



## WESTERN NUCLEAR, INC.

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February 26, 2009

Keith McConnell, Deputy Director  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Mailstop T8F5  
Washington, DC 20555-0001

**RE: Source Material License SUA-56; Western Nuclear, Inc., Split Rock Uranium Mill Tailings Facility; Surface Water and Groundwater Monitoring Report**

Dear Mr. McConnell:

Please find enclosed for Nuclear Regulatory Commission review, the surface water and groundwater sampling results for the second half of 2008 for the Split Rock Uranium mill tailings facility. This monitoring was performed as required by license conditions 24 and 74.

Figure 1 shows the location of the monitor wells and the surface water sample locations. The table presents the analytical results. Figures are also included in the enclosure, which show the temporal changes in water quality for key constituents. Some of the wells have more historic data as they were part of the previous monitoring network. The remaining wells have limited historic data since they were only sampled as part of the characterization study. No data were reported for monitor wells SWAB-1 and SWAB-12 because there was insufficient water in the wells to provide a valid sample.

In all cases the data indicate that surface water and groundwater quality are within expected ranges and that the system is behaving as predicted.

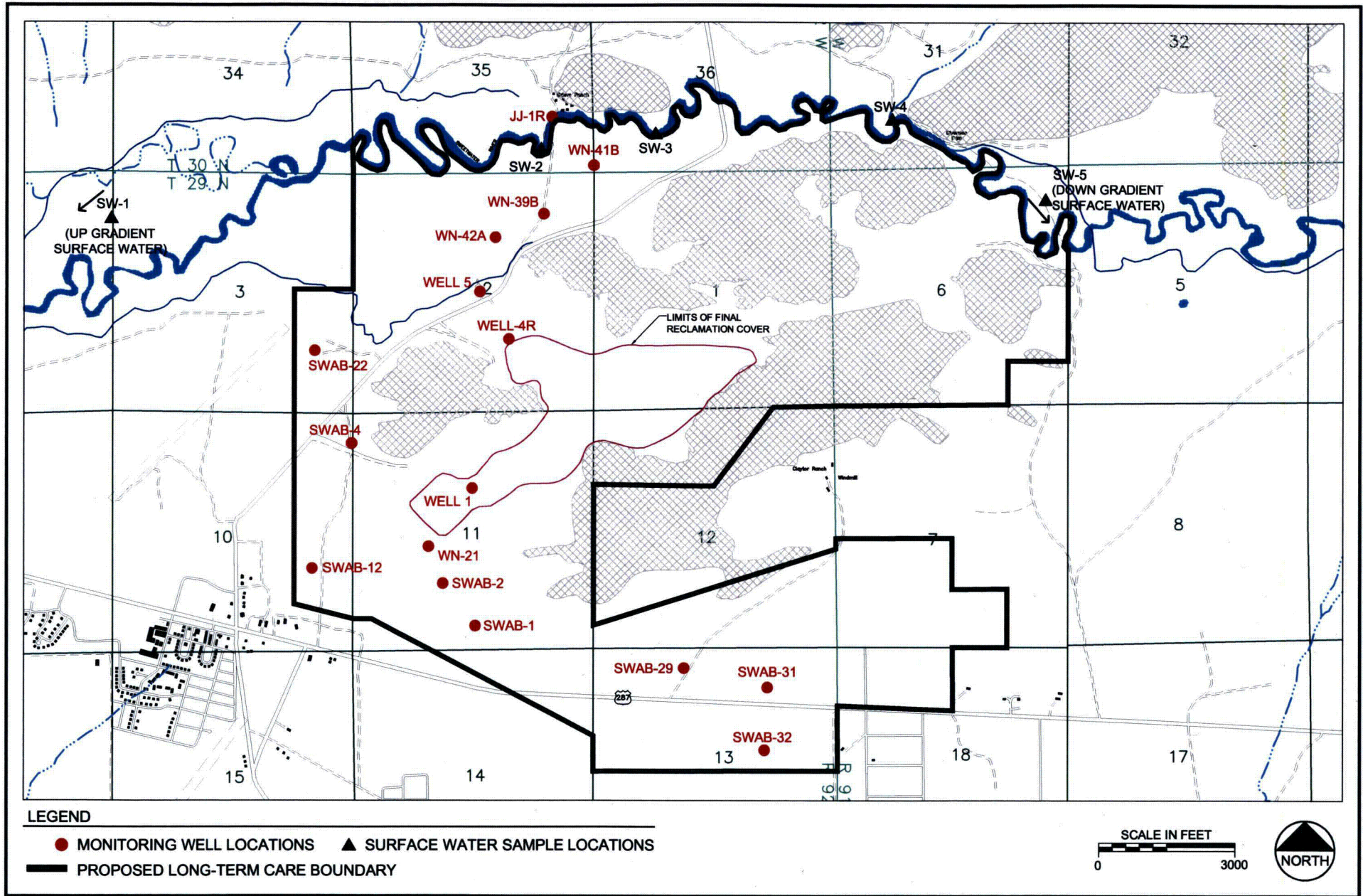
If you have any questions, please contact me at your convenience.

Sincerely,

  
Lawrence J. Corte, President

Enclosure

cc. Steve Hall, Stoller  
Scott Surovchak, DOE  
Mark Thiesse, WDEQ  
cc/wo: Anne Thomas, WNI



**MFG, Inc.**  
consulting scientists and engineers

**FIGURE 1**  
**SURFACE WATER AND GROUND WATER MONITORING LOCATIONS**

Date:	FEBRUARY 2008
Project:	003-347/2008
File:	GW-MONIT-02.DWG

Semi-Annual Groundwater and Surface  
Water Compliance Monitoring Results  
Second Half of Year 2008

# WNI Split Rock Mill Groundwater and Surface Water Quality Semi-Annual Report

2nd Half 2008 (Sampled: 9/17/08 to 9/19/2008)

Parameter	JJ-1R	SWAB-2	SWAB-4	SWAB-22	SWAB-29	SWAB-31	SWAB-32	WELL-1	WELL-4R	WELL-5
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.6	<0.1
Ammonia as N (mg/L)	<0.0001	0.0218	0.0118	0.0006	0.0001	<0.0006	<0.0006	0.0292	0.0545	<0.0001
Antimony (mg/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic (D) (mg/L)	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Cadmium (D) (mg/L)	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.024	<0.001
Chloride (mg/L)	12	39	34	3	<1	7	11	96	96	88
Cond Field (uS/cm)	644	4830	1960	603	602	472	575	4820	7120	4360
Fluoride (mg/L)	0.5	0.4	0.3	0.4	0.2	0.3	0.4	0.2	6	<0.1
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Manganese (D) (mg/L)	0.18	6.6	0.08	0.11	0.12	<0.05	<0.05	13.7	96.8	0.48
Molybdenum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.56	<0.05
Nitrate + Nitrite as N (mg/L)	<0.2	335	46.5	<0.2	<0.2	1.3	1.4	25.3	104	71.3
pH Field (std units)	7.06	6.42	7.04	7.11	6.44	7.63	7.66	6.26	5.93	6.67
pH Lab (std units)	7.32	7.01	7.33	7.35	7.38	7.86	7.85	6.71	6.25	6.94
Radium-226 (D) (pCi/L)	<0.06±0.11	0.31±0.15	0.96±0.22	<0.02±0.10	<0.08±0.12	<0.06±0.09	<0.07±0.09	0.42±0.15	<0.04±0.08	<0.05±0.08
Radium-228 (D) (pCi/L)	1.4±0.8	3±0.9	2.8±0.9	<0.7±0.8	<0.1±0.8	<0.8±0.8	<0.5±0.8	1.5±0.8	<0.6±0.8	1.8±0.8
Selenium (D) (mg/L)	<0.005	0.011	0.006	<0.005	<0.005	0.009	0.01	0.014	0.028	0.021
Sulfate (mg/L)	47	1550	509	44	43	31	51	2110	3430	1800
TDS (mg/L)	364	3930	1200	312	283	250	314	3600	4890	3650
Temp Field (C)	13.17	9.83	15.22	14.22	18.72	14.94	14.61	12.28	12	12
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	0.002	<0.001
Thorium-230 (D) (pCi/L)	<0.4±0.6	<0.1±0.5	<0.1±0.9	<0.4±0.9	<0.4±0.9	<0.1±1	<0.4±0.7	<0.1±0.7	<0.7±0.8	<0.1±0.9
Uranium (D)(mg/L)	0.008	1.39	1.12	0.018	0.029	0.031	0.127	4.88	0.295	1.71
Water Elevation (ft)	NA	6293.95	6291.85	6288.65	6279.1	6271.9	6273.85	6295.15	6286.5	6281.05

Ammonia as N is the free ammonia concentration, calculated from the laboratory reported total ammonia concentration and field measured pH, consistent with the method used to determine the ACL for ammonia.

# WNI Split Rock Mill

## Groundwater and Surface Water Quality

### Semi-Annual Report

2nd Half 2008 (Sampled: 9/17/08 to 9/19/2008)

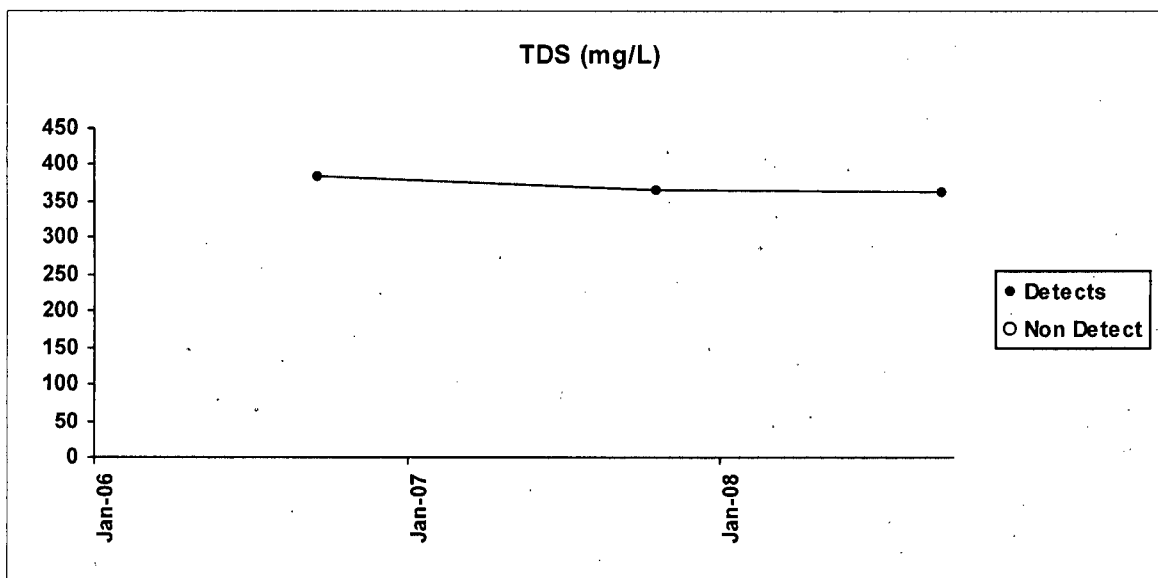
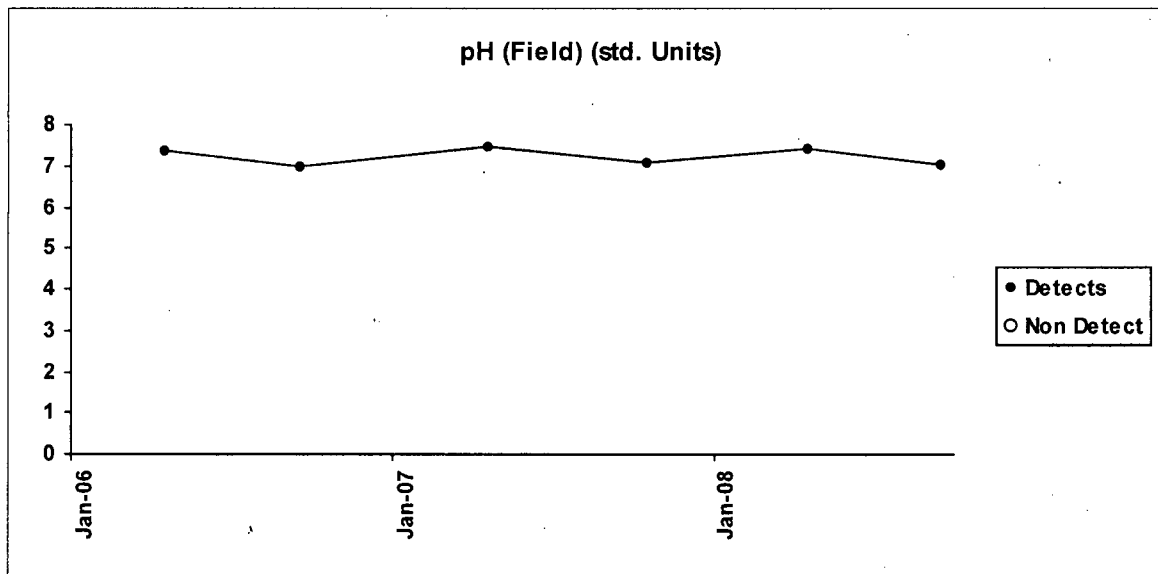
Parameter	WN-21	WN-39B	WN-41B	WN-42A	SW-1	SW-2	SW-3	SW-4	SW-5
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia as N (mg/L)	0.0169	<0.0002	<0.0008	<0.0001	<0.0001	<0.0003	<0.0003	<0.0094	<0.0107
Antimony (mg/L)	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic (D) (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloride (mg/L)	9	26	389	42	2	1	2	3	3
Cond Field (uS/cm)	659	1052	2630	4700	219	179	175	188	188
Fluoride (mg/L)	0.2	0.2	1.2	<0.1	0.2	0.2	0.2	0.2	0.2
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Manganese (D) (mg/L)	0.34	<0.05	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05
Molybdenum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	2.9	10.6	<0.2	43	<0.2	<0.2	<0.2	<0.2	<0.2
pH Field (std units)	7.52	7.42	7.93	6.75	6.98	7.39	7.36	9.02	9.07
pH Lab (std units)	7.77	7.7	8.12	6.99	7.95	8	8.02	8.01	7.98
Radium-226 (D) (pCi/L)	<0.08±0.09	<0.15±0.13	0.18±0.13	<0.1±0.07	<0.1±0.08	<0.06±0.1	<0.1±0.08	<0.09±0.09	<0.08±0.25
Radium-228 (D) (pCi/L)	<0.8±0.8	<0.9±0.8	<0.4±0.7	<0.4±0.8	<0.6±0.8	<0.5±0.8	<0.7±0.8	<0.6±0.8	2.7±1.6
Selenium (D) (mg/L)	<0.005	<0.005	<0.005	0.036	<0.005	<0.005	<0.005	<0.005	<0.005
Sulfate (mg/L)	86	233	400	2080	29	29	30	30	30
TDS (mg/L)	384	685	1420	4170	149	157	158	155	155
Temp Field (C)	13.06	10.22	10.05	11.28	14.44	13.33	12.22	12.22	12.78
Thallium (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Thorium-230 (D) (pCi/L)	<0.3±0.7	<0.4±0.6	<0±0.5	<0.2±0.6	<0.1±0.4	<0.3±0.6	<0.3±0.7	<0.2±0.6	<0.1±0.4
Uranium (D)(mg/L)	0.069	0.375	0.01	1.06	0.001	0.001	0.002	0.002	0.002
Water Elevation (ft)	6296	6272.65	6269.55	6275.85	NA	NA	NA	NA	NA

Ammonia as N is the free ammonia concentration, calculated from the laboratory reported total ammonia concentration and field measured pH, consistent with the method used to determine the ACL for ammonia.

GROUNDWATER

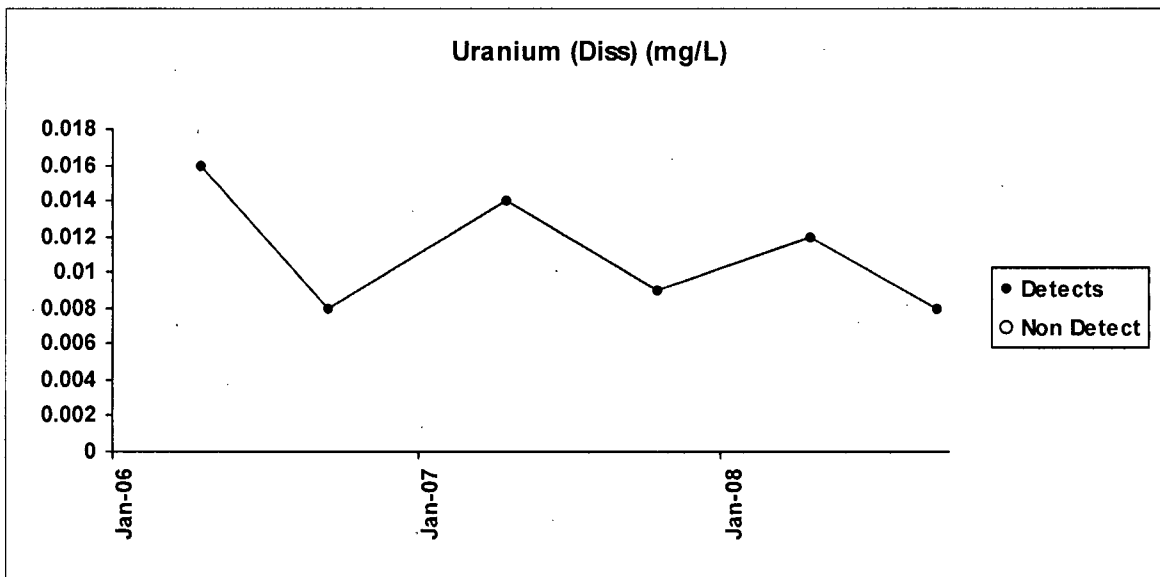
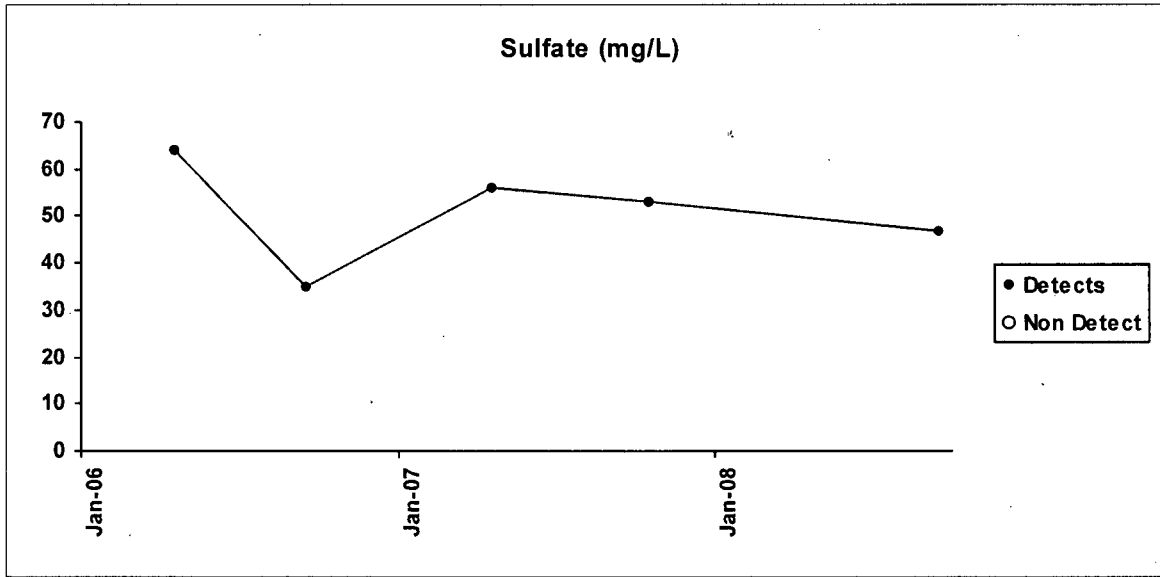
Jeffrey City

JJ-1R



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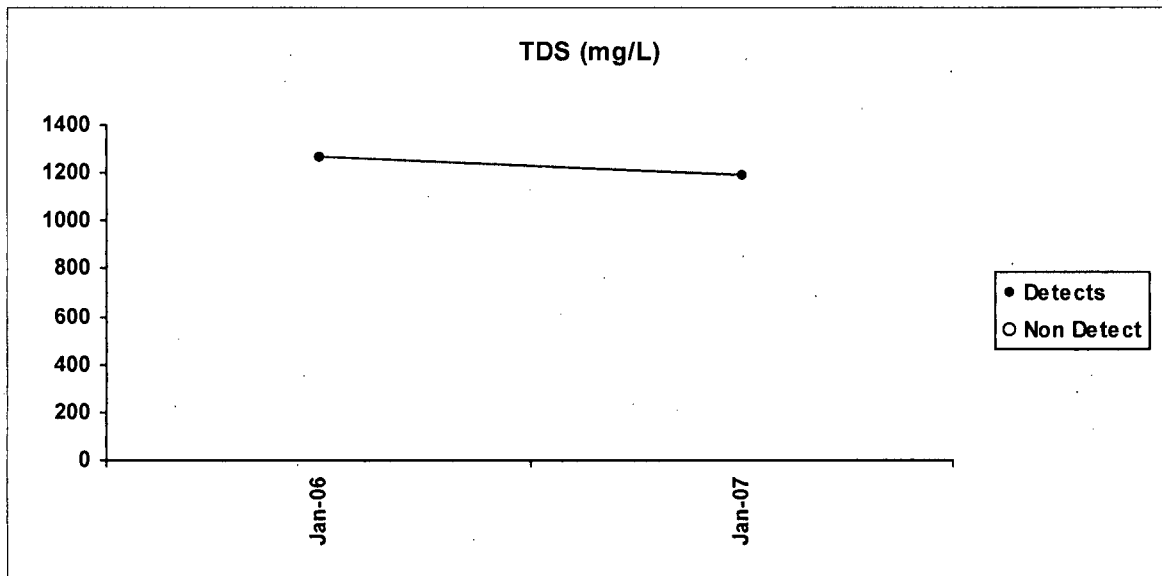
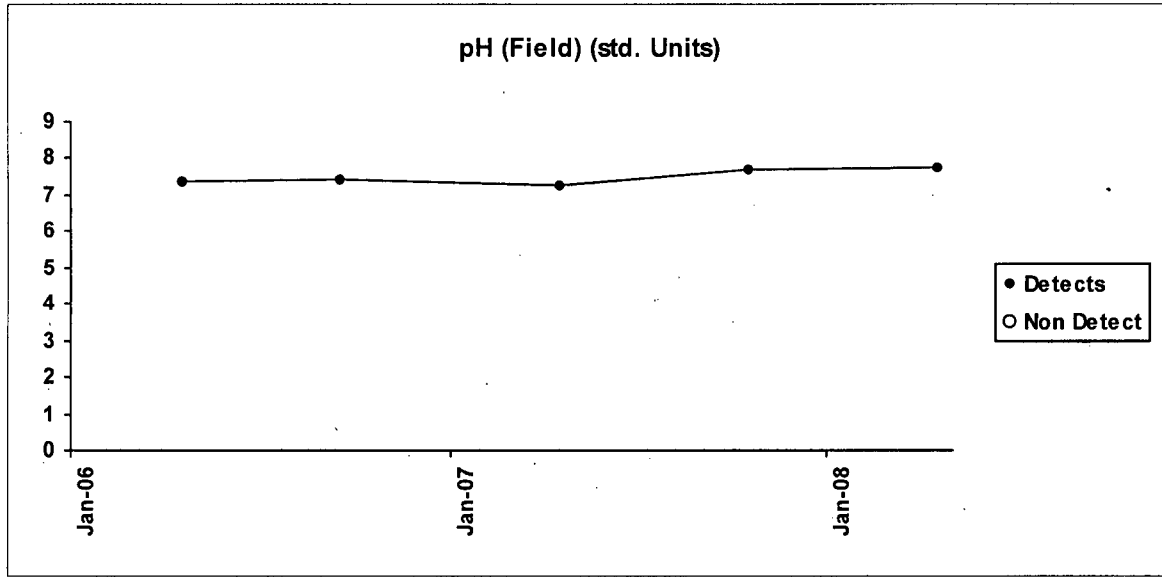
JJ-1R





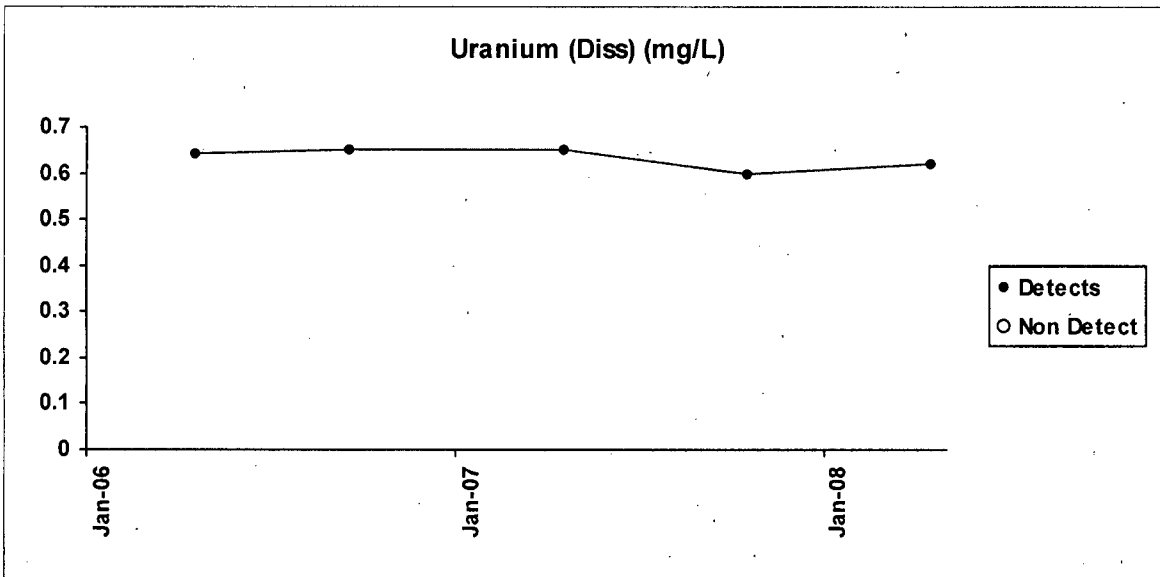
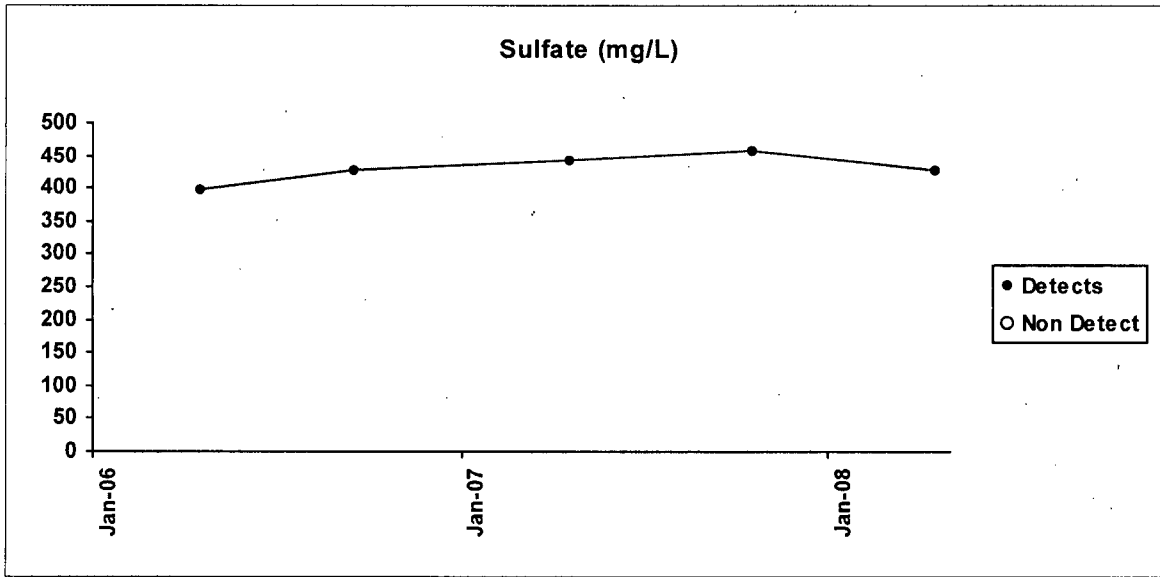
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SWAB-1



