

WORTHINGTON MILLER ENVIRONMENTAL, LLC

201 Linden, Suite 301
Fort Collins, Colorado 80524
970.672.8770

July 3, 2013

Attn: Document Control Desk
Deputy Director
Decommission and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
US Nuclear Regulatory Commission
Washington DC 20555
Mail Stop T8F5

Deputy Director
Decommission and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
US Nuclear Regulatory Commission
11545 Rockville Pike
Mail Stop T8F5
Rockville, Maryland 20852-2738

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

Dear Deputy Director:

The combined surface water and groundwater sampling results conducted in May 2013 for the first half of 2013 for the Split Rock Uranium mill tailings facility are enclosed. This monitoring was performed as required by license conditions 24 and 74. Groundwater and surface water sampling was also performed earlier during the first half of 2013 in January to confirm some anomalous values that were observed in the second half of 2012 sampling. The sampling done in May 2013 was done during the time of year that the first half sampling is usually conducted.

Figure 1 shows the location of the monitor wells and the surface water sample locations. The analytical results for the first half of 2013 are found in Table 1. Figures are also included in the enclosure, which show the temporal changes in water quality for key constituents. Laboratory data reports for each well and surface water location are also included for the sampling event.

It should be noted that spikes in concentrations for sulfate and uranium noted in the surface water locations SW-1 through SW-5 during the second half of 2012 have returned to previous concentrations for those locations in May 2013.

The remaining water quality data from both sampling episodes indicates that the parameters meet the required limits in the license and are consistent with previous values and with values predicted by the site model.

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

Sincerely,

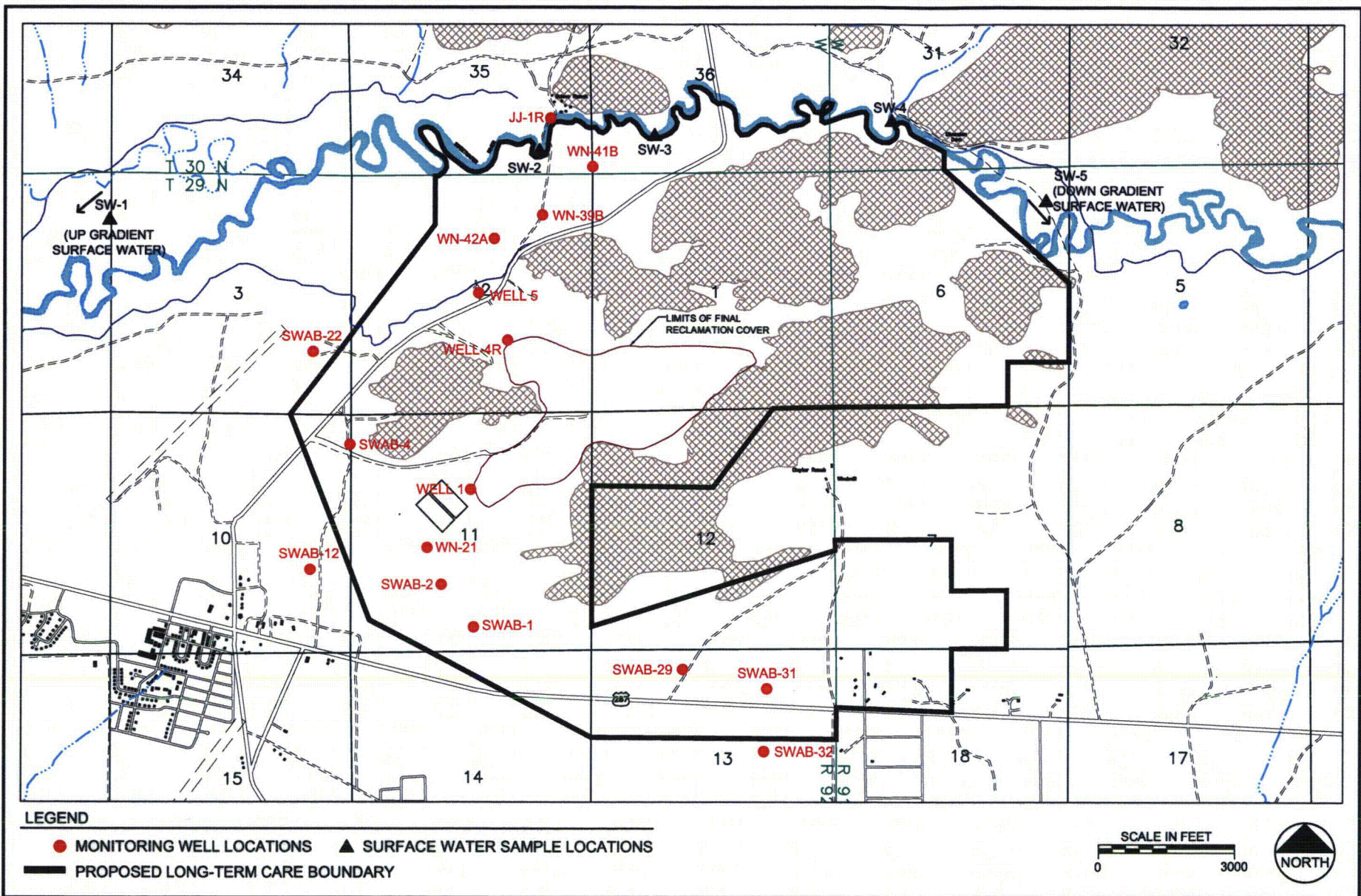


Louis Miller
Consulting Engineer

Enclosure

cc. Steve Hall, Stoller
Scott Surovchak, DOE
Deb Harris, WDEQ
Anne Thomas, WNI

FSME20



MFG, Inc.
consulting scientists and engineers

FIGURE 1
SURFACE WATER AND GROUND WATER MONITORING LOCATIONS

Date:	APRIL 2006
Project:	003-347/2006
File:	GW-MONIT-01.DWG

Table 1. WNI Split Rock Mill Groundwater and Surface Water Quality
1st Half 2013 (Sampled: 5/1/13 to 5/2/13)

Parameter ⁽¹⁾	JJ-1R	SWAB-1R ⁽³⁾	SWAB-2	SWAB-12R ⁽⁴⁾	SWAB-4	SWAB-22	SWAB-29	SWAB-31	SWAB-32	WN-1	WN-4R
Aluminum (mg/L)										<0.1	1.1
Ammonia, Free as N ⁽²⁾ (mg/L)										0.6431	0.7707
Antimony (mg/L)										<0.003	<0.003
Arsenic (mg/L)										<0.01	0.01
Beryllium (mg/L)										<0.004	<0.004
Cadmium (mg/L)										0.001	0.02
Chloride (mg/L)										84	111
Conductivity Field (µS/cm)	592	2800	3970	440	1097	566	408	383	448	3900	5250
Fluoride (mg/L)										0.8	6.4
Lead (mg/L)										<0.005	<0.005
Manganese (mg/L)										33	90
Molybdenum (mg/L)										<0.1	<0.1
Nickel (mg/L)										0.06	0.48
Nitrate + Nitrite as N (mg/L)										18	141
pH Field (std units)	8.02	7.48	7.04	8.18	7.53	7.84	7.84	7.89	8.19	6.8	6.76
pH Lab (std units)										6.6	6.4
Radium-226 (pCi/L)										0.70 +/- 0.20	<0.18
Radium-228 (pCi/L)										<1.3	<1.3
Selenium (mg/L)										0.01	0.048
Sulfate (mg/L)	53	1070	1310	59	589	42	44	28	46	2720	3100
TDS (mg/L)										4040	4840
Temperature Field (C)	9.2	13.3	15.8	11.3	14.4	15.1	15.9	14.3	15.4	10.5	11.5
Thallium (mg/L)										0.008	0.001
Thorium-230 (pCi/L)										<0.2	<0.1
Uranium (mg/L)	0.014	2.15	1.16	0.061	1.39	0.032	0.035	0.032	0.129	2.31	0.424
Water Elevation (ft)	NA	6295.35	6293	6298.5	6291.3	6286.7	6277.8	6270.55	6272.5	6294.15	6284.7

Notes:

(1) All metals are dissolved analyte concentrations.

(2) 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.

(3) Well SWAB-1R installed as replacement for SWAB-1. Water Elevation taken at SWAB-1.

(4) Well SWAB-12R installed as replacement for SWAB-12. Water Elevation taken at SWAB-12.

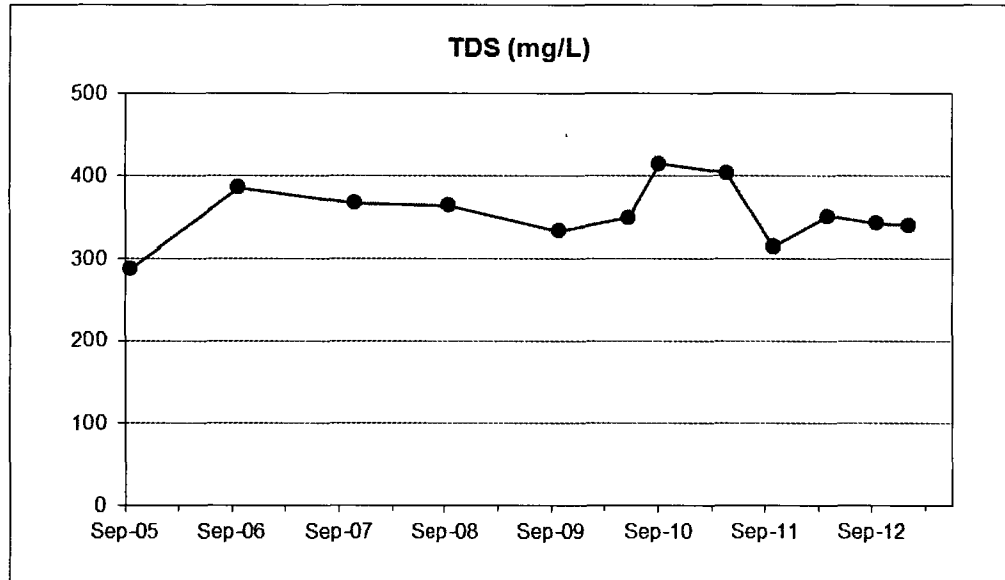
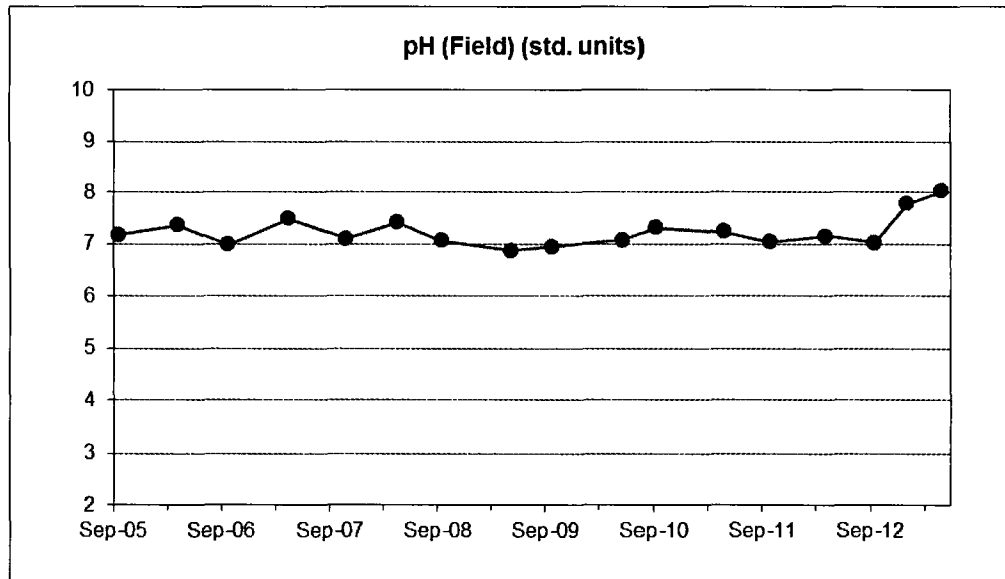
Table 1. WNI Split Rock Mill Groundwater and Surface Water Quality
1st Half 2013 (Sampled: 5/1/13 to 5/2/13)

Parameter ⁽¹⁾	WN-5	WN-21	WN-39B	WN-41B	WN-42A	SW-1	SW-2	SW-3	SW-4	SW-5
Aluminum (mg/L)	<0.1	<0.1								
Ammonia, Free as N ⁽²⁾ (mg/L)	0.0004	0.0750								
Antimony (mg/L)	<0.003	<0.003								
Arsenic (mg/L)	<0.01	<0.01								
Beryllium (mg/L)	<0.004	<0.004								
Cadmium (mg/L)	<0.001	<0.001								
Chloride (mg/L)	106	12								
Conductivity Field (µS/cm)	3580	577	826	2360	3700	263	252	246	256	256
Fluoride (mg/L)	<0.1	0.2								
Lead (mg/L)	<0.005	<0.005								
Manganese (mg/L)	0.59	0.22								
Molybdenum (mg/L)	<0.1	<0.1								
Nickel (mg/L)	<0.05	<0.05								
Nitrate + Nitrite as N (mg/L)	47	3.6								
pH Field (std units)	7.23	8.04	8.14	8.58	7.47	9.05	8.93	8.96	8.77	8.81
pH Lab (std units)	7.24	7.68								
Radium-226 (pCi/L)	<0.2	<0.2								
Radium-228 (pCi/L)	1.7 +/- 0.9	<1.4								
Selenium (mg/L)	0.016	<0.005								
Sulfate (mg/L)	1720	83	190	373	1800	20	21	21	22	22
TDS (mg/L)	3680	386								
Temperature Field (C)	9.6	11.1	8.3	8.8	9.8	3.4	3.6	3.6	6.4	5.9
Thallium (mg/L)	<0.001	<0.001								
Thorium-230 (pCi/L)	<0.2	<0.2								
Uranium (mg/L)	1.88	0.062	0.37	0.01	1.54	0.003	0.003	0.003	0.003	0.003
Water Elevation (ft)	6281.05	6295.05	6273.55	6271.55	6276.75	NA	NA	NA	NA	NA

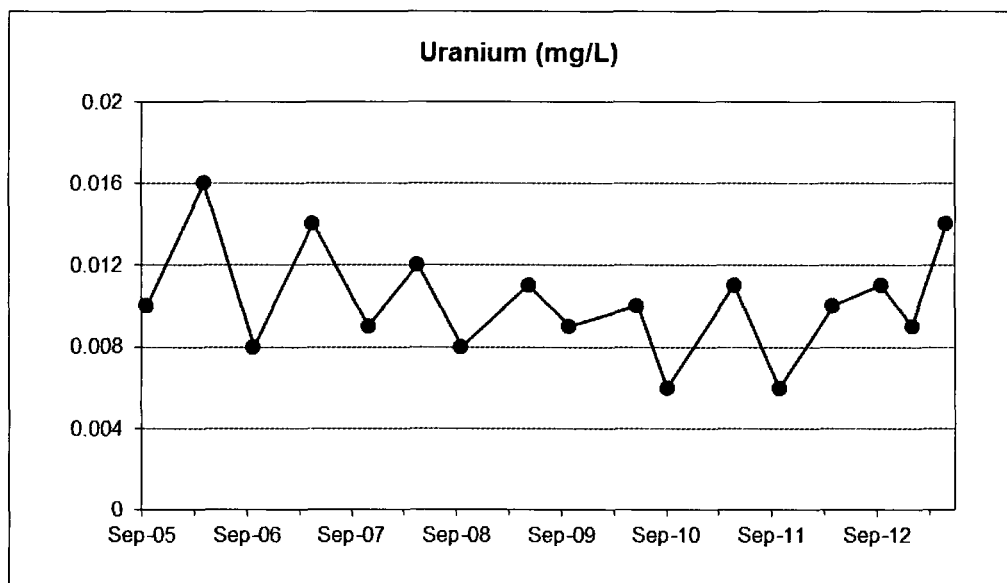
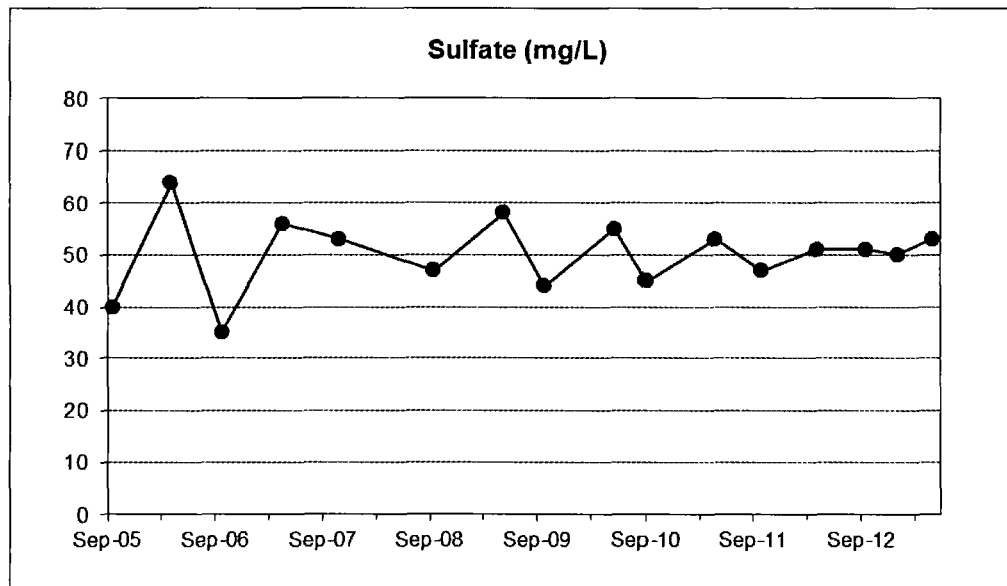
Notes:

- (1) All metals are dissolved analyte concentrations.
- (2) 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.
- (3) Well SWAB-1R installed as replacement for SWAB-1. Water Elevation taken at SWAB-1.
- (4) Well SWAB-12R installed as replacement for SWAB-12. Water Elevation taken at SWAB-12.

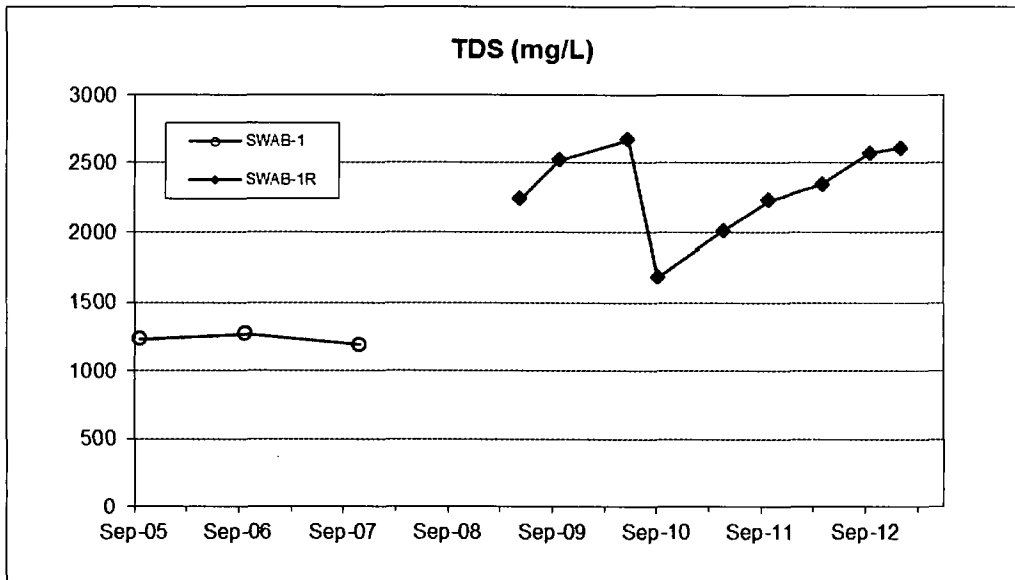
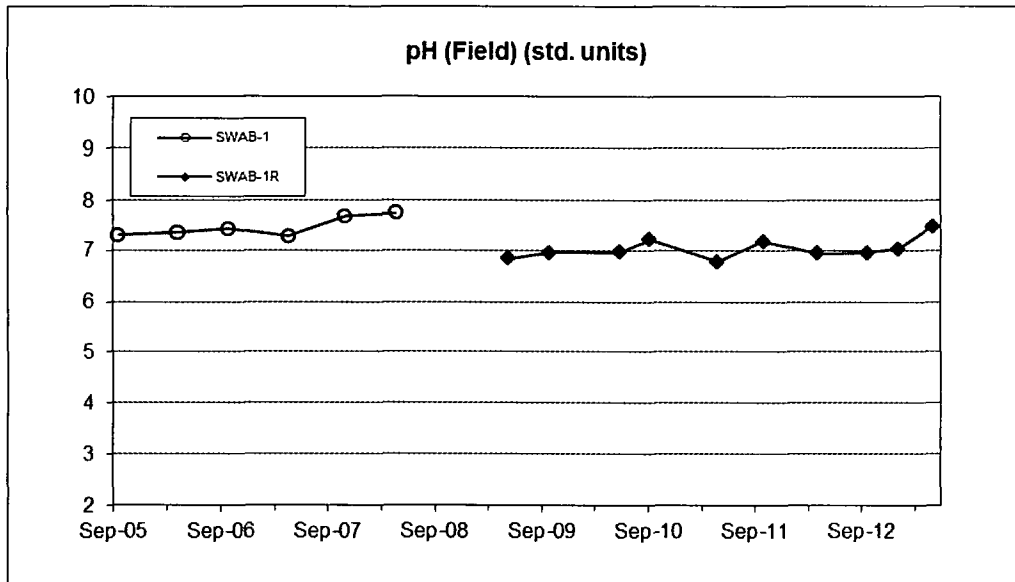
JJ-1R



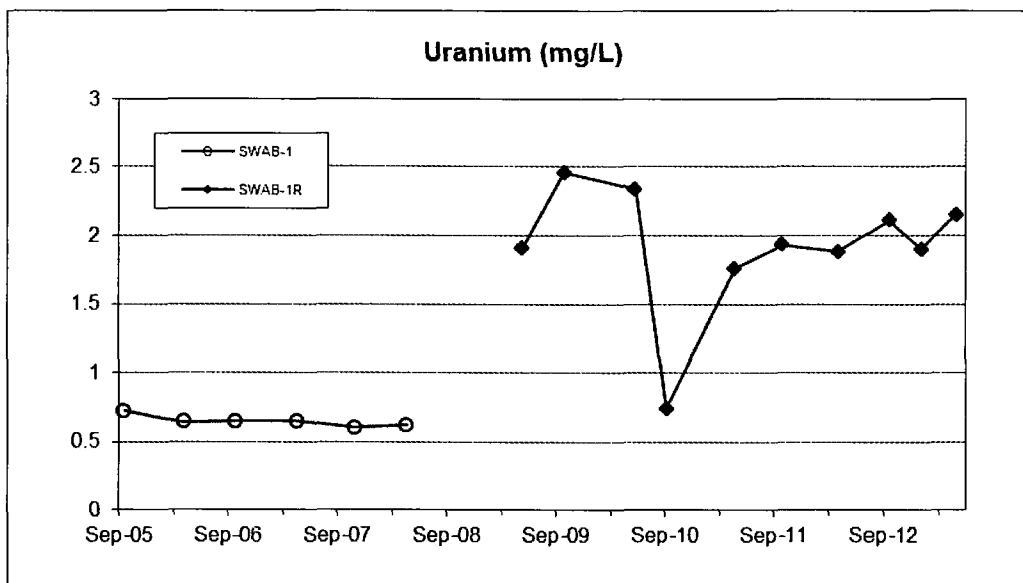
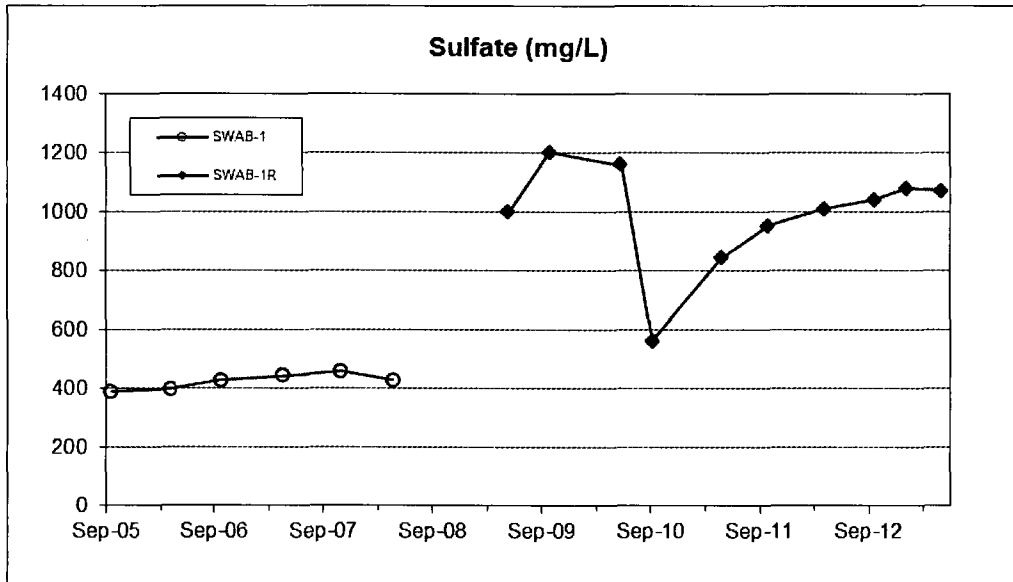
JJ-1R



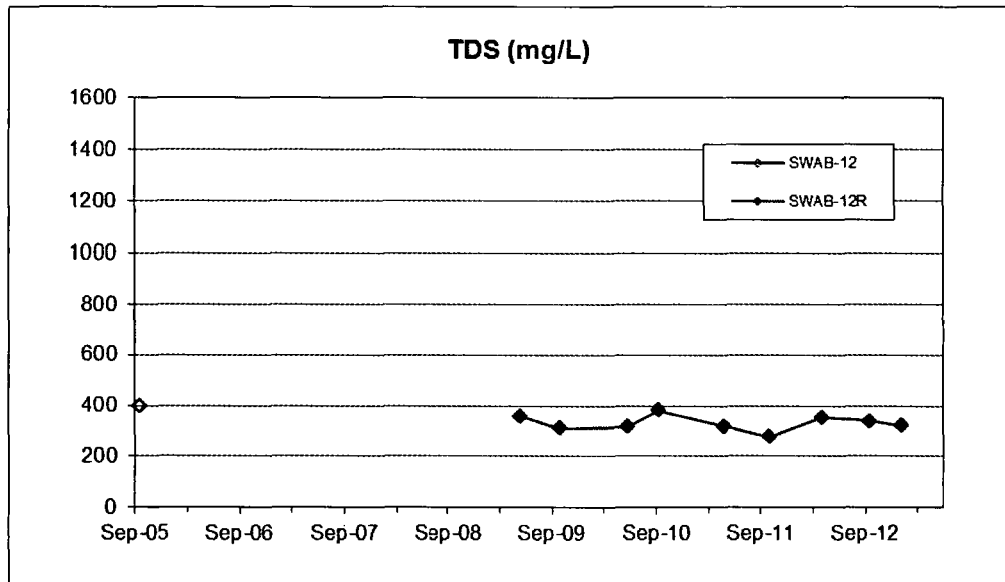
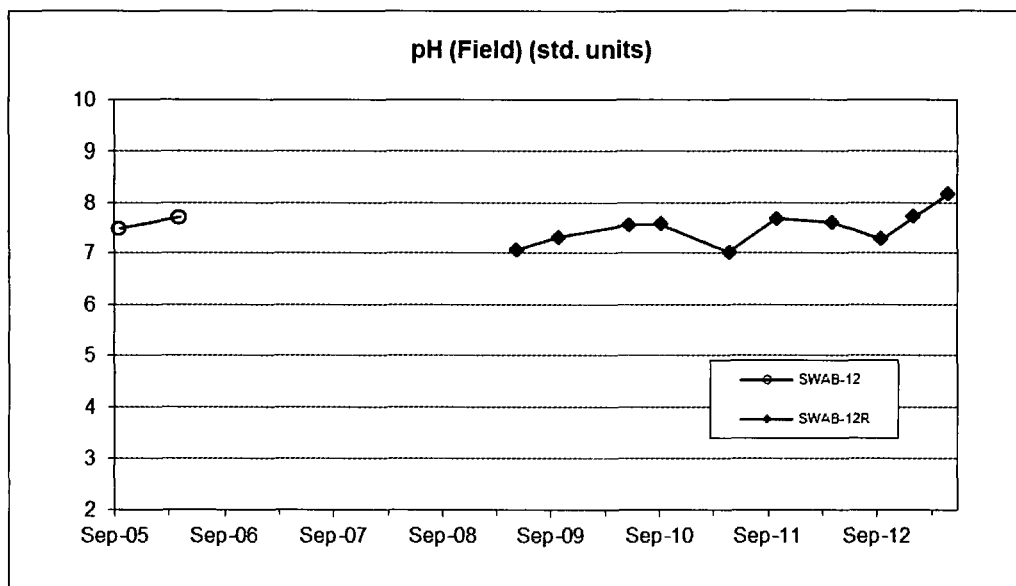
SWAB-1 and 1R



