


United States Nuclear Regulatory Commission Official Hearing Exhibit																									
In the Matter of: POWERTECH USA, INC. (Dewey-Burdock In Situ Uranium Recovery Facility)																									
	<table><tr><td><b>ASLBP #:</b></td><td>10-898-02-MLA-BD01</td><td><b>Identified:</b></td><td>8/19/2014</td></tr><tr><td><b>Docket #:</b></td><td>04009075</td><td><b>Withdrawn:</b></td><td></td></tr><tr><td><b>Exhibit #:</b></td><td>APP-015-O-00-BD01</td><td><b>Stricken:</b></td><td></td></tr><tr><td><b>Admitted:</b></td><td>8/19/2014</td><td></td><td></td></tr><tr><td><b>Rejected:</b></td><td></td><td></td><td></td></tr><tr><td><b>Other:</b></td><td></td><td></td><td></td></tr></table>	<b>ASLBP #:</b>	10-898-02-MLA-BD01	<b>Identified:</b>	8/19/2014	<b>Docket #:</b>	04009075	<b>Withdrawn:</b>		<b>Exhibit #:</b>	APP-015-O-00-BD01	<b>Stricken:</b>		<b>Admitted:</b>	8/19/2014			<b>Rejected:</b>				<b>Other:</b>			
<b>ASLBP #:</b>	10-898-02-MLA-BD01	<b>Identified:</b>	8/19/2014																						
<b>Docket #:</b>	04009075	<b>Withdrawn:</b>																							
<b>Exhibit #:</b>	APP-015-O-00-BD01	<b>Stricken:</b>																							
<b>Admitted:</b>	8/19/2014																								
<b>Rejected:</b>																									
<b>Other:</b>																									



## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 08:45  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
MAJOR IONS								
Alkalinity, Total as CaCO3	ND	mg/L		5		1	A2320 B	11/25/08 11:21/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:21/mb
Bicarbonate as HCO3	ND	mg/L		5		1	A2320 B	11/25/08 11:21/mb
Calcium	ND	mg/L		0.5		2	E200.7	12/10/08 16:24/eli-c
Chloride	ND	mg/L		1		1	E300.0	11/20/08 18:36/jmh
Fluoride	ND	mg/L		0.1		1	E300.0	11/20/08 18:36/jmh
Magnesium	ND	mg/L		0.5		2	E200.7	12/10/08 16:24/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:10/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 18:36/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 18:36/jmh
Potassium	ND	mg/L		0.5		2	E200.7	12/10/08 16:24/eli-c
Sodium	ND	mg/L	D	2		2	E200.7	12/10/08 16:24/eli-c
Sulfate	ND	mg/L		1		1	E300.0	11/20/08 18:36/jmh
Silica	ND	mg/L		0.2		2	E200.7	12/10/08 16:24/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	ND	umhos/cm		5.0		1	A2510 B	11/25/08 15:29/tb
Oxidation-Reduction Potential	330	mV				1	A2580 B	11/25/08 16:00/jmh
pH	4.84	s.u.		0.01		1	A4500-H B	11/25/08 14:43/tb
Sodium Adsorption Ratio (SAR)	ND	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	64	mg/L		5		1	A2540 C	11/21/08 11:26/mb
- SAR calculations may not be appropriate for near blank results.								
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 19:33/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 19:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 19:33/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 16:24/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 19:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 19:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 19:33/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 16:24/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 19:33/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	12/03/08 19:33/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 19:33/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 19:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 19:33/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:37/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 02:51/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08110211-001  
Client Sample ID: DewBurd BLK01

Report Date: 01/29/09  
Collection Date: 11/18/08 08:45  
Date Received: 11/19/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 19:33/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/03/08 19:33/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 19:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 19:33/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:02/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:27/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	-0.6	pCi/L	U			1	E900.0	12/24/08 01:10/eli-c
Gross Alpha precision (±)	0.5	pCi/L				1	E900.0	12/24/08 01:10/eli-c
Gross Alpha MDC	1.0	pCi/L				1	E900.0	12/24/08 01:10/eli-c
Gross Beta	-2	pCi/L	U			1	E900.0	12/24/08 01:10/eli-c
Gross Beta precision (±)	1.5	pCi/L				1	E900.0	12/24/08 01:10/eli-c
Gross Beta MDC	2.6	pCi/L				1	E900.0	12/24/08 01:10/eli-c
Lead 210	-0.2	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.39	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	-0.1	pCi/L	U			1	E903.0	12/16/08 23:17/eli-c
Radium 226 precision (±)	0.07	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-4	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.035	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.25	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	12/18/08 15:28/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 08:45  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
RADIONUCLIDES - TOTAL								
Radon 222	222	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	82.8	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 06:34/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/05/08 06:34/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 06:34/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 06:34/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 22:12/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 06:34/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 06:34/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 06:34/eli-c
Iron	0.03	mg/L		0.03		2	E200.7	12/10/08 22:12/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 06:34/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	12/05/08 06:34/eli-c
Mercury	ND	mg/L		0.001		1	0	11/24/08 12:14/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 06:34/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 06:34/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 06:34/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 13:22/eli-c
Strontium	ND	mg/L		0.1		1	E200.8	12/05/08 06:34/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 06:34/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/05/08 06:34/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 06:34/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-002  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 08:45  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	178	mg/L		5		1	A2320 B	11/25/08 11:22/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:22/mb
Bicarbonate as HCO <sub>3</sub>	217	mg/L		5		1	A2320 B	11/25/08 11:22/mb
Calcium	30.9	mg/L		0.5		2	E200.7	12/10/08 16:36/eli-c
Chloride	13	mg/L		1		1	E300.0	11/20/08 19:25/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	11/20/08 19:25/jmh
Magnesium	10.6	mg/L		0.5		2	E200.7	12/10/08 16:36/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:13/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:25/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:25/jmh
Potassium	9.1	mg/L		0.5		2	E200.7	12/10/08 16:36/eli-c
Sodium	293	mg/L	D	2		2	E200.7	12/10/08 16:36/eli-c
Sulfate	476	mg/L	D	3		50	E300.0	11/21/08 03:37/jmh
Silica	9.9	mg/L		0.2		2	E200.7	12/10/08 16:36/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1340	umhos/cm		5.0		1	A2510 B	11/25/08 15:31/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.03	s.u.		0.01		1	A4500-H B	11/25/08 14:44/tb
Sodium Adsorption Ratio (SAR)	12	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	790	mg/L		5		1	A2540 C	11/21/08 11:27/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 19:40/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 19:40/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 19:40/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 16:36/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 19:40/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 19:40/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 19:40/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 16:36/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 19:40/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/03/08 19:40/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 19:40/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 19:40/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 19:40/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:44/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 02:58/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 19:40/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-002  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 08:45  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/03/08 19:40/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 19:40/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 19:40/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:09/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:34/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	6.9	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha precision (±)	3.2	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha MDC	4.4	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta	9.0	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta precision (±)	2.6	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta MDC	4.1	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Lead 210	0.0	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.33	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	0.8	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.2	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-6	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.11	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.33	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.3	pCi/L	U			1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 15:28/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-002  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 08:45  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	222	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	82.9	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 06:41/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/05/08 06:41/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 06:41/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 06:41/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 22:25/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 06:41/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 06:41/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 06:41/eli-c
Iron	0.14	mg/L		0.03		2	E200.7	12/10/08 22:25/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 06:41/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/05/08 06:41/eli-c
Mercury	ND	mg/L		0.001		1	0	11/24/08 12:16/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 06:41/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 06:41/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 06:41/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 13:29/eli-c
Strontium	0.7	mg/L		0.1		1	E200.8	12/05/08 06:41/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 06:41/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/05/08 06:41/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 06:41/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	5.40	%				1	A1030 E	01/29/09 00:00/jmh
Anions	13.8	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	15.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	967	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.820					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-003  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	182	mg/L		5		1	A2320 B	11/25/08 11:24/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:24/mb
Bicarbonate as HCO <sub>3</sub>	222	mg/L		5		1	A2320 B	11/25/08 11:24/mb
Calcium	101	mg/L		0.5		2	E200.7	12/10/08 16:44/eli-c
Chloride	9	mg/L		1		1	E300.0	11/20/08 19:41/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	11/20/08 19:41/jmh
Magnesium	36.2	mg/L		0.5		2	E200.7	12/10/08 16:44/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:14/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:41/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:41/jmh
Potassium	13.3	mg/L		0.5		2	E200.7	12/10/08 16:44/eli-c
Sodium	184	mg/L	D	2		2	E200.7	12/10/08 16:44/eli-c
Sulfate	484	mg/L	D	3		50	E300.0	11/21/08 04:27/jmh
Silica	9.3	mg/L		0.2		2	E200.7	12/10/08 16:44/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1310	umhos/cm		5.0		1	A2510 B	11/25/08 15:32/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	7.93	s.u.		0.01		1	A4500-H B	11/25/08 14:45/tb
Sodium Adsorption Ratio (SAR)	4.0	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	980	mg/L		5		1	A2540 C	11/21/08 11:31/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 19:47/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/03/08 19:47/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 19:47/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 16:44/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 19:47/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 19:47/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 19:47/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 16:44/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 19:47/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	12/03/08 19:47/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 19:47/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 19:47/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 19:47/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:47/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 03:05/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 19:47/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-003  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0006	mg/L		0.0003		1	E200.8	12/03/08 19:47/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 19:47/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 19:47/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:15/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:37/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	9.2	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha precision (±)	3.3	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha MDC	4.4	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta	5.9	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta MDC	4.7	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	1.7	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-4	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.040	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 15:28/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-003  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	331	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	82.4	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 06:47/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/05/08 06:47/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 06:47/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 06:47/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 22:45/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 06:47/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 06:47/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 06:47/eli-c
Iron	0.19	mg/L		0.03		2	E200.7	12/10/08 22:45/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 06:47/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	12/05/08 06:47/eli-c
Mercury	ND	mg/L		0.001		1	0	11/24/08 12:19/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 06:47/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 06:47/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 06:47/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 13:35/eli-c
Strontium	2.6	mg/L		0.1		1	E200.8	12/05/08 06:47/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 06:47/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	12/05/08 06:47/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 06:47/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	7.92	%				1	A1030 E	01/29/09 00:00/jmh
Anions	14.0	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	16.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	962	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.01					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-004  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	146	mg/L		5		1	A2320 B	11/25/08 11:26/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:26/mb
Bicarbonate as HCO3	178	mg/L		5		1	A2320 B	11/25/08 11:26/mb
Calcium	51.2	mg/L		0.5		2	E200.7	12/10/08 16:48/eli-c
Chloride	12	mg/L		1		1	E300.0	11/20/08 19:58/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	11/20/08 19:58/jmh
Magnesium	21.0	mg/L		0.5		2	E200.7	12/10/08 16:48/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:16/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:58/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 19:58/jmh
Potassium	12.5	mg/L		0.5		2	E200.7	12/10/08 16:48/eli-c
Sodium	202	mg/L	D	2		2	E200.7	12/10/08 16:48/eli-c
Sulfate	421	mg/L	D	3		50	E300.0	11/21/08 05:16/jmh
Silica	8.7	mg/L		0.2		2	E200.7	12/10/08 16:48/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1140	umhos/cm		5.0		1	A2510 B	11/25/08 15:33/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.19	s.u.		0.01		1	A4500-H B	11/25/08 14:47/tb
Sodium Adsorption Ratio (SAR)	6.0	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	780	mg/L		5		1	A2540 C	11/21/08 11:32/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 20:07/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/03/08 20:07/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 20:07/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 16:48/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 20:07/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 20:07/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 20:07/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 16:48/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 20:07/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/03/08 20:07/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 20:07/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 20:07/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 20:07/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:49/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 03:11/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 20:07/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-004  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	12/03/08 20:07/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 20:07/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 20:07/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:22/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:39/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	15.0	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha precision (±)	3.3	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha MDC	3.8	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta	17.4	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta precision (±)	2.4	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta MDC	3.6	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Lead 210	1.1	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.22	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	2.7	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
RADIONUCLIDES - SUSPENDED								
Lead 210	-5	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.061	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	0.2	pCi/L	U			1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/18/08 15:28/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-004  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	162	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	81.3	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/08/08 19:34/eli-c
Arsenic	0.006	mg/L	D	0.005		1	E200.8	12/13/08 00:02/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/08/08 19:34/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/08/08 19:34/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/12/08 19:38/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/08/08 19:34/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/08/08 19:34/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/08/08 19:34/eli-c
Iron	0.34	mg/L		0.03		2	E200.7	12/12/08 19:38/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/08/08 19:34/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/08/08 19:34/eli-c
Mercury	ND	mg/L		0.001		1	0	11/24/08 12:21/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/08/08 19:34/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/08/08 19:34/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	12/08/08 19:34/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 19:34/eli-c
Strontium	1.3	mg/L		0.1		1	E200.8	12/08/08 19:34/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/08/08 19:34/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/08/08 19:34/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	12/12/08 19:38/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	5.50	%				1	A1030 E	01/29/09 00:00/jmh
Anions	12.0	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	13.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	831	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.940					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-005  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
MAJOR IONS								
Alkalinity, Total as CaCO3	250	mg/L		5		1	A2320 B	11/25/08 11:28/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:28/mb
Bicarbonate as HCO3	305	mg/L		5		1	A2320 B	11/25/08 11:28/mb
Calcium	389	mg/L		0.5		2	E200.7	12/10/08 16:52/eli-c
Chloride	14	mg/L		1		1	E300.0	11/20/08 20:14/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0	11/20/08 20:14/jmh
Magnesium	123	mg/L		0.5		2	E200.7	12/10/08 16:52/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:17/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:14/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:14/jmh
Potassium	19.2	mg/L		0.5		2	E200.7	12/10/08 16:52/eli-c
Sodium	145	mg/L	D	2		2	E200.7	12/10/08 16:52/eli-c
Sulfate	1330	mg/L	D	3		50	E300.0	11/21/08 05:32/jmh
Silica	8.4	mg/L		0.2		2	E200.7	12/10/08 16:52/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	2470	umhos/cm		5.0		1	A2510 B	11/25/08 15:34/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	11/25/08 16:00/jmh
pH	7.86	s.u.		0.01		1	A4500-H B	11/25/08 14:51/tb
Sodium Adsorption Ratio (SAR)	1.6	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5		1	A2540 C	11/21/08 11:33/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 20:14/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/03/08 20:14/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 20:14/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	12/10/08 16:52/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 20:14/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 20:14/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 20:14/eli-c
Iron	0.12	mg/L		0.03		2	E200.7	12/10/08 16:52/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 20:14/eli-c
Manganese	0.43	mg/L		0.01		1	E200.8	12/03/08 20:14/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 20:14/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 20:14/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 20:14/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:51/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 03:18/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 20:14/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-005  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	0.0196	mg/L		0.0003			1	E200.8	12/03/08 20:14/eli-c
Vanadium	ND	mg/L		0.1			1	E200.8	12/03/08 20:14/eli-c
Zinc	ND	mg/L		0.01			1	E200.8	12/03/08 20:14/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003			1	E200.8	12/11/08 01:29/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001			1	A3114 B	12/04/08 15:41/eli-c
Selenium-VI	ND	mg/L		0.001			1	A3114 B	12/05/08 11:31/eli-c
RADIONUCLIDES - DISSOLVED									
Gross Alpha	4410	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha precision (±)	69.5	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha MDC	10.2	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Gross Beta	1840	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Gross Beta precision (±)	24.8	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Gross Beta MDC	13.8	pCi/L					1	E900.0	12/24/08 01:10/eli-ca
Lead 210	9.3	pCi/L					1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.7	pCi/L					1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L					1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	1.0	pCi/L	U	1.0			1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.63	pCi/L					1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	1430	pCi/L					1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	6.7	pCi/L					1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L					1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.1	pCi/L	U	0.2			1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L					1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	1200	pCi/L		20			1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	86	pCi/L					1	E901.1	12/03/08 15:07/eli-c
RADIONUCLIDES - SUSPENDED									
Lead 210	-0.5	pCi/L	U				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L					1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L					1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	0.88	pCi/L					1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.66	pCi/L					1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	1.7	pCi/L					1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.4	pCi/L					1	E903.0	12/18/08 15:28/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-005  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 10:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	86200	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	453	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 07:20/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/05/08 07:20/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 07:20/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 07:20/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	12/10/08 22:49/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 07:20/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 07:20/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 07:20/eli-c
Iron	0.28	mg/L		0.03		2	E200.7	12/10/08 22:49/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 07:20/eli-c
Manganese	0.43	mg/L		0.01		1	E200.8	12/05/08 07:20/eli-c
Mercury	ND	mg/L		0.001		1	0	11/24/08 12:24/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 07:20/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 07:20/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 07:20/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 13:42/eli-c
Strontium	7.0	mg/L		0.1		1	E200.8	12/05/08 07:20/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 07:20/eli-c
Uranium	0.0174	mg/L		0.0003		1	E200.8	12/05/08 07:20/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 07:20/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	4.57	%				1	A1030 E	01/29/09 00:00/jmh
Anions	33.2	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	36.3	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	2200	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.05					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-006  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:05  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO3	206	mg/L		5		1	A2320 B	11/25/08 11:39/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:39/mb
Bicarbonate as HCO3	251	mg/L		5		1	A2320 B	11/25/08 11:39/mb
Calcium	99.7	mg/L		0.5		2	E200.7	12/10/08 16:56/eli-c
Chloride	9	mg/L		1		1	E300.0	11/20/08 20:30/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	11/20/08 20:30/jmh
Magnesium	35.6	mg/L		0.5		2	E200.7	12/10/08 16:56/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:18/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:30/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:30/jmh
Potassium	13.3	mg/L		0.5		2	E200.7	12/10/08 16:56/eli-c
Sodium	182	mg/L	D	2		2	E200.7	12/10/08 16:56/eli-c
Sulfate	505	mg/L	D	3		50	E300.0	11/21/08 05:49/jmh
Silica	9.1	mg/L		0.2		2	E200.7	12/10/08 16:56/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1300	umhos/cm		5.0		1	A2510 B	11/25/08 15:36/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.27	s.u.		0.01		1	A4500-H B	11/25/08 14:52/tb
Sodium Adsorption Ratio (SAR)	4.0	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	990	mg/L		5		1	A2540 C	11/21/08 11:33/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 20:21/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/03/08 20:21/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 20:21/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 16:56/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 20:21/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 20:21/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 20:21/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 16:56/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 20:21/eli-c
Manganese	0.14	mg/L		0.01		1	E200.8	12/03/08 20:21/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 20:21/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 20:21/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 20:21/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 09:53/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 03:50/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 20:21/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 interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-006  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:05  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0006	mg/L		0.0003		1	E200.8	12/03/08 20:21/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 20:21/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 20:21/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:35/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:44/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	12.1	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha precision (±)	3.6	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Alpha MDC	4.5	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta	13.5	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta precision (±)	3.1	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Gross Beta MDC	4.7	pCi/L				1	E900.0	12/24/08 01:10/eli-ca
Lead 210	-2	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	-0.1	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.25	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	1.5	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-6	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	0.082	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	0.3	pCi/L	U			1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/18/08 15:28/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-006  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 09:05  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.4	pCi/L	U	0.2		1	E903.0	12/18/08 15:28/eli-c
Thorium 230	-0.2	pCi/L				1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
RADIONUCLIDES - TOTAL								
Radon 222	309	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	84.0	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 07:27/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/05/08 07:27/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 07:27/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 07:27/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 22:53/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 07:27/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 07:27/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 07:27/eli-c
Iron	0.19	mg/L		0.03		2	E200.7	12/10/08 22:53/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 07:27/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	12/05/08 07:27/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 08:46/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 07:27/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 07:27/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 07:27/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 14:15/eli-c
Strontium	2.6	mg/L		0.1		1	E200.8	12/05/08 07:27/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 07:27/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	12/05/08 07:27/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 07:27/eli-c
DATA QUALITY								
A/C Balance (± 5)	4.19	%				1	A1030 E	01/29/09 00:00/jmh
Anions	14.9	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	16.2	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	994	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.00					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-007  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 11:19  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	184	mg/L		5		1	A2320 B	11/25/08 11:41/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:41/mb
Bicarbonate as HCO <sub>3</sub>	224	mg/L		5		1	A2320 B	11/25/08 11:41/mb
Calcium	375	mg/L		0.5		2	E200.7	12/10/08 17:00/eli-c
Chloride	17	mg/L		1		1	E300.0	11/20/08 20:47/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	11/20/08 20:47/jmh
Magnesium	117	mg/L		0.5		2	E200.7	12/10/08 17:00/eli-c
Nitrogen, Ammonia as N	0.5	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:19/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:47/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 20:47/jmh
Potassium	19.3	mg/L		0.5		2	E200.7	12/10/08 17:00/eli-c
Sodium	170	mg/L	D	2		2	E200.7	12/10/08 17:00/eli-c
Sulfate	1370	mg/L	D	3		50	E300.0	11/21/08 06:05/jmh
Silica	9.1	mg/L		0.2		2	E200.7	12/10/08 17:00/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2310	umhos/cm		5.0		1	A2510 B	11/25/08 15:37/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	11/25/08 16:00/jmh
pH	7.44	s.u.		0.01		1	A4500-H B	11/25/08 14:53/tb
Sodium Adsorption Ratio (SAR)	2.0	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5		1	A2540 C	11/21/08 11:34/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 20:27/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/03/08 20:27/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 20:27/eli-c
Boron	0.2	mg/L		0.1		2	E200.7	12/10/08 17:00/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 20:27/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 20:27/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 20:27/eli-c
Iron	3.59	mg/L		0.03		2	E200.7	12/10/08 17:00/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 20:27/eli-c
Manganese	1.04	mg/L		0.01		1	E200.8	12/03/08 20:27/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 20:27/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 20:27/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 20:27/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:00/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 03:57/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 20:27/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08110211-007  
Client Sample ID: DewBurd GW3026

Report Date: 01/29/09  
Collection Date: 11/18/08 11:19  
Date Received: 11/19/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0048	mg/L		0.0003		1	E200.8	12/03/08 20:27/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 20:27/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 20:27/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 01:42/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:51/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	19.7	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha precision (±)	6.9	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha MDC	9.1	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta	3.4	pCi/L	U			1	E900.0	12/24/08 13:29/eli-c
Gross Beta precision (±)	5.7	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta MDC	9.5	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Lead 210	-2	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.16	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	3.9	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	0.0	pCi/L	U	20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-2	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.3	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.031	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.23	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	0.8	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-007  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 11:19  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 15:28/eli-c
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	505	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	85.3	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 07:33/eli-c
Arsenic	0.006	mg/L		0.001		1	E200.8	12/05/08 07:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 07:33/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 07:33/eli-c
Boron	0.2	mg/L		0.1		2	E200.7	12/10/08 22:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 07:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 07:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 07:33/eli-c
Iron	14.5	mg/L		0.03		2	E200.7	12/10/08 22:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 07:33/eli-c
Manganese	1.00	mg/L		0.01		1	E200.8	12/05/08 07:33/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 08:57/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 07:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 07:33/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 07:33/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 14:22/eli-c
Strontium	5.7	mg/L		0.1		1	E200.8	12/05/08 07:33/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 07:33/eli-c
Uranium	0.0044	mg/L		0.0003		1	E200.8	12/05/08 07:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 07:33/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	5.27	%				1	A1030 E	01/29/09 00:00/jmh
Anions	32.8	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	36.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	2210	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.03					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-008  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 12:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	112	mg/L		5		1	A2320 B	11/25/08 11:43/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:43/mb
Bicarbonate as HCO <sub>3</sub>	137	mg/L		5		1	A2320 B	11/25/08 11:43/mb
Calcium	388	mg/L		0.5		2	E200.7	12/10/08 17:49/eli-c
Chloride	10	mg/L		1		1	E300.0	11/20/08 21:03/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0	11/20/08 21:03/jmh
Magnesium	141	mg/L		0.5		2	E200.7	12/10/08 17:49/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:24/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 21:03/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 21:03/jmh
Potassium	15.5	mg/L		0.5		2	E200.7	12/10/08 17:49/eli-c
Sodium	86	mg/L	D	2		2	E200.7	12/10/08 17:49/eli-c
Sulfate	1360	mg/L	D	3		50	E300.0	11/21/08 06:21/jmh
Silica	11.1	mg/L		0.2		2	E200.7	12/10/08 17:49/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2300	umhos/cm		5.0		1	A2510 B	11/25/08 15:38/tb
Oxidation-Reduction Potential	300	mV				1	A2580 B	11/25/08 16:00/jmh
pH	7.42	s.u.		0.01		1	A4500-H B	11/25/08 14:54/tb
Sodium Adsorption Ratio (SAR)	0.95	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5		1	A2540 C	11/21/08 11:34/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:01/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 21:01/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:01/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	12/10/08 17:49/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:01/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:01/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:01/eli-c
Iron	2.54	mg/L		0.03		2	E200.7	12/10/08 17:49/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:01/eli-c
Manganese	2.25	mg/L		0.01		1	E200.8	12/03/08 21:01/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:01/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:01/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:01/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:02/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/05/08 04:03/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:01/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-008  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 12:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.106	mg/L		0.0003		1	E200.8	12/03/08 21:01/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:01/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:01/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0042	mg/L		0.0003		1	E200.8	12/11/08 02:16/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:53/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1680	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha precision (±)	40.3	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha MDC	8.9	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta	619	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta precision (±)	12.6	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta MDC	9.4	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Lead 210	1.4	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.3	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.40	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	403	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 precision (±)	3.6	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	1700	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	260	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	4.4	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.5	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	1.6	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.98	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	9.0	pCi/L				1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.9	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-008  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 12:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.4	pCi/L	U	0.2		1	E903.0	12/18/08 17:20/eli-c
Thorium 230	0.2	pCi/L				1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	12/11/08 15:00/eli-c
RADIONUCLIDES - TOTAL								
Radon 222	37400	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	303	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/09/08 22:05/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/08/08 14:29/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/09/08 22:05/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/08/08 14:29/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/12/08 19:46/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/09/08 22:05/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/08/08 14:29/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/09/08 22:05/eli-c
Iron	4.42	mg/L		0.03		2	E200.7	12/12/08 19:46/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/08/08 14:29/eli-c
Manganese	2.31	mg/L		0.01		1	E200.8	12/08/08 14:29/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 08:59/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/09/08 22:05/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/08/08 14:29/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/08/08 14:29/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 14:29/eli-c
Strontium	4.4	mg/L		0.1		1	E200.8	12/09/08 22:05/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/09/08 22:05/eli-c
Uranium	0.103	mg/L		0.0003		1	E200.8	12/09/08 22:05/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/09/08 22:05/eli-c
DATA QUALITY								
A/C Balance (± 5)	6.79	%				1	A1030 E	01/29/09 00:00/jmh
Anions	30.9	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	35.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	2100	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.05					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-009  
**Client Sample ID:** DewBurd GW695

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	172	mg/L		5		1	A2320 B	11/25/08 11:44/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:44/mb
Bicarbonate as HCO <sub>3</sub>	210	mg/L		5		1	A2320 B	11/25/08 11:44/mb
Calcium	52.7	mg/L		0.5		2	E200.7	12/10/08 17:53/eli-c
Chloride	13	mg/L		1		1	E300.0	11/20/08 21:53/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	11/20/08 21:53/jmh
Magnesium	19.0	mg/L		0.5		2	E200.7	12/10/08 17:53/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:27/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 21:53/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 21:53/jmh
Potassium	8.7	mg/L		0.5		2	E200.7	12/10/08 17:53/eli-c
Sodium	253	mg/L	D	2		2	E200.7	12/10/08 17:53/eli-c
Sulfate	481	mg/L	D	3		50	E300.0	11/21/08 06:38/jmh
Silica	8.9	mg/L		0.2		2	E200.7	12/10/08 17:53/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1290	umhos/cm		5.0		1	A2510 B	11/25/08 15:39/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.18	s.u.		0.01		1	A4500-H B	11/25/08 14:55/tb
Sodium Adsorption Ratio (SAR)	7.6	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	940	mg/L		5		1	A2540 C	11/21/08 11:35/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:08/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 21:08/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:08/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 17:53/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:08/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:08/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:08/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 17:53/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:08/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	12/03/08 21:08/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:08/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:08/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:08/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:05/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 17:12/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:08/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-009  
**Client Sample ID:** DewBurd GW695

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0029	mg/L		0.0003		1	E200.8	12/03/08 21:08/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:08/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:08/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 02:22/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:55/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	19.2	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha precision (±)	4.0	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha MDC	4.4	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta	9.7	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta precision (±)	3.5	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta MDC	5.6	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Lead 210	0.3	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.19	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	4.8	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/16/08 23:17/eli-c
Thorium 230	0.2	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	1100	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-0.9	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	0.058	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-009  
**Client Sample ID:** DewBurd GW695

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:25  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 17:20/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	2020	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	102	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 07:53/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/05/08 07:53/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 07:53/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 07:53/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 23:01/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 07:53/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 07:53/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 07:53/eli-c
Iron	0.16	mg/L		0.03		2	E200.7	12/10/08 23:01/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 07:53/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	12/05/08 07:53/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 09:09/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 07:53/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 07:53/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 07:53/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 14:36/eli-c
Strontium	0.9	mg/L		0.1		1	E200.8	12/05/08 07:53/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 07:53/eli-c
Uranium	0.0026	mg/L		0.0003		1	E200.8	12/05/08 07:53/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 07:53/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	5.57	%				1	A1030 E	01/29/09 00:00/jmh
Anions	13.8	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	15.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	954	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-010  
**Client Sample ID:** DewBurd GW697

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:35  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
MAJOR IONS								
Alkalinity, Total as CaCO3	164	mg/L		5		1	A2320 B	11/25/08 11:46/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:46/mb
Bicarbonate as HCO3	200	mg/L		5		1	A2320 B	11/25/08 11:46/mb
Calcium	54.5	mg/L		0.5		2	E200.7	12/10/08 17:57/eli-
Chloride	9	mg/L		1		1	E300.0	11/20/08 22:42/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	11/20/08 22:42/jmh
Magnesium	17.7	mg/L		0.5		2	E200.7	12/10/08 17:57/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:28/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 22:42/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 22:42/jmh
Potassium	8.5	mg/L		0.5		2	E200.7	12/10/08 17:57/eli-c
Sodium	219	mg/L	D	2		2	E200.7	12/10/08 17:57/eli-c
Sulfate	430	mg/L	D	3		50	E300.0	11/21/08 06:54/jmh
Silica	9.3	mg/L		0.2		2	E200.7	12/10/08 17:57/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1180	umhos/cm		5.0		1	A2510 B	11/25/08 15:40/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.24	s.u.		0.01		1	A4500-H B	11/25/08 14:56/tb
Sodium Adsorption Ratio (SAR)	6.6	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	820	mg/L		5		1	A2540 C	11/21/08 11:35/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:15/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/03/08 21:15/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:15/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 17:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:15/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:15/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:15/eli-c
Iron	0.04	mg/L		0.03		2	E200.7	12/10/08 17:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:15/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	12/03/08 21:15/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:15/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:15/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:15/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:07/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 17:18/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:15/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-010  
**Client Sample ID:** DewBurd GW697

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:35  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/03/08 21:15/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:15/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:15/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 02:29/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 15:58/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	12.7	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha precision (±)	3.2	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha MDC	3.9	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta	11.4	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta precision (±)	2.3	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta MDC	3.6	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Lead 210	-0.8	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	1.7	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	1100	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	210	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-0.6	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.0042	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 17:20/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-010  
**Client Sample ID:** DewBurd GW697

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:35  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.4	pCi/L	U	0.2		1	E903.0	12/18/08 17:20/eli-c
Thorium 230	0.1	pCi/L				1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
RADIONUCLIDES - TOTAL								
Radon 222	412	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	82.7	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 07:59/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/05/08 07:59/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 07:59/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 07:59/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 23:05/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 07:59/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 07:59/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 07:59/eli-c
Iron	0.04	mg/L		0.03		2	E200.7	12/10/08 23:05/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 07:59/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	12/05/08 07:59/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 09:11/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 07:59/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 07:59/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 07:59/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 14:43/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	12/05/08 07:59/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 07:59/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/05/08 07:59/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 07:59/eli-c
DATA QUALITY								
A/C Balance (± 5)	5.48	%				1	A1030 E	01/29/09 00:00/jmh
Anions	12.5	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	14.0	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	863	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	01/29/09 00:00/jmh

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

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

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-011  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:02  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	150	mg/L		5		1	A2320 B	11/25/08 11:49/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:49/mb
Bicarbonate as HCO3	183	mg/L		5		1	A2320 B	11/25/08 11:49/mb
Calcium	45.3	mg/L		0.5		2	E200.7	12/10/08 18:01/eli-c
Chloride	5	mg/L		1		1	E300.0	11/20/08 22:58/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	11/20/08 22:58/jmh
Magnesium	15.7	mg/L		0.5		2	E200.7	12/10/08 18:01/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:30/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 22:58/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 22:58/jmh
Potassium	7.6	mg/L		0.5		2	E200.7	12/10/08 18:01/eli-c
Sodium	179	mg/L	D	2		2	E200.7	12/10/08 18:01/eli-c
Sulfate	379	mg/L	D	3		50	E300.0	11/21/08 07:44/jmh
Silica	9.6	mg/L		0.2		2	E200.7	12/10/08 18:01/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	982	umhos/cm		5.0		1	A2510 B	11/25/08 15:43/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.45	s.u.		0.01		1	A4500-H B	11/25/08 14:58/tb
Sodium Adsorption Ratio (SAR)	5.8	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	660	mg/L		5		1	A2540 C	11/21/08 11:49/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:21/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 21:21/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:21/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 18:01/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:21/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:21/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:21/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 18:01/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:21/eli-c
Manganese	0.04	mg/L		0.01		1	E200.8	12/03/08 21:21/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:21/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:21/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:21/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:09/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 18:13/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-011  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:02  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
METALS - DISSOLVED								
Uranium	0.0033	mg/L		0.0003		1	E200.8	12/03/08 21:21/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:21/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:21/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 02:49/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 16:00/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	37.9	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha precision (±)	4.1	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha MDC	3.2	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta	15.3	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta precision (±)	2.4	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta MDC	3.5	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Lead 210	-1	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.31	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	6.6	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Thorium 230	0.2	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	1100	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	12/03/08 15:07/eli-c
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.6	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	-0.039	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.04	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-011  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:02  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
RADIONUCLIDES - SUSPENDED									
Radium 226 MDC	0.4	pCi/L	U	0.2			1	E903.0	12/18/08 17:20/eli-c
Thorium 230	-0.2	pCi/L				1	E907.0	12/11/08 15:00/eli-c	
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c	
RADIONUCLIDES - TOTAL									
Radon 222	2580	pCi/L		100			1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	108	pCi/L					1	D5072-92	11/23/08 09:20/eli-c
TOTAL METALS ANALYSES									
Antimony	ND	mg/L	D	0.003			1	E200.8	12/08/08 19:41/eli-c
Arsenic	0.006	mg/L		0.005			1	E200.8	12/13/08 00:36/eli-c
Barium	ND	mg/L		0.1			1	E200.8	12/08/08 19:41/eli-c
Beryllium	ND	mg/L		0.001			1	E200.8	12/08/08 19:41/eli-c
Boron	ND	mg/L		0.1			2	E200.7	12/12/08 19:50/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	12/08/08 19:41/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	12/08/08 19:41/eli-c
Copper	ND	mg/L		0.01			1	E200.8	12/08/08 19:41/eli-c
Iron	0.56	mg/L		0.03			2	E200.7	12/12/08 19:50/eli-c
Lead	ND	mg/L		0.001			1	E200.8	12/08/08 19:41/eli-c
Manganese	0.05	mg/L		0.01			1	E200.8	12/08/08 19:41/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	11/24/08 09:14/eli-b
Molybdenum	ND	mg/L		0.1			1	E200.8	12/08/08 19:41/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	12/08/08 19:41/eli-c
Selenium	ND	mg/L		0.001			1	E200.8	12/08/08 19:41/eli-c
Silver	ND	mg/L		0.005			1	E200.8	12/08/08 19:41/eli-c
Strontium	0.9	mg/L		0.1			1	E200.8	12/08/08 19:41/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	12/08/08 19:41/eli-c
Uranium	0.0031	mg/L		0.0003			1	E200.8	12/08/08 19:41/eli-c
Zinc	ND	mg/L		0.01			2	E200.7	12/12/08 19:50/eli-c
DATA QUALITY									
A/C Balance (± 5)	2.10	%					1	A1030 E	01/29/09 00:00/jmh
Anions	11.1	meq/L					1	A1030 E	01/29/09 00:00/jmh
Cations	11.6	meq/L					1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	749	mg/L					1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.880						1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-012  
**Client Sample ID:** DewBurd GW681

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:55  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	172	mg/L		5		1	A2320 B	11/25/08 11:50/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/25/08 11:50/mb
Bicarbonate as HCO <sub>3</sub>	210	mg/L		5		1	A2320 B	11/25/08 11:50/mb
Calcium	64.7	mg/L		0.5		2	E200.7	12/10/08 18:13/eli-c
Chloride	16	mg/L		1		1	E300.0	11/20/08 23:15/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	11/20/08 23:15/jmh
Magnesium	24.5	mg/L		0.5		2	E200.7	12/10/08 18:13/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/25/08 17:31/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:15/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:15/jmh
Potassium	9.7	mg/L		0.5		2	E200.7	12/10/08 18:13/eli-c
Sodium	218	mg/L	D	2		2	E200.7	12/10/08 18:13/eli-c
Sulfate	478	mg/L	D	3		50	E300.0	11/21/08 08:33/jmh
Silica	8.7	mg/L		0.2		2	E200.7	12/10/08 18:13/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1270	umhos/cm		5.0		1	A2510 B	11/25/08 15:46/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.16	s.u.		0.01		1	A4500-H B	11/25/08 15:00/tb
Sodium Adsorption Ratio (SAR)	5.9	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	11/21/08 11:49/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:28/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/03/08 21:28/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:28/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 18:13/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:28/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:28/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:28/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 18:13/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:28/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	12/03/08 21:28/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:28/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:28/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:28/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:16/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 18:20/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:28/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-012  
**Client Sample ID:** DewBurd GW681

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:55  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0098	mg/L		0.0003		1	E200.8	12/03/08 21:28/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:28/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:28/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 04:32/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 16:07/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1850	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha precision (±)	29.4	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha MDC	4.3	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta	605	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta precision (±)	9.2	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta MDC	5.6	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Lead 210	29.0	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	5.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	8.7	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	2.9	pCi/L		1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	1.2	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	398	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 precision (±)	3.7	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	2100	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	270	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	10.8	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.6	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	2.2	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.88	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	0.08	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-012  
**Client Sample ID:** DewBurd GW681

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 13:55  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 17:20/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	335000	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	872	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 08:06/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/05/08 08:06/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 08:06/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 08:06/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 23:10/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 08:06/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 08:06/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 08:06/eli-c
Iron	0.06	mg/L		0.03		2	E200.7	12/10/08 23:10/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 08:06/eli-c
Manganese	0.09	mg/L		0.01		1	E200.8	12/05/08 08:06/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 09:16/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 08:06/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 08:06/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 08:06/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 16:24/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	12/05/08 08:06/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 08:06/eli-c
Uranium	0.0087	mg/L		0.0003		1	E200.8	12/05/08 08:06/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 08:06/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	3.94	%				1	A1030 E	01/29/09 00:00/jmh
Anions	13.9	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	15.0	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	939	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.960					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 15:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
MAJOR IONS								
Alkalinity, Total as CaCO3	138	mg/L		5		1	A2320 B	11/25/08 11:53/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:53/mb
Bicarbonate as HCO3	168	mg/L		5		1	A2320 B	11/25/08 11:53/mb
Calcium	77.0	mg/L		0.5		2	E200.7	12/10/08 18:21/eli-c
Chloride	5	mg/L		1		1	E300.0	11/20/08 23:31/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	11/20/08 23:31/jmh
Magnesium	22.6	mg/L		0.5		2	E200.7	12/10/08 18:21/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:32/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:31/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:31/jmh
Potassium	8.9	mg/L		0.5		2	E200.7	12/10/08 18:21/eli-c
Sodium	135	mg/L	D	2		2	E200.7	12/10/08 18:21/eli-c
Sulfate	391	mg/L	D	3		50	E300.0	11/21/08 08:49/jmh
Silica	9.1	mg/L		0.2		2	E200.7	12/10/08 18:21/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	973	umhos/cm		5.0		1	A2510 B	11/25/08 15:47/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.04	s.u.		0.01		1	A4500-H B	11/25/08 15:01/tb
Sodium Adsorption Ratio (SAR)	3.5	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	700	mg/L		5		1	A2540 C	11/21/08 11:50/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:35/eli-c
Arsenic	0.012	mg/L		0.001		1	E200.8	12/03/08 21:35/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:35/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 18:21/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:35/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:35/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:35/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 18:21/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:35/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/03/08 21:35/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:35/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:35/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:35/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:18/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 18:26/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:35/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 15:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0026	mg/L		0.0003		1	E200.8	12/03/08 21:35/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:35/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:35/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 04:39/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 16:09/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	13.9	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha precision (±)	2.9	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Alpha MDC	3.2	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta	4.2	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta precision (±)	2.2	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Gross Beta MDC	3.5	pCi/L				1	E900.0	12/24/08 13:29/eli-ca
Lead 210	-0.2	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	4.4	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.1	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	1.9	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/17/08 00:57/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/12/08 16:26/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	12/12/08 16:26/eli-c
Gross Gamma	960	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.5	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	0.097	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	0.04	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 15:00  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 17:20/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1800	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	99.1	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 08:12/eli-c
Arsenic	0.022	mg/L		0.001		1	E200.8	12/05/08 08:12/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 08:12/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 08:12/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 23:14/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 08:12/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 08:12/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 08:12/eli-c
Iron	1.19	mg/L		0.03		2	E200.7	12/10/08 23:14/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 08:12/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/05/08 08:12/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 09:18/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 08:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 08:12/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 08:12/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 16:45/eli-c
Strontium	1.3	mg/L		0.1		1	E200.8	12/05/08 08:12/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 08:12/eli-c
Uranium	0.0022	mg/L		0.0003		1	E200.8	12/05/08 08:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 08:12/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	3.16	%				1	A1030 E	01/29/09 00:00/jmh
Anions	11.1	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	11.8	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	747	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.940					1	A1030 E	01/29/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-014  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:30  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	180	mg/L		5		1	A2320 B	11/25/08 11:54/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/25/08 11:54/mb
Bicarbonate as HCO3	219	mg/L		5		1	A2320 B	11/25/08 11:54/mb
Calcium	92.4	mg/L		0.5		2	E200.7	12/10/08 18:25/eli-c
Chloride	11	mg/L		1		1	E300.0	11/20/08 23:47/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	11/20/08 23:47/jmh
Magnesium	31.7	mg/L		0.5		2	E200.7	12/10/08 18:25/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	11/25/08 17:33/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:47/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/20/08 23:47/jmh
Potassium	10.5	mg/L		0.5		2	E200.7	12/10/08 18:25/eli-c
Sodium	180	mg/L	D	2		2	E200.7	12/10/08 18:25/eli-c
Sulfate	480	mg/L	D	3		50	E300.0	11/21/08 09:06/jmh
Silica	8.5	mg/L		0.2		2	E200.7	12/10/08 18:25/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1180	umhos/cm		5.0		1	A2510 B	11/25/08 15:49/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	11/25/08 16:00/jmh
pH	8.01	s.u.		0.01		1	A4500-H B	11/25/08 15:02/tb
Sodium Adsorption Ratio (SAR)	4.1	unitless		0.10		1	Calculation	01/29/09 11:40/ADM
Solids, Total Dissolved TDS @ 180 C	890	mg/L		5		1	A2540 C	11/21/08 11:50/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/03/08 21:55/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/03/08 21:55/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/03/08 21:55/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 18:25/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/03/08 21:55/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/03/08 21:55/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/03/08 21:55/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/10/08 18:25/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/03/08 21:55/eli-c
Manganese	0.17	mg/L		0.01		1	E200.8	12/03/08 21:55/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/03/08 21:55/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/03/08 21:55/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/03/08 21:55/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	12/05/08 10:21/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 18:33/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/03/08 21:55/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-014  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:30  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0055	mg/L		0.0003		1	E200.8	12/03/08 21:55/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/03/08 21:55/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/03/08 21:55/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/11/08 04:45/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	12/04/08 16:11/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	12/05/08 11:31/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	32.6	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha precision (±)	4.6	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Alpha MDC	4.2	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta	17.6	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta precision (±)	2.7	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Gross Beta MDC	4.1	pCi/L				1	E900.0	12/24/08 13:29/eli-c
Lead 210	-2	pCi/L	U			1	E909.0M	12/11/08 10:00/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Lead 210 MDC	8.7	pCi/L				1	E909.0M	12/11/08 10:00/eli-c
Polonium 210	0.1	pCi/L	U	1.0		1	RMO-3008	12/11/08 10:19/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	12/11/08 10:19/eli-c
Radium 226	2.9	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/17/08 00:57/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/15/08 08:55/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/15/08 08:55/eli-c
Gross Gamma	910	pCi/L		20		1	E901.1	12/03/08 15:07/eli-c
Gross Gamma precision (±)	210	pCi/L				1	E901.1	12/03/08 15:07/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.0	pCi/L	U			1	E909.0M	12/18/08 07:13/eli-c
Lead 210 precision (±)	5.4	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Lead 210 MDC	9.0	pCi/L				1	E909.0M	12/18/08 07:13/eli-c
Polonium 210	0.24	pCi/L	U			1	RMO-3008	12/30/08 08:57/eli-c
Polonium 210 precision (±)	0.42	pCi/L				1	RMO-3008	12/30/08 08:57/eli-c
Radium 226	-0.1	pCi/L	U			1	E903.0	12/18/08 17:20/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	12/18/08 17:20/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08110211-014  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/29/09  
**Collection Date:** 11/18/08 14:30  
**Date Received:** 11/19/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.4	pCi/L				1	E903.0	12/18/08 17:20/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	12/11/08 15:00/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/11/08 15:00/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1280	pCi/L		100		1	D5072-92	11/23/08 09:20/eli-c
Radon 222 precision (±)	93.3	pCi/L				1	D5072-92	11/23/08 09:20/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/05/08 08:45/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/05/08 08:45/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/05/08 08:45/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/05/08 08:45/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/10/08 23:18/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/05/08 08:45/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/05/08 08:45/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/05/08 08:45/eli-c
Iron	0.95	mg/L		0.03		2	E200.7	12/10/08 23:18/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/05/08 08:45/eli-c
Manganese	0.18	mg/L		0.01		1	E200.8	12/05/08 08:45/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/24/08 09:21/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/05/08 08:45/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/05/08 08:45/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/05/08 08:45/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/08/08 16:51/eli-c
Strontium	1.5	mg/L		0.1		1	E200.8	12/05/08 08:45/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/05/08 08:45/eli-c
Uranium	0.0051	mg/L		0.0003		1	E200.8	12/05/08 08:45/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/05/08 08:45/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	4.85	%				1	A1030 E	01/29/09 00:00/jmh
Anions	13.9	meq/L				1	A1030 E	01/29/09 00:00/jmh
Cations	15.4	meq/L				1	A1030 E	01/29/09 00:00/jmh
Solids, Total Dissolved Calculated	938	mg/L				1	A1030 E	01/29/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	01/29/09 00:00/jmh

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

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

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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B			Batch: 081125A-ALK-SEL-W						
Sample ID: LCS1_081125A	Laboratory Control Sample				Run: PH_COND1-R_081125A		11/25/08 08:40		
Alkalinity, Total as CaCO3	940	mg/L	5.0	94	90	110			
Sample ID: MBLK1_081125A	Method Blank				Run: PH_COND1-R_081125A		11/25/08 08:41		
Alkalinity, Total as CaCO3	ND	mg/L	3						
Sample ID: R08110211-005AMS	Sample Matrix Spike				Run: PH_COND1-R_081125A		11/25/08 11:30		
Alkalinity, Total as CaCO3	376	mg/L	5.0	119	80	120			
Sample ID: R08110211-005AMSD	Sample Matrix Spike Duplicate				Run: PH_COND1-R_081125A		11/25/08 11:32		
Alkalinity, Total as CaCO3	374	mg/L	5.0	117	80	120	0.5	10	
Sample ID: R08110211-014AMS	Sample Matrix Spike				Run: PH_COND1-R_081125A		11/25/08 11:56		
Alkalinity, Total as CaCO3	300	mg/L	5.0	113	80	120			
Sample ID: R08110211-014AMSD	Sample Matrix Spike Duplicate				Run: PH_COND1-R_081125A		11/25/08 11:59		
Alkalinity, Total as CaCO3	300	mg/L	5.0	113	80	120	0	10	
Method: A2510 B			Batch: 081125_1_COND-PROBE-W						
Sample ID: LCS_COND-1_081125	Laboratory Control Sample				Run: PH_COND2-R_081125B		11/25/08 15:23		
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
Sample ID: LCS1-1_081125	Laboratory Control Sample				Run: PH_COND2-R_081125B		11/25/08 15:24		
Conductivity @ 25 C	149	umhos/cm	5.0	99	90	110			
Sample ID: LCS2-1_081125	Laboratory Control Sample				Run: PH_COND2-R_081125B		11/25/08 15:26		
Conductivity @ 25 C	4960	umhos/cm	5.0	99	90	110			
Sample ID: MBLK-1_081125	Method Blank				Run: PH_COND2-R_081125B		11/25/08 15:23		
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: R08110211-010ADUP	Sample Duplicate				Run: PH_COND2-R_081125B		11/25/08 15:42		
Conductivity @ 25 C	1170	umhos/cm	5.0				0.9	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>					Batch: 081121A-SLDS-TDS-W				
<b>Sample ID: LCS1_081121A</b>	Laboratory Control Sample				Run: BAL-4-R_081121A				11/21/08 10:50
Solids, Total Dissolved TDS @ 180 C	190	mg/L	5.0	92	90	110			
<b>Sample ID: MBLK1_081121A</b>	Method Blank				Run: BAL-4-R_081121A				11/21/08 10:52
Solids, Total Dissolved TDS @ 180 C	6	mg/L	3						
<b>Sample ID: R08110211-004AMS</b>	Sample Matrix Spike				Run: BAL-4-R_081121A				11/21/08 11:32
Solids, Total Dissolved TDS @ 180 C	980	mg/L	5.0	101	80	120			
<b>Sample ID: R08110211-004AMSD</b>	Sample Matrix Spike Duplicate				Run: BAL-4-R_081121A				11/21/08 11:33
Solids, Total Dissolved TDS @ 180 C	990	mg/L	5.0	103	80	120	0.4	10	
<b>Sample ID: R08110211-014AMS</b>	Sample Matrix Spike				Run: BAL-4-R_081121A				11/21/08 11:51
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	117	80	120			
<b>Sample ID: R08110211-014AMSD</b>	Sample Matrix Spike Duplicate				Run: BAL-4-R_081121A				11/21/08 11:51
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	111	80	120	1.1	10	
<b>Method: A2580 B</b>					Batch: 081125-ORP-ISE-W				
<b>Sample ID: LCS</b>	Laboratory Control Sample				Run: PH_COND1-R_081125B				11/25/08 16:00
Oxidation-Reduction Potential	480	mV		101	95	105			
<b>Sample ID: R08110211-001F</b>	Sample Duplicate				Run: PH_COND1-R_081125B				11/25/08 16:00
Oxidation-Reduction Potential	310	mV					6.7	10	
<b>Sample ID: R08110211-011F</b>	Sample Duplicate				Run: PH_COND1-R_081125B				11/25/08 16:00
Oxidation-Reduction Potential	280	mV					0.1	10	
<b>Method: A3114 B</b>					Batch: C_SE3114-081205				
<b>Sample ID: MBLK</b>	Method Blank				Run: SUB-C111885				12/05/08 09:31
Selenium	ND	mg/L	0.0003						
<b>Sample ID: 288-178-1</b>	Laboratory Control Sample				Run: SUB-C111885				12/05/08 09:33
Selenium	0.049	mg/L	0.0010	99	90	110			
<b>Sample ID: R08110211-001E</b>	Sample Matrix Spike				Run: SUB-C111885				12/05/08 09:40
Selenium	0.047	mg/L	0.0010	93	85	115			
<b>Sample ID: R08110211-001E</b>	Sample Matrix Spike Duplicate				Run: SUB-C111885				12/05/08 09:42
Selenium	0.047	mg/L	0.0010	95	85	115	1.9	15	
<b>Sample ID: R08110211-011E</b>	Sample Matrix Spike				Run: SUB-C111885				12/05/08 10:12
Selenium	0.045	mg/L	0.0010	90	85	115			
<b>Sample ID: R08110211-011E</b>	Sample Matrix Spike Duplicate				Run: SUB-C111885				12/05/08 10:14
Selenium	0.046	mg/L	0.0010	92	85	115	2.7	15	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B							Batch: C_SEIV3114-081204		
Sample ID: MBLK Selenium-IV	Method Blank ND	mg/L	0.0003			Run: SUB-C111846			12/04/08 15:21
Sample ID: 288-178-1 Selenium-IV	Laboratory Control Sample 0.051	mg/L	0.0010	101	90	110			12/04/08 15:23
Sample ID: R08110211-001E Selenium-IV	Sample Matrix Spike 0.052	mg/L	0.0010	104	85	115			12/04/08 15:30
Sample ID: R08110211-001E Selenium-IV	Sample Matrix Spike Duplicate 0.053	mg/L	0.0010	106	85	115	1.8	10	12/04/08 15:32
Sample ID: R08110211-011E Selenium-IV	Sample Matrix Spike 0.050	mg/L	0.0010	99	85	115			12/04/08 16:02
Sample ID: R08110211-011E Selenium-IV	Sample Matrix Spike Duplicate 0.048	mg/L	0.0010	95	85	115	4.1	10	12/04/08 16:04
Method: A4500-H B							Batch: 081125_1_PH-W		
Sample ID: LCS_pH-1_081125 pH	Laboratory Control Sample 6.86	s.u.	0.010	100	98.55	101.45			11/25/08 14:42
Sample ID: R08110211-010ADUP pH	Sample Duplicate 8.24	s.u.	0.010			Run: PH_COND2-R_081125A	0	1.25	11/25/08 14:57

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G		Batch: A2008-11-25_2_NH3_01							
Sample ID: MBLK-2 Nitrogen, Ammonia as N	Method Blank ND	mg/L	0.01			Run: TECHAA2-R_081125A			11/25/08 14:44
Sample ID: LFB-3 Nitrogen, Ammonia as N	Laboratory Fortified Blank 0.26	mg/L	0.10	105	90	110			11/25/08 14:45
Sample ID: LFB-4 Nitrogen, Ammonia as N	Laboratory Fortified Blank 0.26	mg/L	0.10	105	90	110			11/25/08 14:46
Sample ID: R08110211-001BMS Nitrogen, Ammonia as N	Sample Matrix Spike 0.25	mg/L	0.10	101	80	120			11/25/08 17:11
Sample ID: R08110211-001BMSD Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.25	mg/L	0.10	99	80	120	1.6	10	11/25/08 17:12
Sample ID: R08110211-008BMS Nitrogen, Ammonia as N	Sample Matrix Spike 0.43	mg/L	0.10	108	80	120			11/25/08 17:25
Sample ID: R08110211-008BMSD Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.42	mg/L	0.10	107	80	120	0.9	10	11/25/08 17:26
Sample ID: R08110220-001CMS Nitrogen, Ammonia as N	Sample Matrix Spike 0.24	mg/L	0.10	94	80	120			11/25/08 17:38
Sample ID: R08110220-001CMSD Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.24	mg/L	0.10	96	80	120	2.1	10	11/25/08 17:39
Method: D5072-92		Batch: C_R111404							
Sample ID: R08110211-014G Radon 222	Sample Duplicate 1340	pCi/L	100			Run: SUB-C111404	4.4	30	11/23/08 09:20
Sample ID: MB-R111404 Radon 222	Method Blank 50	pCi/L				Run: SUB-C111404			11/23/08 09:20 U
Sample ID: LCS-R111404 Radon 222	Laboratory Control Sample 303	pCi/L	100	83	70	130			11/23/08 09:20

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_20705		
Sample ID: MB-20705	Method Blank		Run: SUB-C112228				12/12/08 19:30		
Boron	0.02	mg/L	0.01						
Iron	ND	mg/L	0.009						
Zinc	0.002	mg/L	0.001						
Sample ID: LCS3-20705	Laboratory Control Sample		Run: SUB-C112228				12/12/08 19:34		
Boron	0.530	mg/L	0.10	106	85	115			
Iron	2.66	mg/L	0.030	106	85	115			
Zinc	0.515	mg/L	0.010	103	85	115			
Sample ID: C08120017-002AMS3	Sample Matrix Spike		Run: SUB-C112228				12/12/08 19:58		
Boron	0.898	mg/L	0.13	109	70	130			
Iron	4.92	mg/L	0.087	124	70	130			
Zinc	0.610	mg/L	0.014	110	70	130			
Sample ID: C08120017-002AMSD3	Sample Matrix Spike Duplicate		Run: SUB-C112228				12/12/08 20:02		
Boron	0.830	mg/L	0.13	95	70	130	7.9	20	
Iron	4.64	mg/L	0.087	113	70	130	5.8	20	
Zinc	0.561	mg/L	0.014	100	70	130	8.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R112099		
Sample ID: R08110211-001C	Sample Matrix Spike		Run: SUB-C112099				12/10/08 16:28		
Boron	2.00	mg/L	0.10	100	70	130			
Iron	2.00	mg/L	0.030	100	70	130			
Silicon	0.733	mg/L	0.10	92	70	130			
Calcium	103	mg/L	1.0	103	70	130			
Magnesium	101	mg/L	1.0	101	70	130			
Potassium	92.3	mg/L	1.0	92	70	130			
Sodium	101	mg/L	1.5	101	70	130			
Silica	1.57	mg/L	0.21	92	70	130			
Sample ID: R08110211-001C	Sample Matrix Spike Duplicate		Run: SUB-C112099				12/10/08 16:32		
Boron	2.04	mg/L	0.10	102	70	130	1.6	20	
Iron	2.02	mg/L	0.030	101	70	130	0.8	20	
Silicon	0.742	mg/L	0.10	93	70	130	1.2	20	
Calcium	104	mg/L	1.0	104	70	130	1.6	20	
Magnesium	102	mg/L	1.0	102	70	130	1.2	20	
Potassium	92.1	mg/L	1.0	92	70	130	0.2	20	
Sodium	102	mg/L	1.5	102	70	130	0.8	20	
Silica	1.59	mg/L	0.21	93	70	130	1.2	20	
Sample ID: R08110211-011C	Sample Matrix Spike		Run: SUB-C112099				12/10/08 18:05		
Boron	2.11	mg/L	0.10	101	70	130			
Iron	2.04	mg/L	0.030	102	70	130			
Silicon	5.05	mg/L	0.10		70	130			A
Calcium	148	mg/L	1.0	103	70	130			
Magnesium	119	mg/L	1.0	103	70	130			
Potassium	96.2	mg/L	1.0	89	70	130			
Sodium	280	mg/L	1.5	101	70	130			
Silica	10.8	mg/L	0.21		70	130			A
Sample ID: R08110211-011C	Sample Matrix Spike Duplicate		Run: SUB-C112099				12/10/08 18:09		
Boron	2.17	mg/L	0.10	104	70	130	2.8	20	
Iron	2.09	mg/L	0.030	104	70	130	2.2	20	
Silicon	5.14	mg/L	0.10		70	130	1.8	20	A
Calcium	151	mg/L	1.0	105	70	130	1.8	20	
Magnesium	120	mg/L	1.0	104	70	130	0.9	20	
Potassium	97.8	mg/L	1.0	90	70	130	1.6	20	
Sodium	278	mg/L	1.5	99	70	130	0.5	20	
Silica	11.0	mg/L	0.21		70	130	1.8	20	A
Sample ID: R08110211-001D	Sample Matrix Spike		Run: SUB-C112099				12/10/08 22:17		
Boron	2.07	mg/L	0.10	103	70	130			
Iron	2.10	mg/L	0.030	103	70	130			
Silicon	0.766	mg/L	0.10	96	70	130			
Calcium	107	mg/L	1.0	106	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R112099		
<b>Sample ID: R08110211-001D</b>	Sample Matrix Spike		Run: SUB-C112099				12/10/08 22:17		
Magnesium	106	mg/L	1.0	106	70	130			
Potassium	93.4	mg/L	1.0	93	70	130			
Sodium	100.0	mg/L	1.1	100	70	130			
Silica	1.64	mg/L	0.21	82	70	130			
<b>Sample ID: R08110211-001D</b>	Sample Matrix Spike Duplicate		Run: SUB-C112099				12/10/08 22:21		
Boron	2.03	mg/L	0.10	101	70	130	1.9	20	
Iron	2.04	mg/L	0.030	100	70	130	2.9	20	
Silicon	0.753	mg/L	0.10	94	70	130	1.7	20	
Calcium	104	mg/L	1.0	103	70	130	2.9	20	
Magnesium	102	mg/L	1.0	102	70	130	3.9	20	
Potassium	91.0	mg/L	1.0	91	70	130	2.6	20	
Sodium	98.9	mg/L	1.1	99	70	130	1.1	20	
Silica	1.61	mg/L	0.21	81	70	130	1.7	20	
<b>Method: E200.7_8</b>							Batch: C_R112099		
<b>Sample ID: MB-081210A</b>	Method Blank		Run: SUB-C112099				12/10/08 12:20		
Boron	0.03	mg/L	0.008						
Iron	ND	mg/L	0.005						
Silicon	ND	mg/L	0.02						
Calcium	ND	mg/L	0.1						
Magnesium	ND	mg/L	0.04						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.8						
Silica	ND	mg/L	0.04						
<b>Sample ID: LFB-081210A</b>	Laboratory Fortified Blank		Run: SUB-C112099				12/10/08 12:24		
Boron	1.08	mg/L	0.10	105	85	125			
Iron	1.07	mg/L	0.030	107	85	125			
Silicon	0.381	mg/L	0.021	95	85	125			
Calcium	53.2	mg/L	0.50	106	85	125			
Magnesium	53.8	mg/L	0.50	108	85	125			
Potassium	44.8	mg/L	0.50	90	85	125			
Sodium	49.0	mg/L	0.77	98	85	125			
Silica	0.815	mg/L	0.044	95	85	125			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20705		
<b>Sample ID: MB-20705</b>	Method Blank		Run: SUB-C111977				12/08/08 19:21		
Antimony	0.0008	mg/L	0.0002						
Arsenic	0.005	mg/L	5E-05						
Barium	ND	mg/L	9E-05						
Beryllium	ND	mg/L	0.0001						
Cadmium	3E-05	mg/L	3E-05						
Chromium	0.002	mg/L	5E-05						
Copper	0.003	mg/L	0.0002						
Lead	ND	mg/L	5E-05						
Manganese	ND	mg/L	3E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	0.0008	mg/L	6E-05						
Selenium	ND	mg/L	0.0002						
Silver	ND	mg/L	4E-05						
Strontium	0.0002	mg/L	8E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
<b>Sample ID: LCS3-20705</b>	Laboratory Control Sample		Run: SUB-C111977				12/08/08 19:27		
Antimony	0.537	mg/L	0.050	107	85	115			
Arsenic	0.517	mg/L	0.0010	102	85	115			
Barium	0.512	mg/L	0.10	102	85	115			
Beryllium	0.244	mg/L	0.010	98	85	115			
Cadmium	0.249	mg/L	0.010	100	85	115			
Chromium	0.486	mg/L	0.050	97	85	115			
Copper	0.473	mg/L	0.010	94	85	115			
Lead	0.495	mg/L	0.050	99	85	115			
Manganese	2.38	mg/L	0.010	95	85	115			
Molybdenum	0.508	mg/L	0.10	102	85	115			
Nickel	0.477	mg/L	0.050	95	85	115			
Selenium	0.507	mg/L	0.0010	101	85	115			
Silver	0.0534	mg/L	0.010	107	85	115			
Strontium	0.540	mg/L	0.10	108	85	115			
Thallium	0.508	mg/L	0.10	102	85	115			
Uranium	0.537	mg/L	0.00030	107	85	115			
Zinc	0.456	mg/L	0.010	91	85	115			
<b>Sample ID: C08120017-002AMS3</b>	Sample Matrix Spike		Run: SUB-C111977				12/08/08 20:15		
Antimony	0.553	mg/L	0.050	110	70	130			
Arsenic	0.535	mg/L	0.0010	104	70	130			
Barium	0.686	mg/L	0.10	107	70	130			
Beryllium	0.241	mg/L	0.010	96	70	130			
Cadmium	0.247	mg/L	0.010	99	70	130			
Chromium	0.490	mg/L	0.050	97	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20705		
<b>Sample ID: C08120017-002AMS3</b>	Sample Matrix Spike		Run: SUB-C111977				12/08/08 20:15		
Copper	0.474	mg/L	0.010	93	70	130			
Lead	0.514	mg/L	0.050	102	70	130			
Manganese	2.83	mg/L	0.010	96	70	130			
Molybdenum	0.764	mg/L	0.10	107	70	130			
Nickel	0.475	mg/L	0.050	94	70	130			
Selenium	0.561	mg/L	0.0010	100	70	130			
Silver	0.0529	mg/L	0.010	106	70	130			
Strontium	0.972	mg/L	0.10	109	70	130			
Thallium	0.502	mg/L	0.10	100	70	130			
Uranium	0.572	mg/L	0.00030	113	70	130			
Zinc	0.472	mg/L	0.010	89	70	130			
<b>Sample ID: C08120017-002AMSD3</b>	Sample Matrix Spike Duplicate		Run: SUB-C111977				12/08/08 20:49		
Antimony	0.537	mg/L	0.050	107	70	130	2.9	20	
Arsenic	0.523	mg/L	0.0010	101	70	130	2.3	20	
Barium	0.668	mg/L	0.10	103	70	130	2.6	20	
Beryllium	0.235	mg/L	0.010	94	70	130	2.4	20	
Cadmium	0.240	mg/L	0.010	96	70	130	3	20	
Chromium	0.479	mg/L	0.050	95	70	130	2.3	20	
Copper	0.464	mg/L	0.010	91	70	130	2.2	20	
Lead	0.508	mg/L	0.050	101	70	130	1.2	20	
Manganese	2.80	mg/L	0.010	94	70	130	1.3	20	
Molybdenum	0.740	mg/L	0.10	102	70	130	3.1	20	
Nickel	0.463	mg/L	0.050	92	70	130	2.7	20	
Selenium	0.542	mg/L	0.0010	96	70	130	3.5	20	
Silver	0.0517	mg/L	0.010	103	70	130	2.4	20	
Strontium	0.957	mg/L	0.10	106	70	130	1.5	20	
Thallium	0.500	mg/L	0.10	100	70	130	0.5	20	
Uranium	0.568	mg/L	0.00030	113	70	130	0.8	20	
Zinc	0.463	mg/L	0.010	87	70	130	2	20	
<b>Sample ID: MB-20705</b>	Method Blank		Run: SUB-C112034				12/09/08 21:52		
Antimony	0.0004	mg/L	0.0002						
Arsenic	0.004	mg/L	5E-05						
Barium	ND	mg/L	9E-05						
Beryllium	ND	mg/L	0.0001						
Cadmium	ND	mg/L	3E-05						
Chromium	0.002	mg/L	5E-05						
Copper	0.003	mg/L	0.0002						
Lead	ND	mg/L	5E-05						
Manganese	0.0003	mg/L	3E-05						
Molybdenum	0.0001	mg/L	5E-05						
Nickel	0.0006	mg/L	6E-05						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20705		
<b>Sample ID: MB-20705</b>	Method Blank		Run: SUB-C112034				12/09/08 21:52		
Selenium	ND	mg/L	0.0002						
Silver	ND	mg/L	4E-05						
Strontium	0.0002	mg/L	8E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
Zinc	0.001	mg/L	0.0003						
<b>Sample ID: LCS3-20705</b>	Laboratory Control Sample		Run: SUB-C112034				12/09/08 21:58		
Antimony	0.530	mg/L	0.050	106	85	115			
Arsenic	0.504	mg/L	0.0010	100	85	115			
Barium	0.507	mg/L	0.10	101	85	115			
Beryllium	0.237	mg/L	0.010	95	85	115			
Cadmium	0.247	mg/L	0.010	99	85	115			
Chromium	0.485	mg/L	0.050	97	85	115			
Copper	0.475	mg/L	0.010	94	85	115			
Lead	0.504	mg/L	0.050	101	85	115			
Manganese	2.48	mg/L	0.010	99	85	115			
Molybdenum	0.515	mg/L	0.10	103	85	115			
Nickel	0.477	mg/L	0.050	95	85	115			
Selenium	0.490	mg/L	0.0010	98	85	115			
Silver	0.0475	mg/L	0.010	95	85	115			
Strontium	0.518	mg/L	0.10	104	85	115			
Thallium	0.514	mg/L	0.10	103	85	115			
Uranium	0.527	mg/L	0.00030	105	85	115			
Zinc	0.474	mg/L	0.010	95	85	115			
<b>Sample ID: C08120017-002AMS3</b>	Sample Matrix Spike		Run: SUB-C112034				12/09/08 22:46		
Antimony	0.551	mg/L	0.050	110	70	130			
Arsenic	0.529	mg/L	0.0010	103	70	130			
Barium	0.682	mg/L	0.10	106	70	130			
Beryllium	0.225	mg/L	0.010	90	70	130			
Cadmium	0.245	mg/L	0.010	98	70	130			
Chromium	0.478	mg/L	0.050	95	70	130			
Copper	0.482	mg/L	0.010	95	70	130			
Lead	0.520	mg/L	0.050	103	70	130			
Manganese	2.81	mg/L	0.010	95	70	130			
Molybdenum	0.794	mg/L	0.10	113	70	130			
Nickel	0.482	mg/L	0.050	96	70	130			
Selenium	0.552	mg/L	0.0010	98	70	130			
Silver	0.0477	mg/L	0.010	95	70	130			
Strontium	0.945	mg/L	0.10	107	70	130			
Thallium	0.521	mg/L	0.10	104	70	130			
Uranium	0.578	mg/L	0.00030	115	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>									Batch: C_20705
<b>Sample ID: C08120017-002AMS3</b>	Sample Matrix Spike				Run: SUB-C112034				12/09/08 22:46
Zinc	0.494	mg/L	0.010	93	70	130			
<b>Sample ID: C08120017-002AMSD3</b>	Sample Matrix Spike Duplicate				Run: SUB-C112034				12/09/08 22:52
Antimony	0.535	mg/L	0.050	107	70	130	3		20
Arsenic	0.515	mg/L	0.0010	100	70	130	2.6		20
Barium	0.662	mg/L	0.10	102	70	130	3		20
Beryllium	0.219	mg/L	0.010	87	70	130	3		20
Cadmium	0.238	mg/L	0.010	95	70	130	3		20
Chromium	0.462	mg/L	0.050	91	70	130	3.4		20
Copper	0.465	mg/L	0.010	91	70	130	3.6		20
Lead	0.505	mg/L	0.050	100	70	130	2.9		20
Manganese	2.74	mg/L	0.010	93	70	130	2.4		20
Molybdenum	0.759	mg/L	0.10	106	70	130	4.5		20
Nickel	0.466	mg/L	0.050	93	70	130	3.4		20
Selenium	0.535	mg/L	0.0010	95	70	130	3.1		20
Silver	0.0464	mg/L	0.010	93	70	130	2.8		20
Strontium	0.913	mg/L	0.10	100	70	130	3.5		20
Thallium	0.506	mg/L	0.10	101	70	130	2.9		20
Uranium	0.558	mg/L	0.00030	111	70	130	3.6		20
Zinc	0.479	mg/L	0.010	90	70	130	3		20
<b>Method: E200.8</b>									Batch: C_20766
<b>Sample ID: MB-20766</b>	Method Blank				Run: SUB-C112108				12/11/08 00:48
Uranium	8E-05	mg/L	1E-05						
<b>Sample ID: LCS1-20766</b>	Laboratory Control Sample				Run: SUB-C112108				12/11/08 00:55
Uranium	0.00466	mg/L	0.00030	92	80	120			
<b>Sample ID: R08110211-010I</b>	Sample Matrix Spike				Run: SUB-C112108				12/11/08 02:36
Uranium	0.0115	mg/L	0.00030	92	70	130			
<b>Sample ID: R08110211-010I</b>	Sample Matrix Spike Duplicate				Run: SUB-C112108				12/11/08 02:42
Uranium	0.0116	mg/L	0.00030	93	70	130	0.9		20

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R111761		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C111761				12/03/08 12:32		
Aluminum	ND	mg/L	0.0001						
Arsenic	ND	mg/L	6E-05						
Barium	ND	mg/L	3E-05						
Cadmium	ND	mg/L	1E-05						
Chromium	ND	mg/L	4E-05						
Copper	ND	mg/L	7E-05						
Lead	ND	mg/L	3E-05						
Manganese	ND	mg/L	5E-05						
Mercury	ND	mg/L	8E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	ND	mg/L	0.0007						
Thorium 232	ND	mg/L	4E-05						
Uranium	ND	mg/L	1E-05						
Vanadium	ND	mg/L	3E-05						
Zinc	0.0005	mg/L	0.0003						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C111761				12/03/08 12:39		
Aluminum	0.0461	mg/L	0.0010	92	85	115			
Arsenic	0.0471	mg/L	0.0010	94	85	115			
Barium	0.0462	mg/L	0.0010	92	85	115			
Cadmium	0.0466	mg/L	0.0010	93	85	115			
Chromium	0.0466	mg/L	0.0010	93	85	115			
Copper	0.0475	mg/L	0.0010	95	85	115			
Lead	0.0460	mg/L	0.0010	92	85	115			
Manganese	0.0467	mg/L	0.0010	93	85	115			
Mercury	0.00467	mg/L	0.0010	93	85	115			
Molybdenum	0.0472	mg/L	0.0010	95	85	115			
Nickel	0.0471	mg/L	0.0010	94	85	115			
Thorium 232	0.0455	mg/L	0.0010	91	85	115			
Uranium	0.0459	mg/L	0.00030	92	85	115			
Vanadium	0.0465	mg/L	0.0010	93	85	115			
Zinc	0.0502	mg/L	0.0010	99	85	115			
<b>Sample ID: R08110211-003C</b>	Post Digestion Spike		Run: SUB-C111761				12/03/08 19:53		
Aluminum	0.0493	mg/L	0.10	99	70	130			
Arsenic	0.0515	mg/L	0.0010	100	70	130			
Barium	0.0603	mg/L	0.10	101	70	130			
Cadmium	0.0468	mg/L	0.010	94	70	130			
Chromium	0.0472	mg/L	0.050	94	70	130			
Copper	0.0479	mg/L	0.010	93	70	130			
Lead	0.0508	mg/L	0.050	102	70	130			
Manganese	0.192	mg/L	0.010	93	70	130			
Mercury	0.00508	mg/L	0.0010	102	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8					Batch: C_R111761				
Sample ID: R08110211-003C					Post Digestion Spike		Run: SUB-C111761		12/03/08 19:53
Molybdenum	0.0516	mg/L	0.10	102	70	130			
Nickel	0.0492	mg/L	0.050	92	70	130			
Thorium 232	0.0529	mg/L	0.0010	106	70	130			
Uranium	0.0531	mg/L	0.00030	105	70	130			
Vanadium	0.0483	mg/L	0.10	96	70	130			
Zinc	0.0489	mg/L	0.010	91	70	130			
Sample ID: R08110211-003C					Post Digestion Spike Duplicate		Run: SUB-C111761		12/03/08 20:00
Aluminum	0.0482	mg/L	0.10	96	70	130	0	20	
Arsenic	0.0519	mg/L	0.0010	101	70	130	0.7	20	
Barium	0.0597	mg/L	0.10	99	70	130	0	20	
Cadmium	0.0473	mg/L	0.010	95	70	130	1.1	20	
Chromium	0.0460	mg/L	0.050	91	70	130	0	20	
Copper	0.0473	mg/L	0.010	92	70	130	1.3	20	
Lead	0.0501	mg/L	0.050	100	70	130	1.2	20	
Manganese	0.188	mg/L	0.010	86	70	130	1.8	20	
Mercury	0.00506	mg/L	0.0010	101	70	130	0.4	20	
Molybdenum	0.0517	mg/L	0.10	102	70	130	0	20	
Nickel	0.0495	mg/L	0.050	92	70	130	0	20	
Thorium 232	0.0529	mg/L	0.0010	106	70	130	0.1	20	
Uranium	0.0531	mg/L	0.00030	105	70	130	0.1	20	
Vanadium	0.0475	mg/L	0.10	95	70	130	0	20	
Zinc	0.0487	mg/L	0.010	91	70	130	0.5	20	
Sample ID: R08110211-013C					Post Digestion Spike		Run: SUB-C111761		12/03/08 21:42
Aluminum	0.0573	mg/L	0.10	115	70	130			
Arsenic	0.0623	mg/L	0.0010	101	70	130			
Barium	0.0620	mg/L	0.10	99	70	130			
Cadmium	0.0469	mg/L	0.010	94	70	130			
Chromium	0.0469	mg/L	0.050	93	70	130			
Copper	0.0479	mg/L	0.010	94	70	130			
Lead	0.0497	mg/L	0.050	99	70	130			
Manganese	0.110	mg/L	0.010	93	70	130			
Mercury	0.00516	mg/L	0.0010	103	70	130			
Molybdenum	0.0512	mg/L	0.10	100	70	130			
Nickel	0.0484	mg/L	0.050	92	70	130			
Thorium 232	0.0516	mg/L	0.0010	103	70	130			
Uranium	0.0538	mg/L	0.00030	102	70	130			
Vanadium	0.0481	mg/L	0.10	96	70	130			
Zinc	0.0484	mg/L	0.010	93	70	130			
Sample ID: R08110211-013C					Post Digestion Spike Duplicate		Run: SUB-C111761		12/03/08 21:49
Aluminum	0.0523	mg/L	0.10	105	70	130	0	20	
Arsenic	0.0623	mg/L	0.0010	101	70	130	0.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R111761		
Sample ID: R08110211-013C	Post Digestion Spike Duplicate			Run: SUB-C111761			12/03/08 21:49		
Barium	0.0622	mg/L	0.10	100	70	130	0	20	
Cadmium	0.0470	mg/L	0.010	94	70	130	0.1	20	
Chromium	0.0472	mg/L	0.050	93	70	130	0	20	
Copper	0.0471	mg/L	0.010	92	70	130	1.8	20	
Lead	0.0501	mg/L	0.050	100	70	130	0.8	20	
Manganese	0.111	mg/L	0.010	94	70	130	0.6	20	
Mercury	0.00521	mg/L	0.0010	104	70	130	0.9	20	
Molybdenum	0.0512	mg/L	0.10	100	70	130	0	20	
Nickel	0.0492	mg/L	0.050	94	70	130	0	20	
Thorium 232	0.0515	mg/L	0.0010	103	70	130	0.2	20	
Uranium	0.0540	mg/L	0.00030	103	70	130	0.3	20	
Vanadium	0.0483	mg/L	0.10	96	70	130	0	20	
Zinc	0.0475	mg/L	0.010	91	70	130	1.8	20	
Sample ID: C08110911-007BMS	Sample Matrix Spike			Run: SUB-C111761			12/04/08 01:06		
Aluminum	0.0966	mg/L	0.10	97	70	130			
Arsenic	0.0954	mg/L	0.0010	94	70	130			
Barium	0.227	mg/L	0.10	93	70	130			
Cadmium	0.0896	mg/L	0.010	90	70	130			
Chromium	0.0862	mg/L	0.050	86	70	130			
Copper	0.0919	mg/L	0.010	88	70	130			
Lead	0.0942	mg/L	0.050	94	70	130			
Manganese	0.114	mg/L	0.010	85	70	130			
Mercury	0.00950	mg/L	0.0010	9	70	130			S
Molybdenum	0.0949	mg/L	0.10	94	70	130			
Nickel	0.0951	mg/L	0.050	89	70	130			
Thorium 232	0.0986	mg/L	0.0010	99	70	130			
Uranium	0.102	mg/L	0.00030	98	70	130			
Vanadium	0.0902	mg/L	0.10	89	70	130			
Zinc	0.0892	mg/L	0.010	86	70	130			
Sample ID: C08110911-007BMSD	Sample Matrix Spike Duplicate			Run: SUB-C111761			12/04/08 01:12		
Aluminum	0.101	mg/L	0.10	101	70	130	4.9	20	
Arsenic	0.0965	mg/L	0.0010	95	70	130	1.1	20	
Barium	0.231	mg/L	0.10	97	70	130	1.6	20	
Cadmium	0.0905	mg/L	0.010	90	70	130	1	20	
Chromium	0.0859	mg/L	0.050	86	70	130	0.2	20	
Copper	0.0931	mg/L	0.010	89	70	130	1.4	20	
Lead	0.0938	mg/L	0.050	94	70	130	0.4	20	
Manganese	0.113	mg/L	0.010	84	70	130	0.4	20	
Mercury	0.00941	mg/L	0.0010	9	70	130	0.9	20	S
Molybdenum	0.0986	mg/L	0.10	98	70	130	0	20	
Nickel	0.0980	mg/L	0.050	92	70	130	2.9	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## QA/QC Summary Report

**Client:** RESPEC Inc

**Report Date:** 01/29/09

**Project:** Edgemont

**Work Order:** R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.8							Batch: C_R111761		
<b>Sample ID:</b> C08110911-007BMSD		Sample Matrix Spike Duplicate			Run: SUB-C111761			12/04/08 01:12	
Thorium 232	0.0984	mg/L	0.0010	98	70	130	0.2	20	
Uranium	0.102	mg/L	0.00030	98	70	130	0.2	20	
Vanadium	0.0897	mg/L	0.10	88	70	130	0	20	
Zinc	0.0901	mg/L	0.010	86	70	130	1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>					Batch: C_R111874				
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C111874		12/04/08 22:10				
Antimony	0.0004	mg/L	0.0003						
Arsenic	ND	mg/L	2E-05						
Barium	ND	mg/L	2E-05						
Beryllium	ND	mg/L	3E-05						
Cadmium	1E-05	mg/L	8E-06						
Chromium	ND	mg/L	2E-05						
Copper	2E-05	mg/L	1E-05						
Lead	ND	mg/L	1E-05						
Manganese	ND	mg/L	2E-05						
Molybdenum	3E-05	mg/L	3E-05						
Nickel	ND	mg/L	2E-05						
Selenium	ND	mg/L	4E-05						
Silver	3E-05	mg/L	3E-05						
Strontium	ND	mg/L	2E-05						
Thallium	ND	mg/L	1.0E-05						
Uranium	ND	mg/L	7E-06						
Zinc	0.0005	mg/L	0.0002						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C111874		12/04/08 22:17				
Antimony	0.0480	mg/L	0.0010	95	85	115			
Arsenic	0.0496	mg/L	0.0010	99	85	115			
Barium	0.0498	mg/L	0.0010	100	85	115			
Beryllium	0.0502	mg/L	0.0010	100	85	115			
Cadmium	0.0496	mg/L	0.0010	99	85	115			
Chromium	0.0492	mg/L	0.0010	98	85	115			
Copper	0.0497	mg/L	0.0010	99	85	115			
Lead	0.0493	mg/L	0.0010	99	85	115			
Manganese	0.0474	mg/L	0.0010	95	85	115			
Molybdenum	0.0497	mg/L	0.0010	99	85	115			
Nickel	0.0496	mg/L	0.0010	99	85	115			
Selenium	0.0508	mg/L	0.0010	102	85	115			
Silver	0.0203	mg/L	0.0010	101	85	115			
Strontium	0.0475	mg/L	0.0010	95	85	115			
Thallium	0.0473	mg/L	0.0010	95	85	115			
Uranium	0.0459	mg/L	0.00030	92	85	115			
Zinc	0.0495	mg/L	0.0010	98	85	115			
<b>Sample ID: C08110862-024BMS4</b>	Post Digestion Spike		Run: SUB-C111874		12/05/08 01:46				
Antimony	0.0513	mg/L	0.050	103	70	130			
Arsenic	0.0508	mg/L	0.0010	101	70	130			
Barium	0.107	mg/L	0.10	100	70	130			
Beryllium	0.0476	mg/L	0.010	95	70	130			
Cadmium	0.0494	mg/L	0.010	99	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R111874		
<b>Sample ID: C08110862-024BMS4</b>	Post Digestion Spike		Run: SUB-C111874				12/05/08 01:46		
Chromium	0.0489	mg/L	0.050	98	70	130			
Copper	0.0484	mg/L	0.010	95	70	130			
Lead	0.0497	mg/L	0.050	99	70	130			
Manganese	0.0547	mg/L	0.010	96	70	130			
Molybdenum	0.0627	mg/L	0.10	99	70	130			
Nickel	0.0483	mg/L	0.050	95	70	130			
Selenium	0.0519	mg/L	0.0010	103	70	130			
Silver	0.0196	mg/L	0.010	98	70	130			
Strontium	0.343	mg/L	0.10		70	130			A
Thallium	0.0477	mg/L	0.10	95	70	130			
Uranium	0.266	mg/L	0.00030		70	130			A
Zinc	0.0546	mg/L	0.010	101	70	130			
<b>Sample ID: C08110862-024BMSD4</b>	Post Digestion Spike Duplicate		Run: SUB-C111874				12/05/08 01:53		
Antimony	0.0518	mg/L	0.050	104	70	130	1	20	
Arsenic	0.0507	mg/L	0.0010	101	70	130	0.4	20	
Barium	0.107	mg/L	0.10	100	70	130	0.1	20	
Beryllium	0.0474	mg/L	0.010	95	70	130	0.6	20	
Cadmium	0.0493	mg/L	0.010	98	70	130	0.2	20	
Chromium	0.0489	mg/L	0.050	97	70	130	0	20	
Copper	0.0484	mg/L	0.010	95	70	130	0	20	
Lead	0.0496	mg/L	0.050	99	70	130	0	20	
Manganese	0.0541	mg/L	0.010	94	70	130	1.1	20	
Molybdenum	0.0624	mg/L	0.10	98	70	130	0	20	
Nickel	0.0479	mg/L	0.050	95	70	130	0	20	
Selenium	0.0516	mg/L	0.0010	103	70	130	0.6	20	
Silver	0.0197	mg/L	0.010	99	70	130	0.6	20	
Strontium	0.345	mg/L	0.10		70	130	0.6	20	A
Thallium	0.0475	mg/L	0.10	95	70	130	0	20	
Uranium	0.262	mg/L	0.00030		70	130	1.2	20	A
Zinc	0.0535	mg/L	0.010	99	70	130	1.9	20	
<b>Sample ID: R08110211-008C</b>	Post Digestion Spike		Run: SUB-C111874				12/05/08 04:10		
Antimony	0.0467	mg/L	0.050	93	70	130			
Arsenic	0.0522	mg/L	0.0010	104	70	130			
Barium	0.0604	mg/L	0.10	102	70	130			
Beryllium	0.0435	mg/L	0.010	87	70	130			
Cadmium	0.0473	mg/L	0.010	95	70	130			
Chromium	0.0501	mg/L	0.050	100	70	130			
Copper	0.0474	mg/L	0.010	95	70	130			
Lead	0.0509	mg/L	0.050	102	70	130			
Manganese	2.44	mg/L	0.010		70	130			A
Molybdenum	0.0507	mg/L	0.10	101	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.

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## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R111874		
<b>Sample ID: R08110211-008C</b>	Post Digestion Spike		Run: SUB-C111874				12/05/08 04:10		
Nickel	0.0496	mg/L	0.050	96	70	130			
Selenium	0.0528	mg/L	0.0010	105	70	130			
Silver	0.0111	mg/L	0.010	56	70	130			S
Strontium	4.77	mg/L	0.10		70	130			A
Thallium	0.0492	mg/L	0.10	98	70	130			
Uranium	0.154	mg/L	0.00030	98	70	130			
Zinc	0.0495	mg/L	0.010	93	70	130			
<b>Sample ID: R08110211-008C</b>	Post Digestion Spike Duplicate		Run: SUB-C111874				12/05/08 04:16		
Antimony	0.0486	mg/L	0.050	97	70	130	0	20	
Arsenic	0.0521	mg/L	0.0010	104	70	130	0.2	20	
Barium	0.0611	mg/L	0.10	104	70	130	0	20	
Beryllium	0.0439	mg/L	0.010	88	70	130	0.8	20	
Cadmium	0.0476	mg/L	0.010	95	70	130	0.7	20	
Chromium	0.0505	mg/L	0.050	101	70	130	0.8	20	
Copper	0.0472	mg/L	0.010	94	70	130	0.4	20	
Lead	0.0512	mg/L	0.050	102	70	130	0.6	20	
Manganese	2.44	mg/L	0.010		70	130	0.1	20	A
Molybdenum	0.0518	mg/L	0.10	103	70	130	0	20	
Nickel	0.0497	mg/L	0.050	96	70	130	0	20	
Selenium	0.0526	mg/L	0.0010	105	70	130	0.5	20	
Silver	0.0131	mg/L	0.010	66	70	130	16	20	S
Strontium	4.82	mg/L	0.10		70	130	1	20	A
Thallium	0.0494	mg/L	0.10	99	70	130	0	20	
Uranium	0.155	mg/L	0.00030	101	70	130	0.9	20	
Zinc	0.0491	mg/L	0.010	92	70	130	0.9	20	
<b>Sample ID: R08110211-007D</b>	Post Digestion Spike		Run: SUB-C111874				12/05/08 07:40		
Antimony	0.0459	mg/L	0.050	92	70	130			
Arsenic	0.0566	mg/L	0.0010	102	70	130			
Barium	0.0638	mg/L	0.10	101	70	130			
Beryllium	0.0428	mg/L	0.010	86	70	130			
Cadmium	0.0465	mg/L	0.010	93	70	130			
Chromium	0.0495	mg/L	0.050	98	70	130			
Copper	0.0471	mg/L	0.010	94	70	130			
Lead	0.0509	mg/L	0.050	102	70	130			
Manganese	1.05	mg/L	0.010		70	130			A
Molybdenum	0.0542	mg/L	0.10	100	70	130			
Nickel	0.0492	mg/L	0.050	96	70	130			
Selenium	0.0524	mg/L	0.0010	105	70	130			
Silver	0.0141	mg/L	0.010	70	70	130			
Strontium	5.73	mg/L	0.10		70	130			A
Thallium	0.0493	mg/L	0.10	99	70	130			

### 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.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R111874		
<b>Sample ID: R08110211-007D</b>	Post Digestion Spike		Run: SUB-C111874				12/05/08 07:40		
Uranium	0.0546	mg/L	0.00030	101	70	130			
Zinc	0.0466	mg/L	0.010	88	70	130			
<b>Sample ID: R08110211-007D</b>	Post Digestion Spike Duplicate		Run: SUB-C111874				12/05/08 07:46		
Antimony	0.0483	mg/L	0.050	97	70	130	0	20	
Arsenic	0.0572	mg/L	0.0010	103	70	130	1	20	
Barium	0.0641	mg/L	0.10	101	70	130	0	20	
Beryllium	0.0421	mg/L	0.010	84	70	130	1.5	20	
Cadmium	0.0471	mg/L	0.010	94	70	130	1.4	20	
Chromium	0.0502	mg/L	0.050	100	70	130	1.4	20	
Copper	0.0475	mg/L	0.010	95	70	130	0.9	20	
Lead	0.0510	mg/L	0.050	102	70	130	0.1	20	
Manganese	1.04	mg/L	0.010		70	130	1.4	20	A
Molybdenum	0.0548	mg/L	0.10	101	70	130	0	20	
Nickel	0.0496	mg/L	0.050	97	70	130	0	20	
Selenium	0.0515	mg/L	0.0010	103	70	130	1.7	20	
Silver	0.0147	mg/L	0.010	73	70	130	4.1	20	
Strontium	5.71	mg/L	0.10		70	130	0.4	20	A
Thallium	0.0495	mg/L	0.10	99	70	130	0	20	
Uranium	0.0577	mg/L	0.00030	107	70	130	5.5	20	
Zinc	0.0467	mg/L	0.010	89	70	130	0.2	20	
<b>Method: E200.8</b>							Batch: C_R111977		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C111977				12/08/08 12:48		
Silver	ND	mg/L	3E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C111977				12/08/08 12:55		
Silver	0.0225	mg/L	0.0010	112	85	115			
<b>Sample ID: R08110211-012D</b>	Post Digestion Spike		Run: SUB-C111977				12/08/08 16:31		
Silver	0.0180	mg/L	0.010	90	70	130			
<b>Sample ID: R08110211-012D</b>	Post Digestion Spike Duplicate		Run: SUB-C111977				12/08/08 16:38		
Silver	0.0199	mg/L	0.010	99	70	130	9.9	20	
<b>Sample ID: R08110211-014C</b>	Post Digestion Spike		Run: SUB-C111977				12/08/08 18:40		
Silver	0.0202	mg/L	0.010	101	70	130			
<b>Sample ID: R08110211-014C</b>	Post Digestion Spike Duplicate		Run: SUB-C111977				12/08/08 18:47		
Silver	0.0198	mg/L	0.010	99	70	130	2.1	20	

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/29/09

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>									Batch: B_35991
<b>Sample ID: MB-35991</b>	Method Blank					Run: SUB-B121239			11/24/08 11:16
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-35991</b>	Laboratory Fortified Blank					Run: SUB-B121239			11/24/08 11:18
Mercury	0.0020	mg/L	0.0010	98	85	115			
<b>Sample ID: R08110200-007E</b>	Sample Matrix Spike					Run: SUB-B121239			11/24/08 11:44
Mercury	0.0019	mg/L	0.0010	96	70	130			
<b>Sample ID: R08110200-007E</b>	Sample Matrix Spike Duplicate					Run: SUB-B121239			11/24/08 11:46
Mercury	0.0020	mg/L	0.0010	98	70	130	0	30	
<b>Method: E245.1</b>									Batch: B_35997
<b>Sample ID: MB-35997</b>	Method Blank					Run: SUB-B121239			11/24/08 08:35
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-35997</b>	Laboratory Fortified Blank					Run: SUB-B121239			11/24/08 08:37
Mercury	0.0020	mg/L	0.0010	99	85	115			
<b>Sample ID: R08110211-006J</b>	Sample Matrix Spike					Run: SUB-B121239			11/24/08 08:52
Mercury	0.0020	mg/L	0.0010	100	70	130			
<b>Sample ID: R08110211-006J</b>	Sample Matrix Spike Duplicate					Run: SUB-B121239			11/24/08 08:54
Mercury	0.0021	mg/L	0.0010	104	70	130	0	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0							Batch: R38508		
Sample ID: LFB0811202111-3	Laboratory Fortified Blank			Run: DIONEX_081120A			11/20/08 18:03		
Chloride	4.88	mg/L	0.50	98	90	110			
Fluoride	2.06	mg/L	0.10	103	90	110			
Nitrogen, Nitrate as N	2.35	mg/L	0.10	94	90	110			
Nitrogen, Nitrite as N	2.53	mg/L	0.10	101	90	110			
Sulfate	14.1	mg/L	1.0	94	90	110			
Sample ID: LFB0811202111-4	Laboratory Fortified Blank			Run: DIONEX_081120A			11/20/08 18:19		
Chloride	4.73	mg/L	0.50	95	90	110			
Fluoride	1.99	mg/L	0.10	100	90	110			
Nitrogen, Nitrate as N	2.27	mg/L	0.10	91	90	110			
Nitrogen, Nitrite as N	2.45	mg/L	0.10	98	90	110			
Sulfate	13.7	mg/L	1.0	91	90	110			
Sample ID: R08110211-001AMS	Sample Matrix Spike			Run: DIONEX_081120A			11/20/08 18:52		
Chloride	4.87	mg/L	0.50	97	80	120			
Fluoride	1.99	mg/L	0.10	100	80	120			
Nitrogen, Nitrate as N	2.34	mg/L	0.10	94	80	120			
Nitrogen, Nitrite as N	2.52	mg/L	0.10	101	80	120			
Sulfate	14.0	mg/L	1.0	93	80	120			
Sample ID: R08110211-001AMSD	Sample Matrix Spike Duplicate			Run: DIONEX_081120A			11/20/08 19:08		
Chloride	4.75	mg/L	0.50	95	80	120	2.5	10	
Fluoride	1.93	mg/L	0.10	97	80	120	3.1	10	
Nitrogen, Nitrate as N	2.27	mg/L	0.10	91	80	120	3	10	
Nitrogen, Nitrite as N	2.45	mg/L	0.10	98	80	120	2.8	10	
Sulfate	13.7	mg/L	1.0	91	80	120	2.3	10	
Sample ID: R08110211-009AMS	Sample Matrix Spike			Run: DIONEX_081120A			11/20/08 22:09		
Chloride	16.1	mg/L	0.50	71	80	120			S
Fluoride	2.13	mg/L	0.10	86	80	120			
Nitrogen, Nitrate as N	2.33	mg/L	0.10	93	80	120			
Nitrogen, Nitrite as N	2.45	mg/L	0.10	98	80	120			
Sulfate	572	mg/L	1.0		80	120			A
Sample ID: R08110211-009AMSD	Sample Matrix Spike Duplicate			Run: DIONEX_081120A			11/20/08 22:25		
Chloride	16.0	mg/L	0.50	69	80	120	0.6	10	S
Fluoride	2.03	mg/L	0.10	81	80	120	4.8	10	
Nitrogen, Nitrate as N	2.27	mg/L	0.10	91	80	120	2.6	10	
Nitrogen, Nitrite as N	2.39	mg/L	0.10	96	80	120	2.5	10	
Sulfate	573	mg/L	1.0		80	120	0.2	10	A
Sample ID: R08110227-001AMS	Sample Matrix Spike			Run: DIONEX_081120A			11/21/08 01:26		
Chloride	32.3	mg/L	0.50		80	120			A
Fluoride	5.05	mg/L	0.10	83	80	120			

### 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.  
S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R38508		
<b>Sample ID: R08110227-001AMS</b>	Sample Matrix Spike		Run: DIONEX_081120A				11/21/08 01:26		
Nitrogen, Nitrate as N	2.34	mg/L	0.10	94	80	120			
Nitrogen, Nitrite as N	2.40	mg/L	0.10	96	80	120			
Sulfate	323	mg/L	1.0		80	120			A
<b>Sample ID: R08110227-001AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081120A				11/21/08 01:42		
Chloride	32.3	mg/L	0.50		80	120	0.1	10	A
Fluoride	4.98	mg/L	0.10	79	80	120	1.4	10	S
Nitrogen, Nitrate as N	2.30	mg/L	0.10	92	80	120	1.7	10	
Nitrogen, Nitrite as N	2.34	mg/L	0.10	94	80	120	2.5	10	
Sulfate	323	mg/L	1.0		80	120	0	10	A
<b>Sample ID: R08110211-003AMS</b>	Sample Matrix Spike		Run: DIONEX_081120A				11/21/08 04:43		
Chloride	252	mg/L	5.4	94	80	120			
Fluoride	104	mg/L	0.56	95	80	120			
Nitrogen, Nitrate as N	115	mg/L	1.3	92	80	120			
Nitrogen, Nitrite as N	126	mg/L	2.9	101	80	120			
Sulfate	1150	mg/L	3.4	88	80	120			
<b>Sample ID: R08110211-003AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081120A				11/21/08 04:59		
Chloride	248	mg/L	5.4	92	80	120	1.9	10	
Fluoride	102	mg/L	0.56	93	80	120	1.9	10	
Nitrogen, Nitrate as N	113	mg/L	1.3	90	80	120	2	10	
Nitrogen, Nitrite as N	123	mg/L	2.9	99	80	120	2	10	
Sulfate	1130	mg/L	3.4	86	80	120	1.4	10	
<b>Sample ID: R08110211-011AMS</b>	Sample Matrix Spike		Run: DIONEX_081120A				11/21/08 08:00		
Chloride	248	mg/L	5.4	93	80	120			
Fluoride	103	mg/L	0.56	96	80	120			
Nitrogen, Nitrate as N	115	mg/L	1.3	92	80	120			
Nitrogen, Nitrite as N	125	mg/L	2.9	100	80	120			
Sulfate	1020	mg/L	3.4	86	80	120			
<b>Sample ID: R08110211-011AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081120A				11/21/08 08:16		
Chloride	249	mg/L	5.4	94	80	120	0.2	10	
Fluoride	104	mg/L	0.56	97	80	120	0.9	10	
Nitrogen, Nitrate as N	115	mg/L	1.3	92	80	120	0.2	10	
Nitrogen, Nitrite as N	125	mg/L	2.9	100	80	120	0.2	10	
Sulfate	1030	mg/L	3.4	86	80	120	0.4	10	

### Qualifiers:

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ND - Not detected at the reporting limit.

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

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>							Batch: C_GrAB-0581		
<b>Sample ID: MB-GrAB-0581</b>	Method Blank				Run: SUB-C112738			12/24/08 01:11	
Gross Alpha	-0.6	pCi/L							U
Gross Beta	-2	pCi/L							U
<b>Sample ID: UNAT-GrAB-0581</b>	Laboratory Control Sample				Run: SUB-C112738			12/24/08 01:11	
Gross Alpha	140	pCi/L		99	70	130			
<b>Sample ID: Cs137-GrAB-0581</b>	Laboratory Control Sample				Run: SUB-C112738			12/24/08 01:11	
Gross Beta	83	pCi/L		91	70	130			
<b>Sample ID: C08120016-001AMS</b>	Sample Matrix Spike				Run: SUB-C112738			12/24/08 01:11	
Gross Alpha	150	pCi/L		112	70	130			
<b>Sample ID: C08120016-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C112738			12/24/08 01:11	
Gross Alpha	160	pCi/L		119	70	130	6.5	16	
<b>Sample ID: C08120016-001AMS</b>	Sample Matrix Spike				Run: SUB-C112738			12/24/08 01:10	
Gross Beta	88	pCi/L		96	70	130			
<b>Sample ID: C08120016-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C112738			12/24/08 01:10	
Gross Beta	97	pCi/L		106	70	130	10	16	
<b>Method: E901.1</b>							Batch: C_R112023		
<b>Sample ID: LCS-R112023</b>	Laboratory Control Sample				Run: SUB-C112023			12/03/08 15:07	
Americium 241	660	pCi/L	20	82	70	130			
Cesium 137	1300	pCi/L	20	93	70	130			
Potassium 40	6700	pCi/L	20	101	70	130			
<b>Sample ID: MB-R112023</b>	Method Blank				Run: SUB-C112023			12/03/08 15:07	
Bismuth 214	ND	pCi/L							U
Gross Gamma	ND	pCi/L							U
<b>Sample ID: R08110211-014H</b>	Sample Duplicate				Run: SUB-C112023			12/03/08 15:07	
Bismuth 214	80	pCi/L	20				43	79	
Lead 214	35	pCi/L	20				41	107	
Potassium 40	980	pCi/L	20				16	47	
Gross Gamma	1100	pCi/L	20				19	51	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0							Batch: C_20766		
Sample ID: R08110211-004I	Sample Duplicate				Run: SUB-C112516			12/18/08 15:28	
Radium 226	0.0035	pCi/L			70	130	190	403.7	U
Sample ID: C08110847-001FMS	Sample Matrix Spike				Run: SUB-C112516			12/18/08 17:20	
Radium 226	19	pCi/L		98	70	130			
Sample ID: LCS-20766	Laboratory Control Sample				Run: SUB-C112516			12/19/08 03:05	
Radium 226	14	pCi/L		101	70	130			
Sample ID: MB-20766	Method Blank				Run: SUB-C112516			12/19/08 03:05	
Radium 226	-2	pCi/L						U	
Method: E903.0							Batch: C_RA226-3296		
Sample ID: R08110211-010H	Sample Matrix Spike				Run: SUB-C112408			12/17/08 00:57	
Radium 226	16	pCi/L		88	70	130			
Sample ID: R08110211-010H	Sample Matrix Spike Duplicate				Run: SUB-C112408			12/17/08 00:57	
Radium 226	17	pCi/L		95	70	130	7.3	23	
Sample ID: MB-RA226-3296	Method Blank				Run: SUB-C112408			12/17/08 02:34	
Radium 226	-0.03	pCi/L						U	
Sample ID: LCS-RA226-3296	Laboratory Control Sample				Run: SUB-C112408			12/17/08 02:34	
Radium 226	7.8	pCi/L		98	70	130			
Method: E907.0							Batch: C_20766		
Sample ID: R08110211-012I	Sample Matrix Spike				Run: SUB-C112665			12/11/08 15:00	
Thorium 230	12.1	pCi/L	0.20	105	70	130			
Sample ID: R08110211-012I	Sample Matrix Spike Duplicate				Run: SUB-C112665			12/11/08 15:00	
Thorium 230	9.62	pCi/L	0.20	83	70	130	23	30	
Sample ID: LCS-20766	Laboratory Control Sample				Run: SUB-C112665			12/11/08 15:00	
Thorium 230	29.9	pCi/L	0.20	130	70	130			
Sample ID: MB-20766	Method Blank				Run: SUB-C112665			12/11/08 15:00	
Thorium 230	0.10	pCi/L						U	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/29/09  
Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-0708		
<b>Sample ID: LCS-RA-TH-ISO-0708</b>	Laboratory Control Sample				Run: SUB-C112347				12/12/08 16:26
Thorium 230	5.60	pCi/L	0.20	92	70	130			
<b>Sample ID: R08110211-007H</b>	Sample Matrix Spike				Run: SUB-C112347				12/12/08 16:26
Thorium 230	15.0	pCi/L	0.20	96	70	130			
<b>Sample ID: R08110211-007H</b>	Sample Matrix Spike Duplicate				Run: SUB-C112347				12/12/08 16:26
Thorium 230	16.6	pCi/L	0.20	106	70	130	10	41.6	
<b>Sample ID: MB-RA-TH-ISO-0708</b>	Method Blank				Run: SUB-C112347				12/15/08 08:55
Thorium 230	0.04	pCi/L							U
<b>Method: E909.0M</b>							Batch: C_20766		
<b>Sample ID: R08110211-007I</b>	Sample Matrix Spike				Run: SUB-C112810				12/18/08 07:13
Lead 210	1100	pCi/L		92	70	130			
<b>Sample ID: R08110211-007I</b>	Sample Matrix Spike Duplicate				Run: SUB-C112810				12/18/08 07:13
Lead 210	1100	pCi/L		96	70	130	4.5	30	
<b>Sample ID: MB-R112810</b>	Method Blank				Run: SUB-C112810				12/18/08 07:13
Lead 210	0.9	pCi/L							U
<b>Sample ID: LCS-R112810</b>	Laboratory Control Sample				Run: SUB-C112810				12/18/08 07:13
Lead 210	100	pCi/L		90	70	130			
<b>Method: E909.0M</b>							Batch: C_R112583		
<b>Sample ID: R08110211-012H</b>	Sample Matrix Spike				Run: SUB-C112583				12/11/08 10:00
Lead 210	140	pCi/L		98	70	130			
<b>Sample ID: R08110211-014H</b>	Sample Duplicate				Run: SUB-C112583				12/11/08 10:00
Lead 210	-1.7	pCi/L					38	30	UR
- The Sample and the Duplicate are both below the MDC; the RPD is acceptable.									
<b>Sample ID: MB-R112583</b>	Method Blank				Run: SUB-C112583				12/11/08 10:00
Lead 210	-5	pCi/L							U
<b>Sample ID: LCS-R112583</b>	Laboratory Control Sample				Run: SUB-C112583				12/11/08 10:00
Lead 210	120	pCi/L		108	70	130			

### Qualifiers:

RL - Analyte reporting limit.  
R - RPD exceeds advisory limit.

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





## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/29/09

Project: Edgemont

Work Order: R08110211

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RMO-3008							Batch: C_20766		
Sample ID: C08110848-001FMS	Sample Matrix Spike					Run: SUB-C112928			12/30/08 11:30
Polonium 210	42	pCi/L	1.0	110	70	130			
Sample ID: C08110848-001FMSD	Sample Matrix Spike Duplicate					Run: SUB-C112928			12/30/08 11:30
Polonium 210	47	pCi/L	1.0	114	70	130	12	56.1	
Sample ID: LCS-20766	Laboratory Control Sample					Run: SUB-C112928			12/30/08 11:30
Polonium 210	15	pCi/L	1.0	95	70	130			
Sample ID: MB-20766	Method Blank					Run: SUB-C112928			12/30/08 11:30
Polonium 210	-0.04	pCi/L							U
Method: RMO-3008							Batch: C_PO210-0166		
Sample ID: R08110211-014K	Sample Matrix Spike					Run: SUB-C112288			12/11/08 10:19
Polonium 210	45	pCi/L	1.0	105	70	130			
Sample ID: R08110211-014K	Sample Matrix Spike Duplicate					Run: SUB-C112288			12/11/08 10:19
Polonium 210	43	pCi/L	1.0	101	70	130	4.6	54.4	
Sample ID: LCS-PO210-0166	Laboratory Control Sample					Run: SUB-C112288			12/12/08 08:48
Polonium 210	19	pCi/L	1.0	111	70	130			
Sample ID: MB-PO210-0166	Method Blank					Run: SUB-C112288			12/12/08 08:48
Polonium 210	-0.03	pCi/L							U
Method: SW7470A							Analytical Run: SUB-B121239		
Sample ID: QCS	Initial Calibration Verification Standard								11/24/08 08:05
Mercury	0.0019	mg/L	0.0010	93	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



# Chain of Custody and Analytical Request Record

Page 1 of 1

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Scott Env.</u>		Project Name, PWS, Permit, Etc. <u>PowerTech DB</u>		Sample Origin State: <u>          </u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>RESPEC</u>		Contact Name: <u>Allen Scott</u>		Phone/Fax: <u>                    </u>		Sampler: (Please Print) <u>Allen Scott</u>	
Invoice Address: <u>RESPEC</u>		Invoice Contact & Phone: <u>                    </u>		Purchase Order: <u>                    </u>		Quote/Bottle Order: <u>                    </u>	
<div><input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: <input type="checkbox"/> Other:</div> <div><input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC</div>		Special Report/Formats - ELI must be notified prior to sample submittal for the following:		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by: <u>                    </u>	
Number of Containers Sample Type: A W S V B Vegetation Bioassay Other		ANALYSIS REQUESTED <u>As per Quote</u>		SEE ATTACHED <u>R U S H</u>		Comments: <u>                    </u>	
MATRIX		Collection Date		Collection Time		Receipt Temp <u>4.8</u> °C	
1 Dew Burdock BL401		11-18		8:45		On Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No	
2 GW 696		11-18		8:45		Custody Seal Y N	
3 GW 694		11-18		9:00		Intact Y N	
4 GW 688		11-18		10:00		Signature Match Y N	
5 GW 680		11-18		10:25		LABORATORY USE ONLY	
6 GW 694		11-18		9:05		208110211-001	
7 GW 3026		11-18		11:19		202	
8 GW 698		11-18		12:00		203	
9 GW 695		11-18		13:25		204	
10 GW 697		11-18		13:35		205	
Custody Record MUST be Signed		Relinquished by (print): <u>Allen Scott</u>		Date/Time: <u>11-19-08 10:36</u>		206	
		Relinquished by (print):		Date/Time:		207	
		Relinquished by (print):		Date/Time:		208	
		Relinquished by (print):		Date/Time:		209	
		Relinquished by (print):		Date/Time:		210	
Sample Disposal:		Return to Client:		Lab Disposal:		Signature: <u>Steve Fairland</u>	
						Date/Time: <u>11-19-08 10:36</u>	

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



Company Name: <b>Sci &amp; Env.</b>		Project Name, PWS, Permit, Etc. <b>Powertech DB</b>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <b>RESPEC</b>		Contact Name: <b>Allen Scott</b>		Sampler: (Please Print) <b>Allen Scott</b>	
Invoice Address: <b>RESPEC</b>		Phone/Fax: <b>Allen Scott</b>		Quote/Bottle Order:	
Special Report/Formats - ELI must be notified prior to sample submittal for the following:		<input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/MWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____		<input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC	
Number of Containers Sample Type: A W S V B Vegetation Bioassay Other		ANALYSIS REQUESTED <b>As Per Quote</b>		SEE ATTACHED Normal Turnaround (TAT)	
MATRIX 1 <b>GW 689</b> 2 <b>GW 681</b> 3 <b>GW 615</b> 4 <b>GW 622</b> 5 6 7 8 9 10		Collection Date 1 <b>11-78</b> 2 <b>11-78</b> 3 <b>11-78</b> 4 <b>11-78</b> 5 6 7 8 9 10		Collection Time 1 <b>14:02</b> 2 <b>13:05</b> 3 <b>15:00</b> 4 <b>14:30</b> 5 6 7 8 9 10	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) 1 <b>GW 689</b> 2 <b>GW 681</b> 3 <b>GW 615</b> 4 <b>GW 622</b> 5 6 7 8 9 10		R U S H Comments:		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	
Shipped by: Cooler Dye: Receipt Temp: <b>41.8 °C</b> On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal: Y N Intact: Y N Signature Match: Y N		Signature:		Date/Time:	
Signature:		Date/Time:		Signature:	
Signature:		Date/Time:		Signature:	

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



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## ANALYTICAL SUMMARY REPORT

January 27, 2009

Cory Foreman  
RESPEC Inc  
3824 Jet Dr  
Rapid City, SD 57701-

Workorder No.: R08120255

Quote ID: R286

Project Name: Edgemont

Energy Laboratories Inc. received the following 13 samples for RESPEC Inc on 12/18/2008 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R08120255-001	DewBurd BLK01	12/17/08 10:00	12/18/08	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved



## ANALYTICAL SUMMARY REPORT

R08120255-002 DewBurd GW681	12/17/08 10:48 12/18/08	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R08120255-003 DewBurd GW689	12/17/08 11:02 12/18/08	Aqueous	Same As Above
R08120255-004 DewBurd GW3026	12/17/08 12:46 12/18/08	Aqueous	Same As Above
R08120255-005 DewBurd GW698	12/17/08 13:00 12/18/08	Aqueous	Same As Above
R08120255-006 DewBurd GW698	12/17/08 13:15 12/18/08	Aqueous	Same As Above
R08120255-007 DewBurd GW680	12/17/08 13:50 12/18/08	Aqueous	Same As Above
R08120255-008 DewBurd GW622	12/17/08 14:20 12/18/08	Aqueous	Same As Above
R08120255-009 DewBurd GW697	12/17/08 14:45 12/18/08	Aqueous	Same As Above
R08120255-010 DewBurd GW695	12/17/08 15:10 12/18/08	Aqueous	Same As Above
R08120255-011 DewBurd GW694	12/17/08 15:45 12/18/08	Aqueous	Same As Above
R08120255-012 DewBurd GW696	12/17/08 16:05 12/18/08	Aqueous	Same As Above
R08120255-013 DewBurd GW615	12/17/08 11:27 12/18/08	Aqueous	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

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

Report Approved By:

Linda Larson  
Rapid City - Project Manager



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 10:00  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:04/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:04/mb
Bicarbonate as HCO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:04/mb
Calcium	ND	mg/L		0.5		2	E200.7	01/05/09 12:39/eli-c
Chloride	ND	mg/L		1		1	E300.0	12/18/08 22:01/jmh
Fluoride	ND	mg/L		0.1		1	E300.0	12/18/08 22:01/jmh
Magnesium	ND	mg/L		0.5		2	E200.7	01/05/09 12:39/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 14:48/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/08 22:01/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/18/08 22:01/jmh
Potassium	ND	mg/L		0.5		2	E200.7	01/05/09 12:39/eli-c
Sodium	ND	mg/L	D	2		2	E200.7	01/05/09 12:39/eli-c
Sulfate	ND	mg/L		1		1	E300.0	12/18/08 22:01/jmh
Silica	ND	mg/L		0.2		2	E200.7	01/05/09 12:39/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	ND	umhos/cm		5.0		1	A2510 B	12/19/08 09:02/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	12/23/08 14:30/jmh
pH	5.67	s.u.		0.01		1	A4500-H B	12/19/08 10:18/tb
Sodium Adsorption Ratio (SAR)	ND	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	12	mg/L		5		1	A2540 C	12/22/08 12:05/mb
- SAR calculations may not be appropriate for near blank results.								
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 18:04/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 18:04/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 18:04/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 12:39/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 18:04/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 18:04/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 18:04/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 12:39/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 18:04/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	12/26/08 18:04/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 18:04/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 18:04/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 18:04/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 15:38/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 18:04/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 10:00  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 18:04/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/26/08 18:04/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 18:04/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 18:04/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 21:29/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:05/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	0.5	pCi/L	U			1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	0.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	0.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	0.3	pCi/L	U			1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	1.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	2.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	2.2	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 11:36/eli-c
Polonium 210 precision (±)	0.18	pCi/L				1	RMO-3008	01/09/09 11:36/eli-c
Radium 226	-0.09	pCi/L	U			1	E903.0	01/05/09 12:37/eli-c
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.8	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.1	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.32	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08120255-001  
Client Sample ID: DewBurd BLK01

Report Date: 01/27/09  
Collection Date: 12/17/08 10:00  
Date Received: 12/18/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226	-0.4	pCi/L	U			1	E903.0	01/21/09 21:42/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	01/07/09 09:04/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 09:04/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	121	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	50.1	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 01:53/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/30/08 01:53/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 01:53/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 20:56/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 17:07/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 01:53/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 01:53/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 01:53/eli-c
Iron	0.04	mg/L		0.03		2	E200.7	01/05/09 17:07/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 01:53/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	12/30/08 01:53/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:04/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 20:56/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 01:53/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 01:53/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/02/09 19:32/eli-c
Strontium	ND	mg/L		0.1		1	E200.8	12/30/08 01:53/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 01:53/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/30/08 01:53/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 16:49/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08120255-002  
Client Sample ID: DewBurd GW681

Report Date: 01/27/09  
Collection Date: 12/17/08 10:48  
Date Received: 12/18/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	170	mg/L		5		1	A2320 B	12/23/08 10:13/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:13/mb
Bicarbonate as HCO <sub>3</sub>	207	mg/L		5		1	A2320 B	12/23/08 10:13/mb
Calcium	62.9	mg/L		0.5		2	E200.7	01/05/09 12:43/eli-c
Chloride	15	mg/L		1		1	E300.0	12/18/08 22:34/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	12/18/08 22:34/jmh
Magnesium	23.9	mg/L		0.5		2	E200.7	01/05/09 12:43/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 14:52/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/08 22:34/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/18/08 22:34/jmh
Potassium	9.7	mg/L		0.5		2	E200.7	01/05/09 12:43/eli-c
Sodium	215	mg/L	D	2		2	E200.7	01/05/09 12:43/eli-c
Sulfate	453	mg/L	D	3		50	E300.0	12/18/08 22:18/jmh
Silica	9.3	mg/L		0.2		2	E200.7	01/05/09 12:43/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1260	umhos/cm		5.0		1	A2510 B	12/19/08 09:04/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.82	s.u.		0.01		1	A4500-H B	12/19/08 10:22/tb
Sodium Adsorption Ratio (SAR)	5.9	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	12/22/08 12:08/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 18:10/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/26/08 18:10/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 18:10/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 12:43/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 18:10/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 18:10/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 18:10/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 12:43/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 18:10/eli-c
Manganese	0.09	mg/L		0.01		1	E200.8	12/26/08 18:10/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 18:10/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 18:10/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 18:10/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 15:44/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 18:10/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 18:10/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-002  
**Client Sample ID:** DewBurd GW681

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 10:48  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0083	mg/L		0.0003		1	E200.8	12/26/08 18:10/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 18:10/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 18:10/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 21:38/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:12/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1560	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha precision (±)	26.2	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha MDC	3.3	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta	526	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta precision (±)	8.7	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta MDC	5.3	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Lead 210	10.7	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	4.8	pCi/L		1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	1.5	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	291	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Radium 226 precision (±)	2.9	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	320	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	53	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	24.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.6	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	9.2	pCi/L		1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	2.4	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	1.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-002  
**Client Sample ID:** DewBurd GW681

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 10:48  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	01/07/09 09:04/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/07/09 09:04/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	2200	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	73.0	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:00/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/30/08 02:00/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:00/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 21:02/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 17:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:00/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:00/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:00/eli-c
Iron	0.09	mg/L		0.03		2	E200.7	01/05/09 17:11/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:00/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	12/30/08 02:00/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:07/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 21:02/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:00/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:00/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/02/09 19:38/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	12/30/08 02:00/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:00/eli-c
Uranium	0.0077	mg/L		0.0003		1	E200.8	12/30/08 02:00/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 16:55/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	5.22	%				1	A1030 E	01/23/09 00:00/jmh
Anions	13.3	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	14.7	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	907	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.990					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-003  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:02  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	158	mg/L		5		1	A2320 B	12/23/08 10:14/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	12/23/08 10:14/mb
Bicarbonate as HCO3	193	mg/L		5		1	A2320 B	12/23/08 10:14/mb
Calcium	54.4	mg/L		0.5		2	E200.7	01/05/09 12:47/eli-c
Chloride	6	mg/L		1		1	E300.0	12/18/08 23:40/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	12/18/08 23:40/jmh
Magnesium	18.1	mg/L		0.5		2	E200.7	01/05/09 12:47/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	12/26/08 14:55/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/08 23:40/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/18/08 23:40/jmh
Potassium	8.5	mg/L		0.5		2	E200.7	01/05/09 12:47/eli-c
Sodium	197	mg/L	D	2		2	E200.7	01/05/09 12:47/eli-c
Sulfate	408	mg/L	D	3		50	E300.0	12/18/08 22:51/jmh
Silica	10.3	mg/L		0.2		2	E200.7	01/05/09 12:47/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1100	umhos/cm		5.0		1	A2510 B	12/19/08 09:06/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.90	s.u.		0.01		1	A4500-H B	12/19/08 10:23/tb
Sodium Adsorption Ratio (SAR)	5.9	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	750	mg/L		5		1	A2540 C	12/22/08 12:08/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 18:44/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/26/08 18:44/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 18:44/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	01/05/09 12:47/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 18:44/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 18:44/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 18:44/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 12:47/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 18:44/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	12/26/08 18:44/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 18:44/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 18:44/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 18:44/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 15:47/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 18:44/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 18:44/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-003  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:02  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0050	mg/L		0.0003		1	E200.8	12/26/08 18:44/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 18:44/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 18:44/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0011	mg/L	D	0.0009		1	E200.8	01/01/09 21:42/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:14/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	54.6	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	4.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	2.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	23.0	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	3.4	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	1.7	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	6.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<p>- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.</p>								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.4	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.3	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.49	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	0.4	pCi/L	U			1	E903.0	01/21/09 21:42/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 interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-003  
**Client Sample ID:** DewBurd GW689

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:02  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/07/09 09:04/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 09:04/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1130	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	62.1	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 19:40/eli-c
Arsenic	0.005	mg/L	L	0.003		1	E200.8	12/30/08 19:40/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 19:40/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/30/08 19:40/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 19:08/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 19:40/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 19:40/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 19:40/eli-c
Iron	2.38	mg/L		0.03		2	E200.7	01/05/09 19:08/eli-c
Lead	0.004	mg/L		0.001		1	E200.8	12/30/08 19:40/eli-c
Manganese	0.09	mg/L		0.01		1	E200.8	12/30/08 19:40/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:09/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/30/08 19:40/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 19:40/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 19:40/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/30/08 19:40/eli-c
Strontium	1.0	mg/L		0.1		1	E200.8	12/30/08 19:40/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 19:40/eli-c
Uranium	0.0060	mg/L		0.0003		1	E200.8	12/30/08 19:40/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	12/30/08 19:40/eli-c
DATA QUALITY								
A/C Balance (± 5)	4.66	%				1	A1030 E	01/23/09 00:00/jmh
Anions	11.8	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	13.0	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	815	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.920					1	A1030 E	01/23/09 00:00/jmh

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
L - Lowest available reporting limit for the analytical method used.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-004  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 12:46  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
MAJOR IONS									
Alkalinity, Total as CaCO3	180	mg/L		5			1	A2320 B	12/23/08 10:17/mb
Carbonate as CO3	ND	mg/L		5			1	A2320 B	12/23/08 10:17/mb
Bicarbonate as HCO3	219	mg/L		5			1	A2320 B	12/23/08 10:17/mb
Calcium	377	mg/L		0.5			2	E200.7	01/05/09 13:03/eli-c
Chloride	16	mg/L		1			1	E300.0	12/19/08 00:46/jmh
Fluoride	0.4	mg/L		0.1			1	E300.0	12/19/08 00:46/jmh
Magnesium	120	mg/L		0.5			2	E200.7	01/05/09 13:03/eli-c
Nitrogen, Ammonia as N	0.5	mg/L		0.1			1	A4500-NH3 G	12/26/08 14:57/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1			1	E300.0	12/19/08 00:46/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1			1	E300.0	12/19/08 00:46/jmh
Potassium	19.7	mg/L		0.5			2	E200.7	01/05/09 13:03/eli-c
Sodium	164	mg/L	D	2			2	E200.7	01/05/09 13:03/eli-c
Sulfate	1290	mg/L	D	3			50	E300.0	12/18/08 23:56/jmh
Silica	9.6	mg/L		0.2			2	E200.7	01/05/09 13:03/eli-c
PHYSICAL PROPERTIES									
Conductivity @ 25 C	2490	umhos/cm		5.0			1	A2510 B	12/19/08 09:07/tb
Oxidation-Reduction Potential	310	mV					1	A2580 B	12/23/08 14:30/jmh
pH	6.83	s.u.		0.01			1	A4500-H B	12/19/08 10:24/tb
Sodium Adsorption Ratio (SAR)	1.9	unitless		0.10			1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5			1	A2540 C	12/22/08 12:09/mb
METALS - DISSOLVED									
Aluminum	ND	mg/L		0.1			1	E200.8	12/26/08 18:51/eli-c
Arsenic	0.002	mg/L		0.001			1	E200.8	12/26/08 18:51/eli-c
Barium	ND	mg/L		0.1			1	E200.8	12/26/08 18:51/eli-c
Boron	0.2	mg/L		0.1			2	E200.7	01/05/09 13:03/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	12/26/08 18:51/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	12/26/08 18:51/eli-c
Copper	ND	mg/L		0.01			1	E200.8	12/26/08 18:51/eli-c
Iron	6.93	mg/L		0.03			2	E200.7	01/05/09 13:03/eli-c
Lead	ND	mg/L		0.001			1	E200.8	12/26/08 18:51/eli-c
Manganese	1.18	mg/L		0.01			1	E200.8	12/26/08 18:51/eli-c
Mercury	ND	mg/L		0.001			1	E200.8	12/26/08 18:51/eli-c
Molybdenum	ND	mg/L		0.1			1	E200.8	12/26/08 18:51/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	12/26/08 18:51/eli-c
Selenium	ND	mg/L		0.001			1	A3114 B	01/09/09 15:49/eli-c
Silver	ND	mg/L		0.005			1	E200.8	12/26/08 18:51/eli-c
Thorium 232	ND	mg/L		0.005			1	E200.8	12/26/08 18:51/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-004  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 12:46  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0045	mg/L		0.0003		1	E200.8	12/26/08 18:51/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 18:51/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 18:51/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 21:46/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:16/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	23.9	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	6.1	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	6.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	19.0	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	5.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	9.1	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	2.3	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.34	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	2.7	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	4.0	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.31	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	0.2	pCi/L	U			1	E903.0	01/21/09 21:42/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-004  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 12:46  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 MDC	0.4	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	355	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	52.2	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:06/eli-c
Arsenic	0.009	mg/L		0.001		1	E200.8	12/30/08 02:06/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:06/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 21:09/eli-c
Boron	0.2	mg/L		0.1		2	E200.7	01/05/09 17:15/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:06/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:06/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:06/eli-c
Iron	17.0	mg/L		0.03		2	E200.7	01/05/09 17:15/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:06/eli-c
Manganese	1.08	mg/L		0.01		1	E200.8	12/30/08 02:06/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:11/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 21:09/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:06/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:06/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/02/09 19:45/eli-c
Strontium	5.9	mg/L		0.1		1	E200.8	12/30/08 02:06/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:06/eli-c
Uranium	0.0047	mg/L		0.0003		1	E200.8	12/30/08 02:06/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 17:02/eli-c
DATA QUALITY								
A/C Balance (± 5)	8.46	%				1	A1030 E	01/23/09 00:00/jmh
Anions	31.0	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	36.7	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	2120	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.08					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:00  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	114	mg/L		5		1	A2320 B	12/23/08 10:29/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:29/mb
Bicarbonate as HCO <sub>3</sub>	139	mg/L		5		1	A2320 B	12/23/08 10:29/mb
Calcium	374	mg/L		0.5		2	E200.7	01/05/09 13:07/eli-c
Chloride	10	mg/L		1		1	E300.0	12/19/08 01:18/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0	12/19/08 01:18/jmh
Magnesium	135	mg/L		0.5		2	E200.7	01/05/09 13:07/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 14:58/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 01:18/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 01:18/jmh
Potassium	15.5	mg/L		0.5		2	E200.7	01/05/09 13:07/eli-c
Sodium	84	mg/L	D	2		2	E200.7	01/05/09 13:07/eli-c
Sulfate	1340	mg/L	D	3		50	E300.0	12/19/08 01:02/jmh
Silica	11.3	mg/L		0.2		2	E200.7	01/05/09 13:07/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2290	umhos/cm		5.0		1	A2510 B	12/19/08 09:09/tb
Oxidation-Reduction Potential	160	mV				1	A2580 B	12/23/08 14:30/jmh
pH	6.92	s.u.		0.01		1	A4500-H B	12/19/08 10:25/tb
Sodium Adsorption Ratio (SAR)	0.95	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5		1	A2540 C	12/22/08 12:11/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 18:58/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 18:58/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 18:58/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 13:07/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 18:58/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 18:58/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 18:58/eli-c
Iron	2.99	mg/L		0.03		2	E200.7	01/05/09 13:07/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 18:58/eli-c
Manganese	2.58	mg/L		0.01		1	E200.8	12/26/08 18:58/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 18:58/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 18:58/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 18:58/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 15:51/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 18:58/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 18:58/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:00  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0998	mg/L		0.0003		1	E200.8	12/26/08 18:58/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 18:58/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 18:58/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0028	mg/L	D	0.0009		1	E200.8	01/01/09 21:50/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:19/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1570	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha precision (±)	37.7	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha MDC	6.7	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta	664	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta precision (±)	13.0	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta MDC	9.1	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Lead 210	4.7	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.3	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.35	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	363	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Radium 226 precision (±)	3.1	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	01/05/09 12:37/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	620	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	63	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	3.2	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	1.0	pCi/L		1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.81	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	4.7	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 precision (±)	0.7	pCi/L				1	E903.0	01/21/09 21:42/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:00  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	0.2	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	01/07/09 13:33/eli-c

- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.