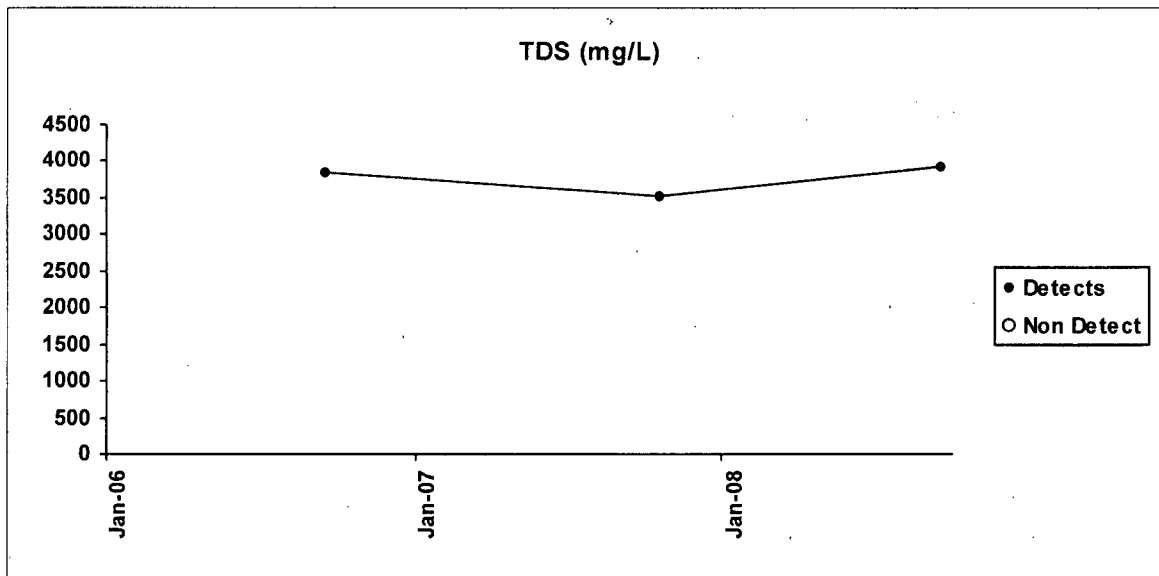
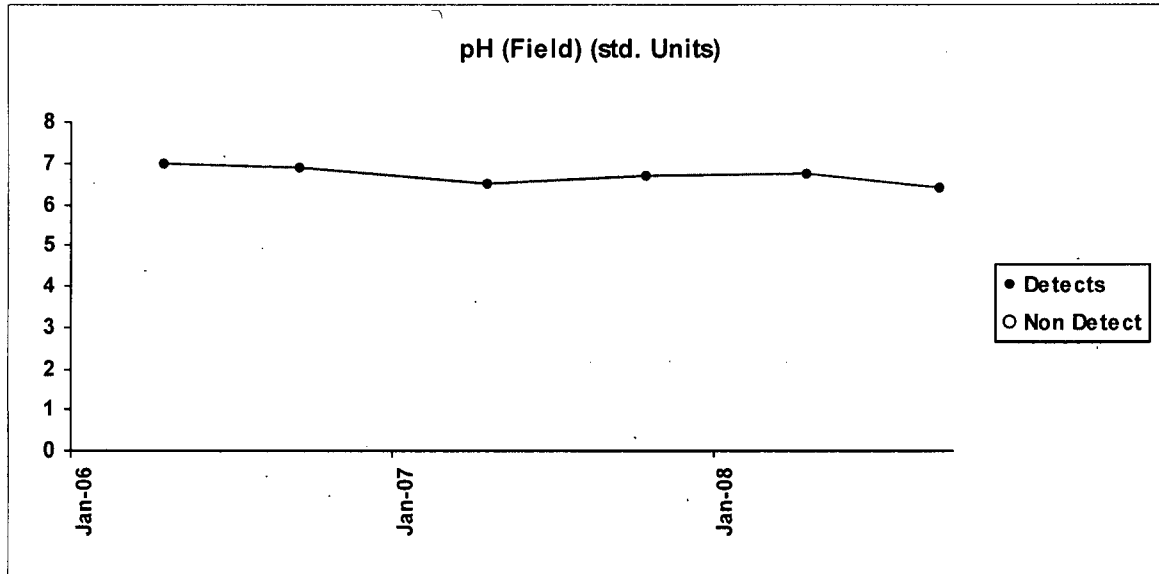
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SWAB-1



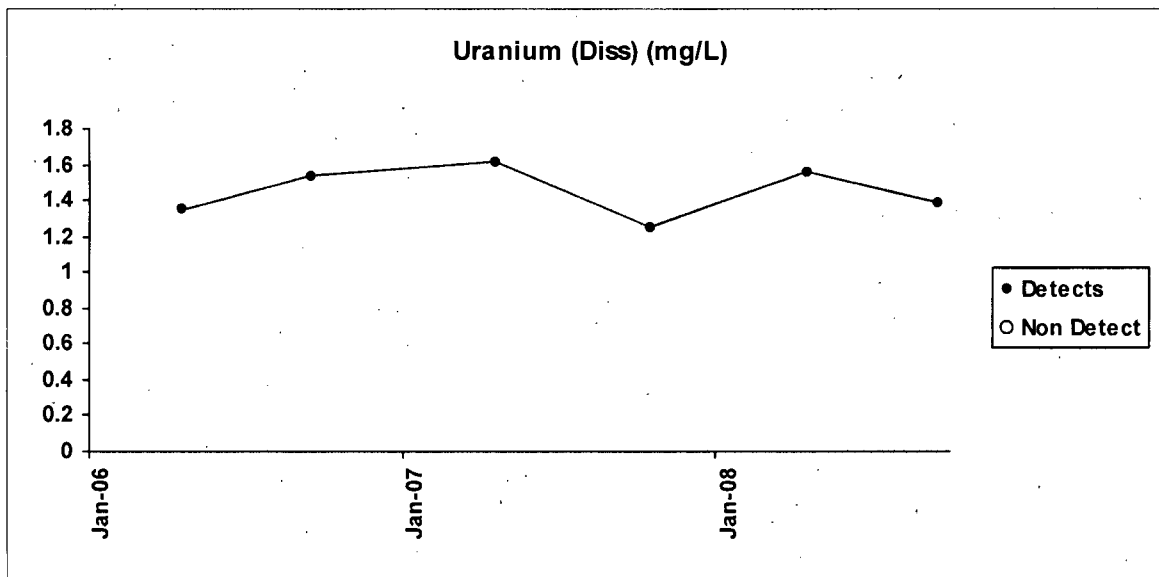
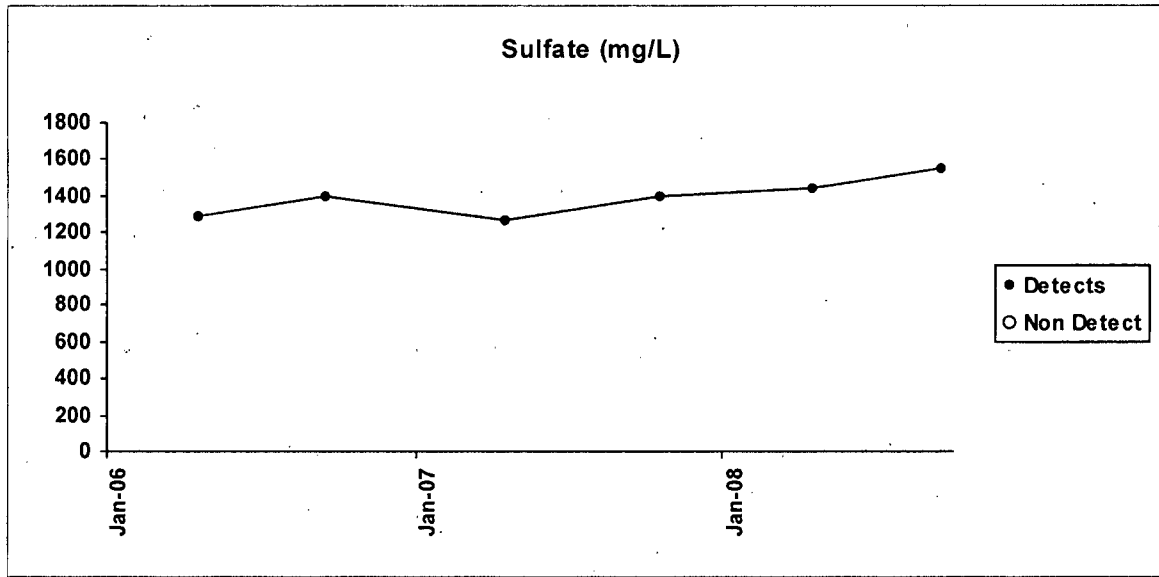
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SWAB-2



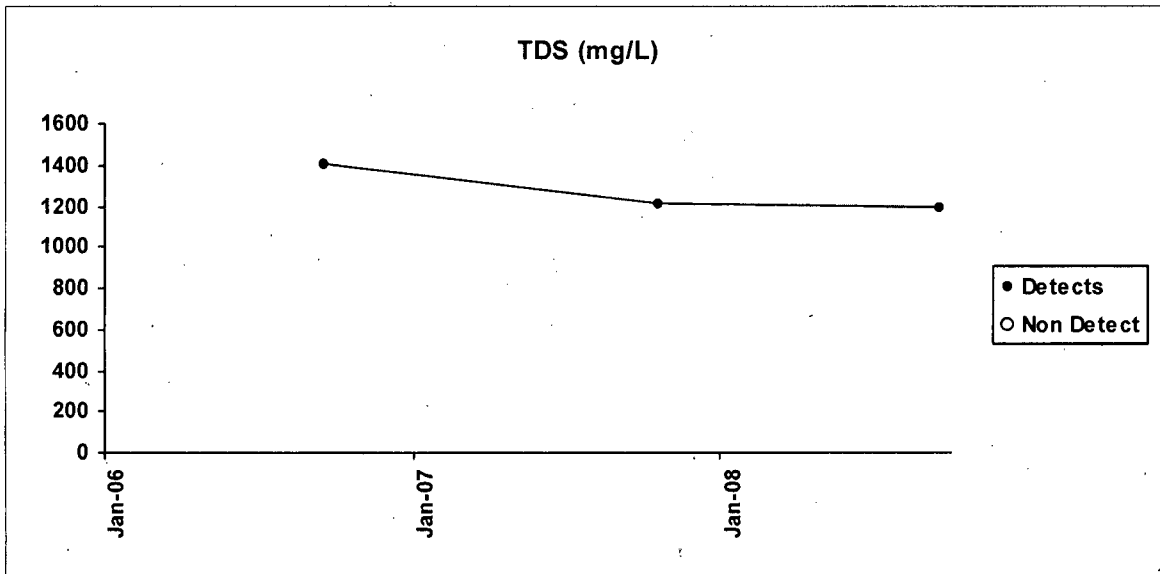
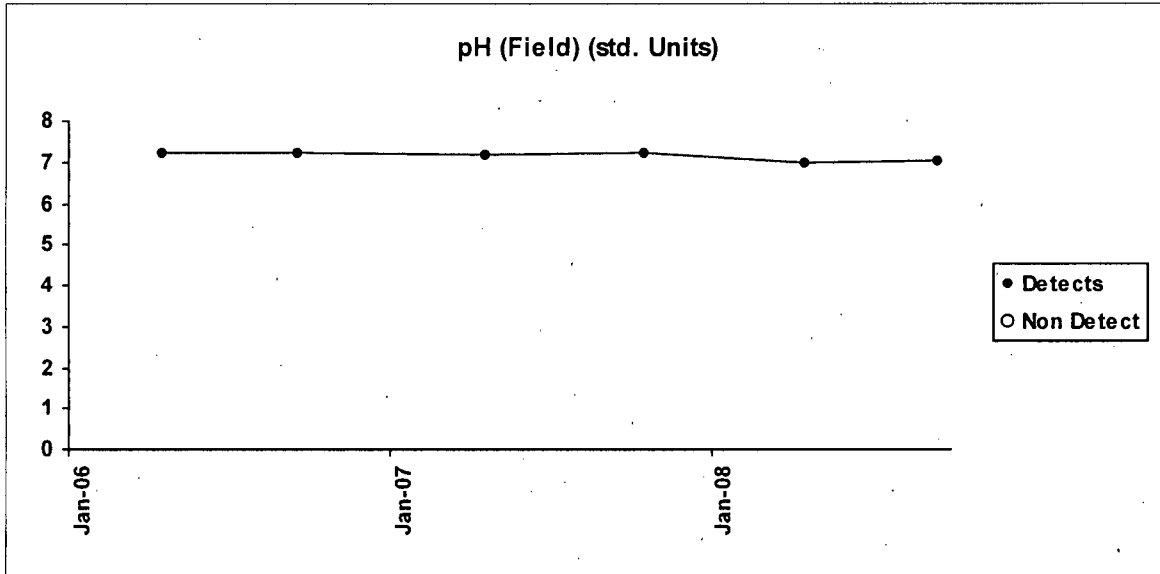
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SWAB-2



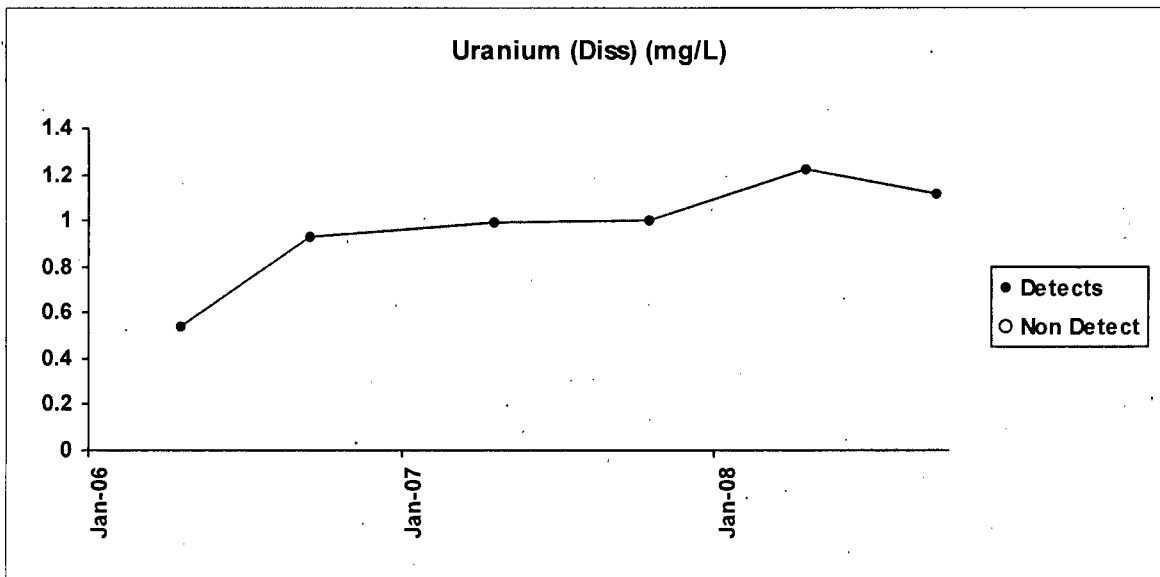
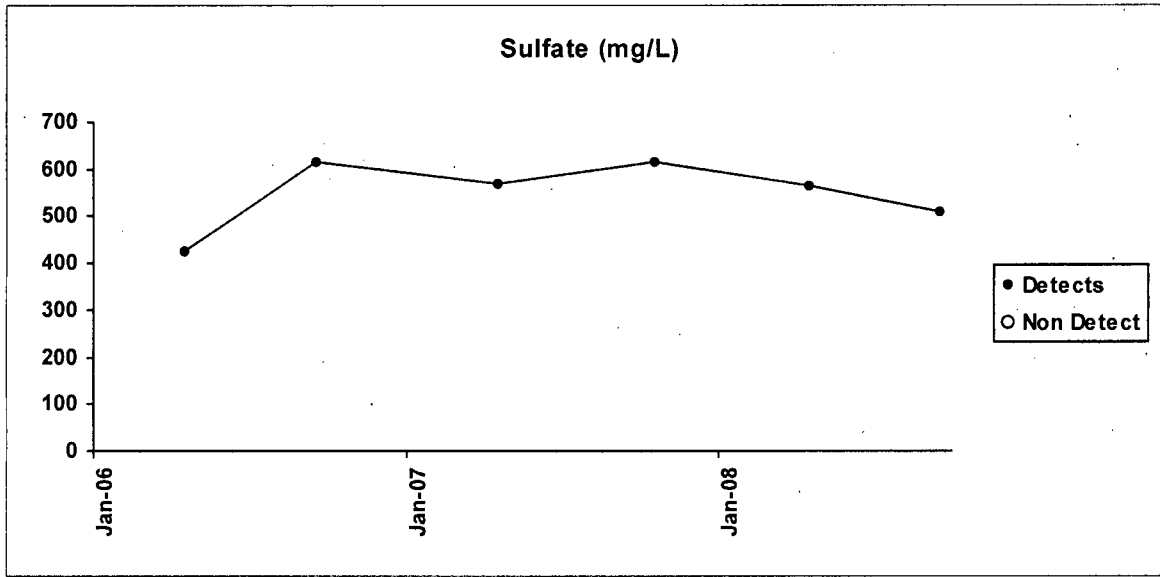
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SWAB-4



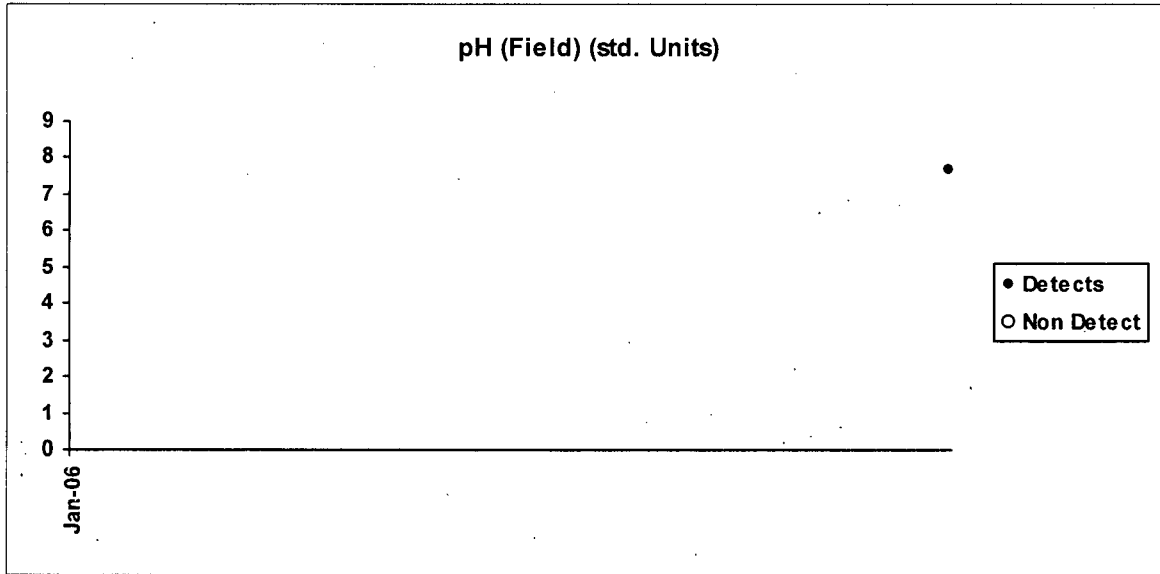
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SWAB-4



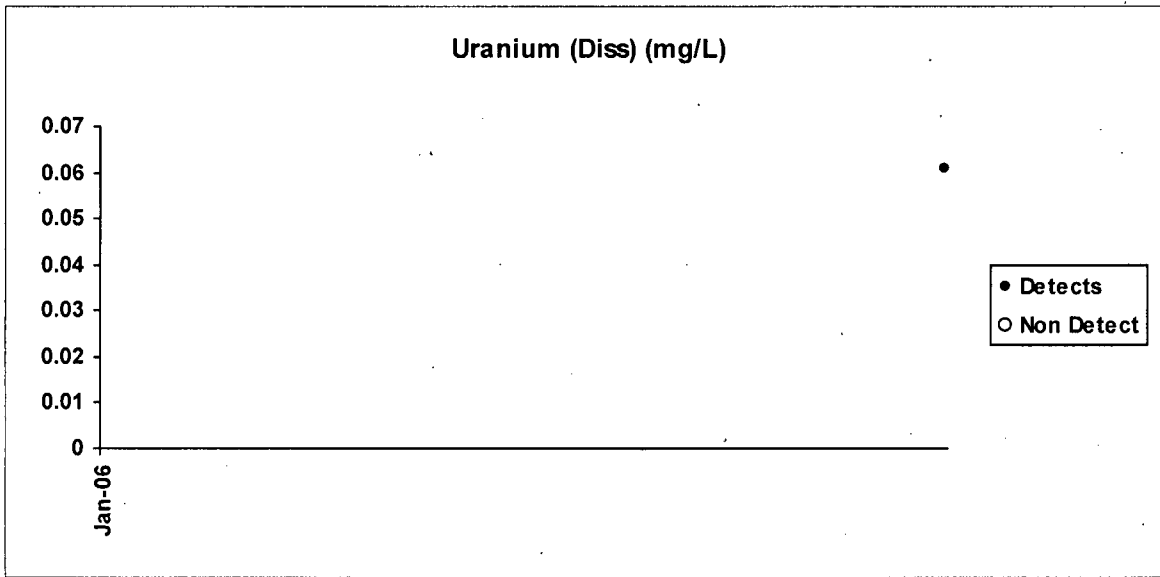
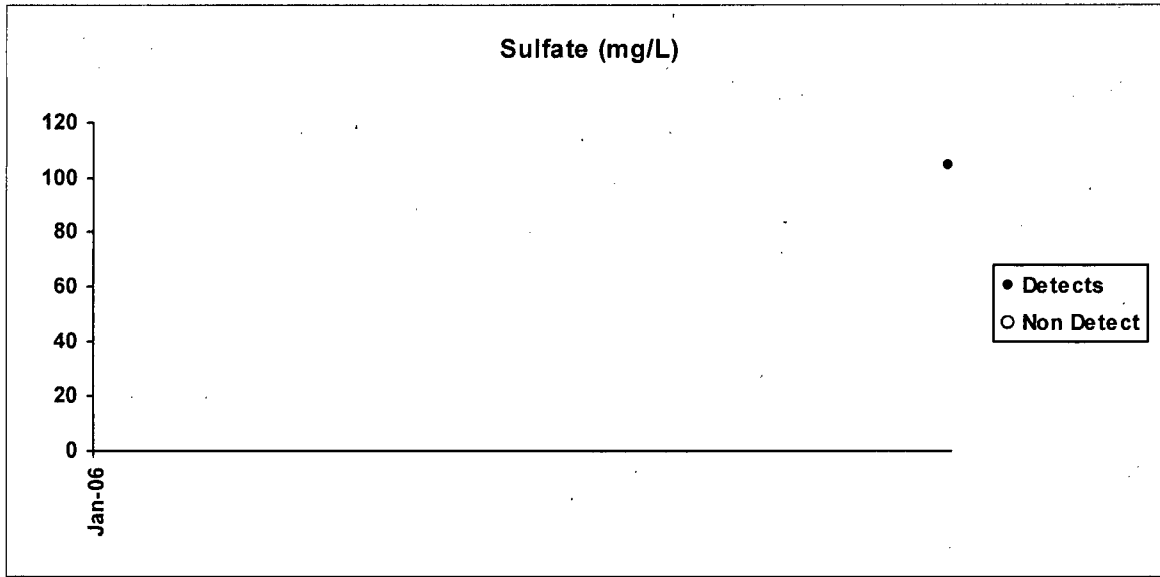
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SWAB-12



