

SPLIT ROCK MILLSITE
GROUNDWATER &
SURFACE WATER
MONITORING RESULTS

WATER QUALITY
REPORT

1st & 2nd QUARTER 2003

TABLE OF CONTENTS

	<u>PAGE</u>
TABLE OF CONTENTS	i
MONITORING WELL LOCATION MAP	A1
CROSS REFERENCE TABLE OF WELL DESIGNATIONS	A2
QUARTERLY AND SEMI-ANNUAL GROUNDWATER AND SURFACE WATER COMPLIANCE MONITORING RESULTS, FIRST HALF OF YEAR 2003	A3
GROUNDWATER CORRECTIVE ACTION PROGRAM QUARTERLY AND SEMI-ANNUAL MONITORING RESULTS, FIRST HALF OF YEAR 2003	A9
WNI SPLIT ROCK MILL GROUNDWATER MAXIMUM CAP WATER QUALITY MONITORING PARAMETER VALUES FOR 1/1/90 - 12/31/96	A11

GRAPHS

DRINKING WATER

WELL #27 NEW MILL DRINKING WATER

SURFACE WATER

SWEETWATER RIVER BELOW MILL (S-5)

SWEETWATER RIVER ACROSS FROM
MILL (S-6)

SWEETWATER RIVER ABOVE MILL (S-7)

GROUND WATER

WELL #1

WELL #2 MILL PROCESS WATER

WELL #3

WELL #4E

WELL #4R

WELL #5

WELL #5E

GROUND WATER CONTINUED

WELL #7

WELL-15 265' BACKGROUND WELL

WELL-16 60'

WELL-17 55'

WELL-18 85'

WELL-19 50'

WELL-21 55'

WELL-23 65'

WELL-24 65'

WELL-25 160'

WELL-26 95'

WELL #28

WELL #30

WELL #31

WN-A 175'

WN-B 185'

WN-C 160'

LABORATORY DATA ANALYSIS REPORTS

DRINKING WATER

WELL #27 NEW MILL DRINKING WATER

SURFACE WATER

SWEETWATER RIVER BELOW MILL (S-5)

SWEETWATER RIVER ACROSS FROM
MILL (S-6)

SWEETWATER RIVER ABOVE MILL (S-7)

GROUND WATER

WELL #1

WELL #2 MILL PROCESS WATER

WELL #3

WELL #4E

WELL #4R

WELL #5

WELL #5E

WELL #5R

WELL #5S

WELL #7

GROUND WATER CONTINUED

WN-15 265' BACKGROUND WELL

WN-16 60'

WN-17 55'

WN-18 85'

WN-19 50'

WN-21 55'

WN-23 65'

WN-24 65'

WN-25 160'

WN-26 95'

WELL #28

WELL #30

WELL #31

WN-A 175'

WN-B 185'

WN-BS 185'

WN-C 160'