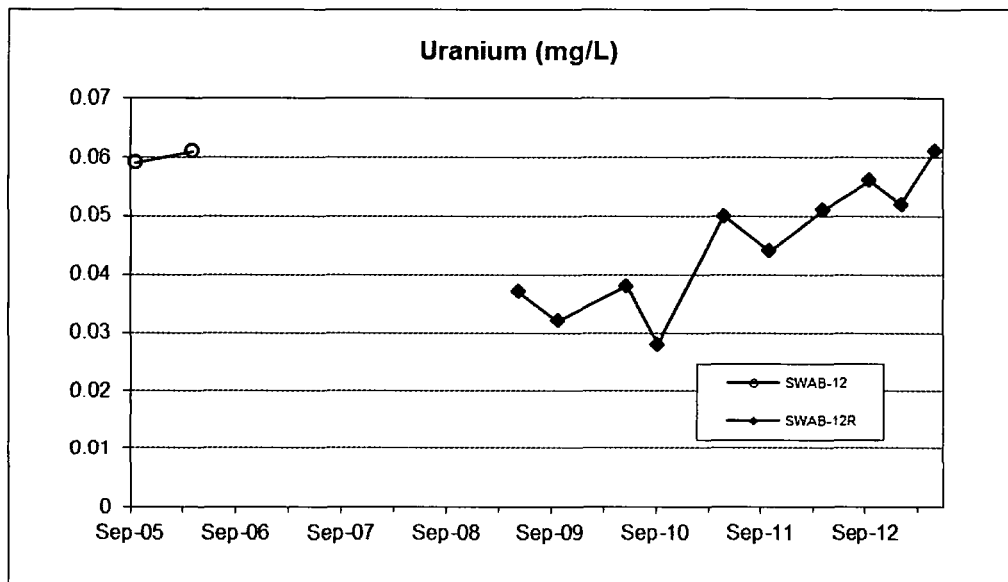
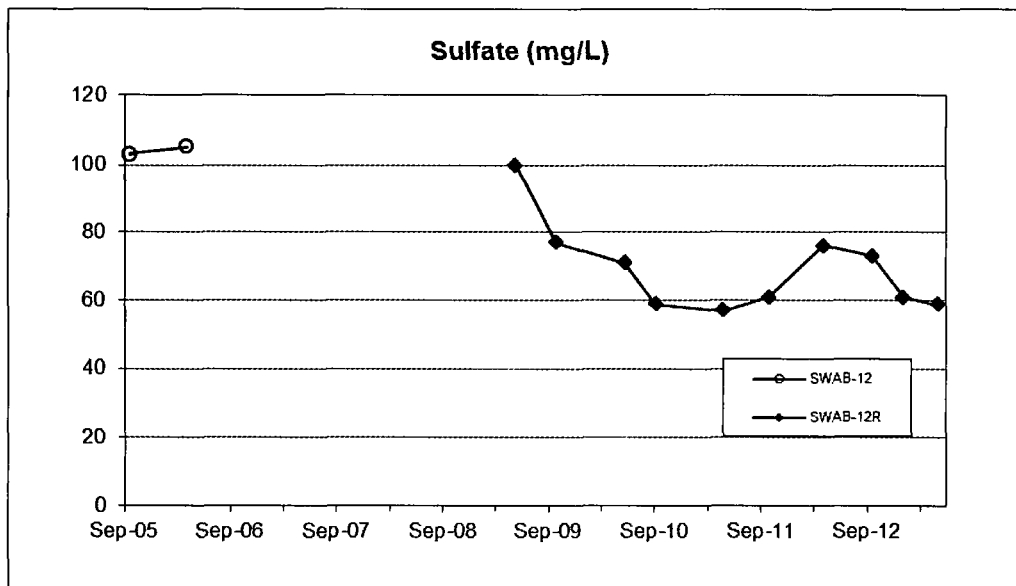
SWAB-1 and 1R



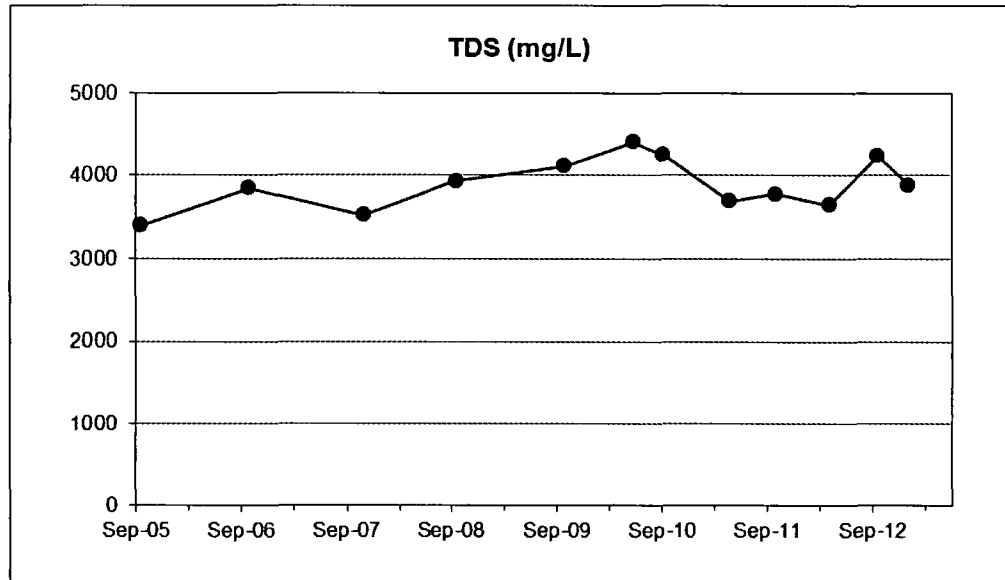
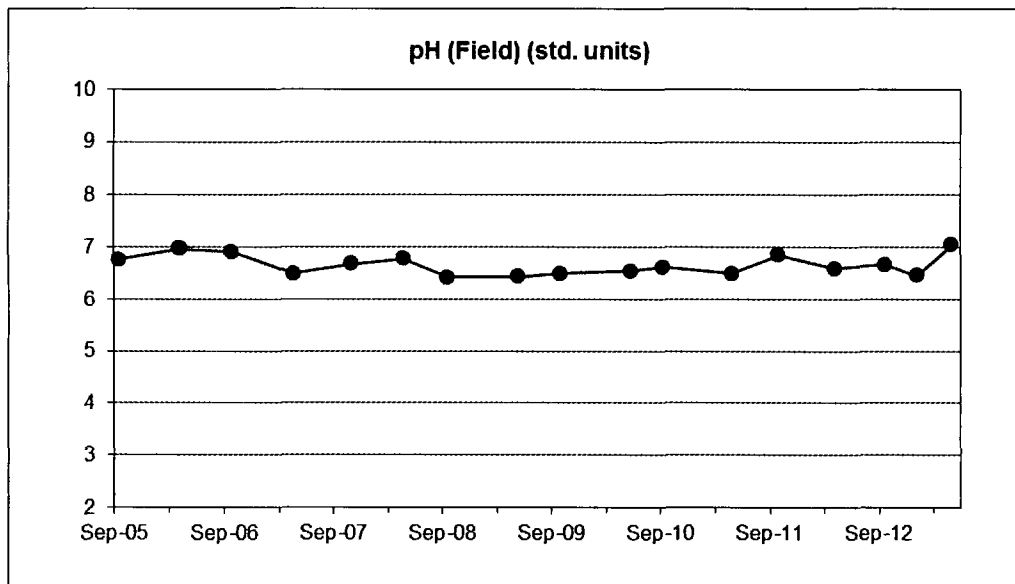
SWAB-12 and 12R



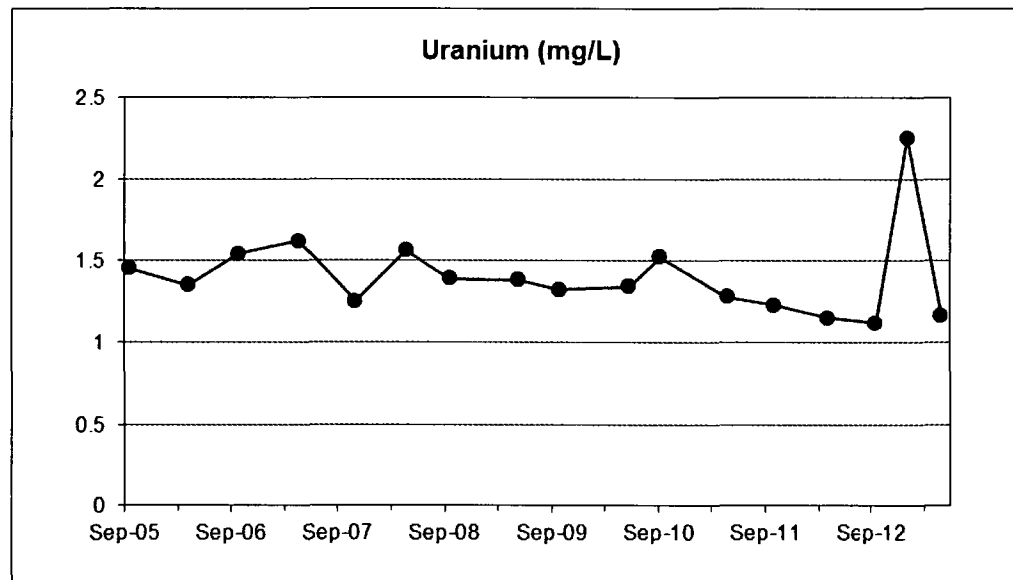
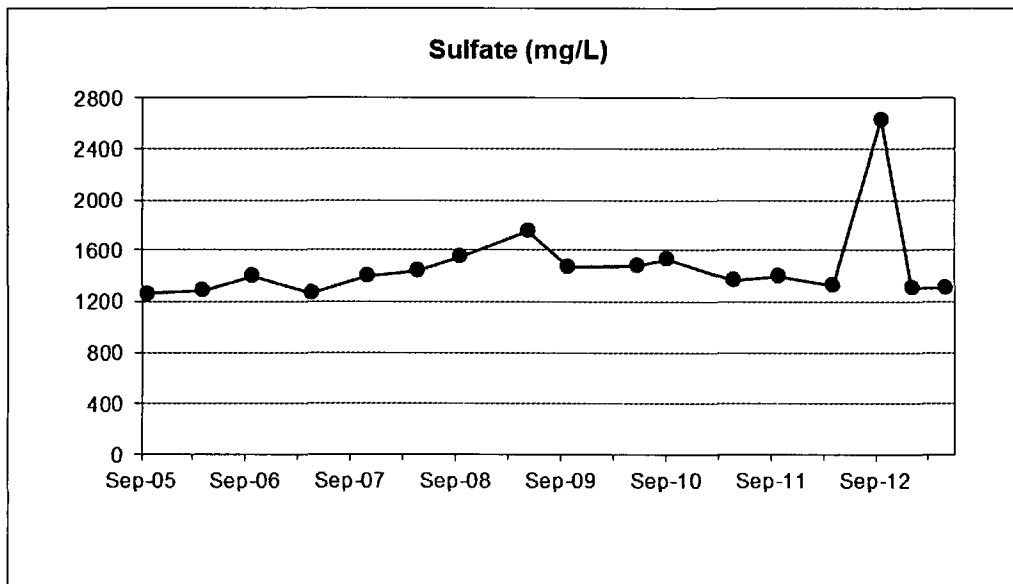
SWAB-12 and 12R



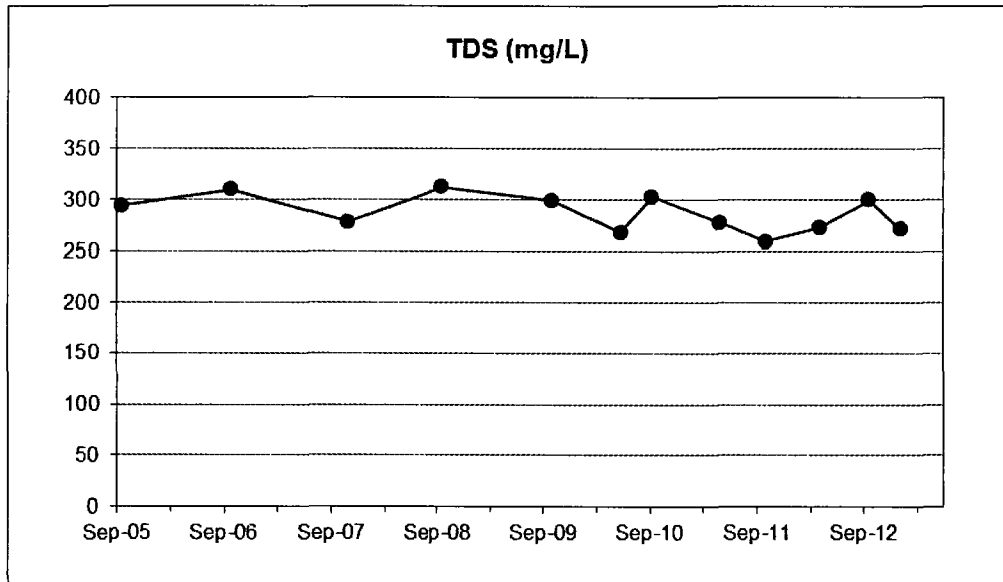
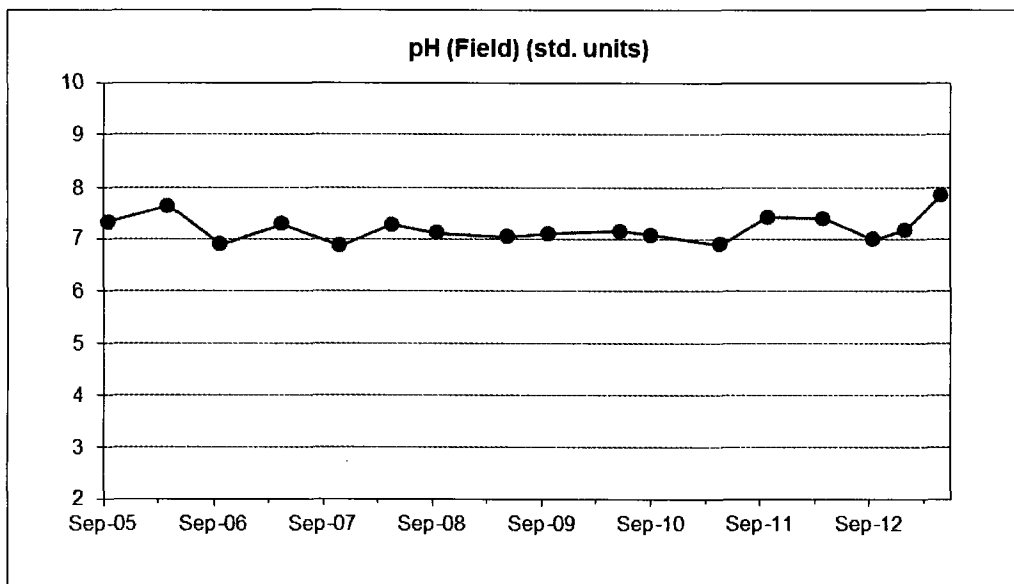
SWAB-2



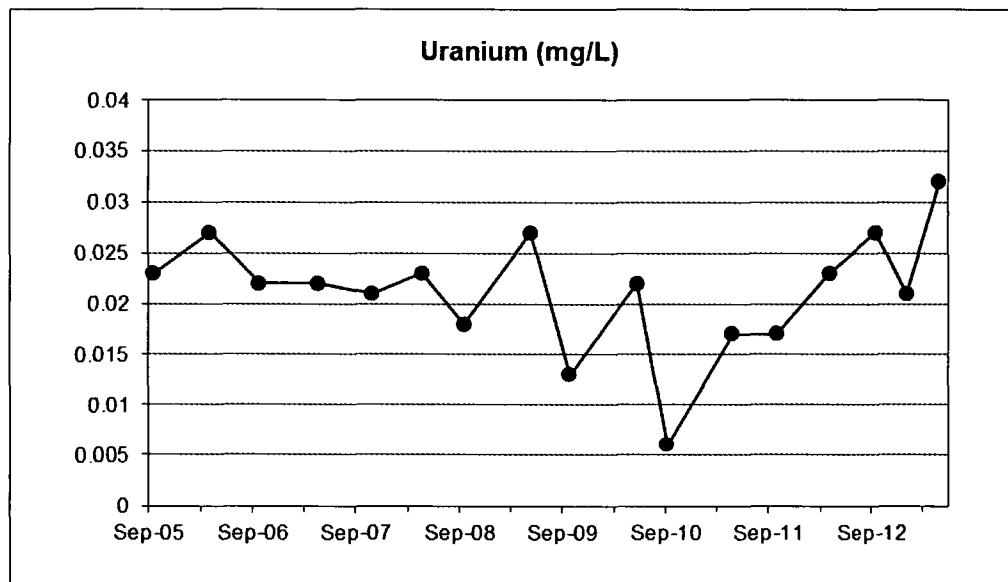
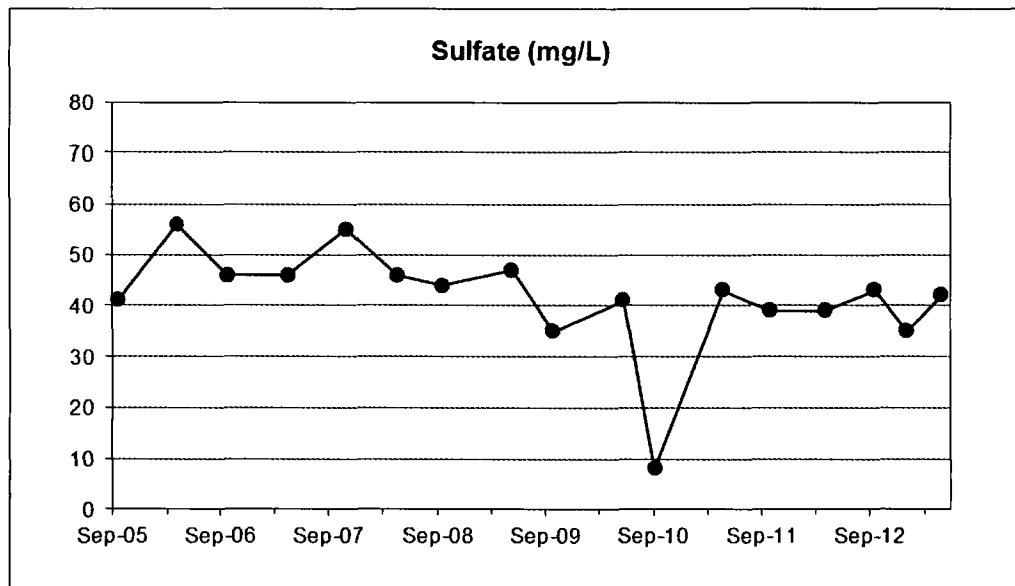
SWAB-2



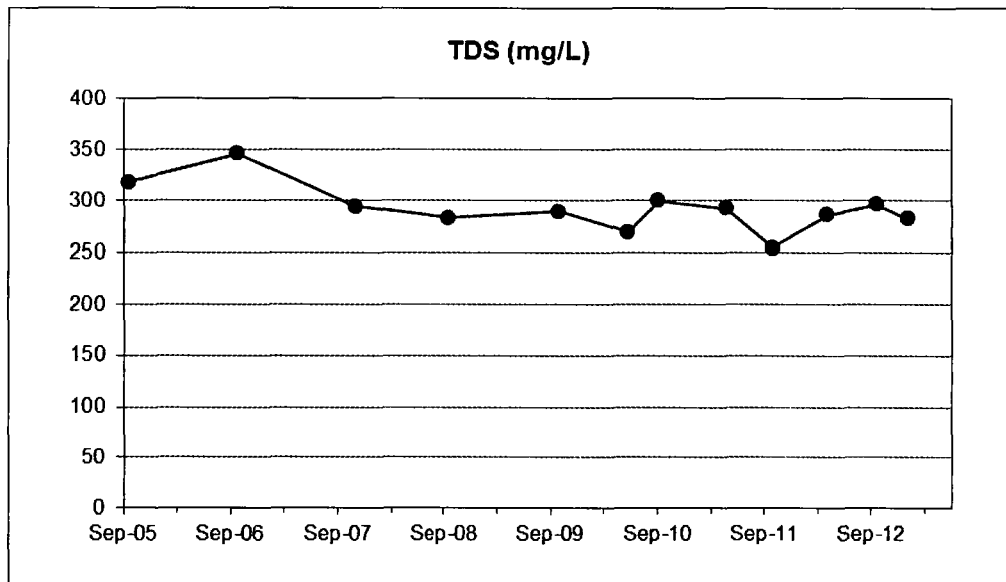
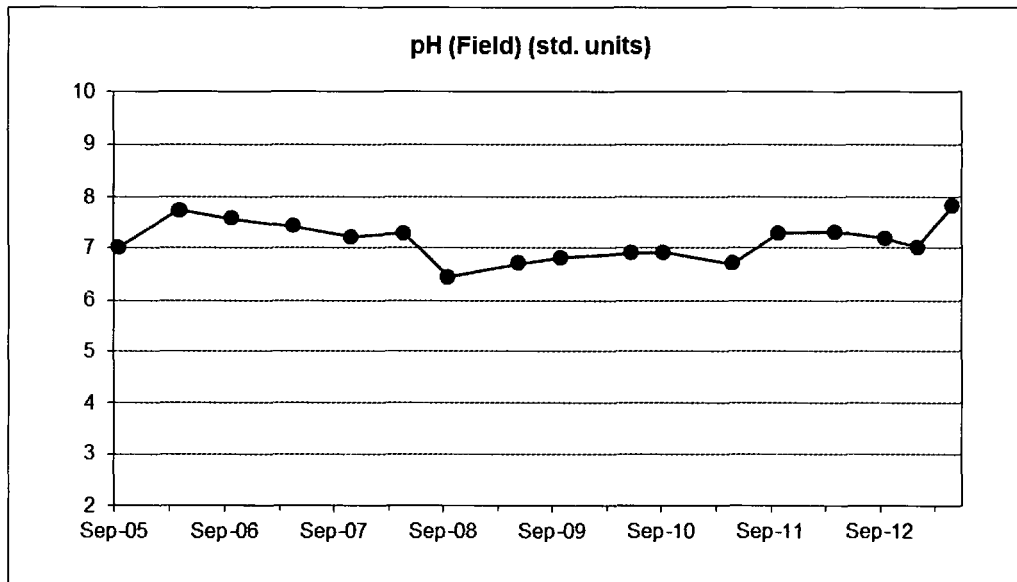
SWAB-22



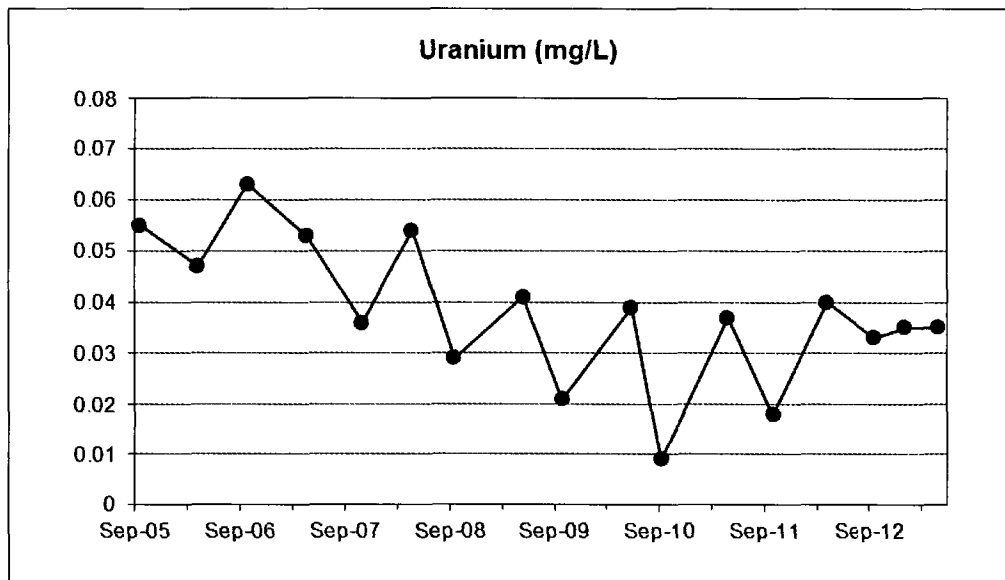
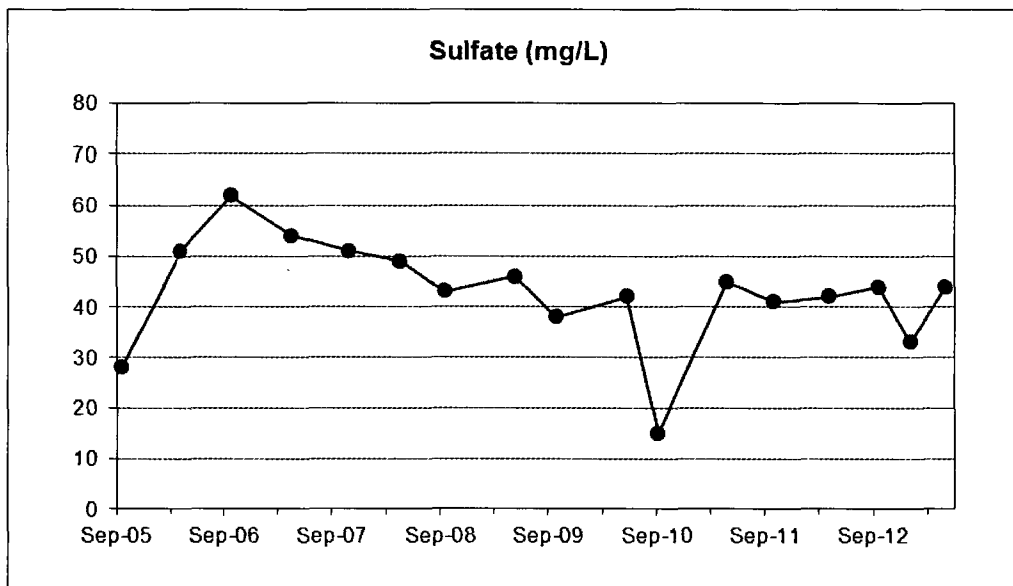
SWAB-22