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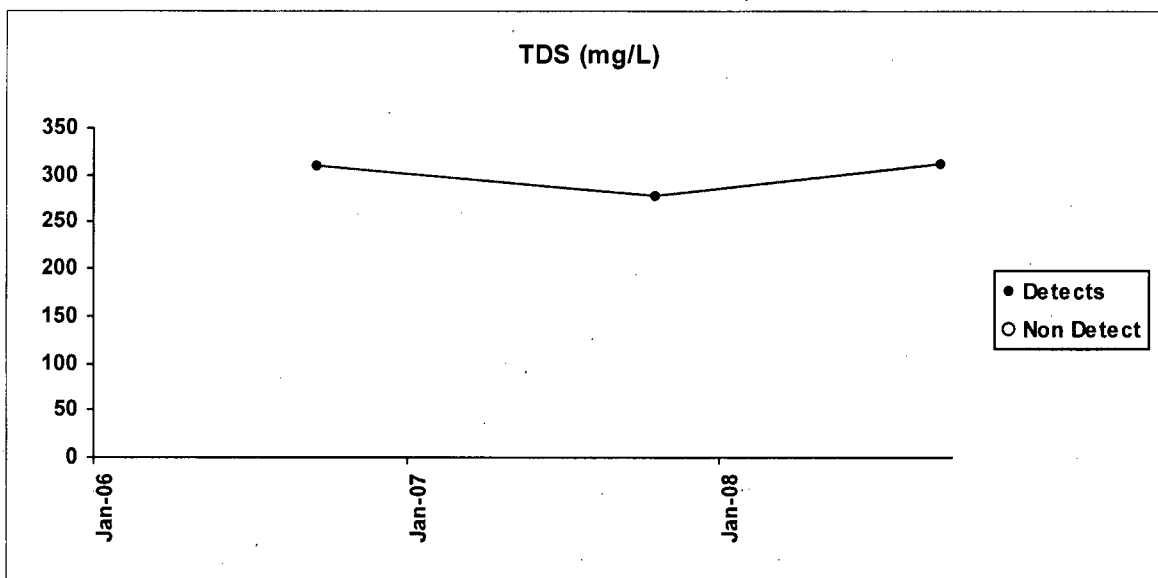
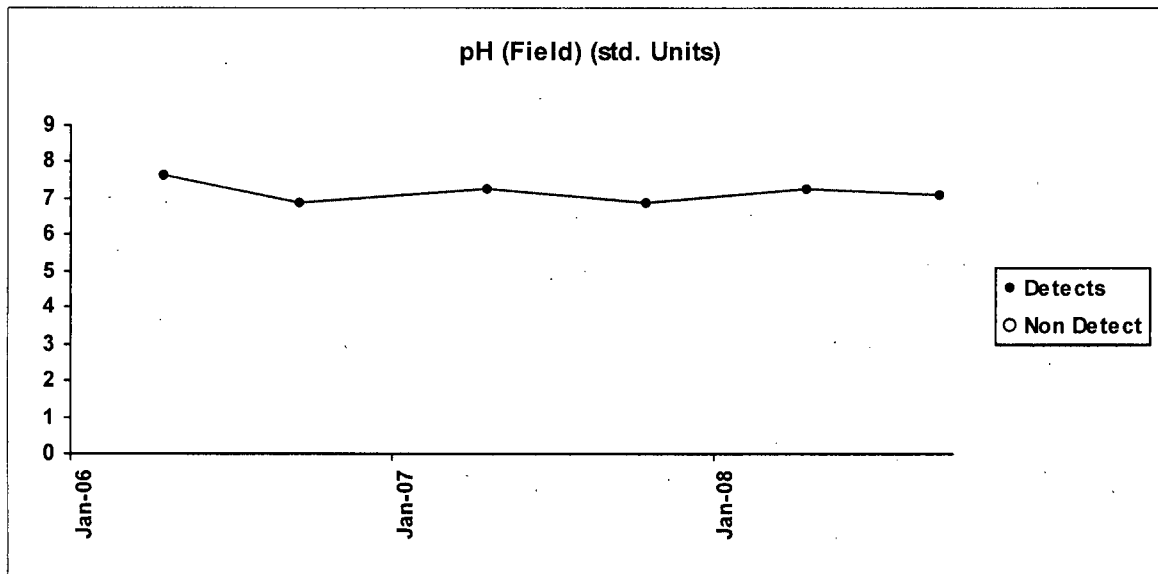
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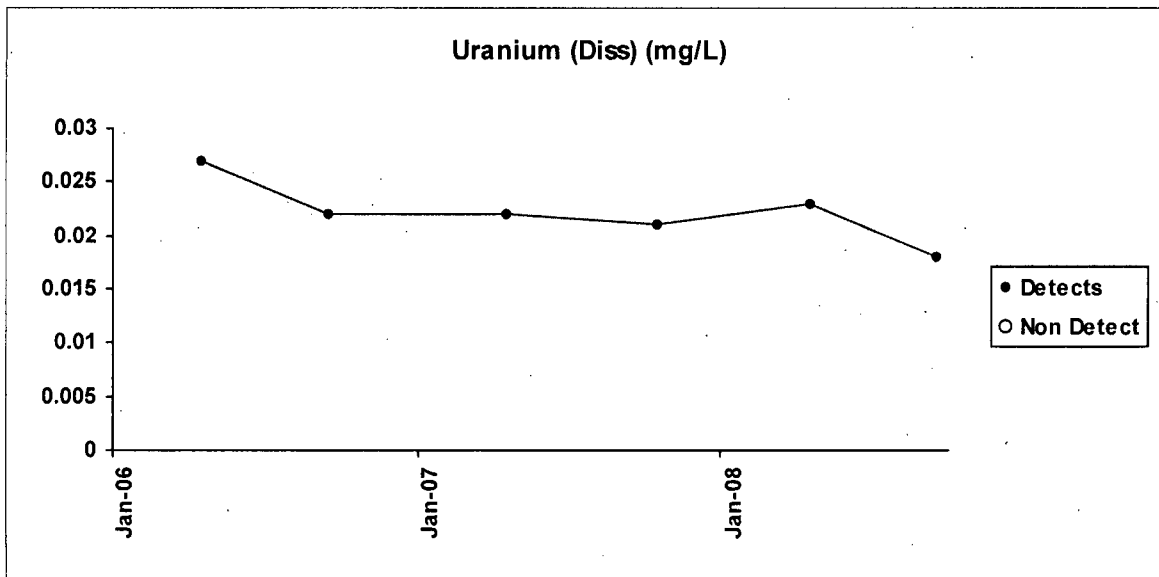
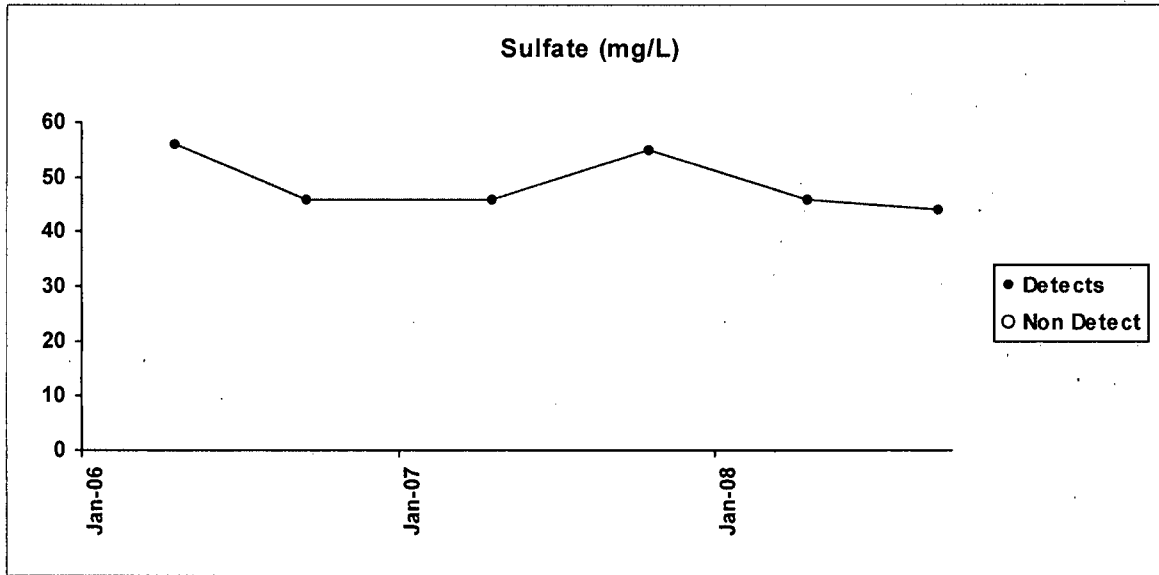
Jeffrey City

SWAB-22



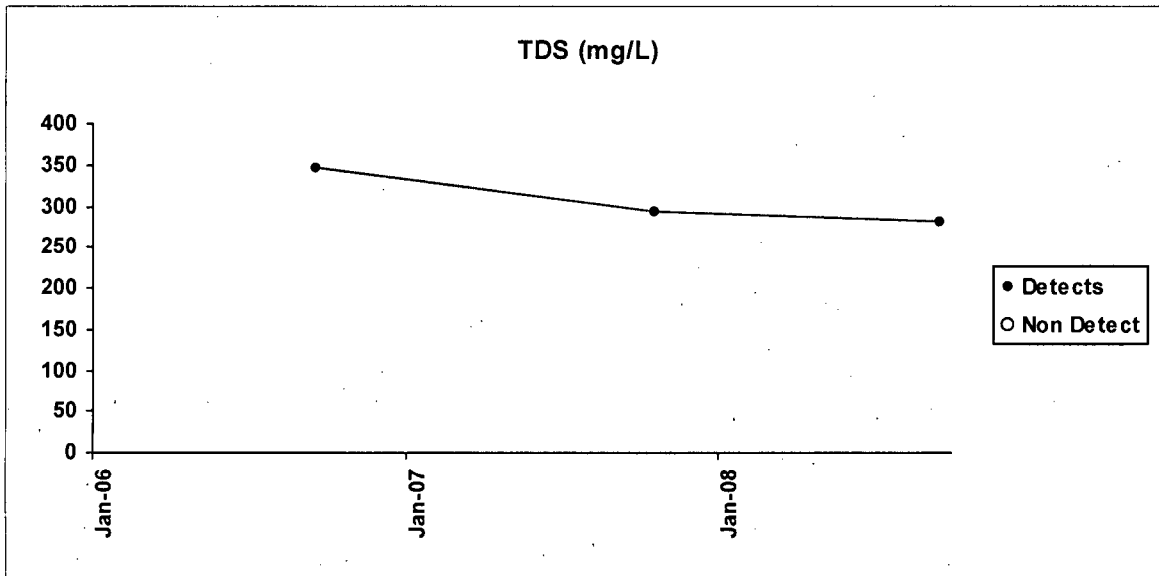
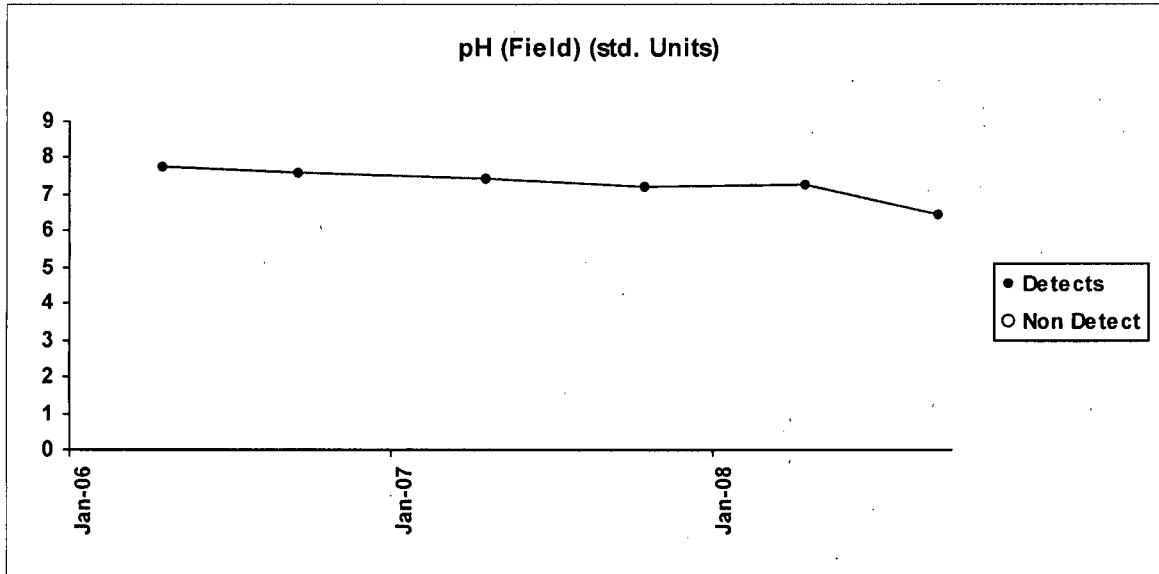
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SWAB-22



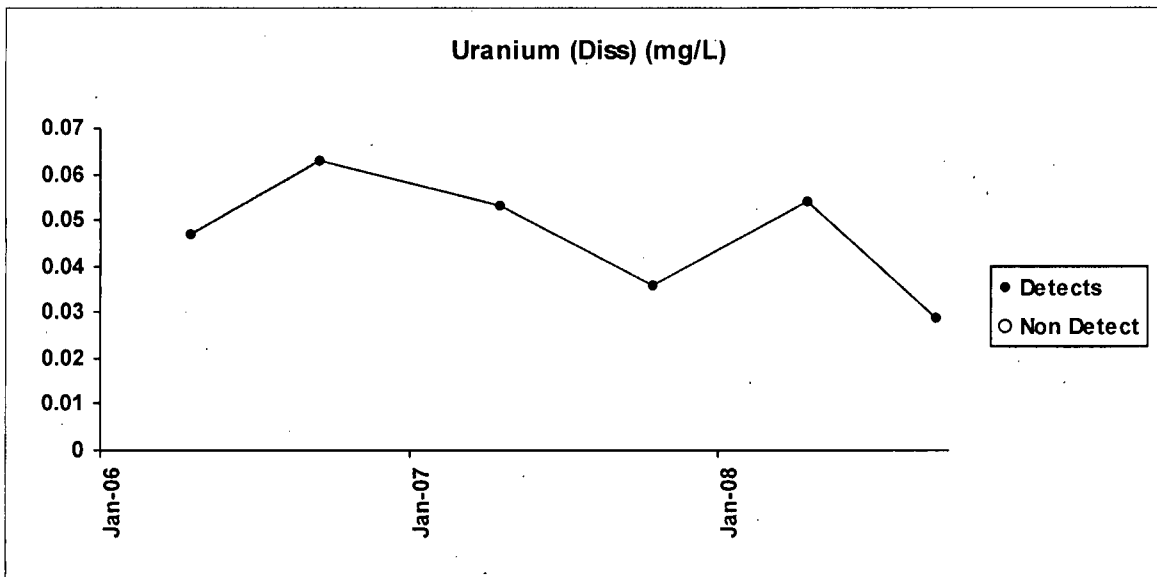
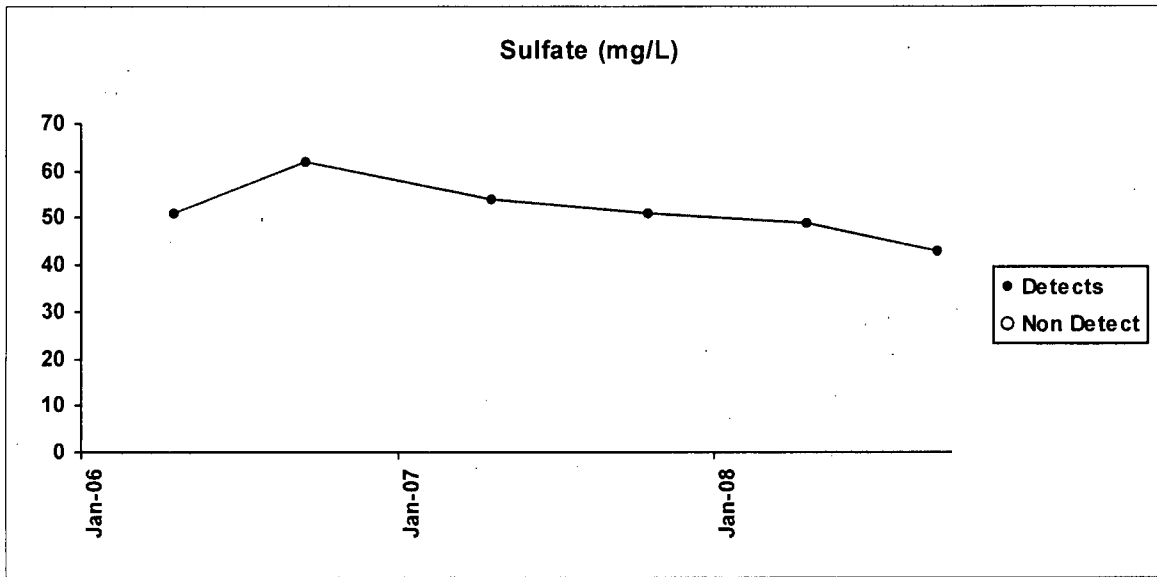
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SWAB-29



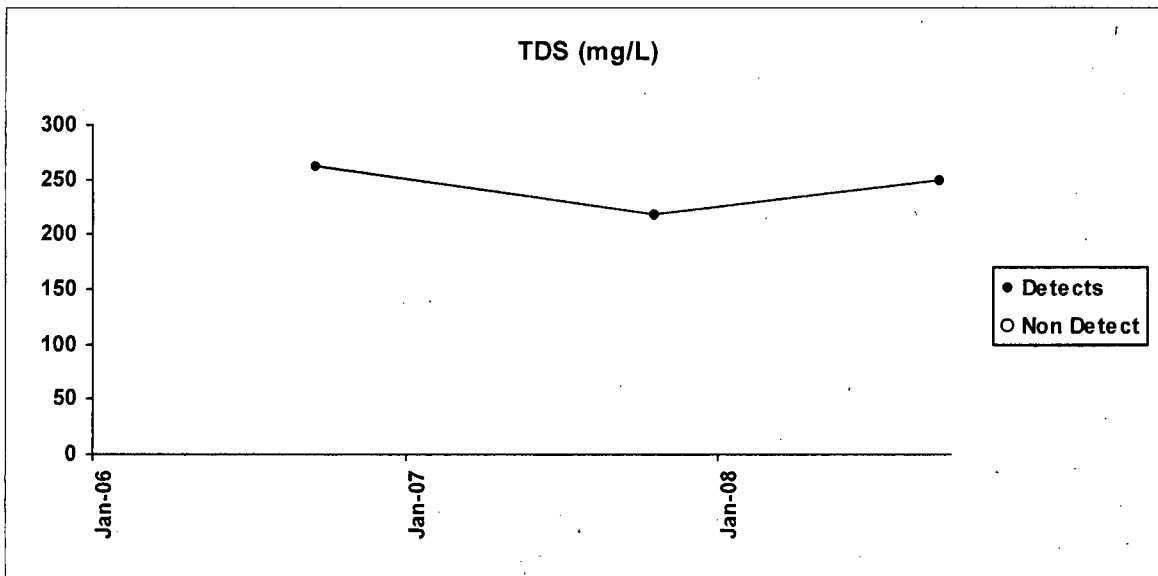
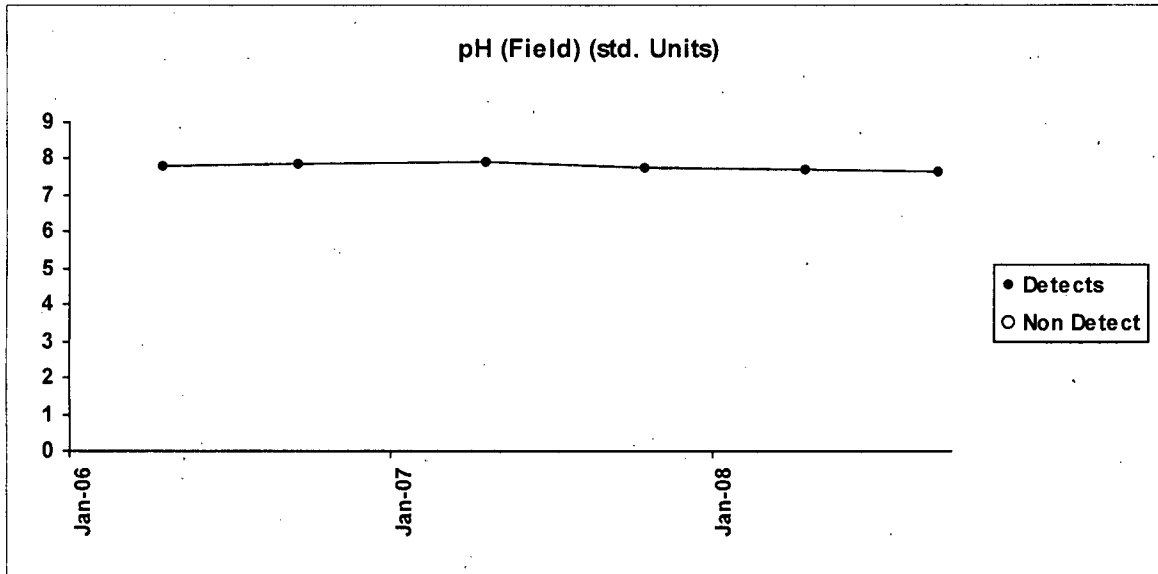
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SWAB-29



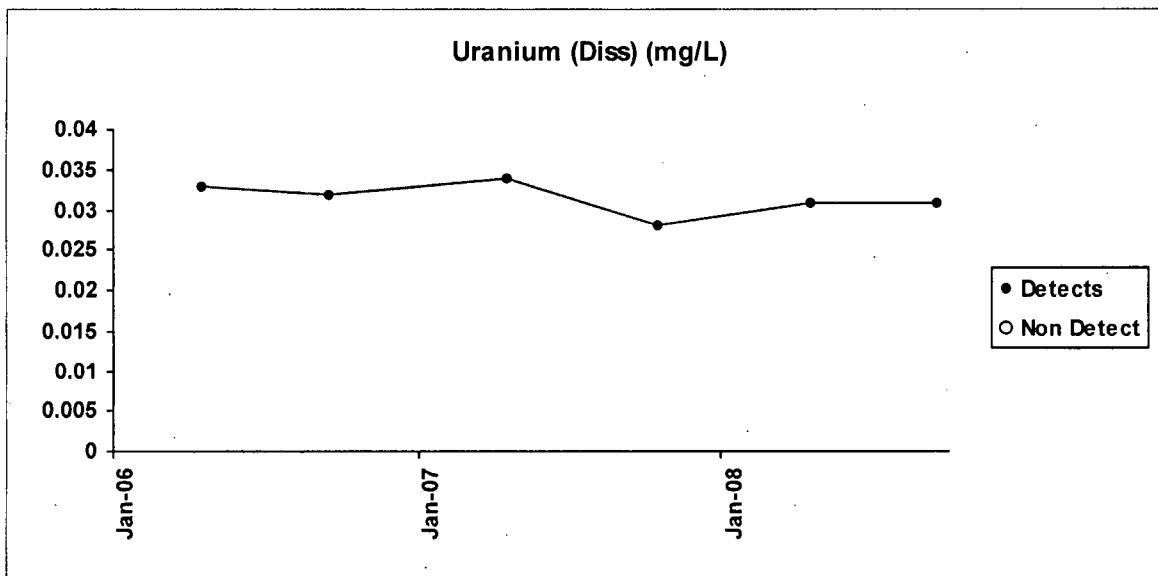
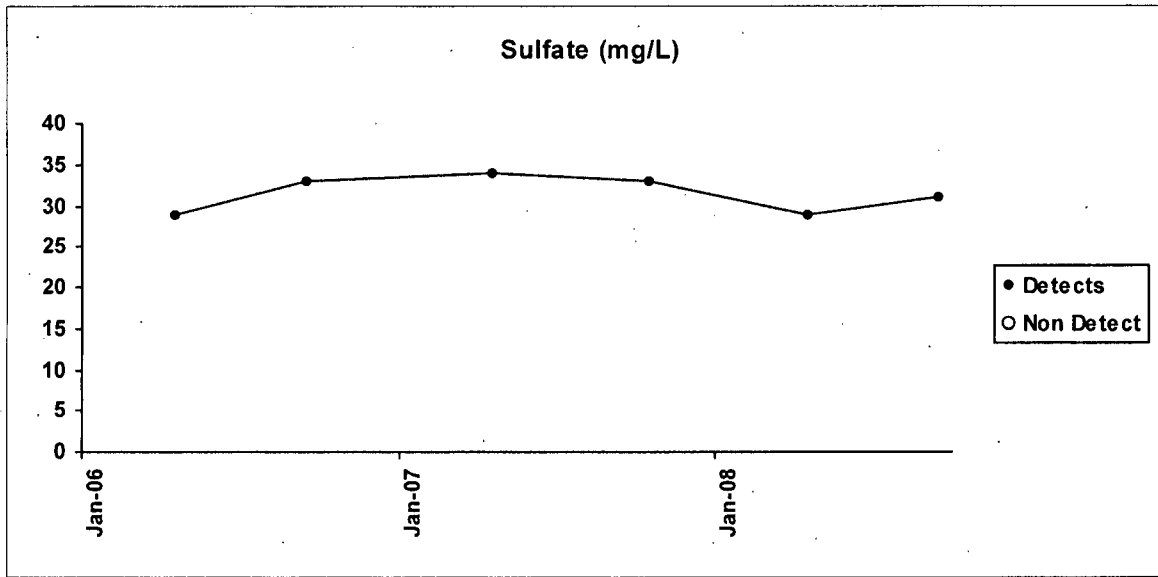
Jeffrey City

SWAB-31



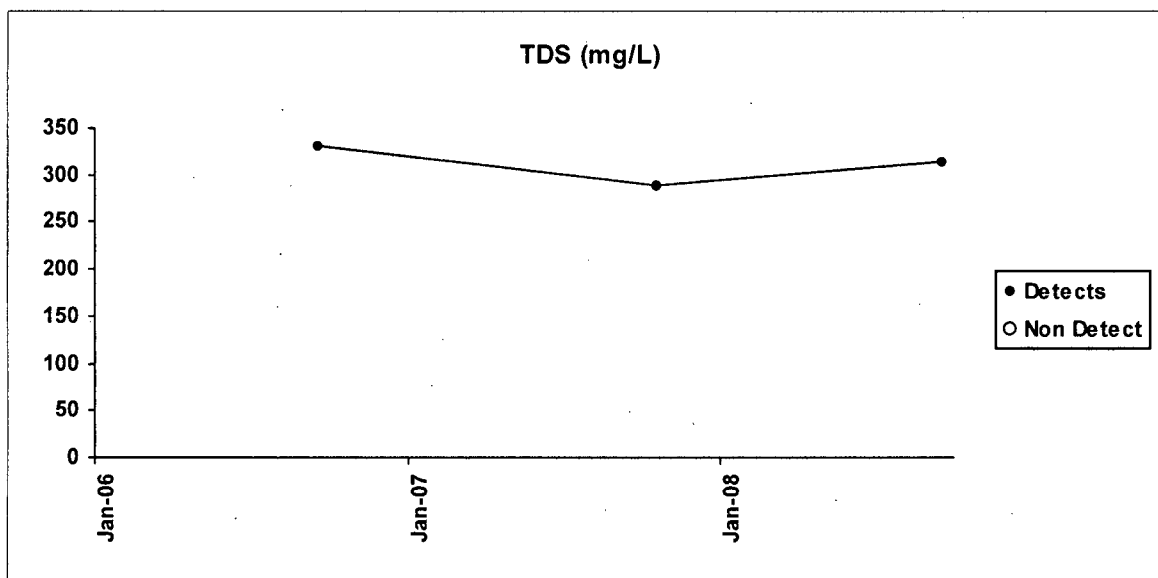
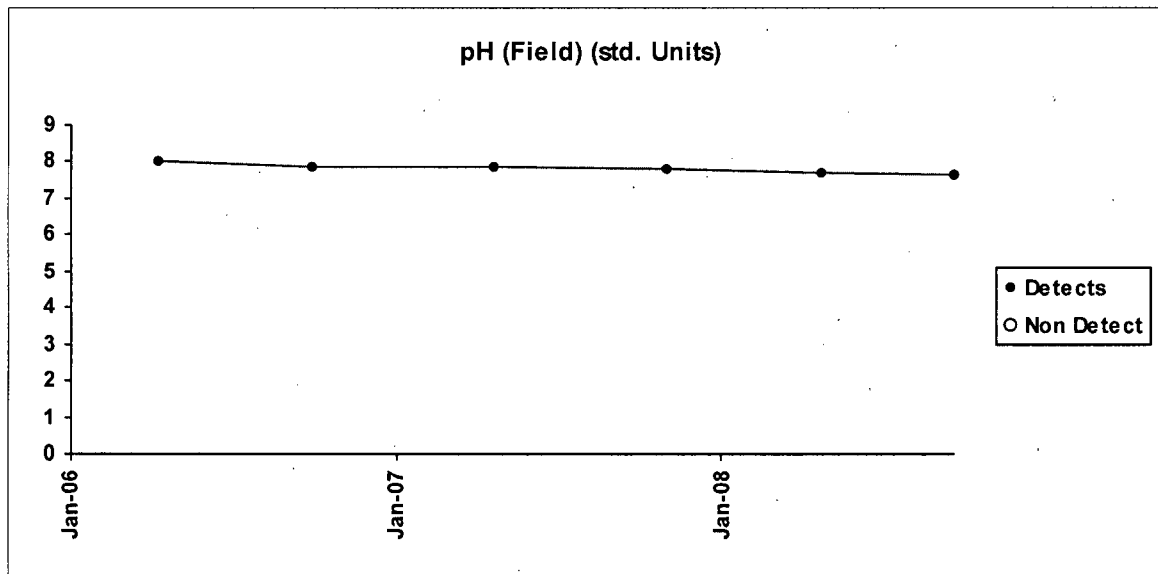
Jeffrey City

