



POWERTECH (USA) INC.

October 22, 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
July and August 2012 Analytical Results and Alluvial Compliance Well Completion Report**

Dear Mr. Hicks:

Powertech (USA) Inc. has installed seven new alluvial compliance wells to address ambient sampling requirements of ARSD 74:54:02:18. Results for the first and second sampling rounds conducted in July and August 2012 are enclosed. Well DC-3 was dry during both sampling rounds and was not sampled. Laboratory results for future monthly samples will be forwarded as they become available.

Also enclosed is the Well Completion Report prepared by the drilling contractor. The report presents drilling and well construction details for each new well.

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 E. Blubaugh
Vice President – Health, Safety and Environmental Resources

Encl. July and August 2012 Summary Tables
Laboratory Data Packages R12070405R1 and R12080362
AET Well Completion Report
CD copy

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.



SUMMARY TABLES

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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	6400	5700			TBD	1000	TBD
Lab Conductivity	umhos/cm	6080	5940			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	404	366			TBD		TBD
Bicarbonate as HCO ₃	mg/L	492	446			TBD		TBD
Calcium, Ca	mg/L	424	438			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	92	73			TBD	250	TBD
Magnesium, Mg	mg/L	348	353			TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	5.5	7.5			TBD	10	TBD
Potassium, K	mg/L	15	13			TBD		TBD
Sodium, Na	mg/L	1030	896			TBD		TBD
Sulfate, SO ₄	mg/L	4010	3520			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	1.2	1.3			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	0.038	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	1.1	1.2			TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.04	< 0.03			TBD		TBD
Dissolved Lead, Pb	mg/L	0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.456	0.330			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.003	0.003			TBD		TBD
Dissolved Nickel, Ni	mg/L	0.047	0.032			TBD		TBD
Dissolved Selenium, Se	mg/L	0.034	0.032			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0225	0.0243			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01			TBD		TBD
Dissolved Zinc, Zn	mg/L	0.14	0.05			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	29.2	13.3			TBD	15	TBD
Dissolved Gross Beta	pCi/L	2.0	-9			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	1.1	0.3			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	1.1	0.8			TBD	5 ³	TBD
Total Radon 222	pCi/L	1830	1440			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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	4600	4600			TBD	1000	TBD
Lab Conductivity	umhos/cm	5010	5710			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	264	260			TBD		TBD
Bicarbonate as HCO ₃	mg/L	322	317			TBD		TBD
Calcium, Ca	mg/L	524	524			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	854	756			TBD	250	TBD
Magnesium, Mg	mg/L	145	144			TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2			TBD	10	TBD
Potassium, K	mg/L	7	7			TBD		TBD
Sodium, Na	mg/L	799	715			TBD		TBD
Sulfate, SO ₄	mg/L	2140	1920			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	0.2	0.3			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.7	0.6			TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.48	0.36			TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	3.88	3.41			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.005	0.005			TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005			TBD		TBD
Dissolved Selenium, Se	mg/L	0.002	0.001			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0089	0.0081			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	0.09			TBD		TBD
Dissolved Zinc, Zn	mg/L	0.04	0.04			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	-10	-5			TBD	15	TBD
Dissolved Gross Beta	pCi/L	-1	-10			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.5	0.7			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.4			TBD	5 ³	TBD
Total Radon 222	pCi/L	1990	1850			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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	11000	11000			TBD	1000	TBD
Lab Conductivity	umhos/cm	9270	10400			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	334	346			TBD		TBD
Bicarbonate as HCO ₃	mg/L	407	422			TBD		TBD
Calcium, Ca	mg/L	388	389			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	116	114			TBD	250	TBD
Magnesium, Mg	mg/L	620	604			TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	1.7	1.6			TBD	10	TBD
Potassium, K	mg/L	10	10			TBD		TBD
Sodium, Na	mg/L	2080	1820			TBD		TBD
Sulfate, SO ₄	mg/L	7450	6920			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	1.8	2.0			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	2.9	2.5			TBD	4	TBD
Dissolved Iron, Fe	mg/L	< 0.03	< 0.03			TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.013	0.004			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.003	0.002			TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005			TBD		TBD
Dissolved Selenium, Se	mg/L	0.032	0.034			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0157	0.0159			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01			TBD		TBD
Dissolved Zinc, Zn	mg/L	0.02	0.02			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	-5	16.5			TBD	15	TBD
Dissolved Gross Beta	pCi/L	-9	-20			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	-0.5	0.04			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.2			TBD	5 ³	TBD
Total Radon 222	pCi/L	4820	4530			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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3600	3700			TBD	1000	TBD
Lab Conductivity	umhos/cm	3200	3630			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	288	290			TBD		TBD
Bicarbonate as HCO ₃	mg/L	351	354			TBD		TBD
Calcium, Ca	mg/L	515	525			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	28	25			TBD	250	TBD
Magnesium, Mg	mg/L	236	238			TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2			TBD	10	TBD
Potassium, K	mg/L	13	12			TBD		TBD
Sodium, Na	mg/L	206	175			TBD		TBD