FIELD BLANK

1ST AND 2ND QTR 2003 LAB QA

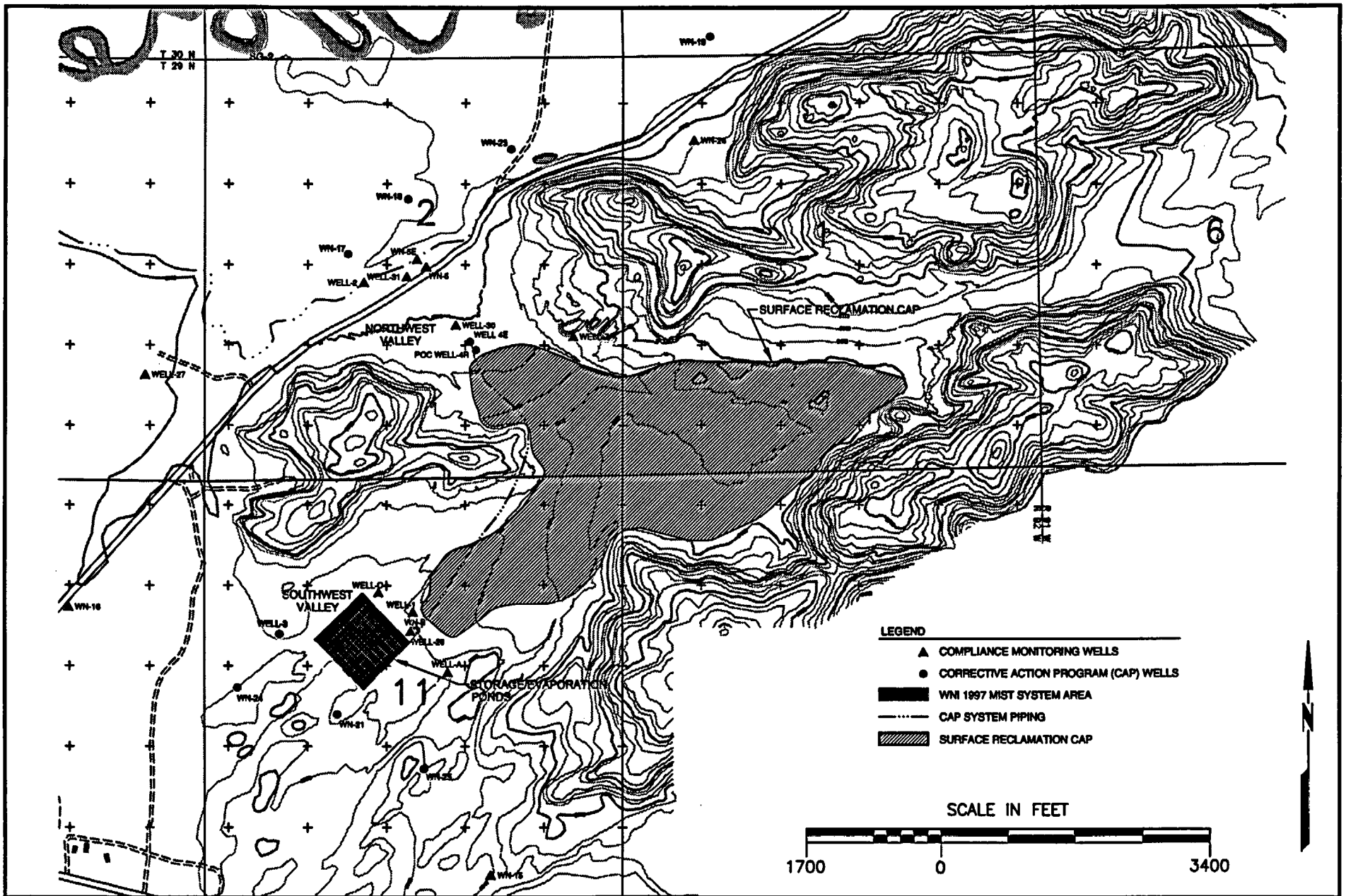


FIGURE 1
MONITORING WELL LOCATIONS AND OPERATIONAL LAYOUT
FOR 1999 CORRECTIVE ACTION PROGRAM

Date:	DECEMBER 2000
Project:	03-347TASK1
File:	OPER-99-1.DWG



CROSS REFERENCE TABLE OF WELL DESIGNATIONS

<u>WELL OR LOCATION</u>	<u>OLD DESIGNATION</u>	<u>STATUS</u>
<u>DRINKING WATER</u>		
WELL #27 NEW MILL DRINKING WATER		
<u>SURFACE WATER</u>		
SWEETWATER RIVER BELOW MILL	S-5	
SWEETWATER RIVER ACROSS FROM MILL	S-6	
SWEETWATER RIVER ABOVE MILL	S-7	
<u>GROUND WATER</u>		
WELL #1	WN 7 HB 48'	
WELL #2 MILL PROCESS WATER		
WELL #3	WN-2 HD 25'	
WELL #4E		
WELL #4R	REPLACES WELL #4	
WELL #5	WN-3 HD 63'	
WELL #5E		
WELL #7	WN-5H 28'	PUMP LOWERED 20' 1/16/96
WELL #9E		ABANDONED 4/13/95
WELL #9R	REPLACES WELL #9	ABANDONED 4/13/95
WN-15 265' BACKGROUND WELL		
WN-16 60'		
WN-17 55'		
WN-18 85'		
WN-19 50'		
WN-21 55'		
WN-23 65'		
WN-24 65'		
WN-25 160'		
WN-26 95'		
WELL #28		
WELL #29		ABANDONED 4/13/95
WELL #30		
WELL #31		
WN-A 175'		STARTED SAMPLING AGAIN 8/28/96
WN-B 185'		
WN-C 160'		