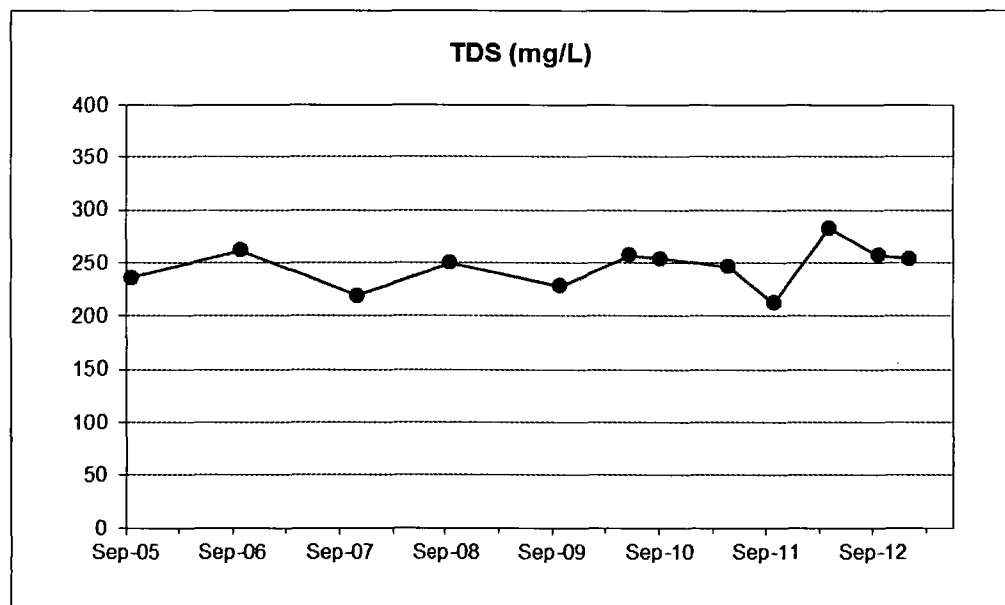
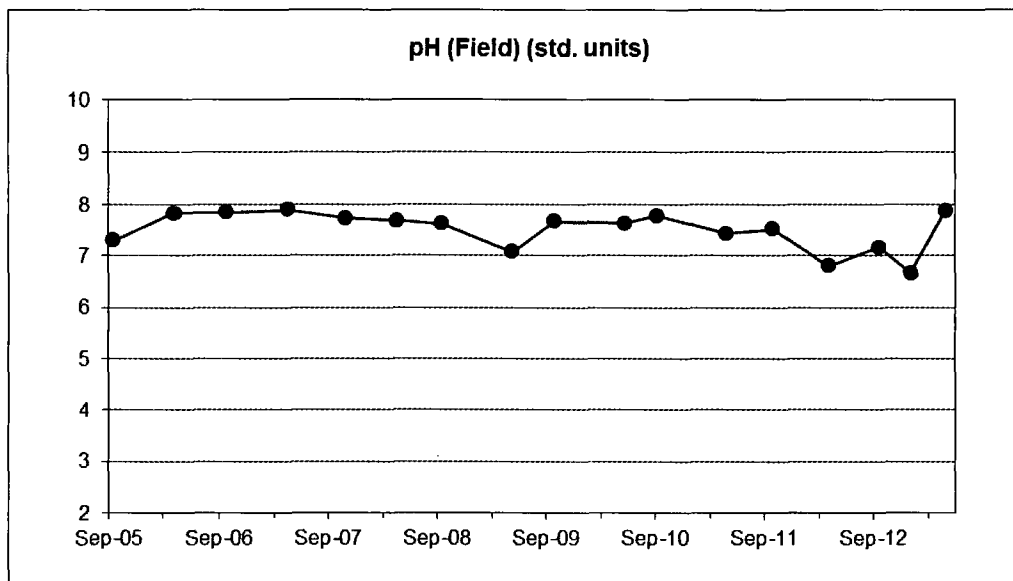
SWAB-29



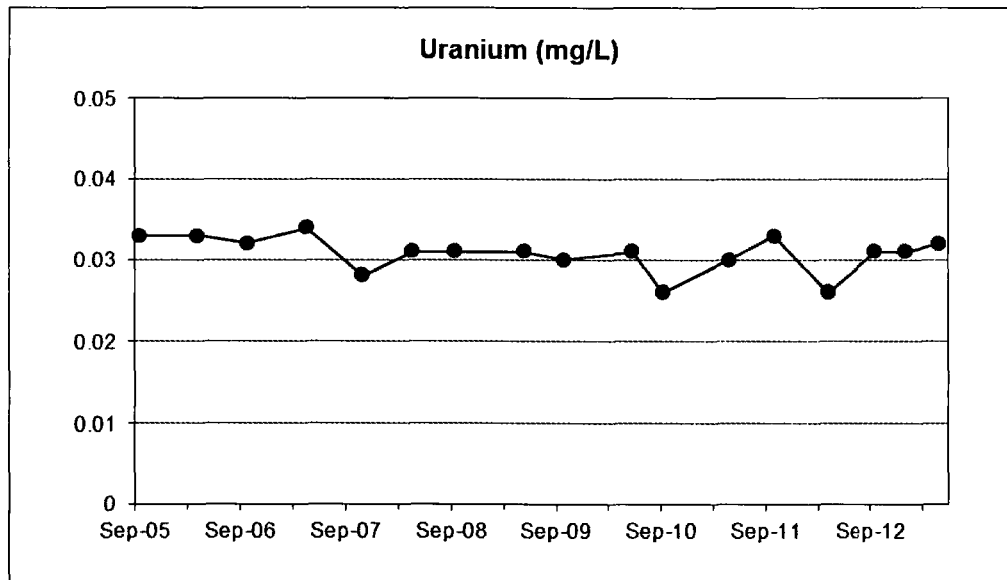
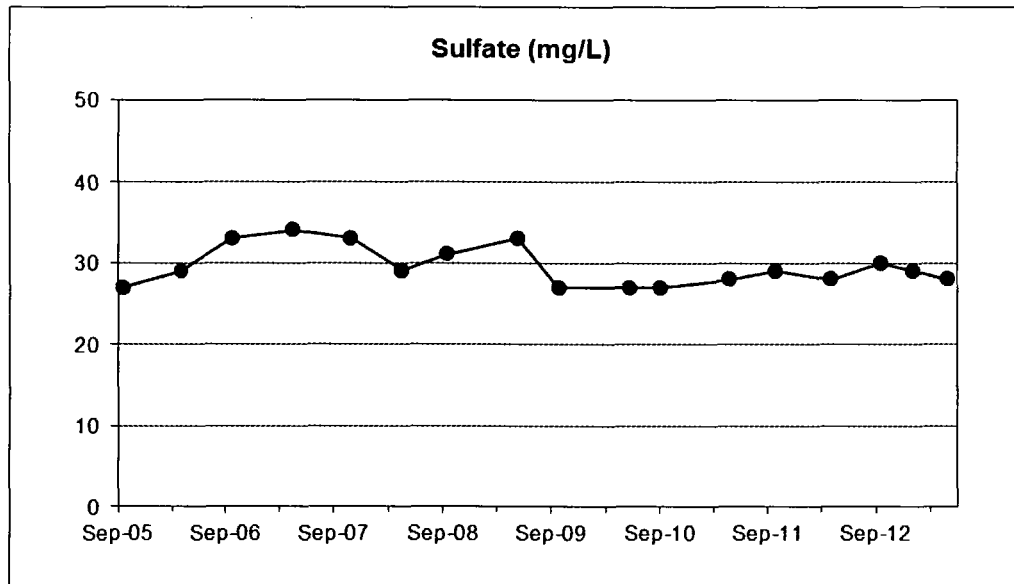
SWAB-29



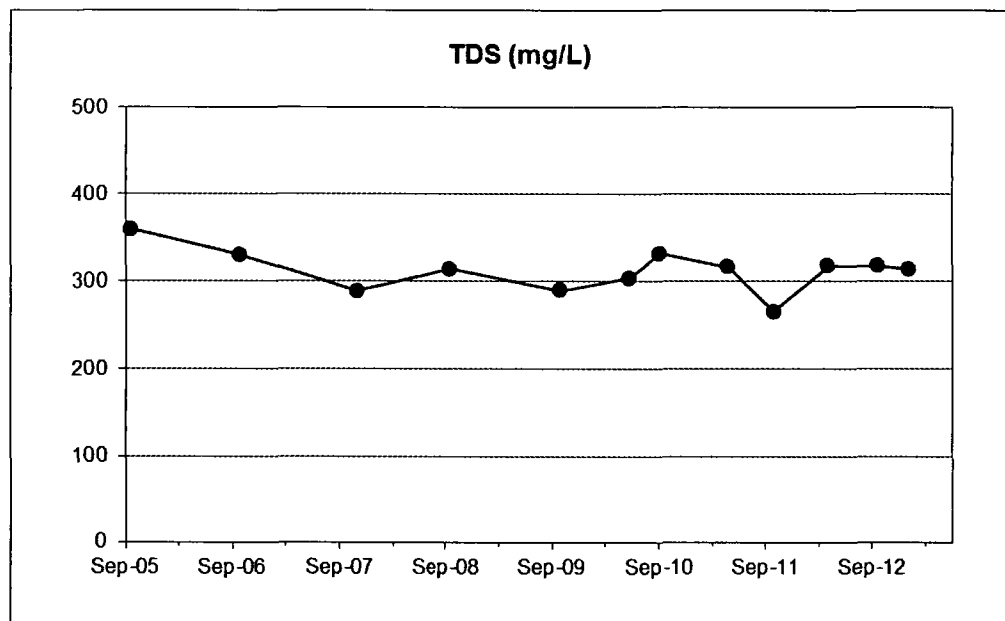
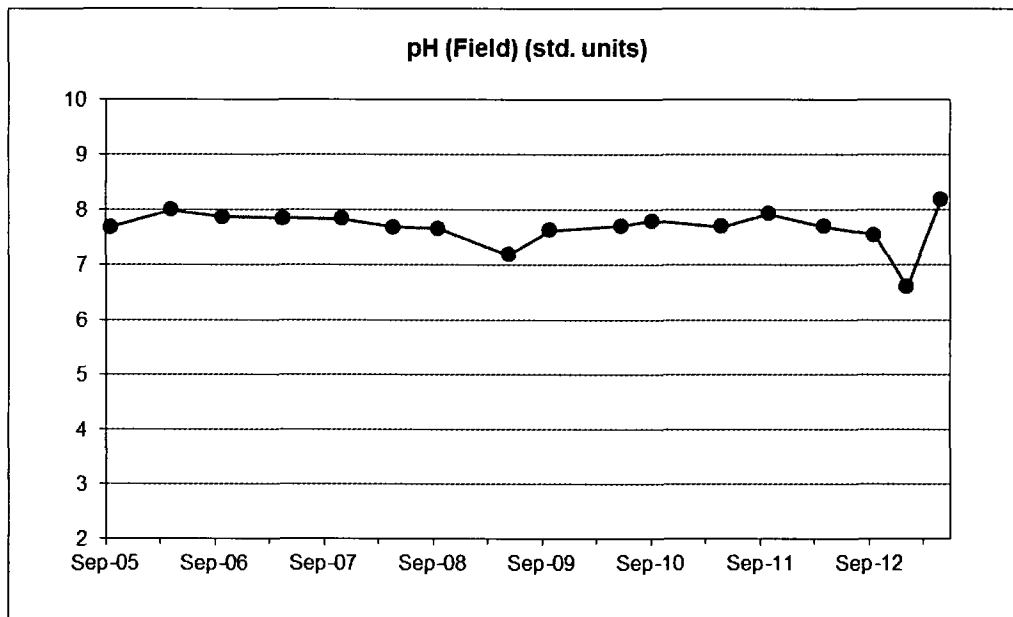
SWAB-31



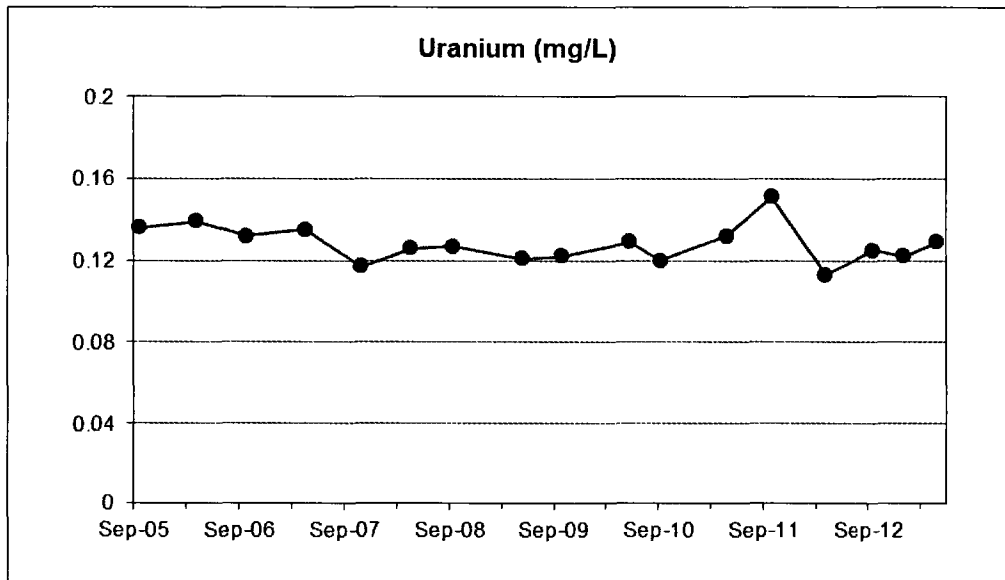
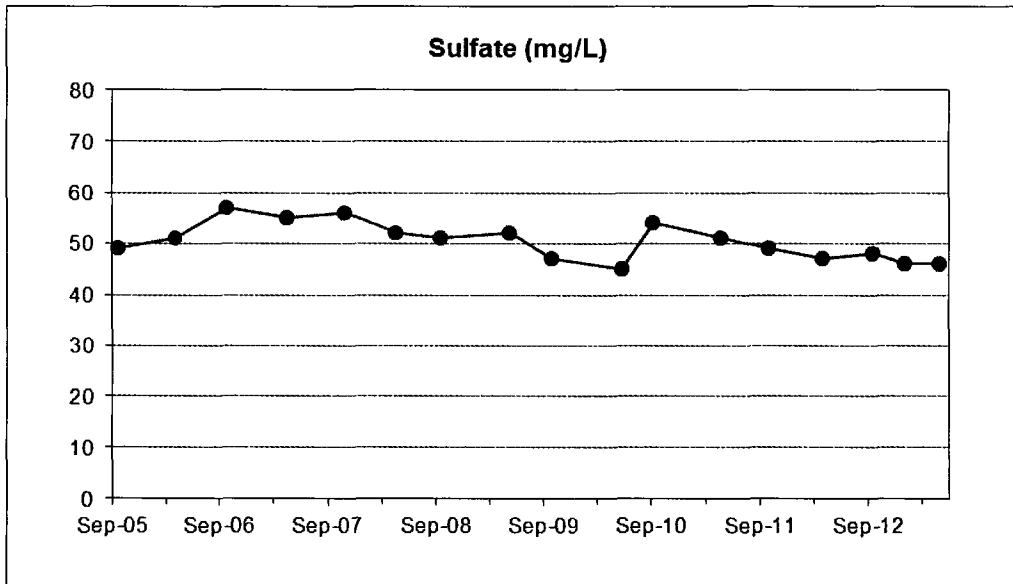
SWAB-31



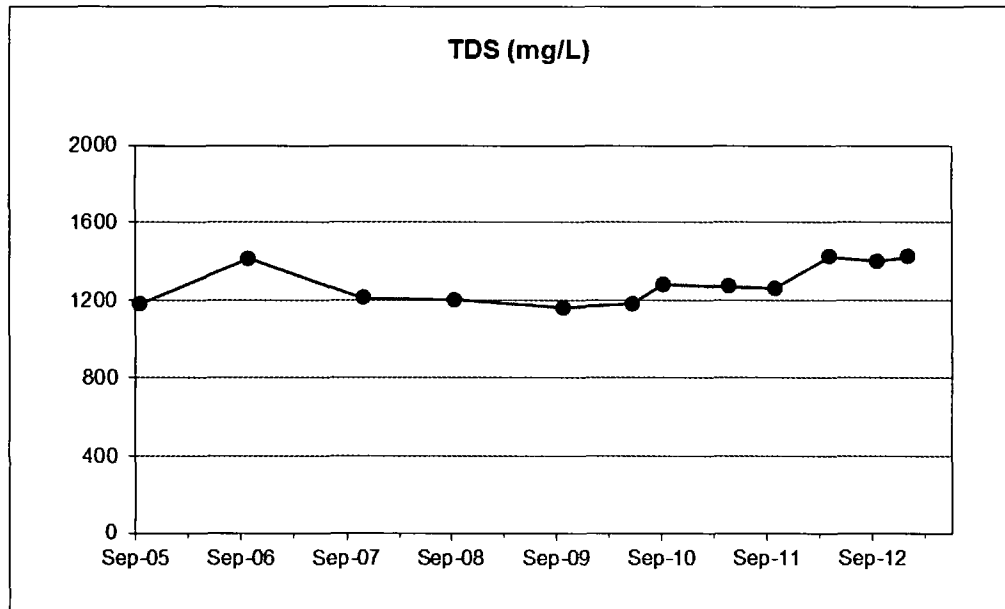
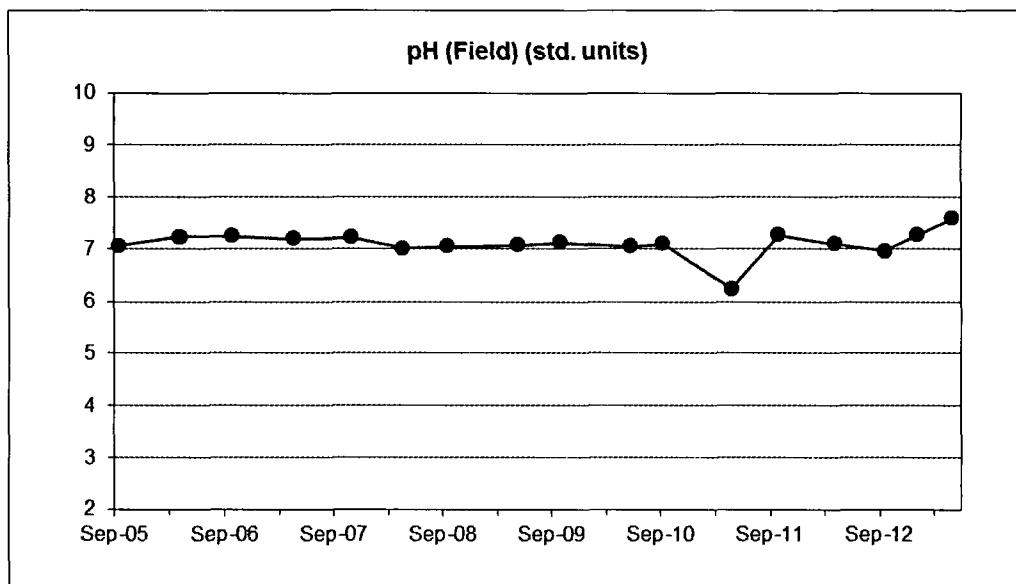
SWAB-32



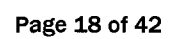
SWAB-32



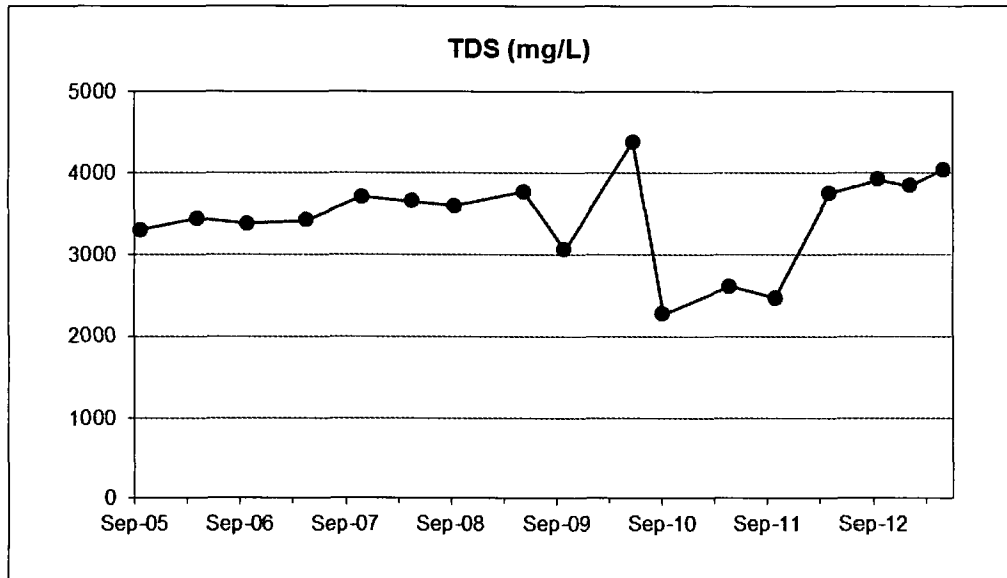
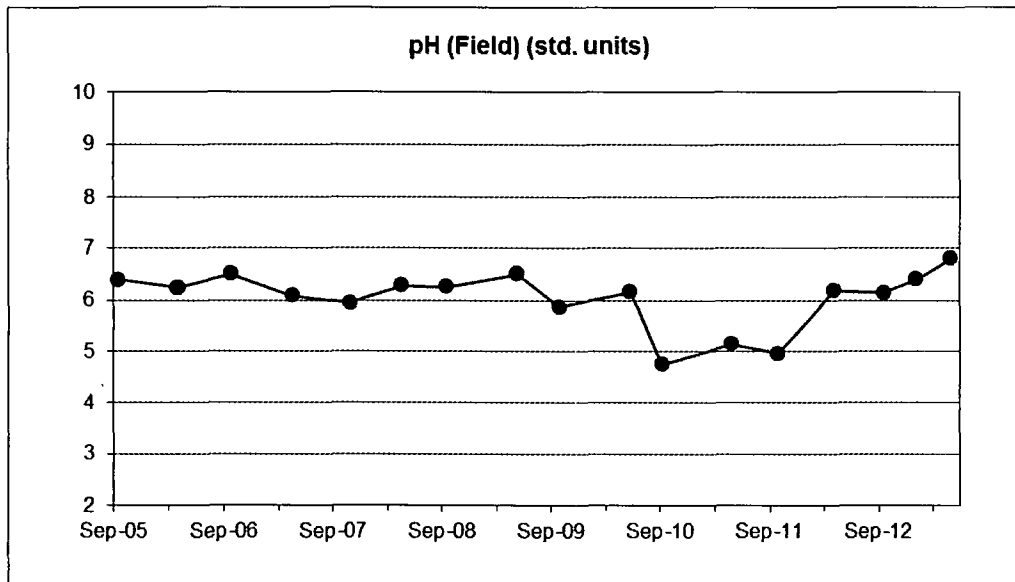
SWAB-4



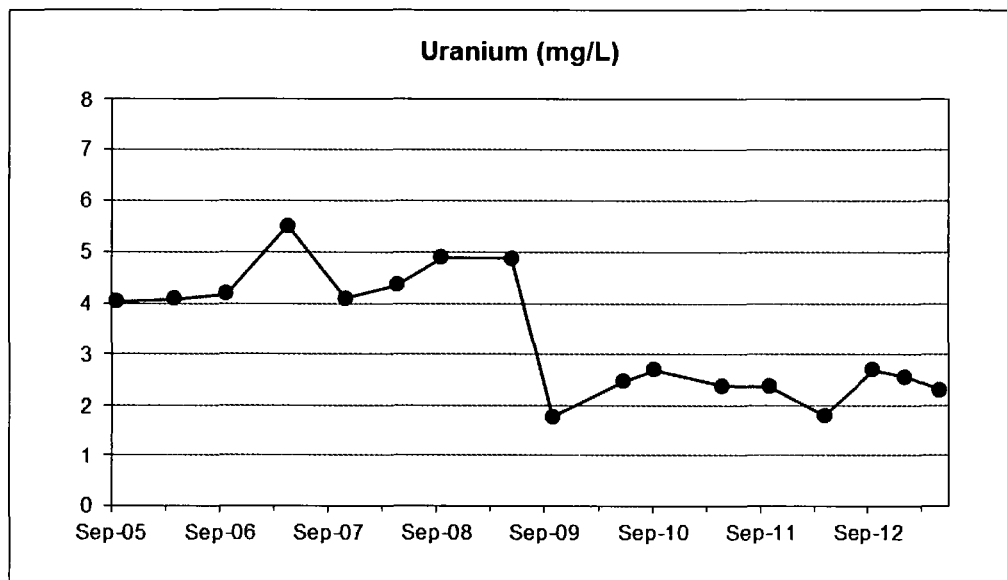
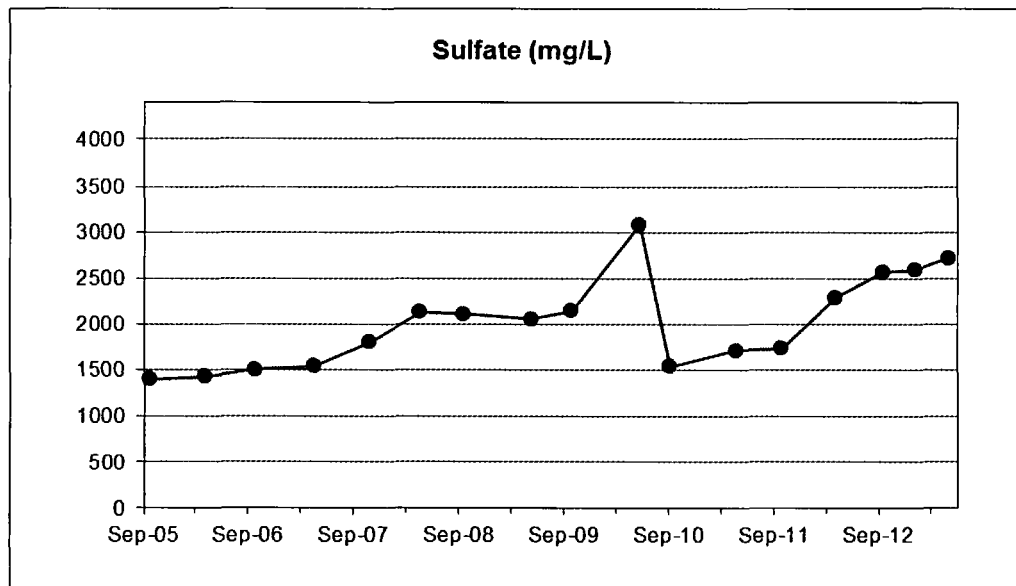
Sulfate (mg/L)