Sulfate, SO ₄	mg/L	2360	2170			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	0.65	0.66			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.6	0.6			TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.06	< 0.03			TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.110	0.061			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.005	0.005			TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005			TBD		TBD
Dissolved Selenium, Se	mg/L	0.001	0.001			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0757	0.0842			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01			TBD		TBD
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	65.9	71.1			TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.4	-4			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.5	0.7			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.1			TBD	5 ³	TBD
Total Radon 222	pCi/L	1870	1870			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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3800	3900			TBD	1000	TBD
Lab Conductivity	umhos/cm	3430	3860			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	230	234			TBD		TBD
Bicarbonate as HCO ₃	mg/L	280	285			TBD		TBD
Calcium, Ca	mg/L	544	516			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	21	21			TBD	250	TBD
Magnesium, Mg	mg/L	200	218			TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2			TBD	10	TBD
Potassium, K	mg/L	12	13			TBD		TBD
Sodium, Na	mg/L	278	258			TBD		TBD
Sulfate, SO ₄	mg/L	2350	2390			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	0.44	0.46			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	0.006	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.8	0.7			TBD	4	TBD
Dissolved Iron, Fe	mg/L	< 0.03	< 0.03			TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.042	0.045			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.012	0.012			TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005			TBD		TBD
Dissolved Selenium, Se	mg/L	< 0.001	< 0.001			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0228	0.0240			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01			TBD		TBD
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	20.0	3.5			TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.5	0.5			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.1	-0.1			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.07	0.3			TBD	5 ³	TBD
Total Radon 222	pCi/L	2860	2460			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			TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3200	3100			TBD	1000	TBD
Lab Conductivity	umhos/cm	2870	3200			TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	254	256			TBD		TBD
Bicarbonate as HCO ₃	mg/L	310	312			TBD		TBD
Calcium, Ca	mg/L	532	531			TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5			TBD		TBD
Chloride, Cl	mg/L	20	19			TBD	250	TBD
Magnesium, Mg	mg/L	150	148			TBD		TBD
Nitrate, NO ₃ (as Nitrogen)	mg/L	0.3	0.3			TBD	10	TBD
Potassium, K	mg/L	11	11			TBD		TBD
Sodium, Na	mg/L	174	158			TBD		TBD
Sulfate, SO ₄	mg/L	2010	1850			TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001			TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05			TBD	2	TBD
Dissolved Boron, B	mg/L	0.44	0.45			TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001			TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005			TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005			TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.6	0.6			TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.05	< 0.03			TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001			TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.498	0.461			TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001			TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.006	0.006			TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005			TBD		TBD
Dissolved Selenium, Se	mg/L	0.002	0.003			TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001			TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0208	0.0214			TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01			TBD		TBD
Dissolved Zinc, Zn	mg/L	0.02	< 0.01			TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	29.9	10.3			TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.7	2			TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	-0.1	-0.1			TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.08	0.1			TBD	5 ³	TBD
Total Radon 222	pCi/L	1700	1710			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						6.5 - 8.5
Total Dissolved Solids	mg/L	3200	3200	3700	3500						1000
Lab Conductivity	umhos/cm	2870	2860	3630	3630						
Common Elements and Ions											
Alkalinity, Total as CaCO ₃	mg/L	254	256	290	290						
Bicarbonate as HCO ₃	mg/L	310	312	354	354						
Calcium, Ca	mg/L	532	518	525	515						
Carbonate as CO ₃	mg/L	< 5	< 5	< 5	< 5						
Chloride, Cl	mg/L	20	20	25	25						250
Magnesium, Mg	mg/L	150	147	238	231						
Nitrate, NO ₃ (as Nitrogen)	mg/L	0.3	0.3	0.2	0.2						10
Potassium, K	mg/L	11	11	12	12						
Sodium, Na	mg/L	174	175	175	179						
Sulfate, SO ₄	mg/L	2010	2020	2170	2180						500
Trace and Minor Elements											
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001						0.01
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05						2
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						0.005
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.005	< 0.005						0.1
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005						1.0
Dissolved Fluoride, F	mg/L	0.6	0.6	0.6	0.6						4
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						0.015
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						0.002
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						0.05
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001						0.1
Dissolved Uranium, U	mg/L	0.0208	0.0208	0.0842	0.0861						0.03
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						
Radiological Parameters											
Dissolved Gross Alpha	pCi/L	29.9	23.4	71.1	89.2						15
Dissolved Gross Beta	pCi/L	4.7	7.1	-4	8.4						4 mrem/year
Dissolved Radium 228	pCi/L	-0.1	0.4	0.7	0.9						5 ³
Dissolved Radium 226	pCi/L	0.08	0.06	0.1	0.2						5 ³
Total Radon 222	pCi/L	1700	1640	1870	1800						300