**Quarterly and Semi-Annual Groundwater
and Surface Water Compliance Monitoring
Results
First Half of Year 2003**

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

1Qtr-2003

Groundwater

Parameter	WELL-1	WELL-2	WELL-4E	WELL-5	WELL-5E	WELL-7	WN-15
Aluminum (D) (mg/L)	<0.1		<0.1	<0.1	<0.1		
Ammonia as N (mg/L)	21.1		20	0.31	0.34		
Arsenic (D) (mg/L)	<0.01		<0.01	<0.01	<0.01		
Barium (D) (mg/L)	<0.05		<0.05	<0.05	<0.05		
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)	806		592	478	684		
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)	698		586	890	754		
Carbonate (mg/L)	<1		<1	<1	<1		
Chloride (mg/L)	71.3	81.6	105	175	91.6	129	14.2
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005
Cond Field (uS/cm)	4430	3510	3980	4560	3490	3970	888
Cond Lab (uS/cm)	3900		4420	5080	3900		
Iron (D) (mg/L)	<0.05		0.09	<0.05	<0.05		
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)			144	54.6	61.7		
Manganese (D) (mg/L)	5.94		17.9	0.09	0.22		
Mercury (D) (mg/L)	<0.001		<0.001	<0.001	<0.001		
Molybdenum (D) (mg/L)	<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
Nitrate + Nitrite as N (mg/L)	47.5	30.5	23.6	122	82	24.9	13.5
pH Field (std. units)	7.33	6.97	6.62	6.86	7.06	6.52	7.56
pH Lab (std. units)	7.48	7.11	7.25	7.54	7.68	6.76	7.49
Potassium (mg/L)	18.3		45	24.5	17.2		
Radium-226 (D) (pCi/L)	<1		<1	<1	<1		
Radium-228 (D) (pCi/L)	<2		<2	<2	<2		
Selenium (D) (mg/L)	0.012	0.057	0.023	0.026	0.009	0.032	0.006
Silver (D) (mg/L)	<0.004		<0.004	<0.004	<0.004		
Sodium (mg/L)	83		200	144	55.6		
Sulfate (mg/L)	1540	1790	1960	1900	1460	2180	274
TDS (mg/L)	3430	3770	3950	4620	3560	4120	701
Temp Field (C)	8.2	8.2	7.5	8.3	7.7	8.8	8.3
Thorium-230 (D) (pCi/L)	0.4	<0.4	<0.4	<0.4	<0.4	0.4	<0.4
Uranium (D) (mg/L)	3.64	0.0644	0.922	2.44	2.46	0.288	0.138

02-Oct-03

Shepherd Miller, Inc.

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

<i>1Qtr-2003</i>	<i>Groundwater</i>						
<i>Parameter</i>	<i>WN-16</i>	<i>WN-19</i>	<i>WN-26</i>	<i>WN-27</i>	<i>WELL-28</i>	<i>WELL-30</i>	<i>WELL-31</i>
Aluminum (D) (mg/L)					<0.1	<0.1	<0.1
Ammonia as N (mg/L)					94	29	0.3
Arsenic (D) (mg/L)					<0.01	0.01	<0.01
Barium (D) (mg/L)					<0.05	<0.05	<0.05
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)					751	493	656
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)					678	785	884
Carbonate (mg/L)					<1	<1	<1
Chloride (mg/L)	5.3	101	<5	<5	102	101	125
Chromium (D) (mg/L)	0.024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	478	1400	3120	381	5150	4710	5580
Cond Lab (uS/cm)					4650	5290	4160
Iron (D) (mg/L)					<0.05	<0.05	<0.05
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)					167	169	
Manganese (D) (mg/L)					14.8	4.12	0.11
Mercury (D) (mg/L)					<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)					<0.1	0.2	0.2
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	1.2	5	0.5	0.9	34.9	167	67
pH Field (std. units)	7.94	7.53	7.9	8.23	6.5	6.75	6.99
pH Lab (std. units)	7.55	7.5	7.67	7.37	7.21	7.36	7.46
Potassium (mg/L)					26	34.7	16.5
Radium-226 (D) (pCi/L)					<1	<1	<1
Radium-228 (D) (pCi/L)					<2	<2	<2
Selenium (D) (mg/L)	<0.005	0.007	<0.005	<0.005	0.028	0.024	0.09
Silver (D) (mg/L)						<0.004	
Sodium (mg/L)					85.8	158	49.3
Sulfate (mg/L)	23	419	72.1	23.7	1970	2100	1710
TDS (mg/L)	227	1120	208	228	3780	4670	3890
Temp Field (C)	8.3	5.4	7.7	7.6	7.1	7.4	8.1
Thorium-230 (D) (pCi/L)	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	0.013	0.42	0.002	0.011	5.67	1.51	5.45