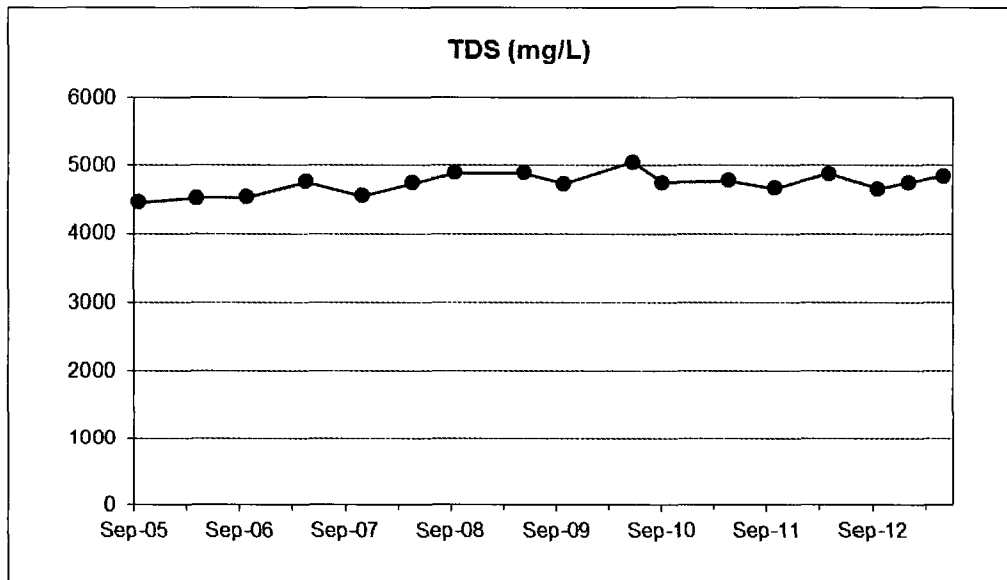
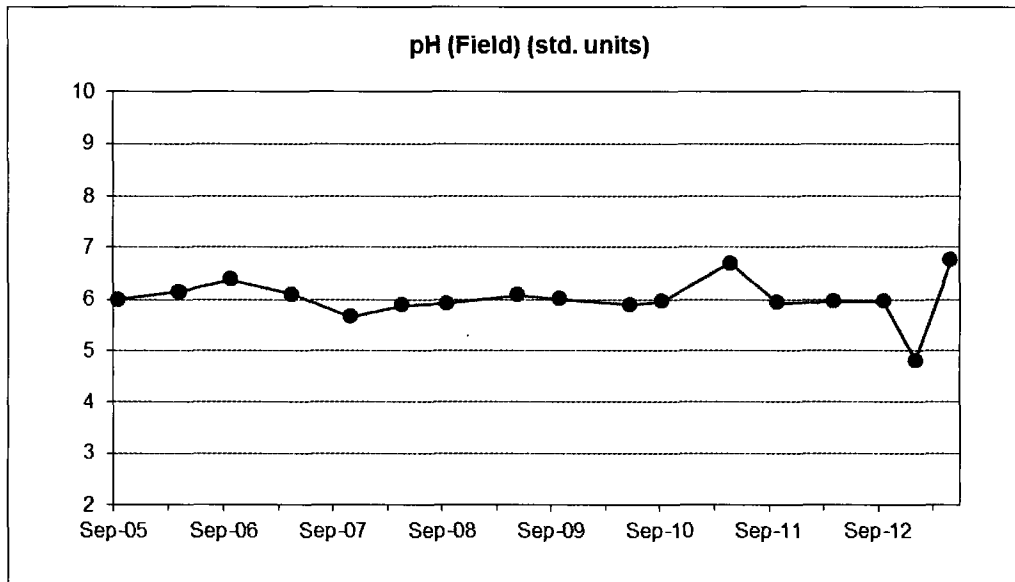
WN-1



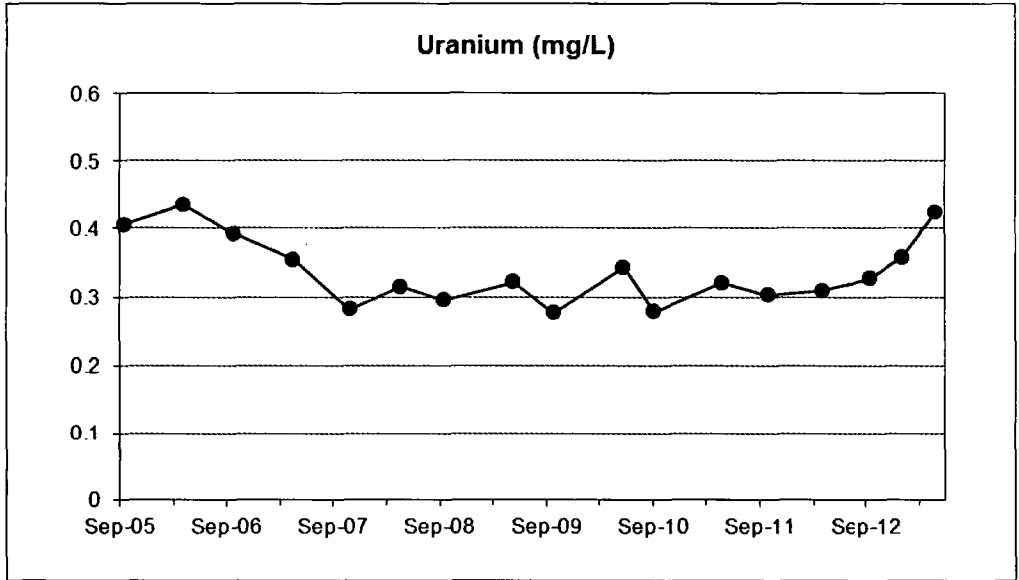
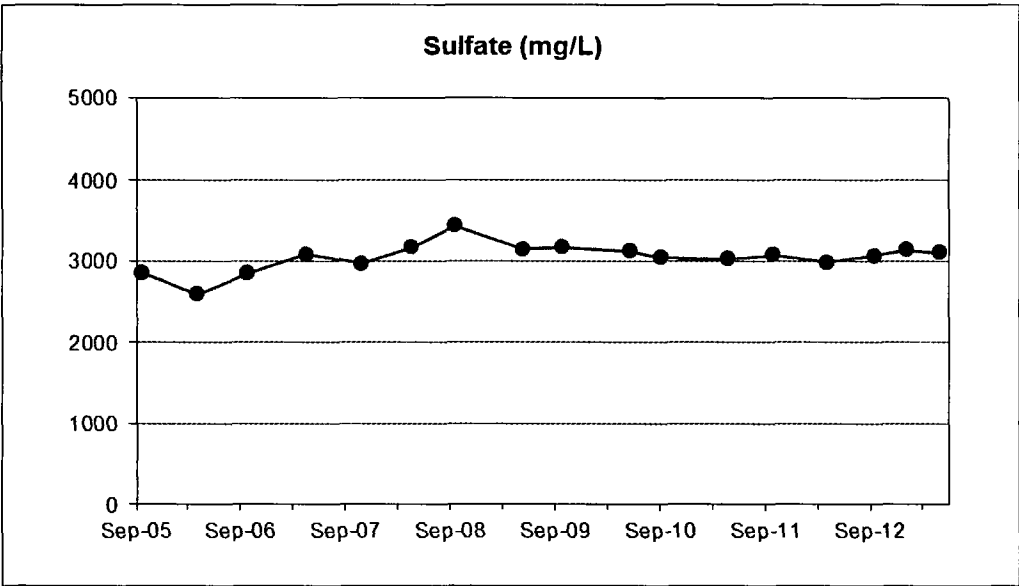
WN-1



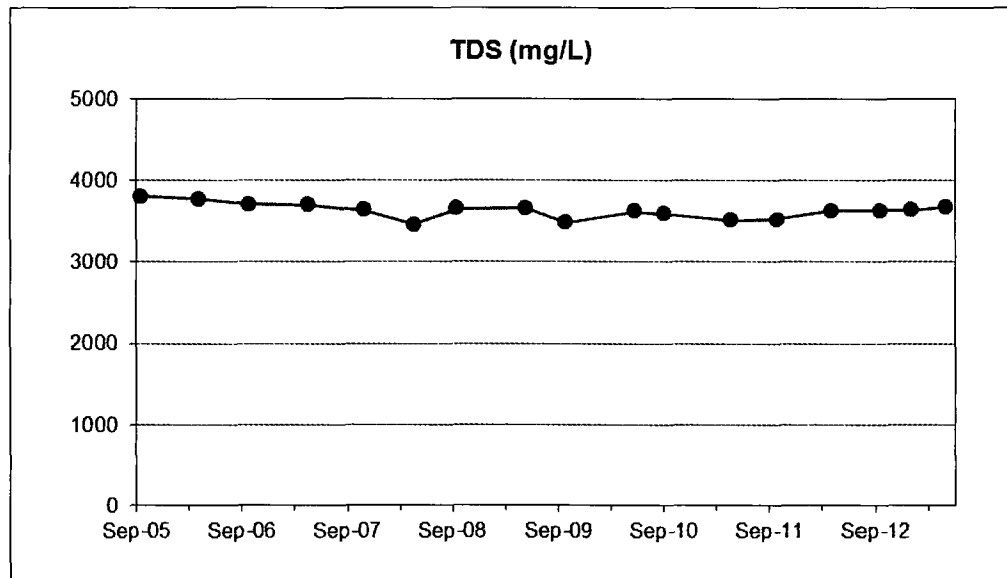
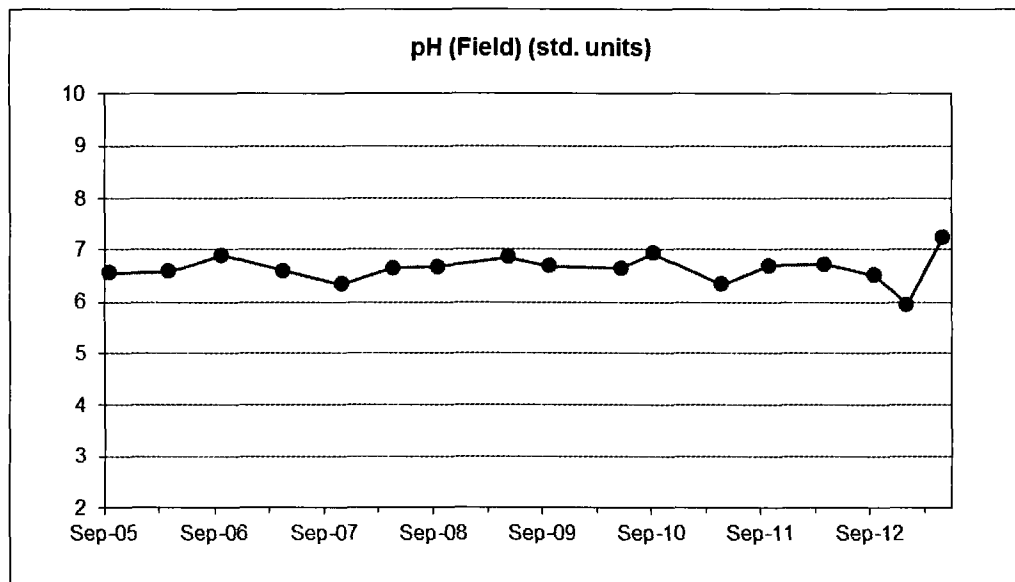
WN-4R



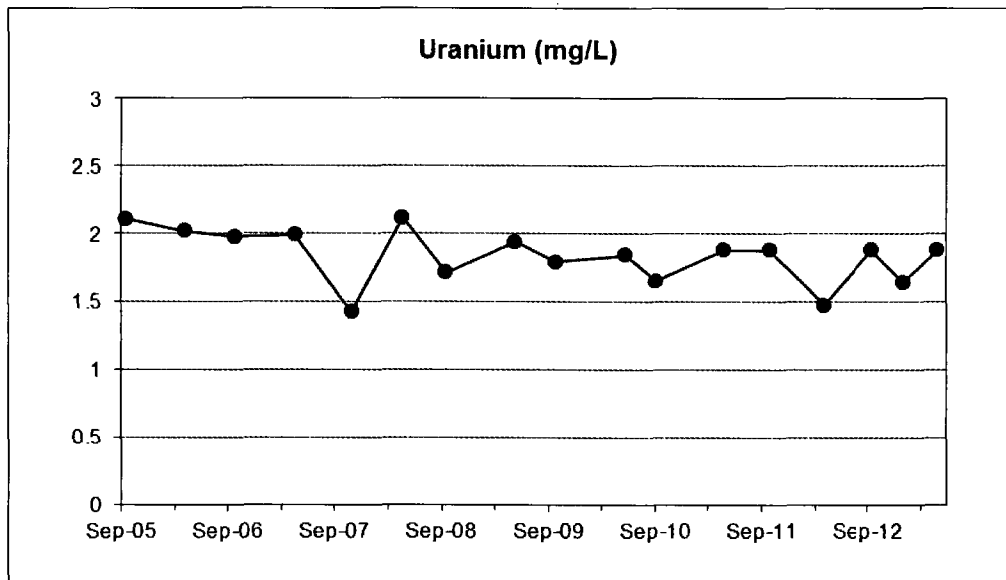
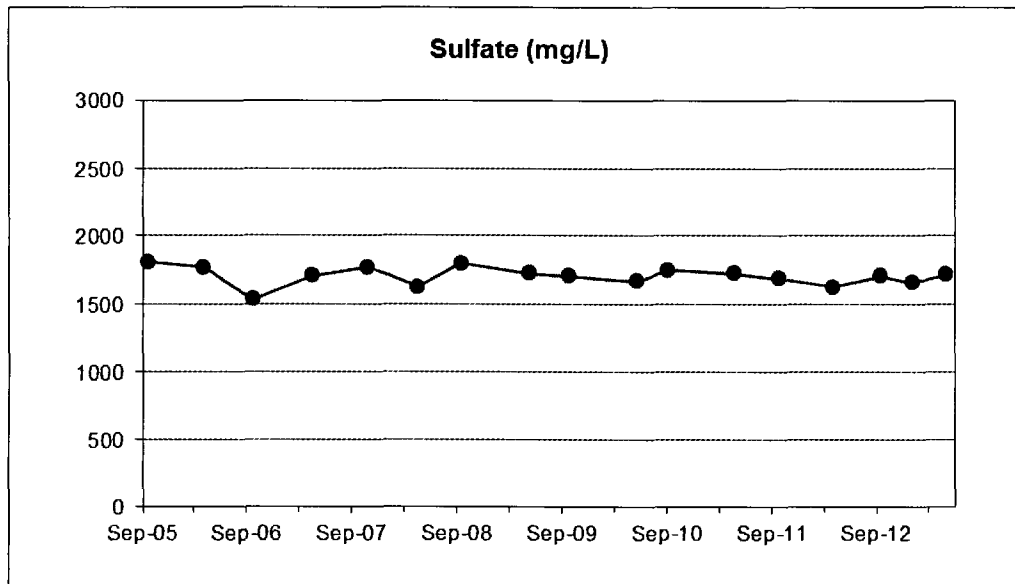
WN-4R



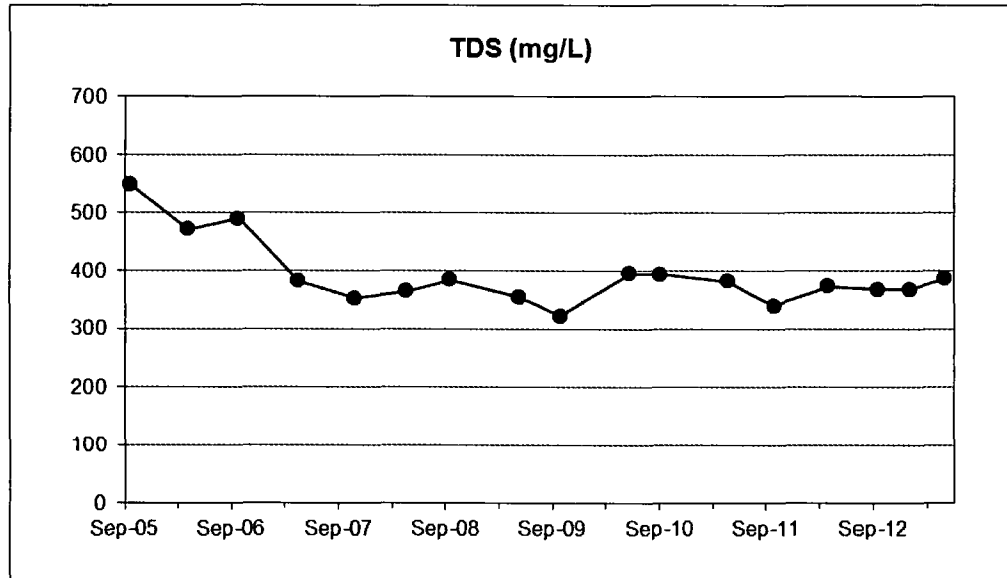
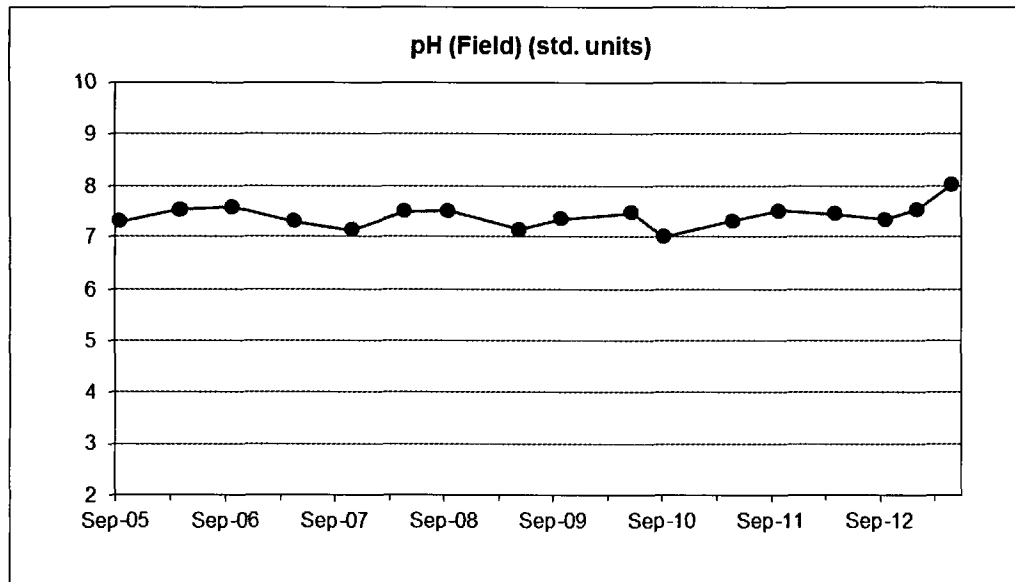
WN-5



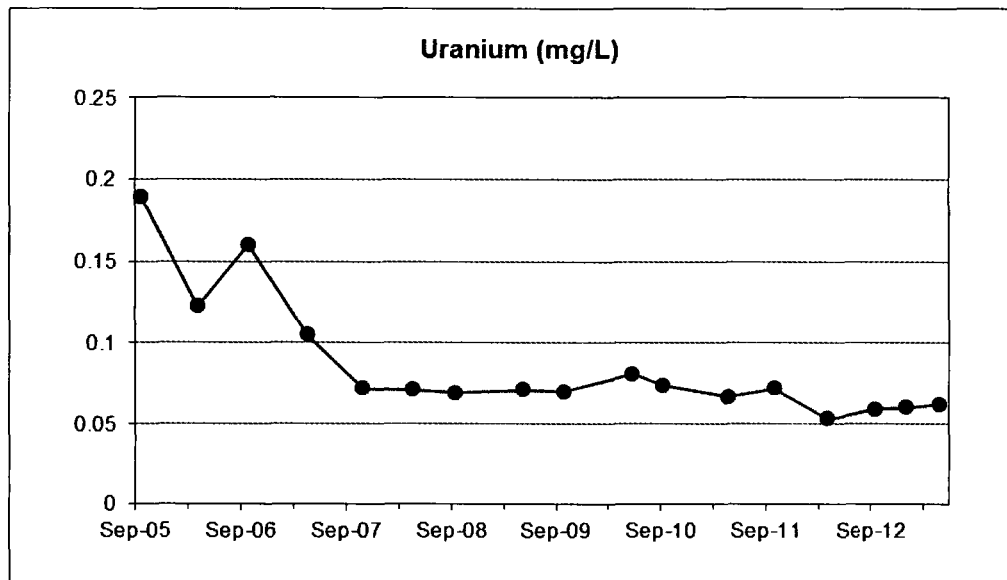
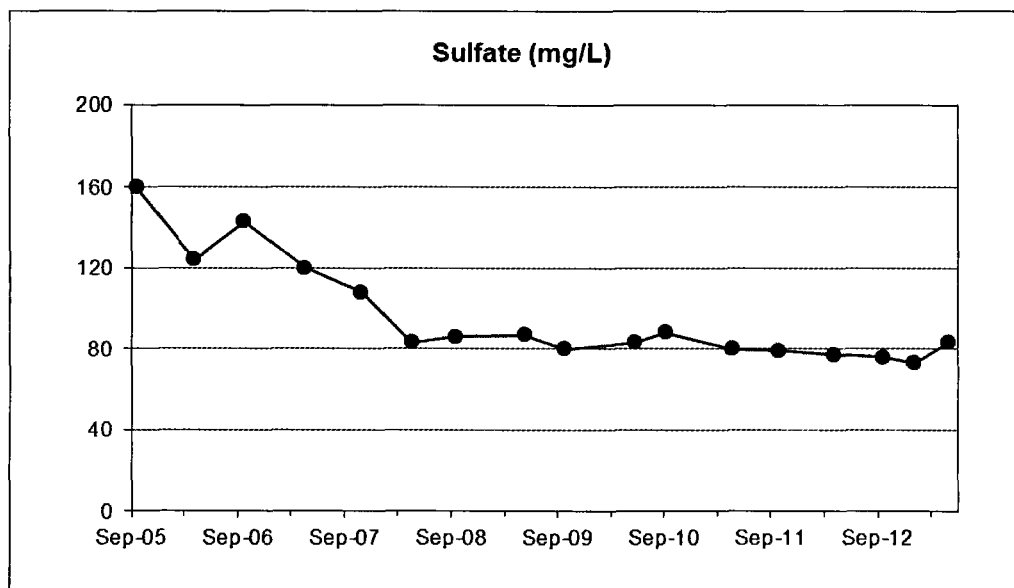
WN-5



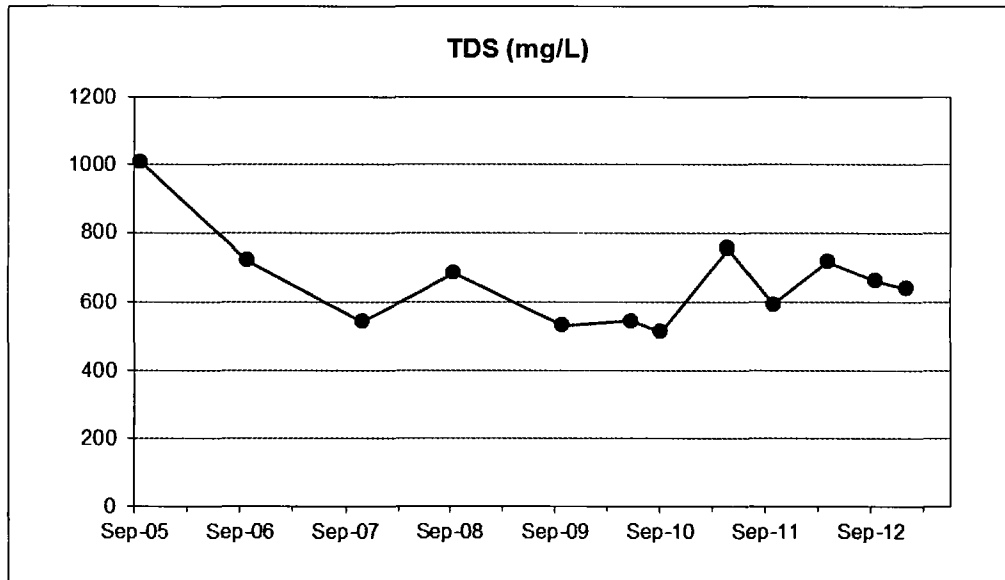
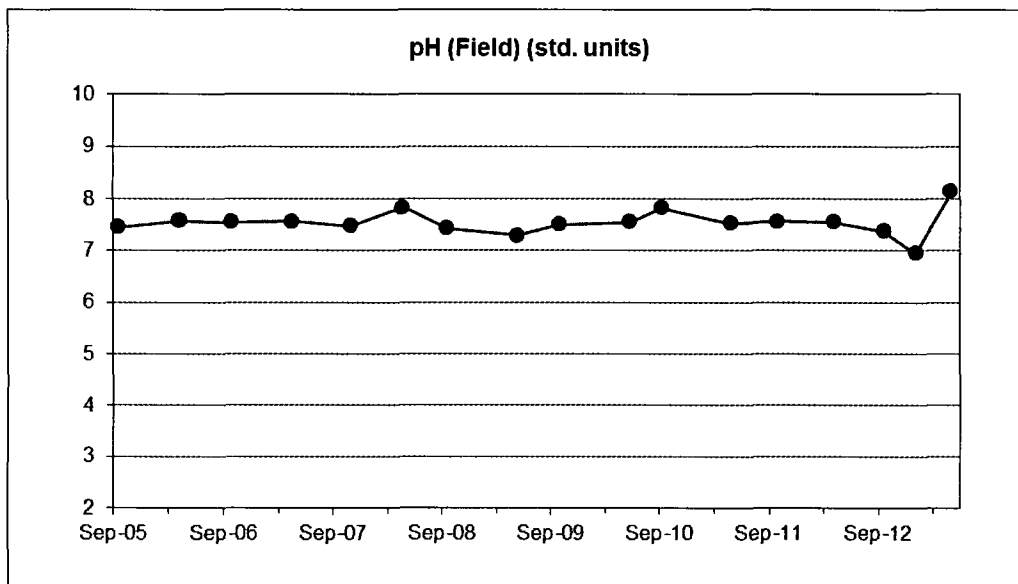
WN-21



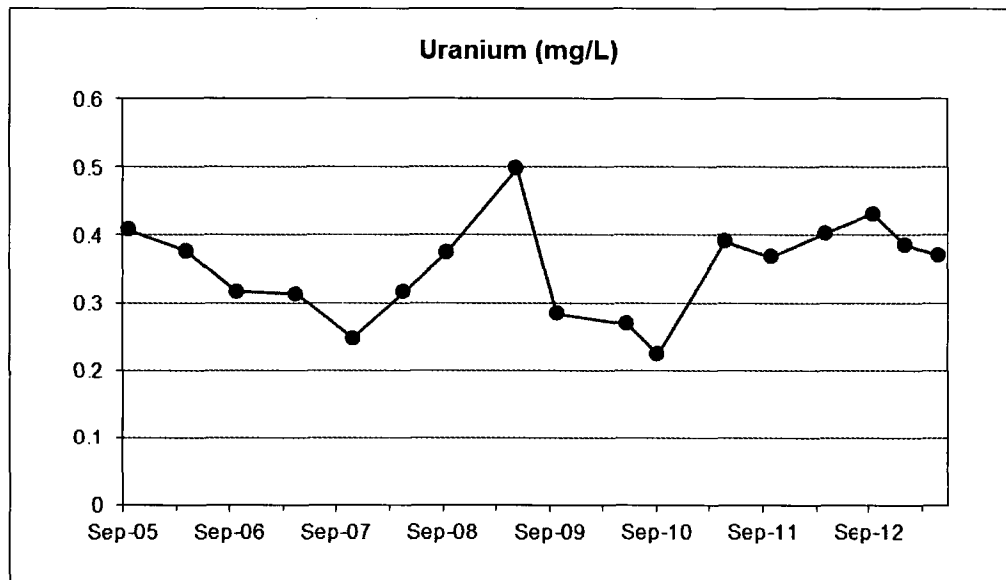
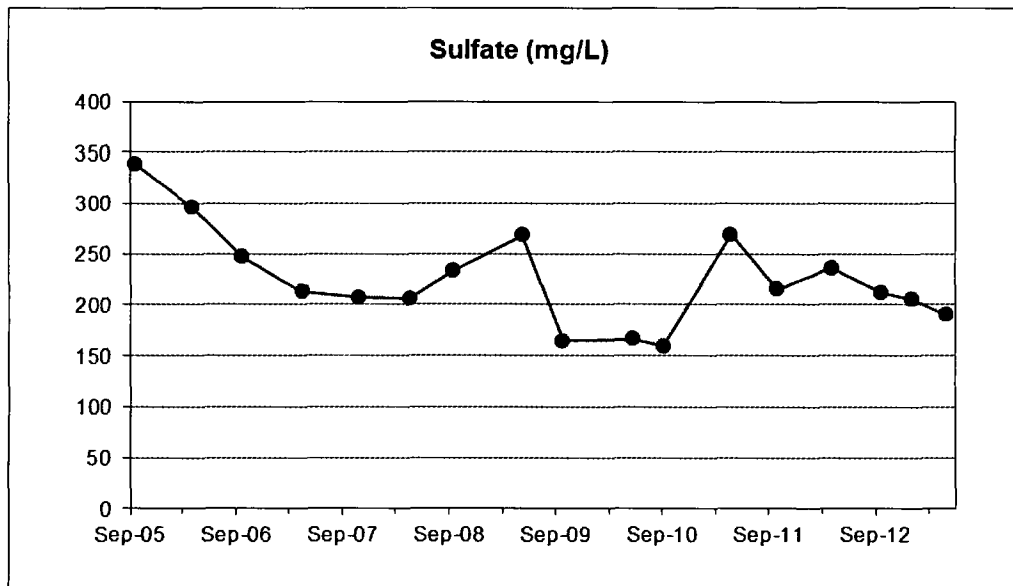
WN-21