## RADIONUCLIDES - TOTAL

Radon 222	37600	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	230	pCi/L				1	D5072-92	12/19/08 15:40/eli-c

## TOTAL METALS ANALYSES

Antimony	ND	mg/L		0.003		1	E200.8	01/14/09 13:58/eli-c
Arsenic	0.004	mg/L	L	0.002		1	E200.8	01/01/09 19:35/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/01/09 19:35/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 19:35/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 19:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/01/09 19:35/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/01/09 19:35/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/01/09 19:35/eli-c
Iron	4.66	mg/L		0.03		2	E200.7	01/05/09 19:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/01/09 19:35/eli-c
Manganese	2.54	mg/L		0.01		1	E200.8	01/01/09 19:35/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:19/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 19:35/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/01/09 19:35/eli-c
Selenium	ND	mg/L	L	0.002		1	E200.8	01/01/09 19:35/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 19:35/eli-c
Strontium	4.9	mg/L		0.1		1	E200.8	01/01/09 19:35/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/01/09 19:35/eli-c
Uranium	0.112	mg/L		0.0003		1	E200.8	01/01/09 19:35/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/08/09 17:22/eli-c

-Sb fails high in LCS, since sample is ND it is not effected by the high bias. Rdw

## DATA QUALITY

A/C Balance (± 5)	5.82	%				1	A1030 E	01/23/09 00:00/jmh
Anions	30.4	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	34.2	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	2060	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.07					1	A1030 E	01/23/09 00:00/jmh

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
L - Lowest available reporting limit for the analytical method used.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-006  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:15  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	114	mg/L		5		1	A2320 B	12/23/08 10:56/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 10:56/mb
Bicarbonate as HCO <sub>3</sub>	139	mg/L		5		1	A2320 B	12/23/08 10:56/mb
Calcium	392	mg/L		0.5		2	E200.7	01/05/09 13:11/eli-c
Chloride	10	mg/L		1		1	E300.0	12/19/08 01:51/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0	12/19/08 01:51/jmh
Magnesium	143	mg/L		0.5		2	E200.7	01/05/09 13:11/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 14:59/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 01:51/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 01:51/jmh
Potassium	16.2	mg/L		0.5		2	E200.7	01/05/09 13:11/eli-c
Sodium	90	mg/L	D	2		2	E200.7	01/05/09 13:11/eli-c
Sulfate	1340	mg/L	D	3		50	E300.0	12/19/08 01:35/jmh
Silica	11.4	mg/L		0.2		2	E200.7	01/05/09 13:11/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2320	umhos/cm		5.0		1	A2510 B	12/19/08 09:10/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	12/23/08 14:30/jmh
pH	6.86	s.u.		0.01		1	A4500-H B	12/19/08 10:26/tb
Sodium Adsorption Ratio (SAR)	0.99	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5		1	A2540 C	12/22/08 12:12/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 19:05/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 19:05/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 19:05/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 13:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 19:05/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 19:05/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 19:05/eli-c
Iron	0.22	mg/L		0.03		2	E200.7	01/05/09 13:11/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 19:05/eli-c
Manganese	2.63	mg/L		0.01		1	E200.8	12/26/08 19:05/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 19:05/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 19:05/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 19:05/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 15:54/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 19:05/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 19:05/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-006  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:15  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0956	mg/L		0.0003		1	E200.8	12/26/08 19:05/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 19:05/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 19:05/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0055	mg/L	D	0.0009		1	E200.8	01/01/09 22:10/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:23/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1730	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	39.2	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	6.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	626	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	12.6	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	9.1	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	4.1	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.4	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.42	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	335	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 precision (±)	3.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	01/08/09 08:39/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	01/08/09 08:39/eli-c
Gross Gamma	650	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	66	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	3.4	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	1.4	pCi/L		1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.69	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	21.6	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 precision (±)	1.4	pCi/L				1	E903.0	01/21/09 21:42/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-006  
**Client Sample ID:** DewBurd GW698

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:15  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
RADIONUCLIDES - SUSPENDED									
Radium 226 MDC	0.5	pCi/L					1	E903.0	01/21/09 21:42/eli-c
Thorium 230	0.3	pCi/L	U	0.2			1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.3	pCi/L					1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.									
RADIONUCLIDES - TOTAL									
Radon 222	36700	pCi/L		100			1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	227	pCi/L					1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES									
Antimony	ND	mg/L		0.003			1	E200.8	12/30/08 19:47/eli-c
Arsenic	0.004	mg/L	L	0.003			1	E200.8	12/30/08 19:47/eli-c
Barium	ND	mg/L		0.1			1	E200.8	12/30/08 19:47/eli-c
Beryllium	ND	mg/L		0.001			1	E200.8	12/30/08 19:47/eli-c
Boron	ND	mg/L		0.1			2	E200.7	01/05/09 19:16/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	12/30/08 19:47/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	12/30/08 19:47/eli-c
Copper	ND	mg/L		0.01			1	E200.8	12/30/08 19:47/eli-c
Iron	4.56	mg/L		0.03			2	E200.7	01/05/09 19:16/eli-c
Lead	ND	mg/L		0.001			1	E200.8	12/30/08 19:47/eli-c
Manganese	2.40	mg/L		0.01			1	E200.8	12/30/08 19:47/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	12/26/08 15:21/eli-b
Molybdenum	ND	mg/L		0.1			1	E200.8	12/30/08 19:47/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	12/30/08 19:47/eli-c
Selenium	0.001	mg/L		0.001			1	E200.8	12/30/08 19:47/eli-c
Silver	ND	mg/L		0.005			1	E200.8	12/30/08 19:47/eli-c
Strontium	4.6	mg/L		0.1			1	E200.8	12/30/08 19:47/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	12/30/08 19:47/eli-c
Uranium	0.107	mg/L		0.0003			1	E200.8	12/30/08 19:47/eli-c
Zinc	ND	mg/L		0.01			1	E200.8	12/30/08 19:47/eli-c
DATA QUALITY									
A/C Balance (± 5)	8.29	%					1	A1030 E	01/23/09 00:00/jmh
Anions	30.4	meq/L					1	A1030 E	01/23/09 00:00/jmh
Cations	35.9	meq/L					1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	2090	mg/L					1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.06						1	A1030 E	01/23/09 00:00/jmh

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

L - Lowest available reporting limit for the analytical method used.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-007  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:50  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
MAJOR IONS									
Alkalinity, Total as CaCO3	252	mg/L		5			1	A2320 B	12/23/08 11:03/mb
Carbonate as CO3	ND	mg/L		5			1	A2320 B	12/23/08 11:03/mb
Bicarbonate as HCO3	307	mg/L		5			1	A2320 B	12/23/08 11:03/mb
Calcium	396	mg/L		0.5			2	E200.7	01/05/09 13:15/eli-c
Chloride	13	mg/L		1			1	E300.0	12/19/08 02:57/jmh
Fluoride	0.2	mg/L		0.1			1	E300.0	12/19/08 02:57/jmh
Magnesium	128	mg/L		0.5			2	E200.7	01/05/09 13:15/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1			1	A4500-NH3 G	12/26/08 15:00/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1			1	E300.0	12/19/08 02:57/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1			1	E300.0	12/19/08 02:57/jmh
Potassium	19.3	mg/L		0.5			2	E200.7	01/05/09 13:15/eli-c
Sodium	151	mg/L	D	2			2	E200.7	01/05/09 13:15/eli-c
Sulfate	1310	mg/L	D	3			50	E300.0	12/19/08 02:08/jmh
Silica	9.4	mg/L		0.2			2	E200.7	01/05/09 13:15/eli-c
PHYSICAL PROPERTIES									
Conductivity @ 25 C	2510	umhos/cm		5.0			1	A2510 B	12/19/08 09:12/tb
Oxidation-Reduction Potential	240	mV					1	A2580 B	12/23/08 14:30/jmh
pH	7.23	s.u.		0.01			1	A4500-H B	12/19/08 10:28/tb
Sodium Adsorption Ratio (SAR)	1.7	unitless		0.10			1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5			1	A2540 C	12/22/08 12:12/mb
METALS - DISSOLVED									
Aluminum	ND	mg/L		0.1			1	E200.8	12/26/08 19:12/eli-c
Arsenic	ND	mg/L		0.001			1	E200.8	12/26/08 19:12/eli-c
Barium	ND	mg/L		0.1			1	E200.8	12/26/08 19:12/eli-c
Boron	0.2	mg/L		0.1			2	E200.7	01/05/09 13:15/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	12/26/08 19:12/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	12/26/08 19:12/eli-c
Copper	ND	mg/L		0.01			1	E200.8	12/26/08 19:12/eli-c
Iron	0.05	mg/L		0.03			2	E200.7	01/05/09 13:15/eli-c
Lead	ND	mg/L		0.001			1	E200.8	12/26/08 19:12/eli-c
Manganese	0.49	mg/L		0.01			1	E200.8	12/26/08 19:12/eli-c
Mercury	ND	mg/L		0.001			1	E200.8	12/26/08 19:12/eli-c
Molybdenum	ND	mg/L		0.1			1	E200.8	12/26/08 19:12/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	12/26/08 19:12/eli-c
Selenium	ND	mg/L		0.001			1	A3114 B	01/09/09 16:01/eli-c
Silver	ND	mg/L		0.005			1	E200.8	12/26/08 19:12/eli-c
Thorium 232	ND	mg/L		0.005			1	E200.8	12/26/08 19:12/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-007  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:50  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0199	mg/L		0.0003		1	E200.8	12/26/08 19:12/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 19:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 19:12/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:14/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:30/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	5140	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	71.3	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	7.4	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	2070	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	23.6	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	10.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	6.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.7	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.49	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	1110	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 precision (±)	5.5	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 12:37/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	01/08/09 15:39/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/08/09 15:39/eli-c
Gross Gamma	1500	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	96	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	5.9	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	2.8	pCi/L		1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	1.2	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	13.1	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 precision (±)	1.1	pCi/L				1	E903.0	01/21/09 21:42/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-007  
**Client Sample ID:** DewBurd GW680

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 13:50  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	-0.3	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	62200	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	293	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:13/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/30/08 02:13/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:13/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 21:16/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	01/05/09 17:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:13/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:13/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:13/eli-c
Iron	0.35	mg/L		0.03		2	E200.7	01/05/09 17:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:13/eli-c
Manganese	0.44	mg/L		0.01		1	E200.8	12/30/08 02:13/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:23/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 21:16/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:13/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:13/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/02/09 19:52/eli-c
Strontium	7.2	mg/L		0.1		1	E200.8	12/30/08 02:13/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:13/eli-c
Uranium	0.0203	mg/L		0.0003		1	E200.8	12/30/08 02:13/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	01/12/09 17:44/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	6.75	%				1	A1030 E	01/23/09 00:00/jmh
Anions	32.7	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	37.4	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	2190	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	1.05					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 14:20  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	146	mg/L		5		1	A2320 B	12/23/08 11:06/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 11:06/mb
Bicarbonate as HCO <sub>3</sub>	178	mg/L		5		1	A2320 B	12/23/08 11:06/mb
Calcium	73.0	mg/L		0.5		2	E200.7	01/05/09 13:19/eli-c
Chloride	10	mg/L		1		1	E300.0	12/19/08 04:03/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	12/19/08 04:03/jmh
Magnesium	31.4	mg/L		0.5		2	E200.7	01/05/09 13:19/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 15:01/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 04:03/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 04:03/jmh
Potassium	10.4	mg/L		0.5		2	E200.7	01/05/09 13:19/eli-c
Sodium	178	mg/L	D	2		2	E200.7	01/05/09 13:19/eli-c
Sulfate	476	mg/L	D	3		50	E300.0	12/19/08 03:13/jmh
Silica	5.8	mg/L		0.2		2	E200.7	01/05/09 13:19/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1220	umhos/cm		5.0		1	A2510 B	12/19/08 09:13/tb
Oxidation-Reduction Potential	250	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.46	s.u.		0.01		1	A4500-H B	12/19/08 10:35/tb
Sodium Adsorption Ratio (SAR)	4.4	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	880	mg/L		5		1	A2540 C	12/22/08 12:13/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 19:18/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 19:18/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 19:18/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 13:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 19:18/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 19:18/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 19:18/eli-c
Iron	0.09	mg/L		0.03		2	E200.7	01/05/09 13:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 19:18/eli-c
Manganese	0.28	mg/L		0.01		1	E200.8	12/26/08 19:18/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 19:18/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 19:18/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 19:18/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:03/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 19:18/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 19:18/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 14:20  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/26/08 19:18/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 19:18/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 19:18/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:18/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:32/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	6.8	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha precision (±)	2.4	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha MDC	3.0	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta	9.6	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta MDC	3.9	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Lead 210	2.5	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.13	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	1.3	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 15:38/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 15:38/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	12/29/08 12:00/eli-c
<p>- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.</p>								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	3.1	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.24	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	0.8	pCi/L				1	E903.0	01/21/09 21:42/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 14:20  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 21:42/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	50.2	pCi/L	U	100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	47.5	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:20/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/30/08 02:20/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:20/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 22:58/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 17:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:20/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:20/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:20/eli-c
Iron	11.0	mg/L		0.03		2	E200.7	01/05/09 17:23/eli-c
Lead	0.005	mg/L		0.001		1	E200.8	12/30/08 02:20/eli-c
Manganese	0.27	mg/L		0.01		1	E200.8	12/30/08 02:20/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:30/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 22:58/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:20/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:20/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 22:58/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	12/30/08 02:20/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:20/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/30/08 02:20/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 17:50/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	4.09	%				1	A1030 E	01/23/09 00:00/jmh
Anions	13.1	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	14.3	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	883	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.990					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-009  
**Client Sample ID:** DewBurd GW697

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 14:45  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	166	mg/L		5		1	A2320 B	12/23/08 11:09/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 11:09/mb
Bicarbonate as HCO <sub>3</sub>	202	mg/L		5		1	A2320 B	12/23/08 11:09/mb
Calcium	53.4	mg/L		0.5		2	E200.7	01/05/09 13:23/eli-c
Chloride	8	mg/L		1		1	E300.0	12/19/08 04:35/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	12/19/08 04:35/jmh
Magnesium	17.4	mg/L		0.5		2	E200.7	01/05/09 13:23/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 15:02/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 04:35/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 04:35/jmh
Potassium	8.4	mg/L		0.5		2	E200.7	01/05/09 13:23/eli-c
Sodium	210	mg/L	D	2		2	E200.7	01/05/09 13:23/eli-c
Sulfate	442	mg/L	D	3		50	E300.0	12/19/08 04:19/jmh
Silica	9.5	mg/L		0.2		2	E200.7	01/05/09 13:23/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1190	umhos/cm		5.0		1	A2510 B	12/19/08 09:15/tb
Oxidation-Reduction Potential	250	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.98	s.u.		0.01		1	A4500-H B	12/19/08 10:38/tb
Sodium Adsorption Ratio (SAR)	6.4	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	810	mg/L		5		1	A2540 C	12/22/08 12:13/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 19:25/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 19:25/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 19:25/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 13:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 19:25/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 19:25/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 19:25/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 13:23/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 19:25/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/26/08 19:25/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 19:25/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 19:25/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 19:25/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:05/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 19:25/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 19:25/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08120255-009  
Client Sample ID: DewBurd GW697

Report Date: 01/27/09  
Collection Date: 12/17/08 14:45  
Date Received: 12/18/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	12/26/08 19:25/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 19:25/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	12/26/08 19:25/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:22/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:34/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	7.7	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha precision (±)	2.5	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha MDC	2.9	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta	7.1	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta MDC	3.9	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Lead 210	1.6	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.26	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	1.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 15:38/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 15:38/eli-c
Gross Gamma	820	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	150	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	2.8	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.38	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	-0.07	pCi/L	U			1	E903.0	01/21/09 23:27/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-009  
**Client Sample ID:** DewBurd GW697

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 14:45  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	200	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	49.5	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:26/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/30/08 02:26/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:26/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 23:05/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 17:27/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:26/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:26/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:26/eli-c
Iron	0.34	mg/L		0.03		2	E200.7	01/05/09 17:27/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:26/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	12/30/08 02:26/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:33/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 23:05/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:26/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:26/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 23:05/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	12/30/08 02:26/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:26/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/30/08 02:26/eli-c
Zinc	0.02	mg/L		0.01		1	E200.8	01/12/09 17:57/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.60	%				1	A1030 E	01/23/09 00:00/jmh
Anions	12.8	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	13.5	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	866	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.930					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-010  
**Client Sample ID:** DewBurd GW695

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 15:10  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	172	mg/L		5		1	A2320 B	12/23/08 11:13/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 11:13/mb
Bicarbonate as HCO <sub>3</sub>	210	mg/L		5		1	A2320 B	12/23/08 11:13/mb
Calcium	50.9	mg/L		0.5		2	E200.7	01/05/09 13:36/eli-c
Chloride	12	mg/L		1		1	E300.0	12/19/08 05:08/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	12/19/08 05:08/jmh
Magnesium	18.4	mg/L		0.5		2	E200.7	01/05/09 13:36/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 15:06/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 05:08/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 05:08/jmh
Potassium	8.6	mg/L		0.5		2	E200.7	01/05/09 13:36/eli-c
Sodium	247	mg/L	D	2		2	E200.7	01/05/09 13:36/eli-c
Sulfate	483	mg/L	D	3		50	E300.0	12/19/08 04:52/jmh
Silica	8.8	mg/L		0.2		2	E200.7	01/05/09 13:36/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1320	umhos/cm		5.0		1	A2510 B	12/19/08 09:16/tb
Oxidation-Reduction Potential	250	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.93	s.u.		0.01		1	A4500-H B	12/19/08 10:39/tb
Sodium Adsorption Ratio (SAR)	7.5	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	890	mg/L		5		1	A2540 C	12/22/08 12:14/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 19:32/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 19:32/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 19:32/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 13:36/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 19:32/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 19:32/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 19:32/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 13:36/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 19:32/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	12/26/08 19:32/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 19:32/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 19:32/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 19:32/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:07/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 19:32/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 19:32/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-010  
**Client Sample ID:** DewBurd GW695

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 15:10  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0026	mg/L		0.0003		1	E200.8	12/26/08 19:32/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 19:32/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 19:32/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:26/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:36/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	26.8	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha precision (±)	4.0	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Alpha MDC	3.4	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta	13.0	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta precision (±)	3.4	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Gross Beta MDC	5.4	pCi/L				1	E900.0	01/14/09 01:15/eli-c
Lead 210	3.4	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.13	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	4.8	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 15:38/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 15:38/eli-c
Gross Gamma	850	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	160	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	5.9	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.2	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.38	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	01/21/09 23:27/eli-c

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08120255-010  
Client Sample ID: DewBurd GW695

Report Date: 01/27/09  
Collection Date: 12/17/08 15:10  
Date Received: 12/18/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1880	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	68.3	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:33/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/30/08 02:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:33/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 23:12/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 17:31/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:33/eli-c
Iron	0.17	mg/L		0.03		2	E200.7	01/05/09 17:31/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:33/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	12/30/08 02:33/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:35/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 23:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:33/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:33/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 23:12/eli-c
Strontium	0.9	mg/L		0.1		1	E200.8	12/30/08 02:33/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:33/eli-c
Uranium	0.0026	mg/L		0.0003		1	E200.8	12/30/08 02:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 18:04/eli-c
DATA QUALITY								
A/C Balance (± 5)	4.06	%				1	A1030 E	01/23/09 00:00/jmh
Anions	13.8	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	15.0	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	947	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.940					1	A1030 E	01/23/09 00:00/jmh

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

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

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R08120255-011  
Client Sample ID: DewBurd GW694

Report Date: 01/27/09  
Collection Date: 12/17/08 15:45  
Date Received: 12/18/08  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	204	mg/L		5		1	A2320 B	12/23/08 11:18/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	12/23/08 11:18/mb
Bicarbonate as HCO3	249	mg/L		5		1	A2320 B	12/23/08 11:18/mb
Calcium	96.1	mg/L		0.5		2	E200.7	01/05/09 14:00/eli-c
Chloride	9	mg/L		1		1	E300.0	12/19/08 06:14/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	12/19/08 06:14/jmh
Magnesium	36.0	mg/L		0.5		2	E200.7	01/05/09 14:00/eli-c
Nitrogen, Ammonia as N	0.3	mg/L		0.1		1	A4500-NH3 G	12/26/08 15:09/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 06:14/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 06:14/jmh
Potassium	12.9	mg/L		0.5		2	E200.7	01/05/09 14:00/eli-c
Sodium	172	mg/L	D	2		2	E200.7	01/05/09 14:00/eli-c
Sulfate	507	mg/L	D	3		50	E300.0	12/19/08 05:25/jmh
Silica	9.5	mg/L		0.2		2	E200.7	01/05/09 14:00/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1320	umhos/cm		5.0		1	A2510 B	12/19/08 09:17/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.70	s.u.		0.01		1	A4500-H B	12/19/08 10:40/tb
Sodium Adsorption Ratio (SAR)	3.8	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	960	mg/L		5		1	A2540 C	12/22/08 12:15/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 20:19/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 20:19/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 20:19/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 14:00/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 20:19/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 20:19/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 20:19/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 14:00/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 20:19/eli-c
Manganese	0.16	mg/L		0.01		1	E200.8	12/26/08 20:19/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 20:19/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 20:19/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 20:19/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:10/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 20:19/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 20:19/eli-c

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

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

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-011  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 15:45  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	0.0005	mg/L		0.0003			1	E200.8	12/26/08 20:19/eli-c
Vanadium	ND	mg/L		0.1			1	E200.8	12/26/08 20:19/eli-c
Zinc	ND	mg/L		0.01			1	E200.8	12/26/08 20:19/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L	D	0.0009			1	E200.8	01/01/09 22:30/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001			1	A3114 B	01/08/09 15:39/eli-c
Selenium-VI	ND	mg/L		0.001			1	A3114 B	01/09/09 16:57/eli-c
RADIONUCLIDES - DISSOLVED									
Gross Alpha	9.3	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha precision (±)	2.8	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha MDC	3.3	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Gross Beta	7.7	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Gross Beta precision (±)	2.9	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Gross Beta MDC	4.5	pCi/L					1	E900.0	01/14/09 01:14/eli-ca
Lead 210	2.2	pCi/L	U				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L					1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L					1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0			1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.20	pCi/L					1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	1.5	pCi/L					1	E903.0	01/05/09 14:13/eli-ca
Radium 226 precision (±)	0.2	pCi/L					1	E903.0	01/05/09 14:13/eli-ca
Radium 226 MDC	0.2	pCi/L					1	E903.0	01/05/09 14:13/eli-ca
Thorium 230	0.0	pCi/L	U	0.2			1	E907.0	01/08/09 15:38/eli-c
Thorium 230 precision (±)	0.2	pCi/L					1	E907.0	01/08/09 15:38/eli-c
Gross Gamma	850	pCi/L					1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	150	pCi/L					1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.									
RADIONUCLIDES - SUSPENDED									
Lead 210	1.7	pCi/L	U				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.3	pCi/L					1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L					1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.4	pCi/L	U	1.0			1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.46	pCi/L					1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	-0.3	pCi/L	U				1	E903.0	01/21/09 23:27/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-011  
**Client Sample ID:** DewBurd GW694

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 15:45  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	215	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	49.3	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:39/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/30/08 02:39/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:39/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 23:18/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	01/05/09 18:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:39/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:39/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:39/eli-c
Iron	0.19	mg/L		0.03		2	E200.7	01/05/09 18:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:39/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	12/30/08 02:39/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:37/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 23:18/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:39/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:39/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 23:18/eli-c
Strontium	2.7	mg/L		0.1		1	E200.8	12/30/08 02:39/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:39/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	12/30/08 02:39/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 18:11/eli-c
DATA QUALITY								
A/C Balance (± 5)	2.21	%				1	A1030 E	01/23/09 00:00/jmh
Anions	14.9	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	15.6	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	981	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-012  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 16:05  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO3	180	mg/L		5		1	A2320 B	12/23/08 11:20/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	12/23/08 11:20/mb
Bicarbonate as HCO3	219	mg/L		5		1	A2320 B	12/23/08 11:20/mb
Calcium	29.8	mg/L		0.5		2	E200.7	01/05/09 14:04/eli-c
Chloride	13	mg/L		1		1	E300.0	12/19/08 07:20/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	12/19/08 07:20/jmh
Magnesium	10.4	mg/L		0.5		2	E200.7	01/05/09 14:04/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH3 G	12/26/08 15:11/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 07:20/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 07:20/jmh
Potassium	9.0	mg/L		0.5		2	E200.7	01/05/09 14:04/eli-c
Sodium	280	mg/L	D	2		2	E200.7	01/05/09 14:04/eli-c
Sulfate	459	mg/L	D	3		50	E300.0	12/19/08 06:30/jmh
Silica	9.9	mg/L		0.2		2	E200.7	01/05/09 14:04/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1340	umhos/cm		5.0		1	A2510 B	12/19/08 09:20/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	12/23/08 14:30/jmh
pH	8.14	s.u.		0.01		1	A4500-H B	12/19/08 10:42/tb
Sodium Adsorption Ratio (SAR)	11	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	12/22/08 12:17/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 20:26/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/26/08 20:26/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 20:26/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 14:04/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 20:26/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 20:26/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 20:26/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 14:04/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 20:26/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	12/26/08 20:26/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 20:26/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 20:26/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 20:26/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:17/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 20:26/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 20:26/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-012  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 16:05  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/26/08 20:26/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 20:26/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 20:26/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:34/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:47/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	8.2	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha precision (±)	2.8	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Alpha MDC	3.4	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta	9.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Gross Beta MDC	4.0	pCi/L				1	E900.0	01/14/09 01:14/eli-c
Lead 210	3.2	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.14	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	0.8	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/08/09 15:39/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/08/09 15:39/eli-c
Gross Gamma	840	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.5	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.21	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	-0.1	pCi/L	U			1	E903.0	01/21/09 23:27/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-012  
**Client Sample ID:** DewBurd GW696

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 16:05  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	182	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	48.8	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 02:46/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/30/08 02:46/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 02:46/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 23:25/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 18:24/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 02:46/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 02:46/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 02:46/eli-c
Iron	0.16	mg/L		0.03		2	E200.7	01/05/09 18:24/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 02:46/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/30/08 02:46/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:40/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 23:25/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 02:46/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 02:46/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 23:25/eli-c
Strontium	0.7	mg/L		0.1		1	E200.8	12/30/08 02:46/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 02:46/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/30/08 02:46/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 18:18/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	4.39	%				1	A1030 E	01/23/09 00:00/jmh
Anions	13.5	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	14.8	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	936	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.970					1	A1030 E	01/23/09 00:00/jmh

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:27  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	140	mg/L		5		1	A2320 B	12/23/08 11:24/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	12/23/08 11:24/mb
Bicarbonate as HCO3	171	mg/L		5		1	A2320 B	12/23/08 11:24/mb
Calcium	72.2	mg/L		0.5		2	E200.7	01/05/09 14:09/eli-c
Chloride	5	mg/L		1		1	E300.0	12/19/08 07:52/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	12/19/08 07:52/jmh
Magnesium	21.4	mg/L		0.5		2	E200.7	01/05/09 14:09/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	12/26/08 15:12/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/19/08 07:52/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/19/08 07:52/jmh
Potassium	8.7	mg/L		0.5		2	E200.7	01/05/09 14:09/eli-c
Sodium	131	mg/L	D	2		2	E200.7	01/05/09 14:09/eli-c
Sulfate	388	mg/L	D	3		50	E300.0	12/19/08 07:36/jmh
Silica	8.9	mg/L		0.2		2	E200.7	01/05/09 14:09/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	965	umhos/cm		5.0		1	A2510 B	12/19/08 09:22/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.34	s.u.		0.01		1	A4500-H B	12/19/08 10:44/tb
Sodium Adsorption Ratio (SAR)	3.5	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	700	mg/L		5		1	A2540 C	12/22/08 12:19/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	12/26/08 20:33/eli-c
Arsenic	0.011	mg/L		0.001		1	E200.8	12/26/08 20:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/26/08 20:33/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 14:09/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/26/08 20:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/26/08 20:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/26/08 20:33/eli-c
Iron	0.03	mg/L		0.03		2	E200.7	01/05/09 14:09/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/26/08 20:33/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	12/26/08 20:33/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/26/08 20:33/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/26/08 20:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/26/08 20:33/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:19/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/26/08 20:33/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/26/08 20:33/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:27  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0023	mg/L		0.0003		1	E200.8	12/26/08 20:33/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/26/08 20:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/26/08 20:33/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:38/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:49/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	21.7	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha precision (±)	3.0	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Alpha MDC	2.4	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta	12.8	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta precision (±)	2.1	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Gross Beta MDC	3.1	pCi/L				1	E900.0	01/14/09 01:14/eli-ca
Lead 210	2.2	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.18	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	2.1	pCi/L				1	E903.0	01/05/09 14:13/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/05/09 14:13/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-ca
Thorium 230	0.3	pCi/L	U	0.2		1	E907.0	01/08/09 15:39/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	01/08/09 15:39/eli-c
Gross Gamma	960	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	160	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.1	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.1	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.38	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	-0.3	pCi/L	U			1	E903.0	01/21/09 23:27/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120255-013  
**Client Sample ID:** DewBurd GW615

**Report Date:** 01/27/09  
**Collection Date:** 12/17/08 11:27  
**Date Received:** 12/18/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1710	pCi/L		100		1	D5072-92	12/19/08 15:40/eli-c
Radon 222 precision (±)	68.2	pCi/L				1	D5072-92	12/19/08 15:40/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 03:19/eli-c
Arsenic	0.023	mg/L		0.001		1	E200.8	12/30/08 03:19/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 03:19/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/01/09 23:32/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	01/05/09 18:36/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 03:19/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 03:19/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 03:19/eli-c
Iron	1.37	mg/L		0.03		2	E200.7	01/05/09 18:36/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/30/08 03:19/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	12/30/08 03:19/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:47/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/01/09 23:32/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 03:19/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/30/08 03:19/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/01/09 23:32/eli-c
Strontium	1.3	mg/L		0.1		1	E200.8	12/30/08 03:19/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 03:19/eli-c
Uranium	0.0023	mg/L		0.0003		1	E200.8	12/30/08 03:19/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/12/09 18:25/eli-c
DATA QUALITY								
A/C Balance (± 5)	1.01	%				1	A1030 E	01/23/09 00:00/jmh
Anions	11.0	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	11.3	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	735	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	01/23/09 00:00/jmh

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

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

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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>		Batch: 081223A-ALK-SEL-W							
<b>Sample ID: LCS1_081223A</b>	Laboratory Control Sample				Run: PH_COND1-R_081223A		12/23/08 09:08		
Alkalinity, Total as CaCO3	936	mg/L	5.0	94	90	110			
<b>Sample ID: MBLK1_081223A</b>	Method Blank				Run: PH_COND1-R_081223A		12/23/08 09:09		
Alkalinity, Total as CaCO3	ND	mg/L	3						
<b>Sample ID: R08120249-005AMS</b>	Sample Matrix Spike				Run: PH_COND1-R_081223A		12/23/08 09:47		
Alkalinity, Total as CaCO3	382	mg/L	5.0	96	80	120			
<b>Sample ID: R08120249-005AMSD</b>	Sample Matrix Spike Duplicate				Run: PH_COND1-R_081223A		12/23/08 09:50		
Alkalinity, Total as CaCO3	380	mg/L	5.0	94	80	120	0.5	10	
<b>Sample ID: R08120255-006AMS</b>	Sample Matrix Spike				Run: PH_COND1-R_081223A		12/23/08 10:40		
Alkalinity, Total as CaCO3	182	mg/L	5.0	64	80	120			S
<b>Sample ID: R08120255-006AMSD</b>	Sample Matrix Spike Duplicate				Run: PH_COND1-R_081223A		12/23/08 10:52		
Alkalinity, Total as CaCO3	198	mg/L	5.0	79	80	120	8.4	10	S
<b>Method: A2510 B</b>		Batch: 081219_1_COND-PROBE-W							
<b>Sample ID: LCS_COND-1_081219</b>	Laboratory Control Sample				Run: PH_COND2-R_081219B		12/19/08 08:44		
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
<b>Sample ID: LCS1-1_081219</b>	Laboratory Control Sample				Run: PH_COND2-R_081219B		12/19/08 08:45		
Conductivity @ 25 C	149	umhos/cm	5.0	99	90	110			
<b>Sample ID: LCS2-1_081219</b>	Laboratory Control Sample				Run: PH_COND2-R_081219B		12/19/08 08:47		
Conductivity @ 25 C	4960	umhos/cm	5.0	99	90	110			
<b>Sample ID: MBLK-1_081219</b>	Method Blank				Run: PH_COND2-R_081219B		12/19/08 08:48		
Conductivity @ 25 C	ND	umhos/cm	5						
<b>Sample ID: R08120255-001ADUP</b>	Sample Duplicate				Run: PH_COND2-R_081219B		12/19/08 09:03		
Conductivity @ 25 C	ND	umhos/cm	5.0				0	10	
<b>Sample ID: R08120255-011ADUP</b>	Sample Duplicate				Run: PH_COND2-R_081219B		12/19/08 09:18		
Conductivity @ 25 C	1320	umhos/cm	5.0				0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/27/09

Project: Edgemont

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>							Batch: 081222A-SLDS-TDS-W		
<b>Sample ID: LCS1_081222A</b>	Laboratory Control Sample				Run: BAL-4-R_081222A				12/22/08 11:36
Solids, Total Dissolved TDS @ 180 C	200	mg/L	7.6	99	90	110			
<b>Sample ID: MBLK1_081222A</b>	Method Blank				Run: BAL-4-R_081222A				12/22/08 11:38
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	8						
<b>Sample ID: R08120255-013AMS</b>	Sample Matrix Spike				Run: BAL-4-R_081222A				12/22/08 12:20
Solids, Total Dissolved TDS @ 180 C	880	mg/L	5.0	91	80	120			
<b>Sample ID: R08120255-013AMSD</b>	Sample Matrix Spike Duplicate				Run: BAL-4-R_081222A				12/22/08 12:20
Solids, Total Dissolved TDS @ 180 C	850	mg/L	5.0	76	80	120	3.5	10	S
<b>Method: A2580 B</b>							Batch: 081223-ORP-ISE-W		
<b>Sample ID: LCS</b>	Laboratory Control Sample				Run: PH_COND1-R_081223B				12/23/08 14:30
Oxidation-Reduction Potential	480	mV		101	95	105			
<b>Sample ID: R08120255-001F</b>	Sample Duplicate				Run: PH_COND1-R_081223B				12/23/08 14:30
Oxidation-Reduction Potential	290	mV					0.8	10	
<b>Sample ID: R08120255-011F</b>	Sample Duplicate				Run: PH_COND1-R_081223B				12/23/08 14:30
Oxidation-Reduction Potential	270	mV					0.3	10	
<b>Method: A3114 B</b>							Batch: C_SE3114-090109B		
<b>Sample ID: MBLK</b>	Method Blank				Run: SUB-C113244				01/09/09 15:31
Selenium	ND	mg/L	0.0003						
<b>Sample ID: 288-184-2</b>	Laboratory Control Sample				Run: SUB-C113244				01/09/09 15:33
Selenium	0.055	mg/L	0.0010	109	90	110			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike				Run: SUB-C113244				01/09/09 16:12
Selenium	0.057	mg/L	0.0010	113	85	115			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113244				01/09/09 16:14
Selenium	0.058	mg/L	0.0010	116	85	115	2.5	15	S
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike				Run: SUB-C113244				01/09/09 15:40
Selenium	0.055	mg/L	0.0010	110	85	115			
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113244				01/09/09 15:42
Selenium	0.057	mg/L	0.0010	113	85	115	2.8	15	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>							Batch: C_SEIV3114-090108		
<b>Sample ID: MBLK</b>	Method Blank					Run: SUB-C113187			01/08/09 14:58
Selenium-IV	ND	mg/L	0.0003						
<b>Sample ID: 288-184-2</b>	Laboratory Control Sample					Run: SUB-C113187			01/08/09 15:00
Selenium-IV	0.050	mg/L	0.0010	100	90	110			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike					Run: SUB-C113187			01/08/09 15:42
Selenium-IV	0.042	mg/L	0.0010	84	85	115			S
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike Duplicate					Run: SUB-C113187			01/08/09 15:44
Selenium-IV	0.044	mg/L	0.0010	87	85	115	4.4	10	
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike					Run: SUB-C113187			01/08/09 15:07
Selenium-IV	0.046	mg/L	0.0010	92	85	115			
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike Duplicate					Run: SUB-C113187			01/08/09 15:10
Selenium-IV	0.046	mg/L	0.0010	93	85	115	0.8	10	
<b>Method: A4500-H B</b>							Batch: 081219_1_PH-W		
<b>Sample ID: LCS_pH-1_081219</b>	Laboratory Control Sample					Run: PH_COND2-R_081219A			12/19/08 09:45
pH	6.85	s.u.	0.010	100	98.55	101.45			
<b>Sample ID: R08120255-001ADUP</b>	Sample Duplicate					Run: PH_COND2-R_081219A			12/19/08 10:20
pH	5.64	s.u.	0.010				0.5	1.25	
<b>Sample ID: R08120255-011ADUP</b>	Sample Duplicate					Run: PH_COND2-R_081219A			12/19/08 10:41
pH	7.72	s.u.	0.010				0.3	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b> Batch: A2008-12-26_2_NH3_01									
<b>Sample ID: MBLK-2</b> Nitrogen, Ammonia as N	Method Blank ND	mg/L	0.01				Run: TECHAA2-R_081226A		12/26/08 14:12
<b>Sample ID: LFB-3</b> Nitrogen, Ammonia as N	Laboratory Fortified Blank 0.25	mg/L	0.10	98	90	110	Run: TECHAA2-R_081226A		12/26/08 14:13
<b>Sample ID: LFB-4</b> Nitrogen, Ammonia as N	Laboratory Fortified Blank 0.27	mg/L	0.10	110	90	110	Run: TECHAA2-R_081226A		12/26/08 14:14
<b>Sample ID: R08120255-002BMS</b> Nitrogen, Ammonia as N	Sample Matrix Spike 0.34	mg/L	0.10	111	80	120	Run: TECHAA2-R_081226A		12/26/08 14:53
<b>Sample ID: R08120255-002BMSD</b> Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.34	mg/L	0.10	111	80	120	0.3	10	12/26/08 14:54
<b>Sample ID: R08120255-010BMS</b> Nitrogen, Ammonia as N	Sample Matrix Spike 0.42	mg/L	0.10	100	80	120	Run: TECHAA2-R_081226A		12/26/08 15:07
<b>Sample ID: R08120255-010BMSD</b> Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.45	mg/L	0.10	109	80	120	5.3	10	12/26/08 15:08
<b>Method: D5072-92</b> Batch: C_R112582									
<b>Sample ID: R08120255-013G</b> Radon 222	Sample Duplicate 1650	pCi/L	100				Run: SUB-C112582	4.1	12/19/08 15:40 30
<b>Sample ID: MB-R112582</b> Radon 222	Method Blank 30	pCi/L					Run: SUB-C112582		12/19/08 15:40 U
<b>Sample ID: LCS-R112582</b> Radon 222	Laboratory Control Sample 304	pCi/L	100	90	70	130	Run: SUB-C112582		12/19/08 15:40

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_20978		
Sample ID: MB-20978	Method Blank				Run: SUB-C113039		01/05/09 19:00		
Boron	ND	mg/L	0.01						
Iron	ND	mg/L	0.009						
Sample ID: LCS3-20978	Laboratory Control Sample				Run: SUB-C113039		01/05/09 19:04		
Boron	0.516	mg/L	0.10	103	85	115			
Iron	2.57	mg/L	0.030	103	85	115			
Sample ID: C08120822-001BMS3	Sample Matrix Spike				Run: SUB-C113039		01/05/09 19:29		
Boron	0.658	mg/L	0.10	104	70	130			
Iron	3.53	mg/L	0.030	110	70	130			
Sample ID: C08120822-001BMSD3	Sample Matrix Spike Duplicate				Run: SUB-C113039		01/05/09 19:33		
Boron	0.647	mg/L	0.10	102	70	130	1.7	20	
Iron	3.34	mg/L	0.030	102	70	130	5.4	20	
Method: E200.7							Batch: C_20993		
Sample ID: MB-20993	Method Blank				Run: SUB-C113039		01/05/09 19:49		
Boron	ND	mg/L	0.01						
Iron	ND	mg/L	0.009						
Sample ID: LCS3-20993	Laboratory Control Sample				Run: SUB-C113039		01/05/09 19:53		
Boron	0.533	mg/L	0.10	107	85	115			
Iron	2.64	mg/L	0.030	106	85	115			
Sample ID: C08120862-001BMS3	Sample Matrix Spike				Run: SUB-C113039		01/05/09 20:17		
Boron	1.42	mg/L	0.10	101	70	130			
Iron	33.4	mg/L	0.030		70	130			A
Sample ID: C08120862-001BMSD3	Sample Matrix Spike Duplicate				Run: SUB-C113039		01/05/09 20:21		
Boron	1.51	mg/L	0.10	119	70	130	6	20	
Iron	34.1	mg/L	0.030		70	130	2.3	20	A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R113039		
<b>Sample ID: MB-090105A</b>	Method Blank		Run: SUB-C113039				01/05/09 12:11		
Silicon	ND	mg/L	0.02						
Boron	0.02	mg/L	0.008						
Calcium	ND	mg/L	0.1						
Iron	ND	mg/L	0.005						
Magnesium	ND	mg/L	0.04						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.8						
Silica	ND	mg/L	0.04						
<b>Sample ID: LFB-0090105A</b>	Laboratory Fortified Blank		Run: SUB-C113039				01/05/09 12:15		
Silicon	0.38	mg/L	0.021	96	85	125			
Boron	1.1	mg/L	0.10	105	85	125			
Calcium	50	mg/L	0.50	99	85	125			
Iron	1.0	mg/L	0.030	101	85	125			
Magnesium	50	mg/L	0.50	100	85	125			
Potassium	47	mg/L	0.50	94	85	125			
Sodium	49	mg/L	0.77	99	85	125			
Silica	0.82	mg/L	0.044	96	85	125			
<b>Sample ID: R08120255-012D</b>	Sample Matrix Spike		Run: SUB-C113039				01/05/09 18:28		
Boron	2.19	mg/L	0.10	105	70	130			
Iron	2.20	mg/L	0.030	102	70	130			
Silicon	5.43	mg/L	0.10		70	130			A
Calcium	136	mg/L	1.0	105	70	130			
Magnesium	116	mg/L	1.0	106	70	130			
Potassium	102	mg/L	1.0	93	70	130			
Sodium	394	mg/L	1.1	102	70	130			
Silica	11.6	mg/L	0.21		70	130			A
<b>Sample ID: R08120255-012D</b>	Sample Matrix Spike Duplicate		Run: SUB-C113039				01/05/09 18:32		
Boron	2.26	mg/L	0.10	109	70	130	3.2	20	
Iron	2.28	mg/L	0.030	106	70	130	3.5	20	
Silicon	5.59	mg/L	0.10		70	130	2.9	20	A
Calcium	137	mg/L	1.0	106	70	130	1	20	
Magnesium	118	mg/L	1.0	107	70	130	1.4	20	
Potassium	103	mg/L	1.0	94	70	130	1	20	
Sodium	412	mg/L	1.1	120	70	130	4.5	20	
Silica	12.0	mg/L	0.21		70	130	2.9	20	A
<b>Sample ID: C08120680-001BMS2</b>	Sample Matrix Spike		Run: SLJB-C113039				01/05/09 12:23		
Boron	2.45	mg/L	0.10	107	70	130			
Iron	11.4	mg/L	0.030		70	130			A
Silicon	6.58	mg/L	0.10		70	130			A
Calcium	501	mg/L	1.0	109	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R113039		
Sample ID: C08120680-001BMS2		Sample Matrix Spike		Run: SUB-C113039			01/05/09 12:23		
Magnesium	204	mg/L	1.0	105	70	130			
Potassium	103	mg/L	1.0	91	70	130			
Sodium	873	mg/L	1.5		70	130			A
Silica	14.1	mg/L	0.21		70	130			A
Sample ID: C08120680-001BMSD2		Sample Matrix Spike Duplicate		Run: SUB-C113039			01/05/09 12:27		
Boron	2.44	mg/L	0.10	107	70	130	0.3	20	
Iron	11.4	mg/L	0.030		70	130	0.5	20	A
Silicon	6.56	mg/L	0.10		70	130	0.2	20	A
Calcium	494	mg/L	1.0	103	70	130	1.2	20	
Magnesium	203	mg/L	1.0	104	70	130	0.6	20	
Potassium	102	mg/L	1.0	90	70	130	1.2	20	
Sodium	871	mg/L	1.5		70	130	0.2	20	A
Silica	14.0	mg/L	0.21		70	130	0.2	20	A
Sample ID: R08120255-009C		Sample Matrix Spike		Run: SUB-C113039			01/05/09 13:28		
Boron	2.29	mg/L	0.10	111	70	130			
Iron	2.15	mg/L	0.030	106	70	130			
Silicon	5.21	mg/L	0.10		70	130			A
Calcium	158	mg/L	1.0	104	70	130			
Magnesium	124	mg/L	1.0	106	70	130			
Potassium	98.7	mg/L	1.0	90	70	130			
Sodium	304	mg/L	1.5	94	70	130			
Silica	11.1	mg/L	0.21		70	130			A
Sample ID: R08120255-009C		Sample Matrix Spike Duplicate		Run: SUB-C113039			01/05/09 13:32		
Boron	2.25	mg/L	0.10	109	70	130	1.9	20	
Iron	2.14	mg/L	0.030	106	70	130	0.4	20	
Silicon	5.07	mg/L	0.10		70	130	2.7	20	A
Calcium	154	mg/L	1.0	101	70	130	2.2	20	
Magnesium	121	mg/L	1.0	104	70	130	2.2	20	
Potassium	102	mg/L	1.0	93	70	130	3.1	20	
Sodium	318	mg/L	1.5	108	70	130	4.5	20	
Silica	10.8	mg/L	0.21		70	130	2.7	20	A
Sample ID: C08120680-001DMS2		Sample Matrix Spike		Run: SUB-C113039			01/05/09 16:38		
Boron	2.35	mg/L	0.10	105	70	130			
Iron	11.0	mg/L	0.030		70	130			A
Silicon	6.35	mg/L	0.10		70	130			A
Calcium	485	mg/L	1.0	95	70	130			
Magnesium	202	mg/L	1.0	102	70	130			
Potassium	101	mg/L	1.0	88	70	130			
Sodium	845	mg/L	1.1		70	130			A
Silica	13.6	mg/L	0.21		70	130			A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



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## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R113039		
Sample ID: C08120680-001DMS2	Sample Matrix Spike			Run: SUB-C113039			01/05/09 16:38		
Sample ID: C08120680-001DMSD2	Sample Matrix Spike Duplicate			Run: SUB-C113039			01/05/09 16:42		
Boron	2.36	mg/L	0.10	106	70	130	0.4	20	
Iron	11.3	mg/L	0.030		70	130	2.4	20	A
Silicon	6.44	mg/L	0.10		70	130	1.3	20	A
Calcium	488	mg/L	1.0	98	70	130	0.6	20	
Magnesium	203	mg/L	1.0	104	70	130	0.6	20	
Potassium	103	mg/L	1.0	91	70	130	2.1	20	
Sodium	861	mg/L	1.1		70	130	2	20	A
Silica	13.8	mg/L	0.21		70	130	1.3	20	A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20978		
<b>Sample ID: MB-20978</b>	Method Blank		Run: SUB-C112889				12/30/08 19:20		
Antimony	0.0002	mg/L	7E-05						
Arsenic	0.003	mg/L	6E-05						
Barium	ND	mg/L	3E-05						
Beryllium	3E-05	mg/L	3E-05						
Cadmium	ND	mg/L	1E-05						
Chromium	0.004	mg/L	4E-05						
Copper	0.0007	mg/L	7E-05						
Lead	ND	mg/L	3E-05						
Manganese	0.0001	mg/L	5E-05						
Molybdenum	8E-05	mg/L	5E-05						
Nickel	ND	mg/L	0.0007						
Selenium	ND	mg/L	0.0002						
Silver	0.0002	mg/L	3E-05						
Strontium	ND	mg/L	3E-05						
Thallium	0.0004	mg/L	1E-05						
Uranium	3E-05	mg/L	1E-05						
Zinc	0.0009	mg/L	0.0003						
<b>Sample ID: MB-20978</b>	Method Blank		Run: SUB-C112947				01/01/09 17:07		
Antimony	0.0009	mg/L	0.0002						
Arsenic	0.003	mg/L	5E-05						
Barium	ND	mg/L	9E-05						
Beryllium	ND	mg/L	0.0001						
Cadmium	ND	mg/L	3E-05						
Chromium	0.002	mg/L	5E-05						
Copper	0.002	mg/L	0.0002						
Lead	ND	mg/L	5E-05						
Manganese	6E-05	mg/L	3E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	0.0004	mg/L	6E-05						
Selenium	0.0007	mg/L	0.0002						
Silver	ND	mg/L	4E-05						
Strontium	ND	mg/L	8E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
Zinc	0.0008	mg/L	0.0003						
<b>Sample ID: LCS3-20978</b>	Laboratory Control Sample		Run: SUB-C112947				01/01/09 17:13		
Antimony	0.559	mg/L	0.050	112	85	115			
Arsenic	0.515	mg/L	0.0010	102	85	115			
Barium	0.519	mg/L	0.10	104	85	115			
Beryllium	0.256	mg/L	0.010	102	85	115			
Cadmium	0.254	mg/L	0.010	102	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/27/09

Project: Edgemont

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20978		
<b>Sample ID: LCS3-20978</b>	Laboratory Control Sample			Run: SUB-C112947			01/01/09 17:13		
Chromium	0.528	mg/L	0.050	105	85	115			
Copper	0.486	mg/L	0.010	97	85	115			
Lead	0.512	mg/L	0.050	102	85	115			
Manganese	2.65	mg/L	0.010	106	85	115			
Molybdenum	0.536	mg/L	0.10	107	85	115			
Nickel	0.479	mg/L	0.050	96	85	115			
Selenium	0.517	mg/L	0.0010	103	85	115			
Silver	0.0485	mg/L	0.010	97	85	115			
Strontium	0.538	mg/L	0.10	108	85	115			
Thallium	0.535	mg/L	0.10	107	85	115			
Uranium	0.538	mg/L	0.00030	108	85	115			
Zinc	0.489	mg/L	0.010	98	85	115			
<b>Sample ID: C08120822-001BMS3</b>	Sample Matrix Spike			Run: SUB-C112947			01/01/09 18:14		
Antimony	0.604	mg/L	0.050	114	70	130			
Arsenic	0.514	mg/L	0.0010	102	70	130			
Barium	0.647	mg/L	0.10	106	70	130			
Beryllium	0.242	mg/L	0.010	97	70	130			
Cadmium	0.252	mg/L	0.010	99	70	130			
Chromium	0.528	mg/L	0.050	101	70	130			
Copper	1.69	mg/L	0.010	103	70	130			
Lead	0.509	mg/L	0.050	84	70	130			
Manganese	2.60	mg/L	0.010	102	70	130			
Molybdenum	0.553	mg/L	0.10	109	70	130			
Nickel	0.494	mg/L	0.050	95	70	130			
Selenium	0.504	mg/L	0.0010	98	70	130			
Silver	0.0619	mg/L	0.010	108	70	130			
Strontium	0.911	mg/L	0.10	105	70	130			
Thallium	0.417	mg/L	0.10	83	70	130			
Uranium	0.459	mg/L	0.00030	90	70	130			
Zinc	2.84	mg/L	0.010		70	130			A
<b>Sample ID: C08120822-001BMSD3</b>	Sample Matrix Spike Duplicate			Run: SUB-C112947			01/01/09 18:21		
Antimony	0.599	mg/L	0.050	113	70	130	0.9	20	
Arsenic	0.512	mg/L	0.0010	102	70	130	0.5	20	
Barium	0.644	mg/L	0.10	105	70	130	0.5	20	
Beryllium	0.245	mg/L	0.010	98	70	130	1.1	20	
Cadmium	0.251	mg/L	0.010	99	70	130	0.5	20	
Chromium	0.524	mg/L	0.050	100	70	130	0.8	20	
Copper	1.67	mg/L	0.010	98	70	130	1.4	20	
Lead	0.505	mg/L	0.050	84	70	130	0.7	20	
Manganese	2.56	mg/L	0.010	101	70	130	1.2	20	
Molybdenum	0.548	mg/L	0.10	108	70	130	0.9	20	

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20978		
<b>Sample ID: C08120822-001BMSD3</b>	Sample Matrix Spike Duplicate			Run: SUB-C112947			01/01/09 18:21		
Nickel	0.490	mg/L	0.050	94	70	130	0.9	20	
Selenium	0.498	mg/L	0.0010	97	70	130	1.1	20	
Silver	0.0564	mg/L	0.010	97	70	130	9.2	20	
Strontium	0.892	mg/L	0.10	101	70	130	2.1	20	
Thallium	0.413	mg/L	0.10	83	70	130	1.1	20	
Uranium	0.455	mg/L	0.00030	89	70	130	0.8	20	
Zinc	2.84	mg/L	0.010		70	130	0.2	20	A
<b>Method: E200.8</b>							Batch: C_20988		
<b>Sample ID: MB-20988</b>	Method Blank			Run: SUB-C112968			01/01/09 21:17		
Uranium	ND	mg/L	0.004						
<b>Sample ID: LCS1-20988</b>	Laboratory Control Sample			Run: SUB-C112968			01/01/09 21:21		
Uranium	0.0977	mg/L	0.0037	98	80	120			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20993		
<b>Sample ID: MB-20993</b>	Method Blank		Run: SUB-C112947				01/01/09 18:34		
Arsenic	0.002	mg/L	5E-05						
Barium	ND	mg/L	9E-05						
Beryllium	ND	mg/L	0.0001						
Cadmium	ND	mg/L	3E-05						
Chromium	0.002	mg/L	5E-05						
Copper	0.0008	mg/L	0.0002						
Lead	7E-05	mg/L	5E-05						
Manganese	0.0002	mg/L	3E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	0.0001	mg/L	6E-05						
Selenium	0.001	mg/L	0.0002						
Silver	ND	mg/L	4E-05						
Strontium	ND	mg/L	8E-05						
Thallium	0.0004	mg/L	3E-05						
Uranium	0.0002	mg/L	3E-05						
Zinc	0.005	mg/L	0.0003						
<b>Sample ID: LCS3-20993</b>	Laboratory Control Sample		Run: SUB-C112947				01/01/09 18:41		
Arsenic	0.536	mg/L	0.0010	107	85	115			
Barium	0.548	mg/L	0.10	110	85	115			
Beryllium	0.257	mg/L	0.010	103	85	115			
Cadmium	0.267	mg/L	0.010	107	85	115			
Chromium	0.550	mg/L	0.050	110	85	115			
Copper	0.508	mg/L	0.010	101	85	115			
Lead	0.546	mg/L	0.050	109	85	115			
Manganese	2.78	mg/L	0.010	111	85	115			
Molybdenum	0.560	mg/L	0.10	112	85	115			
Nickel	0.504	mg/L	0.050	101	85	115			
Selenium	0.537	mg/L	0.0010	107	85	115			
Silver	0.0507	mg/L	0.010	101	85	115			
Strontium	0.560	mg/L	0.10	112	85	115			
Thallium	0.555	mg/L	0.10	111	85	115			
Uranium	0.568	mg/L	0.00030	113	85	115			
Zinc	0.516	mg/L	0.010	102	85	115			
<b>Sample ID: C08120862-001BMS3</b>	Sample Matrix Spike		Run: SUB-C112947				01/01/09 20:09		
Arsenic	0.528	mg/L	0.0010	102	70	130			
Barium	4.61	mg/L	0.10		70	130			A
Beryllium	0.240	mg/L	0.010	96	70	130			
Cadmium	0.254	mg/L	0.010	98	70	130			
Chromium	0.551	mg/L	0.050	98	70	130			
Copper	0.903	mg/L	0.010	93	70	130			
Lead	0.647	mg/L	0.050	106	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.





## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20993		
<b>Sample ID: C08120862-001BMS3</b>	Sample Matrix Spike		Run: SUB-C112947				01/01/09 20:09		
Manganese	3.19	mg/L	0.010	99	70	130			
Molybdenum	0.682	mg/L	0.10	109	70	130			
Nickel	0.516	mg/L	0.050	94	70	130			
Selenium	0.372	mg/L	0.0010	74	70	130			
Silver	0.0470	mg/L	0.010	93	70	130			
Strontium	1.18	mg/L	0.10	106	70	130			
Thallium	0.528	mg/L	0.10	106	70	130			
Uranium	0.582	mg/L	0.00030	114	70	130			
Zinc	3.43	mg/L	0.010		70	130			A
<b>Sample ID: C08120862-001BMSD3</b>	Sample Matrix Spike Duplicate		Run: SUB-C112947				01/01/09 20:15		
Arsenic	0.530	mg/L	0.0010	102	70	130	0.3	20	
Barium	4.96	mg/L	0.10		70	130	7.3	20	A
Beryllium	0.231	mg/L	0.010	92	70	130	3.9	20	
Cadmium	0.253	mg/L	0.010	97	70	130	0.4	20	
Chromium	0.534	mg/L	0.050	95	70	130	3.1	20	
Copper	0.931	mg/L	0.010	99	70	130	3	20	
Lead	0.645	mg/L	0.050	105	70	130	0.3	20	
Manganese	3.07	mg/L	0.010	94	70	130	3.8	20	
Molybdenum	0.684	mg/L	0.10	109	70	130	0.2	20	
Nickel	0.518	mg/L	0.050	94	70	130	0.4	20	
Selenium	0.370	mg/L	0.0010	74	70	130	0.6	20	
Silver	0.0472	mg/L	0.010	94	70	130	0.6	20	
Strontium	1.18	mg/L	0.10	105	70	130	0.5	20	
Thallium	0.528	mg/L	0.10	106	70	130	0.1	20	
Uranium	0.574	mg/L	0.00030	112	70	130	1.5	20	
Zinc	3.26	mg/L	0.010		70	130	5.2	20	A
<b>Sample ID: C08120862-001BMS3</b>	Sample Matrix Spike		Run: SUB-C113003				01/02/09 18:44		
Arsenic	0.540	mg/L	0.0010	104	70	130			
Barium	4.49	mg/L	0.10		70	130			A
Beryllium	0.248	mg/L	0.010	99	70	130			
Cadmium	0.269	mg/L	0.010	104	70	130			
Chromium	0.575	mg/L	0.050	101	70	130			
Copper	0.935	mg/L	0.010	94	70	130			
Lead	0.643	mg/L	0.050	105	70	130			
Manganese	3.41	mg/L	0.010	107	70	130			
Molybdenum	0.670	mg/L	0.10	107	70	130			
Nickel	0.534	mg/L	0.050	97	70	130			
Selenium	0.424	mg/L	0.0020	85	70	130			
Silver	0.0477	mg/L	0.010	95	70	130			
Strontium	1.22	mg/L	0.10	111	70	130			
Thallium	0.509	mg/L	0.10	102	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20993		
<b>Sample ID: C08120862-001BMS3</b>	Sample Matrix Spike		Run: SUB-C113003				01/02/09 18:44		
Uranium	0.559	mg/L	0.00032	109	70	130			
Zinc	3.70	mg/L	0.010		70	130			A
<b>Sample ID: C08120862-001BMSD3</b>	Sample Matrix Spike Duplicate		Run: SUB-C113003				01/02/09 18:51		
Arsenic	0.533	mg/L	0.0010	102	70	130	1.2	20	
Barium	4.78	mg/L	0.10		70	130	6.2	20	A
Beryllium	0.239	mg/L	0.010	96	70	130	3.8	20	
Cadmium	0.265	mg/L	0.010	102	70	130	1.7	20	
Chromium	0.563	mg/L	0.050	99	70	130	2.2	20	
Copper	0.936	mg/L	0.010	95	70	130	0.1	20	
Lead	0.632	mg/L	0.050	102	70	130	1.7	20	
Manganese	3.32	mg/L	0.010	103	70	130	2.8	20	
Molybdenum	0.658	mg/L	0.10	105	70	130	1.8	20	
Nickel	0.527	mg/L	0.050	96	70	130	1.3	20	
Selenium	0.403	mg/L	0.0020	81	70	130	5	20	
Silver	0.0476	mg/L	0.010	95	70	130	0.3	20	
Strontium	1.18	mg/L	0.10	104	70	130	2.8	20	
Thallium	0.509	mg/L	0.10	102	70	130	0	20	
Uranium	0.545	mg/L	0.00032	106	70	130	2.5	20	
Zinc	3.35	mg/L	0.010		70	130	9.7	20	A
<b>Sample ID: MB-20993</b>	Method Blank		Run: SUB-C113003				01/03/09 05:09		
Copper	0.001	mg/L	7E-05						
Lead	0.00010	mg/L	3E-05						
<b>Sample ID: LCS3-20993</b>	Laboratory Control Sample		Run: SUB-C113003				01/03/09 05:15		
Arsenic	0.525	mg/L	0.0010	104	85	115			
Barium	0.534	mg/L	0.10	107	85	115			
Beryllium	0.268	mg/L	0.010	107	85	115			
Cadmium	0.272	mg/L	0.010	109	85	115			
Chromium	0.540	mg/L	0.050	108	85	115			
Copper	0.510	mg/L	0.010	102	85	115			
Lead	0.540	mg/L	0.050	108	85	115			
Manganese	2.77	mg/L	0.010	111	85	115			
Molybdenum	0.550	mg/L	0.10	110	85	115			
Nickel	0.512	mg/L	0.050	102	85	115			
Selenium	0.509	mg/L	0.0010	102	85	115			
Silver	0.0512	mg/L	0.010	102	85	115			
Strontium	0.546	mg/L	0.10	109	85	115			
Thallium	0.538	mg/L	0.10	108	85	115			
Uranium	0.560	mg/L	0.00030	112	85	115			
<b>Sample ID: MB-20993</b>	Method Blank		Run: SUB-C113238				01/08/09 17:02		
Arsenic	0.002	mg/L	6E-05						

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/27/09

Project: Edgemont

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_20993		
Sample ID: MB-20993	Method Blank		Run: SUB-C113238				01/08/09 17:02		
Barium	ND	mg/L	4E-05						
Beryllium	ND	mg/L	0.0002						
Cadmium	ND	mg/L	2E-05						
Chromium	0.0006	mg/L	6E-05						
Copper	0.0001	mg/L	3E-05						
Lead	7E-05	mg/L	5E-05						
Manganese	5E-05	mg/L	2E-05						
Molybdenum	5E-05	mg/L	4E-05						
Nickel	5E-05	mg/L	3E-05						
Selenium	ND	mg/L	0.0005						
Silver	ND	mg/L	2E-05						
Strontium	ND	mg/L	5E-06						
Thallium	0.003	mg/L	4E-05						
Uranium	0.0001	mg/L	5E-05						
Zinc	0.005	mg/L	0.0005						
Sample ID: LCS3-20993	Laboratory Control Sample		Run: SUB-C113238				01/08/09 17:08		
Arsenic	0.541	mg/L	0.0010	108	85	115			
Barium	0.539	mg/L	0.10	108	85	115			
Beryllium	0.279	mg/L	0.010	111	85	115			
Cadmium	0.277	mg/L	0.010	111	85	115			
Chromium	0.553	mg/L	0.050	110	85	115			
Copper	0.545	mg/L	0.010	109	85	115			
Lead	0.536	mg/L	0.050	107	85	115			
Manganese	2.60	mg/L	0.010	104	85	115			
Molybdenum	0.539	mg/L	0.10	108	85	115			
Nickel	0.535	mg/L	0.050	107	85	115			
Selenium	0.537	mg/L	0.0010	107	85	115			
Silver	0.0527	mg/L	0.010	105	85	115			
Strontium	0.545	mg/L	0.10	109	85	115			
Thallium	0.528	mg/L	0.10	105	85	115			
Uranium	0.542	mg/L	0.00030	108	85	115			
Zinc	0.531	mg/L	0.010	105	85	115			
Sample ID: C08120862-001BMS3	Sample Matrix Spike		Run: SUB-C113238				01/08/09 17:35		
Arsenic	0.505	mg/L	0.0010	97	70	130			
Barium	4.38	mg/L	0.10		70	130			A
Beryllium	0.219	mg/L	0.010	87	70	130			
Cadmium	0.247	mg/L	0.010	95	70	130			
Chromium	0.598	mg/L	0.050	107	70	130			
Copper	0.958	mg/L	0.010	99	70	130			
Lead	0.658	mg/L	0.050	107	70	130			
Manganese	3.20	mg/L	0.010	100	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20993		
<b>Sample ID: C08120862-001BMS3</b>	Sample Matrix Spike		Run: SUB-C113238				01/08/09 17:35		
Molybdenum	0.655	mg/L	0.10	105	70	130			
Nickel	0.536	mg/L	0.050	98	70	130			
Selenium	0.359	mg/L	0.0010	71	70	130			
Silver	0.0464	mg/L	0.010	92	70	130			
Strontium	1.20	mg/L	0.10	109	70	130			
Thallium	0.530	mg/L	0.10	105	70	130			
Uranium	0.579	mg/L	0.00030	113	70	130			
Zinc	3.21	mg/L	0.010		70	130			A
<b>Sample ID: C08120862-001BMSD3</b>	Sample Matrix Spike Duplicate		Run: SUB-C113238				01/08/09 17:42		
Arsenic	0.500	mg/L	0.0010	97	70	130	0.8	20	
Barium	4.71	mg/L	0.10		70	130	7.3	20	A
Beryllium	0.208	mg/L	0.010	83	70	130	5.1	20	
Cadmium	0.245	mg/L	0.010	94	70	130	0.9	20	
Chromium	0.594	mg/L	0.050	106	70	130	0.6	20	
Copper	0.956	mg/L	0.010	98	70	130	0.2	20	
Lead	0.660	mg/L	0.050	107	70	130	0.3	20	
Manganese	3.16	mg/L	0.010	98	70	130	1.4	20	
Molybdenum	0.647	mg/L	0.10	103	70	130	1.2	20	
Nickel	0.530	mg/L	0.050	97	70	130	1.1	20	
Selenium	0.355	mg/L	0.0010	70	70	130	1.2	20	
Silver	0.0458	mg/L	0.010	91	70	130	1.4	20	
Strontium	1.20	mg/L	0.10	108	70	130	0.3	20	
Thallium	0.538	mg/L	0.10	107	70	130	1.6	20	
Uranium	0.583	mg/L	0.00030	114	70	130	0.6	20	
Zinc	2.90	mg/L	0.010		70	130	9.9	20	A
<b>Method: E200.8</b>							Batch: C_21089		
<b>Sample ID: MB-21089</b>	Method Blank		Run: SUB-C113412				01/14/09 13:12		
Antimony	0.0004	mg/L	0.0002						
<b>Sample ID: LCS3-21089</b>	Laboratory Control Sample		Run: SUB-C113412				01/14/09 13:18		
Antimony	0.614	mg/L	0.050	123	85	115			S
<b>Sample ID: C09010316-001BMS3</b>	Sample Matrix Spike		Run: SUB-C113412				01/14/09 15:22		
Antimony	0.619	mg/L	0.050	123	70	130			
<b>Sample ID: C09010316-001BMSD3</b>	Sample Matrix Spike Duplicate		Run: SUB-C113412				01/14/09 15:28		
Antimony	0.628	mg/L	0.050	125	70	130	1.5	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.  
S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R112759		
Sample ID: LRB	Method Blank		Run: SUB-C112759				12/26/08 11:23		
Aluminum	ND	mg/L	0.0001						
Arsenic	0.0004	mg/L	6E-05						
Barium	ND	mg/L	3E-05						
Cadmium	3E-05	mg/L	1E-05						
Chromium	ND	mg/L	4E-05						
Copper	ND	mg/L	7E-05						
Lead	ND	mg/L	3E-05						
Manganese	ND	mg/L	5E-05						
Mercury	ND	mg/L	8E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	ND	mg/L	0.0007						
Silver	7E-05	mg/L	3E-05						
Thorium 232	ND	mg/L	4E-05						
Uranium	ND	mg/L	1E-05						
Vanadium	ND	mg/L	3E-05						
Zinc	0.0004	mg/L	0.0003						
Sample ID: LFB	Laboratory Fortified Blank		Run: SUB-C112759				12/26/08 11:30		
Aluminum	0.0504	mg/L	0.0010	101	85	115			
Arsenic	0.0511	mg/L	0.0010	102	85	115			
Barium	0.0497	mg/L	0.0010	99	85	115			
Cadmium	0.0499	mg/L	0.0010	100	85	115			
Chromium	0.0511	mg/L	0.0010	102	85	115			
Copper	0.0518	mg/L	0.0010	104	85	115			
Lead	0.0503	mg/L	0.0010	101	85	115			
Manganese	0.0511	mg/L	0.0010	102	85	115			
Mercury	0.00524	mg/L	0.0010	105	85	115			
Molybdenum	0.0513	mg/L	0.0010	103	85	115			
Nickel	0.0517	mg/L	0.0010	103	85	115			
Silver	0.0202	mg/L	0.0010	101	85	115			
Thorium 232	0.0495	mg/L	0.0010	99	85	115			
Uranium	0.0495	mg/L	0.00030	99	85	115			
Vanadium	0.0511	mg/L	0.0010	102	85	115			
Zinc	0.0528	mg/L	0.0010	104	85	115			
Sample ID: LFB	Laboratory Fortified Blank		Run: SUB-C112759				12/26/08 15:55		
Aluminum	0.0461	mg/L	0.0010	92	85	115			
Arsenic	0.0483	mg/L	0.0010	96	85	115			
Barium	0.0486	mg/L	0.0010	97	85	115			
Cadmium	0.0485	mg/L	0.0010	97	85	115			
Chromium	0.0493	mg/L	0.0010	99	85	115			
Copper	0.0497	mg/L	0.0010	99	85	115			
Lead	0.0494	mg/L	0.0010	99	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R112759		
<b>Sample ID: LFB</b>	Laboratory Fortified Blank			Run: SUB-C112759			12/26/08 15:55		
Manganese	0.0497	mg/L	0.0010	99	85	115			
Mercury	0.00522	mg/L	0.0010	104	85	115			
Molybdenum	0.0497	mg/L	0.0010	99	85	115			
Nickel	0.0497	mg/L	0.0010	99	85	115			
Silver	0.0189	mg/L	0.0010	94	85	115			
Thorium 232	0.0496	mg/L	0.0010	99	85	115			
Uranium	0.0498	mg/L	0.00030	100	85	115			
Vanadium	0.0490	mg/L	0.0010	98	85	115			
Zinc	0.0504	mg/L	0.0010	100	85	115			
<b>Sample ID: R08120255-010C</b>	Post Digestion Spike			Run: SUB-C112759			12/26/08 19:39		
Aluminum	0.0422	mg/L	0.10	84	70	130			
Arsenic	0.0499	mg/L	0.0010	99	70	130			
Barium	0.0584	mg/L	0.10	98	70	130			
Cadmium	0.0497	mg/L	0.010	99	70	130			
Chromium	0.0498	mg/L	0.050	98	70	130			
Copper	0.0462	mg/L	0.010	92	70	130			
Lead	0.0505	mg/L	0.050	101	70	130			
Manganese	0.136	mg/L	0.010	103	70	130			
Mercury	0.00551	mg/L	0.0010	110	70	130			
Molybdenum	0.0557	mg/L	0.10	103	70	130			
Nickel	0.0461	mg/L	0.050	92	70	130			
Silver	0.0169	mg/L	0.010	85	70	130			
Thorium 232	0.0495	mg/L	0.0010	99	70	130			
Uranium	0.0508	mg/L	0.00030	96	70	130			
Vanadium	0.0512	mg/L	0.10	102	70	130			
Zinc	0.0538	mg/L	0.010	98	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R112871		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C112871				12/29/08 19:45		
Antimony	0.0004	mg/L	0.0003						
Arsenic	ND	mg/L	2E-05						
Barium	ND	mg/L	2E-05						
Cadmium	1E-05	mg/L	8E-06						
Chromium	ND	mg/L	2E-05						
Copper	ND	mg/L	1E-05						
Lead	ND	mg/L	1E-05						
Manganese	ND	mg/L	2E-05						
Nickel	ND	mg/L	2E-05						
Selenium	ND	mg/L	4E-05						
Strontium	ND	mg/L	2E-05						
Thallium	ND	mg/L	1.0E-05						
Uranium	ND	mg/L	7E-06						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C112871				12/29/08 19:52		
Antimony	0.0509	mg/L	0.0010	101	85	115			
Arsenic	0.0520	mg/L	0.0010	104	85	115			
Barium	0.0525	mg/L	0.0010	105	85	115			
Cadmium	0.0522	mg/L	0.0010	104	85	115			
Chromium	0.0516	mg/L	0.0010	103	85	115			
Copper	0.0524	mg/L	0.0010	105	85	115			
Lead	0.0518	mg/L	0.0010	104	85	115			
Manganese	0.0518	mg/L	0.0010	104	85	115			
Nickel	0.0521	mg/L	0.0010	104	85	115			
Selenium	0.0526	mg/L	0.0010	105	85	115			
Strontium	0.0515	mg/L	0.0010	103	85	115			
Thallium	0.0513	mg/L	0.0010	103	85	115			
Uranium	0.0491	mg/L	0.00030	98	85	115			
<b>Sample ID: C08120843-006BMS</b>	Sample Matrix Spike		Run: SUB-C112871				12/29/08 23:06		
Uranium	66	mg/L	0.00030		70	130			A
<b>Sample ID: C08120843-006BMSD</b>	Sample Matrix Spike Duplicate		Run: SUB-C112871				12/29/08 23:13		
Uranium	67	mg/L	0.00030		70	130	1.9	20	A
<b>Sample ID: R08120255-013D</b>	Post Digestion Spike		Run: SUB-C112871				12/30/08 03:26		
Antimony	0.0539	mg/L	0.050	108	70	130			
Arsenic	0.0740	mg/L	0.0010	102	70	130			
Barium	0.0629	mg/L	0.10	101	70	130			
Cadmium	0.0494	mg/L	0.010	99	70	130			
Chromium	0.0478	mg/L	0.050	96	70	130			
Copper	0.0487	mg/L	0.010	97	70	130			
Lead	0.0513	mg/L	0.050	102	70	130			
Manganese	0.113	mg/L	0.010	102	70	130			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R112871		
Sample ID: R08120255-013D	Post Digestion Spike			Run: SUB-C112871			12/30/08 03:26		
Nickel	0.0484	mg/L	0.050	96	70	130			
Selenium	0.0541	mg/L	0.0010	108	70	130			
Strontium	1.36	mg/L	0.10		70	130			A
Thallium	0.0483	mg/L	0.10	97	70	130			
Uranium	0.0504	mg/L	0.00030	96	70	130			
Sample ID: R08120255-013D	Post Digestion Spike Duplicate			Run: SUB-C112871			12/30/08 03:33		
Antimony	0.0540	mg/L	0.050	108	70	130	0.1	20	
Arsenic	0.0749	mg/L	0.0010	104	70	130	1.3	20	
Barium	0.0629	mg/L	0.10	101	70	130	0	20	
Cadmium	0.0493	mg/L	0.010	99	70	130	0.2	20	
Chromium	0.0480	mg/L	0.050	96	70	130	0	20	
Copper	0.0485	mg/L	0.010	97	70	130	0.3	20	
Lead	0.0514	mg/L	0.050	102	70	130	0.3	20	
Manganese	0.115	mg/L	0.010	106	70	130	1.8	20	
Nickel	0.0489	mg/L	0.050	97	70	130	0	20	
Selenium	0.0527	mg/L	0.0010	105	70	130	2.7	20	
Strontium	1.37	mg/L	0.10		70	130	1	20	A
Thallium	0.0486	mg/L	0.10	97	70	130	0	20	
Uranium	0.0509	mg/L	0.00030	97	70	130	1	20	
Method: E200.8							Batch: C_R112947		
Sample ID: LRB	Method Blank			Run: SUB-C112947			01/01/09 16:40		
Beryllium	ND	mg/L	3E-05						
Molybdenum	ND	mg/L	5E-05						
Silver	ND	mg/L	3E-05						
Sample ID: LFB	Laboratory Fortified Blank			Run: SUB-C112947			01/01/09 16:46		
Beryllium	0.0508	mg/L	0.0010	102	85	115			
Molybdenum	0.0527	mg/L	0.0010	105	85	115			
Silver	0.0202	mg/L	0.0010	101	85	115			
Sample ID: C08120940-006AMS4	Post Digestion Spike			Run: SUB-C112947			01/02/09 01:54		
Beryllium	0.0494	mg/L	0.010	99	70	130			
Molybdenum	0.973	mg/L	0.10		70	130			A
Silver	0.0186	mg/L	0.010	93	70	130			
Sample ID: C08120940-006AMSD4	Post Digestion Spike Duplicate			Run: SUB-C112947			01/02/09 02:01		
Beryllium	0.0481	mg/L	0.010	96	70	130	2.7	20	
Molybdenum	0.979	mg/L	0.10		70	130	0.6	20	A
Silver	0.0187	mg/L	0.010	94	70	130	0.7	20	

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.





## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R113003		
Sample ID: LRB Silver	Method Blank ND	mg/L	3E-05			Run: SUB-C113003		01/02/09 15:06	
Sample ID: LFB Silver	Laboratory Fortified Blank 0.0183	mg/L	0.0010	91	85	115		01/02/09 15:13	
Sample ID: R08120255-007D Silver	Post Digestion Spike 0.0151	mg/L	0.010	75	70	130		01/02/09 19:59	
Sample ID: R08120255-007D Silver	Post Digestion Spike Duplicate 0.0158	mg/L	0.010	79	70	130	4.9	01/02/09 20:05 20	
Method: E200.8							Batch: C_R113293		
Sample ID: LRB Zinc	Method Blank ND	mg/L	0.0002			Run: SUB-C113293		01/12/09 12:01	
Sample ID: R08120255-013D Zinc	Post Digestion Spike 0.0543	mg/L	0.010	105	70	130		01/12/09 18:31	
Sample ID: R08120255-013D Zinc	Post Digestion Spike Duplicate 0.0534	mg/L	0.010	104	70	130	1.7	01/12/09 18:38 20	
Sample ID: LFB Zinc	Laboratory Fortified Blank 0.0537	mg/L	0.0010	107	85	115		01/13/09 10:22	
Method: E245.1							Batch: B_36516		
Sample ID: MB-36516 Mercury	Method Blank ND	mg/L	5E-05			Run: SUB-B122673		12/26/08 14:51	
Sample ID: LFB-36516 Mercury	Laboratory Fortified Blank 0.0019	mg/L	0.0010	97	85	115		12/26/08 14:53	
Sample ID: R08120271-001A Mercury	Sample Matrix Spike 0.0019	mg/L	0.0010	94	70	130		12/26/08 14:57	
Sample ID: R08120271-001A Mercury	Sample Matrix Spike Duplicate 0.0019	mg/L	0.0010	93	70	130	0	12/26/08 15:00 30	
Sample ID: B08121922-007JMS Mercury	Sample Matrix Spike 0.0020	mg/L	0.0010	99	70	130		12/26/08 15:26	
Sample ID: B08121922-007JMSD Mercury	Sample Matrix Spike Duplicate 0.0020	mg/L	0.0010	100	70	130	1	12/26/08 15:28 30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1							Analytical Run: SUB-B122673		
Sample ID: QCS	Initial Calibration Verification Standard						12/26/08 14:40		
Mercury	0.0019	mg/L	0.0010	97	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>									Batch: R38894
<b>Sample ID: LFB0812181213-3</b>	Laboratory Fortified Blank					Run: DIONEX_081218A			12/18/08 19:50
Chloride	4.83	mg/L	0.50	97	90	110			
Fluoride	2.11	mg/L	0.10	105	90	110			
Nitrogen, Nitrate as N	2.33	mg/L	0.10	93	90	110			
Nitrogen, Nitrite as N	2.49	mg/L	0.10	100	90	110			
Sulfate	14.4	mg/L	1.0	96	90	110			
<b>Sample ID: LFB0812181213-4</b>	Laboratory Fortified Blank					Run: DIONEX_081218A			12/18/08 20:07
Chloride	4.81	mg/L	0.50	96	90	110			
Fluoride	2.11	mg/L	0.10	105	90	110			
Nitrogen, Nitrate as N	2.32	mg/L	0.10	93	90	110			
Nitrogen, Nitrite as N	2.48	mg/L	0.10	99	90	110			
Sulfate	14.4	mg/L	1.0	96	90	110			
<b>Sample ID: R08120226-003AMS</b>	Sample Matrix Spike					Run: DIONEX_081218A			12/18/08 20:39
Chloride	763	mg/L	1.1		80	120			A
Fluoride	20.4	mg/L	0.11	93	80	120			
Nitrogen, Nitrate as N	52.0	mg/L	0.25	91	80	120			
Nitrogen, Nitrite as N	22.9	mg/L	0.58	92	80	120			
Sulfate	3580	mg/L	1.0		80	120			A
<b>Sample ID: R08120226-003AMSD</b>	Sample Matrix Spike Duplicate					Run: DIONEX_081218A			12/18/08 20:56
Chloride	764	mg/L	1.1		80	120	0.2	10	A
Fluoride	19.6	mg/L	0.11	89	80	120	4.5	10	
Nitrogen, Nitrate as N	51.1	mg/L	0.25	87	80	120	1.9	10	
Nitrogen, Nitrite as N	21.9	mg/L	0.58	88	80	120	4.3	10	
Sulfate	3590	mg/L	1.0		80	120	0.3	10	A
<b>Sample ID: R08120255-004AMS</b>	Sample Matrix Spike					Run: DIONEX_081218A			12/19/08 00:13
Chloride	251	mg/L	5.4	90	80	120			
Fluoride	105	mg/L	0.56	94	80	120			
Nitrogen, Nitrate as N	113	mg/L	1.3	91	80	120			
Nitrogen, Nitrite as N	122	mg/L	2.9	97	80	120			
Sulfate	1910	mg/L	3.4	82	80	120			
<b>Sample ID: R08120255-004AMSD</b>	Sample Matrix Spike Duplicate					Run: DIONEX_081218A			12/19/08 00:29
Chloride	244	mg/L	5.4	87	80	120	2.6	10	
Fluoride	101	mg/L	0.56	91	80	120	3	10	
Nitrogen, Nitrate as N	110	mg/L	1.3	88	80	120	2.8	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	2.5	10	
Sulfate	1870	mg/L	3.4	77	80	120	1.9	10	S
<b>Sample ID: R08120255-008AMS</b>	Sample Matrix Spike					Run: DIONEX_081218A			12/19/08 03:30
Chloride	246	mg/L	5.4	89	80	120			
Fluoride	104	mg/L	0.56	92	80	120			

### 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.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/27/09

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R38894		
<b>Sample ID: R08120255-008AMS</b>	Sample Matrix Spike		Run: DIONEX_081218A				12/19/08 03:30		
Nitrogen, Nitrate as N	113	mg/L	1.3	90	80	120			
Nitrogen, Nitrite as N	122	mg/L	2.9	98	80	120			
Sulfate	1090	mg/L	3.4	82	80	120			
<b>Sample ID: R08120255-008AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081218A				12/19/08 03:46		
Chloride	241	mg/L	5.4	87	80	120	2.2	10	
Fluoride	102	mg/L	0.56	91	80	120	1.6	10	
Nitrogen, Nitrate as N	110	mg/L	1.3	88	80	120	2.6	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	2.6	10	
Sulfate	1080	mg/L	3.4	81	80	120	0.7	10	
<b>Sample ID: R08120255-012AMS</b>	Sample Matrix Spike		Run: DIONEX_081218A				12/19/08 06:47		
Chloride	247	mg/L	5.4	90	80	120			
Fluoride	103	mg/L	0.56	93	80	120			
Nitrogen, Nitrate as N	113	mg/L	1.3	90	80	120			
Nitrogen, Nitrite as N	121	mg/L	2.9	97	80	120			
Sulfate	1080	mg/L	3.4	83	80	120			
<b>Sample ID: R08120255-012AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081218A				12/19/08 07:03		
Chloride	242	mg/L	5.4	88	80	120	1.9	10	
Fluoride	102	mg/L	0.56	91	80	120	1.6	10	
Nitrogen, Nitrate as N	110	mg/L	1.3	88	80	120	2.3	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	2.2	10	
Sulfate	1070	mg/L	3.4	82	80	120	0.9	10	
<b>Method: E900.0</b>							Batch: C_GrAB-0589		
<b>Sample ID: MB-GrAB-0589</b>	Method Blank		Run: SUB-C113399				01/13/09 11:06		
Gross Alpha	0.03	pCi/L							U
Gross Beta	0.4	pCi/L							U
<b>Sample ID: UNAT-GrAB-0589</b>	Laboratory Control Sample		Run: SUB-C113399				01/13/09 11:06		
Gross Alpha	120	pCi/L		85	70	130			
<b>Sample ID: C08120850-001AMS</b>	Sample Matrix Spike		Run: SUB-C113399				01/13/09 11:06		
Gross Beta	90	pCi/L		94	70	130			
<b>Sample ID: C08120850-001AMSD</b>	Sample Matrix Spike Duplicate		Run: SUB-C113399				01/13/09 11:06		
Gross Beta	94	pCi/L		97	70	130	3.7	16.1	
<b>Sample ID: R08120255-007H</b>	Sample Duplicate		Run: SUB-C113399				01/14/09 01:15		
Gross Alpha	5400	pCi/L					4.9	12.7	
Gross Beta	2000	pCi/L					3.6	12.3	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1							Batch: C_R112957		
Sample ID: LCS-R112957	Laboratory Control Sample				Run: SUB-C112957			12/29/08 12:00	
Americium 241	25000	pCi/L	20	83	70	130			
Cesium 137	43000	pCi/L	20	95	70	130			
Cobalt 60	30000	pCi/L	20	100	70	130			
Sample ID: MB-R112957	Method Blank				Run: SUB-C112957			12/29/08 12:00	
Americium 241	ND	pCi/L							
Barium 133	ND	pCi/L							
Bismuth 212	ND	pCi/L							
Bismuth 214	ND	pCi/L							U
Cesium 134	ND	pCi/L							
Cesium 137	ND	pCi/L							
Cobalt 60	ND	pCi/L							
Iodine 125	ND	pCi/L							
Iodine 131	ND	pCi/L							
Lead 212	ND	pCi/L							
Lead 214	ND	pCi/L							
Manganese 54	ND	pCi/L							
Potassium 40	ND	pCi/L							
Radium 223	ND	pCi/L							
Radium 224	ND	pCi/L							
Thallium 208	ND	pCi/L							
Thorium 228	ND	pCi/L							
Thorium 234	ND	pCi/L							
Zinc 65	ND	pCi/L							
Radium 228	ND	pCi/L							
Gross Gamma	ND	pCi/L							U
Sample ID: R08120255-007H	Sample Duplicate				Run: SUB-C112957			12/29/08 12:00	
Americium 241	ND	pCi/L	20				0	30	
Barium 133	ND	pCi/L	20				0	30	
Bismuth 212	ND	pCi/L	20				0	30	
Bismuth 214	780	pCi/L	20				5.6	30	
Cesium 134	ND	pCi/L	20				0	30	
Cesium 137	ND	pCi/L	20				0	30	
Cobalt 60	ND	pCi/L	20				0	30	
Iodine 125	ND	pCi/L	20				0	30	
Iodine 131	ND	pCi/L	20				0	30	
Lead 212	ND	pCi/L	20				0	30	
Lead 214	760	pCi/L	20				1.9	30	
Manganese 54	ND	pCi/L	20				0	30	
Potassium 40	ND	pCi/L	20				0	30	
Radium 223	ND	pCi/L					0	30	
Radium 224	ND	pCi/L					0	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1							Batch: C_R112957		
Sample ID: R08120255-007H	Sample Duplicate				Run: SUB-C112957			12/29/08 12:00	
Thallium 208	ND	pCi/L	20				0	30	
Thorium 228	ND	pCi/L	20				0	30	
Thorium 234	ND	pCi/L	20				0	30	
Zinc 65	ND	pCi/L	20				0	30	
Radium 228	ND	pCi/L	20				0	30	
Gross Gamma	1500	pCi/L					1.9	30	
Method: E903.0							Batch: C_20988		
Sample ID: R08120255-005I	Sample Duplicate				Run: SUB-C113735			01/21/09 21:42	
Radium 226	4.3	pCi/L			70	130	10	40.6	
Sample ID: R08120255-010I	Sample Matrix Spike				Run: SUB-C113735			01/21/09 23:27	
Radium 226	33	pCi/L		95	70	130			
Sample ID: LCS-20988	Laboratory Control Sample				Run: SUB-C113735			01/22/09 01:17	
Radium 226	14	pCi/L		98	70	130			
Sample ID: MB-20988	Method Blank				Run: SUB-C113735			01/22/09 01:17	
Radium 226	-0.3	pCi/L						U	
Method: E903.0							Batch: C_RA226-3344		
Sample ID: R08120255-001H	Sample Matrix Spike				Run: SUB-C113059			01/05/09 12:37	
Radium 226	27	pCi/L		87	70	130			
Sample ID: R08120255-001H	Sample Matrix Spike Duplicate				Run: SUB-C113059			01/05/09 12:37	
Radium 226	14	pCi/L		89	70	130	64	20.9	R
- The RPD for the MSD is high because the MS was spiked twice. The individual spike recoveries are within range, the MB is acceptable, and the LCS is within range, therefore the batch is approved.									
Sample ID: MB-RA226-3344	Method Blank				Run: SUB-C113059			01/05/09 15:43	
Radium 226	-0.09	pCi/L						U	
Sample ID: LCS-RA226-3344	Laboratory Control Sample				Run: SUB-C113059			01/05/09 15:43	
Radium 226	7.1	pCi/L		90	70	130			

### Qualifiers:

RL - Analyte reporting limit.  
R - RPD exceeds advisory limit.

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



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/27/09

Project: Edgemont

Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_20988		
<b>Sample ID: C08120794-003AMS</b>	Sample Matrix Spike				Run: SUB-C113220		01/08/09 08:37		
Thorium 230	25.2	pCi/Filter	0.20	109	70	130			
<b>Sample ID: C08120794-003AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C113220		01/08/09 08:37		
Thorium 230	24.1	pCi/Filter	0.20	103	70	130	4.2	58.2	
<b>Sample ID: LCS-20988</b>	Laboratory Control Sample				Run: SUB-C113220		01/08/09 08:37		
Thorium 230	4.86	pCi/L	0.20	104	70	130			
<b>Sample ID: MB-20988</b>	Method Blank				Run: SUB-C113220		01/08/09 08:37		
Thorium 230	-0.1	pCi/L							U
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-0721		
<b>Sample ID: LCS-RA-TH-ISO-0721</b>	Laboratory Control Sample				Run: SUB-C113222		01/08/09 08:39		
Thorium 230	5.07	pCi/L	0.20	101	70	130			
<b>Sample ID: R08120255-003H</b>	Sample Matrix Spike				Run: SUB-C113222		01/08/09 08:39		
Thorium 230	45.0	pCi/L	0.20	92	70	130			
<b>Sample ID: R08120255-003H</b>	Sample Matrix Spike Duplicate				Run: SUB-C113222		01/08/09 08:39		
Thorium 230	48.3	pCi/L	0.20	98	70	130	7.1	43.2	
<b>Sample ID: MB-RA-TH-ISO-0721</b>	Method Blank				Run: SUB-C113222		01/08/09 15:39		
Thorium 230	0.1	pCi/L							U
<b>Method: E909.0M</b>							Batch: C_20988		
<b>Sample ID: R08120255-009I</b>	Sample Matrix Spike				Run: SUB-C113352		01/06/09 10:06		
Lead 210	1200	pCi/L		99	70	130			
<b>Sample ID: R08120255-009I</b>	Sample Matrix Spike Duplicate				Run: SUB-C113352		01/06/09 10:06		
Lead 210	1300	pCi/L		113	70	130	13	30	
<b>Sample ID: MB-R113352</b>	Method Blank				Run: SUB-C113352		01/06/09 10:06		
Lead 210	-2	pCi/L							U
<b>Sample ID: LCS-R113352</b>	Laboratory Control Sample				Run: SUB-C113352		01/06/09 10:06		
Lead 210	56	pCi/L		50	70	130			S

- LCS response is outside of the acceptance range for this analysis. Since the MS and MSD recoveries are acceptable the batch is approved.

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/27/09  
Work Order: R08120255

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M							Batch: C_R113310		
Sample ID: R08120255-004H	Sample Matrix Spike				Run: SUB-C113310			12/30/08 08:13	
Lead 210	57	pCi/L		47	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the MB are acceptable the batch is approved.									
Sample ID: R08120255-010H	Sample Duplicate				Run: SUB-C113310			12/30/08 08:13	
Lead 210	4.7	pCi/L					32	30	UR
- The Sample and the Duplicate are both below the MDC; the RPD is acceptable.									
Sample ID: MB-R113310	Method Blank				Run: SUB-C113310			12/30/08 08:13	
Lead 210	0.5	pCi/L							U
Sample ID: LCS-R113310	Laboratory Control Sample				Run: SUB-C113310			12/30/08 08:13	
Lead 210	62	pCi/L		106	70	130			
Method: RMO-3008							Batch: C_20988		
Sample ID: C08120790-003FMS	Sample Matrix Spike				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	160	pCi/L	1.0	96	70	130			
Sample ID: C08120790-003FMSD	Sample Matrix Spike Duplicate				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	150	pCi/L	1.0	90	70	130	6.2	55.7	
Sample ID: LCS-20988	Laboratory Control Sample				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	84	pCi/L	1.0	98	70	130			
Sample ID: MB-20988	Method Blank				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	0.2	pCi/L							U
Method: RMO-3008							Batch: C_PO210-0173		
Sample ID: C08120771-001KMS	Sample Matrix Spike				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	15	pCi/L	1.0	98	70	130			
Sample ID: C08120771-001KMSD	Sample Matrix Spike Duplicate				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	12	pCi/L	1.0	78	70	130	22	50.6	
Sample ID: LCS-PO210-0173	Laboratory Control Sample				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	18	pCi/L	1.0	103	70	130			
Sample ID: MB-PO210-0173	Method Blank				Run: SUB-C113513			01/12/09 09:22	
Polonium 210	0.05	pCi/L							U

### Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.





# Chain of Custody and Analytical Request Record

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PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Scott Environmental</u>	Project Name, PWS, Permit, Etc. <u>Dewey Burdock GW Ponds</u>	Sample Origin State: _____	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <u>RESPEC</u>	Contact Name: <u>Allen Scott</u>	Email: <u>Allen Scott</u>	Sampler: (Please Print) <u>Allen Scott</u>
Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Special Report/Formats - ELI must be notified prior to sample submittal for the following:

<input type="checkbox"/> DW	<input type="checkbox"/> A2LA
<input type="checkbox"/> GSA	<input type="checkbox"/> EDD/EDT (Electronic Data)
<input type="checkbox"/> POTW/WWTP	Format: _____
<input type="checkbox"/> State: _____	<input type="checkbox"/> LEVEL IV
<input type="checkbox"/> Other: _____	<input type="checkbox"/> NELAC

## ANALYSIS REQUESTED

Number of Containers	Sample Type: A W S V B O	Vegetation Bioassay Other
1	water	
2		
3		
4		
5		
6		
7		
8		
9		
10		

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

Comments:

Receipt Temp  
1.9 °C

On Ice: ☒ Yes ☐ No

Custody Seal Y N

Intact Y N

Signature Match Y N

Shipped by:

Cooler ID(s):

LABORATORY USE ONLY

208120255-001

202

203

204

205

206

207

208

209

210

Signature:

Date/Time:

Received by (print):

Date/Time:

Received by (print):

Date/Time:

Signature:

Date/Time:

Signature:

Date/Time:

Signature:

Date/Time:

Signature:

Date/Time:

Custody Record MUST be Signed

Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

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Relinquished by (print): Allen Scott

Relinquished by (print): Allen Scott

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

## Chain of Custody and Analytical Request Record

Company Name: <b>Sixt Environmental</b>		Project Name, PWS, Permit, Etc. <b>Powertech Power &amp; Light Co</b>		Sample Origin State: <input type="checkbox"/> No <input type="checkbox"/>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <b>RESPEC</b>		Contact Name: <b>Allen Smith</b>		Phone/Fax:		Sampler: (Please Print) <b>Allen Smith</b>	
Invoice Address:		Invoice Contact & Phone:		Purchase Order:		Quote/Bottle Order:	

Special Report/Formats - ELI must be notified prior to sample submittal for the following: <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> POTW/MWTP <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC				Number of Containers Sample Type: A W S V B Air Water Soils/Solids Vegetation Bioassay Other		ANALYSIS REQUESTED <div style="border: 1px solid black; padding: 5px; text-align: center;"> <b>SEE ATTACHED</b>  <b>Normal Turnaround (TAT)</b> </div>		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page <b>R U S H</b>		Shipped by: Cooler ID(s): Receipt Temp _____ °C On Ice: Yes <input type="checkbox"/> No <input type="checkbox"/> Custody Seal Y N Intact Y N Signature Match Y N	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)				Collection Date		Collection Time		MATRIX		COMMENTS	
1 GW 694				12-17		3:45		Water			
2 GW 696				12-17		4:05		11			
3 GW 615				12-17		11:27		11			
4 <del>694</del>											
5											
6											
7											
8											
9											
10											

Relinquished by (print): <b>Allen Smith</b> Date/Time: <b>12-18-08 10:19</b>		Signature: <b>Allen Smith</b> Date/Time:	
Relinquished by (print):		Signature:	

Custody Record MUST be Signed		Relinquished by (print): <b>Allen Smith</b> Date/Time: <b>12-18-08 10:19</b>		Signature: <b>Allen Smith</b> Date/Time:	
Sample Disposal:		Relinquished by (print):		Signature:	

This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

**\*\* REPORT \*\***

RESPEC Inc  
Cory Foreman  
3824 Jet Dr  
Rapid City SD 57701



## ANALYTICAL SUMMARY REPORT

January 28, 2009

Cory Foreman  
RESPEC Inc  
3824 Jet Dr  
Rapid City, SD 57701-

Workorder No.: R08120281      Quote ID: R286

Project Name: Edgemont

Energy Laboratories Inc. received the following 1 sample for RESPEC Inc on 12/22/2008 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R08120281-001	DewBurd GW688	12/22/08 9:45	12/22/08	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

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

Report Approved By: \_\_\_\_\_

  
Linda Larson  
Rapid City - Project Manager



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120281-001  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/28/09  
**Collection Date:** 12/22/08 09:45  
**Date Received:** 12/22/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	166	mg/L		5		1	A2320 B	12/23/08 11:29/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/23/08 11:29/mb
Bicarbonate as HCO <sub>3</sub>	202	mg/L		5		1	A2320 B	12/23/08 11:29/mb
Calcium	48.7	mg/L		0.5		2	E200.7	01/05/09 15:50/eli-c
Chloride	12	mg/L		1		1	E300.0	12/24/08 18:15/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	12/24/08 18:15/jmh
Magnesium	21.1	mg/L		0.5		2	E200.7	01/05/09 15:50/eli-c
Nitrogen, Ammonia as N	0.7	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/26/08 15:48/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/24/08 18:15/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/24/08 18:15/jmh
Potassium	12.3	mg/L		0.5		2	E200.7	01/05/09 15:50/eli-c
Sodium	194	mg/L	D	2		2	E200.7	01/05/09 15:50/eli-c
Sulfate	435	mg/L	D	3		50	E300.0	12/24/08 17:58/jmh
Silica	8.9	mg/L		0.2		2	E200.7	01/05/09 15:50/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1110	umhos/cm		5.0		1	A2510 B	01/06/09 10:18/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	12/23/08 14:30/jmh
pH	7.87	s.u.		0.01		1	A4500-H B	12/29/08 12:34/tb
Sodium Adsorption Ratio (SAR)	5.9	unitless		0.10		1	Calculation	01/23/09 16:16/ADM
Solids, Total Dissolved TDS @ 180 C	780	mg/L	H	5		1	A2540 C	12/30/08 15:10/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	12/29/08 14:22/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	12/27/08 07:55/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/27/08 07:55/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 15:50/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/27/08 07:55/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/29/08 14:22/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/27/08 07:55/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/05/09 15:50/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/27/08 07:55/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	12/27/08 07:55/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/27/08 07:55/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	12/27/08 07:55/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/27/08 07:55/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/09/09 16:21/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/27/08 07:55/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	12/27/08 07:55/eli-c

**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 interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120281-001  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/28/09  
**Collection Date:** 12/22/08 09:45  
**Date Received:** 12/22/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	12/27/08 07:55/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	12/29/08 14:22/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/27/08 07:55/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L	D	0.0009		1	E200.8	01/01/09 22:42/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/08/09 15:51/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/09/09 16:57/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	1.9	pCi/L	U			1	E900.0	01/14/09 22:47/eli-c
Gross Alpha precision (±)	2.5	pCi/L				1	E900.0	01/14/09 22:47/eli-c
Gross Alpha MDC	3.9	pCi/L				1	E900.0	01/14/09 22:47/eli-c
Gross Beta	8.8	pCi/L				1	E900.0	01/14/09 22:47/eli-c
Gross Beta precision (±)	3.4	pCi/L				1	E900.0	01/14/09 22:47/eli-c
Gross Beta MDC	5.5	pCi/L				1	E900.0	01/14/09 22:47/eli-c
Lead 210	1.0	pCi/L	U			1	E909.0M	12/30/08 08:13/eli-c
Lead 210 precision (±)	2.4	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Lead 210 MDC	4.0	pCi/L				1	E909.0M	12/30/08 08:13/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/09/09 13:47/eli-c
Polonium 210 precision (±)	0.17	pCi/L				1	RMO-3008	01/09/09 13:47/eli-c
Radium 226	0.7	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/05/09 14:13/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	01/14/09 16:00/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	01/14/09 16:00/eli-c
Gross Gamma	720	pCi/L				1	E901.1	12/29/08 12:00/eli-c
Gross Gamma precision (±)	140	pCi/L				1	E901.1	12/29/08 12:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	0.1	pCi/L	U			1	E909.0M	01/06/09 10:06/eli-c
Lead 210 precision (±)	6.2	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Lead 210 MDC	10.4	pCi/L				1	E909.0M	01/06/09 10:06/eli-c
Polonium 210	0.0	pCi/L	U	1.0		1	RMO-3008	01/15/09 14:33/eli-c
Polonium 210 precision (±)	0.25	pCi/L				1	RMO-3008	01/15/09 14:33/eli-c
Radium 226	0.1	pCi/L	U			1	E903.0	01/21/09 23:27/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R08120281-001  
**Client Sample ID:** DewBurd GW688

**Report Date:** 01/28/09  
**Collection Date:** 12/22/08 09:45  
**Date Received:** 12/22/08  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Radium 226 MDC	0.5	pCi/L				1	E903.0	01/21/09 23:27/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	01/07/09 13:33/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	01/07/09 13:33/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	81.1	pCi/L	U	100		1	D5072-92	12/23/08 17:11/eli-c
Radon 222 precision (±)	41.5	pCi/L				1	D5072-92	12/23/08 17:11/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	12/30/08 20:28/eli-c
Arsenic	0.004	mg/L	L	0.003		1	E200.8	12/30/08 20:28/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/30/08 20:28/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/30/08 20:28/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/05/09 18:44/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/30/08 20:28/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/30/08 20:28/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/30/08 20:28/eli-c
Iron	0.50	mg/L		0.03		2	E200.7	01/05/09 18:44/eli-c
Lead	0.001	mg/L		0.001		1	E200.8	12/30/08 20:28/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	12/30/08 20:28/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/26/08 15:49/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/30/08 20:28/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/30/08 20:28/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	01/01/09 18:01/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/30/08 20:28/eli-c
Strontium	1.2	mg/L		0.1		1	E200.8	12/30/08 20:28/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/30/08 20:28/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	12/30/08 20:28/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	12/30/08 20:28/eli-c
DATA QUALITY								
A/C Balance (± 5)	0.990	%				1	A1030 E	01/23/09 00:00/jmh
Anions	12.7	meq/L				1	A1030 E	01/23/09 00:00/jmh
Cations	13.0	meq/L				1	A1030 E	01/23/09 00:00/jmh
Solids, Total Dissolved Calculated	848	mg/L				1	A1030 E	01/23/09 00:00/jmh
TDS Balance (0.80 - 1.20)	0.920					1	A1030 E	01/23/09 00:00/jmh

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
L - Lowest available reporting limit for the analytical method used.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B		Batch: 081223A-ALK-SEL-W							
Sample ID: LCS1_081223A	Laboratory Control Sample					Run: PH_COND1-R_081223A			12/23/08 09:08
Alkalinity, Total as CaCO <sub>3</sub>	936	mg/L	5.0	94	90	110			
Sample ID: MBLK1_081223A	Method Blank					Run: PH_COND1-R_081223A			12/23/08 09:09
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	3						
Sample ID: R08120255-006AMS	Sample Matrix Spike					Run: PH_COND1-R_081223A			12/23/08 10:40
Alkalinity, Total as CaCO <sub>3</sub>	182	mg/L	5.0	64	80	120			S
Sample ID: R08120255-006AMSD	Sample Matrix Spike Duplicate					Run: PH_COND1-R_081223A			12/23/08 10:52
Alkalinity, Total as CaCO <sub>3</sub>	198	mg/L	5.0	79	80	120	8.4	10	S
Method: A2510 B		Batch: 090106_1_COND-PROBE-W							
Sample ID: LCS_COND-1_090106	Laboratory Control Sample					Run: PH_COND2-R_090106A			01/06/09 10:12
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
Sample ID: LCS1-1_090106	Laboratory Control Sample					Run: PH_COND2-R_090106A			01/06/09 10:13
Conductivity @ 25 C	150	umhos/cm	5.0	100	90	110			
Sample ID: LCS2-1_090106	Laboratory Control Sample					Run: PH_COND2-R_090106A			01/06/09 10:15
Conductivity @ 25 C	4950	umhos/cm	5.0	99	90	110			
Sample ID: MBLK-1_090106	Method Blank					Run: PH_COND2-R_090106A			01/06/09 10:17
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: R09010033-001BDUP	Sample Duplicate					Run: PH_COND2-R_090106A			01/06/09 10:30
Conductivity @ 25 C	ND	umhos/cm	5.0				0	10	
Method: A2540 C		Batch: 081230A-SLDS-TDS-W							
Sample ID: LCS1_081230A	Laboratory Control Sample					Run: BAL-4-R_081230A			12/30/08 15:08
Solids, Total Dissolved TDS @ 180 C	190	mg/L	5.0	96	90	110			
Sample ID: MBLK1_081230A	Method Blank					Run: BAL-4-R_081230A			12/30/08 15:09
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	8						
Sample ID: R08120281-001AMS	Sample Matrix Spike					Run: BAL-4-R_081230A			12/30/08 15:10
Solids, Total Dissolved TDS @ 180 C	990	mg/L	5.0	106	80	120			
Sample ID: R08120281-001AMSD	Sample Matrix Spike Duplicate					Run: BAL-4-R_081230A			12/30/08 15:11
Solids, Total Dissolved TDS @ 180 C	990	mg/L	5.0	108	80	120	0.4	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2580 B</b>							Batch: 081223-ORP-ISE-W		
<b>Sample ID: LCS</b>	Laboratory Control Sample				Run: PH_COND1-R_081223B		12/23/08 14:30		
Oxidation-Reduction Potential	480	mV		101	95	105			
<b>Sample ID: R08120255-001F</b>	Sample Duplicate				Run: PH_COND1-R_081223B		12/23/08 14:30		
Oxidation-Reduction Potential	290	mV					0.8	10	
<b>Sample ID: R08120255-011F</b>	Sample Duplicate				Run: PH_COND1-R_081223B		12/23/08 14:30		
Oxidation-Reduction Potential	270	mV					0.3	10	
<b>Method: A3114 B</b>							Batch: C_SE3114-090109B		
<b>Sample ID: MBLK</b>	Method Blank				Run: SUB-C113244		01/09/09 15:31		
Selenium	ND	mg/L	0.0003						
<b>Sample ID: 288-184-2</b>	Laboratory Control Sample				Run: SUB-C113244		01/09/09 15:33		
Selenium	0.055	mg/L	0.0010	109	90	110			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike				Run: SUB-C113244		01/09/09 16:12		
Selenium	0.057	mg/L	0.0010	113	85	115			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113244		01/09/09 16:14		
Selenium	0.058	mg/L	0.0010	116	85	115	2.5	15	S
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike				Run: SUB-C113244		01/09/09 15:40		
Selenium	0.055	mg/L	0.0010	110	85	115			
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113244		01/09/09 15:42		
Selenium	0.057	mg/L	0.0010	113	85	115	2.8	15	
<b>Method: A3114 B</b>							Batch: C_SEIV3114-090108		
<b>Sample ID: MBLK</b>	Method Blank				Run: SUB-C113187		01/08/09 14:58		
Selenium-IV	ND	mg/L	0.0003						
<b>Sample ID: 288-184-2</b>	Laboratory Control Sample				Run: SUB-C113187		01/08/09 15:00		
Selenium-IV	0.050	mg/L	0.0010	100	90	110			
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike				Run: SUB-C113187		01/08/09 15:42		
Selenium-IV	0.042	mg/L	0.0010	84	85	115			S
<b>Sample ID: R08120255-011E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113187		01/08/09 15:44		
Selenium-IV	0.044	mg/L	0.0010	87	85	115	4.4	10	
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike				Run: SUB-C113187		01/08/09 15:07		
Selenium-IV	0.046	mg/L	0.0010	92	85	115			
<b>Sample ID: R08120255-001E</b>	Sample Matrix Spike Duplicate				Run: SUB-C113187		01/08/09 15:10		
Selenium-IV	0.046	mg/L	0.0010	93	85	115	0.8	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-H B</b>							Batch: 081229_1_PH-W		
<b>Sample ID: LCS_pH-1_081229</b>	Laboratory Control Sample				Run: PH_COND2-R_081229A		12/29/08 12:32		
pH	6.84	s.u.	0.010	100	98.55	101.45			
<b>Sample ID: R08120281-001ADUP</b>	Sample Duplicate				Run: PH_COND2-R_081229A		12/29/08 12:35		
pH	7.89	s.u.	0.010				0.3	1.25	
<b>Method: A4500-NH3 G</b>							Batch: A2008-12-26_2_NH3_01		
<b>Sample ID: MBLK-2</b>	Method Blank				Run: TECHAA2-R_081226A		12/26/08 14:12		
Nitrogen, Ammonia as N	ND	mg/L	0.01						
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank				Run: TECHAA2-R_081226A		12/26/08 14:13		
Nitrogen, Ammonia as N	0.25	mg/L	0.10	98	90	110			
<b>Sample ID: LFB-4</b>	Laboratory Fortified Blank				Run: TECHAA2-R_081226A		12/26/08 14:14		
Nitrogen, Ammonia as N	0.27	mg/L	0.10	110	90	110			
<b>Sample ID: R08120255-002BMS</b>	Sample Matrix Spike				Run: TECHAA2-R_081226A		12/26/08 14:53		
Nitrogen, Ammonia as N	0.34	mg/L	0.10	111	80	120			
<b>Sample ID: R08120255-002BMSD</b>	Sample Matrix Spike Duplicate				Run: TECHAA2-R_081226A		12/26/08 14:54		
Nitrogen, Ammonia as N	0.34	mg/L	0.10	111	80	120	0.3	10	
<b>Sample ID: R08120255-010BMS</b>	Sample Matrix Spike				Run: TECHAA2-R_081226A		12/26/08 15:07		
Nitrogen, Ammonia as N	0.42	mg/L	0.10	100	80	120			
<b>Sample ID: R08120255-010BMSD</b>	Sample Matrix Spike Duplicate				Run: TECHAA2-R_081226A		12/26/08 15:08		
Nitrogen, Ammonia as N	0.45	mg/L	0.10	109	80	120	5.3	10	
<b>Method: D5072-92</b>							Batch: C_R112705		
<b>Sample ID: R08120281-001G</b>	Sample Duplicate				Run: SUB-C112705		12/23/08 17:11		
Radon 222	110	pCi/L	100				30	30	R
- Activity of original sample is below detection limit; duplicate is above detection limit, but within the limits of precision, resulting in high RPD. Batch is acceptable.									
<b>Sample ID: MB-R112705</b>	Method Blank				Run: SUB-C112705		12/23/08 17:11		
Radon 222	20	pCi/L							U
<b>Sample ID: LCS-R112705</b>	Laboratory Control Sample				Run: SUB-C112705		12/23/08 17:11		
Radon 222	301	pCi/L	100	93	70	130			

### Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_20978		
<b>Sample ID: MB-20978</b>	Method Blank				Run: SUB-C113039		01/05/09 19:00		
Boron	ND	mg/L	0.01						
Iron	ND	mg/L	0.009						
<b>Sample ID: LCS3-20978</b>	Laboratory Control Sample				Run: SUB-C113039		01/05/09 19:04		
Boron	0.516	mg/L	0.10	103	85	115			
Iron	2.57	mg/L	0.030	103	85	115			
<b>Sample ID: C08120822-001BMS3</b>	Sample Matrix Spike				Run: SUB-C113039		01/05/09 19:29		
Boron	0.658	mg/L	0.10	104	70	130			
Iron	3.53	mg/L	0.030	110	70	130			
<b>Sample ID: C08120822-001BMSD3</b>	Sample Matrix Spike Duplicate				Run: SUB-C113039		01/05/09 19:33		
Boron	0.647	mg/L	0.10	102	70	130	1.7	20	
Iron	3.34	mg/L	0.030	102	70	130	5.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R113039		
Sample ID: MB-090105A	Method Blank		Run: SUB-C113039				01/05/09 12:11		
Silicon	ND	mg/L	0.02						
Boron	0.02	mg/L	0.008						
Calcium	ND	mg/L	0.1						
Iron	ND	mg/L	0.005						
Magnesium	ND	mg/L	0.04						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.8						
Silica	ND	mg/L	0.04						
Sample ID: LFB-0090105A	Laboratory Fortified Blank		Run: SUB-C113039				01/05/09 12:15		
Silicon	0.38	mg/L	0.021	96	85	125			
Boron	1.1	mg/L	0.10	105	85	125			
Calcium	50	mg/L	0.50	99	85	125			
Iron	1.0	mg/L	0.030	101	85	125			
Magnesium	50	mg/L	0.50	100	85	125			
Potassium	47	mg/L	0.50	94	85	125			
Sodium	49	mg/L	0.77	99	85	125			
Silica	0.82	mg/L	0.044	96	85	125			
Sample ID: C08120739-002BMS2	Sample Matrix Spike		Run: SUB-C113039				01/05/09 15:25		
Boron	2.25	mg/L	0.10	104	70	130			
Iron	2.03	mg/L	0.030	101	70	130			
Silicon	8.94	mg/L	0.10		70	130			A
Calcium	118	mg/L	1.0	102	70	130			
Magnesium	113	mg/L	1.0	102	70	130			
Potassium	95.9	mg/L	1.0	93	70	130			
Sodium	230	mg/L	1.5	104	70	130			
Silica	19.1	mg/L	0.21		70	130			A
Sample ID: C08120739-002BMSD2	Sample Matrix Spike Duplicate		Run: SUB-C113039				01/05/09 15:29		
Boron	2.29	mg/L	0.10	106	70	130	1.6	20	
Iron	2.05	mg/L	0.030	102	70	130	0.6	20	
Silicon	8.93	mg/L	0.10		70	130	0	20	A
Calcium	118	mg/L	1.0	102	70	130	0	20	
Magnesium	114	mg/L	1.0	103	70	130	0.2	20	
Potassium	97.9	mg/L	1.0	95	70	130	2.1	20	
Sodium	232	mg/L	1.5	106	70	130	1	20	
Silica	19.1	mg/L	0.21		70	130	0	20	A
Sample ID: R08120255-012D	Sample Matrix Spike		Run: SUB-C113039				01/05/09 18:28		
Boron	2.19	mg/L	0.10	105	70	130			
Iron	2.20	mg/L	0.030	102	70	130			
Silicon	5.43	mg/L	0.10		70	130			A
Calcium	136	mg/L	1.0	105	70	130			

### 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.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R113039		
Sample ID: R08120255-012D	Sample Matrix Spike		Run: SUB-C113039				01/05/09 18:28		
Magnesium	116	mg/L	1.0	106	70	130			
Potassium	102	mg/L	1.0	93	70	130			
Sodium	394	mg/L	1.1	102	70	130			
Silica	11.6	mg/L	0.21		70	130			A
Sample ID: R08120255-012D	Sample Matrix Spike Duplicate		Run: SUB-C113039				01/05/09 18:32		
Boron	2.26	mg/L	0.10	109	70	130	3.2	20	
Iron	2.28	mg/L	0.030	106	70	130	3.5	20	
Silicon	5.59	mg/L	0.10		70	130	2.9	20	A
Calcium	137	mg/L	1.0	106	70	130	1	20	
Magnesium	118	mg/L	1.0	107	70	130	1.4	20	
Potassium	103	mg/L	1.0	94	70	130	1	20	
Sodium	412	mg/L	1.1	120	70	130	4.5	20	
Silica	12.0	mg/L	0.21		70	130	2.9	20	A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20978		
<b>Sample ID: MB-20978</b>	Method Blank		Run: SUB-C112889				12/30/08 19:20		
Antimony	0.0002	mg/L	7E-05						
Arsenic	0.003	mg/L	6E-05						
Barium	ND	mg/L	3E-05						
Beryllium	3E-05	mg/L	3E-05						
Cadmium	ND	mg/L	1E-05						
Chromium	0.004	mg/L	4E-05						
Copper	0.0007	mg/L	7E-05						
Lead	ND	mg/L	3E-05						
Manganese	0.0001	mg/L	5E-05						
Molybdenum	8E-05	mg/L	5E-05						
Nickel	ND	mg/L	0.0007						
Selenium	ND	mg/L	0.0002						
Silver	0.0002	mg/L	3E-05						
Strontium	ND	mg/L	3E-05						
Thallium	0.0004	mg/L	1E-05						
Uranium	3E-05	mg/L	1E-05						
Zinc	0.0009	mg/L	0.0003						
<b>Sample ID: MB-20978</b>	Method Blank		Run: SUB-C112947				01/01/09 17:07		
Antimony	0.0009	mg/L	0.0002						
Arsenic	0.003	mg/L	5E-05						
Barium	ND	mg/L	9E-05						
Beryllium	ND	mg/L	0.0001						
Cadmium	ND	mg/L	3E-05						
Chromium	0.002	mg/L	5E-05						
Copper	0.002	mg/L	0.0002						
Lead	ND	mg/L	5E-05						
Manganese	6E-05	mg/L	3E-05						
Molybdenum	ND	mg/L	5E-05						
Nickel	0.0004	mg/L	6E-05						
Selenium	0.0007	mg/L	0.0002						
Silver	ND	mg/L	4E-05						
Strontium	ND	mg/L	8E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
Zinc	0.0008	mg/L	0.0003						
<b>Sample ID: LCS3-20978</b>	Laboratory Control Sample		Run: SUB-C112947				01/01/09 17:13		
Antimony	0.559	mg/L	0.050	112	85	115			
Arsenic	0.515	mg/L	0.0010	102	85	115			
Barium	0.519	mg/L	0.10	104	85	115			
Beryllium	0.256	mg/L	0.010	102	85	115			
Cadmium	0.254	mg/L	0.010	102	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_20978		
<b>Sample ID: LCS3-20978</b>	Laboratory Control Sample			Run: SUB-C112947			01/01/09 17:13		
Chromium	0.528	mg/L	0.050	105	85	115			
Copper	0.486	mg/L	0.010	97	85	115			
Lead	0.512	mg/L	0.050	102	85	115			
Manganese	2.65	mg/L	0.010	106	85	115			
Molybdenum	0.536	mg/L	0.10	107	85	115			
Nickel	0.479	mg/L	0.050	96	85	115			
Selenium	0.517	mg/L	0.0010	103	85	115			
Silver	0.0485	mg/L	0.010	97	85	115			
Strontium	0.538	mg/L	0.10	108	85	115			
Thallium	0.535	mg/L	0.10	107	85	115			
Uranium	0.538	mg/L	0.00030	108	85	115			
Zinc	0.489	mg/L	0.010	98	85	115			
<b>Sample ID: C08120822-001BMS3</b>	Sample Matrix Spike			Run: SUB-C112947			01/01/09 18:14		
Antimony	0.604	mg/L	0.050	114	70	130			
Arsenic	0.514	mg/L	0.0010	102	70	130			
Barium	0.647	mg/L	0.10	106	70	130			
Beryllium	0.242	mg/L	0.010	97	70	130			
Cadmium	0.252	mg/L	0.010	99	70	130			
Chromium	0.528	mg/L	0.050	101	70	130			
Copper	1.69	mg/L	0.010	103	70	130			
Lead	0.509	mg/L	0.050	84	70	130			
Manganese	2.60	mg/L	0.010	102	70	130			
Molybdenum	0.553	mg/L	0.10	109	70	130			
Nickel	0.494	mg/L	0.050	95	70	130			
Selenium	0.504	mg/L	0.0010	98	70	130			
Silver	0.0619	mg/L	0.010	108	70	130			
Strontium	0.911	mg/L	0.10	105	70	130			
Thallium	0.417	mg/L	0.10	83	70	130			
Uranium	0.459	mg/L	0.00030	90	70	130			
Zinc	2.84	mg/L	0.010		70	130			A
<b>Sample ID: C08120822-001BMSD3</b>	Sample Matrix Spike Duplicate			Run: SUB-C112947			01/01/09 18:21		
Antimony	0.599	mg/L	0.050	113	70	130	0.9	20	
Arsenic	0.512	mg/L	0.0010	102	70	130	0.5	20	
Barium	0.644	mg/L	0.10	105	70	130	0.5	20	
Beryllium	0.245	mg/L	0.010	98	70	130	1.1	20	
Cadmium	0.251	mg/L	0.010	99	70	130	0.5	20	
Chromium	0.524	mg/L	0.050	100	70	130	0.8	20	
Copper	1.67	mg/L	0.010	98	70	130	1.4	20	
Lead	0.505	mg/L	0.050	84	70	130	0.7	20	
Manganese	2.56	mg/L	0.010	101	70	130	1.2	20	
Molybdenum	0.548	mg/L	0.10	108	70	130	0.9	20	

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_20978		
Sample ID: C08120822-001BMSD3	Sample Matrix Spike Duplicate		Run: SUB-C112947				01/01/09 18:21		
Nickel	0.490	mg/L	0.050	94	70	130	0.9	20	
Selenium	0.498	mg/L	0.0010	97	70	130	1.1	20	
Silver	0.0564	mg/L	0.010	97	70	130	9.2	20	
Strontium	0.892	mg/L	0.10	101	70	130	2.1	20	
Thallium	0.413	mg/L	0.10	83	70	130	1.1	20	
Uranium	0.455	mg/L	0.00030	89	70	130	0.8	20	
Zinc	2.84	mg/L	0.010		70	130	0.2	20	A
Method: E200.8							Batch: C_20988		
Sample ID: MB-20988	Method Blank		Run: SUB-C112968				01/01/09 21:17		
Uranium	ND	mg/L	0.004						
Sample ID: LCS1-20988	Laboratory Control Sample		Run: SUB-C112968				01/01/09 21:21		
Uranium	0.0977	mg/L	0.0037	98	80	120			

### Qualifiers:

RL - Analyte reporting limit.

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

ND - Not detected at the reporting limit.





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R112751		
Sample ID: C08120718-005CMS4	Post Digestion Spike		Run: SUB-C112751				12/27/08 08:09		
Arsenic	0.488	mg/L	0.0010	97	70	130			
Barium	0.518	mg/L	0.10	100	70	130			
Cadmium	0.486	mg/L	0.010	97	70	130			
Copper	0.499	mg/L	0.010	92	70	130			
Lead	0.506	mg/L	0.050	101	70	130			
Manganese	1.31	mg/L	0.010	100	70	130			
Mercury	0.0527	mg/L	0.0010	105	70	130			
Molybdenum	0.446	mg/L	0.10	89	70	130			
Nickel	0.708	mg/L	0.050	91	70	130			
Silver	0.131	mg/L	0.010	65	70	130			S
Thorium 232	0.500	mg/L	0.0010	99	70	130			
Uranium	0.962	mg/L	0.00030	116	70	130			
Zinc	0.552	mg/L	0.010	97	70	130			
Sample ID: C08120718-005CMSD4	Post Digestion Spike Duplicate		Run: SUB-C112751				12/27/08 08:15		
Arsenic	0.495	mg/L	0.0010	99	70	130	1.4	20	
Barium	0.522	mg/L	0.10	101	70	130	0.9	20	
Cadmium	0.491	mg/L	0.010	98	70	130	1	20	
Copper	0.504	mg/L	0.010	93	70	130	1	20	
Lead	0.505	mg/L	0.050	101	70	130	0.2	20	
Manganese	1.32	mg/L	0.010	102	70	130	0.9	20	
Mercury	0.0542	mg/L	0.0010	108	70	130	2.8	20	
Molybdenum	0.455	mg/L	0.10	90	70	130	1.9	20	
Nickel	0.715	mg/L	0.050	93	70	130	1	20	
Silver	0.134	mg/L	0.010	67	70	130	2.5	20	S
Thorium 232	0.511	mg/L	0.0010	101	70	130	2.3	20	
Uranium	0.953	mg/L	0.00030	114	70	130	0.9	20	
Zinc	0.551	mg/L	0.010	97	70	130	0.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R112828		
<b>Sample ID: LRB</b>	Method Blank					Run: SUB-C112828			12/29/08 13:55
Aluminum	0.002	mg/L	0.0001						
Chromium	ND	mg/L	4E-05						
Vanadium	ND	mg/L	3E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank					Run: SUB-C112828			12/29/08 14:02
Aluminum	0.0484	mg/L	0.0010	93	85	115			
Chromium	0.0509	mg/L	0.0010	102	85	115			
Vanadium	0.0511	mg/L	0.0010	102	85	115			
<b>Sample ID: R08120281-001C</b>	Post Digestion Spike					Run: SUB-C112828			12/29/08 14:29
Aluminum	0.0556	mg/L	0.10	93	70	130			
Chromium	0.0490	mg/L	0.050	98	70	130			
Vanadium	0.0495	mg/L	0.10	98	70	130			
<b>Sample ID: R08120281-001C</b>	Post Digestion Spike Duplicate					Run: SUB-C112828			12/29/08 14:36
Aluminum	0.0553	mg/L	0.10	92	70	130	0	20	
Chromium	0.0488	mg/L	0.050	98	70	130	0	20	
Vanadium	0.0497	mg/L	0.10	98	70	130	0	20	
<b>Method: E245.1</b>							Batch: B_36516		
<b>Sample ID: MB-36516</b>	Method Blank					Run: SUB-B122673			12/26/08 14:51
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-36516</b>	Laboratory Fortified Blank					Run: SUB-B122673			12/26/08 14:53
Mercury	0.0019	mg/L	0.0010	97	85	115			
<b>Sample ID: B08121922-007JMS</b>	Sample Matrix Spike					Run: SUB-B122673			12/26/08 15:26
Mercury	0.0020	mg/L	0.0010	99	70	130			
<b>Sample ID: B08121922-007JMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-B122673			12/26/08 15:28
Mercury	0.0020	mg/L	0.0010	100	70	130	1	30	
<b>Method: E245.1</b>							Analytical Run: SUB-B122673		
<b>Sample ID: QCS</b>	Initial Calibration Verification Standard								12/26/08 14:40
Mercury	0.0019	mg/L	0.0010	97	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R38961		
<b>Sample ID: LFB0812241709-1</b>	Laboratory Fortified Blank		Run: DIONEX_081224A				12/24/08 16:03		
Chloride	5.87	mg/L	0.50	117	90	110			S
Fluoride	2.05	mg/L	0.10	102	90	110			
Nitrogen, Nitrate as N	2.26	mg/L	0.10	90	90	110			
Nitrogen, Nitrite as N	2.53	mg/L	0.10	101	90	110			
Sulfate	13.5	mg/L	1.0	90	90	110			
<b>Sample ID: LFB0812241709-3</b>	Laboratory Fortified Blank		Run: DIONEX_081224A				12/24/08 16:36		
Chloride	5.47	mg/L	0.50	109	90	110			
Fluoride	2.09	mg/L	0.10	104	90	110			
Nitrogen, Nitrate as N	2.27	mg/L	0.10	91	90	110			
Nitrogen, Nitrite as N	2.52	mg/L	0.10	101	90	110			
Sulfate	13.7	mg/L	1.0	91	90	110			
<b>Sample ID: R08120270-001AMS</b>	Sample Matrix Spike		Run: DIONEX_081224A				12/24/08 17:26		
Chloride	66.5	mg/L	0.54	79	80	120			S
Fluoride	11.3	mg/L	0.10	99	80	120			
Nitrogen, Nitrate as N	19.3	mg/L	0.13	88	80	120			
Nitrogen, Nitrite as N	11.9	mg/L	0.29	95	80	120			
Sulfate	353	mg/L	1.0		80	120			A
<b>Sample ID: R08120270-001AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_081224A				12/24/08 17:42		
Chloride	65.4	mg/L	0.54	74	80	120	1.7	10	S
Fluoride	11.3	mg/L	0.10	98	80	120	0.5	10	
Nitrogen, Nitrate as N	19.0	mg/L	0.13	85	80	120	1.6	10	
Nitrogen, Nitrite as N	11.7	mg/L	0.29	94	80	120	1.4	10	
Sulfate	348	mg/L	1.0		80	120	1.6	10	A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>							Batch: C_GrAB-0591		
<b>Sample ID: MB-GrAB-0591</b>	Method Blank				Run: SUB-C113561			01/14/09 22:47	
Gross Alpha	-0.2	pCi/L							U
Gross Beta	-1	pCi/L							U
<b>Sample ID: UNAT-GrAB-0591</b>	Laboratory Control Sample				Run: SUB-C113561			01/14/09 22:47	
Gross Alpha	130	pCi/L		95	70	130			
<b>Sample ID: Cs137-GrAB-0591</b>	Laboratory Control Sample				Run: SUB-C113561			01/14/09 22:47	
Gross Beta	83	pCi/L		91	70	130			
<b>Sample ID: C09010049-001AMS</b>	Sample Matrix Spike				Run: SUB-C113561			01/14/09 22:47	
Gross Alpha	170	pCi/L		122	70	130			
<b>Sample ID: C09010049-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C113561			01/14/09 22:47	
Gross Alpha	170	pCi/L		121	70	130	1	17	
<b>Sample ID: C09010049-001AMS</b>	Sample Matrix Spike				Run: SUB-C113561			01/14/09 22:47	
Gross Beta	95	pCi/L		100	70	130			
<b>Sample ID: C09010049-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C113561			01/14/09 22:47	
Gross Beta	97	pCi/L		102	70	130	2	16.1	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>							Batch: C_R112957		
<b>Sample ID: LCS-R112957</b>	Laboratory Control Sample				Run: SUB-C112957			12/29/08 12:00	
Americium 241	25000	pCi/L	20	83	70	130			
Cesium 137	43000	pCi/L	20	95	70	130			
Cobalt 60	30000	pCi/L	20	100	70	130			
<b>Sample ID: MB-R112957</b>	Method Blank				Run: SUB-C112957			12/29/08 12:00	
Gross Gamma	ND	pCi/L						U	
<b>Sample ID: R08120281-001H</b>	Sample Duplicate				Run: SUB-C112957			12/29/08 12:00	
Gross Gamma	770	pCi/L					6.9	30	
<b>Sample ID: R08120255-007H</b>	Sample Duplicate				Run: SUB-C112957			12/29/08 12:00	
Americium 241	ND	pCi/L	20				0	30	
Barium 133	ND	pCi/L	20				0	30	
Bismuth 212	ND	pCi/L	20				0	30	
Bismuth 214	780	pCi/L	20				5.6	30	
Cesium 134	ND	pCi/L	20				0	30	
Cesium 137	ND	pCi/L	20				0	30	
Cobalt 60	ND	pCi/L	20				0	30	
Iodine 125	ND	pCi/L	20				0	30	
Iodine 131	ND	pCi/L	20				0	30	
Lead 212	ND	pCi/L	20				0	30	
Lead 214	760	pCi/L	20				1.9	30	
Manganese 54	ND	pCi/L	20				0	30	
Potassium 40	ND	pCi/L	20				0	30	
Radium 223	ND	pCi/L					0	30	
Radium 224	ND	pCi/L					0	30	
Thallium 208	ND	pCi/L	20				0	30	
Thorium 228	ND	pCi/L	20				0	30	
Thorium 234	ND	pCi/L	20				0	30	
Zinc 65	ND	pCi/L	20				0	30	
Radium 228	ND	pCi/L	20				0	30	
Gross Gamma	1500	pCi/L					1.9	30	

### Qualifiers:

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ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 01/28/09

Project: Edgemont

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0							Batch: C_20988		
Sample ID: R08120255-0051	Sample Duplicate				Run: SUB-C113735				01/21/09 21:42
Radium 226	4.3	pCi/L			70	130	10	40.6	
Sample ID: R08120255-0101	Sample Matrix Spike				Run: SUB-C113735				01/21/09 23:27
Radium 226	33	pCi/L		95	70	130			
Sample ID: LCS-20988	Laboratory Control Sample				Run: SUB-C113735				01/22/09 01:17
Radium 226	14	pCi/L		98	70	130			
Sample ID: MB-20988	Method Blank				Run: SUB-C113735				01/22/09 01:17
Radium 226	-0.3	pCi/L							U
Method: E903.0							Batch: C_RA226-3344		
Sample ID: R08120255-001H	Sample Matrix Spike				Run: SUB-C113059				01/05/09 12:37
Radium 226	27	pCi/L		87	70	130			
Sample ID: R08120255-001H	Sample Matrix Spike Duplicate				Run: SUB-C113059				01/05/09 12:37
Radium 226	14	pCi/L		89	70	130	64	20.9	R
- The RPD for the MSD is high because the MS was spiked twice. The individual spike recoveries are within range, the MB is acceptable, and the LCS is within range, therefore the batch is approved.									
Sample ID: MB-RA226-3344	Method Blank				Run: SUB-C113059				01/05/09 15:43
Radium 226	-0.09	pCi/L							U
Sample ID: LCS-RA226-3344	Laboratory Control Sample				Run: SUB-C113059				01/05/09 15:43
Radium 226	7.1	pCi/L		90	70	130			
Method: E907.0							Batch: C_20988		
Sample ID: C08120794-003AMS	Sample Matrix Spike				Run: SUB-C113220				01/08/09 08:37
Thorium 230	25.2	pCi/Filter	0.20	109	70	130			
Sample ID: C08120794-003AMSD	Sample Matrix Spike Duplicate				Run: SUB-C113220				01/08/09 08:37
Thorium 230	24.1	pCi/Filter	0.20	103	70	130	4.2	58.2	
Sample ID: LCS-20988	Laboratory Control Sample				Run: SUB-C113220				01/08/09 08:37
Thorium 230	4.86	pCi/L	0.20	104	70	130			
Sample ID: MB-20988	Method Blank				Run: SUB-C113220				01/08/09 08:37
Thorium 230	-0.1	pCi/L							U

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 01/28/09  
Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E907.0							Batch: C_RA-TH-ISO-0725		
Sample ID: LCS-RA-TH-ISO-0725	Laboratory Control Sample				Run: SUB-C113665				01/14/09 16:00
Thorium 230	4.80	pCi/L	0.20	96	70	130			
Sample ID: R08120281-001H	Sample Matrix Spike				Run: SUB-C113665				01/14/09 16:00
Thorium 230	23.8	pCi/L	0.20	98	70	130			
Sample ID: R08120281-001H	Sample Matrix Spike Duplicate				Run: SUB-C113665				01/14/09 16:00
Thorium 230	21.0	pCi/L	0.20	92	70	130	12	41.1	
Sample ID: MB-RA-TH-ISO-0725	Method Blank				Run: SUB-C113665				01/15/09 09:54
Thorium 230	0.07	pCi/L							U
Method: E909.0M							Batch: C_20988		
Sample ID: R08120255-009I	Sample Matrix Spike				Run: SUB-C113352				01/06/09 10:06
Lead 210	1200	pCi/L		99	70	130			
Sample ID: R08120255-009I	Sample Matrix Spike Duplicate				Run: SUB-C113352				01/06/09 10:06
Lead 210	1300	pCi/L		113	70	130	13	30	
Sample ID: MB-R113352	Method Blank				Run: SUB-C113352				01/06/09 10:06
Lead 210	-2	pCi/L							U
Sample ID: LCS-R113352	Laboratory Control Sample				Run: SUB-C113352				01/06/09 10:06
Lead 210	56	pCi/L		50	70	130			S
- LCS response is outside of the acceptance range for this analysis. Since the MS and MSD recoveries are acceptable the batch is approved.									
Method: E909.0M							Batch: C_R113310		
Sample ID: R08120255-004H	Sample Matrix Spike				Run: SUB-C113310				12/30/08 08:13
Lead 210	57	pCi/L		47	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the MB are acceptable the batch is approved.									
Sample ID: R08120255-010H	Sample Duplicate				Run: SUB-C113310				12/30/08 08:13
Lead 210	4.7	pCi/L					32	30	UR
- The Sample and the Duplicate are both below the MDC; the RPD is acceptable.									
Sample ID: MB-R113310	Method Blank				Run: SUB-C113310				12/30/08 08:13
Lead 210	0.5	pCi/L							U
Sample ID: LCS-R113310	Laboratory Control Sample				Run: SUB-C113310				12/30/08 08:13
Lead 210	62	pCi/L		106	70	130			

### Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 01/28/09

Work Order: R08120281

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RMO-3008							Batch: C_20988		
Sample ID: C08120790-003FMS	Sample Matrix Spike				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	160	pCi/L	1.0	96	70	130			
Sample ID: C08120790-003FMSD	Sample Matrix Spike Duplicate				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	150	pCi/L	1.0	90	70	130	6.2	55.7	
Sample ID: LCS-20988	Laboratory Control Sample				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	84	pCi/L	1.0	98	70	130			
Sample ID: MB-20988	Method Blank				Run: SUB-C113510			01/16/09 12:03	
Polonium 210	0.2	pCi/L							U
Method: RMO-3008							Batch: C_PO210-0173		
Sample ID: C08120771-001KMS	Sample Matrix Spike				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	15	pCi/L	1.0	98	70	130			
Sample ID: C08120771-001KMSD	Sample Matrix Spike Duplicate				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	12	pCi/L	1.0	78	70	130	22	50.6	
Sample ID: LCS-PO210-0173	Laboratory Control Sample				Run: SUB-C113513			01/09/09 13:47	
Polonium 210	18	pCi/L	1.0	103	70	130			
Sample ID: MB-PO210-0173	Method Blank				Run: SUB-C113513			01/12/09 09:22	
Polonium 210	0.05	pCi/L							U

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



**\*\* REPORT \*\***

RESPEC Inc  
Cory Foreman  
3824 Jet Dr  
Rapid City SD 57701



# Chain of Custody and Analytical Request Record

Page      of     

PLEASE PRINT- Provide as much information as possible.

Company Name: <b>Scott Env.</b>		Project Name, PWS, Permit, Etc. <b>PowersTech - Burdock/Dwy</b>		Sample Origin State: <u>    </u>		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <b>RESPEC</b>		Contact Name: <b>Allen Scott</b>		Phone/Fax: <u>    </u>		Email: <u>    </u>	
Invoice Address: <b>RESPEC</b>		Purchase Order: <u>    </u>		Quote/Bottle Order: <u>    </u>		Sampler: (Please Print) <u>    </u>	
Special Report/Formats - ELI must be notified prior to sample submittal for the following:  <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: <u>    </u> <input type="checkbox"/> Other: <u>    </u>  <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: <u>    </u> <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		ANALYSIS REQUESTED  <b>SEE ATTACHED</b>  <b>as per quote</b>		Normal Turnaround (TAT) <b>R U S H</b>		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page  Comments: <u>    </u>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) <b>60 W 688</b>		Collection Date <b>12-22</b>		Collection Time <b>9:45</b>		Matrix <b>Water</b>	
Number of Containers Sample Type: A W S V B O Vegetation Bioassay Other		Shipped by: <u>    </u>		Cooler ID(s): <u>    </u>		Receipt Temp <b>6.8 °C</b>	
On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal Y N		Intact Y N		Signature Match Y N	
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625		626		627		628	
629		630		631		632	
633		634		635		636	
637		638		639		640	
641		642		643		644	
645		646		647		648	
649		650		651		652	
653		654		655		656	
657		658		659		660	
661		662		663		664	
665		666		667		668	
669		670		671		672	
673		674		675		676	
677		678		679		680	
681		682		683		684	
685		686		687		688	
689		690		691		692	
693		694		695		696	
697		698		699		700	
701		702		703		704	
705		706		707		708	
709		710		711		712	
713		714		715		716	
717		718		719		720	
721		722		723		724	
725		726		727		728	
729		730		731		732	
733		734		735		736	
737		738		739		740	
741		742		743		744	
745		746		747		748	
749		750		751		752	
753		754		755		756	
757		758		759		760	
761		762		763		764	
765		766		767		768	
769		770		771		772	
773		774		775		776	
777		778		779		780	
781		782		783		784	
785		786		787		788	
789		790		791		792	
793		794		795		796	
797		798		799		800	
801		802		803		804	
805		806		807		808	
809		810		811		812	
813		814		815		816	
817		818		819		820	
821		822		823		824	
825		826		827		828	
829		830		831		832	
833		834		835		836	
837		838		839		840	
841		842		843		844	
845		846		847		848	
849		850		851		852	
853		854		855		856	
857		858		859		860	
861		862		863		864	
865		866		867		868	
869		870		871		872	
873		874		875		876	
877		878		879		880	
881		882		883		884	
885		886		887		888	
889		890		891		892	
893		894		895		896	
897		898		899		900	
901		902		903		904	
905		906		907		908	
909		910		911		912	
913		914		915		916	
917		918		919		920	
921		922		923		924	
925		926		927		928	
929		930		931		932	
933		934		935		936	
937		938		939		940	
941		942		943		944	
945		946		947		948	
949		950		951		952	
953		954		955		956	
957		958					



## ANALYTICAL SUMMARY REPORT

March 17, 2009

Cory Foreman

RESPEC Inc

3824 Jet Dr

Rapid City, SD 57701-

Workorder No.: R09010301

Quote ID: R286

Project Name: Edgemont

Energy Laboratories Inc. received the following 14 samples for RESPEC Inc on 1/21/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R09010301-001	DewBurd BLK01	01/20/09 7:00	01/21/09	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved



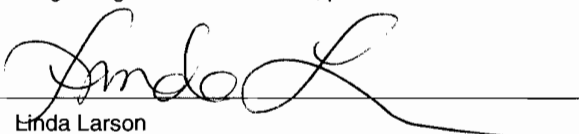
## ANALYTICAL SUMMARY REPORT

R09010301-002 DewBurd GW622	01/20/09 10:51 01/21/09	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R09010301-003 DewBurd GW622	01/20/09 10:55 01/21/09	Aqueous	Same As Above
R09010301-004 DewBurd GW615	01/20/09 11:10 01/21/09	Aqueous	Same As Above
R09010301-005 DewBurd GW695	01/20/09 12:15 01/21/09	Aqueous	Same As Above
R09010301-006 DewBurd GW697	01/20/09 12:35 01/21/09	Aqueous	Same As Above
R09010301-007 DewBurd GW681	01/20/09 12:50 01/21/09	Aqueous	Same As Above
R09010301-008 DewBurd GW689	01/20/09 13:05 01/21/09	Aqueous	Same As Above
R09010301-009 DewBurd GW698	01/20/09 14:07 01/21/09	Aqueous	Same As Above
R09010301-010 DewBurd GW3026	01/20/09 14:25 01/21/09	Aqueous	Same As Above
R09010301-011 DewBurd GW680	01/20/09 15:25 01/21/09	Aqueous	Same As Above
R09010301-012 DewBurd GW688	01/20/09 15:35 01/21/09	Aqueous	Same As Above
R09010301-013 DewBurd GW696	01/20/09 16:55 01/21/09	Aqueous	Same As Above
R09010301-014 DewBurd GW694	01/20/09 17:00 01/21/09	Aqueous	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

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

Report Approved By:



Linda Larson  
Rapid City - Project Manager



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 07:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	ND	mg/L		5		1	A2320 B	01/26/09 13:53/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	01/26/09 13:53/mb
Bicarbonate as HCO3	ND	mg/L		5		1	A2320 B	01/26/09 13:53/mb
Calcium	ND	mg/L		0.5		1	E200.7	01/30/09 19:47/eli-c
Chloride	ND	mg/L		1		1	E300.0	01/21/09 22:11/jmh
Fluoride	ND	mg/L		0.1		1	E300.0	01/21/09 22:11/jmh
Magnesium	ND	mg/L		0.5		1	E200.7	01/30/09 19:47/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:07/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/21/09 22:11/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/21/09 22:11/jmh
Potassium	ND	mg/L		0.5		1	E200.7	01/30/09 19:47/eli-c
Sodium	ND	mg/L		0.5		1	E200.7	01/30/09 19:47/eli-c
Sulfate	ND	mg/L		1		1	E300.0	01/21/09 22:11/jmh
Silica	ND	mg/L		0.2		1	E200.7	01/30/09 19:47/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	ND	umhos/cm		5.0		1	A2510 B	01/22/09 14:46/tb
Oxidation-Reduction Potential	310	mV				1	A2580 B	01/27/09 11:00/jmh
pH	6.01	s.u.		0.01		1	A4500-H B	01/22/09 10:01/tb
Sodium Adsorption Ratio (SAR)	ND	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		5		1	A2540 C	01/26/09 09:14/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		2	E200.7	02/20/09 13:02/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 17:36/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 17:36/eli-c
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 19:47/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 17:36/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 17:36/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 17:36/eli-c
Iron	ND	mg/L		0.03		1	E200.7	01/30/09 19:47/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 17:36/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	01/30/09 17:36/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	01/30/09 17:36/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 17:36/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 17:36/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:07/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 17:36/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 17:36/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 17:36/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 07:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 17:36/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 17:36/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/18/09 22:55/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:06/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	2.6	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Alpha precision (±)	0.7	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Alpha MDC	0.8	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Beta	-1	pCi/L	U			1	E900.0	02/06/09 03:24/eli-ca
Gross Beta precision (±)	1.4	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Beta MDC	2.5	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Lead 210	0.6	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.050	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.67	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.30	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/05/09 12:53/eli-ca
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/05/09 16:35/eli-c
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	02/05/09 16:35/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	6.7	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	0.045	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.26	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.56	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	02/18/09 13:43/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 13:43/eli-ca

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 07:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:43/eli-ca
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	141	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	60.9	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 20:19/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 20:19/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:19/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 20:19/eli-c
Boron	ND	mg/L		0.1		1	E200.7	02/05/09 18:55/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:19/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:19/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:19/eli-c
Iron	ND	mg/L		0.03		1	E200.7	02/05/09 18:55/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:19/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	01/30/09 20:19/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:22/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:19/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:19/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/06/09 15:37/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:19/eli-c
Strontium	ND	mg/L		0.1		1	E200.8	01/30/09 20:19/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 20:19/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 20:19/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:19/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-002  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:51  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	176	mg/L		5		1	A2320 B	01/26/09 13:55/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 13:55/mb
Bicarbonate as HCO <sub>3</sub>	215	mg/L		5		1	A2320 B	01/26/09 13:55/mb
Calcium	84.7	mg/L		0.5		1	E200.7	01/30/09 19:52/eli-c
Chloride	10	mg/L		1		1	E300.0	01/21/09 23:50/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/21/09 23:50/jmh
Magnesium	29.7	mg/L		0.5		1	E200.7	01/30/09 19:52/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:08/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/21/09 23:50/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/21/09 23:50/jmh
Potassium	12.2	mg/L		0.5		1	E200.7	01/30/09 19:52/eli-c
Sodium	173	mg/L		0.5		1	E200.7	01/30/09 19:52/eli-c
Sulfate	499	mg/L	D	3		50	E300.0	01/21/09 23:00/jmh
Silica	7.4	mg/L		0.2		1	E200.7	01/30/09 19:52/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1310	umhos/cm		5.0		1	A2510 B	01/22/09 14:48/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.46	s.u.		0.01		1	A4500-H B	01/22/09 10:02/tb
Sodium Adsorption Ratio (SAR)	4.1	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	01/26/09 09:15/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/18/09 14:01/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 17:43/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 17:43/eli-c
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 19:52/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 17:43/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 17:43/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 17:43/eli-c
Iron	ND	mg/L		0.03		1	E200.7	01/30/09 19:52/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 17:43/eli-c
Manganese	0.17	mg/L		0.01		1	E200.8	01/30/09 17:43/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	01/30/09 17:43/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 17:43/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 17:43/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:14/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 17:43/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 17:43/eli-c
Uranium	0.0029	mg/L		0.0003		1	E200.8	01/30/09 17:43/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-002  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:51  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 17:43/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 17:43/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0003	mg/L		0.0003		1	E200.8	02/18/09 22:59/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:12/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	36.4	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Gross Alpha precision (±)	4.3	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Gross Alpha MDC	3.5	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Gross Beta	16.0	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/06/09 03:23/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.063	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.69	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.32	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	2.9	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/05/09 16:36/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/05/09 16:36/eli-c
Gross Gamma	160	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	73	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	8.1	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	0.77	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.56	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.53	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	0.2	pCi/L	U			1	E903.0	02/18/09 13:43/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/18/09 13:43/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-002  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:51  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:43/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1180	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	72.3	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	02/04/09 16:35/eli-c
Arsenic	0.003	mg/L	D	0.002		1	E200.8	02/04/09 16:35/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/04/09 16:35/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/04/09 16:35/eli-c
Boron	ND	mg/L		0.1		1	E200.7	02/07/09 03:17/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/04/09 16:35/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/04/09 16:35/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/04/09 16:35/eli-c
Iron	4.06	mg/L		0.03		1	E200.7	02/07/09 03:17/eli-c
Lead	0.008	mg/L		0.001		1	E200.8	02/04/09 16:35/eli-c
Manganese	0.19	mg/L		0.01		1	E200.8	02/04/09 16:35/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:24/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 16:35/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/04/09 16:35/eli-c
Selenium	ND	mg/L	D	0.002		1	E200.8	02/04/09 16:35/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/04/09 16:35/eli-c
Strontium	1.6	mg/L		0.1		1	E200.8	02/04/09 16:35/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/04/09 16:35/eli-c
Uranium	0.0056	mg/L		0.0003		1	E200.8	02/04/09 16:35/eli-c
Zinc	0.08	mg/L		0.01		1	E200.8	02/04/09 16:35/eli-c
DATA QUALITY								
A/C Balance (± 5)	1.07	%				1	A1030 E	03/16/09 00:00/kl
Anions	14.2	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	14.5	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	934	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	0.970					1	A1030 E	03/16/09 00:00/kl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-003  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	178	mg/L		5		1	A2320 B	01/26/09 13:57/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	01/26/09 13:57/mb
Bicarbonate as HCO3	217	mg/L		5		1	A2320 B	01/26/09 13:57/mb
Calcium	83.4	mg/L		0.5		1	E200.7	01/30/09 20:10/eli-c
Chloride	10	mg/L		1		1	E300.0	01/22/09 00:22/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 00:22/jmh
Magnesium	29.5	mg/L		0.5		1	E200.7	01/30/09 20:10/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:09/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 00:22/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 00:22/jmh
Potassium	12.2	mg/L		0.5		1	E200.7	01/30/09 20:10/eli-c
Sodium	174	mg/L		0.5		1	E200.7	01/30/09 20:10/eli-c
Sulfate	492	mg/L	D	3		50	E300.0	01/22/09 00:06/jmh
Silica	7.4	mg/L		0.2		1	E200.7	01/30/09 20:10/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1310	umhos/cm		5.0		1	A2510 B	01/22/09 14:49/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.53	s.u.		0.01		1	A4500-H B	01/22/09 10:04/tb
Sodium Adsorption Ratio (SAR)	4.2	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	950	mg/L		5		1	A2540 C	01/26/09 09:17/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:11/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 18:16/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:16/eli-c
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 20:10/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:16/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:16/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:16/eli-c
Iron	ND	mg/L		0.03		1	E200.7	01/30/09 20:10/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:16/eli-c
Manganese	0.18	mg/L		0.01		1	E200.8	01/30/09 18:16/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:11/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:16/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:16/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:16/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:16/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:16/eli-c
Uranium	0.0059	mg/L		0.0003		1	E200.8	01/30/09 18:16/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-003  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:16/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:16/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0005	mg/L		0.0003		1	E200.8	02/18/09 23:19/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:15/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	37.6	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Alpha precision (±)	4.4	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Alpha MDC	3.5	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta	16.1	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Lead 210	0.8	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.024	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.77	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.33	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	3.3	pCi/L				1	E903.0	02/05/09 12:53/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/05/09 12:53/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/05/09 16:36/eli-c
Thorium 230 precision (±)	0.04	pCi/L				1	E907.0	02/05/09 16:36/eli-c
Gross Gamma	100	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	64	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	5.8	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	0.82	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.59	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.62	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	0.3	pCi/L	U			1	E903.0	02/18/09 13:43/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/18/09 13:43/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-003  
**Client Sample ID:** DewBurd GW622

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 10:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:43/eli-ce
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1360	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	74.3	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	02/04/09 16:42/eli-c
Arsenic	0.004	mg/L	D	0.002		1	E200.8	02/04/09 16:42/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/04/09 16:42/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/04/09 16:42/eli-c
Boron	ND	mg/L		0.1		1	E200.7	02/07/09 03:22/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/04/09 16:42/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/04/09 16:42/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/04/09 16:42/eli-c
Iron	4.68	mg/L		0.03		1	E200.7	02/07/09 03:22/eli-c
Lead	0.010	mg/L		0.001		1	E200.8	02/04/09 16:42/eli-c
Manganese	0.19	mg/L		0.01		1	E200.8	02/04/09 16:42/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:27/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 16:42/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/04/09 16:42/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 16:42/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/04/09 16:42/eli-c
Strontium	1.6	mg/L		0.1		1	E200.8	02/04/09 16:42/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/04/09 16:42/eli-c
Uranium	0.0056	mg/L		0.0003		1	E200.8	02/04/09 16:42/eli-c
Zinc	0.09	mg/L		0.01		1	E200.8	02/04/09 16:42/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.26	%				1	A1030 E	03/16/09 00:00/kl
Anions	14.1	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	14.5	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	928	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	1.03					1	A1030 E	03/16/09 00:00/kl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-004  
**Client Sample ID:** DewBurd GW615

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 11:10  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	138	mg/L		5		1	A2320 B	01/26/09 14:00/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:00/mb
Bicarbonate as HCO <sub>3</sub>	168	mg/L		5		1	A2320 B	01/26/09 14:00/mb
Calcium	70.3	mg/L		0.5		1	E200.7	01/30/09 20:15/eli-c
Chloride	5	mg/L		1		1	E300.0	01/22/09 00:55/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 00:55/jmh
Magnesium	21.0	mg/L		0.5		1	E200.7	01/30/09 20:15/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:10/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 00:55/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 00:55/jmh
Potassium	9.8	mg/L		0.5		1	E200.7	01/30/09 20:15/eli-c
Sodium	131	mg/L		0.5		1	E200.7	01/30/09 20:15/eli-c
Sulfate	389	mg/L	D	3		50	E300.0	01/22/09 00:39/jmh
Silica	7.8	mg/L		0.2		1	E200.7	01/30/09 20:15/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1050	umhos/cm		5.0		1	A2510 B	01/22/09 14:51/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.19	s.u.		0.01		1	A4500-H B	01/22/09 10:06/tb
Sodium Adsorption Ratio (SAR)	3.5	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	720	mg/L		5		1	A2540 C	01/26/09 09:18/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:18/eli-c
Arsenic	0.014	mg/L		0.001		1	E200.8	01/30/09 18:23/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:23/eli-c
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 20:15/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:23/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:23/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:23/eli-c
Iron	0.13	mg/L		0.03		1	E200.7	01/30/09 20:15/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:23/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	01/30/09 18:23/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:18/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:23/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:23/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:18/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:23/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:23/eli-c
Uranium	0.0027	mg/L		0.0003		1	E200.8	01/30/09 18:23/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-004  
**Client Sample ID:** DewBurd GW615

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 11:10  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:23/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:23/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/18/09 23:23/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:17/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	21.1	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Alpha precision (±)	3.0	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Alpha MDC	2.7	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta	10.4	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta precision (±)	2.1	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Gross Beta MDC	3.3	pCi/L				1	E900.0	02/06/09 03:24/eli-c
Lead 210	1.2	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	-0.027	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.54	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	1.8	pCi/L				1	E903.0	02/05/09 12:53/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/05/09 12:53/eli-c
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/05/09 16:36/eli-c
Thorium 230 precision (±)	0.04	pCi/L				1	E907.0	02/05/09 16:36/eli-c
Gross Gamma	32	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	18	pCi/L				1	E901.1	02/04/09 14:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	5.8	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	0.14	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.32	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.57	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/18/09 13:43/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/18/09 13:43/eli-c

- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-004  
**Client Sample ID:** DewBurd GW615

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 11:10  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:43/eli-ce
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1630	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	77.2	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 20:25/eli-c
Arsenic	0.024	mg/L		0.001		1	E200.8	01/30/09 20:25/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:25/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 20:25/eli-c
Boron	ND	mg/L	D	0.4		10	E200.7	02/05/09 19:00/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:25/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:25/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:25/eli-c
Iron	1.3	mg/L	D	0.2		10	E200.7	02/05/09 19:00/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:25/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	01/30/09 20:25/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:29/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:25/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:25/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 17:43/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:25/eli-c
Strontium	1.5	mg/L		0.1		1	E200.8	01/30/09 20:25/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 20:25/eli-c
Uranium	0.0026	mg/L		0.0003		1	E200.8	01/30/09 20:25/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:25/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.660	%				1	A1030 E	03/16/09 00:00/kl
Anions	11.0	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	11.2	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	730	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	03/16/09 00:00/kl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-005  
**Client Sample ID:** DewBurd GW695

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:15  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
MAJOR IONS								
Alkalinity, Total as CaCO3	174	mg/L		5		1	A2320 B	01/26/09 14:19/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	01/26/09 14:19/mb
Bicarbonate as HCO3	212	mg/L		5		1	A2320 B	01/26/09 14:19/mb
Calcium	49.8	mg/L		0.5		2	E200.7	01/30/09 20:19/eli-c
Chloride	12	mg/L		1		1	E300.0	01/22/09 01:28/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 01:28/jmh
Magnesium	18.3	mg/L		0.5		2	E200.7	01/30/09 20:19/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:14/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 01:28/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 01:28/jmh
Potassium	9.5	mg/L		0.5		2	E200.7	01/30/09 20:19/eli-c
Sodium	247	mg/L		0.5		2	E200.7	01/30/09 20:19/eli-c
Sulfate	500	mg/L	D	3		50	E300.0	01/22/09 01:12/jmh
Silica	7.9	mg/L		0.2		2	E200.7	01/30/09 20:19/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1350	umhos/cm		5.0		1	A2510 B	01/22/09 14:52/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.81	s.u.		0.01		1	A4500-H B	01/22/09 10:07/tb
Sodium Adsorption Ratio (SAR)	7.6	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	910	mg/L		5		1	A2540 C	01/26/09 09:18/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:25/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 18:30/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:30/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 20:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:30/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:30/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:30/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 20:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:30/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	01/30/09 18:30/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:25/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:30/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:30/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:21/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:30/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:30/eli-c
Uranium	0.0031	mg/L		0.0003		1	E200.8	01/30/09 18:30/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-005  
**Client Sample ID:** DewBurd GW695

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:15  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:30/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:30/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/18/09 23:27/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:19/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	35.8	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Alpha precision (±)	4.3	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Alpha MDC	3.6	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Beta	12.1	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Beta precision (±)	2.8	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/06/09 03:24/eli-ca
Lead 210	1.5	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.051	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.74	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.33	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	4.5	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	6.6	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.2	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	0.13	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.29	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.51	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.1	pCi/L	U			1	E903.0	02/18/09 13:43/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 13:43/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-005  
**Client Sample ID:** DewBurd GW695

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:15  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:43/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1840	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	78.9	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 20:32/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/30/09 20:32/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:32/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 20:32/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 19:14/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:32/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:32/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:32/eli-c
Iron	0.13	mg/L	D	0.04		2	E200.7	02/05/09 19:14/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:32/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	01/30/09 20:32/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:31/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:32/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:32/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 17:49/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:32/eli-c
Strontium	1.0	mg/L		0.1		1	E200.8	01/30/09 20:32/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 20:32/eli-c
Uranium	0.0031	mg/L		0.0003		1	E200.8	01/30/09 20:32/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:32/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.54	%				1	A1030 E	03/16/09 00:00/lkl
Anions	14.3	meq/L				1	A1030 E	03/16/09 00:00/lkl
Cations	15.0	meq/L				1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	962	mg/L				1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	03/16/09 00:00/lkl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-006  
**Client Sample ID:** DewBurd GW697

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	168	mg/L		5		1	A2320 B	01/26/09 14:21/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:21/mb
Bicarbonate as HCO <sub>3</sub>	205	mg/L		5		1	A2320 B	01/26/09 14:21/mb
Calcium	49.7	mg/L		0.5		2	E200.7	01/30/09 20:24/eli-c
Chloride	8	mg/L		1		1	E300.0	01/22/09 03:07/jmh
Fluoride	0.7	mg/L		0.1		1	E300.0	01/22/09 03:07/jmh
Magnesium	16.4	mg/L		0.5		2	E200.7	01/30/09 20:24/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:18/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 03:07/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 03:07/jmh
Potassium	8.6	mg/L		0.5		2	E200.7	01/30/09 20:24/eli-c
Sodium	206	mg/L		0.5		2	E200.7	01/30/09 20:24/eli-c
Sulfate	444	mg/L	D	3		50	E300.0	01/22/09 02:17/jmh
Silica	7.9	mg/L		0.2		2	E200.7	01/30/09 20:24/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1220	umhos/cm		5.0		1	A2510 B	01/22/09 14:54/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.73	s.u.		0.01		1	A4500-H B	01/22/09 10:08/tb
Sodium Adsorption Ratio (SAR)	6.5	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	820	mg/L		5		1	A2540 C	01/26/09 09:19/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:32/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/30/09 18:37/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:37/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 20:24/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:37/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:37/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:37/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 20:24/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:37/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	01/30/09 18:37/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:32/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:37/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:37/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:23/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:37/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:37/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 18:37/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-006  
**Client Sample ID:** DewBurd GW697

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:37/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:37/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/18/09 23:31/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:22/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	21.7	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha precision (±)	3.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha MDC	3.3	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta	12.5	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta precision (±)	2.8	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta MDC	4.3	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Lead 210	0.6	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	-0.027	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.54	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.20	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	0.9	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	2.9	pCi/L	U			1	E909.0M	02/12/09 09:35/eli-c
Lead 210 precision (±)	5.1	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Lead 210 MDC	8.5	pCi/L				1	E909.0M	02/12/09 09:35/eli-c
Polonium 210	-0.0097	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.18	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.45	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/18/09 13:43/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 13:43/eli-ca

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-006  
**Client Sample ID:** DewBurd GW697

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.4	pCi/L				1	E903.0	02/18/09 13:43/eli-ca
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	03/03/09 16:30/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/03/09 16:30/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	299	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	60.7	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 20:39/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/30/09 20:39/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:39/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 20:39/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 19:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:39/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:39/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:39/eli-c
Iron	ND	mg/L	D	0.04		2	E200.7	02/05/09 19:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:39/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	01/30/09 20:39/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:34/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:39/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:39/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 17:56/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:39/eli-c
Strontium	1.2	mg/L		0.1		1	E200.8	01/30/09 20:39/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 20:39/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 20:39/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:39/eli-c
DATA QUALITY								
A/C Balance (± 5)	0.640	%				1	A1030 E	03/16/09 00:00/lkl
Anions	12.9	meq/L				1	A1030 E	03/16/09 00:00/lkl
Cations	13.0	meq/L				1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	856	mg/L				1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	0.960					1	A1030 E	03/16/09 00:00/lkl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-007  
**Client Sample ID:** DewBurd GW681

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:50  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	170	mg/L		5		1	A2320 B	01/26/09 14:23/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:23/mb
Bicarbonate as HCO <sub>3</sub>	207	mg/L		5		1	A2320 B	01/26/09 14:23/mb
Calcium	53.6	mg/L		0.5		2	E200.7	01/30/09 20:28/eli-c
Chloride	13	mg/L		1		1	E300.0	01/22/09 03:39/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 03:39/jmh
Magnesium	20.9	mg/L		0.5		2	E200.7	01/30/09 20:28/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:19/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 03:39/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 03:39/jmh
Potassium	10	mg/L		0.5		2	E200.7	01/30/09 20:28/eli-c
Sodium	213	mg/L		0.5		2	E200.7	01/30/09 20:28/eli-c
Sulfate	465	mg/L	D	3		50	E300.0	01/22/09 03:23/jmh
Silica	7.8	mg/L		0.2		2	E200.7	01/30/09 20:28/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1310	umhos/cm		5.0		1	A2510 B	01/22/09 14:56/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.85	s.u.		0.01		1	A4500-H B	01/22/09 10:10/tb
Sodium Adsorption Ratio (SAR)	6.2	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	940	mg/L		5		1	A2540 C	01/26/09 09:19/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:38/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	01/30/09 18:44/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:44/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 20:28/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:44/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:44/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:44/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 20:28/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:44/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	01/30/09 18:44/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:38/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:44/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:44/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:30/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:44/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:44/eli-c
Uranium	0.0081	mg/L		0.0003		1	E200.8	01/30/09 18:44/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-007  
**Client Sample ID:** DewBurd GW681

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:50  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:44/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:44/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 00:16/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:28/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1210	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha precision (±)	21.8	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha MDC	3.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta	361	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta precision (±)	6.5	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Lead 210	11.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.7	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	3.8	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.75	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	1.4	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	258	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Radium 226 precision (±)	3.6	pCi/L				1	E903.0	02/05/09 12:53/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	190	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	46	pCi/L				1	E901.1	02/04/09 14:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	2.2	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	1.7	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.88	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.65	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	1.1	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-007  
**Client Sample ID:** DewBurd GW681

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 12:50  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/26/09 08:59/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	02/26/09 08:59/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	133000	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	469	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 21:13/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	02/04/09 18:03/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 21:13/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 21:13/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 19:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 21:13/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 21:13/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 21:13/eli-c
Iron	0.07	mg/L	D	0.04		2	E200.7	02/05/09 19:23/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 21:13/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	01/30/09 21:13/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:41/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 18:03/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 21:13/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 18:03/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 21:13/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	02/04/09 18:03/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 21:13/eli-c
Uranium	0.0084	mg/L		0.0003		1	E200.8	01/30/09 21:13/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	01/30/09 21:13/eli-c
DATA QUALITY								
A/C Balance (± 5)	1.57	%				1	A1030 E	03/16/09 00:00/kl
Anions	13.5	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	13.9	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	899	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	1.05					1	A1030 E	03/16/09 00:00/kl

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-008  
**Client Sample ID:** DewBurd GW689