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

<i>1Qtr-2003</i>	<i>Groundwater</i>			<i>Surface Water</i>		
<i>Parameter</i>	<i>WN-A</i>	<i>WN-B</i>	<i>WN-C</i>	<i>S-7</i>	<i>S-6</i>	<i>S-5</i>
Aluminum (D) (mg/L)		<0.1				
Ammonia as N (mg/L)		63.6				
Arsenic (D) (mg/L)		<0.01				
Barium (D) (mg/L)		<0.05				
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)		904				
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)		715				
Carbonate (mg/L)		<1				
Chloride (mg/L)	84.2	84.4	64	5.6	14.5	8.8
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	4270	4710	4860	378	418	486
Cond Lab (uS/cm)		4320				
Iron (D) (mg/L)		0.1				
Lead (D) (mg/L)	<0.005	<0.005	0.006	<0.005	<0.005	<0.005
Magnesium (mg/L)		166				
Manganese (D) (mg/L)		7.46				
Mercury (D) (mg/L)		<0.001				
Molybdenum (D) (mg/L)		<0.1				
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	2.8	18.8	46	<0.2	<0.2	<0.2
pH Field (std. units)	6.38	6.41	6.64	7.79	7.98	7.87
pH Lab (std. units)	6.92	7.06	6.99	7.32	7.54	7.58
Potassium (mg/L)		31.8				
Radium-226 (D) (pCi/L)		<1				
Radium-228 (D) (pCi/L)		<2				
Selenium (D) (mg/L)	0.01	0.015	0.011	<0.005	<0.005	<0.008
Silver (D) (mg/L)		<0.004				
Sodium (mg/L)		86				
Sulfate (mg/L)	1620	1820	1710	41.8	55.1	45.7
TDS (mg/L)	3360	3640	3660	210	255	224
Temp Field (C)	8.8	6.4	8.1	0.7	0.7	0.44
Thorium-230 (D) (pCi/L)	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	1.88	3.83	4.86	0.003	0.012	0.004

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

<i>2Qtr-2003</i>		<i>Groundwater</i>					
<i>Parameter</i>	<i>WELL-1</i>	<i>WELL-2</i>	<i>WELL-4E</i>	<i>WELL-5</i>	<i>WELL-5E</i>	<i>WELL-7</i>	<i>WN-15</i>
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia as N (mg/L)	23.8	0.54	2.4	0.29	0.29	2.16	<0.05
Arsenic (D) (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Barium (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)	746	752	597	451	709	526	201
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)	712	918	760	965	818	785	158
Carbonate (mg/L)	<1	<1	<1	<1	<1	<1	<1
Chloride (mg/L)	61.3	101	109	204	106	138	11.8
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	3910	2970	3270	4400	3030	3410	994
Cond Lab (uS/cm)	4150	4180	4700	5600	4250	4790	931
Iron (D) (mg/L)	<0.05	0.23	<0.05	<0.05	<0.05	0.7	<0.05
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)	143	82.8	168	126	128	203	24.4
Manganese (D) (mg/L)	7.62	1.16	12	0.09	0.21	12.8	<0.05
Mercury (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)	<0.1	<0.1	0.1	<0.1	<0.17	<0.1	<0.1
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	49.9	27.8	37.1	145	90	25.7	14.6
pH Field (std. units)	6.41	6.85	6.61	6.78	6.88	6.46	7.53
pH Lab (std. units)	6.84	7.33	7.08	7.08	7.18	6.94	7.41
Potassium (mg/L)	20.7	18.6	22.1	24.5	16.9	21.9	6.2
Radium-226 (D) (pCi/L)	2	<1	<1	<1	<1	<1	<1
Radium-228 (D) (pCi/L)	<2	<2	<2	<2	<2	3.7	<2
Selenium (D) (mg/L)	0.008	0.051	0.015	0.017	0.01	0.026	0.006
Silver (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (mg/L)	124	61.9	187	197	71.4	146	13.9
Sulfate (mg/L)	1633	1958	2100	2110	1400	2270	257
TDS (mg/L)	3370	3860	4090	4630	3570	4320	692
Temp Field (C)	10.3	9.7	9	11.3	9.9	10.8	9.9
Thorium-230 (D) (pCi/L)	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	3.48	0.501	1.15	2.47	2.6	0.272	0.139