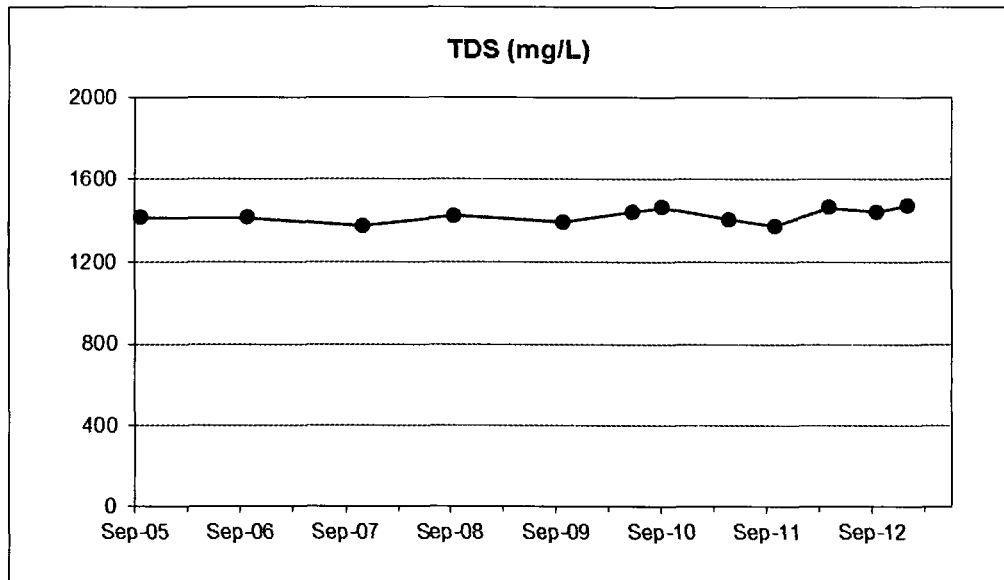
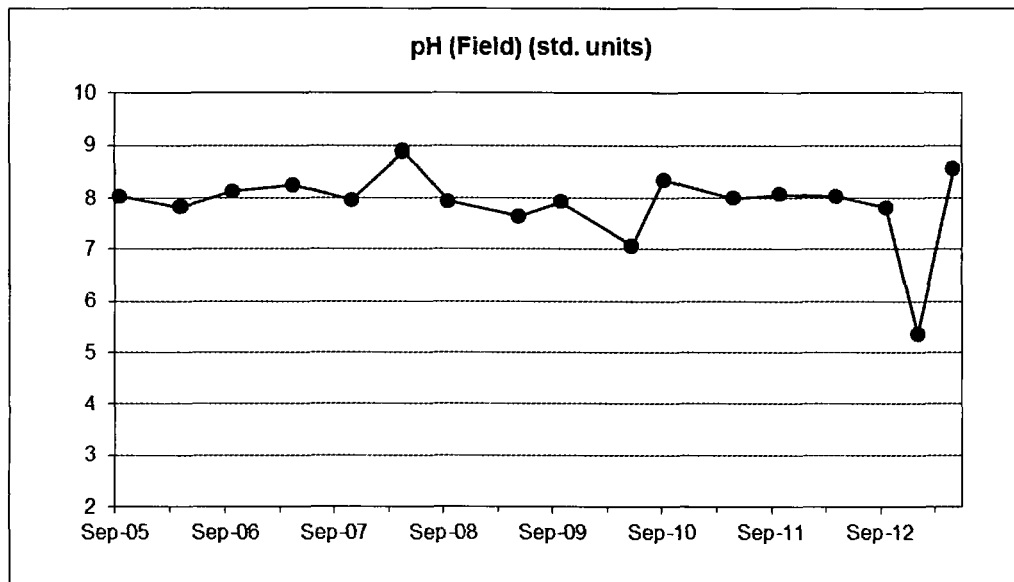
WN-39B



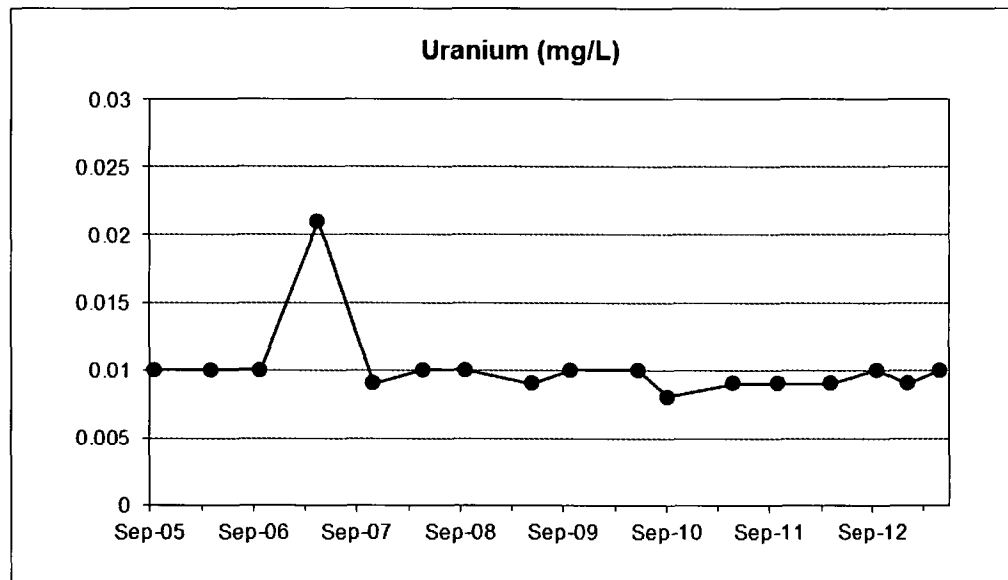
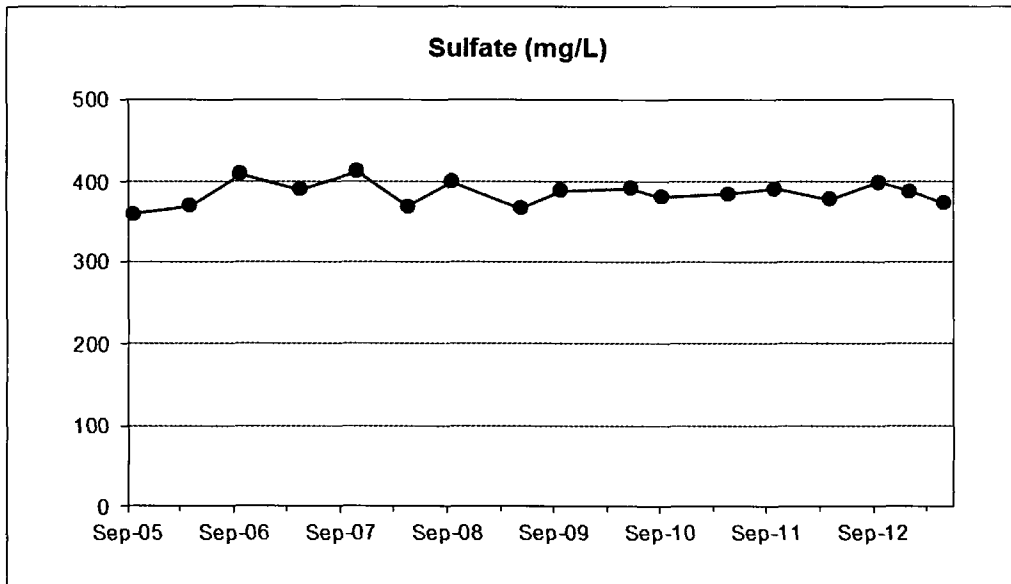
WN-39B



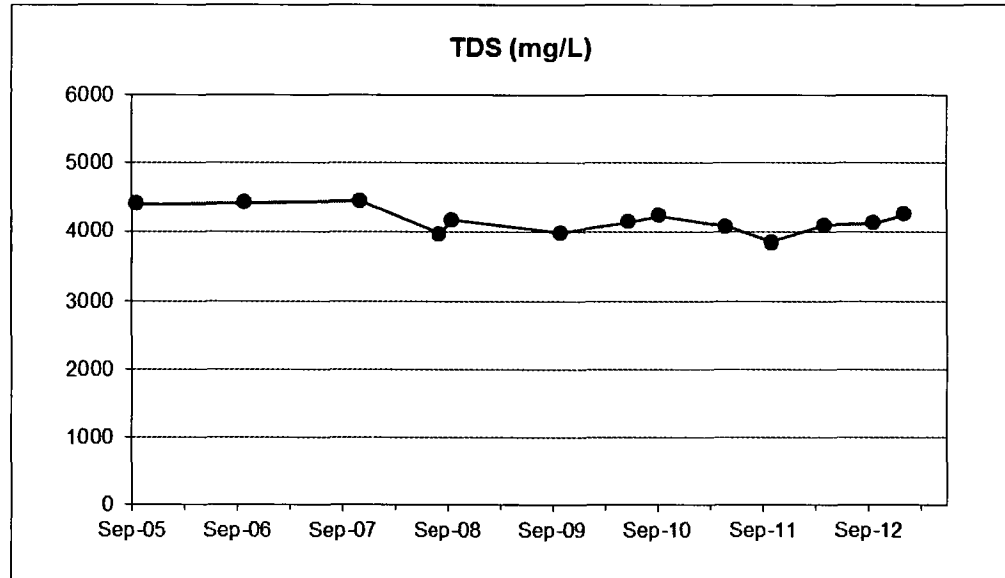
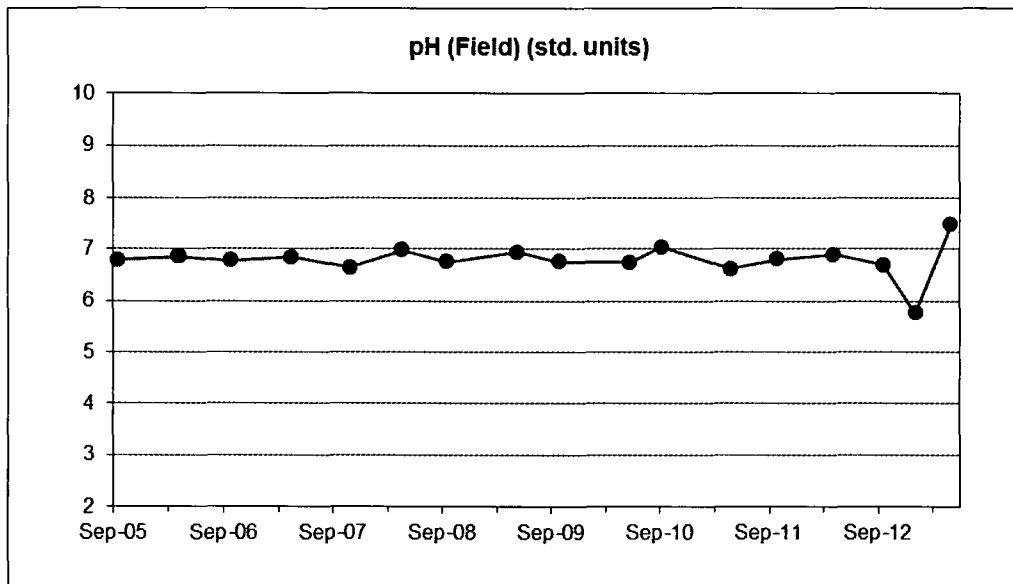
WN-41B



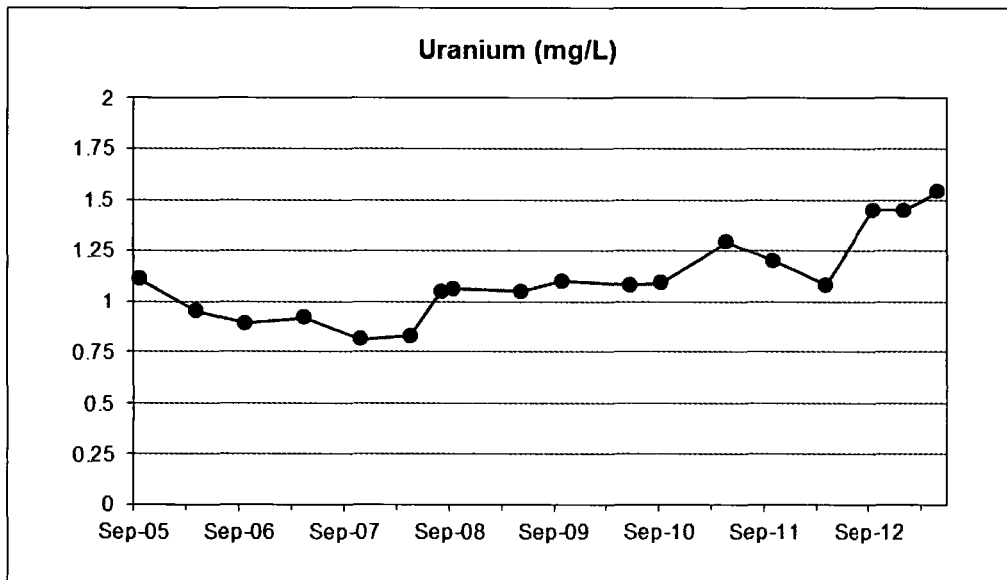
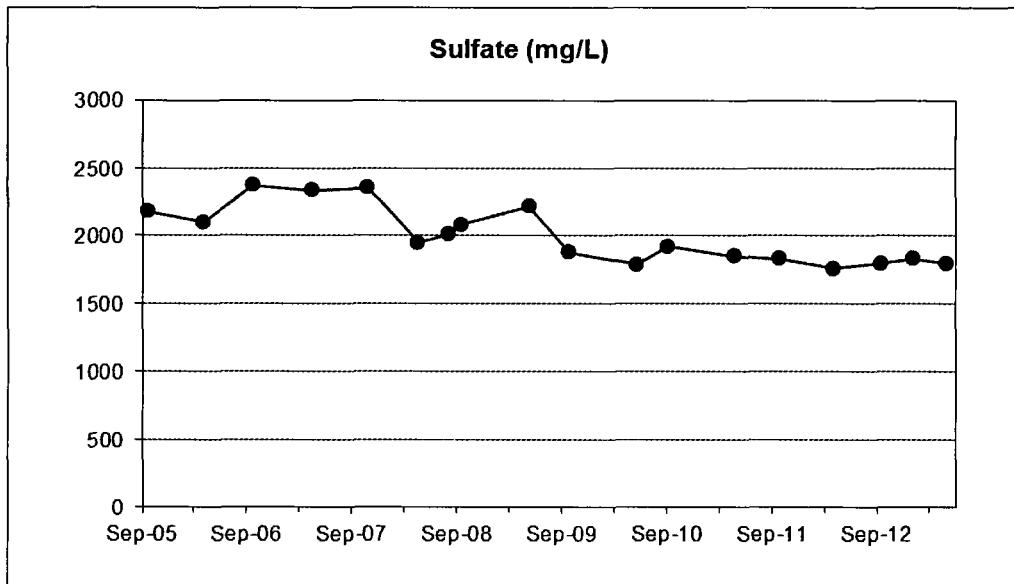
WN-41B



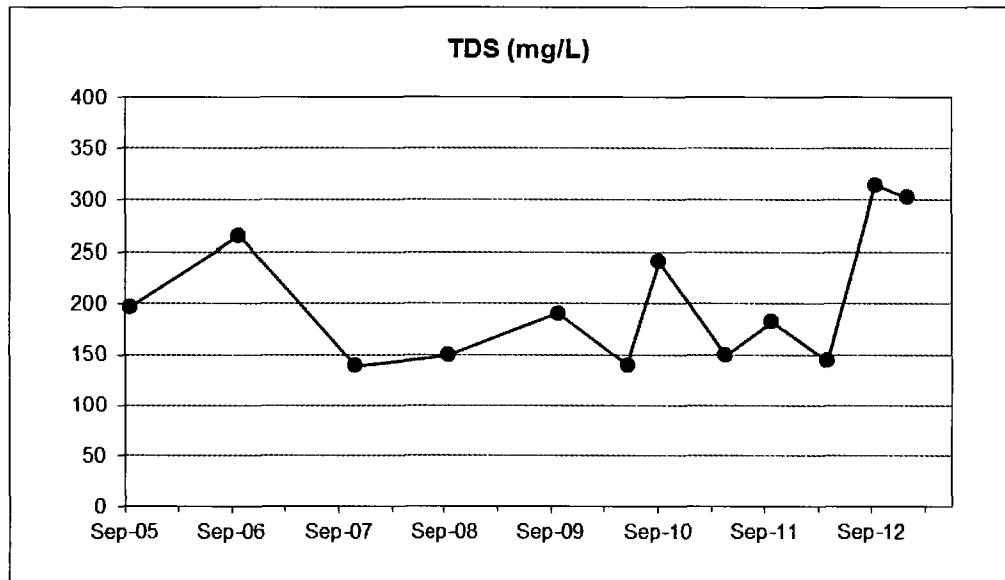
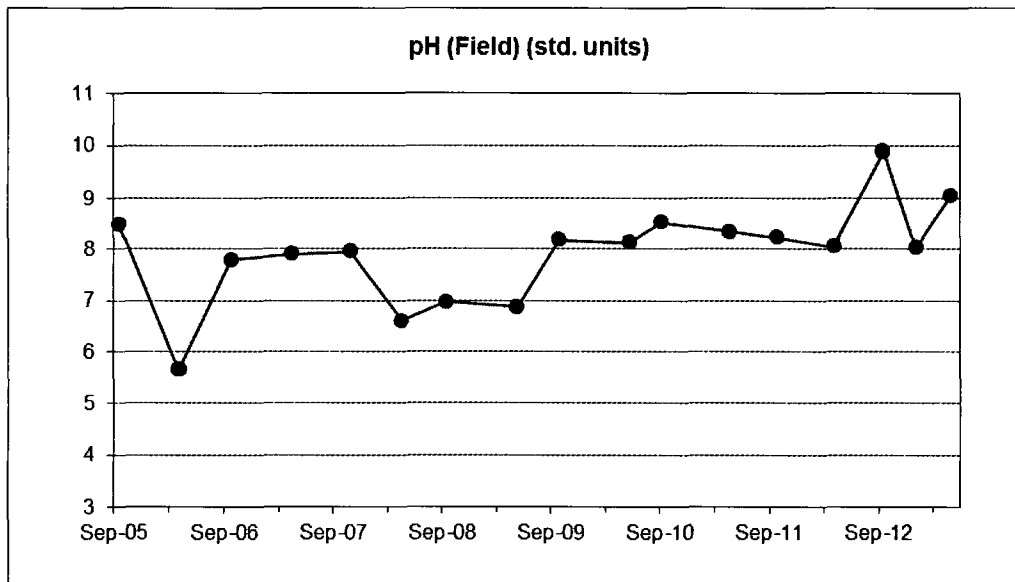
WN-42A



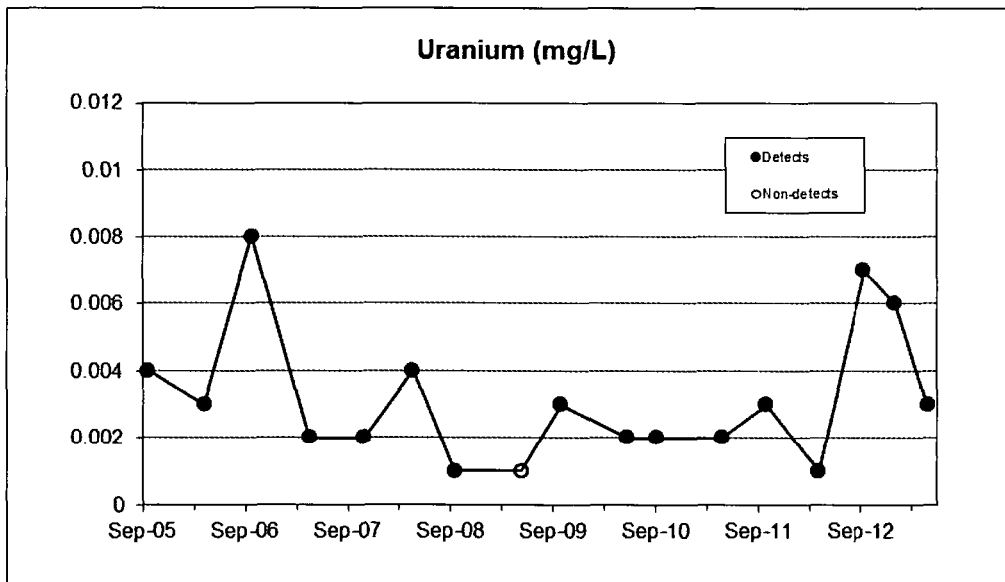
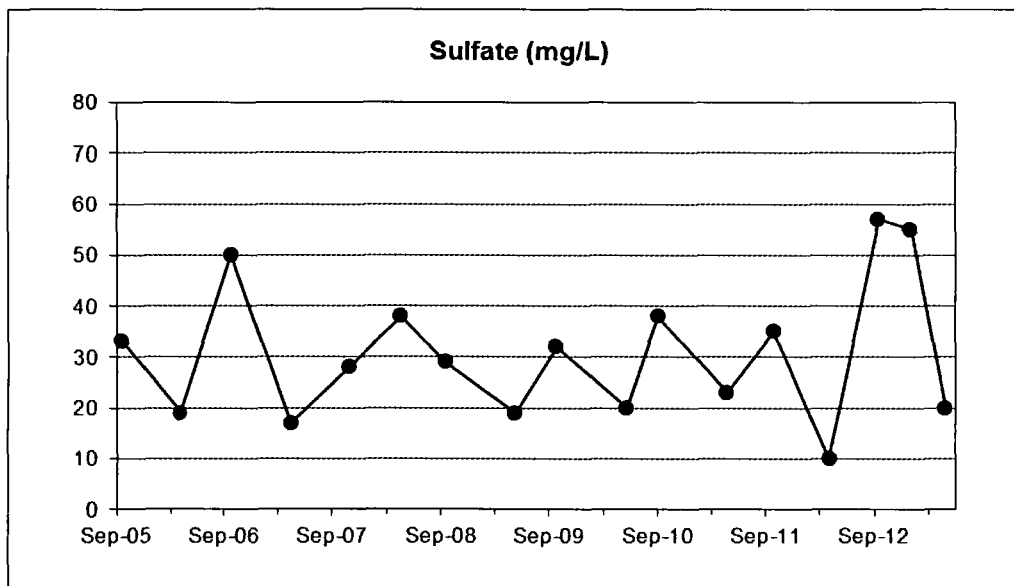
WN-42A



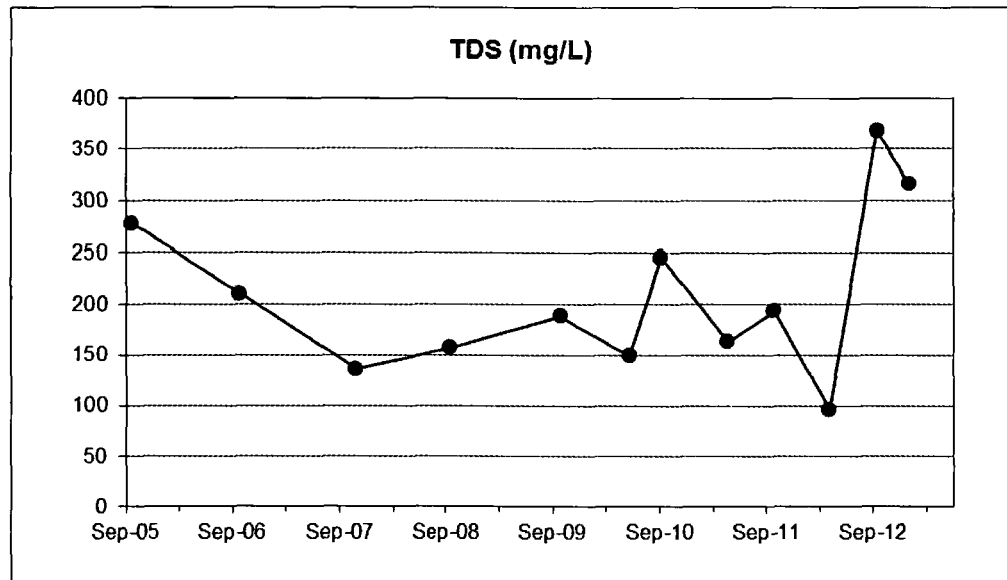
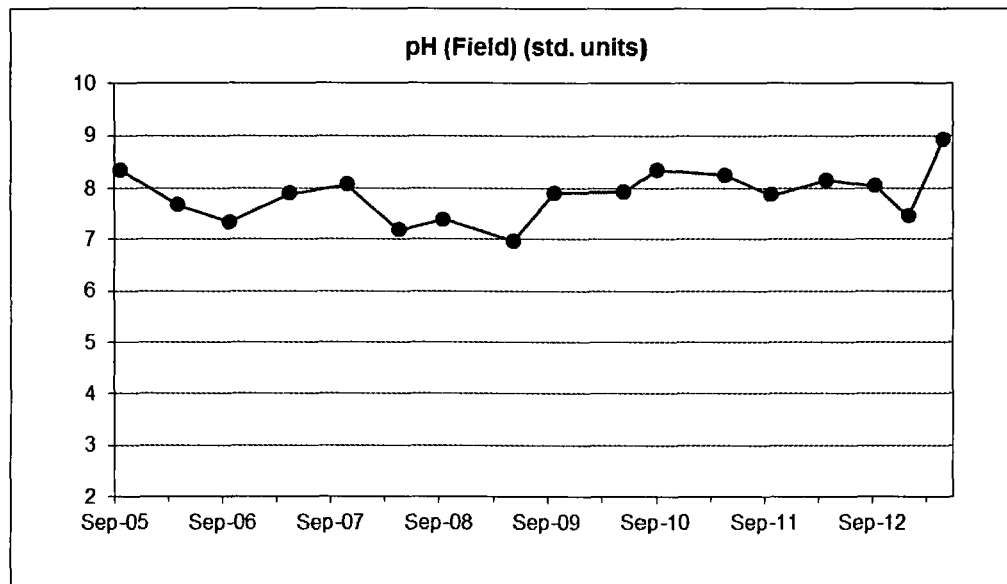
SW-1