SWAB-31



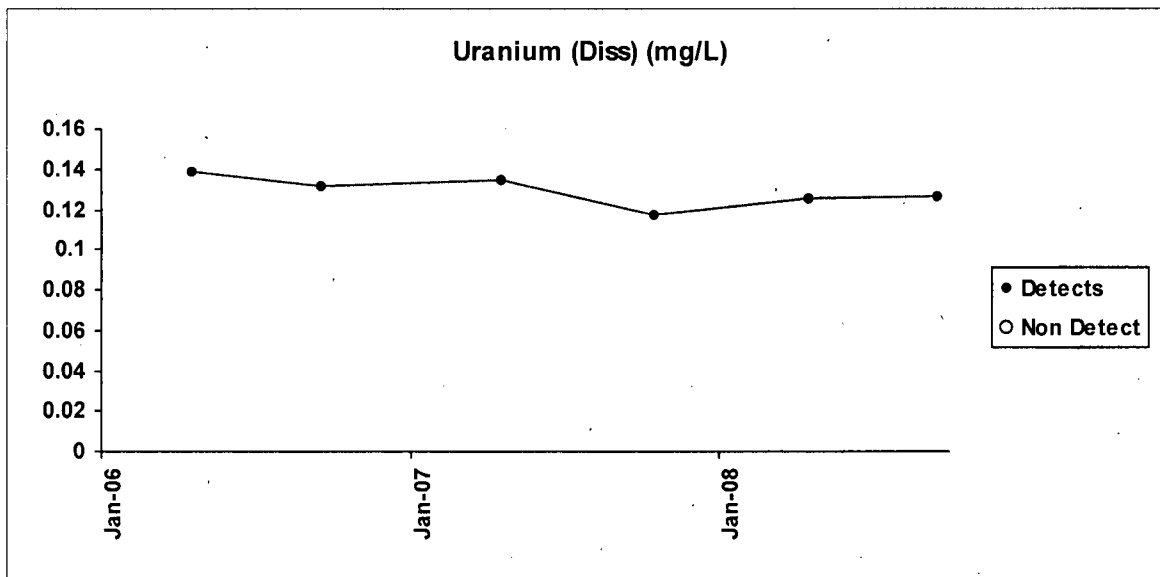
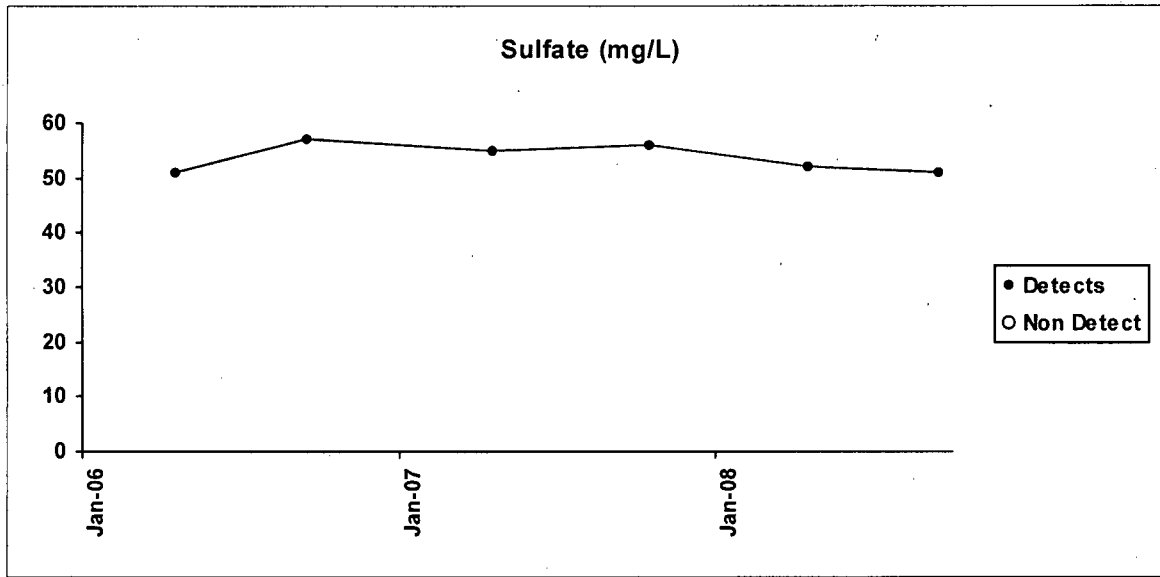
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SWAB-32



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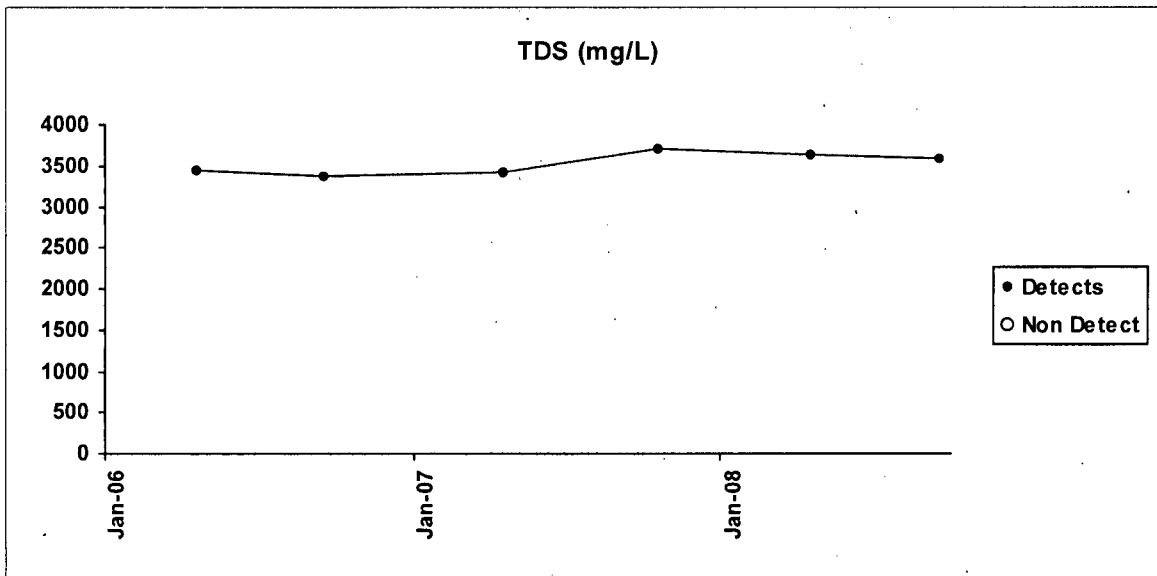
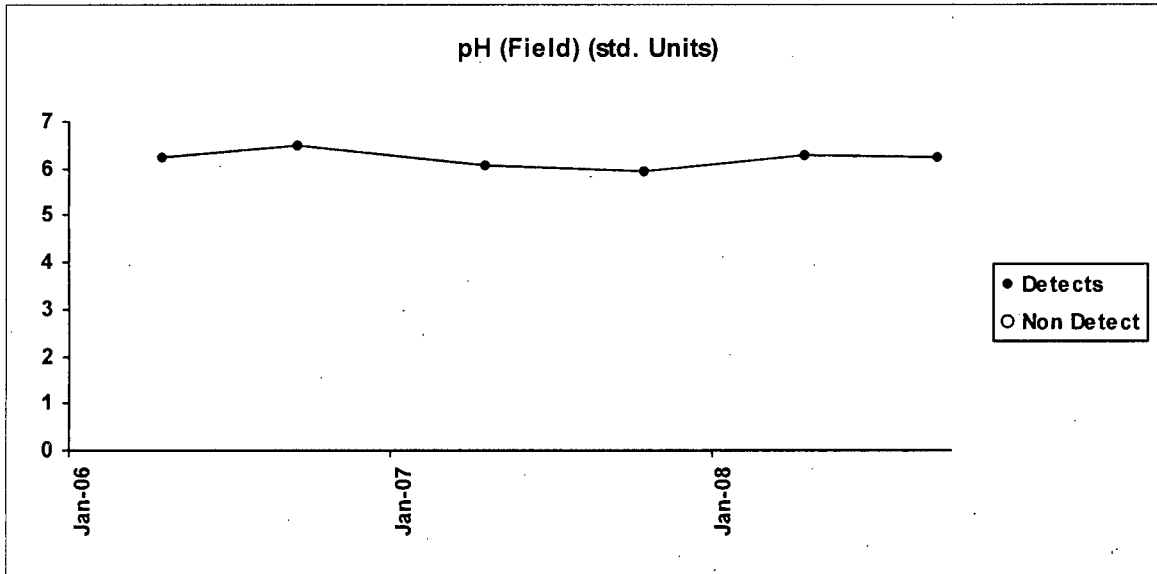
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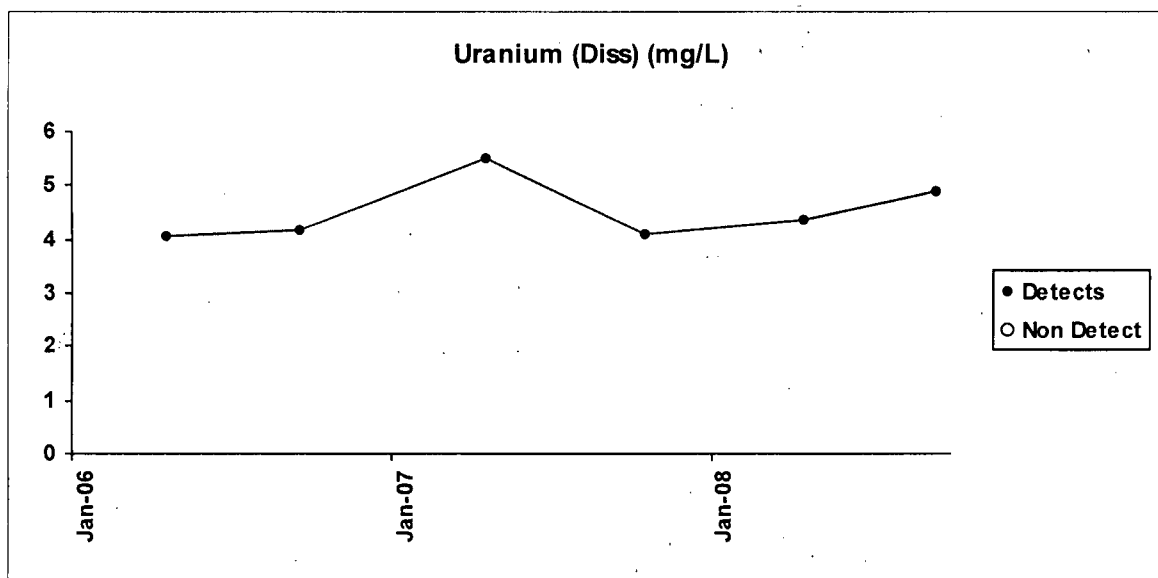
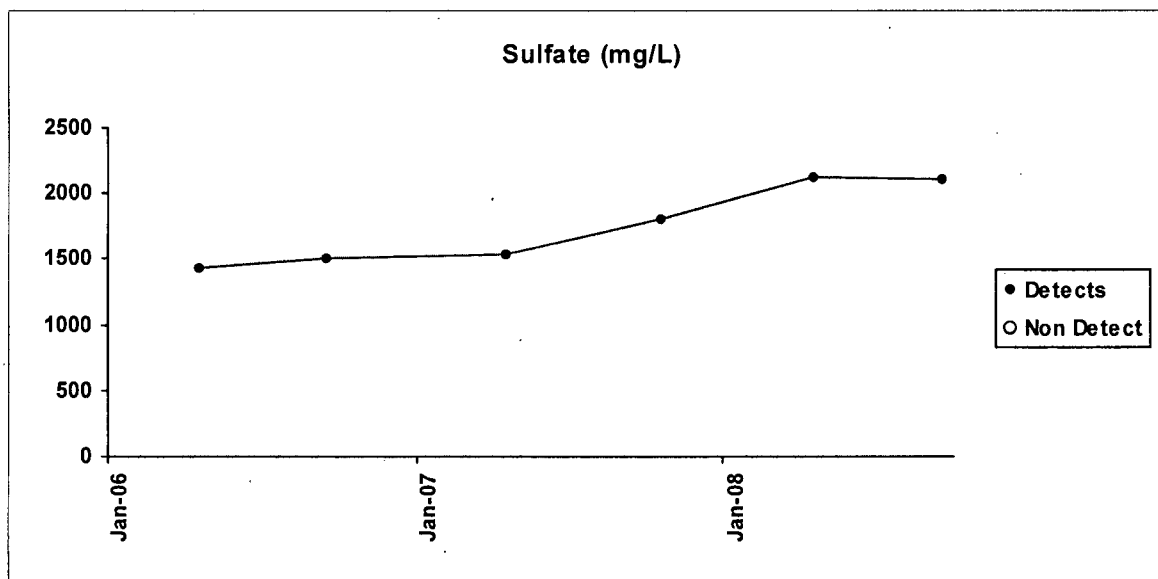
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WELL-1



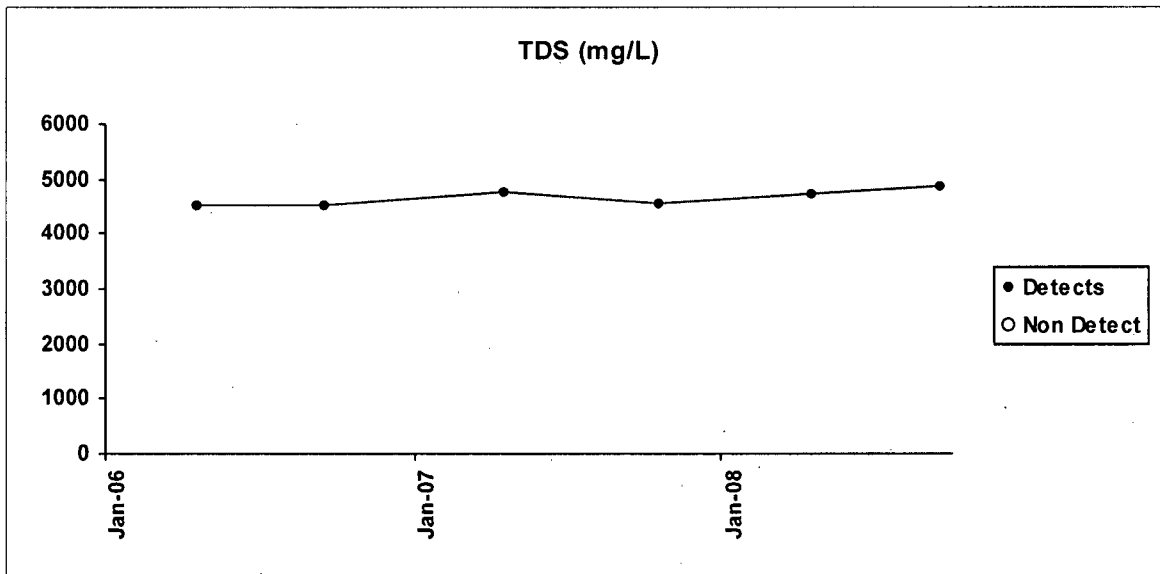
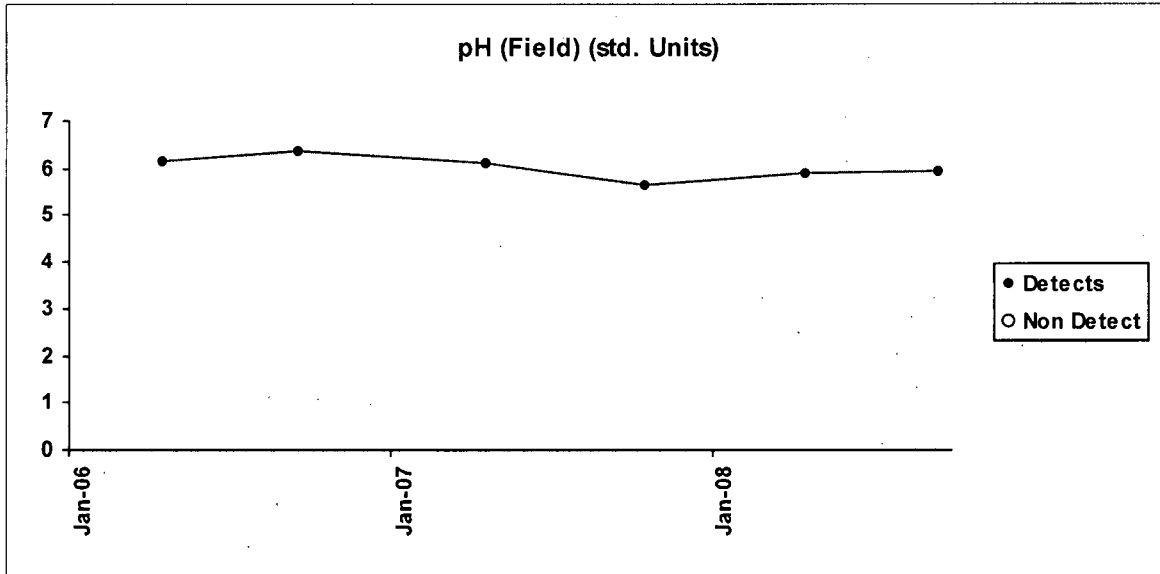
Jeffrey City

WELL-1



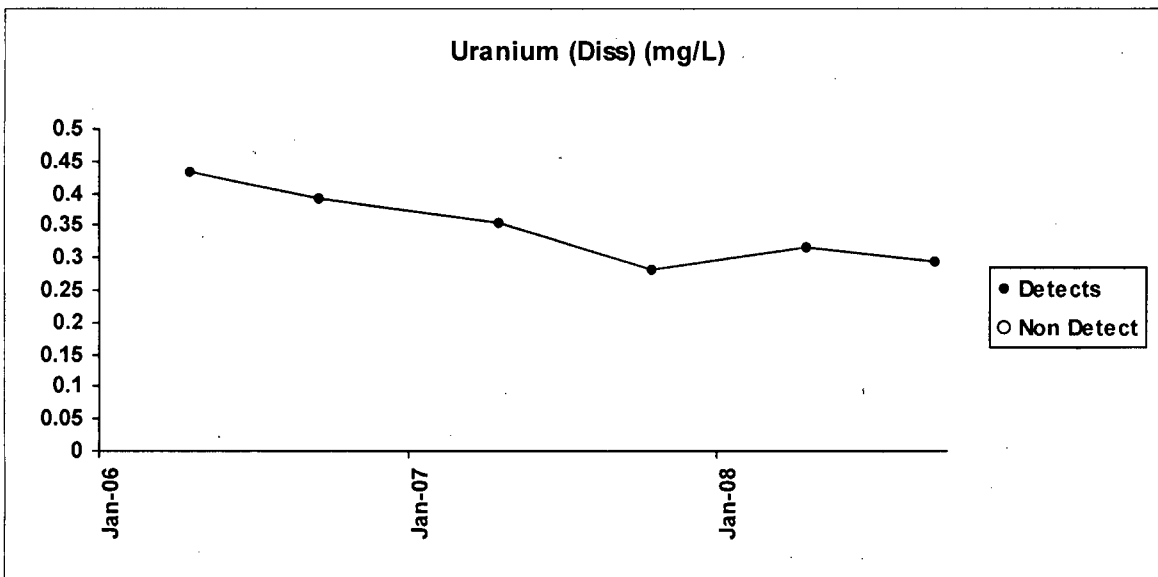
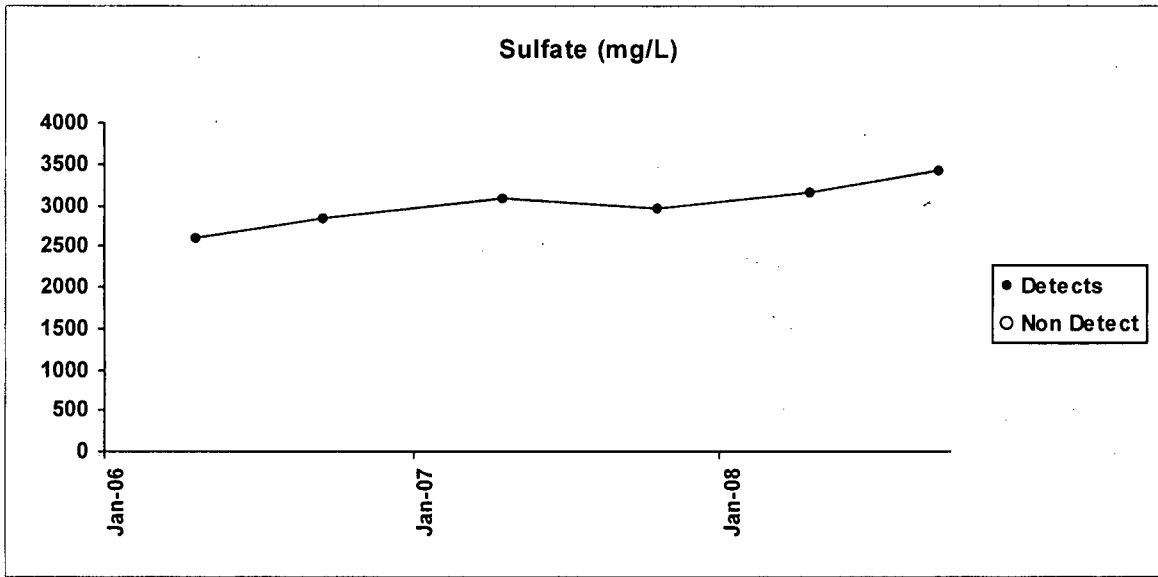
Jeffrey City

WELL-4R



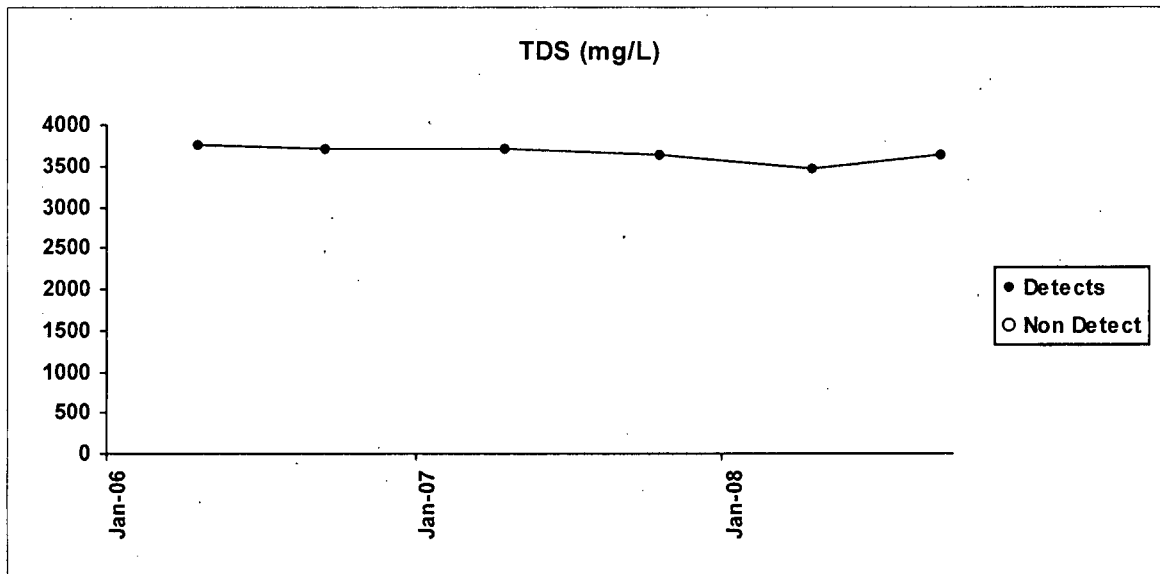
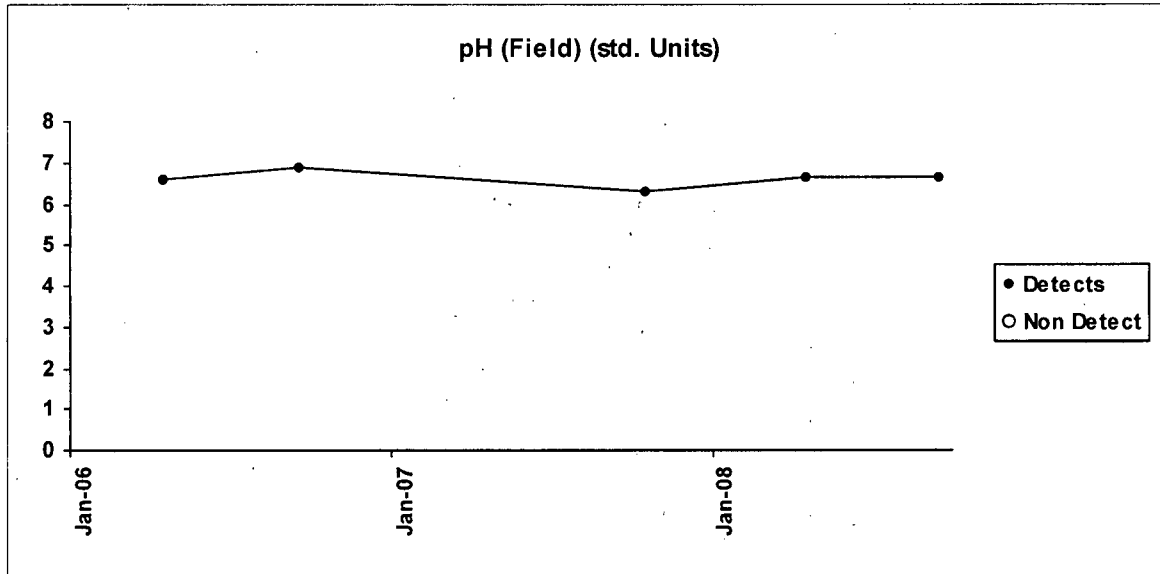
Jeffrey City

WELL-4R



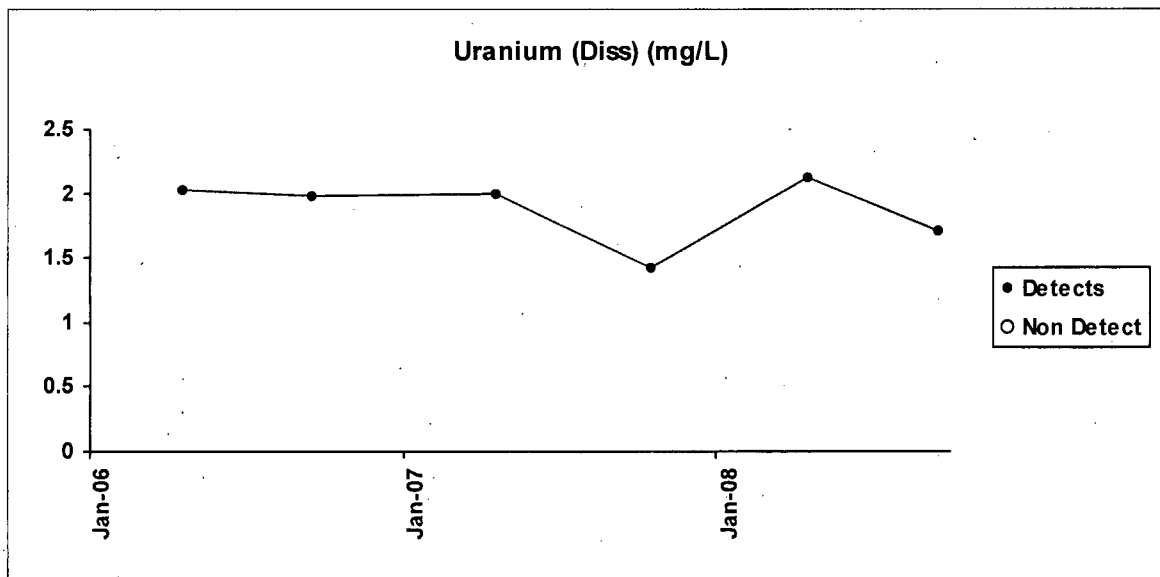
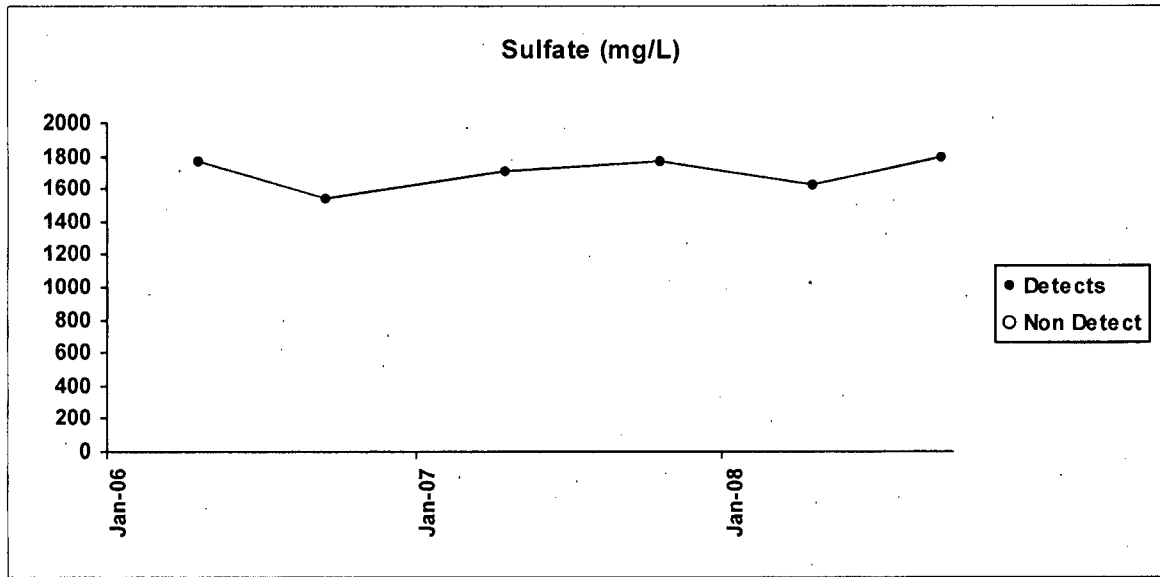
Jeffrey City