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 13:05  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	150	mg/L		5		1	A2320 B	01/26/09 14:25/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	01/26/09 14:25/mb
Bicarbonate as HCO3	183	mg/L		5		1	A2320 B	01/26/09 14:25/mb
Calcium	44.8	mg/L		0.5		1	E200.7	01/30/09 20:32/eli-c
Chloride	5	mg/L		1		1	E300.0	01/22/09 04:12/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 04:12/jmh
Magnesium	15.5	mg/L		0.5		1	E200.7	01/30/09 20:32/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:20/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 04:12/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 04:12/jmh
Potassium	9.0	mg/L		0.5		1	E200.7	01/30/09 20:32/eli-c
Sodium	177	mg/L		0.5		1	E200.7	01/30/09 20:32/eli-c
Sulfate	399	mg/L	D	3		50	E300.0	01/22/09 03:56/jmh
Silica	8.3	mg/L		0.2		1	E200.7	01/30/09 20:32/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1080	umhos/cm		5.0		1	A2510 B	01/22/09 14:59/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.71	s.u.		0.01		1	A4500-H B	01/22/09 10:13/tb
Sodium Adsorption Ratio (SAR)	5.8	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	780	mg/L		5		1	A2540 C	01/26/09 09:20/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 17:45/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/30/09 18:50/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 18:50/eli-c
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 20:32/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 18:50/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 18:50/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 18:50/eli-c
Iron	ND	mg/L		0.03		1	E200.7	01/30/09 20:32/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 18:50/eli-c
Manganese	0.04	mg/L		0.01		1	E200.8	01/30/09 18:50/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 17:45/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 18:50/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 18:50/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:32/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 18:50/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 18:50/eli-c
Uranium	0.0035	mg/L		0.0003		1	E200.8	01/30/09 18:50/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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### LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc

Project: Edgemont

Lab ID: R09010301-008

Client Sample ID: DewBurd GW689

Report Date: 03/17/09

Collection Date: 01/20/09 13:05

Date Received: 01/21/09

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 18:50/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 18:50/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 00:20/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:31/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	52.8	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha precision (±)	4.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha MDC	2.8	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta	17.6	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta precision (±)	2.3	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta MDC	3.3	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Lead 210	-0.4	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	-0.031	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.62	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.22	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	6.1	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-6	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.7	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	0.025	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.30	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.68	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-008  
**Client Sample ID:** DewBurd GW689

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 13:05  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1850	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	78.7	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	02/04/09 16:48/eli-c
Arsenic	ND	mg/L	D	0.002		1	E200.8	02/04/09 16:48/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/04/09 16:48/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/04/09 16:48/eli-c
Boron	ND	mg/L		0.1		1	E200.7	02/07/09 03:26/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/04/09 16:48/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/04/09 16:48/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/04/09 16:48/eli-c
Iron	0.62	mg/L		0.03		1	E200.7	02/07/09 03:26/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/04/09 16:48/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	02/04/09 16:48/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:43/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 16:48/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/04/09 16:48/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 16:48/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/04/09 16:48/eli-c
Strontium	1.0	mg/L		0.1		1	E200.8	02/04/09 16:48/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/04/09 16:48/eli-c
Uranium	0.0036	mg/L		0.0003		1	E200.8	02/04/09 16:48/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/04/09 16:48/eli-c
DATA QUALITY								
A/C Balance (± 5)	-0.130	%				1	A1030 E	03/16/09 00:00/kl
Anions	11.5	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	11.5	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	765	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	1.02					1	A1030 E	03/16/09 00:00/kl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-009  
**Client Sample ID:** DewBurd GW698

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:07  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	118	mg/L		5		1	A2320 B	01/26/09 14:28/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:28/mb
Bicarbonate as HCO <sub>3</sub>	144	mg/L		5		1	A2320 B	01/26/09 14:28/mb
Calcium	341	mg/L		0.5		2	E200.7	01/30/09 20:37/eli-c
Chloride	10	mg/L		.1		1	E300.0	01/22/09 04:45/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	01/22/09 04:45/jmh
Magnesium	127	mg/L		0.5		2	E200.7	01/30/09 20:37/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:21/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 04:45/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 04:45/jmh
Potassium	16.0	mg/L		0.5		2	E200.7	01/30/09 20:37/eli-c
Sodium	92.1	mg/L		0.5		2	E200.7	01/30/09 20:37/eli-c
Sulfate	1340	mg/L	D	3		50	E300.0	01/22/09 04:29/jmh
Silica	10.2	mg/L		0.2		2	E200.7	01/30/09 20:37/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2410	umhos/cm		5.0		1	A2510 B	01/22/09 15:01/tb
Oxidation-Reduction Potential	300	mV				1	A2580 B	01/27/09 11:00/jmh
pH	6.74	s.u.		0.01		1	A4500-H B	01/22/09 10:14/tb
Sodium Adsorption Ratio (SAR)	1.1	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	1700	mg/L		5		1	A2540 C	01/26/09 09:21/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 18:06/eli-c
Arsenic	ND	mg/L		0.001		5	E200.8	01/30/09 18:57/eli-c
Barium	ND	mg/L		0.1		5	E200.8	01/30/09 18:57/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 20:37/eli-c
Cadmium	ND	mg/L		0.005		5	E200.8	01/30/09 18:57/eli-c
Chromium	ND	mg/L		0.05		5	E200.8	01/30/09 18:57/eli-c
Copper	ND	mg/L		0.01		5	E200.8	01/30/09 18:57/eli-c
Iron	1.74	mg/L		0.03		2	E200.7	01/30/09 20:37/eli-c
Lead	ND	mg/L		0.001		5	E200.8	01/30/09 18:57/eli-c
Manganese	2.39	mg/L		0.01		5	E200.8	01/30/09 18:57/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 18:06/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.8	01/30/09 18:57/eli-c
Nickel	ND	mg/L		0.05		5	E200.8	01/30/09 18:57/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:34/eli-c
Silver	ND	mg/L		0.005		5	E200.8	01/30/09 18:57/eli-c
Thorium 232	ND	mg/L		0.005		5	E200.8	01/30/09 18:57/eli-c
Uranium	0.100	mg/L		0.0003		5	E200.8	01/30/09 18:57/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-009  
**Client Sample ID:** DewBurd GW698

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:07  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		5	E200.8	01/30/09 18:57/eli-c
Zinc	ND	mg/L		0.01		5	E200.8	01/30/09 18:57/eli-c
METALS - SUSPENDED								
Uranium	0.0021	mg/L		0.0003		1	E200.8	02/19/09 01:21/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:33/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	1960	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha precision (±)	40.9	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha MDC	7.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta	547	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta precision (±)	11.6	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta MDC	8.7	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.42	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.68	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.51	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	386	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	3.8	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1400	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	220	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	0.9	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	2.0	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.96	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.59	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	7.3	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	0.8	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-009  
**Client Sample ID:** DewBurd GW698

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:07  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ce
Thorium 230	1.9	pCi/L		0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.6	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	32100	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	235	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	02/04/09 17:22/eli-c
Arsenic	ND	mg/L	D	0.002		1	E200.8	02/04/09 17:22/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/04/09 17:22/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/04/09 17:22/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/07/09 03:31/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/04/09 17:22/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/04/09 17:22/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/04/09 17:22/eli-c
Iron	4.60	mg/L		0.03		2	E200.7	02/07/09 03:31/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/04/09 17:22/eli-c
Manganese	2.37	mg/L		0.01		1	E200.8	02/04/09 17:22/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:45/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 17:22/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/04/09 17:22/eli-c
Selenium	ND	mg/L	D	0.002		1	E200.8	02/04/09 17:22/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/04/09 17:22/eli-c
Strontium	4.8	mg/L		0.1		1	E200.8	02/04/09 17:22/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/04/09 17:22/eli-c
Uranium	0.108	mg/L		0.0003		1	E200.8	02/04/09 17:22/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/04/09 17:22/eli-c
DATA QUALITY								
A/C Balance (± 5)	2.51	%				1	A1030 E	03/16/09 00:00/lkl
Anions	30.6	meq/L				1	A1030 E	03/16/09 00:00/lkl
Cations	32.2	meq/L				1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	2030	mg/L				1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	0.820					1	A1030 E	03/16/09 00:00/lkl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-010  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	174	mg/L		5		1	A2320 B	01/26/09 14:30/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:30/mb
Bicarbonate as HCO <sub>3</sub>	212	mg/L		5		1	A2320 B	01/26/09 14:30/mb
Calcium	350	mg/L		0.5		2	E200.7	01/30/09 20:42/eli-c
Chloride	16	mg/L		1		1	E300.0	01/22/09 06:24/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 06:24/jmh
Magnesium	114	mg/L		0.5		2	E200.7	01/30/09 20:42/eli-c
Nitrogen, Ammonia as N	0.5	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:22/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 06:24/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 06:24/jmh
Potassium	20.6	mg/L		0.5		2	E200.7	01/30/09 20:42/eli-c
Sodium	161	mg/L		0.5		2	E200.7	01/30/09 20:42/eli-c
Sulfate	1310	mg/L	D	3		50	E300.0	01/22/09 05:34/jmh
Silica	8.5	mg/L		0.2		2	E200.7	01/30/09 20:42/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2600	umhos/cm		5.0		1	A2510 B	01/22/09 15:03/tb
Oxidation-Reduction Potential	240	mV				1	A2580 B	01/27/09 11:00/jmh
pH	6.67	s.u.		0.01		1	A4500-H B	01/22/09 10:15/tb
Sodium Adsorption Ratio (SAR)	1.9	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	2100	mg/L		5		1	A2540 C	01/26/09 09:22/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 18:40/eli-c
Arsenic	0.001	mg/L		0.001		5	E200.8	01/30/09 19:04/eli-c
Barium	ND	mg/L		0.1		5	E200.8	01/30/09 19:04/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 20:42/eli-c
Cadmium	ND	mg/L		0.005		5	E200.8	01/30/09 19:04/eli-c
Chromium	ND	mg/L		0.05		5	E200.8	01/30/09 19:04/eli-c
Copper	ND	mg/L		0.01		5	E200.8	01/30/09 19:04/eli-c
Iron	6.85	mg/L		0.03		2	E200.7	01/30/09 20:42/eli-c
Lead	ND	mg/L		0.001		5	E200.8	01/30/09 19:04/eli-c
Manganese	1.16	mg/L		0.01		5	E200.8	01/30/09 19:04/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 18:40/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.8	01/30/09 19:04/eli-c
Nickel	ND	mg/L		0.05		5	E200.8	01/30/09 19:04/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:37/eli-c
Silver	ND	mg/L		0.005		5	E200.8	01/30/09 19:04/eli-c
Thorium 232	ND	mg/L		0.005		5	E200.8	01/30/09 19:04/eli-c
Uranium	0.0039	mg/L		0.0003		5	E200.8	01/30/09 19:04/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-010  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		5	E200.8	01/30/09 19:04/eli-c
Zinc	0.02	mg/L		0.01		5	E200.8	01/30/09 19:04/eli-c
METALS - SUSPENDED								
Uranium	0.0003	mg/L		0.0003		1	E200.8	02/19/09 01:25/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:35/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	51.6	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha precision (±)	7.8	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha MDC	7.3	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta	24.9	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta precision (±)	5.6	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta MDC	8.7	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Lead 210	-0.9	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.053	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.75	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.34	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	3.5	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.5	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	-0.058	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.27	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.75	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	0.6	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-010  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 14:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
RADIONUCLIDES - SUSPENDED									
Radium 226 MDC	0.5	pCi/L					1	E903.0	02/18/09 13:41/eli-ca
Thorium 230	-0.1	pCi/L	U	0.2			1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.3	pCi/L					1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.									
RADIONUCLIDES - TOTAL									
Radon 222	295	pCi/L		100			1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	59.9	pCi/L					1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES									
Antimony	ND	mg/L		0.003			1	E200.8	01/30/09 21:20/eli-c
Arsenic	0.010	mg/L		0.001			1	E200.8	02/04/09 18:10/eli-c
Barium	ND	mg/L		0.1			1	E200.8	01/30/09 21:20/eli-c
Beryllium	ND	mg/L		0.001			1	E200.8	01/30/09 21:20/eli-c
Boron	0.2	mg/L		0.1			2	E200.7	02/05/09 19:27/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	01/30/09 21:20/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	01/30/09 21:20/eli-c
Copper	ND	mg/L		0.01			1	E200.8	01/30/09 21:20/eli-c
Iron	17.0	mg/L	D	0.04			2	E200.7	02/05/09 19:27/eli-c
Lead	ND	mg/L		0.001			1	E200.8	01/30/09 21:20/eli-c
Manganese	1.20	mg/L		0.01			1	E200.8	01/30/09 21:20/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	01/26/09 10:48/eli-b
Molybdenum	ND	mg/L		0.1			1	E200.8	02/04/09 18:10/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	01/30/09 21:20/eli-c
Selenium	0.003	mg/L		0.001			1	E200.8	02/04/09 18:10/eli-c
Silver	ND	mg/L		0.005			1	E200.8	01/30/09 21:20/eli-c
Strontium	6.0	mg/L		0.1			1	E200.8	02/04/09 18:10/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	01/30/09 21:20/eli-c
Uranium	0.0047	mg/L		0.0003			1	E200.8	01/30/09 21:20/eli-c
Zinc	ND	mg/L		0.01			1	E200.8	01/30/09 21:20/eli-c
DATA QUALITY									
A/C Balance (± 5)	5.42	%					1	A1030 E	03/16/09 00:00/lkl
Anions	31.2	meq/L					1	A1030 E	03/16/09 00:00/lkl
Cations	34.8	meq/L					1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	2100	mg/L					1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	0.990						1	A1030 E	03/16/09 00:00/lkl

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-011  
**Client Sample ID:** DewBurd GW680

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	252	mg/L		5		1	A2320 B	01/26/09 14:32/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:32/mb
Bicarbonate as HCO <sub>3</sub>	307	mg/L		5		1	A2320 B	01/26/09 14:32/mb
Calcium	358	mg/L		0.5		2	E200.7	01/30/09 21:10/eli-c
Chloride	13	mg/L		1		1	E300.0	01/22/09 06:56/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	01/22/09 06:56/jmh
Magnesium	117	mg/L		0.5		2	E200.7	01/30/09 21:10/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:23/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 06:56/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 06:56/jmh
Potassium	19.8	mg/L		0.5		2	E200.7	01/30/09 21:10/eli-c
Sodium	145	mg/L		0.5		2	E200.7	01/30/09 21:10/eli-c
Sulfate	1370	mg/L	D	3		50	E300.0	01/22/09 06:40/jmh
Silica	8.7	mg/L		0.2		2	E200.7	01/30/09 21:10/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2480	umhos/cm		5.0		1	A2510 B	01/22/09 15:05/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.12	s.u.		0.01		1	A4500-H B	01/22/09 10:17/tb
Sodium Adsorption Ratio (SAR)	1.7	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5		1	A2540 C	01/26/09 09:22/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 18:46/eli-c
Arsenic	ND	mg/L		0.001		5	E200.8	01/30/09 19:52/eli-c
Barium	ND	mg/L		0.1		5	E200.8	01/30/09 19:52/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 21:10/eli-c
Cadmium	ND	mg/L		0.005		5	E200.8	01/30/09 19:52/eli-c
Chromium	ND	mg/L		0.05		5	E200.8	01/30/09 19:52/eli-c
Copper	ND	mg/L		0.01		5	E200.8	01/30/09 19:52/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 21:10/eli-c
Lead	ND	mg/L		0.001		5	E200.8	01/30/09 19:52/eli-c
Manganese	0.47	mg/L		0.01		5	E200.8	01/30/09 19:52/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 18:46/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.8	01/30/09 19:52/eli-c
Nickel	ND	mg/L		0.05		5	E200.8	01/30/09 19:52/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:43/eli-c
Silver	ND	mg/L		0.005		5	E200.8	01/30/09 19:52/eli-c
Thorium 232	ND	mg/L		0.005		5	E200.8	01/30/09 19:52/eli-c
Uranium	0.0205	mg/L		0.0003		5	E200.8	01/30/09 19:52/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-011  
**Client Sample ID:** DewBurd GW680

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		5	E200.8	01/30/09 19:52/eli-c
Zinc	0.01	mg/L		0.01		5	E200.8	01/30/09 19:52/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 01:29/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:42/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	6730	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha precision (±)	79.0	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha MDC	8.1	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta	1790	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta precision (±)	19.6	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta MDC	8.8	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Lead 210	5.4	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.6	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.53	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.51	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.48	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	1360	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	7.5	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1700	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	240	pCi/L				1	E901.1	02/04/09 14:00/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	6.2	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	2.0	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.94	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.53	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	13.3	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	1.1	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-011  
**Client Sample ID:** DewBurd GW680

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:25  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	48000	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	283	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 21:26/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	02/04/09 18:16/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 21:26/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 21:26/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	02/05/09 19:48/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 21:26/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 21:26/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 21:26/eli-c
Iron	0.30	mg/L	D	0.04		2	E200.7	02/05/09 19:48/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 21:26/eli-c
Manganese	0.46	mg/L		0.01		1	E200.8	01/30/09 21:26/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:50/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 18:16/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 21:26/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 18:16/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 21:26/eli-c
Strontium	7.1	mg/L		0.1		1	E200.8	02/04/09 18:16/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 21:26/eli-c
Uranium	0.0220	mg/L		0.0003		1	E200.8	01/30/09 21:26/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 21:26/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.670	%				1	A1030 E	03/16/09 00:00/kl
Anions	33.9	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	34.3	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	2190	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	0.990					1	A1030 E	03/16/09 00:00/kl

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-012  
**Client Sample ID:** DewBurd GW688

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
MAJOR IONS									
Alkalinity, Total as CaCO3	166	mg/L		5		1	A2320 B	01/26/09 14:45/mb	
Carbonate as CO3	ND	mg/L		5		1	A2320 B	01/26/09 14:45/mb	
Bicarbonate as HCO3	197	mg/L		5		1	A2320 B	01/26/09 14:45/mb	
Calcium	48.8	mg/L		0.5		1	E200.7	01/30/09 21:19/eli-c	
Chloride	11	mg/L		1		1	E300.0	01/22/09 07:29/jmh	
Fluoride	0.6	mg/L		0.1		1	E300.0	01/22/09 07:29/jmh	
Magnesium	20.5	mg/L		0.5		1	E200.7	01/30/09 21:19/eli-c	
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	01/21/09 17:24/jmh	
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 07:29/jmh	
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 07:29/jmh	
Potassium	14.2	mg/L		0.5		1	E200.7	01/30/09 21:19/eli-c	
Sodium	189	mg/L		0.5		1	E200.7	01/30/09 21:19/eli-c	
Sulfate	436	mg/L	D	3		50	E300.0	01/22/09 07:13/jmh	
Silica	7.6	mg/L		0.2		1	E200.7	01/30/09 21:19/eli-c	
PHYSICAL PROPERTIES									
Conductivity @ 25 C	1210	umhos/cm		5.0		1	A2510 B	01/22/09 15:07/tb	
Oxidation-Reduction Potential	240	mV				1	A2580 B	01/27/09 11:00/jmh	
pH	8.00	s.u.		0.01		1	A4500-H B	01/22/09 10:18/tb	
Sodium Adsorption Ratio (SAR)	5.7	unitless		0.10		1	Calculation	03/16/09 16:28/ADM	
Solids, Total Dissolved TDS @ 180 C	800	mg/L		5		1	A2540 C	01/26/09 09:23/mb	
METALS - DISSOLVED									
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 18:53/eli-c	
Arsenic	0.002	mg/L		0.001		1	E200.8	01/30/09 19:58/eli-c	
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 19:58/eli-c	
Boron	ND	mg/L		0.1		1	E200.7	01/30/09 21:19/eli-c	
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 19:58/eli-c	
Chromium	ND	mg/L		0.05		1	E200.8	02/03/09 18:53/eli-c	
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 19:58/eli-c	
Iron	0.03	mg/L		0.03		1	E200.7	01/30/09 21:19/eli-c	
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 19:58/eli-c	
Manganese	0.05	mg/L		0.01		1	E200.8	02/02/09 23:01/eli-c	
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 18:53/eli-c	
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 19:58/eli-c	
Nickel	ND	mg/L		0.05		1	E200.8	02/03/09 18:53/eli-c	
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:46/eli-c	
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 19:58/eli-c	
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 19:58/eli-c	
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 19:58/eli-c	

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-012  
**Client Sample ID:** DewBurd GW688

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	02/02/09 23:01/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 19:58/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 01:33/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:44/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	25.6	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha precision (±)	3.6	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Alpha MDC	3.2	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta	15.8	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Gross Beta MDC	4.3	pCi/L				1	E900.0	02/07/09 01:12/eli-ca
Lead 210	1.0	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	-0.0089	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.71	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	3.8	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1100	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	3.2	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	-0.0045	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.17	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.43	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	0.1	pCi/L	U			1	E903.0	02/18/09 13:41/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/18/09 13:41/eli-ca

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-012  
**Client Sample ID:** DewBurd GW688

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:35  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	152	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	57.4	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 21:33/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	02/04/09 18:50/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 21:33/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 21:33/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 19:53/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 21:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 21:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 21:33/eli-c
Iron	0.17	mg/L	D	0.04		2	E200.7	02/05/09 19:53/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 21:33/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	01/30/09 21:33/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 10:53/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 18:50/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 21:33/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 18:50/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 21:33/eli-c
Strontium	1.3	mg/L		0.1		1	E200.8	02/04/09 18:50/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 21:33/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 21:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 21:33/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.140	%				1	A1030 E	03/16/09 00:00/lkl
Anions	12.8	meq/L				1	A1030 E	03/16/09 00:00/lkl
Cations	12.7	meq/L				1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	840	mg/L				1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	03/16/09 00:00/lkl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-013  
**Client Sample ID:** DewBurd GW696

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 16:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	178	mg/L		5		1	A2320 B	01/26/09 14:47/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:47/mb
Bicarbonate as HCO <sub>3</sub>	217	mg/L		5		1	A2320 B	01/26/09 14:47/mb
Calcium	27.0	mg/L		0.5		2	E200.7	01/30/09 21:24/eli-c
Chloride	12	mg/L		1		1	E300.0	01/22/09 08:02/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	01/22/09 08:02/jmh
Magnesium	9.6	mg/L		0.5		2	E200.7	01/30/09 21:24/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:28/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 08:02/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 08:02/jmh
Potassium	8.8	mg/L		0.5		2	E200.7	01/30/09 21:24/eli-c
Sodium	253	mg/L		0.5		2	E200.7	01/30/09 21:24/eli-c
Sulfate	483	mg/L	D	3		50	E300.0	01/22/09 07:46/jmh
Silica	7.5	mg/L		0.2		2	E200.7	01/30/09 21:24/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1400	umhos/cm		5.0		1	A2510 B	01/22/09 15:08/tb
Oxidation-Reduction Potential	240	mV				1	A2580 B	01/27/09 11:00/jmh
pH	8.05	s.u.		0.01		1	A4500-H B	01/22/09 10:19/tb
Sodium Adsorption Ratio (SAR)	11	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	920	mg/L		5		1	A2540 C	01/26/09 09:25/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/03/09 19:00/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/30/09 20:05/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:05/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 21:24/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:05/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:05/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:05/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 21:24/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:05/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	01/30/09 20:05/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 19:00/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:05/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:05/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:48/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:05/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 20:05/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 20:05/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-013  
**Client Sample ID:** DewBurd GW696

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 16:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 20:05/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:05/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 01:37/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:47/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	20.2	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Gross Alpha precision (±)	3.6	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Gross Alpha MDC	3.6	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Gross Beta	6.4	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Gross Beta precision (±)	2.7	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/07/09 01:12/eli-c
Lead 210	0.4	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.0	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.61	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.23	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	1	pCi/L				1	E903.0	02/05/09 14:35/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/05/09 14:35/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	940	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-4	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.7	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	-0.035	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.18	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.50	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	02/18/09 13:41/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 13:41/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-013  
**Client Sample ID:** DewBurd GW696

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 16:55  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 13:41/eli-ca
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	250	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	58.2	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 21:40/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	02/04/09 20:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 21:40/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 21:40/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 19:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 21:40/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 21:40/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 21:40/eli-c
Iron	0.14	mg/L	D	0.04		2	E200.7	02/05/09 19:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 21:40/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	01/30/09 21:40/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 11:21/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 20:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 21:40/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 20:33/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 21:40/eli-c
Strontium	0.8	mg/L		0.1		1	E200.8	02/04/09 20:33/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 21:40/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	01/30/09 21:40/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 21:40/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.22	%				1	A1030 E	03/16/09 00:00/kl
Anions	14.0	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	13.4	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	921	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	1.00					1	A1030 E	03/16/09 00:00/kl

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 17:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	208	mg/L		5		1	A2320 B	01/26/09 14:49/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 14:49/mb
Bicarbonate as HCO <sub>3</sub>	254	mg/L		5		1	A2320 B	01/26/09 14:49/mb
Calcium	86.6	mg/L		0.5		2	E200.7	01/30/09 21:28/eli-c
Chloride	9	mg/L		1		1	E300.0	01/22/09 09:41/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	01/22/09 09:41/jmh
Magnesium	32.8	mg/L		0.5		2	E200.7	01/30/09 21:28/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/21/09 17:31/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 09:41/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 09:41/jmh
Potassium	12.3	mg/L		0.5		2	E200.7	01/30/09 21:28/eli-c
Sodium	162	mg/L		0.5		2	E200.7	01/30/09 21:28/eli-c
Sulfate	508	mg/L	D	3		50	E300.0	01/22/09 08:51/jmh
Silica	7.6	mg/L		0.2		2	E200.7	01/30/09 21:28/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1370	umhos/cm		5.0		1	A2510 B	01/22/09 15:10/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	01/27/09 11:00/jmh
pH	7.55	s.u.		0.01		1	A4500-H B	01/22/09 10:20/tb
Sodium Adsorption Ratio (SAR)	3.8	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	960	mg/L		5		1	A2540 C	01/26/09 09:25/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		2	E200.7	02/20/09 13:06/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/30/09 20:12/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 20:12/eli-c
Boron	ND	mg/L		0.1		2	E200.7	01/30/09 21:28/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 20:12/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 20:12/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 20:12/eli-c
Iron	ND	mg/L		0.03		2	E200.7	01/30/09 21:28/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 20:12/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	01/30/09 20:12/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/03/09 20:42/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/30/09 20:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 20:12/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:50/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 20:12/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/30/09 20:12/eli-c
Uranium	0.0006	mg/L		0.0003		1	E200.8	01/30/09 20:12/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 17:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	01/30/09 20:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 20:12/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 01:41/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:49/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	25.9	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha precision (±)	3.9	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Alpha MDC	3.7	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta	16.8	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0	02/07/09 01:11/eli-ca
Lead 210	-0.9	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	0.045	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.58	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.26	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	1.7	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/05/09 14:35/eli-ca
Thorium 230	0.0	pCi/L	U	0.2		1	E907.0	02/06/09 08:45/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	02/06/09 08:45/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	150	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-1	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	0.056	pCi/L	U			1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Polonium 210 MDC	0.59	pCi/L				1	RMO-3008	02/19/09 09:56/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/18/09 15:51/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 15:51/eli-ca

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010301-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 17:00  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.4	pCi/L				1	E903.0	02/18/09 15:51/eli-ca
Thorium 230	-0.1	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	270	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	58.4	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	01/30/09 21:47/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	02/04/09 20:39/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/30/09 21:47/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/30/09 21:47/eli-c
Boron	ND	mg/L		0.1		2	E200.7	02/05/09 20:02/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/30/09 21:47/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/30/09 21:47/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/30/09 21:47/eli-c
Iron	0.15	mg/L	D	0.04		2	E200.7	02/05/09 20:02/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/30/09 21:47/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	01/30/09 21:47/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/26/09 11:28/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 20:39/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/30/09 21:47/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 20:39/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/30/09 21:47/eli-c
Strontium	2.7	mg/L		0.1		1	E200.8	02/04/09 20:39/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/30/09 21:47/eli-c
Uranium	0.0006	mg/L		0.0003		1	E200.8	01/30/09 21:47/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/30/09 21:47/eli-c
DATA QUALITY								
A/C Balance (± 5)	-2.05	%				1	A1030 E	03/16/09 00:00/lkl
Anions	15.0	meq/L				1	A1030 E	03/16/09 00:00/lkl
Cations	14.4	meq/L				1	A1030 E	03/16/09 00:00/lkl
Solids, Total Dissolved Calculated	956	mg/L				1	A1030 E	03/16/09 00:00/lkl
TDS Balance (0.80 - 1.20)	1.00					1	A1030 E	03/16/09 00:00/lkl

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

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

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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B			Batch: 090126A-ALK-SEL-W						
Sample ID: LCS1_090126A	Laboratory Control Sample				Run: PH_COND1-R_090126A		01/26/09 12:59		
Alkalinity, Total as CaCO3	960	mg/L	5.0	96	90	110			
Sample ID: MBLK1_090126A	Method Blank				Run: PH_COND1-R_090126A		01/26/09 13:00		
Alkalinity, Total as CaCO3	ND	mg/L	3						
Sample ID: R09010301-004AMS	Sample Matrix Spike				Run: PH_COND1-R_090126A		01/26/09 14:06		
Alkalinity, Total as CaCO3	236	mg/L	5.0	92	80	120			
Sample ID: R09010301-004AMSD	Sample Matrix Spike Duplicate				Run: PH_COND1-R_090126A		01/26/09 14:11		
Alkalinity, Total as CaCO3	244	mg/L	5.0	100	80	120	3.3	10	
Sample ID: R09010301-014AMS	Sample Matrix Spike				Run: PH_COND1-R_090126A		01/26/09 14:51		
Alkalinity, Total as CaCO3	296	mg/L	5.0	83	80	120			
Sample ID: R09010301-014AMSD	Sample Matrix Spike Duplicate				Run: PH_COND1-R_090126A		01/26/09 14:53		
Alkalinity, Total as CaCO3	296	mg/L	5.0	83	80	120	0	10	
Method: A2510 B			Batch: 090122_1_COND-PROBE-W						
Sample ID: LCS_COND-1_090122	Laboratory Control Sample				Run: PH_COND2-R_090122B		01/22/09 14:38		
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
Sample ID: LCS1-1_090122	Laboratory Control Sample				Run: PH_COND2-R_090122B		01/22/09 14:39		
Conductivity @ 25 C	149	umhos/cm	5.0	99	90	110			
Sample ID: LCS2-1_090122	Laboratory Control Sample				Run: PH_COND2-R_090122B		01/22/09 14:40		
Conductivity @ 25 C	5000	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_090122	Method Blank				Run: PH_COND2-R_090122B		01/22/09 14:40		
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: R09010301-007ADUP	Sample Duplicate				Run: PH_COND2-R_090122B		01/22/09 14:57		
Conductivity @ 25 C	1310	umhos/cm	5.0				0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>							Batch: 090126A-SLDS-TDS-W		
<b>Sample ID: LCS1_090126A</b>	Laboratory Control Sample				Run: BAL-4-R_090126A		01/26/09 08:55		
Solids, Total Dissolved TDS @ 180 C	220	mg/L	5.0	108	90	110			
<b>Sample ID: MBLK1_090126A</b>	Method Blank				Run: BAL-4-R_090126A		01/26/09 08:57		
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	5						
<b>Sample ID: R09010301-002AMS</b>	Sample Matrix Spike				Run: BAL-4-R_090126A		01/26/09 09:15		
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	109	80	120			
<b>Sample ID: R09010301-002AMSD</b>	Sample Matrix Spike Duplicate				Run: BAL-4-R_090126A		01/26/09 09:16		
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	106	80	120	0.5	10	
<b>Sample ID: R09010301-012AMS</b>	Sample Matrix Spike				Run: BAL-4-R_090126A		01/26/09 09:23		
Solids, Total Dissolved TDS @ 180 C	1000	mg/L	5.0	108	80	120			
<b>Sample ID: R09010301-012AMSD</b>	Sample Matrix Spike Duplicate				Run: BAL-4-R_090126A		01/26/09 09:24		
Solids, Total Dissolved TDS @ 180 C	1000	mg/L	5.0	101	80	120	1.4	10	
<b>Method: A2580 B</b>							Batch: 090127-ORP-ISE-W		
<b>Sample ID: LCS</b>	Laboratory Control Sample				Run: PH_COND1-R_090127A		01/27/09 11:00		
Oxidation-Reduction Potential	480	mV		100	95	105			
<b>Sample ID: R09010301-010F</b>	Sample Duplicate				Run: PH_COND1-R_090127A		01/27/09 11:00		
Oxidation-Reduction Potential	240	mV					0.4	10	
<b>Method: A3114 B</b>							Batch: C_SE3114-090224D-IV		
<b>Sample ID: MBLK</b>	Method Blank				Run: SUB-C115145		02/24/09 15:59		
Selenium-IV	ND	mg/L	0.0003						
<b>Sample ID: As/Se 1.0ppm-Q 02090</b>	Laboratory Control Sample				Run: SUB-C115145		02/24/09 16:01		
Selenium-IV	0.054	mg/L	0.0010	108	90	110			
<b>Sample ID: R09010301-001E</b>	Sample Matrix Spike				Run: SUB-C115145		02/24/09 16:08		
Selenium-IV	0.050	mg/L	0.0010	100	85	115			
<b>Sample ID: R09010301-001E</b>	Sample Matrix Spike Duplicate				Run: SUB-C115145		02/24/09 16:10		
Selenium-IV	0.051	mg/L	0.0010	102	85	115	1.2	10	
<b>Sample ID: C09010797-010EMS</b>	Sample Matrix Spike				Run: SUB-C115145		02/24/09 16:38		
Selenium-IV	0.049	mg/L	0.0010	99	85	115			
<b>Sample ID: C09010797-010EMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C115145		02/24/09 16:40		
Selenium-IV	0.047	mg/L	0.0010	94	85	115	4.8	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>							Batch: C_SE3114-090225A		
<b>Sample ID: MBLK</b> Selenium	Method Blank ND	mg/L	0.0003			Run: SUB-C115157			02/25/09 10:00
<b>Sample ID: As/Se 1.0ppm-Q 02090</b> Selenium	Laboratory Control Sample 0.052	mg/L	0.0010	103	90	110			02/25/09 10:03
<b>Sample ID: R09010301-001E</b> Selenium	Sample Matrix Spike 0.049	mg/L	0.0010	98	85	115			02/25/09 10:09
<b>Sample ID: R09010301-001E</b> Selenium	Sample Matrix Spike Duplicate 0.050	mg/L	0.0010	99	85	115	1.4		02/25/09 10:12 15
<b>Sample ID: C09010797-010EMS</b> Selenium	Sample Matrix Spike 0.047	mg/L	0.0010	94	85	115			02/25/09 10:39
<b>Sample ID: C09010797-010EMSD</b> Selenium	Sample Matrix Spike Duplicate 0.048	mg/L	0.0010	97	85	115	3		02/25/09 10:41 15
<b>Method: A4500-H B</b>							Batch: 090122_1_PH-W		
<b>Sample ID: LCS_pH-1_090122</b> pH	Laboratory Control Sample 6.88	s.u.	0.010	100	98.55	101.45			01/22/09 09:53
<b>Sample ID: R09010301-007ADUP</b> pH	Sample Duplicate 7.85	s.u.	0.010			Run: PH_COND2-R_090122A	0		01/22/09 10:11 1.25

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G					Batch: A2009-01-21_2_NH3_01				
Sample ID: MBLK-2	Method Blank				Run: TECHAA2-R_090121A			01/21/09 15:03	
Nitrogen, Ammonia as N	ND	mg/L	0.01						
Sample ID: LFB-3	Laboratory Fortified Blank				Run: TECHAA2-R_090121A			01/21/09 15:05	
Nitrogen, Ammonia as N	0.24	mg/L	0.10	96	90	110			
Sample ID: LFB-4	Laboratory Fortified Blank				Run: TECHAA2-R_090121A			01/21/09 15:06	
Nitrogen, Ammonia as N	0.26	mg/L	0.10	103	90	110			
Sample ID: R09010278-006CMS	Sample Matrix Spike				Run: TECHAA2-R_090121A			01/21/09 17:01	
Nitrogen, Ammonia as N	0.18	mg/L	0.10	73	80	120			S
Sample ID: R09010278-006CMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090121A			01/21/09 17:02	
Nitrogen, Ammonia as N	0.18	mg/L	0.10	73	80	120	0	10	S
Sample ID: R09010301-005BMS	Sample Matrix Spike				Run: TECHAA2-R_090121A			01/21/09 17:15	
Nitrogen, Ammonia as N	0.44	mg/L	0.10	110	80	120			
Sample ID: R09010301-005BMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090121A			01/21/09 17:16	
Nitrogen, Ammonia as N	0.44	mg/L	0.10	110	80	120	0	10	
Sample ID: R09010301-013BMS	Sample Matrix Spike				Run: TECHAA2-R_090121A			01/21/09 17:29	
Nitrogen, Ammonia as N	0.63	mg/L	0.10	99	80	120			
Sample ID: R09010301-013BMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090121A			01/21/09 17:30	
Nitrogen, Ammonia as N	0.65	mg/L	0.10	108	80	120	3.3	10	
Method: D5072-92					Batch: C_R113850				
Sample ID: C09010745-002CDUP	Sample Duplicate				Run: SUB-C113850			01/23/09 14:10	
Radon 222	150	pCi/L	100				0	30	
Sample ID: R09010302-001G	Sample Duplicate				Run: SUB-C113850			01/23/09 14:10	
Radon 222	133	pCi/L	100				14	30	
Sample ID: MB-R113850	Method Blank				Run: SUB-C113850			01/23/09 14:10	
Radon 222	30	pCi/L						U	
Sample ID: LCS-R113850	Laboratory Control Sample				Run: SUB-C113850			01/23/09 14:10	
Radon 222	307	pCi/L	100	90	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_21342		
<b>Sample ID: MB-21342</b>	Method Blank					Run: SUB-C114422	02/07/09 03:07		
Boron	ND	mg/L	0.006						
Iron	ND	mg/L	0.01						
<b>Sample ID: LCS3-21342</b>	Laboratory Control Sample					Run: SUB-C114422	02/07/09 03:12		
Boron	0.482	mg/L	0.10	96	85	115			
Iron	2.54	mg/L	0.030	102	85	115			
<b>Sample ID: R09010301-009D</b>	Sample Matrix Spike					Run: SUB-C114422	02/07/09 03:35		
Boron	0.512	mg/L	0.10	94	70	130			
Iron	6.94	mg/L	0.030	94	70	130			
<b>Sample ID: R09010301-009D</b>	Sample Matrix Spike Duplicate					Run: SUB-C114422	02/07/09 03:40		
Boron	0.559	mg/L	0.10	103	70	130	8.7	20	
Iron	7.30	mg/L	0.030	108	70	130	5	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R114100		
Sample ID: LRB	Method Blank		Run: SUB-C114100				01/30/09 15:45		
Boron	ND	mg/L	0.006						
Iron	0.005	mg/L	0.0004						
Silicon	ND	mg/L	0.003						
Calcium	ND	mg/L	0.02						
Magnesium	ND	mg/L	0.01						
Potassium	ND	mg/L	0.005						
Sodium	-0.05	mg/L							
Silica	ND	mg/L	0.005						
Sample ID: C09010796-010BMS	Sample Matrix Spike		Run: SUB-C114100				01/30/09 19:38		
Boron	15.4	mg/L	0.14	104	70	130			
Iron	13.1	mg/L	0.030	101	70	130			
Silicon	57.6	mg/L	0.10		70	130			A
Calcium	2910	mg/L	1.0	100	70	130			
Magnesium	1590	mg/L	1.0	103	70	130			
Potassium	1580	mg/L	1.0	112	70	130			
Sodium	3000	mg/L	1.0	103	70	130			
Silica	123	mg/L	0.21	452	70	130			S
Sample ID: C09010796-010BMSD	Sample Matrix Spike Duplicate		Run: SUB-C114100				01/30/09 19:43		
Boron	16.0	mg/L	0.14	109	70	130	3.7	20	
Iron	13.6	mg/L	0.030	105	70	130	3.4	20	
Silicon	58.8	mg/L	0.10		70	130	2	20	A
Calcium	3010	mg/L	1.0	108	70	130	3.5	20	
Magnesium	1630	mg/L	1.0	106	70	130	2.7	20	
Potassium	1610	mg/L	1.0	114	70	130	1.5	20	
Sodium	3020	mg/L	1.0	105	70	130	0.8	20	
Silica	126	mg/L	0.21	461	70	130	2	20	S
Sample ID: R09010301-010C	Sample Matrix Spike		Run: SUB-C114100				01/30/09 20:46		
Boron	1.19	mg/L	0.10	109	70	130			
Iron	7.94	mg/L	0.030		70	130			A
Silicon	4.63	mg/L	0.10		70	130			A
Calcium	459	mg/L	1.0	108	70	130			
Magnesium	222	mg/L	1.0	106	70	130			
Potassium	143	mg/L	1.0	120	70	130			
Sodium	264	mg/L	1.0	101	70	130			
Silica	9.92	mg/L	0.21	67	70	130			S
Sample ID: R09010301-010C	Sample Matrix Spike Duplicate		Run: SUB-C114100				01/30/09 20:51		
Boron	1.17	mg/L	0.10	108	70	130	1.5	20	
Iron	7.76	mg/L	0.030		70	130	2.2	20	A
Silicon	4.52	mg/L	0.10		70	130	2.5	20	A
Calcium	452	mg/L	1.0	100	70	130	1.6	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 03/17/09

Project: Edgemont

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R114100		
Sample ID: R09010301-010C	Sample Matrix Spike Duplicate			Run: SUB-C114100			01/30/09 20:51		
Magnesium	219	mg/L	1.0	102	70	130	1.7	20	
Sodium	263	mg/L	1.0	100	70	130	0.4	20	
Silica	9.68	mg/L	0.21	55	70	130	2.5	20	S
Sample ID: C09010853-001BMS	Sample Matrix Spike			Run: SUB-C114100			01/30/09 22:19		
Boron	1.08	mg/L	0.10	104	70	130			
Iron	1.06	mg/L	0.030	102	70	130			
Calcium	332	mg/L	1.0	103	70	130			
Magnesium	149	mg/L	1.0	104	70	130			
Potassium	128	mg/L	1.0	112	70	130			
Sodium	165	mg/L	1.0	103	70	130			
Silica	15.3	mg/L	0.21		70	130			A
Sample ID: C09010853-001BMSD	Sample Matrix Spike Duplicate			Run: SUB-C114100			01/30/09 22:23		
Boron	1.08	mg/L	0.10	104	70	130	0.5	20	
Iron	1.06	mg/L	0.030	103	70	130	0.2	20	
Calcium	337	mg/L	1.0	108	70	130	1.5	20	
Magnesium	149	mg/L	1.0	104	70	130	0.3	20	
Potassium	128	mg/L	1.0	112	70	130	0.3	20	
Sodium	166	mg/L	1.0	104	70	130	0.6	20	
Silica	15.6	mg/L	0.21		70	130	2	20	A
Method: E200.7							Batch: C_R114362		
Sample ID: LRB	Method Blank			Run: SUB-C114362			02/05/09 12:03		
Boron	0.007	mg/L	0.006						
Iron	0.006	mg/L	0.0004						
Sample ID: R09010301-004D	Sample Matrix Spike			Run: SUB-C114362			02/05/09 19:05		
Boron	5.41	mg/L	0.37	106	70	130			
Iron	6.63	mg/L	0.22	104	70	130			
Sample ID: R09010301-004D	Sample Matrix Spike Duplicate			Run: SUB-C114362			02/05/09 19:10		
Boron	5.64	mg/L	0.37	111	70	130	4.3	20	
Iron	6.90	mg/L	0.22	109	70	130	4	20	
Sample ID: R09010302-001D	Sample Matrix Spike			Run: SUB-C114362			02/05/09 20:15		
Boron	1.44	mg/L	0.10	106	70	130			
Iron	1.74	mg/L	0.043	104	70	130			
Sample ID: R09010302-001D	Sample Matrix Spike Duplicate			Run: SUB-C114362			02/05/09 20:20		
Boron	1.49	mg/L	0.10	110	70	130	3	20	
Iron	1.77	mg/L	0.043	107	70	130	1.6	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** RESPEC Inc  
**Project:** Edgemont

**Report Date:** 03/17/09  
**Work Order:** R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7							Batch: C_R115011		
<b>Sample ID:</b> MB-090220A	Method Blank					Run: SUB-C115011			02/20/09 12:54
Aluminum	ND	mg/L	0.003						
<b>Sample ID:</b> LFB-090220A	Laboratory Fortified Blank					Run: SUB-C115011			02/20/09 12:58
Aluminum	0.95	mg/L	0.10	95	85	125			
<b>Sample ID:</b> C09010797-014CMS2	Sample Matrix Spike					Run: SUB-C115011			02/20/09 13:10
Aluminum	1.92	mg/L	0.10	94	70	130			
<b>Sample ID:</b> C09010797-014CMSD2	Sample Matrix Spike Duplicate					Run: SUB-C115011			02/20/09 13:14
Aluminum	1.92	mg/L	0.10	94	70	130	0.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_21342		
<b>Sample ID: MB-21342</b>	Method Blank		Run: SUB-C114332				02/04/09 16:21		
Antimony	0.0004	mg/L	0.0003						
Arsenic	0.002	mg/L	0.0008						
Barium	ND	mg/L	0.0002						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	7E-05						
Chromium	0.002	mg/L	0.0005						
Copper	0.0004	mg/L	0.0002						
Lead	ND	mg/L	8E-05						
Manganese	ND	mg/L	0.0001						
Molybdenum	ND	mg/L	9E-05						
Nickel	ND	mg/L	9E-05						
Selenium	0.002	mg/L	0.0008						
Silver	ND	mg/L	0.0002						
Strontium	ND	mg/L	7E-05						
Thallium	ND	mg/L	0.0004						
Uranium	ND	mg/L	6E-05						
Zinc	ND	mg/L	0.001						
<b>Sample ID: LCS3-21342</b>	Laboratory Control Sample		Run: SUB-C114332				02/04/09 16:28		
Antimony	0.584	mg/L	0.050	117	85	115			S
Arsenic	0.497	mg/L	0.0010	99	85	115			
Barium	0.511	mg/L	0.10	102	85	115			
Beryllium	0.276	mg/L	0.010	110	85	115			
Cadmium	0.251	mg/L	0.010	100	85	115			
Chromium	0.465	mg/L	0.050	93	85	115			
Copper	0.476	mg/L	0.010	95	85	115			
Lead	0.498	mg/L	0.050	100	85	115			
Manganese	2.43	mg/L	0.010	97	85	115			
Molybdenum	0.516	mg/L	0.10	103	85	115			
Nickel	0.477	mg/L	0.050	95	85	115			
Selenium	0.498	mg/L	0.0010	100	85	115			
Silver	0.0500	mg/L	0.010	100	85	115			
Strontium	0.504	mg/L	0.10	101	85	115			
Thallium	0.497	mg/L	0.10	99	85	115			
Uranium	0.525	mg/L	0.00030	105	85	115			
Zinc	0.485	mg/L	0.010	97	85	115			
<b>Sample ID: R09010301-009D</b>	Sample Matrix Spike		Run: SUB-C114332				02/04/09 17:29		
Antimony	0.585	mg/L	0.050	117	70	130			
Arsenic	0.507	mg/L	0.0010	101	70	130			
Barium	0.529	mg/L	0.10	104	70	130			
Beryllium	0.264	mg/L	0.010	106	70	130			
Cadmium	0.242	mg/L	0.010	97	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_21342		
Sample ID: R09010301-009D	Sample Matrix Spike		Run: SUB-C114332				02/04/09 17:29		
Chromium	0.461	mg/L	0.050	90	70	130			
Copper	0.468	mg/L	0.010	93	70	130			
Lead	0.508	mg/L	0.050	101	70	130			
Manganese	4.66	mg/L	0.010	92	70	130			
Molybdenum	0.531	mg/L	0.10	106	70	130			
Nickel	0.471	mg/L	0.050	93	70	130			
Selenium	0.499	mg/L	0.0010	99	70	130			
Silver	0.0483	mg/L	0.010	97	70	130			
Strontium	5.32	mg/L	0.10		70	130			A
Thallium	0.512	mg/L	0.10	102	70	130			
Uranium	0.660	mg/L	0.00030	110	70	130			
Zinc	0.455	mg/L	0.010	89	70	130			
Sample ID: R09010301-009D	Sample Matrix Spike Duplicate		Run: SUB-C114332				02/04/09 17:36		
Antimony	0.586	mg/L	0.050	117	70	130	0.1	20	
Arsenic	0.502	mg/L	0.0010	100	70	130	1	20	
Barium	0.526	mg/L	0.10	103	70	130	0.5	20	
Beryllium	0.258	mg/L	0.010	103	70	130	2.3	20	
Cadmium	0.244	mg/L	0.010	97	70	130	0.8	20	
Chromium	0.445	mg/L	0.050	87	70	130	3.5	20	
Copper	0.455	mg/L	0.010	90	70	130	2.9	20	
Lead	0.499	mg/L	0.050	100	70	130	1.8	20	
Manganese	4.57	mg/L	0.010	88	70	130	2	20	
Molybdenum	0.541	mg/L	0.10	108	70	130	2	20	
Nickel	0.460	mg/L	0.050	91	70	130	2.3	20	
Selenium	0.499	mg/L	0.0010	99	70	130	0	20	
Silver	0.0494	mg/L	0.010	99	70	130	2.3	20	
Strontium	5.28	mg/L	0.10		70	130	0.8	20	A
Thallium	0.501	mg/L	0.10	100	70	130	2.2	20	
Uranium	0.634	mg/L	0.00030	105	70	130	3.9	20	
Zinc	0.443	mg/L	0.010	87	70	130	2.6	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

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_21458		
<b>Sample ID: MB-21458</b>	Method Blank					Run: SUB-C114869			02/18/09 22:43
Uranium	ND	mg/L	7E-05						
<b>Sample ID: LCS1-21458</b>	Laboratory Control Sample					Run: SUB-C114869			02/18/09 22:47
Uranium	0.102	mg/L	0.00030	102	80	120			
<b>Sample ID: R09010301-0061</b>	Post Digestion Spike					Run: SUB-C114869			02/18/09 23:35
Uranium	0.0127	mg/L	0.00030	101	70	130			
<b>Sample ID: R09010301-0061</b>	Post Digestion Spike Duplicate					Run: SUB-C114869			02/18/09 23:39
Uranium	0.0128	mg/L	0.00030	102	70	130	0.5	20	
<b>Method: E200.8</b>							Batch: C_21459		
<b>Sample ID: MB-21459</b>	Method Blank					Run: SUB-C114869			02/18/09 23:47
Uranium	ND	mg/L	7E-05						
<b>Sample ID: LCS1-21459</b>	Laboratory Control Sample					Run: SUB-C114869			02/18/09 23:51
Uranium	0.105	mg/L	0.00030	105	80	120			
<b>Sample ID: R09010302-0011</b>	Post Digestion Spike					Run: SUB-C114869			02/19/09 01:49
Uranium	0.0128	mg/L	0.00030	102	70	130			
<b>Sample ID: R09010302-0011</b>	Post Digestion Spike Duplicate					Run: SUB-C114869			02/19/09 01:53
Uranium	0.0127	mg/L	0.00030	101	70	130	0.5	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114097		
Sample ID: LRB	Method Blank				Run: SUB-C114097		01/30/09 16:42		
Antimony	0.0004	mg/L	0.0001						
Arsenic	ND	mg/L	0.0003						
Barium	0.0001	mg/L	3E-05						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	9E-05	mg/L	4E-05						
Lead	5E-05	mg/L	2E-05						
Manganese	0.0001	mg/L	5E-05						
Mercury	ND	mg/L	4E-05						
Molybdenum	5E-05	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Silver	6E-05	mg/L	2E-05						
Strontium	0.0006	mg/L	2E-05						
Thallium	4E-05	mg/L	3E-05						
Thorium 232	0.0001	mg/L	3E-05						
Uranium	0.0001	mg/L	8E-06						
Vanadium	0.0001	mg/L	9E-05						
Zinc	0.0004	mg/L	6E-05						
Sample ID: LFB	Laboratory Fortified Blank				Run: SUB-C114097		01/30/09 16:49		
Antimony	0.0523	mg/L	0.0010	104	85	115			
Arsenic	0.0517	mg/L	0.0010	103	85	115			
Barium	0.0514	mg/L	0.0010	103	85	115			
Beryllium	0.0501	mg/L	0.0010	100	85	115			
Cadmium	0.0521	mg/L	0.0010	104	85	115			
Chromium	0.0495	mg/L	0.0010	99	85	115			
Copper	0.0521	mg/L	0.0010	104	85	115			
Lead	0.0525	mg/L	0.0010	105	85	115			
Manganese	0.0500	mg/L	0.0010	100	85	115			
Mercury	0.00528	mg/L	0.0010	106	85	115			
Molybdenum	0.0523	mg/L	0.0010	104	85	115			
Nickel	0.0524	mg/L	0.0010	105	85	115			
Silver	0.0212	mg/L	0.0010	106	85	115			
Strontium	0.0503	mg/L	0.0010	99	85	115			
Thallium	0.0521	mg/L	0.0010	104	85	115			
Thorium 232	0.0515	mg/L	0.0010	103	85	115			
Uranium	0.0514	mg/L	0.00030	103	85	115			
Vanadium	0.0489	mg/L	0.0010	98	85	115			
Zinc	0.0557	mg/L	0.0010	111	85	115			
Sample ID: C09010693-001CMS4	Post Digestion Spike				Run: SUB-C114097		01/30/09 17:22		
Antimony	0.0563	mg/L	0.050	112	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114097		
Sample ID: C09010693-001CMS4		Post Digestion Spike		Run: SUB-C114097			01/30/09 17:22		
Arsenic	0.0574	mg/L	0.0010	114	70	130			
Barium	0.0719	mg/L	0.10	109	70	130			
Beryllium	0.0485	mg/L	0.010	97	70	130			
Cadmium	0.0513	mg/L	0.010	102	70	130			
Chromium	0.0493	mg/L	0.050	98	70	130			
Copper	0.0541	mg/L	0.010	97	70	130			
Lead	0.0541	mg/L	0.050	108	70	130			
Manganese	0.551	mg/L	0.010		70	130			A
Mercury	0.00544	mg/L	0.0010	109	70	130			
Molybdenum	0.0581	mg/L	0.10	110	70	130			
Nickel	0.0582	mg/L	0.050	104	70	130			
Silver	0.0186	mg/L	0.010	93	70	130			
Strontium	1.86	mg/L	0.10		70	130			A
Thallium	0.0545	mg/L	0.10	109	70	130			
Thorium 232	0.0584	mg/L	0.0010	116	70	130			
Uranium	0.0587	mg/L	0.00030	115	70	130			
Vanadium	0.0496	mg/L	0.10	99	70	130			
Zinc	0.0789	mg/L	0.010	93	70	130			
Sample ID: C09010693-001CMSD4		Post Digestion Spike Duplicate		Run: SUB-C114097			01/30/09 17:29		
Antimony	0.0566	mg/L	0.050	112	70	130	0.5	20	
Arsenic	0.0560	mg/L	0.0010	111	70	130	2.5	20	
Barium	0.0724	mg/L	0.10	110	70	130		20	
Beryllium	0.0473	mg/L	0.010	95	70	130	2.6	20	
Cadmium	0.0513	mg/L	0.010	102	70	130	0.1	20	
Chromium	0.0494	mg/L	0.050	98	70	130		20	
Copper	0.0539	mg/L	0.010	97	70	130	0.4	20	
Lead	0.0542	mg/L	0.050	108	70	130	0.2	20	
Manganese	0.549	mg/L	0.010		70	130	0.4	20	A
Mercury	0.00547	mg/L	0.0010	109	70	130	0.5	20	
Molybdenum	0.0584	mg/L	0.10	111	70	130		20	
Nickel	0.0572	mg/L	0.050	102	70	130	1.8	20	
Silver	0.0192	mg/L	0.010	96	70	130	3.1	20	
Strontium	1.86	mg/L	0.10		70	130	0.3	20	A
Thallium	0.0548	mg/L	0.10	109	70	130		20	
Thorium 232	0.0585	mg/L	0.0010	117	70	130	0.2	20	
Uranium	0.0588	mg/L	0.00030	115	70	130	0.1	20	
Vanadium	0.0493	mg/L	0.10	98	70	130		20	
Zinc	0.0783	mg/L	0.010	92	70	130	0.7	20	
Sample ID: R09010301-010C		Post Digestion Spike		Run: SUB-C114097			01/30/09 19:11		
Antimony	0.272	mg/L	0.050	109	70	130			
Arsenic	0.278	mg/L	0.0010	111	70	130			

### 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

Client: RESPEC Inc

Report Date: 03/17/09

Project: Edgemont

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114097		
Sample ID: R09010301-010C	Post Digestion Spike		Run: SUB-C114097				01/30/09 19:11		
Barium	0.282	mg/L	0.10	108	70	130			
Beryllium	0.247	mg/L	0.010	99	70	130			
Cadmium	0.259	mg/L	0.010	103	70	130			
Chromium	0.252	mg/L	0.050	100	70	130			
Copper	0.252	mg/L	0.010	100	70	130			
Lead	0.263	mg/L	0.050	105	70	130			
Manganese	1.41	mg/L	0.010		70	130			A
Molybdenum	0.277	mg/L	0.10	109	70	130			
Nickel	0.257	mg/L	0.050	101	70	130			
Silver	0.0681	mg/L	0.010	68	70	130			S
Strontium	6.64	mg/L	0.10		70	130			A
Thallium	0.261	mg/L	0.10	104	70	130			
Thorium 232	0.271	mg/L	0.0010	108	70	130			
Uranium	0.274	mg/L	0.00030	108	70	130			
Vanadium	0.252	mg/L	0.10	101	70	130			
Zinc	0.267	mg/L	0.010	97	70	130			
Sample ID: C09010797-014DMS4	Post Digestion Spike		Run: SUB-C114097				01/30/09 21:53		
Antimony	0.0547	mg/L	0.050	109	70	130			
Barium	0.0636	mg/L	0.10	108	70	130			
Beryllium	0.0525	mg/L	0.010	105	70	130			
Cadmium	0.0521	mg/L	0.010	104	70	130			
Chromium	0.0515	mg/L	0.050	103	70	130			
Copper	0.0497	mg/L	0.010	98	70	130			
Lead	0.0522	mg/L	0.050	104	70	130			
Manganese	0.213	mg/L	0.010	117	70	130			
Nickel	0.0504	mg/L	0.050	98	70	130			
Silver	0.0191	mg/L	0.010	96	70	130			
Thallium	0.0523	mg/L	0.10	105	70	130			
Thorium 232	0.0573	mg/L	0.0010	115	70	130			
Uranium	0.0581	mg/L	0.00030	115	70	130			
Vanadium	0.0522	mg/L	0.10	104	70	130			
Zinc	0.0548	mg/L	0.010	102	70	130			
Sample ID: C09010797-014DMSD4	Post Digestion Spike Duplicate		Run: SUB-C114097				01/30/09 22:00		
Antimony	0.0550	mg/L	0.050	110	70	130	0.5	20	
Barium	0.0631	mg/L	0.10	107	70	130		20	
Beryllium	0.0536	mg/L	0.010	107	70	130	2.2	20	
Cadmium	0.0516	mg/L	0.010	103	70	130	0.9	20	
Chromium	0.0523	mg/L	0.050	104	70	130	1.5	20	
Copper	0.0493	mg/L	0.010	97	70	130	0.8	20	
Lead	0.0534	mg/L	0.050	107	70	130	2.3	20	
Manganese	0.218	mg/L	0.010	128	70	130	2.6	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114097		
Sample ID: C09010797-014DMSD4	Post Digestion Spike Duplicate			Run: SUB-C114097			01/30/09 22:00		
Nickel	0.0500	mg/L	0.050	97	70	130		20	
Silver	0.0200	mg/L	0.010	100	70	130	4.3	20	
Thallium	0.0535	mg/L	0.10	107	70	130		20	
Thorium 232	0.0585	mg/L	0.0010	117	70	130	2.1	20	
Uranium	0.0591	mg/L	0.00030	117	70	130	1.7	20	
Vanadium	0.0532	mg/L	0.10	106	70	130		20	
Zinc	0.0545	mg/L	0.010	101	70	130	0.7	20	
Method: E200.8							Batch: C_R114166		
Sample ID: LRB	Method Blank			Run: SUB-C114166			02/02/09 11:50		
Manganese	ND	mg/L	5E-05						
Vanadium	ND	mg/L	9E-05						
Sample ID: LFB	Laboratory Fortified Blank			Run: SUB-C114166			02/02/09 11:56		
Manganese	0.0509	mg/L	0.0010	102	85	115			
Vanadium	0.0514	mg/L	0.0010	103	85	115			
Sample ID: R09010301-010C	Post Digestion Spike			Run: SUB-C114166			02/02/09 22:45		
Manganese	1.15	mg/L	0.010		70	130			A
Vanadium	0.0488	mg/L	0.10	97	70	130			
Sample ID: R09010301-010C	Post Digestion Spike Duplicate			Run: SUB-C114166			02/02/09 22:50		
Manganese	1.14	mg/L	0.010		70	130	1.1	20	A
Vanadium	0.0483	mg/L	0.10	96	70	130		20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R114210		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C114210				02/03/09 14:15		
Aluminum	0.003	mg/L	0.002						
Chromium	0.0001	mg/L	8E-05						
Mercury	ND	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C114210				02/03/09 14:22		
Aluminum	0.0530	mg/L	0.0022	99	85	115			
Chromium	0.0490	mg/L	0.0010	98	85	115			
Mercury	0.00500	mg/L	0.0010	100	85	115			
Nickel	0.0485	mg/L	0.0010	97	85	115			
<b>Sample ID: R09010301-008C</b>	Post Digestion Spike		Run: SUB-C114210				02/03/09 17:52		
Aluminum	0.0553	mg/L	0.10	104	70	130			
Chromium	0.0490	mg/L	0.050	96	70	130			
Mercury	0.00559	mg/L	0.0010	112	70	130			
Nickel	0.0480	mg/L	0.050	94	70	130			
<b>Sample ID: R09010301-008C</b>	Post Digestion Spike Duplicate		Run: SUB-C114210				02/03/09 17:59		
Aluminum	0.0567	mg/L	0.10	107	70	130			20
Chromium	0.0492	mg/L	0.050	97	70	130			20
Mercury	0.00553	mg/L	0.0010	111	70	130	1.1		20
Nickel	0.0477	mg/L	0.050	94	70	130			20

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R114332		
<b>Sample ID: LRB</b>	Method Blank				Run: SUB-C114332		02/04/09 12:58		
Arsenic	ND	mg/L	0.0003						
Molybdenum	ND	mg/L	4E-05						
Selenium	ND	mg/L	0.001						
Strontium	ND	mg/L	2E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank				Run: SUB-C114332		02/04/09 13:05		
Arsenic	0.0508	mg/L	0.0010	102	85	115			
Molybdenum	0.0512	mg/L	0.0010	102	85	115			
Selenium	0.0509	mg/L	0.0014	102	85	115			
Strontium	0.0504	mg/L	0.0010	101	85	115			
<b>Sample ID: C09010797-014DMS4</b>	Post Digestion Spike				Run: SUB-C114332		02/04/09 20:46		
Arsenic	0.0543	mg/L	0.0010	105	70	130			
Molybdenum	0.0531	mg/L	0.050	105	70	130			
Selenium	0.0509	mg/L	0.0010	102	70	130			
Strontium	2.74	mg/L	0.10		70	130			A
<b>Sample ID: C09010797-014DMSD4</b>	Post Digestion Spike Duplicate				Run: SUB-C114332		02/04/09 20:53		
Arsenic	0.0551	mg/L	0.0010	107	70	130	1.5	20	
Molybdenum	0.0544	mg/L	0.050	107	70	130	2.5	20	
Selenium	0.0524	mg/L	0.0010	105	70	130	3	20	
Strontium	2.75	mg/L	0.10		70	130	0.3	20	A
<b>Method: E200.8</b>							Batch: C_R114411		
<b>Sample ID: LRB</b>	Method Blank				Run: SUB-C114411		02/06/09 13:14		
Selenium	ND	mg/L	0.001						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank				Run: SUB-C114411		02/06/09 13:21		
Selenium	0.0524	mg/L	0.0014	105	85	115			
<b>Sample ID: C09011015-001BMS4</b>	Post Digestion Spike				Run: SUB-C114411		02/06/09 16:25		
Selenium	0.0546	mg/L	0.0010	106	70	130			
<b>Sample ID: C09011015-001BMSD4</b>	Post Digestion Spike Duplicate				Run: SUB-C114411		02/06/09 16:31		
Selenium	0.0543	mg/L	0.0010	106	70	130	0.5	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

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114880		
Sample ID: LRB	Method Blank					Run: SUB-C114880		02/18/09 13:34	
Aluminum	ND	mg/L	0.002						
Sample ID: LFB	Laboratory Fortified Blank					Run: SUB-C114880		02/18/09 13:41	
Aluminum	0.0453	mg/L	0.0022	91	85	115			
Sample ID: C09020383-007BMS4	Post Digestion Spike					Run: SUB-C114880		02/18/09 15:50	
Aluminum	0.0521	mg/L	0.10	100	70	130			
Sample ID: C09020383-007BMSD4	Post Digestion Spike Duplicate					Run: SUB-C114880		02/18/09 15:57	
Aluminum	0.0521	mg/L	0.10	100	70	130		20	
Method: E245.1							Batch: B_36915		
Sample ID: MB-36915	Method Blank					Run: SUB-B123917		01/26/09 09:36	
Mercury	ND	mg/L	5E-05						
Sample ID: LFB-36915	Laboratory Fortified Blank					Run: SUB-B123917		01/26/09 09:45	
Mercury	0.0019	mg/L	0.0010	94	85	115			
Sample ID: B09011705-001BMS	Sample Matrix Spike					Run: SUB-B123917		01/26/09 09:52	
Mercury	0.0018	mg/L	0.0010	89	70	130			
Sample ID: B09011705-001BMSD	Sample Matrix Spike Duplicate					Run: SUB-B123917		01/26/09 09:54	
Mercury	0.0018	mg/L	0.0010	89	70	130	0	30	
Sample ID: R09010294-001C	Sample Matrix Spike					Run: SUB-B123917		01/26/09 10:15	
Mercury	0.0018	mg/L	0.00020	89	70	130			
Sample ID: R09010294-001C	Sample Matrix Spike Duplicate					Run: SUB-B123917		01/26/09 10:17	
Mercury	0.0018	mg/L	0.00020	88	70	130	1.1	30	
Method: E245.1							Batch: B_36926		
Sample ID: MB-36926	Method Blank					Run: SUB-B123917		01/26/09 11:14	
Mercury	ND	mg/L	5E-05						
Sample ID: LFB-36926	Laboratory Fortified Blank					Run: SUB-B123917		01/26/09 11:16	
Mercury	0.0019	mg/L	0.0010	97	85	115			
Sample ID: R09010301-013J	Sample Matrix Spike					Run: SUB-B123917		01/26/09 11:23	
Mercury	0.0018	mg/L	0.0010	92	70	130			
Sample ID: R09010301-013J	Sample Matrix Spike Duplicate					Run: SUB-B123917		01/26/09 11:25	
Mercury	0.0019	mg/L	0.0010	94	70	130	2.2	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





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## QA/QC Summary Report

**Client:** RESPEC Inc

**Report Date:** 03/17/09

**Project:** Edgemont

**Work Order:** R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1							Analytical Run: SUB-B123917		
Sample ID: QCS		Initial Calibration Verification Standard						01/26/09 09:28	
Mercury	0.0018	mg/L	0.0010	92	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R39252		
<b>Sample ID: LFB0901211057-3</b>	Laboratory Fortified Blank			Run: DIONEX_090121A			01/21/09 19:10		
Chloride	4.61	mg/L	0.50	92	90	110			
Fluoride	1.92	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N	2.30	mg/L	0.10	92	90	110			
Nitrogen, Nitrite as N	2.42	mg/L	0.10	97	90	110			
Sulfate	13.6	mg/L	1.0	91	90	110			
<b>Sample ID: LFB0901211057-4</b>	Laboratory Fortified Blank			Run: DIONEX_090121A			01/21/09 19:27		
Chloride	4.52	mg/L	0.50	90	90	110			
Fluoride	1.90	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N	2.25	mg/L	0.10	90	90	110			
Nitrogen, Nitrite as N	2.37	mg/L	0.10	95	90	110			
Sulfate	13.5	mg/L	1.0	90	90	110			
<b>Sample ID: R09010301-002AMS</b>	Sample Matrix Spike			Run: DIONEX_090121A			01/21/09 23:17		
Chloride	249	mg/L	5.4	90	80	120			
Fluoride	102	mg/L	0.56	100	80	120			
Nitrogen, Nitrate as N	117	mg/L	1.3	94	80	120			
Nitrogen, Nitrite as N	124	mg/L	2.9	99	80	120			
Sulfate	1110	mg/L	3.4	82	80	120			
<b>Sample ID: R09010301-002AMSD</b>	Sample Matrix Spike Duplicate			Run: DIONEX_090121A			01/21/09 23:33		
Chloride	233	mg/L	5.4	83	80	120	6.8	10	
Fluoride	95.4	mg/L	0.56	94	80	120	7	10	
Nitrogen, Nitrate as N	109	mg/L	1.3	87	80	120	7.4	10	
Nitrogen, Nitrite as N	116	mg/L	2.9	92	80	120	7.1	10	
Sulfate	1070	mg/L	3.4	76	80	120	4	10	S
<b>Sample ID: R09010301-006AMS</b>	Sample Matrix Spike			Run: DIONEX_090121A			01/22/09 02:34		
Chloride	246	mg/L	5.4	89	80	120			
Fluoride	102	mg/L	0.56	100	80	120			
Nitrogen, Nitrate as N	116	mg/L	1.3	93	80	120			
Nitrogen, Nitrite as N	123	mg/L	2.9	99	80	120			
Sulfate	1060	mg/L	3.4	82	80	120			
<b>Sample ID: R09010301-006AMSD</b>	Sample Matrix Spike Duplicate			Run: DIONEX_090121A			01/22/09 02:50		
Chloride	237	mg/L	5.4	85	80	120	3.8	10	
Fluoride	98.0	mg/L	0.56	97	80	120	3.8	10	
Nitrogen, Nitrate as N	111	mg/L	1.3	89	80	120	4.1	10	
Nitrogen, Nitrite as N	118	mg/L	2.9	95	80	120	4.1	10	
Sulfate	1020	mg/L	3.4	76	80	120	4	10	S
<b>Sample ID: R09010301-010AMS</b>	Sample Matrix Spike			Run: DIONEX_090121A			01/22/09 05:51		
Chloride	255	mg/L	5.4	90	80	120			
Fluoride	103	mg/L	0.56	101	80	120			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0							Batch: R39252		
Sample ID: R09010301-010AMS	Sample Matrix Spike		Run: DIONEX_090121A				01/22/09 05:51		
Nitrogen, Nitrate as N	117	mg/L	1.3	94	80	120			
Nitrogen, Nitrite as N	125	mg/L	2.9	100	80	120			
Sulfate	1990	mg/L	3.4	91	80	120			
Sample ID: R09010301-010AMSD	Sample Matrix Spike Duplicate		Run: DIONEX_090121A				01/22/09 06:07		
Chloride	243	mg/L	5.4	85	80	120	4.8	10	
Fluoride	98.0	mg/L	0.56	96	80	120	5	10	
Nitrogen, Nitrate as N	112	mg/L	1.3	89	80	120	5.1	10	
Nitrogen, Nitrite as N	118	mg/L	2.9	95	80	120	5.4	10	
Sulfate	1930	mg/L	3.4	82	80	120	3.3	10	
Sample ID: R09010301-014AMS	Sample Matrix Spike		Run: DIONEX_090121A				01/22/09 09:08		
Chloride	248	mg/L	5.4	90	80	120			
Fluoride	102	mg/L	0.56	100	80	120			
Nitrogen, Nitrate as N	116	mg/L	1.3	93	80	120			
Nitrogen, Nitrite as N	123	mg/L	2.9	98	80	120			
Sulfate	1130	mg/L	3.4	84	80	120			
Sample ID: R09010301-014AMSD	Sample Matrix Spike Duplicate		Run: DIONEX_090121A				01/22/09 09:24		
Chloride	239	mg/L	5.4	86	80	120	3.6	10	
Fluoride	98.7	mg/L	0.56	97	80	120	3.7	10	
Nitrogen, Nitrate as N	112	mg/L	1.3	90	80	120	3.5	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	3.3	10	
Sulfate	1120	mg/L	3.4	82	80	120	1.3	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>							Batch: C_GrAB-0604		
<b>Sample ID: MB-GrAB-0604</b>	Method Blank				Run: SUB-C114642			02/06/09 03:23	
Gross Alpha	1	pCi/L							
Gross Alpha precision (±)	0.6	pCi/L							
Gross Alpha MDC	0.5	pCi/L							
Gross Beta	-2	pCi/L							U
Gross Beta precision (±)	1	pCi/L							
Gross Beta MDC	1	pCi/L							
<b>Sample ID: UNAT-GrAB-0604</b>	Laboratory Control Sample				Run: SUB-C114642			02/06/09 03:24	
Gross Alpha	130	pCi/L		97	70	130			
<b>Sample ID: Cs137-GrAB-0604</b>	Laboratory Control Sample				Run: SUB-C114642			02/06/09 03:24	
Gross Beta	84	pCi/L		92	70	130			
<b>Sample ID: C09010797-001HMS</b>	Sample Matrix Spike				Run: SUB-C114642			02/06/09 03:24	
Gross Alpha	120	pCi/L		85	70	130			
<b>Sample ID: C09010797-001HMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C114642			02/06/09 03:23	
Gross Alpha	120	pCi/L		88	70	130	3.6	15.7	
<b>Sample ID: C09010797-001HMS</b>	Sample Matrix Spike				Run: SUB-C114642			02/06/09 03:23	
Gross Beta	79	pCi/L		87	70	130			
<b>Sample ID: C09010797-001HMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C114642			02/06/09 03:23	
Gross Beta	82	pCi/L		89	70	130	3	16.4	
<b>Method: E903.0</b>							Batch: C_21458		
<b>Sample ID: R09010301-001I</b>	Sample Matrix Spike				Run: SUB-C114911			02/18/09 13:43	
Radium 226	19	pCi/L		102	70	130			
<b>Sample ID: R09010301-001I</b>	Sample Matrix Spike Duplicate				Run: SUB-C114911			02/18/09 13:43	
Radium 226	18	pCi/L		102	70	130	2.9	24.4	
<b>Sample ID: LCS-21458</b>	Laboratory Control Sample				Run: SUB-C114911			02/18/09 13:43	
Radium 226	70	pCi/L		96	70	130			
<b>Sample ID: MB-21458</b>	Method Blank				Run: SUB-C114911			02/18/09 15:52	
Radium 226	0.02	pCi/L							U
Radium 226 precision (±)	0.2	pCi/L							
Radium 226 MDC	0.4	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>							Batch: C_21459		
<b>Sample ID: C09010797-007IMS</b>	Sample Matrix Spike					Run: SUB-C114901			02/18/09 13:41
Radium 226	19	pCi/L		98	70	130			
<b>Sample ID: C09010797-007IMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C114901			02/18/09 13:41
Radium 226	19	pCi/L		97	70	130	1	24	
<b>Sample ID: LCS-21459</b>	Laboratory Control Sample					Run: SUB-C114901			02/18/09 15:51
Radium 226	74	pCi/L		102	70	130			
<b>Sample ID: MB-21459</b>	Method Blank					Run: SUB-C114901			02/18/09 15:51
Radium 226	-0.02	pCi/L							U
Radium 226 precision ( $\pm$ )	0.2	pCi/L							
Radium 226 MDC	0.4	pCi/L							
<b>Method: E903.0</b>							Batch: C_RA226-3432		
<b>Sample ID: C09010797-001HMS</b>	Sample Matrix Spike					Run: SUB-C114417			02/05/09 12:53
Radium 226	16	pCi/L		105	70	130			
<b>Sample ID: C09010797-001HMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C114417			02/05/09 12:53
Radium 226	15	pCi/L		96	70	130	8	25.6	
<b>Sample ID: MB-RA226-3432</b>	Method Blank					Run: SUB-C114417			02/05/09 14:35
Radium 226	-0.1	pCi/L							U
Radium 226 precision ( $\pm$ )	0.1	pCi/L							
Radium 226 MDC	0.3	pCi/L							
<b>Sample ID: LCS-RA226-3432</b>	Laboratory Control Sample					Run: SUB-C114417			02/05/09 14:35
Radium 226	8.6	pCi/L		111	70	130			
<b>Method: E907.0</b>							Batch: C_21458		
<b>Sample ID: C09010595-006AMS</b>	Sample Matrix Spike					Run: SUB-C115513			03/03/09 16:30
Thorium 230	49.7	pCi/Filter		108	70	130			
<b>Sample ID: C09010595-006AMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C115513			03/03/09 16:30
Thorium 230	52.9	pCi/Filter		113	70	130	6.2	54	
<b>Sample ID: LCS-21458</b>	Laboratory Control Sample					Run: SUB-C115513			03/03/09 16:30
Thorium 230	5.21	pCi/Filter		109	70	130			
<b>Sample ID: MB-21458</b>	Method Blank					Run: SUB-C115513			03/03/09 16:30
Thorium 230	0.1	pCi/Filter							U

### 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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## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_21459		
<b>Sample ID: R09010302-001I</b>	Sample Matrix Spike				Run: SUB-C115509			03/01/09 14:58	
Thorium 230	15	pCi/L		134	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.									
<b>Sample ID: R09010302-001I</b>	Sample Matrix Spike Duplicate				Run: SUB-C115509			03/01/09 14:58	
Thorium 230	12	pCi/L		107	70	130	20	53	
<b>Sample ID: LCS-21459</b>	Laboratory Control Sample				Run: SUB-C115509			03/02/09 09:04	
Thorium 230	5.2	pCi/L		113	70	130			
<b>Sample ID: MB-21459</b>	Method Blank				Run: SUB-C115509			03/02/09 09:04	
Thorium 230	-0.07	pCi/L							U
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-0741		
<b>Sample ID: LCS-RA-TH-ISO-0741</b>	Laboratory Control Sample				Run: SUB-C114512			02/05/09 16:36	
Thorium 230	5.1	pCi/L	0.20	103	70	130			
<b>Sample ID: R09010301-001H</b>	Sample Matrix Spike				Run: SUB-C114512			02/05/09 16:36	
Thorium 230	17	pCi/L	0.20	112	70	130			
<b>Sample ID: R09010301-001H</b>	Sample Matrix Spike Duplicate				Run: SUB-C114512			02/05/09 16:36	
Thorium 230	16	pCi/L	0.20	98	70	130	8.8	42.4	
<b>Sample ID: MB-RA-TH-ISO-0741</b>	Method Blank				Run: SUB-C114512			02/06/09 08:45	
Thorium 230	ND	pCi/L							U
<b>Method: E909.0M</b>							Batch: C_21458		
<b>Sample ID: R09010301-002I</b>	Sample Matrix Spike				Run: SUB-C115433			02/12/09 09:35	
Lead 210	230	pCi/L		81	70	130			
<b>Sample ID: R09010301-002I</b>	Sample Matrix Spike Duplicate				Run: SUB-C115433			02/12/09 09:35	
Lead 210	230	pCi/L		82	70	130	0.8	30	
<b>Sample ID: MB-R115433</b>	Method Blank				Run: SUB-C115433			02/12/09 09:35	
Lead 210	-0.3	pCi/L							U
Lead 210 precision (±)	4	pCi/L							
Lead 210 MDC	7	pCi/L							
<b>Sample ID: LCS-R115433</b>	Laboratory Control Sample				Run: SUB-C115433			02/12/09 09:35	
Lead 210	110	pCi/L		95	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M							Batch: C_R114833		
Sample ID: C09010853-001DMS	Sample Matrix Spike				Run: SUB-C114833			02/03/09 10:43	
Lead 210	94	pCi/L		78	70	130			
Sample ID: C09010853-002DMD	Sample Duplicate				Run: SUB-C114833			02/03/09 10:43	
Lead 210	0.50	pCi/L					700	30	UR
Lead 210 precision (±)	5.1	pCi/L							
Lead 210 MDC	8.5	pCi/L							
- The Sample and the Duplicate are both below the MDC; the RPD is acceptable.									
Sample ID: MB-R114833	Method Blank				Run: SUB-C114833			02/03/09 10:43	
Lead 210	-0.7	pCi/L							U
Lead 210 precision (±)	3	pCi/L							
Lead 210 MDC	4	pCi/L							
Sample ID: LCS-R114833	Laboratory Control Sample				Run: SUB-C114833			02/03/09 10:43	
Lead 210	50	pCi/L		88	70	130			
Method: E909.0M							Batch: C_R115907		
Sample ID: MB-R115907	Method Blank				Run: SUB-C115907			03/10/09 13:35	
Lead 210	-1	pCi/L							U
Lead 210 precision (±)	4	pCi/L							
Lead 210 MDC	7	pCi/L							
Sample ID: LCS-R115907	Laboratory Control Sample				Run: SUB-C115907			03/10/09 13:35	
Lead 210	65	pCi/L		97	70	130			
- No MS or MSD available due to spiking error by analyst..									
Method: RMO-3008							Batch: C_PO210-0181		
Sample ID: R09010302-001K	Sample Matrix Spike				Run: SUB-C114991			02/13/09 14:35	
Polonium 210	13	pCi/L		79	70	130			
Sample ID: R09010302-001K	Sample Matrix Spike Duplicate				Run: SUB-C114991			02/17/09 10:36	
Polonium 210	17	pCi/L		103	70	130	26	58.3	
Sample ID: LCS-PO210-0181	Laboratory Control Sample				Run: SUB-C114991			02/17/09 10:36	
Polonium 210	14	pCi/L		83	70	130			
Sample ID: MB-PO210-0181	Method Blank				Run: SUB-C114991			02/17/09 10:36	
Polonium 210	-0.04	pCi/L							U
Polonium 210 MDC	0.7	pCi/L							
Polonium 210 precision (±)	0.2	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.  
R - RPD exceeds advisory limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010301

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RMO-3008							Batch: C_R115005		
Sample ID: C09020173-003FMS	Sample Matrix Spike				Run: SUB-C115005			02/19/09 12:18	
Polonium 210	21	pCi/L		74	70	130			
Sample ID: C09020173-003FMSD	Sample Matrix Spike Duplicate				Run: SUB-C115005			02/19/09 12:18	
Polonium 210	32	pCi/L		113	70	130	39	53.2	
Sample ID: LCS-21459	Laboratory Control Sample				Run: SUB-C115005			02/19/09 12:18	
Polonium 210	75	pCi/L		98	70	130			
Sample ID: MB-21459	Method Blank				Run: SUB-C115005			02/19/09 12:18	
Polonium 210	0.08	pCi/L							U
Polonium 210 MDC	2	pCi/L							
Polonium 210 precision (±)	1.0	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



MS ~~DONOT MAIL~~  
~~BLANK~~

3/16/2009

BALANCE, ( $\pm 5\%$ )	34.15
BALANCE, "sigma"	-0.08

Salinity	0.00
Cl as NaCl	0
Carbonate Hardness	0
Non-carbonate Hardness	0
Free CO2	
Total CO2	
SAR	0.07
Langlier Saturation Index	-7.4
Ryznar Index	20.82
Aggressive Index	#NUM!
Temp	20

Soft water.

BALANCE, ( $\pm 5\%$ )	34.15
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**Sample R09010301-002A not reported to LIMS**

**SAMPLE ID: R09010301-002A**

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	<b>10</b>	0.28
Ca	<b>85</b>	4.23	SO4	<b>499</b>	10.38
Mg	<b>30</b>	2.44	T. Alkalinity	<b>176</b>	3.52
K	<b>12</b>	0.31	HCO3	215	
Na	<b>173</b>	7.53	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.01			
Hardness (as CaCO3)	334		OH		
Hardness, grains/gal.	19.5		NO3	<b>&lt;0.1</b>	0.00
NH4+	<b>&lt;0.1</b>	0.00	PO4		
Si	<b>7.4</b>		F	<b>0.6</b>	0.03
			CN		
			Br	<b>0.2</b>	0.00
Total Cations		14.52	Total Anions		14.21

BALANCE, (± 5%) 1.07  
BALANCE, "sigma" -0.94

	Measured	Calculated
Sample pH	<b>7.5</b>	
Conductivity (umho/cm)	<b>1310</b>	1220
TDS	<b>904</b>	934
TDS Ratio	0.97	
Resistivity (RW - ohm-m)	7.63	
Estimated Ionic Strength (from TDS)	0.0226	

Salinity	0.67
Cl as NaCl	17
Carbonate Hardness	176
Non-carbonate Hardness	158
Free CO2	
Total CO2	
SAR	4.12
Langlier Saturation Index	0.1
Ryznar Index	7.27
Aggressive Index	12.03
Temp	20

Very hard water.

**SAMPLE ID: R09010301-002A**

BALANCE, (± 5%) 1.07

Sample R09010301-003A not reported to LIMS

SAMPLE ID: R09010301-003A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO <sub>3</sub> )			Cl	10	0.28
Ca	83	4.16	SO <sub>4</sub>	492	10.24
Mg	30	2.42	T. Alkalinity	178	3.56
K	12	0.31	HCO <sub>3</sub>	217	
Na	174	7.56	CO <sub>3</sub>	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.01			
Hardness (as CaCO <sub>3</sub> )	330		OH		
Hardness, grains/gal.	19.3		NO <sub>3</sub>	<0.1	0.00
NH <sub>4</sub> <sup>+</sup>	<0.1	0.00	PO <sub>4</sub>		
Si	7.4		F	0.6	0.03
			CN		
			Br	0.2	0.00
Total Cations		14.48	Total Anions		14.11
BALANCE, (± 5%)		1.26			
BALANCE, "sigma"		-1.11			

	Measured	Calculated
Sample pH	7.5	
Conductivity (umho/cm)	1310	1210
TDS	952	928
TDS Ratio		1.03
Resistivity (RW - ohm-m)		7.63
Estimated Ionic Strength (from TDS)		0.0238

Salinity	0.67
Cl as NaCl	17
Carbonate Hardness	178
Non-carbonate Hardness	152
Free CO <sub>2</sub>	
Total CO <sub>2</sub>	
SAR	4.16
Langlier Saturation Index	0.2
Ryznar Index	7.21
Aggressive Index	12.10
Temp	20

Very hard water.

SAMPLE ID: R09010301-003A

BALANCE, (± 5%) 1.26

Sample R09010301-004A not reported to LIMS									
SAMPLE ID: R09010301-004A					3/16/2009				
CATIONS		ANIONS							
	mg/L	meq/L		mg/L	meq/L				
Acidity(as CaCO3)			Cl	5	0.14				
Ca	70	3.51	SO4	389	8.10				
Mg	21	1.73	T. Alkalinity	138	2.76				
K	10	0.25	HCO3	168					
Na	131	5.68	CO3	<1					
Al	<1	0.00							
Fe	<1	0.00							
Mn	<1	0.00							
Hardness (as CaCO3)	262		OH						
Hardness, grains/gal.	15.3		NO3	<0.1	0.00				
NH4+	<0.1	0.00	PO4						
Si	7.8		F	0.6	0.03				
			CN						
			Br	0.2	0.00				
Total Cations		11.18	Total Anions		11.03				
BALANCE, (± 5%)		0.66							
BALANCE, "sigma"		-0.53							
Measured Calculated					Salinity				
Sample pH	7.2					0.53			
Conductivity (umho/cm)	1050	971				Cl as NaCl			
TDS	716	730				8			
TDS Ratio	0.98					Carbonate Hardness			
Resistivity (RW - ohm-m)	9.52					138			
Estimated Ionic Strength (from TDS)	0.0179					Non-carbonate Hardness			
						124			
						Free CO2			
						Total CO2			
						SAR			
						3.51			
						Langlier Saturation Index			
						-0.3			
						Ryznar Index			
						7.85			
						Aggressive Index			
						11.57			
						Temp			
						20			
Very hard water.									
SAMPLE ID: R09010301-004A									
BALANCE, (± 5%) 0.66									

Appendix 2.7-H

**Sample R09010301-005A not reported to LIMS**

**SAMPLE ID: R09010301-005A**

3/16/2009

CATIONS			ANIONS		
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	12	0.33
Ca	50	2.49	SO4	500	10.41
Mg	18	1.50	T. Alkalinity	174	3.48
K	9	0.24	HCO3	212	
Na	247	10.74	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.01			
Hardness (as CaCO3)	200		OH		
Hardness, grains/gal.	11.7		NO3	<0.1	0.00
NH4+	0.2	0.01	PO4		
Si	7.9		F	0.6	0.03
			CN		
			Br	0.2	0.00
Total Cations		14.99	Total Anions		14.25

BALANCE, (± 5%) 2.54  
BALANCE, "sigma" -2.27

	Measured	Calculated
Sample pH	7.8	
Conductivity (umho/cm)	1350	1230
TDS	912	962
TDS Ratio	0.95	
Resistivity (RW - ohm-m)	7.41	
Estimated Ionic Strength (from TDS)	0.0228	

Salinity	0.69
Cl as NaCl	19
Carbonate Hardness	174
Non-carbonate Hardness	26
Free CO2	
Total CO2	
SAR	7.60
Langlier Saturation Index	0.2
Ryznar Index	7.39
Aggressive Index	12.15
Temp	20

Moderately hard water.

**SAMPLE ID: R09010301-005A**

BALANCE, (± 5%) 2.54

Sample R09010301-006A not reported to LIMS

SAMPLE ID: R09010301-006A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	8	0.23
Ca	50	2.48	SO4	444	9.25
Mg	16	1.35	T. Alkalinity	168	3.36
K	9	0.22	HCO3	205	
Na	206	8.97	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.00			
Hardness (as CaCO3)	192		OH		
Hardness, grains/gal.	11.2		NO3	<0.1	0.00
NH4+	0.2	0.01	PO4		
Si	7.9		F	0.7	0.03
			CN		
			Br	0.2	0.00
Total Cations		13.04	Total Anions		12.87

BALANCE, (± 5%) 0.64  
BALANCE, "sigma" -0.54

	Measured	Calculated
Sample pH	7.7	
Conductivity (umho/cm)	1220	1100
TDS	818	856
TDS Ratio	0.96	
Resistivity (RW - ohm-m)	8.20	
Estimated Ionic Strength (from TDS)	0.0205	

Salinity	0.62
Cl as NaCl	13
Carbonate Hardness	168
Non-carbonate Hardness	24
Free CO2	
Total CO2	
SAR	6.48
Langlier Saturation Index	0.1
Ryznar Index	7.48
Aggressive Index	12.05
Temp	20

Moderately hard water.

SAMPLE ID: R09010301-006A

BALANCE, (± 5%) 0.64

**Sample R09010301-007A not reported to LIMS**

**SAMPLE ID: R09010301-007A**

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	<b>13</b>	0.36
Ca	<b>54</b>	2.67	SO4	<b>465</b>	9.69
Mg	<b>21</b>	1.72	T. Alkalinity	<b>170</b>	3.40
K	<b>10</b>	0.26	HCO3	207	
Na	<b>213</b>	9.25	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.01			
Hardness (as CaCO3)	220		OH		
Hardness, grains/gal.	12.9		NO3	<b>&lt;0.1</b>	0.00
NH4+	<b>&lt;0.1</b>	0.00	PO4		
Si	<b>7.8</b>		F	<b>0.6</b>	0.03
			CN		
			Br	<b>0.3</b>	0.00
Total Cations		13.91	Total Anions		13.48

BALANCE, (± 5%) 1.57  
BALANCE, "sigma" -1.37

	Measured	Calculated
Sample pH	<b>7.9</b>	
Conductivity (umho/cm)	<b>1310</b>	1160
TDS	<b>944</b>	899
TDS Ratio		1.05
Resistivity (RW - ohm-m)		7.63
Estimated Ionic Strength (from TDS)		0.0236

Salinity	0.67
Cl as NaCl	21
Carbonate Hardness	170
Non-carbonate Hardness	50
Free CO2	
Total CO2	
SAR	6.23
Langlier Saturation Index	0.3
Ryznar Index	7.32
Aggressive Index	12.21
Temp	20

Very hard water.

**SAMPLE ID: R09010301-007A**

BALANCE, (± 5%) 1.57

**Sample R09010301-008A not reported to LIMS**

**SAMPLE ID: R09010301-008A**

3/16/2009

CATIONS			ANIONS		
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	5	0.15
Ca	45	2.24	SO4	399	8.31
Mg	16	1.28	T. Alkalinity	150	3.00
K	9	0.23	HCO3	183	
Na	177	7.71	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.00			
Hardness (as CaCO3)	176		OH		
Hardness, grains/gal.	10.3		NO3	<0.1	0.00
NH4+	<0.1	0.00	PO4		
Si	8.3		F	0.6	0.03
			CN		
			Br	0.2	0.00
Total Cations		11.47	Total Anions		11.50

BALANCE, (± 5%) -0.13  
BALANCE, "sigma" 0.11

	Measured	Calculated
Sample pH	7.7	
Conductivity (umho/cm)	1080	988
TDS	782	765
TDS Ratio		1.02
Resistivity (RW - ohm-m)		9.26
Estimated Ionic Strength (from TDS)		0.0196

Salinity	0.55
Cl as NaCl	9
Carbonate Hardness	150
Non-carbonate Hardness	26
Free CO2	
Total CO2	
SAR	5.82
Langlier Saturation Index	0.0
Ryznar Index	7.67
Aggressive Index	11.94
Temp	20

Moderately hard water.

**SAMPLE ID: R09010301-008A**

BALANCE, (± 5%) -0.13



**Sample R09010301-009A not reported to LIMS**

**SAMPLE ID: R09010301-009A**

3/16/2009

		CATIONS		ANIONS	
		mg/L	meq/L	mg/L	meq/L
Acidity(as CaCO3)				Cl	10 0.27
Ca	341	17.03		SO4	1340 27.94
Mg	127	10.48		T. Alkalinity	118 2.36
K	16	0.41		HCO3	144
Na	92	4.00		CO3	<1
Al	<1	0.00			
Fe	2	0.06			
Mn	2	0.17			
Hardness (as CaCO3)	1380			OH	
Hardness, grains/gal.	80.5			NO3	<0.1 0.00
NH4+	0.1	0.01		PO4	
Si	10.2			F	0.4 0.02
				CN	
				Br	0.2 0.00
Total Cations		32.17		Total Anions	30.59

BALANCE, (± 5%) 2.51  
BALANCE, "sigma" -2.72

	Measured	Calculated
Sample pH	6.7	
Conductivity (umho/cm)	2410	2670
TDS	1670	2030
TDS Ratio	0.82	
Resistivity (RW - ohm-m)	4.15	
Estimated Ionic Strength (from TDS)	0.0418	

Salinity	1.25
Cl as NaCl	16
Carbonate Hardness	118
Non-carbonate Hardness	1259
Free CO2	
Total CO2	
SAR	1.08
Langlier Saturation Index	-0.3
Ryznar Index	7.29
Aggressive Index	11.74
Temp	20

Very hard water.

**SAMPLE ID: R09010301-009A**

BALANCE, (± 5%) 2.51

**Sample R09010301-010A not reported to LIMS**

**SAMPLE ID: R09010301-010A**

3/16/2009

CATIONS			ANIONS		
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	<b>16</b>	0.44
Ca	<b>350</b>	17.45	SO4	<b>1310</b>	27.22
Mg	<b>114</b>	9.42	T. Alkalinity	<b>174</b>	3.48
K	<b>21</b>	0.53	HCO3	212	
Na	<b>161</b>	6.99	CO3	<1	
Al	<b>&lt;1</b>	0.00			
Fe	<b>7</b>	0.25			
Mn	<b>1</b>	0.08			
Hardness (as CaCO3)	1340		OH		
Hardness, grains/gal.	78.6		NO3	<b>&lt;0.1</b>	0.00
NH4+	<b>0.5</b>	0.03	PO4		
Si	<b>8.5</b>		F	<b>0.6</b>	0.03
			CN		
			Br	<b>0.2</b>	0.00
Total Cations		34.75	Total Anions		31.18

BALANCE, (± 5%) 5.42  
BALANCE, "sigma" -6.06

	Measured	Calculated
Sample pH	<b>6.7</b>	
Conductivity (umho/cm)	<b>2600</b>	2720
TDS	<b>2080</b>	2100
TDS Ratio		0.99
Resistivity (RW - ohm-m)		3.85
Estimated Ionic Strength (from TDS)		0.0521

Salinity	1.35
Cl as NaCl	26
Carbonate Hardness	174
Non-carbonate Hardness	1171
Free CO2	
Total CO2	
SAR	1.90
Langlier Saturation Index	-0.2
Ryznar Index	7.07
Aggressive Index	11.85
Temp	20

Very hard water.

**SAMPLE ID: R09010301-010A**

BALANCE, (± 5%) 5.42

Sample R09010301-011A not reported to LIMS

SAMPLE ID: R09010301-011A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	13	0.36
Ca	358	17.87	SO4	1370	28.44
Mg	117	9.59	T. Alkalinity	252	5.04
K	20	0.51	HCO3	307	
Na	145	6.32	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.03			
Hardness (as CaCO3)	1370		OH		
Hardness, grains/gal.	80.4		NO3	<0.1	0.00
NH4+	<0.1	0.00	PO4		
Si	8.7		F	0.5	0.03
			CN		
			Br	0.2	0.00
Total Cations		34.32	Total Anions		33.87

BALANCE, (± 5%) 0.67  
BALANCE, "sigma" -0.72

	Measured	Calculated
Sample pH	7.1	
Conductivity (umho/cm)	2480	2770
TDS	2170	2190
TDS Ratio	0.99	
Resistivity (RW - ohm-m)	4.03	
Estimated Ionic Strength (from TDS)	0.0542	

Salinity	1.29
Cl as NaCl	21
Carbonate Hardness	252
Non-carbonate Hardness	1122
Free CO2	
Total CO2	
SAR	1.70
Langlier Saturation Index	0.4
Ryznar Index	6.29
Aggressive Index	12.47
Temp	20

Very hard water.

SAMPLE ID: R09010301-011A

BALANCE, (± 5%) 0.67

Sample R09010301-012A not reported to LIMS

SAMPLE ID: R09010301-012A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	11	0.32
Ca	49	2.43	SO4	436	9.08
Mg	21	1.69	T. Alkalinity	166	3.32
K	14	0.36	HCO3	203	
Na	189	8.20	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.00			
Hardness (as CaCO3)	206		OH		
Hardness, grains/gal.	12.1		NO3	<0.1	0.00
NH4+	0.2	0.02	PO4		
Si	7.7		F	0.6	0.03
			CN		
			Br	0.2	0.00
Total Cations		12.71	Total Anions		12.75
BALANCE, (± 5%)		-0.14			
BALANCE, "sigma"		0.12			

	Measured	Calculated
Sample pH	8.0	
Conductivity (umho/cm)	1210	1080
TDS	796	840
TDS Ratio		0.95
Resistivity (RW - ohm-m)		8.26
Estimated Ionic Strength (from TDS)		0.0199

Salinity	0.61
Cl as NaCl	18
Carbonate Hardness	166
Non-carbonate Hardness	40
Free CO2	
Total CO2	
SAR	5.71
Langlier Saturation Index	0.4
Ryznar Index	7.23
Aggressive Index	12.31
Temp	20

Very hard water.

SAMPLE ID: R09010301-012A

BALANCE, (± 5%) -0.14

**Sample R09010301-013A not reported to LIMS**

**SAMPLE ID: R09010301-013A**

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	<b>12</b>	0.35
Ca	<b>27</b>	1.35	SO4	<b>483</b>	10.06
Mg	<b>10</b>	0.79	T. Alkalinity	<b>178</b>	3.56
K	<b>9</b>	0.23	HCO3	217	
Na	<b>253</b>	10.99	CO3	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.00			
Hardness (as CaCO3)	107		OH		
Hardness, grains/gal.	6.26		NO3	<b>&lt;0.1</b>	0.00
NH4+	<b>0.4</b>	0.03	PO4		
Si	<b>7.5</b>		F	<b>0.5</b>	0.03
			CN		
			Br	<b>0.3</b>	0.00
Total Cations		13.38	Total Anions		13.99

BALANCE, (± 5%) -2.22  
BALANCE, "sigma" 1.88

	Measured	Calculated
Sample pH	<b>8.1</b>	
Conductivity (umho/cm)	<b>1400</b>	1160
TDS	<b>922</b>	921
TDS Ratio		1
Resistivity (RW - ohm-m)		7.14
Estimated Ionic Strength (from TDS)	0.0231	

Salinity	0.71
Cl as NaCl	20
Carbonate Hardness	107
Non-carbonate Hardness	0
Free CO2	
Total CO2	
SAR	10.62
Langlier Saturation Index	0.2
Ryznar Index	7.67
Aggressive Index	12.13
Temp	20

Moderately hard water.

**SAMPLE ID: R09010301-013A**

BALANCE, (± 5%) -2.22

SAMPLE ID: R09010301-014A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO <sub>3</sub> )			Cl	9	0.25
Ca	87	4.32	SO <sub>4</sub>	508	10.57
Mg	33	2.70	T. Alkalinity	208	4.16
K	12	0.32	HCO <sub>3</sub>	254	
Na	162	7.03	CO <sub>3</sub>	<1	
Al	<1	0.00			
Fe	<1	0.00			
Mn	<1	0.01			
Hardness (as CaCO <sub>3</sub> )	351		OH		
Hardness, grains/gal.	20.5		NO <sub>3</sub>	<0.1	0.00
NH <sub>4</sub> <sup>+</sup>	0.2	0.02	PO <sub>4</sub>		
Si	7.6		F	0.5	0.02
			CN		
			Br	0.2	0.00
Total Cations		14.40	Total Anions		15.00
BALANCE, (± 5%)		-2.05			
BALANCE, "sigma"		1.78			

	Measured	Calculated
Sample pH	7.6	
Conductivity (umho/cm)	1370	1220
TDS	958	956
TDS Ratio		1
Resistivity (RW - ohm-m)		7.30
Estimated Ionic Strength (from TDS)		0.024

Salinity	0.70
Cl as NaCl	15
Carbonate Hardness	208
Non-carbonate Hardness	143
Free CO <sub>2</sub>	
Total CO <sub>2</sub>	
SAR	3.75
Langlier Saturation Index	0.3
Ryznar Index	7.03
Aggressive Index	12.20
Temp	20

Very hard water.

SAMPLE ID: R09010301-014A

BALANCE, (± 5%) -2.05

**Linda Larson**

**From:** Steve Carlston [scarlston@energylab.com]  
**Sent:** Monday, March 16, 2009 4:40 PM  
**To:** llarson@energylab.com  
**Subject:** R09010301

Linda-dear;

Please change the metals report from L quals to D plus on the two seleniums please change the RL to 0.002 and the QUAL from B to D.

Thanks!

**Steven Carlston**

Project Manager, Technical Data Review  
Toll Free: 888.235.0515 x3213  
Office: 307.235.0515 x3213  
Fax: 307.234.1639  
[scarlston@energylab.com](mailto:scarlston@energylab.com)

**Energy Laboratories, Inc.**

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This transmission is CONFIDENTIAL. If you have received this in error,  
please contact Energy Laboratories, Inc. immediately.



This serves as notice of this possibility. All sub-contract data will be clearly noted on your analytical report.





# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Scott Env.</u>		Project Name, PWS, Permit, Etc.: <u>Pur Backus / Power Tech</u>		Sample Origin State: _____		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>RESREC</u>		Contact Name: _____		Phone/Fax: _____		Sampler: (Please Print) <u>9/1/2009</u>	
Invoice Address: _____		Invoice Contact & Phone: _____		Purchase Order: _____		Quote/Bottle Order: _____	
<p>Special Report/Formats – ELI must be notified prior to sample submittal for the following:</p> <p><input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> POTW/MWWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____</p>		<p>Number of Containers: _____</p> <p>Sample Type: A W S V B O</p> <p>Vegetation: _____</p> <p>Biosassay Other: _____</p>		<p>ANALYSIS REQUESTED</p> <p><u>As Per Quote</u></p>		<p>SEE ATTACHED</p> <p>Normal Turnaround (TAT)</p>	
<p>Shipped by: _____</p> <p>Cooler ID(s): _____</p> <p>Receipt Temp: <u>2.4</u> °C</p> <p>On Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Custody Seal: Y N</p> <p>Intact: Y N</p> <p>Signature: Y N</p> <p>Match: Y N</p>		<p>CONTACT ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page</p> <p>Comments: _____</p>		<p>R U S H</p>		<p>LABORATORY USE ONLY</p> <p><u>89910301-011</u></p> <p><u>012</u></p> <p><u>013</u></p> <p><u>014</u></p>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX			
1	<u>GW 680</u>	<u>1-20-09</u>	<u>15:25</u>	<u>Water</u>			
2	<u>GW 680</u>	<u>1-20-09</u>	<u>15:35</u>	<u>"</u>			
3	<u>Parade's well</u>	<u>1-20-09</u>	<u>15:05</u>	<u>"</u>			
4	<u>GW 696</u>	<u>1-20-09</u>	<u>16:55</u>	<u>"</u>			
5	<u>GW 694</u>	<u>1-20-09</u>	<u>17:00</u>	<u>"</u>			
6							
7							
8							
9							
10							
Custody Record MUST be Signed		Relinquished by (print): <u>[Signature]</u>	Date/Time: <u>1-21-09 10:37</u>	Signature: <u>[Signature]</u>	Received by (print): <u>[Signature]</u>	Date/Time: _____	Signature: _____
Sample Disposal: _____		Return to Client: _____	Lab Disposal: _____	Signature: <u>[Signature]</u>	Date/Time: _____	Signature: _____	Signature: _____

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



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## ANALYTICAL SUMMARY REPORT

March 17, 2009

Cory Foreman  
RESPEC Inc  
3824 Jet Dr  
Rapid City, SD 57701-

Workorder No.: R09010302

Quote ID: R286

Project Name: Edgemont

Energy Laboratories Inc. received the following 1 sample for RESPEC Inc on 1/21/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R09010302-001	GW703	01/20/09 15:05	01/21/09	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

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

Report Approved By: \_\_\_\_\_

Linda Larson  
Rapid City - Project Manager



**CLIENT:** RESPEC Inc  
**Project:** Edgemont  
**Sample Delivery Group:** R09010302

**Date:** 17-Mar-09

## CASE NARRATIVE

This case narrative is used to explain any exceptions to the analyses performed for your sample(s). In accordance with Good Analytical Laboratory Practices (GALP), samples requiring data qualifiers or analytical modifications are explained herein.

All samples were analyzed in accordance with prescribed methodology, except were noted. Samples are accompanied by appropriate quality assurance/quality control (QA/QC) samples throughout the analytical process.

During the course of analyzing your sample(s) the following exceptions were noted.

- The Mercury was run out of hold due to laboratory error.

Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES, INC. will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories are indicated within the Laboratory Analytical Report.

### BRANCH LABORATORY IDENTIFIERS

eli-b - Energy Laboratories, Inc. - Billings, MT, EPA # MT00005  
eli-c - Energy Laboratories, Inc. - Casper, WY, EPA# WY00002  
eli-f - Energy Laboratories, Inc. - Idaho Falls, ID, EPA # ID00942  
eli-g - Energy Laboratories, Inc. - Gillette, WY, EPA# WY00006  
eli-h - Energy Laboratories, Inc. - Helena, MT, EPA# MT00945  
eli-t - Energy Laboratories, Inc. - College Station, TX, EPA# TX01520

For additional information, including certifications, and analytical services visit our web page [www.energylab.com](http://www.energylab.com).

If you have questions regarding this information, please feel free to contact us at (888)672-1225, (605)342-1225 or [rapid\\_city@energylab.com](mailto:rapid_city@energylab.com).

Comments imported for SUBBED Workorder: B09011713

Prep Comments for Sample R09010302-001J, Test PRP-HG-245.1: The prep HoldTime was exceeded by 2.78 days.

Prep Comments for Sample R09010302-001J, Test PRP-HG-245.1: The prep HoldTime was exceeded by 2.78 days.

End of comments imported for SUBBED Workorder: B09011713



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010302-001  
**Client Sample ID:** GW703

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:05  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	148	mg/L		5		1	A2320 B	01/26/09 15:33/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/09 15:33/mb
Bicarbonate as HCO <sub>3</sub>	180	mg/L		5		1	A2320 B	01/26/09 15:33/mb
Calcium	72.6	mg/L		0.5		2	E200.7	01/30/09 21:32/eli-c
Chloride	16	mg/L		1		1	E300.0	01/22/09 10:13/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	01/22/09 10:13/jmh
Magnesium	ND	mg/L		0.5		2	E200.7	01/30/09 21:32/eli-c
Nitrogen, Ammonia as N	1.6	mg/L		0.1		4	A4500-NH <sub>3</sub> G	01/21/09 17:45/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/22/09 10:13/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/22/09 10:13/jmh
Potassium	9.3	mg/L		0.5		2	E200.7	01/30/09 21:32/eli-c
Sodium	370	mg/L		0.5		2	E200.7	01/30/09 21:32/eli-c
Sulfate	828	mg/L	D	3		50	E300.0	01/22/09 09:57/jmh
Silica	4.2	mg/L		0.2		2	E200.7	01/30/09 21:32/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2420	umhos/cm		5.0		1	A2510 B	01/22/09 15:11/tb
Oxidation-Reduction Potential	88	mV				1	A2580 B	01/27/09 11:00/jmh
pH	11.4	s.u.		0.01		1	A4500-H B	01/22/09 10:22/tb
Sodium Adsorption Ratio (SAR)	12	unitless		0.10		1	Calculation	03/16/09 16:28/ADM
Solids, Total Dissolved TDS @ 180 C	1400	mg/L		5		1	A2540 C	01/26/09 09:26/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		2	E200.7	02/20/09 13:18/eli-c
Arsenic	ND	mg/L		0.001		5	E200.8	01/31/09 01:17/eli-c
Barium	ND	mg/L		0.1		5	E200.8	01/31/09 01:17/eli-c
Boron	0.3	mg/L		0.1		2	E200.7	01/30/09 21:32/eli-c
Cadmium	ND	mg/L		0.005		5	E200.8	01/31/09 01:17/eli-c
Chromium	ND	mg/L		0.05		5	E200.8	01/31/09 01:17/eli-c
Copper	ND	mg/L		0.01		5	E200.8	01/31/09 01:17/eli-c
Iron	0.05	mg/L		0.03		2	E200.7	01/30/09 21:32/eli-c
Lead	ND	mg/L		0.001		5	E200.8	01/31/09 01:17/eli-c
Manganese	ND	mg/L		0.01		5	E200.8	01/31/09 01:17/eli-c
Mercury	ND	mg/L		0.001		5	E200.8	01/31/09 01:17/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.8	01/31/09 01:17/eli-c
Nickel	ND	mg/L		0.05		5	E200.8	01/31/09 01:17/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/09 10:57/eli-c
Silver	ND	mg/L		0.005		5	E200.8	01/31/09 01:17/eli-c
Thorium 232	ND	mg/L		0.005		5	E200.8	01/31/09 01:17/eli-c
Uranium	0.0003	mg/L		0.0003		5	E200.8	01/31/09 01:17/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Page 1 of 3



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010302-001  
**Client Sample ID:** GW703

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:05  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		5	E200.8	01/31/09 01:17/eli-c
Zinc	0.03	mg/L		0.01		5	E200.8	01/31/09 01:17/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/19/09 01:45/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/24/09 16:56/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/09 11:07/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	42.6	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Gross Alpha precision (±)	6.0	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Gross Alpha MDC	5.4	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Gross Beta	14.2	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Gross Beta precision (±)	4.2	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Gross Beta MDC	6.6	pCi/L				1	E900.0	02/07/09 01:11/eli-c
Lead 210	1.0	pCi/L	U			1	E909.0M	02/03/09 10:43/eli-c
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Lead 210 MDC	4.2	pCi/L				1	E909.0M	02/03/09 10:43/eli-c
Polonium 210	-0.015	pCi/L	U			1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 MDC	0.53	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Polonium 210 precision (±)	0.19	pCi/L				1	RMO-3008	02/13/09 14:35/eli-c
Radium 226	0.4	pCi/L				1	E903.0	02/05/09 14:35/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/05/09 14:35/eli-c
Thorium 230	0.1	pCi/L	U	0.2		1	E907.0	02/08/09 11:55/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	02/08/09 11:55/eli-c
Gross Gamma	1100	pCi/L				1	E901.1	02/04/09 14:00/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	02/04/09 14:00/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.1	pCi/L	U			1	E909.0M	03/10/09 13:35/eli-c
Lead 210 precision (±)	4.8	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Lead 210 MDC	8.0	pCi/L				1	E909.0M	03/10/09 13:35/eli-c
Polonium 210	0.047	pCi/L	U			1	RMO-3008	02/19/09 12:18/eli-c
Polonium 210 precision (±)	0.27	pCi/L				1	RMO-3008	02/19/09 12:18/eli-c
Polonium 210 MDC	0.58	pCi/L				1	RMO-3008	02/19/09 12:18/eli-c
Radium 226	-0.4	pCi/L	U			1	E903.0	02/18/09 15:51/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/18/09 15:51/eli-c

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

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

Page 2 of 3



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09010302-001  
**Client Sample ID:** GW703

**Report Date:** 03/17/09  
**Collection Date:** 01/20/09 15:05  
**Date Received:** 01/21/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.5	pCi/L				1	E903.0	02/18/09 15:51/eli-ca
Thorium 230	-0.2	pCi/L	U	0.2		1	E907.0	03/01/09 14:58/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/01/09 14:58/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	153	pCi/L		100		1	D5072-92	01/23/09 14:10/eli-c
Radon 222 precision (±)	57.7	pCi/L				1	D5072-92	01/23/09 14:10/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	02/04/09 21:00/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	02/04/09 21:00/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/04/09 21:00/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/04/09 21:00/eli-c
Boron	0.4	mg/L		0.1		2	E200.7	02/05/09 20:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/04/09 21:00/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/04/09 21:00/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/04/09 21:00/eli-c
Iron	0.68	mg/L	D	0.04		2	E200.7	02/05/09 20:11/eli-c
Lead	0.007	mg/L		0.001		1	E200.8	02/04/09 21:00/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	02/04/09 21:00/eli-c
Mercury	ND	mg/L	H	0.001		1	E245.1	02/20/09 14:04/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/04/09 21:00/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/11/09 22:14/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/04/09 21:00/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/04/09 21:00/eli-c
Strontium	2.2	mg/L		0.1		1	E200.8	02/04/09 21:00/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/04/09 21:00/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	02/04/09 21:00/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/04/09 21:00/eli-c
DATA QUALITY								
A/C Balance (± 5)	-1.35	%				1	A1030 E	03/16/09 00:00/kl
Anions	20.7	meq/L				1	A1030 E	03/16/09 00:00/kl
Cations	20.1	meq/L				1	A1030 E	03/16/09 00:00/kl
Solids, Total Dissolved Calculated	1400	mg/L				1	A1030 E	03/16/09 00:00/kl
TDS Balance (0.80 - 1.20)	1.01					1	A1030 E	03/16/09 00:00/kl

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

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

Page 3 of 3



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b> Batch: 090126A-ALK-SEL-W									
<b>Sample ID: LCS1_090126A</b> Alkalinity, Total as CaCO3	Laboratory Control Sample 960	mg/L	5.0	96	90	110			01/26/09 12:59
<b>Sample ID: MBLK1_090126A</b> Alkalinity, Total as CaCO3	Method Blank ND	mg/L	3						01/26/09 13:00
<b>Sample ID: R09010301-014AMS</b> Alkalinity, Total as CaCO3	Sample Matrix Spike 296	mg/L	5.0	83	80	120			01/26/09 14:51
<b>Sample ID: R09010301-014AMSD</b> Alkalinity, Total as CaCO3	Sample Matrix Spike Duplicate 296	mg/L	5.0	83	80	120	0	10	01/26/09 14:53
<b>Method: A2510 B</b> Batch: 090122_1_COND-PROBE-W									
<b>Sample ID: LCS_COND-1_090122</b> Conductivity @ 25 C	Laboratory Control Sample 1410	umhos/cm	5.0	100	90	110			01/22/09 14:38
<b>Sample ID: LCS1-1_090122</b> Conductivity @ 25 C	Laboratory Control Sample 149	umhos/cm	5.0	99	90	110			01/22/09 14:39
<b>Sample ID: LCS2-1_090122</b> Conductivity @ 25 C	Laboratory Control Sample 5000	umhos/cm	5.0	100	90	110			01/22/09 14:40
<b>Sample ID: MBLK-1_090122</b> Conductivity @ 25 C	Method Blank ND	umhos/cm	5						01/22/09 14:40
<b>Sample ID: R09010302-001ADUP</b> Conductivity @ 25 C	Sample Duplicate 2420	umhos/cm	5.0				0	10	01/22/09 15:12
<b>Method: A2540 C</b> Batch: 090126A-SLDS-TDS-W									
<b>Sample ID: LCS1_090126A</b> Solids, Total Dissolved TDS @ 180 C	Laboratory Control Sample 220	mg/L	5.0	108	90	110			01/26/09 08:55
<b>Sample ID: MBLK1_090126A</b> Solids, Total Dissolved TDS @ 180 C	Method Blank ND	mg/L	5						01/26/09 08:57
<b>Sample ID: R09010301-012AMS</b> Solids, Total Dissolved TDS @ 180 C	Sample Matrix Spike 1000	mg/L	5.0	108	80	120			01/26/09 09:23
<b>Sample ID: R09010301-012AMSD</b> Solids, Total Dissolved TDS @ 180 C	Sample Matrix Spike Duplicate 1000	mg/L	5.0	101	80	120	1.4	10	01/26/09 09:24

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2580 B</b>							Batch: 090127-ORP-ISE-W		
<b>Sample ID: LCS</b> Oxidation-Reduction Potential	Laboratory Control Sample 480	mV		100	95	105			01/27/09 11:00
<b>Sample ID: R09010302-001F</b> Oxidation-Reduction Potential	Sample Duplicate 84	mV					4.3	10	01/27/09 11:00
<b>Method: A3114 B</b>							Batch: C_SE3114-090224D-IV		
<b>Sample ID: MBLK</b> Selenium-IV	Method Blank ND	mg/L	0.0003						02/24/09 15:59
<b>Sample ID: As/Se 1.0ppm-Q 02090</b> Selenium-IV	Laboratory Control Sample 0.054	mg/L	0.0010	108	90	110			02/24/09 16:01
<b>Sample ID: C09010797-010EMS</b> Selenium-IV	Sample Matrix Spike 0.049	mg/L	0.0010	99	85	115			02/24/09 16:38
<b>Sample ID: C09010797-010EMSD</b> Selenium-IV	Sample Matrix Spike Duplicate 0.047	mg/L	0.0010	94	85	115	4.8	10	02/24/09 16:40
<b>Method: A3114 B</b>							Batch: C_SE3114-090225A		
<b>Sample ID: MBLK</b> Selenium	Method Blank ND	mg/L	0.0003						02/25/09 10:00
<b>Sample ID: As/Se 1.0ppm-Q 02090</b> Selenium	Laboratory Control Sample 0.052	mg/L	0.0010	103	90	110			02/25/09 10:03
<b>Sample ID: C09010797-010EMS</b> Selenium	Sample Matrix Spike 0.047	mg/L	0.0010	94	85	115			02/25/09 10:39
<b>Sample ID: C09010797-010EMSD</b> Selenium	Sample Matrix Spike Duplicate 0.048	mg/L	0.0010	97	85	115	3	15	02/25/09 10:41
<b>Method: A4500-H B</b>							Batch: 090122_1_PH-W		
<b>Sample ID: LCS_pH-1_090122</b> pH	Laboratory Control Sample 6.88	s.u.	0.010	100	98.55	101.45			01/22/09 09:53
<b>Sample ID: R09010302-001ADUP</b> pH	Sample Duplicate 11.4	s.u.	0.010				0	1.25	01/22/09 10:23

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b>					Batch: A2009-01-21_2_NH3_01				
<b>Sample ID: MBLK-2</b>	Method Blank					Run: TECHAA2-R_090121A			01/21/09 15:03
Nitrogen, Ammonia as N	ND	mg/L	0.01						
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank					Run: TECHAA2-R_090121A			01/21/09 15:05
Nitrogen, Ammonia as N	0.24	mg/L	0.10	96	90	110			
<b>Sample ID: LFB-4</b>	Laboratory Fortified Blank					Run: TECHAA2-R_090121A			01/21/09 15:06
Nitrogen, Ammonia as N	0.26	mg/L	0.10	103	90	110			
<b>Sample ID: R09010301-013BMS</b>	Sample Matrix Spike					Run: TECHAA2-R_090121A			01/21/09 17:29
Nitrogen, Ammonia as N	0.63	mg/L	0.10	99	80	120			
<b>Sample ID: R09010301-013BMSD</b>	Sample Matrix Spike Duplicate					Run: TECHAA2-R_090121A			01/21/09 17:30
Nitrogen, Ammonia as N	0.65	mg/L	0.10	108	80	120	3.3	10	
<b>Method: D5072-92</b>					Batch: C_R113850				
<b>Sample ID: R09010302-001G</b>	Sample Duplicate					Run: SUB-C113850			01/23/09 14:10
Radon 222	133	pCi/L	100				14	30	
<b>Sample ID: MB-R113850</b>	Method Blank					Run: SUB-C113850			01/23/09 14:10
Radon 222	30	pCi/L						U	
<b>Sample ID: LCS-R113850</b>	Laboratory Control Sample					Run: SUB-C113850			01/23/09 14:10
Radon 222	307	pCi/L	100	90	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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R114100		
Sample ID: LRB	Method Blank		Run: SUB-C114100				01/30/09 15:45		
Boron	ND	mg/L	0.006						
Iron	0.005	mg/L	0.0004						
Silicon	ND	mg/L	0.003						
Calcium	ND	mg/L	0.02						
Magnesium	ND	mg/L	0.01						
Potassium	ND	mg/L	0.005						
Sodium	-0.05	mg/L							
Silica	ND	mg/L	0.005						
Sample ID: C09010853-001BMS	Sample Matrix Spike		Run: SUB-C114100				01/30/09 22:19		
Boron	1.08	mg/L	0.10	104	70	130			
Iron	1.06	mg/L	0.030	102	70	130			
Silicon	7.13	mg/L	0.10		70	130			A
Calcium	332	mg/L	1.0	103	70	130			
Magnesium	149	mg/L	1.0	104	70	130			
Potassium	128	mg/L	1.0	112	70	130			
Sodium	165	mg/L	1.0	103	70	130			
Silica	15.3	mg/L	0.21		70	130			A
Sample ID: C09010853-001BMSD	Sample Matrix Spike Duplicate		Run: SUB-C114100				01/30/09 22:23		
Boron	1.08	mg/L	0.10	104	70	130	0.5	20	
Iron	1.06	mg/L	0.030	103	70	130	0.2	20	
Silicon	7.28	mg/L	0.10		70	130	2	20	A
Calcium	337	mg/L	1.0	108	70	130	1.5	20	
Magnesium	149	mg/L	1.0	104	70	130	0.3	20	
Potassium	128	mg/L	1.0	112	70	130	0.3	20	
Sodium	166	mg/L	1.0	104	70	130	0.6	20	
Silica	15.6	mg/L	0.21		70	130	2	20	A
Method: E200.7							Batch: C_R114362		
Sample ID: LRB	Method Blank		Run: SUB-C114362				02/05/09 12:03		
Boron	0.007	mg/L	0.006						
Iron	0.006	mg/L	0.0004						
Sample ID: R09010302-001D	Sample Matrix Spike		Run: SUB-C114362				02/05/09 20:15		
Boron	1.44	mg/L	0.10	106	70	130			
Iron	1.74	mg/L	0.043	104	70	130			
Sample ID: R09010302-001D	Sample Matrix Spike Duplicate		Run: SUB-C114362				02/05/09 20:20		
Boron	1.49	mg/L	0.10	110	70	130	3	20	
Iron	1.77	mg/L	0.043	107	70	130	1.6	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

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R115011		
<b>Sample ID: MB-090220A</b>	Method Blank					Run: SUB-C115011			02/20/09 12:54
Aluminum	ND	mg/L	0.003						
<b>Sample ID: LFB-090220A</b>	Laboratory Fortified Blank					Run: SUB-C115011			02/20/09 12:58
Aluminum	0.95	mg/L	0.10	95	85	125			
<b>Sample ID: C09010797-014CMS2</b>	Sample Matrix Spike					Run: SUB-C115011			02/20/09 13:10
Aluminum	1.92	mg/L	0.10	94	70	130			
<b>Sample ID: C09010797-014CMSD2</b>	Sample Matrix Spike Duplicate					Run: SUB-C115011			02/20/09 13:14
Aluminum	1.92	mg/L	0.10	94	70	130	0.4	20	
<b>Method: E200.8</b>							Batch: C_21459		
<b>Sample ID: MB-21459</b>	Method Blank					Run: SUB-C114869			02/18/09 23:47
Uranium	ND	mg/L	7E-05						
<b>Sample ID: LCS1-21459</b>	Laboratory Control Sample					Run: SUB-C114869			02/18/09 23:51
Uranium	0.105	mg/L	0.00030	105	80	120			
<b>Sample ID: R09010302-001I</b>	Post Digestion Spike					Run: SUB-C114869			02/19/09 01:49
Uranium	0.0128	mg/L	0.00030	102	70	130			
<b>Sample ID: R09010302-001I</b>	Post Digestion Spike Duplicate					Run: SUB-C114869			02/19/09 01:53
Uranium	0.0127	mg/L	0.00030	101	70	130	0.5	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** RESPEC Inc  
**Project:** Edgemont

**Report Date:** 03/17/09  
**Work Order:** R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R114097		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C114097				01/30/09 16:42		
Arsenic	ND	mg/L	0.0003						
Barium	0.0001	mg/L	3E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	9E-05	mg/L	4E-05						
Lead	5E-05	mg/L	2E-05						
Manganese	0.0001	mg/L	5E-05						
Mercury	ND	mg/L	4E-05						
Molybdenum	5E-05	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Silver	6E-05	mg/L	2E-05						
Thorium 232	0.0001	mg/L	3E-05						
Uranium	0.0001	mg/L	8E-06						
Vanadium	0.0001	mg/L	9E-05						
Zinc	0.0004	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C114097				01/30/09 16:42		
Arsenic	0.0517	mg/L	0.0010	103	85	115			
Barium	0.0514	mg/L	0.0010	103	85	115			
Cadmium	0.0521	mg/L	0.0010	104	85	115			
Chromium	0.0495	mg/L	0.0010	99	85	115			
Copper	0.0521	mg/L	0.0010	104	85	115			
Lead	0.0525	mg/L	0.0010	105	85	115			
Manganese	0.0500	mg/L	0.0010	100	85	115			
Mercury	0.00528	mg/L	0.0010	106	85	115			
Molybdenum	0.0523	mg/L	0.0010	104	85	115			
Nickel	0.0524	mg/L	0.0010	105	85	115			
Silver	0.0212	mg/L	0.0010	106	85	115			
Thorium 232	0.0515	mg/L	0.0010	103	85	115			
Uranium	0.0514	mg/L	0.00030	103	85	115			
Vanadium	0.0489	mg/L	0.0010	98	85	115			
Zinc	0.0557	mg/L	0.0010	111	85	115			
<b>Sample ID: C09010797-014DMS4</b>	Post Digestion Spike		Run: SUB-C114097				01/30/09 21:53		
Barium	0.0636	mg/L	0.10	108	70	130			
Cadmium	0.0521	mg/L	0.010	104	70	130			
Chromium	0.0515	mg/L	0.050	103	70	130			
Copper	0.0497	mg/L	0.010	98	70	130			
Lead	0.0522	mg/L	0.050	104	70	130			
Manganese	0.213	mg/L	0.010	117	70	130			
Nickel	0.0504	mg/L	0.050	98	70	130			
Silver	0.0191	mg/L	0.010	96	70	130			
Thorium 232	0.0573	mg/L	0.0010	115	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R114097		
Sample ID: C09010797-014DMS4	Post Digestion Spike			Run: SUB-C114097			01/30/09 21:53		
Uranium	0.0581	mg/L	0.00030	115	70	130			
Vanadium	0.0522	mg/L	0.10	104	70	130			
Zinc	0.0548	mg/L	0.010	102	70	130			
Sample ID: C09010797-014DMSD4	Post Digestion Spike Duplicate			Run: SUB-C114097			01/30/09 22:00		
Barium	0.0631	mg/L	0.10	107	70	130		20	
Cadmium	0.0516	mg/L	0.010	103	70	130	0.9	20	
Chromium	0.0523	mg/L	0.050	104	70	130	1.5	20	
Copper	0.0493	mg/L	0.010	97	70	130	0.8	20	
Lead	0.0534	mg/L	0.050	107	70	130	2.3	20	
Manganese	0.218	mg/L	0.010	128	70	130	2.6	20	
Nickel	0.0500	mg/L	0.050	97	70	130		20	
Silver	0.0200	mg/L	0.010	100	70	130	4.3	20	
Thorium 232	0.0585	mg/L	0.0010	117	70	130	2.1	20	
Uranium	0.0591	mg/L	0.00030	117	70	130	1.7	20	
Vanadium	0.0532	mg/L	0.10	106	70	130		20	
Zinc	0.0545	mg/L	0.010	101	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

**Client:** RESPEC Inc  
**Project:** Edgemont

**Report Date:** 03/17/09  
**Work Order:** R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R114332		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C114332				02/04/09 12:58		
Antimony	0.0001	mg/L	0.0001						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	ND	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Molybdenum	ND	mg/L	4E-05						
Selenium	ND	mg/L	0.001						
Silver	ND	mg/L	2E-05						
Strontium	ND	mg/L	2E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Zinc	ND	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C114332				02/04/09 13:05		
Antimony	0.0506	mg/L	0.0010	101	85	115			
Arsenic	0.0508	mg/L	0.0010	102	85	115			
Barium	0.0509	mg/L	0.0010	102	85	115			
Beryllium	0.0522	mg/L	0.0010	104	85	115			
Cadmium	0.0511	mg/L	0.0010	102	85	115			
Chromium	0.0520	mg/L	0.0010	104	85	115			
Copper	0.0513	mg/L	0.0010	103	85	115			
Lead	0.0521	mg/L	0.0010	104	85	115			
Manganese	0.0517	mg/L	0.0010	103	85	115			
Molybdenum	0.0512	mg/L	0.0010	102	85	115			
Selenium	0.0509	mg/L	0.0014	102	85	115			
Silver	0.0211	mg/L	0.0010	106	85	115			
Strontium	0.0504	mg/L	0.0010	101	85	115			
Thallium	0.0520	mg/L	0.0010	104	85	115			
Uranium	0.0519	mg/L	0.00030	104	85	115			
Zinc	0.0542	mg/L	0.0010	108	85	115			
<b>Sample ID: C09010797-014DMS4</b>	Post Digestion Spike		Run: SUB-C114332				02/04/09 20:46		
Antimony	0.0549	mg/L	0.050	110	70	130			
Arsenic	0.0543	mg/L	0.0010	105	70	130			
Barium	0.0583	mg/L	0.10	99	70	130			
Beryllium	0.0509	mg/L	0.010	102	70	130			
Cadmium	0.0498	mg/L	0.010	100	70	130			
Chromium	0.0493	mg/L	0.050	99	70	130			
Copper	0.0499	mg/L	0.010	100	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** RESPEC Inc  
**Project:** Edgemont

**Report Date:** 03/17/09  
**Work Order:** R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R114332		
<b>Sample ID: C09010797-014DMS4</b>	Post Digestion Spike		Run: SUB-C114332				02/04/09 20:46		
Lead	0.0503	mg/L	0.050	101	70	130			
Manganese	0.194	mg/L	0.010	95	70	130			
Molybdenum	0.0531	mg/L	0.050	105	70	130			
Selenium	0.0509	mg/L	0.0010	102	70	130			
Silver	0.0182	mg/L	0.010	91	70	130			
Strontium	2.74	mg/L	0.10		70	130			A
Thallium	0.0505	mg/L	0.10	101	70	130			
Uranium	0.0536	mg/L	0.00030	106	70	130			
Zinc	0.0553	mg/L	0.010	104	70	130			
<b>Sample ID: C09010797-014DMS4</b>	Post Digestion Spike Duplicate		Run: SUB-C114332				02/04/09 20:53		
Antimony	0.0559	mg/L	0.050	112	70	130	1.7	20	
Arsenic	0.0551	mg/L	0.0010	107	70	130	1.5	20	
Barium	0.0592	mg/L	0.10	101	70	130		20	
Beryllium	0.0498	mg/L	0.010	100	70	130	2.1	20	
Cadmium	0.0511	mg/L	0.010	102	70	130	2.6	20	
Chromium	0.0488	mg/L	0.050	98	70	130		20	
Copper	0.0493	mg/L	0.010	99	70	130	1.2	20	
Lead	0.0514	mg/L	0.050	103	70	130	2.1	20	
Manganese	0.191	mg/L	0.010	89	70	130	1.5	20	
Molybdenum	0.0544	mg/L	0.050	107	70	130	2.5	20	
Selenium	0.0524	mg/L	0.0010	105	70	130	3	20	
Silver	0.0189	mg/L	0.010	94	70	130	3.6	20	
Strontium	2.75	mg/L	0.10		70	130	0.3	20	A
Thallium	0.0520	mg/L	0.10	104	70	130		20	
Uranium	0.0541	mg/L	0.00030	107	70	130	0.9	20	
Zinc	0.0546	mg/L	0.010	103	70	130	1.2	20	
<b>Method: E200.8</b>							Batch: C_R114631		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C114631				02/11/09 12:44		
Nickel	ND	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C114631				02/11/09 12:50		
Nickel	0.0454	mg/L	0.0010	91	85	115			
<b>Sample ID: C09020274-004AMS4</b>	Post Digestion Spike		Run: SUB-C114631				02/11/09 23:26		
Nickel	0.0485	mg/L	0.040	93	70	130			
<b>Sample ID: C09020274-004AMSD4</b>	Post Digestion Spike Duplicate		Run: SUB-C114631				02/11/09 23:33		
Nickel	0.0485	mg/L	0.040	93	70	130	0	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

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>							Batch: B_37342		
<b>Sample ID: MB-37342</b>	Method Blank				Run: SUB-B125166		02/20/09 13:51		
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-37342</b>	Laboratory Fortified Blank				Run: SUB-B125166		02/20/09 13:53		
Mercury	0.0018	mg/L	0.0010	89	85	115			
<b>Sample ID: B09021443-001AMS</b>	Sample Matrix Spike				Run: SUB-B125166		02/20/09 14:00		
Mercury	0.0018	mg/L	0.00020	90	70	130			
<b>Sample ID: B09021443-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-B125166		02/20/09 14:02		
Mercury	0.0018	mg/L	0.00020	89	70	130	1.1	30	
<b>Method: E245.1</b>							Analytical Run: SUB-B125166		
<b>Sample ID: QCS</b>	Initial Calibration Verification Standard						02/20/09 13:43		
Mercury	0.0020	mg/L	0.00020	98	95	105			
<b>Method: E300.0</b>							Batch: R39252		
<b>Sample ID: LFB0901211057-3</b>	Laboratory Fortified Blank				Run: DIONEX_090121A		01/21/09 19:10		
Chloride	4.61	mg/L	0.50	92	90	110			
Fluoride	1.92	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N	2.30	mg/L	0.10	92	90	110			
Nitrogen, Nitrite as N	2.42	mg/L	0.10	97	90	110			
Sulfate	13.6	mg/L	1.0	91	90	110			
<b>Sample ID: LFB0901211057-4</b>	Laboratory Fortified Blank				Run: DIONEX_090121A		01/21/09 19:27		
Chloride	4.52	mg/L	0.50	90	90	110			
Fluoride	1.90	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N	2.25	mg/L	0.10	90	90	110			
Nitrogen, Nitrite as N	2.37	mg/L	0.10	95	90	110			
Sulfate	13.5	mg/L	1.0	90	90	110			
<b>Sample ID: R09010301-014AMS</b>	Sample Matrix Spike				Run: DIONEX_090121A		01/22/09 09:08		
Chloride	248	mg/L	5.4	90	80	120			
Fluoride	102	mg/L	0.56	100	80	120			
Nitrogen, Nitrate as N	116	mg/L	1.3	93	80	120			
Nitrogen, Nitrite as N	123	mg/L	2.9	98	80	120			
Sulfate	1130	mg/L	3.4	84	80	120			
<b>Sample ID: R09010301-014AMSD</b>	Sample Matrix Spike Duplicate				Run: DIONEX_090121A		01/22/09 09:24		
Chloride	239	mg/L	5.4	86	80	120	3.6	10	
Fluoride	98.7	mg/L	0.56	97	80	120	3.7	10	
Nitrogen, Nitrate as N	112	mg/L	1.3	90	80	120	3.5	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	3.3	10	
Sulfate	1120	mg/L	3.4	82	80	120	1.3	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0							Batch: C_GrAB-0604		
Sample ID: MB-GrAB-0604	Method Blank				Run: SUB-C114642		02/06/09 03:23		
Gross Alpha	1	pCi/L							
Gross Alpha precision (±)	0.6	pCi/L							
Gross Alpha MDC	0.5	pCi/L							
Gross Beta	-2	pCi/L					U		
Gross Beta precision (±)	1	pCi/L							
Gross Beta MDC	1	pCi/L							
Sample ID: UNAT-GrAB-0604	Laboratory Control Sample				Run: SUB-C114642		02/06/09 03:24		
Gross Alpha	130	pCi/L	97		70	130			
Sample ID: Cs137-GrAB-0604	Laboratory Control Sample				Run: SUB-C114642		02/06/09 03:24		
Gross Beta	84	pCi/L	92		70	130			
Sample ID: C09010797-001HMS	Sample Matrix Spike				Run: SUB-C114642		02/06/09 03:24		
Gross Alpha	120	pCi/L	85		70	130			
Sample ID: C09010797-001HMSD	Sample Matrix Spike Duplicate				Run: SUB-C114642		02/06/09 03:23		
Gross Alpha	120	pCi/L	88		70	130	3.6	15.7	
Sample ID: C09010797-001HMS	Sample Matrix Spike				Run: SUB-C114642		02/06/09 03:23		
Gross Beta	79	pCi/L	87		70	130			
Sample ID: C09010797-001HMSD	Sample Matrix Spike Duplicate				Run: SUB-C114642		02/06/09 03:23		
Gross Beta	82	pCi/L	89		70	130	3	16.4	
Sample ID: R09010302-001H	Sample Duplicate				Run: SUB-C114642		02/07/09 01:11		
Gross Alpha	30	pCi/L					33	40.7	
Gross Alpha precision (±)	5.3	pCi/L							
Gross Alpha MDC	5.3	pCi/L							
Gross Beta	12	pCi/L					18	73.5	
Gross Beta precision (±)	4.1	pCi/L							
Gross Beta MDC	6.5	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>							Batch: C_R114484		
<b>Sample ID: C09010797-014HDUP</b>	Sample Duplicate				Run: SUB-C114484			02/04/09 14:00	
Gross Gamma	980	pCi/L					2.9	30	
Gross Gamma precision (±)	160	pCi/L							
<b>Sample ID: MB-R114484</b>	Method Blank				Run: SUB-C114484			02/04/09 14:00	
Gross Gamma	ND	pCi/L							U
<b>Sample ID: LCS-R114484</b>	Laboratory Control Sample				Run: SUB-C114484			02/04/09 14:00	
Americium 241	25000	pCi/L	20	84	70	130			
Cesium 137	45000	pCi/L	20	106	70	130			
Cobalt 60	30000	pCi/L	20	103	70	130			
<b>Method: E903.0</b>							Batch: C_21459		
<b>Sample ID: C09010797-007IMS</b>	Sample Matrix Spike				Run: SUB-C114901			02/18/09 13:41	
Radium 226	19	pCi/L		98	70	130			
<b>Sample ID: C09010797-007IMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C114901			02/18/09 13:41	
Radium 226	19	pCi/L		97	70	130	1	24	
<b>Sample ID: LCS-21459</b>	Laboratory Control Sample				Run: SUB-C114901			02/18/09 15:51	
Radium 226	74	pCi/L		102	70	130			
<b>Sample ID: MB-21459</b>	Method Blank				Run: SUB-C114901			02/18/09 15:51	
Radium 226	-0.02	pCi/L							U
Radium 226 precision (±)	0.2	pCi/L							
Radium 226 MDC	0.4	pCi/L							
<b>Method: E903.0</b>							Batch: C_RA226-3432		
<b>Sample ID: C09010797-001HMS</b>	Sample Matrix Spike				Run: SUB-C114417			02/05/09 12:53	
Radium 226	16	pCi/L		105	70	130			
<b>Sample ID: C09010797-001HMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C114417			02/05/09 12:53	
Radium 226	15	pCi/L		96	70	130	8	25.6	
<b>Sample ID: MB-RA226-3432</b>	Method Blank				Run: SUB-C114417			02/05/09 14:35	
Radium 226	-0.1	pCi/L							U
Radium 226 precision (±)	0.1	pCi/L							
Radium 226 MDC	0.3	pCi/L							
<b>Sample ID: LCS-RA226-3432</b>	Laboratory Control Sample				Run: SUB-C114417			02/05/09 14:35	
Radium 226	8.6	pCi/L		111	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



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 03/17/09  
Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_21459		
<b>Sample ID: R09010302-001I</b>	Sample Matrix Spike				Run: SUB-C115509			03/01/09 14:58	
Thorium 230	15	pCi/L		134	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.									
<b>Sample ID: R09010302-001I</b>	Sample Matrix Spike Duplicate				Run: SUB-C115509			03/01/09 14:58	
Thorium 230	12	pCi/L		107	70	130	20	53	
<b>Sample ID: LCS-21459</b>	Laboratory Control Sample				Run: SUB-C115509			03/02/09 09:04	
Thorium 230	5.2	pCi/L		113	70	130			
<b>Sample ID: MB-21459</b>	Method Blank				Run: SUB-C115509			03/02/09 09:04	
Thorium 230	-0.07	pCi/L							U
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-0742		
<b>Sample ID: LCS-RA-TH-ISO-0742</b>	Laboratory Control Sample				Run: SUB-C114515			02/08/09 11:55	
Thorium 230	5.1	pCi/L	0.20	104	70	130			
<b>Sample ID: R09010302-001H</b>	Sample Matrix Spike				Run: SUB-C114515			02/08/09 11:55	
Thorium 230	25	pCi/L	0.20	103	70	130			
<b>Sample ID: R09010302-001H</b>	Sample Matrix Spike Duplicate				Run: SUB-C114515			02/08/09 11:55	
Thorium 230	27	pCi/L	0.20	113	70	130	7.9	43	
<b>Sample ID: MB-RA-TH-ISO-0742</b>	Method Blank				Run: SUB-C114515			02/09/09 08:45	
Thorium 230	0.01	pCi/L							U
<b>Method: E909.0M</b>							Batch: C_R114833		
<b>Sample ID: C09010853-001DMS</b>	Sample Matrix Spike				Run: SUB-C114833			02/03/09 10:43	
Lead 210	94	pCi/L		78	70	130			
<b>Sample ID: C09010853-002DMD</b>	Sample Duplicate				Run: SUB-C114833			02/03/09 10:43	
Lead 210	0.50	pCi/L					700	30	UR
Lead 210 precision ( $\pm$ )	5.1	pCi/L							
Lead 210 MDC	8.5	pCi/L							
- The Sample and the Duplicate are both below the MDC; the RPD is acceptable.									
<b>Sample ID: MB-R114833</b>	Method Blank				Run: SUB-C114833			02/03/09 10:43	
Lead 210	-0.7	pCi/L							U
Lead 210 precision ( $\pm$ )	3	pCi/L							
Lead 210 MDC	4	pCi/L							
<b>Sample ID: LCS-R114833</b>	Laboratory Control Sample				Run: SUB-C114833			02/03/09 10:43	
Lead 210	50	pCi/L		88	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 03/17/09

Work Order: R09010302

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>							Batch: C_R115907		
<b>Sample ID: MB-R115907</b>	Method Blank				Run: SUB-C115907		03/10/09 13:35		
Lead 210	-1	pCi/L							U
Lead 210 precision (±)	4	pCi/L							
Lead 210 MDC	7	pCi/L							
<b>Sample ID: LCS-R115907</b>	Laboratory Control Sample				Run: SUB-C115907		03/10/09 13:35		
Lead 210	65	pCi/L		97	70	130			
- No MS or MSD available due to spiking error by analyst..									
<b>Method: RMO-3008</b>							Batch: C_PO210-0181		
<b>Sample ID: R09010302-001K</b>	Sample Matrix Spike				Run: SUB-C114991		02/13/09 14:35		
Polonium 210	13	pCi/L		79	70	130			
<b>Sample ID: R09010302-001K</b>	Sample Matrix Spike Duplicate				Run: SUB-C114991		02/17/09 10:36		
Polonium 210	17	pCi/L		103	70	130	26	58.3	
<b>Sample ID: LCS-PO210-0181</b>	Laboratory Control Sample				Run: SUB-C114991		02/17/09 10:36		
Polonium 210	14	pCi/L		83	70	130			
<b>Sample ID: MB-PO210-0181</b>	Method Blank				Run: SUB-C114991		02/17/09 10:36		
Polonium 210 MDC	0.7	pCi/L							
Polonium 210	-0.04	pCi/L							U
Polonium 210 precision (±)	0.2	pCi/L							
<b>Method: RMO-3008</b>							Batch: C_R115005		
<b>Sample ID: C09020173-003FMS</b>	Sample Matrix Spike				Run: SUB-C115005		02/19/09 12:18		
Polonium 210	21	pCi/L		74	70	130			
<b>Sample ID: C09020173-003FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C115005		02/19/09 12:18		
Polonium 210	32	pCi/L		113	70	130	39	53.2	
<b>Sample ID: LCS-21458</b>	Laboratory Control Sample				Run: SUB-C115005		02/19/09 09:56		
Polonium 210	87	pCi/L		111	70	130			
<b>Sample ID: MB-21458</b>	Method Blank				Run: SUB-C115005		02/19/09 09:56		
Polonium 210 MDC	2	pCi/L							
Polonium 210	0.2	pCi/L							U
Polonium 210 precision (±)	1	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

Sample R09010302-001A not reported to LIMS

SAMPLE ID: R09010302-001A

3/16/2009

	CATIONS			ANIONS	
	mg/L	meq/L		mg/L	meq/L
Acidity(as CaCO3)			Cl	16	0.45
Ca	73	3.62	SO4	828	17.23
Mg	<1	0.01	T. Alkalinity	148	2.96
K	9	0.24	HCO3	181	
Na	370	16.11	CO3	<1	
Al	<1	0.01			
Fe	<1	0.00			
Mn	<1	0.00			
Hardness (as CaCO3)	182		OH		
Hardness, grains/gal.	10.6		NO3	<0.1	0.00
NH4+	1.6	0.11	PO4		
Si	4.2		F	0.3	0.02
			CN		
			Br	0.3	0.00
	Total Cations	20.11		Total Anions	20.66

BALANCE, (± 5%) -1.35  
BALANCE, "sigma" 1.29

	Measured	Calculated
Sample pH	11.4	
Conductivity (umho/cm)	2420	1770
TDS	1410	1400
TDS Ratio		1.01
Resistivity (RW - ohm-m)		4.13
Estimated Ionic Strength (from TDS)		0.0354

Salinity	1.25
Cl as NaCl	26
Carbonate Hardness	148
Non-carbonate Hardness	34
Free CO2	
Total CO2	
SAR	11.94
Langlier Saturation Index	2.5
Ryznar Index	6.34
Aggressive Index	15.83
Temp	20

Moderately hard water.

SAMPLE ID: R09010302-001A

BALANCE, (± 5%) -1.35



# Chain of Custody and Analytical Request Record

Page 1 of 1

PLEASE PRINT- Provide as much information as possible.