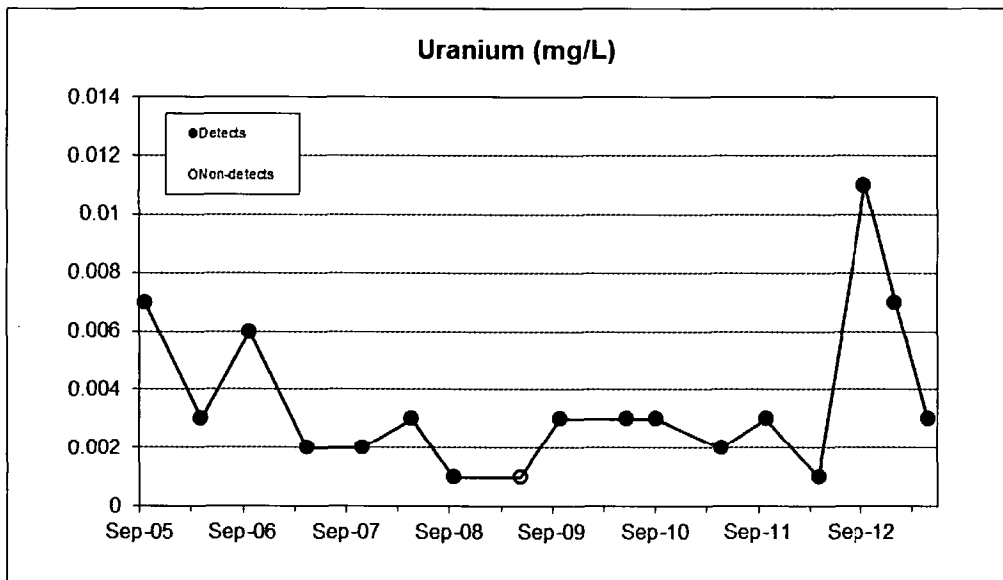
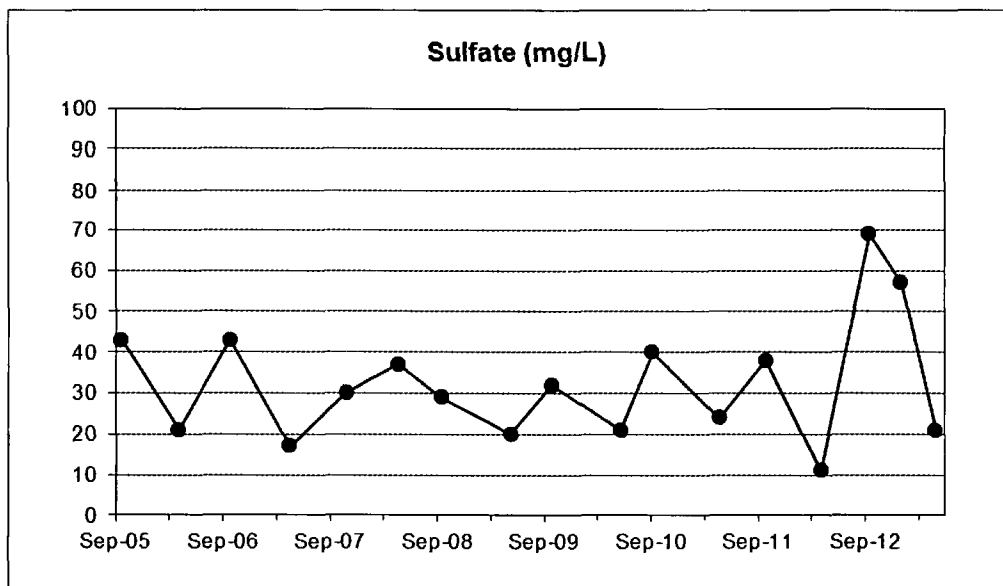
SW-1



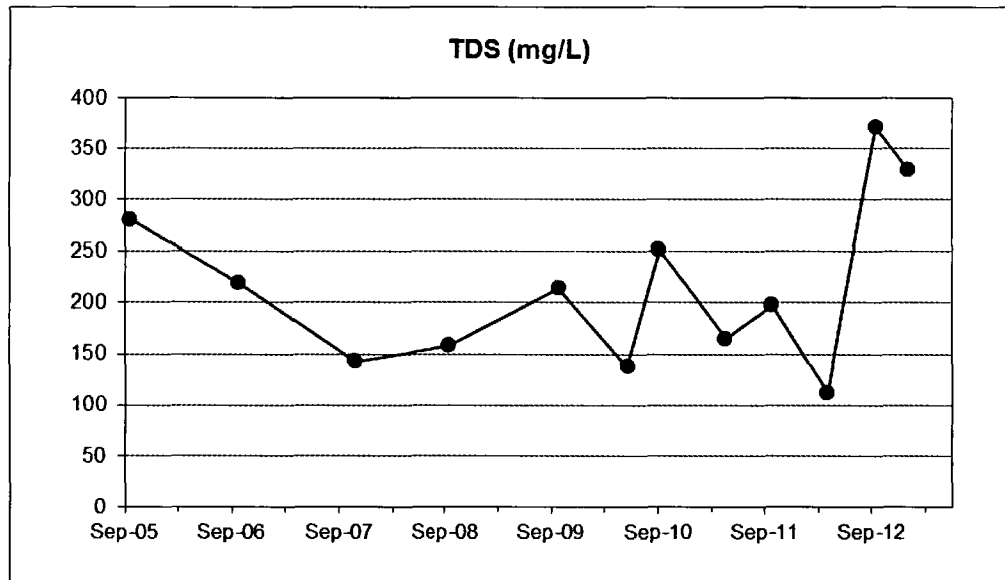
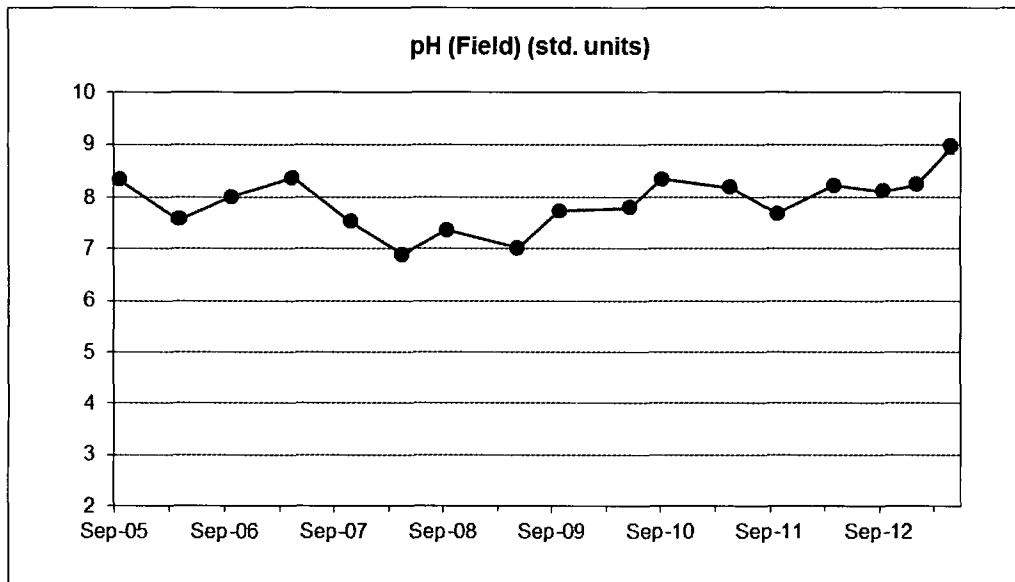
SW-2



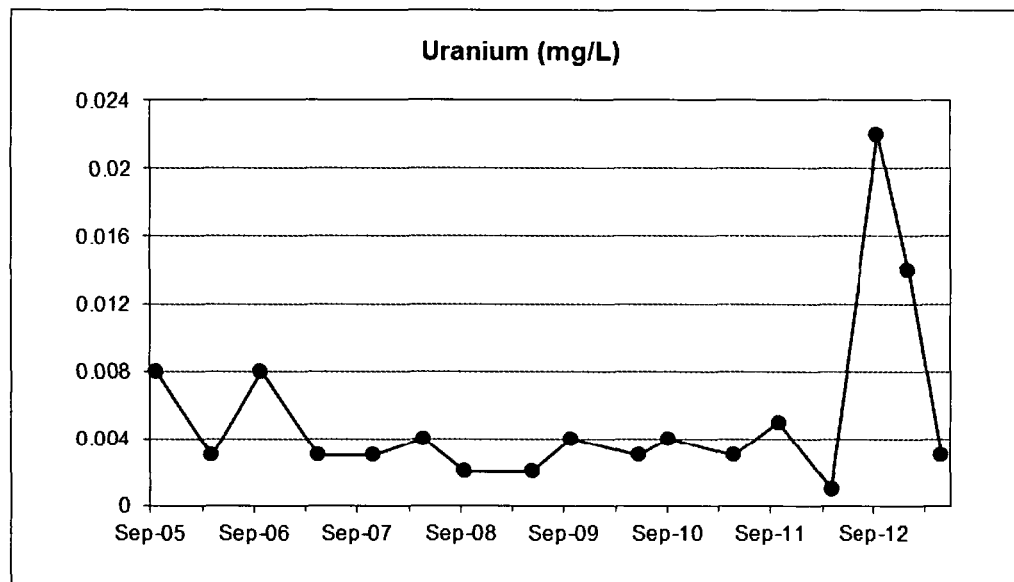
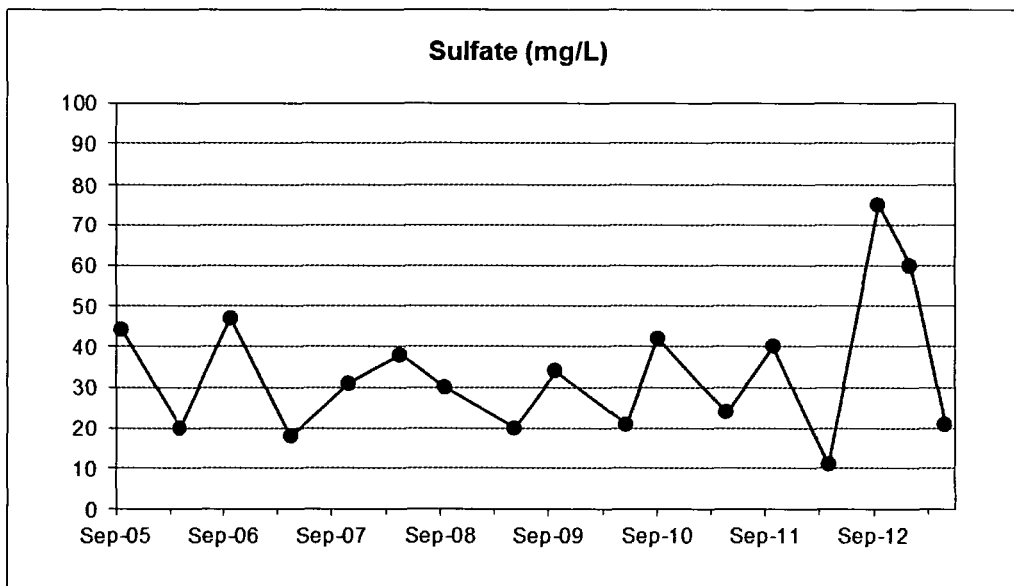
SW-2



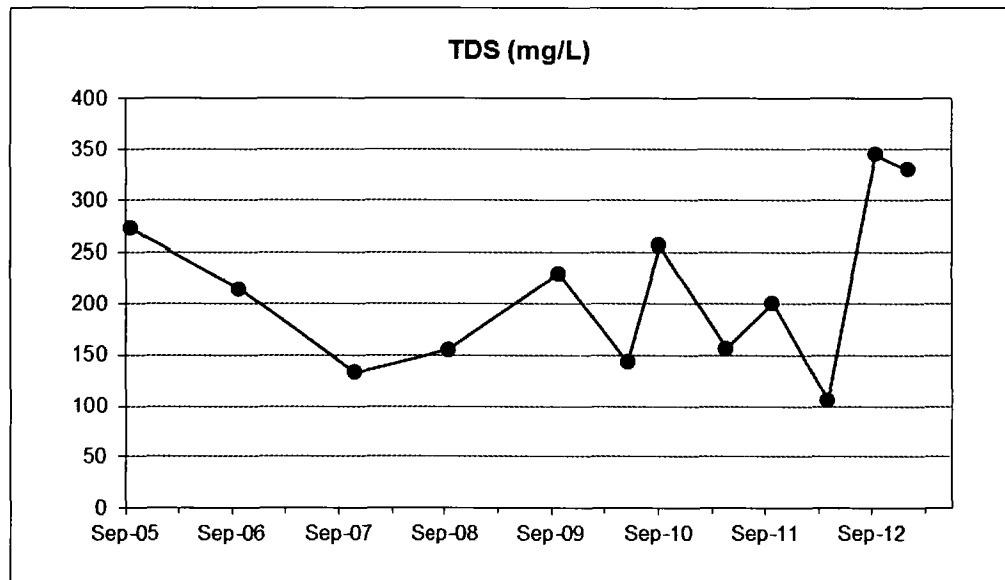
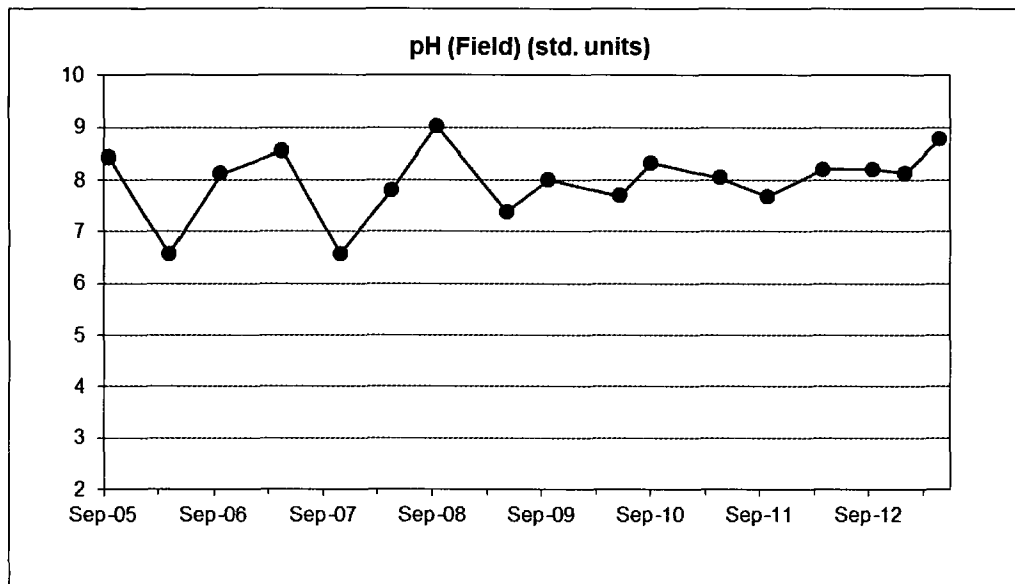
SW-3



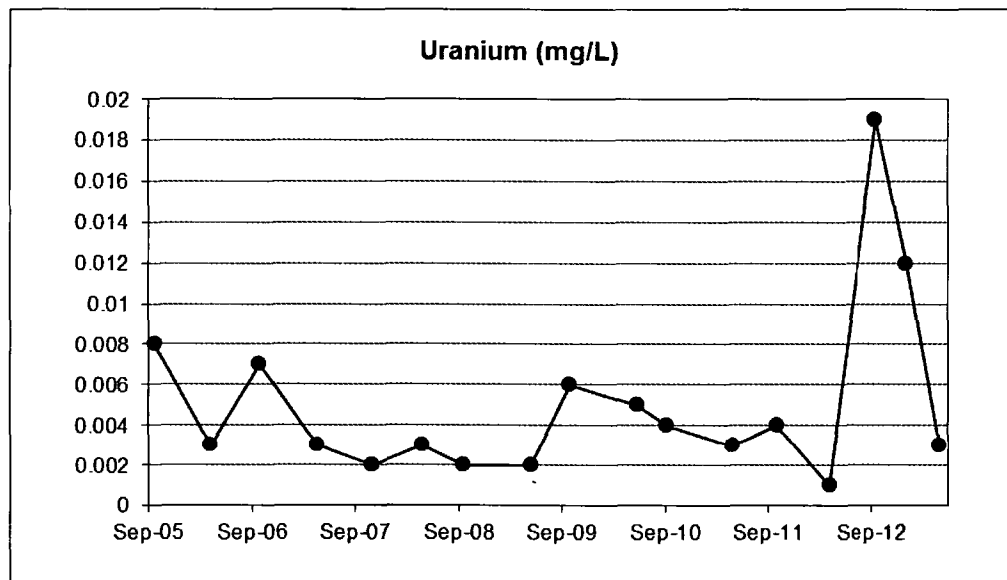
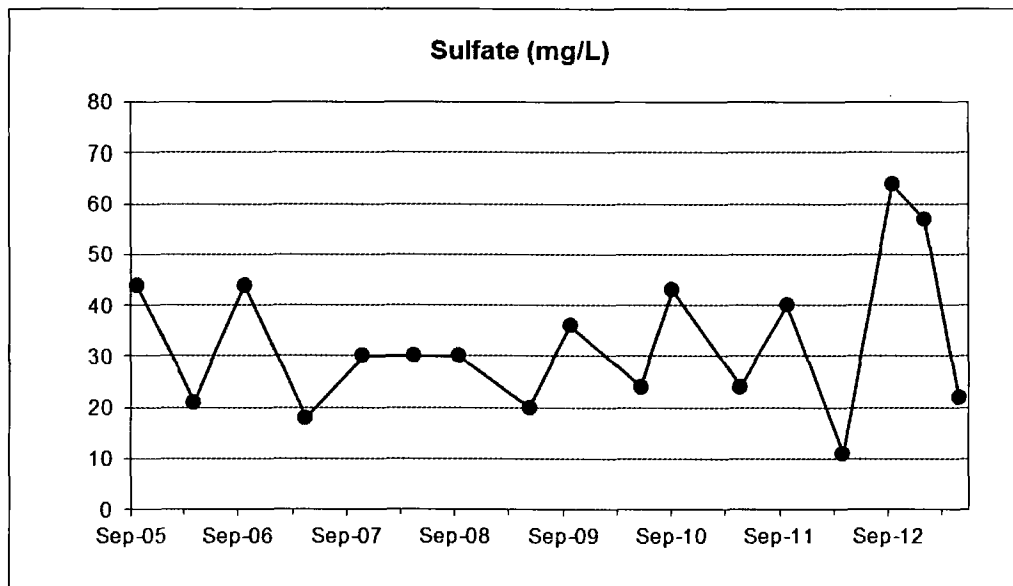
SW-3



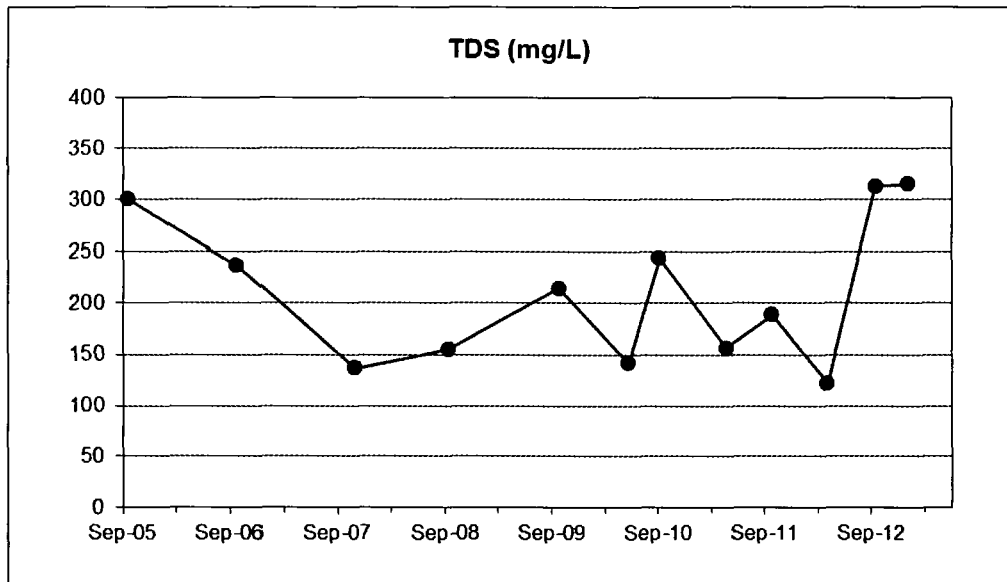
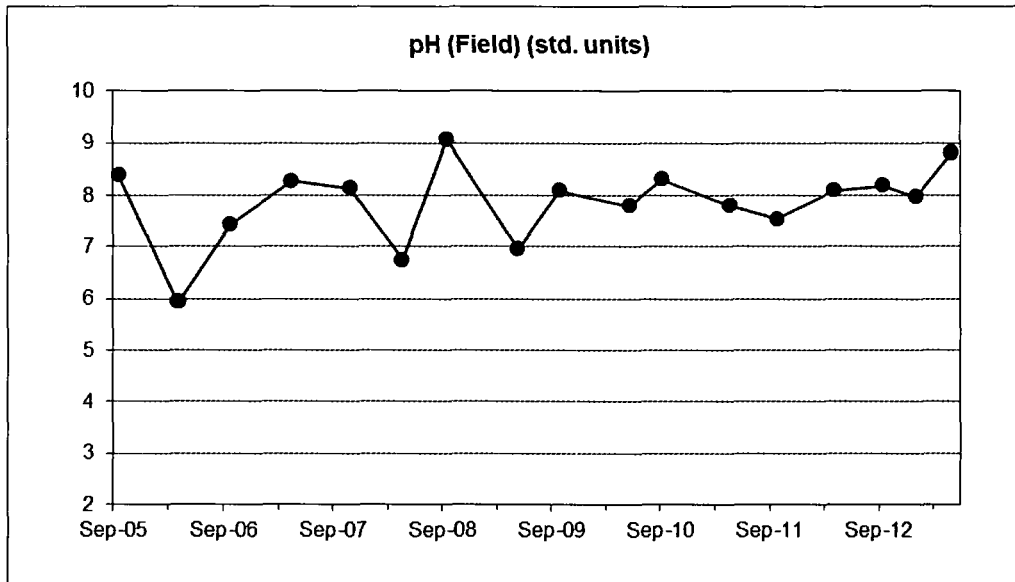
SW-4



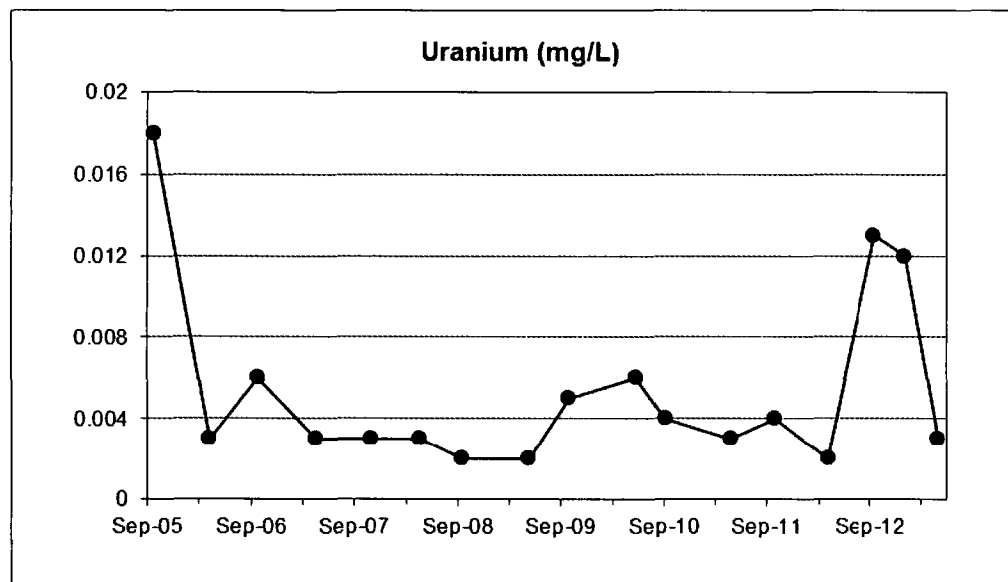
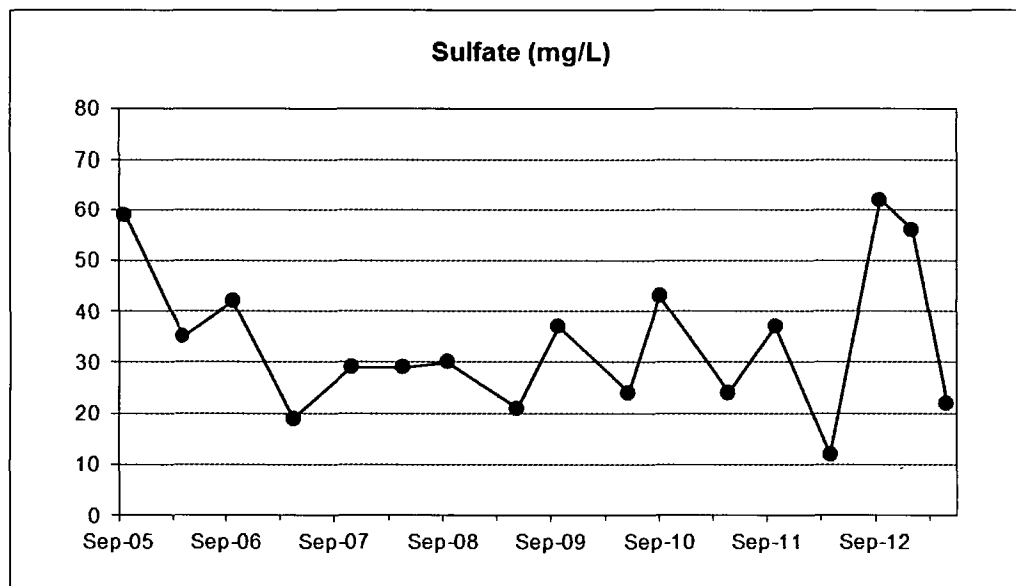
SW-4



SW-5



SW-5



ANALYTICAL SUMMARY REPORT

May 28, 2013

Western Nuclear Inc
Split Rock Mill
Jeffrey City, WY 82310

Workorder No.: C13050129 Quote ID: C119 - Annual

Project Name: Split Rock Mill Site GWPP

Energy Laboratories, Inc. Casper WY received the following 25 samples for Western Nuclear Inc on 5/3/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C13050129-001	WN-1	05/02/13 14:01	05/03/13	Aqueous	Metals by ICP/ICPMS, Dissolved Field Parameters Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Radium 226, Dissolved Radium 228, Dissolved Thorium, Isotopic Solids, Total Dissolved
C13050129-002	WN-4R	05/02/13 11:52	05/03/13	Aqueous	Same As Above
C13050129-003	WN-21	05/02/13 14:22	05/03/13	Aqueous	Same As Above
C13050129-004	SWAB-1R	05/02/13 15:53	05/03/13	Aqueous	Metals by ICP/ICPMS, Dissolved Field Parameters E300.0 Anions
C13050129-005	SWAB-12R	05/02/13 13:20	05/03/13	Aqueous	Same As Above
C13050129-006	WN-39B	05/02/13 10:57	05/03/13	Aqueous	Same As Above
C13050129-007	WN-41B	05/02/13 10:35	05/03/13	Aqueous	Same As Above
C13050129-008	WN-42A	05/02/13 11:14	05/03/13	Aqueous	Same As Above
C13050129-009	WN-5	05/02/13 11:30	05/03/13	Aqueous	Metals by ICP/ICPMS, Dissolved Field Parameters Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Radium 226, Dissolved Radium 228, Dissolved Thorium, Isotopic Solids, Total Dissolved
C13050129-010	JJ-1R	05/02/13 10:10	05/03/13	Aqueous	Metals by ICP/ICPMS, Dissolved Field Parameters E300.0 Anions
C13050129-011	SWR-UG	05/01/13 11:23	05/03/13	Aqueous	Same As Above
C13050129-012	SWR-A	05/01/13 11:55	05/03/13	Aqueous	Same As Above
C13050129-013	SWR-B	05/01/13 12:22	05/03/13	Aqueous	Same As Above
C13050129-014	SWR-C	05/01/13 13:35	05/03/13	Aqueous	Same As Above
C13050129-015	SWR-DG	05/01/13 13:57	05/03/13	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

C13050129-016	SWAB-2	05/02/13 15:38 05/03/13	Aqueous	Same As Above
C13050129-017	SWAB-4	05/02/13 13:23 05/03/13	Aqueous	Same As Above
C13050129-018	SWAB-22	05/02/13 13:04 05/03/13	Aqueous	Same As Above
C13050129-019	SWAB-29	05/02/13 15:20 05/03/13	Aqueous	Same As Above
C13050129-020	SWAB-31	05/02/13 15:37 05/03/13	Aqueous	Same As Above
C13050129-021	SWAB-32	05/02/13 15:55 05/03/13	Aqueous	Same As Above
C13050129-022	Field Blank	05/02/13 16:10 05/03/13	Aqueous	Metals by ICP/ICPMS, Dissolved Field Parameters Fluoride E300.0 Anions Nitrogen, Ammonia Nitrogen, Nitrate + Nitrite pH Radium 226, Dissolved Radium 228, Dissolved Thorium, Isotopic Solids, Total Dissolved
C13050129-023	WN-1R	05/02/13 14:01 05/03/13	Aqueous	Same As Above
C13050129-024	WN-5R	05/02/13 11:30 05/03/13	Aqueous	Same As Above
C13050129-025	WN-5S	05/02/13 11:30 05/03/13	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. 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 test results, please call.