WELL-5



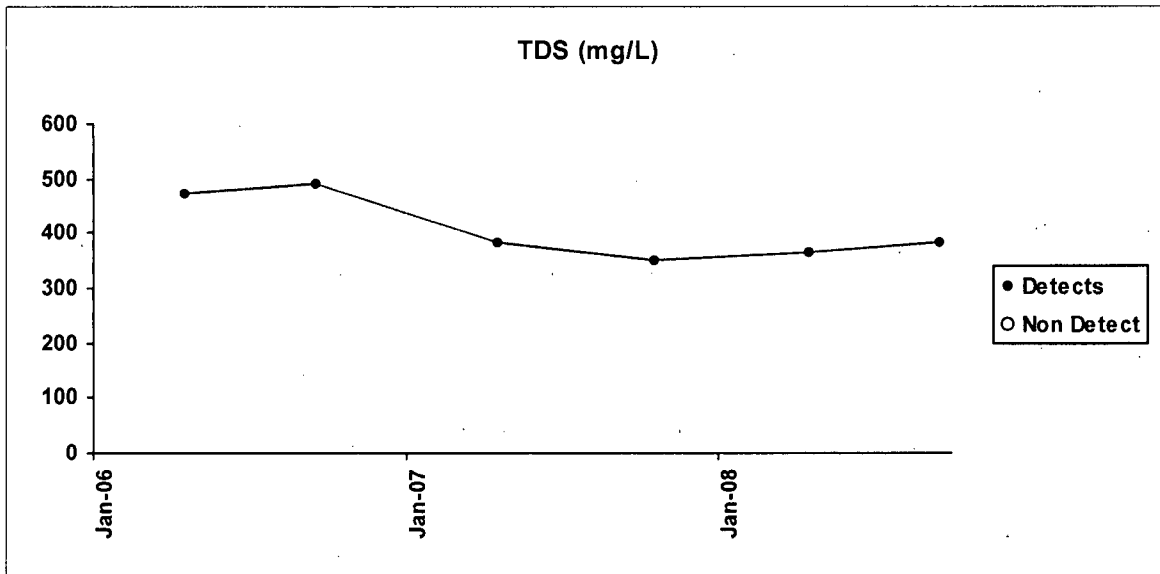
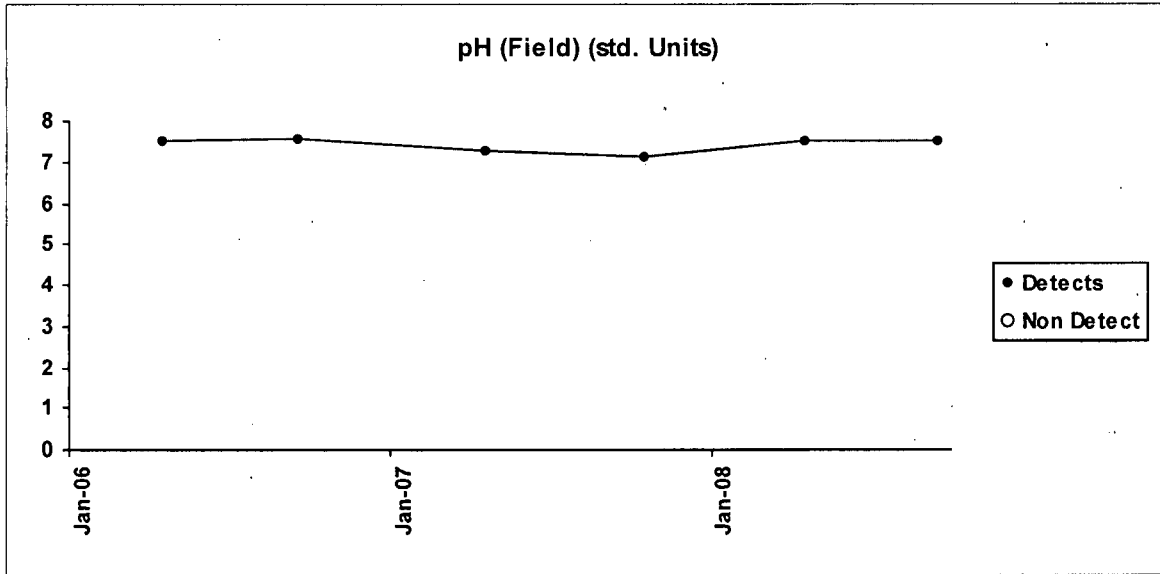
Jeffrey City

WELL-5



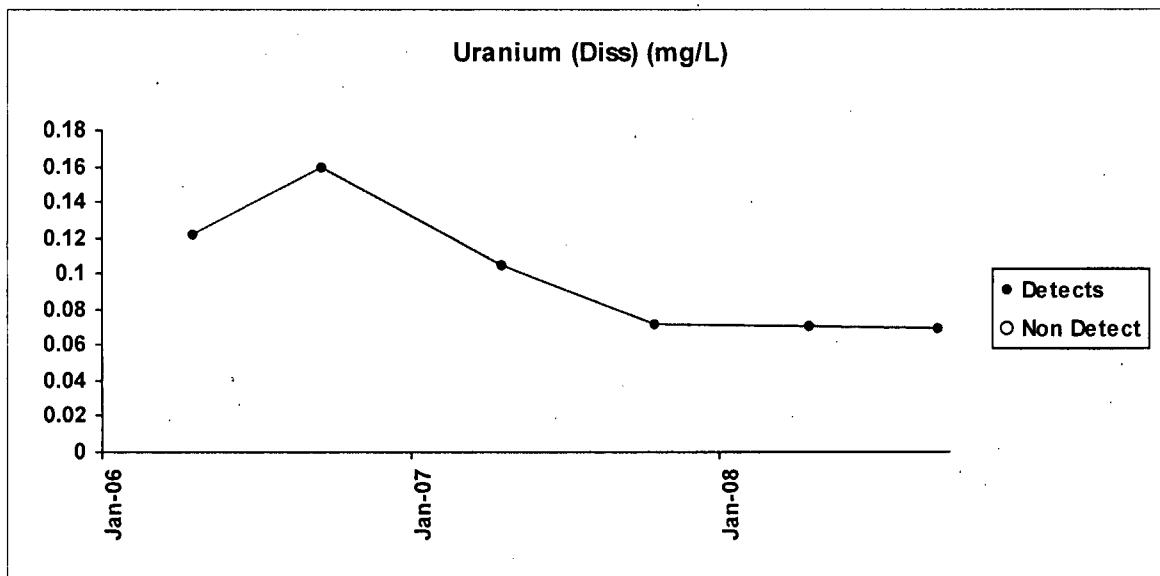
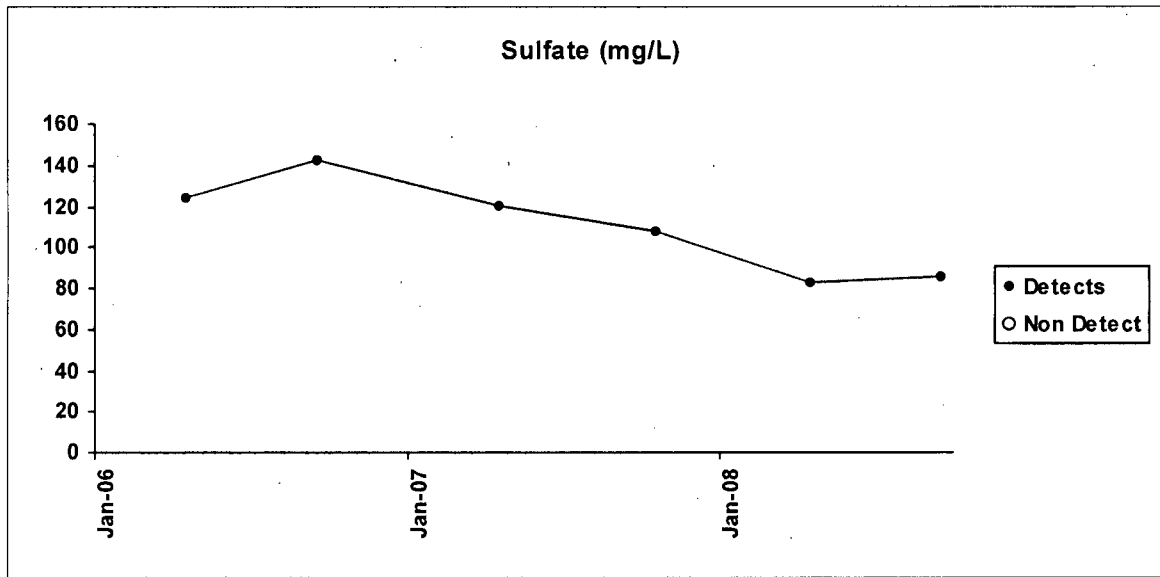
Jeffrey City

WN-21



Jeffrey City

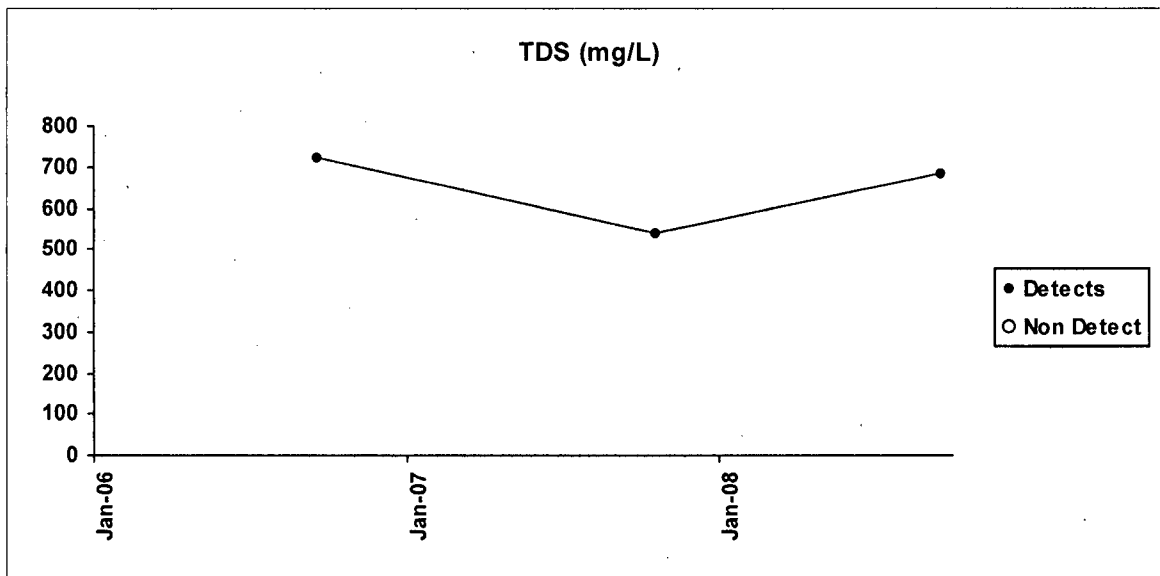
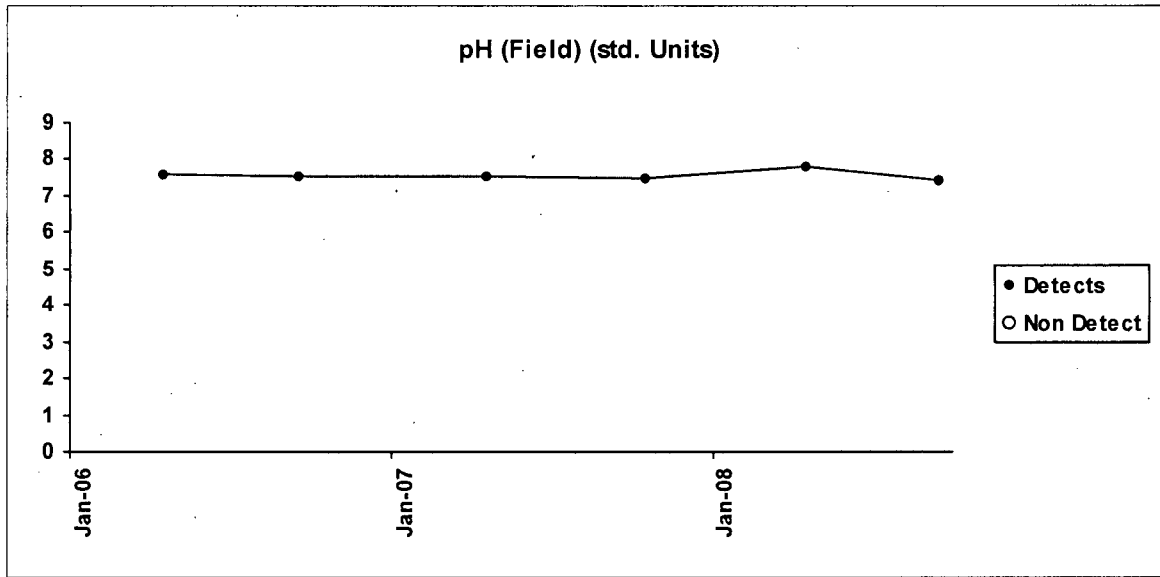
WN-21





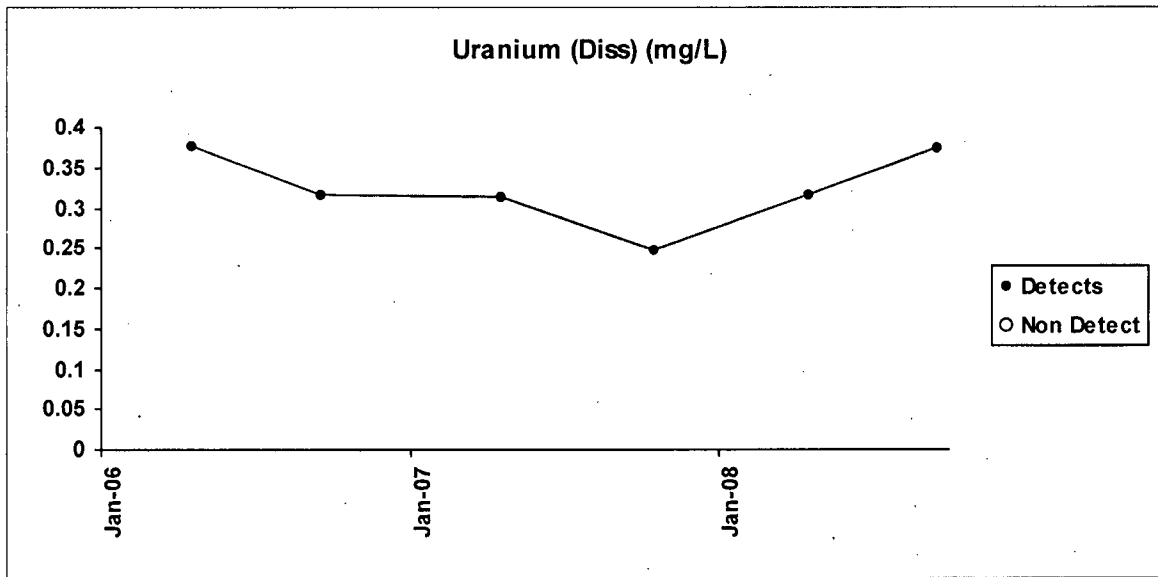
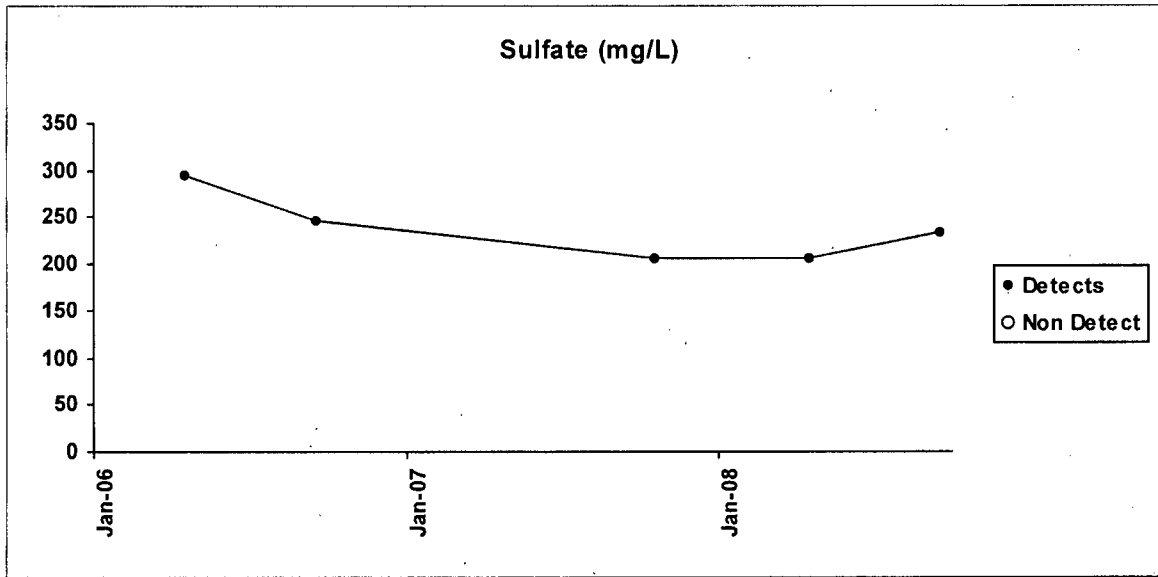
Jeffrey City

WN-39B



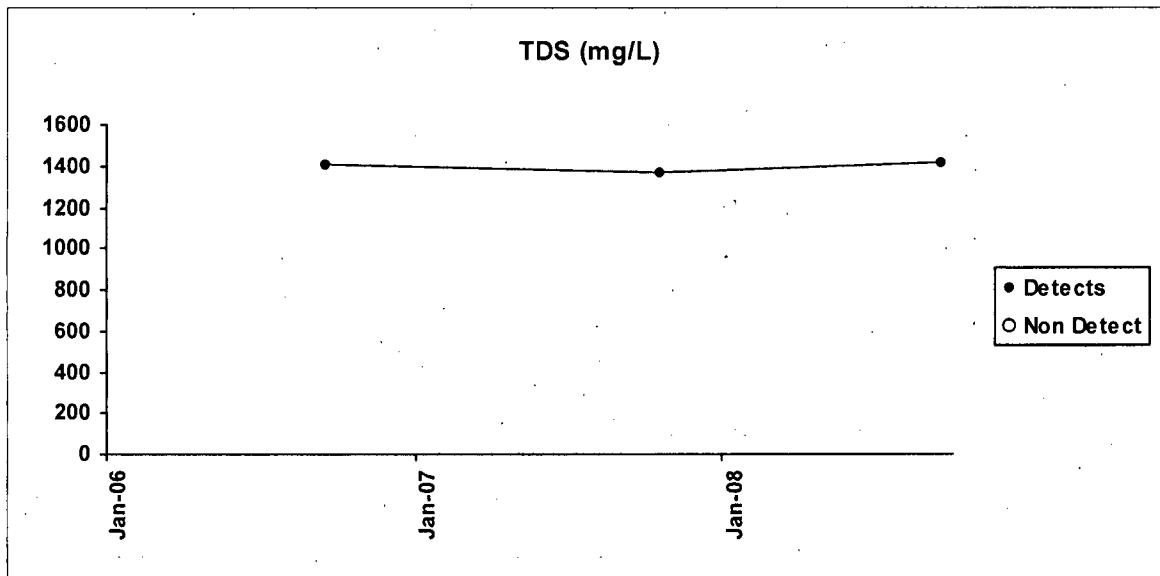
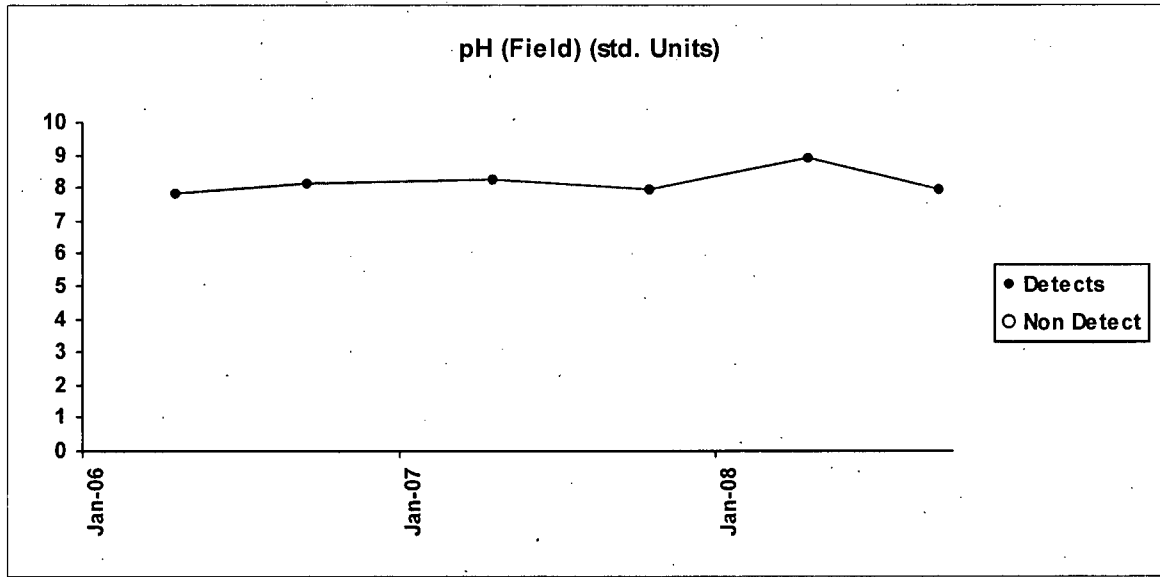
Jeffrey City

WN-39B



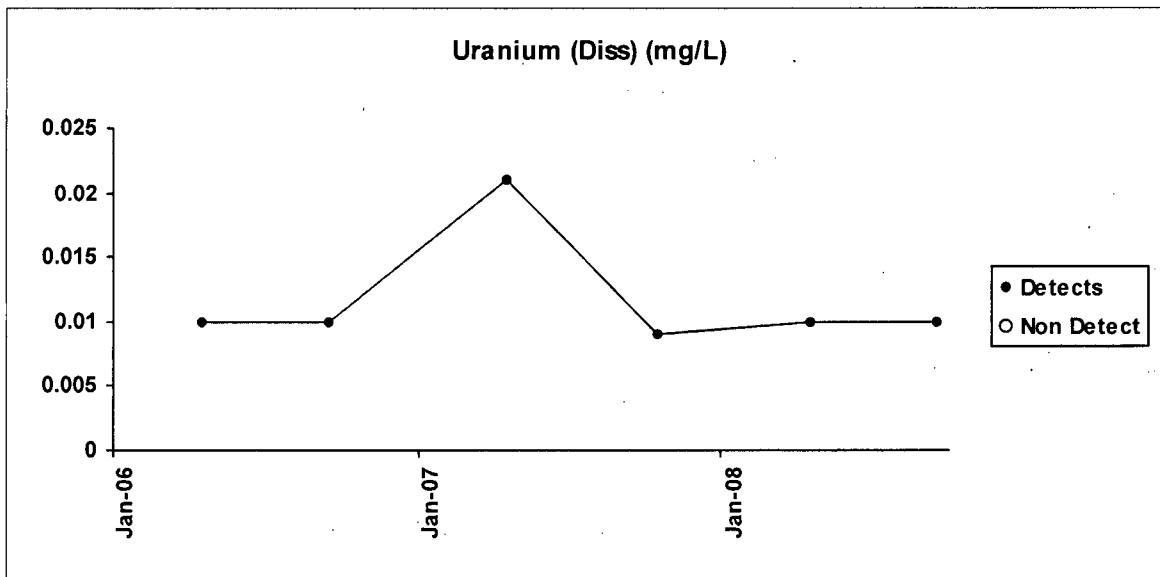
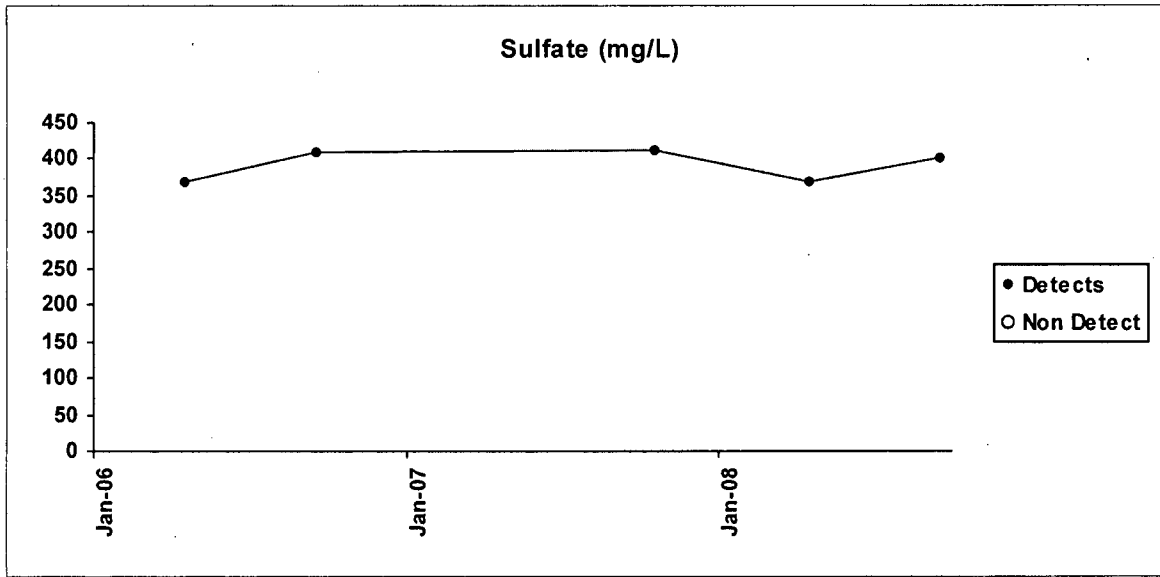
Jeffrey City