Company Name: <b>South Env.</b>	Project Name, PWS, Permit, Etc. <b>Pur Burdock / PowerTech</b>	Sample Origin State: _____	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <b>RESREC</b>	Contact Name: _____	Email: _____	Sampler: (Please Print) <b>9/1/2009</b>
Invoice Address: _____	Invoice Contact & Phone: _____	Purchase Order: _____	Quote/Bottle Order: _____

Special Report/Formats - ELI must be notified prior to sample submittal for the following:				Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page				Shipped by: Cooler ID(e): Receipt Temp: <b>2.4 °C</b> On Ice: <input checked="" type="radio"/> Yes <input type="radio"/> No Custody Seal Y N Intact Y N Signature Y N Match Y N			
<input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP State: _____ Other: _____ <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC				Number of Containers Sample Type: A W S V B O Vegetation Bioassay Other				Normal Turnaround (TAT)			
ANALYSIS REQUESTED				SEE ATTACHED				R U S H			
MATRIX				Collection Date				Collection Time			
1 GW 680				1-20-09				15:25			
2 GW 680				1-20-09				15:35			
3 991015 well				1-20-09				15:05			
4 GW 696				1-20-09				16:25			
5 GW 694				1-20-09				17:00			
6											
7											
8											
9											
10											

Custody Record MUST be Signed	Relinquished by (print): <b>ALL</b>	Date/Time: <b>1-21-09 10:37</b>	Signature: <b>ALL</b>	Received by (print): <b>Steve Hoiland</b>	Date/Time: <b>1-21-09 10:37</b>	Signature: <b>Steve Hoiland</b>
	Relinquished by (print): <b>ALL</b>	Date/Time: <b>1-21-09 10:37</b>	Signature: <b>ALL</b>	Received by (print): <b>Steve Hoiland</b>	Date/Time: <b>1-21-09 10:37</b>	Signature: <b>Steve Hoiland</b>

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



## ANALYTICAL SUMMARY REPORT

April 14, 2009

Cory Foreman

RESPEC Inc

3824 Jet Dr

Rapid City, SD 57701-

Workorder No.: R09020293

Quote ID: R286

Project Name: Edgemont

Energy Laboratories Inc. received the following 15 samples for RESPEC Inc on 2/25/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R09020293-001	DewBurd BLK01	02/24/09 18:00	02/25/09	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved



## ANALYTICAL SUMMARY REPORT

R09020293-002	DewBurd GW704	02/24/09 9:40	02/25/09	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R09020293-003	DewBurd GW3026	02/24/09 11:35	02/25/09	Aqueous	Same As Above
R09020293-004	DewBurd GW698	02/24/09 12:10	02/25/09	Aqueous	Same As Above
R09020293-005	DewBurd GW698	02/24/09 12:15	02/25/09	Aqueous	Same As Above
R09020293-006	DewBurd GW688	02/24/09 13:23	02/25/09	Aqueous	Same As Above
R09020293-007	DewBurd GW680	02/24/09 13:35	02/25/09	Aqueous	Same As Above
R09020293-008	DewBurd GW622	02/24/09 15:31	02/25/09	Aqueous	Same As Above
R09020293-009	DewBurd GW615	02/24/09 15:45	02/25/09	Aqueous	Same As Above
R09020293-010	DewBurd GW689	02/24/09 16:04	02/25/09	Aqueous	Same As Above
R09020293-011	DewBurd GW681	02/24/09 16:18	02/25/09	Aqueous	Same As Above
R09020293-012	DewBurd GW697	02/24/09 16:45	02/25/09	Aqueous	Same As Above
R09020293-013	DewBurd GW695	02/24/09 16:56	02/25/09	Aqueous	Same As Above
R09020293-014	DewBurd GW694	02/24/09 17:15	02/25/09	Aqueous	Same As Above
R09020293-015	DewBurd GW696	02/24/09 17:31	02/25/09	Aqueous	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

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

Report Approved By:

  
Linda Larson





# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 18:00  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:18/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:18/mb
Bicarbonate as HCO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:18/mb
Calcium	ND	mg/L	D	1		1	E200.7	03/06/09 21:14/eli-c
Chloride	ND	mg/L		1		1	E300.0	02/25/09 23:17/jmh
Fluoride	ND	mg/L		0.1		1	E300.0	02/25/09 23:17/jmh
Magnesium	ND	mg/L		0.5		1	E200.7	03/06/09 21:14/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 16:14/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/25/09 23:17/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/25/09 23:17/jmh
Potassium	ND	mg/L		0.5		1	E200.7	03/06/09 21:14/eli-c
Sodium	ND	mg/L		0.5		1	E200.7	03/06/09 21:14/eli-c
Sulfate	ND	mg/L		1		1	E300.0	02/25/09 23:17/jmh
Silica	ND	mg/L		0.2		1	E200.7	03/06/09 21:14/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	ND	umhos/cm		5.0		1	A2510 B	02/27/09 12:41/tb
Oxidation-Reduction Potential	240	mV				1	A2580 B	03/02/09 11:00/jmh
pH	5.58	s.u.		0.01		1	A4500-H B	02/27/09 10:47/tb
Sodium Adsorption Ratio (SAR)	ND	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	10	mg/L		5		1	A2540 C	03/02/09 09:56/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 19:38/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 19:38/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 19:38/eli-c
Boron	ND	mg/L		0.1		1	E200.7	03/06/09 21:14/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 19:38/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 19:38/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 19:38/eli-c
Iron	ND	mg/L		0.03		1	E200.7	03/06/09 21:14/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 19:38/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	03/04/09 19:38/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 19:38/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 19:38/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 19:38/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:35/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 19:38/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 19:38/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/04/09 19:38/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 18:00  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 19:38/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 19:38/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 02:55/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 13:45/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	0.6	pCi/L	U			1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	0.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	1.1	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	-2	pCi/L	U			1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	1.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	2.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	-0.4	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.054	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.43	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.21	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	0.2	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	0.06	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-4	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.3	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.14	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.36	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.66	pCi/L				1	E912.0	03/23/09 07:21/eli-c

- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-001  
**Client Sample ID:** DewBurd BLK01

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 18:00  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226	-0.2	pCi/L	U			1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	141	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	64.2	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/09/09 13:54/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/09/09 13:54/eli-c
Barium	ND	mg/L		0.1		1	E200.7	03/06/09 21:32/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/09/09 13:54/eli-c
Boron	ND	mg/L		0.1		1	E200.7	03/06/09 21:32/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/09/09 13:54/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/09/09 13:54/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/09/09 13:54/eli-c
Iron	ND	mg/L		0.03		1	E200.7	03/06/09 21:32/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/09/09 13:54/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	03/06/09 02:56/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:03/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/09/09 13:54/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/09/09 13:54/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/09/09 13:54/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/09/09 13:54/eli-c
Strontium	ND	mg/L		0.1		1	E200.7	03/06/09 21:32/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/09/09 13:54/eli-c
Uranium	0.0004	mg/L		0.0003		1	E200.8	03/09/09 13:54/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/09/09 13:54/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-002  
**Client Sample ID:** DewBurd GW704

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 09:40  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	168	mg/L		5		1	A2320 B	03/03/09 14:20/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:20/mb
Bicarbonate as HCO <sub>3</sub>	205	mg/L		5		1	A2320 B	03/03/09 14:20/mb
Calcium	55	mg/L	D	6		5	E200.7	03/06/09 21:37/eli-c
Chloride	10	mg/L		1		1	E300.0	02/25/09 23:50/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	02/25/09 23:50/jmh
Magnesium	18.6	mg/L		0.5		5	E200.7	03/06/09 21:37/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 16:16/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/25/09 23:50/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/25/09 23:50/jmh
Potassium	9.3	mg/L		0.5		5	E200.7	03/06/09 21:37/eli-c
Sodium	205	mg/L		0.5		5	E200.7	03/06/09 21:37/eli-c
Sulfate	487	mg/L	D	3		50	E300.0	02/25/09 23:34/jmh
Silica	7.1	mg/L		0.2		5	E200.7	03/06/09 21:37/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1300	umhos/cm		5.0		1	A2510 B	02/27/09 12:42/tb
Oxidation-Reduction Potential	200	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.78	s.u.		0.01		1	A4500-H B	02/27/09 10:49/tb
Sodium Adsorption Ratio (SAR)	6.1	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	890	mg/L		5		1	A2540 C	03/02/09 09:56/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 19:45/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 19:45/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 19:45/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 21:37/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 19:45/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 19:45/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 19:45/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 21:37/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 19:45/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	03/04/09 19:45/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 19:45/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 19:45/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 19:45/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:42/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 19:45/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 19:45/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/04/09 19:45/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-002  
**Client Sample ID:** DewBurd GW704

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 09:40  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 19:45/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 19:45/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 02:59/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 13:53/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	2.5	pCi/L	U			1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	3.0	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	4.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	8.8	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	3.5	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	5.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	-1	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.15	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.55	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.31	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	1.6	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	0.04	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-0.2	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.068	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.34	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.72	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-002  
**Client Sample ID:** DewBurd GW704

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 09:40  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226	-0.03	pCi/L	U			1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	-0.007	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	200	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	69.5	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/09/09 14:01/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/09/09 14:01/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 21:41/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/09/09 14:01/eli-c
Boron	ND	mg/L		0.1		1	E200.8	03/09/09 14:01/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/09/09 14:01/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/09/09 14:01/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/09/09 14:01/eli-c
Iron	1.55	mg/L		0.03		1	E200.8	03/09/09 14:01/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/09/09 14:01/eli-c
Manganese	0.09	mg/L		0.01		1	E200.8	03/06/09 03:29/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:10/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/09/09 14:01/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/09/09 14:01/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/09/09 14:01/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/09/09 14:01/eli-c
Strontium	1.0	mg/L		0.1		1	E200.8	03/09/09 14:01/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/09/09 14:01/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/09/09 14:01/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/09/09 14:01/eli-c
DATA QUALITY								
A/C Balance (± 5)	-1.29	%				1	A1030 E	04/14/09 00:00/ADM
Anions	13.8	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	13.4	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	905	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-002  
**Client Sample ID:** DewBurd GW704

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 09:40  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-003  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 11:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	176	mg/L		5		1	A2320 B	03/03/09 14:22/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:22/mb
Bicarbonate as HCO <sub>3</sub>	215	mg/L		5		1	A2320 B	03/03/09 14:22/mb
Calcium	334	mg/L	D	6		5	E200.7	03/06/09 21:46/eli-c
Chloride	16	mg/L		1		1	E300.0	02/26/09 00:56/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	02/26/09 00:56/jmh
Magnesium	108	mg/L		0.5		5	E200.7	03/06/09 21:46/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:26/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 00:56/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 00:56/jmh
Potassium	17.5	mg/L		0.5		5	E200.7	03/06/09 21:46/eli-c
Sodium	147	mg/L		0.5		5	E200.7	03/06/09 21:46/eli-c
Sulfate	1390	mg/L	D	3		50	E300.0	02/26/09 00:06/jmh
Silica	8.1	mg/L		0.2		5	E200.7	03/06/09 21:46/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2510	umhos/cm		5.0		1	A2510 B	02/27/09 12:44/tb
Oxidation-Reduction Potential	170	mV				1	A2580 B	03/02/09 11:00/jmh
pH	6.63	s.u.		0.01		1	A4500-H B	02/27/09 10:50/tb
Sodium Adsorption Ratio (SAR)	1.8	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5		1	A2540 C	03/02/09 09:57/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 19:52/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/04/09 19:52/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 19:52/eli-c
Boron	0.2	mg/L		0.1		5	E200.7	03/06/09 21:46/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 19:52/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 19:52/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 19:52/eli-c
Iron	2.98	mg/L		0.03		5	E200.7	03/06/09 21:46/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 19:52/eli-c
Manganese	1.10	mg/L		0.01		1	E200.8	03/04/09 19:52/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 19:52/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 19:52/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 19:52/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:44/eli-ce
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 19:52/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 19:52/eli-c
Uranium	0.0022	mg/L		0.0003		1	E200.8	03/04/09 19:52/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-003  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 11:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 19:52/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 19:52/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:20/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 13:55/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	15.4	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	6.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	9.2	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	18.1	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	6.0	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	9.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	0.4	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.14	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.65	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.35	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	2.9	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	2.9	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.098	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.34	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.68	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-003  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 11:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	0.1	pCi/L	U			1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	-0.07	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve a MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	484	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	72.4	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/09/09 14:07/eli-c
Arsenic	0.006	mg/L		0.001		1	E200.8	03/09/09 14:07/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 21:50/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/09/09 14:07/eli-c
Boron	0.2	mg/L		0.1		1	E200.8	03/09/09 14:07/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/09/09 14:07/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/09/09 14:07/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/09/09 14:07/eli-c
Iron	15.1	mg/L		0.03		1	E200.8	03/09/09 14:07/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/09/09 14:07/eli-c
Manganese	1.35	mg/L		0.01		1	E200.8	03/06/09 03:35/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:12/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/09/09 14:07/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/09/09 14:07/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/09/09 14:07/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/09/09 14:07/eli-c
Strontium	5.8	mg/L		0.1		1	E200.8	03/09/09 14:07/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/09/09 14:07/eli-c
Uranium	0.0025	mg/L		0.0003		1	E200.8	03/09/09 14:07/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/09/09 14:07/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.590	%				1	A1030 E	04/14/09 00:00/ADM
Anions	33.0	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	32.6	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	2140	mg/L				1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-003  
**Client Sample ID:** DewBurd GW3026

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 11:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	1.05					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-004  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:10  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	110	mg/L		5		1	A2320 B	03/03/09 14:24/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:24/mb
Bicarbonate as HCO <sub>3</sub>	134	mg/L		5		1	A2320 B	03/03/09 14:24/mb
Calcium	357	mg/L	D	6		5	E200.7	03/06/09 21:54/eli-c
Chloride	9	mg/L		1		1	E300.0	02/26/09 02:01/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	02/26/09 02:01/jmh
Magnesium	131	mg/L		0.5		5	E200.7	03/06/09 21:54/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:30/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 02:01/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 02:01/jmh
Potassium	15.5	mg/L		0.5		5	E200.7	03/06/09 21:54/eli-c
Sodium	86.5	mg/L		0.5		5	E200.7	03/06/09 21:54/eli-c
Sulfate	1240	mg/L	D	3		50	E300.0	02/26/09 01:12/jmh
Silica	10.2	mg/L		0.2		5	E200.7	03/06/09 21:54/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2360	umhos/cm		5.0		1	A2510 B	02/27/09 12:46/tb
Oxidation-Reduction Potential	110	mV				1	A2580 B	03/02/09 11:00/jmh
pH	6.82	s.u.		0.01		1	A4500-H B	02/27/09 10:54/tb
Sodium Adsorption Ratio (SAR)	0.99	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5		1	A2540 C	03/02/09 09:57/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 19:59/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 19:59/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 19:59/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 21:54/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 19:59/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 19:59/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 19:59/eli-c
Iron	2.03	mg/L		0.03		5	E200.7	03/06/09 21:54/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 19:59/eli-c
Manganese	2.45	mg/L		0.01		1	E200.8	03/04/09 19:59/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 19:59/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 19:59/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 19:59/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:47/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 19:59/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 19:59/eli-c
Uranium	0.108	mg/L		0.0003		1	E200.8	03/04/09 19:59/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-004  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:10  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 19:59/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 19:59/eli-c
METALS - SUSPENDED								
Uranium	0.0050	mg/L		0.0003		1	E200.8	03/10/09 03:24/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:00/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	1270	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	35.4	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	9.5	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	357	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	10.4	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	9.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	1.5	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.40	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.51	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.45	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	355	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	3.1	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	0.03	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	420	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	56	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	4.5	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.78	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.62	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.61	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-004  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:10  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Radium 226	11.0	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.9	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	1	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.5	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	38400	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	279	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 04:18/eli-c
Arsenic	0.003	mg/L	L	0.002		1	E200.8	03/10/09 04:18/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/10/09 04:18/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/16/09 22:35/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 16:41/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 04:18/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 04:18/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 04:18/eli-c
Iron	4.37	mg/L		0.03		1	E200.8	03/10/09 04:18/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 04:18/eli-c
Manganese	2.7	mg/L	D	0.1		5	E200.7	03/10/09 16:41/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:15/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/16/09 22:35/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 04:18/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	03/10/09 04:18/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 04:18/eli-c
Strontium	4.7	mg/L		0.1		1	E200.8	03/10/09 04:18/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 04:18/eli-c
Uranium	0.113	mg/L		0.0003		1	E200.8	03/10/09 04:18/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/10/09 04:18/eli-c
DATA QUALITY								
A/C Balance (± 5)	7.55	%				1	A1030 E	04/14/09 00:00/ADM
Anions	28.4	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	33.0	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	1940	mg/L				1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

L - Lowest available reporting limit for the analytical method used.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-004  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:10  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	1.15					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
MAJOR IONS									
Alkalinity, Total as CaCO3	114	mg/L		5			1	A2320 B	03/03/09 14:28/mb
Carbonate as CO3	ND	mg/L		5			1	A2320 B	03/03/09 14:28/mb
Bicarbonate as HCO3	139	mg/L		5			1	A2320 B	03/03/09 14:28/mb
Calcium	348	mg/L	D	6			5	E200.7	03/06/09 21:59/eli-c
Chloride	9	mg/L		1			1	E300.0	02/26/09 02:34/jmh
Fluoride	0.4	mg/L		0.1			1	E300.0	02/26/09 02:34/jmh
Magnesium	130	mg/L		0.5			5	E200.7	03/06/09 21:59/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1			1	A4500-NH3 G	02/27/09 15:31/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1			1	E300.0	02/26/09 02:34/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1			1	E300.0	02/26/09 02:34/jmh
Potassium	15.5	mg/L		0.5			5	E200.7	03/06/09 21:59/eli-c
Sodium	85.5	mg/L		0.5			5	E200.7	03/06/09 21:59/eli-c
Sulfate	1380	mg/L	D	3			50	E300.0	02/26/09 02:18/jmh
Silica	10	mg/L		0.2			5	E200.7	03/06/09 21:59/eli-c
PHYSICAL PROPERTIES									
Conductivity @ 25 C	2390	umhos/cm		5.0			1	A2510 B	02/27/09 12:47/tb
Oxidation-Reduction Potential	110	mV					1	A2580 B	03/02/09 11:00/jmh
pH	6.78	s.u.		0.01			1	A4500-H B	02/27/09 11:00/tb
Sodium Adsorption Ratio (SAR)	0.99	unitless		0.10			1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	2200	mg/L		5			1	A2540 C	03/02/09 09:58/mb
METALS - DISSOLVED									
Aluminum	ND	mg/L		0.1			1	E200.8	03/04/09 20:05/eli-c
Arsenic	ND	mg/L		0.001			1	E200.8	03/04/09 20:05/eli-c
Barium	ND	mg/L		0.1			1	E200.8	03/04/09 20:05/eli-c
Boron	ND	mg/L		0.1			5	E200.7	03/06/09 21:59/eli-c
Cadmium	ND	mg/L		0.005			1	E200.8	03/04/09 20:05/eli-c
Chromium	ND	mg/L		0.05			1	E200.8	03/04/09 20:05/eli-c
Copper	ND	mg/L		0.01			1	E200.8	03/04/09 20:05/eli-c
Iron	1.16	mg/L		0.03			5	E200.7	03/06/09 21:59/eli-c
Lead	ND	mg/L		0.001			1	E200.8	03/04/09 20:05/eli-c
Manganese	2.42	mg/L		0.01			1	E200.8	03/04/09 20:05/eli-c
Mercury	ND	mg/L		0.001			1	E200.8	03/04/09 20:05/eli-c
Molybdenum	ND	mg/L		0.1			1	E200.8	03/04/09 20:05/eli-c
Nickel	ND	mg/L		0.05			1	E200.8	03/04/09 20:05/eli-c
Selenium	ND	mg/L		0.001			1	A3114 B	03/09/09 10:49/eli-c
Silver	ND	mg/L		0.005			1	E200.8	03/04/09 20:05/eli-c
Thorium 232	ND	mg/L		0.005			1	E200.8	03/04/09 20:05/eli-c
Uranium	0.104	mg/L		0.0003			1	E200.8	03/04/09 20:05/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.





# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 20:05/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 20:05/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0047	mg/L		0.0003		1	E200.8	03/10/09 03:28/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:02/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1490	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	38.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	9.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	373	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	10.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	9.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	2.1	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.068	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.51	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.25	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	349	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	3.0	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	0.05	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	440	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	56	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.1	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	1.1	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.82	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.91	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	12.5	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	1	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	0.4	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	42600	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	293	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 04:25/eli-c
Arsenic	0.003	mg/L	L	0.002		1	E200.8	03/10/09 04:25/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/10/09 04:25/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/16/09 22:41/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 16:45/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 04:25/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 04:25/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 04:25/eli-c
Iron	4.28	mg/L		0.03		1	E200.8	03/10/09 04:25/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 04:25/eli-c
Manganese	2.6	mg/L	D	0.1		5	E200.7	03/10/09 16:45/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:22/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/16/09 22:41/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 04:25/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 04:25/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 04:25/eli-c
Strontium	4.7	mg/L		0.1		1	E200.8	03/10/09 04:25/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 04:25/eli-c
Uranium	0.110	mg/L		0.0003		1	E200.8	03/10/09 04:25/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/10/09 04:25/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.91	%				1	A1030 E	04/14/09 00:00/ADM
Anions	31.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	32.5	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	2060	mg/L				1	A1030 E	04/14/09 00:00/ADM

<b>Report</b>	RL - Analyte reporting limit.	MCL - Maximum contaminant level.	Page 18 of 57
<b>Definitions:</b>	QCL - Quality control limit.	ND - Not detected at the reporting limit.	
	MDC - Minimum detectable concentration	D - RL increased due to sample matrix interference.	
	L - Lowest available reporting limit for the analytical method used.	U - Not detected at minimum detectable concentration	



### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-005  
**Client Sample ID:** DewBurd GW698

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 12:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	1.09					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-006  
**Client Sample ID:** DewBurd GW688

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:23  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	166	mg/L		5		1	A2320 B	03/03/09 14:30/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	03/03/09 14:30/mb
Bicarbonate as HCO3	202	mg/L		5		1	A2320 B	03/03/09 14:30/mb
Calcium	52	mg/L	D	6		5	E200.7	03/06/09 22:03/eli-c
Chloride	11	mg/L		1		1	E300.0	02/26/09 03:07/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	02/26/09 03:07/jmh
Magnesium	21.4	mg/L		0.5		5	E200.7	03/06/09 22:03/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	02/27/09 15:32/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 03:07/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 03:07/jmh
Potassium	12.1	mg/L		0.5		5	E200.7	03/06/09 22:03/eli-c
Sodium	181	mg/L		0.5		5	E200.7	03/06/09 22:03/eli-c
Sulfate	460	mg/L	D	3		50	E300.0	02/26/09 02:51/jmh
Silica	7.5	mg/L		0.2		5	E200.7	03/06/09 22:03/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1200	umhos/cm		5.0		1	A2510 B	02/27/09 12:49/tb
Oxidation-Reduction Potential	120	mV				1	A2580 B	03/02/09 11:00/jmh
pH	8.03	s.u.		0.01		1	A4500-H B	02/27/09 11:01/tb
Sodium Adsorption Ratio (SAR)	5.3	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	830	mg/L		5		1	A2540 C	03/02/09 09:58/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 20:12/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	03/04/09 20:12/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 20:12/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 22:03/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 20:12/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 20:12/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 20:12/eli-c
Iron	0.03	mg/L		0.03		5	E200.7	03/06/09 22:03/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 20:12/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	03/04/09 20:12/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 20:12/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 20:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 20:12/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:51/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 20:12/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 20:12/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/04/09 20:12/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-006  
**Client Sample ID:** DewBurd GW688

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:23  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 20:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 20:12/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:32/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:04/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	28.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	4.3	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	4.2	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	19.2	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	3.2	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	4.8	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	-1	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	3.2	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	5.4	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.45	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.43	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.41	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	7.9	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	0.03	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-0.9	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	-0.054	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.26	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.73	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-006  
**Client Sample ID:** DewBurd GW688

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:23  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	0.2	pCi/L	U			1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	0.1	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	218	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	67.9	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 04:31/eli-c
Arsenic	0.003	mg/L	L	0.002		1	E200.8	03/10/09 04:31/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/10/09 04:31/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/16/09 23:15/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 16:50/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 04:31/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 04:31/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 04:31/eli-c
Iron	0.44	mg/L		0.03		1	E200.8	03/10/09 04:31/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 04:31/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	03/16/09 23:15/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:24/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/16/09 23:15/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 04:31/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 04:31/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 04:31/eli-c
Strontium	1.3	mg/L		0.1		1	E200.8	03/10/09 04:31/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 04:31/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	03/10/09 04:31/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	03/10/09 04:31/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.71	%				1	A1030 E	04/14/09 00:00/ADM
Anions	13.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	12.6	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	858	mg/L				1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
MDC - Minimum detectable concentration  
L - Lowest available reporting limit for the analytical method used.

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-006  
**Client Sample ID:** DewBurd GW688

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:23  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
DATA QUALITY									
TDS Balance (0.80 - 1.20)	0.960						1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-007  
**Client Sample ID:** DewBurd GW680

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	250	mg/L		5		1	A2320 B	03/03/09 14:33/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:33/mb
Bicarbonate as HCO <sub>3</sub>	305	mg/L		5		1	A2320 B	03/03/09 14:33/mb
Calcium	365	mg/L	D	6		5	E200.7	03/06/09 22:30/eli-c
Chloride	13	mg/L		1		1	E300.0	02/26/09 04:13/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	02/26/09 04:13/jmh
Magnesium	121	mg/L		0.5		5	E200.7	03/06/09 22:30/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:34/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 04:13/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 04:13/jmh
Potassium	19.2	mg/L		0.5		5	E200.7	03/06/09 22:30/eli-c
Sodium	145	mg/L		0.5		5	E200.7	03/06/09 22:30/eli-c
Sulfate	1400	mg/L	D	3		50	E300.0	02/26/09 03:23/jmh
Silica	8.6	mg/L		0.2		5	E200.7	03/06/09 22:30/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	2530	umhos/cm		5.0		1	A2510 B	02/27/09 12:50/tb
Oxidation-Reduction Potential	140	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.16	s.u.		0.01		1	A4500-H B	02/27/09 11:03/tb
Sodium Adsorption Ratio (SAR)	1.7	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		5		1	A2540 C	03/02/09 09:59/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 20:19/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	03/04/09 20:19/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 20:19/eli-c
Boron	0.2	mg/L		0.1		5	E200.7	03/06/09 22:30/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 20:19/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 20:19/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 20:19/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 22:30/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 20:19/eli-c
Manganese	0.44	mg/L		0.01		1	E200.8	03/04/09 20:19/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 20:19/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 20:19/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 20:19/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 10:58/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 20:19/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 20:19/eli-c
Uranium	0.0185	mg/L		0.0003		1	E200.8	03/04/09 20:19/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R09020293-007  
Client Sample ID: DewBurd GW680

Report Date: 04/14/09  
Collection Date: 02/24/09 13:35  
Date Received: 02/25/09  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 20:19/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 20:19/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:36/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:11/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	5140	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	73.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	10.4	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	1210	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	17.1	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	9.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	10.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.069	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.45	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.23	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	1330	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	6.1	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.009	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	80	pCi/L				1	E901.1	03/06/09 09:10/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	4.1	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.64	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.53	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.49	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Radium 226	6.4	pCi/L				1	E903.0	03/17/09 13:12/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-007  
**Client Sample ID:** DewBurd GW680

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 13:35  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - SUSPENDED								
Radium 226 precision (±)	0.7	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	0.03	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	56800	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	334	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/09/09 14:14/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	03/09/09 14:14/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 22:39/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/09/09 14:14/eli-c
Boron	0.1	mg/L		0.1		1	E200.8	03/09/09 14:14/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/09/09 14:14/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/09/09 14:14/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/09/09 14:14/eli-c
Iron	0.24	mg/L		0.03		1	E200.8	03/09/09 14:14/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/09/09 14:14/eli-c
Manganese	0.44	mg/L		0.01		1	E200.8	03/06/09 03:42/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:27/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/09/09 14:14/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/09/09 14:14/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/09/09 14:14/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/09/09 14:14/eli-c
Strontium	7.2	mg/L		0.1		1	E200.8	03/09/09 14:14/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/09/09 14:14/eli-c
Uranium	0.0206	mg/L		0.0003		1	E200.8	03/09/09 14:14/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/09/09 14:14/eli-c
DATA QUALITY								
A/C Balance (± 5)	0.760	%				1	A1030 E	04/14/09 00:00/ADM
Anions	34.4	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	35.0	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	2230	mg/L				1	A1030 E	04/14/09 00:00/ADM
TDS Balance (0.80 - 1.20)	1.04					1	A1030 E	04/14/09 00:00/ADM

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	178	mg/L		5		1	A2320 B	03/03/09 14:35/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:35/mb
Bicarbonate as HCO <sub>3</sub>	217	mg/L		5		1	A2320 B	03/03/09 14:35/mb
Calcium	85	mg/L	D	6		5	E200.7	03/06/09 22:43/eli-c
Chloride	10	mg/L		1		1	E300.0	02/26/09 05:18/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	02/26/09 05:18/jmh
Magnesium	30.5	mg/L		0.5		5	E200.7	03/06/09 22:43/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:35/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 05:18/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 05:18/jmh
Potassium	10.8	mg/L		0.5		5	E200.7	03/06/09 22:43/eli-c
Sodium	167	mg/L		0.5		5	E200.7	03/06/09 22:43/eli-c
Sulfate	495	mg/L	D	3		50	E300.0	02/26/09 04:29/jmh
Silica	7.3	mg/L		0.2		5	E200.7	03/06/09 22:43/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1230	umhos/cm		5.0		1	A2510 B	02/27/09 12:55/tb
Oxidation-Reduction Potential	130	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.58	s.u.		0.01		1	A4500-H B	02/27/09 11:04/tb
Sodium Adsorption Ratio (SAR)	3.9	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	03/02/09 10:00/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 20:53/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 20:53/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 20:53/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 22:43/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 20:53/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 20:53/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 20:53/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 22:43/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 20:53/eli-c
Manganese	0.18	mg/L		0.01		1	E200.8	03/04/09 20:53/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 20:53/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 20:53/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 20:53/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:00/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 20:53/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 20:53/eli-c
Uranium	0.0053	mg/L		0.0003		1	E200.8	03/04/09 20:53/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 20:53/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 20:53/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:40/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:14/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	44.3	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Gross Alpha precision (±)	5.3	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Gross Alpha MDC	4.6	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Gross Beta	19.7	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Gross Beta precision (±)	3.2	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Gross Beta MDC	4.8	pCi/L				1	E900.0	03/11/09 22:56/eli-c
Lead 210	0.7	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.16	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.46	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	7.9	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.5	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.01	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.1	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.30	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.36	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.47	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226	0.5	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 13:12/eli-c
Thorium 230	-0.09	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1360	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	81.2	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 04:38/eli-c
Arsenic	0.004	mg/L	L	0.002		1	E200.8	03/10/09 04:38/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/10/09 04:38/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/16/09 23:22/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 16:54/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 04:38/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 04:38/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 04:38/eli-c
Iron	1.40	mg/L		0.03		1	E200.8	03/10/09 04:38/eli-c
Lead	0.002	mg/L		0.001		1	E200.8	03/10/09 04:38/eli-c
Manganese	0.2	mg/L	D	0.1		5	E200.7	03/10/09 16:54/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/02/09 11:29/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/16/09 23:22/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 04:38/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 04:38/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 04:38/eli-c
Strontium	1.6	mg/L		0.1		1	E200.8	03/10/09 04:38/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 04:38/eli-c
Uranium	0.0051	mg/L		0.0003		1	E200.8	03/10/09 04:38/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	03/10/09 04:38/eli-c
DATA QUALITY								
A/C Balance (± 5)	0.620	%				1	A1030 E	04/14/09 00:00/ADM
Anions	14.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	14.3	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	925	mg/L				1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
MDC - Minimum detectable concentration  
L - Lowest available reporting limit for the analytical method used.

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-008  
**Client Sample ID:** DewBurd GW622

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>DATA QUALITY</b>								
TDS Balance (0.80 - 1.20)	0.970					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-009  
**Client Sample ID:** DewBurd GW615

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	138	mg/L		5		1	A2320 B	03/03/09 14:39/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:39/mb
Bicarbonate as HCO <sub>3</sub>	168	mg/L		5		1	A2320 B	03/03/09 14:39/mb
Calcium	69	mg/L	D	1		1	E200.7	03/06/09 22:48/eli-c
Chloride	5	mg/L		1		1	E300.0	02/26/09 05:51/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	02/26/09 05:51/jmh
Magnesium	21.0	mg/L		0.5		1	E200.7	03/06/09 22:48/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:36/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 05:51/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 05:51/jmh
Potassium	8.4	mg/L		0.5		1	E200.7	03/06/09 22:48/eli-c
Sodium	124	mg/L		0.5		1	E200.7	03/06/09 22:48/eli-c
Sulfate	398	mg/L	D	3		50	E300.0	02/26/09 05:35/jmh
Silica	7.8	mg/L		0.2		1	E200.7	03/06/09 22:48/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	971	umhos/cm		5.0		1	A2510 B	02/27/09 12:57/tb
Oxidation-Reduction Potential	130	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.23	s.u.		0.01		1	A4500-H B	02/27/09 11:06/tb
Sodium Adsorption Ratio (SAR)	3.3	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	730	mg/L		5		1	A2540 C	03/02/09 10:02/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 21:00/eli-c
Arsenic	0.012	mg/L		0.001		1	E200.8	03/04/09 21:00/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 21:00/eli-c
Boron	ND	mg/L		0.1		1	E200.7	03/06/09 22:48/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 21:00/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 21:00/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 21:00/eli-c
Iron	0.06	mg/L		0.03		1	E200.7	03/06/09 22:48/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 21:00/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	03/04/09 21:00/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 21:00/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 21:00/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 21:00/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:03/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 21:00/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 21:00/eli-c
Uranium	0.0025	mg/L		0.0003		1	E200.8	03/04/09 21:00/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-009  
**Client Sample ID:** DewBurd GW615

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 21:00/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 21:00/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:44/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:16/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	14.8	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	3.1	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	3.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	10.5	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	2.6	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	4.1	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	0.9	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.14	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.46	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.27	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	2.3	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.002	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.5	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.15	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.46	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-009  
**Client Sample ID:** DewBurd GW615

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	0.06	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	0.07	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1590	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	83.6	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/09/09 14:20/eli-c
Arsenic	0.022	mg/L		0.001		1	E200.8	03/09/09 14:20/eli-c
Barium	ND	mg/L		0.1		1	E200.7	03/06/09 22:52/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/09/09 14:20/eli-c
Boron	ND	mg/L		0.1		1	E200.7	03/06/09 22:52/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/09/09 14:20/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/09/09 14:20/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/09/09 14:20/eli-c
Iron	1.31	mg/L		0.03		1	E200.7	03/06/09 22:52/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/09/09 14:20/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	03/06/09 03:48/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:10/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/09/09 14:20/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/09/09 14:20/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/09/09 14:20/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/09/09 14:20/eli-c
Strontium	1.3	mg/L		0.1		1	E200.7	03/06/09 22:52/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/09/09 14:20/eli-c
Uranium	0.0024	mg/L		0.0003		1	E200.8	03/09/09 14:20/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/09/09 14:20/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.02	%				1	A1030 E	04/14/09 00:00/ADM
Anions	11.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	10.8	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	729	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-009  
**Client Sample ID:** DewBurd GW615

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 15:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL	DF			
DATA QUALITY									
TDS Balance (0.80 - 1.20)	1.00						1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-010  
**Client Sample ID:** DewBurd GW689

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:04  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	148	mg/L		5		1	A2320 B	03/03/09 14:46/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:46/mb
Bicarbonate as HCO <sub>3</sub>	180	mg/L		5		1	A2320 B	03/03/09 14:46/mb
Calcium	45	mg/L	D	6		5	E200.7	03/06/09 22:57/eli-c
Chloride	5	mg/L		1		1	E300.0	02/26/09 06:24/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	02/26/09 06:24/jmh
Magnesium	14.0	mg/L		0.5		5	E200.7	03/06/09 22:57/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:37/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 06:24/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 06:24/jmh
Potassium	8.5	mg/L		0.5		5	E200.7	03/06/09 22:57/eli-c
Sodium	158	mg/L		0.5		5	E200.7	03/06/09 22:57/eli-c
Sulfate	380	mg/L	D	3		50	E300.0	02/26/09 06:08/jmh
Silica	8.3	mg/L		0.2		5	E200.7	03/06/09 22:57/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1040	umhos/cm		5.0		1	A2510 B	02/27/09 13:02/tb
Oxidation-Reduction Potential	130	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.77	s.u.		0.01		1	A4500-H B	02/27/09 11:07/tb
Sodium Adsorption Ratio (SAR)	2.4	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	690	mg/L		5		1	A2540 C	03/02/09 10:02/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 21:27/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 21:27/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 21:27/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 22:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 21:27/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 21:27/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 21:27/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 22:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 21:27/eli-c
Manganese	0.04	mg/L		0.01		1	E200.8	03/04/09 21:27/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 21:27/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 21:27/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 21:27/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:05/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 21:27/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 21:27/eli-c
Uranium	0.0030	mg/L		0.0003		1	E200.8	03/04/09 21:27/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-010  
**Client Sample ID:** DewBurd GW689

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:04  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 21:27/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 21:27/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:49/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:18/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	23.9	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha precision (±)	3.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Alpha MDC	3.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta	12.0	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta precision (±)	3.0	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Gross Beta MDC	4.7	pCi/L				1	E900.0	03/11/09 22:56/eli-ca
Lead 210	0.5	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.44	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	1.0	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.65	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	5.4	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.001	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	0.0	pCi/L	U			1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	20	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-2	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.35	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.43	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.56	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-010  
**Client Sample ID:** DewBurd GW689

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:04  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	-0.2	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	0.2	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1810	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	86.0	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 04:44/eli-c
Arsenic	0.003	mg/L	L	0.002		1	E200.8	03/10/09 04:44/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/10/09 04:44/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/16/09 23:29/eli-c
Boron	ND	mg/L		0.1		1	E200.7	03/10/09 16:59/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 04:44/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 04:44/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 04:44/eli-c
Iron	0.60	mg/L		0.03		1	E200.8	03/10/09 04:44/eli-c
Lead	0.001	mg/L		0.001		1	E200.8	03/10/09 04:44/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	03/16/09 23:29/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:17/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/16/09 23:29/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 04:44/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 04:44/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 04:44/eli-c
Strontium	0.9	mg/L		0.1		1	E200.8	03/10/09 04:44/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 04:44/eli-c
Uranium	0.0032	mg/L		0.0003		1	E200.8	03/10/09 04:44/eli-c
Zinc	0.02	mg/L		0.01		1	E200.8	03/10/09 04:44/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.77	%				1	A1030 E	04/14/09 00:00/ADM
Anions	11.1	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	10.5	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	722	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
L - Lowest available reporting limit for the analytical method used.

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U - Not detected at minimum detectable concentration



### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-010  
**Client Sample ID:** DewBurd GW689

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:04  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>DATA QUALITY</b>								
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-011  
**Client Sample ID:** DewBurd GW681

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:18  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	174	mg/L		5		1	A2320 B	03/03/09 14:48/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:48/mb
Bicarbonate as HCO <sub>3</sub>	212	mg/L		5		1	A2320 B	03/03/09 14:48/mb
Calcium	63	mg/L	D	6		5	E200.7	03/06/09 23:01/eli-c
Chloride	13	mg/L		1		1	E300.0	02/26/09 07:30/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	02/26/09 07:30/jmh
Magnesium	24.4	mg/L		0.5		5	E200.7	03/06/09 23:01/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:41/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 07:30/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 07:30/jmh
Potassium	10.3	mg/L		0.5		5	E200.7	03/06/09 23:01/eli-c
Sodium	200	mg/L		0.5		5	E200.7	03/06/09 23:01/eli-c
Sulfate	479	mg/L	D	3		50	E300.0	02/26/09 06:40/jmh
Silica	7.9	mg/L		0.2		5	E200.7	03/06/09 23:01/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1300	umhos/cm		5.0		1	A2510 B	02/27/09 13:03/tb
Oxidation-Reduction Potential	140	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.83	s.u.		0.01		1	A4500-H B	02/27/09 11:10/tb
Sodium Adsorption Ratio (SAR)	5.4	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	900	mg/L		5		1	A2540 C	03/02/09 10:03/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 21:33/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	03/04/09 21:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 21:33/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 23:01/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 21:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 21:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 21:33/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 23:01/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 21:33/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	03/04/09 21:33/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 21:33/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 21:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 21:33/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:12/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 21:33/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 21:33/eli-c
Uranium	0.0092	mg/L		0.0003		1	E200.8	03/04/09 21:33/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-011  
**Client Sample ID:** DewBurd GW681

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:18  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 21:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 21:33/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 03:53/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:25/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	1460	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha precision (±)	26.4	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha MDC	4.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta	402	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta precision (±)	7.9	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta MDC	5.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Lead 210	37.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	3.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	5.4	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.28	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.46	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.35	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	336	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	3.0	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.001	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	6000	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	350	pCi/L				1	E901.1	03/06/09 09:10/eli-c
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	25.9	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	2.3	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	1.1	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.62	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Radium 226	1.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-011  
**Client Sample ID:** DewBurd GW681

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:18  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	0.1	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	389000	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	851	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 05:49/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	03/10/09 05:49/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 23:06/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/11/09 06:10/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 19:34/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 05:49/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 05:49/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 05:49/eli-c
Iron	0.04	mg/L		0.03		1	E200.8	03/10/09 05:49/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 05:49/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	03/06/09 03:54/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:19/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/11/09 06:10/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 05:49/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 05:49/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 05:49/eli-c
Strontium	1.2	mg/L		0.1		1	E200.8	03/10/09 05:49/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 05:49/eli-c
Uranium	0.0086	mg/L		0.0003		1	E200.8	03/10/09 05:49/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/10/09 05:49/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.990	%				1	A1030 E	04/14/09 00:00/ADM
Anions	13.9	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	14.1	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	916	mg/L				1	A1030 E	04/14/09 00:00/ADM
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	04/14/09 00:00/ADM

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-012  
**Client Sample ID:** DewBurd GW697

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	166	mg/L		5		1	A2320 B	03/03/09 14:51/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	03/03/09 14:51/mb
Bicarbonate as HCO3	202	mg/L		5		1	A2320 B	03/03/09 14:51/mb
Calcium	52	mg/L	D	6		5	E200.7	03/06/09 23:11/eli-c
Chloride	8	mg/L		1		1	E300.0	02/26/09 08:35/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	02/26/09 08:35/jmh
Magnesium	16.8	mg/L		0.5		5	E200.7	03/06/09 23:11/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	02/27/09 15:44/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 08:35/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 08:35/jmh
Potassium	9.2	mg/L		0.5		5	E200.7	03/06/09 23:11/eli-c
Sodium	201	mg/L		0.5		5	E200.7	03/06/09 23:11/eli-c
Sulfate	436	mg/L	D	3		50	E300.0	02/26/09 07:46/jmh
Silica	8.0	mg/L		0.2		5	E200.7	03/06/09 23:11/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1210	umhos/cm		5.0		1	A2510 B	02/27/09 13:05/tb
Oxidation-Reduction Potential	140	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.90	s.u.		0.01		1	A4500-H B	02/27/09 11:11/tb
Sodium Adsorption Ratio (SAR)	6.2	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	820	mg/L		5		1	A2540 C	03/02/09 10:04/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 21:40/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 21:40/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 21:40/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 23:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 21:40/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 21:40/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 21:40/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 23:11/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 21:40/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	03/04/09 21:40/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 21:40/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 21:40/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 21:40/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:14/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 21:40/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 21:40/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/04/09 21:40/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



LABORATORY ANALYTICAL REPORT

Client: RESPEC Inc  
Project: Edgemont  
Lab ID: R09020293-012  
Client Sample ID: DewBurd GW697

Report Date: 04/14/09  
Collection Date: 02/24/09 16:45  
Date Received: 02/25/09  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - DISSOLVED								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 21:40/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 21:40/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 04:13/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:27/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	18.2	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha precision (±)	3.8	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha MDC	4.3	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta	11.0	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta precision (±)	3.0	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta MDC	4.8	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Lead 210	1.0	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.034	pCi/L	U			1	E912.0	03/10/09 13:10/eli-c
Polonium 210 MDC	0.62	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Polonium 210 precision (±)	0.28	pCi/L				1	E912.0	03/10/09 13:10/eli-c
Radium 226	5.6	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1100	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	180	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-2	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	-0.019	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.21	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.55	pCi/L				1	E912.0	03/23/09 07:21/eli-c

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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Definitions: QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-012  
**Client Sample ID:** DewBurd GW697

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	-0.2	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	0.05	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	236	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	66.5	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 05:56/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/10/09 05:56/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 23:29/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/11/09 06:16/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 19:38/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 05:56/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 05:56/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 05:56/eli-c
Iron	0.09	mg/L		0.03		1	E200.8	03/10/09 05:56/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 05:56/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	03/06/09 04:01/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:21/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/11/09 06:16/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 05:56/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 05:56/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 05:56/eli-c
Strontium	1.1	mg/L		0.1		1	E200.8	03/10/09 05:56/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 05:56/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 05:56/eli-c
Zinc	0.03	mg/L		0.01		1	E200.8	03/10/09 05:56/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.29	%				1	A1030 E	04/14/09 00:00/ADM
Anions	12.6	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	13.0	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	845	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

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

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Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-012  
**Client Sample ID:** DewBurd GW697

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:45  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-013  
**Client Sample ID:** DewBurd GW695

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:56  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	178	mg/L		5		1	A2320 B	03/03/09 14:53/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:53/mb
Bicarbonate as HCO <sub>3</sub>	217	mg/L		5		1	A2320 B	03/03/09 14:53/mb
Calcium	50	mg/L	D	6		5	E200.7	03/06/09 23:42/eli-c
Chloride	12	mg/L		1		1	E300.0	02/26/09 09:08/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	02/26/09 09:08/jmh
Magnesium	17.6	mg/L		0.5		5	E200.7	03/06/09 23:42/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:45/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 09:08/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 09:08/jmh
Potassium	9.8	mg/L		0.5		5	E200.7	03/06/09 23:42/eli-c
Sodium	225	mg/L		0.5		5	E200.7	03/06/09 23:42/eli-c
Sulfate	494	mg/L	D	3		50	E300.0	02/26/09 08:52/jmh
Silica	7.6	mg/L		0.2		5	E200.7	03/06/09 23:42/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1350	umhos/cm		5.0		1	A2510 B	02/27/09 13:11/tb
Oxidation-Reduction Potential	140	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.86	s.u.		0.01		1	A4500-H B	02/27/09 11:12/tb
Sodium Adsorption Ratio (SAR)	7.0	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	910	mg/L		5		1	A2540 C	03/02/09 10:04/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 21:47/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 21:47/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 21:47/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 23:42/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 21:47/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 21:47/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 21:47/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 23:42/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 21:47/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	03/04/09 21:47/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 21:47/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 21:47/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 21:47/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:16/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 21:47/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 21:47/eli-c
Uranium	0.0028	mg/L		0.0003		1	E200.8	03/04/09 21:47/eli-c

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-013  
**Client Sample ID:** DewBurd GW695

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:56  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 21:47/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 21:47/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 04:18/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:30/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	18.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha precision (±)	4.1	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha MDC	4.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta	12.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta precision (±)	3.6	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta MDC	5.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Lead 210	0.9	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	0.16	pCi/L	U			1	E912.0	03/11/09 12:08/eli-c
Polonium 210 MDC	0.74	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Polonium 210 precision (±)	0.40	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Radium 226	4.7	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	03/11/09 15:45/eli-c
Thorium 230	-0.02	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1200	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	180	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.1	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.25	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.48	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.83	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-013  
**Client Sample ID:** DewBurd GW695

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:56  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226	-0.1	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	0.02	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
RADIONUCLIDES - TOTAL								
Radon 222	1600	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	83.2	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 06:02/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/10/09 06:02/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 23:47/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/11/09 06:23/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 19:52/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 06:02/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 06:02/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 06:02/eli-c
Iron	0.23	mg/L		0.03		1	E200.8	03/10/09 06:02/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 06:02/eli-c
Manganese	0.08	mg/L		0.01		1	E200.8	03/06/09 04:07/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:24/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/11/09 06:23/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 06:02/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 06:02/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 06:02/eli-c
Strontium	0.9	mg/L		0.1		1	E200.8	03/10/09 06:02/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 06:02/eli-c
Uranium	0.0027	mg/L		0.0003		1	E200.8	03/10/09 06:02/eli-c
Zinc	0.01	mg/L		0.01		1	E200.8	03/10/09 06:02/eli-c
DATA QUALITY								
A/C Balance (± 5)	-0.610	%				1	A1030 E	04/14/09 00:00/ADM
Anions	14.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	14.0	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	937	mg/L				1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix interference.

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-013  
**Client Sample ID:** DewBurd GW695

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 16:56  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.970					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	206	mg/L		5		1	A2320 B	03/03/09 14:55/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:55/mb
Bicarbonate as HCO <sub>3</sub>	251	mg/L		5		1	A2320 B	03/03/09 14:55/mb
Calcium	99	mg/L	D	6		5	E200.7	03/06/09 23:51/eli-c
Chloride	9	mg/L		1		1	E300.0	02/26/09 09:41/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	02/26/09 09:41/jmh
Magnesium	35.5	mg/L		0.5		5	E200.7	03/06/09 23:51/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:46/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 09:41/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 09:41/jmh
Potassium	13.6	mg/L		0.5		5	E200.7	03/06/09 23:51/eli-c
Sodium	171	mg/L		0.5		5	E200.7	03/06/09 23:51/eli-c
Sulfate	518	mg/L	D	3		50	E300.0	02/26/09 09:25/jmh
Silica	8.7	mg/L		0.2		5	E200.7	03/06/09 23:51/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1340	umhos/cm		5.0		1	A2510 B	02/27/09 13:13/tb
Oxidation-Reduction Potential	150	mV				1	A2580 B	03/02/09 11:00/jmh
pH	7.55	s.u.		0.01		1	A4500-H B	02/27/09 11:14/tb
Sodium Adsorption Ratio (SAR)	3.7	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	970	mg/L		5		1	A2540 C	03/02/09 10:05/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 22:21/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/04/09 22:21/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 22:21/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/06/09 23:51/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 22:21/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 22:21/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 22:21/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/06/09 23:51/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 22:21/eli-c
Manganese	0.15	mg/L		0.01		1	E200.8	03/04/09 22:21/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 22:21/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 22:21/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 22:21/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:23/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 22:21/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 22:21/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	03/04/09 22:21/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 22:21/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 22:21/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 04:22/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:36/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/09/09 13:39/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	8.3	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Gross Alpha precision (±)	3.5	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Gross Alpha MDC	4.9	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Gross Beta	10.9	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Gross Beta precision (±)	3.6	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Gross Beta MDC	5.7	pCi/L				1	E900.0	03/12/09 11:11/eli-c
Lead 210	1.3	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	-0.031	pCi/L	U			1	E912.0	03/11/09 12:08/eli-c
Polonium 210 MDC	0.52	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Polonium 210 precision (±)	0.19	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Radium 226	2.2	pCi/L				1	E903.0	03/11/09 17:31/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/11/09 17:31/eli-c
Thorium 230	0.05	pCi/L	U			1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1600	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	230	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-0.2	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.31	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.38	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.50	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	-0.1	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	-0.09	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.4	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	235	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	66.3	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 06:09/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/10/09 06:09/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/06/09 23:56/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/11/09 06:43/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 20:01/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 06:09/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 06:09/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 06:09/eli-c
Iron	0.11	mg/L		0.03		1	E200.8	03/10/09 06:09/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 06:09/eli-c
Manganese	0.17	mg/L		0.01		1	E200.8	03/06/09 04:14/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:26/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/11/09 06:43/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 06:09/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 06:09/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 06:09/eli-c
Strontium	2.7	mg/L		0.1		1	E200.8	03/10/09 06:09/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 06:09/eli-c
Uranium	0.0005	mg/L		0.0003		1	E200.8	03/10/09 06:09/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/10/09 06:09/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.67	%				1	A1030 E	04/14/09 00:00/ADM
Anions	15.2	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	15.7	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	994	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-014  
**Client Sample ID:** DewBurd GW694

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:15  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-015  
**Client Sample ID:** DewBurd GW696

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	182	mg/L		5		1	A2320 B	03/03/09 14:58/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/03/09 14:58/mb
Bicarbonate as HCO <sub>3</sub>	222	mg/L		5		1	A2320 B	03/03/09 14:58/mb
Calcium	31	mg/L	D	6		5	E200.7	03/07/09 00:00/eli-c
Chloride	12	mg/L		1		1	E300.0	02/26/09 10:30/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	02/26/09 10:30/jmh
Magnesium	10.7	mg/L		0.5		5	E200.7	03/07/09 00:00/eli-c
Nitrogen, Ammonia as N	0.4	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/27/09 15:47/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/26/09 10:30/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/26/09 10:30/jmh
Potassium	10.1	mg/L		0.5		5	E200.7	03/07/09 00:00/eli-c
Sodium	273	mg/L		0.5		5	E200.7	03/07/09 00:00/eli-c
Sulfate	470	mg/L		1		10	E300.0	02/27/09 01:45/jmh
Silica	8.8	mg/L		0.2		5	E200.7	03/07/09 00:00/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1290	umhos/cm		5.0		1	A2510 B	02/27/09 13:14/tb
Oxidation-Reduction Potential	130	mV				1	A2580 B	03/02/09 11:00/jmh
pH	8.08	s.u.		0.01		1	A4500-H B	02/27/09 11:16/tb
Sodium Adsorption Ratio (SAR)	11	unitless		0.10		1	Calculation	04/07/09 09:24/ADM
Solids, Total Dissolved TDS @ 180 C	920	mg/L		5		1	A2540 C	03/02/09 10:06/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	03/04/09 22:28/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/04/09 22:28/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/04/09 22:28/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/07/09 00:00/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/04/09 22:28/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/04/09 22:28/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/04/09 22:28/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/07/09 00:00/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/04/09 22:28/eli-c
Manganese	0.06	mg/L		0.01		1	E200.8	03/04/09 22:28/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/04/09 22:28/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	03/04/09 22:28/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/04/09 22:28/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/09/09 11:25/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/04/09 22:28/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/04/09 22:28/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/04/09 22:28/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix interference.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-015  
**Client Sample ID:** DewBurd GW696

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Vanadium	ND	mg/L		0.1		1	E200.8	03/04/09 22:28/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/04/09 22:28/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 04:26/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/06/09 14:39/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/26/09 15:17/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	4.3	pCi/L	U			1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha precision (±)	3.2	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Alpha MDC	4.8	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta	2.0	pCi/L	U			1	E900.0	03/12/09 11:11/eli-ca
Gross Beta precision (±)	3.4	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Gross Beta MDC	5.7	pCi/L				1	E900.0	03/12/09 11:11/eli-ca
Lead 210	-0.3	pCi/L	U			1	E909.0M	03/16/09 09:10/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/16/09 09:10/eli-c
Polonium 210	-0.094	pCi/L	U			1	E912.0	03/11/09 12:08/eli-c
Polonium 210 MDC	0.72	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Polonium 210 precision (±)	0.25	pCi/L				1	E912.0	03/11/09 12:08/eli-c
Radium 226	1.3	pCi/L				1	E903.0	03/11/09 17:31/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/11/09 17:31/eli-c
Thorium 230	0.2	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/13/09 12:03/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	03/06/09 09:10/eli-c
Gross Gamma precision (±)	160	pCi/L				1	E901.1	03/06/09 09:10/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.8	pCi/L	U			1	E909.0M	03/11/09 10:11/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M	03/11/09 10:11/eli-c
Polonium 210	0.045	pCi/L	U			1	E912.0	03/23/09 07:21/eli-c
Polonium 210 precision (±)	0.36	pCi/L				1	E912.0	03/23/09 07:21/eli-c
Polonium 210 MDC	0.80	pCi/L				1	E912.0	03/23/09 07:21/eli-c

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

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

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# LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-015  
**Client Sample ID:** DewBurd GW696

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	-0.2	pCi/L	U			1	E903.0	03/17/09 14:53/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	03/17/09 14:53/eli-c
Thorium 230	-0.04	pCi/L	U			1	E907.0	03/14/09 15:06/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	03/14/09 15:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	03/14/09 15:06/eli-c
- The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agent prior to using these results for compliance purposes.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	234	pCi/L		100		1	D5072-92	02/28/09 09:50/eli-c
Radon 222 precision (±)	66.2	pCi/L				1	D5072-92	02/28/09 09:50/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/10/09 06:15/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/10/09 06:15/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/07/09 00:05/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/11/09 06:50/eli-c
Boron	ND	mg/L	D	0.2		5	E200.7	03/10/09 20:06/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/10/09 06:15/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/10/09 06:15/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/10/09 06:15/eli-c
Iron	0.10	mg/L		0.03		1	E200.8	03/10/09 06:15/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/10/09 06:15/eli-c
Manganese	0.07	mg/L		0.01		1	E200.8	03/06/09 04:20/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/27/09 16:33/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/11/09 06:50/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/10/09 06:15/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/10/09 06:15/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/10/09 06:15/eli-c
Strontium	0.8	mg/L		0.1		1	E200.8	03/10/09 06:15/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/10/09 06:15/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/10/09 06:15/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/10/09 06:15/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.91	%				1	A1030 E	04/14/09 00:00/ADM
Anions	13.8	meq/L				1	A1030 E	04/14/09 00:00/ADM
Cations	14.6	meq/L				1	A1030 E	04/14/09 00:00/ADM
Solids, Total Dissolved Calculated	941	mg/L				1	A1030 E	04/14/09 00:00/ADM

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

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

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## LABORATORY ANALYTICAL REPORT

**Client:** RESPEC Inc  
**Project:** Edgemont  
**Lab ID:** R09020293-015  
**Client Sample ID:** DewBurd GW696

**Report Date:** 04/14/09  
**Collection Date:** 02/24/09 17:31  
**Date Received:** 02/25/09  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
DATA QUALITY									
TDS Balance (0.80 - 1.20)	0.980						1	A1030 E	04/14/09 00:00/ADM

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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## QA/QC Summary Report

**Client:** RESPEC Inc  
**Project:** Edgemont

**Report Date:** 04/14/09  
**Work Order:** R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>							Batch: 090303A-ALK-SEL-W		
<b>Sample ID: LCS1_090303A</b>	Laboratory Control Sample					Run: PH_COND1-R_090303A			03/03/09 13:13
Alkalinity, Total as CaCO <sub>3</sub>	964	mg/L	5.0	96	90	110			
<b>Sample ID: MBLK1_090303A</b>	Method Blank					Run: PH_COND1-R_090303A			03/03/09 13:15
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	3						
<b>Sample ID: R09020281-005BMS</b>	Sample Matrix Spike					Run: PH_COND1-R_090303A			03/03/09 13:58
Alkalinity, Total as CaCO <sub>3</sub>	356	mg/L	5.0	102	80	120			
<b>Sample ID: R09020281-005BMSD</b>	Sample Matrix Spike Duplicate					Run: PH_COND1-R_090303A			03/03/09 14:02
Alkalinity, Total as CaCO <sub>3</sub>	366	mg/L	5.0	111	80	120	2.8	10	
<b>Sample ID: R09020293-009AMS</b>	Sample Matrix Spike					Run: PH_COND1-R_090303A			03/03/09 14:41
Alkalinity, Total as CaCO <sub>3</sub>	240	mg/L	5.0	96	80	120			
<b>Sample ID: R09020293-009AMSD</b>	Sample Matrix Spike Duplicate					Run: PH_COND1-R_090303A			03/03/09 14:43
Alkalinity, Total as CaCO <sub>3</sub>	250	mg/L	5.0	106	80	120	4.1	10	
<b>Sample ID: R09020294-004AMS</b>	Sample Matrix Spike					Run: PH_COND1-R_090303A			03/03/09 15:26
Alkalinity, Total as CaCO <sub>3</sub>	118	mg/L	5.0	89	80	120			
<b>Sample ID: R09020294-004AMSD</b>	Sample Matrix Spike Duplicate					Run: PH_COND1-R_090303A			03/03/09 15:31
Alkalinity, Total as CaCO <sub>3</sub>	118	mg/L	5.0	89	80	120		10	
<b>Method: A2510 B</b>							Batch: 090227_1_COND-PROBE-W		
<b>Sample ID: LCS_COND-1_090227</b>	Laboratory Control Sample					Run: PH_COND2-R_090227A			02/27/09 12:30
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
<b>Sample ID: LCS1-1_090227</b>	Laboratory Control Sample					Run: PH_COND2-R_090227A			02/27/09 12:31
Conductivity @ 25 C	151	umhos/cm	5.0	101	90	110			
<b>Sample ID: LCS2-1_090227</b>	Laboratory Control Sample					Run: PH_COND2-R_090227A			02/27/09 12:33
Conductivity @ 25 C	4960	umhos/cm	5.0	99	90	110			
<b>Sample ID: MBLK-1_090227</b>	Method Blank					Run: PH_COND2-R_090227A			02/27/09 12:37
Conductivity @ 25 C	ND	umhos/cm	5						
<b>Sample ID: R09020293-009ADUP</b>	Sample Duplicate					Run: PH_COND2-R_090227A			02/27/09 13:00
Conductivity @ 25 C	992	umhos/cm	5.0				2.1	10	
<b>Sample ID: R09020293-015ADUP</b>	Sample Duplicate					Run: PH_COND2-R_090227A			02/27/09 13:17
Conductivity @ 25 C	1300	umhos/cm	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

Client: RESPEC Inc

Project: Edgemont

Report Date: 04/14/09

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C		Batch: 090302A-SLDS-TDS-W							
Sample ID: LCS1_090302A	Laboratory Control Sample				Run: BAL-4-R_090302B		03/02/09 09:44		
Solids, Total Dissolved TDS @ 180 C	220	mg/L	5.0	111	90	110			S
Sample ID: MBLK1_090302A	Method Blank				Run: BAL-4-R_090302B		03/02/09 09:45		
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	5						
Sample ID: R09020293-008AMS	Sample Matrix Spike				Run: BAL-4-R_090302B		03/02/09 10:00		
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	111	80	120			
Sample ID: R09020293-008AMSD	Sample Matrix Spike Duplicate				Run: BAL-4-R_090302B		03/02/09 10:01		
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	5.0	111	80	120	0	10	
Sample ID: R09020294-003AMS	Sample Matrix Spike				Run: BAL-4-R_090302B		03/02/09 10:08		
Solids, Total Dissolved TDS @ 180 C	1300	mg/L	5.0	108	80	120			
Sample ID: R09020294-003AMSD	Sample Matrix Spike Duplicate				Run: BAL-4-R_090302B		03/02/09 10:09		
Solids, Total Dissolved TDS @ 180 C	1300	mg/L	5.0	113	80	120	0.7	10	
Method: A2580 B		Batch: 090302-ORP-ISE-W							
Sample ID: LCS	Laboratory Control Sample				Run: PH_COND1-R_090302A		03/02/09 11:00		
Oxidation-Reduction Potential	480	mV		101	95	105			
Method: A3114 B		Batch: C_SE3114-090306IV							
Sample ID: MBLK	Method Blank				Run: SUB-C115572		03/06/09 13:38		
Selenium-IV	ND	mg/L	0.0002						
Sample ID: As/Se 1.0ppm-Q 03020	Laboratory Control Sample				Run: SUB-C115572		03/06/09 13:40		
Selenium-IV	0.049	mg/L	0.0010	98	90	110			
Sample ID: R09020293-001E	Sample Matrix Spike				Run: SUB-C115572		03/06/09 13:48		
Selenium-IV	0.049	mg/L	0.0010	98	85	115			
Sample ID: R09020293-001E	Sample Matrix Spike Duplicate				Run: SUB-C115572		03/06/09 13:50		
Selenium-IV	0.046	mg/L	0.0010	92	85	115	6.8	10	
Sample ID: R09020293-010E	Sample Matrix Spike				Run: SUB-C115572		03/06/09 14:20		
Selenium-IV	0.046	mg/L	0.0010	92	85	115			
Sample ID: R09020293-010E	Sample Matrix Spike Duplicate				Run: SUB-C115572		03/06/09 14:23		
Selenium-IV	0.044	mg/L	0.0010	88	85	115	4.5	10	

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 04/14/09

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B							Batch: 090227_1_PH-W		
Sample ID: LCS_pH-1_090227	Laboratory Control Sample				Run: PH_COND2-R_090227B		02/27/09 10:36		
pH	6.87	s.u.	0.010	100	98.55	101.45			
Sample ID: R09020293-004ADUP	Sample Duplicate				Run: PH_COND2-R_090227B		02/27/09 10:57		
pH	6.79	s.u.	0.010				0.4	1.25	
Sample ID: R09020293-014ADUP	Sample Duplicate				Run: PH_COND2-R_090227B		02/27/09 11:15		
pH	7.56	s.u.	0.010				0.1	1.25	
Method: A4500-NH3 G							Batch: A2009-02-27_2_NH3_01		
Sample ID: MBLK-2	Method Blank				Run: TECHAA2-R_090227A		02/27/09 10:50		
Nitrogen, Ammonia as N	0.02	mg/L	0.01						
Sample ID: LFB-3	Laboratory Fortified Blank				Run: TECHAA2-R_090227A		02/27/09 10:52		
Nitrogen, Ammonia as N	0.23	mg/L	0.10	92	90	110			
Sample ID: LFB-4	Laboratory Fortified Blank				Run: TECHAA2-R_090227A		02/27/09 11:04		
Nitrogen, Ammonia as N	0.22	mg/L	0.10	88	90	110			S
Sample ID: R09020293-003BMS	Sample Matrix Spike				Run: TECHAA2-R_090227A		02/27/09 15:28		
Nitrogen, Ammonia as N	0.62	mg/L	0.10	87	80	120			
Sample ID: R09020293-003BMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090227A		02/27/09 15:29		
Nitrogen, Ammonia as N	0.63	mg/L	0.10	92	80	120	2.1	10	
Sample ID: R09020293-011BMS	Sample Matrix Spike				Run: TECHAA2-R_090227A		02/27/09 15:42		
Nitrogen, Ammonia as N	0.31	mg/L	0.10	101	80	120			
Sample ID: R09020293-011BMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090227A		02/27/09 15:43		
Nitrogen, Ammonia as N	0.33	mg/L	0.10	105	80	120	3.4	10	
Sample ID: R09020314-001CMS	Sample Matrix Spike				Run: TECHAA2-R_090227A		02/27/09 16:10		
Nitrogen, Ammonia as N	0.20	mg/L	0.10	80	80	120			
Sample ID: R09020314-001CMSD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_090227A		02/27/09 16:11		
Nitrogen, Ammonia as N	0.18	mg/L	0.10	72	80	120	11	10	SR

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b>							Batch: C_R115409		
<b>Sample ID: R09020293-015G</b>	Sample Duplicate				Run: SUB-C115409			02/28/09 09:50	
Radon 222	234	pCi/L	100				0	30	
Radon 222 precision (±)	66.2	pCi/L							
<b>Sample ID: MB-R115409</b>	Method Blank				Run: SUB-C115409			02/28/09 09:50	
Radon 222	10	pCi/L							U
Radon 222 precision (±)	30	pCi/L							
<b>Sample ID: LCS-R115409</b>	Laboratory Control Sample				Run: SUB-C115409			02/28/09 09:50	
Radon 222	301	pCi/L	100	95	70	130			
<b>Method: E200.7</b>							Batch: C_21707		
<b>Sample ID: MB-21707</b>	Method Blank				Run: SUB-C115709			03/10/09 16:32	
Boron	ND	mg/L	0.04						
Manganese	ND	mg/L	0.02						
<b>Sample ID: LCS3-21707</b>	Laboratory Control Sample				Run: SUB-C115709			03/10/09 16:36	
Boron	0.509	mg/L	0.10	102	85	115			
Manganese	2.56	mg/L	0.020	102	85	115			
<b>Sample ID: C09030079-003CMS3</b>	Sample Matrix Spike				Run: SUB-C115709			03/10/09 17:08	
Boron	0.547	mg/L	0.10	109	70	130			
Manganese	3.00	mg/L	0.020	107	70	130			
<b>Sample ID: C09030079-003CMSD3</b>	Sample Matrix Spike Duplicate				Run: SUB-C115709			03/10/09 17:12	
Boron	0.557	mg/L	0.10	111	70	130	1.8	20	
Manganese	3.08	mg/L	0.020	110	70	130	2.6	20	

### 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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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 04/14/09

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R115623		
<b>Sample ID: C09020945-001BMS</b>	Sample Matrix Spike		Run: SUB-C115623				03/06/09 21:01		
Barium	0.561	mg/L	0.10	97	70	130			
Boron	0.518	mg/L	0.10	96	70	130			
Iron	0.561	mg/L	0.030	93	70	130			
Silicon	3.97	mg/L	0.10		70	130			A
Strontium	0.711	mg/L	0.10	110	70	130			
Calcium	67.4	mg/L	1.2	95	70	130			
Magnesium	56.9	mg/L	1.0	102	70	130			
Potassium	56.8	mg/L	1.0	95	70	130			
Sodium	83.8	mg/L	1.0	96	70	130			
Silica	8.49	mg/L	0.21		70	130			A
<b>Sample ID: C09020945-001BMSD</b>	Sample Matrix Spike Duplicate		Run: SUB-C115623				03/06/09 21:05		
Barium	0.551	mg/L	0.10	95	70	130	1.7	20	
Boron	0.509	mg/L	0.10	94	70	130	1.7	20	
Iron	0.551	mg/L	0.030	91	70	130	1.7	20	
Silicon	3.94	mg/L	0.10		70	130	0.7	20	A
Strontium	0.690	mg/L	0.10	105	70	130	3	20	
Calcium	65.7	mg/L	1.2	92	70	130	2.5	20	
Magnesium	54.1	mg/L	1.0	97	70	130	5.1	20	
Potassium	53.7	mg/L	1.0	89	70	130	5.6	20	
Sodium	80.3	mg/L	1.0	89	70	130	4.3	20	
Silica	8.43	mg/L	0.21		70	130	0.7	20	A
<b>Sample ID: C09020974-006CMS</b>	Sample Matrix Spike		Run: SUB-C115623				03/06/09 22:08		
Barium	2.40	mg/L	0.10	94	70	130			
Boron	2.36	mg/L	0.10	91	70	130			
Iron	2.33	mg/L	0.030	90	70	130			
Silicon	5.18	mg/L	0.10	65	70	130			S
Strontium	3.66	mg/L	0.10	96	70	130			
Calcium	283	mg/L	6.2	91	70	130			
Magnesium	257	mg/L	1.0	92	70	130			
Potassium	238	mg/L	1.0	89	70	130			
Sodium	405	mg/L	1.0	88	70	130			
Silica	11.1	mg/L	0.21	65	70	130			S
<b>Sample ID: C09020974-006CMSD</b>	Sample Matrix Spike Duplicate		Run: SUB-C115623				03/06/09 22:12		
Barium	2.45	mg/L	0.10	96	70	130	2	20	
Boron	2.43	mg/L	0.10	93	70	130	2.7	20	
Iron	2.39	mg/L	0.030	93	70	130	2.8	20	
Silicon	5.30	mg/L	0.10	70	70	130	2.4	20	
Strontium	3.77	mg/L	0.10	100	70	130	2.9	20	
Calcium	288	mg/L	6.2	93	70	130	1.8	20	
Magnesium	258	mg/L	1.0	93	70	130	0.3	20	
Potassium	237	mg/L	1.0	88	70	130	0.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R115623		
<b>Sample ID: C09020974-006CMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C115623			03/06/09 22:12	
Sodium	406	mg/L	1.0	88	70	130	0.3	20	
Silica	11.4	mg/L	0.21	70	70	130	2.4	20	
<b>Sample ID: R09020293-012D</b>	Sample Matrix Spike				Run: SUB-C115623			03/06/09 23:33	
Barium	2.46	mg/L	0.10	97	70	130			
Boron	2.44	mg/L	0.18	96	70	130			
Iron	2.47	mg/L	0.11	97	70	130			
Silicon	5.52	mg/L	0.11	67	70	130			S
Strontium	3.52	mg/L	0.11	95	70	130			
Calcium	291	mg/L	1.1	93	70	130			
Magnesium	250	mg/L	1.2	92	70	130			
Potassium	233	mg/L	1.0	88	70	130			
Sodium	418	mg/L	1.1	86	70	130			
Silica	11.8	mg/L	0.23	144	70	130			S
<b>Sample ID: R09020293-012D</b>	Sample Matrix Spike Duplicate				Run: SUB-C115623			03/06/09 23:38	
Barium	2.20	mg/L	0.10	86	70	130	11	20	
Boron	2.19	mg/L	0.18	86	70	130	11	20	
Iron	2.18	mg/L	0.11	86	70	130	12	20	
Silicon	4.91	mg/L	0.11	43	70	130	12	20	S
Strontium	3.30	mg/L	0.11	86	70	130	6.5	20	
Calcium	265	mg/L	1.1	83	70	130	9.3	20	
Magnesium	237	mg/L	1.2	86	70	130	5.7	20	
Potassium	233	mg/L	1.0	88	70	130	0.1	20	
Sodium	416	mg/L	1.1	85	70	130	0.5	20	
Silica	10.5	mg/L	0.23	92	70	130	12	20	
<b>Method: E200.7</b>							Batch: C_R115709		
<b>Sample ID: C09020884-001BMS</b>	Sample Matrix Spike				Run: SUB-C115709			03/10/09 18:34	
Boron	3.15	mg/L	0.10	100	70	130			
<b>Sample ID: C09020884-001BMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C115709			03/10/09 18:39	
Boron	3.09	mg/L	0.10	97	70	130	2.1	20	
<b>Sample ID: R09020293-012D</b>	Sample Matrix Spike				Run: SUB-C115709			03/10/09 19:43	
Boron	2.49	mg/L	0.18	99	70	130			
<b>Sample ID: R09020293-012D</b>	Sample Matrix Spike Duplicate				Run: SUB-C115709			03/10/09 19:48	
Boron	2.47	mg/L	0.18	99	70	130	0.5	20	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 04/14/09

Project: Edgemont

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7_8</b> Batch: C_21713									
<b>Sample ID: MB-21713</b>	Method Blank					Run: SUB-C115669			03/10/09 00:42
Uranium	8E-05	mg/L	1E-05						
<b>Sample ID: LCS2-21713</b>	Laboratory Control Sample					Run: SUB-C115669			03/10/09 00:47
Uranium	0.0800	mg/L	0.00030	80	75	125			
<b>Method: E200.7_8</b> Batch: C_R115623									
<b>Sample ID: LRB</b>	Method Blank					Run: SUB-C115623			03/06/09 12:28
Barium	ND	mg/L	0.002						
Boron	0.02	mg/L	0.006						
Iron	0.06	mg/L	0.0004						
Silicon	0.004	mg/L	0.003						
Strontium	0.002	mg/L	0.002						
Calcium	0.4	mg/L	0.02						
Magnesium	0.5	mg/L	0.01						
Potassium	0.1	mg/L	0.005						
Sodium	0.01	mg/L	0.006						
Silica	0.009	mg/L	0.005						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank					Run: SUB-C115623			03/06/09 12:33
Barium	2.53	mg/L	0.10	101	80	120			
Boron	2.55	mg/L	0.10	101	80	120			
Iron	2.50	mg/L	0.030	97	80	120			
Silicon	2.57	mg/L	0.0025	103	80	120			
Strontium	2.47	mg/L	0.10	99	80	120			
Calcium	25.0	mg/L	0.50	98	80	120			
Magnesium	24.9	mg/L	0.50	98	80	120			
Potassium	24.4	mg/L	0.50	97	80	120			
Sodium	25.1	mg/L	0.50	100	80	120			
Silica	5.50	mg/L	0.0054	103	80	120			
<b>Method: E200.7_8</b> Batch: C_R115709									
<b>Sample ID: LRB</b>	Method Blank					Run: SUB-C115709			03/10/09 14:55
Boron	0.02	mg/L	0.006						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank					Run: SUB-C115709			03/10/09 14:59
Boron	2.55	mg/L	0.10	101	80	120			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_21707		
<b>Sample ID: MB-21707</b>	Method Blank		Run: SUB-C115667				03/10/09 03:59		
Antimony	0.0008	mg/L	0.0004						
Arsenic	0.002	mg/L	4E-05						
Barium	ND	mg/L	0.0007						
Beryllium	ND	mg/L	9E-05						
Cadmium	ND	mg/L	5E-05						
Chromium	0.0005	mg/L	8E-05						
Copper	0.0002	mg/L	0.0001						
Iron	0.003	mg/L	0.002						
Lead	ND	mg/L	9E-05						
Manganese	0.00010	mg/L	4E-05						
Molybdenum	ND	mg/L	0.0001						
Nickel	ND	mg/L	6E-05						
Selenium	0.0001	mg/L	7E-05						
Silver	ND	mg/L	4E-05						
Strontium	ND	mg/L	0.0002						
Thallium	ND	mg/L	0.0003						
Uranium	ND	mg/L	7E-05						
Zinc	0.002	mg/L	0.0009						
<b>Sample ID: LCS3-21707</b>	Laboratory Control Sample		Run: SUB-C115667				03/10/09 04:06		
Antimony	0.575	mg/L	0.050	115	85	115			
Arsenic	0.495	mg/L	0.0010	99	85	115			
Barium	0.509	mg/L	0.10	102	85	115			
Beryllium	0.213	mg/L	0.010	85	85	115			
Cadmium	0.258	mg/L	0.010	103	85	115			
Chromium	0.507	mg/L	0.050	101	85	115			
Copper	0.524	mg/L	0.010	105	85	115			
Iron	2.45	mg/L	0.030	98	85	115			
Lead	0.537	mg/L	0.050	107	85	115			
Manganese	2.35	mg/L	0.010	94	85	115			
Molybdenum	0.466	mg/L	0.10	93	85	115			
Nickel	0.486	mg/L	0.050	97	85	115			
Selenium	0.499	mg/L	0.0010	100	85	115			
Silver	0.0474	mg/L	0.010	95	85	115			
Strontium	0.507	mg/L	0.10	101	85	115			
Thallium	0.530	mg/L	0.10	106	85	115			
Uranium	0.528	mg/L	0.00030	106	85	115			
Zinc	0.492	mg/L	0.010	98	85	115			
<b>Sample ID: C09030079-003CMS3</b>	Sample Matrix Spike		Run: SUB-C115667				03/10/09 05:30		
Antimony	0.586	mg/L	0.050	117	70	130			
Arsenic	0.494	mg/L	0.0010	98	70	130			
Barium	0.712	mg/L	0.10	117	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 04/14/09

Project: Edgemont

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_21707		
Sample ID: C09030079-003CMS3	Sample Matrix Spike		Run: SUB-C115667				03/10/09 05:30		
Beryllium	0.178	mg/L	0.010	71	70	130			
Cadmium	0.259	mg/L	0.010	103	70	130			
Chromium	0.513	mg/L	0.050	101	70	130			
Copper	0.521	mg/L	0.010	103	70	130			
Iron	6.01	mg/L	0.030	112	70	130			
Lead	0.545	mg/L	0.050	108	70	130			
Manganese	2.54	mg/L	0.010	90	70	130			
Molybdenum	0.453	mg/L	0.10	90	70	130			
Nickel	0.485	mg/L	0.050	96	70	130			
Selenium	0.479	mg/L	0.0010	95	70	130			
Silver	0.0471	mg/L	0.010	94	70	130			
Strontium	0.816	mg/L	0.10	101	70	130			
Thallium	0.533	mg/L	0.10	107	70	130			
Uranium	0.538	mg/L	0.00030	106	70	130			
Zinc	0.495	mg/L	0.010	96	70	130			
Sample ID: C09030079-003CMSD3	Sample Matrix Spike Duplicate		Run: SUB-C115667				03/10/09 05:36		
Antimony	0.586	mg/L	0.050	117	70	130	0	20	
Arsenic	0.494	mg/L	0.0010	98	70	130	0	20	
Barium	0.714	mg/L	0.10	117	70	130	0.2	20	
Beryllium	0.172	mg/L	0.010	69	70	130	3.7	20	S
Cadmium	0.260	mg/L	0.010	104	70	130	0.6	20	
Chromium	0.502	mg/L	0.050	99	70	130	2.1	20	
Copper	0.519	mg/L	0.010	103	70	130	0.4	20	
Iron	5.93	mg/L	0.030	109	70	130	1.4	20	
Lead	0.548	mg/L	0.050	109	70	130	0.6	20	
Manganese	2.52	mg/L	0.010	89	70	130	0.6	20	
Molybdenum	0.453	mg/L	0.10	90	70	130	0	20	
Nickel	0.484	mg/L	0.050	96	70	130	0.2	20	
Selenium	0.485	mg/L	0.0010	97	70	130	1.4	20	
Silver	0.0478	mg/L	0.010	96	70	130	1.3	20	
Strontium	0.818	mg/L	0.10	102	70	130	0.2	20	
Thallium	0.538	mg/L	0.10	108	70	130	0.9	20	
Uranium	0.547	mg/L	0.00030	108	70	130	1.7	20	
Zinc	0.493	mg/L	0.010	96	70	130	0.4	20	
Sample ID: MB-21707	Method Blank		Run: SUB-C115926				03/16/09 22:22		
Beryllium	ND	mg/L	6E-05						
Manganese	ND	mg/L	0.0001						
Molybdenum	0.0001	mg/L	9E-05						
Sample ID: LCS3-21707	Laboratory Control Sample		Run: SUB-C115926				03/16/09 22:28		
Beryllium	0.297	mg/L	0.010	119	85	115			S
Manganese	2.48	mg/L	0.010	99	85	115			

### 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

Client: RESPEC Inc

Report Date: 04/14/09

Project: Edgemont

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_21707		
<b>Sample ID: LCS3-21707</b>	Laboratory Control Sample				Run: SUB-C115926		03/16/09 22:28		
Molybdenum	0.529	mg/L	0.10	106	85	115			
- Response for Be is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.									
<b>Sample ID: C09030079-003CMS3</b>	Sample Matrix Spike				Run: SUB-C115926		03/16/09 23:42		
Beryllium	0.281	mg/L	0.010	112	70	130			
Manganese	2.73	mg/L	0.010	97	70	130			
Molybdenum	0.531	mg/L	0.10	106	70	130			
<b>Sample ID: C09030079-003CMSD3</b>	Sample Matrix Spike Duplicate				Run: SUB-C115926		03/16/09 23:49		
Beryllium	0.276	mg/L	0.010	110	70	130	1.9	20	
Manganese	2.72	mg/L	0.010	97	70	130	0.6	20	
Molybdenum	0.531	mg/L	0.10	106	70	130	0.1	20	
<b>Method: E200.8</b>							Batch: C_21713		
<b>Sample ID: R09020293-015I</b>	Post Digestion Spike				Run: SUB-C115669		03/10/09 04:30		
Uranium	0.0118	mg/L	0.00030	94	70	130			
<b>Sample ID: R09020293-015I</b>	Post Digestion Spike Duplicate				Run: SUB-C115669		03/10/09 04:34		
Uranium	0.0120	mg/L	0.00030	96	70	130	1.9	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R115500		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C115500				03/04/09 13:17		
Aluminum	ND	mg/L	0.002						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	ND	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Mercury	ND	mg/L	4E-05						
Molybdenum	ND	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Silver	ND	mg/L	2E-05						
Thorium 232	ND	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Vanadium	ND	mg/L	9E-05						
Zinc	ND	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C115500				03/04/09 13:24		
Aluminum	0.0504	mg/L	0.0022	101	85	115			
Arsenic	0.0522	mg/L	0.0010	104	85	115			
Barium	0.0516	mg/L	0.0010	103	85	115			
Cadmium	0.0514	mg/L	0.0010	103	85	115			
Chromium	0.0512	mg/L	0.0010	102	85	115			
Copper	0.0468	mg/L	0.0010	94	85	115			
Lead	0.0514	mg/L	0.0010	103	85	115			
Manganese	0.0512	mg/L	0.0010	102	85	115			
Mercury	0.00513	mg/L	0.0010	103	85	115			
Molybdenum	0.0508	mg/L	0.0010	102	85	115			
Nickel	0.0501	mg/L	0.0010	100	85	115			
Silver	0.0215	mg/L	0.0010	108	85	115			
Thorium 232	0.0493	mg/L	0.0010	99	85	115			
Uranium	0.0496	mg/L	0.00030	99	85	115			
Vanadium	0.0514	mg/L	0.0010	103	85	115			
Zinc	0.0539	mg/L	0.0010	108	85	115			
<b>Sample ID: C09020974-009CMS4</b>	Post Digestion Spike		Run: SUB-C115500				03/04/09 21:06		
Aluminum	0.0534	mg/L	0.10	107	70	130			
Arsenic	0.0666	mg/L	0.0010	110	70	130			
Barium	0.0688	mg/L	0.10	114	70	130			
Cadmium	0.0551	mg/L	0.010	110	70	130			
Chromium	0.0531	mg/L	0.050	106	70	130			
Copper	0.0477	mg/L	0.010	95	70	130			
Lead	0.0557	mg/L	0.050	111	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 04/14/09

Project: Edgemont

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R115500		
<b>Sample ID: C09020974-009CMS4</b>	Post Digestion Spike			Run: SUB-C115500			03/04/09 21:06		
Manganese	0.120	mg/L	0.010	106	70	130			
Mercury	0.00538	mg/L	0.0010	108	70	130			
Molybdenum	0.0567	mg/L	0.10	111	70	130			
Nickel	0.0505	mg/L	0.050	101	70	130			
Silver	0.0118	mg/L	0.010	59	70	130			S
Thorium 232	0.0567	mg/L	0.0010	113	70	130			
Uranium	0.0587	mg/L	0.00030	112	70	130			
Vanadium	0.0551	mg/L	0.10	110	70	130			
Zinc	0.0556	mg/L	0.010	111	70	130			
<b>Sample ID: C09020974-009CMSD4</b>	Post Digestion Spike Duplicate			Run: SUB-C115500			03/04/09 21:13		
Aluminum	0.0514	mg/L	0.10	103	70	130		20	
Arsenic	0.0666	mg/L	0.0010	110	70	130	0	20	
Barium	0.0686	mg/L	0.10	114	70	130		20	
Cadmium	0.0546	mg/L	0.010	109	70	130	0.9	20	
Chromium	0.0530	mg/L	0.050	106	70	130	0.1	20	
Copper	0.0474	mg/L	0.010	95	70	130	0.6	20	
Lead	0.0560	mg/L	0.050	112	70	130	0.7	20	
Manganese	0.121	mg/L	0.010	107	70	130	0.6	20	
Mercury	0.00547	mg/L	0.0010	109	70	130	1.7	20	
Molybdenum	0.0563	mg/L	0.10	110	70	130		20	
Nickel	0.0506	mg/L	0.050	101	70	130	0.2	20	
Silver	0.0153	mg/L	0.010	76	70	130	26	20	R
Thorium 232	0.0571	mg/L	0.0010	114	70	130	0.7	20	
Uranium	0.0590	mg/L	0.00030	113	70	130	0.6	20	
Vanadium	0.0550	mg/L	0.10	110	70	130		20	
Zinc	0.0553	mg/L	0.010	111	70	130	0.5	20	
<b>Sample ID: C09020995-014DMS4</b>	Post Digestion Spike			Run: SUB-C115500			03/04/09 23:01		
Aluminum	0.119	mg/L	0.10	107	70	130			
Arsenic	0.0591	mg/L	0.0010	111	70	130			
Barium	0.103	mg/L	0.10	113	70	130			
Cadmium	0.0542	mg/L	0.010	108	70	130			
Chromium	0.0523	mg/L	0.050	104	70	130			
Copper	0.0484	mg/L	0.010	97	70	130			
Lead	0.0565	mg/L	0.050	111	70	130			
Manganese	0.0550	mg/L	0.010	104	70	130			
Mercury	0.00526	mg/L	0.0010	105	70	130			
Molybdenum	0.0605	mg/L	0.10	111	70	130			
Nickel	0.0586	mg/L	0.050	101	70	130			
Silver	0.0147	mg/L	0.010	73	70	130			
Thorium 232	0.0567	mg/L	0.0010	113	70	130			
Uranium	0.150	mg/L	0.00030	114	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

R - RPD exceeds advisory limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R115500		
Sample ID: C09020995-014DMS4	Post Digestion Spike				Run: SUB-C115500		03/04/09 23:01		
Vanadium	0.0623	mg/L	0.10	107	70	130			
Zinc	0.0788	mg/L	0.010	113	70	130			
Sample ID: C09020995-014DMSD4	Post Digestion Spike Duplicate				Run: SUB-C115500		03/04/09 23:08		
Aluminum	0.120	mg/L	0.10	108	70	130	0.7	20	
Arsenic	0.0582	mg/L	0.0010	110	70	130	1.5	20	
Barium	0.103	mg/L	0.10	113	70	130	0.3	20	
Cadmium	0.0546	mg/L	0.010	109	70	130	0.8	20	
Chromium	0.0522	mg/L	0.050	104	70	130	0.3	20	
Copper	0.0475	mg/L	0.010	95	70	130	1.7	20	
Lead	0.0564	mg/L	0.050	111	70	130	0.2	20	
Manganese	0.0545	mg/L	0.010	104	70	130	0.8	20	
Mercury	0.00532	mg/L	0.0010	106	70	130	1.1	20	
Molybdenum	0.0608	mg/L	0.10	111	70	130		20	
Nickel	0.0572	mg/L	0.050	98	70	130	2.4	20	
Silver	0.0153	mg/L	0.010	76	70	130	3.7	20	
Thorium 232	0.0569	mg/L	0.0010	114	70	130	0.4	20	
Uranium	0.150	mg/L	0.00030	115	70	130	0.3	20	
Vanadium	0.0621	mg/L	0.10	107	70	130		20	
Zinc	0.0767	mg/L	0.010	108	70	130	2.7	20	
Sample ID: C09030090-004AMS	Sample Matrix Spike				Run: SUB-C115500		03/04/09 16:22		
Uranium	0.053	mg/L	0.0010	99	70	130			
Sample ID: C09030090-004AMSD	Sample Matrix Spike Duplicate				Run: SUB-C115500		03/04/09 16:29		
Uranium	0.053	mg/L	0.0010	99	70	130	0.1	20	
Method: E200.8							Batch: C_R115550		
Sample ID: LRB	Method Blank				Run: SUB-C115550		03/06/09 00:41		
Manganese	ND	mg/L	3E-05						
Sample ID: LFB	Laboratory Fortified Blank				Run: SUB-C115550		03/06/09 00:47		
Manganese	0.0479	mg/L	0.0010	96	85	115			
Sample ID: R09020293-015D	Post Digestion Spike				Run: SUB-C115550		03/06/09 04:52		
Manganese	0.129	mg/L	0.010	123	70	130			
Silver	0.0175	mg/L	0.010	87	70	130			
Sample ID: R09020293-015D	Post Digestion Spike Duplicate				Run: SUB-C115550		03/06/09 04:59		
Manganese	0.126	mg/L	0.010	117	70	130	2.3	20	
Silver	0.0174	mg/L	0.010	87	70	130	0.6	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc

Report Date: 04/14/09

Project: Edgemont

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R115667		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C115667				03/09/09 12:22		
Antimony	ND	mg/L	0.0006						
Arsenic	ND	mg/L	5E-05						
Beryllium	ND	mg/L	6E-05						
Boron	0.0005	mg/L	0.0004						
Cadmium	ND	mg/L	4E-05						
Chromium	ND	mg/L	4E-05						
Copper	ND	mg/L	7E-05						
Iron	ND	mg/L	0.0006						
Lead	ND	mg/L	2E-05						
Molybdenum	ND	mg/L	0.0001						
Nickel	ND	mg/L	6E-05						
Selenium	ND	mg/L	3E-05						
Silver	ND	mg/L	4E-05						
Strontium	ND	mg/L	3E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
Zinc	ND	mg/L	0.0002						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C115667				03/09/09 12:29		
Antimony	0.0481	mg/L	0.0010	96	85	115			
Arsenic	0.0491	mg/L	0.0010	98	85	115			
Beryllium	0.0478	mg/L	0.0010	96	85	115			
Boron	0.0481	mg/L	0.0010	95	85	115			
Cadmium	0.0489	mg/L	0.0010	98	85	115			
Chromium	0.0490	mg/L	0.0010	98	85	115			
Copper	0.0495	mg/L	0.0010	99	85	115			
Iron	1.27	mg/L	0.0010	101	85	115			
Lead	0.0489	mg/L	0.0010	98	85	115			
Molybdenum	0.0485	mg/L	0.0010	97	85	115			
Nickel	0.0496	mg/L	0.0010	99	85	115			
Selenium	0.0497	mg/L	0.0010	99	85	115			
Silver	0.0194	mg/L	0.0010	97	85	115			
Strontium	0.0462	mg/L	0.0010	92	85	115			
Thallium	0.0490	mg/L	0.0010	98	85	115			
Uranium	0.0461	mg/L	0.00030	92	85	115			
Zinc	0.0521	mg/L	0.0010	104	85	115			
<b>Sample ID: R09020293-009D</b>	Post Digestion Spike		Run: SUB-C115667				03/09/09 14:27		
Antimony	0.0511	mg/L	0.050	102	70	130			
Arsenic	0.0728	mg/L	0.0010	101	70	130			
Beryllium	0.0454	mg/L	0.010	91	70	130			
Boron	0.110	mg/L	0.10	88	70	130			
Cadmium	0.0497	mg/L	0.010	99	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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## QA/QC Summary Report

Client: RESPEC Inc

Project: Edgemont

Report Date: 04/14/09

Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R115667		
<b>Sample ID: R09020293-009D</b>	Post Digestion Spike		Run: SUB-C115667				03/09/09 14:27		
Chromium	0.0494	mg/L	0.050	99	70	130			
Copper	0.0488	mg/L	0.010	98	70	130			
Iron	2.59	mg/L	0.030	103	70	130			
Lead	0.0498	mg/L	0.050	100	70	130			
Molybdenum	0.0487	mg/L	0.10	95	70	130			
Nickel	0.0492	mg/L	0.050	98	70	130			
Selenium	0.0532	mg/L	0.0010	106	70	130			
Silver	0.00800	mg/L	0.010	40	70	130			S
Strontium	1.36	mg/L	0.10		70	130			A
Thallium	0.0498	mg/L	0.10	100	70	130			
Uranium	0.0506	mg/L	0.00030	96	70	130			
Zinc	0.0520	mg/L	0.010	101	70	130			
<b>Sample ID: R09020293-009D</b>	Post Digestion Spike Duplicate		Run: SUB-C115667				03/09/09 14:33		
Antimony	0.0519	mg/L	0.050	104	70	130	1.6	20	
Arsenic	0.0731	mg/L	0.0010	102	70	130	0.5	20	
Beryllium	0.0462	mg/L	0.010	92	70	130	1.9	20	
Boron	0.112	mg/L	0.10	91	70	130	1.5	20	
Cadmium	0.0500	mg/L	0.010	100	70	130	0.7	20	
Chromium	0.0494	mg/L	0.050	99	70	130		20	
Copper	0.0489	mg/L	0.010	98	70	130	0.2	20	
Iron	2.57	mg/L	0.030	102	70	130	0.8	20	
Lead	0.0506	mg/L	0.050	101	70	130		20	
Molybdenum	0.0491	mg/L	0.10	96	70	130		20	
Nickel	0.0492	mg/L	0.050	98	70	130		20	
Selenium	0.0535	mg/L	0.0010	107	70	130	0.6	20	
Silver	0.00768	mg/L	0.010	38	70	130		20	S
Strontium	1.36	mg/L	0.10		70	130	0.5	20	A
Thallium	0.0504	mg/L	0.10	101	70	130		20	
Uranium	0.0509	mg/L	0.00030	97	70	130	0.6	20	
Zinc	0.0519	mg/L	0.010	101	70	130	0.1	20	
<b>Sample ID: C09030226-001CMS4</b>	Post Digestion Spike		Run: SUB-C115667				03/10/09 07:08		
Antimony	0.0546	mg/L	0.050	109	70	130			
Arsenic	0.0529	mg/L	0.0010	100	70	130			
Beryllium	0.0341	mg/L	0.010	68	70	130			S
Boron	0.147	mg/L	0.10	57	70	130			S
Cadmium	0.0493	mg/L	0.010	99	70	130			
Chromium	0.0481	mg/L	0.050	93	70	130			
Copper	0.0484	mg/L	0.010	97	70	130			
Iron	1.35	mg/L	0.030	102	70	130			
Lead	0.0507	mg/L	0.050	101	70	130			
Molybdenum	0.0506	mg/L	0.10	89	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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





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## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R115667		
<b>Sample ID: C09030226-001CMS4</b>	Post Digestion Spike		Run: SUB-C115667				03/10/09 07:08		
Nickel	0.0481	mg/L	0.050	95	70	130			
Selenium	0.0529	mg/L	0.0010	106	70	130			
Silver	0.0112	mg/L	0.010	56	70	130			S
Strontium	1.24	mg/L	0.10		70	130			A
Thallium	0.0504	mg/L	0.10	101	70	130			
Uranium	0.0500	mg/L	0.00030	97	70	130			
Zinc	0.0521	mg/L	0.010	102	70	130			
<b>Sample ID: C09030226-001CMSD4</b>	Post Digestion Spike Duplicate		Run: SUB-C115667				03/10/09 07:14		
Antimony	0.0543	mg/L	0.050	109	70	130	0.4	20	
Arsenic	0.0531	mg/L	0.0010	100	70	130	0.4	20	
Beryllium	0.0342	mg/L	0.010	68	70	130	0.2	20	S
Boron	0.147	mg/L	0.10	58	70	130	0.1	20	S
Cadmium	0.0492	mg/L	0.010	98	70	130	0.1	20	
Chromium	0.0482	mg/L	0.050	94	70	130		20	
Copper	0.0480	mg/L	0.010	96	70	130	0.7	20	
Iron	1.30	mg/L	0.030	98	70	130	3.5	20	
Lead	0.0506	mg/L	0.050	101	70	130	0.1	20	
Molybdenum	0.0497	mg/L	0.10	87	70	130		20	
Nickel	0.0477	mg/L	0.050	94	70	130		20	
Selenium	0.0507	mg/L	0.0010	101	70	130	4.2	20	
Silver	0.0118	mg/L	0.010	59	70	130	5.3	20	S
Strontium	1.25	mg/L	0.10		70	130	0.6	20	A
Thallium	0.0503	mg/L	0.10	101	70	130		20	
Uranium	0.0499	mg/L	0.00030	97	70	130	0.1	20	
Zinc	0.0520	mg/L	0.010	102	70	130	0.1	20	
<b>Method: E200.8</b>							Batch: C_R115711		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C115711				03/10/09 12:30		
Beryllium	ND	mg/L	6E-05						
Molybdenum	ND	mg/L	4E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C115711				03/10/09 12:37		
Beryllium	0.0517	mg/L	0.0010	103	85	115			
Molybdenum	0.0499	mg/L	0.0010	100	85	115			
<b>Sample ID: C09030221-002BMS4</b>	Post Digestion Spike		Run: SUB-C115711				03/11/09 04:41		
Beryllium	0.238	mg/L	0.010	95	70	130			
Molybdenum	0.264	mg/L	0.10	104	70	130			
<b>Sample ID: C09030221-002BMSD4</b>	Post Digestion Spike Duplicate		Run: SUB-C115711				03/11/09 04:48		
Beryllium	0.236	mg/L	0.010	95	70	130	0.7	20	
Molybdenum	0.263	mg/L	0.10	104	70	130	0.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>							Batch: B_37498		
<b>Sample ID: MB-37498</b>	Method Blank					Run: SUB-B125567			03/02/09 10:54
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-37498</b>	Laboratory Fortified Blank					Run: SUB-B125567			03/02/09 10:56
Mercury	0.0019	mg/L	0.0010	97	85	115			
<b>Sample ID: B09022083-001JMS</b>	Sample Matrix Spike					Run: SUB-B125567			03/02/09 11:05
Mercury	0.0020	mg/L	0.0010	100	70	130			
<b>Sample ID: B09022083-001JMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-B125567			03/02/09 11:08
Mercury	0.0020	mg/L	0.0010	99	70	130	1	30	
<b>Sample ID: B09022084-003EMS</b>	Sample Matrix Spike					Run: SUB-B125567			03/02/09 11:34
Mercury	0.0019	mg/L	0.0010	95	70	130			
<b>Sample ID: B09022084-003EMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-B125567			03/02/09 11:36
Mercury	0.0020	mg/L	0.0010	95	70	130	0.5	30	
<b>Method: E245.1</b>							Batch: B_37499		
<b>Sample ID: MB-37499</b>	Method Blank					Run: SUB-B125469			02/27/09 16:05
Mercury	ND	mg/L	5E-05						
<b>Sample ID: LFB-37499</b>	Laboratory Fortified Blank					Run: SUB-B125469			02/27/09 16:07
Mercury	0.0018	mg/L	0.0010	91	85	115			
<b>Sample ID: R09020293-009J</b>	Sample Matrix Spike					Run: SUB-B125469			02/27/09 16:12
Mercury	0.0019	mg/L	0.0010	88	70	130			
<b>Sample ID: R09020293-009J</b>	Sample Matrix Spike Duplicate					Run: SUB-B125469			02/27/09 16:14
Mercury	0.0018	mg/L	0.0010	83	70	130	5.5	30	
<b>Method: E245.1</b>							Analytical Run: SUB-B125469		
<b>Sample ID: QCS</b>	Initial Calibration Verification Standard								02/27/09 09:13
Mercury	0.0019	mg/L	0.0010	96	90	110			
<b>Method: E245.1</b>							Analytical Run: SUB-B125567		
<b>Sample ID: QCS</b>	Initial Calibration Verification Standard								03/02/09 10:47
Mercury	0.0018	mg/L	0.0010	90	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R39724		
<b>Sample ID: LFB0902255159-3</b>	Laboratory Fortified Blank			Run: DIONEX_090225A			02/25/09 21:06		
Chloride	4.59	mg/L	0.50	92	90	110			
Fluoride	1.89	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N	2.21	mg/L	0.10	88	90	110			S
Nitrogen, Nitrite as N	2.42	mg/L	0.10	97	90	110			
Sulfate	13.6	mg/L	1.0	91	90	110			
<b>Sample ID: LFB0902255159-4</b>	Laboratory Fortified Blank			Run: DIONEX_090225A			02/25/09 21:22		
Chloride	4.56	mg/L	0.50	91	90	110			
Fluoride	1.92	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N	2.20	mg/L	0.10	88	90	110			S
Nitrogen, Nitrite as N	2.40	mg/L	0.10	96	90	110			
Sulfate	13.5	mg/L	1.0	90	90	110			
<b>Sample ID: R09020255-001BMS</b>	Sample Matrix Spike			Run: DIONEX_090225A			02/25/09 21:55		
Chloride	8.88	mg/L	0.50	95	80	120			
Fluoride	2.33	mg/L	0.10	94	80	120			
Nitrogen, Nitrate as N	2.50	mg/L	0.10	94	80	120			
Nitrogen, Nitrite as N	2.45	mg/L	0.10	98	80	120			
Sulfate	109	mg/L	1.0		80	120			A
<b>Sample ID: R09020255-001BMSD</b>	Sample Matrix Spike Duplicate			Run: DIONEX_090225A			02/25/09 22:11		
Chloride	8.76	mg/L	0.50	92	80	120	1.4	10	
Fluoride	2.28	mg/L	0.10	91	80	120	2.2	10	
Nitrogen, Nitrate as N	2.43	mg/L	0.10	92	80	120	2.8	10	
Nitrogen, Nitrite as N	2.38	mg/L	0.10	95	80	120	2.9	10	
Sulfate	109	mg/L	1.0		80	120	0.1	10	A
<b>Sample ID: R09020293-004AMS</b>	Sample Matrix Spike			Run: DIONEX_090225A			02/26/09 01:28		
Chloride	239	mg/L	5.4	85	80	120			
Fluoride	89.3	mg/L	0.56	86	80	120			
Nitrogen, Nitrate as N	110	mg/L	1.3	88	80	120			
Nitrogen, Nitrite as N	120	mg/L	2.9	96	80	120			
Sulfate	1940	mg/L	3.4	92	80	120			
<b>Sample ID: R09020293-004AMSD</b>	Sample Matrix Spike Duplicate			Run: DIONEX_090225A			02/26/09 01:45		
Chloride	256	mg/L	5.4	91	80	120	6.5	10	
Fluoride	94.8	mg/L	0.56	91	80	120	5.9	10	
Nitrogen, Nitrate as N	116	mg/L	1.3	93	80	120	5.4	10	
Nitrogen, Nitrite as N	126	mg/L	2.9	101	80	120	5.4	10	
Sulfate	1980	mg/L	3.4	98	80	120	2.1	10	
<b>Sample ID: R09020293-008AMS</b>	Sample Matrix Spike			Run: DIONEX_090225A			02/26/09 04:45		
Chloride	249	mg/L	5.4	85	80	120			
Fluoride	93.3	mg/L	0.56	90	80	120			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: RESPEC Inc  
Project: Edgemont

Report Date: 04/14/09  
Work Order: R09020293

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R39724		
<b>Sample ID: R09020293-008AMS</b>	Sample Matrix Spike				Run: DIONEX_090225A		02/26/09 04:45		
Nitrogen, Nitrate as N	114	mg/L	1.3	91	80	120			
Nitrogen, Nitrite as N	125	mg/L	2.9	100	80	120			
Sulfate	1120	mg/L	3.4	83	80	120			
<b>Sample ID: R09020293-008AMSD</b>	Sample Matrix Spike Duplicate				Run: DIONEX_090225A		02/26/09 05:02		
Chloride	238	mg/L	5.4	81	80	120	4.3	10	
Fluoride	88.9	mg/L	0.56	86	80	120	4.8	10	
Nitrogen, Nitrate as N	109	mg/L	1.3	87	80	120	4.4	10	
Nitrogen, Nitrite as N	119	mg/L	2.9	95	80	120	5	10	
Sulfate	1080	mg/L	3.4	78	80	120	3.1	10	S
<b>Sample ID: R09020293-012AMS</b>	Sample Matrix Spike				Run: DIONEX_090225A		02/26/09 08:02		
Chloride	246	mg/L	5.4	90	80	120			
Fluoride	93.2	mg/L	0.56	90	80	120			
Nitrogen, Nitrate as N	114	mg/L	1.3	91	80	120			
Nitrogen, Nitrite as N	124	mg/L	2.9	99	80	120			
Sulfate	1060	mg/L	3.4	83	80	120			
<b>Sample ID: R09020293-012AMSD</b>	Sample Matrix Spike Duplicate				Run: DIONEX_090225A		02/26/09 08:19		
Chloride	236	mg/L	5.4	86	80	120	4.1	10	
Fluoride	88.4	mg/L	0.56	85	80	120	5.3	10	
Nitrogen, Nitrate as N	108	mg/L	1.3	87	80	120	5.3	10	
Nitrogen, Nitrite as N	118	mg/L	2.9	94	80	120	5.2	10	
Sulfate	1040	mg/L	3.4	80	80	120	2	10	
<b>Method: E300.0</b>							Batch: R39736		
<b>Sample ID: LFB0902262544-3</b>	Laboratory Fortified Blank				Run: DIONEX_090226A		02/26/09 19:28		
Sulfate	14.2	mg/L	1.0	94	90	110			
<b>Sample ID: LFB0902262544-4</b>	Laboratory Fortified Blank				Run: DIONEX_090226A		02/26/09 19:44		
Sulfate	13.3	mg/L	1.0	88	90	110			S

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



# Chain of Custody and Analytical Request Record

Page 1 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Scott Env.</u>		Project Name, PWS, Permit, Etc. <u>Dewey Burdock - Power-tech</u>		Sample Origin State: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>R ESPEC</u>		Contact Name: <u>Allen Smith</u>		Email: <u>605673-4059</u>	
Invoice Address:		Invoice Contact & Phone:		Purchase Order:	
Special Report/Formats - ELI must be notified prior to sample submittal for the following:  <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: <input type="checkbox"/> NELAC		ANALYSIS REQUESTED  <u>As per Quote</u>		Contact ELI prior to RUSH sample submittal for charges and scheduling - See instruction page	
Number of Containers Sample Type: A W S V B O Vegetation Bioassay Other		SEE ATTACHED		Comments:	
MATRIX		Normal Turnaround (TAT)		Shipped by:	
1 DB Blank 101		2-24-09 18:00		Cooler ID(e):	
2 Puhum EW 1024		2-24-09 9:40		Recall Temp <u>3.8</u> °C	
3 GW 3026		2-24-09 11:35		On Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4 GW 698		2-24-09 12:10		Culinary Seal Y N	
5 GW 698		2-24-09 12:15		Bottles/ Coolers B C	
6 GW 682		2-24-09 13:23		Intact Y N	
7 GW 680		2-24-09 13:35		Signature Match Y N	
8 GW 622		2-24-09 15:31			
9 GW 615		2-24-09 15:45			
10					
Custody Record MUST be Signed		Relinquished by (print): <u>Allen Smith</u> Date/Time: <u>2-25-09 11:00</u>		Signature: <u>[Signature]</u>	
Sample Disposal: <u>Return to Client</u>		Relinquished by (print): <u>Steve Traylor</u> Date/Time: <u>2-25-09 11:00</u>		Signature: <u>[Signature]</u>	
Lab Disposal:		Relinquished by (print): <u>Steve Traylor</u> Date/Time: <u>2-25-09 11:00</u>		Signature: <u>[Signature]</u>	

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



# Chain of Custody and Analytical Request Record

Page 2 of 2

PLEASE PRINT- Provide as much information as possible.

Company Name: <u>Scott Env.</u>		Project Name, PWS, Permit, Etc. <u>Dewey Burdock - Pontchar</u>		Sample Origin State: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <u>RFSPCL</u>		Contact Name: <u>Alan Scott</u> Phone/Fax: <u>605-673-4859</u>		Email: Sampler: (Please Print)	
Invoice Address:		Invoice Contact & Phone:		Purchase Order: Quote/Bottle Order:	
<b>Special Report/Formats - ELI must be notified prior to sample submittal for the following:</b>  <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> POTW/MWTP <input type="checkbox"/> State: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC <input type="checkbox"/> Other: _____		<b>ANALYSIS REQUESTED</b>  <u>As per Quote</u>  SEE ATTACHED  Normal Turnaround (TAT)		<b>R U S H</b>  Contact ELI prior to RUSH sample submittal for charges and scheduling - See instruction Page Comments:	
<b>SAMPLE IDENTIFICATION</b> (Name, Location, Interval, etc.)		<b>Matrix</b>		<b>Shipped by:</b>	
1 <u>6 W 689</u>		<u>water</u>		Cooler ID(s):	
2 <u>6 W 681</u>		<u>"</u>		Receipt Temp <u>3.8</u> °C	
3 <u>6 W 697</u>		<u>"</u>		On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4 <u>6 W 695</u>		<u>"</u>		Custody Seal Y N	
5 <u>6 W 694</u>		<u>"</u>		Bottles/ Coolers B C	
6 <u>6 W 696</u>		<u>"</u>		Intact Y N	
7				Signature Match Y N	
8					
9					
10					
<b>Custody Record MUST be Signed</b>		Received by (print): <u>Alan Scott</u> Date/Time: <u>2-25-09 11:00</u>		Signature: <u>[Signature]</u>	
Reinquished by (print): <u>Alan Scott</u>		Received by (print): <u>Steve Franklin</u> Date/Time: <u>2-26-09 11:00</u>		Signature: <u>[Signature]</u>	
Sample Disposal: _____		Return to Client: _____		Lab Disposal: _____	

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

**\*\*REPORT\*\***

RESPEC Inc  
Cory Foreman  
3824 Jet Dr  
Rapid City SD 57701



## ANALYTICAL SUMMARY REPORT

February 27, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No. R10010180

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 1/19/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10010180-001	DB-09-21-01	01/18/10 0:00	01/19/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10010180-002	DB-09-21-02	01/18/10 0:00	01/19/10	Aqueous	Same As Above

Thank you for submitting your samples to Energy Laboratories, Inc. - Rapid City. The following pages contain the results of your sample analysis.

The samples were analyzed in accordance with the methods specified on the analytical reports. All analyses were accompanied by applicable quality assurance samples throughout the test. Where applicable, the results of these quality assurance samples will be included with your analytical data.

If you have any questions regarding the analyses performed or the results of these analyses, please feel free to call (888)672-1225, (605)342-1225 or llarson@energylab.com.

Sincerely,

Summary Report: Page 1 of 2





ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## ANALYTICAL SUMMARY REPORT

Linda Larson  
Branch Manager  
Energy Laboratories, Inc.  
Rapid City, SD

*Linda K. Larson*

Branch Manager

Digitally signed by  
Linda Larson

Date: 2010.03.09 13:22:54 -07:00

Report Approved By:

Summary Report: Page 2 of 2



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10010180

**Report Date:** 02/27/10

## **CASE NARRATIVE**

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Tests Associated with Analyst identified as ELI-CA were subcontracted to Energy Laboratories Casper Branch, EPA Number WY00002.

Comments imported for SUBBED Workorder: C10010713

### **PO210 ANALYSIS**

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### **PB210 ANALYSIS**

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10010713

### **Comments**

The alkalinity on DB-09-21-01 seems to have some sort of buffering affect. A recheck on the alkalinity resulted in 104 mg/L



# LABORATORY ANALYTICAL REPORT

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10010180-001  
Client Sample ID: DB-09-21-01

Report Date: 02/27/10  
Collection Date: 01/18/10  
Date Received: 01/19/10  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	40	mg/L		5		1	A2320 B	01/26/10 15:01/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/10 15:01/mb
Bicarbonate as HCO <sub>3</sub>	44	mg/L		5		1	A2320 B	01/26/10 15:01/mb
Calcium	61	mg/L	D	1		5	E200.7	02/02/10 16:53/eli-c
Chloride	7	mg/L		1		1	E300.0	01/20/10 17:23/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	01/20/10 17:23/jmh
Magnesium	21.7	mg/L		0.5		5	E200.7	02/02/10 16:53/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/19/10 12:18/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/20/10 17:23/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/20/10 17:23/jmh
Potassium	13.6	mg/L		0.5		5	E200.7	02/02/10 16:53/eli-c
Sodium	166	mg/L	D	1		5	E200.7	02/02/10 16:53/eli-c
Sulfate	513	mg/L		1		20	E300.0	01/20/10 16:33/jmh
Silica	7.1	mg/L		0.2		5	E200.7	02/02/10 16:53/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1150	umhos/cm		5.0		1	A2510 B	01/21/10 09:16/tb
Oxidation-Reduction Potential	210	mV				1	A2580 B	01/25/10 16:00/jmh
pH	9.03	s.u.		0.01		1	A4500-H B	01/22/10 12:07/tb
Sodium Adsorption Ratio (SAR)	4.6	unitless		0.10		1	Calculation	02/05/10 15:38/ADM
Solids, Total Dissolved TDS @ 180 C	770	mg/L		5		1	A2540 C	01/25/10 10:52/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	01/27/10 15:48/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	01/27/10 15:48/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/27/10 15:48/eli-c
Boron	ND	mg/L		0.1		5	E200.7	02/02/10 16:53/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/27/10 15:48/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/27/10 15:48/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/27/10 15:48/eli-c
Iron	ND	mg/L		0.03		5	E200.7	02/02/10 16:53/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/27/10 15:48/eli-c
Manganese	0.01	mg/L		0.01		1	E200.8	01/27/10 15:48/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	01/27/10 15:48/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/27/10 15:48/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/27/10 15:48/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/26/10 12:08/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	01/27/10 15:48/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/27/10 15:48/eli-c

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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Definitions: QCL - Quality control limit.

ND Not detected at the reporting limit

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10010180-001  
Client Sample ID: DB-09-21-01

Report Date: 02/27/10  
Collection Date: 01/18/10  
Date Received: 01/19/10  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	01/27/10 15:48/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	01/27/10 15:48/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/27/10 15:48/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	02/02/10 04:36/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/26/10 10:32/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/26/10 14:36/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	3.0	pCi/L	U			1	E900.0	02/06/10 01:58/eli-ca
Gross Alpha precision (±)	2.9	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Alpha MDC	4.6	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta	11.3	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta MDC	3.9	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0M	02/09/10 11:19/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Polonium 210	0.050	pCi/L	U			1	E912.0	02/19/10 08:46/eli-c
Polonium 210 MDC	0.44	pCi/L				1	E912.0	02/19/10 08:46/eli-c
Polonium 210 precision (±)	0.22	pCi/L				1	E912.0	02/19/10 08:46/eli-c
Radium 226	0.6	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Thorium 230	0.02	pCi/L	U			1	E907.0	01/26/10 09:42/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	01/26/10 09:42/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	01/26/10 09:42/eli-c
Gross Gamma	1100	pCi/L				1	E901.1	01/23/10 20:28/eli-c
Gross Gamma precision (+)	150	pCi/L				1	E901.1	01/23/10 20:28/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.9	pCi/L	U			1	E909.0M	02/09/10 11:19/eli-c
Lead 210 precision (±)	4.3	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Lead 210 MDC	7.1	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Polonium 210	-0.056	pCi/L	U			1	E912.0	02/17/10 08:48/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  
U - Not detected at minimum detectable concentration

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# LABORATORY ANALYTICAL REPORT

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10010180-001  
Client Sample ID: DB-09-21-01

Report Date: 02/27/10  
Collection Date: 01/18/10  
Date Received: 01/19/10  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 precision (±)	0.44	pCi/L				1	E912.0	02/17/10 08:48/eli-c
Polonium 210 MDC	1.2	pCi/L				1	E912.0	02/17/10 08:48/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/04/10 08:48/eli-cat
Radium 226 precision (±)	0.03	pCi/L				1	E903.0	02/04/10 08:48/eli-cat
Radium 226 MDC	0.08	pCi/L				1	E903.0	02/04/10 08:48/eli-cat
Thorium 230	-0.1	pCi/L	U			1	E907.0	02/02/10 15:49/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	02/02/10 15:49/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	206	pCi/L		100		1	D5072-92	12/20/09 00:00/ADM
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/28/10 16:22/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	01/28/10 16:22/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/28/10 16:22/eli-c
Bismuth	ND	mg/L		0.001		1	E200.8	01/28/10 16:22/eli-c
Boron	ND	mg/L		0.1		1	E200.8	02/01/10 20:32/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/28/10 16:22/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/28/10 16:22/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/28/10 16:22/eli-c
Iron	0.10	mg/L		0.03		1	E200.8	02/01/10 20:32/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/28/10 16:22/eli-c
Manganese	0.02	mg/L		0.01		1	E200.8	01/28/10 16:22/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/21/10 14:54/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/28/10 16:22/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/28/10 16:22/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/01/10 20:32/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/01/10 20:32/eli-c
Strontium	2.6	mg/L		0.1		1	E200.8	02/01/10 20:32/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/01/10 20:32/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	02/01/10 20:32/eli-c
	ND	mg/L		0.01			E200.8	02/01/10 20:32/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.96	%				1	A1030 E	02/05/10 00:00/jmh
Anions	11.7	meq/L				1	A1030 E	02/05/10 00:00/jmh
Cations	12.4	meq/L				1	A1030 E	02/05/10 00:00/jmh
Solids, Total Dissolved Calculated	825	mg/L				1	A1030 E	02/05/10 00:00/jmh

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

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

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10010180-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 02/27/10  
**Collection Date:** 01/18/10  
**Date Received:** 01/19/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.930					1	A1030 E	02/05/10 00:00/jmh

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10010180-002  
Client Sample ID: DB-09-21-02

Report Date: 02/27/10  
Collection Date: 01/18/10  
Date Received: 01/19/10  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	196	mg/L		5		1	A2320 B	01/26/10 15:08/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	01/26/10 15:08/mb
Bicarbonate as HCO <sub>3</sub>	239	mg/L		5		1	A2320 B	01/26/10 15:08/mb
Calcium	172	mg/L	D	1		5	E200.7	02/02/10 16:57/eli-c
Chloride	10	mg/L		1		1	E300.0	01/20/10 17:55/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	01/20/10 17:55/jmh
Magnesium	49.0	mg/L		0.5		5	E200.7	02/02/10 16:57/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	01/19/10 12:19/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	01/20/10 17:55/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	01/20/10 17:55/jmh
Potassium	12.4	mg/L		0.5		5	E200.7	02/02/10 16:57/eli-c
Sodium	127	mg/L	D	1		5	E200.7	02/02/10 16:57/eli-c
Sulfate	714	mg/L		1		20	E300.0	01/20/10 17:39/jmh
Silica	9.1	mg/L		0.2		5	E200.7	02/02/10 16:57/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1620	umhos/cm		5.0		1	A2510 B	01/21/10 09:18/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	01/25/10 16:00/jmh
pH	7.63	s.u.		0.01		1	A4500-H B	01/22/10 12:10/tb
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	02/05/10 15:38/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L		5		1	A2540 C	01/25/10 10:53/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	01/27/10 15:54/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	01/27/10 15:54/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/27/10 15:54/eli-c
Boron	ND	mg/L		0.1		5	E200.7	02/02/10 16:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/27/10 15:54/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/27/10 15:54/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/27/10 15:54/eli-c
Iron	ND	mg/L		0.03		5	E200.7	02/02/10 16:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/27/10 15:54/eli-c
Manganese	0.52	mg/L		0.01		1	E200.8	01/27/10 15:54/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	01/27/10 15:54/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	01/27/10 15:54/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/27/10 15:54/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	01/26/10 12:15/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	01/27/10 15:54/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/27/10 15:54/eli-c

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

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Definitions: QCL - Quality control limit.

ND Not detected at the reporting limit

D - RL increased due to sample matrix interference.



# LABORATORY ANALYTICAL REPORT

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10010180-002  
Client Sample ID: DB-09-21-02

Report Date: 02/27/10  
Collection Date: 01/18/10  
Date Received: 01/19/10  
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	0.0089	mg/L		0.0003		1	E200.8	01/27/10 15:54/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	01/27/10 15:54/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/27/10 15:54/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/02/10 04:40/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	01/26/10 10:39/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	01/26/10 14:36/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	39.7	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Alpha precision (±)	6.7	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Alpha MDC	7.4	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta	18.3	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta precision (±)	4.0	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Gross Beta MDC	6.2	pCi/L				1	E900.0	02/06/10 01:58/eli-ca
Lead 210	1.1	pCi/L	U			1	E909.0M	02/09/10 11:19/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Polonium 210	0.074	pCi/L	U			1	E912.0	02/19/10 08:46/eli-c
Polonium 210 MDC	1.4	pCi/L				1	E912.0	02/19/10 08:46/eli-c
Polonium 210 precision (±)	0.60	pCi/L				1	E912.0	02/19/10 08:46/eli-c
Radium 226	2.7	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	02/02/10 11:19/eli-c
Thorium 230	0.01	pCi/L	U			1	E907.0	01/26/10 09:42/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	01/26/10 09:42/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	01/26/10 09:42/eli-c
Gross Gamma	820	pCi/L				1	E901.1	01/23/10 20:28/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	01/23/10 20:28/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	2.6	pCi/L	U			1	E909.0M	02/09/10 11:19/eli-c
Lead 210 precision (±)	4.3	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Lead 210 MDC	7.1	pCi/L				1	E909.0M	02/09/10 11:19/eli-c
Polonium 210	0.12	pCi/L	U			1	E912.0	02/17/10 08:48/eli-c

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10010180-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 02/27/10  
**Collection Date:** 01/18/10  
**Date Received:** 01/19/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 precision (±)	0.94	pCi/L				1	E912.0	02/17/10 08:48/eli-c
Polonium 210 MDC	2.1	pCi/L				1	E912.0	02/17/10 08:48/eli-c
Radium 226	-0.2	pCi/L	U			1	E903.0	02/04/10 08:48/eli-cat
Radium 226 precision (±)	0.04	pCi/L				1	E903.0	02/04/10 08:48/eli-cat
Radium 226 MDC	0.08	pCi/L				1	E903.0	02/04/10 08:48/eli-cat
Thorium 230	0.06	pCi/L	U			1	E907.0	02/02/10 15:49/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	02/02/10 15:49/eli-c
- See Case Narrative regarding Pb210 analysis.								
- See Case Narrative regarding Po210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	270	pCi/L		100		1	D5072-92	12/20/09 00:00/ADM
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	01/28/10 16:28/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	01/28/10 16:28/eli-c
Barium	ND	mg/L		0.1		1	E200.8	01/28/10 16:28/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	01/28/10 16:28/eli-c
Boron	ND	mg/L		0.1		1	E200.8	02/01/10 20:38/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	01/28/10 16:28/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	01/28/10 16:28/eli-c
Copper	ND	mg/L		0.01		1	E200.8	01/28/10 16:28/eli-c
Iron	0.03	mg/L		0.03		1	E200.8	02/01/10 20:38/eli-c
Lead	ND	mg/L		0.001		1	E200.8	01/28/10 16:28/eli-c
Manganese	0.54	mg/L		0.01		1	E200.8	01/28/10 16:28/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	01/21/10 14:56/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	01/28/10 16:28/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	01/28/10 16:28/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	01/28/10 16:28/eli-c
Silver	ND	mg/L		0.005		1	E200.8	01/28/10 16:28/eli-c
Strontium	2.4	mg/L		0.1		1	E200.8	01/28/10 16:28/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	01/28/10 16:28/eli-c
	0.0087	mg/L		0.0003			E200.8	01/28/10 16:28/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	01/28/10 16:28/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-1.62	%				1	A1030 E	02/05/10 00:00/jmh
Anions	19.1	meq/L				1	A1030 E	02/05/10 00:00/jmh
Cations	18.5	meq/L				1	A1030 E	02/05/10 00:00/jmh

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

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

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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10010180-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 02/27/10  
**Collection Date:** 01/18/10  
**Date Received:** 01/19/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
DATA QUALITY									
Solids, Total Dissolved Calculated	1230	mg/L					1	A1030 E	02/05/10 00:00/jmh
TDS Balance (0.80 - 1.20)	0.960						1	A1030 E	02/05/10 00:00/jmh

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B							Batch: 100126A-ALK-SEL-W		
Sample ID: LCS1_100126A	Laboratory Control Sample				Run: PH_COND1-R_100126A		01/26/10 14:03		
Alkalinity, Total as CaCO3	984	mg/L	5.0	98	90	110			
Sample ID: MBLK1_100126A	Method Blank				Run: PH_COND1-R_100126A		01/26/10 14:04		
Alkalinity, Total as CaCO3	ND	mg/L	3						
Sample ID: R10010209-001AMS	Sample Matrix Spike				Run: PH_COND1-R_100126A		01/26/10 15:15		
Alkalinity, Total as CaCO3	238	mg/L	5.0	89	80	120			
Sample ID: R10010209-001AMSD	Sample Matrix Spike Duplicate				Run: PH_COND1-R_100126A		01/26/10 15:18		
Alkalinity, Total as CaCO3	238	mg/L	5.0	89	80	120	0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 02/27/10  
**Work Order:** R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B			Batch: 100121_1_COND-PROBE-W						
Sample ID: LCS_COND-1_100121	Laboratory Control Sample				Run: PH_COND2-R_100121A			01/21/10 08:59	
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
Sample ID: LCS1-1_100121	Laboratory Control Sample				Run: PH_COND2-R_100121A			01/21/10 09:01	
Conductivity @ 25 C	150	umhos/cm	5.0	100	90	110			
Sample ID: LCS2-1_100121	Laboratory Control Sample				Run: PH_COND2-R_100121A			01/21/10 09:03	
Conductivity @ 25 C	5030	umhos/cm	5.0	101	90	110			
Sample ID: MBLK-1_100121	Method Blank				Run: PH_COND2-R_100121A			01/21/10 09:07	
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: R10010114-001ADUP	Sample Duplicate				Run: PH_COND2-R_100121A			01/21/10 09:11	
Conductivity @ 25 C	5670	umhos/cm	5.0				0	10	

### Qualifiers:

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MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C							Batch: 100125A-SLDS-TDS-W		
Sample ID: LCS1_100125A	Laboratory Control Sample				Run: BAL-4-R_100125A				01/25/10 10:51
Solids, Total Dissolved TDS @ 180 C	200	mg/L	10	100	90	110			
Sample ID: MBLK1_100125A	Method Blank				Run: BAL-4-R_100125A				01/25/10 10:51
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	5						
Sample ID: R10010227-001AMS	Sample Matrix Spike				Run: BAL-4-R_100125A				01/25/10 10:59
Solids, Total Dissolved TDS @ 180 C	2000	mg/L	10	107	80	120			
Sample ID: R10010227-001AMSD	Sample Matrix Spike Duplicate				Run: BAL-4-R_100125A				01/25/10 11:00
Solids, Total Dissolved TDS @ 180 C	2000	mg/L	10	106	80	120	0.1	10	

### Qualifiers:

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2580 B							Batch: 100125-ORP-ISE-W		
Sample ID: LCS	Laboratory Control Sample				Run: PH_COND1-R_100125A		01/25/10 16:00		
Oxidation-Reduction Potential	460	mV		97	95	105			
Sample ID: R10010180-001F	Sample Duplicate				Run: PH_COND1-R_100125A		01/25/10 16:00		
Oxidation-Reduction Potential	220	mV					5.2	10	

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A3114 B							Batch: C_SE3114-100126A		
Sample ID: MBLK	Method Blank					Run: SUB-C128931		01/26/10 10:25	
Selenium-IV	ND	mg/L	0.0003						
Sample ID: As/Se 1.0ppm-Q 01051	Laboratory Control Sample					Run: SUB-C128931		01/26/10 10:28	
Selenium-IV	0.048	mg/L	0.0010	96	90	110			
Sample ID: R10010180-001E	Sample Matrix Spike					Run: SUB-C128931		01/26/10 10:35	
Selenium-IV	0.050	mg/L	0.0010	100	85	115			
Sample ID: R10010180-001E	Sample Matrix Spike Duplicate					Run: SUB-C128931		01/26/10 10:37	
Selenium-IV	0.048	mg/L	0.0010	97	85	115	3	10	
Method: A3114 B							Batch: C_SE3114-100126B		
Sample ID: MBLK	Method Blank					Run: SUB-C128938		01/26/10 12:01	
Selenium	ND	mg/L	0.0002						
Sample ID: As/Se 1.0ppm-Q 01051	Laboratory Control Sample					Run: SUB-C128938		01/26/10 12:03	
Selenium	0.050	mg/L	0.0010	100	90	110			
Sample ID: R10010180-001E	Sample Matrix Spike					Run: SUB-C128938		01/26/10 12:10	
Selenium	0.051	mg/L	0.0010	103	85	115			
Sample ID: R10010180-001E	Sample Matrix Spike Duplicate					Run: SUB-C128938		01/26/10 12:12	
Selenium	0.051	mg/L	0.0010	103	85	115	0	15	

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B							Batch: 100122_1_PH-W		
Sample ID: LCS_pH-1_100122	Laboratory Control Sample				Run: PH_COND2-R_100122A		01/22/10 11:58		
pH	6.90	s.u.	0.010	101	98.55	101.45			
Sample ID: R10010179-002CDUP	Sample Duplicate				Run: PH_COND2-R_100122A		01/22/10 12:04		
pH	8.07	s.u.	0.010				0	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 02/27/10  
**Work Order:** R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-NH3 G			Batch: A2010-01-19_2_NH3_01						
<b>Sample ID:</b> MBLK-2	Method Blank				Run: TECHAA2-R_100119A		01/19/10 11:06		
Nitrogen, Ammonia as N	0.02	mg/L	0.01						
<b>Sample ID:</b> LFB-3	Laboratory Fortified Blank				Run: TECHAA2-R_100119A		01/19/10 11:29		
Nitrogen, Ammonia as N	0.23	mg/L	0.10	90	90	110			
<b>Sample ID:</b> R10010180-002BMS	Sample Matrix Spike				Run: TECHAA2-R_100119A		01/19/10 12:20		
Nitrogen, Ammonia as N	0.19	mg/L	0.10	74	80	120			S
<b>Sample ID:</b> R10010180-002BMISD	Sample Matrix Spike Duplicate				Run: TECHAA2-R_100119A		01/19/10 12:21		
Nitrogen, Ammonia as N	0.19	mg/L	0.10	75	80	120	1.1	10	S

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R129210		
Sample ID: MB-100202A	Method Blank		Run: SUB-C129210				02/02/10 14:52		
Silicon	0.03	mg/L	0.007						
Boron	0.01	mg/L	0.009						
Calcium	ND	mg/L	0.2						
Iron	ND	mg/L	0.002						
Magnesium	ND	mg/L	0.05						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.3						
Sample ID: LFB-100202A	Laboratory Fortified Blank		Run: SUB-C129210				02/02/10 14:56		
Silicon	0.45	mg/L	0.0075	95	85	115			
Boron	1.0	mg/L	0.10	99	85	115			
Calcium	50	mg/L	0.50	99	85	115			
Iron	1.00	mg/L	0.030	100	85	115			
Magnesium	49	mg/L	0.50	99	85	115			
Potassium	44	mg/L	0.50	88	85	115			
Sodium	48	mg/L	0.50	97	85	115			
Silica	0.97	mg/L	0.016	97	85	125			
Sample ID: C10010571-001BMS2	Sample Matrix Spike		Run: SUB-C129210				02/02/10 17:09		
Boron	2.03	mg/L	0.10	97	70	130			
Iron	1.99	mg/L	0.030	97	70	130			
Silicon	9.05	mg/L	0.10		70	130			A
Calcium	241	mg/L	1.0	99	70	130			
Magnesium	124	mg/L	1.0	97	70	130			
Potassium	101	mg/L	1.0	80	70	130			
Sodium	141	mg/L	1.0	99	70	130			
Sample ID: C10010571-001BMSD2	Sample Matrix Spike Duplicate		Run: SUB-C129210				02/02/10 17:13		
Boron	2.08	mg/L	0.10	99	70	130	2.5	20	
Iron	1.99	mg/L	0.030	97	70	130	0	20	
Silicon	9.23	mg/L	0.10		70	130	1.9	20	A
Calcium	241	mg/L	1.0	99	70	130	0	20	
Magnesium	123	mg/L	1.0	96	70	130	0.8	20	
Potassium	101	mg/L	1.0	80	70	130	0.1	20	
Sodium	144	mg/L	1.0	102	70	130	2	20	

### Qualifiers:

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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

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R129009		
<b>Sample ID: LRB</b>	<b>Method Blank</b>		<b>Run: SUB-C129009</b>				<b>01/27/10 12:26</b>		
Aluminum	ND	mg/L	0.002						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	ND	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Mercury	ND	mg/L	4E-05						
Molybdenum	ND	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Silver	ND	mg/L	2E-05						
Thorium 232	0.0002	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Vanadium	ND	mg/L	9E-05						
Zinc	0.0002	mg/L	6E-05						
<b>Sample ID: LFB</b>	<b>Laboratory Fortified Blank</b>		<b>Run: SUB-C129009</b>				<b>01/27/10 12:47</b>		
Aluminum	0.0541	mg/L	0.0022	108	85	115			
Arsenic	0.0541	mg/L	0.0010	108	85	115			
Barium	0.0560	mg/L	0.0010	112	85	115			
Cadmium	0.0543	mg/L	0.0010	109	85	115			
Chromium	0.0534	mg/L	0.0010	107	85	115			
Copper	0.0536	mg/L	0.0010	107	85	115			
Lead	0.0546	mg/L	0.0010	109	85	115			
Manganese	0.0536	mg/L	0.0010	107	85	115			
Mercury	0.00557	mg/L	0.0010	111	85	115			
Molybdenum	0.0546	mg/L	0.0010	109	85	115			
Nickel	0.0531	mg/L	0.0010	106	85	115			
Silver	0.0209	mg/L	0.0010	105	85	115			
Thorium 232	0.0510	mg/L	0.0010	102	85	115			
Uranium	0.0537	mg/L	0.00030	107	85	115			
Vanadium	0.0532	mg/L	0.0010	106	85	115			
Zinc	0.0540	mg/L	0.0010	107	85	115			
<b>Sample ID: R10010180-002C</b>	<b>Post Digestion Spike</b>		<b>Run: SUB-C129009</b>				<b>01/27/10 16:01</b>		
Aluminum	0.0588	mg/L	0.0010	114	70	130			
Arsenic	0.0606	mg/L	0.0010	115	70	130			
Barium	0.0731	mg/L	0.0010	118	70	130			
Cadmium	0.0547	mg/L	0.010	109	70	130			
Chromium	0.0517	mg/L	0.050	102	70	130			
Copper	0.0524	mg/L	0.010	102	70	130			
Lead	0.0570	mg/L	0.050	114	70	130			

### Qualifiers:

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R129009		
Sample ID: R10010180-002C	Post Digestion Spike		Run: SUB-C129009				01/27/10 16:01		
Manganese	0.564	mg/L	0.010		70	130			A
Mercury	0.00581	mg/L	0.0010	116	70	130			
Molybdenum	0.0582	mg/L	0.0010	115	70	130			
Nickel	0.0539	mg/L	0.050	103	70	130			
Silver	0.0189	mg/L	0.010	94	70	130			
Thorium 232	0.0630	mg/L	0.0010	126	70	130			
Uranium	0.0724	mg/L	0.00030	127	70	130			
Vanadium	0.0552	mg/L	0.0010	108	70	130			
Zinc	0.0539	mg/L	0.010	101	70	130			
Sample ID: R10010180-002C	Post Digestion Spike Duplicate		Run: SUB-C129009				01/27/10 16:08		
Aluminum	0.0579	mg/L	0.0010	112	70	130	1.5	20	
Arsenic	0.0605	mg/L	0.0010	115	70	130	0.2	20	
Barium	0.0735	mg/L	0.0010	119	70	130	0.6	20	
Cadmium	0.0549	mg/L	0.010	110	70	130	0.4	20	
Chromium	0.0520	mg/L	0.050	102	70	130	0.5	20	
Copper	0.0519	mg/L	0.010	101	70	130	0.9	20	
Lead	0.0571	mg/L	0.050	114	70	130	0.2	20	
Manganese	0.564	mg/L	0.010		70	130	0.1	20	A
Mercury	0.00592	mg/L	0.0010	118	70	130	1.9	20	
Molybdenum	0.0587	mg/L	0.0010	116	70	130	0.9	20	
Nickel	0.0534	mg/L	0.050	102	70	130	1	20	
Silver	0.0188	mg/L	0.010	94	70	130	0.4	20	
Thorium 232	0.0629	mg/L	0.0010	126	70	130	0.1	20	
Uranium	0.0726	mg/L	0.00030	127	70	130	0.2	20	
Vanadium	0.0548	mg/L	0.0010	107	70	130	0.7	20	
Zinc	0.0529	mg/L	0.010	99	70	130	1.8	20	

### Qualifiers:

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ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R129058		
Sample ID: LRB	Method Blank		Run: SUB-C129058				01/28/10 14:40		
Antimony	0.0001	mg/L	0.0001						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	5E-05	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Molybdenum	ND	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Selenium	ND	mg/L	0.001						
Silver	4E-05	mg/L	2E-05						
Strontium	ND	mg/L	2E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Zinc	0.0008	mg/L	6E-05						
Sample ID: LFB	Laboratory Fortified Blank		Run: SUB-C129058				01/28/10 14:47		
Antimony	0.0508	mg/L	0.0010	101	85	115			
Arsenic	0.0511	mg/L	0.0010	102	85	115			
Barium	0.0509	mg/L	0.0010	102	85	115			
Beryllium	0.0511	mg/L	0.0010	102	85	115			
Cadmium	0.0510	mg/L	0.0010	102	85	115			
Chromium	0.0511	mg/L	0.0010	102	85	115			
Copper	0.0515	mg/L	0.0010	103	85	115			
Lead	0.0509	mg/L	0.0010	102	85	115			
Manganese	0.0506	mg/L	0.0010	101	85	115			
Molybdenum	0.0515	mg/L	0.0010	103	85	115			
Nickel	0.0510	mg/L	0.0010	102	85	115			
Selenium	0.0508	mg/L	0.0014	102	85	115			
Silver	0.0204	mg/L	0.0010	102	85	115			
Strontium	0.0501	mg/L	0.0010	100	85	115			
Thallium	0.0497	mg/L	0.0010	99	85	115			
Uranium	0.0498	mg/L	0.00030	100	85	115			
Zinc	0.0521	mg/L	0.0010	103	85	115			
Sample ID: R10010180-002D	Post Digestion Spike		Run: SUB-C129058				01/28/10 16:35		
Antimony	0.0564	mg/L	0.050	113	70	130			
Arsenic	0.0550	mg/L	0.0010	103	70	130			
Barium	0.0654	mg/L	0.0010	103	70	130			
Beryllium	0.0441	mg/L	0.010	88	70	130			
Cadmium	0.0489	mg/L	0.010	98	70	130			

### Qualifiers:

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8							Batch: C_R129058		
Sample ID: R10010180-002D	Post Digestion Spike			Run: SUB-C129058			01/28/10 16:35		
Chromium	0.0491	mg/L	0.0010	98	70	130			
Copper	0.0458	mg/L	0.010	89	70	130			
Lead	0.0514	mg/L	0.050	103	70	130			
Manganese	0.582	mg/L	0.010		70	130			A
Molybdenum	0.0515	mg/L	0.0010	101	70	130			
Nickel	0.0458	mg/L	0.0010	87	70	130			
Selenium	0.0517	mg/L	0.0010	103	70	130			
Silver	0.00941	mg/L	0.0010	47	70	130			S
Strontium	2.42	mg/L	0.10		70	130			A
Thallium	0.0491	mg/L	0.0010	98	70	130			
Uranium	0.0621	mg/L	0.00030	107	70	130			
Zinc	0.0483	mg/L	0.010	93	70	130			
Sample ID: R10010180-002D	Post Digestion Spike Duplicate			Run: SUB-C129058			01/28/10 16:42		
Antimony	0.0565	mg/L	0.050	113	70	130	0.2	20	
Arsenic	0.0556	mg/L	0.0010	105	70	130	1.1	20	
Barium	0.0655	mg/L	0.0010	104	70	130	0.3	20	
Beryllium	0.0448	mg/L	0.010	90	70	130	1.7	20	
Cadmium	0.0496	mg/L	0.010	99	70	130	1.5	20	
Chromium	0.0491	mg/L	0.0010	98	70	130	0	20	
Copper	0.0466	mg/L	0.010	91	70	130	1.8	20	
Lead	0.0514	mg/L	0.050	103	70	130	0.1	20	
Manganese	0.578	mg/L	0.010		70	130	0.7	20	A
Molybdenum	0.0524	mg/L	0.0010	103	70	130	1.8	20	
Nickel	0.0473	mg/L	0.0010	90	70	130	3.2	20	
Selenium	0.0513	mg/L	0.0010	103	70	130	0.7	20	
Silver	0.00920	mg/L	0.0010	46	70	130	2.3	20	S
Strontium	2.43	mg/L	0.10		70	130	0.3	20	A
Thallium	0.0495	mg/L	0.0010	99	70	130	0.9	20	
Uranium	0.0625	mg/L	0.00030	108	70	130	0.6	20	
Zinc	0.0489	mg/L	0.010	94	70	130	1.2	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Analytical Run: SUB-C129168		
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard								02/01/10 13:08
Uranium	0.0495	mg/L	0.00030	99	90	110			
<b>Method: E200.8</b>							Batch: C_25076		
<b>Sample ID: MB-25076</b>	Method Blank								02/02/10 00:36
Uranium	0.01	mg/L	6E-05				Run: SUB-C129168		
<b>Sample ID: LCS2-25076</b>	Laboratory Control Sample								02/02/10 00:40
Uranium	0.109	mg/L	0.00030	109	85	115	Run: SUB-C129168		
<b>Sample ID: R10010180-002I</b>	Post Digestion Spike								02/02/10 04:44
Uranium	0.0520	mg/L	0.00030	104	70	130	Run: SUB-C129168		
<b>Sample ID: R10010180-002I</b>	Post Digestion Spike Duplicate								02/02/10 05:05
Uranium	0.0519	mg/L	0.00030	104	70	130	0.1	20	
<b>Method: E200.8</b>							Batch: C_R129172		
<b>Sample ID: LRB</b>	Method Blank								02/01/10 13:36
Boron	0.0008	mg/L	0.0004				Run: SUB-C129172		
Iron	ND	mg/L	0.0006						
Selenium	ND	mg/L	3E-05						
Silver	0.0001	mg/L	4E-05						
Strontium	ND	mg/L	3E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	3E-05						
Zinc	0.0009	mg/L	0.0002						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank								02/01/10 13:42
Boron	0.0524	mg/L	0.0010	98	85	115	Run: SUB-C129172		
Iron	1.28	mg/L	0.0010	102	85	115			
Selenium	0.0508	mg/L	0.0010	102	85	115			
Silver	0.0202	mg/L	0.0010	101	85	115			
Strontium	0.0493	mg/L	0.0010	98	85	115			
Thallium	0.0507	mg/L	0.0010	101	85	115			
Uranium	0.0487	mg/L	0.00030	97	85	115			
Zinc	0.0539	mg/L	0.0010	105	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1									Batch: B_44007
Sample ID: MB-44007	Method Blank					Run: SUB-B142124			01/21/10 14:42
Mercury	ND	mg/L	5E-05						
Sample ID: LCS-44007	Laboratory Control Sample					Run: SUB-B142124			01/21/10 14:44
Mercury	0.0019	mg/L	0.0010	94	85	115			
Sample ID: B10011137-001CMS	Sample Matrix Spike					Run: SUB-B142124			01/21/10 14:48
Mercury	0.0019	mg/L	0.0010	96	70	130			
Sample ID: B10011137-001CMSD	Sample Matrix Spike Duplicate					Run: SUB-B142124			01/21/10 14:50
Mercury	0.0019	mg/L	0.0010	97	70	130	0.5	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0							Batch: R44459		
Sample ID: LFB011910-10	Laboratory Fortified Blank			Run: DIONEX_100120A			01/20/10 16:17		
Chloride	4.92	mg/L	0.50	98	90	110			
Fluoride	2.05	mg/L	0.10	103	90	110			
Nitrogen, Nitrate as N	2.38	mg/L	0.10	95	90	110			
Nitrogen, Nitrite as N	2.60	mg/L	0.10	104	90	110			
Sulfate	14.7	mg/L	1.0	98	90	110			
Sample ID: R10010180-001AMS	Sample Matrix Spike			Run: DIONEX_100120A			01/20/10 16:50		
Chloride	107	mg/L	2.2	95	80	120			
Fluoride	41.9	mg/L	0.22	98	80	120			
Nitrogen, Nitrate as N	48.0	mg/L	0.50	96	80	120			
Nitrogen, Nitrite as N	53.3	mg/L	1.2	107	80	120			
Sulfate	754	mg/L	1.3	81	80	120			
Sample ID: R10010180-001AMSD	Sample Matrix Spike Duplicate			Run: DIONEX_100120A			01/20/10 17:06		
Chloride	108	mg/L	2.2	96	80	120	1	10	
Fluoride	42.3	mg/L	0.22	99	80	120	1.1	10	
Nitrogen, Nitrate as N	48.2	mg/L	0.50	96	80	120	0.5	10	
Nitrogen, Nitrite as N	53.5	mg/L	1.2	107	80	120	0.3	10	
Sulfate	757	mg/L	1.3	82	80	120	0.4	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0							Batch: C_GrAB-0827		
Sample ID: MB-GrAB-0827	Method Blank				Run: SUB-C129405				02/05/10 11:47
Gross Alpha	-0.7	pCi/L							U
Gross Alpha precision (±)	0.8	pCi/L							
Gross Alpha MDC	0.9	pCi/L							
Gross Beta	-5	pCi/L							U
Gross Beta precision (±)	2	pCi/L							
Gross Beta MDC	2	pCi/L							
Sample ID: Th230-GrAB-0827	Laboratory Control Sample				Run: SUB-C129405				02/05/10 11:47
Gross Alpha	100	pCi/L		99	70	130			
Sample ID: Cs137-GrAB-0827	Laboratory Control Sample				Run: SUB-C129405				02/05/10 11:47
Gross Beta	74	pCi/L		87	70	130			
Sample ID: C10010313-009AMS	Sample Matrix Spike				Run: SUB-C129405				02/05/10 11:48
Gross Alpha	100	pCi/L		101	70	130			
Sample ID: C10010313-009AMSD	Sample Matrix Spike Duplicate				Run: SUB-C129405				02/05/10 11:48
Gross Alpha	100	pCi/L		104	70	130	2.6	17	
Sample ID: C10010313-009AMS	Sample Matrix Spike				Run: SUB-C129405				02/05/10 11:48
Gross Beta	96	pCi/L		111	70	130			
Sample ID: C10010313-009AMSD	Sample Matrix Spike Duplicate				Run: SUB-C129405				02/06/10 01:58
Gross Beta	88	pCi/L		102	70	130	8.7	16.4	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1							Batch: C_R128951		
Sample ID: LCS-R128951	Laboratory Control Sample		Run: SUB-C128951				01/23/10 20:28		
Americium 241	730	pCi/L	20	83	70	130			
Barium 133	550	pCi/L	20	98	70	130			
Cesium 137	890	pCi/L	20	97	70	130			
Potassium 40	2700	pCi/L	20	82	70	130			
Sample ID: MB-R128951	Method Blank		Run: SUB-C128951				01/23/10 20:28		
Gross Gamma	ND	pCi/L							U
Sample ID: R10010180-002H	Sample Duplicate		Run: SUB-C128951				01/23/10 20:28		
Gross Gamma	830	pCi/L					1.3	30	
Gross Gamma precision (±)	130	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 02/27/10  
**Work Order:** R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>							Batch: C_RA226-4321		
<b>Sample ID: C10010728-001DMS</b>	Sample Matrix Spike				Run: SUB-C129197			02/02/10 12:51	
Radium 226	18.2	pCi/L		91	70	130			
<b>Sample ID: C10010728-001DMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129197			02/02/10 12:51	
Radium 226	17.1	pCi/L		83	70	130	6.6	23.7	
<b>Sample ID: MB-RA226-4321</b>	Method Blank				Run: SUB-C129197			02/02/10 14:22	
Radium 226	-0.07	pCi/L							U
Radium 226 precision (±)	0.09	pCi/L							
Radium 226 MDC	0.2	pCi/L							
<b>Sample ID: LCS-RA226-4321</b>	Laboratory Control Sample				Run: SUB-C129197			02/02/10 14:22	
Radium 226	9.1	pCi/L		117	70	130			
<b>Method: E903.0</b>							Batch: C_R129243		
<b>Sample ID: C10010546-012AMS</b>	Sample Matrix Spike				Run: SUB-C129243			02/03/10 13:28	
Radium 226	8.6	pCi/g-dry		113	70	130			
<b>Sample ID: C10010546-012AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129243			02/03/10 13:28	
Radium 226	8.0	pCi/g-dry		102	70	130	7.5	24.2	
<b>Sample ID: LCS-25024</b>	Laboratory Control Sample				Run: SUB-C129243			02/03/10 13:28	
Radium 226	1.7	pCi/g-dry		112	70	130			
<b>Sample ID: MB-25024</b>	Method Blank				Run: SUB-C129243			02/03/10 13:28	
Radium 226	-0.0003	pCi/g-dry							U
Radium 226 precision (±)	0.0002	pCi/g-dry							
Radium 226 MDC	0.0004	pCi/g-dry							

### 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

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-1079		
<b>Sample ID: LCS-RA-TH-ISO-1079</b>	Laboratory Control Sample				Run: SUB-C129046				01/26/10 09:42
Thorium 230	5.2	pCi/L		94	70	130			
<b>Sample ID: C10010532-002AMS</b>	Sample Matrix Spike				Run: SUB-C129046				01/26/10 09:42
Thorium 230	11	pCi/L		87	70	130			
<b>Sample ID: C10010532-002AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129046				01/26/10 09:42
Thorium 230	14	pCi/L		108	70	130	22	44.5	
<b>Sample ID: MB-RA-TH-ISO-1079</b>	Method Blank				Run: SUB-C129046				01/26/10 09:42
Thorium 230	0.02	pCi/L							U
Thorium 230 MDC	0.1	pCi/L							
Thorium 230 precision (±)	0.07	pCi/L							
<b>Method: E907.0</b>							Batch: C_R129307		
<b>Sample ID: LCS-25076</b>	Laboratory Control Sample				Run: SUB-C129307				02/02/10 15:49
Thorium 230	5.8	pCi/L		120	70	130			
<b>Sample ID: MB-25076</b>	Method Blank				Run: SUB-C129307				02/02/10 15:49
Thorium 230	-0.1	pCi/L							U
Thorium 230 MDC	0.2	pCi/L							
Thorium 230 precision (±)	0.10	pCi/L							
<b>Sample ID: TAP WATER-MS</b>	Sample Matrix Spike				Run: SUB-C129307				02/02/10 15:49
Thorium 230	5.2	pCi/L		101	70	130			
<b>Sample ID: TAP WATER-MSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129307				02/02/10 15:49
Thorium 230	5.9	pCi/L		114	70	130	14	35.3	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 02/27/10  
Work Order: R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M							Batch: C_PB-210-0652		
Sample ID: C09071013-004DMS	Sample Matrix Spike		Run: SUB-C129676				02/09/10 11:19		
Lead 210	220	pCi/L		95	70	130			
Sample ID: C09071013-004DMSD	Sample Matrix Spike Duplicate		Run: SUB-C129676				02/09/10 11:19		
Lead 210	260	pCi/L		118	70	130	21	17.3	R
- The RPD for the MSD is high. The individual spike recoveries are within range, the MB is acceptable, and the LCS is within range, therefore the batch is approved.									
Sample ID: MB-PB-210-0652	Method Blank		Run: SUB-C129676				02/09/10 11:19		
Lead 210	0.4	pCi/L							U
Lead 210 precision (±)	3	pCi/L							
Lead 210 MDC	6	pCi/L							
Sample ID: LCS-PB-210-0652	Laboratory Control Sample		Run: SUB-C129676				02/09/10 11:19		
Lead 210	120	pCi/L		103	70	130			
Method: E909.0M							Batch: C_25076		
Sample ID: C10010532-003DMS	Sample Matrix Spike		Run: SUB-C129677				02/09/10 11:19		
Lead 210	93	pCi/L		98	70	130			
Sample ID: C10010532-003DMSD	Sample Matrix Spike Duplicate		Run: SUB-C129677				02/09/10 11:19		
Lead 210	98	pCi/L		104	70	130	5.8	16.6	
Sample ID: MB-25076	Method Blank		Run: SUB-C129677				02/09/10 11:19		
Lead 210	5	pCi/L							U
Lead 210 precision (±)	10	pCi/L							
Lead 210 MDC	20	pCi/L							
Sample ID: LCS-25076	Laboratory Control Sample		Run: SUB-C129677				02/09/10 11:19		
Lead 210	490	pCi/L		86	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 02/27/10  
**Work Order:** R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>							Batch: C_PO210-0281		
<b>Sample ID: C10020209-003DMS</b>	Sample Matrix Spike				Run: SUB-C129833			02/17/10 15:45	
Polonium 210	33	pCi/L		100	70	130			
<b>Sample ID: C10020209-003DMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129833			02/17/10 15:45	
Polonium 210	34	pCi/L		104	70	130	4.2	55.8	
<b>Sample ID: LCS-PO210-0281</b>	Method Blank				Run: SUB-C129833			02/19/10 08:46	
Polonium 210	0.10	pCi/L							U
Polonium 210 MDC	0.8	pCi/L							
Polonium 210 precision (±)	0.4	pCi/L							
<b>Sample ID: MB-PO210-0281</b>	Laboratory Control Sample				Run: SUB-C129833			02/19/10 08:46	
Polonium 210	13	pCi/L		78	70	130			
<b>Method: E912.0</b>							Batch: C_R129834		
<b>Sample ID: LCS-25076</b>	Laboratory Control Sample				Run: SUB-C129834			02/17/10 08:48	
Polonium 210	95	pCi/L		120	70	130			
<b>Sample ID: MB-25076</b>	Method Blank				Run: SUB-C129834			02/17/10 08:48	
Polonium 210	0.2	pCi/L							U
Polonium 210 precision (±)	1	pCi/L							
Polonium 210 MDC	3	pCi/L							
<b>Sample ID: C10020209-003EMS</b>	Sample Matrix Spike				Run: SUB-C129834			02/17/10 11:59	
Polonium 210	25	pCi/L		120	70	130			
<b>Sample ID: C10020209-003EMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C129834			02/17/10 11:59	
Polonium 210	19	pCi/L		91	70	130	27	61.3	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 02/27/10  
**Work Order:** R10010180

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> SW7470A							Analytical Run: SUB-B142124		
<b>Sample ID:</b> QCS							Initial Calibration Verification Standard		
Mercury							01/21/10 14:35		
	0.0020	mg/L	0.0010	98	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





# Chain of Custody and Analytical Request Record

Page 1 of 1

Company Name: <u>Scott Environmental</u>		Project Name, PWS, Permit, Etc. <u>PowerTech, Inc.</u>		Sample Origin State: _____		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address:		Contact Name: <u>Allen Scott</u>		Email: <u>Allen.Scott@PowerTech.com</u>		Sampler: (Please Print) <u>Allen Scott</u>	
Invoice Address: <u>PowerTech</u>		Invoice Contact & Phone:		Purchase Order:		Quote/Bottle Order:	
<input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTM/MWTP State: _____ Other: _____		<input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		Special Reports/Formats - ELI must be notified prior to sample submittal for the following:		Contact ELI prior to RUSH sample submittal for charges and scheduling - See instruction page	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date		Collection Time		Matrix	
1 <u>DO-09-21-01</u>		<u>1-18-10</u>		<u>10:24</u>		<u>water</u>	
2 <u>BB-09-21-02</u>		<u>1-18-10</u>		<u>10:24</u>		<u>water</u>	
3							
4							
5							
6							
7							
8							
9							
10							
Custody Record MUST be Signed		Relinquished by (print): <u>Allen Scott</u>		Date/Time: <u>1-19-10 10:24</u>		Signature: <u>[Signature]</u>	
		Relinquished by (print):		Date/Time:		Signature:	
Sample Disposal:		Return to Client:		Lab Disposal:		Signature: <u>Steve Frailand</u>	
						Date/Time: <u>1-19-10 10:24</u>	

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



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## ANALYTICAL SUMMARY REPORT

September 10, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10020266

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 2/23/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10020266-001	DB-09-21-01	02/22/10 0:00	02/23/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10020266-002	DB-09-21-02	02/22/10 0:00	02/23/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2010.09.10 10:34:07 -06:00



**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10020266

**Revised Date:** 09/10/10

**Report Date:** 03/29/10

## CASE NARRATIVE

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Tests Associated with Analyst identified as ELI-CA were subcontracted to Energy Laboratories Casper Branch, EPA Number WY00002.