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

LABORATORY DATA PACKAGE

R12070405R1



ANALYTICAL SUMMARY REPORT

October 11, 2012

Powertech USA Inc
PO Box 812
Edgemont, SD 57735

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

Project Name: Alluvial Wells/Dewey Burdock

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

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R12070405-001	BC-3	07/23/12 11:47	07/24/12	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Anions by Ion Chromatography pH Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Radium 226, Dissolved Radium 228, Dissolved Radon 222 Solids, Total Dissolved
R12070405-002	BC-3 Dup	07/23/12 11:55	07/24/12	Aqueous	Same As Above
R12070405-003	BC-1	07/23/12 13:33	07/24/12	Aqueous	Same As Above
R12070405-004	BC-2	07/23/12 14:34	07/24/12	Aqueous	Same As Above
R12070405-005	DC-2	07/23/12 16:30	07/24/12	Aqueous	Same As Above
R12070405-006	DC-1	07/24/12 08:00	07/24/12	Aqueous	Same As Above
R12070405-007	DC-4	07/24/12 09:07	07/24/12	Aqueous	Same As Above

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

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

Report Approved By:



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

Revised Date: 10/11/12

Report Date: 08/29/12

CASE NARRATIVE

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

Comments imported for SUBBED Workorder: C12070940

GROSS ALPHABETA ANALYSIS

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

End of comments imported for SUBBED Workorder: C12070940

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:47

Lab ID: R12070405-001

Date Received: 07/24/12

Client Sample ID: BC-3

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:47

Lab ID: R12070405-001

Date Received: 07/24/12

Client Sample ID: BC-3

Matrix: AQUEOUS

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

Report 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

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:55

Lab ID: R12070405-002

Date Received: 07/24/12

Client Sample ID: BC-3 Dup

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:55

Lab ID: R12070405-002

Date Received: 07/24/12

Client Sample ID: BC-3 Dup

Matrix: AQUEOUS

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

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

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 13:33

Lab ID: R12070405-003

Date Received: 07/24/12

Client Sample ID: BC-1

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 13:33

Lab ID: R12070405-003

Date Received: 07/24/12

Client Sample ID: BC-1

Matrix: AQUEOUS

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

Report 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

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 14:34

Lab ID: R12070405-004

Date Received: 07/24/12

Client Sample ID: BC-2

Matrix: AQUEOUS

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

- See Case Narrative regarding Gross AlphaBeta analysis.

RADIONUCLIDES - TOTAL

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 14:34

Lab ID: R12070405-004

Date Received: 07/24/12

Client Sample ID: BC-2

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 16:30

Lab ID: R12070405-005

Date Received: 07/24/12

Client Sample ID: DC-2

Matrix: AQUEOUS

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 16:30

Lab ID: R12070405-005

Date Received: 07/24/12

Client Sample ID: DC-2

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 08:00

Lab ID: R12070405-006

Date Received: 07/24/12

Client Sample ID: DC-1

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 08:00

Lab ID: R12070405-006

Date Received: 07/24/12

Client Sample ID: DC-1

Matrix: AQUEOUS

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

Report Definitions:
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 MDC - Minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 09:07