WN-41B



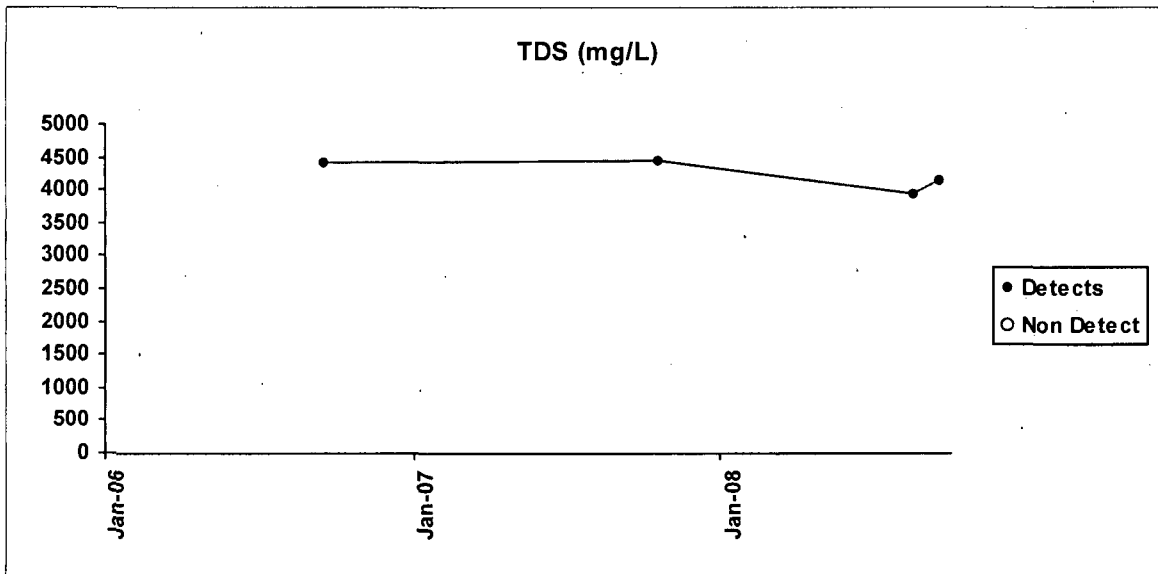
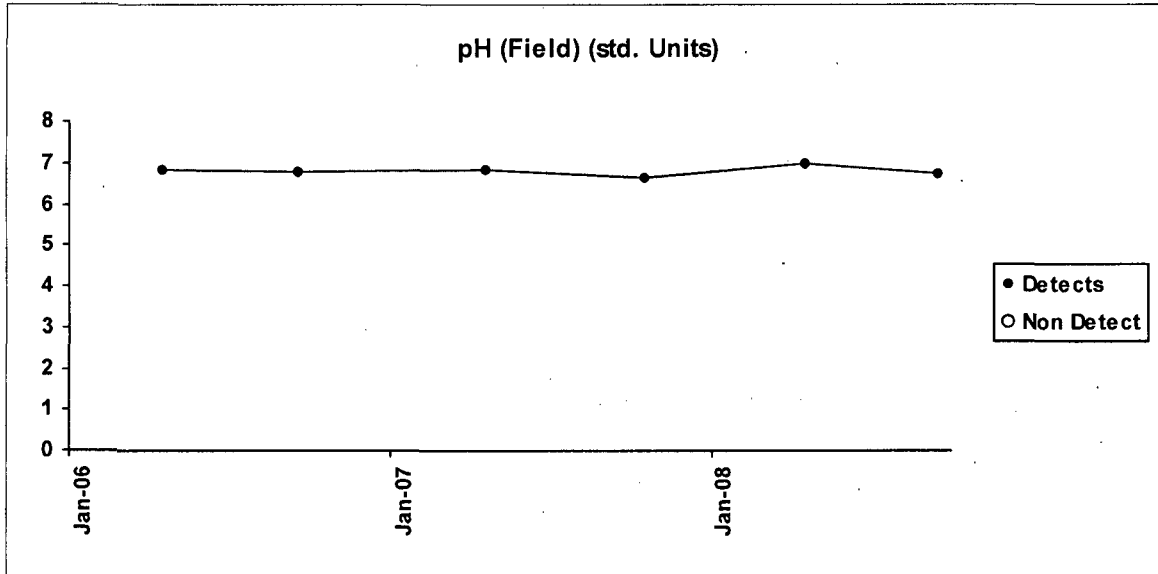
Jeffrey City

WN-41B



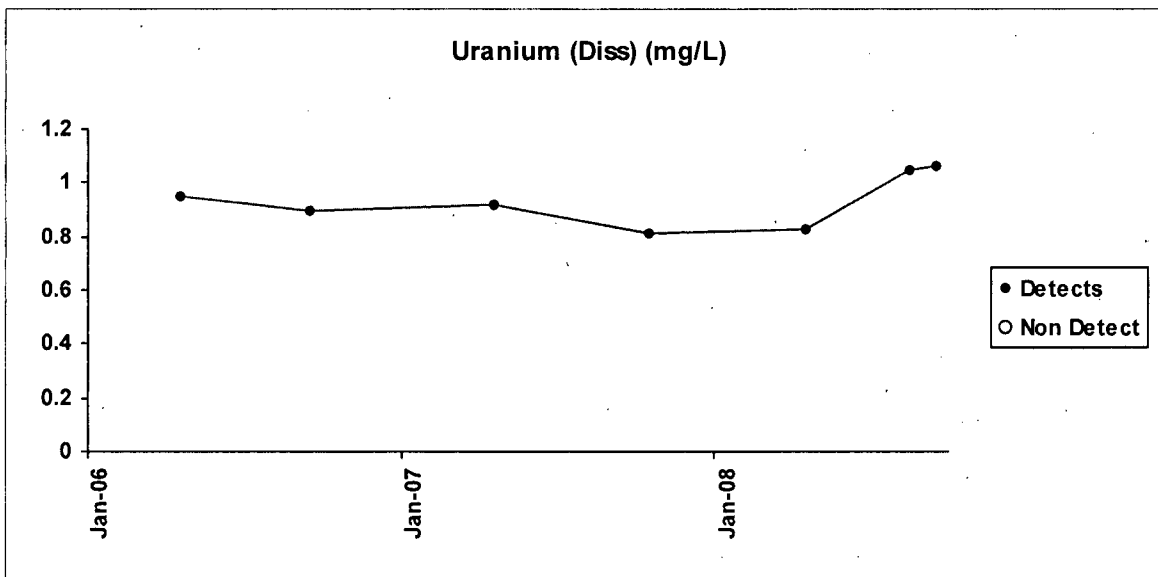
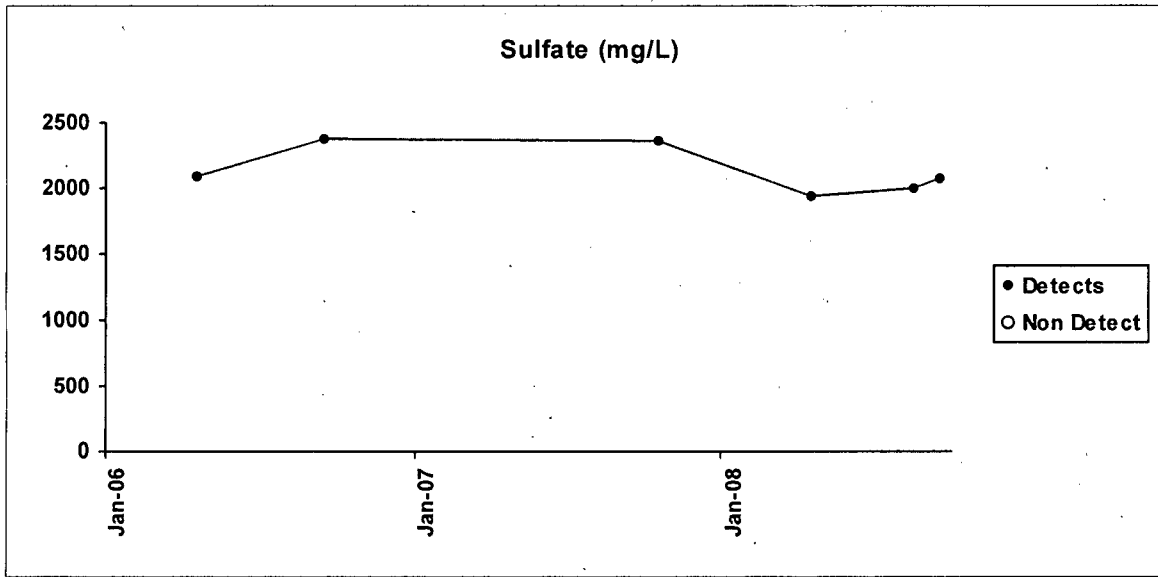
Jeffrey City

WN-42A



Jeffrey City

WN-42A





LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-011  
 Client Sample ID: JJ-1R

Report Date: 11/16/08  
 Collection Date: 09/18/08 08:25  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	12	mg/L		1		A4500-Cl B	09/22/08 14:56 / sp
Fluoride	0.5	mg/L		0.1		A4500-F C	09/22/08 14:43 / ljj
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:51 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 13:06 / eli-b
Sulfate	47	mg/L		1		A4500-SO4 E	09/25/08 08:52 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.32	s.u.		0.01		A4500-H B	09/22/08 12:57 / dd
Solids, Total Dissolved TDS @ 180 C	364	mg/L		10		A2540 C	09/22/08 18:44 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:01 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:01 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 06:01 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:01 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 06:01 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:01 / ts
Manganese	0.18	mg/L		0.05		E200.8	09/30/08 06:01 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:01 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:01 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 06:01 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:01 / ts
Uranium	0.008	mg/L		0.001		E200.8	09/30/08 06:01 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.06	pCi/L		U		E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.11	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	1.4	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.4	pCi/L		U	0.4	E907.0	10/21/08 13:09 / dmj
Thorium 230 precision (±)	0.6	pCi/L				E907.0	10/21/08 13:09 / dmj
<b>FIELD PARAMETERS</b>							
pH	7.06	s.u.				FIELD	09/18/08 08:25 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-012  
 Client Sample ID: SWAB-2

Report Date: 11/16/08  
 Collection Date: 09/19/08 09:11  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	39	mg/L		1		A4500-CI B	09/22/08 14:59 / sp
Fluoride	0.4	mg/L		0.1		A4500-F C	09/22/08 14:46 / ljl
Nitrogen, Ammonia as N	45.2	mg/L	D	0.4		E350.1	09/30/08 13:44 / eli-b
Nitrogen, Nitrate+Nitrite as N	335	mg/L	D	0.3		E353.2	09/25/08 13:08 / eli-b
Sulfate	1550	mg/L	D	30		A4500-SO4 E	09/25/08 08:55 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.01	s.u.		0.01		A4500-H B	09/22/08 13:00 / dd
Solids, Total Dissolved TDS @ 180 C	3930	mg/L		10		A2540 C	09/22/08 18:44 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:07 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:07 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 06:07 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:07 / ts
Cadmium	0.001	mg/L		0.001		E200.8	09/30/08 06:07 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:07 / ts
Manganese	6.60	mg/L		0.05		E200.8	09/30/08 06:07 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:07 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:07 / ts
Selenium	0.011	mg/L		0.005		E200.8	09/30/08 06:07 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:07 / ts
Uranium	1.39	mg/L		0.001		E200.8	09/30/08 06:07 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.31	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.15	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.17	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	3.0	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.9	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.1	pCi/L	U	0.4		E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.5	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.42	s.u.				FIELD	09/19/08 09:11 / ***

\*\*\* Performed by Sampler

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.





LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-013  
 Client Sample ID: SWAB-4

Report Date: 11/16/08  
 Collection Date: 09/18/08 11:33  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	34	mg/L		1		A4500-Cl B	09/22/08 15:01 / sp
Fluoride	0.3	mg/L		0.1		A4500-F C	09/22/08 14:48 / ljl
Nitrogen, Ammonia as N	3.9	mg/L	D	0.1		E350.1	09/30/08 13:46 / eli-b
Nitrogen, Nitrate+Nitrite as N	46.5	mg/L		0.2		E353.2	09/25/08 13:09 / eli-b
Sulfate	509	mg/L	D	30		A4500-SO4 E	09/25/08 08:58 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.33	s.u.		0.01		A4500-H B	09/22/08 13:04 / dd
Solids, Total Dissolved TDS @ 180 C	1200	mg/L		10		A2540 C	09/22/08 18:45 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:14 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:14 / ts
Arsenic	0.01	mg/L		0.01		E200.8	09/30/08 06:14 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:14 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 06:14 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:14 / ts
Manganese	0.08	mg/L		0.05		E200.8	09/30/08 06:14 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:14 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:14 / ts
Selenium	0.006	mg/L		0.005		E200.8	09/30/08 06:14 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:14 / ts
Uranium	1.12	mg/L		0.001		E200.8	09/30/08 06:14 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.96	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.22	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	2.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.9	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.1	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.9	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.04	s.u.				FIELD	09/18/08 11:33 / ***
*** Performed by Sampler							

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-014  
 Client Sample ID: SWAB-22

Report Date: 11/16/08  
 Collection Date: 09/18/08 11:12  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	3	mg/L		1		A4500-Cl B	09/22/08 15:02 / sp
Fluoride	0.4	mg/L		0.1		A4500-F C	09/22/08 14:51 / ljl
Nitrogen, Ammonia as N	0.17	mg/L		0.05		E350.1	09/30/08 13:47 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 12:46 / eli-b
Sulfate	44	mg/L		1		A4500-SO4 E	09/25/08 09:04 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.35	s.u.		0.01		A4500-H B	09/22/08 13:08 / dd
Solids, Total Dissolved TDS @ 180 C	312	mg/L		10		A2540 C	09/22/08 18:46 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:21 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:21 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 06:21 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:21 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 06:21 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:21 / ts
Manganese	0.11	mg/L		0.05		E200.8	09/30/08 06:21 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:21 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:21 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 06:21 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:21 / ts
Uranium	0.018	mg/L		0.001		E200.8	09/30/08 06:21 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.02	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.10	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.7	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.4	pCi/L				E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.9	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.11	s.u.				FIELD	09/18/08 11:12 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-015  
 Client Sample ID: SWAB-29

Report Date: 11/16/08  
 Collection Date: 09/18/08 14:43  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	ND	mg/L		1		A4500-Cl B	09/22/08 15:03 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:53 / ljl
Nitrogen, Ammonia as N	0.15	mg/L		0.05		E350.1	09/30/08 11:39 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 12:47 / eli-b
Sulfate	43	mg/L		1		A4500-SO4 E	09/25/08 09:05 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.38	s.u.		0.01		A4500-H B	09/22/08 13:11 / dd
Solids, Total Dissolved TDS @ 180 C	283	mg/L		10		A2540 C	09/22/08 18:46 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:28 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:28 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 06:28 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:28 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 06:28 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:28 / ts
Manganese	0.12	mg/L		0.05		E200.8	09/30/08 06:28 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:28 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:28 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 06:28 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:28 / ts
Uranium	0.029	mg/L		0.001		E200.8	09/30/08 06:28 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.08	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.12	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.19	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.1	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.4	pCi/L				E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.9	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.44	s.u.				FIELD	09/18/08 14:43 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-016  
 Client Sample ID: SWAB-31

Report Date: 11/16/08  
 Collection Date: 09/18/08 15:01  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	7	mg/L		1		A4500-Cl B	09/22/08 15:05 / sp
Fluoride	0.3	mg/L		0.1		A4500-F C	09/22/08 14:56 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:40 / eli-b
Nitrogen, Nitrate+Nitrite as N	1.3	mg/L		0.2		E353.2	09/25/08 13:10 / eli-b
Sulfate	31	mg/L		1		A4500-SO4 E	09/25/08 09:07 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.86	s.u.		0.01		A4500-H B	09/22/08 13:15 / dd
Solids, Total Dissolved TDS @ 180 C	250	mg/L		10		A2540 C	09/22/08 18:50 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 06:34 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 06:34 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 06:34 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 06:34 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 06:34 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 06:34 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 06:34 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 06:34 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 06:34 / ts
Selenium	0.009	mg/L		0.005		E200.8	09/30/08 06:34 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 06:34 / ts
Uranium	0.031	mg/L		0.001		E200.8	09/30/08 06:34 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.06	pCi/L		U		E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.8	pCi/L		U		RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	-0.1	pCi/L		U	0.4	E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	1	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.63	s.u.				FIELD	09/18/08 15:01 / ***
*** Performed by Sampler							

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-017  
 Client Sample ID: SWAB-32

Report Date: 11/16/08  
 Collection Date: 09/18/08 15:29  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	11	mg/L		1		A4500-Cl B	09/22/08 15:16 / sp
Fluoride	0.4	mg/L		0.1		A4500-F C	09/22/08 14:59 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:41 / eli-b
Nitrogen, Nitrate+Nitrite as N	1.4	mg/L		0.2		E353.2	09/25/08 13:11 / eli-b
Sulfate	51	mg/L		1		A4500-SO4 E	09/25/08 09:09 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.85	s.u.		0.01		A4500-H B	09/22/08 13:18 / dd
Solids, Total Dissolved TDS @ 180 C	314	mg/L		10		A2540 C	09/22/08 18:50 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 20:41 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 20:41 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 20:41 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 20:41 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 20:41 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 20:41 / ts
Manganese	ND	mg/L		0.05		E200.8	10/01/08 20:41 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 20:41 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 20:41 / ts
Selenium	0.010	mg/L		0.005		E200.8	10/01/08 20:41 / ts
Thallium	ND	mg/L		0.001		E200.8	10/01/08 20:41 / ts
Uranium	0.127	mg/L		0.001		E200.8	10/01/08 20:41 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.07	pCi/L		U		E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.19	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.5	pCi/L		U		RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.0	pCi/L		U	0.4	E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.7	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.66	s.u.				FIELD	09/18/08 15:29 / ***
*** Performed by Sampler							

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-001  
 Client Sample ID: WN-1

Report Date: 11/16/08  
 Collection Date: 09/18/08 13:15  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	96	mg/L		1		A4500-CI B	09/22/08 14:29 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 13:56 / ljl
Nitrogen, Ammonia as N	72.4	mg/L	D	0.4		E350.1	09/30/08 11:32 / eli-b
Nitrogen, Nitrate+Nitrite as N	25.3	mg/L		0.2		E353.2	09/25/08 12:35 / eli-b
Sulfate	2110	mg/L	D	30		A4500-SO4 E	09/25/08 08:27 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.71	s.u.		0.01		A4500-H B	09/22/08 11:20 / dd
Solids, Total Dissolved TDS @ 180 C	3600	mg/L		10		A2540 C	09/22/08 18:39 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 20:28 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 02:30 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 02:30 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 20:28 / ts
Cadmium	0.001	mg/L		0.001		E200.8	09/30/08 02:30 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 02:30 / ts
Manganese	13.7	mg/L		0.05		E200.8	09/30/08 02:30 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 02:30 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 02:30 / ts
Selenium	0.014	mg/L		0.005		E200.8	09/30/08 02:30 / ts
Thallium	0.006	mg/L		0.001		E200.8	09/30/08 02:30 / ts
Uranium	4.88	mg/L		0.001		E200.8	09/30/08 02:30 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.42	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.15	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	1.5	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	-0.1	pCi/L	U	0.4		E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.7	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.26	s.u.				FIELD	09/18/08 13:15 / ***

\*\*\* Performed by Sampler

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-021  
 Client Sample ID: WN-1R

Report Date: 11/16/08  
 Collection Date: 09/18/08 13:15  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	106	mg/L		1		A4500-Cl B	09/22/08 15:48 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 15:21 / ljl
Nitrogen, Ammonia as N	70.5	mg/L	D	0.4		E350.1	09/30/08 13:48 / eli-b
Nitrogen, Nitrate+Nitrite as N	26.2	mg/L		0.2		E353.2	09/25/08 12:52 / eli-b
Sulfate	2170	mg/L	D	60		A4500-SO4 E	09/25/08 09:19 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.71	s.u.		0.01		A4500-H B	09/22/08 13:34 / dd
Solids, Total Dissolved TDS @ 180 C	3590	mg/L		10		A2540 C	09/22/08 18:51 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 21:09 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 21:09 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 21:09 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 21:09 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 21:09 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 21:09 / ts
Manganese	13.2	mg/L		0.05		E200.8	10/01/08 21:09 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 21:09 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 21:09 / ts
Selenium	0.008	mg/L		0.005		E200.8	10/01/08 21:09 / ts
Thallium	0.005	mg/L		0.001		E200.8	10/01/08 21:09 / ts
Uranium	4.42	mg/L		0.001		E200.8	10/01/08 21:09 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.67	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 precision (±)	0.18	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 228	0.6	pCi/L	U			RA-05	10/09/08 10:52 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 10:52 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	10/09/08 10:52 / plj
Thorium 230	0.0	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.26	s.u.				FIELD	09/18/08 13:15 / ***

\*\*\* Performed by Sampler

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-002  
 Client Sample ID: WN-4R

Report Date: 11/16/08  
 Collection Date: 09/18/08 10:51  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	96	mg/L		1		A4500-Cl B	09/22/08 14:30 / sp
Fluoride	6.0	mg/L		0.1		A4500-F C	09/22/08 13:59 / ljl
Nitrogen, Ammonia as N	295	mg/L	D	2		E350.1	09/30/08 11:33 / eli-b
Nitrogen, Nitrate+Nitrite as N	104	mg/L	D	0.3		E353.2	09/25/08 12:37 / eli-b
Sulfate	3430	mg/L	D	60		A4500-SO4 E	09/25/08 08:28 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.25	s.u.		0.01		A4500-H B	09/22/08 11:22 / dd
Solids, Total Dissolved TDS @ 180 C	4890	mg/L		10		A2540 C	09/22/08 18:40 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	1.6	mg/L		0.1		E200.8	10/01/08 20:35 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 02:36 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 02:36 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 20:35 / ts
Cadmium	0.024	mg/L		0.001		E200.8	09/30/08 02:36 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 02:36 / ts
Manganese	96.8	mg/L		0.05		E200.8	09/30/08 02:36 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 02:36 / ts
Nickel	0.56	mg/L		0.05		E200.8	09/30/08 02:36 / ts
Selenium	0.028	mg/L		0.005		E200.8	09/30/08 02:36 / ts
Thallium	0.002	mg/L		0.001		E200.8	09/30/08 02:36 / ts
Uranium	0.295	mg/L		0.001		E200.8	09/30/08 02:36 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.04	pCi/L	U			E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.08	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.6	pCi/L	U			RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.7	pCi/L	U	0.4		E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.8	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	5.93	s.u.				FIELD	09/18/08 10:51 / ***

\*\*\* Performed by Sampler

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.





LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-003  
 Client Sample ID: WN-5

Report Date: 11/16/08  
 Collection Date: 09/18/08 10:23  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	88	mg/L		1		A4500-Cl B	09/22/08 14:31 / sp
Fluoride	ND	mg/L		0.1		A4500-F C	09/22/08 14:02 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:34 / eli-b
Nitrogen, Nitrate+Nitrite as N	71.3	mg/L		0.2		E353.2	09/25/08 12:38 / eli-b
Sulfate	1800	mg/L	D	30		A4500-SO4 E	09/25/08 08:30 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.94	s.u.		0.01		A4500-H B	09/22/08 11:24 / dd
Solids, Total Dissolved TDS @ 180 C	3650	mg/L		10		A2540 C	09/22/08 18:40 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 04:25 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 04:25 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 04:25 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 04:25 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 04:25 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 04:25 / ts
Manganese	0.48	mg/L		0.05		E200.8	09/30/08 04:25 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 04:25 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 04:25 / ts
Selenium	0.021	mg/L		0.005		E200.8	09/30/08 04:25 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 04:25 / ts
Uranium	1.71	mg/L		0.001		E200.8	09/30/08 04:25 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.05	pCi/L	U			E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.08	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.17	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	1.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.1	pCi/L	U	0.4		E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.9	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.67	s.u.				FIELD	09/18/08 10:23 / ***

\*\*\* Performed by Sampler

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.

### LABORATORY ANALYTICAL REPORT

**Client:** Western Nuclear  
**Project:** Split Rock Mill Site  
**Lab ID:** C08090833-022  
**Client Sample ID:** WN-5R

**Report Date:** 11/16/08  
**Collection Date:** 09/18/08 10:23  
**Date Received:** 09/19/08  
**Matrix:** Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	99	mg/L		1		A4500-Cl B	09/22/08 15:50 / sp
Fluoride	ND	mg/L		0.1		A4500-F C	09/22/08 15:24 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 13:49 / eli-b
Nitrogen, Nitrate+Nitrite as N	78.0	mg/L		0.2		E353.2	09/25/08 12:53 / eli-b
Sulfate	1810	mg/L	D	60		A4500-SO4 E	09/25/08 09:21 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.93	s.u.		0.01		A4500-H B	09/22/08 13:37 / dd
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		10		A2540 C	09/22/08 18:51 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 21:15 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 21:15 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 21:15 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 21:15 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 21:15 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 21:15 / ts
Manganese	0.47	mg/L		0.05		E200.8	10/01/08 21:15 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 21:15 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 21:15 / ts
Selenium	0.018	mg/L		0.005		E200.8	10/01/08 21:15 / ts
Thallium	ND	mg/L		0.001		E200.8	10/01/08 21:15 / ts
Uranium	1.76	mg/L		0.001		E200.8	10/01/08 21:15 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.1	pCi/L	U			E903.0	10/14/08 16:42 / evm
Radium 226 precision (±)	0.06	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 228	0.8	pCi/L	U			RA-05	10/09/08 10:52 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 10:52 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	10/09/08 10:52 / plj
Thorium 230	0.1	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.67	s.u.				FIELD	09/18/08 10:23 / ***
*** Performed by Sampler							

**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.

LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-023  
 Client Sample ID: WN-5S

Report Date: 11/16/08  
 Collection Date: 09/18/08 10:23  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	97	mg/L		1		A4500-Cl B	09/22/08 15:51 / sp
Fluoride	ND	mg/L		0.1		A4500-F C	09/22/08 15:28 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 12:11 / eli-b
Nitrogen, Nitrate+Nitrite as N	73.3	mg/L		0.2		E353.2	09/25/08 12:54 / eli-b
Sulfate	1790	mg/L	D	60		A4500-SO4 E	09/25/08 09:22 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.93	s.u.		0.01		A4500-H B	09/22/08 13:39 / dd
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		10		A2540 C	09/22/08 18:51 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 14:53 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 14:53 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 14:53 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 21:49 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 14:53 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 14:53 / ts
Manganese	0.51	mg/L		0.05		E200.8	09/30/08 14:53 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 14:53 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 14:53 / ts
Selenium	0.021	mg/L		0.005		E200.8	09/30/08 14:53 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 14:53 / ts
Uranium	1.75	mg/L		0.001		E200.8	09/30/08 14:53 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.10	pCi/L	U			E903.0	10/14/08 16:42 / evm
Radium 226 precision (±)	0.11	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 228	1.0	pCi/L	U			RA-05	10/09/08 10:52 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 10:52 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	10/09/08 10:52 / plj
Thorium 230	0.2	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.67	s.u.				FIELD	09/18/08 10:23 / ***

\*\*\* Performed by Sampler

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-004  
 Client Sample ID: WN-21

Report Date: 11/16/08  
 Collection Date: 09/18/08 13:43  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	9	mg/L		1		A4500-Cl B	09/22/08 14:33 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:05 / lji
Nitrogen, Ammonia as N	2.18	mg/L		0.05		E350.1	09/30/08 11:35 / eli-b
Nitrogen, Nitrate+Nitrite as N	2.9	mg/L		0.2		E353.2	09/25/08 12:45 / eli-b
Sulfate	86	mg/L	D	3		A4500-SO4 E	09/25/08 08:33 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.77	s.u.		0.01		A4500-H B	09/22/08 11:28 / dd
Solids, Total Dissolved TDS @ 180 C	384	mg/L		10		A2540 C	09/22/08 18:40 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 04:32 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 04:32 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 04:32 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 04:32 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 04:32 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 04:32 / ts
Manganese	0.34	mg/L		0.05		E200.8	09/30/08 04:32 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 04:32 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 04:32 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 04:32 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 04:32 / ts
Uranium	0.069	mg/L		0.001		E200.8	09/30/08 04:32 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.08	pCi/L	U			E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.19	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.8	pCi/L	U			RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	-0.3	pCi/L	U	0.4		E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.7	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.52	s.u.				FIELD	09/18/08 13:43 / ***
*** Performed by Sampler							

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-018  
 Client Sample ID: WN-39B