Comments imported for SUBBED Workorder: C10020811

### PB210 ANALYSIS

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10020811

This case narrative is used to explain any exceptions to the analyses performed for your sample(s). In accordance with Good Analytical Laboratory Practices (GALP), samples requiring data qualifiers or analytical modifications are explained herein.

This report is being re-issued due to a change in the report that was made following the original issuance of the report. The reason for this re-issuance is due to the following.

- The Gross Gamma was re-reported

All samples were analyzed in accordance with prescribed methodology, except where noted. Samples are accompanied by appropriate quality assurance/quality control (QA/QC) samples throughout the analytical process.

If you have questions regarding this information, please feel free to contact us at (888)672-1225, (605)342-1225 or [rapid\\_city@energylab.com](mailto:rapid_city@energylab.com).

# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	36	mg/L		5		1	A2320 B	03/01/10 12:25/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	03/01/10 12:25/mb
Bicarbonate as HCO3	39	mg/L		5		1	A2320 B	03/01/10 12:25/mb
Calcium	54	mg/L	D	1		5	E200.7	03/04/10 18:59/eli-c
Chloride	7.2	mg/L		0.5		1	E300.0	02/23/10 20:06/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0	02/23/10 20:06/jmh
Magnesium	22.5	mg/L		0.5		5	E200.7	03/04/10 18:59/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	02/26/10 14:13/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/23/10 20:06/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/23/10 20:06/jmh
Potassium	12.9	mg/L		0.5		5	E200.7	03/04/10 18:59/eli-c
Sodium	162	mg/L	D	1		5	E200.7	03/04/10 18:59/eli-c
Sulfate	495	mg/L		1		20	E300.0	02/23/10 19:50/jmh
Silica	7.8	mg/L		0.2		5	E200.7	03/04/10 18:59/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1570	umhos/cm		5.0		1	A2510 B	03/02/10 15:46/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	03/01/10 15:00/jmh
pH	9.34	s.u.		0.01		1	A4500-H B	02/25/10 10:14/tb
Sodium Adsorption Ratio (SAR)	4.7	unitless		0.10		1	Calculation	03/19/10 08:36/ADM
Solids, Total Dissolved TDS @ 180 C	840	mg/L		5		1	A2540 C	02/25/10 15:59/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	02/26/10 21:33/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	02/26/10 21:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/26/10 21:33/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/04/10 18:59/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/26/10 21:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/26/10 21:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/26/10 21:33/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/04/10 18:59/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/26/10 21:33/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	02/26/10 21:33/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/26/10 21:33/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	02/26/10 21:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/26/10 21:33/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/10 15:28/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	02/26/10 21:33/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	02/26/10 21:33/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	02/26/10 21:33/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	02/26/10 21:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/26/10 21:33/eli-c
METALS - SUSPENDED								
Uranium	0.0015	mg/L	B	0.0003		1	E200.8	03/06/10 00:29/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/25/10 13:50/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/10 15:50/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	1.1	pCi/L	U			1	E900.0	03/05/10 00:36/eli-ca
Gross Alpha precision (±)	2.3	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Alpha MDC	3.8	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta	6.7	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta precision (±)	2.3	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta MDC	3.6	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0M	03/12/10 08:14/eli-c
Lead 210 precision (±)	0.8	pCi/L				1	E909.0M	03/12/10 08:14/eli-c
Lead 210 MDC	1.3	pCi/L				1	E909.0M	03/12/10 08:14/eli-c
Polonium 210	0.050	pCi/L	U			1	E912.0	03/15/10 08:48/eli-ca
Polonium 210 MDC	0.38	pCi/L				1	E912.0	03/15/10 08:48/eli-ca
Polonium 210 precision (±)	0.19	pCi/L				1	E912.0	03/15/10 08:48/eli-ca
Radium 226	0.8	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Thorium 230	0.01	pCi/L	U			1	E907.0	03/08/10 16:08/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/08/10 16:08/eli-ca
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	03/08/10 16:08/eli-ca
Gross Gamma	ND	pCi/L		20		1	E901.1	02/26/10 17:33/eli-ca
Gross Gamma precision (±)	ND	pCi/L				1	E901.1	02/26/10 17:33/eli-ca
RADIONUCLIDES - SUSPENDED								
Lead 210	0.2	pCi/L	U			1	E909.0M	03/23/10 07:42/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/23/10 07:42/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	03/23/10 07:42/eli-c
Polonium 210	0.069	pCi/L	U			1	E912.0	03/15/10 12:17/eli-ca
Polonium 210 precision (±)	0.26	pCi/L				1	E912.0	03/15/10 12:17/eli-ca

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
B - The analyte was detected in the method blank.



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - SUSPENDED								
Polonium 210 MDC	0.53	pCi/L				1	E912.0	03/15/10 12:17/eli-ca
Radium 226	0.03	pCi/L	U			1	E903.0	03/09/10 17:27/eli-ca
Radium 226 precision (±)	0.07	pCi/L				1	E903.0	03/09/10 17:27/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	03/09/10 17:27/eli-ca
Thorium 230	-0.07	pCi/L	U			1	E907.0	03/09/10 13:24/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	03/09/10 13:24/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - TOTAL								
Radon 222	ND	pCi/L		100		1	D5072-92	02/24/10 00:00/lkl
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	02/26/10 22:21/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	02/26/10 22:21/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/26/10 22:21/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/26/10 22:21/eli-c
Boron	ND	mg/L		0.1		5	E200.8	03/02/10 22:17/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/26/10 22:21/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/26/10 22:21/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/26/10 22:21/eli-c
Iron	ND	mg/L		0.03		5	E200.8	03/02/10 22:17/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/26/10 22:21/eli-c
Manganese	ND	mg/L		0.01		1	E200.8	02/26/10 22:21/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/25/10 15:01/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/26/10 22:21/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/26/10 22:21/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/26/10 22:21/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/26/10 22:21/eli-c
Strontium	2.2	mg/L		0.1		1	E200.8	02/26/10 22:21/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/26/10 22:21/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	02/26/10 22:21/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/26/10 22:21/eli-c
DATA QUALITY								
A/C Balance (± 5)	2.90	%				1	A1030 E	03/22/10 00:00/jmh
Anions	11.2	meq/L				1	A1030 E	03/22/10 00:00/jmh
Cations	11.9	meq/L				1	A1030 E	03/22/10 00:00/jmh
Solids, Total Dissolved Calculated	1130	mg/L				1	A1030 E	03/22/10 00:00/jmh
TDS Balance (0.80 - 1.20)	1.06					1	A1030 E	03/22/10 00:00/jmh

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	190	mg/L		5		1	A2320 B	03/01/10 12:38/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	03/01/10 12:38/mb
Bicarbonate as HCO <sub>3</sub>	232	mg/L		5		1	A2320 B	03/01/10 12:38/mb
Calcium	166	mg/L	D	1		5	E200.7	03/04/10 19:23/eli-c
Chloride	9.9	mg/L		0.5		1	E300.0	02/23/10 20:39/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	02/23/10 20:39/jmh
Magnesium	48.0	mg/L		0.5		5	E200.7	03/04/10 19:23/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	02/26/10 14:14/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	02/23/10 20:39/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	02/23/10 20:39/jmh
Potassium	12.3	mg/L		0.5		5	E200.7	03/04/10 19:23/eli-c
Sodium	126	mg/L	D	1		5	E200.7	03/04/10 19:23/eli-c
Sulfate	677	mg/L		1		20	E300.0	02/23/10 20:23/jmh
Silica	8.8	mg/L		0.2		5	E200.7	03/04/10 19:23/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1160	umhos/cm		5.0		1	A2510 B	03/02/10 15:50/tb
Oxidation-Reduction Potential	230	mV				1	A2580 B	03/01/10 15:00/jmh
pH	7.57	s.u.		0.01		1	A4500-H B	02/25/10 10:17/tb
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	03/19/10 08:36/ADM
Solids, Total Dissolved TDS @ 180 C	1300	mg/L		5		1	A2540 C	02/25/10 15:59/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	02/26/10 22:48/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	02/26/10 22:48/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/26/10 22:48/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/04/10 19:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/26/10 22:48/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/26/10 22:48/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/26/10 22:48/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/04/10 19:23/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/26/10 22:48/eli-c
Manganese	0.48	mg/L		0.01		1	E200.8	02/26/10 22:48/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	02/26/10 22:48/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	02/26/10 22:48/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/26/10 22:48/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	02/25/10 15:31/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	02/26/10 22:48/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	02/26/10 22:48/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0079	mg/L		0.0003		1	E200.8	02/26/10 22:48/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	02/26/10 22:48/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/26/10 22:48/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	0.0011	mg/L	B	0.0003		1	E200.8	03/06/10 00:35/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/25/10 13:53/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	02/25/10 15:50/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	37.9	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Alpha precision (±)	5.9	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Alpha MDC	6.1	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta	27.5	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta precision (±)	4.0	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Gross Beta MDC	5.9	pCi/L				1	E900.0	03/05/10 00:36/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0M	03/12/10 10:16/eli-c
Lead 210 precision (±)	0.8	pCi/L				1	E909.0M	03/12/10 10:16/eli-c
Lead 210 MDC	1.3	pCi/L				1	E909.0M	03/12/10 10:16/eli-c
Polonium 210	0.23	pCi/L	U			1	E912.0	03/15/10 08:48/eli-ca
Polonium 210 MDC	0.64	pCi/L				1	E912.0	03/15/10 08:48/eli-ca
Polonium 210 precision (±)	0.39	pCi/L				1	E912.0	03/15/10 08:48/eli-ca
Radium 226	2.3	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/09/10 13:45/eli-c
Thorium 230	-0.01	pCi/L	U			1	E907.0	03/08/10 16:08/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/08/10 16:08/eli-ca
Thorium 230 precision (±)	0.08	pCi/L				1	E907.0	03/08/10 16:08/eli-ca
Gross Gamma	ND	pCi/L		20		1	E901.1	02/26/10 17:33/eli-ca
Gross Gamma precision (±)	ND	pCi/L				1	E901.1	02/26/10 17:33/eli-ca
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.3	pCi/L	U			1	E909.0M	03/23/10 07:42/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	03/23/10 07:42/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	03/23/10 07:42/eli-c
Polonium 210	-0.096	pCi/L	U			1	E912.0	03/15/10 12:17/eli-ca
Polonium 210 precision (±)	0.26	pCi/L				1	E912.0	03/15/10 12:17/eli-ca

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
B - The analyte was detected in the method blank.





# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10020266-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Collection Date:** 02/22/10  
**Date Received:** 02/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.73	pCi/L				1	E912.0	03/15/10 12:17/eli-ca
Radium 226	0.07	pCi/L	U			1	E903.0	03/09/10 17:27/eli-ca
Radium 226 precision (±)	0.07	pCi/L				1	E903.0	03/09/10 17:27/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	03/09/10 17:27/eli-ca
Thorium 230	-0.07	pCi/L	U			1	E907.0	03/09/10 13:24/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	03/09/10 13:24/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	313	pCi/L		100		1	D5072-92	02/24/10 00:00/kl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	02/26/10 22:55/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	02/26/10 22:55/eli-c
Barium	ND	mg/L		0.1		1	E200.8	02/26/10 22:55/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	02/26/10 22:55/eli-c
Boron	ND	mg/L		0.1		5	E200.8	03/02/10 22:24/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	02/26/10 22:55/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	02/26/10 22:55/eli-c
Copper	ND	mg/L		0.01		1	E200.8	02/26/10 22:55/eli-c
Iron	0.07	mg/L		0.03		5	E200.8	03/02/10 22:24/eli-c
Lead	ND	mg/L		0.001		1	E200.8	02/26/10 22:55/eli-c
Manganese	0.50	mg/L		0.01		1	E200.8	02/26/10 22:55/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	02/25/10 15:03/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	02/26/10 22:55/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	02/26/10 22:55/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	02/26/10 22:55/eli-c
Silver	ND	mg/L		0.005		1	E200.8	02/26/10 22:55/eli-c
Strontium	2.5	mg/L		0.1		1	E200.8	02/26/10 22:55/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	02/26/10 22:55/eli-c
Uranium	0.0080	mg/L		0.0003		1	E200.8	02/26/10 22:55/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	02/26/10 22:55/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.440	%				1	A1030 E	03/22/10 00:00/jmh
Anions	18.2	meq/L				1	A1030 E	03/22/10 00:00/jmh
Cations	18.0	meq/L				1	A1030 E	03/22/10 00:00/jmh
Solids, Total Dissolved Calculated	1540	mg/L				1	A1030 E	03/22/10 00:00/jmh
TDS Balance (0.80 - 1.20)	1.08					1	A1030 E	03/22/10 00:00/jmh

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

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>							Batch: 100301A-ALK-SEL-W		
<b>Sample ID: LCS1_100301A</b>	Laboratory Control Sample				Run: PH_COND1-R_100301A		03/01/10 11:16		
Alkalinity, Total as CaCO <sub>3</sub>	956	mg/L	5.0	96	90	110			
<b>Sample ID: MBLK1_100301A</b>	Method Blank				Run: PH_COND1-R_100301A		03/01/10 11:18		
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	3						
<b>Sample ID: R10020303-004BMS</b>	Sample Matrix Spike				Run: PH_COND1-R_100301A		03/01/10 14:40		
Alkalinity, Total as CaCO <sub>3</sub>	1330	mg/L	6.1	96	80	120			
<b>Sample ID: R10020303-004BMSD</b>	Sample Matrix Spike Duplicate				Run: PH_COND1-R_100301A		03/01/10 14:55		
Alkalinity, Total as CaCO <sub>3</sub>	1340	mg/L	6.1	100	80	120	0.6	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Revised Date: 09/10/10

Report Date: 03/29/10

Work Order: R10020266

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B			Batch: 100302_1_COND-PROBE-W						
Sample ID: LCS1-1_100302	Laboratory Control Sample					Run: PH_COND2-R_100302B			03/02/10 15:36
Conductivity @ 25 C	150	umhos/cm	5.0	100	90	110			
Sample ID: LCS2-1_100302	Laboratory Control Sample					Run: PH_COND2-R_100302B			03/02/10 15:38
Conductivity @ 25 C	5010	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_100302	Method Blank					Run: PH_COND2-R_100302B			03/02/10 15:42
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: LCS_COND-1_100302	Laboratory Control Sample					Run: PH_COND2-R_100302B			03/02/10 15:44
Conductivity @ 25 C	1420	umhos/cm	5.0	100	90	110			
Sample ID: R10020266-001ADUP	Sample Duplicate					Run: PH_COND2-R_100302B			03/02/10 15:48
Conductivity @ 25 C	1570	umhos/cm	5.0				0	10	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C							Batch: 100225A-SLDS-TDS-W		
<b>Sample ID:</b> LCS1_100225A	Laboratory Control Sample				Run: BAL-4-R_100225A				02/25/10 15:58
Solids, Total Dissolved TDS @ 180 C	220	mg/L	10	106	90	110			
<b>Sample ID:</b> MBLK1_100225A	Method Blank				Run: BAL-4-R_100225A				02/25/10 15:58
Solids, Total Dissolved TDS @ 180 C	6	mg/L	5						
<b>Sample ID:</b> R10020306-002DMS	Sample Matrix Spike				Run: BAL-4-R_100225A				02/25/10 16:05
Solids, Total Dissolved TDS @ 180 C	3100	mg/L	10	100	80	120			
<b>Sample ID:</b> R10020306-002DMSD	Sample Matrix Spike Duplicate				Run: BAL-4-R_100225A				02/25/10 16:05
Solids, Total Dissolved TDS @ 180 C	3100	mg/L	10	99	80	120	0.3	10	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2580 B							Batch: 100301-ORP-ISE-W		
Sample ID: LCS	Laboratory Control Sample				Run: PH_COND2-R_100301A		03/01/10 15:00		
Oxidation-Reduction Potential	470	mV		100	95	105			
Sample ID: R10020266-001F	Sample Duplicate				Run: PH_COND2-R_100301A		03/01/10 15:00		
Oxidation-Reduction Potential	220	mV					2.4	10	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
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**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: A3114 B							Analytical Run: SUB-C130009			
Sample ID: As/Se 1.0ppm-Q 02231	Initial Calibration Verification Standard									02/25/10 13:36
Selenium-IV	0.051	mg/L	0.0010	103	90	110				
Method: A3114 B							Batch: C_SE3114-100225A			
Sample ID: MBLK	Method Blank				Run: SUB-C130009			02/25/10 13:42		
Selenium-IV	ND	mg/L	0.0003							
Sample ID: As/Se 1.0ppm-Q 02231	Laboratory Control Sample				Run: SUB-C130009			02/25/10 13:45		
Selenium-IV	0.051	mg/L	0.0010	102	90	110				
Sample ID: R10020266-002E	Sample Matrix Spike				Run: SUB-C130009			02/25/10 13:57		
Selenium-IV	0.048	mg/L	0.0010	97	85	115				
Sample ID: R10020266-002E	Sample Matrix Spike Duplicate				Run: SUB-C130009			02/25/10 14:00		
Selenium-IV	0.050	mg/L	0.0010	99	85	115	2.4	10		
Method: A3114 B							Analytical Run: SUB-C130017			
Sample ID: As/Se 1.0ppm-Q 02231	Initial Calibration Verification Standard									02/25/10 15:14
Selenium	0.053	mg/L	0.0010	106	90	110				
Method: A3114 B							Batch: C_SE3114-100225B			
Sample ID: MBLK	Method Blank				Run: SUB-C130017			02/25/10 15:21		
Selenium	0.0005	mg/L	0.0002							
Sample ID: As/Se 1.0ppm-Q 02231	Laboratory Control Sample				Run: SUB-C130017			02/25/10 15:24		
Selenium	0.052	mg/L	0.0010	103	90	110				
Sample ID: R10020266-002E	Sample Matrix Spike				Run: SUB-C130017			02/25/10 15:33		
Selenium	0.049	mg/L	0.0010	96	85	115				
Sample ID: R10020266-002E	Sample Matrix Spike Duplicate				Run: SUB-C130017			02/25/10 15:35		
Selenium	0.049	mg/L	0.0010	97	85	115	0.6	15		

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B							Batch: 100225_1_PH-W		
<b>Sample ID:</b> LCS_pH-1_100225	Laboratory Control Sample				Run: PH_COND2-R_100225A		02/25/10 10:02		
pH	7.23	s.u.	0.010	98	98.55	101.45			
<b>Sample ID:</b> R10020245-001ADUP	Sample Duplicate				Run: PH_COND2-R_100225A		02/25/10 10:10		
pH	6.49	s.u.	0.010				0.2	1.25	

### Qualifiers:

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ND - Not detected at the reporting limit.



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b>					Batch: A2010-02-26_2_NH3_01				
<b>Sample ID: MBLK-2</b> Nitrogen, Ammonia as N	Method Blank ND	mg/L	0.01			Run: TECHAA2-R_100226A		02/26/10 11:00	
<b>Sample ID: LFB-3</b> Nitrogen, Ammonia as N	Laboratory Fortified Blank 0.25	mg/L	0.10	99	90	110		02/26/10 11:01	
<b>Sample ID: R10020231-002CMS</b> Nitrogen, Ammonia as N	Sample Matrix Spike 0.22	mg/L	0.10	90	80	120		02/26/10 13:56	
<b>Sample ID: R10020231-002CMSD</b> Nitrogen, Ammonia as N	Sample Matrix Spike Duplicate 0.23	mg/L	0.10	93	80	120	3.1	02/26/10 13:58	10

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Analytical Run: SUB-C130316		
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard							03/04/10 10:01	
Silicon	5.1	mg/L	0.0073	102	95	105			
Boron	2.5	mg/L	0.10	101	95	105			
Calcium	25	mg/L	0.50	100	95	105			
Iron	2.5	mg/L	0.030	99	95	105			
Magnesium	25	mg/L	0.50	98	95	105			
Potassium	25	mg/L	0.50	99	95	105			
Sodium	25	mg/L	0.50	99	95	105			
<b>Sample ID: ICSA</b>	Interference Check Sample A							03/04/10 10:17	
Silicon	0.0039	mg/L	0.0073		0	0			
Boron	0.45	mg/L	0.10		0	0			
Calcium	490	mg/L	0.50	97	90	110			
Iron	180	mg/L	0.030	91	90	110			
Magnesium	510	mg/L	0.50	102	90	110			
Potassium	-0.0012	mg/L	0.50		0	0			
Sodium	0.13	mg/L	0.50		0	0			
<b>Sample ID: ICSAB</b>	Interference Check Sample AB							03/04/10 10:21	
Silicon	0.0025	mg/L	0.0073		0	0			
Boron	0.034	mg/L	0.10		0	0			
Calcium	490	mg/L	0.50	98	90	110			
Iron	200	mg/L	0.11	99	90	110			
Magnesium	510	mg/L	0.50	102	90	110			
Potassium	0.00040	mg/L	0.50		0	0			
Sodium	0.025	mg/L	0.50		0	0			
<b>Method: E200.7</b>							Batch: C_R130316		
<b>Sample ID: MB-100304A</b>	Method Blank		Run: SUB-C130316				03/04/10 10:45		
Silicon	ND	mg/L	0.007						
Boron	ND	mg/L	0.009						
Calcium	ND	mg/L	0.2						
Iron	ND	mg/L	0.002						
Magnesium	ND	mg/L	0.05						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.3						
<b>Sample ID: LFB-100304A</b>	Laboratory Fortified Blank		Run: SUB-C130316				03/04/10 10:49		
Silicon	0.45	mg/L	0.0075	95	85	115			
Boron	0.98	mg/L	0.10	98	85	115			
Calcium	49	mg/L	0.50	98	85	115			
Iron	0.96	mg/L	0.030	96	85	115			
Magnesium	48	mg/L	0.50	97	85	115			
Potassium	45	mg/L	0.50	90	85	115			
Sodium	49	mg/L	0.50	98	85	115			

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7							Batch: C_R130316		
<b>Sample ID:</b> LFB-100304A	Laboratory Fortified Blank			Run: SUB-C130316			03/04/10 10:49		
<b>Sample ID:</b> R10020266-001C	Sample Matrix Spike			Run: SUB-C130316			03/04/10 19:03		
Boron	5.24	mg/L	0.10	103	70	130			
Iron	5.09	mg/L	0.030	100	70	130			
Silicon	6.00	mg/L	0.10	117	70	130			
Calcium	306	mg/L	1.1	99	70	130			
Magnesium	268	mg/L	1.0	96	70	130			
Potassium	254	mg/L	1.0	95	70	130			
Sodium	414	mg/L	1.4	99	70	130			
<b>Sample ID:</b> R10020266-001C	Sample Matrix Spike Duplicate			Run: SUB-C130316			03/04/10 19:07		
Boron	5.24	mg/L	0.10	103	70	130	0	20	
Iron	4.90	mg/L	0.030	96	70	130	4	20	
Silicon	5.74	mg/L	0.10	104	70	130	4.5	20	
Calcium	299	mg/L	1.1	96	70	130	2.2	20	
Magnesium	262	mg/L	1.0	94	70	130	2.3	20	
Potassium	251	mg/L	1.0	93	70	130	1.2	20	
Sodium	416	mg/L	1.4	100	70	130	0.5	20	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Analytical Run: SUB-C130108		
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard							02/26/10 13:18	
Aluminum	0.0499	mg/L	0.0022	100	90	110			
Antimony	0.0507	mg/L	0.0010	101	90	110			
Arsenic	0.0501	mg/L	0.0010	100	90	110			
Barium	0.0511	mg/L	0.0010	102	90	110			
Beryllium	0.0506	mg/L	0.0010	101	90	110			
Cadmium	0.0510	mg/L	0.0010	102	90	110			
Chromium	0.0505	mg/L	0.0010	101	90	110			
Copper	0.0508	mg/L	0.0010	102	90	110			
Lead	0.0499	mg/L	0.0010	100	90	110			
Manganese	0.0502	mg/L	0.0010	100	90	110			
Mercury	0.00531	mg/L	0.0010	106	90	110			
Molybdenum	0.0520	mg/L	0.0010	104	90	110			
Nickel	0.0501	mg/L	0.0010	100	90	110			
Selenium	0.248	mg/L	0.0014	99	90	110			
Silver	0.0531	mg/L	0.0010	106	90	110			
Strontium	0.0499	mg/L	0.0010	100	90	110			
Thallium	0.0497	mg/L	0.0010	99	90	110			
Thorium 232	0.0460	mg/L	0.0010	92	90	110			
Uranium	0.0516	mg/L	0.00030	103	90	110			
Vanadium	0.0495	mg/L	0.0010	99	90	110			
Zinc	0.0509	mg/L	0.0010	102	90	110			
<b>Sample ID: ICSA</b>	Interference Check Sample A							02/26/10 13:25	
Aluminum	0.984	mg/L	0.0022	98	80	120			
Antimony	0.000493	mg/L	0.0010		0	0			
Arsenic	2.49E-05	mg/L	0.0010		0	0			
Barium	3.10E-05	mg/L	0.0010		0	0			
Beryllium	3.80E-06	mg/L	0.0010		0	0			
Cadmium	1.67E-05	mg/L	0.0010		0	0			
Chromium	2.08E-05	mg/L	0.0010		0	0			
Copper	-0.000225	mg/L	0.0010		0	0			
Lead	7.90E-06	mg/L	0.0010		0	0			
Manganese	3.49E-05	mg/L	0.0010		0	0			
Mercury	6.41E-05	mg/L	0.0010		0	0			
Molybdenum	0.0202	mg/L	0.0010	101	80	120			
Nickel	4.50E-06	mg/L	0.0010		0	0			
Selenium	0.000143	mg/L	0.0014		0	0			
Silver	0.000386	mg/L	0.0010		0	0			
Strontium	2.80E-05	mg/L	0.0010		0	0			
Thallium	1.74E-05	mg/L	0.0010		0	0			
Thorium 232	0.000874	mg/L	0.0010		0	0			
Uranium	7.10E-06	mg/L	0.00030		0	0			
Vanadium	1.01E-05	mg/L	0.0010		0	0			

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Analytical Run: SUB-C130108		
<b>Sample ID: ICSA</b>	Interference Check Sample A								02/26/10 13:25
Zinc	0.000202	mg/L	0.0010		0	0			
<b>Sample ID: ICSAB</b>	Interference Check Sample AB								02/26/10 13:31
Aluminum	0.984	mg/L	0.0022	98	70	130			
Antimony	0.000126	mg/L	0.0010		0	0			
Arsenic	0.0104	mg/L	0.0010	104	70	130			
Barium	5.51E-05	mg/L	0.0010		0	0			
Beryllium	1.30E-05	mg/L	0.0010		0	0			
Cadmium	0.0103	mg/L	0.0010	103	70	130			
Chromium	0.0103	mg/L	0.0010	103	70	130			
Copper	0.0101	mg/L	0.0010	101	70	130			
Lead	1.36E-05	mg/L	0.0010		0	0			
Manganese	0.0101	mg/L	0.0010	101	70	130			
Mercury	2.40E-05	mg/L	0.0010		0	0			
Molybdenum	0.0206	mg/L	0.0010	103	70	130			
Nickel	0.0101	mg/L	0.0010	101	70	130			
Selenium	0.000145	mg/L	0.0014		0	0			
Silver	0.00991	mg/L	0.0010	99	70	130			
Strontium	3.83E-05	mg/L	0.0010		0	0			
Thallium	6.00E-06	mg/L	0.0010		0	0			
Thorium 232	0.000331	mg/L	0.0010		0	0			
Uranium	1.00E-07	mg/L	0.00030		0	0			
Vanadium	-0.000193	mg/L	0.0010		0	0			
Zinc	0.0104	mg/L	0.0010	104	70	130			
<b>Method: E200.8</b>							Batch: C_R130108		
<b>Sample ID: LRB</b>	Method Blank				Run: SUB-C130108		02/26/10 14:05		
Aluminum	ND	mg/L	0.002						
Antimony	ND	mg/L	0.0001						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	ND	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Mercury	ND	mg/L	4E-05						
Molybdenum	ND	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Selenium	ND	mg/L	0.001						
Silver	0.0002	mg/L	2E-05						
Strontium	ND	mg/L	2E-05						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R130108		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C130108				02/26/10 14:05		
Thallium	ND	mg/L	3E-05						
Thorium 232	0.0002	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Vanadium	ND	mg/L	9E-05						
Zinc	0.0009	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C130108				02/26/10 14:12		
Aluminum	0.0519	mg/L	0.0022	104	85	115			
Antimony	0.0546	mg/L	0.0010	109	85	115			
Arsenic	0.0540	mg/L	0.0010	108	85	115			
Barium	0.0550	mg/L	0.0010	110	85	115			
Beryllium	0.0524	mg/L	0.0010	105	85	115			
Cadmium	0.0537	mg/L	0.0010	107	85	115			
Chromium	0.0526	mg/L	0.0010	105	85	115			
Copper	0.0511	mg/L	0.0010	102	85	115			
Lead	0.0534	mg/L	0.0010	107	85	115			
Manganese	0.0522	mg/L	0.0010	104	85	115			
Mercury	0.00546	mg/L	0.0010	109	85	115			
Molybdenum	0.0553	mg/L	0.0010	111	85	115			
Nickel	0.0522	mg/L	0.0010	104	85	115			
Selenium	0.0529	mg/L	0.0014	106	85	115			
Silver	0.0203	mg/L	0.0010	100	85	115			
Strontium	0.0530	mg/L	0.0010	106	85	115			
Thallium	0.0532	mg/L	0.0010	106	85	115			
Thorium 232	0.0565	mg/L	0.0010	113	85	115			
Uranium	0.0547	mg/L	0.00030	109	85	115			
Vanadium	0.0526	mg/L	0.0010	105	85	115			
Zinc	0.0543	mg/L	0.0010	107	85	115			
<b>Sample ID: R10020266-001C</b>	Post Digestion Spike		Run: SUB-C130108				02/26/10 21:40		
Aluminum	0.0532	mg/L	0.10	102	70	130			
Arsenic	0.0518	mg/L	0.0010	102	70	130			
Barium	0.0808	mg/L	0.10	107	70	130			
Cadmium	0.0514	mg/L	0.010	103	70	130			
Chromium	0.0509	mg/L	0.050	102	70	130			
Copper	0.0484	mg/L	0.010	94	70	130			
Lead	0.0524	mg/L	0.050	105	70	130			
Manganese	0.0575	mg/L	0.010	100	70	130			
Mercury	0.00536	mg/L	0.0010	107	70	130			
Molybdenum	0.0568	mg/L	0.10	109	70	130			
Nickel	0.0478	mg/L	0.050	96	70	130			
Silver	0.0186	mg/L	0.010	93	70	130			
Thorium 232	0.0569	mg/L	0.0010	114	70	130			
Uranium	0.0551	mg/L	0.00030	110	70	130			

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



## QA/QC Summary Report

Revised Date: 09/10/10

Report Date: 03/29/10

Work Order: R10020266

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R130108		
<b>Sample ID: R10020266-001C</b>	Post Digestion Spike		Run: SUB-C130108				02/26/10 21:40		
Vanadium	0.0518	mg/L	0.10	103	70	130			
Zinc	0.0511	mg/L	0.010	96	70	130			
<b>Sample ID: R10020266-001C</b>	Post Digestion Spike Duplicate		Run: SUB-C130108				02/26/10 21:47		
Aluminum	0.0530	mg/L	0.0010	101	70	130	0.5	20	
Arsenic	0.0519	mg/L	0.0010	103	70	130	0.3	20	
Barium	0.0802	mg/L	0.0010	105	70	130	0.7	20	
Cadmium	0.0514	mg/L	0.010	103	70	130	0	20	
Chromium	0.0508	mg/L	0.050	101	70	130	0.2	20	
Copper	0.0489	mg/L	0.010	95	70	130	1	20	
Lead	0.0524	mg/L	0.050	105	70	130	0	20	
Manganese	0.0574	mg/L	0.010	100	70	130	0.1	20	
Mercury	0.00538	mg/L	0.0010	107	70	130	0.3	20	
Molybdenum	0.0570	mg/L	0.0010	109	70	130	0.4	20	
Nickel	0.0476	mg/L	0.0010	95	70	130	0.4	20	
Silver	0.0189	mg/L	0.010	95	70	130	1.6	20	
Thorium 232	0.0574	mg/L	0.0010	115	70	130	0.8	20	
Uranium	0.0558	mg/L	0.00030	112	70	130	1.3	20	
Vanadium	0.0519	mg/L	0.0010	104	70	130	0.2	20	
Zinc	0.0511	mg/L	0.010	96	70	130	0	20	
<b>Sample ID: R10020266-001D</b>	Post Digestion Spike		Run: SUB-C130108				02/26/10 22:28		
Antimony	0.0571	mg/L	0.050	114	70	130			
Arsenic	0.0518	mg/L	0.0010	104	70	130			
Barium	0.0810	mg/L	0.0010	106	70	130			
Beryllium	0.0494	mg/L	0.010	99	70	130			
Cadmium	0.0513	mg/L	0.010	103	70	130			
Chromium	0.0505	mg/L	0.050	101	70	130			
Copper	0.0478	mg/L	0.010	94	70	130			
Lead	0.0524	mg/L	0.050	104	70	130			
Manganese	0.0550	mg/L	0.010	99	70	130			
Molybdenum	0.0548	mg/L	0.0010	105	70	130			
Nickel	0.0470	mg/L	0.0010	93	70	130			
Selenium	0.0509	mg/L	0.0010	102	70	130			
Silver	0.0189	mg/L	0.010	95	70	130			
Strontium	2.28	mg/L	0.10		70	130			A
Thallium	0.0515	mg/L	0.0010	103	70	130			
Uranium	0.0551	mg/L	0.00030	110	70	130			
Zinc	0.0498	mg/L	0.010	95	70	130			
<b>Sample ID: R10020266-001D</b>	Post Digestion Spike Duplicate		Run: SUB-C130108				02/26/10 22:34		
Antimony	0.0572	mg/L	0.050	114	70	130	0.2	20	
Arsenic	0.0525	mg/L	0.0010	105	70	130	1.3	20	
Barium	0.0808	mg/L	0.0010	106	70	130	0.2	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>		Batch: C_R130108							
<b>Sample ID: R10020266-001D</b>	Post Digestion Spike Duplicate		Run: SUB-C130108		02/26/10 22:34				
Beryllium	0.0490	mg/L	0.010	98	70	130	0.9	20	
Cadmium	0.0509	mg/L	0.010	102	70	130	0.8	20	
Chromium	0.0504	mg/L	0.050	101	70	130	0	20	
Copper	0.0482	mg/L	0.010	95	70	130	0.9	20	
Lead	0.0518	mg/L	0.050	103	70	130	1.1	20	
Manganese	0.0548	mg/L	0.010	99	70	130	0.3	20	
Molybdenum	0.0546	mg/L	0.0010	105	70	130	0.3	20	
Nickel	0.0472	mg/L	0.0010	93	70	130	0.2	20	
Selenium	0.0512	mg/L	0.0010	102	70	130	0.5	20	
Silver	0.0187	mg/L	0.010	94	70	130	0.9	20	
Strontium	2.28	mg/L	0.10		70	130	0.1	20	A
Thallium	0.0512	mg/L	0.0010	102	70	130	0.7	20	
Uranium	0.0548	mg/L	0.00030	110	70	130	0.6	20	
Zinc	0.0505	mg/L	0.010	97	70	130	1.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Analytical Run: SUB-C130212		
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard								03/02/10 14:47
Boron	0.0542	mg/L	0.0010	108	90	110			
Iron	1.04	mg/L	0.0010	104	90	110			
<b>Sample ID: ICSA</b>	Interference Check Sample A								03/02/10 14:54
Boron	0.000960	mg/L	0.0010		0	0			
Iron	1.01	mg/L	0.0010	101	80	120			
<b>Sample ID: ICSAB</b>	Interference Check Sample AB								03/02/10 15:00
Boron	0.000509	mg/L	0.0010		0	0			
Iron	1.01	mg/L	0.0010	101	70	130			
<b>Method: E200.8</b>							Batch: C_R130212		
<b>Sample ID: LRB</b>	Method Blank				Run: SUB-C130212			03/02/10 15:35	
Boron	ND	mg/L	0.0004						
Iron	ND	mg/L	0.0006						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank				Run: SUB-C130212			03/02/10 15:48	
Boron	0.0519	mg/L	0.0010	104	85	115			
Iron	1.30	mg/L	0.0010	104	85	115			
<b>Sample ID: C10020843-003CMS4</b>	Post Digestion Spike				Run: SUB-C130212			03/03/10 10:45	
Boron	0.113	mg/L	0.10	100	70	130			
Iron	1.27	mg/L	0.030	99	70	130			
<b>Sample ID: C10020843-003CMSD4</b>	Post Digestion Spike Duplicate				Run: SUB-C130212			03/03/10 10:52	
Boron	0.112	mg/L	0.10	97	70	130	1.5	20	
Iron	1.27	mg/L	0.030	99	70	130	0.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b> Analytical Run: SUB-C130368									
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard								03/05/10 12:06
Uranium	0.0508	mg/L	0.00030	102	90	110			
<b>Method: E200.8</b> Batch: C_25430									
<b>Sample ID: MB-25430</b>	Method Blank								03/06/10 00:19
Uranium	0.001	mg/L	6E-05						
<b>Sample ID: LCS2-25430</b> Laboratory Control Sample Run: SUB-C130368 03/06/10 00:24									
Uranium	0.123	mg/L	0.00030	121	85	115			S
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since this there is no remaining filter to re-process, and the remainder of the run QA is within acceptance range, this batch is approved.									
<b>Sample ID: R10020266-002I</b>	Post Digestion Spike								03/06/10 00:40
Uranium	0.0540	mg/L	0.00030	106	70	130			
<b>Sample ID: R10020266-002I</b> Post Digestion Spike Duplicate Run: SUB-C130368 03/06/10 00:45									
Uranium	0.0531	mg/L	0.00030	104	70	130	1.7	20	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1							Analytical Run: SUB-B143772		
<b>Sample ID:</b> QCS	Initial Calibration Verification Standard								02/25/10 14:37
Mercury	0.0018	mg/L	0.0010	92	90	110			
<b>Method:</b> E245.1							Batch: B_44724		
<b>Sample ID:</b> MB-44724	Method Blank								02/25/10 14:47
Mercury	ND	mg/L	5E-05						
<b>Sample ID:</b> LCS-44724	Laboratory Control Sample								02/25/10 14:50
Mercury	0.0018	mg/L	0.0010	91	85	115			
<b>Sample ID:</b> R10020236-005A	Sample Matrix Spike								02/25/10 14:54
Mercury	0.0016	mg/L	0.0010	80	70	130			
<b>Sample ID:</b> R10020236-005A	Sample Matrix Spike Duplicate								02/25/10 14:57
Mercury	0.0017	mg/L	0.0010	82	70	130	2.4	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>									Batch: R44872
<b>Sample ID: LFB022310-10</b>	Laboratory Fortified Blank					Run: DIONEX_100224A			02/23/10 18:28
Chloride	4.68	mg/L	0.50	94	90	110			
Fluoride	1.98	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N	2.28	mg/L	0.10	91	90	110			
Nitrogen, Nitrite as N	2.40	mg/L	0.10	96	90	110			
Sulfate	14.0	mg/L	1.0	93	90	110			
<b>Sample ID: R10020252-001AMS</b>	Sample Matrix Spike					Run: DIONEX_100224A			02/23/10 19:17
Chloride	24.0	mg/L	0.50		80	120			A
Fluoride	2.10	mg/L	0.10	94	80	120			
Nitrogen, Nitrate as N	2.52	mg/L	0.10	90	80	120			
Nitrogen, Nitrite as N	2.41	mg/L	0.10	96	80	120			
Sulfate	29.7	mg/L	1.0	81	80	120			
<b>Sample ID: R10020252-001AMSD</b>	Sample Matrix Spike Duplicate					Run: DIONEX_100224A			02/23/10 19:33
Chloride	24.1	mg/L	0.50		80	120	0.5	10	A
Fluoride	2.11	mg/L	0.10	94	80	120	0.4	10	
Nitrogen, Nitrate as N	2.52	mg/L	0.10	90	80	120	0.1	10	
Nitrogen, Nitrite as N	2.42	mg/L	0.10	97	80	120	0.5	10	
Sulfate	29.8	mg/L	1.0	81	80	120	0.3	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>							Batch: C_GrAB-0854		
<b>Sample ID: MB-GrAB-0854</b>	Method Blank				Run: SUB-C130382			03/04/10 03:14	
Gross Alpha	-0.6	pCi/L							U
Gross Alpha precision (±)	0.6	pCi/L							
Gross Alpha MDC	0.7	pCi/L							
Gross Beta	0.2	pCi/L							U
Gross Beta precision (±)	1	pCi/L							
Gross Beta MDC	2	pCi/L							
<b>Sample ID: Th230-GrAB-0854</b>	Laboratory Control Sample				Run: SUB-C130382			03/04/10 03:14	
Gross Alpha	100	pCi/L		99	70	130			
<b>Sample ID: Cs137-GrAB-0854</b>	Laboratory Control Sample				Run: SUB-C130382			03/04/10 03:14	
Gross Beta	85	pCi/L		94	70	130			
<b>Sample ID: C10020552-001DMS</b>	Sample Matrix Spike				Run: SUB-C130382			03/04/10 03:14	
Gross Alpha	210	pCi/L		101	70	130			
<b>Sample ID: C10020552-001DMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130382			03/04/10 03:14	
Gross Alpha	170	pCi/L		67	70	130	18	20	S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.									
<b>Sample ID: C10020552-001DMS</b>	Sample Matrix Spike				Run: SUB-C130382			03/04/10 03:14	
Gross Beta	130	pCi/L		104	70	130			
<b>Sample ID: C10020552-001DMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130382			03/04/10 03:14	
Gross Beta	120	pCi/L		101	70	130	2	15	
<b>Sample ID: C10020817-001ADUP</b>	Sample Duplicate				Run: SUB-C130382			03/05/10 00:36	
Gross Alpha	-0.266	pCi/L					98	521.1	U
Gross Alpha precision (±)	1.50	pCi/L							
Gross Alpha MDC	2.58	pCi/L							
Gross Beta	16.2	pCi/L					28	40.7	
Gross Beta precision (±)	2.23	pCi/L							
Gross Beta MDC	3.28	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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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>							Batch: C_R130184		
<b>Sample ID: LCS-R130184</b>	Laboratory Control Sample				Run: SUB-C130184		02/26/10 17:33		
Americium 241	660	pCi/L	20	82	70	130			
Cesium 137	990	pCi/L	20	97	70	130			
Potassium 40	6700	pCi/L	20	101	70	130			
<b>Sample ID: MB-R130184</b>	Method Blank				Run: SUB-C130184		02/26/10 17:33		
Actinium 228	ND	pCi/L							
Actinium 228 precision (±)	ND	pCi/L							
Americium 241	ND	pCi/L							
Americium 241 precision (±)	ND	pCi/L							
Barium 133	ND	pCi/L							
Barium 133 precision (±)	ND	pCi/L							
Bismuth 212	ND	pCi/L							
Bismuth 212 precision (±)	ND	pCi/L							
Bismuth 214	ND	pCi/L							U
Cesium 134	ND	pCi/L							
Cesium 134 precision (±)	ND	pCi/L							
Cesium 137	ND	pCi/L							
Cesium 137 precision (±)	ND	pCi/L							
Cobalt 60	ND	pCi/L							
Cobalt 60 precision (±)	ND	pCi/L							
Iodine 125	ND	pCi/L							
Iodine 125 precision (±)	ND	pCi/L							
Iodine 131	ND	pCi/L							U
Lead 212	ND	pCi/L							
Lead 212 precision (±)	ND	pCi/L							
Lead 214	ND	pCi/L							
Lead 214 precision (±)	ND	pCi/L							
Manganese 54	ND	pCi/L							
Manganese 54 precision (±)	ND	pCi/L							
Potassium 40	ND	pCi/L							U
Radium 223	ND	pCi/L							
Radium 223 precision (±)	ND	pCi/L							
Radium 224	ND	pCi/L							
Radium 224 precision (±)	ND	pCi/L							
Thallium 208	ND	pCi/L							
Thallium 208 precision (±)	ND	pCi/L							
Thorium 228	ND	pCi/L							
Thorium 228 precision (±)	ND	pCi/L							
Thorium 234	ND	pCi/L							
Thorium 234 precision (±)	ND	pCi/L							
Zinc 65	ND	pCi/L							
Zinc 65 precision (±)	ND	pCi/L							
Radium 228	ND	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>							Batch: C_R130184		
<b>Sample ID: MB-R130184</b>							Run: SUB-C130184		
Method Blank							02/26/10 17:33		
Radium 228 precision (±)	ND	pCi/L							
Gross Gamma	ND	pCi/L							U
<b>Sample ID: C10020817-004ADUP</b>							Run: SUB-C130184		
Sample Duplicate							02/26/10 17:33		
Bismuth 212	ND	pCi/L	20					30	
Bismuth 212 precision (±)	ND	pCi/L							
Bismuth 214	ND	pCi/L	20					30	
Cesium 134	ND	pCi/L	20					30	
Cesium 134 precision (±)	ND	pCi/L							
Cesium 137	ND	pCi/L	20					30	
Cesium 137 precision (±)	ND	pCi/L							
Cobalt 60	ND	pCi/L	20					30	
Cobalt 60 precision (±)	ND	pCi/L							
Iodine 125	ND	pCi/L	20					30	
Iodine 125 precision (±)	ND	pCi/L							
Iodine 131	ND	pCi/L	20					30	U
Lead 212	ND	pCi/L	20					30	
Lead 212 precision (±)	ND	pCi/L							
Lead 214	ND	pCi/L	20					30	
Lead 214 precision (±)	ND	pCi/L							
Manganese 54	ND	pCi/L	20					30	
Manganese 54 precision (±)	ND	pCi/L							
Potassium 40	ND	pCi/L	20					30	U
Radium 223	ND	pCi/L	20					30	
Radium 223 precision (±)	ND	pCi/L							
Radium 224	ND	pCi/L	20					30	
Radium 224 precision (±)	ND	pCi/L							
Thallium 208	ND	pCi/L	20					30	
Thallium 208 precision (±)	ND	pCi/L							
Thorium 228	ND	pCi/L	20					30	
Thorium 228 precision (±)	ND	pCi/L							
Thorium 234	ND	pCi/L	20					30	
Thorium 234 precision (±)	ND	pCi/L							
Zinc 65	ND	pCi/L	20					30	
Zinc 65 precision (±)	ND	pCi/L							
Radium 228	ND	pCi/L	20					30	
Radium 228 precision (±)	ND	pCi/L							
Gross Gamma	ND	pCi/L	20					30	U
Gross Gamma precision (±)	ND	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Revised Date: 09/10/10

Client: Powertech USA Inc

Report Date: 03/29/10

Project: Dewey Groundwater Sampling

Work Order: R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>							Batch: C_R130472		
<b>Sample ID: LCS-25430</b>	Laboratory Control Sample				Run: SUB-C130472		03/09/10 17:27		
Radium 226	15	pCi/L		98	70	130			
<b>Sample ID: MB-25430</b>	Method Blank				Run: SUB-C130472		03/09/10 17:27		
Radium 226	0.2	pCi/L							U
Radium 226 precision ( $\pm$ )	0.2	pCi/L							
Radium 226 MDC	0.3	pCi/L							
<b>Sample ID: C10020854-001AMS</b>	Sample Matrix Spike				Run: SUB-C130472		03/10/10 09:16		
Radium 226	310	pCi/g		-257	70	130			S
- Sample response is much larger than spike amount, therefore small variances in the sample adversely affected the recovery. Both of the LSCs analyzed with the batch meet acceptance criteria; this batch is approved.									
<b>Sample ID: C10020854-001AMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130472		03/10/10 09:16		
Radium 226	400	pCi/g		443	70	130	26	12.4	SR
- Sample response is much larger than spike amount, therefore small variances in the sample adversely affected the recovery. Both of the LSCs analyzed with the batch meet acceptance criteria; this batch is approved.									
<b>Method: E903.0</b>							Batch: C_RA226-4389		
<b>Sample ID: C10030004-002CMS</b>	Sample Matrix Spike				Run: SUB-C130649		03/09/10 16:32		
Radium 226	17	pCi/L		105	70	130			
<b>Sample ID: C10030004-002CMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130649		03/09/10 16:32		
Radium 226	15	pCi/L		94	70	130	11	24	
<b>Sample ID: MB-RA226-4389</b>	Method Blank				Run: SUB-C130649		03/09/10 18:03		
Radium 226	-0.2	pCi/L							U
Radium 226 precision ( $\pm$ )	0.08	pCi/L							
Radium 226 MDC	0.2	pCi/L							
<b>Sample ID: LCS-RA226-4389</b>	Laboratory Control Sample				Run: SUB-C130649		03/09/10 18:03		
Radium 226	8.6	pCi/L		111	70	130			

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Revised Date: 09/10/10

Report Date: 03/29/10

Work Order: R10020266

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-1109		
<b>Sample ID: LCS-RA-TH-ISO-1109</b>	Laboratory Control Sample				Run: SUB-C130435				03/08/10 11:54
Thorium 230	5.9	pCi/L		114	70	130			
<b>Sample ID: R10020266-001H</b>	Sample Matrix Spike				Run: SUB-C130435				03/08/10 16:08
Thorium 230	11	pCi/L		89	70	130			
<b>Sample ID: R10020266-001H</b>	Sample Matrix Spike Duplicate				Run: SUB-C130435				03/08/10 16:08
Thorium 230	13	pCi/L		105	70	130	16	37.5	
<b>Sample ID: MB-RA-TH-ISO-1109</b>	Method Blank				Run: SUB-C130435				03/08/10 16:08
Thorium 230	0.07	pCi/L							U
Thorium 230 MDC	0.2	pCi/L							
Thorium 230 precision (±)	0.1	pCi/L							
<b>Method: E907.0</b>							Batch: C_25430		
<b>Sample ID: C10020823-007FMS</b>	Sample Matrix Spike				Run: SUB-C130526				03/09/10 13:24
Thorium 230	6.7	pCi/L		107	70	130			
<b>Sample ID: C10020823-007FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130526				03/09/10 13:24
Thorium 230	6.2	pCi/L		95	70	130	7.7	35.2	
<b>Sample ID: LCS-25430</b>	Laboratory Control Sample				Run: SUB-C130526				03/09/10 13:24
Thorium 230	5.4	pCi/L		113	70	130			
<b>Sample ID: MB-25430</b>	Method Blank				Run: SUB-C130526				03/09/10 13:24
Thorium 230	0.006	pCi/L							U
Thorium 230 MDC	0.08	pCi/L							
Thorium 230 precision (±)	0.09	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration





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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Revised Date: 09/10/10  
Report Date: 03/29/10  
Work Order: R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>							Batch: C_PB-210-0669		
<b>Sample ID: C09081027-005CMS</b>	Sample Matrix Spike				Run: SUB-C130620			03/12/10 22:26	
Lead 210	210	pCi/L		96	70	130			
<b>Sample ID: C09081027-005CMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130620			03/13/10 00:28	
Lead 210	180	pCi/L		81	70	130	17	18.4	
<b>Sample ID: MB-PB-210-0669</b>	Method Blank				Run: SUB-C130620			03/13/10 02:29	
Lead 210	1	pCi/L							U
Lead 210 precision (±)	3	pCi/L							
Lead 210 MDC	5	pCi/L							
<b>Sample ID: LCS-PB-210-0669</b>	Laboratory Control Sample				Run: SUB-C130620			03/13/10 06:33	
Lead 210	120	pCi/L		105	70	130			
- One of the two LCSs run with the batch was substituted for the Standard due to poor recovery. This resulted in the STD, LCS, MS, and MSD all being from the same stock solution. The efficiency is acceptable therefore the batch is approved.									
<b>Method: E909.0M</b>							Batch: C_R130998		
<b>Sample ID: C09090819-001FMS</b>	Sample Matrix Spike				Run: SUB-C130998			03/23/10 07:42	
Lead 210	150	pCi/Filter		103	70	130			
<b>Sample ID: C09090819-001FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130998			03/23/10 07:42	
Lead 210	164	pCi/Filter		113	70	130	8.5	17.8	
<b>Sample ID: MB-25430</b>	Method Blank				Run: SUB-C130998			03/23/10 07:42	
Lead 210	ND	pCi/L							U
Lead 210 precision (±)	20	pCi/L							
Lead 210 MDC	30	pCi/L							
<b>Sample ID: LCS-25430</b>	Laboratory Control Sample				Run: SUB-C130998			03/23/10 07:42	
Lead 210	550	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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 03/29/10  
**Work Order:** R10020266

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>							Batch: C_PO210-0283		
<b>Sample ID: LCS-25262</b>	Laboratory Control Sample				Run: SUB-C130624			03/08/10 09:25	
Polonium 210	66	pCi/L		85	70	130			
<b>Sample ID: MB-25262</b>	Method Blank				Run: SUB-C130624			03/08/10 09:25	
Polonium 210	0.4	pCi/L							U
Polonium 210 precision (±)	1	pCi/L							
Polonium 210 MDC	2	pCi/L							
<b>Sample ID: C10020823-007EMS</b>	Sample Matrix Spike				Run: SUB-C130624			03/15/10 08:47	
Polonium 210	30	pCi/L		92	70	130			
<b>Sample ID: C10020823-007EMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130624			03/15/10 08:47	
Polonium 210	25	pCi/L		75	70	130	20	59.3	
<b>Method: E912.0</b>							Batch: C_25430		
<b>Sample ID: C10020823-004FMS</b>	Sample Matrix Spike				Run: SUB-C130723			03/15/10 12:17	
Polonium 210	24	pCi/L		113	70	130			
<b>Sample ID: C10020823-004FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C130723			03/15/10 12:17	
Polonium 210	17	pCi/L		79	70	130	35	54.1	
<b>Sample ID: LCS-25430</b>	Laboratory Control Sample				Run: SUB-C130723			03/15/10 12:17	
Polonium 210	82	pCi/L		104	70	130			
<b>Sample ID: MB-25430</b>	Method Blank				Run: SUB-C130723			03/15/10 12:17	
Polonium 210	0.1	pCi/L							U
Polonium 210 precision (±)	1	pCi/L							
Polonium 210 MDC	3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



# Chain of Custody and Analytical Request Record

Page 1 of 1

PLEASE PRINT - Provide as much information as possible.

Company Name: <i>South Environmental</i>	Project Name, PWS, Permit, Etc. <i>Powertech - Perry</i>	Sample Origin State: _____	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <i>Powertech</i>	Contact Name: <i>Allen Scott</i>	Email: <i>673-4859</i>	Sampler: (Please Print)
Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Special Report/Formats - ELI must be notified prior to sample submittal for the following:

<input type="checkbox"/> DW	<input type="checkbox"/> A2LA
<input type="checkbox"/> GSA	<input type="checkbox"/> EDD/EDT (Electronic Data)
<input type="checkbox"/> POTW/WWTP	Format: _____
<input type="checkbox"/> State: _____	<input type="checkbox"/> LEVEL IV
<input type="checkbox"/> Other: _____	<input type="checkbox"/> NELAC

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	ANALYSIS REQUESTED		Normal Turnaround (TAT)	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by:
				Number of Containers	Sample Type: AWS, VBO, Air, Water, Soils/Solids, Vegetation, Bioassay, Other			
1 <i>08-04-21-01</i>	<i>2-22-10</i>		<i>water</i>					
2 <i>08-09-21-02</i>	<i>2-22-10</i>		<i>water</i>					
3								
4								
5								
6								
7								
8								
9								
10								

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Signature: <i>ALL AS</i>	Received by (print):	Date/Time:
	Relinquished by (print):	Signature:	Received by (print):	Date/Time:
Sample Disposal:	Return to Client:	Lab Disposal:	Signature: <i>Steve Fairland</i>	Date/Time: <i>2-23-10 9:53</i>

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



## ANALYTICAL SUMMARY REPORT

May 03, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10030205

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 3 samples for Powertech USA Inc on 3/17/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10030205-001	DB-09-21-01	03/15/10 0:00	03/17/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10030205-002	DB-09-21-01 Dup	03/15/10 0:00	03/17/10	Aqueous	Same As Above
R10030205-003	DB-09-21-02	03/15/10 0:00	03/17/10	Aqueous	Same As Above

Thank you for submitting your samples to Energy Laboratories, Inc. - Rapid City. The following pages contain the results of your sample analysis.

The samples were analyzed in accordance with the methods specified on the analytical reports. All analyses were accompanied by applicable quality assurance samples throughout the test. Where applicable, the results of these quality assurance samples will be included with your analytical data.

If you have any questions regarding the analyses performed or the results of these analyses, please feel free to call (888)672-1225, (605)342-1225 or llarson@energylab.com.

Sincerely,



ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
Toll Free 888.672.1225 \* 605.342.1225 \* FAX 605.342.1397 \* rapid\_city@energylab.com

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## ANALYTICAL SUMMARY REPORT

Linda Larson  
Branch Manager  
Energy Laboratories, Inc.  
Rapid City, SD

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by

Linda Larson

Date: 2010.05.04 08:45:38 -06:00



**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10030205

**Report Date:** 05/03/10

## **CASE NARRATIVE**

Tests Associated with Analyst identified as ELI-CA were subcontracted to Energy Laboratories Casper Branch, EPA Number WY00002.

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Comments imported for SUBBED Workorder: C10030626

### **PB210 ANALYSIS**

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10030626

Radon analysis was subbed to the South Dakota State Health Lab.

The samples were received two days after samples collected. Analyst missed alkalinity hold time by one day to error in reading sample date in laboratory information system.



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	160	mg/L	H	5		1	A2320 B	03/30/10 09:44/mb
Carbonate as CO <sub>3</sub>	ND	mg/L	H	5		1	A2320 B	03/30/10 09:44/mb
Bicarbonate as HCO <sub>3</sub>	195	mg/L	H	5		1	A2320 B	03/30/10 09:44/mb
Calcium	88	mg/L	D	1		5	E200.7	03/19/10 13:23/eli-c
Chloride	8	mg/L		1		1	E300.0	03/18/10 18:50/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	03/18/10 18:50/jmh
Magnesium	31.8	mg/L		0.5		5	E200.7	03/19/10 13:23/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	03/23/10 11:27/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	03/18/10 18:50/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	03/18/10 18:50/jmh
Potassium	11.5	mg/L		0.5		5	E200.7	03/19/10 13:23/eli-c
Sodium	154	mg/L	D	1		5	E200.7	03/19/10 13:23/eli-c
Sulfate	509	mg/L		1		20	E300.0	03/18/10 18:01/jmh
Silica	8.3	mg/L		0.2		5	E200.7	03/19/10 13:23/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1360	umhos/cm		5.0		1	A2510 B	03/19/10 10:58/tb
Oxidation-Reduction Potential	200	mV				1	A2580 B	03/22/10 15:30/jmh
pH	7.93	s.u.		0.01		1	A4500-H B	03/19/10 10:03/tb
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	04/08/10 14:52/ADM
Solids, Total Dissolved TDS @ 180 C	1000	mg/L		5		1	A2540 C	03/19/10 13:55/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	03/19/10 13:23/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/20/10 01:47/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/19/10 13:23/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/19/10 13:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/20/10 01:47/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	03/19/10 13:23/eli-c
Copper	ND	mg/L		0.01		5	E200.7	03/19/10 13:23/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/19/10 13:23/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/20/10 01:47/eli-c
Manganese	0.04	mg/L		0.01		5	E200.7	03/19/10 13:23/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/20/10 01:47/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7	03/19/10 13:23/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	03/19/10 13:23/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/22/10 14:34/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/20/10 01:47/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/20/10 01:47/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

Page 1 of 12



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/20/10 01:47/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	03/20/10 01:47/eli-c
Zinc	ND	mg/L		0.01		5	E200.7	03/19/10 13:23/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	03/23/10 23:35/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/22/10 12:59/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/22/10 14:55/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	8.6	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Alpha precision (±)	3.8	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Alpha MDC	5.4	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta	13.7	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta precision (±)	3.9	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta MDC	6.2	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Lead 210	2.0	pCi/L	U			1	E909.0M	04/03/10 04:17/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	04/03/10 04:17/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	04/03/10 04:17/eli-c
Polonium 210	-0.020	pCi/L	U			1	E912.0	03/26/10 08:55/eli-c
Polonium 210 MDC	0.56	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Polonium 210 precision (±)	0.21	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Radium 226	2.1	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Thorium 230	0.002	pCi/L	U			1	E907.0	03/23/10 08:45/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Gross Gamma	810	pCi/L		20		1	E901.1	03/22/10 09:00/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	03/22/10 09:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.06	pCi/L	U			1	E909.0M	04/02/10 03:57/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	04/02/10 03:57/eli-c
Lead 210 MDC	2.9	pCi/L				1	E909.0M	04/02/10 03:57/eli-c
Polonium 210	-0.013	pCi/L	U			1	E912.0	04/06/10 08:44/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.  
U - Not detected at minimum detectable concentration

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 precision (±)	0.099	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Polonium 210 MDC	0.26	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Radium 226	0.2	pCi/L				1	E903.0	03/29/10 23:54/eli-cal
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	03/29/10 23:54/eli-cal
Radium 226 MDC	0.08	pCi/L				1	E903.0	03/29/10 23:54/eli-cal
Thorium 230	-0.08	pCi/L	U			1	E907.0	03/23/10 17:02/eli-c
Thorium 230 precision (±)	0.04	pCi/L				1	E907.0	03/23/10 17:02/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	260	pCi/L		100		1	D5072-92	03/18/10 00:00/lki
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/22/10 12:35/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/22/10 12:35/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/22/10 12:35/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/22/10 12:35/eli-c
Boron	0.1	mg/L		0.1		5	E200.7	03/23/10 14:14/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/22/10 12:35/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/22/10 12:35/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/22/10 12:35/eli-c
Iron	0.34	mg/L	D	0.04		5	E200.7	03/23/10 14:14/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/22/10 12:35/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	03/22/10 12:35/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/22/10 12:09/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/22/10 12:35/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/22/10 12:35/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/22/10 12:35/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/22/10 12:35/eli-c
Strontium	2.8	mg/L		0.1		1	E200.8	03/22/10 12:35/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/22/10 12:35/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/22/10 12:35/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/22/10 12:35/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.0300	%				1	A1030 E	04/08/10 00:00/jmh
Anions	14.0	meq/L				1	A1030 E	04/08/10 00:00/jmh
Cations	14.0	meq/L				1	A1030 E	04/08/10 00:00/jmh
Solids, Total Dissolved Calculated	922	mg/L				1	A1030 E	04/08/10 00:00/jmh

**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 interference.

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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
DATA QUALITY									
TDS Balance (0.80 - 1.20)	1.08						1	A1030 E	04/08/10 00:00/jmh

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-002  
**Client Sample ID:** DB-09-21-01 Dup

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	158	mg/L	H	5		1	A2320 B	03/30/10 09:48/mb
Carbonate as CO <sub>3</sub>	ND	mg/L	H	5		1	A2320 B	03/30/10 09:48/mb
Bicarbonate as HCO <sub>3</sub>	193	mg/L	H	5		1	A2320 B	03/30/10 09:48/mb
Calcium	87	mg/L	D	1		5	E200.7	03/19/10 13:27/eli-c
Chloride	8	mg/L		1		1	E300.0	03/18/10 19:23/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	03/18/10 19:23/jmh
Magnesium	31.1	mg/L		0.5		5	E200.7	03/19/10 13:27/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	03/23/10 11:28/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	03/18/10 19:23/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	03/18/10 19:23/jmh
Potassium	11.2	mg/L		0.5		5	E200.7	03/19/10 13:27/eli-c
Sodium	156	mg/L	D	1		5	E200.7	03/19/10 13:27/eli-c
Sulfate	531	mg/L		1		20	E300.0	03/18/10 19:06/jmh
Silica	8.1	mg/L		0.2		5	E200.7	03/19/10 13:27/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1360	umhos/cm		5.0		1	A2510 B	03/19/10 11:00/tb
Oxidation-Reduction Potential	200	mV				1	A2580 B	03/22/10 15:30/jmh
pH	7.94	s.u.		0.01		1	A4500-H B	03/19/10 10:09/tb
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	04/08/10 14:52/ADM
Solids, Total Dissolved TDS @ 180 C	1000	mg/L		5		1	A2540 C	03/19/10 13:56/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	03/19/10 13:27/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	03/20/10 01:54/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/19/10 13:27/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/19/10 13:27/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/20/10 01:54/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	03/19/10 13:27/eli-c
Copper	ND	mg/L		0.01		5	E200.7	03/19/10 13:27/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/19/10 13:27/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/20/10 01:54/eli-c
Manganese	0.04	mg/L		0.01		5	E200.7	03/19/10 13:27/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/20/10 01:54/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7	03/19/10 13:27/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	03/19/10 13:27/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/22/10 14:36/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/20/10 01:54/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/20/10 01:54/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-002  
**Client Sample ID:** DB-09-21-01 Dup

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/20/10 01:54/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	03/20/10 01:54/eli-c
Zinc	ND	mg/L		0.01		5	E200.7	03/19/10 13:27/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/23/10 23:39/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/22/10 13:01/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/22/10 14:55/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	10.0	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Alpha precision (±)	5.2	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Alpha MDC	7.6	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta	17.3	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta precision (±)	4.1	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Gross Beta MDC	6.4	pCi/L				1	E900.0	03/29/10 23:12/eli-ca
Lead 210	1.1	pCi/L	U			1	E909.0M	04/03/10 06:19/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	04/03/10 06:19/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	04/03/10 06:19/eli-c
Polonium 210	0.066	pCi/L	U			1	E912.0	03/26/10 08:55/eli-c
Polonium 210 MDC	0.59	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Radium 226	1.9	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Thorium 230	-0.007	pCi/L	U			1	E907.0	03/23/10 08:45/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Gross Gamma	930	pCi/L		20		1	E901.1	03/22/10 09:00/eli-c
Gross Gamma precision (±)	140	pCi/L				1	E901.1	03/22/10 09:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.2	pCi/L	U			1	E909.0M	04/02/10 10:02/eli-c
Lead 210 precision (±)	1.8	pCi/L				1	E909.0M	04/02/10 10:02/eli-c
Lead 210 MDC	3.0	pCi/L				1	E909.0M	04/02/10 10:02/eli-c
Polonium 210	0.013	pCi/L	U			1	E912.0	04/06/10 08:44/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.  
U - Not detected at minimum detectable concentration

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-002  
**Client Sample ID:** DB-09-21-01 Dup

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 precision (±)	0.15	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Polonium 210 MDC	0.33	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Radium 226	0.2	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Radium 226 MDC	0.08	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Thorium 230	0.03	pCi/L	U			1	E907.0	03/23/10 17:02/eli-c
Thorium 230 precision (±)	0.04	pCi/L				1	E907.0	03/23/10 17:02/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	232	pCi/L		100		1	D5072-92	03/18/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/22/10 12:42/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/22/10 12:42/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/22/10 12:42/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/22/10 12:42/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/23/10 14:18/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/22/10 12:42/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/22/10 12:42/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/22/10 12:42/eli-c
Iron	0.34	mg/L	D	0.04		5	E200.7	03/23/10 14:18/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/22/10 12:42/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	03/22/10 12:42/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/22/10 12:12/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/22/10 12:42/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/22/10 12:42/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	03/22/10 12:42/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/22/10 12:42/eli-c
Strontium	2.8	mg/L		0.1		1	E200.8	03/22/10 12:42/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/22/10 12:42/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	03/22/10 12:42/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/22/10 12:42/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-1.77	%				1	A1030 E	04/08/10 00:00/jmh
Anions	14.4	meq/L				1	A1030 E	04/08/10 00:00/jmh
Cations	14.0	meq/L				1	A1030 E	04/08/10 00:00/jmh
Solids, Total Dissolved Calculated	940	mg/L				1	A1030 E	04/08/10 00:00/jmh

**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 interference.

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ENERGY LABORATORIES, INC. \* 2821 Plant St \* Rapid City, SD 57702  
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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-002  
**Client Sample ID:** DB-09-21-01 Dup

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	1.09					1	A1030 E	04/08/10 00:00/jmh

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-003  
**Client Sample ID:** DB-09-21-02

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	200	mg/L	H	5		1	A2320 B	03/30/10 09:58/mb
Carbonate as CO3	ND	mg/L	H	5		1	A2320 B	03/30/10 09:58/mb
Bicarbonate as HCO3	244	mg/L	H	5		1	A2320 B	03/30/10 09:58/mb
Calcium	166	mg/L	D	1		5	E200.7	03/19/10 13:31/eli-c
Chloride	10	mg/L		1		1	E300.0	03/18/10 19:56/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	03/18/10 19:56/jmh
Magnesium	46.6	mg/L		0.5		5	E200.7	03/19/10 13:31/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	03/23/10 11:29/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	03/18/10 19:56/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	03/18/10 19:56/jmh
Potassium	11.3	mg/L		0.5		5	E200.7	03/19/10 13:31/eli-c
Sodium	124	mg/L	D	1		5	E200.7	03/19/10 13:31/eli-c
Sulfate	666	mg/L		1		20	E300.0	03/18/10 19:39/jmh
Silica	8.3	mg/L		0.2		5	E200.7	03/19/10 13:31/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1570	umhos/cm		5.0		1	A2510 B	03/19/10 11:03/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	03/22/10 15:30/jmh
pH	7.48	s.u.		0.01		1	A4500-H B	03/19/10 10:11/tb
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	04/08/10 14:52/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L		5		1	A2540 C	03/19/10 13:57/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		5	E200.7	03/19/10 13:31/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/20/10 02:28/eli-c
Barium	ND	mg/L		0.1		5	E200.7	03/19/10 13:31/eli-c
Boron	ND	mg/L		0.1		5	E200.7	03/19/10 13:31/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/20/10 02:28/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	03/19/10 13:31/eli-c
Copper	ND	mg/L		0.01		5	E200.7	03/19/10 13:31/eli-c
Iron	ND	mg/L		0.03		5	E200.7	03/19/10 13:31/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/20/10 02:28/eli-c
Manganese	0.53	mg/L		0.01		5	E200.7	03/19/10 13:31/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	03/20/10 02:28/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7	03/19/10 13:31/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	03/19/10 13:31/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	03/22/10 14:38/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	03/23/10 16:29/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	03/23/10 16:29/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix interference.

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

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-003  
**Client Sample ID:** DB-09-21-02

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
METALS - DISSOLVED								
Uranium	0.0078	mg/L		0.0003		1	E200.8	03/20/10 02:28/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	03/20/10 02:28/eli-c
Zinc	ND	mg/L		0.01		5	E200.7	03/19/10 13:31/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	03/23/10 23:43/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	03/22/10 13:03/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	03/22/10 14:55/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	11.2	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Gross Alpha precision (±)	3.8	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Gross Alpha MDC	5.1	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Gross Beta	19.7	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Gross Beta MDC	4.3	pCi/L				1	E900.0	04/17/10 10:27/eli-ca
Lead 210	0.7	pCi/L	U			1	E909.0M	04/03/10 08:20/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	04/03/10 08:20/eli-c
Lead 210 MDC	2.8	pCi/L				1	E909.0M	04/03/10 08:20/eli-c
Polonium 210	0.0	pCi/L	U			1	E912.0	03/26/10 08:55/eli-c
Polonium 210 MDC	0.42	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Polonium 210 precision (±)	0.17	pCi/L				1	E912.0	03/26/10 08:55/eli-c
Radium 226	2.9	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	03/29/10 17:02/eli-ca
Thorium 230	-0.01	pCi/L	U			1	E907.0	03/23/10 08:45/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	03/23/10 08:45/eli-c
Gross Gamma	990	pCi/L		20		1	E901.1	03/22/10 09:00/eli-c
Gross Gamma precision (±)	150	pCi/L				1	E901.1	03/22/10 09:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	0.7	pCi/L	U			1	E909.0M	04/02/10 12:04/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	04/02/10 12:04/eli-c
Lead 210 MDC	2.9	pCi/L				1	E909.0M	04/02/10 12:04/eli-c
Polonium 210	0.061	pCi/L	U			1	E912.0	04/06/10 08:44/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.  
U - Not detected at minimum detectable concentration

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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-003  
**Client Sample ID:** DB-09-21-02

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 precision (±)	0.18	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Polonium 210 MDC	0.34	pCi/L				1	E912.0	04/06/10 08:44/eli-c
Radium 226	0.2	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Radium 226 MDC	0.08	pCi/L				1	E903.0	03/29/10 23:54/eli-cat
Thorium 230	-0.001	pCi/L	U			1	E907.0	03/23/10 17:02/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	03/23/10 17:02/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	319	pCi/L		100		1	D5072-92	03/18/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	03/22/10 12:55/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	03/22/10 12:55/eli-c
Barium	ND	mg/L		0.1		1	E200.8	03/22/10 12:55/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	03/22/10 12:55/eli-c
Boron	0.1	mg/L		0.1		5	E200.7	03/23/10 14:30/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	03/22/10 12:55/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	03/22/10 12:55/eli-c
Copper	ND	mg/L		0.01		1	E200.8	03/22/10 12:55/eli-c
Iron	0.15	mg/L	D	0.04		5	E200.7	03/23/10 14:30/eli-c
Lead	ND	mg/L		0.001		1	E200.8	03/22/10 12:55/eli-c
Manganese	0.56	mg/L		0.01		1	E200.8	03/22/10 12:55/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	03/22/10 12:14/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	03/22/10 12:55/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	03/22/10 12:55/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	03/22/10 12:55/eli-c
Silver	ND	mg/L		0.005		1	E200.8	03/22/10 12:55/eli-c
Strontium	2.4	mg/L		0.1		1	E200.8	03/22/10 12:55/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	03/22/10 12:55/eli-c
Uranium	0.0088	mg/L		0.0003		1	E200.8	03/22/10 12:55/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	03/22/10 12:55/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.990	%				1	A1030 E	04/08/10 00:00/jmh
Anions	18.2	meq/L				1	A1030 E	04/08/10 00:00/jmh
Cations	17.8	meq/L				1	A1030 E	04/08/10 00:00/jmh
Solids, Total Dissolved Calculated	1170	mg/L				1	A1030 E	04/08/10 00:00/jmh

**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 interference.

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### LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10030205-003  
**Client Sample ID:** DB-09-21-02

**Report Date:** 05/03/10  
**Collection Date:** 03/15/10  
**Date Received:** 03/17/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
DATA QUALITY								
TDS Balance (0.80 - 1.20)	1.06					1	A1030 E	04/08/10 00:00/jmh

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>							Batch: 100330A-ALK-SEL-W		
<b>Sample ID: LCS1_100330A</b>	Laboratory Control Sample				Run: PH_COND1-R_100330A		03/30/10 09:31		
Alkalinity, Total as CaCO <sub>3</sub>	980	mg/L	5.0	98	90	110			
<b>Sample ID: MBLK1_100330A</b>	Method Blank				Run: PH_COND1-R_100330A		03/30/10 09:36		
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	3						
<b>Sample ID: R10030220-005AMS</b>	Sample Matrix Spike				Run: PH_COND1-R_100330A		03/30/10 10:26		
Alkalinity, Total as CaCO <sub>3</sub>	210	mg/L	5.0	91	80	120			
<b>Sample ID: R10030220-005AMSD</b>	Sample Matrix Spike Duplicate				Run: PH_COND1-R_100330A		03/30/10 10:27		
Alkalinity, Total as CaCO <sub>3</sub>	212	mg/L	5.0	92	80	120	0.9	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B		Batch: 100319_1_COND-PROBE-W							
Sample ID: LCS1-1_100319	Laboratory Control Sample					Run: PH_COND2-R_100319B			03/19/10 10:39
Conductivity @ 25 C	150	umhos/cm	5.0	100	90	110			
Sample ID: LCS2-1_100319	Laboratory Control Sample					Run: PH_COND2-R_100319B			03/19/10 10:43
Conductivity @ 25 C	5000	umhos/cm	5.0	100	90	110			
Sample ID: LCS_COND-1_100319	Laboratory Control Sample					Run: PH_COND2-R_100319B			03/19/10 10:48
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_100319	Method Blank					Run: PH_COND2-R_100319B			03/19/10 10:50
Conductivity @ 25 C	ND	umhos/cm	5						
Sample ID: R10030165-001ADUP	Sample Duplicate					Run: PH_COND2-R_100319B			03/19/10 10:55
Conductivity @ 25 C	3430	umhos/cm	5.0				2.1	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C							Batch: 100319A-SLDS-TDS-W		
<b>Sample ID:</b> LCS1_100319A	Laboratory Control Sample				Run: BAL-4-R_100322A				03/19/10 11:50
Solids, Total Dissolved TDS @ 180 C	210	mg/L	10	105	90	110			
<b>Sample ID:</b> MBLK1_100319A	Method Blank				Run: BAL-4-R_100322A				03/19/10 11:52
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	5						
<b>Sample ID:</b> R10030220-003AMS	Sample Matrix Spike				Run: BAL-4-R_100322A				03/19/10 14:07
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	10	107	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2580 B</b>							Batch: 100322-ORP-ISE-W		
<b>Sample ID: LCS</b>	Laboratory Control Sample				Run: PH_COND1-R_100322A		03/22/10 15:30		
Oxidation-Reduction Potential	470	mV		99	95	105			
<b>Sample ID: R10030205-001FDUP</b>	Sample Duplicate				Run: PH_COND1-R_100322A		03/22/10 15:30		
Oxidation-Reduction Potential	200	mV					0.6	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>							Batch: C_SE3114-100322A		
<b>Sample ID: MBLK</b>	Method Blank					Run: SUB-C130847			03/22/10 12:52
Selenium-IV	ND	mg/L	0.0003						
<b>Sample ID: As/Se 1.0ppm-Q 03121</b>	Laboratory Control Sample					Run: SUB-C130847			03/22/10 12:54
Selenium-IV	0.050	mg/L	0.0010	101	90	110			
<b>Sample ID: R10030205-003E</b>	Sample Matrix Spike					Run: SUB-C130847			03/22/10 13:06
Selenium-IV	0.050	mg/L	0.0010	100	85	115			
<b>Sample ID: R10030205-003E</b>	Sample Matrix Spike Duplicate					Run: SUB-C130847			03/22/10 13:08
Selenium-IV	0.049	mg/L	0.0010	98	85	115	1.5	10	
<b>Method: A3114 B</b>							Batch: C_SE3114-100322B		
<b>Sample ID: MBLK</b>	Method Blank					Run: SUB-C130854			03/22/10 14:27
Selenium	0.0007	mg/L	0.0002						
<b>Sample ID: As/Se 1.0ppm-Q 03121</b>	Laboratory Control Sample					Run: SUB-C130854			03/22/10 14:29
Selenium	0.049	mg/L	0.0010	98	90	110			
<b>Sample ID: R10030205-003E</b>	Sample Matrix Spike					Run: SUB-C130854			03/22/10 14:41
Selenium	0.048	mg/L	0.0010	95	85	115			
<b>Sample ID: R10030205-003E</b>	Sample Matrix Spike Duplicate					Run: SUB-C130854			03/22/10 14:43
Selenium	0.050	mg/L	0.0010	99	85	115	4.2	15	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B							Batch: 100319_1_PH-W		
<b>Sample ID:</b> LCS_pH-1_100319	Laboratory Control Sample				Run: PH_COND2-R_100319A			03/19/10 09:57	
pH	7.44	s.u.	0.010	100	98.55	101.45			
<b>Sample ID:</b> R10030205-001ADUP	Sample Duplicate				Run: PH_COND2-R_100319A			03/19/10 10:06	
pH	7.93	s.u.	0.010				0	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b>					Batch: A2010-03-23_2_NH3_01				
<b>Sample ID: MBLK-2</b>	Method Blank				Run: TECHAA2-R_100323A		03/23/10 09:52		
Nitrogen, Ammonia as N	ND	mg/L	0.01						
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank				Run: TECHAA2-R_100323A		03/23/10 09:54		
Nitrogen, Ammonia as N	0.24	mg/L	0.10	97	90	110			
<b>Sample ID: R10030217-001AMS</b>	Sample Matrix Spike				Run: TECHAA2-R_100323A		03/23/10 11:34		
Nitrogen, Ammonia as N	0.28	mg/L	0.10	93	80	120			
<b>Sample ID: R10030217-001AMSD</b>	Sample Matrix Spike Duplicate				Run: TECHAA2-R_100323A		03/23/10 11:35		
Nitrogen, Ammonia as N	0.27	mg/L	0.10	88	80	120	4.7	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Batch: C_R130823		
<b>Sample ID: MB-100319A</b>	Method Blank		Run: SUB-C130823				03/19/10 10:46		
Silicon	ND	mg/L	0.007						
Aluminum	ND	mg/L	0.01						
Barium	ND	mg/L	0.0005						
Boron	0.01	mg/L	0.009						
Calcium	ND	mg/L	0.2						
Chromium	ND	mg/L	0.002						
Copper	ND	mg/L	0.001						
Iron	ND	mg/L	0.002						
Magnesium	ND	mg/L	0.05						
Manganese	ND	mg/L	0.0004						
Molybdenum	ND	mg/L	0.005						
Nickel	ND	mg/L	0.003						
Potassium	ND	mg/L	0.02						
Sodium	ND	mg/L	0.3						
Zinc	ND	mg/L	0.001						
<b>Sample ID: LFB-100319A</b>	Laboratory Fortified Blank		Run: SUB-C130823				03/19/10 10:50		
Silicon	0.47	mg/L	0.0075	100	85	115			
Aluminum	0.92	mg/L	0.10	92	85	115			
Barium	0.94	mg/L	0.10	94	85	115			
Boron	0.96	mg/L	0.10	95	85	115			
Calcium	48	mg/L	0.50	95	85	115			
Chromium	0.93	mg/L	0.050	93	85	115			
Copper	0.95	mg/L	0.010	95	85	115			
Iron	0.95	mg/L	0.030	95	85	115			
Magnesium	47	mg/L	0.50	95	85	115			
Manganese	0.92	mg/L	0.010	92	85	115			
Molybdenum	0.96	mg/L	0.10	96	85	115			
Nickel	0.92	mg/L	0.050	92	85	115			
Potassium	44	mg/L	0.50	89	85	115			
Sodium	47	mg/L	0.50	93	85	115			
Zinc	0.94	mg/L	0.010	94	85	115			
<b>Sample ID: C10030544-001BMS2</b>	Sample Matrix Spike		Run: SUB-C130823				03/19/10 12:50		
Aluminum	1.98	mg/L	0.10	97	70	130			
Barium	1.96	mg/L	0.10	93	70	130			
Boron	2.00	mg/L	0.10	96	70	130			
Chromium	1.92	mg/L	0.050	94	70	130			
Copper	1.95	mg/L	0.010	96	70	130			
Iron	1.97	mg/L	0.030	95	70	130			
Manganese	1.91	mg/L	0.010	92	70	130			
Molybdenum	1.91	mg/L	0.10	94	70	130			
Nickel	1.89	mg/L	0.050	93	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7							Batch: C_R130823		
Sample ID: C10030544-001BMS2	Sample Matrix Spike		Run: SUB-C130823				03/19/10 12:50		
Silicon	7.39	mg/L	0.10		70	130			A
Zinc	2.00	mg/L	0.010	97	70	130			
Calcium	157	mg/L	1.0	96	70	130			
Magnesium	105	mg/L	1.0	93	70	130			
Potassium	102	mg/L	1.0	91	70	130			
Sodium	127	mg/L	1.0	94	70	130			
Sample ID: C10030544-001BMSD2	Sample Matrix Spike Duplicate		Run: SUB-C130823				03/19/10 12:54		
Aluminum	1.99	mg/L	0.10	98	70	130	0.8	20	
Barium	1.99	mg/L	0.10	94	70	130	1.3	20	
Boron	2.01	mg/L	0.10	96	70	130	0.5	20	
Chromium	1.91	mg/L	0.050	93	70	130	1	20	
Copper	1.94	mg/L	0.010	95	70	130	0.9	20	
Iron	1.92	mg/L	0.030	93	70	130	2.5	20	
Manganese	1.90	mg/L	0.010	92	70	130	0.1	20	
Molybdenum	1.93	mg/L	0.10	94	70	130	0.7	20	
Nickel	1.88	mg/L	0.050	92	70	130	0.6	20	
Silicon	7.28	mg/L	0.10		70	130	1.5	20	A
Zinc	1.97	mg/L	0.010	96	70	130	1.3	20	
Calcium	155	mg/L	1.0	94	70	130	1.3	20	
Magnesium	105	mg/L	1.0	93	70	130	0.2	20	
Potassium	103	mg/L	1.0	92	70	130	0.6	20	
Sodium	125	mg/L	1.0	93	70	130	1.1	20	
Method: E200.7							Batch: C_R130908		
Sample ID: MB-100323A	Method Blank		Run: SUB-C130908				03/23/10 10:49		
Boron	ND	mg/L	0.009						
Iron	ND	mg/L	0.002						
Sample ID: LFB-100323A	Laboratory Fortified Blank		Run: SUB-C130908				03/23/10 10:53		
Boron	0.98	mg/L	0.10	98	85	115			
Iron	0.96	mg/L	0.030	96	85	115			
Sample ID: R10030205-002D	Sample Matrix Spike		Run: SUB-C130908				03/23/10 14:22		
Boron	5.17	mg/L	0.10	100	70	130			
Iron	5.35	mg/L	0.042	98	70	130			
Sample ID: R10030205-002D	Sample Matrix Spike Duplicate		Run: SUB-C130908				03/23/10 14:26		
Boron	5.14	mg/L	0.10	99	70	130	0.7	20	
Iron	5.33	mg/L	0.042	98	70	130	0.3	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7_8							Batch: C_R130917		
<b>Sample ID:</b> LRB	Method Blank		Run: SUB-C130917				03/23/10 13:18		
Silver	ND	mg/L	8E-05						
Thorium 232	ND	mg/L	3E-05						
<b>Sample ID:</b> LFB	Laboratory Fortified Blank		Run: SUB-C130917				03/23/10 13:25		
Silver	0.0215	mg/L	0.0010	108	85	115			
Thorium 232	0.0531	mg/L	0.0010	106	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8					Batch: C_R130826				
Sample ID: LRB	Method Blank				Run: SUB-C130826			03/19/10 12:49	
Arsenic	ND	mg/L	0.0003						
Cadmium	ND	mg/L	6E-05						
Lead	ND	mg/L	2E-05						
Mercury	ND	mg/L	4E-05						
Silver	0.0003	mg/L	2E-05						
Thorium 232	0.0002	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Vanadium	ND	mg/L	9E-05						
Sample ID: LFB	Laboratory Fortified Blank				Run: SUB-C130826			03/19/10 12:56	
Arsenic	0.0499	mg/L	0.0010	100	85	115			
Cadmium	0.0500	mg/L	0.0010	100	85	115			
Lead	0.0497	mg/L	0.0010	99	85	115			
Mercury	0.00501	mg/L	0.0010	100	85	115			
Silver	0.0196	mg/L	0.0010	97	85	115			
Thorium 232	0.0426	mg/L	0.0010	85	85	115			
Uranium	0.0478	mg/L	0.00030	96	85	115			
Vanadium	0.0497	mg/L	0.0010	99	85	115			
Sample ID: C10030605-002BMS4	Post Digestion Spike				Run: SUB-C130826			03/20/10 01:27	
Arsenic	0.0512	mg/L	0.0010	98	70	130			
Cadmium	0.0469	mg/L	0.010	94	70	130			
Lead	0.0481	mg/L	0.050	96	70	130			
Mercury	0.00474	mg/L	0.0010	95	70	130			
Silver	0.0147	mg/L	0.010	73	70	130			
Thorium 232	0.0371	mg/L	0.0010	74	70	130			
Uranium	0.0685	mg/L	0.00030	101	70	130			
Vanadium	0.0533	mg/L	0.10	96	70	130			
Sample ID: C10030605-002BMSD4	Post Digestion Spike Duplicate				Run: SUB-C130826			03/20/10 01:33	
Arsenic	0.0513	mg/L	0.0010	98	70	130	0.2	20	
Cadmium	0.0471	mg/L	0.010	94	70	130	0.6	20	
Lead	0.0482	mg/L	0.0010	96	70	130	0.1	20	
Mercury	0.00486	mg/L	0.0010	98	70	130	2.4	20	
Silver	0.0158	mg/L	0.010	79	70	130	7.2	20	
Thorium 232	0.0431	mg/L	0.0010	86	70	130	15	20	
Uranium	0.0687	mg/L	0.00030	101	70	130	0.3	20	
Vanadium	0.0538	mg/L	0.0010	97	70	130	0.9	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R130867		
<b>Sample ID: LRB</b>	Method Blank		Run: SUB-C130867				03/22/10 12:15		
Antimony	0.0001	mg/L	0.0001						
Arsenic	ND	mg/L	0.0003						
Barium	ND	mg/L	3E-05						
Beryllium	ND	mg/L	6E-05						
Cadmium	ND	mg/L	6E-05						
Chromium	ND	mg/L	8E-05						
Copper	ND	mg/L	4E-05						
Lead	ND	mg/L	2E-05						
Manganese	ND	mg/L	5E-05						
Molybdenum	9E-05	mg/L	4E-05						
Nickel	ND	mg/L	9E-05						
Selenium	ND	mg/L	0.001						
Silver	0.0002	mg/L	2E-05						
Strontium	ND	mg/L	2E-05						
Thallium	ND	mg/L	3E-05						
Uranium	ND	mg/L	8E-06						
Zinc	0.001	mg/L	6E-05						
<b>Sample ID: LFB</b>	Laboratory Fortified Blank		Run: SUB-C130867				03/22/10 12:21		
Antimony	0.0514	mg/L	0.0010	102	85	115			
Arsenic	0.0520	mg/L	0.0010	104	85	115			
Barium	0.0519	mg/L	0.0010	104	85	115			
Beryllium	0.0535	mg/L	0.0010	107	85	115			
Cadmium	0.0516	mg/L	0.0010	103	85	115			
Chromium	0.0514	mg/L	0.0010	103	85	115			
Copper	0.0522	mg/L	0.0010	104	85	115			
Lead	0.0523	mg/L	0.0010	105	85	115			
Manganese	0.0519	mg/L	0.0010	104	85	115			
Molybdenum	0.0524	mg/L	0.0010	105	85	115			
Nickel	0.0518	mg/L	0.0010	104	85	115			
Selenium	0.0528	mg/L	0.0014	106	85	115			
Silver	0.0198	mg/L	0.0010	98	85	115			
Strontium	0.0517	mg/L	0.0010	103	85	115			
Thallium	0.0522	mg/L	0.0010	104	85	115			
Uranium	0.0515	mg/L	0.00030	103	85	115			
Zinc	0.0544	mg/L	0.0010	107	85	115			
<b>Sample ID: C10030680-001BMS4</b>	Post Digestion Spike		Run: SUB-C130867				03/22/10 13:09		
Antimony	0.284	mg/L	0.050	113	70	130			
Arsenic	0.266	mg/L	0.0010	104	70	130			
Barium	0.583	mg/L	0.10	98	70	130			
Beryllium	0.244	mg/L	0.010	98	70	130			
Cadmium	0.241	mg/L	0.010	97	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_R130867		
<b>Sample ID: C10030680-001BMS4</b>	Post Digestion Spike		Run: SUB-C130867				03/22/10 13:09		
Chromium	0.256	mg/L	0.050	97	70	130			
Copper	0.244	mg/L	0.010	95	70	130			
Lead	0.265	mg/L	0.050	106	70	130			
Manganese	0.869	mg/L	0.010	47	70	130			S
Molybdenum	0.300	mg/L	0.10	109	70	130			
Nickel	0.258	mg/L	0.050	94	70	130			
Selenium	0.274	mg/L	0.0012	94	70	130			
Silver	0.0765	mg/L	0.010	73	70	130			
Strontium	2.35	mg/L	0.10		70	130			A
Thallium	0.259	mg/L	0.10	104	70	130			
Uranium	4.33	mg/L	0.00030		70	130			A
Zinc	0.236	mg/L	0.010	63	70	130			S
<b>Sample ID: C10030680-001BMSD4</b>	Post Digestion Spike Duplicate		Run: SUB-C130867				03/22/10 13:43		
Antimony	0.303	mg/L	0.050	121	70	130	6.5	20	
Arsenic	0.278	mg/L	0.0010	109	70	130	4.3	20	
Barium	0.621	mg/L	0.10	113	70	130	6.4	20	
Beryllium	0.249	mg/L	0.010	100	70	130	1.8	20	
Cadmium	0.256	mg/L	0.010	102	70	130	5.8	20	
Chromium	0.266	mg/L	0.050	101	70	130	3.9	20	
Copper	0.251	mg/L	0.010	98	70	130	2.8	20	
Lead	0.278	mg/L	0.050	111	70	130	5	20	
Manganese	0.923	mg/L	0.010	68	70	130	6	20	S
Molybdenum	0.314	mg/L	0.10	115	70	130	4.5	20	
Nickel	0.268	mg/L	0.050	98	70	130	3.9	20	
Selenium	0.289	mg/L	0.0012	100	70	130	5.5	20	
Silver	0.0815	mg/L	0.010	78	70	130	6.3	20	
Strontium	2.48	mg/L	0.10		70	130	5.4	20	A
Thallium	0.273	mg/L	0.10	109	70	130	5.3	20	
Uranium	4.55	mg/L	0.00030		70	130	5.1	20	A
Zinc	0.245	mg/L	0.010	67	70	130	3.4	20	S

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>							Batch: C_25594		
<b>Sample ID: MB-25594</b>	Method Blank					Run: SUB-C130913			03/23/10 23:26
Uranium	0.0001	mg/L	6E-05						
<b>Sample ID: LCS2-25594</b>	Laboratory Control Sample					Run: SUB-C130913			03/23/10 23:31
Uranium	0.105	mg/L	0.00030	105	85	115			
<b>Sample ID: R10030205-003I</b>	Post Digestion Spike					Run: SUB-C130913			03/23/10 23:47
Uranium	0.00656	mg/L	0.00030	104	70	130			
<b>Sample ID: R10030205-003I</b>	Post Digestion Spike Duplicate					Run: SUB-C130913			03/23/10 23:51
Uranium	0.00656	mg/L	0.00030	104	70	130	0.1	20	
<b>Method: E200.8</b>							Batch: C_R130917		
<b>Sample ID: C10030663-005BMS4</b>	Post Digestion Spike					Run: SUB-C130917			03/23/10 15:41
Silver	0.0161	mg/L	0.010	80	70	130			
Thorium 232	0.0547	mg/L	0.0010	109	70	130			
<b>Sample ID: C10030663-005BMSD4</b>	Post Digestion Spike Duplicate					Run: SUB-C130917			03/23/10 16:15
Silver	0.0169	mg/L	0.010	84	70	130	5	20	
Thorium 232	0.0560	mg/L	0.0010	112	70	130	2.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1							Analytical Run: SUB-B144938		
<b>Sample ID:</b> QCS	Initial Calibration Verification Standard								03/22/10 11:10
Mercury	0.0020	mg/L	0.0010	100	90	110			
<b>Method:</b> E245.1							Batch: B_45135		
<b>Sample ID:</b> MB-45135	Method Blank								03/22/10 11:16
Mercury	ND	mg/L	5E-05				Run: SUB-B144938		
<b>Sample ID:</b> LCS-45135	Laboratory Control Sample								03/22/10 11:18
Mercury	0.0021	mg/L	0.0010	105	85	115	Run: SUB-B144938		
<b>Sample ID:</b> B10031588-004EMS	Sample Matrix Spike								03/22/10 11:52
Mercury	0.0020	mg/L	0.0010	101	70	130	Run: SUB-B144938		
<b>Sample ID:</b> B10031588-004EMSD	Sample Matrix Spike Duplicate								03/22/10 11:54
Mercury	0.0020	mg/L	0.0010	101	70	130	0.5	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Batch: R45163		
<b>Sample ID: LFB031810-10</b>	Laboratory Fortified Blank		Run: DIONEX_100318A				03/18/10 17:28		
Chloride	9.90	mg/L	1.0	99	90	110			
Fluoride	3.96	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N	4.85	mg/L	0.10	97	90	110			
Nitrogen, Nitrite as N	5.29	mg/L	0.10	106	90	110			
Sulfate	28.2	mg/L	1.0	94	90	110			
<b>Sample ID: R10030205-001AMS</b>	Sample Matrix Spike		Run: DIONEX_100318A				03/18/10 18:17		
Chloride	204	mg/L	2.2	76	90	110			S
Fluoride	80.6	mg/L	0.22	101	90	110			
Nitrogen, Nitrate as N	97.2	mg/L	0.50	97	90	110			
Nitrogen, Nitrite as N	106	mg/L	1.2	106	90	110			
Sulfate	1000	mg/L	1.3	83	90	110			S
<b>Sample ID: R10030205-001AMSD</b>	Sample Matrix Spike Duplicate		Run: DIONEX_100318A				03/18/10 18:34		
Chloride	202	mg/L	2.2	74	90	110	1.2	10	S
Fluoride	79.8	mg/L	0.22	100	90	110	1.1	10	
Nitrogen, Nitrate as N	96.1	mg/L	0.50	96	90	110	1.1	10	
Nitrogen, Nitrite as N	105	mg/L	1.2	105	90	110	1.4	10	
Sulfate	996	mg/L	1.3	81	90	110	0.8	10	S

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0							Batch: C_GrAB-0873		
Sample ID: MB-GrAB-0873	Method Blank		Run: SUB-C131111		03/29/10 23:12				
Gross Alpha	0.2	pCi/L							U
Gross Alpha precision (±)	0.7	pCi/L							
Gross Alpha MDC	0.8	pCi/L							
Gross Beta	-0.8	pCi/L							U
Gross Beta precision (±)	2	pCi/L							
Gross Beta MDC	2	pCi/L							
Sample ID: Th230-GrAB-0873	Laboratory Control Sample		Run: SUB-C131111		03/29/10 23:12				
Gross Alpha	110	pCi/L	107		70	130			
Sample ID: Cs137-GrAB-0873	Laboratory Control Sample		Run: SUB-C131111		03/29/10 23:12				
Gross Beta	94	pCi/L	105		70	130			
Sample ID: C10030544-001DDUP	Sample Duplicate		Run: SUB-C131111		03/29/10 23:12				
Gross Alpha	4.9	pCi/L					28	72.3	
Gross Alpha precision (±)	1.7	pCi/L							
Gross Alpha MDC	2.4	pCi/L							
Gross Beta	12	pCi/L					11	41.9	
Gross Beta precision (±)	2.0	pCi/L							
Gross Beta MDC	3.1	pCi/L							
Sample ID: C10030685-003AMS	Sample Matrix Spike		Run: SUB-C131111		03/30/10 11:56				
Gross Alpha	107	pCi/L	105		70	130			
Sample ID: C10030685-003AMSD	Sample Matrix Spike Duplicate		Run: SUB-C131111		03/30/10 11:56				
Gross Alpha	95.4	pCi/L	94		70	130	11	18.2	
Sample ID: C10030685-003AMS	Sample Matrix Spike		Run: SUB-C131111		03/30/10 11:56				
Gross Beta	99.3	pCi/L	113		70	130			
Sample ID: C10030685-003AMSD	Sample Matrix Spike Duplicate		Run: SUB-C131111		03/30/10 11:56				
Gross Beta	107	pCi/L	122		70	130	7.9	16.1	

### 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

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0							Batch: C_GrAB-0885		
Sample ID: MB-GrAB-0885	Method Blank				Run: SUB-C131733			04/16/10 22:20	
Gross Alpha	-0.1	pCi/L							U
Gross Alpha precision ( $\pm$ )	0.7	pCi/L							
Gross Alpha MDC	0.7	pCi/L							
Gross Beta	1	pCi/L							U
Gross Beta precision ( $\pm$ )	2	pCi/L							
Gross Beta MDC	2	pCi/L							
Sample ID: Th230-GrAB-0885	Laboratory Control Sample				Run: SUB-C131733			04/16/10 22:20	
Gross Alpha	97	pCi/L		95	70	130			
Sample ID: Cs137-GrAB-0885	Laboratory Control Sample				Run: SUB-C131733			04/16/10 22:20	
Gross Beta	91	pCi/L		100	70	130			
Sample ID: C10040184-005AMS	Sample Matrix Spike				Run: SUB-C131733			04/16/10 22:20	
Gross Alpha	92.2	pCi/L		90	70	130			
Sample ID: C10040184-005AMSD	Sample Matrix Spike Duplicate				Run: SUB-C131733			04/16/10 22:20	
Gross Alpha	107	pCi/L		105	70	130	15	16.7	
Sample ID: C10040184-005AMS	Sample Matrix Spike				Run: SUB-C131733			04/16/10 22:20	
Gross Beta	96.0	pCi/L		106	70	130			
Sample ID: C10040184-005AMSD	Sample Matrix Spike Duplicate				Run: SUB-C131733			04/16/10 22:20	
Gross Beta	95.8	pCi/L		105	70	130	0.2	15.9	
Sample ID: C10040305-001ADUP	Sample Duplicate				Run: SUB-C131733			04/17/10 10:27	
Gross Alpha	18.7	pCi/L					23	46.5	
Gross Alpha precision ( $\pm$ )	3.21	pCi/L							
Gross Alpha MDC	3.48	pCi/L							
Gross Beta	9.59	pCi/L					53	63.1	
Gross Beta precision ( $\pm$ )	2.12	pCi/L							
Gross Beta MDC	3.26	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E901.1							Batch: C_R130928		
<b>Sample ID:</b> LCS-R130928	Laboratory Control Sample				Run: SUB-C130928			03/22/10 09:00	
Americium 241	710	pCi/L	20	80	70	130			
Barium 133	540	pCi/L	20	98	70	130			
Cesium 137	900	pCi/L	20	98	70	130			
Potassium 40	2500	pCi/L	20	76	70	130			
<b>Sample ID:</b> MB-R130928	Method Blank				Run: SUB-C130928			03/22/10 09:00	
Gross Gamma	ND	pCi/L							U
<b>Sample ID:</b> R10030205-003H	Sample Duplicate				Run: SUB-C130928			03/22/10 09:00	
Gross Gamma	780	pCi/L	20				25	30	
Gross Gamma precision (±)	130	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>							Batch: C_RA226-4424		
<b>Sample ID: R10030205-001H</b>	Sample Matrix Spike					Run: SUB-C131089			03/29/10 17:02
Radium 226	20	pCi/L		114	70	130			
<b>Sample ID: R10030205-001H</b>	Sample Matrix Spike Duplicate					Run: SUB-C131089			03/29/10 17:02
Radium 226	19	pCi/L		109	70	130	5.2	21.9	
<b>Sample ID: MB-RA226-4424</b>	Method Blank					Run: SUB-C131089			03/29/10 22:05
Radium 226	0.03	pCi/L							U
Radium 226 precision (±)	0.09	pCi/L							
Radium 226 MDC	0.1	pCi/L							
<b>Sample ID: LCS-RA226-4424</b>	Laboratory Control Sample					Run: SUB-C131089			03/29/10 22:05
Radium 226	8.2	pCi/L		103	70	130			
<b>Method: E903.0</b>							Batch: C_R131112		
<b>Sample ID: LCS-25594</b>	Laboratory Control Sample					Run: SUB-C131112			03/29/10 23:54
Radium 226	15	pCi/L		97	70	130			
<b>Sample ID: MB-25594</b>	Method Blank					Run: SUB-C131112			03/29/10 23:54
Radium 226	0.4	pCi/L							
Radium 226 precision (±)	0.2	pCi/L							
Radium 226 MDC	0.2	pCi/L							
<b>Sample ID: C10030615-001AMS</b>	Sample Matrix Spike					Run: SUB-C131112			03/29/10 23:54
Radium 226	1400	pCi/g-dry		4340	70	130			S
- Sample response is much larger than spike amount, therefore small variances in the sample adversely affected the recovery. The two LCSs and the MB meet acceptance criteria; this batch is approved.									
<b>Sample ID: C10030615-001AMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C131112			03/29/10 23:54
Radium 226	2700	pCi/g-dry		22100	70	130	65	10.6	SR

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>							Batch: C_RA-TH-ISO-1125		
<b>Sample ID: LCS-RA-TH-ISO-1125</b>	Laboratory Control Sample				Run: SUB-C130898				03/23/10 08:45
Thorium 230	5.3	pCi/L		101	70	130			
<b>Sample ID: R10030205-003H</b>	Sample Matrix Spike				Run: SUB-C130898				03/23/10 08:45
Thorium 230	15	pCi/L		113	70	130			
<b>Sample ID: R10030205-003H</b>	Sample Matrix Spike Duplicate				Run: SUB-C130898				03/23/10 08:45
Thorium 230	13	pCi/L		97	70	130	17	39.7	
<b>Sample ID: MB-RA-TH-ISO-1125</b>	Method Blank				Run: SUB-C130898				03/23/10 08:45
Thorium 230	0.01	pCi/L							U
Thorium 230 MDC	0.2	pCi/L							
Thorium 230 precision (±)	0.09	pCi/L							
<b>Method: E907.0</b>							Batch: C_25594		
<b>Sample ID: R10030205-003I</b>	Sample Matrix Spike				Run: SUB-C130981				03/23/10 17:02
Thorium 230	5.9	pCi/L		116	70	130			
<b>Sample ID: R10030205-003I</b>	Sample Matrix Spike Duplicate				Run: SUB-C130981				03/23/10 17:02
Thorium 230	5.1	pCi/L		106	70	130	15	35.1	
<b>Sample ID: LCS-25594</b>	Laboratory Control Sample				Run: SUB-C130981				03/23/10 17:02
Thorium 230	4.9	pCi/L		102	70	130			
<b>Sample ID: MB-25594</b>	Method Blank				Run: SUB-C130981				03/23/10 17:02
Thorium 230	-0.07	pCi/L							U
Thorium 230 MDC	0.1	pCi/L							
Thorium 230 precision (±)	0.09	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Report Date: 05/03/10  
Work Order: R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M							Batch: C_PB-210-0677		
Sample ID: C09100378-001BMS	Sample Matrix Spike					Run: SUB-C131275			04/04/10 04:36
Lead 210	240	pCi/L		109	70	130			
Sample ID: C09100378-001BMSD	Sample Matrix Spike Duplicate					Run: SUB-C131275			04/04/10 06:38
Lead 210	240	pCi/L		109	70	130	0	17.4	
Sample ID: MB-PB-210-0677	Method Blank					Run: SUB-C131275			04/04/10 08:39
Lead 210	-0.2	pCi/L							U
Lead 210 precision (±)	3	pCi/L							
Lead 210 MDC	6	pCi/L							
Sample ID: LCS-PB-210-0677	Laboratory Control Sample					Run: SUB-C131275			04/04/10 10:41
Lead 210	92	pCi/L		83	70	130			
Sample ID: LCS-PB-210-0677	Laboratory Control Sample					Run: SUB-C131275			04/04/10 12:42
Lead 210	130	pCi/L		115	70	130			
Method: E909.0M							Batch: C_PB-210-0679		
Sample ID: R10030205-001I	Sample Matrix Spike					Run: SUB-C131286			04/02/10 05:59
Lead 210	110	pCi/L		86	70	130			
Sample ID: R10030205-001I	Sample Matrix Spike Duplicate					Run: SUB-C131286			04/02/10 08:00
Lead 210	120	pCi/L		90	70	130	5.1	17.8	
Sample ID: MB-25594	Method Blank					Run: SUB-C131286			04/02/10 14:05
Lead 210	3	pCi/L							U
Lead 210 precision (±)	3	pCi/L							
Lead 210 MDC	5	pCi/L							
Sample ID: LCS-25594	Laboratory Control Sample					Run: SUB-C131286			04/02/10 16:07
Lead 210	500	pCi/L		95	70	130			
Sample ID: LCS-PB-210-0679	Laboratory Control Sample					Run: SUB-C131286			04/02/10 18:09
Lead 210	450	pCi/L		81	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





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 05/03/10  
**Work Order:** R10030205

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>							Batch: C_PO210-0289		
<b>Sample ID: C10030544-003EMS</b>	Sample Matrix Spike				Run: SUB-C131016				03/26/10 08:55
Polonium 210	34	pCi/L		104	70	130			
<b>Sample ID: C10030544-003EMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C131016				03/26/10 08:55
Polonium 210	32	pCi/L		98	70	130	7.1	56.9	
<b>Sample ID: LCS-PO210-0289</b>	Laboratory Control Sample				Run: SUB-C131016				03/26/10 11:35
Polonium 210	19	pCi/L		113	70	130			
<b>Sample ID: MB-PO210-0289</b>	Method Blank				Run: SUB-C131016				03/26/10 11:35
Polonium 210	-0.04	pCi/L							U
Polonium 210 MDC	0.5	pCi/L							
Polonium 210 precision (±)	0.2	pCi/L							
<b>Method: E912.0</b>							Batch: C_R131341		
<b>Sample ID: R10030205-002I</b>	Sample Matrix Spike				Run: SUB-C131341				04/06/10 08:44
Polonium 210	15	pCi/L		78	70	130			
<b>Sample ID: R10030205-002I</b>	Sample Matrix Spike Duplicate				Run: SUB-C131341				04/06/10 08:44
Polonium 210	20	pCi/L		103	70	130	28	52.1	
<b>Sample ID: LCS-25594</b>	Laboratory Control Sample				Run: SUB-C131341				04/06/10 11:37
Polonium 210	74	pCi/L		95	70	130			
<b>Sample ID: MB-25594</b>	Method Blank				Run: SUB-C131341				04/06/10 11:37
Polonium 210	-0.2	pCi/L							U
Polonium 210 precision (±)	1	pCi/L							
Polonium 210 MDC	3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT - Provide as much information as possible.

Company Name: <b>Scott Env.</b>		Project Name, PWS, Permit, Etc. <b>Powertek Dew Burdock</b>		Sample Origin State: _____		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <b>Powertek</b>		Contact Name: <b>Allen Scott</b>		Phone/Fax: _____-_____-_____-_____-_____-_____-		Sampler (Please Print)	
Invoice Address: <b>59 me</b>		Invoice Contact & Phone: _____-_____-_____-_____-_____-_____-		Purchase Order:		Quote/Bottle Order	
Special Report/Formats - ELI must be notified prior to sample submittal for the following: <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> POT/WWTP <input type="checkbox"/> Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC				Number of Containers Sample Type: AWS V B O Air Water Soils/Solids Vegetation Bioassay Other			
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRX		ANALYSIS REQUESTED	
1 <b>DB-09-21-01</b>		<b>3-15-10</b>		<b>Water</b>		<b>SEE ATTACHED</b>	
2 <b>DB-09-01-01 Day</b>		<b>3-15-10</b>		<b>U</b>		<b>Normal Turnaround (TAT)</b>	
3 <b>DB-09-21-02</b>		<b>3-15-10</b>		<b>S</b>		<b>Comments:</b>	
4				<b>H</b>		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	
5						On log: <b>2.9</b> °C	
6						Custody Seal: Y N	
7						Bottled: B C	
8						Cooled: Y N	
9						Intact: Y N	
10						Signature: Y N	
Custody Record MUST be Signed		Relinquished by (print): <b>Allen Scott</b>		Date/Time: <b>3-17-10 2:45</b>		Signature: <b>Allen Scott</b>	
Sample Disposal: Return to Client:		Lab Disposal:		Received by (print): <b>Steve Holland</b>		Date/Time: <b>3-17-10 3:45</b>	
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-contracted data will be clearly noted on your analytical report. Visit our web site at <a href="http://www.energylab.com">www.energylab.com</a> for additional information, downloadable fee schedule, forms, and links.		Signature: <b>Steve Holland</b>		Date/Time: <b>3-17-10 3:45</b>		Signature: <b>Steve Holland</b>	



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## ANALYTICAL SUMMARY REPORT

June 15, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10040303

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 4/22/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10040303-001	DB-09-21-01	04/21/10 0:00	04/22/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10040303-002	DB-09-21-02	04/21/10 0:00	04/22/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by

Linda Larson

Date: 2010.06.15 16:13:03 -06:00



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**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10040303

**Report Date:** 06/15/10

## CASE NARRATIVE

Tests Associated with Analyst identified as ELI-CA were subcontracted to Energy Laboratories Casper Branch, EPA Number WY00002.

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Radon analysis was subbed to the South Dakota State Health Lab.

Comments imported for SUBBED Workorder: C10040835

### PB210 ANALYSIS

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10040835



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	104	mg/L		5		1	A2320 B	04/29/10 17:19/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	04/29/10 17:19/ch
Bicarbonate as HCO <sub>3</sub>	127	mg/L		5		1	A2320 B	04/29/10 17:19/ch
Calcium	76	mg/L	D	1		5	E200.7	04/26/10 19:11/eli-c
Chloride	7	mg/L		1		1	E300.0	04/22/10 22:16/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	04/22/10 22:16/jmh
Magnesium	28.0	mg/L		0.5		5	E200.7	04/26/10 19:11/eli-c
Nitrogen, Ammonia as N	0.6	mg/L		0.1		1	A4500-NH <sub>3</sub> G	05/04/10 16:50/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	04/22/10 22:16/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	04/22/10 22:16/jmh
Potassium	12.7	mg/L		0.5		5	E200.7	04/26/10 19:11/eli-c
Sodium	168	mg/L	D	1		5	E200.7	04/26/10 19:11/eli-c
Sulfate	521	mg/L		1		20	E300.0	05/07/10 03:03/jmh
Silica	10.3	mg/L		0.2		5	E200.7	04/26/10 19:11/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1300	umhos/cm		5.0		1	A2510 B	04/27/10 10:44/tb
Oxidation-Reduction Potential	230	mV				1	A2580 B	04/28/10 16:00/jmh
pH	8.04	s.u.		0.01		1	A4500-H B	04/23/10 10:54/tb
Sodium Adsorption Ratio (SAR)	4.2	unitless		0.10		1	Calculation	05/03/10 10:11/ADM
Solids, Total Dissolved TDS @ 180 C	970	mg/L		5		1	A2540 C	04/26/10 15:16/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	04/26/10 19:11/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	04/26/10 17:24/eli-c
Barium	ND	mg/L		0.1		5	E200.7	04/26/10 19:11/eli-c
Boron	0.2	mg/L		0.1		5	E200.7	04/26/10 19:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	04/26/10 17:24/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	04/26/10 19:11/eli-c
Copper	ND	mg/L		0.01		5	E200.7	04/26/10 19:11/eli-c
Iron	ND	mg/L		0.03		5	E200.7	04/26/10 19:11/eli-c
Lead	ND	mg/L		0.001		1	E200.8	04/26/10 17:24/eli-c
Manganese	0.02	mg/L		0.01		5	E200.7	04/26/10 19:11/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	04/26/10 17:24/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7	04/26/10 19:11/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	04/26/10 19:11/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	04/26/10 14:23/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	04/26/10 17:24/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	04/27/10 22:51/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	04/26/10 17:24/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	04/26/10 17:24/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	04/27/10 22:51/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	04/28/10 22:31/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	04/26/10 10:27/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	04/26/10 15:45/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	7.5	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Alpha precision (±)	3.3	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Alpha MDC	4.6	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta	12.8	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta precision (±)	2.5	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta MDC	3.7	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Lead 210	-2	pCi/L	U			1	E909.0M	05/07/10 12:59/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	05/07/10 12:59/eli-c
Lead 210 MDC	2.6	pCi/L				1	E909.0M	05/07/10 12:59/eli-c
Polonium 210	-0.039	pCi/L	U			1	E912.0	05/04/10 15:33/eli-ca
Polonium 210 MDC	0.56	pCi/L				1	E912.0	05/04/10 15:33/eli-ca
Polonium 210 precision (±)	0.20	pCi/L				1	E912.0	05/04/10 15:33/eli-ca
Radium 226	1.8	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Thorium 230	0.1	pCi/L	U			1	E907.0	04/27/10 16:58/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	04/27/10 16:58/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	04/27/10 16:58/eli-c
Gross Gamma	1000	pCi/L				1	E901.1	04/27/10 09:00/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	04/27/10 09:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.1	pCi/L	U			1	E909.0M	05/08/10 23:12/eli-c
Lead 210 precision (±)	3.1	pCi/L				1	E909.0M	05/08/10 23:12/eli-c
Lead 210 MDC	5.2	pCi/L				1	E909.0M	05/08/10 23:12/eli-c
Polonium 210	0.18	pCi/L	U			1	E912.0	05/04/10 13:24/eli-ca
Polonium 210 precision (±)	0.60	pCi/L				1	E912.0	05/04/10 13:24/eli-ca

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	1.2	pCi/L				1	E912.0	05/04/10 13:24/eli-ca
Radium 226	-0.01	pCi/L	U			1	E903.0	05/05/10 17:03/eli-ca
Radium 226 precision (±)	0.07	pCi/L				1	E903.0	05/05/10 17:03/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	05/05/10 17:03/eli-ca
Thorium 230	-0.1	pCi/L	U			1	E907.0	04/30/10 08:55/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	04/30/10 08:55/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	ND	pCi/L		100		1	D5072-92	04/23/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	04/26/10 18:12/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	04/26/10 18:12/eli-c
Barium	ND	mg/L		0.1		5	E200.7	04/26/10 22:44/eli-c
Beryllium	ND	mg/L		0.001		5	E200.7	04/26/10 22:44/eli-c
Boron	0.1	mg/L		0.1		5	E200.7	04/26/10 22:44/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	04/26/10 18:12/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	04/26/10 22:44/eli-c
Copper	ND	mg/L		0.01		5	E200.7	04/26/10 22:44/eli-c
Iron	0.11	mg/L	D	0.04		5	E200.7	04/26/10 22:44/eli-c
Lead	ND	mg/L		0.001		1	E200.8	04/26/10 18:12/eli-c
Manganese	0.02	mg/L		0.01		5	E200.7	04/26/10 22:44/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	04/26/10 12:06/eli-b
Molybdenum	ND	mg/L		0.1		5	E200.7	04/26/10 22:44/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	04/26/10 22:44/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	04/26/10 18:12/eli-c
Silver	ND	mg/L		0.005		1	E200.8	04/26/10 18:12/eli-c
Strontium	2.6	mg/L		0.1		5	E200.7	04/26/10 22:44/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	04/26/10 18:12/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	04/26/10 18:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	04/27/10 22:57/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.20	%				1	A1030 E	06/15/10 00:00/lkl
Anions	13.2	meq/L				1	A1030 E	06/15/10 00:00/lkl
Cations	13.7	meq/L				1	A1030 E	06/15/10 00:00/lkl
Solids, Total Dissolved Calculated	903	mg/L				1	A1030 E	06/15/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.07					1	A1030 E	06/15/10 00:00/lkl

**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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	198	mg/L		5		1	A2320 B	04/29/10 17:22/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	04/29/10 17:22/ch
Bicarbonate as HCO <sub>3</sub>	241	mg/L		5		1	A2320 B	04/29/10 17:22/ch
Calcium	173	mg/L	D	1		5	E200.7	04/26/10 19:23/eli-c
Chloride	9	mg/L		1		1	E300.0	04/22/10 23:54/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	04/22/10 23:54/jmh
Magnesium	48.6	mg/L		0.5		5	E200.7	04/26/10 19:23/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	05/04/10 16:51/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	04/22/10 23:54/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	04/22/10 23:54/jmh
Potassium	11.9	mg/L		0.5		5	E200.7	04/26/10 19:23/eli-c
Sodium	134	mg/L	D	1		5	E200.7	04/26/10 19:23/eli-c
Sulfate	659	mg/L		1		20	E300.0	05/07/10 03:19/jmh
Silica	9.0	mg/L		0.2		5	E200.7	04/26/10 19:23/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1600	umhos/cm		5.0		1	A2510 B	04/27/10 10:48/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	04/28/10 16:00/jmh
pH	7.50	s.u.		0.01		1	A4500-H B	04/23/10 10:58/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	05/03/10 10:11/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L		5		1	A2540 C	04/26/10 15:18/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	04/26/10 19:23/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	04/26/10 18:18/eli-c
Barium	ND	mg/L		0.1		5	E200.7	04/26/10 19:23/eli-c
Boron	0.1	mg/L		0.1		5	E200.7	04/26/10 19:23/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	04/26/10 18:18/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	04/26/10 19:23/eli-c
Copper	ND	mg/L		0.01		5	E200.7	04/26/10 19:23/eli-c
Iron	ND	mg/L		0.03		5	E200.7	04/26/10 19:23/eli-c
Lead	ND	mg/L		0.001		1	E200.8	04/26/10 18:18/eli-c
Manganese	0.56	mg/L		0.01		5	E200.7	04/26/10 19:23/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	04/26/10 18:18/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7	04/26/10 19:23/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	04/26/10 19:23/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	04/26/10 14:30/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	04/26/10 18:18/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	04/27/10 23:32/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0084	mg/L		0.0003		1	E200.8	04/26/10 18:18/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	04/26/10 18:18/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	04/27/10 23:32/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	04/28/10 22:35/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	04/26/10 10:34/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	04/26/10 15:45/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	56.3	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Alpha precision (±)	7.1	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Alpha MDC	6.2	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta	32.7	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta precision (±)	3.6	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Gross Beta MDC	5.1	pCi/L				1	E900.0	05/04/10 00:09/eli-ca
Lead 210	-2	pCi/L	U			1	E909.0M	05/07/10 15:03/eli-c
Lead 210 precision (±)	1.6	pCi/L				1	E909.0M	05/07/10 15:03/eli-c
Lead 210 MDC	2.7	pCi/L				1	E909.0M	05/07/10 15:03/eli-c
Polonium 210	-0.0025	pCi/L	U			1	E912.0	05/04/10 15:33/eli-ca
Polonium 210 MDC	0.60	pCi/L				1	E912.0	05/04/10 15:33/eli-ca
Polonium 210 precision (±)	0.24	pCi/L				1	E912.0	05/04/10 15:33/eli-ca
Radium 226	4.3	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	05/01/10 18:26/eli-ca
Thorium 230	0.004	pCi/L	U			1	E907.0	04/27/10 16:58/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	04/27/10 16:58/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	04/27/10 16:58/eli-c
Gross Gamma	960	pCi/L				1	E901.1	04/27/10 09:00/eli-c
Gross Gamma precision (±)	200	pCi/L				1	E901.1	04/27/10 09:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.7	pCi/L	U			1	E909.0M	05/09/10 05:17/eli-c
Lead 210 precision (±)	3.1	pCi/L				1	E909.0M	05/09/10 05:17/eli-c
Lead 210 MDC	5.2	pCi/L				1	E909.0M	05/09/10 05:17/eli-c
Polonium 210	0.14	pCi/L	U			1	E912.0	05/04/10 13:24/eli-ca
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	05/04/10 13:24/eli-ca

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

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



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## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10040303-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 06/15/10  
**Collection Date:** 04/21/10  
**Date Received:** 04/22/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.48	pCi/L				1	E912.0	05/04/10 13:24/eli-ca
Radium 226	0.03	pCi/L	U			1	E903.0	05/05/10 17:03/eli-ca
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	05/05/10 17:03/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	05/05/10 17:03/eli-ca
Thorium 230	0.1	pCi/L	U			1	E907.0	04/30/10 08:55/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	04/30/10 08:55/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	303	pCi/L		100		1	D5072-92	04/23/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	04/26/10 18:25/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	04/26/10 18:25/eli-c
Barium	ND	mg/L		0.1		5	E200.7	04/26/10 22:48/eli-c
Beryllium	ND	mg/L		0.001		5	E200.7	04/26/10 22:48/eli-c
Boron	ND	mg/L		0.1		5	E200.7	04/26/10 22:48/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	04/26/10 18:25/eli-c
Chromium	ND	mg/L		0.05		5	E200.7	04/26/10 22:48/eli-c
Copper	ND	mg/L		0.01		5	E200.7	04/26/10 22:48/eli-c
Iron	ND	mg/L	D	0.04		5	E200.7	04/26/10 22:48/eli-c
Lead	ND	mg/L		0.001		1	E200.8	04/26/10 18:25/eli-c
Manganese	0.57	mg/L		0.01		5	E200.7	04/26/10 22:48/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	04/26/10 12:08/eli-b
Molybdenum	ND	mg/L		0.1		5	E200.7	04/26/10 22:48/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	04/26/10 22:48/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	04/26/10 18:25/eli-c
Silver	ND	mg/L		0.005		1	E200.8	04/26/10 18:25/eli-c
Strontium	2.4	mg/L		0.1		5	E200.7	04/26/10 22:48/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	04/26/10 18:25/eli-c
Uranium	0.0083	mg/L		0.0003		1	E200.8	04/26/10 18:25/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	04/27/10 23:39/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	2.25	%				1	A1030 E	06/15/10 00:00/lkl
Anions	18.0	meq/L				1	A1030 E	06/15/10 00:00/lkl
Cations	18.8	meq/L				1	A1030 E	06/15/10 00:00/lkl
Solids, Total Dissolved Calculated	1180	mg/L				1	A1030 E	06/15/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.06					1	A1030 E	06/15/10 00:00/lkl

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

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>										Batch: 100429A-ALK-SEL-W
<b>Sample ID: LCS1_100429A</b>	Laboratory Control Sample									
Alkalinity, Total as CaCO <sub>3</sub>	976		mg/L	5.0	98	90	110			04/29/10 15:07
<b>Sample ID: MBLK1_100429A</b>	Method Blank									
Alkalinity, Total as CaCO <sub>3</sub>	ND		mg/L	3						04/29/10 15:29
<b>Sample ID: R10040273-001AMS</b>	Sample Matrix Spike									
Alkalinity, Total as CaCO <sub>3</sub>	326		mg/L	5.0	106	80	120			04/29/10 15:56
<b>Sample ID: R10040273-001AMSD</b>	Sample Matrix Spike Duplicate									
Alkalinity, Total as CaCO <sub>3</sub>	326		mg/L	5.0	106	80	120	0	10	04/29/10 16:01

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B						Batch: 100427_1_COND-PROBE-W				
Sample ID: LCS1-1_100427	Laboratory Control Sample					Run: PH_COND2-R_100427B			04/27/10 10:29	
Conductivity @ 25 C	150	umhos/cm		5.0	100	90	110			
Sample ID: LCS2-1_100427	Laboratory Control Sample					Run: PH_COND2-R_100427B			04/27/10 10:37	
Conductivity @ 25 C	5230	umhos/cm		5.0	105	90	110			
Sample ID: LCS_COND-1_100427	Laboratory Control Sample					Run: PH_COND2-R_100427B			04/27/10 10:40	
Conductivity @ 25 C	1420	umhos/cm		5.0	100	90	110			
Sample ID: MBLK-1_100427	Method Blank					Run: PH_COND2-R_100427B			04/27/10 10:42	
Conductivity @ 25 C	ND	umhos/cm		5						
Sample ID: R10040303-001ADUP	Sample Duplicate					Run: PH_COND2-R_100427B			04/27/10 10:46	
Conductivity @ 25 C	1300	umhos/cm		5.0				0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: 100426A-SLDS-TDS-W		
Sample ID: LCS1_100426A	Laboratory Control Sample					Run: BAL-4-R_100426A			04/26/10 15:11	
Solids, Total Dissolved TDS @ 180 C	210	mg/L	10	101	90	110				
Sample ID: MBLK1_100426A	Method Blank					Run: BAL-4-R_100426A			04/26/10 15:12	
Solids, Total Dissolved TDS @ 180 C	10	mg/L	5							
Sample ID: R10040305-002AMS	Sample Matrix Spike					Run: BAL-4-R_100426A			04/26/10 15:20	
Solids, Total Dissolved TDS @ 180 C	16000	mg/L	10	77	90	110				S

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2580 B								Batch: 100428-ORP-ISE-W		
<b>Sample ID:</b> LCS		Laboratory Control Sample			Run: PH_COND2-R_100428A			04/28/10 16:00		
Oxidation-Reduction Potential		470	mV		99	95	105			
<b>Sample ID:</b> R10040303-001FDUP		Sample Duplicate			Run: PH_COND2-R_100428A			04/28/10 16:00		
Oxidation-Reduction Potential		230	mV					0.3	10	

### Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A3114 B								Analytical Run: SUB-C131969		
<b>Sample ID:</b> As/Se 1.0mg/L-Q 0415		Initial Calibration Verification Standard								04/26/10 10:13
Selenium-IV		0.053	mg/L	0.0010	107	90	110			
<b>Method:</b> A3114 B								Batch: C_SE3114-100426A		
<b>Sample ID:</b> MBLK		Method Blank				Run: SUB-C131969		04/26/10 10:20		
Selenium-IV		0.0005	mg/L	0.0003						
<b>Sample ID:</b> As/Se 1.0ppm-Q 04151		Laboratory Control Sample				Run: SUB-C131969		04/26/10 10:23		
Selenium-IV		0.053	mg/L	0.0010	104	90	110			
<b>Sample ID:</b> R10040303-001E		Sample Matrix Spike				Run: SUB-C131969		04/26/10 10:29		
Selenium-IV		0.038	mg/L	0.0010	75	85	115			S
<b>Sample ID:</b> R10040303-001E		Sample Matrix Spike Duplicate				Run: SUB-C131969		04/26/10 10:32		
Selenium-IV		0.038	mg/L	0.0010	76	85	115	1.5	10	S
<b>Method:</b> A3114 B								Analytical Run: SUB-C131994		
<b>Sample ID:</b> As/Se 1.0mg/L-Q 0415		Initial Calibration Verification Standard								04/26/10 14:02
Selenium		0.052	mg/L	0.0010	104	90	110			
<b>Method:</b> A3114 B								Batch: C_SE3114-100426B		
<b>Sample ID:</b> As/Se 1.0ppm-Q 04151		Laboratory Control Sample				Run: SUB-C131994		04/26/10 14:11		
Selenium		0.050	mg/L	0.0010	99	90	110			
<b>Sample ID:</b> MBLK		Method Blank				Run: SUB-C131994		04/26/10 14:16		
Selenium		0.0009	mg/L	0.0002						
<b>Sample ID:</b> R10040303-001E		Sample Matrix Spike				Run: SUB-C131994		04/26/10 14:25		
Selenium		0.044	mg/L	0.0010	87	85	115			
<b>Sample ID:</b> R10040303-001E		Sample Matrix Spike Duplicate				Run: SUB-C131994		04/26/10 14:28		
Selenium		0.046	mg/L	0.0010	91	85	115	5	15	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Batch: 100423_1_PH-W	
Sample ID: LCS_pH-1_100423		Laboratory Control Sample			Run: PH_COND2-R_100423A			04/23/10 10:31		
pH		7.43	s.u.	0.010	100	98.55	101.45			

### Qualifiers:

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MDC - Minimum detectable concentration





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G								Batch: A2010-05-04_2_NH3_01		
Sample ID: MBLK-2	Method Blank					Run: TECHAA2-R_100504A			05/04/10 14:11	
Nitrogen, Ammonia as N		0.03	mg/L	0.01						
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHAA2-R_100504A			05/04/10 14:12	
Nitrogen, Ammonia as N		0.24	mg/L	0.10	94	90	110			
Sample ID: R10040323-002BMS	Sample Matrix Spike					Run: TECHAA2-R_100504A			05/04/10 16:57	
Nitrogen, Ammonia as N		0.22	mg/L	0.10	88	80	120			
Sample ID: R10040323-002BMSD	Sample Matrix Spike Duplicate					Run: TECHAA2-R_100504A			05/04/10 16:58	
Nitrogen, Ammonia as N		0.22	mg/L	0.10	90	80	120	1.8	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7		Analytical Run: SUB-C132003								
<b>Sample ID:</b> ICV		17 Initial Calibration Verification Standard								04/26/10 11:32
Silicon		5.1	mg/L	0.0073	103	95	105			
Aluminum		2.4	mg/L	0.10	96	95	105			
Barium		2.5	mg/L	0.10	99	95	105			
Beryllium		1.2	mg/L	0.010	96	95	105			
Boron		2.5	mg/L	0.10	100	95	105			
Calcium		26	mg/L	0.50	104	95	105			
Chromium		2.5	mg/L	0.050	99	95	105			
Copper		2.5	mg/L	0.010	99	95	105			
Iron		2.6	mg/L	0.030	104	95	105			
Magnesium		25	mg/L	0.50	101	95	105			
Manganese		2.5	mg/L	0.010	98	95	105			
Molybdenum		2.5	mg/L	0.10	100	95	105			
Nickel		2.5	mg/L	0.050	102	95	105			
Potassium		24	mg/L	0.50	97	95	105			
Sodium		25	mg/L	0.50	101	95	105			
Strontium		2.5	mg/L	0.10	98	95	105			
Silica		11	mg/L	0.016	103	95	105			
<b>Sample ID:</b> ICSA		17 Interference Check Sample A								04/26/10 11:48
Silicon		0.0068	mg/L	0.0073		0	0			
Aluminum		520	mg/L	0.10	103	90	110			
Barium		0.00020	mg/L	0.10		0	0			
Beryllium		0.00010	mg/L	0.010		0	0			
Boron		0.0048	mg/L	0.61		0	0			
Calcium		500	mg/L	0.50	100	90	110			
Chromium		0.00070	mg/L	0.050		0	0			
Copper		0.0081	mg/L	0.010		0	0			
Iron		190	mg/L	0.030	94	90	110			
Magnesium		520	mg/L	0.50	105	90	110			
Manganese		-0.0038	mg/L	0.010		0	0			
Molybdenum		-0.0056	mg/L	0.10		0	0			
Nickel		-0.00070	mg/L	0.050		0	0			
Potassium		0.0023	mg/L	0.50		0	0			
Sodium		0.17	mg/L	0.50		0	0			
Strontium		-0.00050	mg/L	0.10		0	0			
Silica		0.015	mg/L	0.016		0	0			
<b>Sample ID:</b> ICSAB		17 Interference Check Sample AB								04/26/10 11:52
Silicon		0.010	mg/L	0.0073		0	0			
Aluminum		510	mg/L	0.10	103	90	120			
Barium		0.51	mg/L	0.10	103	90	110			
Beryllium		0.48	mg/L	0.010	97	90	110			
Boron		0.0053	mg/L	0.61		0	0			
Calcium		490	mg/L	0.50	99	90	110			
Chromium		0.49	mg/L	0.050	98	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7								Analytical Run: SUB-C132003		
Sample ID: ICSAB	17 Interference Check Sample AB							04/26/10 11:52		
Copper		0.53	mg/L	0.010	105	90	110			
Iron		180	mg/L	0.030	92	90	110			
Magnesium		520	mg/L	0.50	103	90	110			
Manganese		0.48	mg/L	0.010	95	90	110			
Molybdenum		-0.0043	mg/L	0.10		0	0			
Nickel		0.96	mg/L	0.050	96	90	110			
Potassium		0.0032	mg/L	0.50		0	0			
Sodium		0.028	mg/L	0.50		0	0			
Strontium		-0.00050	mg/L	0.10		0	0			
Silica		0.022	mg/L	0.016		0	0			
Method: E200.7								Batch: C_R132003		
Sample ID: MB-100426A	16 Method Blank				Run: SUB-C132003			04/26/10 12:18		
Silicon		ND	mg/L	0.06						
Aluminum		ND	mg/L	0.01						
Barium		ND	mg/L	0.0005						
Beryllium		ND	mg/L	0.0002						
Boron		ND	mg/L	0.009						
Calcium		ND	mg/L	0.2						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.002						
Magnesium		ND	mg/L	0.05						
Manganese		ND	mg/L	0.0004						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
Strontium		ND	mg/L	0.0002						
Sample ID: LFB-100426A	17 Laboratory Fortified Blank				Run: SUB-C132003			04/26/10 12:22		
Silicon		0.45	mg/L	0.0075	95	85	115			
Aluminum		0.90	mg/L	0.10	90	85	115			
Barium		0.92	mg/L	0.10	92	85	115			
Beryllium		0.90	mg/L	0.010	90	85	115			
Boron		0.93	mg/L	0.10	93	85	115			
Calcium		49	mg/L	0.50	97	85	115			
Chromium		0.92	mg/L	0.050	92	85	115			
Copper		0.91	mg/L	0.010	91	85	115			
Iron		0.94	mg/L	0.030	94	85	115			
Magnesium		49	mg/L	0.50	98	85	115			
Manganese		0.89	mg/L	0.010	89	85	115			
Molybdenum		0.93	mg/L	0.10	93	85	115			
Nickel		0.93	mg/L	0.050	93	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										
Batch: C_R132003										
<b>Sample ID: LFB-100426A</b>	17	Laboratory Fortified Blank			Run: SUB-C132003			04/26/10 12:22		
Potassium		46	mg/L	0.50	92	85	115			
Sodium		47	mg/L	0.50	94	85	115			
Strontium		0.91	mg/L	0.10	91	85	115			
Silica		0.96	mg/L	0.016	96	85	125			
<b>Sample ID: C10040844-006BMS2</b>	16	Sample Matrix Spike			Run: SUB-C132003			04/26/10 20:20		
Aluminum		2.03	mg/L	0.10	99	70	130			
Barium		2.00	mg/L	0.10	96	70	130			
Beryllium		1.91	mg/L	0.010	94	70	130			
Boron		2.03	mg/L	0.10	97	70	130			
Chromium		1.92	mg/L	0.050	94	70	130			
Copper		1.95	mg/L	0.010	96	70	130			
Iron		4.43	mg/L	0.030	93	70	130			
Manganese		2.28	mg/L	0.010	92	70	130			
Molybdenum		1.91	mg/L	0.10	94	70	130			
Nickel		1.88	mg/L	0.050	92	70	130			
Silicon		9.58	mg/L	0.10		70	130			A
Strontium		3.27	mg/L	0.10	94	70	130			
Calcium		205	mg/L	1.0	93	70	130			
Magnesium		114	mg/L	1.0	91	70	130			
Potassium		102	mg/L	1.0	91	70	130			
Sodium		123	mg/L	1.0	95	70	130			
<b>Sample ID: C10040844-006BMSD2</b>	16	Sample Matrix Spike Duplicate			Run: SUB-C132003			04/26/10 20:24		
Aluminum		2.05	mg/L	0.10	100	70	130	1.1	20	
Barium		1.99	mg/L	0.10	95	70	130	0.8	20	
Beryllium		1.92	mg/L	0.010	94	70	130	0.9	20	
Boron		2.05	mg/L	0.10	98	70	130	0.8	20	
Chromium		1.93	mg/L	0.050	95	70	130	0.4	20	
Copper		1.95	mg/L	0.010	96	70	130	0.1	20	
Iron		4.48	mg/L	0.030	95	70	130	1.1	20	
Manganese		2.28	mg/L	0.010	92	70	130	0.1	20	
Molybdenum		1.94	mg/L	0.10	95	70	130	1.4	20	
Nickel		1.90	mg/L	0.050	93	70	130	1.1	20	
Silicon		9.63	mg/L	0.10		70	130	0.5	20	A
Strontium		3.32	mg/L	0.10	96	70	130	1.3	20	
Calcium		208	mg/L	1.0	95	70	130	1.2	20	
Magnesium		117	mg/L	1.0	94	70	130	2.5	20	
Potassium		103	mg/L	1.0	92	70	130	1.3	20	
Sodium		125	mg/L	1.0	97	70	130	1.6	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 06/15/10  
**Work Order:** R10040303

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: SUB-C132016		
Sample ID: ICV		10 Initial Calibration Verification Standard						04/26/10 14:21		
Antimony		0.0488	mg/L	0.0010	98	90	110			
Arsenic		0.0480	mg/L	0.0010	96	90	110			
Cadmium		0.0497	mg/L	0.0010	99	90	110			
Lead		0.0493	mg/L	0.0010	99	90	110			
Mercury		0.00516	mg/L	0.0010	103	90	110			
Selenium		0.247	mg/L	0.0014	99	90	110			
Silver		0.0518	mg/L	0.0010	104	90	110			
Thallium		0.0480	mg/L	0.0010	96	90	110			
Uranium		0.0481	mg/L	0.00030	96	90	110			
Vanadium		0.0497	mg/L	0.0010	99	90	110			
Sample ID: ICSA		10 Interference Check Sample A						04/26/10 14:28		
Antimony		0.000619	mg/L	0.0010		0	0			
Arsenic		0.000117	mg/L	0.0010		0	0			
Cadmium		2.80E-06	mg/L	0.0010		0	0			
Lead		5.01E-05	mg/L	0.0010		0	0			
Mercury		6.10E-05	mg/L	0.0010		0	0			
Selenium		0.000209	mg/L	0.0014		0	0			
Silver		0.000180	mg/L	0.0010		0	0			
Thallium		2.81E-05	mg/L	0.0010		0	0			
Uranium		2.84E-05	mg/L	0.00030		0	0			
Vanadium		2.45E-05	mg/L	0.0010		0	0			
Sample ID: ICSAB		10 Interference Check Sample AB						04/26/10 14:35		
Antimony		0.000157	mg/L	0.0010		0	0			
Arsenic		0.0111	mg/L	0.0010	111	70	130			
Cadmium		0.0109	mg/L	0.0010	109	70	130			
Lead		2.62E-05	mg/L	0.0010		0	0			
Mercury		4.01E-05	mg/L	0.0010		0	0			
Selenium		3.50E-06	mg/L	0.0014		0	0			
Silver		0.0106	mg/L	0.0010	106	70	130			
Thallium		1.78E-05	mg/L	0.0010		0	0			
Uranium		1.05E-05	mg/L	0.00030		0	0			
Vanadium		-0.000133	mg/L	0.0010		0	0			
Method: E200.8								Batch: C_R132016		
Sample ID: LRB		10 Method Blank				Run: SUB-C132016		04/26/10 15:09		
Antimony		0.0001	mg/L	0.0001						
Arsenic		ND	mg/L	0.0003						
Cadmium		ND	mg/L	6E-05						
Lead		ND	mg/L	2E-05						
Mercury		ND	mg/L	4E-05						
Selenium		ND	mg/L	0.001						
Silver		0.0001	mg/L	2E-05						
Thallium		ND	mg/L	3E-05						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT - Provide as much information as possible.