Lab ID: R12070405-007

Date Received: 07/24/12

Client Sample ID: DC-4

Matrix: AQUEOUS

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

Report 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

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 09:07

Lab ID: R12070405-007

Date Received: 07/24/12

Client Sample ID: DC-4

Matrix: AQUEOUS

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

Report 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

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Work Order: R12070405

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Work Order: R12070405

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

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

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Method: E200.8								Batch: C_R162824		
Sample ID: LRB	15	Method Blank						Run: SUB-C162824		08/03/12 21:50
Arsenic		ND	mg/L	5E-05						
Barium		ND	mg/L	7E-05						
Cadmium		ND	mg/L	3E-05						
Chromium		ND	mg/L	4E-05						
Copper		ND	mg/L	3E-05						
Iron		ND	mg/L	0.0006						
Lead		ND	mg/L	2E-05						
Manganese		ND	mg/L	3E-05						
Molybdenum		ND	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						
Selenium		ND	mg/L	7E-05						
Silver		ND	mg/L	6E-05						
Uranium		ND	mg/L	9E-06						
Vanadium		ND	mg/L	4E-05						
Zinc		ND	mg/L	0.0002						

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

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MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

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MDC - Minimum detectable concentration

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

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

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

Qualifiers:

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MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

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S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0								Batch: C_GrAB-1323		
Sample ID: Th230-GrAB-1323	Laboratory Control Sample			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	194	pCi/L		95	80	120				
Sample ID: Cs137-GrAB-1323	Laboratory Control Sample			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	172	pCi/L		92	80	120				
Sample ID: MB-GrAB-1323	6 Method Blank			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	-1	pCi/L								U
Gross Alpha precision (±)	0.6	pCi/L								
Gross Alpha MDC	1	pCi/L								
Gross Beta	0.3	pCi/L								U
Gross Beta precision (±)	2	pCi/L								
Gross Beta MDC	3	pCi/L								
Sample ID: R12070405-001E	Sample Matrix Spike			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	540	pCi/L		64	70	130				S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: R12070405-001E	Sample Matrix Spike Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	490	pCi/L		57	70	130	10	16.9		S
Sample ID: R12070405-001E	Sample Matrix Spike			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	720	pCi/L		96	70	130				
Sample ID: R12070405-001E	Sample Matrix Spike Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	770	pCi/L		103	70	130	7.3	14		
Sample ID: R12070405-007E	6 Sample Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	-5.3	pCi/L					4.6	777.2		U
Gross Alpha precision (±)	21	pCi/L								
Gross Alpha MDC	36	pCi/L								
Gross Beta	-42	pCi/L					130	173.5		U
Gross Beta precision (±)	25	pCi/L								
Gross Beta MDC	43	pCi/L								

Qualifiers:

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ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Work Order: R12070405

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

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U - Not detected at minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

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U - Not detected at minimum detectable concentration



Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>Scott Environmental</i>		Project Name, PWS, Permit, Etc. <i>Dewey / Burdock Alluvial Weirgate</i>		Sample Origin		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <i>PowerTech, Inc.</i>		Contact Name: <i>Allen Sutt</i>		Phone/Fax: <i>673-4089</i>		Sampler: (Please Print) <i>Allen Sutt</i>	
Invoice Address: <i>PowerTech, Inc.</i>		Invoice Contact & Phone:		Purchase Order:		Quote/Bottle Order:	
Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTWW/WTP <input type="checkbox"/> State: <input type="checkbox"/> Other:		ANALYSIS REQUESTED		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by:	
<input type="checkbox"/> EDD/EDT (Electronic Data) Format: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		SEE ATTACHED		Comments:		Cooler ID(s):	
Number of Containers		Sample Type: A W S V B O DW		Standard Turnaround (TAT)		Receipt Temp <i>3.6 °C</i>	
Vegetation Bioassay Other		DW - Drinking Water		R U S H		On Ice: <input checked="" type="checkbox"/> N	
MATRIX		As per quote		↑		Custody Seal On Bottle Y N On Cooler Y N Intact Y N Signature Match Y N	
1	BC-3	7-23-12	11:47	WATER	✓	<i>812076405-001</i>	
2	BC-3 Dup.	7-23-12	11:55	"	✓	<i>002</i>	
3	BC-1	7-23-12	13:33	"	✓	<i>003</i>	
4	BC-2	7-23-12	14:34	"	✓	<i>004</i>	
5	708	7-23-12	15:13	"	✓	<i>005</i>	
6	OC-2	7-23-12	16:30	"	✓	<i>006</i>	
7	PC-1	7-24-12	8:00	"	✓	<i>007</i>	
8	OC-4	7-24-12	9:07	"	✓		
9							
10							