Report Date: 11/16/08  
 Collection Date: 09/18/08 09:35  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	26	mg/L		1		A4500-Cl B	09/22/08 15:41 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 15:05 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:53 / eli-b
Nitrogen, Nitrate+Nitrite as N	10.6	mg/L		0.2		E353.2	09/25/08 12:49 / eli-b
Sulfate	233	mg/L	D	3		A4500-SO4 E	09/25/08 09:11 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.70	s.u.		0.01		A4500-H B	09/22/08 13:22 / dd
Solids, Total Dissolved TDS @ 180 C	685	mg/L		10		A2540 C	09/22/08 18:50 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 20:48 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 20:48 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 20:48 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 20:48 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 20:48 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 20:48 / ts
Manganese	ND	mg/L		0.05		E200.8	10/01/08 20:48 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 20:48 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 20:48 / ts
Selenium	ND	mg/L		0.005		E200.8	10/01/08 20:48 / ts
Thallium	ND	mg/L		0.001		E200.8	10/01/08 20:48 / ts
Uranium	0.375	mg/L		0.001		E200.8	10/01/08 20:48 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.15	pCi/L	U			E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.19	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.9	pCi/L	U			RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.4	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.42	s.u.				FIELD	09/18/08 09:35 / ***
*** Performed by Sampler							

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-019  
 Client Sample ID: WN-41B

Report Date: 11/16/08  
 Collection Date: 09/18/08 08:50  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	389	mg/L		1		A4500-Cl B	09/22/08 15:44 / sp
Fluoride	1.2	mg/L		0.1		A4500-F C	09/22/08 15:15 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:54 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 12:50 / eli-b
Sulfate	400	mg/L	D	10		A4500-SO4 E	09/25/08 09:13 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	8.12	s.u.		0.01		A4500-H B	09/22/08 13:29 / dd
Solids, Total Dissolved TDS @ 180 C	1420	mg/L		10		A2540 C	09/22/08 18:50 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 20:55 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 20:55 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 20:55 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 20:55 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 20:55 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 20:55 / ts
Manganese	ND	mg/L		0.05		E200.8	10/01/08 20:55 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 20:55 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 20:55 / ts
Selenium	ND	mg/L		0.005		E200.8	10/01/08 20:55 / ts
Thallium	ND	mg/L		0.001		E200.8	10/01/08 20:55 / ts
Uranium	0.010	mg/L		0.001		E200.8	10/01/08 20:55 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.18	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 precision (±)	0.13	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 228	-0.4	pCi/L	U			RA-05	10/09/08 10:52 / plj
Radium 228 precision (±)	0.7	pCi/L				RA-05	10/09/08 10:52 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	10/09/08 10:52 / plj
Thorium 230	0.0	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.5	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.93	s.u.				FIELD	09/18/08 08:50 / ***
*** Performed by Sampler							

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-020  
 Client Sample ID: WN-42A

Report Date: 11/16/08  
 Collection Date: 09/18/08 10:00  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	42	mg/L		1		A4500-Cl B	09/22/08 15:47 / sp
Fluoride	ND	mg/L		0.1		A4500-F C	09/22/08 15:18 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:56 / eli-b
Nitrogen, Nitrate+Nitrite as N	43.0	mg/L		0.2		E353.2	09/25/08 12:51 / eli-b
Sulfate	2080	mg/L	D	60		A4500-SO4 E	09/25/08 09:17 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	6.99	s.u.		0.01		A4500-H B	09/22/08 13:32 / dd
Solids, Total Dissolved TDS @ 180 C	4170	mg/L		10		A2540 C	09/22/08 18:51 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	10/01/08 21:02 / ts
Antimony	ND	mg/L		0.003		E200.8	10/01/08 21:02 / ts
Arsenic	ND	mg/L		0.01		E200.8	10/01/08 21:02 / ts
Beryllium	ND	mg/L		0.004		E200.8	10/01/08 21:02 / ts
Cadmium	ND	mg/L		0.001		E200.8	10/01/08 21:02 / ts
Lead	ND	mg/L		0.005		E200.8	10/01/08 21:02 / ts
Manganese	0.17	mg/L		0.05		E200.8	10/01/08 21:02 / ts
Molybdenum	ND	mg/L		0.1		E200.8	10/01/08 21:02 / ts
Nickel	ND	mg/L		0.05		E200.8	10/01/08 21:02 / ts
Selenium	0.036	mg/L		0.005		E200.8	10/01/08 21:02 / ts
Thallium	ND	mg/L		0.001		E200.8	10/01/08 21:02 / ts
Uranium	1.06	mg/L		0.001		E200.8	10/01/08 21:02 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.1	pCi/L	U			E903.0	10/14/08 16:42 / evm
Radium 226 precision (±)	0.07	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 226 MDC	0.16	pCi/L				E903.0	10/14/08 16:42 / evm
Radium 228	0.4	pCi/L	U			RA-05	10/09/08 10:52 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 10:52 / plj
Radium 228 MDC	1.2	pCi/L				RA-05	10/09/08 10:52 / plj
Thorium 230	0.2	pCi/L	U	0.4		E907.0	10/21/08 17:21 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E907.0	10/21/08 17:21 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.75	s.u.				FIELD	09/18/08 10:00 / ***
*** Performed by Sampler							

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.



LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-005  
 Client Sample ID: Field Blank

Report Date: 11/16/08  
 Collection Date: 09/18/08 09:55  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	ND	mg/L		1		A4500-Cl B	09/22/08 14:35 / sp
Fluoride	ND	mg/L		0.1		A4500-F C	09/22/08 14:10 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:28 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 12:41 / eli-b
Sulfate	ND	mg/L		1		A4500-SO4 E	09/25/08 08:39 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	5.43	s.u.		0.01		A4500-H B	09/22/08 11:33 / dd
Solids, Total Dissolved TDS @ 180 C	24	mg/L		10		A2540 C	09/22/08 18:42 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 04:39 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 04:39 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 04:39 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 04:39 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 04:39 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 04:39 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 04:39 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 04:39 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 04:39 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 04:39 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 04:39 / ts
Uranium	0.003	mg/L		0.001		E200.8	09/30/08 04:39 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.1	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.07	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.18	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.03	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.0	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.7	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	3.83	s.u.				FIELD	09/18/08 09:55 / ***
*** Performed by Sampler							

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

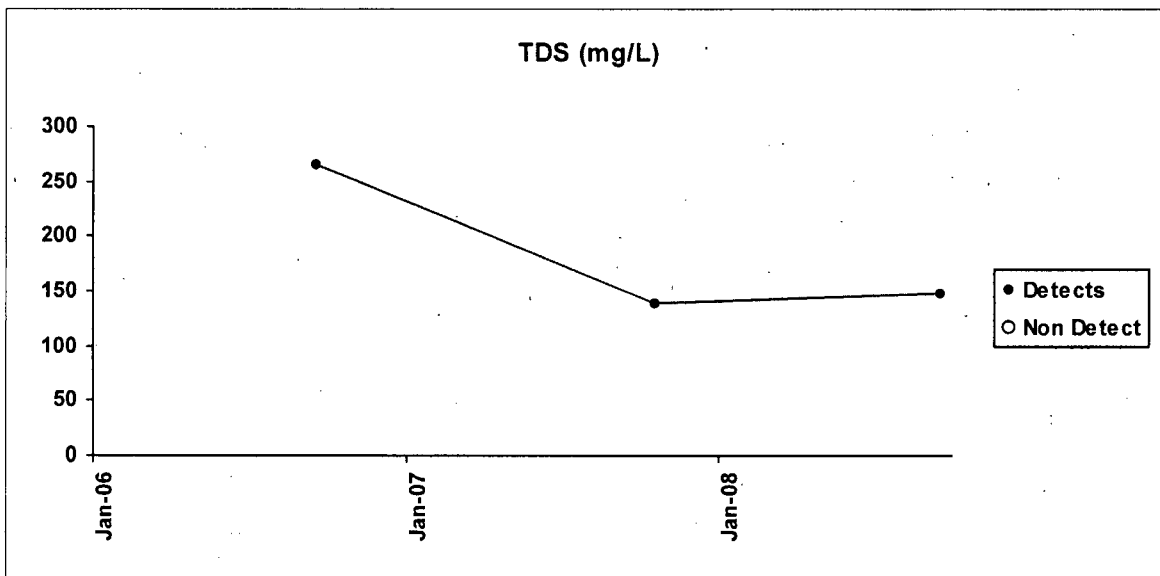
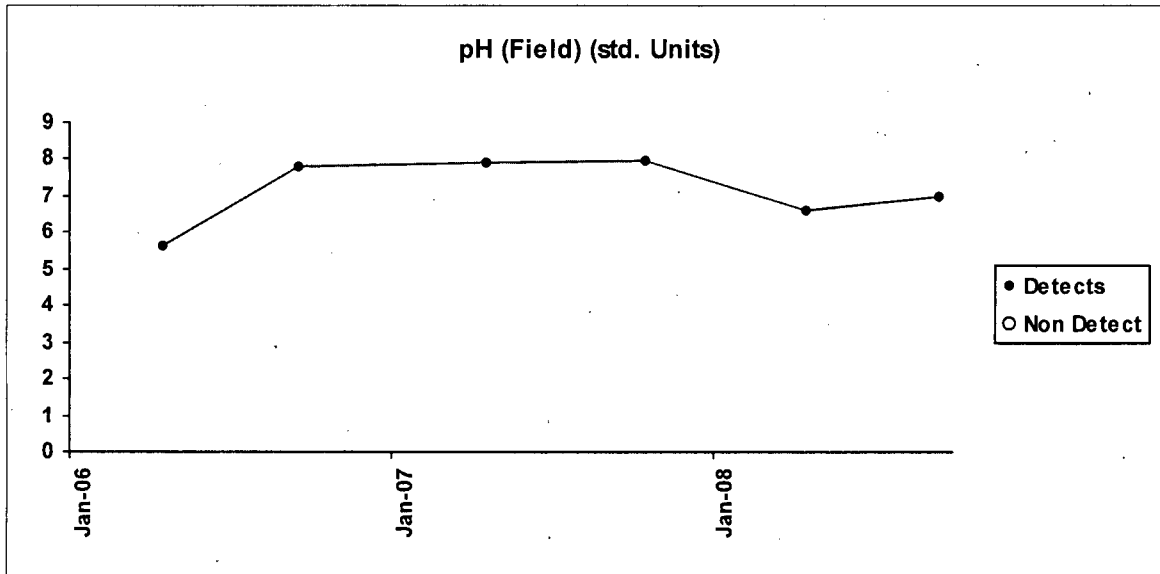
MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.  
 U - Not detected at minimum detectable concentration



SURFACE WATER

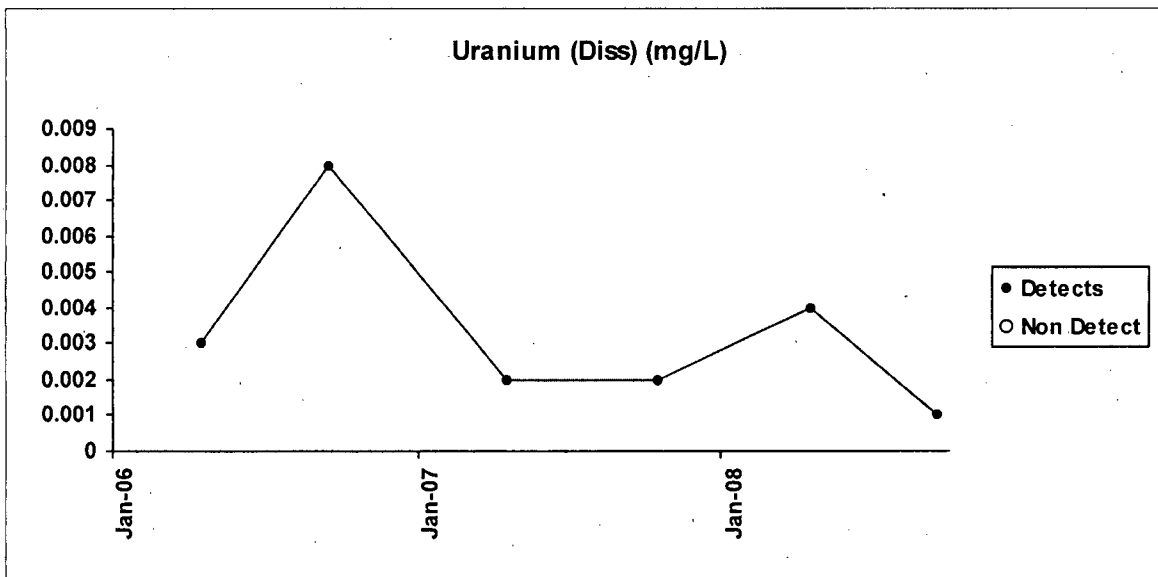
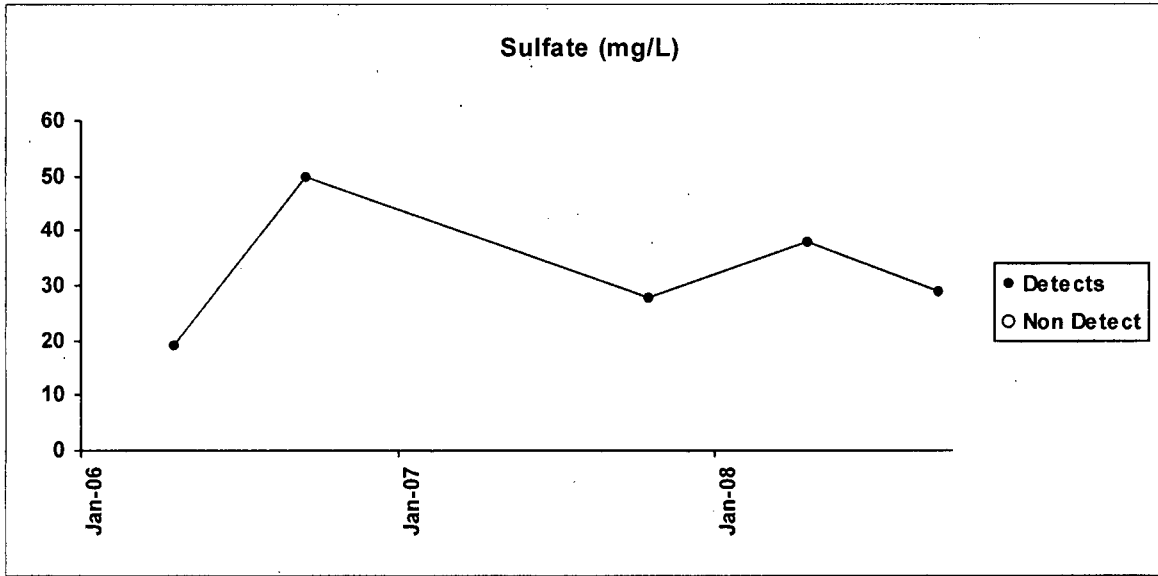
Jeffrey City

SW-1



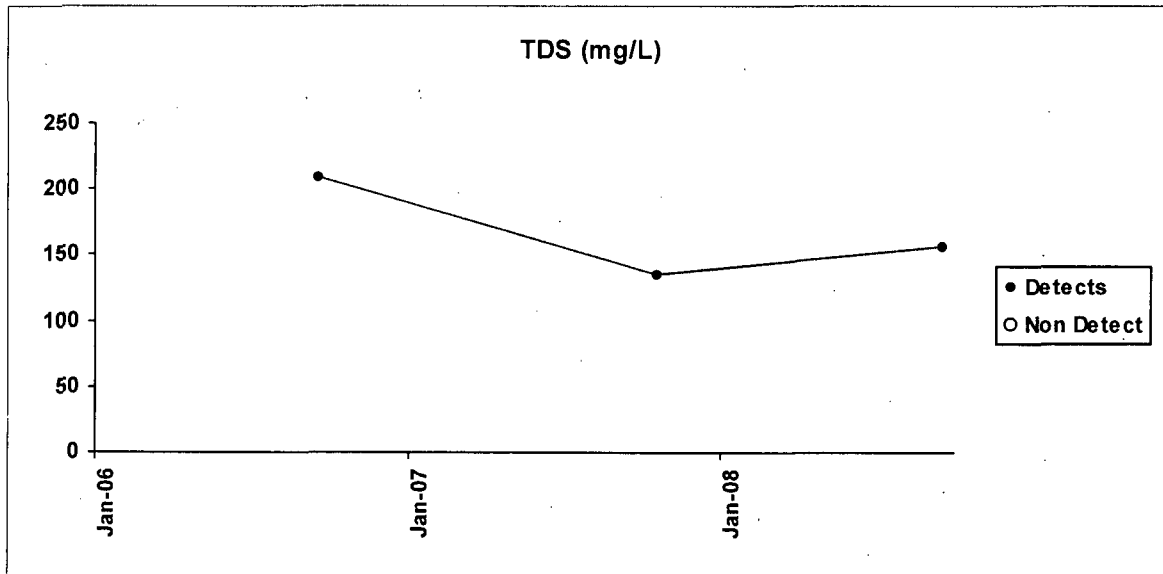
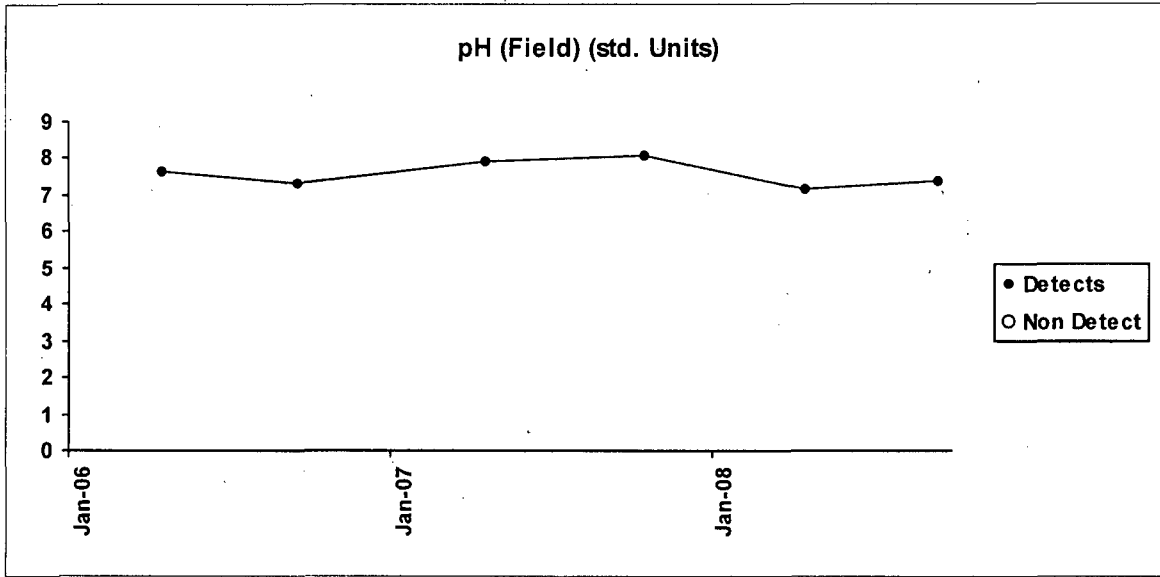
Jeffrey City

SW-1



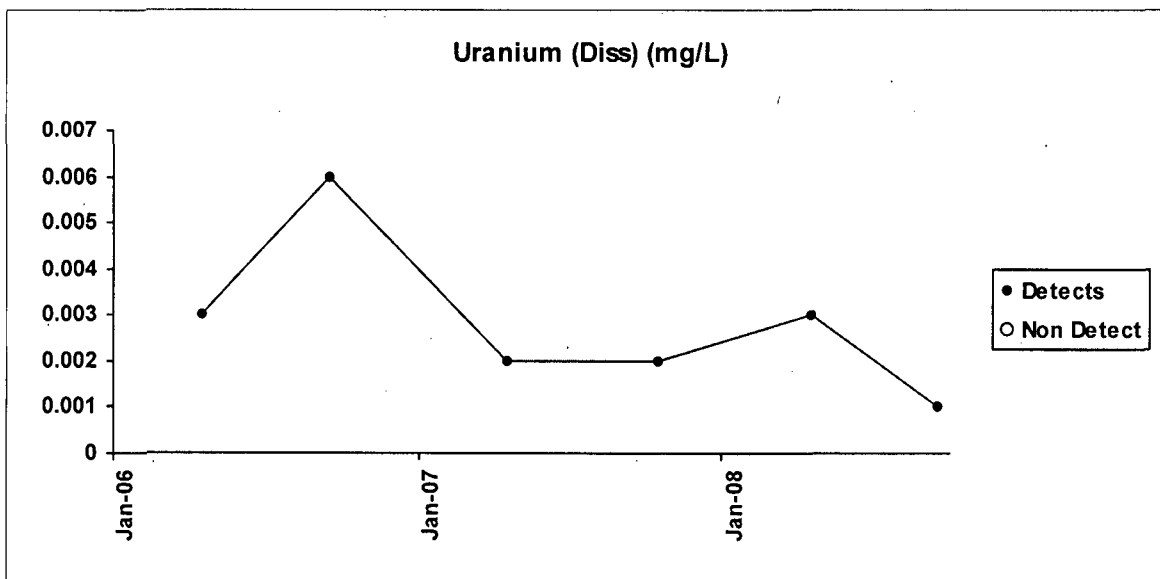
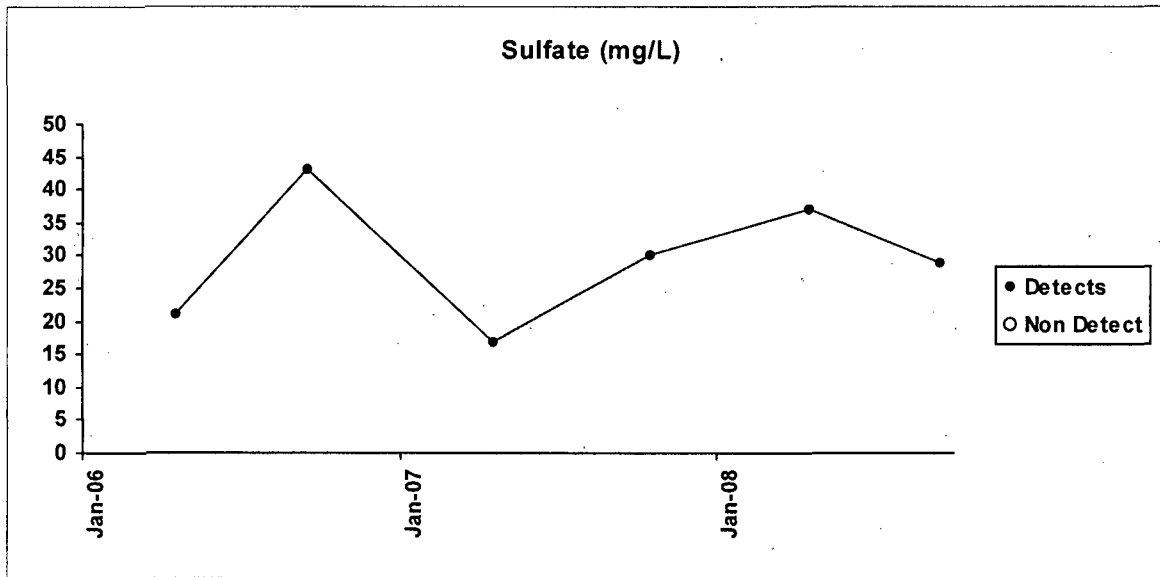
Jeffrey City

SW-2



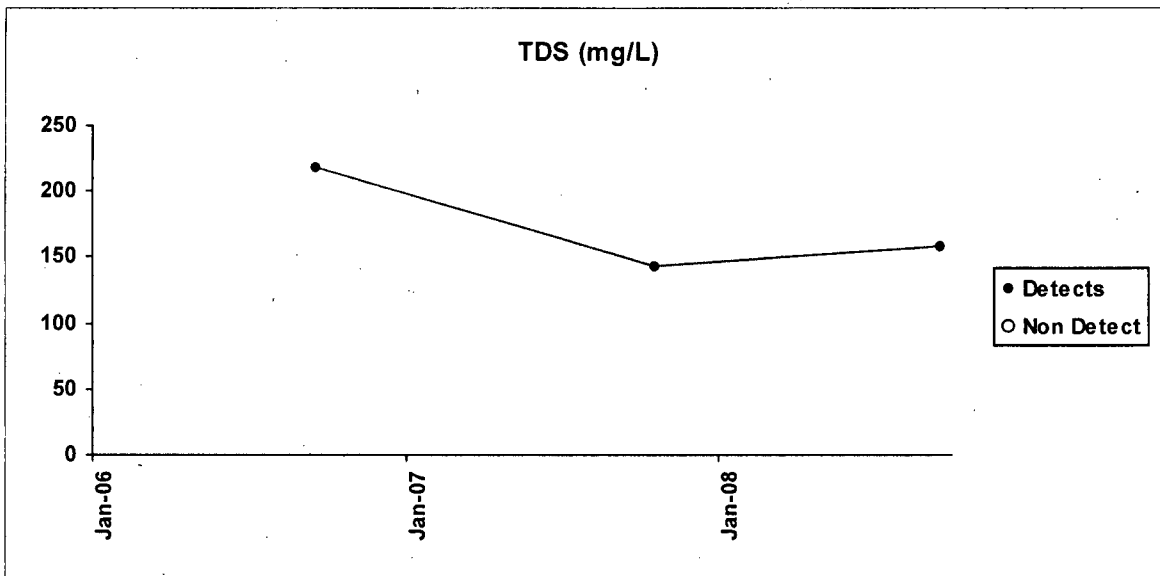
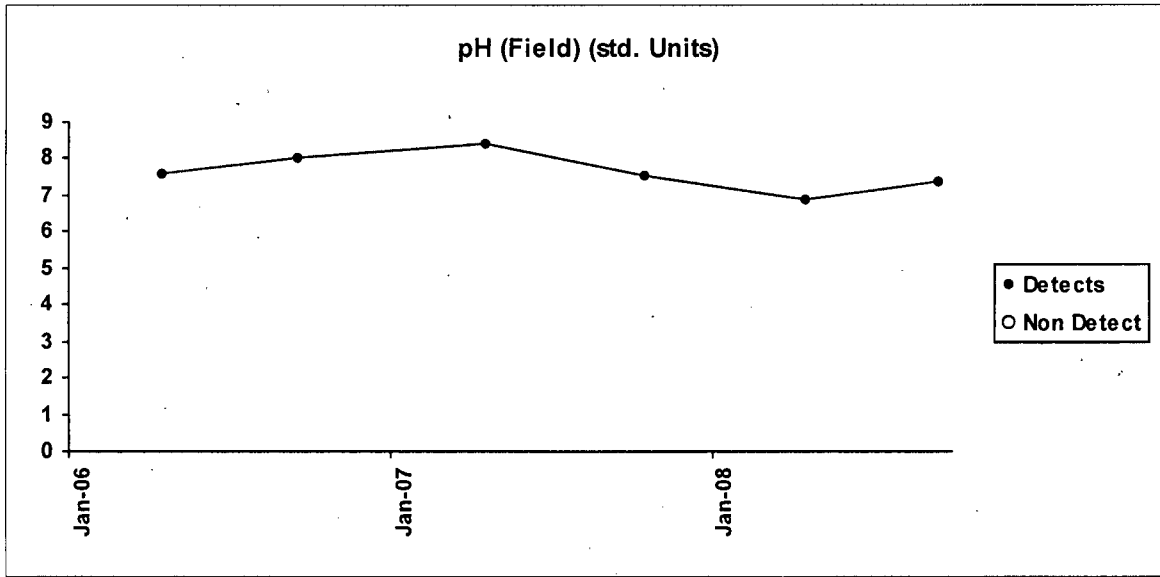
Jeffrey City