Company Name: <b>Scott Ex.</b>		Project Name, PWS, Permit, Etc. <b>Powdered Densified</b>		Sample Origin State: _____	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <b>Powdered</b>		Contact Name: <b>Allen Scott</b>		Phone/Fax: <b>473-7433</b>	Sampler: (Please Print)
Invoice Address: <b>Powdered</b>		Invoice Contact & Phone:		Purchase Order:	Quote/Bottle Order:
Special Report/Formats - ELI must be notified prior to sample submittal for the following: <div><input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> GSA <input type="checkbox"/> Format: _____ <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> LEVEL IV <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC</div>					
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX	Number of Containers Sample Type: AWS V B O Air Water Soils/Solids Vegetation Bioassay Other
1 <b>DP-09-21-1</b>		<b>4-21-10</b>		<b>wsk</b>	<b>ANALYSIS REQUESTED</b>  <b>SEE ATTACHED</b> Normal Turnaround (TAT) <b>RUSH</b> Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:  Shipped by: Cooler (Id): Recep Temp <b>3.6 °C</b> On Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal Y N Bottles/Coatons B C Intact Y N Signature Y N Match
2 <b>DP-09-21-2</b>		<b>4-21-10</b>		<b>wsk</b>	
3					
4					
5					
6					
7					
8					
9					
10					
Custody Record MUST be Signed		Relinquished by (print): <b>Allen Scott</b>	Date/Time: <b>4-22-10 7:40</b>	Signature: <b>Allen Scott</b>	Received by (print): <b>Steve Froiland</b>
Sample Disposal: Return to Client:		Lab Disposal:		Date/Time: <b>4-22-10 8:00</b>	Signature: <b>Steve Froiland</b>

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



## ANALYTICAL SUMMARY REPORT

September 10, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10050253

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 5/18/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10050253-001	DB-09-21-01	05/17/10 0:00	05/18/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10050253-002	DB-09-21-02	05/17/10 0:00	05/18/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by

Linda Larson

Date: 2010.09.10 10:33:22 -06:00



**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10050253

**Revised Date:** 09/10/10

**Report Date:** 06/29/10

## CASE NARRATIVE

Tests Associated with Analyst identified as ELI-CA were subcontracted to Energy Laboratories Casper Branch, EPA Number WY00002.

Tests Associated with Analyst identified as ELI-B were subcontracted to Energy Laboratories Billings Branch, EPA Number MT00005.

Comments imported for SUBBED Workorder: C10050710

### RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes

### PB210 ANALYSIS

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### TH230 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10050710

This case narrative is used to explain any exceptions to the analyses performed for your sample(s). In accordance with Good Analytical Laboratory Practices (GALP), samples requiring data qualifiers or analytical modifications are explained herein.

This report is being re-issued due to a change in the report that was made following the original issuance of the report. The reason for this re-issuance is due to the following.

- The Gross Gamma was re-reported

All samples were analyzed in accordance with prescribed methodology, except where noted. Samples are accompanied by appropriate quality assurance/quality control (QA/QC) samples throughout the analytical process.

If you have questions regarding this information, please feel free to contact us at (888)672-1225, (605)342-1225 or [rapid\\_city@energylab.com](mailto:rapid_city@energylab.com).





# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
MAJOR IONS								
Alkalinity, Total as CaCO3	130	mg/L		5		1	A2320 B	05/27/10 11:00/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	05/27/10 11:00/mb
Bicarbonate as HCO3	158	mg/L		5		1	A2320 B	05/27/10 11:00/mb
Calcium	81	mg/L	D	1		5	E200.7	05/25/10 14:33/eli-c
Chloride	8	mg/L		5		1	E300.0	05/22/10 12:17/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	05/19/10 01:35/jmh
Magnesium	29.4	mg/L		0.5		5	E200.7	05/25/10 14:33/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	06/02/10 13:55/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	05/19/10 01:35/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	05/19/10 01:35/jmh
Potassium	11.7	mg/L		0.5		5	E200.7	05/25/10 14:33/eli-c
Sodium	166	mg/L	D	1		5	E200.7	05/25/10 14:33/eli-c
Sulfate	542	mg/L		1		20	E300.0	05/19/10 01:18/jmh
Silica	7.5	mg/L		0.2		1	E200.8	05/24/10 23:15/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1300	umhos/cm	B	5.0		1	A2510 B	05/20/10 17:14/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	05/24/10 17:30/jmh
pH	7.91	s.u.		0.01		1	A4500-H B	05/20/10 16:29/tb
Sodium Adsorption Ratio (SAR)	4.0	unitless		0.10		1	Calculation	06/28/10 17:08/ADM
Solids, Total Dissolved TDS @ 180 C	840	mg/L		5		1	A2540 C	05/24/10 16:41/mb
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	05/24/10 23:15/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	05/24/10 23:15/eli-c
Barium	ND	mg/L		0.1		1	E200.8	05/24/10 23:15/eli-c
Boron	ND	mg/L		0.1		1	E200.8	05/24/10 23:15/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	05/24/10 23:15/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	05/24/10 23:15/eli-c
Copper	ND	mg/L		0.01		1	E200.8	05/24/10 23:15/eli-c
Iron	ND	mg/L		0.03		1	E200.8	05/24/10 23:15/eli-c
Lead	ND	mg/L		0.001		1	E200.8	05/24/10 23:15/eli-c
Manganese	0.03	mg/L		0.01		1	E200.8	05/24/10 23:15/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	05/24/10 23:15/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	05/24/10 23:15/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	05/24/10 23:15/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	05/26/10 18:13/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	05/24/10 23:15/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	05/24/10 23:15/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
B - The analyte was detected in the method blank.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	05/24/10 23:15/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	05/24/10 23:15/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	05/24/10 23:15/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	06/02/10 08:37/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	05/26/10 16:34/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	05/26/10 18:41/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	3.9	pCi/L	U			1	E900.0	05/29/10 13:27/eli-ca
Gross Alpha precision (±)	3.3	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Alpha MDC	5.2	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta	8.4	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta precision (±)	2.4	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta MDC	3.7	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Lead 210	0.02	pCi/L	U			1	E909.0M	06/11/10 15:59/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	06/11/10 15:59/eli-c
Lead 210 MDC	2.9	pCi/L				1	E909.0M	06/11/10 15:59/eli-c
Polonium 210	-0.060	pCi/L	U			1	E912.0	06/07/10 08:47/eli-ca
Polonium 210 MDC	1.1	pCi/L				1	E912.0	06/07/10 08:47/eli-ca
Polonium 210 precision (±)	0.40	pCi/L				1	E912.0	06/07/10 08:47/eli-ca
Radium 226	1.6	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Thorium 230	0.03	pCi/L	U			1	E907.0	05/27/10 08:45/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	05/27/10 08:45/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	05/27/10 08:45/eli-c
Gross Gamma	420	pCi/L				1	E901.1	05/27/10 06:15/eli-c
Gross Gamma precision (±)	110	pCi/L				1	E901.1	05/27/10 06:15/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.3	pCi/L	U			1	E909.0M	06/13/10 16:36/eli-c
Lead 210 precision (±)	3.6	pCi/L				1	E909.0M	06/13/10 16:36/eli-c
Lead 210 MDC	6.1	pCi/L				1	E909.0M	06/13/10 16:36/eli-c
Polonium 210	0.077	pCi/L	U			1	E912.0	06/07/10 08:49/eli-ca
Polonium 210 precision (±)	0.31	pCi/L				1	E912.0	06/07/10 08:49/eli-ca

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.62	pCi/L				1	E912.0	06/07/10 08:49/eli-ca
Radium 226	0.3	pCi/L	U			1	E903.0	06/18/10 08:33/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	06/18/10 08:33/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	06/18/10 08:33/eli-c
Thorium 230	-0.4	pCi/L	U			1	E907.0	06/04/10 10:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	06/04/10 10:06/eli-c
- See Case Narrative regarding Pb210 analysis.								
- See Case Narrative regarding Ra226 analysis.								
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	157	pCi/L		100		1	D5072-92	05/19/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	06/14/10 18:45/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	05/24/10 16:30/eli-c
Barium	ND	mg/L		0.1		1	E200.8	05/24/10 16:30/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	05/24/10 16:30/eli-c
Boron	ND	mg/L		0.1		1	E200.8	05/24/10 16:30/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	05/24/10 16:30/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	05/24/10 16:30/eli-c
Copper	ND	mg/L		0.01		1	E200.8	05/24/10 16:30/eli-c
Iron	0.22	mg/L		0.03		1	E200.8	05/24/10 16:30/eli-c
Lead	ND	mg/L		0.001		1	E200.8	05/24/10 16:30/eli-c
Manganese	0.03	mg/L		0.01		1	E200.8	05/24/10 16:30/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	05/26/10 13:24/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	05/24/10 16:30/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	05/24/10 16:30/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	05/24/10 16:30/eli-c
Silver	ND	mg/L		0.005		1	E200.8	05/24/10 16:30/eli-c
Strontium	2.4	mg/L		0.1		1	E200.8	05/24/10 16:30/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	05/24/10 16:30/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	05/24/10 16:30/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	05/24/10 16:30/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.470	%				1	A1030 E	06/29/10 00:00/lkl
Anions	14.1	meq/L				1	A1030 E	06/29/10 00:00/lkl
Cations	14.0	meq/L				1	A1030 E	06/29/10 00:00/lkl
Solids, Total Dissolved Calculated	937	mg/L				1	A1030 E	06/29/10 00:00/lkl

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

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



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## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
DATA QUALITY								
TDS Balance (0.80 - 1.20)	0.900					1	A1030 E	06/29/10 00:00/kl

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	200	mg/L		5		1	A2320 B	05/27/10 11:08/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	05/27/10 11:08/mb
Bicarbonate as HCO <sub>3</sub>	244	mg/L		5		1	A2320 B	05/27/10 11:08/mb
Calcium	168	mg/L	D	1		5	E200.7	05/25/10 14:37/eli-c
Chloride	10	mg/L		5		1	E300.0	05/22/10 12:35/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	05/19/10 02:07/jmh
Magnesium	47.2	mg/L		0.5		5	E200.7	05/25/10 14:37/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	06/02/10 13:58/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	05/19/10 02:07/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	05/19/10 02:07/jmh
Potassium	11.7	mg/L		0.5		5	E200.7	05/25/10 14:37/eli-c
Sodium	130	mg/L	D	1		5	E200.7	05/25/10 14:37/eli-c
Sulfate	694	mg/L		1		20	E300.0	05/19/10 01:51/jmh
Silica	6.7	mg/L		0.2		1	E200.8	05/24/10 23:21/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1520	umhos/cm	B	5.0		1	A2510 B	05/20/10 17:15/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	05/24/10 17:30/jmh
pH	7.47	s.u.		0.01		1	A4500-H B	05/20/10 16:32/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	06/28/10 17:08/ADM
Solids, Total Dissolved TDS @ 180 C	1100	mg/L		5		1	A2540 C	05/24/10 16:43/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	05/24/10 23:21/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	05/24/10 23:21/eli-c
Barium	ND	mg/L		0.1		1	E200.8	05/24/10 23:21/eli-c
Boron	ND	mg/L		0.1		1	E200.8	05/24/10 23:21/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	05/24/10 23:21/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	05/24/10 23:21/eli-c
Copper	ND	mg/L		0.01		1	E200.8	05/24/10 23:21/eli-c
Iron	ND	mg/L		0.03		1	E200.8	05/24/10 23:21/eli-c
Lead	ND	mg/L		0.001		1	E200.8	05/24/10 23:21/eli-c
Manganese	0.54	mg/L		0.01		1	E200.8	05/24/10 23:21/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	05/24/10 23:21/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	05/24/10 23:21/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	05/24/10 23:21/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	05/26/10 18:20/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	05/24/10 23:21/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	05/24/10 23:21/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
B - The analyte was detected in the method blank.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	0.0086	mg/L		0.0003		1	E200.8	05/24/10 23:21/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	05/24/10 23:21/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	05/24/10 23:21/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	06/02/10 08:42/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	05/26/10 16:41/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	05/27/10 10:48/eli-ca
RADIONUCLIDES - DISSOLVED								
Gross Alpha	40.1	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Alpha precision (±)	6.3	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Alpha MDC	6.7	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta	25.7	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta precision (±)	3.3	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Gross Beta MDC	4.7	pCi/L				1	E900.0	05/29/10 13:27/eli-ca
Lead 210	2.2	pCi/L	U			1	E909.0M	06/11/10 18:01/eli-c
Lead 210 precision (±)	1.7	pCi/L				1	E909.0M	06/11/10 18:01/eli-c
Lead 210 MDC	2.9	pCi/L				1	E909.0M	06/11/10 18:01/eli-c
Polonium 210	-0.060	pCi/L	U			1	E912.0	06/07/10 08:47/eli-ca
Polonium 210 MDC	1.1	pCi/L				1	E912.0	06/07/10 08:47/eli-ca
Polonium 210 precision (±)	0.39	pCi/L				1	E912.0	06/07/10 08:47/eli-ca
Radium 226	1.9	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	06/02/10 12:29/eli-ca
Thorium 230	0.006	pCi/L	U			1	E907.0	05/27/10 08:45/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	05/27/10 08:45/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	05/27/10 08:45/eli-c
Gross Gamma	ND	pCi/L		20		1	E901.1	05/27/10 06:15/eli-c
Gross Gamma precision (±)	ND	pCi/L				1	E901.1	05/27/10 06:15/eli-c
- See Case Narrative regarding Pb210 analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	-1	pCi/L	U			1	E909.0M	06/13/10 18:37/eli-c
Lead 210 precision (±)	3.6	pCi/L				1	E909.0M	06/13/10 18:37/eli-c
Lead 210 MDC	6.1	pCi/L				1	E909.0M	06/13/10 18:37/eli-c
Polonium 210	0.061	pCi/L	U			1	E912.0	06/07/10 08:49/eli-ca
Polonium 210 precision (±)	0.37	pCi/L				1	E912.0	06/07/10 08:49/eli-ca

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10050253-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Collection Date:** 05/17/10  
**Date Received:** 05/18/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.80	pCi/L				1	E912.0	06/07/10 08:49/eli-ca
Radium 226	0.6	pCi/L				1	E903.0	06/18/10 08:33/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	06/18/10 08:33/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	06/18/10 08:33/eli-c
Thorium 230	-0.1	pCi/L	U			1	E907.0	06/04/10 10:06/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	06/04/10 10:06/eli-c
- See Case Narrative regarding Pb210 analysis.								
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	303	pCi/L		100		1	D5072-92	05/19/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	06/03/10 13:29/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	05/25/10 09:15/eli-c
Barium	ND	mg/L		0.1		1	E200.8	05/25/10 09:15/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	05/25/10 09:15/eli-c
Boron	ND	mg/L		0.1		1	E200.8	05/25/10 09:15/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	05/25/10 09:15/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	05/25/10 09:15/eli-c
Copper	ND	mg/L		0.01		1	E200.8	05/25/10 09:15/eli-c
Iron	ND	mg/L		0.03		1	E200.8	05/25/10 09:15/eli-c
Lead	ND	mg/L		0.001		1	E200.8	05/25/10 09:15/eli-c
Manganese	0.55	mg/L		0.01		1	E200.8	05/25/10 09:15/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	05/26/10 13:26/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	05/25/10 09:15/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	05/25/10 09:15/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	05/25/10 09:15/eli-c
Silver	ND	mg/L		0.005		1	E200.8	06/03/10 01:15/eli-c
Strontium	2.3	mg/L		0.1		1	E200.8	05/25/10 09:15/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	05/25/10 09:15/eli-c
Uranium	0.0088	mg/L		0.0003		1	E200.8	05/25/10 09:15/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	05/25/10 09:15/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-1.36	%				1	A1030 E	06/29/10 00:00/lkl
Anions	18.8	meq/L				1	A1030 E	06/29/10 00:00/lkl
Cations	18.3	meq/L				1	A1030 E	06/29/10 00:00/lkl
Solids, Total Dissolved Calculated	1200	mg/L				1	A1030 E	06/29/10 00:00/lkl
TDS Balance (0.80 - 1.20)	0.930					1	A1030 E	06/29/10 00:00/lkl

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

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>										Batch: 100527A-ALK-SEL-W
<b>Sample ID: LCS1_100527A</b>		Laboratory Control Sample				Run: PH_COND1-R_100527A				05/27/10 10:12
Alkalinity, Total as CaCO <sub>3</sub>		960	mg/L	5.0	96	90	110			
<b>Sample ID: MBLK1_100527A</b>		Method Blank				Run: PH_COND1-R_100527A				05/27/10 10:17
Alkalinity, Total as CaCO <sub>3</sub>		ND	mg/L	3						
<b>Sample ID: R10050253-001AMS</b>		Sample Matrix Spike				Run: PH_COND1-R_100527A				05/27/10 11:03
Alkalinity, Total as CaCO <sub>3</sub>		230	mg/L	5.0	94	80	120			
<b>Sample ID: R10050253-001AMSD</b>		Sample Matrix Spike Duplicate				Run: PH_COND1-R_100527A				05/27/10 11:06
Alkalinity, Total as CaCO <sub>3</sub>		232	mg/L	5.0	96	80	120	0.9	10	

### Qualifiers:

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MDC - Minimum detectable concentration





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B				Batch: 100520_1_COND-PROBE-W						
Sample ID: LCS1-1_100520	Laboratory Control Sample			Run: PH_COND2-R_100520B			05/20/10 16:50			
Conductivity @ 25 C	148	umhos/cm	5.0	99	90	110				
Sample ID: LCS2-1_100520	Laboratory Control Sample			Run: PH_COND2-R_100520B			05/20/10 16:52			
Conductivity @ 25 C	4980	umhos/cm	5.0	100	90	110				
Sample ID: MBLK-1_100520	Method Blank			Run: PH_COND2-R_100520B			05/20/10 16:56			
Conductivity @ 25 C	400	umhos/cm	5							
Sample ID: LCS_COND-1_100520	Laboratory Control Sample			Run: PH_COND2-R_100520B			05/20/10 17:01			
Conductivity @ 25 C	1420	umhos/cm	5.0	100	90	110				

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: 100524A-SLDS-TDS-W		
Sample ID: LCS1_100524A	Laboratory Control Sample					Run: BAL-4-R_100524B			05/24/10 16:34	
Solids, Total Dissolved TDS @ 180 C	200	mg/L	10	98	90	110				
Sample ID: MBLK1_100524A	Method Blank					Run: BAL-4-R_100524B			05/24/10 16:34	
Solids, Total Dissolved TDS @ 180 C	ND	mg/L	5							
Sample ID: R10050253-001ADUP	Sample Duplicate					Run: BAL-4-R_100524B			05/24/10 16:42	
Solids, Total Dissolved TDS @ 180 C	840	mg/L	10						5	
Sample ID: R10050253-002AMS	Sample Matrix Spike					Run: BAL-4-R_100524B			05/24/10 16:45	
Solids, Total Dissolved TDS @ 180 C	2100	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2580 B								Batch: 100524-ORP-ISE-W		
Sample ID: LCS	Laboratory Control Sample					Run: PH_COND1-R_100524A		05/24/10 17:30		
Oxidation-Reduction Potential		470	mV		99	95	105			
Sample ID: R10050253-001F	Sample Duplicate					Run: PH_COND1-R_100524A		05/24/10 17:30		
Oxidation-Reduction Potential		250	mV					1.4	10	

### Qualifiers:

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MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_26210
<b>Sample ID: MB-26210</b>		Method Blank					Run: SUB-C133182			05/26/10 16:27
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LCS-26210</b>		Laboratory Control Sample					Run: SUB-C133182			05/26/10 16:30
Selenium-IV		0.049	mg/L	0.0010	98	90	110			
<b>Sample ID: R10050253-001E</b>		Sample Matrix Spike					Run: SUB-C133182			05/26/10 16:36
Selenium-IV		0.047	mg/L	0.0010	94	85	115			
<b>Sample ID: R10050253-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C133182			05/26/10 16:39
Selenium-IV		0.046	mg/L	0.0010	92	85	115	1.3	10	
<b>Method: A3114 B</b>										Batch: C_26210
<b>Sample ID: MB-26210</b>		Method Blank					Run: SUB-C133188			05/26/10 18:06
Selenium		ND	mg/L	0.0002						
<b>Sample ID: LCS-26210</b>		Laboratory Control Sample					Run: SUB-C133188			05/26/10 18:08
Selenium		0.052	mg/L	0.0010	104	90	110			
<b>Sample ID: R10050253-001E</b>		Sample Matrix Spike					Run: SUB-C133188			05/26/10 18:15
Selenium		0.052	mg/L	0.0010	104	85	115			
<b>Sample ID: R10050253-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C133188			05/26/10 18:18
Selenium		0.052	mg/L	0.0010	104	85	115	0.2	15	

### Qualifiers:

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B								Batch: 100520_1_PH-W		
<b>Sample ID:</b> LCS_pH-1_100520		Laboratory Control Sample				Run: PH_COND2-R_100520A		05/20/10 16:21		
pH		7.43	s.u.	0.010	100	98.55	101.45			
<b>Sample ID:</b> R10050237-003BDUP		Sample Duplicate				Run: PH_COND2-R_100520A		05/20/10 16:27		
pH		8.87	s.u.	0.010				0	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b>								Batch: A2010-06-02_2_NH3_01		
<b>Sample ID: MBLK-2</b>	Method Blank					Run: TECHAA2-R_100602A		06/02/10 12:12		
Nitrogen, Ammonia as N		0.03	mg/L	0.01						
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank					Run: TECHAA2-R_100602A		06/02/10 12:13		
Nitrogen, Ammonia as N		0.27	mg/L	0.10	96	90	110			
<b>Sample ID: R10050253-001BMS</b>	Sample Matrix Spike					Run: TECHAA2-R_100602A		06/02/10 13:56		
Nitrogen, Ammonia as N		0.40	mg/L	0.10	96	80	120			
<b>Sample ID: R10050253-001BMSD</b>	Sample Matrix Spike Duplicate					Run: TECHAA2-R_100602A		06/02/10 13:57		
Nitrogen, Ammonia as N		0.38	mg/L	0.10	90	80	120	3.6	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										Batch: C_R133131
<b>Sample ID:</b> MB-100525A	4	Method Blank				Run: SUB-C133131				05/25/10 12:44
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
<b>Sample ID:</b> LFB-100525A	4	Laboratory Fortified Blank				Run: SUB-C133131				05/25/10 12:48
Calcium		50	mg/L	0.50	100	85	115			
Magnesium		50	mg/L	0.50	99	85	115			
Potassium		49	mg/L	0.82	97	85	115			
Sodium		47	mg/L	0.50	94	85	115			
<b>Sample ID:</b> C10040979-001BMS2	4	Sample Matrix Spike				Run: SUB-C133131				05/25/10 13:44
Calcium		110	mg/L	1.0	96	70	130			
Magnesium		111	mg/L	1.0	94	70	130			
Potassium		96.1	mg/L	1.0	90	70	130			
Sodium		260	mg/L	1.0	99	70	130			
<b>Sample ID:</b> C10040979-001BMSD2	4	Sample Matrix Spike Duplicate				Run: SUB-C133131				05/25/10 13:49
Calcium		113	mg/L	1.0	99	70	130	2.2	20	
Magnesium		116	mg/L	1.0	99	70	130	4.5	20	
Potassium		98.6	mg/L	1.0	93	70	130	2.5	20	
Sodium		264	mg/L	1.0	103	70	130	1.6	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Revised Date: 09/10/10  
Report Date: 06/29/10  
Work Order: R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>		Batch: C_R133067A								
<b>Sample ID: R10050253-002D</b>	23 Post Digestion Spike		Run: SUB-C133067		05/24/10 16:44					
Aluminum		0.0527	mg/L	0.10	58	70	130			S
Arsenic		0.0535	mg/L	0.0010	104	70	130			
Barium		0.0626	mg/L	0.0010	103	70	130			
Beryllium		0.0430	mg/L	0.010	86	70	130			
Boron		0.108	mg/L	0.10	90	70	130			
Cadmium		0.0498	mg/L	0.010	100	70	130			
Chromium		0.0488	mg/L	0.0010	97	70	130			
Copper		0.0458	mg/L	0.010	91	70	130			
Iron		1.24	mg/L	0.030	97	70	130			
Lead		0.0517	mg/L	0.050	103	70	130			
Manganese		0.589	mg/L	0.010		70	130			A
Mercury		0.00537	mg/L	0.0010	107	70	130			
Molybdenum		0.0475	mg/L	0.0010	95	70	130			
Nickel		0.0468	mg/L	0.0010	93	70	130			
Selenium		0.0549	mg/L	0.0010	110	70	130			
Silicon		3.24	mg/L	0.10		70	130			A
Silver		0.0139	mg/L	0.010	70	70	130			
Strontium		2.28	mg/L	0.10		70	130			A
Thallium		0.0525	mg/L	0.0010	104	70	130			
Thorium 232		0.0539	mg/L	0.0010	107	70	130			
Uranium		0.0626	mg/L	0.00030	108	70	130			
Vanadium		0.0500	mg/L	0.0010	99	70	130			
Zinc		0.0521	mg/L	0.010	97	70	130			
<b>Sample ID: R10050253-002D</b>	23 Post Digestion Spike Duplicate		Run: SUB-C133067		05/24/10 16:50					
Aluminum		0.0519	mg/L	0.10	56	70	130		20	S
Arsenic		0.0523	mg/L	0.0010	102	70	130	2.4	20	
Barium		0.0602	mg/L	0.0010	98	70	130	3.9	20	
Beryllium		0.0438	mg/L	0.010	87	70	130	1.7	20	
Boron		0.111	mg/L	0.10	97	70	130	2.9	20	
Cadmium		0.0484	mg/L	0.010	97	70	130	2.9	20	
Chromium		0.0460	mg/L	0.0010	92	70	130	5.9	20	
Copper		0.0449	mg/L	0.010	90	70	130	2	20	
Iron		1.27	mg/L	0.030	99	70	130	2.4	20	
Lead		0.0510	mg/L	0.050	102	70	130	1.5	20	
Manganese		0.596	mg/L	0.010		70	130	1	20	A
Mercury		0.00523	mg/L	0.0010	105	70	130	2.7	20	
Molybdenum		0.0460	mg/L	0.0010	92	70	130	3.2	20	
Nickel		0.0448	mg/L	0.0010	89	70	130	4.5	20	
Selenium		0.0570	mg/L	0.0010	114	70	130	3.7	20	
Silicon		3.36	mg/L	0.10		70	130	3.9	20	A
Silver		0.0120	mg/L	0.010	60	70	130	15	20	S
Strontium		2.18	mg/L	0.10		70	130	4.7	20	A
Thallium		0.0516	mg/L	0.0010	102	70	130	1.7	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R133067A
<b>Sample ID: R10050253-002D</b>	23	Post Digestion Spike Duplicate				Run: SUB-C133067				05/24/10 16:50
Thorium 232		0.0529	mg/L	0.0010	105	70	130	1.9	20	
Uranium		0.0626	mg/L	0.00030	108	70	130	0	20	
Vanadium		0.0470	mg/L	0.0010	93	70	130	6.2	20	
Zinc		0.0519	mg/L	0.010	97	70	130	0.5	20	
<b>Sample ID: C10050737-004BMS4</b>	23	Post Digestion Spike				Run: SUB-C133067				05/25/10 00:17
Aluminum		0.0456	mg/L	0.0010	91	70	130			
Arsenic		0.0515	mg/L	0.0010	103	70	130			
Barium		0.131	mg/L	0.10	87	70	130			
Beryllium		0.0454	mg/L	0.010	91	70	130			
Boron		0.0863	mg/L	0.0010	86	70	130			
Cadmium		0.0476	mg/L	0.010	95	70	130			
Chromium		0.0486	mg/L	0.0010	97	70	130			
Copper		0.0499	mg/L	0.010	96	70	130			
Iron		1.20	mg/L	0.030	96	70	130			
Lead		0.0491	mg/L	0.0010	98	70	130			
Manganese		0.0479	mg/L	0.010	95	70	130			
Mercury		0.00490	mg/L	0.0010	98	70	130			
Molybdenum		0.0842	mg/L	0.0010	92	70	130			
Nickel		0.0494	mg/L	0.0010	95	70	130			
Selenium		0.0516	mg/L	0.0010	102	70	130			
Silicon		5.51	mg/L	0.10		70	130			A
Silver		0.0120	mg/L	0.010	60	70	130			S
Strontium		0.642	mg/L	0.10		70	130			A
Thallium		0.0497	mg/L	0.0010	99	70	130			
Thorium 232		0.0496	mg/L	0.0010	99	70	130			
Uranium		2.47	mg/L	0.00030		70	130			A
Vanadium		0.0498	mg/L	0.0010	99	70	130			
Zinc		0.0654	mg/L	0.010	99	70	130			
<b>Sample ID: C10050737-004BMSD4</b>	23	Post Digestion Spike Duplicate				Run: SUB-C133067				05/25/10 00:23
Aluminum		0.0460	mg/L	0.0010	92	70	130	0.9	20	
Arsenic		0.0521	mg/L	0.0010	104	70	130	1.1	20	
Barium		0.134	mg/L	0.10	94	70	130	2.6	20	
Beryllium		0.0467	mg/L	0.010	93	70	130	2.8	20	
Boron		0.0876	mg/L	0.0010	88	70	130	1.4	20	
Cadmium		0.0496	mg/L	0.010	99	70	130	4.2	20	
Chromium		0.0497	mg/L	0.0010	99	70	130	2.3	20	
Copper		0.0502	mg/L	0.010	97	70	130	0.5	20	
Iron		1.23	mg/L	0.030	98	70	130	2.8	20	
Lead		0.0509	mg/L	0.0010	102	70	130	3.7	20	
Manganese		0.0501	mg/L	0.010	99	70	130	4.5	20	
Mercury		0.00509	mg/L	0.0010	102	70	130	3.8	20	
Molybdenum		0.0880	mg/L	0.0010	100	70	130	4.4	20	
Nickel		0.0500	mg/L	0.0010	97	70	130	1.2	20	

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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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R133067A
<b>Sample ID: C10050737-004BMSD4</b> 23 Post Digestion Spike Duplicate										Run: SUB-C133067 05/25/10 00:23
Selenium		0.0527	mg/L	0.0010	104	70	130	2.1	20	
Silicon		5.44	mg/L	0.10		70	130	1.4	20	A
Silver		0.0125	mg/L	0.010	63	70	130	4.2	20	S
Strontium		0.654	mg/L	0.10		70	130	1.9	20	A
Thallium		0.0516	mg/L	0.0010	103	70	130	3.8	20	
Thorium 232		0.0518	mg/L	0.0010	104	70	130	4.3	20	
Uranium		2.52	mg/L	0.00030		70	130	2	20	A
Vanadium		0.0504	mg/L	0.0010	100	70	130	1.2	20	
Zinc		0.0646	mg/L	0.010	98	70	130	1.3	20	
<b>Sample ID: LRB</b> 23 Method Blank										Run: SUB-C133067 05/24/10 15:14
Silicon		ND	mg/L	0.0005						
Aluminum		0.0006	mg/L	8E-05						
Arsenic		ND	mg/L	4E-05						
Barium		ND	mg/L	3E-05						
Beryllium		ND	mg/L	3E-05						
Boron		-0.0005	mg/L							
Cadmium		ND	mg/L	7E-05						
Chromium		ND	mg/L	5E-05						
Copper		ND	mg/L	6E-05						
Iron		0.0002	mg/L	0.0001						
Lead		4E-05	mg/L	2E-05						
Manganese		3E-05	mg/L	2E-05						
Mercury		ND	mg/L	2E-05						
Molybdenum		0.0001	mg/L	8E-05						
Nickel		ND	mg/L	5E-05						
Selenium		ND	mg/L	5E-05						
Silver		ND	mg/L	8E-05						
Strontium		ND	mg/L	6E-05						
Thallium		ND	mg/L	2E-05						
Thorium 232		ND	mg/L	3E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		ND	mg/L	1E-05						
Zinc		0.0005	mg/L	0.0001						
<b>Sample ID: LFB</b> 23 Laboratory Fortified Blank										Run: SUB-C133067 05/24/10 15:21
Silicon		0.487	mg/L	0.0010	93	85	115			
Aluminum		0.0490	mg/L	0.0010	97	85	115			
Arsenic		0.0515	mg/L	0.0010	103	85	115			
Barium		0.0507	mg/L	0.0010	101	85	115			
Beryllium		0.0509	mg/L	0.0010	102	85	115			
Boron		0.0514	mg/L	0.0010	104	85	115			
Cadmium		0.0517	mg/L	0.0010	103	85	115			
Chromium		0.0510	mg/L	0.0010	102	85	115			
Copper		0.0524	mg/L	0.0010	105	85	115			

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**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R133067A
<b>Sample ID: LFB</b>	23	Laboratory Fortified Blank				Run: SUB-C133067				05/24/10 15:21
Iron		1.20	mg/L	0.0010	96	85	115			
Lead		0.0512	mg/L	0.0010	102	85	115			
Manganese		0.0512	mg/L	0.0010	102	85	115			
Mercury		0.00512	mg/L	0.0010	102	85	115			
Molybdenum		0.0501	mg/L	0.0010	100	85	115			
Nickel		0.0519	mg/L	0.0010	104	85	115			
Selenium		0.0524	mg/L	0.0010	105	85	115			
Silver		0.0200	mg/L	0.0010	100	85	115			
Strontium		0.0511	mg/L	0.0010	102	85	115			
Thallium		0.0515	mg/L	0.0010	103	85	115			
Thorium 232		0.0507	mg/L	0.0010	101	85	115			
Uranium		0.0502	mg/L	0.00030	100	85	115			
Vanadium		0.0506	mg/L	0.0010	101	85	115			
Zinc		0.0570	mg/L	0.0010	113	85	115			
<b>Method: E200.8</b>										Batch: C_26223
<b>Sample ID: MB-26223</b>		Method Blank				Run: SUB-C133358				06/02/10 08:01
Uranium		0.0001	mg/L	6E-05						
<b>Sample ID: LCS2-26223</b>		Laboratory Control Sample				Run: SUB-C133358				06/02/10 08:27
Uranium		0.0999	mg/L	0.00030	100	85	115			
<b>Sample ID: C10050737-005CMS4</b>		Post Digestion Spike				Run: SUB-C133358				06/02/10 09:09
Uranium		0.0559	mg/L	0.00030	109	70	130			
<b>Sample ID: C10050737-005CMSD4</b>		Post Digestion Spike Duplicate				Run: SUB-C133358				06/02/10 09:14
Uranium		0.0562	mg/L	0.00030	110	70	130	0.5	20	
<b>Method: E200.8</b>										Batch: C_R133403A
<b>Sample ID: C10050908-003BMS4</b>		Post Digestion Spike				Run: SUB-C133403				06/03/10 04:35
Silver		0.0162	mg/L	0.010	81	70	130			
<b>Sample ID: C10050908-003BMSD4</b>		Post Digestion Spike Duplicate				Run: SUB-C133403				06/03/10 04:41
Silver		0.0157	mg/L	0.010	78	70	130	3.4	20	
<b>Sample ID: LRB</b>		Method Blank				Run: SUB-C133403				06/02/10 15:00
Silver		ND	mg/L	8E-05						
<b>Sample ID: LFB</b>		Laboratory Fortified Blank				Run: SUB-C133403				06/02/10 15:07
Silver		0.0206	mg/L	0.0010	103	85	115			

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## QA/QC Summary Report

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Revised Date: 09/10/10  
Report Date: 06/29/10  
Work Order: R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R133470
<b>Sample ID: LRB</b>		Method Blank					Run: SUB-C133470			06/03/10 12:41
Antimony		0.0001	mg/L	0.0001						
<b>Sample ID: LFB</b>		Laboratory Fortified Blank					Run: SUB-C133470			06/03/10 12:48
Antimony		0.0530	mg/L	0.0010	106	85	115			
<b>Sample ID: C10050684-001BMS4</b>		Post Digestion Spike					Run: SUB-C133470			06/03/10 13:15
Antimony		0.0560	mg/L	0.0010	112	70	130			
<b>Sample ID: C10050684-001BMSD4</b>		Post Digestion Spike Duplicate					Run: SUB-C133470			06/03/10 13:22
Antimony		0.0561	mg/L	0.0010	112	70	130	0.3	20	
<b>Method: E200.8</b>										Batch: C_R133814
<b>Sample ID: LRB</b>		Method Blank					Run: SUB-C133814			06/14/10 12:44
Antimony		ND	mg/L	0.0001						
<b>Sample ID: LFB</b>		Laboratory Fortified Blank					Run: SUB-C133814			06/14/10 12:51
Antimony		0.0509	mg/L	0.0010	102	85	115			
<b>Sample ID: R10050253-001D</b>		Post Digestion Spike					Run: SUB-C133814			06/14/10 18:52
Antimony		0.0577	mg/L	0.050	115	70	130			
<b>Sample ID: R10050253-001D</b>		Post Digestion Spike Duplicate					Run: SUB-C133814			06/14/10 18:59
Antimony		0.0577	mg/L	0.050	115	70	130	0	20	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
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**Revised Date:** 09/10/10  
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**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-B148233
<b>Sample ID:</b> QCS										05/26/10 13:07
Mercury		0.0019	mg/L	0.0010	97	90	110			
<b>Method:</b> E245.1										Batch: B_46506
<b>Sample ID:</b> MB-46506										05/26/10 13:11
Mercury		ND	mg/L	5E-05						
<b>Sample ID:</b> LCS-46506										05/26/10 13:13
Mercury		0.0019	mg/L	0.0010	93	85	115			
<b>Sample ID:</b> B10051125-001BMS										05/26/10 13:16
Mercury		0.0019	mg/L	0.0010	96	70	130			
<b>Sample ID:</b> B10051125-001BMSD										05/26/10 13:18
Mercury		0.0018	mg/L	0.0010	91	70	130	5.3	30	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0								Analytical Run: DIONEX_100518A		
Sample ID: CCV051810-22	4	Continuing Calibration Verification Standard							05/18/10 22:34	
Fluoride		7.20	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		7.12	mg/L	0.10	95	90	110			
Nitrogen, Nitrite as N		7.44	mg/L	0.10	99	90	110			
Sulfate		75.6	mg/L	1.0	101	90	110			
Method: E300.0										
										Batch: R46049
Sample ID: LFB051810-10	4	Laboratory Fortified Blank				Run: DIONEX_100518A			05/18/10 18:44	
Fluoride		4.61	mg/L	0.10	92	90	110			
Nitrogen, Nitrate as N		4.52	mg/L	0.10	90	90	110			
Nitrogen, Nitrite as N		5.38	mg/L	0.10	108	90	110			
Sulfate		45.9	mg/L	1.0	92	90	110			
Sample ID: R10050251-003AMS	4	Sample Matrix Spike				Run: DIONEX_100518A			05/18/10 23:23	
Fluoride		24.1	mg/L	0.10	91	90	110			
Nitrogen, Nitrate as N		65.4	mg/L	0.13	57	90	110			S
Nitrogen, Nitrite as N		24.7	mg/L	0.29	99	90	110			
Sulfate		726	mg/L	1.0	57	90	110			S
Sample ID: R10050251-003AMSD	4	Sample Matrix Spike Duplicate				Run: DIONEX_100518A			05/18/10 23:40	
Fluoride		24.7	mg/L	0.10	94	90	110	2.8	10	
Nitrogen, Nitrate as N		66.4	mg/L	0.13	61	90	110	1.5	10	S
Nitrogen, Nitrite as N		25.3	mg/L	0.29	101	90	110	2.4	10	
Sulfate		737	mg/L	1.0	61	90	110	1.5	10	S
Sample ID: R10050264-001CMS	4	Sample Matrix Spike				Run: DIONEX_100518A			05/19/10 03:13	
Fluoride		5.15	mg/L	0.10	93	90	110			
Nitrogen, Nitrate as N		4.92	mg/L	0.10	98	90	110			
Nitrogen, Nitrite as N		5.16	mg/L	0.10	103	90	110			
Sulfate		73.0	mg/L	1.0	98	90	110			
Sample ID: R10050264-001CMSD	4	Sample Matrix Spike Duplicate				Run: DIONEX_100518A			05/19/10 03:29	
Fluoride		5.13	mg/L	0.10	92	90	110	0.4	10	
Nitrogen, Nitrate as N		4.87	mg/L	0.10	97	90	110	1	10	
Nitrogen, Nitrite as N		5.10	mg/L	0.10	102	90	110	1.1	10	
Sulfate		72.5	mg/L	1.0	97	90	110	0.7	10	

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E300.0										Analytical Run: DIONEX_100521A
<b>Sample ID:</b> CCV052110-46										05/22/10 09:00
Chloride		72.7	mg/L	5.0	97	90	110			
<b>Method:</b> E300.0										Batch: R46121
<b>Sample ID:</b> LFB052110-10										05/21/10 20:46
Chloride		22.5	mg/L	5.0	90	90	110			
<b>Sample ID:</b> R10050162-001BMS										05/22/10 09:54
Chloride		1150	mg/L	5.4	79	90	110			S
<b>Sample ID:</b> R10050162-001BMSD										05/22/10 10:12
Chloride		1160	mg/L	5.4	80	90	110	0.4	10	S

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										Batch: C_GrAB-0909
<b>Sample ID: MB-GrAB-0909</b>	6	Method Blank				Run: SUB-C133323			05/28/10 03:36	
Gross Alpha		-1	pCi/L							U
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		0.8	pCi/L							
Gross Beta		-3	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-0909</b>		Laboratory Control Sample				Run: SUB-C133323			05/28/10 03:36	
Gross Alpha		94	pCi/L	93		70	130			
<b>Sample ID: Cs137-GrAB-0909</b>		Laboratory Control Sample				Run: SUB-C133323			05/28/10 03:36	
Gross Beta		87	pCi/L	100		70	130			
<b>Sample ID: C10050458-009AMS</b>		Sample Matrix Spike				Run: SUB-C133323			05/29/10 01:18	
Gross Alpha		120	pCi/L	119		70	130			
<b>Sample ID: C10050458-009AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133323			05/29/10 01:18	
Gross Alpha		120	pCi/L	113		70	130	5.1	20.1	
<b>Sample ID: C10050458-009AMS</b>		Sample Matrix Spike				Run: SUB-C133323			05/29/10 01:18	
Gross Beta		82	pCi/L	88		70	130			
<b>Sample ID: C10050458-009AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133323			05/29/10 01:18	
Gross Beta		86	pCi/L	92		70	130	4.5	16.4	
<b>Sample ID: C10050705-001DDUP</b>	6	Sample Duplicate				Run: SUB-C133323			05/29/10 01:18	
Gross Alpha		820	pCi/L					6.7	14.2	
Gross Alpha precision (±)		18	pCi/L							
Gross Alpha MDC		4.1	pCi/L							
Gross Beta		200	pCi/L					4	14	
Gross Beta precision (±)		3.9	pCi/L							
Gross Beta MDC		2.9	pCi/L							

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
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**Revised Date:** 09/10/10  
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**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R133449
<b>Sample ID: LCS-R133449</b>	3	Laboratory Control Sample				Run: SUB-C133449				05/27/10 06:15
Americium 241		690	pCi/L	20	85	70	130			
Cesium 137		990	pCi/L	20	97	70	130			
Potassium 40		6300	pCi/L	20	94	70	130			
<b>Sample ID: MB-R133449</b>	4	Method Blank				Run: SUB-C133449				05/27/10 06:15
Bismuth 214		ND	pCi/L							U
Lead 214		ND	pCi/L							U
Potassium 40		ND	pCi/L							U
Gross Gamma		ND	pCi/L							U
<b>Sample ID: R10050253-002H</b>	2	Sample Duplicate				Run: SUB-C133449				05/27/10 06:15
Bismuth 214		ND	pCi/L	20					30	U
Gross Gamma		ND	pCi/L					0	30	

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## QA/QC Summary Report

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**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-4544
<b>Sample ID: C10050641-007AMS</b>		Sample Matrix Spike				Run: SUB-C133373				06/02/10 10:57
Radium 226	18	pCi/L		110		70	130			
<b>Sample ID: C10050641-007AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133373				06/02/10 12:29
Radium 226	17	pCi/L		109		70	130	0.9	23.4	
<b>Sample ID: MB-RA226-4544</b>	3	Method Blank				Run: SUB-C133373				06/02/10 12:29
Radium 226		-0.1	pCi/L							U
Radium 226 precision ( $\pm$ )		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Sample ID: LCS-RA226-4544</b>		Laboratory Control Sample				Run: SUB-C133373				06/02/10 12:29
Radium 226		8.8	pCi/L	113		70	130			
<b>Method: E903.0</b>										Batch: C_R133983
<b>Sample ID: C10050920-002AMS</b>		Sample Matrix Spike				Run: SUB-C133983				06/18/10 08:32
Radium 226	8.7	pCi/g-dry		112		70	130			
<b>Sample ID: C10050920-002AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133983				06/18/10 08:32
Radium 226	8.6	pCi/g-dry		112		70	130	0.4	23.7	
<b>Sample ID: LCS-26223</b>		Laboratory Control Sample				Run: SUB-C133983				06/18/10 08:32
Radium 226	18	pCi/L		116		70	130			
<b>Sample ID: MB-26223</b>	3	Method Blank				Run: SUB-C133983				06/18/10 08:32
Radium 226		0.3	pCi/L							U
Radium 226 precision ( $\pm$ )		0.3	pCi/L							
Radium 226 MDC		0.3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Revised Date: 09/10/10

Report Date: 06/29/10

Work Order: R10050253

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E907.0								Batch: C_RA-TH-ISO-1179		
Sample ID: LCS-RA-TH-ISO-1179		Laboratory Control Sample				Run: SUB-C133256			05/27/10 08:45	
Thorium 230		4.9	pCi/L		93	70	130			
Sample ID: R10050253-002H		Sample Matrix Spike				Run: SUB-C133256			05/27/10 08:45	
Thorium 230		12	pCi/L		95	70	130			
Sample ID: R10050253-002H		Sample Matrix Spike Duplicate				Run: SUB-C133256			05/27/10 08:45	
Thorium 230		11	pCi/L		86	70	130	10	38.3	
Sample ID: MB-RA-TH-ISO-1179	3	Method Blank				Run: SUB-C133256			05/27/10 08:45	
Thorium 230		0.006	pCi/L							U
Thorium 230 MDC		0.1	pCi/L							
Thorium 230 precision (±)		0.06	pCi/L							
Method: E907.0								Batch: C_R133616		
Sample ID: LCS-26223		Laboratory Control Sample				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		4.6	pCi/L		98	70	130			
Sample ID: MB-26223	3	Method Blank				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		-0.2	pCi/L							U
Thorium 230 MDC		0.2	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
Sample ID: C10050803-001DMS		Sample Matrix Spike				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		4.7	pCi/L		108	70	130			
Sample ID: C10050803-001DMSD		Sample Matrix Spike Duplicate				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		5.6	pCi/L		125	70	130	16	45.6	
Sample ID: LCS-26241		Laboratory Control Sample				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		4.9	pCi/L		101	70	130			
Sample ID: MB-26241	3	Method Blank				Run: SUB-C133616			06/04/10 10:06	
Thorium 230		-0.06	pCi/L							U
Thorium 230 MDC		0.2	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>										Batch: C_PB-210-0712
<b>Sample ID: C10050659-006AMS</b>		Sample Matrix Spike				Run: SUB-C133793				06/13/10 12:33
Lead 210		113	pCi/g-dry	109		70	130			
<b>Sample ID: C10050659-006AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133793				06/13/10 14:34
Lead 210		108	pCi/g-dry	104		70	130	4.8	17	
<b>Sample ID: MB-26211</b>	3	Method Blank				Run: SUB-C133793				06/13/10 20:39
Lead 210		ND	pCi/g-dry							U
Lead 210 precision (±)		0.02	pCi/g-dry							
Lead 210 MDC		0.03	pCi/g-dry							
<b>Sample ID: MB-26223</b>	3	Method Blank				Run: SUB-C133793				06/13/10 22:40
Lead 210		5	pCi/L							U
Lead 210 precision (±)		20	pCi/L							
Lead 210 MDC		30	pCi/L							
<b>Sample ID: LCS-26211</b>		Laboratory Control Sample				Run: SUB-C133793				06/14/10 00:42
Lead 210		60.7	pCi/g-dry	116		70	130			
<b>Sample ID: LCS-26223</b>		Laboratory Control Sample				Run: SUB-C133793				06/14/10 02:44
Lead 210		650	pCi/L	124		70	130			
<b>Method: E909.0M</b>										Batch: C_PB-210-0710
<b>Sample ID: C09110441-001GMS</b>		Sample Matrix Spike				Run: SUB-C133803				06/12/10 06:10
Lead 210		240	pCi/L	107		70	130			
<b>Sample ID: C09110441-001GMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C133803				06/12/10 08:11
Lead 210		230	pCi/L	102		70	130	4.6	17.8	
<b>Sample ID: MB-PB-210-0710</b>	3	Method Blank				Run: SUB-C133803				06/12/10 10:13
Lead 210		ND	pCi/L							U
Lead 210 precision (±)		3	pCi/L							
Lead 210 MDC		6	pCi/L							
<b>Sample ID: LCS-PB-210-0710</b>		Laboratory Control Sample				Run: SUB-C133803				06/12/10 14:16
Lead 210		100	pCi/L	94		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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 09/10/10  
**Report Date:** 06/29/10  
**Work Order:** R10050253

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_R133609
<b>Sample ID: LCS-26223</b>	Laboratory Control Sample					Run: SUB-C133609				06/07/10 08:48
Polonium 210		76	pCi/L		97	70	130			
<b>Sample ID: MB-26223</b>	3	Method Blank				Run: SUB-C133609				06/07/10 08:48
Polonium 210		0.7	pCi/L							U
Polonium 210 precision (±)		2	pCi/L							
Polonium 210 MDC		3	pCi/L							
<b>Sample ID: C10050803-004DMS</b>	Sample Matrix Spike					Run: SUB-C133609				06/07/10 11:03
Polonium 210		15	pCi/L		104	70	130			
<b>Sample ID: C10050803-004DMSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C133609				06/07/10 11:03
Polonium 210		12	pCi/L		89	70	130	15	58	
<b>Sample ID: LCS-26241</b>	Laboratory Control Sample					Run: SUB-C133609				06/07/10 11:03
Polonium 210		92	pCi/L		118	70	130			
<b>Sample ID: MB-26241</b>	3	Method Blank				Run: SUB-C133609				06/07/10 11:03
Polonium 210		0.3	pCi/L							U
Polonium 210 precision (±)		1	pCi/L							
Polonium 210 MDC		3	pCi/L							
<b>Method: E912.0</b>										Batch: C_PO210-0301
<b>Sample ID: R10050253-002K</b>	Sample Matrix Spike					Run: SUB-C133610				06/07/10 08:47
Polonium 210		36	pCi/L		110	70	130			
<b>Sample ID: R10050253-002K</b>	Sample Matrix Spike Duplicate					Run: SUB-C133610				06/07/10 08:47
Polonium 210		32	pCi/L		97	70	130	13	65.4	
<b>Sample ID: LCS-PO210-0301</b>	Laboratory Control Sample					Run: SUB-C133610				06/07/10 08:47
Polonium 210		16	pCi/L		99	70	130			
<b>Sample ID: MB-PO210-0301</b>	3	Method Blank				Run: SUB-C133610				06/07/10 08:47
Polonium 210		-0.05	pCi/L							U
Polonium 210 MDC		0.7	pCi/L							
Polonium 210 precision (±)		0.2	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT - Provide as much information as possible.

Company Name: <b>Scott Env., Portland</b>		Project Name, PWS, Permit, Etc. <b>Powder Dewey-Burdock</b>		Sample Origin State: _____ EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <b>Scott Env., Portland</b>		Contact Name: <b>Allen Surf</b>		Sampler: (Please Print) _____
Invoice Address: <b>Scott Env., Portland</b>		Phone/Fax: _____ Invoice Contact & Phone: _____		Purchase Order: _____ Quote/Bottle Order: _____
Special Report/Formats - ELL must be notified prior to sample submittal for the following: <input type="checkbox"/> DW <input type="checkbox"/> GSA <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> A2LA <input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		Number of Containers Sample Type: AWSVB O Air Water Soils/Solids Vegetation Bioassay Other		
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX
1 <b>DB-09-21-01</b>		<b>5-17-10</b>		<b>water</b>
2 <b>DB-09-21-02</b>		<b>5-17-10</b>		<b>water</b>
3				
4				
5				
6				
7				
8				
9				
10				
Custody Record MUST be Signed		Relinquished by (print): <b>Allen Surf</b> Date/Time: <b>5-17-10 10:38 AM</b> Signature: <b>Allen Surf</b>		
Sample Disposal: Return to Client: _____		Lab Disposal: _____		
Received by Laboratory: <b>Steve Ireland</b> Date/Time: <b>5-18-10 10:38</b> Signature: <b>Steve Ireland</b>		Received by (print): _____ Date/Time: _____ Signature: _____		
Comments: Contact ELL prior to RUSH sample submittal for charges and scheduling - See Instruction Page		Shipped by: Cooler Dryer: Refrigerant Temp: <b>3.1</b> °C On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal: Y N Bottles/ Coolers: B C Intact: Y N Signature Match: Y N		
LABORATORY USE ONLY		8050253-001 002		

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

This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

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



## ANALYTICAL SUMMARY REPORT

August 23, 2010

Mark Hollenbeck  
Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10060444

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 6/23/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10060444-001	DB-09-21-01	06/22/10 0:00	06/23/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10060444-002	DB-09-21-02	06/22/10 0:00	06/23/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by

Linda Larson

Date: 2010.08.23 09:35:58 -06:00



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**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10060444

**Report Date:** 08/23/10

## CASE NARRATIVE

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

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Comments imported for SUBBED Workorder: C10061034

### RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### PB210 ANALYSIS

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10061034





## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	152	mg/L		5		1	A2320 B	07/01/10 11:16/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	07/01/10 11:16/mb
Bicarbonate as HCO <sub>3</sub>	185	mg/L		5		1	A2320 B	07/01/10 11:16/mb
Calcium	92	mg/L	D	1		5	E200.7	07/01/10 15:12/eli-c
Chloride	7	mg/L		1		1	E300.0	06/24/10 13:07/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	06/24/10 13:07/jmh
Magnesium	33.6	mg/L		0.5		5	E200.7	07/01/10 15:12/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	07/02/10 16:22/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	06/24/10 13:07/jmh
Nitrogen, Nitrite as N	0.3	mg/L		0.1		1	E300.0	06/24/10 13:07/jmh
Potassium	11.8	mg/L		0.5		5	E200.7	07/01/10 15:12/eli-c
Sodium	159	mg/L	D	1		5	E200.7	07/01/10 15:12/eli-c
Sulfate	524	mg/L	D	20		20	E300.0	06/24/10 12:49/jmh
Silica	8.2	mg/L		0.2		1	E200.8	06/29/10 00:27/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1320	umhos/cm		5.0		1	A2510 B	07/01/10 12:59/tb
Oxidation-Reduction Potential	330	mV				1	A2580 B	06/29/10 16:30/jmh
pH	7.86	s.u.		0.01		1	A4500-H B	06/28/10 13:09/tb
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	08/12/10 16:22/ADM
Solids, Total Dissolved TDS @ 180 C	910	mg/L	D	10		1	A2540 C	06/28/10 12:45/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	07/01/10 04:08/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	06/29/10 00:27/eli-c
Barium	ND	mg/L		0.1		1	E200.8	06/29/10 00:27/eli-c
Boron	ND	mg/L		0.1		5	E200.7	07/01/10 15:12/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	06/29/10 00:27/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	06/29/10 00:27/eli-c
Copper	ND	mg/L		0.01		1	E200.8	06/29/10 00:27/eli-c
Iron	ND	mg/L		0.03		1	E200.8	06/29/10 00:27/eli-c
Lead	ND	mg/L		0.001		1	E200.8	06/29/10 00:27/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	06/29/10 00:27/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	06/29/10 00:27/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	06/29/10 00:27/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	06/29/10 00:27/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	07/01/10 16:39/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	07/01/10 04:08/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	06/29/10 00:27/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	ND	mg/L		0.0003		1	E200.8		06/29/10 00:27/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8		06/29/10 00:27/eli-c
Zinc	ND	mg/L		0.01		1	E200.8		06/29/10 00:27/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003		1	E200.8		07/11/10 07:36/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001		1	A3114 B		07/01/10 14:55/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B		07/02/10 07:18/eli-ca
RADIONUCLIDES - DISSOLVED									
Gross Alpha	6.2	pCi/L	U			1	E900.0		07/19/10 22:35/eli-ca
Gross Alpha precision (±)	4.7	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Alpha MDC	7.1	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta	13.4	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta precision (±)	2.7	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta MDC	4.2	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Lead 210	0.8	pCi/L	U			1	E909.0M		07/11/10 20:11/eli-c
Lead 210 precision (±)	1.4	pCi/L				1	E909.0M		07/11/10 20:11/eli-c
Lead 210 MDC	2.3	pCi/L				1	E909.0M		07/11/10 20:11/eli-c
Polonium 210	0.11	pCi/L	U			1	E912.0		07/06/10 09:18/eli-ca
Polonium 210 MDC	0.54	pCi/L				1	E912.0		07/06/10 09:18/eli-ca
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0		07/06/10 09:18/eli-ca
Radium 226	1.8	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Thorium 230	1.2	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Gross Gamma	500	pCi/L				1	E901.1		06/28/10 10:55/eli-c
Gross Gamma precision (±)	160	pCi/L				1	E901.1		06/28/10 10:55/eli-c
- See Case Narrative regarding Pb210 analysis.									
RADIONUCLIDES - SUSPENDED									
Lead 210	2.7	pCi/L	U			1	E909.0M		07/07/10 08:46/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M		07/07/10 08:46/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M		07/07/10 08:46/eli-c
Polonium 210	-0.036	pCi/L	U			1	E912.0		07/08/10 09:12/eli-ca
Polonium 210 precision (±)	0.24	pCi/L				1	E912.0		07/08/10 09:12/eli-ca

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

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

## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Polonium 210 MDC	0.64	pCi/L				1	E912.0	07/08/10 09:12/eli-ca
Radium 226	-0.3	pCi/L	U			1	E903.0	07/12/10 22:14/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	07/12/10 22:14/eli-c
Radium 226 MDC	0.4	pCi/L				1	E903.0	07/12/10 22:14/eli-c
Thorium 230	-0.4	pCi/L	U			1	E907.0	07/07/10 11:11/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0	07/07/10 11:11/eli-c
- See Case Narrative regarding Pb210 analysis.								
- See Case Narrative regarding Ra226 analysis.								
RADIONUCLIDES - TOTAL								
Radon 222	243	pCi/L		100		1	D5072-92	06/25/10 00:00/kl
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	07/02/10 01:52/eli-c
Arsenic	0.004	mg/L		0.001		1	E200.8	07/02/10 01:52/eli-c
Barium	ND	mg/L		0.1		2	E200.7	07/01/10 23:22/eli-c
Beryllium	ND	mg/L		0.001		2	E200.7	07/01/10 23:22/eli-c
Boron	0.1	mg/L		0.1		2	E200.7	07/01/10 23:22/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	07/01/10 23:22/eli-c
Chromium	ND	mg/L		0.05		2	E200.7	07/01/10 23:22/eli-c
Copper	ND	mg/L		0.01		2	E200.7	07/01/10 23:22/eli-c
Iron	0.31	mg/L		0.03		2	E200.7	07/01/10 23:22/eli-c
Lead	ND	mg/L		0.001		1	E200.8	07/02/10 01:52/eli-c
Manganese	0.05	mg/L		0.01		2	E200.7	07/01/10 23:22/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	06/28/10 11:41/eli-b
Molybdenum	ND	mg/L		0.1		2	E200.7	07/01/10 23:22/eli-c
Nickel	ND	mg/L		0.05		2	E200.7	07/01/10 23:22/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	07/02/10 01:52/eli-c
Silver	ND	mg/L		0.005		2	E200.7	07/01/10 23:22/eli-c
Strontium	2.8	mg/L		0.1		2	E200.7	07/01/10 23:22/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	07/02/10 01:52/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	07/02/10 01:52/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	07/02/10 01:52/eli-c
DATA QUALITY								
A/C Balance (± 5)	1.50	%				1	A1030 E	08/19/10 00:00/jmh
Anions	14.2	meq/L				1	A1030 E	08/19/10 00:00/jmh
Cations	14.6	meq/L				1	A1030 E	08/19/10 00:00/jmh
Solids, Total Dissolved Calculated	944	mg/L				1	A1030 E	08/19/10 00:00/jmh
TDS Balance (0.80 - 1.20)	0.960					1	A1030 E	08/19/10 00:00/jmh

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	210	mg/L		5		1	A2320 B	07/01/10 11:19/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	07/01/10 11:19/mb
Bicarbonate as HCO <sub>3</sub>	256	mg/L		5		1	A2320 B	07/01/10 11:19/mb
Calcium	165	mg/L	D	1		5	E200.7	07/01/10 15:16/eli-c
Chloride	9	mg/L		1		1	E300.0	06/24/10 13:42/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	06/24/10 13:42/jmh
Magnesium	47.4	mg/L		0.5		5	E200.7	07/01/10 15:16/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	07/02/10 16:25/jmh
Nitrogen, Nitrate as N	0.2	mg/L		0.1		1	E300.0	06/24/10 13:42/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	06/24/10 13:42/jmh
Potassium	11.8	mg/L		0.5		5	E200.7	07/01/10 15:16/eli-c
Sodium	130	mg/L	D	1		5	E200.7	07/01/10 15:16/eli-c
Sulfate	640	mg/L	D	20		20	E300.0	06/24/10 13:25/jmh
Silica	7.6	mg/L		0.2		1	E200.8	06/29/10 00:33/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1520	umhos/cm		5.0		1	A2510 B	07/01/10 13:02/tb
Oxidation-Reduction Potential	340	mV				1	A2580 B	06/29/10 16:30/jmh
pH	7.50	s.u.		0.01		1	A4500-H B	06/28/10 13:15/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	08/12/10 16:22/ADM
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	D	10		1	A2540 C	06/28/10 12:47/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	07/01/10 04:15/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	06/29/10 00:33/eli-c
Barium	ND	mg/L		0.1		1	E200.8	06/29/10 00:33/eli-c
Boron	ND	mg/L		0.1		5	E200.7	07/01/10 15:16/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	06/29/10 00:33/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	06/29/10 00:33/eli-c
Copper	ND	mg/L		0.01		1	E200.8	06/29/10 00:33/eli-c
Iron	ND	mg/L		0.03		1	E200.8	06/29/10 00:33/eli-c
Lead	ND	mg/L		0.001		1	E200.8	06/29/10 00:33/eli-c
Manganese	0.56	mg/L		0.01		1	E200.8	06/29/10 00:33/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	06/29/10 00:33/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	06/29/10 00:33/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	06/29/10 00:33/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	07/01/10 16:45/eli-ca
Silver	ND	mg/L		0.005		1	E200.8	07/01/10 04:15/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	06/29/10 00:33/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	0.0087	mg/L		0.0003		1	E200.8		06/29/10 00:33/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8		06/29/10 00:33/eli-c
Zinc	ND	mg/L		0.01		1	E200.8		06/29/10 00:33/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003		1	E200.8		07/11/10 07:40/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001		1	A3114 B		07/01/10 15:02/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B		07/02/10 07:18/eli-ca
RADIONUCLIDES - DISSOLVED									
Gross Alpha	34.0	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Alpha precision (±)	7.2	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Alpha MDC	8.8	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta	19.6	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta precision (±)	3.3	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Gross Beta MDC	5.0	pCi/L				1	E900.0		07/19/10 22:35/eli-ca
Lead 210	0.7	pCi/L	U			1	E909.0M		07/11/10 22:13/eli-c
Lead 210 precision (±)	1.4	pCi/L				1	E909.0M		07/11/10 22:13/eli-c
Lead 210 MDC	2.3	pCi/L				1	E909.0M		07/11/10 22:13/eli-c
Polonium 210	-0.042	pCi/L	U			1	E912.0		07/06/10 09:18/eli-ca
Polonium 210 MDC	0.60	pCi/L				1	E912.0		07/06/10 09:18/eli-ca
Polonium 210 precision (±)	0.22	pCi/L				1	E912.0		07/06/10 09:18/eli-ca
Radium 226	2.5	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0		07/06/10 17:27/eli-ca
Thorium 230	0.8	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Thorium 230 precision (±)	0.3	pCi/L				1	E907.0		07/01/10 13:14/eli-c
Gross Gamma	1300	pCi/L				1	E901.1		06/28/10 10:55/eli-c
Gross Gamma precision (±)	310	pCi/L				1	E901.1		06/28/10 10:55/eli-c
- See Case Narrative regarding Pb210 analysis.									
RADIONUCLIDES - SUSPENDED									
Lead 210	0.05	pCi/L	U			1	E909.0M		07/07/10 08:46/eli-c
Lead 210 precision (±)	3.4	pCi/L				1	E909.0M		07/07/10 08:46/eli-c
Lead 210 MDC	5.7	pCi/L				1	E909.0M		07/07/10 08:46/eli-c
Polonium 210	-0.047	pCi/L	U			1	E912.0		07/08/10 09:12/eli-ca
Polonium 210 precision (±)	0.31	pCi/L				1	E912.0		07/08/10 09:12/eli-ca

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10060444-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 08/23/10  
**Collection Date:** 06/22/10  
**Date Received:** 06/23/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.85	pCi/L				1	E912.0	07/08/10 09:12/eli-ca
Radium 226	-0.2	pCi/L	U			1	E903.0	07/12/10 22:14/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	07/12/10 22:14/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	07/12/10 22:14/eli-c
Thorium 230	-0.2	pCi/L	U			1	E907.0	07/07/10 11:12/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	07/07/10 11:12/eli-c
- See Case Narrative regarding Ra226 analysis. - See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	338	pCi/L		100		1	D5072-92	06/25/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	07/12/10 18:14/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	07/12/10 18:14/eli-c
Barium	ND	mg/L		0.1		2	E200.7	07/02/10 19:00/eli-c
Beryllium	ND	mg/L		0.001		2	E200.7	07/02/10 19:00/eli-c
Boron	ND	mg/L		0.1		2	E200.7	07/02/10 19:00/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	07/02/10 19:00/eli-c
Chromium	ND	mg/L		0.05		2	E200.7	07/02/10 19:00/eli-c
Copper	ND	mg/L		0.01		2	E200.7	07/02/10 19:00/eli-c
Iron	ND	mg/L		0.03		2	E200.7	07/02/10 19:00/eli-c
Lead	ND	mg/L		0.001		1	E200.8	07/12/10 18:14/eli-c
Manganese	0.57	mg/L		0.01		2	E200.7	07/02/10 19:00/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	06/28/10 11:42/eli-b
Molybdenum	ND	mg/L		0.1		2	E200.7	07/02/10 19:00/eli-c
Nickel	ND	mg/L		0.05		2	E200.7	07/02/10 19:00/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	07/12/10 18:14/eli-c
Silver	ND	mg/L		0.005		2	E200.7	07/02/10 19:00/eli-c
Strontium	2.4	mg/L		0.1		2	E200.7	07/02/10 19:00/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	07/12/10 18:14/eli-c
Uranium	0.0081	mg/L		0.0003		1	E200.8	07/12/10 18:14/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	07/12/10 18:14/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.900	%				1	A1030 E	08/19/10 00:00/jmh
Anions	17.8	meq/L				1	A1030 E	08/19/10 00:00/jmh
Cations	18.2	meq/L				1	A1030 E	08/19/10 00:00/jmh
Solids, Total Dissolved Calculated	1150	mg/L				1	A1030 E	08/19/10 00:00/jmh
TDS Balance (0.80 - 1.20)	0.960					1	A1030 E	08/19/10 00:00/jmh

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

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B								Batch: 100701A-ALK-SEL-W		
Sample ID: LCS1_100701A		Laboratory Control Sample				Run: PH_COND1-R_100701A		07/01/10 10:06		
Alkalinity, Total as CaCO3		972	mg/L	5.0	97	90	110			
Sample ID: MBLK1_100701A		Method Blank				Run: PH_COND1-R_100701A		07/01/10 10:07		
Alkalinity, Total as CaCO3		ND	mg/L	3						
Sample ID: R10060398-009AMS		Sample Matrix Spike				Run: PH_COND1-R_100701A		07/01/10 10:58		
Alkalinity, Total as CaCO3		290	mg/L	5.0	89	80	120			
Sample ID: R10060398-009AMSD		Sample Matrix Spike Duplicate				Run: PH_COND1-R_100701A		07/01/10 11:00		
Alkalinity, Total as CaCO3		296	mg/L	5.0	94	80	120	2	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B Batch: 100701_1_COND-PROBE-W										
Sample ID: LCS1-1_100701		Laboratory Control Sample					Run: PH_COND2-R_100701B			07/01/10 12:43
Conductivity @ 25 C		151	umhos/cm	5.0	101	90	110			
Sample ID: LCS2-1_100701		Laboratory Control Sample					Run: PH_COND2-R_100701B			07/01/10 12:45
Conductivity @ 25 C		5010	umhos/cm	5.0	100	90	110			
Sample ID: LCS_COND-1_100701		Laboratory Control Sample					Run: PH_COND2-R_100701B			07/01/10 12:47
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_100701		Method Blank					Run: PH_COND2-R_100701B			07/01/10 12:49
Conductivity @ 25 C		8	umhos/cm	5						
Sample ID: R10060424-001JDUP		Sample Duplicate					Run: PH_COND2-R_100701B			07/01/10 12:53
Conductivity @ 25 C		101	umhos/cm	5.0				0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: 100628A-SLDS-TDS-W		
Sample ID: LCS1_100628A	Laboratory Control Sample					Run: BAL-4-R_100628A			06/28/10 12:31	
Solids, Total Dissolved TDS @ 180 C	190	mg/L		10	95	90	110			
Sample ID: MBLK1_100628A	Method Blank					Run: BAL-4-R_100628A			06/28/10 12:32	
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		5						
Sample ID: R10060444-001ADUP	Sample Duplicate					Run: BAL-4-R_100628A			06/28/10 12:45	
Solids, Total Dissolved TDS @ 180 C	910	mg/L		10					5	
Sample ID: R10060444-002ADUP	Sample Duplicate					Run: BAL-4-R_100628A			06/28/10 12:48	
Solids, Total Dissolved TDS @ 180 C	1100	mg/L		10				0.9	5	
Sample ID: R10060477-001CMS	Sample Matrix Spike					Run: BAL-4-R_100628A			06/28/10 12:51	
Solids, Total Dissolved TDS @ 180 C	2300	mg/L		10	105	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2580 B</b>								Batch: 100629-ORP-ISE-W		
<b>Sample ID: LCS</b>		Laboratory Control Sample				Run: PH_COND1-R_100629B		06/29/10 16:30		
Oxidation-Reduction Potential		490	mV		103	95	105			
<b>Sample ID: R10050321-011A</b>		Sample Duplicate				Run: PH_COND1-R_100629B		06/29/10 16:30		
Oxidation-Reduction Potential		510	mV					0.9	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Analytical Run: SUB-C134466
<b>Sample ID: As/Se 1.0mg/L-Q 0622</b>		Initial Calibration Verification Standard								07/01/10 14:33
Selenium-IV		0.052	mg/L	0.0010	104	90	110			
<b>Method: A3114 B</b>										Batch: C_26567
<b>Sample ID: MB-26567</b>		Method Blank								07/01/10 14:40
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LCS-26567</b>		Laboratory Control Sample								07/01/10 14:42
Selenium-IV		0.051	mg/L	0.0010	102	90	110			
<b>Sample ID: R10060444-001E</b>		Sample Matrix Spike								07/01/10 14:57
Selenium-IV		0.049	mg/L	0.0010	98	85	115			
<b>Sample ID: R10060444-001E</b>		Sample Matrix Spike Duplicate								07/01/10 14:59
Selenium-IV		0.049	mg/L	0.0010	98	85	115	0	10	
<b>Method: A3114 B</b>										Batch: C_26567
<b>Sample ID: MB-26567</b>		Method Blank								07/01/10 16:25
Selenium		ND	mg/L	0.0002						
<b>Sample ID: LCS-26567</b>		Laboratory Control Sample								07/01/10 16:27
Selenium		0.051	mg/L	0.0010	103	90	110			
<b>Sample ID: R10060444-001E</b>		Sample Matrix Spike								07/01/10 16:41
Selenium		0.053	mg/L	0.0010	105	85	115			
<b>Sample ID: R10060444-001E</b>		Sample Matrix Spike Duplicate								07/01/10 16:43
Selenium		0.052	mg/L	0.0010	103	85	115	2.2	15	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B									Batch: 100628_1_PH-W	
<b>Sample ID:</b> LCS_pH-1_100628		Laboratory Control Sample				Run: PH_COND2-R_100628A				06/28/10 13:03
pH		7.42	s.u.	0.010	100	98.55	101.45			
<b>Sample ID:</b> R10060444-001ADUP		Sample Duplicate				Run: PH_COND2-R_100628A				06/28/10 13:13
pH		7.82	s.u.	0.010				0.5	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b> Batch: A2010-07-02_2_NH3_01										
<b>Sample ID: MBLK-2</b>	Method Blank									
Nitrogen, Ammonia as N		ND	mg/L	0.02						07/02/10 12:29
Run: TECHAA2-R_100702A										
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank									
Nitrogen, Ammonia as N		0.27	mg/L	0.10	107	90	110			07/02/10 12:31
Run: TECHAA2-R_100702A										
<b>Sample ID: R10060444-001BMS</b>	Sample Matrix Spike									
Nitrogen, Ammonia as N		0.35	mg/L	0.10	104	80	120			07/02/10 16:23
Run: TECHAA2-R_100702A										
<b>Sample ID: R10060444-001BMDS</b>	Sample Matrix Spike Duplicate									
Nitrogen, Ammonia as N		0.35	mg/L	0.10	102	80	120	0.9	10	07/02/10 16:24

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_26553
<b>Sample ID: MB-26553</b>	12	Method Blank					Run: SUB-C134477			07/01/10 23:14
Barium		ND	mg/L	0.002						
Beryllium		ND	mg/L	0.0001						
Boron		0.02	mg/L	0.008						
Cadmium		ND	mg/L	0.001						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.008						
Manganese		ND	mg/L	0.0008						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Silver		ND	mg/L	0.001						
Strontium		ND	mg/L	0.0002						
<b>Sample ID: LCS3-26553</b>	12	Laboratory Control Sample					Run: SUB-C134477			07/01/10 23:18
Barium		0.501	mg/L	0.10	100	85	115			
Beryllium		0.255	mg/L	0.010	102	85	115			
Boron		0.515	mg/L	0.10	98	85	115			
Cadmium		0.256	mg/L	0.010	102	85	115			
Chromium		0.502	mg/L	0.050	100	85	115			
Copper		0.504	mg/L	0.010	101	85	115			
Iron		2.51	mg/L	0.030	100	85	115			
Manganese		2.48	mg/L	0.010	99	85	115			
Molybdenum		0.499	mg/L	0.10	100	85	115			
Nickel		0.494	mg/L	0.050	99	85	115			
Silver		0.0493	mg/L	0.010	99	85	115			
Strontium		0.509	mg/L	0.10	102	85	115			
<b>Sample ID: C10061061-001CMS3</b>	12	Sample Matrix Spike					Run: SUB-C134477			07/01/10 23:38
Barium		0.645	mg/L	0.10	108	70	130			
Beryllium		0.268	mg/L	0.010	107	70	130			
Boron		0.748	mg/L	0.10	107	70	130			
Cadmium		0.274	mg/L	0.010	110	70	130			
Chromium		0.540	mg/L	0.050	108	70	130			
Copper		0.598	mg/L	0.010	107	70	130			
Iron		3.71	mg/L	0.030	108	70	130			
Manganese		2.69	mg/L	0.010	104	70	130			
Molybdenum		0.549	mg/L	0.10	105	70	130			
Nickel		0.537	mg/L	0.050	105	70	130			
Silver		0.0486	mg/L	0.010	97	70	130			
Strontium		1.18	mg/L	0.10	109	70	130			
<b>Sample ID: C10061061-001CMSD3</b>	12	Sample Matrix Spike Duplicate					Run: SUB-C134477			07/01/10 23:42
Barium		0.639	mg/L	0.10	107	70	130	0.9	20	
Beryllium		0.265	mg/L	0.010	106	70	130	1.3	20	
Boron		0.754	mg/L	0.10	108	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_26553
<b>Sample ID: C10061061-001CMSD3</b>	12	Sample Matrix Spike Duplicate		Run: SUB-C134477		07/01/10 23:42				
Cadmium		0.264	mg/L	0.010	106	70	130	3.7	20	
Chromium		0.533	mg/L	0.050	107	70	130	1.3	20	
Copper		0.571	mg/L	0.010	102	70	130	4.8	20	
Iron		3.62	mg/L	0.030	105	70	130	2.6	20	
Manganese		2.66	mg/L	0.010	103	70	130	1	20	
Molybdenum		0.549	mg/L	0.10	105	70	130	0	20	
Nickel		0.532	mg/L	0.050	104	70	130	0.9	20	
Silver		0.0506	mg/L	0.010	101	70	130	4	20	
Strontium		1.18	mg/L	0.10	107	70	130	0.5	20	
<b>Method: E200.7</b>										Batch: C_R134477
<b>Sample ID: MB-100701A</b>	5	Method Blank		Run: SUB-C134477		07/01/10 10:51				
Boron		0.02	mg/L	0.009						
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
<b>Sample ID: LFB-100701A</b>	5	Laboratory Fortified Blank		Run: SUB-C134477		07/01/10 10:55				
Boron		0.96	mg/L	0.10	94	85	115			
Calcium		49	mg/L	0.50	98	85	115			
Magnesium		49	mg/L	0.50	98	85	115			
Potassium		45	mg/L	0.50	89	85	115			
Sodium		47	mg/L	0.50	94	85	115			
<b>Sample ID: C10060982-005BMS2</b>	5	Sample Matrix Spike		Run: SUB-C134477		07/01/10 13:03				
Boron		1.92	mg/L	0.10	94	70	130			
Calcium		98.3	mg/L	1.0	94	70	130			
Magnesium		95.0	mg/L	1.0	93	70	130			
Potassium		98.4	mg/L	1.0	96	70	130			
Sodium		97.6	mg/L	1.0	95	70	130			
<b>Sample ID: C10060982-005BMSD2</b>	5	Sample Matrix Spike Duplicate		Run: SUB-C134477		07/01/10 13:07				
Boron		1.94	mg/L	0.10	95	70	130	1.3	20	
Calcium		99.1	mg/L	1.0	95	70	130	0.7	20	
Magnesium		96.9	mg/L	1.0	95	70	130	2	20	
Potassium		97.3	mg/L	1.0	95	70	130	1.1	20	
Sodium		98.6	mg/L	1.0	96	70	130	1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										Batch: C_R134533
<b>Sample ID:</b> C10060999-001DMS2 12 Sample Matrix Spike										Run: SUB-C134533 07/02/10 18:52
Barium		2.41	mg/L	0.10	98	70	130			
Beryllium		2.00	mg/L	0.010	98	70	130			
Boron		2.04	mg/L	0.10	99	70	130			
Cadmium		2.00	mg/L	0.010	98	70	130			
Chromium		2.00	mg/L	0.050	98	70	130			
Copper		2.04	mg/L	0.010	100	70	130			
Iron		2.04	mg/L	0.030	98	70	130			
Manganese		2.08	mg/L	0.010	97	70	130			
Molybdenum		1.99	mg/L	0.10	98	70	130			
Nickel		2.02	mg/L	0.050	99	70	130			
Silver		1.94	mg/L	0.010	95	70	130			
Strontium		3.19	mg/L	0.10	100	70	130			
<b>Sample ID:</b> C10060999-001DMSD2 12 Sample Matrix Spike Duplicate										Run: SUB-C134533 07/02/10 18:56
Barium		2.39	mg/L	0.10	97	70	130	0.9	20	
Beryllium		1.98	mg/L	0.010	97	70	130	0.7	20	
Boron		2.04	mg/L	0.10	99	70	130	0.2	20	
Cadmium		1.95	mg/L	0.010	96	70	130	2.4	20	
Chromium		1.95	mg/L	0.050	96	70	130	2.2	20	
Copper		1.99	mg/L	0.010	98	70	130	2.1	20	
Iron		1.99	mg/L	0.030	96	70	130	2.3	20	
Manganese		2.04	mg/L	0.010	95	70	130	1.7	20	
Molybdenum		1.98	mg/L	0.10	97	70	130	0.5	20	
Nickel		2.03	mg/L	0.050	99	70	130	0.5	20	
Silver		1.91	mg/L	0.010	93	70	130	1.6	20	
Strontium		3.16	mg/L	0.10	98	70	130	1.1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R134311A
<b>Sample ID: R10060444-002C</b>	16	Post Digestion Spike		Run: SUB-C134311				06/29/10 01:08		
Arsenic		0.0547	mg/L	0.0010	107	70	130			
Barium		0.0631	mg/L	0.0010	104	70	130			
Cadmium		0.0502	mg/L	0.010	100	70	130			
Chromium		0.0522	mg/L	0.050	104	70	130			
Copper		0.0504	mg/L	0.010	101	70	130			
Iron		1.28	mg/L	0.030	102	70	130			
Lead		0.0535	mg/L	0.050	107	70	130			
Manganese		0.603	mg/L	0.010		70	130			A
Mercury		0.00543	mg/L	0.0010	109	70	130			
Molybdenum		0.0534	mg/L	0.0010	105	70	130			
Nickel		0.0512	mg/L	0.050	101	70	130			
Silicon		4.30	mg/L	0.10		70	130			A
Thorium 232		0.0541	mg/L	0.0010	108	70	130			
Uranium		0.0608	mg/L	0.00030	104	70	130			
Vanadium		0.0536	mg/L	0.0010	106	70	130			
Zinc		0.0536	mg/L	0.010	100	70	130			
<b>Sample ID: R10060444-002C</b>	16	Post Digestion Spike Duplicate		Run: SUB-C134311				06/29/10 01:15		
Arsenic		0.0560	mg/L	0.0010	110	70	130	2.3	20	
Barium		0.0650	mg/L	0.0010	108	70	130	2.9	20	
Cadmium		0.0518	mg/L	0.010	104	70	130	3.2	20	
Chromium		0.0537	mg/L	0.050	107	70	130	2.8	20	
Copper		0.0516	mg/L	0.010	103	70	130	2.2	20	
Iron		1.29	mg/L	0.030	103	70	130	0.6	20	
Lead		0.0551	mg/L	0.050	110	70	130	2.9	20	
Manganese		0.612	mg/L	0.010		70	130	1.6	20	A
Mercury		0.00559	mg/L	0.0010	112	70	130	2.9	20	
Molybdenum		0.0566	mg/L	0.0010	112	70	130	5.7	20	
Nickel		0.0525	mg/L	0.050	104	70	130	2.5	20	
Silicon		4.32	mg/L	0.10		70	130	0.4	20	A
Thorium 232		0.0558	mg/L	0.0010	112	70	130	3.1	20	
Uranium		0.0627	mg/L	0.00030	108	70	130	3.1	20	
Vanadium		0.0551	mg/L	0.0010	109	70	130	2.8	20	
Zinc		0.0542	mg/L	0.010	101	70	130	1.1	20	
<b>Sample ID: LRB</b>	16	Method Blank		Run: SUB-C134311				06/28/10 11:52		
Silicon		0.03	mg/L	0.0005						
Arsenic		8E-05	mg/L	4E-05						
Barium		7E-05	mg/L	3E-05						
Cadmium		7E-05	mg/L	7E-05						
Chromium		7E-05	mg/L	5E-05						
Copper		ND	mg/L	6E-05						
Iron		0.002	mg/L	0.0001						
Lead		6E-05	mg/L	2E-05						
Manganese		ND	mg/L	2E-05						

### 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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Batch: C_R134311A		
Sample ID: LRB	16	Method Blank				Run: SUB-C134311			06/28/10 11:52	
Mercury		3E-05	mg/L	2E-05						
Molybdenum		0.0004	mg/L	8E-05						
Nickel		8E-05	mg/L	5E-05						
Thorium 232		5E-05	mg/L	3E-05						
Uranium		6E-05	mg/L	8E-06						
Vanadium		5E-05	mg/L	1E-05						
Zinc		0.006	mg/L	0.0001						
Sample ID: LFB	16	Laboratory Fortified Blank				Run: SUB-C134311			06/28/10 11:59	
Silicon		0.584	mg/L	0.0050	106	85	115			
Arsenic		0.0533	mg/L	0.0010	106	85	115			
Barium		0.0541	mg/L	0.0010	108	85	115			
Cadmium		0.0551	mg/L	0.0010	110	85	115			
Chromium		0.0530	mg/L	0.0010	106	85	115			
Copper		0.0537	mg/L	0.0010	107	85	115			
Iron		1.30	mg/L	0.012	104	85	115			
Lead		0.0536	mg/L	0.0010	107	85	115			
Manganese		0.0542	mg/L	0.0010	108	85	115			
Mercury		0.00538	mg/L	0.0010	107	85	115			
Molybdenum		0.0537	mg/L	0.0010	107	85	115			
Nickel		0.0534	mg/L	0.0010	107	85	115			
Thorium 232		0.0525	mg/L	0.0010	105	85	115			
Uranium		0.0518	mg/L	0.00030	103	85	115			
Vanadium		0.0524	mg/L	0.0010	105	85	115			
Zinc		0.0564	mg/L	0.0010	101	85	115			
Method: E200.8								Batch: C_R134408		
Sample ID: LRB	2	Method Blank				Run: SUB-C134408			06/30/10 11:16	
Aluminum		0.0003	mg/L	8E-05						
Silver		0.0003	mg/L	8E-05						
Sample ID: LFB	2	Laboratory Fortified Blank				Run: SUB-C134408			06/30/10 11:23	
Aluminum		0.0505	mg/L	0.0010	100	85	115			
Silver		0.0207	mg/L	0.0010	102	85	115			
Sample ID: C10061078-005BMS4	2	Post Digestion Spike				Run: SUB-C134408			07/01/10 05:24	
Aluminum		0.0563	mg/L	0.0010	90	70	130			
Silver		0.0191	mg/L	0.010	96	70	130			
Sample ID: C10061078-005BMSD4	2	Post Digestion Spike Duplicate				Run: SUB-C134408			07/01/10 05:30	
Aluminum		0.0543	mg/L	0.0010	86	70	130	3.7	20	
Silver		0.0187	mg/L	0.010	93	70	130	2.2	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_26553
<b>Sample ID: MB-26553</b>	7	Method Blank				Run: SUB-C134490				07/02/10 01:12
Antimony		0.0002	mg/L	0.0002						
Arsenic		0.0008	mg/L	0.0003						
Lead		0.0002	mg/L	5E-05						
Selenium		ND	mg/L	0.0007						
Thallium		ND	mg/L	5E-05						
Uranium		ND	mg/L	4E-05						
Zinc		0.003	mg/L	0.001						
<b>Sample ID: LCS3-26553</b>	7	Laboratory Control Sample				Run: SUB-C134490				07/02/10 01:19
Antimony		0.557	mg/L	0.050	111	85	115			
Arsenic		0.500	mg/L	0.0010	100	85	115			
Lead		0.515	mg/L	0.050	103	85	115			
Selenium		0.508	mg/L	0.0010	102	85	115			
Thallium		0.495	mg/L	0.10	99	85	115			
Uranium		0.550	mg/L	0.00030	110	85	115			
Zinc		0.474	mg/L	0.010	94	85	115			
<b>Sample ID: C10061061-001CMS3</b>	7	Sample Matrix Spike				Run: SUB-C134490				07/02/10 02:39
Antimony		0.589	mg/L	0.050	117	70	130			
Arsenic		0.519	mg/L	0.0010	103	70	130			
Lead		0.558	mg/L	0.050	110	70	130			
Selenium		0.306	mg/L	0.0010	61	70	130			S
Thallium		0.525	mg/L	0.10	105	70	130			
Uranium		0.601	mg/L	0.00030	119	70	130			
Zinc		0.590	mg/L	0.010	91	70	130			
<b>Sample ID: C10061061-001CMSD3</b>	7	Sample Matrix Spike Duplicate				Run: SUB-C134490				07/02/10 02:46
Antimony		0.583	mg/L	0.050	116	70	130	1.1	20	
Arsenic		0.518	mg/L	0.0010	103	70	130	0.1	20	
Lead		0.552	mg/L	0.050	109	70	130	1	20	
Selenium		0.301	mg/L	0.0010	60	70	130	1.9	20	S
Thallium		0.517	mg/L	0.10	103	70	130	1.5	20	
Uranium		0.590	mg/L	0.00030	117	70	130	1.8	20	
Zinc		0.582	mg/L	0.010	89	70	130	1.3	20	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.8										Batch: C_26535
<b>Sample ID:</b> MB-26535		Method Blank					Run: SUB-C134738			07/11/10 07:07
Uranium		0.0003	mg/L	6E-05						
<b>Sample ID:</b> LCS2-26535		Laboratory Control Sample					Run: SUB-C134738			07/11/10 07:11
Uranium		0.110	mg/L	0.00030	110	85	115			
<b>Sample ID:</b> R10060444-002I		Post Digestion Spike					Run: SUB-C134738			07/11/10 07:44
Uranium		0.0138	mg/L	0.00030	111	70	130			
<b>Sample ID:</b> R10060444-002I		Post Digestion Spike Duplicate					Run: SUB-C134738			07/11/10 07:49
Uranium		0.0138	mg/L	0.00030	110	70	130	0.5	20	

### Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R134782
<b>Sample ID: LRB</b>	7	Method Blank				Run: SUB-C134782				07/12/10 17:40
Antimony		ND	mg/L	7E-05						
Arsenic		ND	mg/L	6E-05						
Lead		ND	mg/L	3E-05						
Selenium		ND	mg/L	0.0002						
Thallium		ND	mg/L	1E-05						
Uranium		ND	mg/L	1E-05						
Zinc		0.0005	mg/L	0.0003						
<b>Sample ID: LFB</b>	7	Laboratory Fortified Blank				Run: SUB-C134782				07/12/10 17:47
Antimony		0.0502	mg/L	0.0010	100	85	115			
Arsenic		0.0513	mg/L	0.0010	103	85	115			
Lead		0.0505	mg/L	0.0010	101	85	115			
Selenium		0.0510	mg/L	0.0010	102	85	115			
Thallium		0.0491	mg/L	0.0010	98	85	115			
Uranium		0.0489	mg/L	0.00030	98	85	115			
Zinc		0.0574	mg/L	0.0010	114	85	115			
<b>Sample ID: C10070031-001BMS4</b>	7	Post Digestion Spike				Run: SUB-C134782				07/12/10 19:15
Antimony		0.0554	mg/L	0.0010	111	70	130			
Arsenic		0.0528	mg/L	0.0010	102	70	130			
Lead		0.0510	mg/L	0.0010	102	70	130			
Selenium		0.0532	mg/L	0.0010	101	70	130			
Thallium		0.0500	mg/L	0.00040	100	70	130			
Uranium		0.0520	mg/L	0.00030	100	70	130			
Zinc		0.0542	mg/L	0.010	105	70	130			
<b>Sample ID: C10070031-001BMSD4</b>	7	Post Digestion Spike Duplicate				Run: SUB-C134782				07/12/10 19:22
Antimony		0.0556	mg/L	0.0010	111	70	130	0.4	20	
Arsenic		0.0540	mg/L	0.0010	104	70	130	2.2	20	
Lead		0.0512	mg/L	0.0010	102	70	130	0.5	20	
Selenium		0.0534	mg/L	0.0010	102	70	130	0.3	20	
Thallium		0.0504	mg/L	0.00040	101	70	130	0.9	20	
Uranium		0.0525	mg/L	0.00030	102	70	130	1.1	20	
Zinc		0.0541	mg/L	0.010	104	70	130	0.1	20	

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>										Analytical Run: SUB-B149826
<b>Sample ID: QCS</b>										06/28/10 11:23
Mercury		0.0019	mg/L	0.0010	93	90	110			
<b>Method: E245.1</b>										Batch: B_47296
<b>Sample ID: MB-47296</b>										06/28/10 11:28
Mercury		ND	mg/L	5E-05						
<b>Sample ID: LCS-47296</b>										06/28/10 11:29
Mercury		0.0019	mg/L	0.0010	95	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E300.0								Analytical Run: DIONEX_100622A		
<b>Sample ID:</b> CCV062210-104		5 Continuing Calibration Verification Standard								06/24/10 11:03
Chloride		70.9	mg/L	1.00	95	90	110			
Fluoride		7.19	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		6.98	mg/L	0.10	93	90	110			
Nitrogen, Nitrite as N		7.10	mg/L	0.10	95	90	110			
Sulfate		69.7	mg/L	1.0	93	90	110			
<b>Method:</b> E300.0								Batch: R46582		
<b>Sample ID:</b> LFB062210-10		5 Laboratory Fortified Blank								06/22/10 20:31
				Run: DIONEX_100622A						
Chloride		37.5	mg/L	1.00	94	90	110			
Fluoride		3.91	mg/L	0.10	98	90	110			
Nitrogen, Nitrate as N		3.85	mg/L	0.10	96	90	110			
Nitrogen, Nitrite as N		3.85	mg/L	0.10	96	90	110			
Sulfate		37.0	mg/L	1.0	93	90	110			
<b>Sample ID:</b> R10060452-001BMS		5 Sample Matrix Spike								06/24/10 12:14
				Run: DIONEX_100622A						
Chloride		98.5	mg/L	1.00	106	90	110			
Fluoride		5.51	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		7.87	mg/L	0.10	191	90	110			S
Nitrogen, Nitrite as N		ND	mg/L	0.10		90	110			S
Sulfate		236	mg/L	1.0		90	110			A
<b>Sample ID:</b> R10060452-001BMSD		5 Sample Matrix Spike Duplicate								06/24/10 12:32
				Run: DIONEX_100622A						
Chloride		98.1	mg/L	1.00	105	90	110	0.4	10	
Fluoride		5.51	mg/L	0.10	99	90	110	0	10	
Nitrogen, Nitrate as N		7.82	mg/L	0.10	190	90	110	0.6	10	S
Nitrogen, Nitrite as N		ND	mg/L	0.10		90	110		10	S
Sulfate		236	mg/L	1.0		90	110	0.3	10	A

### Qualifiers:

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ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										Batch: C_GrAB-0931
<b>Sample ID: MB-GrAB-0931</b>	6	Method Blank				Run: SUB-C135115				07/19/10 22:35
Gross Alpha		-1	pCi/L							U
Gross Alpha precision (±)		0.9	pCi/L							
Gross Alpha MDC		1	pCi/L							
Gross Beta		-1	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		2	pCi/L							
<b>Sample ID: Th230-GrAB-0931</b>		Laboratory Control Sample				Run: SUB-C135115				07/19/10 22:35
Gross Alpha		120	pCi/L	116		70	130			
<b>Sample ID: Cs137-GrAB-0931</b>		Laboratory Control Sample				Run: SUB-C135115				07/19/10 22:35
Gross Beta		83	pCi/L	94		70	130			
<b>Sample ID: C10061049-001DDUP</b>	6	Sample Duplicate				Run: SUB-C135115				07/19/10 22:35
Gross Alpha		152	pCi/L					12	20.6	
Gross Alpha precision (±)		7.81	pCi/L							
Gross Alpha MDC		4.18	pCi/L							
Gross Beta		51.4	pCi/L					2.6	20.5	
Gross Beta precision (±)		2.67	pCi/L							
Gross Beta MDC		3.15	pCi/L							
<b>Sample ID: C10070025-001EMS</b>		Sample Matrix Spike				Run: SUB-C135115				07/21/10 04:16
Gross Alpha		420	pCi/L	83		70	130			
<b>Sample ID: C10070025-001EMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C135115				07/21/10 04:16
Gross Alpha		460	pCi/L	119		70	130	8.5	15.3	
<b>Sample ID: C10070025-001EMS</b>		Sample Matrix Spike				Run: SUB-C135115				07/21/10 04:16
Gross Beta		190	pCi/L	100		70	130			
<b>Sample ID: C10070025-001EMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C135115				07/21/10 04:16
Gross Beta		180	pCi/L	95		70	130	2.8	14	

### Qualifiers:

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U - Not detected at minimum detectable concentration





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R134585
<b>Sample ID: LCS-R134585</b>	4	Laboratory Control Sample				Run: SUB-C134585				06/28/10 10:55
Americium 241		640	pCi/L	20	73	70	130			
Barium 133		550	pCi/L	20	102	70	130			
Cesium 137		860	pCi/L	20	94	70	130			
Potassium 40		2800	pCi/L	20	82	70	130			
<b>Sample ID: MB-R134585</b>	5	Method Blank				Run: SUB-C134585				06/28/10 10:55
Bismuth 214		ND	pCi/L							U
Cesium 137		ND	pCi/L							U
Lead 214		ND	pCi/L							U
Potassium 40		ND	pCi/L							U
Gross Gamma		ND	pCi/L							U
<b>Sample ID: C10061076-001ADUP</b>	3	Sample Duplicate				Run: SUB-C134585				06/28/10 10:55
Cesium 137		ND	pCi/L	20					30	U
Potassium 40		ND	pCi/L	20					30	U
Gross Gamma		ND	pCi/L	20					30	U

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E903.0								Batch: C_RA226-4620			
Sample ID: C10060993-002DMS	Sample Matrix Spike			Run: SUB-C134637			07/06/10 15:51				
Radium 226	54	pCi/L		81	70	130					
Sample ID: C10060993-002DMSD	Sample Matrix Spike Duplicate			Run: SUB-C134637			07/06/10 15:51				
Radium 226	57	pCi/L		99	70	130	5.2	17.6			
Sample ID: MB-RA226-4620	3	Method Blank			Run: SUB-C134637			07/06/10 17:27			
Radium 226		-0.10	pCi/L	U							
Radium 226 precision (±)		0.07	pCi/L								
Radium 226 MDC		0.2	pCi/L								
Sample ID: LCS-RA226-4620	Laboratory Control Sample			Run: SUB-C134637			07/06/10 17:27				
Radium 226	9.7	pCi/L		123	70	130					
Method: E903.0								Batch: C_R134801			
Sample ID: C10060905-001FMS	Sample Matrix Spike			Run: SUB-C134801			07/12/10 15:23				
Radium 226	19	pCi/L		100	70	130					
Sample ID: C10060905-001FMSD	Sample Matrix Spike Duplicate			Run: SUB-C134801			07/12/10 15:23				
Radium 226	16	pCi/L		90	70	130	20	24			
Sample ID: LCS-26518	Laboratory Control Sample			Run: SUB-C134801			07/12/10 22:14				
Radium 226	13	pCi/L		88	70	130					
Sample ID: MB-26518	3	Method Blank			Run: SUB-C134801			07/12/10 22:14			
Radium 226		-0.2	pCi/L	U							
Radium 226 precision (±)		0.1	pCi/L								
Radium 226 MDC		0.3	pCi/L								

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E907.0								Batch: C_RA-TH-ISO-1197		
Sample ID: LCS-RA-TH-ISO-1197	Laboratory Control Sample				Run: SUB-C134520			07/01/10 08:45		
Thorium 230		4.7	pCi/L		88	70	130			
Sample ID: C10061072-002CMS	Sample Matrix Spike				Run: SUB-C134520			07/01/10 13:14		
Thorium 230		9.0	pCi/L		67	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS, MSD, and all tracer recoveries are acceptable the batch is approved.										
Sample ID: C10061072-002CMSD	Sample Matrix Spike Duplicate				Run: SUB-C134520			07/01/10 13:14		
Thorium 230		13	pCi/L		101	70	130	38	41.1	
Sample ID: MB-RA-TH-ISO-1197	3	Method Blank			Run: SUB-C134520			07/02/10 08:32		
Thorium 230		0.02	pCi/L							U
Thorium 230 MDC		0.2	pCi/L							
Thorium 230 precision (±)		0.07	pCi/L							
Method: E907.0								Batch: C_26535		
Sample ID: R10060444-001I	Sample Matrix Spike				Run: SUB-C134650			07/07/10 11:11		
Thorium 230		9.1	pCi/L		79	70	130			
Sample ID: R10060444-001I	Sample Matrix Spike Duplicate				Run: SUB-C134650			07/07/10 11:12		
Thorium 230		11	pCi/L		94	70	130	17	54.2	
Sample ID: MB-26535	3	Method Blank			Run: SUB-C134650			07/07/10 11:12		
Thorium 230		-0.1	pCi/L							U
Thorium 230 MDC		0.4	pCi/L							
Thorium 230 precision (±)		0.2	pCi/L							
Sample ID: LCS1-26535	Laboratory Control Sample				Run: SUB-C134650			07/07/10 11:12		
Thorium 230		5.4	pCi/L		114	70	130			

### Qualifiers:

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MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>										Batch: C_PB-210-0729
<b>Sample ID: R10060444-002I</b>		Sample Matrix Spike				Run: SUB-C134719				07/07/10 08:46
Lead 210		210	pCi/L	82		70	130			
<b>Sample ID: R10060444-002I</b>		Sample Matrix Spike Duplicate				Run: SUB-C134719				07/07/10 08:46
Lead 210		210	pCi/L	83		70	130	0.3	18.3	
<b>Sample ID: MB-26518</b>	3	Method Blank				Run: SUB-C134719				07/07/10 08:46
Lead 210		-1	pCi/L							U
Lead 210 precision ( $\pm$ )		10	pCi/L							
Lead 210 MDC		20	pCi/L							
<b>Sample ID: LCS-26518</b>		Laboratory Control Sample				Run: SUB-C134719				07/07/10 08:46
Lead 210		350	pCi/L	71		70	130			
<b>Sample ID: LCS1-26535</b>		Laboratory Control Sample				Run: SUB-C134719				07/07/10 08:46
Lead 210		410	pCi/L	76		70	130			
<b>Method: E909.0M</b>										Batch: C_PB-210-0728
<b>Sample ID: C09120066-001AMS</b>		Sample Matrix Spike				Run: SUB-C134817				07/12/10 10:22
Lead 210		210	pCi/L	92		70	130			
<b>Sample ID: C09120066-001AMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C134817				07/12/10 12:24
Lead 210		190	pCi/L	81		70	130	13	17.3	
<b>Sample ID: MB-PB-210-0728</b>	3	Method Blank				Run: SUB-C134817				07/12/10 14:25
Lead 210		2	pCi/L							U
Lead 210 precision ( $\pm$ )		3	pCi/L							
Lead 210 MDC		5	pCi/L							
<b>Sample ID: LCS-PB-210-0728</b>		Laboratory Control Sample				Run: SUB-C134817				07/12/10 16:27
Lead 210		110	pCi/L	94		70	130			
<b>Sample ID: LCS-PB-210-0728</b>		Laboratory Control Sample				Run: SUB-C134817				07/12/10 18:28
Lead 210		98	pCi/L	87		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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 08/23/10  
**Work Order:** R10060444

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0306
<b>Sample ID: R10060444-002K</b>		Sample Matrix Spike				Run: SUB-C134590				07/06/10 09:18
Polonium 210	31		pCi/L	95		70	130			
<b>Sample ID: R10060444-002K</b>		Sample Matrix Spike Duplicate				Run: SUB-C134590				07/06/10 09:18
Polonium 210	31		pCi/L	96		70	130	0.5	57.1	
<b>Sample ID: MB-PO210-0306</b>	3	Method Blank				Run: SUB-C134590				07/06/10 09:18
Polonium 210		-0.01	pCi/L							U
Polonium 210 MDC		0.6	pCi/L							
Polonium 210 precision (±)		0.2	pCi/L							
<b>Sample ID: LCS-PO210-0306</b>		Laboratory Control Sample				Run: SUB-C134590				07/06/10 09:18
Polonium 210	11		pCi/L	70		70	130			
<b>Method: E912.0</b>										Batch: C_PO210-0307
<b>Sample ID: MB-26518</b>	3	Method Blank				Run: SUB-C134649				07/08/10 09:12
Polonium 210		0.2	pCi/L							U
Polonium 210 precision (±)		1	pCi/L							
Polonium 210 MDC		3	pCi/L							
<b>Sample ID: LCS-26518</b>		Laboratory Control Sample				Run: SUB-C134649				07/08/10 09:12
Polonium 210	52		pCi/L	66		70	130			US
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, MSD, second LCS, and all tracer recoveries are acceptable the batch is approved.										
<b>Sample ID: C10060928-003GMS</b>		Sample Matrix Spike				Run: SUB-C134649				07/08/10 09:12
Polonium 210	12		pCi/L	90		70	130			
<b>Sample ID: C10060928-003GMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C134649				07/08/10 09:12
Polonium 210	16		pCi/L	117		70	130	25	60.5	

### 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.



# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT. Provide as much information as possible.

Company Name: <i>Scott Env.</i>		Project Name, PWS, Permit, Etc. <i>Powdered Tea, Scott Env.</i>		Sample Origin State: _____ Yes <input type="checkbox"/> No <input type="checkbox"/>	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <i>Powdered Tea, Scott Env.</i>		Contact Name: <i>Allen East</i>		Phone/Fax: <i>Powdered, Doug Burdock</i>	Sampler: (Please Print)
Invoice Address: <i>Powdered, Inc.</i>		Invoice Contact & Phone:		Purchase Order:	Quote/Bottle Order:
Special Report/Formats – ELL must be notified prior to sample submittal for the following:  <input type="checkbox"/> DW <input type="checkbox"/> A2LA <input type="checkbox"/> GSA <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> Format: <input type="checkbox"/> State: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: <input type="checkbox"/> NELAC		Number of Containers Sample Type: AWS V B O Air Water Soils/Solids Vegetation Bioassay Other		ANALYSIS REQUESTED  <i>As per sample</i>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX	SEE ATTACHED Normal Turnaround (TAT)
1 <i>08-09-21-01</i>		<i>6-22-10</i>		<i>water</i>	R U S H Contact ELL prior to RUSH sample submittal for charges and scheduling – See instruction Page Comments: Shipped by: Cooler ID#: Recept Temp <i>4.4</i> °C On Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal Y N Bottle/Coolers B C Intact Y N Signature Y N Match
2 <i>08-09-21-02</i>		<i>6-22-10</i>		<i>water</i>	
3					
4					
5					
6					
7					
8					
9					
10					
Custody Record Must be Signed		Relinquished by (print): <i>Allen East</i>	Date/Time: <i>6-22-10 11:35</i>	Signature: <i>Allen East</i>	Received by (print): <i>Shane Burdock</i>
Sample Disposal: Return to Client: Lab Disposal:		Received by (print): <i>Shane Burdock</i>			

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



## ANALYTICAL SUMMARY REPORT

October 19, 2010

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10070459

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 3 samples for Powertech USA Inc on 7/27/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10070459-001	DB-09-21-01	07/27/10 0:00	07/27/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10070459-002	DB-09-21-02	07/27/10 0:00	07/27/10	Aqueous	Same As Above
R10070459-003	DB-09-21-02-Dup	07/27/10 0:00	07/27/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by

Linda Larson

Date: 2010.10.19 14:44:53 -06:00



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Analytical Excellence Since 1952

Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515  
Gilllette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-688-2218

**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10070459

**Revised Date:** 10/19/10

**Report Date:** 09/25/10

## CASE NARRATIVE

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

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Radon analysis was performed by the SDSHL  
Comments imported for SUBBED Workorder: C10071156  
PB210 ANALYSIS

The MDC for Pb-210 per RG 4.14 is 1 pCi/L. The current technique can achieve an MDC of about 2 pCi/L to 5 pCi/L if we have sufficient sample to process 1.0 L, and this is reported on a sample specific basis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

End of comments imported for SUBBED Workorder: C10071156





# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
MAJOR IONS									
Alkalinity, Total as CaCO3	168	mg/L		5		1	A2320 B		08/05/10 11:59/mb
Carbonate as CO3	ND	mg/L		5		1	A2320 B		08/05/10 11:59/mb
Bicarbonate as HCO3	205	mg/L		5		1	A2320 B		08/05/10 11:59/mb
Calcium	94	mg/L	D	1		5	E200.7		08/02/10 16:26/eli-c
Chloride	7	mg/L		1		1	E300.0		07/28/10 23:00/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0		07/28/10 23:00/jmh
Magnesium	34.9	mg/L		0.5		5	E200.7		08/02/10 16:26/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH3 G		08/04/10 13:51/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0		07/28/10 23:00/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0		07/28/10 23:00/jmh
Potassium	11.3	mg/L		0.5		5	E200.7		08/02/10 16:26/eli-c
Sodium	169	mg/L	D	1		5	E200.7		08/02/10 16:26/eli-c
Sulfate	534	mg/L	D	20		20	E300.0		07/28/10 22:07/jmh
Silica	9.3	mg/L		0.2		5	E200.7		08/02/10 16:26/eli-c
PHYSICAL PROPERTIES									
Conductivity @ 25 C	1320	umhos/cm		5.0		1	A2510 B		07/28/10 15:28/jmh
Oxidation-Reduction Potential	180	mV				1	A2580 B		08/03/10 16:00/jmh
pH	7.84	s.u.		0.01		1	A4500-H B		08/02/10 13:46/tb
Sodium Adsorption Ratio (SAR)	3.8	unitless		0.10		1	Calculation		08/30/10 10:46/ADM
Solids, Total Dissolved TDS @ 180 C	950	mg/L	D	10		1	A2540 C		07/29/10 14:10/mb
METALS - DISSOLVED									
Aluminum	ND	mg/L		0.1		5	E200.7		08/02/10 16:26/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8		08/04/10 03:37/eli-c
Barium	ND	mg/L		0.1		5	E200.7		08/02/10 16:26/eli-c
Boron	0.1	mg/L		0.1		5	E200.7		08/02/10 16:26/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8		08/04/10 03:37/eli-c
Chromium	ND	mg/L		0.05		5	E200.7		08/02/10 16:26/eli-c
Copper	ND	mg/L		0.01		5	E200.7		08/02/10 16:26/eli-c
Iron	ND	mg/L		0.03		5	E200.7		08/02/10 16:26/eli-c
Lead	ND	mg/L		0.001		1	E200.8		08/04/10 03:37/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8		08/04/10 03:37/eli-c
Mercury	ND	mg/L		0.001		1	E200.8		08/04/10 03:37/eli-c
Molybdenum	ND	mg/L		0.1		5	E200.7		08/02/10 16:26/eli-c
Nickel	ND	mg/L		0.05		5	E200.7		08/02/10 16:26/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B		08/04/10 16:35/eli-ca
Silver	ND	mg/L		0.005		1	E200.8		08/04/10 03:37/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8		08/06/10 09:19/eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0007	mg/L		0.0003		1	E200.8	08/04/10 03:37/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	08/04/10 03:37/eli-c
Zinc	0.01	mg/L		0.01		5	E200.7	08/02/10 16:26/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	08/11/10 01:13/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	08/04/10 14:48/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	08/04/10 17:03/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	6.7	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha precision (±)	4.0	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha MDC	6.1	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta	17.1	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta precision (±)	2.7	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta MDC	4.0	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Lead 210	0.4	pCi/L	U			1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 precision (±)	1.4	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 MDC	2.3	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Polonium 210	0.076	pCi/L	U			1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 MDC	0.61	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 precision (±)	0.30	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Radium 226	1.8	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Thorium 230	0.04	pCi/L	U			1	E907.0	08/12/10 08:54/eli-c
Thorium 230 MDC	0.09	pCi/L				1	E907.0	08/12/10 08:54/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	08/12/10 08:54/eli-c
Gross Gamma	500	pCi/L				1	E901.1	08/04/10 07:00/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	08/04/10 07:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-1	pCi/L	U			1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 MDC	4.2	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Polonium 210	-0.10	pCi/L	U			1	E912.0	08/10/10 12:20/eli-ca
Polonium 210 precision (±)	0.34	pCi/L				1	E912.0	08/10/10 12:20/eli-ca

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.95	pCi/L				1	E912.0	08/10/10 12:20/eli-ca
Radium 226	-0.1	pCi/L	U			1	E903.0	08/10/10 14:32/eli-c
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	08/10/10 14:32/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	08/10/10 14:32/eli-c
Thorium 230	0.2	pCi/L	U			1	E907.0	08/06/10 08:44/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	08/06/10 08:44/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	247	pCi/L		100		1	D5072-92	07/29/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	08/06/10 20:39/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	08/06/10 20:39/eli-c
Barium	ND	mg/L		0.1		2	E200.7	08/05/10 11:18/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	08/06/10 20:39/eli-c
Boron	ND	mg/L		0.1		2	E200.7	08/05/10 11:18/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	08/05/10 11:18/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	08/06/10 20:39/eli-c
Copper	ND	mg/L		0.01		1	E200.8	08/06/10 20:39/eli-c
Iron	0.25	mg/L		0.03		2	E200.7	08/05/10 11:18/eli-c
Lead	ND	mg/L		0.001		1	E200.8	08/06/10 20:39/eli-c
Manganese	0.05	mg/L		0.01		2	E200.7	08/05/10 11:18/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	07/30/10 15:42/eli-b
Molybdenum	ND	mg/L		0.1		2	E200.7	08/05/10 11:18/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	08/06/10 20:39/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	08/06/10 20:39/eli-c
Silver	ND	mg/L		0.005		2	E200.7	08/05/10 11:18/eli-c
Strontium	2.8	mg/L		0.1		1	E200.8	08/06/10 20:39/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	08/06/10 20:39/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	08/06/10 20:39/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	08/06/10 20:39/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.76	%				1	A1030 E	08/30/10 00:00/lkl
Anions	14.7	meq/L				1	A1030 E	08/30/10 00:00/lkl
Cations	15.2	meq/L				1	A1030 E	08/30/10 00:00/lkl
Solids, Total Dissolved Calculated	977	mg/L				1	A1030 E	08/30/10 00:00/lkl
TDS Balance (0.80 - 1.20)	0.970					1	A1030 E	08/30/10 00:00/lkl

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

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

# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	200	mg/L		5		1	A2320 B	08/05/10 12:01/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	08/05/10 12:01/mb
Bicarbonate as HCO <sub>3</sub>	244	mg/L		5		1	A2320 B	08/05/10 12:01/mb
Calcium	163	mg/L	D	1		5	E200.7	08/02/10 16:30/eli-c
Chloride	9	mg/L		1		1	E300.0	07/29/10 00:11/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	07/29/10 00:11/jmh
Magnesium	47.4	mg/L		0.5		5	E200.7	08/02/10 16:30/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	08/04/10 14:13/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	07/29/10 00:11/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	07/29/10 00:11/jmh
Potassium	11.5	mg/L		0.5		5	E200.7	08/02/10 16:30/eli-c
Sodium	132	mg/L	D	1		5	E200.7	08/02/10 16:30/eli-c
Sulfate	658	mg/L	D	20		20	E300.0	07/28/10 23:18/jmh
Silica	8.5	mg/L		0.2		5	E200.7	08/02/10 16:30/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1540	umhos/cm		5.0		1	A2510 B	07/28/10 15:29/jmh
Oxidation-Reduction Potential	220	mV				1	A2580 B	08/03/10 16:00/jmh
pH	7.51	s.u.		0.01		1	A4500-H B	08/02/10 13:52/tb
Sodium Adsorption Ratio (SAR)	2.4	unitless		0.10		1	Calculation	08/30/10 10:46/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	07/29/10 14:11/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	08/02/10 16:30/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	08/06/10 09:24/eli-b
Barium	ND	mg/L		0.1		5	E200.7	08/02/10 16:30/eli-c
Boron	ND	mg/L		0.1		5	E200.7	08/02/10 16:30/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	08/06/10 13:12/eli-b
Chromium	ND	mg/L		0.05		5	E200.7	08/02/10 16:30/eli-c
Copper	ND	mg/L		0.01		5	E200.7	08/02/10 16:30/eli-c
Iron	ND	mg/L		0.03		5	E200.7	08/02/10 16:30/eli-c
Lead	ND	mg/L		0.001		1	E200.8	08/06/10 09:24/eli-b
Manganese	0.56	mg/L		0.01		5	E200.7	08/02/10 16:30/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	08/06/10 09:24/eli-b
Molybdenum	ND	mg/L		0.1		5	E200.7	08/02/10 16:30/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	08/02/10 16:30/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	08/04/10 16:42/eli-ca
Silver	ND	mg/L		0.005		2	E200.7	08/06/10 13:12/eli-b
Thorium 232	ND	mg/L		0.005		1	E200.8	08/06/10 09:24/eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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

# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0069	mg/L		0.0003		1	E200.8	08/06/10 09:24/eli-b
Vanadium	ND	mg/L		0.1		2	E200.7	08/06/10 13:12/eli-b
Zinc	0.02	mg/L		0.01		5	E200.7	08/02/10 16:30/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	08/11/10 01:17/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	08/04/10 14:55/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	08/04/10 17:03/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	31.6	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha precision (±)	6.2	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha MDC	7.3	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta	27.2	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta precision (±)	3.6	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta MDC	5.2	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Lead 210	-1	pCi/L	U			1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 precision (±)	1.4	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 MDC	2.3	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Polonium 210	0.062	pCi/L	U			1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 MDC	0.62	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Radium 226	2.6	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Thorium 230	0.04	pCi/L	U			1	E907.0	08/12/10 13:14/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	08/12/10 13:14/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	08/12/10 13:14/eli-c
Gross Gamma	980	pCi/L				1	E901.1	08/04/10 07:00/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	08/04/10 07:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-2	pCi/L	U			1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 MDC	4.2	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Polonium 210	0.0	pCi/L	U			1	E912.0	08/10/10 12:20/eli-ca
Polonium 210 precision (±)	0.20	pCi/L				1	E912.0	08/10/10 12:20/eli-ca

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-002  
**Client Sample ID:** DB-09-21-02

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL	DF			
RADIONUCLIDES - SUSPENDED									
Polonium 210 MDC	0.48	pCi/L					1	E912.0	08/10/10 12:20/eli-ca
Radium 226	-0.1	pCi/L	U				1	E903.0	08/10/10 14:32/eli-c
Radium 226 precision (±)	0.08	pCi/L					1	E903.0	08/10/10 14:32/eli-c
Radium 226 MDC	0.2	pCi/L					1	E903.0	08/10/10 14:32/eli-c
Thorium 230	-0.2	pCi/L	U				1	E907.0	08/06/10 08:44/eli-c
Thorium 230 precision (±)	0.08	pCi/L					1	E907.0	08/06/10 08:44/eli-c
- See Case Narrative regarding Pb210 analysis.									
RADIONUCLIDES - TOTAL									
Radon 222	373	pCi/L		100			1	D5072-92	07/29/10 00:00/lkl
TOTAL METALS ANALYSES									
Antimony	ND	mg/L		0.003			1	E200.8	08/06/10 20:45/eli-c
Arsenic	0.001	mg/L		0.001			1	E200.8	08/06/10 20:45/eli-c
Barium	ND	mg/L		0.1			2	E200.7	08/05/10 11:22/eli-c
Beryllium	ND	mg/L		0.001			2	E200.7	08/05/10 11:22/eli-c
Boron	ND	mg/L		0.1			2	E200.7	08/05/10 11:22/eli-c
Cadmium	ND	mg/L		0.005			2	E200.7	08/05/10 11:22/eli-c
Chromium	ND	mg/L		0.05			2	E200.7	08/05/10 11:22/eli-c
Copper	ND	mg/L		0.01			2	E200.7	08/05/10 11:22/eli-c
Iron	ND	mg/L		0.03			2	E200.7	08/05/10 11:22/eli-c
Lead	ND	mg/L		0.001			1	E200.8	08/06/10 20:45/eli-c
Manganese	0.56	mg/L		0.01			2	E200.7	08/05/10 11:22/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	07/30/10 15:46/eli-b
Molybdenum	ND	mg/L		0.1			2	E200.7	08/05/10 11:22/eli-c
Nickel	ND	mg/L		0.05			2	E200.7	08/05/10 11:22/eli-c
Selenium	ND	mg/L		0.001			1	E200.8	08/06/10 20:45/eli-c
Silver	ND	mg/L		0.005			2	E200.7	08/05/10 11:22/eli-c
Strontium	2.3	mg/L		0.1			2	E200.7	08/05/10 11:22/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	08/06/10 20:45/eli-c
Uranium	0.0080	mg/L		0.0003			1	E200.8	08/06/10 20:45/eli-c
Zinc	ND	mg/L		0.01			1	E200.8	08/06/10 20:45/eli-c
DATA QUALITY									
A/C Balance (± 5)	0.400	%					1	A1030 E	08/30/10 00:00/lkl
Anions	18.0	meq/L					1	A1030 E	08/30/10 00:00/lkl
Cations	18.1	meq/L					1	A1030 E	08/30/10 00:00/lkl
Solids, Total Dissolved Calculated	1160	mg/L					1	A1030 E	08/30/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.00						1	A1030 E	08/30/10 00:00/lkl

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

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



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# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-003  
**Client Sample ID:** DB-09-21-02-Dup

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	198	mg/L		5		1	A2320 B	08/05/10 12:04/mb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	08/05/10 12:04/mb
Bicarbonate as HCO <sub>3</sub>	241	mg/L		5		1	A2320 B	08/05/10 12:04/mb
Calcium	167	mg/L	D	1		5	E200.7	08/02/10 16:34/eli-c
Chloride	9	mg/L		1		1	E300.0	07/29/10 00:46/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	07/29/10 00:46/jmh
Magnesium	47.4	mg/L		0.5		5	E200.7	08/02/10 16:34/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	08/04/10 14:14/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	07/29/10 00:46/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	07/29/10 00:46/jmh
Potassium	11.6	mg/L		0.5		5	E200.7	08/02/10 16:34/eli-c
Sodium	135	mg/L	D	1		5	E200.7	08/02/10 16:34/eli-c
Sulfate	659	mg/L	D	20		20	E300.0	07/29/10 00:29/jmh
Silica	8.5	mg/L		0.2		5	E200.7	08/02/10 16:34/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1530	umhos/cm		5.0		1	A2510 B	07/28/10 15:30/jmh
Oxidation-Reduction Potential	230	mV				1	A2580 B	08/03/10 16:00/jmh
pH	7.53	s.u.		0.01		1	A4500-H B	08/02/10 13:53/tb
Sodium Adsorption Ratio (SAR)	2.4	unitless		0.10		1	Calculation	08/30/10 10:46/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	07/29/10 14:11/mb
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		5	E200.7	08/02/10 16:34/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	08/06/10 09:28/eli-b
Barium	ND	mg/L		0.1		5	E200.7	08/02/10 16:34/eli-c
Boron	ND	mg/L		0.1		5	E200.7	08/02/10 16:34/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	08/06/10 13:24/eli-b
Chromium	ND	mg/L		0.05		5	E200.7	08/02/10 16:34/eli-c
Copper	ND	mg/L		0.01		5	E200.7	08/02/10 16:34/eli-c
Iron	ND	mg/L		0.03		5	E200.7	08/02/10 16:34/eli-c
Lead	ND	mg/L		0.001		1	E200.8	08/06/10 09:28/eli-b
Manganese	0.56	mg/L		0.01		5	E200.7	08/02/10 16:34/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	08/06/10 09:28/eli-b
Molybdenum	ND	mg/L		0.1		5	E200.7	08/02/10 16:34/eli-c
Nickel	ND	mg/L		0.05		5	E200.7	08/02/10 16:34/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	08/04/10 16:44/eli-ca
Silver	ND	mg/L		0.005		2	E200.7	08/06/10 13:24/eli-b
Thorium 232	ND	mg/L		0.005		1	E200.8	08/06/10 09:28/eli-b

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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

# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-003  
**Client Sample ID:** DB-09-21-02-Dup

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0070	mg/L		0.0003		1	E200.8	08/06/10 09:28/eli-b
Vanadium	ND	mg/L		0.1		2	E200.7	08/06/10 13:24/eli-b
Zinc	0.01	mg/L		0.01		5	E200.7	08/02/10 16:34/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	08/11/10 01:21/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	08/04/10 15:00/eli-ca
Selenium-VI	ND	mg/L		0.001		1	A3114 B	08/04/10 17:03/eli-ca
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	33.5	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha precision (±)	6.3	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Alpha MDC	7.3	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta	29.2	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta precision (±)	3.6	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Gross Beta MDC	5.2	pCi/L				1	E900.0	08/26/10 22:55/eli-ca
Lead 210	-1	pCi/L	U			1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 precision (±)	1.4	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Lead 210 MDC	2.3	pCi/L				1	E909.0M	08/13/10 09:09/eli-cs
Polonium 210	-0.040	pCi/L	U			1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 MDC	0.77	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Polonium 210 precision (±)	0.28	pCi/L				1	E912.0	08/10/10 09:40/eli-ca
Radium 226	2.6	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	08/09/10 13:47/eli-ca
Thorium 230	0.02	pCi/L	U			1	E907.0	08/12/10 13:14/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	08/12/10 13:14/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	08/12/10 13:14/eli-c
Gross Gamma	940	pCi/L				1	E901.1	08/04/10 07:00/eli-c
Gross Gamma precision (±)	140	pCi/L				1	E901.1	08/04/10 07:00/eli-c
- See Case Narrative regarding Pb210 analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	-3	pCi/L	U			1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 precision (±)	2.5	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Lead 210 MDC	4.2	pCi/L				1	E909.0M	08/11/10 15:18/eli-cs
Polonium 210	0.22	pCi/L	U			1	E912.0	08/10/10 12:20/eli-ca
Polonium 210 precision (±)	0.42	pCi/L				1	E912.0	08/10/10 12:20/eli-ca

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

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





# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-003  
**Client Sample ID:** DB-09-21-02-Dup

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.66	pCi/L				1	E912.0	08/10/10 12:20/eli-ca
Radium 226	-0.09	pCi/L	U			1	E903.0	08/10/10 14:32/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	08/10/10 14:32/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	08/10/10 14:32/eli-c
Thorium 230	-0.1	pCi/L	U			1	E907.0	08/06/10 08:44/eli-c
Thorium 230 precision (±)	0.09	pCi/L				1	E907.0	08/06/10 08:44/eli-c
- See Case Narrative regarding Pb210 analysis.								
- See Case Narrative regarding Ra226 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	388	pCi/L		100		1	D5072-92	07/29/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	08/06/10 21:19/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	08/06/10 21:19/eli-c
Barium	ND	mg/L		0.1		2	E200.7	08/05/10 11:26/eli-c
Beryllium	ND	mg/L		0.001		2	E200.7	08/05/10 11:26/eli-c
Boron	ND	mg/L		0.1		2	E200.7	08/05/10 11:26/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	08/05/10 11:26/eli-c
Chromium	ND	mg/L		0.05		2	E200.7	08/05/10 11:26/eli-c
Copper	ND	mg/L		0.01		2	E200.7	08/05/10 11:26/eli-c
Iron	ND	mg/L		0.03		2	E200.7	08/05/10 11:26/eli-c
Lead	ND	mg/L		0.001		1	E200.8	08/06/10 21:19/eli-c
Manganese	0.56	mg/L		0.01		2	E200.7	08/05/10 11:26/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	07/30/10 15:48/eli-b
Molybdenum	ND	mg/L		0.1		2	E200.7	08/05/10 11:26/eli-c
Nickel	ND	mg/L		0.05		2	E200.7	08/05/10 11:26/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	08/06/10 21:19/eli-c
Silver	ND	mg/L		0.005		2	E200.7	08/05/10 11:26/eli-c
Strontium	2.3	mg/L		0.1		2	E200.7	08/05/10 11:26/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	08/06/10 21:19/eli-c
Uranium	0.0081	mg/L		0.0003		1	E200.8	08/06/10 21:19/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	08/06/10 21:19/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.38	%				1	A1030 E	08/30/10 00:00/lkl
Anions	17.9	meq/L				1	A1030 E	08/30/10 00:00/lkl
Cations	18.4	meq/L				1	A1030 E	08/30/10 00:00/lkl
Solids, Total Dissolved Calculated	1170	mg/L				1	A1030 E	08/30/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.00					1	A1030 E	08/30/10 00:00/lkl

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10070459-003  
**Client Sample ID:** DB-09-21-02-Dup

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Collection Date:** 07/27/10  
**Date Received:** 07/27/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
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### DATA QUALITY

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2320 B										Batch: 100805A-ALK-SEL-W
<b>Sample ID:</b> LCS1_100805A	Laboratory Control Sample									
Alkalinity, Total as CaCO <sub>3</sub>	948		mg/L	5.0	95	90	110			Run: PH_COND1-R_100805A 08/05/10 10:56
<b>Sample ID:</b> MBLK1_100805A	Method Blank									
Alkalinity, Total as CaCO <sub>3</sub>	ND		mg/L	3						Run: PH_COND1-R_100805A 08/05/10 10:58
<b>Sample ID:</b> R10070420-003AMS	Sample Matrix Spike									
Alkalinity, Total as CaCO <sub>3</sub>	272		mg/L	5.0	89	80	120			Run: PH_COND1-R_100805A 08/05/10 11:46
<b>Sample ID:</b> R10070420-003AMSD	Sample Matrix Spike Duplicate									
Alkalinity, Total as CaCO <sub>3</sub>	286		mg/L	5.0	102	80	120	5	10	Run: PH_COND1-R_100805A 08/05/10 11:47

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2510 B						Batch: 100728_1_COND-PROBE-W				
<b>Sample ID:</b> LCS1-1_100728		Laboratory Control Sample				Run: PH_COND2-R_100728A				07/28/10 15:20
Conductivity @ 25 C		151	umhos/cm	5.0	101	90	110			
<b>Sample ID:</b> LCS2-1_100728		Laboratory Control Sample				Run: PH_COND2-R_100728A				07/28/10 15:21
Conductivity @ 25 C		5020	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> LCS_COND-1_100728		Laboratory Control Sample				Run: PH_COND2-R_100728A				07/28/10 15:21
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> MBLK-1_100728		Method Blank				Run: PH_COND2-R_100728A				07/28/10 15:22
Conductivity @ 25 C		ND	umhos/cm	5						
<b>Sample ID:</b> R10070321-001BDUP		Sample Duplicate				Run: PH_COND2-R_100728A				07/28/10 15:24
Conductivity @ 25 C		501	umhos/cm	5.0				0.8	10	

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C								Batch: 100729A-SLDS-TDS-W		
<b>Sample ID:</b> LCS1_100729A		Laboratory Control Sample				Run: BAL-4-R_100729A		07/29/10 14:01		
Solids, Total Dissolved TDS @ 180 C		210	mg/L	10	103	90	110			
<b>Sample ID:</b> MBLK1_100729A		Method Blank				Run: BAL-4-R_100729A		07/29/10 14:02		
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	5						
<b>Sample ID:</b> R10070494-002AMS		Sample Matrix Spike				Run: BAL-4-R_100729A		07/29/10 14:15		
Solids, Total Dissolved TDS @ 180 C		1100	mg/L	10	103	90	110			

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2580 B								Batch: 100803-ORP-ISE-W		
<b>Sample ID:</b> LCS		Laboratory Control Sample				Run: PH_COND1-R_100803A		08/03/10 16:00		
Oxidation-Reduction Potential		490	mV		102	95	105			
<b>Sample ID:</b> R10070459-001F		Sample Duplicate				Run: PH_COND1-R_100803A		08/03/10 16:00		
Oxidation-Reduction Potential		180	mV					0.5	10	

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B										
Batch: 100802_1_PH-W										
<b>Sample ID:</b> LCS_pH-1_100802	Laboratory Control Sample									
pH		7.42	s.u.	0.010	100	98.55	101.45			Run: PH_COND2-R_100802A 08/02/10 13:42
<b>Sample ID:</b> R10070459-001ADUP	Sample Duplicate									
pH		7.88	s.u.	0.010				0.5	1.25	Run: PH_COND2-R_100802A 08/02/10 13:50

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b> Batch: A2010-08-04_2_NH3_01										
<b>Sample ID: MBLK-2</b>	Method Blank									
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Run: TECHAA2-R_100804A 08/04/10 10:46										
<b>Sample ID: LFB-3</b>	Laboratory Fortified Blank									
Nitrogen, Ammonia as N		0.26	mg/L	0.10	102	90	110			
Run: TECHAA2-R_100804A 08/04/10 11:14										
<b>Sample ID: R10070459-001BMS</b>	Sample Matrix Spike									
Nitrogen, Ammonia as N		0.34	mg/L	0.10	94	80	120			
Run: TECHAA2-R_100804A 08/04/10 13:52										
<b>Sample ID: R10070459-001BMSD</b>	Sample Matrix Spike Duplicate									
Nitrogen, Ammonia as N		0.37	mg/L	0.10	103	80	120	6.5	10	
Run: TECHAA2-R_100804A 08/04/10 13:53										
<b>Sample ID: R10070462-005CMS</b>	Sample Matrix Spike									
Nitrogen, Ammonia as N		0.22	mg/L	0.10	89	80	120			
Run: TECHAA2-R_100804A 08/04/10 14:07										
<b>Sample ID: R10070462-005CMSD</b>	Sample Matrix Spike Duplicate									
Nitrogen, Ammonia as N		0.23	mg/L	0.10	91	80	120	2.7	10	
Run: TECHAA2-R_100804A 08/04/10 14:08										

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										Batch: C_R135591
<b>Sample ID:</b> MB-100802A	15	Method Blank				Run: SUB-C135591				08/02/10 12:52
Silicon		ND	mg/L	0.007						
Aluminum		ND	mg/L	0.01						
Barium		ND	mg/L	0.0005						
Boron		ND	mg/L	0.009						
Calcium		ND	mg/L	0.2						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.002						
Magnesium		ND	mg/L	0.05						
Manganese		ND	mg/L	0.0004						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
Zinc		ND	mg/L	0.001						
<b>Sample ID:</b> LFB-100802A	15	Laboratory Fortified Blank				Run: SUB-C135591				08/02/10 12:56
Silicon		0.45	mg/L	0.10	96	85	115			
Aluminum		0.98	mg/L	0.10	98	85	115			
Barium		0.97	mg/L	0.10	97	85	115			
Boron		0.99	mg/L	0.10	99	85	115			
Calcium		48	mg/L	0.50	97	85	115			
Chromium		0.98	mg/L	0.050	98	85	115			
Copper		0.99	mg/L	0.010	99	85	115			
Iron		0.99	mg/L	0.030	99	85	115			
Magnesium		48	mg/L	0.50	96	85	115			
Manganese		0.98	mg/L	0.010	98	85	115			
Molybdenum		0.99	mg/L	0.10	99	85	115			
Nickel		0.99	mg/L	0.050	99	85	115			
Potassium		46	mg/L	0.50	93	85	115			
Sodium		49	mg/L	0.50	98	85	115			
Zinc		1.0	mg/L	0.010	101	85	115			
<b>Sample ID:</b> C10070457-001BMS2	15	Sample Matrix Spike				Run: SUB-C135591				08/02/10 13:57
Aluminum		2.04	mg/L	0.10	100	70	130			
Barium		2.00	mg/L	0.10	97	70	130			
Boron		2.12	mg/L	0.10	98	70	130			
Chromium		1.99	mg/L	0.050	98	70	130			
Copper		2.01	mg/L	0.010	98	70	130			
Iron		2.01	mg/L	0.030	98	70	130			
Manganese		1.96	mg/L	0.010	96	70	130			
Molybdenum		1.99	mg/L	0.10	98	70	130			
Nickel		2.00	mg/L	0.050	98	70	130			
Silicon		5.53	mg/L	0.10		70	130			A
Zinc		2.06	mg/L	0.010	100	70	130			

### 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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										Batch: C_R135591
<b>Sample ID: C10070457-001BMS2</b> 15 Sample Matrix Spike										
						Run: SUB-C135591				
Calcium		109	mg/L	1.0	98	70	130			
Magnesium		99.8	mg/L	1.0	97	70	130			
Potassium		100	mg/L	1.0	95	70	130			
Sodium		224	mg/L	1.0	101	70	130			
<b>Sample ID: C10070457-001BMSD2</b> 15 Sample Matrix Spike Duplicate										
						Run: SUB-C135591				
Aluminum		2.04	mg/L	0.10	100	70	130	0	20	
Barium		2.02	mg/L	0.10	98	70	130	1	20	
Boron		2.13	mg/L	0.10	99	70	130	0.6	20	
Chromium		2.00	mg/L	0.050	98	70	130	0.4	20	
Copper		2.01	mg/L	0.010	98	70	130	0.1	20	
Iron		2.02	mg/L	0.030	99	70	130	0.6	20	
Manganese		1.99	mg/L	0.010	97	70	130	1.4	20	
Molybdenum		1.99	mg/L	0.10	98	70	130	0	20	
Nickel		1.97	mg/L	0.050	97	70	130	1.1	20	
Silicon		5.54	mg/L	0.10		70	130	0.3	20	A
Zinc		2.07	mg/L	0.010	100	70	130	0.4	20	
Calcium		110	mg/L	1.0	99	70	130	0.6	20	
Magnesium		103	mg/L	1.0	100	70	130	2.8	20	
Potassium		99.6	mg/L	1.0	94	70	130	0.9	20	
Sodium		226	mg/L	1.0	103	70	130	0.7	20	

### Qualifiers:

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ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Revised Date: 10/19/10

Report Date: 09/25/10

Work Order: R10070459

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_R135754
<b>Sample ID: MB-100804A</b>	12	Method Blank				Run: SUB-C135754				08/04/10 12:48
Barium		ND	mg/L	0.0005						
Beryllium		ND	mg/L	0.0002						
Boron		ND	mg/L	0.009						
Cadmium		ND	mg/L	0.001						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		0.002	mg/L	0.002						
Manganese		ND	mg/L	0.0004						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Silver		ND	mg/L	0.001						
Strontium		ND	mg/L	0.0002						
<b>Sample ID: LFB-100804A</b>	12	Laboratory Fortified Blank				Run: SUB-C135754				08/04/10 12:52
Barium		0.97	mg/L	0.10	97	85	115			
Beryllium		1.00	mg/L	0.010	100	85	115			
Boron		0.99	mg/L	0.10	99	85	115			
Cadmium		1.0	mg/L	0.010	101	85	115			
Chromium		0.97	mg/L	0.050	97	85	115			
Copper		0.98	mg/L	0.010	98	85	115			
Iron		1.00	mg/L	0.030	99	85	115			
Manganese		0.96	mg/L	0.010	96	85	115			
Molybdenum		0.99	mg/L	0.10	99	85	115			
Nickel		0.96	mg/L	0.050	96	85	115			
Silver		0.97	mg/L	0.010	97	85	115			
Strontium		0.98	mg/L	0.10	98	85	115			
<b>Sample ID: C10070817-001BMS2</b>	12	Sample Matrix Spike				Run: SUB-C135754				08/04/10 13:44
Barium		2.07	mg/L	0.10	97	70	130			
Beryllium		1.99	mg/L	0.010	98	70	130			
Boron		2.05	mg/L	0.10	99	70	130			
Cadmium		2.06	mg/L	0.010	101	70	130			
Chromium		1.96	mg/L	0.050	96	70	130			
Copper		2.00	mg/L	0.010	98	70	130			
Iron		2.04	mg/L	0.030	97	70	130			
Manganese		2.01	mg/L	0.010	94	70	130			
Molybdenum		1.98	mg/L	0.10	97	70	130			
Nickel		1.92	mg/L	0.050	94	70	130			
Silver		1.95	mg/L	0.010	96	70	130			
Strontium		2.20	mg/L	0.10	98	70	130			
<b>Sample ID: C10070817-001BMDS2</b>	12	Sample Matrix Spike Duplicate				Run: SUB-C135754				08/04/10 13:49
Barium		2.06	mg/L	0.10	97	70	130	0.5	20	
Beryllium		2.00	mg/L	0.010	98	70	130	0.4	20	
Boron		2.05	mg/L	0.10	99	70	130	0	20	

### Qualifiers:

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## QA/QC Summary Report

Revised Date: 10/19/10

Report Date: 09/25/10

Work Order: R10070459

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_R135754
<b>Sample ID: C10070817-001BMSD2</b>										08/04/10 13:49
12 Sample Matrix Spike Duplicate										Run: SUB-C135754
Cadmium		2.02	mg/L	0.010	99	70	130	1.7	20	
Chromium		1.97	mg/L	0.050	97	70	130	0.3	20	
Copper		1.98	mg/L	0.010	97	70	130	0.6	20	
Iron		2.05	mg/L	0.030	98	70	130	0.4	20	
Manganese		2.03	mg/L	0.010	95	70	130	0.7	20	
Molybdenum		1.99	mg/L	0.10	98	70	130	0.7	20	
Nickel		1.96	mg/L	0.050	96	70	130	2.5	20	
Silver		1.94	mg/L	0.010	95	70	130	0.3	20	
Strontium		2.20	mg/L	0.10	98	70	130	0.1	20	

### Qualifiers:

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## QA/QC Summary Report

Revised Date: 10/19/10

Report Date: 09/25/10

Work Order: R10070459

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R135663
<b>Sample ID: LRB</b>	15	Method Blank		Run: SUB-C135663			08/03/10 12:33			
Arsenic		9E-05	mg/L	6E-05						
Beryllium		ND	mg/L	3E-05						
Cadmium		ND	mg/L	1E-05						
Chromium		ND	mg/L	4E-05						
Copper		0.0001	mg/L	7E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	5E-05						
Mercury		ND	mg/L	8E-05						
Nickel		ND	mg/L	0.0007						
Selenium		0.0007	mg/L	0.0002						
Silver		5E-05	mg/L	3E-05						
Strontium		ND	mg/L	3E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		ND	mg/L	3E-05						
Zinc		0.0003	mg/L	0.0003						
<b>Sample ID: LFB</b>	15	Laboratory Fortified Blank		Run: SUB-C135663			08/03/10 12:39			
Arsenic		0.0512	mg/L	0.0010	102	85	115			
Beryllium		0.0526	mg/L	0.0010	105	85	115			
Cadmium		0.0521	mg/L	0.0010	104	85	115			
Chromium		0.0514	mg/L	0.0010	103	85	115			
Copper		0.0516	mg/L	0.0010	103	85	115			
Lead		0.0506	mg/L	0.0010	101	85	115			
Manganese		0.0516	mg/L	0.0010	103	85	115			
Mercury		0.00510	mg/L	0.0010	102	85	115			
Nickel		0.0518	mg/L	0.0010	104	85	115			
Selenium		0.0512	mg/L	0.0010	101	85	115			
Silver		0.0205	mg/L	0.0010	102	85	115			
Strontium		0.0504	mg/L	0.0010	101	85	115			
Uranium		0.0522	mg/L	0.00030	104	85	115			
Vanadium		0.0513	mg/L	0.0010	103	85	115			
Zinc		0.0542	mg/L	0.0010	108	85	115			
<b>Sample ID: R10070459-001C</b>	15	Post Digestion Spike		Run: SUB-C135663			08/04/10 04:11			
Arsenic		0.0530	mg/L	0.0010	104	70	130			
Beryllium		0.0491	mg/L	0.010	98	70	130			
Cadmium		0.0494	mg/L	0.010	99	70	130			
Chromium		0.0491	mg/L	0.0010	98	70	130			
Copper		0.0477	mg/L	0.010	94	70	130			
Lead		0.0507	mg/L	0.050	101	70	130			
Manganese		0.101	mg/L	0.010	105	70	130			
Mercury		0.00511	mg/L	0.0010	102	70	130			
Nickel		0.0472	mg/L	0.0010	92	70	130			
Selenium		0.0507	mg/L	0.0010	101	70	130			
Silver		0.0157	mg/L	0.010	78	70	130			

### Qualifiers:

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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Batch: C_R135663										
<b>Sample ID: R10070459-001C</b>	15	Post Digestion Spike				Run: SUB-C135663				08/04/10 04:11
Strontium		2.76	mg/L	0.10		70	130			A
Uranium		0.0547	mg/L	0.00030	108	70	130			
Vanadium		0.0510	mg/L	0.0010	102	70	130			
Zinc		0.0517	mg/L	0.010	97	70	130			
<b>Sample ID: R10070459-001C</b>	15	Post Digestion Spike Duplicate				Run: SUB-C135663				08/04/10 04:18
Arsenic		0.0525	mg/L	0.0010	103	70	130	0.9	20	
Beryllium		0.0495	mg/L	0.010	99	70	130	0.8	20	
Cadmium		0.0488	mg/L	0.010	98	70	130	1.1	20	
Chromium		0.0491	mg/L	0.0010	98	70	130	0.1	20	
Copper		0.0476	mg/L	0.010	94	70	130	0.2	20	
Lead		0.0507	mg/L	0.050	101	70	130	0	20	
Manganese		0.101	mg/L	0.010	105	70	130	0.3	20	
Mercury		0.00520	mg/L	0.0010	104	70	130	1.7	20	
Nickel		0.0471	mg/L	0.0010	92	70	130	0.1	20	
Selenium		0.0506	mg/L	0.0010	101	70	130	0.2	20	
Silver		0.0172	mg/L	0.010	86	70	130	9.4	20	
Strontium		2.74	mg/L	0.10		70	130	0.5	20	A
Uranium		0.0548	mg/L	0.00030	108	70	130	0.1	20	
Vanadium		0.0512	mg/L	0.0010	102	70	130	0.4	20	
Zinc		0.0518	mg/L	0.010	97	70	130	0.2	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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R135811
<b>Sample ID: LRB</b>	7	Method Blank				Run: SUB-C135811				08/06/10 12:51
Antimony		ND	mg/L	7E-05						
Arsenic		ND	mg/L	6E-05						
Lead		ND	mg/L	3E-05						
Selenium		ND	mg/L	0.0002						
Thallium		ND	mg/L	1E-05						
Uranium		ND	mg/L	1E-05						
Zinc		ND	mg/L	0.0003						
<b>Sample ID: LFB</b>	7	Laboratory Fortified Blank				Run: SUB-C135811				08/06/10 12:58
Antimony		0.0505	mg/L	0.0010	101	85	115			
Arsenic		0.0521	mg/L	0.0010	104	85	115			
Lead		0.0515	mg/L	0.0010	103	85	115			
Selenium		0.0516	mg/L	0.0010	103	85	115			
Thallium		0.0516	mg/L	0.0010	103	85	115			
Uranium		0.0500	mg/L	0.00030	100	85	115			
Zinc		0.0545	mg/L	0.0010	109	85	115			
<b>Sample ID: C10071092-012AMS4</b>	7	Post Digestion Spike				Run: SUB-C135811				08/06/10 15:01
Antimony		0.0558	mg/L	0.050	112	70	130			
Arsenic		0.0638	mg/L	0.0010	106	70	130			
Lead		0.0514	mg/L	0.050	103	70	130			
Selenium		0.0560	mg/L	0.0010	106	70	130			
Thallium		0.0516	mg/L	0.10	103	70	130			
Uranium		0.0661	mg/L	0.00030	103	70	130			
Zinc		0.0538	mg/L	0.010	102	70	130			
<b>Sample ID: C10071092-012AMS4</b>	7	Post Digestion Spike				Run: SUB-C135811				08/06/10 19:17
Antimony		0.0554	mg/L	0.050	111	70	130			
Arsenic		0.0616	mg/L	0.0010	103	70	130			
Lead		0.0503	mg/L	0.050	101	70	130			
Selenium		0.0527	mg/L	0.0010	100	70	130			
Thallium		0.0503	mg/L	0.0010	101	70	130			
Uranium		0.0646	mg/L	0.00030	100	70	130			
Zinc		0.0523	mg/L	0.010	99	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_B_R151901
<b>Sample ID: LRB</b>		Method Blank					Run: SUB-C135846			08/05/10 11:30
Thorium		0.001	mg/L	1E-05						
<b>Sample ID: LFB</b>		Laboratory Fortified Blank					Run: SUB-C135846			08/05/10 11:35
Thorium		0.0470	mg/L	0.0010	92	85	115			
<b>Sample ID: B10062814-002CMS</b>		Sample Matrix Spike					Run: SUB-C135846			08/06/10 08:46
Thorium		0.0482	mg/L	0.0050	95	70	130			
<b>Sample ID: B10062814-002CMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C135846			08/06/10 08:51
Thorium		0.0502	mg/L	0.0050	98	70	130	4	20	
<b>Method: E200.8</b>										Batch: C_26896
<b>Sample ID: MB-26896</b>		Method Blank					Run: SUB-C135977			08/11/10 01:00
Uranium		0.0003	mg/L	6E-05						
<b>Sample ID: LCS2-26896</b>		Laboratory Control Sample					Run: SUB-C135977			08/11/10 01:05
Uranium		0.0647	mg/L	0.00030	129	85	115			S
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Sample ID: R10070459-003I</b>		Sample Matrix Spike					Run: SUB-C135977			08/11/10 01:25
Uranium		0.0549	mg/L	0.00030	110	70	130			
<b>Sample ID: R10070459-003I</b>		Sample Matrix Spike Duplicate					Run: SUB-C135977			08/11/10 01:29
Uranium		0.0552	mg/L	0.00030	110	70	130	0.4	20	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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





## QA/QC Summary Report

Revised Date: 10/19/10

Report Date: 09/25/10

Work Order: R10070459

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1										Analytical Run: SUB-B151585
Sample ID: QCS		Initial Calibration Verification Standard								07/30/10 11:33
Mercury		0.0020	mg/L	0.0010	100	90	110			
Method: E245.1										Batch: B_48008
Sample ID: MB-48008		Method Blank								07/30/10 15:38
Mercury		ND	mg/L	1E-05						
Sample ID: LCS-48008		Laboratory Control Sample								07/30/10 15:40
Mercury		0.0022	mg/L	0.0010	108	85	115			
Sample ID: B10072906-001JMS		Sample Matrix Spike								07/30/10 15:43
Mercury		0.0020	mg/L	0.0010	102	70	130			
Sample ID: B10072906-001JMSD		Sample Matrix Spike Duplicate								07/30/10 15:45
Mercury		0.0021	mg/L	0.0010	105	70	130	2.9	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>										Analytical Run: DIONEX_100728A
<b>Sample ID: CCV072810-22</b>	5	Continuing Calibration Verification Standard								07/28/10 18:18
Chloride		73.6	mg/L	1.00	98	90	110			
Fluoride		7.15	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N		7.00	mg/L	0.10	93	90	110			
Nitrogen, Nitrite as N		7.17	mg/L	0.10	95	90	110			
Sulfate		70.8	mg/L	1.0	94	90	110			
<b>Sample ID: CCV072810-34</b>	5	Continuing Calibration Verification Standard								07/28/10 22:25
Chloride		74.5	mg/L	1.00	99	90	110			
Fluoride		7.22	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		7.14	mg/L	0.10	95	90	110			
Nitrogen, Nitrite as N		7.27	mg/L	0.10	97	90	110			
Sulfate		71.4	mg/L	1.0	95	90	110			
<b>Method: E300.0</b>										Batch: R47210
<b>Sample ID: LFB072810-10</b>	5	Laboratory Fortified Blank				Run: DIONEX_100728A			07/28/10 14:10	
Chloride		37.0	mg/L	1.00	92	90	110			
Fluoride		3.82	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N		3.74	mg/L	0.10	94	90	110			
Nitrogen, Nitrite as N		3.76	mg/L	0.10	94	90	110			
Sulfate		36.6	mg/L	1.0	91	90	110			
<b>Sample ID: R10070459-002AMS</b>	5	Sample Matrix Spike				Run: DIONEX_100728A			07/28/10 23:36	
Chloride		803	mg/L	20	96	90	110			
Fluoride		81.0	mg/L	2.0	97	90	110			
Nitrogen, Nitrate as N		78.9	mg/L	2.0	99	90	110			
Nitrogen, Nitrite as N		80.5	mg/L	2.0	101	90	110			
Sulfate		1420	mg/L	20	96	90	110			
<b>Sample ID: R10070459-002AMSD</b>	5	Sample Matrix Spike Duplicate				Run: DIONEX_100728A			07/28/10 23:53	
Chloride		806	mg/L	20	96	90	110	0.3	10	
Fluoride		81.4	mg/L	2.0	97	90	110	0.4	10	
Nitrogen, Nitrate as N		78.9	mg/L	2.0	99	90	110	0.1	10	
Nitrogen, Nitrite as N		79.2	mg/L	2.0	99	90	110	1.6	10	
Sulfate		1430	mg/L	20	97	90	110	0.7	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>									Batch: C_GrAB-0941	
<b>Sample ID: MB-GrAB-0941</b>	6	Method Blank				Run: SUB-C135796			08/05/10 23:18	
Gross Alpha		-1	pCi/L							U
Gross Alpha precision ( $\pm$ )		0.7	pCi/L							
Gross Alpha MDC		0.9	pCi/L							
Gross Beta		-2	pCi/L							U
Gross Beta precision ( $\pm$ )		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-0941</b>		Laboratory Control Sample				Run: SUB-C135796			08/05/10 23:18	
Gross Alpha		100	pCi/L	102		70	130			
<b>Sample ID: Cs137-GrAB-0941</b>		Laboratory Control Sample				Run: SUB-C135796			08/05/10 23:18	
Gross Beta		78	pCi/L	89		70	130			
<b>Sample ID: C10070657-001DMS</b>		Sample Matrix Spike				Run: SUB-C135796			08/05/10 23:18	
Gross Alpha		124	pCi/L	118		70	130			
<b>Sample ID: C10070657-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C135796			08/05/10 23:18	
Gross Alpha		115	pCi/L	108		70	130	7.8	18.8	
<b>Sample ID: C10070657-001DMS</b>		Sample Matrix Spike				Run: SUB-C135796			08/05/10 23:18	
Gross Beta		80.3	pCi/L	87		70	130			
<b>Sample ID: C10070657-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C135796			08/05/10 23:18	
Gross Beta		86.4	pCi/L	94		70	130	7.3	16.3	
<b>Sample ID: C10070781-002ADUP</b>	6	Sample Duplicate				Run: SUB-C135796			08/06/10 11:25	
Gross Alpha		0.688	pCi/L					3800	598.8	UR
Gross Alpha precision ( $\pm$ )		2.18	pCi/L							
Gross Alpha MDC		3.61	pCi/L							
Gross Beta		6.31	pCi/L					33	86.9	
Gross Beta precision ( $\pm$ )		2.12	pCi/L							
Gross Beta MDC		3.37	pCi/L							

- For Gross Alpha the Sample and the Duplicate are both below the MDC; the RPD is acceptable.