Report Approved By:


Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2013.05.28 13:54:11 -06:00

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-001
Client Sample ID WN-1

Report Date: 05/28/13
Collection Date: 05/02/13 14:01
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	84	mg/L	D	4		E300.0	05/07/13 10:00 / wc
Fluoride	0.8	mg/L		0.1		A4500-F C	05/03/13 13:07 / jba
Nitrogen, Ammonia as N	204	mg/L	D	2		A4500-NH3 G	05/09/13 15:20 / ljl
Nitrogen, Nitrate+Nitrite as N	18	mg/L	D	2		E353.2	05/06/13 13:27 / lr
Sulfate	2720	mg/L	D	20		E300.0	05/07/13 10:00 / wc
PHYSICAL PROPERTIES							
pH	6.60	s.u.	H	0.01		A4500-H B	05/03/13 14:42 / jz
Solids, Total Dissolved TDS @ 180 C	4040	mg/L		40		A2540 C	05/07/13 16:31 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/06/13 21:46 / clm
Antimony	ND	mg/L		0.003		E200.8	05/06/13 21:46 / clm
Arsenic	ND	mg/L		0.01		E200.8	05/06/13 21:46 / clm
Beryllium	ND	mg/L		0.004		E200.8	05/06/13 21:46 / clm
Cadmium	0.001	mg/L		0.001		E200.8	05/06/13 21:46 / clm
Lead	ND	mg/L		0.005		E200.8	05/06/13 21:46 / clm
Manganese	33.0	mg/L		0.05		E200.8	05/07/13 19:13 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/06/13 21:46 / clm
Nickel	0.06	mg/L		0.05		E200.8	05/06/13 21:46 / clm
Selenium	0.010	mg/L		0.005		E200.8	05/06/13 21:46 / clm
Thallium	0.008	mg/L		0.001		E200.8	05/06/13 21:46 / clm
Uranium	2.31	mg/L		0.001		E200.8	05/06/13 21:46 / clm
RADIONUCLIDES - DISSOLVED							
Radium 226	0.70	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.20	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	0.7	pCi/L	U			RA-05	05/17/13 20:21 / gb
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/13 20:21 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	05/17/13 20:21 / gb
Thorium 230	0.06	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	6.80	s.u.				FIELD	05/02/13 14:01 / ***

*** Field data provided by client

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-002
Client Sample ID: WN-4R

Report Date: 05/28/13
Collection Date: 05/02/13 11:52
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	111	mg/L	D	4		E300.0	05/07/13 10:17 / wc
Fluoride	6.4	mg/L		0.1		A4500-F C	05/03/13 13:10 / jba
Nitrogen, Ammonia as N	268	mg/L	D	5		A4500-NH3 G	05/09/13 15:41 / ljl
Nitrogen, Nitrate+Nitrite as N	141	mg/L	D	10		E353.2	05/06/13 13:30 / lr
Sulfate	3100	mg/L	D	20		E300.0	05/07/13 10:17 / wc
PHYSICAL PROPERTIES							
pH	6.40	s.u.	H	0.01		A4500-H B	05/03/13 14:46 / jz
Solids, Total Dissolved TDS @ 180 C	4840	mg/L		100		A2540 C	05/07/13 16:32 / ab
METALS - DISSOLVED							
Aluminum	1.1	mg/L		0.1		E200.8	05/06/13 21:49 / clm
Antimony	ND	mg/L		0.003		E200.8	05/06/13 21:49 / clm
Arsenic	0.01	mg/L		0.01		E200.8	05/06/13 21:49 / clm
Beryllium	ND	mg/L		0.004		E200.8	05/06/13 21:49 / clm
Cadmium	0.020	mg/L		0.001		E200.8	05/06/13 21:49 / clm
Lead	ND	mg/L		0.005		E200.8	05/06/13 21:49 / clm
Manganese	90.0	mg/L		0.05		E200.8	05/07/13 19:18 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/06/13 21:49 / clm
Nickel	0.48	mg/L		0.05		E200.8	05/06/13 21:49 / clm
Selenium	0.048	mg/L		0.005		E200.8	05/06/13 21:49 / clm
Thallium	0.001	mg/L		0.001		E200.8	05/06/13 21:49 / clm
Uranium	0.424	mg/L		0.001		E200.8	05/06/13 21:49 / clm
RADIONUCLIDES - DISSOLVED							
Radium 226	0.16	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.13	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.18	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	0.6	pCi/L	U			RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	0.03	pCi/L	U			E908.0	05/10/13 09:30 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	05/10/13 09:30 / dmf
Thorium 230 MDC	0.1	pCi/L				E908.0	05/10/13 09:30 / dmf
FIELD PARAMETERS							
Field pH	6.76	s.u.				FIELD	05/02/13 11:52 / ***

*** Field data provided by client

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-003
Client Sample ID WN-21

Report Date: 05/28/13
Collection Date: 05/02/13 14:22
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	12	mg/L		1		E300.0	05/07/13 10:35 / wc
Fluoride	0.2	mg/L		0.1		A4500-F C	05/03/13 13:13 / jba
Nitrogen, Ammonia as N	1.44	mg/L		0.05		A4500-NH3 G	05/09/13 11:52 / ljl
Nitrogen, Nitrate+Nitrite as N	3.6	mg/L	D	0.5		E353.2	05/06/13 13:32 / lr
Sulfate	83	mg/L	D	2		E300.0	05/07/13 10:35 / wc
PHYSICAL PROPERTIES							
pH	7.68	s.u.	H	0.01		A4500-H B	05/03/13 14:49 / jz
Solids, Total Dissolved TDS @ 180 C	386	mg/L		10		A2540 C	05/07/13 16:32 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/06/13 22:15 / clm
Antimony	ND	mg/L		0.003		E200.8	05/06/13 22:15 / clm
Arsenic	ND	mg/L		0.01		E200.8	05/06/13 22:15 / clm
Beryllium	ND	mg/L		0.004		E200.8	05/06/13 22:15 / clm
Cadmium	ND	mg/L		0.001		E200.8	05/06/13 22:15 / clm
Lead	ND	mg/L		0.005		E200.8	05/06/13 22:15 / clm
Manganese	0.22	mg/L		0.05		E200.8	05/06/13 22:15 / clm
Molybdenum	ND	mg/L		0.1		E200.8	05/06/13 22:15 / clm
Nickel	ND	mg/L		0.05		E200.8	05/06/13 22:15 / clm
Selenium	ND	mg/L		0.005		E200.8	05/06/13 22:15 / clm
Thallium	ND	mg/L		0.001		E200.8	05/06/13 22:15 / clm
Uranium	0.062	mg/L		0.001		E200.8	05/06/13 22:15 / clm
RADIONUCLIDES - DISSOLVED							
Radium 226	0.02	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.12	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1.1	pCi/L	U			RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	0.9	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	0.02	pCi/L	U			E908.0	05/10/13 09:30 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/10/13 09:30 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:30 / dmf
FIELD PARAMETERS							
Field pH	8.04	s.u.				FIELD	05/02/13 14:22 / ***
*** Field data provided by client							

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-004
Client Sample ID SWAB-1R

Report Date: 05/28/13
Collection Date: 05/02/13 15:53
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	1070	mg/L	D	8		E300.0	05/07/13 10:52 / wc
METALS - DISSOLVED							
Uranium	2.15	mg/L		0.001		E200.8	05/07/13 19:22 / cp
FIELD PARAMETERS							
Field pH	7.48	s.u.				FIELD	05/02/13 15:53 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-005
Client Sample ID SWAB-12R

Report Date: 05/28/13
Collection Date: 05/02/13 13:20
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	59	mg/L		1		E300.0	05/07/13 11:09 / wc
METALS - DISSOLVED							
Uranium	0.061	mg/L		0.001		E200.8	05/07/13 19:26 / cp
FIELD PARAMETERS							
Field pH	8.18	s.u.				FIELD	05/02/13 13:20 / ***

*** Field data provided by client

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-006
Client Sample ID WN-39B

Report Date: 05/28/13
Collection Date: 05/02/13 10:57
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	190	mg/L	D	2		E300.0	05/07/13 11:27 / wc
METALS - DISSOLVED							
Uranium	0.370	mg/L		0.001		E200.8	05/07/13 19:31 / cp
FIELD PARAMETERS							
Field pH	8.14	s.u.				FIELD	05/02/13 10:57 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-007
Client Sample ID WN-41B

Report Date: 05/28/13
Collection Date: 05/02/13 10:35
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	373	mg/L	D	4		E300.0	05/07/13 11:44 / wc
METALS - DISSOLVED							
Uranium	0.010	mg/L		0.001		E200.8	05/07/13 20:05 / cp
FIELD PARAMETERS							
Field pH	8.58	s.u.				FIELD	05/02/13 10:35 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-008
Client Sample ID WN-42A

Report Date: 05/28/13
Collection Date: 05/02/13 11:14
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	1800	mg/L	D	20		E300.0	05/07/13 12:02 / wc
METALS - DISSOLVED							
Uranium	1.54	mg/L		0.001		E200.8	05/07/13 20:10 / cp
FIELD PARAMETERS							
Field pH	7.47	s.u.				FIELD	05/02/13 11:14 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-009
Client Sample ID WN-5

Report Date: 05/28/13
Collection Date: 05/02/13 11:30
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	106	mg/L	D	2		E300.0	05/07/13 12:54 / wc
Fluoride	ND	mg/L		0.1		A4500-F C	05/03/13 13:44 / jba
Nitrogen, Ammonia as N	0.05	mg/L		0.05		A4500-NH3 G	05/09/13 11:58 / ljl
Nitrogen, Nitrate+Nitrite as N	47	mg/L	D	2		E353.2	05/06/13 13:35 / lr
Sulfate	1720	mg/L	D	8		E300.0	05/07/13 12:54 / wc
PHYSICAL PROPERTIES							
pH	7.24	s.u.	H	0.01		A4500-H B	05/06/13 13:21 / ab
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		40		A2540 C	05/07/13 16:33 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/07/13 20:14 / cp
Antimony	ND	mg/L		0.003		E200.8	05/08/13 13:50 / clm
Arsenic	ND	mg/L		0.01		E200.8	05/07/13 20:14 / cp
Beryllium	ND	mg/L		0.004		E200.8	05/07/13 20:14 / cp
Cadmium	ND	mg/L		0.001		E200.8	05/07/13 20:14 / cp
Lead	ND	mg/L		0.005		E200.8	05/07/13 20:14 / cp
Manganese	0.59	mg/L		0.05		E200.8	05/07/13 20:14 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/07/13 20:14 / cp
Nickel	ND	mg/L		0.05		E200.8	05/07/13 20:14 / cp
Selenium	0.016	mg/L		0.005		E200.8	05/07/13 20:14 / cp
Thallium	ND	mg/L		0.001		E200.8	05/07/13 20:14 / cp
Uranium	1.88	mg/L		0.001		E200.8	05/07/13 20:14 / cp
RADIONUCLIDES - DISSOLVED							
Radium 226	0.001	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.20	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1.7	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	0.9	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.4	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	0.06	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	7.23	s.u.				FIELD	05/02/13 11:30 / ***
*** Field data provided by client							

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-010
Client Sample ID JJ-1R

Report Date: 05/28/13
Collection Date: 05/02/13 10:10
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	53	mg/L	D	2		E300.0	05/07/13 13:46 / wc
METALS - DISSOLVED							
Uranium	0.014	mg/L		0.001		E200.8	05/07/13 20:18 / cp
FIELD PARAMETERS							
Field pH	8.02	s.u.				FIELD	05/02/13 10:10 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-011
Client Sample ID SWR-UG

Report Date: 05/28/13
Collection Date: 05/01/13 11:23
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	20	mg/L		1		E300.0	05/07/13 14:04 / wc
METALS - DISSOLVED							
Uranium	0.003	mg/L		0.001		E200.8	05/07/13 20:23 / cp
FIELD PARAMETERS							
Field pH	9.05	s.u.				FIELD	05/01/13 11:23 / ***
*** Field data provided by client							

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

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



www.energylab.com
Analytical Excellence Since 1952

Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-012
Client Sample ID: SWR-A

Report Date: 05/28/13
Collection Date: 05/01/13 11:55
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	21	mg/L		1		E300.0	05/07/13 14:21 / wc
METALS - DISSOLVED							
Uranium	0.003	mg/L		0.001		E200.8	05/07/13 20:27 / cp
FIELD PARAMETERS							
Field pH	8.93	s.u.				FIELD	05/01/13 11:55 / ***
*** Field data provided by client							

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-013
Client Sample ID SWR-B

Report Date: 05/28/13
Collection Date: 05/01/13 12:22
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	21	mg/L		1		E300.0	05/07/13 14:38 / wc
METALS - DISSOLVED							
Uranium	0.003	mg/L		0.001		E200.8	05/07/13 20:31 / cp
FIELD PARAMETERS							
Field pH	8.96	s.u.				FIELD	05/01/13 12:22 / ***

*** Field data provided by client

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-014
Client Sample ID SWR-C

Report Date: 05/28/13
Collection Date: 05/01/13 13:35
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	22	mg/L		1		E300.0	05/07/13 14:56 / wc
METALS - DISSOLVED							
Uranium	0.003	mg/L		0.001		E200.8	05/07/13 20:36 / cp
FIELD PARAMETERS							
Field pH	8.77	s.u.				FIELD	05/01/13 13:35 / ***
*** Field data provided by client							

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

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



www.energylab.com
Analytical Excellence Since 1952

Helena, MT 877-472-0711 • Billings, MT 800-735-4489 • Casper, WY 888-235-0515
Gillette, WY 866-686-7175 • Rapid City, SD 888-672-1225 • College Station, TX 888-690-2218

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-015
Client Sample ID: SWR-DG

Report Date: 05/28/13
Collection Date: 05/01/13 13:57
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	22	mg/L		1		E300.0	05/07/13 15:13 / wc
METALS - DISSOLVED							
Uranium	0.003	mg/L		0.001		E200.8	05/07/13 20:40 / cp
FIELD PARAMETERS							
Field pH	8.81	s.u.				FIELD	05/01/13 13:57 / ***

*** Field data provided by client

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-016
Client Sample ID SWAB-2

Report Date: 05/28/13
Collection Date: 05/02/13 15:38
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	1310	mg/L	D	20		E300.0	05/07/13 15:31 / wc
METALS - DISSOLVED							
Uranium	1.16	mg/L		0.001		E200.8	05/07/13 21:02 / cp
FIELD PARAMETERS							
Field pH	7.04	s.u.				FIELD	05/02/13 15:38 / ***
*** Field data provided by client							

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-017
Client Sample ID SWAB-4

Report Date: 05/28/13
Collection Date: 05/02/13 13:23
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	589	mg/L	D	4		E300.0	05/07/13 15:48 / wc
METALS - DISSOLVED							
Uranium	1.39	mg/L		0.001		E200.8	05/07/13 22:29 / cp
FIELD PARAMETERS							
Field pH	7.58	s.u.				FIELD	05/02/13 13:23 / ***

*** Field data provided by client

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 Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-018
Client Sample ID SWAB-22

Report Date: 05/28/13
Collection Date: 05/02/13 13:04
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	42	mg/L		1		E300.0	05/07/13 16:05 / wc
METALS - DISSOLVED							
Uranium	0.032	mg/L		0.001		E200.8	05/07/13 22:33 / cp
FIELD PARAMETERS							
Field pH	7.84	s.u.				FIELD	05/02/13 13:04 / ***
*** Field data provided by client							

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-019
Client Sample ID SWAB-29

Report Date: 05/28/13
Collection Date: 05/02/13 15:20
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	44	mg/L		1		E300.0	05/07/13 16:58 / wc
METALS - DISSOLVED							
Uranium	0.035	mg/L		0.001		E200.8	05/07/13 22:38 / cp
FIELD PARAMETERS							
Field pH	7.84	s.u.				FIELD	05/02/13 15:20 / ***

*** Field data provided by client

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-020
Client Sample ID SWAB-31

Report Date: 05/28/13
Collection Date: 05/02/13 15:37
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	28	mg/L		1		E300.0	05/07/13 17:50 / wc
METALS - DISSOLVED							
Uranium	0.032	mg/L		0.001		E200.8	05/07/13 22:42 / cp
FIELD PARAMETERS							
Field pH	7.89	s.u.				FIELD	05/02/13 15:37 / ***
*** Field data provided by client							

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-021
Client Sample ID SWAB-32

Report Date: 05/28/13
Collection Date: 05/02/13 15:55
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Sulfate	46	mg/L		1		E300.0	05/07/13 18:07 / wc
METALS - DISSOLVED							
Uranium	0.129	mg/L		0.001		E200.8	05/07/13 22:46 / cp
FIELD PARAMETERS							
Field pH	8.19	s.u.				FIELD	05/02/13 15:55 / ***
*** Field data provided by client							

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-022
Client Sample ID: Field Blank

Report Date: 05/28/13
Collection Date: 05/02/13 16:10
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	ND	mg/L		1		E300.0	05/07/13 18:25 / wc
Fluoride	ND	mg/L		0.1		A4500-F C	05/03/13 14:53 / jba
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	05/09/13 12:00 / ljl
Nitrogen, Nitrate+Nitrite as N	ND	mg/L		0.2		E353.2	05/06/13 13:42 / lr
Sulfate	ND	mg/L		1		E300.0	05/07/13 18:25 / wc
PHYSICAL PROPERTIES							
pH	5.87	s.u.	H	0.01		A4500-H B	05/13/13 10:55 / jz
Solids, Total Dissolved TDS @ 180 C	ND	mg/L		10		A2540 C	05/07/13 16:33 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/07/13 22:51 / cp
Antimony	ND	mg/L		0.003		E200.8	05/07/13 22:51 / cp
Arsenic	ND	mg/L		0.01		E200.8	05/07/13 22:51 / cp
Beryllium	ND	mg/L		0.004		E200.8	05/07/13 22:51 / cp
Cadmium	ND	mg/L		0.001		E200.8	05/07/13 22:51 / cp
Lead	ND	mg/L		0.005		E200.8	05/07/13 22:51 / cp
Manganese	ND	mg/L		0.05		E200.8	05/07/13 22:51 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/07/13 22:51 / cp
Nickel	ND	mg/L		0.05		E200.8	05/07/13 22:51 / cp
Selenium	ND	mg/L		0.005		E200.8	05/07/13 22:51 / cp
Thallium	ND	mg/L		0.001		E200.8	05/07/13 22:51 / cp
Uranium	ND	mg/L		0.001		E200.8	05/07/13 22:51 / cp
RADIONUCLIDES - DISSOLVED							
Radium 226	0.04	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.14	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.23	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1.4	pCi/L	U			RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	1.0	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.6	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	0.05	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	8.23	s.u.				FIELD	05/02/13 16:10 / ***
*** Field data provided by client							

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.
H - Analysis performed past recommended holding time.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-023
Client Sample ID WN-1R

Report Date: 05/28/13
Collection Date: 05/02/13 14:01
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	85	mg/L	D	4		E300.0	05/07/13 18:42 / wc
Fluoride	0.7	mg/L		0.1		A4500-F C	05/03/13 14:56 / jba
Nitrogen, Ammonia as N	204	mg/L	D	5		A4500-NH3 G	05/09/13 12:02 / ljl
Nitrogen, Nitrate+Nitrite as N	20	mg/L	D	1		E353.2	05/06/13 13:50 / lr
Sulfate	2740	mg/L	D	20		E300.0	05/07/13 18:42 / wc
PHYSICAL PROPERTIES							
pH	7.01	s.u.	H	0.01		A4500-H B	05/13/13 10:59 / jz
Solids, Total Dissolved TDS @ 180 C	4120	mg/L		40		A2540 C	05/07/13 16:36 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/07/13 22:55 / cp
Antimony	ND	mg/L		0.003		E200.8	05/07/13 22:55 / cp
Arsenic	ND	mg/L		0.01		E200.8	05/07/13 22:55 / cp
Beryllium	ND	mg/L		0.004		E200.8	05/07/13 22:55 / cp
Cadmium	0.001	mg/L		0.001		E200.8	05/07/13 22:55 / cp
Lead	ND	mg/L		0.005		E200.8	05/07/13 22:55 / cp
Manganese	32.9	mg/L		0.05		E200.8	05/07/13 22:55 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/07/13 22:55 / cp
Nickel	0.05	mg/L		0.05		E200.8	05/07/13 22:55 / cp
Selenium	0.007	mg/L		0.005		E200.8	05/07/13 22:55 / cp
Thallium	0.008	mg/L		0.001		E200.8	05/07/13 22:55 / cp
Uranium	2.35	mg/L		0.001		E200.8	05/07/13 22:55 / cp
RADIONUCLIDES - DISSOLVED							
Radium 226	0.89	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.22	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.18	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1	pCi/L	U			RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	0.07	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.1	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	6.80	s.u.				FIELD	05/02/13 14:01 / ***
*** Field data provided by client							

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-024
Client Sample ID WN-5R

Report Date: 05/28/13
Collection Date: 05/02/13 11:30
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	109	mg/L	D	2		E300.0	05/07/13 19:00 / wc
Fluoride	ND	mg/L		0.1		A4500-F C	05/03/13 14:59 / jba
Nitrogen, Ammonia as N	ND	mg/L		0.05		A4500-NH3 G	05/09/13 12:04 / ljl
Nitrogen, Nitrate+Nitrite as N	47	mg/L	D	2		E353.2	05/06/13 13:52 / lr
Sulfate	1760	mg/L	D	8		E300.0	05/07/13 19:00 / wc
PHYSICAL PROPERTIES							
pH	7.60	s.u.	H	0.01		A4500-H B	05/13/13 11:02 / jz
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		40		A2540 C	05/07/13 16:37 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/07/13 23:00 / cp
Antimony	ND	mg/L		0.003		E200.8	05/07/13 23:00 / cp
Arsenic	ND	mg/L		0.01		E200.8	05/07/13 23:00 / cp
Beryllium	ND	mg/L		0.004		E200.8	05/07/13 23:00 / cp
Cadmium	ND	mg/L		0.001		E200.8	05/07/13 23:00 / cp
Lead	ND	mg/L		0.005		E200.8	05/07/13 23:00 / cp
Manganese	0.58	mg/L		0.05		E200.8	05/07/13 23:00 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/07/13 23:00 / cp
Nickel	ND	mg/L		0.05		E200.8	05/07/13 23:00 / cp
Selenium	0.015	mg/L		0.005		E200.8	05/07/13 23:00 / cp
Thallium	ND	mg/L		0.001		E200.8	05/07/13 23:00 / cp
Uranium	1.85	mg/L		0.001		E200.8	05/07/13 23:00 / cp
RADIONUCLIDES - DISSOLVED							
Radium 226	0.03	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.11	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1.1	pCi/L	U			RA-05	05/17/13 20:20 / gb
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/13 20:20 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	05/17/13 20:20 / gb
Thorium 230	-0.03	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	7.23	s.u.				FIELD	05/02/13 11:30 / ***

*** Field data provided by client

Report Definitions:

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP
Lab ID: C13050129-025
Client Sample ID WN-5S

Report Date: 05/28/13
Collection Date: 05/02/13 11:30
Date Received: 05/03/13
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
MAJOR IONS							
Chloride	103	mg/L	D	2		E300.0	05/07/13 19:17 / wc
Fluoride	ND	mg/L		0.1		A4500-F C	05/03/13 15:02 / jba
Nitrogen, Ammonia as N	0.05	mg/L		0.05		A4500-NH3 G	05/09/13 12:06 / ljl
Nitrogen, Nitrate+Nitrite as N	37	mg/L	D	5		E353.2	05/06/13 13:55 / lr
Sulfate	1670	mg/L	D	8		E300.0	05/07/13 19:17 / wc
PHYSICAL PROPERTIES							
pH	7.59	s.u.	H	0.01		A4500-H B	05/13/13 11:06 / jz
Solids, Total Dissolved TDS @ 180 C	3740	mg/L		40		A2540 C	05/07/13 16:38 / ab
METALS - DISSOLVED							
Aluminum	ND	mg/L		0.1		E200.8	05/07/13 23:22 / cp
Antimony	ND	mg/L		0.003		E200.8	05/07/13 23:22 / cp
Arsenic	ND	mg/L		0.01		E200.8	05/07/13 23:22 / cp
Beryllium	ND	mg/L		0.004		E200.8	05/07/13 23:22 / cp
Cadmium	ND	mg/L		0.001		E200.8	05/07/13 23:22 / cp
Lead	ND	mg/L		0.005		E200.8	05/07/13 23:22 / cp
Manganese	0.59	mg/L		0.05		E200.8	05/07/13 23:22 / cp
Molybdenum	ND	mg/L		0.1		E200.8	05/07/13 23:22 / cp
Nickel	ND	mg/L		0.05		E200.8	05/07/13 23:22 / cp
Selenium	0.015	mg/L		0.005		E200.8	05/07/13 23:22 / cp
Thallium	ND	mg/L		0.001		E200.8	05/07/13 23:22 / cp
Uranium	1.90	mg/L		0.001		E200.8	05/07/13 23:22 / cp
RADIONUCLIDES - DISSOLVED							
Radium 226	0.12	pCi/L	U			E903.0	05/22/13 11:52 / lmc
Radium 226 precision (±)	0.13	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 226 MDC	0.19	pCi/L				E903.0	05/22/13 11:52 / lmc
Radium 228	1.1	pCi/L	U			RA-05	05/17/13 20:21 / gb
Radium 228 precision (±)	0.8	pCi/L				RA-05	05/17/13 20:21 / gb
Radium 228 MDC	1.3	pCi/L				RA-05	05/17/13 20:21 / gb
Thorium 230	0.04	pCi/L	U			E908.0	05/10/13 09:31 / dmf
Thorium 230 precision (±)	0.08	pCi/L				E908.0	05/10/13 09:31 / dmf
Thorium 230 MDC	0.2	pCi/L				E908.0	05/10/13 09:31 / dmf
FIELD PARAMETERS							
Field pH	7.23	s.u.				FIELD	05/02/13 11:30 / ***
*** Field data provided by client							

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

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

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Project: Split Rock Mill Site GWPP

Report Date: 05/28/13

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C								Batch: TDS130507A		
Sample ID: MB-1_130507A	Method Blank					Run: BAL-19_130507B		05/07/13 16:22		
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	10						
Sample ID: LCS-2_130507A	Laboratory Control Sample					Run: BAL-19_130507B		05/07/13 16:22		
Solids, Total Dissolved TDS @ 180 C		1990	mg/L	20	99	90	110			
Sample ID: C13050118-014A MS	Sample Matrix Spike					Run: BAL-19_130507B		05/07/13 16:30		
Solids, Total Dissolved TDS @ 180 C		1700	mg/L	11	99	90	110			
Sample ID: C13050129-024A DUP	Sample Duplicate					Run: BAL-19_130507B		05/07/13 16:38		
Solids, Total Dissolved TDS @ 180 C		3730	mg/L	40				1.3	5	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP