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

2Qtr-2003

Groundwater

<i>Parameter</i>	<i>WN-16</i>	<i>WN-19</i>	<i>WN-26</i>	<i>WN-27</i>	<i>WELL-28</i>	<i>WELL-30</i>	<i>WELL-31</i>
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia as N (mg/L)	<0.05	0.06	<0.05	<0.05	91	30	0.21
Arsenic (D) (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Barium (D) (mg/L)	0.06	0.075	0.09	<0.05	<0.05	<0.05	<0.05
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)	160	267	101	154	692	439	666
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)	44.6	162	54.2	40.6	703	894	940
Carbonate (mg/L)	<1	<1	<1	<1	<1	<1	<1
Chloride (mg/L)	9.8	103	6.6	7.9	105	96.8	147
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	2670	1497	304	333	4550	4180	3190
Cond Lab (uS/cm)	308	1650	305	298	5130	6390	4590
Iron (D) (mg/L)	<0.05	0.07	<0.05	0.35	<0.05	<0.05	<0.05
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)	5.8	35.1	4.4	5.7	174	205	134
Manganese (D) (mg/L)	<0.05	0.18	<0.05	<0.05	13.9	3.97	0.12
Mercury (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	0.3	0.2
Nickel (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Nitrate + Nitrite as N (mg/L)	1.2	5.6	0.06	0.9	43.1	209	70
pH Field (std. units)	7.92	7.38	7.91	7.47	6.46	6.75	7
pH Lab (std. units)	7.66	7.53	7.71	7.59	6.91	7.2	6.84
Potassium (mg/L)	7.2	16.2	3.1	6.8	30.9	41.3	19.2
Radium-226 (D) (pCi/L)	<1	<1	<1	<1	1.1	<1	<1
Radium-228 (D) (pCi/L)	<2	<2	3.4	<2	<2	<2	<2
Selenium (D) (mg/L)	<0.005	0.006	<0.005	<0.005	0.03	0.031	0.007
Silver (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (mg/L)	17.5	137	8.3	21.1	131	215	65.5
Sulfate (mg/L)	27.2	458	71.1	25.1	1990	2320	1817
TDS (mg/L)	216	1170	201	206	3750	4980	3930
Temp Field (C)	10.02	5.9	8.7	9.4	9.6	9.06	9.8
Thorium-230 (D) (pCi/L)	<0.4	0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	0.014	0.479	0.003	0.012	5.4	1.77	5.98