LABORATORY USE ONLY

Relinquished by (print): <i>Allen Sutt</i>	Date/Time: <i>7-24-12 14:30</i>	Signature: <i>Allen Sutt</i>	Received by (print):	Date/Time:	Signature:
Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Sample Disposal:	Return to Client:	Lab Disposal:	Received by Laboratory (print): <i>Steve Ffolkes</i>	Date/Time: <i>7-24-12 14:35</i>	Signature: <i>Steve Ffolkes</i>

Custody Record MUST be Signed

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.enrnlabs.com for additional information. www.enrnlabs.com



LABORATORY DATA PACKAGE

R12080362

ANALYTICAL SUMMARY REPORT

September 26, 2012

Powertech USA Inc
PO Box 812
Edgemont, SD 57735

Workorder No.: R12080362 Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

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

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

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

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

Report Approved By:



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

Revised Date: 09/26/12

Report Date: 09/25/12

CASE NARRATIVE

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 09:25

Lab ID: R12080362-001

Date Received: 08/21/12

Client Sample ID: DC-2

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 09:25

Lab ID: R12080362-001

Date Received: 08/21/12

Client Sample ID: DC-2

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 10:11

Lab ID: R12080362-002

Date Received: 08/21/12

Client Sample ID: DC-4

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Collection Date: 08/20/12 10:11

Project: Alluvial Wells Dewey Burdock

Date Received: 08/21/12

Lab ID: R12080362-002

Matrix: AQUEOUS

Client Sample ID: DC-4

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 11:23

Lab ID: R12080362-003

Date Received: 08/21/12

Client Sample ID: BC-3

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 11:23

Lab ID: R12080362-003

Date Received: 08/21/12

Client Sample ID: BC-3

Matrix: AQUEOUS

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

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

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:29

Lab ID: R12080362-004

Date Received: 08/21/12

Client Sample ID: BC-1

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Collection Date: 08/20/12 12:29

Project: Alluvial Wells Dewey Burdock

Date Received: 08/21/12

Lab ID: R12080362-004

Matrix: AQUEOUS

Client Sample ID: BC-1

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

Report 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

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:38

Lab ID: R12080362-005

Date Received: 08/21/12

Client Sample ID: BC-1 Dup

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:38

Lab ID: R12080362-005

Date Received: 08/21/12

Client Sample ID: BC-1 Dup

Matrix: AQUEOUS

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

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 13:41

Lab ID: R12080362-006

Date Received: 08/21/12

Client Sample ID: BC-2

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 13:41

Lab ID: R12080362-006

Date Received: 08/21/12

Client Sample ID: BC-2

Matrix: AQUEOUS

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

Report 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

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/21/12 09:05

Lab ID: R12080362-007

Date Received: 08/21/12

Client Sample ID: DC-1

Matrix: AQUEOUS

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

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/21/12 09:05

Lab ID: R12080362-007

Date Received: 08/21/12

Client Sample ID: DC-1

Matrix: AQUEOUS

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

Report 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

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: TDS120823A		
Sample ID: MB-1_120823A		Method Blank								
Solids, Total Dissolved TDS @ 180 C		8	mg/L	3						Run: BAL-TDS_120823A 08/23/12 16:27
Sample ID: LCS-2_120823A		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10	106	90	110			Run: BAL-TDS_120823A 08/23/12 16:30
Sample ID: R12080344-004A DUP		Sample Duplicate								
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10				1.9	5	Run: BAL-TDS_120823A 08/23/12 16:34
Sample ID: R12080344-005A MS		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		350	mg/L	10	106	90	110			Run: BAL-TDS_120823A 08/23/12 16:40
Method: A2540 C								Batch: TDS120827A		
Sample ID: MB-1_120827A		Method Blank								
Solids, Total Dissolved TDS @ 180 C		10	mg/L	3						Run: BAL-TDS_120827A 08/27/12 12:29
Sample ID: LCS-2_120827A		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		230	mg/L	20	108	90	110			Run: BAL-TDS_120827A 08/27/12 12:30
Sample ID: R12080362-005A DUP		Sample Duplicate								
Solids, Total Dissolved TDS @ 180 C		3600	mg/L	40				2.8	5	Run: BAL-TDS_120827A 08/27/12 12:31
Sample ID: R12080362-006A MS		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		4300	mg/L	40	101	90	110			Run: BAL-TDS_120827A 08/27/12 12:32

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



QA/QC Summary Report

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Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

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

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Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration

QA/QC Summary Report

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Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

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QA/QC Summary Report

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Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

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Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

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Work Order: R12080362

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

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Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

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.



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Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



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

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

AET WELL COMPLETION REPORT