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R135892
<b>Sample ID: LCS-R135892</b>	3	Laboratory Control Sample				Run: SUB-C135892				08/04/10 07:00
Americium 241		700	pCi/L	20	87	70	130			
Cesium 137		960	pCi/L	20	95	70	130			
Potassium 40		6300	pCi/L	20	94	70	130			
<b>Sample ID: MB-R135892</b>	4	Method Blank				Run: SUB-C135892				08/04/10 07:00
Bismuth 214		ND	pCi/L							U
Lead 214		ND	pCi/L							U
Potassium 40		ND	pCi/L							U
Gross Gamma		ND	pCi/L							U
<b>Sample ID: R10070459-001H</b>	4	Sample Duplicate				Run: SUB-C135892				08/04/10 07:00
Thorium 234		550	pCi/L	20				10	30	
Thorium 234 precision (±)		140	pCi/L							
Gross Gamma		550	pCi/L					10	30	
Gross Gamma precision (±)		140	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-4699
<b>Sample ID: C10070928-001GMS</b>		Sample Matrix Spike					Run: SUB-C135886			08/09/10 10:42
Radium 226		16.5	pCi/L		105	70	130			
<b>Sample ID: C10070928-001GMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C135886			08/09/10 10:42
Radium 226		14.5	pCi/L		93	70	130	12	24.1	
<b>Sample ID: MB-RA226-4699</b>	3	Method Blank					Run: SUB-C135886			08/09/10 13:47
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Sample ID: LCS-RA226-4699</b>		Laboratory Control Sample					Run: SUB-C135886			08/09/10 13:47
Radium 226		8.3	pCi/L		107	70	130			
<b>Method: E903.0</b>										Batch: C_R135959
<b>Sample ID: C10070368-004AMS</b>		Sample Matrix Spike					Run: SUB-C135959			08/10/10 12:50
Radium 226		0.00023	uCi/kg		91	70	130			
<b>Sample ID: C10070368-004AMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C135959			08/10/10 12:50
Radium 226		0.00024	uCi/kg		95	70	130	3.2	23.6	
<b>Sample ID: LCS-26896</b>		Laboratory Control Sample					Run: SUB-C135959			08/10/10 14:32
Radium 226		14	pCi/L		97	70	130			
<b>Sample ID: MB-26896</b>	3	Method Blank					Run: SUB-C135959			08/10/10 14:32
Radium 226		-0.2	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Revised Date: 10/19/10  
Report Date: 09/25/10  
Work Order: R10070459

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>										Batch: C_26896
<b>Sample ID: R10070459-003I</b>		Sample Matrix Spike					Run: SUB-C135891			08/06/10 08:44
Thorium 230		10	pCi/L		97	70	130			
<b>Sample ID: R10070459-003I</b>		Sample Matrix Spike Duplicate					Run: SUB-C135891			08/06/10 08:44
Thorium 230		14	pCi/L		120	70	130	32	53.8	
<b>Sample ID: LCS-26896</b>		Laboratory Control Sample					Run: SUB-C135891			08/06/10 08:45
Thorium 230		4.3	pCi/L		88	70	130			
<b>Sample ID: MB-26896</b>	3	Method Blank					Run: SUB-C135891			08/06/10 08:44
Thorium 230		-0.2	pCi/L							U
Thorium 230 MDC		0.3	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
<b>Method: E907.0</b>										Batch: C_RA-TH-ISO-1222
<b>Sample ID: LCS-RA-TH-ISO-1222</b>		Laboratory Control Sample					Run: SUB-C136138			08/12/10 08:54
Thorium 230		5.2	pCi/L		93	70	130			
<b>Sample ID: C10071017-011DMS</b>		Sample Matrix Spike					Run: SUB-C136138			08/12/10 08:54
Thorium 230		16	pCi/L		97	70	130			
<b>Sample ID: C10071017-011DMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C136138			08/12/10 08:54
Thorium 230		18	pCi/L		110	70	130	13	40.5	
<b>Sample ID: MB-RA-TH-ISO-1222</b>	3	Method Blank					Run: SUB-C136138			08/12/10 13:14
Thorium 230		0.1	pCi/L							U
Thorium 230 MDC		0.1	pCi/L							
Thorium 230 precision (±)		0.09	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>										Batch: C_PB-210-0748
<b>Sample ID: MB-26896</b>	3	Method Blank				Run: SUB-C136055				08/11/10 15:18
Lead 210		-10	pCi/L							U
Lead 210 precision (±)		10	pCi/L							
Lead 210 MDC		20	pCi/L							
<b>Sample ID: TAP WATER-MS</b>		Sample Matrix Spike				Run: SUB-C136055				08/11/10 15:18
Lead 210		590	pCi/L		109	70	130			
<b>Sample ID: TAP WATER-MSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C136055				08/11/10 15:18
Lead 210		590	pCi/L		109	70	130	0.1	15.3	
<b>Sample ID: LCS-26896</b>		Laboratory Control Sample				Run: SUB-C136055				08/11/10 15:18
Lead 210		460	pCi/L		90	70	130			
<b>Sample ID: LCS-PB-210-0748</b>		Laboratory Control Sample				Run: SUB-C136055				08/11/10 15:18
Lead 210		100	pCi/L		102	70	130			
<b>Method: E909.0M</b>										Batch: C_PB-210-0749
<b>Sample ID: MB-PB-210-0749</b>	3	Method Blank				Run: SUB-C136095				08/13/10 09:09
Lead 210		ND	pCi/L							U
Lead 210 precision (±)		1	pCi/L							
Lead 210 MDC		2	pCi/L							
<b>Sample ID: C10071017-012DMS</b>		Sample Matrix Spike				Run: SUB-C136095				08/13/10 09:09
Lead 210		120	pCi/L		111	70	130			
<b>Sample ID: C10071017-012DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C136095				08/13/10 09:09
Lead 210		130	pCi/L		121	70	130	8.9	16.1	
<b>Sample ID: LCS-PB-210-0749</b>		Laboratory Control Sample				Run: SUB-C136095				08/13/10 09:09
Lead 210		56	pCi/L		101	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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 10/19/10  
**Report Date:** 09/25/10  
**Work Order:** R10070459

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0308
<b>Sample ID: R10070459-002K</b>	Sample Matrix Spike			Run: SUB-C135910			08/10/10 09:40			
Polonium 210	35		pCi/L	106		70	130			
<b>Sample ID: R10070459-002K</b>	Sample Matrix Spike Duplicate			Run: SUB-C135910			08/10/10 09:40			
Polonium 210	32		pCi/L	99		70	130	7.3	58.7	
<b>Sample ID: MB-PO210-0308</b>	3	Method Blank		Run: SUB-C135910			08/10/10 09:40			
Polonium 210		0.7	pCi/L							
Polonium 210 MDC		0.6	pCi/L							
Polonium 210 precision (±)		0.6	pCi/L							
<b>Sample ID: LCS-PO210-0308</b>	Laboratory Control Sample			Run: SUB-C135910			08/10/10 09:40			
Polonium 210	18		pCi/L	109		70	130			
<b>Method: E912.0</b>										Batch: C_R135911
<b>Sample ID: R10070459-003I</b>	Sample Matrix Spike			Run: SUB-C135911			08/10/10 12:20			
Polonium 210	47		pCi/L	120		70	130			
<b>Sample ID: R10070459-003I</b>	Sample Matrix Spike Duplicate			Run: SUB-C135911			08/10/10 12:20			
Polonium 210	34		pCi/L	88		70	130	31	56.8	
<b>Sample ID: LCS-26896</b>	Laboratory Control Sample			Run: SUB-C135911			08/10/10 12:20			
Polonium 210	74		pCi/L	96		70	130			
<b>Sample ID: MB-26896</b>	3	Method Blank		Run: SUB-C135911			08/10/10 12:20			
Polonium 210		-0.05	pCi/L							U
Polonium 210 precision (±)		0.9	pCi/L							
Polonium 210 MDC		2	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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





# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT (Provide as much information as possible.)

Company Name: <b>South Env.</b>		Project Name, PWS, Permit, Etc. <b>Powertek - Dewey Burdock</b>		Sample Origin State:		EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Report Mail Address: <b>Powertek, South Env.</b>		Contact Name: <b>Allen Smith</b>		Phone/Fax: <b>673-4859</b>		Email: <b>allen.smith</b>	
Invoice Address: <b>Powertek</b>		Invoice Contact & Phone:		Purchase Order:		Quoter/Bottle Order:	
Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTW/MWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC		Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water		ANALYSIS REQUESTED  <b>Gr. Per Quote</b>		SEE ATTACHED Standard Turnaround (TAT) <b>R U S H</b>	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	MATRIX	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page		
1 <b>DB-09-21-01</b>		<b>7-27-10</b>		<b>water</b>	Comments:		
2 <b>DB-09-21-02</b>		<b>1</b>		<b>1</b>	Receipt Temp: <b>7.2 °C</b>		
3 <b>DB-09-21-02 Aug.</b>		<b>1</b>		<b>1</b>	On Ice: <input checked="" type="radio"/> Y <input type="radio"/> N		
4					Custody Seal On Bottle: <input type="checkbox"/> Y <input type="checkbox"/> N		
5					On Cooler: <input type="checkbox"/> Y <input type="checkbox"/> N		
6					Infect: <input type="checkbox"/> Y <input type="checkbox"/> N		
7					Signature Match: <input type="checkbox"/> Y <input type="checkbox"/> N		
8					Shipped by:		
9					Cooler Disl:		
10					Signature:		
Custody Record MUST be Signed		Relinquished by (print): <b>Allen Smith</b>		Date/Time: <b>7-27-10 4:23pm</b>		Signature: <b>[Signature]</b>	
Sample Disposal: Return to Client:		Lab Disposal:		Received by (print): <b>Steve Pritchard</b>		Date/Time: <b>7-27-10 4:23</b>	
				Received by (print): <b>[Signature]</b>		Date/Time: <b>7-27-10 4:23</b>	

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



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## ANALYTICAL SUMMARY REPORT

October 15, 2010

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10080398

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. received the following 2 samples for Powertech USA Inc on 8/24/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10080398-001	DB-09-21-01	08/23/10 0:00	08/24/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10080398-002	DB-09-21-02	08/23/10 0:00	08/24/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2010.10.15 11:29:29 -06:00



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**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10080398

**Report Date:** 10/15/10

## CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

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

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

Comments imported for SUBBED Workorder: C10081031  
RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved on all samples due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.  
End of comments imported for SUBBED Workorder: C10081031



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	168	mg/L		5		1	A2320 B	08/25/10 09:20/jmh
Carbonate as CO3	ND	mg/L		5		1	A2320 B	08/25/10 09:20/jmh
Bicarbonate as HCO3	205	mg/L		5		1	A2320 B	08/25/10 09:20/jmh
Calcium	97	mg/L	D	1		5	E200.7	09/01/10 20:46/eli-c
Chloride	8	mg/L	B	1		1	E300.0	08/25/10 13:15/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	08/25/10 13:15/jmh
Magnesium	35.4	mg/L		0.5		5	E200.7	09/01/10 20:46/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH3 G	08/31/10 16:21/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	08/25/10 13:15/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	08/25/10 13:15/jmh
Potassium	11.7	mg/L		0.5		5	E200.7	09/01/10 20:46/eli-c
Sodium	169	mg/L	D	1		5	E200.7	09/01/10 20:46/eli-c
Sulfate	575	mg/L	D	20		20	E300.0	08/25/10 12:58/jmh
Silica	8.5	mg/L		0.2		1	E200.8	09/01/10 10:12/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1330	umhos/cm		5.0		1	A2510 B	09/02/10 09:26/tb
Oxidation-Reduction Potential	270	mV				1	A2580 B	08/30/10 16:30/jmh
pH	7.88	s.u.		0.01		1	A4500-H B	08/30/10 09:05/tb
Sodium Adsorption Ratio (SAR)	3.7	unitless		0.10		1	Calculation	10/04/10 10:46/ADM
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	D	10		1	A2540 C	08/30/10 14:08/jmh
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		5	E200.7	09/01/10 20:46/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	09/01/10 10:12/eli-c
Barium	ND	mg/L		0.1		1	E200.8	09/01/10 10:12/eli-c
Boron	ND	mg/L		0.1		1	E200.8	09/01/10 10:12/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	09/01/10 10:12/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	09/01/10 10:12/eli-c
Copper	ND	mg/L		0.01		1	E200.8	09/01/10 10:12/eli-c
Iron	ND	mg/L		0.03		1	E200.8	09/01/10 10:12/eli-c
Lead	ND	mg/L		0.001		1	E200.8	09/01/10 10:12/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	09/01/10 10:12/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	09/01/10 10:12/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	09/01/10 10:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	09/01/10 10:12/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	08/31/10 12:22/eli-c
Silver	ND	mg/L		0.005		1	E200.8	09/01/10 10:12/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	09/01/10 10:12/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
B - The analyte was detected in the method blank.

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
METALS - DISSOLVED								
Uranium	ND	mg/L		0.0003		1	E200.8	09/01/10 10:12/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	09/01/10 10:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	09/01/10 10:12/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	09/10/10 03:00/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	08/31/10 10:56/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	08/31/10 15:55/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	8.9	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Alpha precision (±)	3.4	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Alpha MDC	4.7	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta	15.5	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta precision (±)	2.9	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Lead 210	0.01	pCi/L	U			1	E909.0M	09/19/10 10:49/eli-cs
Lead 210 precision (±)	1.0	pCi/L				1	E909.0M	09/19/10 10:49/eli-cs
Lead 210 MDC	1.7	pCi/L				1	E909.0M	09/19/10 10:49/eli-cs
Polonium 210	0.088	pCi/L	U			1	E912.0	09/07/10 09:24/eli-ca
Polonium 210 MDC	0.56	pCi/L				1	E912.0	09/07/10 09:24/eli-ca
Polonium 210 precision (±)	0.29	pCi/L				1	E912.0	09/07/10 09:24/eli-ca
Radium 226	1.8	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Radium 226 MDC	0.09	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Thorium 230	0.09	pCi/L	U			1	E907.0	09/17/10 17:09/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	09/17/10 17:09/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	09/17/10 17:09/eli-c
Gross Gamma	710	pCi/L				1	E901.1	09/02/10 09:00/eli-c
Gross Gamma precision (±)	190	pCi/L				1	E901.1	09/02/10 09:00/eli-c
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.08	pCi/L	U			1	E909.0M	09/30/10 05:46/eli-cs
Lead 210 precision (±)	0.8	pCi/L				1	E909.0M	09/30/10 05:46/eli-cs
Lead 210 MDC	1.3	pCi/L				1	E909.0M	09/30/10 05:46/eli-cs
Polonium 210	0.069	pCi/L	U			1	E912.0	09/15/10 11:06/eli-ca
Polonium 210 precision (±)	0.27	pCi/L				1	E912.0	09/15/10 11:06/eli-ca

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - SUSPENDED								
Polonium 210 MDC	0.55	pCi/L				1	E912.0	09/15/10 11:06/eli-ca
Radium 226	-0.2	pCi/L	U			1	E903.0	09/15/10 17:33/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/15/10 17:33/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	09/15/10 17:33/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0	09/13/10 13:26/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	09/13/10 13:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	09/13/10 13:26/eli-c
- See Case Narrative regarding Ra226 analysis.								
RADIONUCLIDES - TOTAL								
Radon 222	238	pCi/L		100		1	D5072-92	08/25/10 00:00/kl
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	08/31/10 23:52/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	08/31/10 23:52/eli-c
Barium	ND	mg/L		0.1		1	E200.8	08/31/10 23:52/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	08/31/10 23:52/eli-c
Boron	ND	mg/L		0.1		1	E200.8	08/31/10 23:52/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	08/31/10 23:52/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	08/31/10 23:52/eli-c
Copper	ND	mg/L		0.01		1	E200.8	08/31/10 23:52/eli-c
Iron	0.28	mg/L		0.03		1	E200.8	08/31/10 23:52/eli-c
Lead	ND	mg/L		0.001		1	E200.8	08/31/10 23:52/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	08/31/10 23:52/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	08/26/10 15:58/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	08/31/10 23:52/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	08/31/10 23:52/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	08/31/10 23:52/eli-c
Silver	ND	mg/L		0.005		1	E200.8	08/31/10 23:52/eli-c
Strontium	2.7	mg/L		0.1		1	E200.8	08/31/10 23:52/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	08/31/10 23:52/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	08/31/10 23:52/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	08/31/10 23:52/eli-c
DATA QUALITY								
A/C Balance (± 5)	-0.500	%				1	A1030 E	10/14/10 00:00/kl
Anions	15.6	meq/L				1	A1030 E	10/14/10 00:00/kl
Cations	15.4	meq/L				1	A1030 E	10/14/10 00:00/kl
Solids, Total Dissolved Calculated	1020	mg/L				1	A1030 E	10/14/10 00:00/kl
TDS Balance (0.80 - 1.20)	1.04					1	A1030 E	10/14/10 00:00/kl

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

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	194	mg/L		5		1	A2320 B	08/25/10 09:29/jmh
Carbonate as CO3	ND	mg/L		5		1	A2320 B	08/25/10 09:29/jmh
Bicarbonate as HCO3	236	mg/L		5		1	A2320 B	08/25/10 09:29/jmh
Calcium	170	mg/L	D	1		5	E200.7	09/01/10 20:42/eli-c
Chloride	10	mg/L	B	1		1	E300.0	08/25/10 13:51/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	08/25/10 13:51/jmh
Magnesium	48.7	mg/L		0.5		5	E200.7	09/01/10 20:42/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	08/31/10 16:23/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	08/25/10 13:51/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	08/25/10 13:51/jmh
Potassium	12.2	mg/L		0.5		5	E200.7	09/01/10 20:42/eli-c
Sodium	133	mg/L	D	1		5	E200.7	09/07/10 12:28/eli-c
Sulfate	708	mg/L	D	20		20	E300.0	08/25/10 13:33/jmh
Silica	7.9	mg/L		0.2		1	E200.8	09/01/10 10:19/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1540	umhos/cm		5.0		1	A2510 B	09/02/10 09:29/tb
Oxidation-Reduction Potential	280	mV				1	A2580 B	08/30/10 16:30/jmh
pH	7.53	s.u.		0.01		1	A4500-H B	08/30/10 09:19/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	10/04/10 10:46/ADM
Solids, Total Dissolved TDS @ 180 C	1300	mg/L	D	10		1	A2540 C	08/30/10 14:09/jmh
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		5	E200.7	09/01/10 20:42/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	09/01/10 10:19/eli-c
Barium	ND	mg/L		0.1		1	E200.8	09/01/10 10:19/eli-c
Boron	ND	mg/L		0.1		1	E200.8	09/01/10 10:19/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	09/01/10 10:19/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	09/01/10 10:19/eli-c
Copper	ND	mg/L		0.01		1	E200.8	09/01/10 10:19/eli-c
Iron	ND	mg/L		0.03		1	E200.8	09/01/10 10:19/eli-c
Lead	ND	mg/L		0.001		1	E200.8	09/01/10 10:19/eli-c
Manganese	0.57	mg/L		0.01		1	E200.8	09/01/10 10:19/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	09/01/10 10:19/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	09/01/10 10:19/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	09/01/10 10:19/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	08/31/10 12:24/eli-c
Silver	ND	mg/L		0.005		1	E200.8	09/01/10 10:19/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	09/01/10 10:19/eli-c

**Report Definitions:**  
RL - Analyte reporting limit.  
QCL - Quality control limit.  
B - The analyte was detected in the method blank.

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



## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
METALS - DISSOLVED								
Uranium	0.0087	mg/L		0.0003		1	E200.8	09/01/10 10:19/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	09/01/10 10:19/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	09/01/10 10:19/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	09/10/10 03:05/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	08/31/10 10:58/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	08/31/10 15:55/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	21.9	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Alpha precision (±)	4.9	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Alpha MDC	5.8	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta	25.2	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta precision (±)	4.3	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Gross Beta MDC	6.4	pCi/L				1	E900.0	09/10/10 03:35/eli-ca
Lead 210	-0.7	pCi/L	U			1	E909.0M	09/20/10 01:01/eli-cs
Lead 210 precision (±)	1.0	pCi/L				1	E909.0M	09/20/10 01:01/eli-cs
Lead 210 MDC	1.7	pCi/L				1	E909.0M	09/20/10 01:01/eli-cs
Polonium 210	-0.040	pCi/L	U			1	E912.0	09/07/10 09:24/eli-ca
Polonium 210 MDC	0.77	pCi/L				1	E912.0	09/07/10 09:24/eli-ca
Polonium 210 precision (±)	0.28	pCi/L				1	E912.0	09/07/10 09:24/eli-ca
Radium 226	2.7	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Radium 226 MDC	0.09	pCi/L				1	E903.0	09/07/10 23:20/eli-c
Thorium 230	-0.02	pCi/L	U			1	E907.0	09/17/10 17:09/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	09/17/10 17:09/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	09/17/10 17:09/eli-c
Gross Gamma	610	pCi/L				1	E901.1	09/02/10 09:00/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	09/02/10 09:00/eli-c
RADIONUCLIDES - SUSPENDED								
Lead 210	-0.02	pCi/L	U			1	E909.0M	09/30/10 12:21/eli-cs
Lead 210 precision (±)	0.8	pCi/L				1	E909.0M	09/30/10 12:21/eli-cs
Lead 210 MDC	1.3	pCi/L				1	E909.0M	09/30/10 12:21/eli-cs
Polonium 210	0.068	pCi/L	U			1	E912.0	09/15/10 11:06/eli-ca
Polonium 210 precision (±)	0.27	pCi/L				1	E912.0	09/15/10 11:06/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.  
U - Not detected at minimum detectable concentration





## LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10080398-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 10/15/10  
**Collection Date:** 08/23/10  
**Date Received:** 08/24/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.54	pCi/L				1	E912.0	09/15/10 11:06/eli-ca
Radium 226	-0.1	pCi/L	U			1	E903.0	09/15/10 17:33/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	09/15/10 17:33/eli-c
Radium 226 MDC	0.3	pCi/L				1	E903.0	09/15/10 17:33/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0	09/13/10 13:26/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	09/13/10 13:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	09/13/10 13:26/eli-c
- See Case Narrative regarding Ra226 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	342	pCi/L		100		1	D5072-92	08/25/10 00:00/lkl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	09/01/10 13:31/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	09/01/10 13:31/eli-c
Barium	ND	mg/L		0.1		1	E200.8	09/01/10 13:31/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	09/01/10 13:31/eli-c
Boron	ND	mg/L		0.1		1	E200.8	09/01/10 13:31/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	09/01/10 13:31/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	09/01/10 13:31/eli-c
Copper	ND	mg/L		0.01		1	E200.8	09/01/10 13:31/eli-c
Iron	ND	mg/L		0.03		1	E200.8	09/01/10 13:31/eli-c
Lead	ND	mg/L		0.001		1	E200.8	09/01/10 13:31/eli-c
Manganese	0.58	mg/L		0.01		1	E200.8	09/01/10 13:31/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	08/26/10 16:00/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	09/01/10 13:31/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	09/01/10 13:31/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	09/01/10 13:31/eli-c
Silver	ND	mg/L		0.005		1	E200.8	09/01/10 13:31/eli-c
Strontium	2.3	mg/L		0.1		1	E200.8	09/01/10 13:31/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	09/01/10 13:31/eli-c
Uranium	0.0083	mg/L		0.0003		1	E200.8	09/01/10 13:31/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	09/01/10 13:31/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.750	%				1	A1030 E	10/14/10 00:00/lkl
Anions	18.9	meq/L				1	A1030 E	10/14/10 00:00/lkl
Cations	18.6	meq/L				1	A1030 E	10/14/10 00:00/lkl
Solids, Total Dissolved Calculated	1220	mg/L				1	A1030 E	10/14/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.09					1	A1030 E	10/14/10 00:00/lkl

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

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



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2320 B		Batch: 100825A-ALK-SEL-W								
<b>Sample ID:</b> LCS1_100825A		Laboratory Control Sample								
Alkalinity, Total as CaCO <sub>3</sub>		952	mg/L	5.0	95	90	110			08/25/10 08:24
<b>Sample ID:</b> MBLK1_100825A		Method Blank								
Alkalinity, Total as CaCO <sub>3</sub>		ND	mg/L	3						08/25/10 08:27
<b>Sample ID:</b> R10080344-001AMS		Sample Matrix Spike								
Alkalinity, Total as CaCO <sub>3</sub>		152	mg/L	5.0	85	80	120			08/25/10 08:48
<b>Sample ID:</b> R10080344-001AMSD		Sample Matrix Spike Duplicate								
Alkalinity, Total as CaCO <sub>3</sub>		150	mg/L	5.0	83	80	120	1.3	10	08/25/10 08:55

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Batch: 100902_1_COND-PROBE-W										
<b>Method:</b> A2510 B										
<b>Sample ID:</b> LCS1-1_100902		Laboratory Control Sample				Run: PH_COND2-R_100902A				09/02/10 08:50
Conductivity @ 25 C		150	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> LCS2-1_100902		Laboratory Control Sample				Run: PH_COND2-R_100902A				09/02/10 08:52
Conductivity @ 25 C		4980	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> LCS_COND-1_100902		Laboratory Control Sample				Run: PH_COND2-R_100902A				09/02/10 08:54
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> MBLK-1_100902		Method Blank				Run: PH_COND2-R_100902A				09/02/10 08:55
Conductivity @ 25 C		ND	umhos/cm	5						
<b>Sample ID:</b> R10080390-001BDUP		Sample Duplicate				Run: PH_COND2-R_100902A				09/02/10 09:23
Conductivity @ 25 C		265	umhos/cm	5.0				0.4	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>								Batch: 100830A-SLDS-TDS-W		
<b>Sample ID: LCS1_100830A</b>		Laboratory Control Sample				Run: BAL-4-R_100830C		08/30/10 14:07		
Solids, Total Dissolved TDS @ 180 C		240	mg/L	10	108	90	110			
<b>Sample ID: MBLK1_100830A</b>		Method Blank				Run: BAL-4-R_100830C		08/30/10 14:08		
Solids, Total Dissolved TDS @ 180 C		20	mg/L	5						
<b>Sample ID: R10080398-001ADUP</b>		Sample Duplicate				Run: BAL-4-R_100830C		08/30/10 14:08		
Solids, Total Dissolved TDS @ 180 C		1100	mg/L	10				0.9	5	
<b>Sample ID: R10080480-003AMS</b>		Sample Matrix Spike				Run: BAL-4-R_100830C		08/30/10 14:21		
Solids, Total Dissolved TDS @ 180 C		980	mg/L	10	110	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2580 B								Batch: 100830-ORP-ISE-W		
Sample ID: LCS		Laboratory Control Sample				Run: PH_COND1-R_100830A		08/30/10 16:30		
Oxidation-Reduction Potential		490	mV		103	95	105			
Sample ID: R10080398-001F		Sample Duplicate				Run: PH_COND1-R_100830A		08/30/10 16:30		
Oxidation-Reduction Potential		280	mV					5.4	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_27278
<b>Sample ID: LRB-27278</b>		Method Blank					Run: SUB-C136665			08/31/10 10:51
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LFB-27278</b>		Laboratory Fortified Blank					Run: SUB-C136665			08/31/10 10:54
Selenium-IV		0.054	mg/L	0.0010	108	90	110			
<b>Sample ID: R10080398-002E</b>		Sample Matrix Spike					Run: SUB-C136665			08/31/10 11:00
Selenium-IV		0.046	mg/L	0.0010	92	85	115			
<b>Sample ID: R10080398-002E</b>		Sample Matrix Spike Duplicate					Run: SUB-C136665			08/31/10 11:03
Selenium-IV		0.045	mg/L	0.0010	90	85	115	1.6	10	
<b>Method: A3114 B</b>										Batch: C_27278
<b>Sample ID: LRB-27278</b>		Method Blank					Run: SUB-C136682			08/31/10 12:06
Selenium		ND	mg/L	0.0003						
<b>Sample ID: LFB-27278</b>		Laboratory Fortified Blank					Run: SUB-C136682			08/31/10 12:09
Selenium		0.047	mg/L	0.0010	94	90	110			
<b>Sample ID: R10080398-002E</b>		Sample Matrix Spike					Run: SUB-C136682			08/31/10 12:26
Selenium		0.046	mg/L	0.0010	92	85	115			
<b>Sample ID: R10080398-002E</b>		Sample Matrix Spike Duplicate					Run: SUB-C136682			08/31/10 12:28
Selenium		0.047	mg/L	0.0010	94	85	115	2.4	15	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Batch: 100830_1_PH-W		
Sample ID: LCS_pH-1_100830		Laboratory Control Sample				Run: PH_COND2-R_100830A		08/30/10 08:51		
pH		7.42	s.u.	0.010	100	98.55	101.45			
Sample ID: R10080398-001ADUP		Sample Duplicate				Run: PH_COND2-R_100830A		08/30/10 09:14		
pH		7.85	s.u.	0.010				0.4	1.25	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G		Batch: A2010-08-31_2_NH3_01								
Sample ID: MBLK-2	Method Blank					Run: TECHAA2-R_100831A		08/31/10 14:34		
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Sample ID: LFB-3	Laboratory Fortified Blank					Run: TECHAA2-R_100831A		08/31/10 15:04		
Nitrogen, Ammonia as N		0.26	mg/L	0.10	104	90	110			
Sample ID: R10080344-003CMS	Sample Matrix Spike					Run: TECHAA2-R_100831A		08/31/10 16:13		
Nitrogen, Ammonia as N		0.24	mg/L	0.10	98	80	120			
Sample ID: R10080344-003CMSD	Sample Matrix Spike Duplicate					Run: TECHAA2-R_100831A		08/31/10 16:14		
Nitrogen, Ammonia as N		0.25	mg/L	0.10	102	80	120	3.6	10	
Sample ID: R10080459-003BMS	Sample Matrix Spike					Run: TECHAA2-R_100831A		08/31/10 16:30		
Nitrogen, Ammonia as N		0.20	mg/L	0.10	78	80	120			S
Sample ID: R10080459-003BMSD	Sample Matrix Spike Duplicate					Run: TECHAA2-R_100831A		08/31/10 16:31		
Nitrogen, Ammonia as N		0.22	mg/L	0.10	88	80	120	11	10	R

### Qualifiers:

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

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





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_R136764
<b>Sample ID: MB-100901A</b>	5	Method Blank					Run: SUB-C136764			09/01/10 13:09
Aluminum		ND	mg/L	0.01						
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
<b>Sample ID: LFB-100901A</b>	5	Laboratory Fortified Blank					Run: SUB-C136764			09/01/10 13:13
Aluminum		1.0	mg/L	0.10	99	85	115			
Calcium		51	mg/L	0.50	99	85	115			
Magnesium		52	mg/L	0.50	101	85	115			
Potassium		46	mg/L	0.50	91	85	115			
Sodium		49	mg/L	0.50	95	85	115			
<b>Sample ID: C10081054-001BMS2</b>	5	Sample Matrix Spike					Run: SUB-C136764			09/01/10 19:21
Aluminum		1.99	mg/L	0.10	98	70	130			
Calcium		139	mg/L	1.0	96	70	130			
Magnesium		114	mg/L	1.0	97	70	130			
Potassium		99.4	mg/L	1.0	94	70	130			
Sodium		889	mg/L	1.0		70	130			A
<b>Sample ID: C10081054-001BMSD2</b>	5	Sample Matrix Spike Duplicate					Run: SUB-C136764			09/01/10 19:25
Aluminum		2.03	mg/L	0.10	100	70	130	2.1	20	
Calcium		141	mg/L	1.0	98	70	130	1.5	20	
Magnesium		116	mg/L	1.0	98	70	130	1.1	20	
Potassium		101	mg/L	1.0	95	70	130	1.9	20	
Sodium		885	mg/L	1.0		70	130	0.5	20	A
<b>Method: E200.7</b>										Batch: C_R136930
<b>Sample ID: MB-100907A</b>		Method Blank					Run: SUB-C136930			09/07/10 11:10
Sodium		ND	mg/L	0.3						
<b>Sample ID: LFB-100907A</b>		Laboratory Fortified Blank					Run: SUB-C136930			09/07/10 11:14
Sodium		50	mg/L	0.50	100	85	115			
<b>Sample ID: C10080752-007CMS2</b>		Sample Matrix Spike					Run: SUB-C136930			09/07/10 12:14
Sodium		141	mg/L	1.0	101	70	130			
<b>Sample ID: C10080752-007CMSD2</b>		Sample Matrix Spike Duplicate					Run: SUB-C136930			09/07/10 12:19
Sodium		142	mg/L	1.0	101	70	130	0.6	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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_27256
<b>Sample ID: MB-27256</b>	19	Method Blank					Run: SUB-C136716			08/31/10 22:43
Antimony		ND	mg/L	0.0003						
Arsenic		0.0009	mg/L	5E-05						
Barium		ND	mg/L	0.0002						
Beryllium		ND	mg/L	3E-05						
Boron		0.009	mg/L	0.003						
Cadmium		ND	mg/L	4E-05						
Chromium		0.0007	mg/L	3E-05						
Copper		0.0001	mg/L	5E-05						
Iron		0.005	mg/L	0.001						
Lead		9E-05	mg/L	5E-05						
Manganese		0.0003	mg/L	2E-05						
Molybdenum		ND	mg/L	0.00010						
Nickel		ND	mg/L	4E-05						
Selenium		ND	mg/L	3E-05						
Silver		ND	mg/L	4E-05						
Strontium		0.0002	mg/L	6E-05						
Thallium		ND	mg/L	0.0001						
Uranium		ND	mg/L	4E-05						
Zinc		0.01	mg/L	0.001						
<b>Sample ID: LCS3-27256</b>	19	Laboratory Control Sample					Run: SUB-C136716			08/31/10 22:50
Antimony		0.588	mg/L	0.050	118	85	115			S
Arsenic		0.512	mg/L	0.0010	102	85	115			
Barium		0.533	mg/L	0.10	107	85	115			
Beryllium		0.228	mg/L	0.010	91	85	115			
Boron		0.494	mg/L	0.10	97	85	115			
Cadmium		0.266	mg/L	0.010	106	85	115			
Chromium		0.526	mg/L	0.050	105	85	115			
Copper		0.529	mg/L	0.010	106	85	115			
Iron		2.47	mg/L	0.030	98	85	115			
Lead		0.526	mg/L	0.050	105	85	115			
Manganese		2.47	mg/L	0.010	99	85	115			
Molybdenum		0.552	mg/L	0.10	110	85	115			
Nickel		0.511	mg/L	0.050	102	85	115			
Selenium		0.533	mg/L	0.0010	107	85	115			
Silver		0.0513	mg/L	0.010	103	85	115			
Strontium		0.488	mg/L	0.10	98	85	115			
Thallium		0.515	mg/L	0.10	103	85	115			
Uranium		0.525	mg/L	0.00030	105	85	115			
Zinc		0.514	mg/L	0.010	100	85	115			
- Response for Antimony is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Sample ID: R10080398-001D</b>	19	Sample Matrix Spike					Run: SUB-C136716			08/31/10 23:59
Antimony		0.597	mg/L	0.050	119	70	130			
Arsenic		0.501	mg/L	0.0010	100	70	130			

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Batch: C_27256		
Sample ID: R10080398-001D	19	Sample Matrix Spike			Run: SUB-C136716			08/31/10 23:59		
Barium		0.552	mg/L	0.10	108	70	130			
Beryllium		0.201	mg/L	0.010	80	70	130			
Boron		0.521	mg/L	0.10	91	70	130			
Cadmium		0.254	mg/L	0.010	102	70	130			
Chromium		0.517	mg/L	0.050	103	70	130			
Copper		0.503	mg/L	0.010	101	70	130			
Iron		2.76	mg/L	0.030	99	70	130			
Lead		0.536	mg/L	0.050	107	70	130			
Manganese		2.52	mg/L	0.010	99	70	130			
Molybdenum		0.582	mg/L	0.10	116	70	130			
Nickel		0.490	mg/L	0.050	98	70	130			
Selenium		0.497	mg/L	0.0010	99	70	130			
Silver		0.0496	mg/L	0.010	99	70	130			
Strontium		3.26	mg/L	0.10		70	130			A
Thallium		0.524	mg/L	0.10	105	70	130			
Uranium		0.551	mg/L	0.00030	110	70	130			
Zinc		0.460	mg/L	0.010	91	70	130			
Sample ID: R10080398-001D	19	Sample Matrix Spike Duplicate			Run: SUB-C136716			09/01/10 00:05		
Antimony		0.590	mg/L	0.050	118	70	130	1.2	20	
Arsenic		0.506	mg/L	0.0010	101	70	130	1.1	20	
Barium		0.547	mg/L	0.10	107	70	130	0.8	20	
Beryllium		0.202	mg/L	0.010	81	70	130	0.9	20	
Boron		0.529	mg/L	0.10	93	70	130	1.6	20	
Cadmium		0.252	mg/L	0.010	101	70	130	0.7	20	
Chromium		0.537	mg/L	0.050	107	70	130	3.9	20	
Copper		0.512	mg/L	0.010	102	70	130	1.9	20	
Iron		2.77	mg/L	0.030	100	70	130	0.2	20	
Lead		0.541	mg/L	0.050	108	70	130	0.9	20	
Manganese		2.55	mg/L	0.010	100	70	130	1.2	20	
Molybdenum		0.580	mg/L	0.10	116	70	130	0.2	20	
Nickel		0.499	mg/L	0.050	100	70	130	1.7	20	
Selenium		0.500	mg/L	0.0010	100	70	130	0.5	20	
Silver		0.0486	mg/L	0.010	97	70	130	2.1	20	
Strontium		3.23	mg/L	0.10		70	130	1	20	A
Thallium		0.534	mg/L	0.10	107	70	130	2	20	
Uranium		0.573	mg/L	0.00030	115	70	130	3.9	20	
Zinc		0.467	mg/L	0.010	93	70	130	1.6	20	
Method: E200.8								Batch: C_R136716A		
Sample ID: R10080398-002D	23	Post Digestion Spike			Run: SUB-C136716			09/01/10 13:38		
Antimony		0.0562	mg/L	0.050	112	70	130			
Arsenic		0.0540	mg/L	0.0010	105	70	130			
Barium		0.0618	mg/L	0.0010	104	70	130			

### 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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.8										Batch: C_R136716A
<b>Sample ID:</b> R10080398-002D	23	Post Digestion Spike		Run: SUB-C136716				09/01/10 13:38		
Beryllium		0.0433	mg/L	0.010	87	70	130			
Boron		0.112	mg/L	0.10	94	70	130			
Cadmium		0.0500	mg/L	0.010	100	70	130			
Chromium		0.0522	mg/L	0.050	104	70	130			
Copper		0.0502	mg/L	0.010	100	70	130			
Iron		1.31	mg/L	0.030	103	70	130			
Lead		0.0523	mg/L	0.050	104	70	130			
Manganese		0.638	mg/L	0.010		70	130			A
Mercury		0.00519	mg/L	0.0010	102	70	130			
Molybdenum		0.0468	mg/L	0.0010	93	70	130			
Nickel		0.0497	mg/L	0.0010	99	70	130			
Selenium		0.0529	mg/L	0.0010	105	70	130			
Silicon		4.38	mg/L	0.10		70	130			A
Silver		0.0158	mg/L	0.010	79	70	130			
Strontium		2.35	mg/L	0.10		70	130			A
Thallium		0.0527	mg/L	0.0010	105	70	130			
Thorium 232		0.0535	mg/L	0.0010	107	70	130			
Uranium		0.0616	mg/L	0.00030	107	70	130			
Vanadium		0.0525	mg/L	0.0010	104	70	130			
Zinc		0.0493	mg/L	0.010	99	70	130			
<b>Sample ID:</b> R10080398-002D	23	Post Digestion Spike Duplicate		Run: SUB-C136716				09/01/10 13:45		
Antimony		0.0560	mg/L	0.050	112	70	130	0.4	20	
Arsenic		0.0544	mg/L	0.0010	106	70	130	0.7	20	
Barium		0.0618	mg/L	0.0010	104	70	130	0.1	20	
Beryllium		0.0434	mg/L	0.010	87	70	130	0.3	20	
Boron		0.115	mg/L	0.10	99	70	130	2.3	20	
Cadmium		0.0500	mg/L	0.010	100	70	130	0.1	20	
Chromium		0.0521	mg/L	0.050	104	70	130	0.1	20	
Copper		0.0505	mg/L	0.010	100	70	130	0.5	20	
Iron		1.34	mg/L	0.030	105	70	130	2.3	20	
Lead		0.0526	mg/L	0.050	105	70	130	0.5	20	
Manganese		0.650	mg/L	0.010		70	130	1.8	20	A
Mercury		0.00527	mg/L	0.0010	103	70	130	1.5	20	
Molybdenum		0.0497	mg/L	0.0010	99	70	130	6	20	
Nickel		0.0499	mg/L	0.0010	100	70	130	0.4	20	
Selenium		0.0535	mg/L	0.0010	106	70	130	1	20	
Silicon		4.44	mg/L	0.10		70	130	1.3	20	A
Silver		0.0183	mg/L	0.010	91	70	130	14	20	
Strontium		2.38	mg/L	0.10		70	130	1.3	20	A
Thallium		0.0529	mg/L	0.0010	106	70	130	0.3	20	
Thorium 232		0.0540	mg/L	0.0010	108	70	130	0.9	20	
Uranium		0.0622	mg/L	0.00030	108	70	130	1	20	
Vanadium		0.0531	mg/L	0.0010	105	70	130	1	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R136716A
<b>Sample ID: R10080398-002D</b>	23	Post Digestion Spike Duplicate				Run: SUB-C136716				09/01/10 13:45
Zinc		0.0498	mg/L	0.010	100	70	130	1	20	
<b>Sample ID: LRB</b>	23	Method Blank				Run: SUB-C136716				08/31/10 12:50
Silicon		ND	mg/L	0.0005						
Antimony		0.0007	mg/L	0.0002						
Arsenic		ND	mg/L	4E-05						
Barium		ND	mg/L	3E-05						
Beryllium		ND	mg/L	3E-05						
Boron		0.0004	mg/L							
Cadmium		ND	mg/L	7E-05						
Chromium		ND	mg/L	5E-05						
Copper		0.0002	mg/L	6E-05						
Iron		ND	mg/L	0.0001						
Lead		ND	mg/L	2E-05						
Manganese		ND	mg/L	2E-05						
Mercury		6E-05	mg/L	2E-05						
Molybdenum		0.0004	mg/L	8E-05						
Nickel		0.0002	mg/L	5E-05						
Selenium		ND	mg/L	5E-05						
Silver		ND	mg/L	8E-05						
Strontium		ND	mg/L	6E-05						
Thallium		ND	mg/L	2E-05						
Thorium 232		6E-05	mg/L	3E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		ND	mg/L	1E-05						
Zinc		0.003	mg/L	0.0001						
<b>Sample ID: LFB</b>	23	Laboratory Fortified Blank				Run: SUB-C136716				08/31/10 12:57
Silicon		0.595	mg/L	0.0050	114	85	115			
Antimony		0.0498	mg/L	0.0010	98	85	115			
Arsenic		0.0520	mg/L	0.0010	104	85	115			
Barium		0.0518	mg/L	0.0010	104	85	115			
Beryllium		0.0515	mg/L	0.0010	103	85	115			
Boron		0.0500	mg/L	0.0010	99	85	115			
Cadmium		0.0525	mg/L	0.0010	105	85	115			
Chromium		0.0518	mg/L	0.0010	104	85	115			
Copper		0.0527	mg/L	0.0010	105	85	115			
Iron		1.28	mg/L	0.012	102	85	115			
Lead		0.0520	mg/L	0.0010	104	85	115			
Manganese		0.0508	mg/L	0.0010	102	85	115			
Mercury		0.00522	mg/L	0.0010	103	85	115			
Molybdenum		0.0510	mg/L	0.0010	101	85	115			
Nickel		0.0521	mg/L	0.0010	104	85	115			
Selenium		0.0526	mg/L	0.0010	105	85	115			
Silver		0.0203	mg/L	0.0010	102	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>									Batch: C_R136716A	
<b>Sample ID: LFB</b>	23	Laboratory Fortified Blank				Run: SUB-C136716			08/31/10 12:57	
Strontium		0.0513	mg/L	0.0010	103	85	115			
Thallium		0.0515	mg/L	0.0010	103	85	115			
Thorium 232		0.0519	mg/L	0.0010	104	85	115			
Uranium		0.0519	mg/L	0.00030	104	85	115			
Vanadium		0.0519	mg/L	0.0010	104	85	115			
Zinc		0.0549	mg/L	0.0010	103	85	115			
<b>Method: E200.8</b>									Batch: C_27340	
<b>Sample ID: MB-27340</b>		Method Blank				Run: SUB-C137102			09/10/10 02:44	
Uranium		0.0001	mg/L	6E-05						
<b>Sample ID: LCS2-27340</b>		Laboratory Control Sample				Run: SUB-C137102			09/10/10 02:49	
Uranium		0.0994	mg/L	0.00030	99	85	115			
<b>Sample ID: R10080398-002I</b>		Post Digestion Spike				Run: SUB-C137102			09/10/10 03:10	
Uranium		0.0520	mg/L	0.00030	104	70	130			
<b>Sample ID: R10080398-002I</b>		Post Digestion Spike Duplicate				Run: SUB-C137102			09/10/10 03:36	
Uranium		0.0508	mg/L	0.00030	101	70	130	2.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0								Analytical Run: DIONEX_100825A		
Sample ID: CCV082510-11	5	Continuing Calibration Verification Standard							08/25/10 11:47	
Chloride		77.3	mg/L	1.00	103	90	110			
Fluoride		7.70	mg/L	0.10	102	90	110			
Nitrogen, Nitrate as N		7.67	mg/L	0.10	102	90	110			
Nitrogen, Nitrite as N		7.70	mg/L	0.10	103	90	110			
Sulfate		75.9	mg/L	1.0	101	90	110			
Method: E300.0								Batch: R47669		
Sample ID: LFB082510-10	5	Laboratory Fortified Blank				Run: DIONEX_100825A			08/25/10 11:29	
Chloride		41.1	mg/L	1.00	96	90	110			
Fluoride		3.92	mg/L	0.10	98	90	110			
Nitrogen, Nitrate as N		4.22	mg/L	0.10	105	90	110			
Nitrogen, Nitrite as N		4.21	mg/L	0.10	98	90	110			
Sulfate		40.8	mg/L	1.0	102	90	110			
Sample ID: R10080390-001BMS	5	Sample Matrix Spike				Run: DIONEX_100825A			08/25/10 12:22	
Chloride		43.8	mg/L	1.00	98	90	110			
Fluoride		4.38	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		4.61	mg/L	0.10	100	90	110			
Nitrogen, Nitrite as N		4.25	mg/L	0.10	106	90	110			
Sulfate		47.8	mg/L	1.0	97	90	110			
Sample ID: R10080390-001BMSD	5	Sample Matrix Spike Duplicate				Run: DIONEX_100825A			08/25/10 12:40	
Chloride		43.8	mg/L	1.00	98	90	110	0	10	
Fluoride		4.40	mg/L	0.10	97	90	110	0.4	10	
Nitrogen, Nitrate as N		4.61	mg/L	0.10	100	90	110	0.1	10	
Nitrogen, Nitrite as N		4.23	mg/L	0.10	106	90	110	0.4	10	
Sulfate		47.7	mg/L	1.0	96	90	110	0.2	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>								Batch: C_GrAB-0957		
<b>Sample ID: MB-GrAB-0957</b>	6	Method Blank				Run: SUB-C137155		09/09/10 03:26		
Gross Alpha		-0.5	pCi/L							U
Gross Alpha precision (±)		0.6	pCi/L							
Gross Alpha MDC		0.7	pCi/L							
Gross Beta		-0.8	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-0957</b>		Laboratory Control Sample				Run: SUB-C137155		09/09/10 03:26		
Gross Alpha		100	pCi/L	101		70	130			
<b>Sample ID: Cs137-GrAB-0957</b>		Laboratory Control Sample				Run: SUB-C137155		09/09/10 03:26		
Gross Beta		89	pCi/L	101		70	130			
<b>Sample ID: C10080978-001DMS</b>		Sample Matrix Spike				Run: SUB-C137155		09/09/10 03:26		
Gross Alpha		120	pCi/L	114		70	130			
<b>Sample ID: C10080978-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C137155		09/09/10 03:26		
Gross Alpha		120	pCi/L	115		70	130	1.2	18.7	
<b>Sample ID: C10080978-001DMS</b>		Sample Matrix Spike				Run: SUB-C137155		09/09/10 03:26		
Gross Beta		96	pCi/L	94		70	130			
<b>Sample ID: C10080978-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C137155		09/09/10 03:26		
Gross Beta		100	pCi/L	100		70	130	6.3	15.7	
<b>Sample ID: R10080398-001H</b>	6	Sample Duplicate				Run: SUB-C137155		09/10/10 03:35		
Gross Alpha		8.1	pCi/L					8.5	90.1	
Gross Alpha precision (±)		3.4	pCi/L							
Gross Alpha MDC		4.7	pCi/L							
Gross Beta		14	pCi/L					10	49.2	
Gross Beta precision (±)		2.9	pCi/L							
Gross Beta MDC		4.4	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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





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## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R137019
<b>Sample ID: LCS-R137019</b>	3	Laboratory Control Sample				Run: SUB-C137019				09/02/10 09:00
Americium 241		1100	pCi/L	20	137	70	130			S
Cesium 137		930	pCi/L	20	92	70	130			
Potassium 40		5800	pCi/L	20	87	70	130			
<b>Sample ID: MB-R137019</b>	2	Method Blank				Run: SUB-C137019				09/02/10 09:00
Potassium 40		ND	pCi/L							U
Gross Gamma		ND	pCi/L							U
<b>Sample ID: R10080398-001H</b>	4	Sample Duplicate				Run: SUB-C137019				09/02/10 09:00
Thorium 234		590	pCi/L	20				18	30	
Thorium 234 precision (±)		160	pCi/L							
Gross Gamma		590	pCi/L					18	30	
Gross Gamma precision (±)		160	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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Helena, MT 877-472-0711 • Billings, MT 808-735-4489 • Casper, WY 888-235-0515  
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-4759
<b>Sample ID: C10080902-001CMS</b>		Sample Matrix Spike					Run: SUB-C136932			09/07/10 21:44
Radium 226		15	pCi/L		96	70	130			
<b>Sample ID: C10080902-001CMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C136932			09/07/10 21:44
Radium 226		14	pCi/L		88	70	130	8.9	22.3	
<b>Sample ID: MB-RA226-4759</b>	3	Method Blank					Run: SUB-C136932			09/07/10 23:20
Radium 226		0.09	pCi/L							U
Radium 226 precision ( $\pm$ )		0.1	pCi/L							
Radium 226 MDC		0.1	pCi/L							
<b>Sample ID: LCS-RA226-4759</b>		Laboratory Control Sample					Run: SUB-C136932			09/07/10 23:20
Radium 226		7.2	pCi/L		89	70	130			
<b>Method: E903.0</b>										Batch: C_27340
<b>Sample ID: R10080398-001I</b>		Sample Matrix Spike					Run: SUB-C137305			09/15/10 17:33
Radium 226		38	pCi/L		115	70	130			
<b>Sample ID: R10080398-001I</b>		Sample Matrix Spike Duplicate					Run: SUB-C137305			09/15/10 17:33
Radium 226		35	pCi/L		105	70	130	7.4	22.8	
<b>Sample ID: LCS-27340</b>		Laboratory Control Sample					Run: SUB-C137305			09/15/10 21:17
Radium 226		17	pCi/L		112	70	130			
<b>Sample ID: MB-27340</b>	3	Method Blank					Run: SUB-C137305			09/15/10 21:17
Radium 226		-0.2	pCi/L							U
Radium 226 precision ( $\pm$ )		0.1	pCi/L							
Radium 226 MDC		0.3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>										Batch: C_27340
<b>Sample ID: R10080398-002I</b>		Sample Matrix Spike				Run: SUB-C137369				09/13/10 13:26
Thorium 230		5.5	pCi/L		95	70	130			
<b>Sample ID: R10080398-002I</b>		Sample Matrix Spike Duplicate				Run: SUB-C137369				09/13/10 13:26
Thorium 230		6.7	pCi/L		115	70	130	19	56.5	
<b>Sample ID: LCS-27340</b>		Laboratory Control Sample				Run: SUB-C137369				09/13/10 13:26
Thorium 230		5.4	pCi/L		105	70	130			
<b>Sample ID: MB-27340</b>	3	Method Blank				Run: SUB-C137369				09/13/10 13:26
Thorium 230		0.02	pCi/L							U
Thorium 230 MDC		0.2	pCi/L							
Thorium 230 precision (±)		0.2	pCi/L							
<b>Method: E907.0</b>										Batch: C_RA-TH-ISO-1246
<b>Sample ID: LCS-RA-TH-ISO-1246</b>		Laboratory Control Sample				Run: SUB-C137446				09/17/10 17:09
Thorium 230		4.3	pCi/L		83	70	130			
<b>Sample ID: R10080398-002H</b>		Sample Matrix Spike				Run: SUB-C137446				09/17/10 17:09
Thorium 230		12	pCi/L		93	70	130			
<b>Sample ID: R10080398-002H</b>		Sample Matrix Spike Duplicate				Run: SUB-C137446				09/17/10 17:09
Thorium 230		10	pCi/L		80	70	130	15	40.5	
<b>Sample ID: MB-RA-TH-ISO-1246</b>	3	Method Blank				Run: SUB-C137446				09/20/10 09:06
Thorium 230		0.02	pCi/L							U
Thorium 230 MDC		0.1	pCi/L							
Thorium 230 precision (±)		0.07	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b> Batch: T_PB-210-0009										
<b>Sample ID: LCS-PB-210-0009</b>		Laboratory Control Sample				Run: SUB-T36920				09/19/10 14:02
Lead 210		59	pCi/L		90	70	130			
<b>Sample ID: TAP WATERMS</b>		Sample Matrix Spike				Run: SUB-T36920				09/19/10 06:26
Lead 210		120	pCi/L		113	70	130			
<b>Sample ID: TAP WATERMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T36920				09/19/10 08:38
Lead 210		130	pCi/L		118	70	130	0	15.8	
<b>Method: E909.0M</b> Batch: T_PB-210-0015										
<b>Sample ID: MB-12297</b>	3	Method Blank				Run: SUB-T37064				09/29/10 23:12
Lead 210			pCi/L							U
Lead 210 precision (±)		4	pCi/L							
Lead 210 MDC		6	pCi/L							
<b>Sample ID: R10080398-001I</b>		Sample Matrix Spike				Run: SUB-T37064				09/30/10 07:58
Lead 210		440	pCi/L		81	70	130			
<b>Sample ID: R10080398-001I</b>		Sample Matrix Spike Duplicate				Run: SUB-T37064				09/30/10 10:09
Lead 210		490	pCi/L		89	70	130	9.1	15.6	

### 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

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Report Date:** 10/15/10  
**Work Order:** R10080398

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0312
<b>Sample ID: C10080917-004EMS</b>		Sample Matrix Spike				Run: SUB-C137063				09/07/10 09:24
Polonium 210		34	pCi/L		106	70	130			
<b>Sample ID: C10080917-004EMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C137063				09/07/10 09:24
Polonium 210		34	pCi/L		103	70	130	2	58.8	
<b>Sample ID: LCS-PO210-0312</b>		Laboratory Control Sample				Run: SUB-C137063				09/07/10 09:24
Polonium 210		16	pCi/L		99	70	130			
<b>Sample ID: MB-PO210-0312</b>	3	Method Blank				Run: SUB-C137063				09/07/10 09:24
Polonium 210		0.08	pCi/L							U
Polonium 210 MDC		0.6	pCi/L							
Polonium 210 precision (±)		0.3	pCi/L							
<b>Method: E912.0</b>										Batch: C_27340
<b>Sample ID: C10080917-001FMS</b>		Sample Matrix Spike				Run: SUB-C137367				09/15/10 11:06
Polonium 210		25	pCi/L		125	70	130			
<b>Sample ID: C10080917-001FMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C137367				09/15/10 11:06
Polonium 210		25	pCi/L		121	70	130	3.3	53.6	
<b>Sample ID: LCS-27340</b>		Laboratory Control Sample				Run: SUB-C137367				09/15/10 11:06
Polonium 210		100	pCi/L		131	70	130			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
<b>Sample ID: MB-27340</b>	3	Method Blank				Run: SUB-C137367				09/15/10 11:06
Polonium 210		-0.2	pCi/L							U
Polonium 210 precision (±)		1	pCi/L							
Polonium 210 MDC		3	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.



# Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT (Provide as much information as possible.)

Company Name:

Scott Env.

Project Name, PWS, Permit, Etc.

Dewey Burdock PoursTech

Sample Origin

EPA/State Compliance:

State:

Yes ☐ No ☐

Report Mail Address:

PoursTech / Scott Env.

Contact Name:

Phone/Fax:

Email:

Sampler: (Please Print)

Invoice Address:

PoursTech

Invoice Contact & Phone:

Allen Scott 603-4809

Purchase Order:

Quote/Bottle Order:

Special Report/Formats:

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

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

## ANALYSIS REQUESTED

SEE ATTACHED

Standard Turnaround (TAT)

R U S H

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

Comments:

Shipped by:

Cooler Date:

Receipt Temp

On Ice: ☒ Y ☐ N

Custody Seal

On Bottle

On Cooler

Intact

Signature

Match

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

Y N

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Y N

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Y N

Y N

Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	ANALYSIS REQUESTED		Standard Turnaround (TAT)	Contact ELL prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Comments:	Shipped by:	Cooler Date:	Receipt Temp 1.4 °C	On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Custody Seal	On Bottle	On Cooler	Intact	Signature	Match	
				SEE ATTACHED															
1																			
2	08-09-21-01	8-23-26	WATER																
3	08-09-21-02	8-23-26	CI																
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Custody  
Record  
MUST be  
Signed

Relinquished by (print):  
Allen Scott

Date/Time:  
7:12 AM 8-24-20

Signature:  
Allen Scott

Relinquished by (print):  
Dewey Burdock

Date/Time:  
8:24:10 8-24-20

Signature:  
Dewey Burdock

Received by (print):  
Dewey Burdock

Date/Time:  
8:24:10 8-24-20

Signature:  
Dewey Burdock

Signature:  
Dewey Burdock

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



## ANALYTICAL SUMMARY REPORT

December 20, 2010

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10090519

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. Rapid City SD received the following 2 samples for Powertech USA Inc on 9/29/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10090519-001	DB-09-21-01	09/28/10 0:00	09/29/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10090519-002	DB-09-21-02	09/28/10 0:00	09/29/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2010.12.20 14:31:17 -07:00



**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10090519

**Report Date:** 12/20/10

## CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

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

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

Comments imported for SUBBED Workorder: C10100037

### GROSS GAMMA ANALYSIS

The gamma spectrometry software has identified Thorium 234 as a potential component of this sample. The value generated by the software has been reported here. However, the Thorium 234 gamma ray peaks reside in the middle of excessive background contributions from Compton scatter, x-rays from thorium, and interfering gamma ray peaks from other naturally occurring radionuclides present in the metal can and sample. This means that the value for Thorium 234 likely has a positive bias. The only method to determine the actual concentration of Th-234 would be by radiochemical separation of thorium and gamma spectrometric analysis on the isolate thorium fraction.

End of comments imported for SUBBED Workorder: C10100037





# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	166	mg/L		5		1	A2320 B	10/08/10 10:07/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	10/08/10 10:07/hv
Bicarbonate as HCO <sub>3</sub>	202	mg/L		5		1	A2320 B	10/08/10 10:07/hv
Calcium	95.3	mg/L		0.5		2	E200.7	10/15/10 11:41/eli-c
Chloride	8	mg/L	B	1		1	E300.0	10/01/10 04:55/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	10/01/10 04:55/jmh
Magnesium	34.8	mg/L		0.5		2	E200.7	10/15/10 11:41/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	09/30/10 15:20/jmh
Nitrogen, Nitrate as N	ND	mg/L	D	2		20	E300.0	09/29/10 21:49/jmh
Nitrogen, Nitrite as N	ND	mg/L	D	2		20	E300.0	09/29/10 21:49/jmh
Potassium	11.6	mg/L		0.5		2	E200.7	10/15/10 11:41/eli-c
Sodium	169	mg/L	D	0.6		2	E200.7	10/15/10 11:41/eli-c
Sulfate	545	mg/L	D	20		20	E300.0	09/29/10 21:49/jmh
Silica	9.3	mg/L		0.2		2	E200.7	10/15/10 11:41/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1390	umhos/cm		5.0		1	A2510 B	10/05/10 15:49/tb
Oxidation-Reduction Potential	260	mV				1	A2580 B	10/05/10 16:45/jmh
pH	7.77	s.u.		0.01		1	A4500-H B	10/05/10 08:54/tb
Sodium Adsorption Ratio (SAR)	3.8	unitless		0.10		1	Calculation	11/09/10 16:57/ADM
Solids, Total Dissolved TDS @ 180 C	990	mg/L	D	10		1	A2540 C	09/29/10 16:55/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	10/12/10 14:57/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	10/12/10 14:57/eli-c
Barium	ND	mg/L		0.1		1	E200.8	10/12/10 14:57/eli-c
Boron	ND	mg/L		0.1		1	E200.8	10/12/10 14:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	10/12/10 14:57/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	10/12/10 14:57/eli-c
Copper	ND	mg/L		0.01		1	E200.8	10/12/10 14:57/eli-c
Iron	ND	mg/L		0.03		1	E200.8	10/12/10 14:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	10/12/10 14:57/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	10/12/10 14:57/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	10/12/10 14:57/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	10/12/10 14:57/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	10/12/10 14:57/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	10/09/10 15:42/eli-c
Silver	ND	mg/L		0.005		1	E200.8	10/12/10 14:57/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	10/12/10 14:57/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

B - The analyte was detected in the method blank.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	ND	mg/L		0.0003		1	E200.8		10/12/10 14:57/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8		10/12/10 14:57/eli-c
Zinc	ND	mg/L		0.01		1	E200.8		10/12/10 14:57/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003		1	E200.8		10/14/10 00:42/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001		1	A3114 B		10/09/10 12:34/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B		10/09/10 16:30/eli-c
RADIONUCLIDES - DISSOLVED									
Gross Alpha	-3	pCi/L	U			1	E900.0		10/28/10 02:53/eli-ca
Gross Alpha precision (±)	3.2	pCi/L				1	E900.0		10/28/10 02:53/eli-ca
Gross Alpha MDC	5.6	pCi/L				1	E900.0		10/28/10 02:53/eli-ca
Gross Beta	8.6	pCi/L				1	E900.0		10/28/10 02:53/eli-ca
Gross Beta precision (±)	2.8	pCi/L				1	E900.0		10/28/10 02:53/eli-ca
Gross Beta MDC	4.4	pCi/L				1	E900.0		10/28/10 02:53/eli-ca
Lead 210	1.8	pCi/L	U			1	E909.0M		10/30/10 21:10/eli-cs
Lead 210 precision (±)	1.2	pCi/L				1	E909.0M		10/30/10 21:10/eli-cs
Lead 210 MDC	2.0	pCi/L				1	E909.0M		10/30/10 21:10/eli-cs
Polonium 210	-0.024	pCi/L	U			1	E912.0		10/18/10 08:37/eli-ca
Polonium 210 MDC	0.53	pCi/L				1	E912.0		10/18/10 08:37/eli-ca
Polonium 210 precision (±)	0.20	pCi/L				1	E912.0		10/18/10 08:37/eli-ca
Radium 226	1.8	pCi/L				1	E903.0		10/13/10 14:58/eli-ca
Radium 226 precision (±)	0.3	pCi/L				1	E903.0		10/13/10 14:58/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0		10/13/10 14:58/eli-ca
Thorium 230	0.04	pCi/L	U			1	E907.0		10/19/10 13:09/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0		10/19/10 13:09/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0		10/19/10 13:09/eli-c
Gross Gamma	390	pCi/L				1	E901.1		10/04/10 09:40/eli-c
Gross Gamma precision (±)	140	pCi/L				1	E901.1		10/04/10 09:40/eli-c
- See Case Narrative regarding Gross Gamma analysis.									
RADIONUCLIDES - SUSPENDED									
Lead 210	-0.07	pCi/L	U			1	E909.0M		11/14/10 11:18/eli-cs
Lead 210 precision (±)	0.9	pCi/L				1	E909.0M		11/14/10 11:18/eli-cs
Lead 210 MDC	1.5	pCi/L				1	E909.0M		11/14/10 11:18/eli-cs
Polonium 210	-0.0041	pCi/L	U			1	E912.0		10/20/10 08:49/eli-ca
Polonium 210 precision (±)	0.075	pCi/L				1	E912.0		10/20/10 08:49/eli-ca

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

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



## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.19	pCi/L				1	E912.0	10/20/10 08:49/eli-ca
Radium 226	-0.06	pCi/L	U			1	E903.0	10/25/10 13:50/eli-c
Radium 226 precision (±)	0.03	pCi/L				1	E903.0	10/25/10 13:50/eli-c
Radium 226 MDC	0.07	pCi/L				1	E903.0	10/25/10 13:50/eli-c
Thorium 230	0.03	pCi/L	U			1	E907.0	10/20/10 15:27/eli-c
Thorium 230 MDC	0.09	pCi/L				1	E907.0	10/20/10 15:27/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E907.0	10/20/10 15:27/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	232	pCi/L		100		1	D5072-92	10/01/10 00:00/kl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	10/19/10 02:15/eli-c
Arsenic	0.002	mg/L	B	0.001		1	E200.8	10/19/10 02:15/eli-c
Barium	ND	mg/L		0.1		1	E200.7	10/13/10 22:41/eli-c
Beryllium	ND	mg/L		0.001		1	E200.7	10/13/10 22:41/eli-c
Boron	ND	mg/L		0.1		1	E200.7	10/13/10 22:41/eli-c
Cadmium	ND	mg/L		0.005		1	E200.7	10/13/10 22:41/eli-c
Chromium	ND	mg/L		0.05		1	E200.7	10/13/10 22:41/eli-c
Copper	ND	mg/L		0.01		1	E200.7	10/13/10 22:41/eli-c
Iron	0.23	mg/L		0.03		1	E200.7	10/13/10 22:41/eli-c
Lead	ND	mg/L		0.001		1	E200.8	10/19/10 02:15/eli-c
Manganese	0.05	mg/L		0.01		1	E200.7	10/13/10 22:41/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	10/01/10 15:52/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.7	10/13/10 22:41/eli-c
Nickel	ND	mg/L		0.05		1	E200.7	10/13/10 22:41/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	10/19/10 02:15/eli-c
Silver	ND	mg/L		0.005		1	E200.7	10/13/10 22:41/eli-c
Strontium	2.7	mg/L		0.1		1	E200.7	10/13/10 22:41/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	10/19/10 02:15/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	10/19/10 02:15/eli-c
Zinc	ND	mg/L		0.01		1	E200.7	10/13/10 22:41/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	1.23	%				1	A1030 E	11/09/10 00:00/kl
Anions	14.9	meq/L				1	A1030 E	11/09/10 00:00/kl
Cations	15.3	meq/L				1	A1030 E	11/09/10 00:00/kl
Solids, Total Dissolved Calculated	988	mg/L				1	A1030 E	11/09/10 00:00/kl
TDS Balance (0.80 - 1.20)	1.00					1	A1030 E	11/09/10 00:00/kl

**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.  
B - The analyte was detected in the method blank.



## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	192	mg/L		5		1	A2320 B	10/08/10 10:11/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	10/08/10 10:11/hv
Bicarbonate as HCO <sub>3</sub>	234	mg/L		5		1	A2320 B	10/08/10 10:11/hv
Calcium	166	mg/L		0.5		2	E200.7	10/15/10 11:53/eli-c
Chloride	10	mg/L	B	1		1	E300.0	10/01/10 05:13/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	10/01/10 05:13/jmh
Magnesium	47.9	mg/L		0.5		2	E200.7	10/15/10 11:53/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	09/30/10 15:39/jmh
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	09/29/10 23:53/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	09/29/10 23:53/jmh
Potassium	11.6	mg/L		0.5		2	E200.7	10/15/10 11:53/eli-c
Sodium	132	mg/L	D	0.6		2	E200.7	10/15/10 11:53/eli-c
Sulfate	687	mg/L	D	20		20	E300.0	09/29/10 23:00/jmh
Silica	8.6	mg/L		0.2		2	E200.7	10/15/10 11:53/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1560	umhos/cm		5.0		1	A2510 B	10/05/10 15:51/tb
Oxidation-Reduction Potential	290	mV				1	A2580 B	10/05/10 16:45/jmh
pH	7.44	s.u.		0.01		1	A4500-H B	10/05/10 09:01/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	11/09/10 16:57/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	09/29/10 16:55/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	10/12/10 15:03/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	10/12/10 15:03/eli-c
Barium	ND	mg/L		0.1		1	E200.8	10/12/10 15:03/eli-c
Boron	ND	mg/L		0.1		1	E200.8	10/12/10 15:03/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	10/12/10 15:03/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	10/12/10 15:03/eli-c
Copper	ND	mg/L		0.01		1	E200.8	10/12/10 15:03/eli-c
Iron	ND	mg/L		0.03		1	E200.8	10/12/10 15:03/eli-c
Lead	ND	mg/L		0.001		1	E200.8	10/12/10 15:03/eli-c
Manganese	0.53	mg/L		0.01		1	E200.8	10/12/10 15:03/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	10/12/10 15:03/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	10/12/10 15:03/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	10/12/10 15:03/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	10/09/10 15:48/eli-c
Silver	ND	mg/L		0.005		1	E200.8	10/12/10 15:03/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	10/12/10 15:03/eli-c

**Report Definitions:**  
RL - Analyte reporting limit.  
QCL - Quality control limit.  
B - The analyte was detected in the method blank.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	0.0081	mg/L		0.0003		1	E200.8	10/12/10 15:03/eli-c	
Vanadium	ND	mg/L		0.1		1	E200.8	10/12/10 15:03/eli-c	
Zinc	ND	mg/L		0.01		1	E200.8	10/12/10 15:03/eli-c	
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003		1	E200.8	10/14/10 00:46/eli-c	
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001		1	A3114 B	10/09/10 12:41/eli-c	
Selenium-VI	ND	mg/L		0.001		1	A3114 B	10/09/10 16:30/eli-c	
RADIONUCLIDES - DISSOLVED									
Gross Alpha	20.5	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Gross Alpha precision (±)	5.2	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Gross Alpha MDC	6.9	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Gross Beta	21.3	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Gross Beta precision (±)	3.9	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Gross Beta MDC	5.9	pCi/L				1	E900.0	10/28/10 02:53/eli-ca	
Lead 210	1.5	pCi/L	U			1	E909.0M	10/30/10 23:12/eli-cs	
Lead 210 precision (±)	1.2	pCi/L				1	E909.0M	10/30/10 23:12/eli-cs	
Lead 210 MDC	2.0	pCi/L				1	E909.0M	10/30/10 23:12/eli-cs	
Polonium 210	-0.075	pCi/L	U			1	E912.0	10/28/10 09:35/eli-ca	
Polonium 210 MDC	1.4	pCi/L				1	E912.0	10/28/10 09:35/eli-ca	
Polonium 210 precision (±)	0.50	pCi/L				1	E912.0	10/28/10 09:35/eli-ca	
Radium 226	2.0	pCi/L				1	E903.0	10/13/10 14:58/eli-ca	
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	10/13/10 14:58/eli-ca	
Radium 226 MDC	0.1	pCi/L				1	E903.0	10/13/10 14:58/eli-ca	
Thorium 230	0.008	pCi/L	U			1	E907.0	10/19/10 13:09/eli-c	
Thorium 230 MDC	0.1	pCi/L				1	E907.0	10/19/10 13:09/eli-c	
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	10/19/10 13:09/eli-c	
Gross Gamma	470	pCi/L				1	E901.1	10/04/10 09:40/eli-c	
Gross Gamma precision (±)	160	pCi/L				1	E901.1	10/04/10 09:40/eli-c	
- See Case Narrative regarding Gross Gamma analysis.									
RADIONUCLIDES - SUSPENDED									
Lead 210	-0.6	pCi/L	U			1	E909.0M	11/14/10 17:52/eli-cs	
Lead 210 precision (±)	0.9	pCi/L				1	E909.0M	11/14/10 17:52/eli-cs	
Lead 210 MDC	1.5	pCi/L				1	E909.0M	11/14/10 17:52/eli-cs	
Polonium 210	-0.0047	pCi/L	U			1	E912.0	10/20/10 08:49/eli-ca	
Polonium 210 precision (±)	0.086	pCi/L				1	E912.0	10/20/10 08:49/eli-ca	

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

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



## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10090519-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/20/10  
**Collection Date:** 09/28/10  
**Date Received:** 09/29/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
RADIONUCLIDES - SUSPENDED									
Polonium 210 MDC	0.22	pCi/L					1	E912.0	10/20/10 08:49/eli-ca
Radium 226	-0.02	pCi/L	U				1	E903.0	10/25/10 13:50/eli-c
Radium 226 precision (±)	0.03	pCi/L					1	E903.0	10/25/10 13:50/eli-c
Radium 226 MDC	0.05	pCi/L					1	E903.0	10/25/10 13:50/eli-c
Thorium 230	0.05	pCi/L	U				1	E907.0	10/20/10 15:27/eli-c
Thorium 230 MDC	0.08	pCi/L					1	E907.0	10/20/10 15:27/eli-c
Thorium 230 precision (±)	0.07	pCi/L					1	E907.0	10/20/10 15:27/eli-c
RADIONUCLIDES - TOTAL									
Radon 222	300	pCi/L		100			1	D5072-92	10/01/10 00:00/kl
TOTAL METALS ANALYSES									
Antimony	ND	mg/L		0.003			1	E200.8	10/19/10 02:21/eli-c
Arsenic	0.002	mg/L	B	0.001			1	E200.8	10/19/10 02:21/eli-c
Barium	ND	mg/L		0.1			1	E200.7	10/13/10 22:45/eli-c
Beryllium	ND	mg/L		0.001			1	E200.7	10/13/10 22:45/eli-c
Boron	ND	mg/L		0.1			1	E200.7	10/13/10 22:45/eli-c
Cadmium	ND	mg/L		0.005			1	E200.7	10/13/10 22:45/eli-c
Chromium	ND	mg/L		0.05			1	E200.7	10/13/10 22:45/eli-c
Copper	ND	mg/L		0.01			1	E200.7	10/13/10 22:45/eli-c
Iron	0.03	mg/L		0.03			1	E200.7	10/13/10 22:45/eli-c
Lead	ND	mg/L		0.001			1	E200.8	10/19/10 02:21/eli-c
Manganese	0.57	mg/L		0.01			1	E200.7	10/13/10 22:45/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	10/01/10 15:54/eli-b
Molybdenum	ND	mg/L		0.1			1	E200.7	10/13/10 22:45/eli-c
Nickel	ND	mg/L		0.05			1	E200.7	10/13/10 22:45/eli-c
Selenium	ND	mg/L		0.001			1	E200.8	10/19/10 02:21/eli-c
Silver	ND	mg/L		0.005			1	E200.7	10/13/10 22:45/eli-c
Strontium	2.3	mg/L		0.1			1	E200.7	10/13/10 22:45/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	10/19/10 02:21/eli-c
Uranium	0.0085	mg/L		0.0003			1	E200.8	10/19/10 02:21/eli-c
Zinc	ND	mg/L		0.01			1	E200.7	10/13/10 22:45/eli-c
DATA QUALITY									
A/C Balance (± 5)	-0.400	%					1	A1030 E	11/09/10 00:00/kl
Anions	18.4	meq/L					1	A1030 E	11/09/10 00:00/kl
Cations	18.3	meq/L					1	A1030 E	11/09/10 00:00/kl
Solids, Total Dissolved Calculated	1190	mg/L					1	A1030 E	11/09/10 00:00/kl
TDS Balance (0.80 - 1.20)	1.00						1	A1030 E	11/09/10 00:00/kl

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

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
B - The analyte was detected in the method blank.



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2320 B		Batch: 101008A-ALK-SEL-W								
<b>Sample ID:</b> LCS1_101008A		Laboratory Control Sample								
Alkalinity, Total as CaCO <sub>3</sub>		964	mg/L	5.0	96	90	110			10/08/10 09:32
<b>Sample ID:</b> MBLK1_101008A		Method Blank								
Alkalinity, Total as CaCO <sub>3</sub>		ND	mg/L	3						10/08/10 09:39
<b>Sample ID:</b> R10090445-001AMS		Sample Matrix Spike								
Alkalinity, Total as CaCO <sub>3</sub>		288	mg/L	5.0	125	80	120			10/08/10 09:53 S
<b>Sample ID:</b> R10090445-001AMSD		Sample Matrix Spike Duplicate								
Alkalinity, Total as CaCO <sub>3</sub>		286	mg/L	5.0	123	80	120	0.7	10	10/08/10 10:00 S

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B		Batch: 101005_1_COND-PROBE-W								
Sample ID: LCS1-1_101005	Laboratory Control Sample			Run: PH_COND2-R_101005B				10/05/10 15:23		
Conductivity @ 25 C		153	umhos/cm	5.0	102	90	110			
Sample ID: LCS2-1_101005	Laboratory Control Sample			Run: PH_COND2-R_101005B				10/05/10 15:25		
Conductivity @ 25 C		4980	umhos/cm	5.0	100	90	110			
Sample ID: LCS_COND-1_101005	Laboratory Control Sample			Run: PH_COND2-R_101005B				10/05/10 15:27		
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_101005	Method Blank			Run: PH_COND2-R_101005B				10/05/10 15:29		
Conductivity @ 25 C		ND	umhos/cm	5						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C								Batch: 100929A-SLDS-TDS-W		
<b>Sample ID:</b> MBLK1_100929A		Method Blank				Run: BAL-4-R_100929B		09/29/10 16:55		
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	5						
<b>Sample ID:</b> LCS1_100929A		Laboratory Control Sample				Run: BAL-4-R_100929B		09/29/10 16:55		
Solids, Total Dissolved TDS @ 180 C		210	mg/L	10	105	90	110			
<b>Sample ID:</b> R10090474-001BMS		Sample Matrix Spike				Run: BAL-4-R_100929B		09/29/10 16:55		
Solids, Total Dissolved TDS @ 180 C		1700	mg/L	10	105	90	110			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2580 B								Batch: 101005-ORP-ISE-W		
<b>Sample ID:</b> LCS		Laboratory Control Sample				Run: PH_COND1-R_101005A		10/05/10 16:45		
Oxidation-Reduction Potential		480	mV		101	95	105			
<b>Sample ID:</b> R10090519-001F		Sample Duplicate				Run: PH_COND1-R_101005A		10/05/10 16:45		
Oxidation-Reduction Potential		280	mV					6.6	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_27769
<b>Sample ID: MB-27769</b>		Method Blank					Run: SUB-C138337			10/09/10 12:30
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LCS-27769</b>		Laboratory Control Sample					Run: SUB-C138337			10/09/10 12:32
Selenium-IV		0.049	mg/L	0.0010	99	90	110			
<b>Sample ID: R10090519-001E</b>		Sample Matrix Spike					Run: SUB-C138337			10/09/10 12:36
Selenium-IV		0.049	mg/L	0.0010	99	85	115			
<b>Sample ID: R10090519-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C138337			10/09/10 12:39
Selenium-IV		0.049	mg/L	0.0010	98	85	115	1.1	10	
<b>Method: A3114 B</b>										Batch: C_27769
<b>Sample ID: MB-27769</b>		Method Blank					Run: SUB-C138338			10/09/10 15:22
Selenium		ND	mg/L	0.0003						
<b>Sample ID: LCS-27769</b>		Laboratory Control Sample					Run: SUB-C138338			10/09/10 15:39
Selenium		0.061	mg/L	0.0010	122	90	110			S
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Sample ID: R10090519-001E</b>		Sample Matrix Spike					Run: SUB-C138338			10/09/10 15:44
Selenium		0.042	mg/L	0.0010	84	85	115			S
<b>Sample ID: R10090519-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C138338			10/09/10 15:46
Selenium		0.040	mg/L	0.0010	80	85	115	5.6	15	S

### Qualifiers:

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MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B									Batch: 101005_1_PH-W	
<b>Sample ID:</b> LCS_pH-1_101005		Laboratory Control Sample				Run: PH_COND2-R_101005A				10/05/10 08:48
pH		7.41	s.u.	0.010	100	98.55	101.45			
<b>Sample ID:</b> R10090519-001ADUP		Sample Duplicate				Run: PH_COND2-R_101005A				10/05/10 08:57
pH		7.77	s.u.	0.010				0.0	1.25	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b> Batch: A2010-09-30_2_NH3_01										
<b>Sample ID: MBLK-2</b>		Method Blank					Run: TECHAA2-R_100930A			09/30/10 14:37
Nitrogen, Ammonia as N		ND	mg/L	0.01						
<b>Sample ID: LFB-3</b>		Laboratory Fortified Blank					Run: TECHAA2-R_100930A			09/30/10 14:41
Nitrogen, Ammonia as N		0.26	mg/L	0.10	103	90	110			
<b>Sample ID: R10090519-002BMS</b>		Sample Matrix Spike					Run: TECHAA2-R_100930A			09/30/10 15:40
Nitrogen, Ammonia as N		0.23	mg/L	0.10	93	80	120			
<b>Sample ID: R10090519-002BMSD</b>		Sample Matrix Spike Duplicate					Run: TECHAA2-R_100930A			09/30/10 15:41
Nitrogen, Ammonia as N		0.24	mg/L	0.10	95	80	120	2.6	10	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_27779
<b>Sample ID: MB-27779</b>	13	Method Blank					Run: SUB-C138497			10/13/10 21:44
Barium		ND	mg/L	0.002						
Beryllium		ND	mg/L	0.0001						
Boron		0.01	mg/L	0.008						
Cadmium		ND	mg/L	0.001						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.008						
Manganese		ND	mg/L	0.0008						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Silver		ND	mg/L	0.001						
Strontium		0.0006	mg/L	0.0002						
Zinc		ND	mg/L	0.008						
<b>Sample ID: LCS3-27779</b>	13	Laboratory Control Sample					Run: SUB-C138497			10/13/10 21:48
Barium		0.550	mg/L	0.10	110	85	115			
Beryllium		0.273	mg/L	0.010	109	85	115			
Boron		0.525	mg/L	0.10	103	85	115			
Cadmium		0.268	mg/L	0.010	107	85	115			
Chromium		0.540	mg/L	0.050	108	85	115			
Copper		0.540	mg/L	0.010	108	85	115			
Iron		2.81	mg/L	0.030	112	85	115			
Manganese		2.71	mg/L	0.010	108	85	115			
Molybdenum		0.540	mg/L	0.10	108	85	115			
Nickel		0.556	mg/L	0.050	111	85	115			
Silver		0.0511	mg/L	0.010	102	85	115			
Strontium		0.547	mg/L	0.10	109	85	115			
Zinc		0.544	mg/L	0.010	109	85	115			
<b>Sample ID: R10090519-002D</b>	13	Sample Matrix Spike					Run: SUB-C138497			10/13/10 22:49
Barium		0.546	mg/L	0.10	107	70	130			
Beryllium		0.265	mg/L	0.010	106	70	130			
Boron		0.606	mg/L	0.10	107	70	130			
Cadmium		0.262	mg/L	0.010	105	70	130			
Chromium		0.532	mg/L	0.050	106	70	130			
Copper		0.540	mg/L	0.010	108	70	130			
Iron		2.77	mg/L	0.030	110	70	130			
Manganese		3.23	mg/L	0.010	106	70	130			
Molybdenum		0.530	mg/L	0.10	106	70	130			
Nickel		0.540	mg/L	0.050	108	70	130			
Silver		0.0529	mg/L	0.010	106	70	130			
Strontium		2.90	mg/L	0.10	70	70	130			A
Zinc		0.534	mg/L	0.010	107	70	130			

### Qualifiers:

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ND - Not detected at the reporting limit.

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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/20/10

Project: Dewey Groundwater Sampling

Work Order: R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_27779
<b>Sample ID: R10090519-002D</b>	13	Sample Matrix Spike Duplicate		Run: SUB-C138497		10/13/10 22:53				
Barium		0.556	mg/L	0.10	109	70	130	1.8	20	
Beryllium		0.272	mg/L	0.010	109	70	130	2.4	20	
Boron		0.629	mg/L	0.10	112	70	130	3.7	20	
Cadmium		0.269	mg/L	0.010	108	70	130	2.7	20	
Chromium		0.543	mg/L	0.050	109	70	130	2.0	20	
Copper		0.549	mg/L	0.010	110	70	130	1.7	20	
Iron		2.84	mg/L	0.030	112	70	130	2.2	20	
Manganese		3.30	mg/L	0.010	109	70	130	2.1	20	
Molybdenum		0.547	mg/L	0.10	109	70	130	3.2	20	
Nickel		0.558	mg/L	0.050	112	70	130	3.3	20	
Silver		0.0528	mg/L	0.010	106	70	130	0.2	20	
Strontium		3.04	mg/L	0.10		70	130	4.6	20	A
Zinc		0.545	mg/L	0.010	109	70	130	2.0	20	
<b>Method: E200.7</b>										Batch: C_R138676
<b>Sample ID: MB-101015A</b>	4	Method Blank		Run: SUB-C138676		10/15/10 10:48				
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
<b>Sample ID: LFB-101015A</b>	5	Laboratory Fortified Blank		Run: SUB-C138676		10/15/10 10:53				
Calcium		49	mg/L	0.50	97	85	115			
Magnesium		50	mg/L	0.50	100	85	115			
Potassium		46	mg/L	0.50	93	85	115			
Sodium		49	mg/L	0.50	99	85	115			
Silica		0.96	mg/L	0.21	96	85	115			
<b>Sample ID: R10090519-001C</b>	4	Sample Matrix Spike		Run: SUB-C138676		10/15/10 11:45				
Calcium		193	mg/L	1.0	96	70	130			
Magnesium		133	mg/L	1.0	97	70	130			
Potassium		102	mg/L	1.0	89	70	130			
Sodium		273	mg/L	1.0	102	70	130			
<b>Sample ID: R10090519-001C</b>	4	Sample Matrix Spike Duplicate		Run: SUB-C138676		10/15/10 11:49				
Calcium		194	mg/L	1.0	96	70	130	0.3	20	
Magnesium		133	mg/L	1.0	96	70	130	0.2	20	
Potassium		102	mg/L	1.0	89	70	130	0.2	20	
Sodium		268	mg/L	1.0	98	70	130	1.7	20	

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R138415A
<b>Sample ID: C10091252-010BMS4</b> 18 Post Digestion Spike										Run: SUB-C138415 10/12/10 14:08
Aluminum		0.0597	mg/L	0.10	96	70	130			
Arsenic		0.0525	mg/L	0.0010	105	70	130			
Barium		0.0882	mg/L	0.10	102	70	130			
Boron		0.117	mg/L	0.10	95	70	130			
Cadmium		0.0502	mg/L	0.010	100	70	130			
Chromium		0.0508	mg/L	0.050	102	70	130			
Copper		0.0512	mg/L	0.010	102	70	130			
Iron		1.28	mg/L	0.030	99	70	130			
Lead		0.0516	mg/L	0.050	103	70	130			
Manganese		0.0748	mg/L	0.010	97	70	130			
Mercury		0.00498	mg/L	0.0010	100	70	130			
Molybdenum		0.0557	mg/L	0.10	103	70	130			
Nickel		0.0497	mg/L	0.050	99	70	130			
Silver		0.0182	mg/L	0.010	91	70	130			
Thorium 232		0.0500	mg/L	0.0010	100	70	130			
Uranium		0.0533	mg/L	0.00030	100	70	130			
Vanadium		0.0513	mg/L	0.10	103	70	130			
Zinc		0.0538	mg/L	0.010	104	70	130			
<b>Sample ID: C10091252-010BMSD4</b> 18 Post Digestion Spike Duplicate										Run: SUB-C138415 10/12/10 14:15
Aluminum		0.0612	mg/L	0.0010	99	70	130	2.4	20	
Arsenic		0.0539	mg/L	0.0010	108	70	130	2.7	20	
Barium		0.0900	mg/L	0.0010	105	70	130	2.0	20	
Boron		0.120	mg/L	0.10	100	70	130	2.1	20	
Cadmium		0.0518	mg/L	0.010	104	70	130	3.2	20	
Chromium		0.0522	mg/L	0.050	104	70	130	2.8	20	
Copper		0.0521	mg/L	0.010	104	70	130	1.7	20	
Iron		1.32	mg/L	0.030	103	70	130	3.5	20	
Lead		0.0535	mg/L	0.050	107	70	130	3.7	20	
Manganese		0.0767	mg/L	0.010	101	70	130	2.5	20	
Mercury		0.00524	mg/L	0.0010	105	70	130	5.0	20	
Molybdenum		0.0588	mg/L	0.0010	109	70	130	5.4	20	
Nickel		0.0506	mg/L	0.0010	101	70	130	1.8	20	
Silver		0.0206	mg/L	0.010	103	70	130	12	20	
Thorium 232		0.0521	mg/L	0.0010	104	70	130	3.9	20	
Uranium		0.0554	mg/L	0.00030	104	70	130	3.9	20	
Vanadium		0.0524	mg/L	0.0010	105	70	130	2.1	20	
Zinc		0.0549	mg/L	0.010	106	70	130	1.9	20	
<b>Sample ID: LRB</b> 18 Method Blank										Run: SUB-C138415 10/11/10 16:22
Aluminum		ND	mg/L	8E-05						
Arsenic		ND	mg/L	4E-05						
Barium		ND	mg/L	3E-05						
Boron		0.0002	mg/L							
Cadmium		ND	mg/L	7E-05						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R138415A
<b>Sample ID: LRB</b>	18	Method Blank				Run: SUB-C138415				10/11/10 16:22
Chromium		ND	mg/L	5E-05						
Copper		ND	mg/L	6E-05						
Iron		ND	mg/L	0.0001						
Lead		ND	mg/L	2E-05						
Manganese		ND	mg/L	2E-05						
Mercury		3E-05	mg/L	2E-05						
Molybdenum		0.0004	mg/L	8E-05						
Nickel		ND	mg/L	5E-05						
Silver		ND	mg/L	8E-05						
Thorium 232		ND	mg/L	3E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		ND	mg/L	1E-05						
Zinc		ND	mg/L	0.0001						
<b>Sample ID: LFB</b>	18	Laboratory Fortified Blank				Run: SUB-C138415				10/11/10 16:29
Aluminum		0.0486	mg/L	0.0010	97	85	115			
Arsenic		0.0527	mg/L	0.0010	105	85	115			
Barium		0.0508	mg/L	0.0010	102	85	115			
Boron		0.0527	mg/L	0.0010	105	85	115			
Cadmium		0.0516	mg/L	0.0010	103	85	115			
Chromium		0.0526	mg/L	0.0010	105	85	115			
Copper		0.0532	mg/L	0.0010	106	85	115			
Iron		1.29	mg/L	0.012	103	85	115			
Lead		0.0513	mg/L	0.0010	103	85	115			
Manganese		0.0507	mg/L	0.0010	101	85	115			
Mercury		0.00522	mg/L	0.0010	104	85	115			
Molybdenum		0.0513	mg/L	0.0010	102	85	115			
Nickel		0.0532	mg/L	0.0010	106	85	115			
Silver		0.0199	mg/L	0.0010	99	85	115			
Thorium 232		0.0503	mg/L	0.0010	101	85	115			
Uranium		0.0498	mg/L	0.00030	100	85	115			
Vanadium		0.0526	mg/L	0.0010	105	85	115			
Zinc		0.0550	mg/L	0.0010	110	85	115			

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/20/10

Project: Dewey Groundwater Sampling

Work Order: R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_27779
<b>Sample ID: MB-27779</b>	6	Method Blank					Run: SUB-C138669			10/19/10 01:00
Antimony		0.0002	mg/L	0.0002						
Arsenic		0.001	mg/L	0.0003						
Lead		ND	mg/L	5E-05						
Selenium		ND	mg/L	0.0007						
Thallium		ND	mg/L	5E-05						
Uranium		ND	mg/L	4E-05						
<b>Sample ID: LCS3-27779</b>	6	Laboratory Control Sample					Run: SLIB-C138669			10/19/10 01:07
Antimony		0.601	mg/L	0.050	120	85	115			S
Arsenic		0.519	mg/L	0.0010	103	85	115			
Lead		0.549	mg/L	0.050	110	85	115			
Selenium		0.506	mg/L	0.0010	101	85	115			
Thallium		0.534	mg/L	0.10	107	85	115			
Uranium		0.574	mg/L	0.00030	115	85	115			
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Sample ID: R10090519-002D</b>	6	Sample Matrix Spike					Run: SUB-C138669			10/19/10 02:28
Antimony		0.599	mg/L	0.050	120	70	130			
Arsenic		0.525	mg/L	0.0010	105	70	130			
Lead		0.548	mg/L	0.050	110	70	130			
Selenium		0.500	mg/L	0.0010	100	70	130			
Thallium		0.532	mg/L	0.10	106	70	130			
Uranium		0.605	mg/L	0.00030	119	70	130			
<b>Sample ID: R10090519-002D</b>	6	Sample Matrix Spike Duplicate					Run: SUB-C138669			10/19/10 02:35
Antimony		0.608	mg/L	0.050	122	70	130	1.5	20	
Arsenic		0.529	mg/L	0.0010	105	70	130	0.8	20	
Lead		0.554	mg/L	0.050	111	70	130	1.1	20	
Selenium		0.507	mg/L	0.0010	101	70	130	1.5	20	
Thallium		0.539	mg/L	0.10	108	70	130	1.3	20	
Uranium		0.606	mg/L	0.00030	119	70	130	0.1	20	

### Qualifiers:

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S - Spike recovery outside of advisory limits.



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-B154899
<b>Sample ID:</b> QCS										10/01/10 14:42
Mercury		0.0020	mg/L	0.0010	100	90	110			
<b>Method:</b> E245.1										Batch: B_49478
<b>Sample ID:</b> MB-49478										10/01/10 15:33
Mercury		3E-05	mg/L	1E-05						
<b>Sample ID:</b> LCS-49478										10/01/10 15:37
Mercury		0.0020	mg/L	0.0010	97	85	115			
<b>Sample ID:</b> B10100063-001BMS										10/01/10 15:47
Mercury		0.0010	mg/L	0.0010	49	70	130			S
<b>Sample ID:</b> B10100063-001BMSD										10/01/10 15:48
Mercury		0.0010	mg/L	0.0010	50	70	130	1.0	30	S

### 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

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>										Analytical Run: DIONEX_100929A
<b>Sample ID: CCV092910-15</b>	3	Continuing Calibration Verification Standard								09/29/10 18:17
Nitrogen, Nitrate as N		7.02	mg/L	0.10	94	90	110			
Nitrogen, Nitrite as N		7.11	mg/L	0.10	95	90	110			
Sulfate		72.1	mg/L	1.0	96	90	110			
<b>Sample ID: CCV092910-34</b>	3	Continuing Calibration Verification Standard								09/29/10 22:07
Nitrogen, Nitrate as N		7.50	mg/L	0.10	100	90	110			
Nitrogen, Nitrite as N		7.61	mg/L	0.10	101	90	110			
Sulfate		77.1	mg/L	1.0	103	90	110			
<b>Method: E300.0</b>										Batch: R48299
<b>Sample ID: LFB092910-14</b>	3	Laboratory Fortified Blank				Run: DIONEX_100929A			09/29/10 17:59	
Nitrogen, Nitrate as N		3.71	mg/L	0.10	93	90	110			
Nitrogen, Nitrite as N		3.78	mg/L	0.10	95	90	110			
Sulfate		37.3	mg/L	1.0	93	90	110			
<b>Sample ID: R10090519-002AMS</b>	3	Sample Matrix Spike				Run: DIONEX_100929A			09/29/10 23:17	
Nitrogen, Nitrate as N		80.6	mg/L	2.0	101	90	110			
Nitrogen, Nitrite as N		81.5	mg/L	2.0	102	90	110			
Sulfate		1530	mg/L	20	105	90	110			
<b>Sample ID: R10090519-002AMSD</b>	3	Sample Matrix Spike Duplicate				Run: DIONEX_100929A			09/29/10 23:35	
Nitrogen, Nitrate as N		80.6	mg/L	2.0	101	90	110	0.1	10	
Nitrogen, Nitrite as N		81.7	mg/L	2.0	102	90	110	0.1	10	
Sulfate		1530	mg/L	20	105	90	110	0.4	10	
<b>Method: E300.0</b>										Analytical Run: DIONEX_100930A
<b>Sample ID: CCV093010-28</b>	2	Continuing Calibration Verification Standard								10/01/10 02:16
Chloride		73.3	mg/L	1.00	98	90	110			
Fluoride		7.36	mg/L	0.10	98	90	110			
<b>Method: E300.0</b>										Batch: R48311
<b>Sample ID: LFB093010-14</b>	2	Laboratory Fortified Blank				Run: DIONEX_100930A			09/30/10 22:27	
Chloride		37.9	mg/L	1.00	95	90	110			
Fluoride		4.02	mg/L	0.10	101	90	110			
<b>Sample ID: R10090533-003AMS</b>	2	Sample Matrix Spike				Run: DIONEX_100930A			10/01/10 03:09	
Chloride		41.5	mg/L	1.00	93	90	110			
Fluoride		4.28	mg/L	0.10	93	90	110			
<b>Sample ID: R10090533-003AMSD</b>	2	Sample Matrix Spike Duplicate				Run: DIONEX_100930A			10/01/10 03:27	
Chloride		41.4	mg/L	1.00	93	90	110	0.0	10	
Fluoride		4.27	mg/L	0.10	93	90	110	0.1	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										Batch: C_GrAB-0985
<b>Sample ID: MB-GrAB-0985</b>	6	Method Blank					Run: SUB-C139230			10/28/10 02:53
Gross Alpha		-2	pCi/L							U
Gross Alpha precision ( $\pm$ )		0.7	pCi/L							
Gross Alpha MDC		0.9	pCi/L							
Gross Beta		-2	pCi/L							U
Gross Beta precision ( $\pm$ )		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-0985</b>		Laboratory Control Sample					Run: SUB-C139230			10/28/10 02:53
Gross Alpha		100	pCi/L	103		70	130			
<b>Sample ID: Cs137-GrAB-0985</b>		Laboratory Control Sample					Run: SUB-C139230			10/28/10 02:53
Gross Beta		92	pCi/L	106		70	130			
<b>Sample ID: C10100071-002CDUP</b>	6	Sample Duplicate					Run: SUB-C139230			10/28/10 02:53
Gross Alpha		220	pCi/L					1.1	17.5	
Gross Alpha precision ( $\pm$ )		8.2	pCi/L							
Gross Alpha MDC		4.0	pCi/L							
Gross Beta		77	pCi/L					4.4	18.2	
Gross Beta precision ( $\pm$ )		3.2	pCi/L							
Gross Beta MDC		3.4	pCi/L							
<b>Sample ID: C10100261-001DMS</b>		Sample Matrix Spike					Run: SUB-C139230			10/28/10 20:13
Gross Alpha		114	pCi/L	94		70	130			
<b>Sample ID: C10100261-001DMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C139230			10/28/10 20:14
Gross Alpha		130	pCi/L	110		70	130	13	17.2	
<b>Sample ID: C10100261-001DMS</b>		Sample Matrix Spike					Run: SUB-C139230			10/28/10 20:14
Gross Beta		104	pCi/L	103		70	130			
<b>Sample ID: C10100261-001DMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C139230			10/28/10 20:14
Gross Beta		95.6	pCi/L	94		70	130	8.0	15.4	

### Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R138187
<b>Sample ID: LCS-R138187</b>	3	Laboratory Control Sample				Run: SUB-C138187				10/04/10 09:40
Americium 241		710	pCi/L	20	87	70	130			
Cesium 137		930	pCi/L	20	93	70	130			
Potassium 40		6200	pCi/L	20	93	70	130			
<b>Sample ID: MB-R138187</b>	23	Method Blank				Run: SUB-C138187				10/04/10 09:40
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234 precision (±)		80	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		500	pCi/L							
Gross Gamma precision (±)		80	pCi/L							
- See Case Narrative regarding Gross Gamma analysis.										
<b>Sample ID: R10090519-002H</b>	22	Sample Duplicate				Run: SUB-C138187				10/04/10 09:40
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40		ND	pCi/L	20					30	
Radium 223 precision (±)		ND	pCi/L							

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E901.1										Batch: C_R138187
<b>Sample ID:</b> R10090519-002H										10/04/10 09:40
22 Sample Duplicate										Run: SUB-C138187
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234 precision (±)		130	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		440	pCi/L					7.6	30	
Gross Gamma precision (±)		130	pCi/L							

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-4869
<b>Sample ID: R10090519-001H</b>		Sample Matrix Spike				Run: SUB-C138511				10/13/10 14:58
Radium 226	15	pCi/L		102		70	130			
<b>Sample ID: R10090519-001H</b>		Sample Matrix Spike Duplicate				Run: SUB-C138511				10/13/10 14:58
Radium 226	17	pCi/L		101		70	130	10	23.3	
<b>Sample ID: MB-RA226-4869</b>	3	Method Blank				Run: SUB-C138511				10/13/10 17:08
Radium 226		-0.04	pCi/L							U
Radium 226 precision ( $\pm$ )		0.07	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Sample ID: LCS-RA226-4869</b>		Laboratory Control Sample				Run: SUB-C138511				10/13/10 17:08
Radium 226	8.2	pCi/L		104		70	130			
<b>Method: E903.0</b>										Batch: C_27802
<b>Sample ID: R10090519-001I</b>		Sample Matrix Spike				Run: SUB-C139019				10/25/10 13:50
Radium 226	78	pCi/L		102		70	130			
<b>Sample ID: R10090519-001I</b>		Sample Matrix Spike Duplicate				Run: SUB-C139019				10/25/10 13:50
Radium 226	87	pCi/L		112		70	130	11	20.1	
<b>Sample ID: LCS-27802</b>		Laboratory Control Sample				Run: SUB-C139019				10/25/10 23:12
Radium 226	13.7	pCi/Filter		92		70	130			
<b>Sample ID: MB-27802</b>	3	Method Blank				Run: SUB-C139019				10/25/10 23:12
Radium 226		-0.1	pCi/Filter							U
Radium 226 precision ( $\pm$ )		0.1	pCi/Filter							
Radium 226 MDC		0.2	pCi/Filter							

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E907.0								Batch: C_RA-TH-ISO-1268		
Sample ID: LCS-RA-TH-ISO-1268		Laboratory Control Sample				Run: SUB-C138766			10/19/10 13:09	
Thorium 230		5.0	pCi/L		91	70	130			
Sample ID: R10090519-002H		Sample Matrix Spike				Run: SUB-C138766			10/19/10 13:09	
Thorium 230		12	pCi/L		91	70	130			
Sample ID: R10090519-002H		Sample Matrix Spike Duplicate				Run: SUB-C138766			10/19/10 13:09	
Thorium 230		12	pCi/L		90	70	130	0.7	41	
Sample ID: MB-RA-TH-ISO-1268	3	Method Blank				Run: SUB-C138766			10/19/10 17:19	
Thorium 230		0.02	pCi/L							U
Thorium 230 MDC		0.2	pCi/L							
Thorium 230 precision (±)		0.08	pCi/L							
Method: E907.0								Batch: C_27802		
Sample ID: C10100194-003AMS		Sample Matrix Spike				Run: SUB-C138997			10/20/10 15:27	
Thorium 230		25.1	pCi/Filter		101	70	130			
Sample ID: C10100194-003AMSD		Sample Matrix Spike Duplicate				Run: SUB-C138997			10/20/10 15:27	
Thorium 230		23.8	pCi/Filter		95	70	130	5.3	34.6	
Sample ID: LCS-27802		Laboratory Control Sample				Run: SUB-C138997			10/20/10 15:27	
Thorium 230		4.85	pCi/Filter		103	70	130			
Sample ID: MB-27802	3	Method Blank				Run: SUB-C138997			10/20/10 15:27	
Thorium 230		-0.2	pCi/Filter							U
Thorium 230 MDC		0.09	pCi/Filter							
Thorium 230 precision (±)		0.06	pCi/Filter							

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/20/10

Project: Dewey Groundwater Sampling

Work Order: R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>										Batch: T_PB-210-0024
<b>Sample ID: MB-PB-210-0024</b>	3	Method Blank					Run: SUB-T37512			10/29/10 12:34
Lead 210			pCi/L							U
Lead 210 precision ( $\pm$ )		1	pCi/L							
Lead 210 MDC		2	pCi/L							
<b>Sample ID: LCS-PB-210-0024</b>		Laboratory Control Sample					Run: SUB-T37512			10/29/10 16:39
Lead 210		48	pCi/L		88	70	130			
<b>Sample ID: TAP WATERMS</b>		Sample Matrix Spike					Run: SUB-T37512			10/29/10 20:43
Lead 210		64	pCi/L		116	70	130			
<b>Sample ID: TAP WATERMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-T37512			10/29/10 22:46
Lead 210		64	pCi/L		116	70	130	0.0	15.7	
<b>Method: E909.0M</b>										Batch: T_12635
<b>Sample ID: MB-12635</b>	3	Method Blank					Run: SUB-T37661			11/14/10 06:55
Lead 210		-2	pCi/L							U
Lead 210 precision ( $\pm$ )		4	pCi/L							
Lead 210 MDC		6	pCi/L							
<b>Sample ID: LCS-12635</b>		Laboratory Control Sample					Run: SUB-T37661			11/14/10 09:06
Lead 210		120	pCi/L		55	70	130			S
<b>Sample ID: R10090519-001I</b>		Sample Matrix Spike					Run: SUB-T37661			11/14/10 13:29
Lead 210		380	pCi/L		86	70	130			
<b>Sample ID: R10090519-001I</b>		Sample Matrix Spike Duplicate					Run: SUB-T37661			11/14/10 15:40
Lead 210		310	pCi/L		71	70	130	20	16.7	R

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/20/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10090519

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0321
<b>Sample ID: C10100003-001GMS</b>		Sample Matrix Spike				Run: SUB-C138717				10/18/10 08:37
Polonium 210		31	pCi/L		92	70	130			
<b>Sample ID: C10100003-001GMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C138717				10/18/10 08:37
Polonium 210		40	pCi/L		118	70	130	24	57	
<b>Sample ID: LCS-PO210-0321</b>		Laboratory Control Sample				Run: SUB-C138717				10/18/10 08:37
Polonium 210		17	pCi/L		101	70	130			
<b>Sample ID: MB-PO210-0321</b>	3	Method Blank				Run: SUB-C138717				10/18/10 08:37
Polonium 210		0.3	pCi/L							U
Polonium 210 MDC		0.5	pCi/L							
Polonium 210 precision (±)		0.3	pCi/L							
<b>Method: E912.0</b>										Batch: C_27802
<b>Sample ID: R10090519-002I</b>		Sample Matrix Spike				Run: SUB-C138957				10/20/10 08:49
Polonium 210		14	pCi/L		96	70	130			
<b>Sample ID: R10090519-002I</b>		Sample Matrix Spike Duplicate				Run: SUB-C138957				10/20/10 08:49
Polonium 210		17	pCi/L		116	70	130	19	57.6	
<b>Sample ID: LCS-27802</b>		Laboratory Control Sample				Run: SUB-C138957				10/20/10 08:49
Polonium 210		74	pCi/L		96	70	130			
<b>Sample ID: MB-27802</b>	3	Method Blank				Run: SUB-C138957				10/20/10 08:49
Polonium 210		ND	pCi/L							U
Polonium 210 precision (±)		0.8	pCi/L							
Polonium 210 MDC		2	pCi/L							
<b>Method: E912.0</b>										Batch: C_PO210-0324
<b>Sample ID: C10100729-001FMS</b>		Sample Matrix Spike				Run: SUB-C139322				10/28/10 09:35
Polonium 210		33	pCi/L		98	70	130			
<b>Sample ID: C10100729-001FMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C139322				10/28/10 09:35
Polonium 210		34	pCi/L		100	70	130	1.4	62.3	
<b>Sample ID: MB-PO210-0324</b>	3	Method Blank				Run: SUB-C139322				10/28/10 09:36
Polonium 210		0.05	pCi/L							U
Polonium 210 MDC		0.5	pCi/L							
Polonium 210 precision (±)		0.2	pCi/L							
<b>Sample ID: LCS-PO210-0324</b>		Laboratory Control Sample				Run: SUB-C139322				10/28/10 09:36
Polonium 210		18	pCi/L		113	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

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

Company Name: <b>Scott Environmental</b>		Project Name, PWS, Permit, Etc. <b>Powertech - Dewey Burdock</b>		Sample Origin:	EPA/State Compliance:
Report Mail Address: <b>Scott Env. / Powertech</b>		Contact Name: <b>Allen Scott</b>	Phone/Fax:	State:	Yes <input type="checkbox"/> No <input type="checkbox"/>
Invoice Address: <b>Powertech</b>		Invoice Contact & Phone:		Email:	Sampler: (Please Print)
Special Report/Formats:		Purchase Order:		Quote/Bottle Order:	

<input type="checkbox"/> DW <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC	Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	<b>ANALYSIS REQUESTED</b>  SEE ATTACHED Standard Turnaround (TAT) <b>R U S H</b>		Contact TEL prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:	Shipped by: Cooler D(e): Receipt Temp <b>16.0 °C</b> On Ice: Y N Custody Seal On Bottle Y N On Cooler Y N Intact Y N Signature Y N Match Y N
---	--	---	--	--	---	--

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	ANALYSIS REQUESTED	SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Comments:	Shipped by:	Cooler D(e):	Receipt Temp	On Ice:	Custody Seal	On Bottle	On Cooler	Intact	Signature	Match
1 <b>08-09-21-01</b>	<b>9-28-10</b>		<b>water</b>															
2 <b>08-09-21-02</b>	<b>9-28-10</b>		<b>water</b>															
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Custody Record MUST be Signed	Relinquished by (print): <b>Allen Scott</b> Date/Time: <b>9-28-10 2:40am</b> Signature: <b>ALL MS</b>	Received by (print): <b>Steve Falow</b> Date/Time: <b>9-29-10 8:45</b> Signature: <b>Steve Falow</b>
--	--	---

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



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## ANALYTICAL SUMMARY REPORT

December 29, 2010

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10100355

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. Rapid City SD received the following 2 samples for Powertech USA Inc on 10/26/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10100355-001	DB-09-21-01	10/25/10 0:00	10/26/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10100355-002	DB-09-21-02	10/25/10 0:00	10/26/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2010.12.29 13:06:51 -07:00



**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10100355

**Report Date:** 12/29/10

## CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

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

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

Comments imported for SUBBED Workorder: C10101128

### GROSS GAMMA ANALYSIS

The gamma spectrometry software has identified Thorium 234 as a potential component of this sample. The value generated by the software has been reported here. However, the Thorium 234 gamma ray peaks reside in the middle of excessive background contributions from Compton scatter, x-rays from thorium, and interfering gamma ray peaks from other naturally occurring radionuclides present in the metal can and sample. This means that the value for Thorium 234 likely has a positive bias. The only method to determine the actual concentration of Th-234 would be by radiochemical separation of thorium and gamma spectrometric analysis on the isolate thorium fraction.

### TH230 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as required by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C10101128



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## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	170	mg/L		5		1	A2320 B	11/02/10 08:47/hv
Carbonate as CO3	ND	mg/L		5		1	A2320 B	11/02/10 08:47/hv
Bicarbonate as HCO3	207	mg/L		5		1	A2320 B	11/02/10 08:47/hv
Calcium	93.8	mg/L		0.5		2	E200.7	11/10/10 15:07/eli-c
Chloride	7	mg/L		1		1	E300.0	10/26/10 22:23/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0	10/26/10 22:23/jmh
Magnesium	33.7	mg/L		0.5		2	E200.7	11/10/10 15:07/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH3 G	11/01/10 12:17/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	10/26/10 22:23/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	10/26/10 22:23/jmh
Potassium	11.3	mg/L		0.5		2	E200.7	11/10/10 15:07/eli-c
Sodium	162	mg/L	D	0.6		2	E200.7	11/10/10 15:07/eli-c
Sulfate	524	mg/L	D	20		20	E300.0	10/26/10 21:30/jmh
Silica	8.2	mg/L		0.2		1	E200.8	11/10/10 03:11/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1310	umhos/cm		5.0		1	A2510 B	10/27/10 17:05/hv
Oxidation-Reduction Potential	270	mV				1	A2580 B	11/01/10 17:00/jmh
pH	7.77	s.u.		0.01		1	A4500-H B	10/29/10 11:09/tb
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	12/07/10 10:07/ADM
Solids, Total Dissolved TDS @ 180 C	940	mg/L	D	10		1	A2540 C	10/27/10 16:14/jmh
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		1	E200.8	11/01/10 19:04/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	11/01/10 19:04/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/01/10 19:04/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/10/10 03:11/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/01/10 19:04/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/01/10 19:04/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/01/10 19:04/eli-c
Iron	ND	mg/L		0.03		1	E200.8	11/10/10 03:11/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/01/10 19:04/eli-c
Manganese	0.04	mg/L		0.01		1	E200.8	11/01/10 19:04/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	11/01/10 19:04/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	11/01/10 19:04/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/01/10 19:04/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	11/15/10 14:38/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/01/10 19:04/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	11/10/10 03:11/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	11/01/10 19:04/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	11/01/10 19:04/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



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## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Zinc	ND	mg/L		0.01		1	E200.8	11/01/10 19:04/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	11/30/10 18:18/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	11/15/10 13:43/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	11/16/10 10:52/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	-0.6	pCi/L	U			1	E900.0	12/27/10 23:05/eli-ca
Gross Alpha precision (±)	3.5	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Alpha MDC	6.0	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta	9.7	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta precision (±)	3.4	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta MDC	5.4	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Lead 210	-0.5	pCi/L	U			1	E909.0M	11/21/10 20:04/eli-cs
Lead 210 precision (±)	0.9	pCi/L				1	E909.0M	11/21/10 20:04/eli-cs
Lead 210 MDC	1.4	pCi/L				1	E909.0M	11/21/10 20:04/eli-cs
Polonium 210	-0.035	pCi/L	U			1	E912.0	11/11/10 08:53/eli-ca
Polonium 210 MDC	0.71	pCi/L				1	E912.0	11/11/10 08:53/eli-ca
Polonium 210 precision (±)	0.26	pCi/L				1	E912.0	11/11/10 08:53/eli-ca
Radium 226	2.4	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Radium 226 precision (±)	0.4	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Thorium 230	0.02	pCi/L	U			1	E907.0	11/16/10 16:16/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	11/16/10 16:16/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	11/16/10 16:16/eli-c
Gross Gamma	670	pCi/L				1	E901.1	11/01/10 10:00/eli-c
Gross Gamma precision (±)	210	pCi/L				1	E901.1	11/01/10 10:00/eli-c
- See Case Narrative regarding Gross Gamma analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.7	pCi/L	U			1	E909.0M	12/16/10 23:03/eli-cs
Lead 210 precision (±)	1.9	pCi/L				1	E909.0M	12/16/10 23:03/eli-cs
Lead 210 MDC	3.2	pCi/L				1	E909.0M	12/16/10 23:03/eli-cs
Polonium 210	-0.013	pCi/L	U			1	E912.0	11/18/10 13:12/eli-ca
Polonium 210 precision (±)	0.24	pCi/L				1	E912.0	11/18/10 13:12/eli-ca
Polonium 210 MDC	0.62	pCi/L				1	E912.0	11/18/10 13:12/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	11/23/10 01:20/eli-c
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	11/23/10 01:20/eli-c

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

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





## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-001  
**Client Sample ID:** DB-09-21-01

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226 MDC	0.1	pCi/L				1	E903.0	11/23/10 01:20/eli-c
Thorium 230	-0.3	pCi/L	U			1	E907.0	11/16/10 16:13/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	11/16/10 16:13/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	11/16/10 16:13/eli-c
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	202	pCi/L		100		1	D5072-92	10/27/10 00:00/kl
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	11/01/10 19:38/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	11/01/10 19:38/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/01/10 19:38/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	11/01/10 19:38/eli-c
Boron	ND	mg/L		0.1		2	E200.7	11/04/10 14:42/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/01/10 19:38/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/01/10 19:38/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/01/10 19:38/eli-c
Iron	0.21	mg/L		0.03		2	E200.7	11/04/10 14:42/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/01/10 19:38/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	11/01/10 19:38/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	10/28/10 17:04/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	11/01/10 19:38/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/01/10 19:38/eli-c
Selenium	0.001	mg/L		0.001		1	E200.8	11/01/10 19:38/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/01/10 19:38/eli-c
Strontium	2.8	mg/L		0.1		1	E200.8	11/01/10 19:38/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	11/01/10 19:38/eli-c
Uranium	ND	mg/L		0.0003		1	E200.8	11/01/10 19:38/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/01/10 19:38/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	0.850	%				1	A1030 E	12/07/10 00:00/jmh
Anions	14.5	meq/L				1	A1030 E	12/07/10 00:00/jmh
Cations	14.8	meq/L				1	A1030 E	12/07/10 00:00/jmh
Solids, Total Dissolved Calculated	940	mg/L				1	A1030 E	12/07/10 00:00/jmh
TDS Balance (0.80 - 1.20)	0.980					1	A1030 E	12/07/10 00:00/jmh

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

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	192	mg/L		5		1	A2320 B	11/02/10 09:07/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/02/10 09:07/hv
Bicarbonate as HCO <sub>3</sub>	234	mg/L		5		1	A2320 B	11/02/10 09:07/hv
Calcium	167	mg/L		0.5		2	E200.7	11/10/10 15:56/eli-c
Chloride	9	mg/L		1		1	E300.0	10/26/10 22:58/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	10/26/10 22:58/jmh
Magnesium	47.7	mg/L		0.5		2	E200.7	11/10/10 15:56/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/01/10 11:37/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	10/26/10 22:58/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	10/26/10 22:58/jmh
Potassium	11.6	mg/L		0.5		2	E200.7	11/10/10 15:56/eli-c
Sodium	132	mg/L	D	0.6		2	E200.7	11/10/10 15:56/eli-c
Sulfate	648	mg/L	D	20		20	E300.0	10/26/10 22:41/jmh
Silica	7.9	mg/L		0.2		1	E200.8	11/10/10 03:17/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1510	umhos/cm		5.0		1	A2510 B	10/27/10 17:05/hv
Oxidation-Reduction Potential	320	mV				1	A2580 B	11/01/10 17:00/jmh
pH	7.59	s.u.		0.01		1	A4500-H B	10/29/10 11:18/tb
Sodium Adsorption Ratio (SAR)	2.3	unitless		0.10		1	Calculation	12/07/10 10:07/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	10/27/10 16:14/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	11/01/10 19:44/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	11/01/10 19:44/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/01/10 19:44/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/10/10 03:17/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/01/10 19:44/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/01/10 19:44/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/01/10 19:44/eli-c
Iron	ND	mg/L		0.03		1	E200.8	11/10/10 03:17/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/01/10 19:44/eli-c
Manganese	0.49	mg/L		0.01		1	E200.8	11/01/10 19:44/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	11/01/10 19:44/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	11/01/10 19:44/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/01/10 19:44/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	11/15/10 14:40/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/01/10 19:44/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	11/10/10 03:17/eli-c
Uranium	0.0086	mg/L		0.0003		1	E200.8	11/01/10 19:44/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	11/01/10 19:44/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Zinc	ND	mg/L		0.01		1	E200.8	11/01/10 19:44/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	11/30/10 18:22/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	11/15/10 13:45/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	11/16/10 10:52/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	19.3	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Alpha precision (±)	5.5	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Alpha MDC	7.4	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta	25.8	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta precision (±)	4.6	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Gross Beta MDC	6.9	pCi/L				1	E900.0	12/27/10 23:05/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0M	11/21/10 22:15/eli-cs
Lead 210 precision (±)	0.9	pCi/L				1	E909.0M	11/21/10 22:15/eli-cs
Lead 210 MDC	1.4	pCi/L				1	E909.0M	11/21/10 22:15/eli-cs
Polonium 210	-0.012	pCi/L	U			1	E912.0	11/11/10 08:53/eli-ca
Polonium 210 MDC	0.54	pCi/L				1	E912.0	11/11/10 08:53/eli-ca
Polonium 210 precision (±)	0.21	pCi/L				1	E912.0	11/11/10 08:53/eli-ca
Radium 226	2.2	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	11/11/10 13:18/eli-c
Thorium 230	0.001	pCi/L	U			1	E907.0	11/16/10 16:16/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	11/16/10 16:16/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	11/16/10 16:16/eli-c
Gross Gamma	490	pCi/L				1	E901.1	11/01/10 10:00/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	11/01/10 10:00/eli-c
- See Case Narrative regarding Gross Gamma analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	1.5	pCi/L	U			1	E909.0M	12/17/10 05:36/eli-cs
Lead 210 precision (±)	1.9	pCi/L				1	E909.0M	12/17/10 05:36/eli-cs
Lead 210 MDC	3.1	pCi/L				1	E909.0M	12/17/10 05:36/eli-cs
Polonium 210	0.081	pCi/L	U			1	E912.0	11/18/10 13:12/eli-ca
Polonium 210 precision (±)	0.27	pCi/L				1	E912.0	11/18/10 13:12/eli-ca
Polonium 210 MDC	0.51	pCi/L				1	E912.0	11/18/10 13:12/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	11/23/10 01:20/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	11/23/10 01:20/eli-c

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

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



## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10100355-002  
**Client Sample ID:** DB-09-21-02

**Report Date:** 12/29/10  
**Collection Date:** 10/25/10  
**Date Received:** 10/26/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
RADIONUCLIDES - SUSPENDED								
Radium 226 MDC	0.1	pCi/L	U			1	E903.0	11/23/10 01:20/eli-c
Thorium 230	-0.1	pCi/L				1	E907.0	11/16/10 16:13/eli-c
Thorium 230 MDC	0.3	pCi/L				1	E907.0	11/16/10 16:13/eli-c
Thorium 230 precision (±)	0.2	pCi/L				1	E907.0	11/16/10 16:13/eli-c
- See Case Narrative regarding Th230 analysis.								
RADIONUCLIDES - TOTAL								
Radon 222	254	pCi/L		100		1	D5072-92	10/27/10 00:00/kl
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	11/02/10 23:48/eli-c
Arsenic	0.003	mg/L		0.001		1	E200.8	11/02/10 23:48/eli-c
Barium	ND	mg/L		0.1		1	E200.7	11/04/10 01:24/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	11/02/10 23:48/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/02/10 23:48/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/02/10 23:48/eli-c
Chromium	ND	mg/L		0.05		1	E200.7	11/04/10 01:24/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/02/10 23:48/eli-c
Iron	0.06	mg/L		0.03		1	E200.8	11/02/10 23:48/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/02/10 23:48/eli-c
Manganese	0.56	mg/L		0.01		1	E200.7	11/04/10 01:24/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	10/28/10 17:06/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	11/02/10 23:48/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/02/10 23:48/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	11/02/10 23:48/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/02/10 23:48/eli-c
Strontium	2.0	mg/L		0.1		1	E200.8	11/02/10 23:48/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	11/02/10 23:48/eli-c
Uranium	0.0089	mg/L		0.0003		1	E200.8	11/06/10 00:22/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/02/10 23:48/eli-c
DATA QUALITY								
A/C Balance (± 5)	2.02	%				1	A1030 E	12/07/10 00:00/jmh
Anions	17.6	meq/L				1	A1030 E	12/07/10 00:00/jmh
Cations	18.3	meq/L				1	A1030 E	12/07/10 00:00/jmh
Solids, Total Dissolved Calculated	1190	mg/L				1	A1030 E	12/07/10 00:00/jmh
TDS Balance (0.80 - 1.20)	1.03					1	A1030 E	12/07/10 00:00/jmh

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

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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b> Batch: 101102A-ALK-SEL-W										
<b>Sample ID: LCS1_101102A</b>	Laboratory Control Sample									
Alkalinity, Total as CaCO <sub>3</sub>	1020	mg/L	5.0	102	90	110	Run: PH_COND1-R_101102A			11/02/10 08:28
<b>Sample ID: MBLK1_101102A</b>	Method Blank									
Alkalinity, Total as CaCO <sub>3</sub>	ND	mg/L	3				Run: PH_COND1-R_101102A			11/02/10 08:42
<b>Sample ID: R10100355-001AMS</b>	Sample Matrix Spike									
Alkalinity, Total as CaCO <sub>3</sub>	294	mg/L	5.0	117	80	120	Run: PH_COND1-R_101102A			11/02/10 08:52
<b>Sample ID: R10100355-001AMSD</b>	Sample Matrix Spike Duplicate									
Alkalinity, Total as CaCO <sub>3</sub>	296	mg/L	5.0	119	80	120	0.7		10	11/02/10 08:58

### Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B		Batch: 101027_1_COND-PROBE-W								
Sample ID: LCS1-1_101027	Laboratory Control Sample			Run: PH_COND2-R_101027A				10/27/10 16:18		
Conductivity @ 25 C	147	umhos/cm	5.0	98	90	110				
Sample ID: LCS2-1_101027	Laboratory Control Sample			Run: PH_COND2-R_101027A				10/27/10 16:33		
Conductivity @ 25 C	5010	umhos/cm	5.0	100	90	110				
Sample ID: LCS_COND-1_101027	Laboratory Control Sample			Run: PH_COND2-R_101027A				10/27/10 16:33		
Conductivity @ 25 C	1410	umhos/cm	5.0	100	90	110				
Sample ID: MBLK-1_101027	Method Blank			Run: PH_COND2-R_101027A				10/27/10 16:25		
Conductivity @ 25 C	ND	umhos/cm	5							
Sample ID: R10100260-001BDUP	Sample Duplicate			Run: PH_COND2-R_101027A				10/27/10 16:36		
Conductivity @ 25 C	1480	umhos/cm	5.0					0.0	10	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C								Batch: 101027A-SLDS-TDS-W		
<b>Sample ID:</b> LCS1_101027A		Laboratory Control Sample				Run: BAL-4-R_101027A		10/27/10 16:11		
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10	108	90	110			
<b>Sample ID:</b> MBLK1_101027A		Method Blank				Run: BAL-4-R_101027A		10/27/10 16:12		
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	3						
<b>Sample ID:</b> R10100319-001ADUP		Sample Duplicate				Run: BAL-4-R_101027A		10/27/10 16:13		
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10				0.0	5	
<b>Sample ID:</b> R10100382-002AMS		Sample Matrix Spike				Run: BAL-4-R_101027A		10/27/10 16:16		
Solids, Total Dissolved TDS @ 180 C		700	mg/L	10	107	90	110			

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2580 B								Batch: 101101-ORP-ISE-W		
<b>Sample ID:</b> LCS		Laboratory Control Sample			Run: PH_COND1-R_101101A			11/01/10 17:00		
Oxidation-Reduction Potential		480	mV		101	95	105			
<b>Sample ID:</b> R10100355-002F		Sample Duplicate			Run: PH_COND1-R_101101A			11/01/10 17:00		
Oxidation-Reduction Potential		320	mV					2.3	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_28215
<b>Sample ID: MB-28215</b>		Method Blank					Run: SUB-C139889			11/15/10 13:39
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LCS-28215</b>		Laboratory Control Sample					Run: SUB-C139889			11/15/10 13:41
Selenium-IV		0.051	mg/L	0.0010	102	90	110			
<b>Sample ID: R10100355-002E</b>		Sample Matrix Spike					Run: SUB-C139889			11/15/10 13:48
Selenium-IV		0.057	mg/L	0.0010	115	85	115			
<b>Sample ID: R10100355-002E</b>		Sample Matrix Spike Duplicate					Run: SUB-C139889			11/15/10 13:50
Selenium-IV		0.055	mg/L	0.0010	111	85	115	3.5	10	
<b>Method: A3114 B</b>										Batch: C_28215
<b>Sample ID: MB-28215</b>		Method Blank					Run: SUB-C139895			11/15/10 14:33
Selenium		ND	mg/L	0.0002						
<b>Sample ID: LCS-28215</b>		Laboratory Control Sample					Run: SUB-C139895			11/15/10 14:35
Selenium		0.046	mg/L	0.0010	92	90	110			
<b>Sample ID: R10100355-001E</b>		Sample Matrix Spike					Run: SUB-C139895			11/15/10 14:42
Selenium		0.056	mg/L	0.0010	112	85	115			
<b>Sample ID: R10100355-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C139895			11/15/10 14:44
Selenium		0.055	mg/L	0.0010	110	85	115	2.1	15	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Batch: 101029_1_PH-W		
Sample ID: LCS_pH-1_101029		Laboratory Control Sample			Run: PH_COND2-R_101029A					10/29/10 10:42
pH		7.43	s.u.	0.010	100	98.55	101.45			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-NH3 G		Batch: A2010-11-01_2_NH3_02								
<b>Sample ID:</b> MBLK-2	Method Blank		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		ND	mg/L	0.02						11/01/10 09:26
<b>Sample ID:</b> LFB-3	Laboratory Fortified Blank		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.26	mg/L	0.10	105	90	110			11/01/10 09:27
<b>Sample ID:</b> LFB-4	Laboratory Fortified Blank		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.25	mg/L	0.10	100	90	110			11/01/10 09:28
<b>Sample ID:</b> LFB-5	Laboratory Fortified Blank		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.25	mg/L	0.10	101	90	110			11/01/10 09:29
<b>Sample ID:</b> LFB-6	Laboratory Fortified Blank		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.25	mg/L	0.10	100	90	110			11/01/10 09:30
<b>Sample ID:</b> R10100355-001BMS	Sample Matrix Spike		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.43	mg/L	0.10	107	80	120			11/01/10 11:35
<b>Sample ID:</b> R10100355-001BMSD	Sample Matrix Spike Duplicate		Run: TECHAA2-R_101101A							
Nitrogen, Ammonia as N		0.42	mg/L	0.10	104	80	120	1.4	10	11/01/10 11:36

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>								Analytical Run: SUB-C139437		
<b>Sample ID: CRI</b>	3	CRDL Standard for ICP								11/03/10 11:56
Barium		0.0035	mg/L	0.10	117	50	150			
Chromium		0.021	mg/L	0.050	105	50	150			
Manganese		0.0053	mg/L	0.010	106	50	150			
<b>Sample ID: ICSA</b>	3	Interference Check Sample A								11/03/10 12:00
Barium		0.0018	mg/L	0.10		0	0			
Chromium		0.0029	mg/L	0.050		0	0			
Manganese		-0.0065	mg/L	0.010		0	0			
<b>Sample ID: ICSAB</b>	3	Interference Check Sample AB								11/03/10 12:04
Barium		0.52	mg/L	0.10	103	80	120			
Chromium		0.50	mg/L	0.050	99	80	120			
Manganese		0.50	mg/L	0.010	99	80	120			
<b>Method: E200.7</b>								Batch: C_28033		
<b>Sample ID: MB-28033</b>	3	Method Blank				Run: SUB-C139437			11/04/10 00:20	
Barium		0.002	mg/L	0.002						
Chromium		ND	mg/L	0.002						
Manganese		ND	mg/L	0.0008						
<b>Sample ID: LCS3-28033</b>	3	Laboratory Control Sample				Run: SUB-C139437			11/04/10 00:24	
Barium		0.511	mg/L	0.10	102	85	115			
Chromium		0.524	mg/L	0.050	105	85	115			
Manganese		2.60	mg/L	0.010	104	85	115			
<b>Sample ID: R10100355-002D</b>	3	Sample Matrix Spike				Run: SUB-C139437			11/04/10 01:28	
Barium		0.536	mg/L	0.10	105	70	130			
Chromium		0.523	mg/L	0.050	105	70	130			
Manganese		3.20	mg/L	0.010	106	70	130			
<b>Sample ID: R10100355-002D</b>	3	Sample Matrix Spike Duplicate				Run: SUB-C139437			11/04/10 01:32	
Barium		0.524	mg/L	0.10	103	70	130	2.3	20	
Chromium		0.516	mg/L	0.050	103	70	130	1.3	20	
Manganese		3.17	mg/L	0.010	105	70	130	1.0	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/29/10

Project: Dewey Groundwater Sampling

Work Order: R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Analytical Run: SUB-C139485
<b>Sample ID: CRI</b>	2	CRDL Standard for ICP								11/04/10 11:33
Boron		0.044	mg/L	0.10	146	50	150			
Iron		0.022	mg/L	0.030	107	50	150			
<b>Sample ID: ICSA</b>	2	Interference Check Sample A								11/04/10 11:37
Boron		-0.35	mg/L	0.10		0	0			
Iron		190	mg/L	0.030	95	80	120			
<b>Sample ID: ICSAB</b>	2	Interference Check Sample AB								11/04/10 11:41
Boron		-0.38	mg/L	0.10		0	0			
Iron		190	mg/L	0.030	94	80	120			
<b>Method: E200.7</b>										Batch: C_R139485
<b>Sample ID: QCS</b>	2	Quality Control Sample								Run: SUB-C139485 11/04/10 11:13
Boron		1.0	mg/L	0.10	102	95	105			
Iron		5.0	mg/L	0.030	100	95	105			
<b>Sample ID: LFB-101104A</b>	2	Laboratory Fortified Blank								Run: SUB-C139485 11/04/10 12:06
Boron		0.91	mg/L	0.10	91	85	115			
Iron		0.92	mg/L	0.030	92	85	115			
<b>Sample ID: MB-101104A</b>	2	Method Blank								Run: SUB-C139485 11/04/10 12:16
Boron		0.01	mg/L	0.009						
Iron		ND	mg/L	0.002						
<b>Sample ID: C10100249-001BMS2</b>	2	Sample Matrix Spike								Run: SUB-C139485 11/04/10 14:25
Boron		12.8	mg/L	0.10	93	70	130			
Iron		181	mg/L	0.084		70	130			A
<b>Sample ID: C10100249-001BMSD2</b>	2	Sample Matrix Spike Duplicate								Run: SUB-C139485 11/04/10 14:29
Boron		13.1	mg/L	0.10	97	70	130	2.8	20	
Iron		182	mg/L	0.084		70	130	0.7	20	A
<b>Method: E200.7</b>										Batch: C_28033
<b>Sample ID: R10100355-002D</b>	3	Sample Matrix Spike								Run: SUB-C139552 11/06/10 10:11
Barium		0.512	mg/L	0.10	100	70	130			
Chromium		0.519	mg/L	0.050	104	70	130			
Manganese		3.17	mg/L	0.010	104	70	130			
<b>Sample ID: R10100355-002D</b>	3	Sample Matrix Spike Duplicate								Run: SUB-C139552 11/06/10 10:15
Barium		0.518	mg/L	0.10	102	70	130	1.2	20	
Chromium		0.500	mg/L	0.050	100	70	130	3.7	20	
Manganese		3.06	mg/L	0.010	100	70	130	3.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Analytical Run: SUB-C139733
<b>Sample ID: CRI</b>	4	CRDL Standard for ICP								11/10/10 12:03
Calcium		0.54	mg/L	0.50	109	50	150			
Magnesium		0.51	mg/L	0.50	102	50	150			
Potassium		0.54	mg/L	0.50	107	50	150			
Sodium		0.58	mg/L	0.50	116	50	150			
<b>Sample ID: ICSA</b>	4	Interference Check Sample A								11/10/10 12:07
Calcium		520	mg/L	0.50	104	80	120			
Magnesium		540	mg/L	0.50	108	80	120			
Potassium		0.0040	mg/L	0.50		0	0			
Sodium		0.11	mg/L	0.50		0	0			
<b>Sample ID: ICSAB</b>	4	Interference Check Sample AB								11/10/10 12:25
Calcium		500	mg/L	0.50	101	80	120			
Magnesium		540	mg/L	0.50	109	80	120			
Potassium		0.0024	mg/L	0.50		0	0			
Sodium		-0.016	mg/L	0.50		0	0			
<b>Method: E200.7</b>										Batch: C_R139733
<b>Sample ID: QCS</b>	4	Quality Control Sample								Run: SUB-C139733 11/10/10 11:43
Calcium		49	mg/L	0.50	98	95	105			
Magnesium		48	mg/L	0.50	96	95	105			
Potassium		50	mg/L	0.80	99	95	105			
Sodium		50	mg/L	0.50	100	95	105			
<b>Sample ID: MB-101110A</b>	4	Method Blank								Run: SUB-C139733 11/10/10 12:46
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
<b>Sample ID: LFB-101110A</b>	4	Laboratory Fortified Blank								Run: SUB-C139733 11/10/10 12:50
Calcium		48	mg/L	0.50	97	85	115			
Magnesium		48	mg/L	0.50	96	85	115			
Potassium		44	mg/L	0.50	87	85	115			
Sodium		49	mg/L	0.50	97	85	115			
<b>Sample ID: C10110303-004BMS2</b>	4	Sample Matrix Spike								Run: SUB-C139733 11/10/10 16:24
Calcium		342	mg/L	1.1	93	70	130			
Magnesium		269	mg/L	1.0	94	70	130			
Potassium		235	mg/L	1.0	90	70	130			
Sodium		818	mg/L	1.4	103	70	130			
<b>Sample ID: C10110303-004BMSD2</b>	4	Sample Matrix Spike Duplicate								Run: SUB-C139733 11/10/10 16:29
Calcium		345	mg/L	1.1	94	70	130	1.0	20	
Magnesium		276	mg/L	1.0	97	70	130	2.6	20	
Potassium		232	mg/L	1.0	89	70	130	1.2	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7		Batch: C_R139733								
<b>Sample ID:</b> C10110303-004BMSD2		4	Sample Matrix Spike Duplicate		Run: SUB-C139733		11/10/10 16:29			
Sodium		815	mg/L	1.4	103	70	130	0.2	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Analytical Run: SUB-C139312										
<b>Sample ID: ICV</b>	20	Initial Calibration Verification Standard								11/01/10 12:48
Aluminum		0.0505	mg/L	0.0010	101	90	110			
Antimony		0.0533	mg/L	0.0010	107	90	110			
Arsenic		0.0492	mg/L	0.0010	98	90	110			
Barium		0.0506	mg/L	0.0010	101	90	110			
Beryllium		0.0511	mg/L	0.0010	102	90	110			
Cadmium		0.0507	mg/L	0.0010	101	90	110			
Chromium		0.0512	mg/L	0.0010	102	90	110			
Copper		0.0511	mg/L	0.0010	102	90	110			
Lead		0.0504	mg/L	0.0010	101	90	110			
Manganese		0.0503	mg/L	0.0010	101	90	110			
Mercury		0.00519	mg/L	0.0010	104	90	110			
Molybdenum		0.0517	mg/L	0.0010	103	90	110			
Nickel		0.0512	mg/L	0.0010	102	90	110			
Selenium		0.249	mg/L	0.0010	100	90	110			
Silver		0.0497	mg/L	0.0010	99	90	110			
Strontium		0.0499	mg/L	0.0010	100	90	110			
Thallium		0.0508	mg/L	0.0010	102	90	110			
Uranium		0.0502	mg/L	0.00030	100	90	110			
Vanadium		0.0516	mg/L	0.0010	103	90	110			
Zinc		0.0510	mg/L	0.0010	102	90	110			
<b>Sample ID: ICSA</b>	20	Interference Check Sample A								11/01/10 12:55
Aluminum		0.999	mg/L	0.0010	100	80	120			
Antimony		0.000164	mg/L	0.0010		0	0			
Arsenic		6.32E-05	mg/L	0.0010		0	0			
Barium		1.80E-06	mg/L	0.0010		0	0			
Beryllium		2.80E-06	mg/L	0.0010		0	0			
Cadmium		8.70E-06	mg/L	0.0010		0	0			
Chromium		-0.000128	mg/L	0.0010		0	0			
Copper		1.61E-05	mg/L	0.0010		0	0			
Lead		4.70E-06	mg/L	0.0010		0	0			
Manganese		2.39E-05	mg/L	0.0010		0	0			
Mercury		0.000127	mg/L	0.0010		0	0			
Molybdenum		0.0203	mg/L	0.0010	101	80	120			
Nickel		2.22E-05	mg/L	0.0010		0	0			
Selenium		0.000130	mg/L	0.0010		0	0			
Silver		6.93E-05	mg/L	0.0010		0	0			
Strontium		5.51E-05	mg/L	0.0010		0	0			
Thallium		1.41E-05	mg/L	0.0010		0	0			
Uranium		4.04E-05	mg/L	0.00030		0	0			
Vanadium		2.42E-05	mg/L	0.0010		0	0			
Zinc		5.10E-06	mg/L	0.0010		0	0			
<b>Sample ID: ICSAB</b>	20	Interference Check Sample AB								11/01/10 13:02
Aluminum		0.991	mg/L	0.0010	99	70	130			

### Qualifiers:

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MDC - Minimum detectable concentration





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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/29/10

Project: Dewey Groundwater Sampling

Work Order: R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: SUB-C139312		
Sample ID: ICSAB		20 Interference Check Sample AB							11/01/10 13:02	
Antimony		1.97E-05	mg/L	0.0010		0	0			
Arsenic		0.00991	mg/L	0.0010	99	70	130			
Barium		1.66E-05	mg/L	0.0010		0	0			
Beryllium		2.00E-06	mg/L	0.0010		0	0			
Cadmium		0.0100	mg/L	0.0010	101	70	130			
Chromium		0.00994	mg/L	0.0010	99	70	130			
Copper		0.00998	mg/L	0.0010	100	70	130			
Lead		2.70E-06	mg/L	0.0010		0	0			
Manganese		0.00992	mg/L	0.0010	99	70	130			
Mercury		2.84E-05	mg/L	0.0010		0	0			
Molybdenum		0.0199	mg/L	0.0010	100	70	130			
Nickel		0.00990	mg/L	0.0010	99	70	130			
Selenium		0.000407	mg/L	0.0010		0	0			
Silver		0.0101	mg/L	0.0010	101	70	130			
Strontium		4.97E-05	mg/L	0.0010		0	0			
Thallium		1.20E-06	mg/L	0.0010		0	0			
Uranium		1.24E-05	mg/L	0.00030		0	0			
Vanadium		-0.000197	mg/L	0.0010		0	0			
Zinc		0.00988	mg/L	0.0010	99	70	130			

Method: E200.8					Batch: C_R139312	
Sample ID: LRB	20	Method Blank		Run: SUB-C139312		11/01/10 13:43
Aluminum	0.002	mg/L	0.0001			
Antimony	ND	mg/L	7E-05			
Arsenic	ND	mg/L	6E-05			
Barium	9E-05	mg/L	3E-05			
Beryllium	ND	mg/L	3E-05			
Cadmium	2E-05	mg/L	1E-05			
Chromium	ND	mg/L	4E-05			
Copper	0.001	mg/L	7E-05			
Lead	3E-05	mg/L	3E-05			
Manganese	8E-05	mg/L	5E-05			
Mercury	ND	mg/L	8E-05			
Molybdenum	ND	mg/L	5E-05			
Nickel	0.001	mg/L	0.0007			
Selenium	0.0003	mg/L	0.0002			
Silver	ND	mg/L	3E-05			
Strontium	0.0001	mg/L	3E-05			
Thallium	ND	mg/L	1E-05			
Uranium	2E-05	mg/L	1E-05			
Vanadium	ND	mg/L	3E-05			
Zinc	0.008	mg/L	0.0003			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/29/10