WNI Split Rock Mill

Groundwater And Surface Water Quality

Quarterly Report

2Qtr-2003	Groundwater			Surface Water		
Parameter	WN-A	WN-B	WN-C	S-7	S-6	S-5
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia as N (mg/L)	4.9	18.3	48	<0.05	<0.05	<0.05
Arsenic (D) (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Barium (D) (mg/L)	<0.05	<0.05	<0.05	0.05	<0.05	<0.05
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)	787	888	794	120	134	143
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Calcium (mg/L)	858	776	751	34	39.8	40.2
Carbonate (mg/L)	<1	<1	<1	<1	<1	<1
Chloride (mg/L)	96.9	75.2	84.6	5.8	8.9	11.6
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	3560	4520	4520	467	447	491
Cond Lab (uS/cm)	3940	4200	4640	271	321	339
Iron (D) (mg/L)	14.1	<0.05	0.05	0.16	0.16	0.093
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)	118	147	108	6.7	7.6	7.8
Manganese (D) (mg/L)	1.11	1.96	11	<0.05	<0.05	<0.05
Mercury (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)	<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
Nitrate + Nitrite as N (mg/L)	2.3	48.6	49.3	<0.2	<0.2	<0.2
pH Field (std. units)	6.3	6.28	6.28	7.84	8.15	8.37
pH Lab (std. units)	6.9	7.11	7.25	7.76	7.79	7.88
Potassium (mg/L)	18.6	23.9	26.4	4.1	4.7	4.7
Radium-226 (D) (pCi/L)	<1	<1	<1	<1	<1	<1
Radium-228 (D) (pCi/L)	2.2	<2	<2	<2	<2	<2
Selenium (D) (mg/L)	<0.005	0.02	0.015	<0.005	<0.005	<0.008
Silver (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (mg/L)	48	90	108	16.9	22.2	25.1
Sulfate (mg/L)	1750	1544	1764	32.8	40.6	41.2
TDS (mg/L)	3460	3410	3670	151	192	193
Temp Field (C)	9.8	17.3	17.3	10.2	10.1	10.4
Thorium-230 (D) (pCi/L)	0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	2	3.79	4.76	0.003	0.004	0.008

**Groundwater Corrective Action Program
Quarterly and Semi-Annual Monitoring
Results
First Half of Year 2003**

Groundwater Corrective Action Program Monitoring Results

1Qtr-2003

<i>Parameter</i>	<i>WN-21(POC)</i>	<i>WN-24</i>	<i>WN-25</i>	<i>WELL-3</i>	<i>WN-18</i>	<i>WN-23</i>	<i>WN-17</i>	<i>WELL-4R(POC)</i>
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.58
Ammonia as N (mg/L)	2.17	0.11	7.7	0.12	0.13	0.22	<0.05	213
Arsenic (D) (mg/L)	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.02	<0.01
Barium (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.06	<0.05
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Bicarbonate (mg/L)	240	260	214	311	408	371	225	321
Cadmium (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.018
Calcium (mg/L)	79.8	231	142	276	364	499	60.4	412
Carbonate (mg/L)	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (mg/L)	17.6	31.1	21.2	48.9	63.1	70.1	12.6	95.6
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	893	1791	1603	2240	2050	2220	440	5300
Cond Lab (uS/cm)	716	1490	1310	1890	2190	2560	482	5700
Iron (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	<0.005
Magnesium (mg/L)	12	31.5	25.8	35.2	36.3	36	11	192
Manganese (D) (mg/L)	0.37	<0.05	3.44	<0.05	<0.05	<0.05	<0.05	79.5
Mercury (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)	<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	0.41
Nitrate + Nitrite as N (mg/L)	9.9	15.7	38.1	26.3	42.1	32.9	0.2	22
pH Field (std. units)	7.63	7.64	7.1	7.11	7.19	6.96	7.68	6.9
pH Lab (std. units)	7.89	7.9	7.27	7.67	7.74	7.69	7.65	6.91
Potassium (mg/L)	9.4	11.2	11.9	12.6	16.6	17.8	10	65.6
Radium-226 (D) (pCi/L)	<1	1+/-0.2	1+/-0.2	<1	<1	1+/-0.3	1+/-0.2	<1
Radium-228 (D) (pCi/L)	<2	<2	<2	<2	<2	<2	<2	<2
Selenium (D) (mg/L)	<0.005	<0.005	0.008	0.006	0.011	0.008	<0.005	0.025
Silver (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (mg/L)	31.8	51.3	38.8	71.6	79.1	52.8	30.4	194
Sulfate (mg/L)	108	503	295	612	672	992	57.2	2430
TDS (mg/L)	489	1180	968	1540	1800	2190	316	4580
Temp Field (C)	9.4	8.7	9	8.4	8	5.3	5.4	8.2
Thorium-230 (D) (pCi/L)	0.4+/-0.1	<0.4	<0.4	<0.4	0.4+/-0.2	0.4+/-0.2	0.4+/-0.2	0.4+/-0.2
Uranium (D) (mg/L)	0.116	0.293	0.211	1.14	0.93	1.21	0.048	0.516