Report Date: 05/28/13
Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-F C										Batch: R173190
Sample ID: MBLK										
Method Blank		Run: MANTECH_130503B								
Fluoride		ND	mg/L	0.05						05/03/13 08:42
Sample ID: LCS-7250										
Laboratory Control Sample		Run: MANTECH_130503B								
Fluoride		2.08	mg/L	0.10	104	90	110			05/03/13 08:45
Sample ID: C13050118-013AMS										
Sample Matrix Spike		Run: MANTECH_130503B								
Fluoride		2.62	mg/L	0.10	106	80	120			05/03/13 12:53
Sample ID: C13050118-013AMSD										
Sample Matrix Spike Duplicate		Run: MANTECH_130503B								
Fluoride		2.62	mg/L	0.10	106	80	120	0.0	10	05/03/13 12:56

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc
Project: Split Rock Mill Site GWPP

Report Date: 05/28/13
Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B										
Analytical Run: PHSC_101-C_130503A										
Sample ID: pH 6.86		Initial Calibration Verification Standard								
										05/03/13 08:40
pH		6.95	s.u.	0.010	101	98	102			
Method: A4500-H B										
Batch: R173163										
Sample ID: C13050082-002ADUP		Sample Duplicate								
										05/03/13 09:49
pH		7.73	s.u.	0.010				0.9	3	
Method: A4500-H B										
Analytical Run: PHSC_101-C_130506A										
Sample ID: pH 6.86		Initial Calibration Verification Standard								
										05/06/13 08:38
pH		6.88	s.u.	0.010	100	98	102			
Method: A4500-H B										
Batch: R173205										
Sample ID: C13050028-003ADUP		Sample Duplicate								
										05/06/13 09:49
pH		7.14	s.u.	0.010				0.6	3	
Method: A4500-H B										
Analytical Run: PHSC_101-C_130513A										
Sample ID: pH 6.86		Initial Calibration Verification Standard								
										05/13/13 09:46
pH		6.84	s.u.	0.010	100	98	102			
Method: A4500-H B										
Batch: R173482										
Sample ID: C13050417-001ADUP		Sample Duplicate								
										05/13/13 11:25
pH		7.32	s.u.	0.010				0.3	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-NH3 G										Batch: R173394
Sample ID: MBLK-1		Method Blank					Run: TECHNICON_130509A			05/09/13 11:18
Nitrogen, Ammonia as N		ND	mg/L	0.01						
Sample ID: LFB-3										05/09/13 11:22
Nitrogen, Ammonia as N		Laboratory Fortified Blank					Run: TECHNICON_130509A			
		2.00	mg/L	0.050	102	80	120			
Sample ID: C13050129-003DMS										05/09/13 11:54
Nitrogen, Ammonia as N		Sample Matrix Spike					Run: TECHNICON_130509A			
		3.38	mg/L	0.050	101	90	110			
Sample ID: C13050129-003DMSD										05/09/13 11:56
Nitrogen, Ammonia as N		Sample Matrix Spike Duplicate					Run: TECHNICON_130509A			
		3.54	mg/L	0.050	109	90	110	4.6	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8		Analytical Run: ICPMS2-C_130506A								
Sample ID: ICV		12 Initial Calibration Verification Standard								05/06/13 20:32
Aluminum		0.0490	mg/L	0.0010	98	90	110			
Antimony		0.0512	mg/L	0.0010	102	90	110			
Arsenic		0.0489	mg/L	0.0010	98	90	110			
Beryllium		0.0498	mg/L	0.0010	100	90	110			
Cadmium		0.0490	mg/L	0.0010	98	90	110			
Lead		0.0500	mg/L	0.0010	100	90	110			
Manganese		0.0495	mg/L	0.0010	99	90	110			
Molybdenum		0.0498	mg/L	0.0010	100	90	110			
Nickel		0.0494	mg/L	0.0010	99	90	110			
Selenium		0.0490	mg/L	0.0010	98	90	110			
Thallium		0.0505	mg/L	0.0010	101	90	110			
Uranium		0.0498	mg/L	0.00030	100	90	110			
Method: E200.8		Batch: R173240								
Sample ID: LRB		12 Method Blank								Run: ICPMS2-C_130506A 05/06/13 12:53
Aluminum		ND	mg/L	0.001						
Antimony		8E-05	mg/L	6E-05						
Arsenic		ND	mg/L	0.00010						
Beryllium		ND	mg/L	5E-05						
Cadmium		ND	mg/L	2E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	2E-05						
Molybdenum		4E-05	mg/L	4E-05						
Nickel		ND	mg/L	3E-05						
Selenium		ND	mg/L	0.0002						
Thallium		ND	mg/L	9E-06						
Uranium		ND	mg/L	1E-05						
Sample ID: LFB		12 Laboratory Fortified Blank								Run: ICPMS2-C_130506A 05/06/13 12:57
Aluminum		0.0512	mg/L	0.0010	102	85	115			
Antimony		0.0513	mg/L	0.0010	103	85	115			
Arsenic		0.0512	mg/L	0.0010	102	85	115			
Beryllium		0.0514	mg/L	0.0010	103	85	115			
Cadmium		0.0507	mg/L	0.0010	101	85	115			
Lead		0.0520	mg/L	0.0010	104	85	115			
Manganese		0.0507	mg/L	0.0010	101	85	115			
Molybdenum		0.0510	mg/L	0.0010	102	85	115			
Nickel		0.0515	mg/L	0.0010	103	85	115			
Selenium		0.0505	mg/L	0.0010	101	85	115			
Thallium		0.0519	mg/L	0.0010	104	85	115			
Uranium		0.0527	mg/L	0.00030	105	85	115			
Sample ID: C13040436-004CMS4		12 Sample Matrix Spike								Run: ICPMS2-C_130506A 05/06/13 20:57
Aluminum		0.0495	mg/L	0.030	99	70	130			
Antimony		0.0534	mg/L	0.0010	107	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R173240
Sample ID: C13040436-004CMS4	12	Sample Matrix Spike				Run: ICPMS2-C_130506A				05/06/13 20:57
Arsenic		0.0546	mg/L	0.0010	105	70	130			
Beryllium		0.0495	mg/L	0.0010	99	70	130			
Cadmium		0.0499	mg/L	0.0010	100	70	130			
Lead		0.0501	mg/L	0.0010	100	70	130			
Manganese		0.0611	mg/L	0.0010	98	70	130			
Molybdenum		0.0484	mg/L	0.0010	95	70	130			
Nickel		0.0496	mg/L	0.0050	99	70	130			
Selenium		0.0545	mg/L	0.0010	108	70	130			
Thallium		0.0484	mg/L	0.00050	97	70	130			
Uranium		0.0517	mg/L	0.00030	101	70	130			
Sample ID: C13040436-004CMSD4	12	Sample Matrix Spike Duplicate				Run: ICPMS2-C_130506A				05/06/13 21:01
Aluminum		0.0498	mg/L	0.030	100	70	130	0.7	20	
Antimony		0.0536	mg/L	0.0010	107	70	130	0.3	20	
Arsenic		0.0546	mg/L	0.0010	105	70	130	0.0	20	
Beryllium		0.0502	mg/L	0.0010	100	70	130	1.4	20	
Cadmium		0.0501	mg/L	0.0010	100	70	130	0.5	20	
Lead		0.0501	mg/L	0.0010	100	70	130	0.1	20	
Manganese		0.0607	mg/L	0.0010	97	70	130	0.5	20	
Molybdenum		0.0493	mg/L	0.0010	97	70	130	1.9	20	
Nickel		0.0499	mg/L	0.0050	99	70	130	0.4	20	
Selenium		0.0542	mg/L	0.0010	107	70	130	0.5	20	
Thallium		0.0489	mg/L	0.00050	98	70	130	1.1	20	
Uranium		0.0522	mg/L	0.00030	102	70	130	1.0	20	
Method: E200.8										Analytical Run: ICPMS2-C_130508A
Sample ID: ICV		Initial Calibration Verification Standard								05/08/13 12:23
Antimony		0.0520	mg/L	0.0010	104	90	110			
Method: E200.8										Batch: R173360
Sample ID: LRB		Method Blank				Run: ICPMS2-C_130508A				05/08/13 11:41
Antimony		0.00010	mg/L	6E-05						
Sample ID: LFB		Laboratory Fortified Blank				Run: ICPMS2-C_130508A				05/08/13 11:44
Antimony		0.0512	mg/L	0.0010	102	85	115			
Sample ID: C13050080-001AMS4		Sample Matrix Spike				Run: ICPMS2-C_130508A				05/08/13 13:24
Antimony		0.0518	mg/L	0.0010	104	70	130			
Sample ID: C13050080-001AMSD4		Sample Matrix Spike Duplicate				Run: ICPMS2-C_130508A				05/08/13 13:28
Antimony		0.0524	mg/L	0.0010	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 Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8		Analytical Run: ICPMS4-C_130507A								
Sample ID: ICV		12 Initial Calibration Verification Standard								05/07/13 22:02
Aluminum		0.0502	mg/L	0.0010	100	90	110			
Antimony		0.0546	mg/L	0.0010	109	90	110			
Arsenic		0.0512	mg/L	0.0010	102	90	110			
Beryllium		0.0502	mg/L	0.0010	100	90	110			
Cadmium		0.0498	mg/L	0.0010	100	90	110			
Lead		0.0492	mg/L	0.0010	98	90	110			
Manganese		0.0511	mg/L	0.0010	102	90	110			
Molybdenum		0.0490	mg/L	0.0010	98	90	110			
Nickel		0.0509	mg/L	0.0010	102	90	110			
Selenium		0.0516	mg/L	0.0010	103	90	110			
Thallium		0.0502	mg/L	0.0010	100	90	110			
Uranium		0.0498	mg/L	0.00030	100	90	110			
Method: E200.8		Batch: R173303								
Sample ID: LRB		12 Method Blank								05/07/13 12:44
		Run: ICPMS4-C_130507A								
Aluminum		ND	mg/L	0.0002						
Antimony		0.0006	mg/L	0.0001						
Arsenic		ND	mg/L	5E-05						
Beryllium		ND	mg/L	2E-05						
Cadmium		ND	mg/L	3E-05						
Lead		ND	mg/L	2E-05						
Manganese		4E-05	mg/L	3E-05						
Molybdenum		0.0002	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						
Selenium		ND	mg/L	7E-05						
Thallium		ND	mg/L	6E-05						
Uranium		2E-05	mg/L	9E-06						
Sample ID: LFB		12 Laboratory Fortified Blank								05/07/13 12:48
		Run: ICPMS4-C_130507A								
Aluminum		0.0540	mg/L	0.0010	108	85	115			
Antimony		0.0505	mg/L	0.0010	100	85	115			
Arsenic		0.0501	mg/L	0.0010	100	85	115			
Beryllium		0.0522	mg/L	0.0010	104	85	115			
Cadmium		0.0502	mg/L	0.0010	100	85	115			
Lead		0.0525	mg/L	0.0010	105	85	115			
Manganese		0.0546	mg/L	0.0010	109	85	115			
Molybdenum		0.0522	mg/L	0.0010	104	85	115			
Nickel		0.0531	mg/L	0.0010	106	85	115			
Selenium		0.0493	mg/L	0.0010	99	85	115			
Thallium		0.0532	mg/L	0.0010	106	85	115			
Uranium		0.0537	mg/L	0.00030	107	85	115			
Sample ID: C13050129-006BMS4		12 Sample Matrix Spike								05/07/13 19:35
		Run: ICPMS4-C_130507A								
Aluminum		0.0512	mg/L	0.030	98	70	130			
Antimony		0.0565	mg/L	0.0010	113	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: R173303
Sample ID: C13050129-006BMS4 12 Sample Matrix Spike										Run: ICPMS4-C_130507A 05/07/13 19:35
Arsenic		0.0555	mg/L	0.0010	107	70	130			
Beryllium		0.0464	mg/L	0.0010	93	70	130			
Cadmium		0.0501	mg/L	0.0010	100	70	130			
Lead		0.0531	mg/L	0.0010	106	70	130			
Manganese		0.0541	mg/L	0.0010	107	70	130			
Molybdenum		0.0485	mg/L	0.0010	95	70	130			
Nickel		0.0495	mg/L	0.0050	97	70	130			
Selenium		0.0533	mg/L	0.0010	103	70	130			
Thallium		0.0527	mg/L	0.00050	105	70	130			
Uranium		0.427	mg/L	0.00030		70	130			A
Sample ID: C13050129-006BMSD4 12 Sample Matrix Spike Duplicate										Run: ICPMS4-C_130507A 05/07/13 19:39
Aluminum		0.0513	mg/L	0.030	98	70	130	0.2	20	
Antimony		0.0571	mg/L	0.0010	114	70	130	1.1	20	
Arsenic		0.0562	mg/L	0.0010	108	70	130	1.3	20	
Beryllium		0.0466	mg/L	0.0010	93	70	130	0.4	20	
Cadmium		0.0501	mg/L	0.0010	100	70	130	0.0	20	
Lead		0.0531	mg/L	0.0010	106	70	130	0.1	20	
Manganese		0.0542	mg/L	0.0010	107	70	130	0.2	20	
Molybdenum		0.0504	mg/L	0.0010	99	70	130	4.0	20	
Nickel		0.0508	mg/L	0.0050	100	70	130	2.6	20	
Selenium		0.0574	mg/L	0.0010	111	70	130	7.5	20	
Thallium		0.0527	mg/L	0.00050	105	70	130	0.0	20	
Uranium		0.432	mg/L	0.00030		70	130	1.2	20	A
Sample ID: C13050129-016BMS4 12 Sample Matrix Spike										Run: ICPMS4-C_130507A 05/07/13 21:06
Aluminum		0.101	mg/L	0.030	96	70	130			
Antimony		0.106	mg/L	0.0010	105	70	130			
Arsenic		0.113	mg/L	0.0010	108	70	130			
Beryllium		0.0807	mg/L	0.0010	81	70	130			
Cadmium		0.0944	mg/L	0.0010	94	70	130			
Lead		0.112	mg/L	0.0010	112	70	130			
Manganese		1.66	mg/L	0.0010		70	130			A
Molybdenum		0.113	mg/L	0.0010	108	70	130			
Nickel		0.133	mg/L	0.0050	106	70	130			
Selenium		0.101	mg/L	0.0010	98	70	130			
Thallium		0.117	mg/L	0.00050	116	70	130			
Uranium		1.29	mg/L	0.00030		70	130			A
Sample ID: C13050129-016BMSD4 12 Sample Matrix Spike Duplicate										Run: ICPMS4-C_130507A 05/07/13 21:10
Aluminum		0.103	mg/L	0.030	99	70	130	2.5	20	
Antimony		0.110	mg/L	0.0010	109	70	130	3.5	20	
Arsenic		0.114	mg/L	0.0010	109	70	130	0.4	20	
Beryllium		0.0821	mg/L	0.0010	82	70	130	1.7	20	
Cadmium		0.0971	mg/L	0.0010	96	70	130	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Project: Split Rock Mill Site GWPP

Report Date: 05/28/13

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: R173303	
Sample ID: C13050129-016BMSD4 12 Sample Matrix Spike Duplicate						Run: ICPMS4-C_130507A			05/07/13 21:10	
Lead		0.113	mg/L	0.0010	113	70	130	0.3	20	
Manganese		1.64	mg/L	0.0010		70	130	0.8	20	A
Molybdenum		0.117	mg/L	0.0010	112	70	130	3.9	20	
Nickel		0.132	mg/L	0.0050	106	70	130	0.2	20	
Selenium		0.101	mg/L	0.0010	99	70	130	0.4	20	
Thallium		0.118	mg/L	0.00050	118	70	130	1.1	20	
Uranium		1.30	mg/L	0.00030		70	130	0.6	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										Batch: R173325
Sample ID: ICB-050613	2	Method Blank				Run: IC1-C_130506A				05/06/13 14:34
Chloride		ND	mg/L	0.07						
Sulfate		0.2	mg/L	0.08						
Sample ID: LFB-050613-01	2	Laboratory Fortified Blank				Run: IC1-C_130506A				05/06/13 14:51
Chloride		9.90	mg/L	1.0	99	90	110			
Sulfate		39.3	mg/L	1.0	98	90	110			
Sample ID: C13050120-001AMS	2	Sample Matrix Spike				Run: IC1-C_130506A				05/07/13 09:08
Chloride		10.7	mg/L	1.0	101	90	110			
Sulfate		44.2	mg/L	1.0	101	90	110			
Sample ID: C13050120-001AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_130506A				05/07/13 09:25
Chloride		11.0	mg/L	1.0	104	90	110	2.9	20	
Sulfate		45.4	mg/L	1.0	104	90	110	2.7	20	
Sample ID: C13050129-009AMS	2	Sample Matrix Spike				Run: IC1-C_130506A				05/07/13 13:11
Chloride		214	mg/L	2.1	107	90	110			
Sulfate		2100	mg/L	8.3		90	110			A
Sample ID: C13050129-009AMSD	2	Sample Matrix Spike Duplicate				Run: IC1-C_130506A				05/07/13 13:29
Chloride		211	mg/L	2.1	104	90	110	1.4	20	
Sulfate		2080	mg/L	8.3		90	110	0.9	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.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E353.2										Batch: R173228
Sample ID: MBLK-1		Method Blank								Run: TECHNICON_130506A 05/06/13 10:40
Nitrogen, Nitrate+Nitrite as N		ND	mg/L	0.02						
Sample ID: LFB-3		Laboratory Fortified Blank								Run: TECHNICON_130506A 05/06/13 10:45
Nitrogen, Nitrate+Nitrite as N		2.06	mg/L	0.10	105	90	110			
Sample ID: C13050118-012DMS		Sample Matrix Spike								Run: TECHNICON_130506A 05/06/13 13:10
Nitrogen, Nitrate+Nitrite as N		2.06	mg/L	0.10	105	90	110			
Sample ID: C13050118-012DMSD		Sample Matrix Spike Duplicate								Run: TECHNICON_130506A 05/06/13 13:12
Nitrogen, Nitrate+Nitrite as N		2.14	mg/L	0.10	109	90	110	3.8	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: RA226-6631	
Sample ID: C13050190-003GMS	Sample Matrix Spike			Run: BERTHOLD 770-1_130509C			05/22/13 13:24			
Radium 226	19	pCi/L		85	70	130				
Sample ID: C13050190-003GMSD	Sample Matrix Spike Duplicate			Run: BERTHOLD 770-1_130509C			05/22/13 13:24			
Radium 226	19	pCi/L		84	70	130	0.8	21		
Sample ID: MB-RA226-6631	3	Method Blank			Run: BERTHOLD 770-1_130509C			05/22/13 15:02		
Radium 226		-0.05	pCi/L	U						
Radium 226 precision (±)		0.07	pCi/L							
Radium 226 MDC		0.1	pCi/L							
Sample ID: LCS-RA226-6631	Laboratory Control Sample			Run: BERTHOLD 770-1_130509C			05/22/13 15:02			
Radium 226	11	pCi/L		98	80	120				

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration



QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Western Nuclear Inc

Project: Split Rock Mill Site GWPP

Report Date: 05/28/13

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0								Batch: RA-TH-ISO-1837		
Sample ID: LCS-RA-TH-ISO-1837	Laboratory Control Sample					Run: EGG-ORTEC_130508A		05/10/13 09:31		
Thorium 230		6.2	pCi/L		102	80	120			
Sample ID: MB-RA-TH-ISO-1837	3	Method Blank				Run: EGG-ORTEC_130508A		05/10/13 09:30		
Thorium 230		0.009	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Sample ID: Tap Water-MS	Sample Matrix Spike					Run: EGG-ORTEC_130508A		05/10/13 09:31		
Thorium 230		12.1	pCi/L		98	70	130			
Sample ID: Tap Water-MSD	Sample Matrix Spike Duplicate					Run: EGG-ORTEC_130508A		05/10/13 09:31		
Thorium 230		11.9	pCi/L		96	70	130	1.6	34.7	

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 Casper, WY Branch

Client: Western Nuclear Inc

Report Date: 05/28/13

Project: Split Rock Mill Site GWPP

Work Order: C13050129

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: RA228-4414		
Sample ID: LCS-228-RA226-6631	Laboratory Control Sample					Run: TENNELEC-3_130509B		05/17/13 20:20		
Radium 228		8.9	pCi/L		98	80	120			
Sample ID: MB-RA226-6631	3	Method Blank				Run: TENNELEC-3_130509B		05/17/13 20:20		
Radium 228		-0.5	pCi/L							U
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		1.0	pCi/L							
Sample ID: C13050243-002AMS	Sample Matrix Spike					Run: TENNELEC-3_130509B		05/17/13 20:21		
Radium 228		21.0	pCi/L		105	70	130			
Sample ID: C13050243-002AMSD	Sample Matrix Spike Duplicate					Run: TENNELEC-3_130509B		05/17/13 20:21		
Radium 228		31.5	pCi/L		96	70	130	40	32.1	R
- The RPD for the MSD is high. The individual spike recoveries are within range, the MB is acceptable, and the LCS is acceptable therefore the batch is approved.										

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.

Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

Western Nuclear Inc

C13050129

Login completed by: Debra Williams

Date Received: 5/3/2013

Reviewed by: BL2000\cwagner

Received by: dw

Reviewed Date: 5/6/2013

Carrier Hand Del
name:

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☒	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☒	Not Applicable ☐
Container/Temp Blank temperature:	3.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☒	Not Applicable ☐

Contact and Corrective Action Comments:

Added 1mL nitric acid to 2L bottles for samples WN1, WN5, WN5R, WN1R and 5S to pH <2.

PLEASE PRINT (Provide as much information as possible.)

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.



Chain of Custody and Analytical Request Record

Page 2 of 3

PLEASE PRINT (Provide as much information as possible.)

Company Name: <u>Western Nuclear, Inc</u>	Project Name, PWS, Permit, Etc. <u>See pg 1 of 3.</u>	Sample Origin State:	EPA/State Compliance: Yes ☐ No ☐
Report Mail Address: <u>See pg 1 of 3</u>	Contact Name: <u>See pg 1 of 3</u>	Phone/Fax:	Email:
Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Special Report/Formats:

- ☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
- ☐ EDD/EDT (Electronic Data)
Format: _____
☐ LEVEL IV
☐ NELAC

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

ANALYSIS REQUESTED

SEE ATTACHED

Standard Turnaround (TAT)

R
U
S
H

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

Comments:

pH =

Shipped by:

Cooler ID(s):

Receipt Temp

3.8 °C

On Ice:

Custody Seal

On Bottle Y ☒ N
On Cooler Y ☒ N

Intact

Signature Match Y ☒ N

LABORATORY USE ONLY

13050129

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX
1 SWR - UG	5-2-13	11:23	W
2 SWR - A		11:55	
3 SWR - B		12:12	
4 SWR - C		13:35	
5 SWR - DG		13:57	
6 SWAB-2	5-2-13	15:38	
7 SWAB-4		13:23	
8 SWAB-22		13:04	
9 SWAB-29		15:20	
10 SWAB-31		15:37	

Custody
Record
MUST be
Signed

Relinquished by (print):

Relinquished by (print):

Date/Time:

Date/Time:

Signature:

Signature:

Received by (print):

Received by (print):

Date/Time:

Date/Time:

Signature:

Signature:

Received by Laboratory:

Received by Laboratory:

Date/Time:

Date/Time:

Signature:

Signature:

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 for additional information, downloadable fee schedule, forms, and links.



Chain of Custody and Analytical Request Record

Page ____ of ____

PLEASE PRINT (Provide as much information as possible.)

Company Name: Western Nuclear, Inc.	Project Name, PWS, Permit, Etc.: See pg 1 of 3.	Sample Origin: State:	EPA/State Compliance: Yes ☐ No ☐
Report Mail Address: See pg. 1 of 3.	Contact Name: Phone/Fax:	Email:	Sampler: (Please Print)
Invoice Address:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Special Report/Formats:

- | | |
|---------------------------------------|--|
| ☐ DW | ☐ EDD/EDT (Electronic Data) |
| ☐ POTW/WWTP | Format: _____ |
| ☐ State: _____ | ☐ LEVEL IV |
| ☐ Other: _____ | ☐ NELAC |

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

ANALYSIS REQUESTED

SEE ATTACHED

Standard Turnaround (TAT)

R
U
S
HContact ELI prior to
RUSH sample submittal
for charges and
scheduling - See
Instruction Page

Comments:

pH =

Shipped by:

Cooler ID(s):

Receipt Temp

3.8 °C

On ice: ☒ Y ☐ N

Custody Seal

On Bottle Y ☒ N ☐On Cooler Y ☒ N ☐Intact Y ☒ N ☐Signature Match Y ☒ N ☐

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX
1 SWAB-32	5-2-13	15:55	W
2 Field Blank		16:10	
3 WN-1R		14:01	
4 WN-5R		11:30	
5 WN-5S		11:30	
6			
7			
8			
9			
10			

LABORATORY USE ONLY

13056129

Custody Record MUST be Signed	Relinquished by (print): [Signature]	Date/Time: 5/3/13 10:14	Signature: [Signature]	Received by (print): [Signature]	Date/Time: 5-3-13 1014	Signature: [Signature]
	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
	Sample Disposal: Return to Client:	Lab Disposal:	Received by Laboratory: [Signature] Date/Time: 5-3-13 1014 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 noted on your analytical report.

Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Split Rock Mill
 Jeffrey City Wyoming
 Western Nuclear, Inc
 Table 1
 Ground-Water Sampling Program

Monitoring Wells	Sampling Frequency	Parameters
58 5R Field Blank	Semi-Annual 2L - Filtr + HNO ₃ 100ml - Filtr + H ₂ SO ₄ 250 ml - Filtr Record Field pH on CO ₂	Al, Sb, As, Be, Cd, chloride, fluoride, Mn, Mo, Ni, ammonia, pH, nitrate, Pb, Ra-226 and -228, Se, sulfate, Th-230, Ti, TDS, uranium, water levels
WN-205, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000	Semi-Annual 2L - Filtr + HNO ₃ 100ml - Filtr + H ₂ SO ₄ 250 ml - Filtr Record Field pH on CO ₂	Al, Sb, As, Be, Cd, chloride, fluoride, Mn, Mo, Ni, ammonia, pH, nitrate, Pb, Ra-226 and -228, Se, sulfate, Th-230, Ti, TDS, uranium, water levels
Annual	Annual	Al, Sb, As, Be, Cd, chloride, fluoride, Mn, Mo, Ni, ammonia, pH, nitrate, Pb, Ra-226 and -228, Se, sulfate, Th-230, Ti, TDS, uranium, water levels
SAME AS ABOVE	SAME AS ABOVE	SAME AS ABOVE

Surface Water Monitoring

On May 24, 2004, WNI requested that the NRC approve a new surface water sampling program to consist of 5 sampling points, each of which would be sampled for uranium and sulfate annually. On November 10, 2004, and January 18, 2005, the NRC provided comments regarding this surface water monitoring plan, suggesting that all locations be sampled semi-annually for the full list of parameters. On March 2, 2005, WNI submitted a revised sampling plan specifying that each surface water location be sampled semi-annually for uranium and sulfate.

On May 17, 2005, WNI and NRC staff discussed the discrepancy in the monitoring plan and came to a final agreement. The latest revision to the sampling plan will mimic the ground-water monitoring plan. All surface locations will be sampled semi-annually for uranium and sulfate and annually for the full suite of parameters. Table 2 contains a summary of the surface water monitoring plan.

Table 2
 Surface Water Monitoring Program

Surface Water Locations	Sampling Frequency	Parameters
[REDACTED]	[REDACTED]	[REDACTED]
	Annual	Al, Sb, As, Be, Cd, chloride, fluoride, Mn, Mo, Ni, ammonia, pH, nitrate, Pb, Ra-226 and -228, Se, sulfate, Th-230, Ti, TDS, uranium, water levels
	SAME AS ABOVE	SAME AS ABOVE