Project: Dewey Groundwater Sampling

Work Order: R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R139312
<b>Sample ID: LFB</b>	20 Laboratory Fortified Blank					Run: SUB-C139312			11/01/10 13:49	
Aluminum		0.0525	mg/L	0.0010	101	85	115			
Antimony		0.0524	mg/L	0.0010	105	85	115			
Arsenic		0.0533	mg/L	0.0010	107	85	115			
Barium		0.0532	mg/L	0.0010	106	85	115			
Beryllium		0.0518	mg/L	0.0010	104	85	115			
Cadmium		0.0530	mg/L	0.0010	106	85	115			
Chromium		0.0520	mg/L	0.0010	104	85	115			
Copper		0.0539	mg/L	0.0010	105	85	115			
Lead		0.0530	mg/L	0.0010	106	85	115			
Manganese		0.0520	mg/L	0.0010	104	85	115			
Mercury		0.00527	mg/L	0.0010	105	85	115			
Molybdenum		0.0532	mg/L	0.0010	106	85	115			
Nickel		0.0539	mg/L	0.0010	105	85	115			
Selenium		0.0538	mg/L	0.0010	107	85	115			
Silver		0.0209	mg/L	0.0010	104	85	115			
Strontium		0.0537	mg/L	0.0010	107	85	115			
Thallium		0.0532	mg/L	0.0010	106	85	115			
Uranium		0.0525	mg/L	0.00030	105	85	115			
Vanadium		0.0520	mg/L	0.0010	104	85	115			
Zinc		0.0557	mg/L	0.0010	96	85	115			
<b>Sample ID: C10101139-001CMS4</b>	20 Post Digestion Spike					Run: SUB-C139312			11/01/10 19:58	
Aluminum		0.0439	mg/L	0.0010	86	70	130			
Antimony		0.0627	mg/L	0.050	115	70	130			
Arsenic		0.101	mg/L	0.0010	105	70	130			
Barium		0.105	mg/L	0.10	109	70	130			
Beryllium		0.0418	mg/L	0.010	84	70	130			
Cadmium		0.0468	mg/L	0.010	93	70	130			
Chromium		0.0439	mg/L	0.0010	80	70	130			
Copper		0.0686	mg/L	0.010	95	70	130			
Lead		0.0561	mg/L	0.050	111	70	130			
Manganese		0.0737	mg/L	0.010	80	70	130			
Mercury		0.00542	mg/L	0.0010	108	70	130			
Molybdenum		0.451	mg/L	0.10	70	70	130			A
Nickel		0.0810	mg/L	0.050	98	70	130			
Selenium		0.177	mg/L	0.0010	97	70	130			
Silver		0.0154	mg/L	0.010	77	70	130			
Strontium		2.44	mg/L	0.10	70	70	130			A
Thallium		0.0553	mg/L	0.0010	109	70	130			
Uranium		1.03	mg/L	0.00030	70	70	130			A
Vanadium		0.813	mg/L	0.10	70	70	130			A
Zinc		0.0563	mg/L	0.010	88	70	130			
<b>Sample ID: C10101139-001CMSD4</b>	20 Post Digestion Spike Duplicate					Run: SUB-C139312			11/01/10 20:05	
Aluminum		0.0454	mg/L	0.0010	89	70	130	3.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Batch: C_R139312		
Sample ID: C10101139-001CMSD4 20 Post Digestion Spike Duplicate				Run: SUB-C139312				11/01/10 20:05		
Antimony		0.0622	mg/L	0.050	114	70	130	0.9	20	
Arsenic		0.0996	mg/L	0.0010	102	70	130	1.6	20	
Barium		0.106	mg/L	0.10	110	70	130	0.5	20	
Beryllium		0.0431	mg/L	0.010	86	70	130	2.9	20	
Cadmium		0.0472	mg/L	0.010	93	70	130	0.9	20	
Chromium		0.0448	mg/L	0.0010	82	70	130	2.1	20	
Copper		0.0679	mg/L	0.010	94	70	130	1.0	20	
Lead		0.0560	mg/L	0.050	111	70	130	0.3	20	
Manganese		0.0757	mg/L	0.010	84	70	130	2.7	20	
Mercury		0.00554	mg/L	0.0010	111	70	130	2.1	20	
Molybdenum		0.452	mg/L	0.10		70	130	0.3	20	A
Nickel		0.0799	mg/L	0.050	96	70	130	1.3	20	
Selenium		0.173	mg/L	0.0010	89	70	130	2.2	20	
Silver		0.0151	mg/L	0.010	76	70	130	1.4	20	
Strontium		2.44	mg/L	0.10		70	130	0.1	20	A
Thallium		0.0559	mg/L	0.0010	110	70	130	1.0	20	
Uranium		1.02	mg/L	0.00030		70	130	1.2	20	A
Vanadium		0.839	mg/L	0.10		70	130	3.1	20	A
Zinc		0.0559	mg/L	0.010	88	70	130	0.7	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

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28033
<b>Sample ID: MB-28033</b>	15	Method Blank					Run: SUB-C139366			11/02/10 21:10
Antimony		ND	mg/L	0.0003						
Arsenic		0.0008	mg/L	5E-05						
Beryllium		ND	mg/L	3E-05						
Boron		0.009	mg/L	0.003						
Cadmium		ND	mg/L	4E-05						
Copper		0.001	mg/L	5E-05						
Iron		0.002	mg/L	0.001						
Lead		9E-05	mg/L	5E-05						
Molybdenum		0.0005	mg/L	0.00010						
Nickel		0.0001	mg/L	4E-05						
Selenium		0.0003	mg/L	3E-05						
Silver		0.0001	mg/L	4E-05						
Strontium		ND	mg/L	6E-05						
Thallium		0.001	mg/L	0.0001						
Zinc		0.002	mg/L	0.001						
<b>Sample ID: LCS3-28033</b>	15	Laboratory Control Sample					Run: SUB-C139366			11/02/10 21:17
Antimony		0.616	mg/L	0.050	123	85	115			S
Arsenic		0.513	mg/L	0.0010	102	85	115			
Beryllium		0.240	mg/L	0.010	96	85	115			
Boron		0.440	mg/L	0.10	86	85	115			
Cadmium		0.275	mg/L	0.010	110	85	115			
Copper		0.471	mg/L	0.010	94	85	115			
Iron		2.14	mg/L	0.030	86	85	115			
Lead		0.517	mg/L	0.050	103	85	115			
Molybdenum		0.462	mg/L	0.10	92	85	115			
Nickel		0.474	mg/L	0.050	95	85	115			
Selenium		0.562	mg/L	0.0010	112	85	115			
Silver		0.0492	mg/L	0.010	98	85	115			
Strontium		0.447	mg/L	0.10	89	85	115			
Thallium		0.501	mg/L	0.10	100	85	115			
Zinc		0.515	mg/L	0.010	103	85	115			
<b>Sample ID: R10100355-002D</b>	15	Sample Matrix Spike					Run: SUB-C139366			11/02/10 23:55
Antimony		0.615	mg/L	0.050	123	70	130			
Arsenic		0.506	mg/L	0.0010	101	70	130			
Beryllium		0.216	mg/L	0.010	87	70	130			
Boron		0.454	mg/L	0.10	78	70	130			
Cadmium		0.262	mg/L	0.010	105	70	130			
Copper		0.457	mg/L	0.010	91	70	130			
Iron		2.23	mg/L	0.030	87	70	130			
Lead		0.528	mg/L	0.050	106	70	130			
Molybdenum		0.481	mg/L	0.10	96	70	130			
Nickel		0.461	mg/L	0.050	92	70	130			
Selenium		0.534	mg/L	0.0010	107	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28033
<b>Sample ID: R10100355-002D</b>	15	Sample Matrix Spike				Run: SUB-C139366				11/02/10 23:55
Silver		0.0471	mg/L	0.010	94	70	130			
Strontium		2.48	mg/L	0.10	105	70	130			
Thallium		0.505	mg/L	0.10	101	70	130			
Zinc		0.464	mg/L	0.010	92	70	130			
<b>Sample ID: R10100355-002D</b>	15	Sample Matrix Spike Duplicate				Run: SUB-C139366				11/03/10 00:02
Antimony		0.537	mg/L	0.050	107	70	130	14	20	
Arsenic		0.507	mg/L	0.0010	101	70	130	0.2	20	
Beryllium		0.216	mg/L	0.010	86	70	130	0.1	20	
Boron		0.456	mg/L	0.10	79	70	130	0.6	20	
Cadmium		0.254	mg/L	0.010	101	70	130	3.1	20	
Copper		0.468	mg/L	0.010	93	70	130	2.4	20	
Iron		2.21	mg/L	0.030	86	70	130	0.8	20	
Lead		0.513	mg/L	0.050	103	70	130	2.8	20	
Molybdenum		0.418	mg/L	0.10	83	70	130	14	20	
Nickel		0.463	mg/L	0.050	92	70	130	0.4	20	
Selenium		0.532	mg/L	0.0010	106	70	130	0.5	20	
Silver		0.0464	mg/L	0.010	93	70	130	1.4	20	
Strontium		2.42	mg/L	0.10	94	70	130	2.2	20	
Thallium		0.493	mg/L	0.10	99	70	130	2.4	20	
Zinc		0.465	mg/L	0.010	93	70	130	0.1	20	
<b>Method: E200.8</b>										Analytical Run: SUB-C139573
<b>Sample ID: ICV</b>		Initial Calibration Verification Standard								11/05/10 12:23
Uranium		0.0498	mg/L	0.00030	100	90	110			
<b>Sample ID: ICSA</b>		Interference Check Sample A								11/05/10 12:30
Uranium		3.56E-05	mg/L	0.00030		0	0			
<b>Sample ID: ICSAB</b>		Interference Check Sample AB								11/05/10 12:37
Uranium		8.10E-06	mg/L	0.00030		0	0			
<b>Method: E200.8</b>										Batch: C_28033
<b>Sample ID: MB-28033</b>		Method Blank				Run: SUB-C139573				11/05/10 23:14
Uranium		ND	mg/L	4E-05						
<b>Sample ID: LCS3-28033</b>		Laboratory Control Sample				Run: SUB-C139573				11/05/10 23:21
Uranium		0.566	mg/L	0.00030	113	85	115			
<b>Sample ID: R10100355-002D</b>		Sample Matrix Spike				Run: SUB-C139573				11/06/10 00:29
Uranium		0.597	mg/L	0.00030	118	70	130			
<b>Sample ID: R10100355-002D</b>		Sample Matrix Spike Duplicate				Run: SUB-C139573				11/06/10 00:35
Uranium		0.582	mg/L	0.00030	115	70	130	2.5	20	

### Qualifiers:

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Report Date:** 12/29/10

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R139687A
<b>Sample ID: C10110303-019BMS4</b>	4	Post Digestion Spike				Run: SUB-C139687				11/10/10 02:22
Boron		0.596	mg/L	0.10		70	130			A
Iron		1.40	mg/L	0.030	111	70	130			
Silicon		7.79	mg/L	0.10		70	130			A
Thorium 232		0.0542	mg/L	0.0010	108	70	130			
<b>Sample ID: C10110303-019BMSD4</b>	4	Post Digestion Spike Duplicate				Run: SUB-C139687				11/10/10 02:29
Boron		0.598	mg/L	0.10		70	130	0.4	20	A
Iron		1.42	mg/L	0.030	113	70	130	1.5	20	
Silicon		7.84	mg/L	0.10		70	130	0.6	20	A
Thorium 232		0.0541	mg/L	0.0010	108	70	130	0.2	20	
<b>Sample ID: LRB</b>	4	Method Blank				Run: SUB-C139687				11/09/10 14:18
Silicon		ND	mg/L	0.0005						
Boron		-0.001	mg/L							
Iron		ND	mg/L	0.0001						
Thorium 232		ND	mg/L	3E-05						
<b>Sample ID: LFB</b>	4	Laboratory Fortified Blank				Run: SUB-C139687				11/09/10 14:25
Silicon		0.579	mg/L	0.0050	111	85	115			
Boron		0.0529	mg/L	0.0010	109	85	115			
Iron		1.34	mg/L	0.012	108	85	115			
Thorium 232		0.0521	mg/L	0.0010	104	85	115			
<b>Method: E200.8</b>										Analytical Run: SUB-C140426
<b>Sample ID: ICV</b>		Initial Calibration Verification Standard								11/30/10 11:59
Uranium		0.0514	mg/L	0.00030	103	90	110			
<b>Method: E200.8</b>										Batch: C_28164
<b>Sample ID: MB-28164</b>		Method Blank				Run: SUB-C140426				11/30/10 17:49
Uranium		ND	mg/L	6E-05						
<b>Sample ID: LCS2-28164</b>		Laboratory Control Sample				Run: SUB-C140426				11/30/10 17:53
Uranium		0.104	mg/L	0.00030	104	85	115			
<b>Sample ID: R10100355-002I</b>		Post Digestion Spike				Run: SUB-C140426				11/30/10 18:26
Uranium		0.0137	mg/L	0.00030	104	70	130			
<b>Sample ID: R10100355-002I</b>		Post Digestion Spike Duplicate				Run: SUB-C140426				11/30/10 18:30
Uranium		0.0133	mg/L	0.00030	101	70	130	3.0	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-B156309
<b>Sample ID:</b> QCS		Initial Calibration Verification Standard								10/28/10 16:00
Mercury		0.0020	mg/L	0.00020	101	90	110			
<b>Method:</b> E245.1										Batch: B_50118
<b>Sample ID:</b> MB-50118		Method Blank					Run: SUB-B156309			10/28/10 16:10
Mercury		4E-05	mg/L	1E-05						
<b>Sample ID:</b> LCS-50118		Laboratory Control Sample					Run: SUB-B156309			10/28/10 16:11
Mercury		0.0018	mg/L	0.00020	86	85	115			
<b>Sample ID:</b> B10102325-001BMS		Sample Matrix Spike					Run: SUB-B156309			10/28/10 16:56
Mercury		0.0019	mg/L	0.00010	95	70	130			
<b>Sample ID:</b> B10102325-001BMSD		Sample Matrix Spike Duplicate					Run: SUB-B156309			10/28/10 16:58
Mercury		0.0019	mg/L	0.00010	95	70	130	0.0	30	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E300.0										Batch: R48774
<b>Sample ID:</b> LFB102610-14	5	Laboratory Fortified Blank				Run: DIONEX_101026A				10/26/10 21:12
Chloride		39.4	mg/L	1.00	99	90	110			
Fluoride		4.08	mg/L	0.10	102	90	110			
Nitrogen, Nitrate as N		3.98	mg/L	0.10	100	90	110			
Nitrogen, Nitrite as N		4.05	mg/L	0.10	101	90	110			
Sulfate		39.2	mg/L	1.0	98	90	110			
<b>Sample ID:</b> R10100355-001AMS	5	Sample Matrix Spike				Run: DIONEX_101026A				10/26/10 21:48
Chloride		802	mg/L	20	94	90	110			
Fluoride		82.3	mg/L	2.0	99	90	110			
Nitrogen, Nitrate as N		80.3	mg/L	2.0	100	90	110			
Nitrogen, Nitrite as N		81.8	mg/L	2.0	102	90	110			
Sulfate		1290	mg/L	20	96	90	110			
<b>Sample ID:</b> R10100355-001AMSD	5	Sample Matrix Spike Duplicate				Run: DIONEX_101026A				10/26/10 22:05
Chloride		794	mg/L	20	93	90	110	1.0	10	
Fluoride		81.5	mg/L	2.0	98	90	110	1.1	10	
Nitrogen, Nitrate as N		79.5	mg/L	2.0	99	90	110	0.9	10	
Nitrogen, Nitrite as N		80.8	mg/L	2.0	101	90	110	1.2	10	
Sulfate		1280	mg/L	20	95	90	110	0.6	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>									Batch: C_GrAB-1022	
<b>Sample ID: MB-GrAB-1022</b>	6	Method Blank				Run: SUB-C141279			12/27/10 23:05	
Gross Alpha		-2	pCi/L							U
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		0.9	pCi/L							
Gross Beta		-1	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-1022</b>		Laboratory Control Sample				Run: SUB-C141279			12/27/10 23:05	
Gross Alpha		110	pCi/L	107		70	130			
<b>Sample ID: Cs137-GrAB-1022</b>		Laboratory Control Sample				Run: SUB-C141279			12/27/10 23:05	
Gross Beta		76	pCi/L	88		70	130			
<b>Sample ID: C10120494-001FDUP</b>	6	Sample Duplicate				Run: SUB-C141279			12/27/10 23:05	
Gross Alpha		-7.4	pCi/L					18	79	U
Gross Alpha precision (±)		2.3	pCi/L							
Gross Alpha MDC		3.0	pCi/L							
Gross Beta		2.0	pCi/L					130	266.4	
Gross Beta precision (±)		1.9	pCi/L							
Gross Beta MDC		1.9	pCi/L							
<b>Sample ID: C10120742-001DMS</b>		Sample Matrix Spike				Run: SUB-C141279			12/28/10 11:23	
Gross Alpha		230	pCi/L	134		70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
<b>Sample ID: C10120742-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C141279			12/28/10 11:23	
Gross Alpha		230	pCi/L	137		70	130	1.5	16.3	S
<b>Sample ID: C10120742-001DMS</b>		Sample Matrix Spike				Run: SUB-C141279			12/28/10 11:23	
Gross Beta		110	pCi/L	95		70	130			
<b>Sample ID: C10120742-001DMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C141279			12/28/10 11:23	
Gross Beta		120	pCi/L	103		70	130	6.1	14.9	

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 12/29/10

Project: Dewey Groundwater Sampling

Work Order: R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R139341
<b>Sample ID: LCS-R139341</b>	3	Laboratory Control Sample				Run: SUB-C139341				11/01/10 10:00
Americium 241		700	pCi/L	20	87	70	130			
Cesium 137		980	pCi/L	20	97	70	130			
Potassium 40		6600	pCi/L	20	98	70	130			
<b>Sample ID: MB-R139341</b>	23	Method Blank				Run: SUB-C139341				11/01/10 10:00
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234		500	pCi/L							
Thorium 234 precision (±)		80	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		500	pCi/L							
Gross Gamma precision (±)		80	pCi/L							
- See Case Narrative regarding Gross Gamma analysis.										
<b>Sample ID: R10100355-002H</b>	23	Sample Duplicate				Run: SUB-C139341				11/01/10 10:00
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E901.1										Batch: C_R139341
<b>Sample ID:</b> R10100355-002H										
23		Sample Duplicate		Run: SUB-C139341		11/01/10 10:00				
Radium 224 precision ( $\pm$ )		ND	pCi/L							
Thallium 208 precision ( $\pm$ )		ND	pCi/L							
Thorium 228 precision ( $\pm$ )		ND	pCi/L							
Thorium 234		470	pCi/L	20				5.1	30	
Thorium 234 precision ( $\pm$ )		130	pCi/L							
Zinc 65 precision ( $\pm$ )		ND	pCi/L							
Radium 228 precision ( $\pm$ )		ND	pCi/L							
Gross Gamma		470	pCi/L					5.1	30	
Gross Gamma precision ( $\pm$ )		130	pCi/L							

### Qualifiers:

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MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0								Batch: C_RA226-4959		
Sample ID: C10101041-008DMS		Sample Matrix Spike				Run: SUB-C139874			11/11/10 11:45	
Radium 226		18.6	pCi/L		115	70	130			
Sample ID: C10101041-008DMSD		Sample Matrix Spike Duplicate				Run: SUB-C139874			11/11/10 11:45	
Radium 226		20.1	pCi/L		125	70	130	7.7	24.6	
Sample ID: MB-RA226-4959	3	Method Blank				Run: SUB-C139874			11/11/10 13:18	
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.09	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-4959		Laboratory Control Sample				Run: SUB-C139874			11/11/10 13:18	
Radium 226		11	pCi/L		141	70	130			S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Method: E903.0								Batch: C_R140270		
Sample ID: R10100355-001I		Sample Matrix Spike				Run: SUB-C140270			11/23/10 01:20	
Radium 226		19	pCi/L		98	70	130			
Sample ID: R10100355-001I		Sample Matrix Spike Duplicate				Run: SUB-C140270			11/23/10 01:20	
Radium 226		22	pCi/L		113	70	130	14	21.9	
Sample ID: LCS-28164		Laboratory Control Sample				Run: SUB-C140270			11/23/10 01:21	
Radium 226		18	pCi/L		116	70	130			
Sample ID: MB-28164	3	Method Blank				Run: SUB-C140270			11/23/10 01:21	
Radium 226		0.4	pCi/L							
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.2	pCi/L							

### Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E907.0</b>										Batch: C_28164
<b>Sample ID: R10100355-002I</b>		Sample Matrix Spike				Run: SUB-C140085				11/16/10 16:13
Thorium 230	13	pCi/L		105		70	130			
<b>Sample ID: R10100355-002I</b>		Sample Matrix Spike Duplicate				Run: SUB-C140085				11/16/10 16:13
Thorium 230	10	pCi/L		83		70	130	25	46.6	
<b>Sample ID: LCS-28164</b>		Laboratory Control Sample				Run: SUB-C140085				11/16/10 16:13
Thorium 230	5.6	pCi/L		116		70	130			
<b>Sample ID: MB-28164</b>	3	Method Blank				Run: SUB-C140085				11/16/10 16:13
Thorium 230		-0.10	pCi/L							U
Thorium 230 MDC		0.3	pCi/L							
Thorium 230 precision (±)		0.2	pCi/L							
<b>Method: E907.0</b>										Batch: C_RA-TH-ISO-1285
<b>Sample ID: LCS-RA-TH-ISO-1285</b>		Laboratory Control Sample				Run: SUB-C140086				11/16/10 16:16
Thorium 230	5.4	pCi/L		94		70	130			
<b>Sample ID: R10100355-002H</b>		Sample Matrix Spike				Run: SUB-C140086				11/16/10 16:16
Thorium 230	13	pCi/L		100		70	130			
<b>Sample ID: R10100355-002H</b>		Sample Matrix Spike Duplicate				Run: SUB-C140086				11/16/10 16:16
Thorium 230	13	pCi/L		100		70	130	0.0	40.8	
<b>Sample ID: MB-RA-TH-ISO-1285</b>	3	Method Blank				Run: SUB-C140086				11/17/10 15:57
Thorium 230		0.01	pCi/L							U
Thorium 230 MDC		0.1	pCi/L							
Thorium 230 precision (±)		0.05	pCi/L							

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0M</b>								Analytical Run: SUB-T37761		
<b>Sample ID: STD-PB-210-0038</b>	3	Continuing Calibration Verification Standard								11/19/10 19:53
Lead 210		32	pCi/L			70	130	0.0	30	
Lead 210 precision (±)		1.3	pCi/L			0	0			
Lead 210 MDC		1.4	pCi/L			0	0			
<b>Method: E909.0M</b>								Batch: T_PB-210-0038		
<b>Sample ID: MB-PB-210-0038</b>	3	Method Blank								11/19/10 17:42
Lead 210		-0.4	pCi/L			Run: SUB-T37761				U
Lead 210 precision (±)		0.9	pCi/L							
Lead 210 MDC		1	pCi/L							
<b>Sample ID: LCS-PB-210-0038</b>		Laboratory Control Sample				Run: SUB-T37761				11/19/10 22:05
Lead 210		53	pCi/L		97	70	130			
<b>Sample ID: T10110006-001BMS</b>		Sample Matrix Spike				Run: SUB-T37761				11/20/10 02:28
Lead 210		100	pCi/L		93	70	130			
<b>Sample ID: T10110006-001BMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T37761				11/20/10 04:39
Lead 210		95	pCi/L		88	70	130	6.3	15.9	
<b>Method: E909.0M</b>								Batch: T_PB-210-0055		
<b>Sample ID: MB-12635</b>	3	Method Blank								12/16/10 16:28
Lead 210		1	pCi/L			Run: SUB-T38122				U
Lead 210 precision (±)		9	pCi/L							
Lead 210 MDC		10	pCi/L							
<b>Sample ID: LCS-12635</b>		Laboratory Control Sample				Run: SUB-T38122				12/16/10 20:51
Lead 210		440	pCi/L		81	70	130			
<b>Sample ID: R10100355-001I</b>		Sample Matrix Spike				Run: SUB-T38122				12/17/10 01:14
Lead 210		480	pCi/L		87	70	130			
<b>Sample ID: R10100355-001I</b>		Sample Matrix Spike Duplicate				Run: SUB-T38122				12/17/10 03:25
Lead 210		460	pCi/L		85	70	130	2.7	16.2	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/29/10

**Project:** Dewey Groundwater Sampling

**Work Order:** R10100355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0325
<b>Sample ID: C10100987-001CMS</b>										
Sample Matrix Spike			Run: SUB-C139964							
Polonium 210	34		pCi/L	105		70	130			11/11/10 08:53
<b>Sample ID: C10100987-001CMSD</b>										
Sample Matrix Spike Duplicate			Run: SUB-C139964							
Polonium 210	34		pCi/L	106		70	130	1.0	56.3	11/11/10 08:53
<b>Sample ID: MB-PO210-0325</b>										
3 Method Blank			Run: SUB-C139964							
Polonium 210		0.09	pCi/L							11/11/10 08:53
Polonium 210 MDC		0.6	pCi/L							U
Polonium 210 precision (±)		0.3	pCi/L							
<b>Sample ID: LCS-PO210-0325</b>										
Laboratory Control Sample			Run: SUB-C139964							
Polonium 210	15		pCi/L	90		70	130			11/11/10 08:53
<b>Method: E912.0</b>										Batch: C_PO210-0327
<b>Sample ID: C10110253-006DMS</b>										
Sample Matrix Spike			Run: SUB-C140163							
Polonium 210	31		pCi/L	96		70	130			11/18/10 13:12
<b>Sample ID: C10110253-006DMSD</b>										
Sample Matrix Spike Duplicate			Run: SUB-C140163							
Polonium 210	32		pCi/L	98		70	130	2.3	59	11/18/10 13:12
<b>Sample ID: LCS-PO210-0327</b>										
Laboratory Control Sample			Run: SUB-C140163							
Polonium 210	15		pCi/L	90		70	130			11/18/10 13:12
<b>Sample ID: MB-PO210-0327</b>										
3 Method Blank			Run: SUB-C140163							
Polonium 210		0.08	pCi/L							11/18/10 13:12
Polonium 210 MDC		0.6	pCi/L							U
Polonium 210 precision (±)		0.3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



PLEASE PRINT (Provide as much information as possible.)

Company Name: <b>Scott Env.</b>		Project Name, PWS, Permit, Etc. <b>Powertech Dewey Burdock</b>		Sample Origin	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <b>Scott Env. / Powertech</b>		Contact Name: <b>Allen Scott</b>		State:	Sampler: (Please Print)
Invoice Address: <b>Powertech, Inc. USA</b>		Phone/Fax: <b>673-4459</b>		Email:	
Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> Format: <input type="checkbox"/> State: <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: <input type="checkbox"/> NELAC		Number of Containers Sample Type: AWS V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water		Purchase Order:	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)		Collection Date	Collection Time	ANALYSIS REQUESTED	
1 <b>08-09-21-01</b>		<b>10-25-10</b>		<b>ASAP</b>  <b>SEE ATTACHED</b> Standard Turnaround (TAT) <b>RUSH</b> Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:  Shipped by: Cooler ID(s): Receipt Temp: <b>3.8</b> °C On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Custody Seal: On Bottle: Y <input type="checkbox"/> N On Cooler: Y <input type="checkbox"/> N Intact: Y <input type="checkbox"/> N Signature: <b>Allen Scott</b> Match: Y <input type="checkbox"/> N	
2 <b>08-09-21-02</b>		<b>10-25-10</b>			
3					
4					
5					
6					
7					
8					
9					
10					
Custody Record Must be Signed		Relinquished by (print): <b>Allen Scott</b>		Date/Time: <b>10-26-10 8:58</b>	
Sample Disposal: Return to Client:		Lab Disposal:		Received by (print): <b>Steve Froland</b>	
				Date/Time: <b>10-26-10 8:58</b>	

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





## ANALYTICAL SUMMARY REPORT

February 14, 2011

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10110179

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. Rapid City SD received the following 3 samples for Powertech USA Inc on 11/15/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10110179-001	DB-09-21-01	11/15/10 0:00	11/15/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10110179-002	DB-09-21-02	11/15/10 0:00	11/15/10	Aqueous	Same As Above
R10110179-003	DB-09-21-02 Dup	11/15/10 0:00	11/15/10	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:

  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2011.02.14 13:37:50 -07:00



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Gillette, WY 866-606-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-698-2218

**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10110179

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

## CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

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

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

Comments imported for SUBBED Workorder: C10110686

### GROSS GAMMA ANALYSIS

The gamma spectrometry software has identified Thorium 234 as a potential component of this sample. The value generated by the software has been reported here. However, the Thorium 234 gamma ray peaks reside in the middle of excessive background contributions from Compton scatter, x-rays from thorium, and interfering gamma ray peaks from other naturally occurring radionuclides present in the metal can and sample. This means that the value for Thorium 234 likely has a positive bias. The only method to determine the actual concentration of Th-234 would be by radiochemical separation of thorium and gamma spectrometric analysis on the isolate thorium fraction.

End of comments imported for SUBBED Workorder: C10110686

Comments imported for SUBBED Workorder: T10110102

Prep Comments for Sample R10110179-001I, Test PRP-3050-F-T: The prep hold time was exceeded by 29.5 days. The prep hold time was exceeded by 23.3 days.

Prep Comments for Sample R10110179-002I, Test PRP-3050-F-T: The prep hold time was exceeded by 29.5 days. The prep hold time was exceeded by 23.3 days.

Prep Comments for Sample R10110179-003I, Test PRP-3050-F-T: The prep hold time was exceeded by 29.5 days. The prep hold time was exceeded by 23.3 days.

End of comments imported for SUBBED Workorder: T10110102

Revised report issued for PB210 recheck on DB09-21-02 sample.



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-001

Date Received: 11/15/10

Client Sample ID: DB-09-21-01

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	166	mg/L		5		1	A2320 B	11/19/10 16:20/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/19/10 16:20/hv
Bicarbonate as HCO <sub>3</sub>	202	mg/L		5		1	A2320 B	11/19/10 16:20/hv
Calcium	91.4	mg/L		0.5		2	E200.7	11/30/10 17:46/eli-c
Chloride	8	mg/L		1		1	E300.0	11/16/10 22:55/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	11/16/10 22:55/jmh
Magnesium	33.4	mg/L		0.5		2	E200.7	11/30/10 17:46/eli-c
Nitrogen, Ammonia as N	0.1	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/18/10 15:43/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/16/10 22:55/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/16/10 22:55/jmh
Potassium	11.8	mg/L		0.5		2	E200.7	11/30/10 17:46/eli-c
Sodium	157	mg/L	D	0.6		2	E200.7	11/30/10 17:46/eli-c
Sulfate	548	mg/L	D	10		10	E300.0	11/16/10 22:02/jmh
Silica	8.8	mg/L		0.2		1	E200.8	11/30/10 03:30/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1300	umhos/cm		5.0		1	A2510 B	11/22/10 14:56/tb
Oxidation-Reduction Potential	210	mV				1	A2580 B	11/22/10 18:00/jmh
pH	7.63	s.u.		0.01		1	A4500-H B	11/19/10 14:10/tb
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	12/21/10 17:26/ADM
Solids, Total Dissolved TDS @ 180 C	990	mg/L	D	10		1	A2540 C	11/22/10 11:21/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	11/30/10 03:30/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	11/30/10 03:30/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 03:30/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/30/10 03:30/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 03:30/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 03:30/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 03:30/eli-c
Iron	ND	mg/L		0.03		1	E200.8	11/30/10 03:30/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 03:30/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	11/30/10 03:30/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	11/30/10 03:30/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 03:30/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 03:30/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	11/22/10 13:10/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 03:30/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	11/30/10 03:30/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-001

Date Received: 11/15/10

Client Sample ID: DB-09-21-01

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
METALS - DISSOLVED									
Uranium	ND	mg/L		0.0003		1	E200.8		11/30/10 03:30/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8		11/30/10 03:30/eli-c
Zinc	ND	mg/L		0.01		1	E200.8		11/30/10 03:30/eli-c
METALS - SUSPENDED									
Uranium	ND	mg/L		0.0003		1	E200.8		11/30/10 17:24/eli-c
METALS - SPECIATED									
Selenium-IV	ND	mg/L		0.001		1	A3114 B		11/22/10 11:41/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B		11/22/10 13:55/eli-c
RADIONUCLIDES - DISSOLVED									
Gross Alpha	0.7	pCi/L	U			1	E900.0		12/02/10 21:28/eli-ca
Gross Alpha precision (±)	3.6	pCi/L				1	E900.0		12/02/10 21:28/eli-ca
Gross Alpha MDC	6.0	pCi/L				1	E900.0		12/02/10 21:28/eli-ca
Gross Beta	10.7	pCi/L				1	E900.0		12/02/10 21:28/eli-ca
Gross Beta precision (±)	3.4	pCi/L				1	E900.0		12/02/10 21:28/eli-ca
Gross Beta MDC	5.3	pCi/L				1	E900.0		12/02/10 21:28/eli-ca
Lead 210	1	pCi/L	U			1	E909.0M		12/15/10 23:53/eli-cs
Lead 210 precision (±)	1.0	pCi/L				1	E909.0M		12/15/10 23:53/eli-cs
Lead 210 MDC	1.7	pCi/L				1	E909.0M		12/15/10 23:53/eli-cs
Polonium 210	-0.012	pCi/L	U			1	E912.0		11/29/10 09:17/eli-ca
Polonium 210 MDC	0.52	pCi/L				1	E912.0		11/29/10 09:17/eli-ca
Polonium 210 precision (±)	0.20	pCi/L				1	E912.0		11/29/10 09:17/eli-ca
Radium 226	2.0	pCi/L				1	E903.0		11/29/10 17:41/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0		11/29/10 17:41/eli-c
Radium 226 MDC	0.06	pCi/L				1	E903.0		11/29/10 17:41/eli-c
Thorium 230	-0.03	pCi/L	U			1	E907.0		12/06/10 09:46/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0		12/06/10 09:46/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0		12/06/10 09:46/eli-c
Gross Gamma	650	pCi/L				1	E901.1		11/18/10 15:20/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1		11/18/10 15:20/eli-c
- See Case Narrative regarding Gross Gamma analysis.									
RADIONUCLIDES - SUSPENDED									
Lead 210	1.3	pCi/L	U			1	E909.0M		12/30/10 01:16/eli-cs
Lead 210 precision (±)	2.0	pCi/L				1	E909.0M		12/30/10 01:16/eli-cs
Lead 210 MDC	3.3	pCi/L				1	E909.0M		12/30/10 01:16/eli-cs
Polonium 210	0.078	pCi/L	U			1	E912.0		12/01/10 09:34/eli-ca
Polonium 210 precision (±)	0.31	pCi/L				1	E912.0		12/01/10 09:34/eli-ca

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

Definitions: QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



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## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-001

Date Received: 11/15/10

Client Sample ID: DB-09-21-01

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
RADIONUCLIDES - SUSPENDED								
Polonium 210 MDC	0.62	pCi/L				1	E912.0	12/01/10 09:34/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Radium 226 MDC	0.1	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Thorium 230	-0.2	pCi/L	U			1	E907.0	12/02/10 16:26/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	12/02/10 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/02/10 16:26/eli-c
RADIONUCLIDES - TOTAL								
Radon 222	532	pCi/L		100		1	D5072-92	11/18/10 15:53/eli-c
TOTAL METALS ANALYSES								
Antimony	ND	mg/L		0.003		1	E200.8	11/30/10 14:43/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	11/30/10 14:43/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 14:43/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	11/30/10 14:43/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/30/10 14:43/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 14:43/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 14:43/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 14:43/eli-c
Iron	0.26	mg/L		0.03		1	E200.8	11/30/10 14:43/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 14:43/eli-c
Manganese	0.05	mg/L		0.01		1	E200.8	11/30/10 14:43/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/18/10 15:10/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 14:43/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 14:43/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	11/30/10 14:43/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 14:43/eli-c
Strontium	2.6	mg/L		0.1		1	E200.8	11/30/10 14:43/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	11/30/10 14:43/eli-c
Uranium	0.0003	mg/L		0.0003		1	E200.8	11/30/10 14:43/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/30/10 14:43/eli-c
DATA QUALITY								
A/C Balance (± 5)	-1.85	%				1	A1030 E	12/31/10 00:00/lkl
Anions	15.0	meq/L				1	A1030 E	12/31/10 00:00/lkl
Cations	14.4	meq/L				1	A1030 E	12/31/10 00:00/lkl
Solids, Total Dissolved Calculated	974	mg/L				1	A1030 E	12/31/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.02					1	A1030 E	12/31/10 00:00/lkl

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

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

# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Collection Date: 11/15/10

Date Received: 11/15/10

Matrix: AQUEOUS

Client: Powertech USA Inc  
Project: Dewey Groundwater Sampling  
Lab ID: R10110179-002  
Client Sample ID: DB-09-21-02

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	194	mg/L		5		1	A2320 B	11/19/10 16:24/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/19/10 16:24/hv
Bicarbonate as HCO <sub>3</sub>	236	mg/L		5		1	A2320 B	11/19/10 16:24/hv
Calcium	163	mg/L		0.5		2	E200.7	11/30/10 17:50/eli-c
Chloride	10	mg/L		1		1	E300.0	11/16/10 23:30/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	11/16/10 23:30/jmh
Magnesium	45.2	mg/L		0.5		2	E200.7	11/30/10 17:50/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/18/10 15:47/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/16/10 23:30/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/16/10 23:30/jmh
Potassium	12.0	mg/L		0.5		2	E200.7	11/30/10 17:50/eli-c
Sodium	125	mg/L	D	0.6		2	E200.7	11/30/10 17:50/eli-c
Sulfate	689	mg/L	D	10		10	E300.0	11/16/10 23:12/jmh
Silica	8.3	mg/L		0.2		1	E200.8	11/30/10 03:37/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1470	umhos/cm		5.0		1	A2510 B	11/22/10 14:58/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	11/22/10 18:00/jmh
pH	7.35	s.u.		0.01		1	A4500-H B	11/19/10 14:14/tb
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	12/21/10 17:26/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	11/22/10 11:21/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	11/30/10 03:37/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	11/30/10 03:37/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 03:37/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/30/10 03:37/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 03:37/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 03:37/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 03:37/eli-c
Iron	ND	mg/L		0.03		1	E200.8	11/30/10 03:37/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 03:37/eli-c
Manganese	0.57	mg/L		0.01		1	E200.8	11/30/10 03:37/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	11/30/10 03:37/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 03:37/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 03:37/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	11/22/10 13:17/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 03:37/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	11/30/10 03:37/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-002

Date Received: 11/15/10

Client Sample ID: DB-09-21-02

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	0.0082	mg/L		0.0003		1	E200.8	11/30/10 03:37/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	11/30/10 03:37/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/30/10 03:37/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	11/30/10 17:28/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	11/22/10 11:48/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	11/22/10 13:55/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	24.5	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Alpha precision (±)	6.0	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Alpha MDC	7.7	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta	21.1	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta precision (±)	3.9	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta MDC	6.0	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Lead 210	-0.08	pCi/L	U			1	E909.0	02/10/11 14:52/eli-cs
Lead 210 precision (±)	0.8	pCi/L				1	E909.0	02/10/11 14:52/eli-cs
Lead 210 MDC	1.4	pCi/L				1	E909.0	02/10/11 14:52/eli-cs
Polonium 210	-0.011	pCi/L	U			1	E912.0	11/29/10 09:17/eli-ca
Polonium 210 MDC	0.53	pCi/L				1	E912.0	11/29/10 09:17/eli-ca
Polonium 210 precision (±)	0.20	pCi/L				1	E912.0	11/29/10 09:17/eli-ca
Radium 226	2.4	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Radium 226 MDC	0.06	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Thorium 230	0.03	pCi/L	U			1	E907.0	12/06/10 09:46/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	12/06/10 09:46/eli-c
Thorium 230 precision (±)	0.06	pCi/L				1	E907.0	12/06/10 09:46/eli-c
Gross Gamma	490	pCi/L				1	E901.1	11/18/10 15:20/eli-c
Gross Gamma precision (±)	170	pCi/L				1	E901.1	11/18/10 15:20/eli-c
- See Case Narrative regarding Gross Gamma analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	2.5	pCi/L	U			1	E909.0M	12/30/10 07:50/eli-cs
Lead 210 precision (±)	2.0	pCi/L				1	E909.0M	12/30/10 07:50/eli-cs
Lead 210 MDC	3.3	pCi/L				1	E909.0M	12/30/10 07:50/eli-cs
Polonium 210	-0.032	pCi/L	U			1	E912.0	12/01/10 09:34/eli-ca
Polonium 210 precision (±)	0.25	pCi/L				1	E912.0	12/01/10 09:34/eli-ca

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



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# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-002

Date Received: 11/15/10

Client Sample ID: DB-09-21-02

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.66	pCi/L				1	E912.0	12/01/10 09:34/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	12/06/10 16:46/eli-c
Radium 226 precision (±)	0.08	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Radium 226 MDC	0.1	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Thorium 230	-0.2	pCi/L	U			1	E907.0	12/02/10 16:26/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	12/02/10 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/02/10 16:26/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	683	pCi/L		100		1	D5072-92	11/18/10 15:53/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	11/30/10 14:50/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	11/30/10 14:50/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 14:50/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	11/30/10 14:50/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/30/10 14:50/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 14:50/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 14:50/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 14:50/eli-c
Iron	0.04	mg/L		0.03		1	E200.8	11/30/10 14:50/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 14:50/eli-c
Manganese	0.59	mg/L		0.01		1	E200.8	11/30/10 14:50/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/18/10 15:12/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 14:50/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 14:50/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	11/30/10 14:50/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 14:50/eli-c
Strontium	2.3	mg/L		0.1		1	E200.8	11/30/10 14:50/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	11/30/10 14:50/eli-c
Uranium	0.0098	mg/L		0.0003		1	E200.8	11/30/10 14:50/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/30/10 14:50/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.58	%				1	A1030 E	12/31/10 00:00/lkl
Anions	18.6	meq/L				1	A1030 E	12/31/10 00:00/lkl
Cations	17.6	meq/L				1	A1030 E	12/31/10 00:00/lkl
Solids, Total Dissolved Calculated	1180	mg/L				1	A1030 E	12/31/10 00:00/lkl
TDS Balance (0.80 - 1.20)	1.01					1	A1030 E	12/31/10 00:00/lkl

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

Definitions: QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration





# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-003

Date Received: 11/15/10

Client Sample ID: DB-09-21-02 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	192	mg/L		5		1	A2320 B	11/19/10 16:29/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	11/19/10 16:29/hv
Bicarbonate as HCO <sub>3</sub>	234	mg/L		5		1	A2320 B	11/19/10 16:29/hv
Calcium	163	mg/L		0.5		2	E200.7	11/30/10 17:54/eli-c
Chloride	10	mg/L		1		1	E300.0	11/17/10 00:05/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	11/17/10 00:05/jmh
Magnesium	46.4	mg/L		0.5		2	E200.7	11/30/10 17:54/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH <sub>3</sub> G	11/18/10 15:48/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	11/17/10 00:05/jmh
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	11/17/10 00:05/jmh
Potassium	12.0	mg/L		0.5		2	E200.7	11/30/10 17:54/eli-c
Sodium	123	mg/L	D	0.6		2	E200.7	11/30/10 17:54/eli-c
Sulfate	691	mg/L	D	10		10	E300.0	11/16/10 23:48/jmh
Silica	8.5	mg/L		0.2		1	E200.8	11/30/10 04:12/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1470	umhos/cm		5.0		1	A2510 B	11/22/10 15:00/tb
Oxidation-Reduction Potential	220	mV				1	A2580 B	11/22/10 18:00/jmh
pH	7.35	s.u.		0.01		1	A4500-H B	11/19/10 14:15/tb
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	12/21/10 17:26/ADM
Solids, Total Dissolved TDS @ 180 C	1100	mg/L	D	10		1	A2540 C	11/22/10 11:22/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		1	E200.8	11/30/10 04:12/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	11/30/10 04:12/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 04:12/eli-c
Boron	ND	mg/L		0.1		2	E200.7	11/30/10 17:54/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 04:12/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 04:12/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 04:12/eli-c
Iron	ND	mg/L		0.03		1	E200.8	11/30/10 04:12/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 04:12/eli-c
Manganese	0.58	mg/L		0.01		1	E200.8	11/30/10 04:12/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	11/30/10 04:12/eli-c
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 04:12/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 04:12/eli-c
Selenium	ND	mg/L		0.001		1	A3114 B	11/22/10 13:19/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 04:12/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	11/30/10 04:12/eli-c

**Report** RL - Analyte reporting limit.  
**Definitions:** QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-003

Date Received: 11/15/10

Client Sample ID: DB-09-21-02 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
METALS - DISSOLVED								
Uranium	0.0083	mg/L		0.0003		1	E200.8	11/30/10 04:12/eli-c
Vanadium	ND	mg/L		0.1		1	E200.8	11/30/10 04:12/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/30/10 04:12/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	11/30/10 17:32/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	11/22/10 11:50/eli-c
Selenium-VI	ND	mg/L		0.001		1	A3114 B	11/22/10 13:55/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	23.3	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Alpha precision (±)	5.9	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Alpha MDC	7.7	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta	26.0	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta precision (±)	4.0	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Gross Beta MDC	6.0	pCi/L				1	E900.0	12/20/10 22:38/eli-ca
Lead 210	0.5	pCi/L	U			1	E909.0M	12/16/10 04:16/eli-cs
Lead 210 precision (±)	1.0	pCi/L				1	E909.0M	12/16/10 04:16/eli-cs
Lead 210 MDC	1.7	pCi/L				1	E909.0M	12/16/10 04:16/eli-cs
Polonium 210	-0.024	pCi/L	U			1	E912.0	11/29/10 09:17/eli-ca
Polonium 210 MDC	0.60	pCi/L				1	E912.0	11/29/10 09:17/eli-ca
Polonium 210 precision (±)	0.23	pCi/L				1	E912.0	11/29/10 09:17/eli-ca
Radium 226	2.3	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Radium 226 MDC	0.06	pCi/L				1	E903.0	11/29/10 17:41/eli-c
Thorium 230	0.004	pCi/L	U			1	E907.0	12/06/10 09:46/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E907.0	12/06/10 09:46/eli-c
Thorium 230 precision (±)	0.05	pCi/L				1	E907.0	12/06/10 09:46/eli-c
Gross Gamma	550	pCi/L				1	E901.1	11/18/10 15:20/eli-c
Gross Gamma precision (±)	160	pCi/L				1	E901.1	11/18/10 15:20/eli-c
- See Case Narrative regarding Gross Gamma analysis.								
RADIONUCLIDES - SUSPENDED								
Lead 210	1.4	pCi/L	U			1	E909.0M	12/30/10 10:01/eli-cs
Lead 210 precision (±)	2.0	pCi/L				1	E909.0M	12/30/10 10:01/eli-cs
Lead 210 MDC	3.3	pCi/L				1	E909.0M	12/30/10 10:01/eli-cs
Polonium 210	0.070	pCi/L	U			1	E912.0	12/01/10 09:34/eli-ca
Polonium 210 precision (±)	0.34	pCi/L				1	E912.0	12/01/10 09:34/eli-ca

**Report** RL - Analyte reporting limit.

MCL - Maximum contaminant level.

**Definitions:** QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Collection Date: 11/15/10

Lab ID: R10110179-003

Date Received: 11/15/10

Client Sample ID: DB-09-21-02 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Polonium 210 MDC	0.70	pCi/L				1	E912.0	12/01/10 09:34/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	12/06/10 16:46/eli-c
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Radium 226 MDC	0.1	pCi/L				1	E903.0	12/06/10 16:46/eli-c
Thorium 230	-0.1	pCi/L	U			1	E907.0	12/02/10 16:26/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E907.0	12/02/10 16:26/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E907.0	12/02/10 16:26/eli-c
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	666	pCi/L		100		1	D5072-92	11/18/10 15:53/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	11/30/10 14:57/eli-c
Arsenic	0.002	mg/L		0.001		1	E200.8	11/30/10 14:57/eli-c
Barium	ND	mg/L		0.1		1	E200.8	11/30/10 14:57/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	11/30/10 14:57/eli-c
Boron	ND	mg/L		0.1		1	E200.8	11/30/10 14:57/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	11/30/10 14:57/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	11/30/10 14:57/eli-c
Copper	ND	mg/L		0.01		1	E200.8	11/30/10 14:57/eli-c
Iron	0.09	mg/L		0.03		1	E200.8	11/30/10 14:57/eli-c
Lead	ND	mg/L		0.001		1	E200.8	11/30/10 14:57/eli-c
Manganese	0.57	mg/L		0.01		1	E200.8	11/30/10 14:57/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	11/18/10 15:13/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	11/30/10 14:57/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	11/30/10 14:57/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	11/30/10 14:57/eli-c
Silver	ND	mg/L		0.005		1	E200.8	11/30/10 14:57/eli-c
Strontium	2.2	mg/L		0.1		1	E200.8	11/30/10 14:57/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	11/30/10 14:57/eli-c
Uranium	0.0097	mg/L		0.0003		1	E200.8	11/30/10 14:57/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	11/30/10 14:57/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-2.35	%				1	A1030 E	12/31/10 00:00/kl
Anions	18.5	meq/L				1	A1030 E	12/31/10 00:00/kl
Cations	17.7	meq/L				1	A1030 E	12/31/10 00:00/kl
Solids, Total Dissolved Calculated	1190	mg/L				1	A1030 E	12/31/10 00:00/kl
TDS Balance (0.80 - 1.20)	0.950					1	A1030 E	12/31/10 00:00/kl

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

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



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B										Batch: 101119A-ALK-SEL-W
Sample ID: LCS1_101119A		Laboratory Control Sample				Run: PH_COND1-R_101119A				11/19/10 15:29
Alkalinity, Total as CaCO <sub>3</sub>		964	mg/L	5.0	96	90	110			
Sample ID: MBLK1_101119A		Method Blank				Run: PH_COND1-R_101119A				11/19/10 15:35
Alkalinity, Total as CaCO <sub>3</sub>		ND	mg/L	7						
Sample ID: R10110177-002AMS		Sample Matrix Spike				Run: PH_COND1-R_101119A				11/19/10 15:47
Alkalinity, Total as CaCO <sub>3</sub>		310	mg/L	5.0	98	80	120			
Sample ID: R10110177-002AMSD		Sample Matrix Spike Duplicate				Run: PH_COND1-R_101119A				11/19/10 15:53
Alkalinity, Total as CaCO <sub>3</sub>		312	mg/L	5.0	99	80	120	0.6	10	
Sample ID: R10110212-004AMS		Sample Matrix Spike				Run: PH_COND1-R_101119A				11/19/10 17:01
Alkalinity, Total as CaCO <sub>3</sub>		294	mg/L	5.0	96	80	120			
Sample ID: R10110212-004AMSD		Sample Matrix Spike Duplicate				Run: PH_COND1-R_101119A				11/19/10 17:04
Alkalinity, Total as CaCO <sub>3</sub>		296	mg/L	5.0	98	80	120	0.7	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Batch: 101122_1_COND-PROBE-W										
<b>Method:</b> A2510 B										
<b>Sample ID:</b> LCS1-1_101122		Laboratory Control Sample				Run: PH_COND2-R_101122A				11/22/10 14:35
Conductivity @ 25 C		152	umhos/cm	5.0	101	90	110			
<b>Sample ID:</b> LCS2-1_101122		Laboratory Control Sample				Run: PH_COND2-R_101122A				11/22/10 14:37
Conductivity @ 25 C		4970	umhos/cm	5.0	99	90	110			
<b>Sample ID:</b> LCS_COND-1_101122		Laboratory Control Sample				Run: PH_COND2-R_101122A				11/22/10 14:41
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
<b>Sample ID:</b> MBLK-1_101122		Method Blank				Run: PH_COND2-R_101122A				11/22/10 14:43
Conductivity @ 25 C		ND	umhos/cm	5						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>								Batch: 101122A-SLDS-TDS-W		
<b>Sample ID: LCS1_101122A</b>		Laboratory Control Sample				Run: BAL-4-R_101122A		11/22/10 11:15		
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10	103	90	110			
<b>Sample ID: MBLK1_101122A</b>		Method Blank				Run: BAL-4-R_101122A		11/22/10 11:16		
Solids, Total Dissolved TDS @ 180 C		10	mg/L	3						
<b>Sample ID: R10110212-001AMS</b>		Sample Matrix Spike				Run: BAL-4-R_101122A		11/22/10 11:23		
Solids, Total Dissolved TDS @ 180 C		1500	mg/L	10	102	90	110			

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2580 B								Batch: 101122-ORP-ISE-W		
<b>Sample ID:</b> LCS		Laboratory Control Sample			Run: PH_COND1-R_101122B			11/22/10 18:00		
Oxidation-Reduction Potential		480	mV		101	95	105			
<b>Sample ID:</b> R10110179-003F		Sample Duplicate			Run: PH_COND1-R_101122B			11/22/10 18:00		
Oxidation-Reduction Potential		220	mV					0.2	10	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_28290
<b>Sample ID: MB-28290</b>		Method Blank					Run: SUB-C140166			11/22/10 11:34
Selenium-IV		0.0005	mg/L	0.0003						
<b>Sample ID: LCS-28290</b>		Laboratory Control Sample					Run: SUB-C140166			11/22/10 11:39
Selenium-IV		0.047	mg/L	0.0010	94	90	110			
<b>Sample ID: R10110179-001E</b>		Sample Matrix Spike					Run: SUB-C140166			11/22/10 11:44
Selenium-IV		0.048	mg/L	0.0010	96	85	115			
<b>Sample ID: R10110179-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C140166			11/22/10 11:46
Selenium-IV		0.047	mg/L	0.0010	93	85	115	3.2	10	
<b>Method: A3114 B</b>										Batch: C_28290
<b>Sample ID: MB-28290</b>		Method Blank					Run: SUB-C140171			11/22/10 13:05
Selenium		ND	mg/L	0.0002						
<b>Sample ID: LCS-28290</b>		Laboratory Control Sample					Run: SUB-C140171			11/22/10 13:08
Selenium		0.046	mg/L	0.0010	92	90	110			
<b>Sample ID: R10110179-001E</b>		Sample Matrix Spike					Run: SUB-C140171			11/22/10 13:12
Selenium		0.052	mg/L	0.0010	103	85	115			
<b>Sample ID: R10110179-001E</b>		Sample Matrix Spike Duplicate					Run: SUB-C140171			11/22/10 13:15
Selenium		0.053	mg/L	0.0010	106	85	115	2.4	15	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B								Batch: 101119_2_PH-W		
<b>Sample ID:</b> LCS_pH-1_101119		Laboratory Control Sample				Run: PH_COND2-R_101119A			11/19/10 13:57	
pH		7.40	s.u.	0.010	100	98.55	101.45			
<b>Sample ID:</b> R10110179-001ADUP		Sample Duplicate				Run: PH_COND2-R_101119A			11/19/10 14:12	
pH		7.64	s.u.	0.010				0.1	1.25	

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b> Batch: A2010-11-18_2_NH3_01										
<b>Sample ID: MBLK-2</b>		Method Blank					Run: TECHAA2-R_101118A			11/18/10 13:36
Nitrogen, Ammonia as N		ND	mg/L	0.02						
<b>Sample ID: LFB-3</b>		Laboratory Fortified Blank					Run: TECHAA2-R_101118A			11/18/10 13:37
Nitrogen, Ammonia as N		0.23	mg/L	0.10	91	90	110			
<b>Sample ID: R10110179-001BMS</b>		Sample Matrix Spike					Run: TECHAA2-R_101118A			11/18/10 15:45
Nitrogen, Ammonia as N		0.40	mg/L	0.10	110	80	120			
<b>Sample ID: R10110179-001BMDS</b>		Sample Matrix Spike Duplicate					Run: TECHAA2-R_101118A			11/18/10 15:46
Nitrogen, Ammonia as N		0.40	mg/L	0.10	112	80	120	1.2	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 01/05/11

**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b>										Batch: C_R140114
<b>Sample ID: R10110179-003G</b>										
Radon 222		Sample Duplicate					Run: SUB-C140114			11/18/10 15:53
	610		pCi/L	100				8.7	30	
<b>Sample ID: MB-R140114</b>										
Radon 222		Method Blank					Run: SUB-C140114			11/18/10 15:53
	30		pCi/L							U
<b>Sample ID: LCS-R140114</b>										
Radon 222		Laboratory Control Sample					Run: SUB-C140114			11/18/10 15:53
	301		pCi/L	100	89	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



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Batch: C_R140421
Sample ID: MB-101130A	5	Method Blank					Run: SUB-C140421			11/30/10 15:57
Boron		ND	mg/L	0.009						
Calcium		ND	mg/L	0.2						
Magnesium		ND	mg/L	0.05						
Potassium		ND	mg/L	0.02						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-101130A	5	Laboratory Fortified Blank					Run: SUB-C140421			11/30/10 16:01
Boron		0.96	mg/L	0.10	96	85	115			
Calcium		47	mg/L	0.50	94	85	115			
Magnesium		47	mg/L	0.50	94	85	115			
Potassium		43	mg/L	0.50	87	85	115			
Sodium		47	mg/L	0.50	94	85	115			
Sample ID: C10110416-001BMS2	5	Sample Matrix Spike					Run: SUB-C140421			11/30/10 16:57
Boron		4.68	mg/L	0.10	99	70	130			
Calcium		130	mg/L	1.0	95	70	130			
Magnesium		95.7	mg/L	1.0	93	70	130			
Potassium		109	mg/L	1.0	82	70	130			
Sodium		647	mg/L	1.0		70	130			A
Sample ID: C10110416-001BMDS2	5	Sample Matrix Spike Duplicate					Run: SUB-C140421			11/30/10 17:02
Boron		4.72	mg/L	0.10	101	70	130	0.8	20	
Calcium		131	mg/L	1.0	96	70	130	0.9	20	
Magnesium		97.0	mg/L	1.0	94	70	130	1.4	20	
Potassium		109	mg/L	1.0	83	70	130	0.6	20	
Sodium		656	mg/L	1.0		70	130	1.4	20	A

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Revised Date: 02/14/11

Report Date: 01/05/11

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R140353A
<b>Sample ID: C10110505-007BMS4</b> 19 Post Digestion Spike										
						Run: SUB-C140353		11/30/10 03:10		
Aluminum		0.0715	mg/L	0.0010	96	70	130			
Arsenic		0.0546	mg/L	0.0010	108	70	130			
Barium		0.0625	mg/L	0.0010	103	70	130			
Boron		0.198	mg/L	0.10	78	70	130			
Cadmium		0.0495	mg/L	0.010	97	70	130			
Chromium		0.0519	mg/L	0.050	104	70	130			
Copper		0.0530	mg/L	0.010	99	70	130			
Iron		7.25	mg/L	0.030		70	130			A
Lead		0.0537	mg/L	0.050	107	70	130			
Manganese		4.99	mg/L	0.010		70	130			A
Mercury		0.00417	mg/L	0.0010	83	70	130			
Molybdenum		0.0597	mg/L	0.0010	102	70	130			
Nickel		0.0966	mg/L	0.050	99	70	130			
Silicon		5.68	mg/L	0.10		70	130			A
Silver		0.00186	mg/L	0.0010	9	70	130			S
Thorium 232		0.0561	mg/L	0.0010	111	70	130			
Uranium		0.0571	mg/L	0.00030	110	70	130			
Vanadium		0.0535	mg/L	0.0010	106	70	130			
Zinc		0.126	mg/L	0.010	94	70	130			
<b>Sample ID: C10110505-007BMSD4</b> 19 Post Digestion Spike Duplicate										
						Run: SUB-C140353		11/30/10 03:17		
Aluminum		0.0708	mg/L	0.0010	94	70	130	1.0	20	
Arsenic		0.0552	mg/L	0.0010	109	70	130	1.1	20	
Barium		0.0643	mg/L	0.0010	107	70	130	2.8	20	
Boron		0.189	mg/L	0.10	60	70	130	4.6	20	S
Cadmium		0.0496	mg/L	0.010	98	70	130	0.2	20	
Chromium		0.0526	mg/L	0.050	105	70	130	1.2	20	
Copper		0.0537	mg/L	0.010	100	70	130	1.2	20	
Iron		7.24	mg/L	0.030		70	130	0.0	20	A
Lead		0.0540	mg/L	0.050	108	70	130	0.6	20	
Manganese		5.00	mg/L	0.010		70	130	0.2	20	A
Mercury		0.00451	mg/L	0.0010	90	70	130	7.7	20	
Molybdenum		0.0610	mg/L	0.0010	104	70	130	2.1	20	
Nickel		0.0979	mg/L	0.050	101	70	130	1.3	20	
Silicon		5.69	mg/L	0.10		70	130	0.1	20	A
Silver		0.00410	mg/L	0.0010	20	70	130	75	20	SR
Thorium 232		0.0569	mg/L	0.0010	113	70	130	1.4	20	
Uranium		0.0574	mg/L	0.00030	111	70	130	0.6	20	
Vanadium		0.0539	mg/L	0.0010	107	70	130	0.9	20	
Zinc		0.123	mg/L	0.010	89	70	130	2.0	20	
<b>Sample ID: LRB</b> 19 Method Blank										
						Run: SUB-C140353		11/29/10 19:01		
Silicon		0.04	mg/L	0.0005						
Aluminum		0.004	mg/L	8E-05						
Arsenic		ND	mg/L	4E-05						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory 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

S - Spike recovery outside of advisory limits.

## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Work Order: R10110179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_R140353A
<b>Sample ID: LRB</b>	19	Method Blank				Run: SUB-C140353				11/29/10 19:01
Barium		ND	mg/L	3E-05						
Boron		0.003	mg/L							
Cadmium		ND	mg/L	7E-05						
Chromium		ND	mg/L	5E-05						
Copper		ND	mg/L	6E-05						
Iron		0.0002	mg/L	0.0001						
Lead		ND	mg/L	2E-05						
Manganese		ND	mg/L	2E-05						
Mercury		5E-05	mg/L	2E-05						
Molybdenum		ND	mg/L	8E-05						
Nickel		ND	mg/L	5E-05						
Silver		ND	mg/L	8E-05						
Thorium 232		6E-05	mg/L	3E-05						
Uranium		ND	mg/L	8E-06						
Vanadium		ND	mg/L	1E-05						
Zinc		0.005	mg/L	0.0001						
<b>Sample ID: LFB</b>	20	Laboratory Fortified Blank				Run: SUB-C140353				11/29/10 19:08
Silicon		0.573	mg/L	0.0050	102	85	115			
Aluminum		0.0524	mg/L	0.0010	97	85	115			
Arsenic		0.0519	mg/L	0.0010	104	85	115			
Barium		0.0526	mg/L	0.0010	105	85	115			
Boron		0.0518	mg/L	0.0010	98	85	115			
Cadmium		0.0524	mg/L	0.0010	105	85	115			
Chromium		0.0517	mg/L	0.0010	103	85	115			
Copper		0.0523	mg/L	0.0010	105	85	115			
Iron		1.30	mg/L	0.012	104	85	115			
Lead		0.0526	mg/L	0.0010	105	85	115			
Manganese		0.0525	mg/L	0.0010	105	85	115			
Mercury		0.00525	mg/L	0.0010	104	85	115			
Molybdenum		0.0502	mg/L	0.0010	100	85	115			
Nickel		0.0508	mg/L	0.0010	102	85	115			
Silver		0.0206	mg/L	0.0010	103	85	115			
Thorium 232		0.0516	mg/L	0.0010	103	85	115			
Uranium		0.0520	mg/L	0.00030	104	85	115			
Vanadium		0.0510	mg/L	0.0010	102	85	115			
Zinc		0.0543	mg/L	0.0010	98	85	115			
Silica		1.23	mg/L	0.011	115	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: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Work Order: R10110179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28308
<b>Sample ID: MB-28308</b>	19	Method Blank					Run: SUB-C140415			11/30/10 13:28
Antimony		0.0010	mg/L	0.0003						
Arsenic		0.0004	mg/L	5E-05						
Barium		ND	mg/L	0.0002						
Beryllium		ND	mg/L	3E-05						
Boron		ND	mg/L	0.003						
Cadmium		8E-05	mg/L	4E-05						
Chromium		0.0003	mg/L	3E-05						
Copper		0.002	mg/L	5E-05						
Iron		ND	mg/L	0.001						
Lead		8E-05	mg/L	5E-05						
Manganese		0.0002	mg/L	2E-05						
Molybdenum		0.0002	mg/L	0.00010						
Nickel		ND	mg/L	4E-05						
Selenium		0.0001	mg/L	3E-05						
Silver		0.0003	mg/L	4E-05						
Strontium		ND	mg/L	6E-05						
Thallium		0.0007	mg/L	0.0001						
Uranium		ND	mg/L	4E-05						
Zinc		0.001	mg/L	0.001						
<b>Sample ID: LCS3-28308</b>	19	Laboratory Control Sample					Run: SUB-C140415			11/30/10 13:35
Antimony		0.602	mg/L	0.050	120	85	115			S
Arsenic		0.497	mg/L	0.0010	99	85	115			
Barium		0.526	mg/L	0.10	105	85	115			
Beryllium		0.258	mg/L	0.010	103	85	115			
Boron		0.520	mg/L	0.10	104	85	115			
Cadmium		0.275	mg/L	0.010	110	85	115			
Chromium		0.483	mg/L	0.050	97	85	115			
Copper		0.497	mg/L	0.010	99	85	115			
Iron		2.51	mg/L	0.030	100	85	115			
Lead		0.518	mg/L	0.050	104	85	115			
Manganese		2.48	mg/L	0.010	99	85	115			
Molybdenum		0.545	mg/L	0.10	109	85	115			
Nickel		0.489	mg/L	0.050	98	85	115			
Selenium		0.530	mg/L	0.0010	106	85	115			
Silver		0.0536	mg/L	0.010	107	85	115			
Strontium		0.492	mg/L	0.10	98	85	115			
Thallium		0.504	mg/L	0.10	101	85	115			
Uranium		0.537	mg/L	0.00030	107	85	115			
Zinc		0.521	mg/L	0.010	104	85	115			
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Sample ID: C10110772-010BMS3</b>	19	Sample Matrix Spike					Run: SUB-C140415			11/30/10 14:23
Antimony		0.560	mg/L	0.050	112	70	130			
Arsenic		0.536	mg/L	0.0010	90	70	130			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Revised Date: 02/14/11

Report Date: 01/05/11

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28308
<b>Sample ID: C10110772-010BMS3</b> 19 Sample Matrix Spike										Run: SUB-C140415 11/30/10 14:23
Barium		0.511	mg/L	0.10	98	70	130			
Beryllium		0.204	mg/L	0.010	82	70	130			
Boron		0.951	mg/L	0.10	81	70	130			
Cadmium		0.241	mg/L	0.010	95	70	130			
Chromium		0.446	mg/L	0.050	89	70	130			
Copper		0.437	mg/L	0.010	86	70	130			
Iron		2.32	mg/L	0.030	92	70	130			
Lead		0.484	mg/L	0.050	97	70	130			
Manganese		2.45	mg/L	0.010	89	70	130			
Molybdenum		3.39	mg/L	0.10		70	130			A
Nickel		0.431	mg/L	0.050	86	70	130			
Selenium		0.447	mg/L	0.0010	89	70	130			
Silver		0.0455	mg/L	0.010	90	70	130			
Strontium		2.21	mg/L	0.10	73	70	130			
Thallium		0.468	mg/L	0.10	93	70	130			
Uranium		2.56	mg/L	0.00030		70	130			A
Zinc		0.453	mg/L	0.010	88	70	130			
<b>Sample ID: C10110772-010BMSD3</b> 19 Sample Matrix Spike Duplicate										Run: SUB-C140415 11/30/10 14:30
Antimony		0.596	mg/L	0.050	119	70	130	6.2	20	
Arsenic		0.544	mg/L	0.0010	92	70	130	1.5	20	
Barium		0.536	mg/L	0.10	103	70	130	4.8	20	
Beryllium		0.217	mg/L	0.010	87	70	130	5.8	20	
Boron		0.987	mg/L	0.10	88	70	130	3.7	20	
Cadmium		0.253	mg/L	0.010	100	70	130	4.9	20	
Chromium		0.450	mg/L	0.050	90	70	130	1.0	20	
Copper		0.439	mg/L	0.010	87	70	130	0.4	20	
Iron		2.46	mg/L	0.030	97	70	130	5.6	20	
Lead		0.508	mg/L	0.050	102	70	130	4.8	20	
Manganese		2.54	mg/L	0.010	93	70	130	3.4	20	
Molybdenum		3.47	mg/L	0.10		70	130	2.4	20	A
Nickel		0.432	mg/L	0.050	86	70	130	0.1	20	
Selenium		0.478	mg/L	0.0010	95	70	130	6.7	20	
Silver		0.0481	mg/L	0.010	95	70	130	5.7	20	
Strontium		2.26	mg/L	0.10	84	70	130	2.4	20	
Thallium		0.491	mg/L	0.10	98	70	130	4.8	20	
Uranium		2.67	mg/L	0.00030		70	130	4.0	20	A
Zinc		0.459	mg/L	0.010	89	70	130	1.4	20	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Analytical Run: SUB-C140426										
<b>Sample ID: ICV</b>	Initial Calibration Verification Standard									
Uranium		0.0514	mg/L	0.00030	103	90	110			11/30/10 11:59
<b>Method: E200.8</b>										
Batch: C_28303										
<b>Sample ID: MB-28303</b>	Method Blank									
Uranium		0.0002	mg/L	6E-05				Run: SUB-C140426		11/30/10 16:55
<b>Sample ID: LCS2-28303</b>										
Laboratory Control Sample										
Uranium		0.102	mg/L	0.00030	102	85	115	Run: SUB-C140426		11/30/10 16:59
<b>Sample ID: R10110179-003I</b>										
Post Digestion Spike										
Uranium		0.0130	mg/L	0.00030	102	70	130	Run: SUB-C140426		11/30/10 17:37
<b>Sample ID: R10110179-003I</b>										
Post Digestion Spike Duplicate										
Uranium		0.0132	mg/L	0.00030	103	70	130	1.4	20	11/30/10 17:41

### Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>										Analytical Run: SUB-B157434
<b>Sample ID: QCS</b>										
Initial Calibration Verification Standard										
Mercury		0.0018	mg/L	0.0010	91	90	110			11/18/10 14:41
<b>Method: E245.1</b>										Batch: B_50582
<b>Sample ID: MB-50582</b>										
Method Blank										
Mercury		6E-05	mg/L	1E-05						Run: SUB-B157434 11/18/10 14:49
<b>Sample ID: LCS-50582</b>										
Laboratory Control Sample										
Mercury		0.0019	mg/L	0.0010	91	85	115			Run: SUB-B157434 11/18/10 14:52
<b>Sample ID: R10110177-006D</b>										
Sample Matrix Spike										
Mercury		0.0018	mg/L	0.0010	86	70	130			Run: SUB-B157434 11/18/10 15:18
<b>Sample ID: R10110177-006D</b>										
Sample Matrix Spike Duplicate										
Mercury		0.0018	mg/L	0.0010	86	70	130	0.0	30	Run: SUB-B157434 11/18/10 15:20

### Qualifiers:

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ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11  
**Report Date:** 01/05/11  
**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E300.0										Batch: R49128
<b>Sample ID:</b> LFB111610-14	5	Laboratory Fortified Blank					Run: DIONEX_101116A			11/16/10 21:44
Chloride		38.1	mg/L	1.00	95	90	110			
Fluoride		3.87	mg/L	0.10	97	90	110			
Nitrogen, Nitrate as N		3.93	mg/L	0.10	98	90	110			
Nitrogen, Nitrite as N		4.00	mg/L	0.10	100	90	110			
Sulfate		37.4	mg/L	1.0	93	90	110			
<b>Sample ID:</b> R10110179-001AMS	5	Sample Matrix Spike					Run: DIONEX_101116A			11/16/10 22:19
Chloride		389	mg/L	10.0	88	90	110			S
Fluoride		39.0	mg/L	1.0	91	90	110			
Nitrogen, Nitrate as N		39.6	mg/L	1.0	99	90	110			
Nitrogen, Nitrite as N		40.2	mg/L	1.0	101	90	110			
Sulfate		909	mg/L	10	90	90	110			
<b>Sample ID:</b> R10110179-001AMSD	5	Sample Matrix Spike Duplicate					Run: DIONEX_101116A			11/16/10 22:37
Chloride		390	mg/L	10.0	89	90	110	0.3	10	S
Fluoride		39.0	mg/L	1.0	91	90	110	0.1	10	
Nitrogen, Nitrate as N		39.5	mg/L	1.0	99	90	110	0.2	10	
Nitrogen, Nitrite as N		40.3	mg/L	1.0	101	90	110	0.0	10	
Sulfate		912	mg/L	10	91	90	110	0.4	10	

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										Batch: C_GrAB-1012
<b>Sample ID: MB-GrAB-1012</b>	6	Method Blank					Run: SUB-C140538		12/02/10 21:27	
Gross Alpha		-2	pCi/L							U
Gross Alpha precision ( $\pm$ )		0.7	pCi/L							
Gross Alpha MDC		0.9	pCi/L							
Gross Beta		-2	pCi/L							U
Gross Beta precision ( $\pm$ )		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-1012</b>		Laboratory Control Sample					Run: SUB-C140538		12/02/10 21:27	
Gross Alpha		110	pCi/L	110		70	130			
<b>Sample ID: Cs137-GrAB-1012</b>		Laboratory Control Sample					Run: SUB-C140538		12/02/10 21:28	
Gross Beta		83	pCi/L	96		70	130			
<b>Sample ID: R10110179-001H</b>	6	Sample Duplicate					Run: SUB-C140538		12/02/10 21:28	
Gross Alpha		-5.3	pCi/L					260	189.6	UR
Gross Alpha precision ( $\pm$ )		3.2	pCi/L							
Gross Alpha MDC		6.0	pCi/L							
Gross Beta		4.1	pCi/L					89	92.1	U
Gross Beta precision ( $\pm$ )		3.3	pCi/L							
Gross Beta MDC		5.3	pCi/L							
- For Gross Alpha the Sample and the Duplicate are both below the MDC; the RPD is acceptable.										
<b>Sample ID: C10110899-001FMS</b>		Sample Matrix Spike					Run: SUB-C140538		12/03/10 09:38	
Gross Alpha		2930	pCi/L	344		70	130			S
- Sample response is much larger than spike amount, therefore small variances in the sample adversely affected the recovery. The LCS and the RPD of the MS/MSD pair meets acceptance criteria; this batch is approved.										
<b>Sample ID: C10110899-001FMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C140538		12/03/10 09:38	
Gross Alpha		2840	pCi/L	259		70	130	3.2	11.9	S
<b>Sample ID: C10110899-001FMS</b>		Sample Matrix Spike					Run: SUB-C140538		12/03/10 09:38	
Gross Beta		530	pCi/L	143		70	130			S
- Sample response is much larger than spike amount, therefore small variances in the sample adversely affected the recovery. The LCS and the RPD of the MS/MSD pair meets acceptance criteria; this batch is approved.										
<b>Sample ID: C10110899-001FMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C140538		12/03/10 09:38	
Gross Beta		515	pCi/L	126		70	130	2.9	12.2	

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										Batch: C_GrAB-1020
<b>Sample ID: MB-GrAB-1020</b>	6	Method Blank					Run: SUB-C141090		12/18/10 02:02	
Gross Alpha		-0.2	pCi/L							U
Gross Alpha precision (±)		0.8	pCi/L							
Gross Alpha MDC		0.9	pCi/L							
Gross Beta		-0.5	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		2	pCi/L							
<b>Sample ID: Th230-GrAB-1020</b>		Laboratory Control Sample					Run: SUB-C141090		12/18/10 02:02	
Gross Alpha		100	pCi/L	98		70	130			
<b>Sample ID: Cs137-GrAB-1020</b>		Laboratory Control Sample					Run: SUB-C141090		12/18/10 02:02	
Gross Beta		86	pCi/L	97		70	130			
<b>Sample ID: C10120299-001DMS</b>		Sample Matrix Spike					Run: SUB-C141090		12/18/10 02:02	
Gross Alpha		110	pCi/L	108		70	130			
<b>Sample ID: C10120299-001DMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141090		12/18/10 02:02	
Gross Alpha		110	pCi/L	108		70	130	0.0	17.4	
<b>Sample ID: C10120299-001DMS</b>		Sample Matrix Spike					Run: SUB-C141090		12/18/10 02:02	
Gross Beta		90	pCi/L	98		70	130			
<b>Sample ID: C10120299-001DMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141090		12/18/10 02:02	
Gross Beta		94	pCi/L	103		70	130	4.9	15.9	
<b>Sample ID: C10120455-001EDUP</b>	6	Sample Duplicate					Run: SUB-C141090		12/20/10 22:38	
Gross Alpha		-6.32	pCi/L					9.1	91	U
Gross Alpha precision (±)		2.69	pCi/L							
Gross Alpha MDC		5.30	pCi/L							
Gross Beta		-0.648	pCi/L					140	880.2	U
Gross Beta precision (±)		2.02	pCi/L							
Gross Beta MDC		3.42	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Work Order: R10110179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										Batch: C_R140453
<b>Sample ID: LCS-R140453</b>	3	Laboratory Control Sample					Run: SUB-C140453			11/18/10 15:20
Americium 241		670	pCi/L	50	82	70	130			
Cesium 137		990	pCi/L	50	99	70	130			
Potassium 40		6500	pCi/L	50	98	70	130			
<b>Sample ID: MB-R140453</b>	23	Method Blank					Run: SUB-C140453			11/18/10 15:20
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234		500	pCi/L							
Thorium 234 precision (±)		80	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		500	pCi/L							
Gross Gamma precision (±)		80	pCi/L							
- See Case Narrative regarding Gross Gamma analysis.										
<b>Sample ID: R10110179-003H</b>	23	Sample Duplicate					Run: SUB-C140453			11/18/10 15:20
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 01/05/11

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1		Batch: C_R140453								
Sample ID: R10110179-003H		23 Sample Duplicate		Run: SUB-C140453		11/18/10 15:20				
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234		470	pCi/L	50				17	30	
Thorium 234 precision (±)		160	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		470	pCi/L					17	30	
Gross Gamma precision (±)		160	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11  
**Report Date:** 01/05/11  
**Work Order:** R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-5019
<b>Sample ID: C10110690-007EMS</b>		Sample Matrix Spike					Run: SUB-C140374			11/29/10 17:41
Radium 226		15	pCi/L	86		70	130			
<b>Sample ID: C10110690-007EMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C140374			11/29/10 17:41
Radium 226		15	pCi/L	87		70	130	1.7	20.4	
<b>Sample ID: MB-RA226-5019</b>	3	Method Blank					Run: SUB-C140374			11/29/10 21:30
Radium 226		0.07	pCi/L							U
Radium 226 precision (±)		0.05	pCi/L							
Radium 226 MDC		0.07	pCi/L							
<b>Sample ID: LCS-RA226-5019</b>		Laboratory Control Sample					Run: SUB-C140374			11/29/10 21:30
Radium 226		7.5	pCi/L	93		70	130			
<b>Method: E903.0</b>										Batch: C_28303
<b>Sample ID: R10110179-003I</b>		Sample Matrix Spike					Run: SUB-C140646			12/06/10 16:46
Radium 226		18	pCi/L	95		70	130			
<b>Sample ID: R10110179-003I</b>		Sample Matrix Spike Duplicate					Run: SUB-C140646			12/06/10 16:46
Radium 226		21	pCi/L	108		70	130	13	19.9	
<b>Sample ID: MB-28303</b>	3	Method Blank					Run: SUB-C140646			12/06/10 16:46
Radium 226		0.3	pCi/L							
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Sample ID: LCS-28303</b>		Laboratory Control Sample					Run: SUB-C140646			12/06/10 16:46
Radium 226		11	pCi/L	70		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





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0								Batch: T_PB-210-0071		
Sample ID: TAP WATERMSD	Laboratory Fortified Blank Duplicate					Run: SUB-T38878			02/11/11 04:01	
Lead 210	55	pCi/L		104	70	130	2.0	15.4		
Sample ID: TAP WATERMS	Laboratory Fortified Blank					Run: SUB-T38878			02/11/11 01:50	
Lead 210	57	pCi/L		106	70	130				
Sample ID: TAP WATER	3	Method Blank				Run: SUB-T38878			02/10/11 23:38	
Lead 210		-0.78	pCi/L			0	0		U	
Lead 210 precision (±)		0.79	pCi/L			0	0			
Lead 210 MDC		1.4	pCi/L			0	0			
Sample ID: LCS-PB-210-0071	Laboratory Control Sample					Run: SUB-T38878			02/10/11 21:27	
Lead 210	58	pCi/L		106	70	130				
Sample ID: MB-PB-210-0071	3	Method Blank				Run: SUB-T38878			02/10/11 17:04	
Lead 210		0.09	pCi/L						U	
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 01/05/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10110179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0328
<b>Sample ID: C10110614-004DMS</b>										
		Sample Matrix Spike			Run: SUB-C140360			11/29/10 09:17		
Polonium 210	27		pCi/L	76		70	130			
<b>Sample ID: C10110614-004DMSD</b>										
		Sample Matrix Spike Duplicate			Run: SUB-C140360			11/29/10 09:17		
Polonium 210	28		pCi/L	79		70	130	4.0	56.6	
<b>Sample ID: MB-PO210-0328</b>										
		3 Method Blank			Run: SUB-C140360			11/29/10 09:17		
Polonium 210		0.3	pCi/L							U
Polonium 210 MDC		0.7	pCi/L							
Polonium 210 precision (±)		0.5	pCi/L							
<b>Sample ID: LCS-PO210-0328</b>										
		Laboratory Control Sample			Run: SUB-C140360			11/29/10 09:17		
Polonium 210	13		pCi/L	77		70	130			
<b>Method: E912.0</b>										Batch: C_28303
<b>Sample ID: R10110179-001I</b>										
		Sample Matrix Spike			Run: SUB-C140443			12/01/10 09:34		
Polonium 210	37		pCi/L	95		70	130			
<b>Sample ID: R10110179-001I</b>										
		Sample Matrix Spike Duplicate			Run: SUB-C140443			12/01/10 09:34		
Polonium 210	38		pCi/L	99		70	130	3.4	56.4	
<b>Sample ID: LCS-28303</b>										
		Laboratory Control Sample			Run: SUB-C140443			12/01/10 09:34		
Polonium 210	70		pCi/L	93		70	130			
<b>Sample ID: MB-28303</b>										
		3 Method Blank			Run: SUB-C140443			12/01/10 09:34		
Polonium 210		-0.1	pCi/L							U
Polonium 210 precision (±)		1	pCi/L							
Polonium 210 MDC		3	pCi/L							

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

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

LABORATORY USE ONLY



## ANALYTICAL SUMMARY REPORT

February 14, 2011

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R10120179

Project Name: Dewey Groundwater Sampling

Energy Laboratories Inc. Rapid City SD received the following 2 samples for Powertech USA Inc on 12/15/2010 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R10120179-001	DB-09-21-01	12/14/10 0:00	12/15/10	Aqueous	Metals by ICP/ICPMS, Dissolved Metals by ICP/ICPMS, Suspended Metals by ICP/ICPMS, Total Alkalinity Anion - Cation Balance Conductivity Mercury, Total Selenium, Dissolved Selenium, Dissolved Selenium, Dissolved Anions by Ion Chromatography Nitrogen, Ammonia Oxidation Reduction Potential pH Digestion, Total Metals Digestion, Total Metals Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Gross Gamma, Dissolved Lead 210, Dissolved Lead 210, Suspended Polonium 210, Dissolved Polonium 210, Suspended Radium 226, Dissolved Radium 226, Suspended Radon 222 Thorium, Isotopic Thorium, Suspended Isotopic Sodium Adsorption Ratio Solids, Total Dissolved
R10120179-002	DB-09-21-02	12/14/10 0:00	12/15/10	Aqueous	Same As Above

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

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

Report Approved By:

*Linda K. Larson*  
Branch Manager

Digitally signed by  
Linda Larson  
Date: 2011.02.15 09:37:15 -07:00

**CLIENT:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Sample Delivery Group:** R10120179

**Revised Date:** 02/14/11

**Report Date:** 02/01/11

## CASE NARRATIVE

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

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

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: C10120584

### RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as recommended by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### GROSS GAMMA ANALYSIS

The gamma spectrometry software has identified Thorium 234 as a potential component of this sample. The value generated by the software has been reported here. However, the Thorium 234 gamma ray peaks reside in the middle of excessive background contributions from Compton scatter, x-rays from thorium, and interfering gamma ray peaks from other naturally occurring radionuclides present in the metal can and sample. This means that the value for Thorium 234 likely has a positive bias. The only method to determine the actual concentration of Th-234 would be by radiochemical separation of thorium and gamma spectrometric analysis on the isolate thorium fraction.

End of comments imported for SUBBED Workorder: C10120584

Comments imported for SUBBED Workorder: C10120584

### RA226 ANALYSIS

The sample specific Minimum Detectable Concentration (MDC) as recommended by USNRC Regulatory Guide 4.14 could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

### GROSS GAMMA ANALYSIS

The gamma spectrometry software has identified Thorium 234 as a potential component of this sample. The value generated by the software has been reported here. However, the Thorium 234 gamma ray peaks reside in the middle of excessive background contributions from Compton scatter, x-rays from thorium, and interfering gamma ray peaks from other naturally occurring radionuclides present in the metal can and sample. This means that the value for Thorium 234 likely has a positive bias. The only method to determine the actual concentration of Th-234 would be by radiochemical separation of thorium and gamma spectrometric analysis on the isolate thorium fraction.

End of comments imported for SUBBED Workorder: C10120584

Re-analysis done on SeVI. Initial results determined to be due to possible contamination in prep. Final results are in revised report.



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10120179-001  
**Client Sample ID:** DB-09-21-01

**Revised Date:** 02/14/11  
**Report Date:** 02/01/11  
**Collection Date:** 12/14/10  
**Date Received:** 12/15/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>MAJOR IONS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	166	mg/L		5		1	A2320 B	12/20/10 15:08/hv
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/10 15:08/hv
Bicarbonate as HCO <sub>3</sub>	202	mg/L		5		1	A2320 B	12/20/10 15:08/hv
Calcium	95.8	mg/L		0.5		2	E200.7	12/22/10 18:59/eli-c
Chloride	8	mg/L		1		1	E300.0	12/16/10 23:25/tb
Fluoride	0.4	mg/L		0.1		1	E300.0	12/16/10 23:25/tb
Magnesium	34.4	mg/L		0.5		2	E200.7	12/22/10 18:59/eli-c
Nitrogen, Ammonia as N	0.2	mg/L		0.1		1	A4500-NH <sub>3</sub> G	12/28/10 12:17/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/16/10 23:25/tb
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/16/10 23:25/tb
Potassium	11.7	mg/L		0.5		2	E200.7	12/22/10 18:59/eli-c
Sodium	163	mg/L	D	0.6		2	E200.7	12/22/10 18:59/eli-c
Sulfate	538	mg/L	D	10		10	E300.0	12/16/10 23:07/tb
Silica	10.4	mg/L		0.2		2	E200.7	01/17/11 12:46/eli-c
<b>PHYSICAL PROPERTIES</b>								
Conductivity @ 25 C	1350	umhos/cm		5.0		1	A2510 B	12/21/10 09:35/tb
Oxidation-Reduction Potential	190	mV				1	A2580 B	12/21/10 16:30/jmh
pH	7.59	s.u.		0.01		1	A4500-H B	12/15/10 14:07/hv
Sodium Adsorption Ratio (SAR)	3.6	unitless		0.10		1	Calculation	01/18/11 16:25/ADM
Solids, Total Dissolved TDS @ 180 C	990	mg/L	D	10		1	A2540 C	12/15/10 16:32/jmh
<b>METALS - DISSOLVED</b>								
Aluminum	ND	mg/L		0.1		2	E200.7	12/22/10 18:59/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/28/10 08:51/eli-c
Barium	ND	mg/L		0.1		2	E200.7	12/22/10 18:59/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/22/10 18:59/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	12/22/10 18:59/eli-c
Chromium	ND	mg/L		0.05		2	E200.7	12/22/10 18:59/eli-c
Copper	ND	mg/L		0.01		2	E200.7	12/22/10 18:59/eli-c
Iron	0.03	mg/L		0.03		2	E200.7	12/22/10 18:59/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/28/10 08:51/eli-c
Manganese	0.05	mg/L		0.01		2	E200.7	12/22/10 18:59/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/28/10 08:51/eli-c
Molybdenum	ND	mg/L		0.1		2	E200.7	12/22/10 18:59/eli-c
Nickel	ND	mg/L		0.05		2	E200.7	12/22/10 18:59/eli-c
Selenium	0.002	mg/L		0.001		1	A3114 B	02/04/11 13:04/eli-c
Silver	ND	mg/L		0.005		2	E200.7	12/22/10 18:59/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/13/11 21:27/eli-c

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

D - RL increased due to sample matrix.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.



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# LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Collection Date: 12/14/10

Lab ID: R10120179-001

Date Received: 12/15/10

Client Sample ID: DB-09-21-01

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/ RL	QCL	DF	Method	Analysis Date / By
<b>METALS - DISSOLVED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	12/28/10 08:51/eli-c
Vanadium	ND	mg/L		0.1		2	E200.7	12/22/10 18:59/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	12/22/10 18:59/eli-c
<b>METALS - SUSPENDED</b>								
Uranium	ND	mg/L		0.0003		1	E200.8	01/06/11 02:05/eli-c
<b>METALS - SPECIATED</b>								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/04/11 11:24/eli-c
Selenium-VI	0.002	mg/L		0.001		1	A3114 B	02/04/11 13:53/eli-c
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	-0.3	pCi/L	U			1	E900.0	01/04/11 22:52/eli-ca
Gross Alpha precision (±)	3.3	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Alpha MDC	5.6	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta	11.0	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta precision (±)	4.2	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta MDC	6.6	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Lead 210	-0.2	pCi/L	U			1	E909.0	01/03/11 15:01/eli-cs
Lead 210 precision (±)	0.8	pCi/L				1	E909.0	01/03/11 15:01/eli-cs
Lead 210 MDC	1.4	pCi/L				1	E909.0	01/03/11 15:01/eli-cs
Polonium 210	0.10	pCi/L	U			1	E912.0	01/05/11 11:54/eli-ca
Polonium 210 MDC	0.66	pCi/L				1	E912.0	01/05/11 11:54/eli-ca
Polonium 210 precision (±)	0.34	pCi/L				1	E912.0	01/05/11 11:54/eli-ca
Radium 226	1.9	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Radium 226 MDC	0.2	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Thorium 230	0.05	pCi/L	U			1	E908.0	01/09/11 13:55/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E908.0	01/09/11 13:55/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E908.0	01/09/11 13:55/eli-c
Gross Gamma	390	pCi/L				1	E901.1	12/22/01 06:10/eli-c
Gross Gamma precision (±)	130	pCi/L				1	E901.1	12/22/01 06:10/eli-c
- See Case Narrative regarding Gross Gamma analysis.								
<b>RADIONUCLIDES - SUSPENDED</b>								
Lead 210	0.6	pCi/L	U			1	E909.0	01/06/11 17:33/eli-cs
Lead 210 precision (±)	1.7	pCi/L				1	E909.0	01/06/11 17:33/eli-cs
Lead 210 MDC	2.8	pCi/L				1	E909.0	01/06/11 17:33/eli-cs
Polonium 210	0.0	pCi/L	U			1	E912.0	01/30/11 12:31/eli-ca
Polonium 210 precision (±)	0.25	pCi/L				1	E912.0	01/30/11 12:31/eli-ca

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

Definitions: QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



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### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Collection Date: 12/14/10

Lab ID: R10120179-001

Date Received: 12/15/10

Client Sample ID: DB-09-21-01

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		DF	Method	Analysis Date / By
					QCL				
RADIONUCLIDES - SUSPENDED									
Polonium 210 MDC	0.61	pCi/L					1	E912.0	01/30/11 12:31/eli-ca
Radium 226	-0.2	pCi/L	U				1	E903.0	01/03/11 12:21/eli-c
Radium 226 precision (±)	0.1	pCi/L					1	E903.0	01/03/11 12:21/eli-c
Radium 226 MDC	0.3	pCi/L					1	E903.0	01/03/11 12:21/eli-c
Thorium 230	-0.2	pCi/L	U				1	E908.0	01/02/11 13:19/eli-c
Thorium 230 MDC	0.1	pCi/L					1	E908.0	01/02/11 13:19/eli-c
Thorium 230 precision (±)	0.08	pCi/L					1	E908.0	01/02/11 13:19/eli-c
- See Case Narrative regarding Ra226 analysis.									
RADIONUCLIDES - TOTAL									
Radon 222	269	pCi/L		100			1	D5072-92	12/16/10 16:27/eli-c
TOTAL METALS ANALYSES									
Antimony	ND	mg/L		0.003			1	E200.8	01/04/11 17:55/eli-c
Arsenic	0.003	mg/L	B	0.001			1	E200.8	12/30/10 15:13/eli-c
Barium	ND	mg/L		0.1			1	E200.7	12/28/10 16:13/eli-c
Beryllium	ND	mg/L		0.001			1	E200.7	12/28/10 16:13/eli-c
Boron	ND	mg/L		0.1			1	E200.7	12/28/10 16:13/eli-c
Cadmium	ND	mg/L		0.005			1	E200.7	12/28/10 16:13/eli-c
Chromium	ND	mg/L		0.05			1	E200.7	12/28/10 16:13/eli-c
Copper	ND	mg/L		0.01			1	E200.7	12/28/10 16:13/eli-c
Iron	0.20	mg/L		0.03			1	E200.7	12/28/10 16:13/eli-c
Lead	ND	mg/L		0.001			1	E200.8	12/30/10 15:13/eli-c
Manganese	0.05	mg/L		0.01			1	E200.7	12/28/10 16:13/eli-c
Mercury	ND	mg/L		0.001			1	E245.1	12/20/10 16:53/eli-b
Molybdenum	ND	mg/L		0.1			1	E200.7	12/28/10 16:13/eli-c
Nickel	ND	mg/L		0.05			1	E200.7	12/28/10 16:13/eli-c
Selenium	ND	mg/L		0.001			1	E200.8	01/06/11 04:24/eli-c
Silver	ND	mg/L		0.005			1	E200.7	12/28/10 16:13/eli-c
Strontium	2.7	mg/L		0.1			1	E200.7	12/28/10 16:13/eli-c
Thallium	ND	mg/L		0.001			1	E200.8	12/30/10 15:13/eli-c
Uranium	ND	mg/L		0.0003			1	E200.8	01/04/11 17:55/eli-c
Zinc	ND	mg/L		0.01			1	E200.7	12/28/10 16:13/eli-c
DATA QUALITY									
A/C Balance (± 5)	0.940	%					1	A1030 E	01/24/11 00:00/jmh
Anions	14.8	meq/L					1	A1030 E	01/24/11 00:00/jmh
Cations	15.0	meq/L					1	A1030 E	01/24/11 00:00/jmh
Solids, Total Dissolved Calculated	979	mg/L					1	A1030 E	01/24/11 00:00/jmh
TDS Balance (0.80 - 1.20)	1.01						1	A1030 E	01/24/11 00:00/jmh

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

B - The analyte was detected in the method blank.





# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10120179-002  
**Client Sample ID:** DB-09-21-02

Prepared by Rapid City, SD Branch

**Revised Date:** 02/14/11  
**Report Date:** 02/01/11  
**Collection Date:** 12/14/10  
**Date Received:** 12/15/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
MAJOR IONS								
Alkalinity, Total as CaCO3	194	mg/L		5		1	A2320 B	12/20/10 15:12/hv
Carbonate as CO3	ND	mg/L		5		1	A2320 B	12/20/10 15:12/hv
Bicarbonate as HCO3	236	mg/L		5		1	A2320 B	12/20/10 15:12/hv
Calcium	167	mg/L		0.5		2	E200.7	12/22/10 19:03/eli-c
Chloride	10	mg/L		1		1	E300.0	12/17/10 00:00/tb
Fluoride	0.6	mg/L		0.1		1	E300.0	12/17/10 00:00/tb
Magnesium	47.8	mg/L		0.5		2	E200.7	12/22/10 19:03/eli-c
Nitrogen, Ammonia as N	ND	mg/L		0.1		1	A4500-NH3 G	12/28/10 12:20/hv
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/17/10 00:00/tb
Nitrogen, Nitrite as N	ND	mg/L		0.1		1	E300.0	12/17/10 00:00/tb
Potassium	11.9	mg/L		0.5		2	E200.7	12/22/10 19:03/eli-c
Sodium	128	mg/L	D	0.6		2	E200.7	12/22/10 19:03/eli-c
Sulfate	682	mg/L	D	10		10	E300.0	12/16/10 23:43/tb
Silica	9.3	mg/L		0.2		2	E200.7	01/17/11 12:58/eli-c
PHYSICAL PROPERTIES								
Conductivity @ 25 C	1540	umhos/cm		5.0		1	A2510 B	12/21/10 09:39/tb
Oxidation-Reduction Potential	200	mV				1	A2580 B	12/21/10 16:30/jmh
pH	7.30	s.u.		0.01		1	A4500-H B	12/15/10 14:12/hv
Sodium Adsorption Ratio (SAR)	2.2	unitless		0.10		1	Calculation	01/18/11 16:25/ADM
Solids, Total Dissolved TDS @ 180 C	1200	mg/L	D	10		1	A2540 C	12/15/10 16:33/jmh
METALS - DISSOLVED								
Aluminum	ND	mg/L		0.1		2	E200.7	12/22/10 19:03/eli-c
Arsenic	ND	mg/L		0.001		1	E200.8	12/28/10 08:58/eli-c
Barium	ND	mg/L		0.1		2	E200.7	12/22/10 19:03/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/22/10 19:03/eli-c
Cadmium	ND	mg/L		0.005		2	E200.7	12/22/10 19:03/eli-c
Chromium	ND	mg/L		0.05		2	E200.7	12/22/10 19:03/eli-c
Copper	ND	mg/L		0.01		2	E200.7	12/22/10 19:03/eli-c
Iron	ND	mg/L		0.03		2	E200.7	12/22/10 19:03/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/28/10 08:58/eli-c
Manganese	0.58	mg/L		0.01		2	E200.7	12/22/10 19:03/eli-c
Mercury	ND	mg/L		0.001		1	E200.8	12/28/10 08:58/eli-c
Molybdenum	ND	mg/L		0.1		2	E200.7	12/22/10 19:03/eli-c
Nickel	ND	mg/L		0.05		2	E200.7	12/22/10 19:03/eli-c
Selenium	0.002	mg/L		0.001		1	A3114 B	02/04/11 13:06/eli-c
Silver	ND	mg/L		0.005		2	E200.7	12/22/10 19:03/eli-c
Thorium 232	ND	mg/L		0.005		1	E200.8	01/13/11 21:31/eli-c

**Report Definitions:** RL - Analyte reporting limit.  
QCL - Quality control limit.  
D - RL increased due to sample matrix.

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



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## LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Collection Date: 12/14/10

Lab ID: R10120179-002

Date Received: 12/15/10

Client Sample ID: DB-09-21-02

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
METALS - DISSOLVED								
Uranium	0.0083	mg/L		0.0003		1	E200.8	12/28/10 08:58/eli-c
Vanadium	ND	mg/L		0.1		2	E200.7	12/22/10 19:03/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	12/22/10 19:03/eli-c
METALS - SUSPENDED								
Uranium	ND	mg/L		0.0003		1	E200.8	01/06/11 02:09/eli-c
METALS - SPECIATED								
Selenium-IV	ND	mg/L		0.001		1	A3114 B	02/04/11 11:26/eli-c
Selenium-VI	0.002	mg/L		0.001		1	A3114 B	02/04/11 13:53/eli-c
RADIONUCLIDES - DISSOLVED								
Gross Alpha	18.2	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Alpha precision (±)	5.0	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Alpha MDC	6.6	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta	22.4	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta precision (±)	5.0	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Gross Beta MDC	7.7	pCi/L				1	E900.0	01/04/11 22:52/eli-ca
Lead 210	-0.8	pCi/L	U			1	E909.0	01/03/11 21:35/eli-cs
Lead 210 precision (±)	0.8	pCi/L				1	E909.0	01/03/11 21:35/eli-cs
Lead 210 MDC	1.4	pCi/L				1	E909.0	01/03/11 21:35/eli-cs
Polonium 210	0.096	pCi/L	U			1	E912.0	01/05/11 11:54/eli-ca
Polonium 210 MDC	0.62	pCi/L				1	E912.0	01/05/11 11:54/eli-ca
Polonium 210 precision (±)	0.32	pCi/L				1	E912.0	01/05/11 11:54/eli-ca
Radium 226	2.5	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Radium 226 precision (±)	0.3	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Radium 226 MDC	0.1	pCi/L				1	E903.0	12/29/10 22:07/eli-c
Thorium 230	0.04	pCi/L	U			1	E908.0	01/09/11 13:55/eli-c
Thorium 230 MDC	0.1	pCi/L				1	E908.0	01/09/11 13:55/eli-c
Thorium 230 precision (±)	0.07	pCi/L				1	E908.0	01/09/11 13:55/eli-c
Gross Gamma	<162.4	pCi/L	U			1	E901.1	12/22/01 06:10/eli-c
RADIONUCLIDES - SUSPENDED								
Lead 210	0.3	pCi/L	U			1	E909.0	01/07/11 00:08/eli-cs
Lead 210 precision (±)	1.5	pCi/L				1	E909.0	01/07/11 00:08/eli-cs
Lead 210 MDC	2.5	pCi/L				1	E909.0	01/07/11 00:08/eli-cs
Polonium 210	0.0	pCi/L	U			1	E912.0	01/30/11 12:31/eli-ca
Polonium 210 precision (±)	0.27	pCi/L				1	E912.0	01/30/11 12:31/eli-ca
Polonium 210 MDC	0.66	pCi/L				1	E912.0	01/30/11 12:31/eli-ca

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

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



# LABORATORY ANALYTICAL REPORT

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling  
**Lab ID:** R10120179-002  
**Client Sample ID:** DB-09-21-02

Prepared by Rapid City, SD Branch

**Revised Date:** 02/14/11  
**Report Date:** 02/01/11  
**Collection Date:** 12/14/10  
**Date Received:** 12/15/10  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - SUSPENDED</b>								
Radium 226	-0.1	pCi/L	U			1	E903.0	01/03/11 12:21/eli-c
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/03/11 12:21/eli-c
Radium 226 MDC	0.4	pCi/L				1	E903.0	01/03/11 12:21/eli-c
Thorium 230	-0.1	pCi/L	U			1	E908.0	01/02/11 13:19/eli-c
Thorium 230 MDC	0.2	pCi/L				1	E908.0	01/02/11 13:19/eli-c
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	01/02/11 13:19/eli-c
- See Case Narrative regarding Ra226 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	241	pCi/L		100		1	D5072-92	12/16/10 16:27/eli-c
<b>TOTAL METALS ANALYSES</b>								
Antimony	ND	mg/L		0.003		1	E200.8	12/28/10 09:32/eli-c
Arsenic	0.001	mg/L		0.001		1	E200.8	12/28/10 09:32/eli-c
Barium	ND	mg/L		0.1		1	E200.8	12/28/10 09:32/eli-c
Beryllium	ND	mg/L		0.001		1	E200.8	12/28/10 09:32/eli-c
Boron	ND	mg/L		0.1		2	E200.7	12/28/10 16:45/eli-c
Cadmium	ND	mg/L		0.005		1	E200.8	12/28/10 09:32/eli-c
Chromium	ND	mg/L		0.05		1	E200.8	12/28/10 09:32/eli-c
Copper	ND	mg/L		0.01		1	E200.8	12/28/10 09:32/eli-c
Iron	0.04	mg/L		0.03		2	E200.7	12/28/10 16:45/eli-c
Lead	ND	mg/L		0.001		1	E200.8	12/28/10 09:32/eli-c
Manganese	0.52	mg/L		0.01		1	E200.8	12/28/10 09:32/eli-c
Mercury	ND	mg/L		0.001		1	E245.1	12/20/10 16:54/eli-b
Molybdenum	ND	mg/L		0.1		1	E200.8	12/28/10 09:32/eli-c
Nickel	ND	mg/L		0.05		1	E200.8	12/28/10 09:32/eli-c
Selenium	ND	mg/L		0.001		1	E200.8	12/28/10 09:32/eli-c
Silver	ND	mg/L		0.005		1	E200.8	12/28/10 09:32/eli-c
Strontium	2.2	mg/L		0.1		1	E200.8	12/28/10 09:32/eli-c
Thallium	ND	mg/L		0.001		1	E200.8	12/28/10 09:32/eli-c
Uranium	0.0084	mg/L		0.0003		1	E200.8	12/28/10 09:32/eli-c
Zinc	ND	mg/L		0.01		1	E200.8	12/28/10 09:32/eli-c
<b>DATA QUALITY</b>								
A/C Balance (± 5)	-0.560	%				1	A1030 E	01/24/11 00:00/jmh
Anions	18.4	meq/L				1	A1030 E	01/24/11 00:00/jmh
Cations	18.2	meq/L				1	A1030 E	01/24/11 00:00/jmh
Solids, Total Dissolved Calculated	1190	mg/L				1	A1030 E	01/24/11 00:00/jmh
TDS Balance (0.80 - 1.20)	0.990					1	A1030 E	01/24/11 00:00/jmh

**Report** RL - Analyte reporting limit.

**Definitions:** QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B		Batch: 101220A-ALK-SEL-W								
Sample ID: LCS1_101220A	Laboratory Control Sample					Run: PH_COND1-R_101220A		12/20/10 11:29		
Alkalinity, Total as CaCO3	964	mg/L	5.0	96	90	110				
Sample ID: MBLK1_101220A	Method Blank					Run: PH_COND1-R_101220A		12/20/10 11:34		
Alkalinity, Total as CaCO3	ND	mg/L	7							
Sample ID: R10120199-002AMS	Sample Matrix Spike					Run: PH_COND1-R_101220A		12/20/10 15:24		
Alkalinity, Total as CaCO3	136	mg/L	5.0	98	80	120				
Sample ID: R10120199-002AMSD	Sample Matrix Spike Duplicate					Run: PH_COND1-R_101220A		12/20/10 15:27		
Alkalinity, Total as CaCO3	136	mg/L	5.0	98	80	120	0.0	10		

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B Batch: 101221_2_COND-PROBE-W										
Sample ID: LCS1-1_101221		Laboratory Control Sample					Run: PH_COND2-R_101221B			12/21/10 09:26
Conductivity @ 25 C		149	umhos/cm	5.0	99	90	110			
Sample ID: LCS_COND-1_101221		Laboratory Control Sample					Run: PH_COND2-R_101221B			12/21/10 09:28
Conductivity @ 25 C		1410	umhos/cm	5.0	100	90	110			
Sample ID: LCS2-1_101221		Laboratory Control Sample					Run: PH_COND2-R_101221B			12/21/10 09:30
Conductivity @ 25 C		5000	umhos/cm	5.0	100	90	110			
Sample ID: MBLK-1_101221		Method Blank					Run: PH_COND2-R_101221B			12/21/10 09:33
Conductivity @ 25 C		ND	umhos/cm	5						
Sample ID: R10120179-001ADUP		Sample Duplicate					Run: PH_COND2-R_101221B			12/21/10 09:37
Conductivity @ 25 C		1350	umhos/cm	5.0				0.0	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>								Batch: 101215A-SLDS-TDS-W		
<b>Sample ID: LCS1_101215A</b>		Laboratory Control Sample				Run: BAL-4-R_101215A		12/15/10 16:27		
Solids, Total Dissolved TDS @ 180 C		180	mg/L	10	90	90	110			
<b>Sample ID: MBLK1_101215A</b>		Method Blank				Run: BAL-4-R_101215A		12/15/10 16:27		
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	3						
<b>Sample ID: R10120135-001ADUP</b>		Sample Duplicate				Run: BAL-4-R_101215A		12/15/10 16:29		
Solids, Total Dissolved TDS @ 180 C		1200	mg/L	10				2.3	5	
<b>Sample ID: R10120179-002AMS</b>		Sample Matrix Spike				Run: BAL-4-R_101215A		12/15/10 16:33		
Solids, Total Dissolved TDS @ 180 C		2300	mg/L	10	108	90	110			

### Qualifiers:

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2580 B</b>								Batch: 101221-ORP-ISE-W		
<b>Sample ID: LCS</b>		Laboratory Control Sample			Run: PH_COND1-R_101221A			12/21/10 16:30		
Oxidation-Reduction Potential		480	mV		100	95	105			
<b>Sample ID: R10120179-001F</b>		Sample Duplicate			Run: PH_COND1-R_101221A			12/21/10 16:30		
Oxidation-Reduction Potential		180	mV					3.2	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: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A3114 B</b>										Batch: C_28638
<b>Sample ID: LCS-28638</b>		Laboratory Control Sample				Run: SUB-C141280				12/28/10 12:29
Selenium-IV		0.050	mg/L	0.0010	99	90	110			
<b>Sample ID: MB-28638</b>		Method Blank				Run: SUB-C141280				12/28/10 12:27
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike Duplicate				Run: SUB-C141280				12/28/10 12:38
Selenium-IV		0.048	mg/L	0.0010	97	85	115	15	15	
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike				Run: SUB-C141280				12/28/10 12:36
Selenium-IV		0.056	mg/L	0.0010	112	85	115			
<b>Method: A3114 B</b>										Batch: C_28638
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike				Run: SUB-C141299				12/28/10 14:33
Selenium		0.061	mg/L	0.0010	91	85	115			
<b>Sample ID: LCS-28638</b>		Laboratory Control Sample				Run: SUB-C141299				12/28/10 14:26
Selenium		0.054	mg/L	0.0010	107	90	110			
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike Duplicate				Run: SUB-C141299				12/28/10 14:35
Selenium		0.059	mg/L	0.0010	86	85	115	3.5	15	
<b>Sample ID: MB-28638</b>		Method Blank				Run: SUB-C141299				12/28/10 14:24
Selenium		ND	mg/L	0.0002						
<b>Method: A3114 B</b>										Batch: C_28638
<b>Sample ID: MB-28638</b>		Method Blank				Run: SUB-C142470				02/04/11 11:20
Selenium-IV		ND	mg/L	0.0003						
<b>Sample ID: LCS-28638</b>		Laboratory Control Sample				Run: SUB-C142470				02/04/11 11:22
Selenium-IV		0.024	mg/L	0.0010	96	90	110			
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike				Run: SUB-C142470				02/04/11 11:27
Selenium-IV		0.025	mg/L	0.0010	102	85	115			
<b>Sample ID: R10120179-002E</b>		Sample Matrix Spike Duplicate				Run: SUB-C142470				02/04/11 11:29
Selenium-IV		0.025	mg/L	0.0010	102	85	115	0.3	15	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration





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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11  
**Report Date:** 02/01/11  
**Work Order:** R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A3114 B										Batch: C_28638
<b>Sample ID:</b> R10120179-002E										02/04/11 13:09
Selenium		Sample Matrix Spike Duplicate				Run: SUB-C142475				
		0.024	mg/L	0.0010	88	85	115	11	15	
<b>Sample ID:</b> MB-28638										02/04/11 13:00
Selenium		Method Blank				Run: SUB-C142475				
		ND	mg/L	0.0003						
<b>Sample ID:</b> LCS-28638										02/04/11 13:02
Selenium		Laboratory Control Sample				Run: SUB-C142475				
		0.025	mg/L	0.0010	102	90	110			
<b>Sample ID:</b> R10120179-002E										02/04/11 13:07
Selenium		Sample Matrix Spike				Run: SUB-C142475				
		0.021	mg/L	0.0010	78	85	115			S

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

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



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Batch: 101215_1_PH-W	
Sample ID: LCS_pH-1_101215		Laboratory Control Sample				Run: PH_COND2-R_101215A				12/15/10 13:37
pH		7.43	s.u.	0.010	100	98.55	101.45			
Sample ID: R10120153-001ADUP		Sample Duplicate				Run: PH_COND2-R_101215A				12/15/10 13:45
pH		8.46	s.u.	0.010				0.4	1.25	

### Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11  
**Report Date:** 02/01/11  
**Work Order:** R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A4500-NH3 G</b>										Batch: A2010-12-28_2_NH3_01
<b>Sample ID: MBLK-2</b>		Method Blank					Run: TECHAA2-R_101228A			12/28/10 11:48
Nitrogen, Ammonia as N		ND	mg/L	0.02						
<b>Sample ID: LFB-3</b>		Laboratory Fortified Blank					Run: TECHAA2-R_101228A			12/28/10 11:49
Nitrogen, Ammonia as N		0.23	mg/L	0.10	91	90	110			
<b>Sample ID: R10120179-001BMS</b>		Sample Matrix Spike					Run: TECHAA2-R_101228A			12/28/10 12:18
Nitrogen, Ammonia as N		0.43	mg/L	0.10	94	80	120			
<b>Sample ID: R10120179-001BMSD</b>		Sample Matrix Spike Duplicate					Run: TECHAA2-R_101228A			12/28/10 12:19
Nitrogen, Ammonia as N		0.42	mg/L	0.10	91	80	120	1.9	10	

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

**Report Date:** 02/01/11

**Work Order:** R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R141031
<b>Sample ID:</b> R10120179-002G										
Radon 222		Sample Duplicate				Run: SUB-C141031				12/16/10 16:27
		270	pCi/L	100				12		30
<b>Sample ID:</b> MB-R141031										
Radon 222		Method Blank				Run: SUB-C141031				12/16/10 16:27
		10	pCi/L							U
<b>Sample ID:</b> LCS-R141031										
Radon 222		Laboratory Control Sample				Run: SUB-C141031				12/16/10 16:27
		300	pCi/L	100	94	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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_R141199
<b>Sample ID: C10120365-002AMSD2</b> 17 Sample Matrix Spike Duplicate										Run: SUB-C141199 12/22/10 18:22
Aluminum		1.88	mg/L	0.10	92	70	130	2.2	20	
Barium		2.03	mg/L	0.10	98	70	130	1.3	20	
Boron		2.47	mg/L	0.10	100	70	130	1.5	20	
Cadmium		1.96	mg/L	0.010	96	70	130	2.4	20	
Chromium		1.97	mg/L	0.050	97	70	130	1.4	20	
Copper		2.03	mg/L	0.010	99	70	130	1.4	20	
Iron		1.99	mg/L	0.030	97	70	130	2.1	20	
Manganese		2.00	mg/L	0.010	98	70	130	0.8	20	
Molybdenum		2.01	mg/L	0.10	96	70	130	0.8	20	
Nickel		1.97	mg/L	0.050	97	70	130	0.8	20	
Silver		1.97	mg/L	0.010	97	70	130	1.7	20	
Vanadium		1.97	mg/L	0.10	97	70	130	0.3	20	
Zinc		2.03	mg/L	0.010	97	70	130	1.1	20	
Calcium		292	mg/L	1.0	94	70	130	0.2	20	
Magnesium		276	mg/L	1.0	99	70	130	1.2	20	
Potassium		127	mg/L	1.0	80	70	130	0.2	20	
Sodium		627	mg/L	1.0		70	130	0.3	20	A
<b>Sample ID: C10120365-002AMSD2</b> 17 Sample Matrix Spike										Run: SUB-C141199 12/22/10 18:18
Aluminum		1.84	mg/L	0.10	90	70	130			
Barium		2.00	mg/L	0.10	97	70	130			
Boron		2.43	mg/L	0.10	98	70	130			
Cadmium		1.92	mg/L	0.010	94	70	130			
Chromium		1.95	mg/L	0.050	95	70	130			
Copper		2.00	mg/L	0.010	98	70	130			
Iron		1.95	mg/L	0.030	95	70	130			
Manganese		1.98	mg/L	0.010	97	70	130			
Molybdenum		2.00	mg/L	0.10	95	70	130			
Nickel		1.99	mg/L	0.050	97	70	130			
Silver		1.94	mg/L	0.010	95	70	130			
Vanadium		1.97	mg/L	0.10	97	70	130			
Zinc		2.01	mg/L	0.010	96	70	130			
Calcium		292	mg/L	1.0	94	70	130			
Magnesium		273	mg/L	1.0	96	70	130			
Potassium		127	mg/L	1.0	80	70	130			
Sodium		625	mg/L	1.0		70	130			A
<b>Sample ID: LFB-101222A</b> 17 Laboratory Fortified Blank										Run: SUB-C141199 12/22/10 11:33
Aluminum		0.94	mg/L	0.10	94	85	115			
Barium		0.94	mg/L	0.10	94	85	115			
Boron		0.97	mg/L	0.10	97	85	115			
Cadmium		0.97	mg/L	0.010	97	85	115			
Calcium		48	mg/L	0.50	96	85	115			
Chromium		0.95	mg/L	0.050	95	85	115			
Copper		0.97	mg/L	0.010	97	85	115			

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_R141199
<b>Sample ID: LFB-101222A</b>	17	Laboratory Fortified Blank				Run: SUB-C141199				12/22/10 11:33
Iron		0.95	mg/L	0.030	95	85	115			
Magnesium		47	mg/L	0.50	95	85	115			
Manganese		0.96	mg/L	0.010	96	85	115			
Molybdenum		0.95	mg/L	0.10	95	85	115			
Nickel		0.94	mg/L	0.050	94	85	115			
Potassium		44	mg/L	0.50	88	85	115			
Silver		0.95	mg/L	0.010	95	85	115			
Sodium		47	mg/L	0.50	94	85	115			
Vanadium		0.98	mg/L	0.10	98	85	115			
Zinc		0.96	mg/L	0.010	96	85	115			
<b>Sample ID: MB-101222A</b>	17	Method Blank				Run: SUB-C141199				12/22/10 11:29
Aluminum		ND	mg/L	0.01						
Barium		0.0009	mg/L	0.0005						
Boron		ND	mg/L	0.009						
Cadmium		ND	mg/L	0.001						
Calcium		ND	mg/L	0.2						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		0.002	mg/L	0.002						
Magnesium		ND	mg/L	0.05						
Manganese		ND	mg/L	0.0004						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Potassium		ND	mg/L	0.02						
Silver		ND	mg/L	0.001						
Sodium		ND	mg/L	0.3						
Vanadium		ND	mg/L	0.03						
Zinc		0.002	mg/L	0.001						

### Qualifiers:

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Work Order: R10120179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_28617
<b>Sample ID: MB-28617</b>	13	Method Blank		Run: SUB-C141316				12/28/10 15:57		
Barium		ND	mg/L	0.002						
Beryllium		ND	mg/L	0.0001						
Boron		0.01	mg/L	0.008						
Cadmium		ND	mg/L	0.001						
Chromium		ND	mg/L	0.002						
Copper		ND	mg/L	0.001						
Iron		ND	mg/L	0.008						
Manganese		ND	mg/L	0.0008						
Molybdenum		ND	mg/L	0.005						
Nickel		ND	mg/L	0.003						
Silver		ND	mg/L	0.001						
Strontium		ND	mg/L	0.0002						
Zinc		ND	mg/L	0.008						
<b>Sample ID: C10120619-002CMS3</b>	13	Sample Matrix Spike		Run: SUB-C141316				12/28/10 16:37		
Barium		0.345	mg/L	0.10	69	70	130			S
Beryllium		0.235	mg/L	0.010	94	70	130			
Boron		2.40	mg/L	0.41		70	130			A
Cadmium		0.225	mg/L	0.056	90	70	130			
Chromium		0.440	mg/L	0.12	88	70	130			
Copper		0.575	mg/L	0.071	115	70	130			
Iron		6.96	mg/L	0.41	113	70	130			
Manganese		3.10	mg/L	0.038	93	70	130			
Molybdenum		0.540	mg/L	0.26	108	70	130			
Nickel		0.455	mg/L	0.13	91	70	130			
Silver		ND	mg/L	0.071		70	130			S
Strontium		9.64	mg/L	0.10		70	130			A
Zinc		0.635	mg/L	0.40	127	70	130			
<b>Sample ID: LCS3-28617</b>	13	Laboratory Control Sample		Run: SUB-C141316				12/28/10 16:01		
Barium		0.501	mg/L	0.10	100	85	115			
Beryllium		0.258	mg/L	0.010	103	85	115			
Boron		0.507	mg/L	0.10	99	85	115			
Cadmium		0.247	mg/L	0.010	99	85	115			
Chromium		0.502	mg/L	0.050	100	85	115			
Copper		0.511	mg/L	0.010	102	85	115			
Iron		2.54	mg/L	0.030	102	85	115			
Manganese		2.52	mg/L	0.010	101	85	115			
Molybdenum		0.518	mg/L	0.10	104	85	115			
Nickel		0.514	mg/L	0.050	103	85	115			
Silver		0.0504	mg/L	0.010	101	85	115			
Strontium		0.508	mg/L	0.10	102	85	115			
Zinc		0.512	mg/L	0.010	102	85	115			

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										Batch: C_28617
<b>Sample ID: C10120619-002CMSD3</b>	13	Sample Matrix Spike Duplicate		Run: SUB-C141316		12/28/10 16:41				
Barium		0.370	mg/L	0.10	74	70	130	7.0	20	
Beryllium		0.235	mg/L	0.010	94	70	130	0.0	20	
Boron		2.26	mg/L	0.41		70	130	6.2	20	A
Cadmium		0.230	mg/L	0.056	92	70	130	2.2	20	
Chromium		0.435	mg/L	0.12	87	70	130	1.1	20	
Copper		0.550	mg/L	0.071	110	70	130	4.4	20	
Iron		7.13	mg/L	0.41	120	70	130	2.4	20	
Manganese		3.15	mg/L	0.038	95	70	130	1.6	20	
Molybdenum		0.545	mg/L	0.26	109	70	130	0.9	20	
Nickel		0.490	mg/L	0.13	98	70	130	7.4	20	
Silver		ND	mg/L	0.071		70	130		20	S
Strontium		19.1	mg/L	0.10		70	130	66	20	AR
Zinc		0.675	mg/L	0.40	135	70	130	6.1	20	S
<b>Method: E200.7</b>										Batch: C_R141316
<b>Sample ID: MB-101228A</b>	2	Method Blank		Run: SUB-C141316		12/28/10 14:29				
Boron		ND	mg/L	0.009						
Iron		ND	mg/L	0.002						
<b>Sample ID: LFB-101228A</b>	2	Laboratory Fortified Blank		Run: SUB-C141316		12/28/10 14:33				
Boron		0.95	mg/L	0.10	95	85	115			
Iron		0.98	mg/L	0.030	98	85	115			
<b>Sample ID: C10110844-005BMS2</b>	2	Sample Matrix Spike		Run: SUB-C141316		12/28/10 15:28				
Boron		2.19	mg/L	0.10	97	70	130			
Iron		1.96	mg/L	0.030	96	70	130			
<b>Sample ID: C10110844-005BMSD2</b>	2	Sample Matrix Spike Duplicate		Run: SUB-C141316		12/28/10 15:32				
Boron		2.17	mg/L	0.10	96	70	130	0.9	20	
Iron		1.95	mg/L	0.030	95	70	130	0.5	20	
<b>Method: E200.7</b>										Batch: C_R141904
<b>Sample ID: LFB-110117B</b>		Laboratory Fortified Blank		Run: SUB-C141904		01/17/11 11:54				
Silicon		0.43	mg/L	0.10	92	85	115			
<b>Sample ID: R10120179-001C</b>		Sample Matrix Spike		Run: SUB-C141904		01/17/11 12:50				
Silicon		5.62	mg/L	0.10		70	130			A
<b>Sample ID: R10120179-001C</b>		Sample Matrix Spike Duplicate		Run: SUB-C141904		01/17/11 12:54				
Silicon		5.61	mg/L	0.10		70	130	0.2	20	A
<b>Sample ID: MB-110117B</b>		Method Blank		Run: SUB-C141904		01/17/11 11:50				
Silicon		ND	mg/L	0.007						

### Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory 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

S - Spike recovery outside of advisory limits.





## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Client: Powertech USA Inc

Work Order: R10120179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>		Batch: C_R141273								
<b>Sample ID: C10120614-001CMS4</b>	18 Post Digestion Spike	Run: SUB-C141273								12/28/10 09:45
Antimony		0.261	mg/L	0.050	102	70	130			
Arsenic		0.510	mg/L	0.0015	89	70	130			
Barium		0.737	mg/L	0.10	98	70	130			
Beryllium		0.221	mg/L	0.010	88	70	130			
Cadmium		0.213	mg/L	0.010	85	70	130			
Chromium		0.228	mg/L	0.050	91	70	130			
Copper		0.217	mg/L	0.010	85	70	130			
Lead		0.251	mg/L	0.050	100	70	130			
Manganese		0.278	mg/L	0.010	90	70	130			
Mercury		0.0250	mg/L	0.0010	99	70	130			
Molybdenum		0.284	mg/L	0.10	100	70	130			
Nickel		0.237	mg/L	0.050	84	70	130			
Selenium		0.240	mg/L	0.0035	84	70	130			
Silver		0.0770	mg/L	0.010	77	70	130			
Strontium		40.4	mg/L	0.10		70	130			A
Thallium		0.255	mg/L	0.10	101	70	130			
Uranium		0.277	mg/L	0.00030	111	70	130			
Zinc		0.215	mg/L	0.010	81	70	130			
<b>Sample ID: LRB</b>	18 Method Blank	Run: SUB-C141273								12/27/10 16:48
Antimony		ND	mg/L	7E-05						
Arsenic		ND	mg/L	6E-05						
Barium		ND	mg/L	3E-05						
Beryllium		ND	mg/L	3E-05						
Cadmium		ND	mg/L	1E-05						
Chromium		ND	mg/L	4E-05						
Copper		ND	mg/L	7E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	5E-05						
Mercury		ND	mg/L	8E-05						
Molybdenum		0.0007	mg/L	5E-05						
Nickel		ND	mg/L	0.0007						
Selenium		ND	mg/L	0.0002						
Silver		ND	mg/L	3E-05						
Strontium		ND	mg/L	3E-05						
Thallium		ND	mg/L	1E-05						
Uranium		ND	mg/L	1E-05						
Zinc		ND	mg/L	0.0003						
<b>Sample ID: LFB</b>	18 Laboratory Fortified Blank	Run: SUB-C141273								12/27/10 16:55
Antimony		0.0552	mg/L	0.0010	110	85	115			
Arsenic		0.0549	mg/L	0.0010	110	85	115			
Barium		0.0554	mg/L	0.0010	111	85	115			
Beryllium		0.0569	mg/L	0.0010	114	85	115			
Cadmium		0.0548	mg/L	0.0010	110	85	115			

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										
Batch: C_R141273										
Sample ID: LFB	18	Laboratory Fortified Blank		Run: SUB-C141273				12/27/10 16:55		
Chromium		0.0540	mg/L	0.0010	108	85	115			
Copper		0.0533	mg/L	0.0010	107	85	115			
Lead		0.0554	mg/L	0.0010	111	85	115			
Manganese		0.0544	mg/L	0.0010	109	85	115			
Mercury		0.00567	mg/L	0.0010	113	85	115			
Molybdenum		0.0562	mg/L	0.0010	111	85	115			
Nickel		0.0538	mg/L	0.0010	108	85	115			
Selenium		0.0550	mg/L	0.0010	110	85	115			
Silver		0.0213	mg/L	0.0010	106	85	115			
Strontium		0.0544	mg/L	0.0010	109	85	115			
Thallium		0.0548	mg/L	0.0010	110	85	115			
Uranium		0.0563	mg/L	0.00030	113	85	115			
Zinc		0.0566	mg/L	0.0010	113	85	115			
Sample ID: C10120614-001CMSD4	18	Post Digestion Spike Duplicate		Run: SUB-C141273				12/28/10 09:52		
Antimony		0.282	mg/L	0.050	111	70	130	8.0	20	
Arsenic		0.532	mg/L	0.0015	98	70	130	4.1	20	
Barium		0.789	mg/L	0.10	119	70	130	6.7	20	
Beryllium		0.230	mg/L	0.010	92	70	130	4.4	20	
Cadmium		0.227	mg/L	0.010	91	70	130	6.4	20	
Chromium		0.240	mg/L	0.050	96	70	130	5.3	20	
Copper		0.224	mg/L	0.010	88	70	130	3.5	20	
Lead		0.265	mg/L	0.050	106	70	130	5.5	20	
Manganese		0.299	mg/L	0.010	98	70	130	7.1	20	
Mercury		0.0274	mg/L	0.0010	109	70	130	9.0	20	
Molybdenum		0.302	mg/L	0.10	107	70	130	6.1	20	
Nickel		0.244	mg/L	0.050	87	70	130	2.9	20	
Selenium		0.247	mg/L	0.0035	87	70	130	3.2	20	
Silver		0.0832	mg/L	0.010	83	70	130	7.7	20	
Strontium		41.6	mg/L	0.10		70	130	3.0	20	A
Thallium		0.271	mg/L	0.10	107	70	130	6.0	20	
Uranium		0.289	mg/L	0.00030	116	70	130	4.4	20	
Zinc		0.277	mg/L	0.010	106	70	130	25	20	R

### Qualifiers:

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ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.  
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## QA/QC Summary Report

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Work Order: R10120179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28617
<b>Sample ID: C10120619-002CMSD3</b>	3	Sample Matrix Spike Duplicate				Run: SUB-C141375				12/30/10 16:14
Arsenic		0.431	mg/L	0.0010	83	70	130	0.5		20
Lead		0.525	mg/L	0.050	104	70	130	4.6		20
Thallium		0.541	mg/L	0.10	108	70	130	3.7		20
<b>Sample ID: C10120619-002CMS3</b>	3	Sample Matrix Spike				Run: SUB-C141375				12/30/10 16:07
Arsenic		0.433	mg/L	0.0010	83	70	130			
Lead		0.501	mg/L	0.050	99	70	130			
Thallium		0.522	mg/L	0.10	104	70	130			
<b>Sample ID: LCS3-28617</b>	3	Laboratory Control Sample				Run: SUB-C141375				12/30/10 14:53
Arsenic		0.494	mg/L	0.0010	98	85	115			
Lead		0.523	mg/L	0.050	105	85	115			
Thallium		0.511	mg/L	0.10	102	85	115			
<b>Sample ID: MB-28617</b>	3	Method Blank				Run: SUB-C141375				12/30/10 14:46
Arsenic		0.002	mg/L	0.0003						
Lead		ND	mg/L	5E-05						
Thallium		0.0004	mg/L	5E-05						
<b>Method: E200.8</b>										Batch: C_28617
<b>Sample ID: C10120619-002CMS3</b>	2	Sample Matrix Spike				Run: SUB-C141484				01/04/11 18:22
Antimony		0.491	mg/L	0.050	98	70	130			
Selenium		0.192	mg/L	0.0010	38	70	130			S
<b>Sample ID: C10120619-002CMSD3</b>	2	Sample Matrix Spike Duplicate				Run: SUB-C141484				01/04/11 18:28
Antimony		0.493	mg/L	0.050	98	70	130	0.4		20
Selenium		0.242	mg/L	0.0010	49	70	130	23		20 SR
<b>Sample ID: LCS3-28617</b>	2	Laboratory Control Sample				Run: SUB-C141484				01/04/11 17:08
Antimony		0.563	mg/L	0.050	113	85	115			
Selenium		0.513	mg/L	0.0010	103	85	115			
<b>Sample ID: MB-28617</b>	2	Method Blank				Run: SUB-C141484				01/04/11 17:01
Antimony		0.0003	mg/L	0.0002						
Selenium		ND	mg/L	0.0007						

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										Batch: C_28617
<b>Sample ID: MB-28617</b>		Method Blank					Run: SUB-C141538			01/06/11 04:04
Selenium		ND	mg/L	0.0007						
<b>Sample ID: C10120619-002CMSD3</b>		Sample Matrix Spike Duplicate					Run: SUB-C141538			01/06/11 05:25
Selenium		0.397	mg/L	0.0010	79	70	130	5.8	20	
<b>Sample ID: LCS3-28617</b>		Laboratory Control Sample					Run: SUB-C141538			01/06/11 04:10
Selenium		0.452	mg/L	0.0010	90	85	115			
<b>Sample ID: C10120619-002CMS3</b>		Sample Matrix Spike					Run: SUB-C141538			01/06/11 05:18
Selenium		0.421	mg/L	0.0010	84	70	130			
<b>Method: E200.8</b>										Batch: C_28598
<b>Sample ID: R10120179-002I</b>		Post Digestion Spike Duplicate					Run: SUB-C141539			01/06/11 02:17
Uranium		0.0670	mg/L	0.00030	134	70	130	0.6	20	S
<b>Sample ID: R10120179-002I</b>		Post Digestion Spike					Run: SUB-C141539			01/06/11 02:13
Uranium		0.0673	mg/L	0.00030	135	70	130			S
<b>Sample ID: MB-28598</b>		Method Blank					Run: SUB-C141539			01/06/11 01:36
Uranium		0.0002	mg/L	7E-05						
<b>Sample ID: LCS2-28598</b>		Laboratory Control Sample					Run: SUB-C141539			01/06/11 01:40
Uranium		0.119	mg/L	0.00030	118	85	115			S
- Response is above standard QA limit. This could indicate a high bias for the sample results. Since there were no detectable analyte responses, and the remainder of the run QA is within acceptance range, this batch is approved.										
<b>Method: E200.8</b>										Batch: C_R141821
<b>Sample ID: LRB</b>		Method Blank					Run: SUB-C141821			01/13/11 12:12
Thorium 232		4E-05	mg/L	3E-05						
<b>Sample ID: LFB</b>		Laboratory Fortified Blank					Run: SUB-C141821			01/13/11 12:16
Thorium 232		0.0526	mg/L	0.0010	105	85	115			
<b>Sample ID: R10120179-002C</b>		Post Digestion Spike					Run: SUB-C141821			01/13/11 21:36
Thorium 232		0.0559	mg/L	0.0010	109	70	130			
<b>Sample ID: R10120179-002C</b>		Post Digestion Spike Duplicate					Run: SUB-C141821			01/13/11 21:40
Thorium 232		0.0583	mg/L	0.0010	114	70	130	4.2	20	

### Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



## QA/QC Summary Report

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Work Order: R10120179

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E245.1</b>										Analytical Run: SUB-B158820
<b>Sample ID: QCS</b>										12/20/10 15:34
Mercury		0.0020	mg/L	0.0010	102	90	110			
<b>Method: E245.1</b>										Batch: B_51167
<b>Sample ID: MB-51167</b>										12/20/10 16:39
Mercury		3E-05	mg/L	1E-05						
<b>Sample ID: LCS-51167</b>										12/20/10 16:41
Mercury		0.0019	mg/L	0.0010	92	85	115			
<b>Sample ID: B10121480-001BMS</b>										12/20/10 16:46
Mercury		0.0015	mg/L	0.0010	75	70	130			
<b>Sample ID: B10121480-001BMDS</b>										12/20/10 16:49
Mercury		0.0016	mg/L	0.0010	80	70	130	5.8	30	

### Qualifiers:

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MDC - Minimum detectable concentration



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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Report Date: 02/01/11

Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										Batch: R49463
Sample ID: LFB121610-14	5	Laboratory Fortified Blank		Run: DIONEX_101216A				12/16/10 21:57		
Chloride		38.1	mg/L	1.00	95	90	110			
Fluoride		3.88	mg/L	0.10	97	90	110			
Nitrogen, Nitrate as N		3.79	mg/L	0.10	95	90	110			
Nitrogen, Nitrite as N		3.91	mg/L	0.10	98	90	110			
Sulfate		37.4	mg/L	1.0	94	90	110			
Sample ID: R10120177-001BMS	5	Sample Matrix Spike		Run: DIONEX_101216A				12/16/10 22:32		
Chloride		54.1	mg/L	1.00	98	90	110			
Fluoride		4.64	mg/L	0.10	92	90	110			
Nitrogen, Nitrate as N		4.26	mg/L	0.10	91	90	110			
Nitrogen, Nitrite as N		3.91	mg/L	0.10	98	90	110			
Sulfate		108	mg/L	1.0	106	90	110			
Sample ID: R10120177-001BMSD	5	Sample Matrix Spike Duplicate		Run: DIONEX_101216A				12/16/10 22:50		
Chloride		54.2	mg/L	1.00	98	90	110	0.2	10	
Fluoride		4.65	mg/L	0.10	92	90	110	0.3	10	
Nitrogen, Nitrate as N		4.26	mg/L	0.10	91	90	110	0.1	10	
Nitrogen, Nitrite as N		3.90	mg/L	0.10	98	90	110	0.3	10	
Sulfate		109	mg/L	1.0	107	90	110	0.3	10	

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## QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 02/14/11

Client: Powertech USA Inc

Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>									Batch: C_GrAB-1025	
<b>Sample ID: MB-GrAB-1025</b>	6	Method Blank					Run: SUB-C141522		01/04/11 22:52	
Gross Alpha		-0.8	pCi/L							U
Gross Alpha precision (±)		0.6	pCi/L							
Gross Alpha MDC		0.7	pCi/L							
Gross Beta		-1	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		1	pCi/L							
<b>Sample ID: Th230-GrAB-1025</b>		Laboratory Control Sample					Run: SUB-C141522		01/04/11 22:52	
Gross Alpha		100	pCi/L	98		70	130			
<b>Sample ID: R10120179-001H</b>	6	Sample Duplicate					Run: SUB-C141522		01/04/11 22:52	
Gross Alpha		-0.63	pCi/L					77	1337.7	U
Gross Alpha precision (±)		3.2	pCi/L							
Gross Alpha MDC		5.5	pCi/L							
Gross Beta		8.0	pCi/L					32	95.6	
Gross Beta precision (±)		4.1	pCi/L							
Gross Beta MDC		6.6	pCi/L							
<b>Sample ID: C10120819-001FMS</b>		Sample Matrix Spike					Run: SUB-C141522		01/05/11 11:01	
Gross Alpha		112	pCi/L	98		70	130			
<b>Sample ID: C10120819-001FMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141522		01/05/11 11:01	
Gross Beta		90.0	pCi/L	96		70	130	0.3	15.6	
<b>Sample ID: C10120819-001FMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141522		01/05/11 11:01	
Gross Alpha		109	pCi/L	95		70	130	2.8	17.3	

### Qualifiers:

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U - Not detected at minimum detectable concentration



## QA/QC Summary Report

Prepared by Rapid City, SD Branch

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Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E901.1</b>										
Batch: C_R141237										
<b>Sample ID: R10120179-002H</b>	23	Sample Duplicate		Run: SUB-C141237				12/22/01 06:10		
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							
Radium 224 precision (±)		ND	pCi/L							
Thallium 208 precision (±)		ND	pCi/L							
Thorium 228 precision (±)		ND	pCi/L							
Thorium 234		360	pCi/L	50					30	
Thorium 234 precision (±)		130	pCi/L							
Zinc 65 precision (±)		ND	pCi/L							
Radium 228 precision (±)		ND	pCi/L							
Gross Gamma		360	pCi/L					200	30	R
Gross Gamma precision (±)		130	pCi/L							

- Activity of original sample is below detection limit; duplicate is above detection limit, but within the limits of precision. RER is acceptable, therefore the batch is acceptable

<b>Sample ID: LCS-R141237</b>	3	Laboratory Control Sample		Run: SUB-C141237				12/22/01 06:10		
Americium 241		660	pCi/L	50	81	70	130			
Cesium 137		990	pCi/L	50	99	70	130			
Potassium 40		6600	pCi/L	50	99	70	130			

<b>Sample ID: MB-R141237</b>	23	Method Blank		Run: SUB-C141237				12/22/01 06:10		
Americium 241 precision (±)		ND	pCi/L							
Barium 133 precision (±)		ND	pCi/L							
Bismuth 212 precision (±)		ND	pCi/L							
Bismuth 214 precision (±)		ND	pCi/L							
Cesium 134 precision (±)		ND	pCi/L							
Cesium 137 precision (±)		ND	pCi/L							
Cobalt 60 precision (±)		ND	pCi/L							
Iodine 125 precision (±)		ND	pCi/L							
Iodine 131 precision (±)		ND	pCi/L							
Lead 212 precision (±)		ND	pCi/L							
Lead 214 precision (±)		ND	pCi/L							
Manganese 54 precision (±)		ND	pCi/L							
Potassium 40 precision (±)		ND	pCi/L							
Radium 223 precision (±)		ND	pCi/L							

### Qualifiers:

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R - RPD exceeds advisory limit.





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## QA/QC Summary Report

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**Client:** Powertech USA Inc

**Project:** Dewey Groundwater Sampling

**Revised Date:** 02/14/11

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**Work Order:** R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E901.1										Batch: C_R141237
<b>Sample ID:</b> MB-R141237										12/22/01 06:10
23 Method Blank										Run: SUB-C141237
Radium 224 precision ( $\pm$ )		ND	pCi/L							
Thallium 208 precision ( $\pm$ )		ND	pCi/L							
Thorium 228 precision ( $\pm$ )		ND	pCi/L							
Thorium 234		400	pCi/L							
Thorium 234 precision ( $\pm$ )		80	pCi/L							
Zinc 65 precision ( $\pm$ )		ND	pCi/L							
Radium 228 precision ( $\pm$ )		ND	pCi/L							
Gross Gamma		400	pCi/L							
Gross Gamma precision ( $\pm$ )		80	pCi/L							

- See Case Narrative regarding Gross Gamma analysis.

### Qualifiers:

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Report Date: 02/01/11

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										Batch: C_RA226-5079
<b>Sample ID: LCS-RA226-5079</b>	Laboratory Control Sample			Run: SUB-C141391			12/29/10 22:07			
Radium 226		8.1	pCi/L	129		70	130			
<b>Sample ID: C10120676-001AMSD</b>	Sample Matrix Spike Duplicate			Run: SUB-C141391			12/29/10 16:43			
Radium 226		16.4	pCi/L	106		70	130	8.6	22.9	
<b>Sample ID: C10120676-001AMS</b>	Sample Matrix Spike			Run: SUB-C141391			12/29/10 16:43			
Radium 226		15.0	pCi/L	95		70	130			
<b>Sample ID: MB-RA226-5079</b>	3	Method Blank		Run: SUB-C141391			12/29/10 22:07			
Radium 226		-0.05	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Method: E903.0</b>										Batch: C_R141421
<b>Sample ID: LCS-28598</b>	Laboratory Control Sample			Run: SUB-C141421			01/03/11 12:21			
Radium 226		14	pCi/L	113		70	130			
<b>Sample ID: R10120179-001I</b>	Sample Matrix Spike Duplicate			Run: SUB-C141421			01/03/11 12:21			
Radium 226		30	pCi/L	115		70	130	3.8	24.7	
<b>Sample ID: MB-28598</b>	3	Method Blank		Run: SUB-C141421			01/03/11 12:21			
Radium 226		0.02	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.3	pCi/L							
<b>Sample ID: R10120179-001I</b>	Sample Matrix Spike			Run: SUB-C141421			01/03/11 12:21			
Radium 226		29	pCi/L	110		70	130			

### Qualifiers:

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MDC - Minimum detectable concentration

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Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>										Batch: C_R141572
<b>Sample ID: C10120734-007HMS</b>		Sample Matrix Spike					Run: SUB-C141572			01/02/11 13:19
Thorium 230		9.1	pCi/L	104		70	130			
<b>Sample ID: MB-28598</b>	3	Method Blank					Run: SUB-C141572			01/02/11 13:19
Thorium 230		0.04	pCi/L							U
Thorium 230 MDC		0.10	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
<b>Sample ID: C10120734-007HMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141572			01/04/11 09:07
Thorium 230		9.3	pCi/L	106		70	130	1.6	30.3	
<b>Sample ID: LCS-28598</b>		Laboratory Control Sample					Run: SUB-C141572			01/02/11 13:19
Thorium 230		11	pCi/L	112		70	130			
<b>Method: E908.0</b>										Batch: C_RA-TH-ISO-1314
<b>Sample ID: LCS-RA-TH-ISO-1314</b>		Laboratory Control Sample					Run: SUB-C141753			01/09/11 13:55
Thorium 230		5.3	pCi/L	93		70	130			
<b>Sample ID: C10120463-001AMS</b>		Sample Matrix Spike					Run: SUB-C141753			01/09/11 13:55
Thorium 230		11	pCi/L	95		70	130			
<b>Sample ID: C10120463-001AMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C141753			01/09/11 13:55
Thorium 230		13	pCi/L	115		70	130	19	45.5	
<b>Sample ID: MB-RA-TH-ISO-1314</b>	3	Method Blank					Run: SUB-C141753			01/10/11 08:55
Thorium 230		0.06	pCi/L							U
Thorium 230 MDC		0.09	pCi/L							
Thorium 230 precision (±)		0.06	pCi/L							

### Qualifiers:

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## QA/QC Summary Report

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Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Work Order: R10120179

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0								Analytical Run: SUB-T38341		
Sample ID: STD-PB-210-0060	3	Continuing Calibration Verification Standard								01/03/11 01:52
Lead 210		32	pCi/L		100	70	130	0.0	30	
Lead 210 precision (±)		1.2	pCi/L			0	0			
Lead 210 MDC		1.4	pCi/L			0	0			
Method: E909.0								Batch: T_PB-210-0060		
Sample ID: MB-PB-210-0060	3	Method Blank				Run: SUB-T38341				01/03/11 04:03
Lead 210		-0.7	pCi/L							U
Lead 210 precision (±)		0.8	pCi/L							
Lead 210 MDC		1	pCi/L							
Sample ID: LCS-PB-210-0060		Laboratory Control Sample				Run: SUB-T38341				01/03/11 06:15
Lead 210		40	pCi/L		75	70	130			
Sample ID: R10120179-001H		Sample Matrix Spike				Run: SUB-T38341				01/03/11 17:12
Lead 210		89	pCi/L		82	70	130			
Sample ID: R10120179-001H		Sample Matrix Spike Duplicate				Run: SUB-T38341				01/03/11 19:23
Lead 210		79	pCi/L		74	70	130	11	16.4	
Method: E909.0								Batch: T_PB-210-0061		
Sample ID: MB-12991	3	Method Blank				Run: SUB-T38403				01/06/11 13:11
Lead 210			pCi/L							U
Lead 210 precision (±)		7	pCi/L							
Lead 210 MDC		10	pCi/L							
Sample ID: LCS-12991		Laboratory Control Sample				Run: SUB-T38403				01/06/11 15:22
Lead 210		480	pCi/L		89	70	130			
Sample ID: R10120179-001I		Sample Matrix Spike				Run: SUB-T38403				01/06/11 19:45
Lead 210		120	pCi/L		83	70	130			
Sample ID: R10120179-001I		Sample Matrix Spike Duplicate				Run: SUB-T38403				01/06/11 21:56
Lead 210		120	pCi/L		89	70	130	5.7	15.3	

### 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: 02/14/11

Report Date: 02/01/11

Work Order: R10120179

Client: Powertech USA Inc

Project: Dewey Groundwater Sampling

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E912.0</b>										Batch: C_PO210-0335
<b>Sample ID: MB-PO210-0335</b>	3	Method Blank				Run: SUB-C141523				01/05/11 11:54
Polonium 210		0.3	pCi/L							U
Polonium 210 MDC		0.6	pCi/L							
Polonium 210 precision (±)		0.4	pCi/L							
<b>Sample ID: C10120734-007FMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-C141523				01/05/11 11:54
Polonium 210		26	pCi/L	80		70	130	20	60.9	
<b>Sample ID: LCS-PO210-0335</b>		Laboratory Control Sample				Run: SUB-C141523				01/05/11 11:54
Polonium 210		16	pCi/L	99		70	130			
<b>Sample ID: C10120734-007FMS</b>		Sample Matrix Spike				Run: SUB-C141523				01/05/11 11:54
Polonium 210		31	pCi/L	98		70	130			
<b>Method: E912.0</b>										Batch: C_R142293
<b>Sample ID: R10120179-002I</b>		Sample Matrix Spike Duplicate				Run: SUB-C142293				01/30/11 12:31
Polonium 210		42	pCi/L	110		70	130	9.4	61.7	
<b>Sample ID: R10120179-002I</b>		Sample Matrix Spike				Run: SUB-C142293				01/30/11 12:31
Polonium 210		46	pCi/L	121		70	130			
<b>Sample ID: MB-28543</b>	3	Method Blank				Run: SUB-C142293				01/30/11 12:31
Polonium 210		-0.03	pCi/L							U
Polonium 210 precision (±)		1	pCi/L							
Polonium 210 MDC		3	pCi/L							
<b>Sample ID: LCS-28543</b>		Laboratory Control Sample				Run: SUB-C142293				01/30/11 12:31
Polonium 210		64	pCi/L	84		70	130			

### Qualifiers:

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MDC - Minimum detectable concentration

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U - Not detected at minimum detectable concentration



Chain of Custody and Analytical Request Record

Page \_\_\_\_ of \_\_\_\_

PLEASE PRINT (Provide as much information as possible.)

Company Name: <b>Scott Env.</b>		Project Name, PWS, Permit, Etc.: <b>PowerTech Drug Bundles</b>		Sample Origin: <b>State:</b>		EPA/State Compliance: <b>Yes</b> <input type="checkbox"/> <b>No</b> <input type="checkbox"/>	
Report Mail Address: <b>Scott Env. / PowerTech</b>		Contact Name: <b>Alan Scott</b>		Phone/Fax: <b>12-15-10 10:00</b>		Email: <b>Alan.Scott@PowerTech.com</b>	
Invoice Address: <b>PowerTech</b>		Invoice Contact & Phone: <b>Alan Scott</b>		Purchase Order: <b>12-15-10 10:00</b>		Quote/Bottle Order: <b>12-15-10 10:00</b>	
Special Report/Formats: <b>PowerTech</b>		Number of Containers: <b>2</b> Sample Type: <b>AW S V B O DW</b> Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water		ANALYSIS REQUESTED		Standard Turnaround (TAT) <b>RUSH</b>	
<input type="checkbox"/> DW <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: <b>12-14-10</b> <input type="checkbox"/> Other: <b>12-14-10</b>		<input type="checkbox"/> EDD/EDT (Electronic Data) Format: <b>LEVEL IV</b> <input type="checkbox"/> NELAC		SEE ATTACHED		Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.): <b>08-09-21-01</b>		Collection Date: <b>12-14-10</b>		Collection Time: <b>12-14-10</b>		Comments: <b>12-15-10 10:00</b>	
1 <b>08-09-21-02</b>		12-14-10		12-14-10		12-15-10 10:00	
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In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.