SW-2



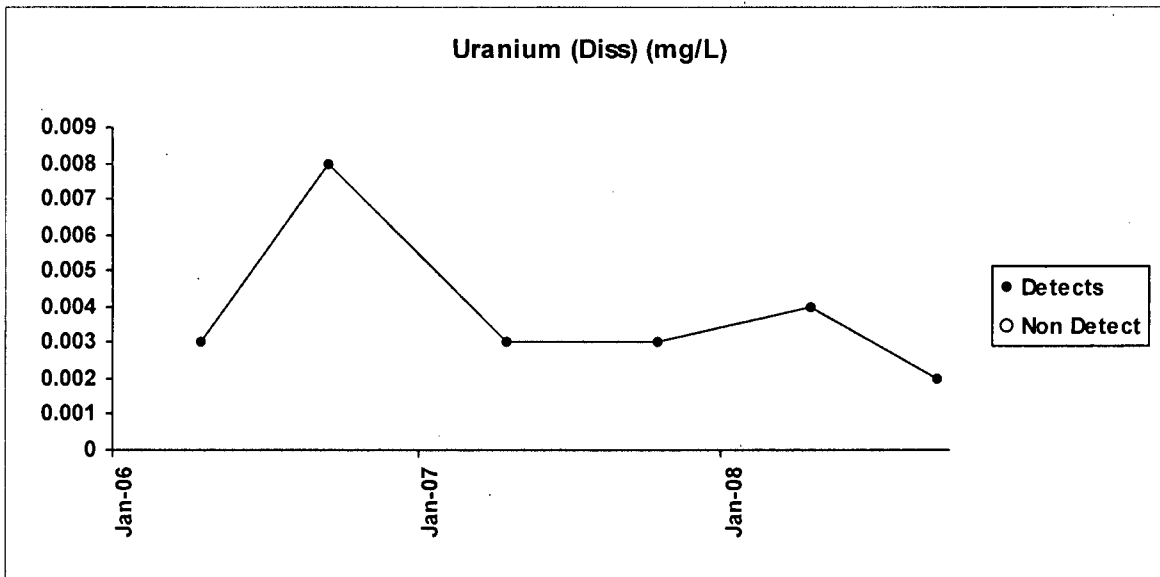
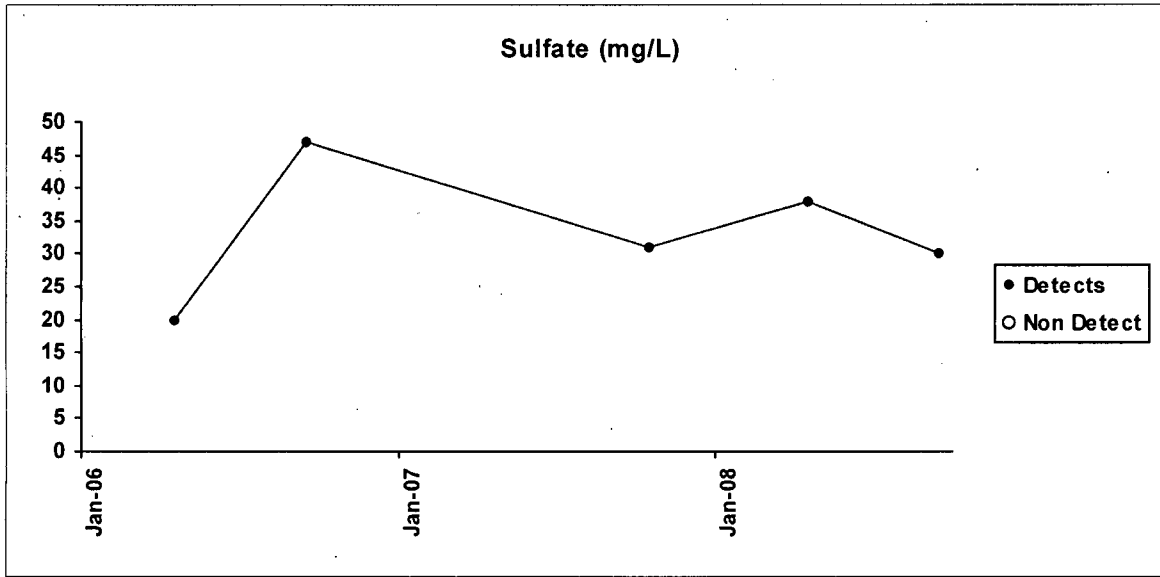
Jeffrey City

SW-3



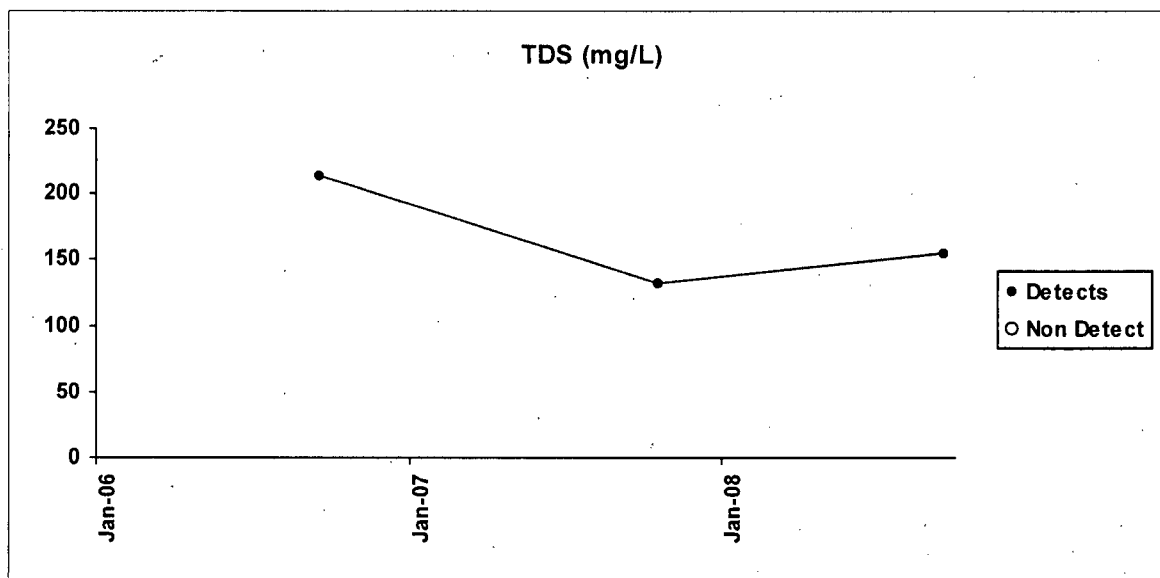
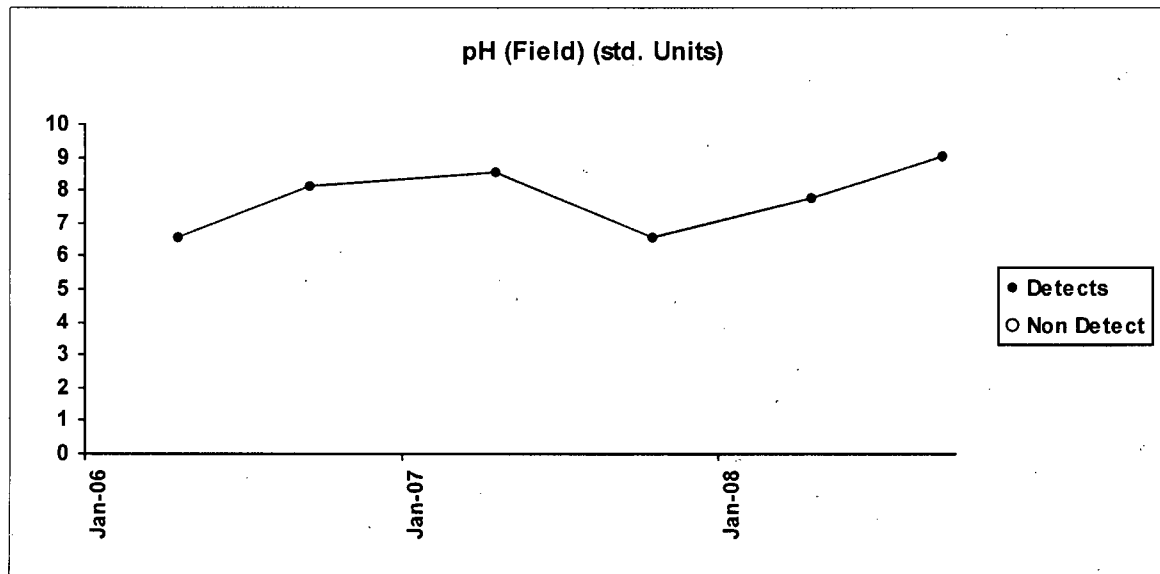
Jeffrey City

SW-3



Jeffrey City

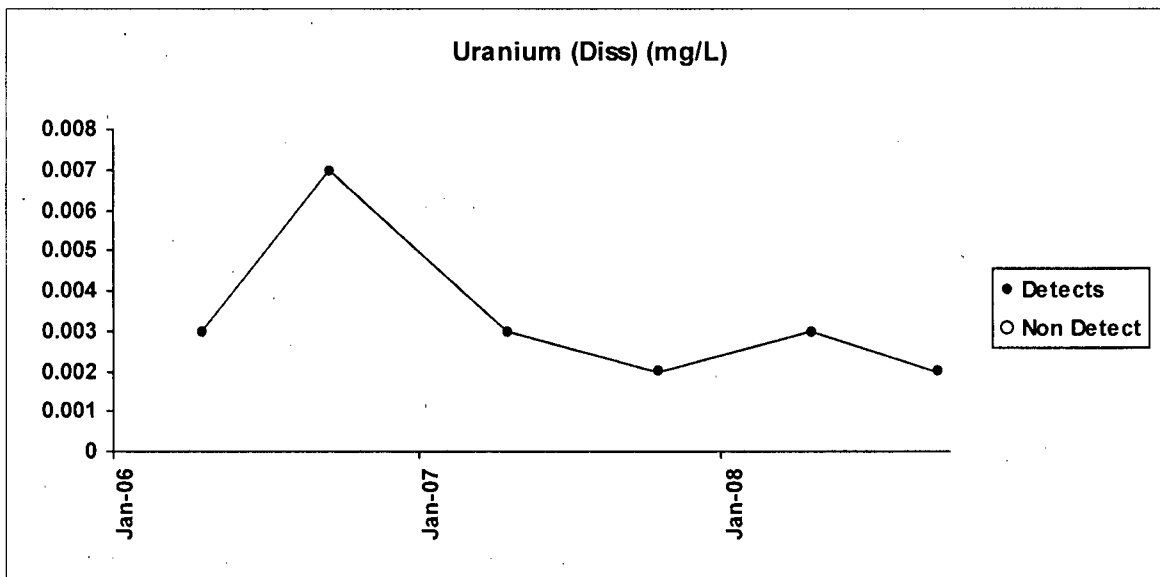
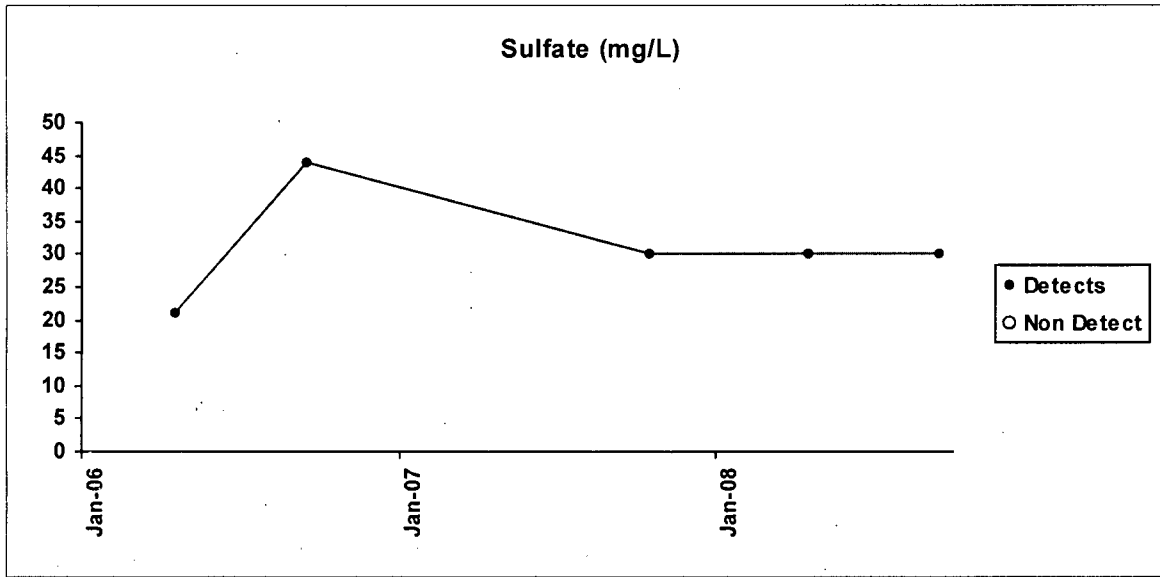
SW-4





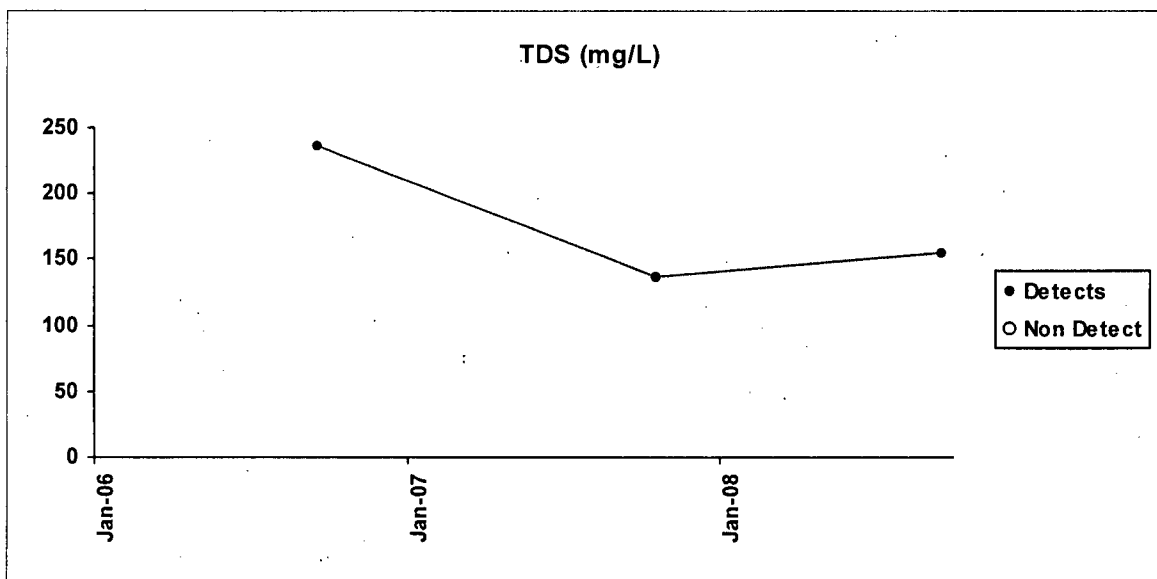
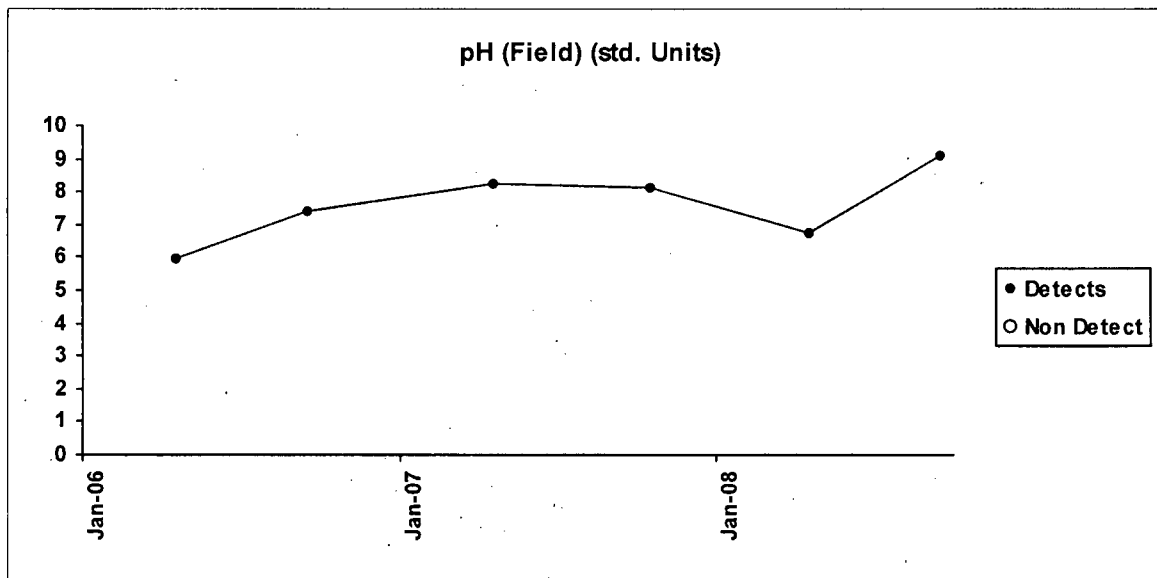
Jeffrey City

SW-4



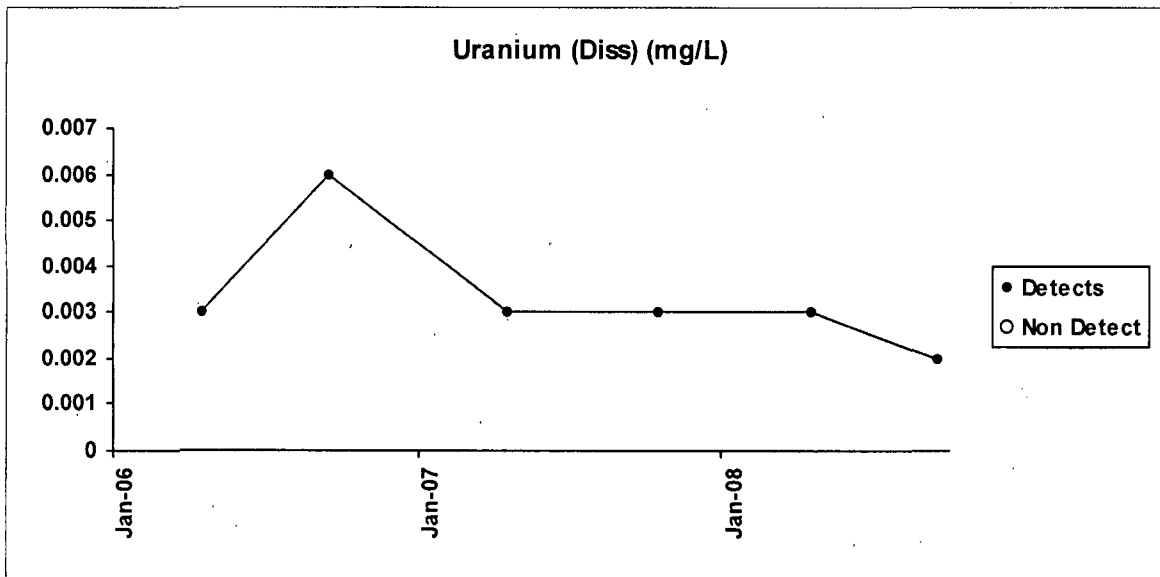
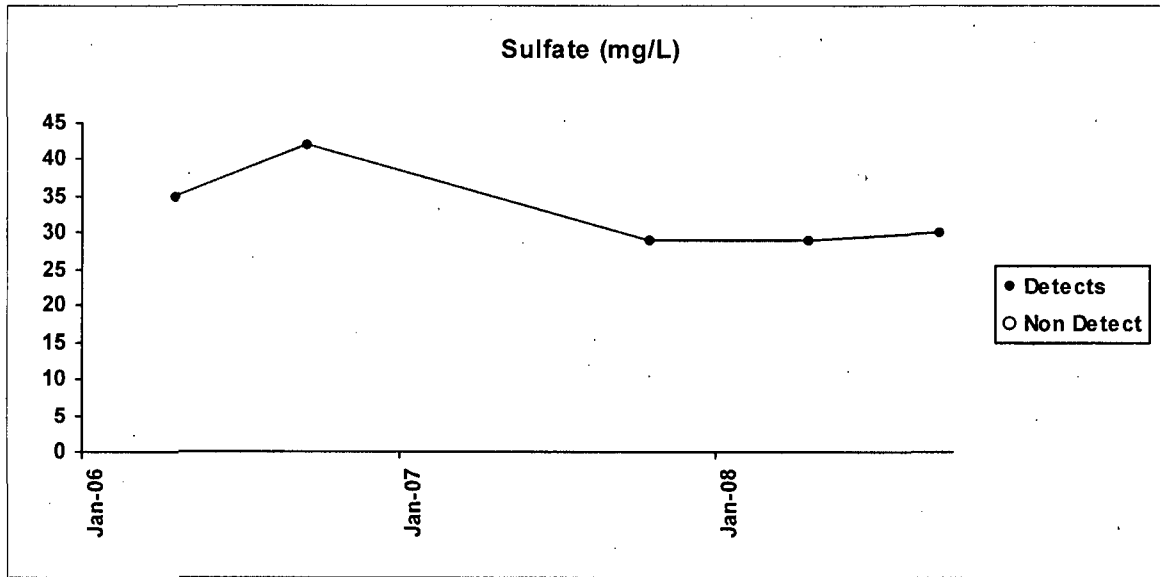
Jeffrey City

SW-5



Jeffrey City

SW-5





LABORATORY ANALYTICAL REPORT

Client: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-006  
 Client Sample ID: SWR-A

Report Date: 11/16/08  
 Collection Date: 09/17/08 10:31  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	1	mg/L		1		A4500-CI B	09/22/08 14:37 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:13 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 12:02 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 12:58 / eli-b
Sulfate	29	mg/L		1		A4500-SO4 E	09/25/08 08:41 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	8.00	s.u.		0.01		A4500-H B	09/22/08 11:37 / dd
Solids, Total Dissolved TDS @ 180 C	157	mg/L		10		A2540 C	09/22/08 18:42 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 04:46 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 04:46 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 04:46 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 04:46 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 04:46 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 04:46 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 04:46 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 04:46 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 04:46 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 04:46 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 04:46 / ts
Uranium	0.001	mg/L		0.001		E200.8	09/30/08 04:46 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.06	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.1	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.20	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.5	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.3	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.39	s.u.				FIELD	09/17/08 10:31 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-010  
 Client Sample ID: SWR-UG "UP"

Report Date: 11/16/08  
 Collection Date: 09/17/08 10:13  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	2	mg/L		1		A4500-Cl B	09/22/08 14:55 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:40 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:50 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 13:05 / eli-b
Sulfate	29	mg/L		1		A4500-SO4 E	09/25/08 08:50 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.95	s.u.		0.01		A4500-H B	09/22/08 12:51 / dd
Solids, Total Dissolved TDS @ 180 C	149	mg/L		10		A2540 C	09/22/08 18:44 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 05:54 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 05:54 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 05:54 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 05:54 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 05:54 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 05:54 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 05:54 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 05:54 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 05:54 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 05:54 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 05:54 / ts
Uranium	0.001	mg/L		0.001		E200.8	09/30/08 05:54 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.1	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 precision (±)	0.08	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 226 MDC	0.20	pCi/L				E903.0	10/14/08 15:07 / evm
Radium 228	0.6	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/09/08 08:49 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/09/08 08:49 / plj
Thorium 230	0.1	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	6.98	s.u.				FIELD	09/17/08 10:13 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-007  
 Client Sample ID: SWR-B

Report Date: 11/16/08  
 Collection Date: 09/17/08 10:51  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	2	mg/L		1		A4500-Cl B	09/22/08 14:51 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:16 / ljl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 12:05 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 13:02 / eli-b
Sulfate	30	mg/L		1		A4500-SO4 E	09/25/08 08:42 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	8.02	s.u.		0.01		A4500-H B	09/22/08 11:40 / dd
Solids, Total Dissolved TDS @ 180 C	158	mg/L		10		A2540 C	09/22/08 18:43 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 05:06 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 05:06 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 05:06 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 05:06 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 05:06 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 05:06 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 05:06 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 05:06 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 05:06 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 05:06 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 05:06 / ts
Uranium	0.002	mg/L		0.001		E200.8	09/30/08 05:06 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.1	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.08	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.20	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.7	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.3	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.7	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	7.36	s.u.				FIELD	09/17/08 10:51 / ***
*** Performed by Sampler							

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-008  
 Client Sample ID: SWR-C

Report Date: 11/16/08  
 Collection Date: 09/17/08 11:14  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	3	mg/L		1		A4500-Cl B	09/22/08 14:53 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:29 / ljj
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:45 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 13:03 / eli-b
Sulfate	30	mg/L		1		A4500-SO4 E	09/25/08 08:46 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	8.01	s.u.		0.01		A4500-H B	09/22/08 11:47 / dd
Solids, Total Dissolved TDS @ 180 C	155	mg/L		10		A2540 C	09/22/08 18:43 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 05:13 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 05:13 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 05:13 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 05:13 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 05:13 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 05:13 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 05:13 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 05:13 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 05:13 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 05:13 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 05:13 / ts
Uranium	0.002	mg/L		0.001		E200.8	09/30/08 05:13 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	-0.09	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.09	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.20	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	0.6	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	0.8	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	1.3	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	0.2	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.6	pCi/L				E907.0	10/21/08 13:09 / dmf
<b>FIELD PARAMETERS</b>							
pH	9.02	s.u.				FIELD	09/17/08 11:14 / ***

\*\*\* Performed by Sampler

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: Western Nuclear  
 Project: Split Rock Mill Site  
 Lab ID: C08090833-009  
 Client Sample ID: SWR-DG "DN"

Report Date: 11/16/08  
 Collection Date: 09/17/08 11:26  
 Date Received: 09/19/08  
 Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
<b>MAJOR IONS</b>							
Chloride	3	mg/L		1		A4500-Cl B	09/22/08 14:54 / sp
Fluoride	0.2	mg/L		0.1		A4500-F C	09/22/08 14:38 / ijl
Nitrogen, Ammonia as N	ND	mg/L		0.05		E350.1	09/30/08 11:48 / eli-b
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	09/25/08 13:04 / eli-b
Sulfate	30	mg/L		1		A4500-SO4 E	09/25/08 08:48 / jal
<b>PHYSICAL PROPERTIES</b>							
pH	7.98	s.u.		0.01		A4500-H B	09/22/08 12:47 / dd
Solids, Total Dissolved TDS @ 180 C	155	mg/L		10		A2540 C	09/22/08 18:43 / jah
<b>METALS - DISSOLVED</b>							
Aluminum	ND	mg/L		0.1		E200.8	09/30/08 05:20 / ts
Antimony	ND	mg/L		0.003		E200.8	09/30/08 05:20 / ts
Arsenic	ND	mg/L		0.01		E200.8	09/30/08 05:20 / ts
Beryllium	ND	mg/L		0.004		E200.8	09/30/08 05:20 / ts
Cadmium	ND	mg/L		0.001		E200.8	09/30/08 05:20 / ts
Lead	ND	mg/L		0.005		E200.8	09/30/08 05:20 / ts
Manganese	ND	mg/L		0.05		E200.8	09/30/08 05:20 / ts
Molybdenum	ND	mg/L		0.1		E200.8	09/30/08 05:20 / ts
Nickel	ND	mg/L		0.05		E200.8	09/30/08 05:20 / ts
Selenium	ND	mg/L		0.005		E200.8	09/30/08 05:20 / ts
Thallium	ND	mg/L		0.001		E200.8	09/30/08 05:20 / ts
Uranium	0.002	mg/L		0.001		E200.8	09/30/08 05:20 / ts
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226	0.08	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 precision (±)	0.25	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 226 MDC	0.41	pCi/L				E903.0	10/14/08 11:05 / evm
Radium 228	2.7	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 precision (±)	1.6	pCi/L				RA-05	10/08/08 11:21 / plj
Radium 228 MDC	2.5	pCi/L				RA-05	10/08/08 11:21 / plj
Thorium 230	-0.1	pCi/L				E907.0	10/21/08 13:09 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E907.0	10/21/08 13:09 / dmf
- See Case Narrative regarding Ra226 analysis.							
<b>FIELD PARAMETERS</b>							
pH	9.07	s.u.				FIELD	09/17/08 11:26 / ***
*** Performed by Sampler							

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