Note: POC = Point of compliance well

Note: Shaded numbers indicate that the value exceeds the maximum CAP water quality monitoring parameter values for 1/1/90 - 12/31/96

Groundwater Corrective Action Program Monitoring Results

2Qtr-2003

Parameter	WN-21(POC)	WN-24	WN-25	WELL-3	WN-18	WN-23	WN-17	WELL-4R(POC)
Aluminum (D) (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.08
Ammonia as N (mg/L)	5.73	0.07	7.8	<0.05	0.13	0.17	<0.05	239
Arsenic (D) (mg/L)	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	<0.01
Barium (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.06	<0.05
Beryllium (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.005
Bicarbonate (mg/L)	223	253	217	300	383	372	213	309
Cadmium (D) (mg/L)	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.018
Calcium (mg/L)	97.9	237	180	277	333	634	58.8	496
Carbonate (mg/L)	<1	<1	<1	<1	<1	<1	<1	<1
Chloride (mg/L)	12.7	24.2	16.1	41.2	65.3	97.6	9.8	96.6
Chromium (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cond Field (uS/cm)	980	1534	1439	1890	1919	2670	446	4680
Cond Lab (uS/cm)	807	1510	1350	1840	2190	3220	455	7060
Iron (D) (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Lead (D) (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium (mg/L)	19.4	33.6	35.4	36.7	52.8	62.4	11.7	252
Manganese (D) (mg/L)	0.96	<0.05	3.82	<0.05	<0.05	<0.05	<0.05	71.5
Mercury (D) (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum (D) (mg/L)	<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	0.45
Nitrate + Nitrite as N (mg/L)	8.7	17.1	35.4	25.4	42.3	43.2	<0.2	17
pH Field (std. units)	7.58	7.63	7.09	7.16	7.17	6.85	7.62	6.03
pH Lab (std. units)	7.54	7.54	7.23	7.05	7.4	7.19	7.35	6.62
Potassium (mg/L)	8.3	10.2	10.1	11.6	15.4	18.8	9	77.2
Radium-226 (D) (pCi/L)	<1	<1	<1	<1	<1	<1	<1	<1
Radium-228 (D) (pCi/L)	<2	2.1+/-1.1	<2	<2	3.9+/-2.1	<2	<2	<2
Selenium (D) (mg/L)	0.005	0.012	<0.005	0.009	<0.005	0.01	<0.005	0.02
Silver (D) (mg/L)	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Sodium (mg/L)	34.2	48.9	41.7	69.2	98.3	76.8	28	217
Sulfate (mg/L)	184	501	352	571	685	1240	54.7	3140
TDS (mg/L)	547	1190	983	1460	1750	2740	301	4810
Temp Field (C)	10.1	10	11	10	8.4	5.7	5.6	9.6
Thorium-230 (D) (pCi/L)	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Uranium (D) (mg/L)	0.176	0.354	0.255	1.17	0.9	1.35	0.048	0.484

Note: POC = Point of compliance well

Note: Shaded numbers indicate that the value exceeds the maximum CAP water quality monitoring parameter values for 1/1/90 - 12/31/96

**WNI Split Rock Mill
Groundwater Corrective Action Plan (CAP)**

**Maximum CAP Water Quality Monitoring
Parameter Values for 1/1/90 – 12/31/96**

**Groundwater Corrective Action Program
Maximum CAP Water Quality Monitoring
Parameter Values for 1/1/90-12/31/96**

Parameter	WN-21(POC)	WN-24	WN-25	WELL-3	WN-18	WN-23	WN-17	WELL-4R(POC)
Beryllium (mg/L)		0.05	0.05	0.05	0.05	0.05	0.05	0.05
Cadmium (mg/L)		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
Chloride (mg/L)		31.50	51.60	50.10	55.00	76.60	11.10	292
Chromium (mg/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07
Lead (mg/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel (mg/L)		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09
Nitrate + Nitrite as N (mg/L)		7.22	49.70	49.40	29	44	0.25	317
pH Field (std. Units)		7.14	6.49	6.95	6.36	6.65	6.87	5.37
Radium Comb. (pCi/L)		7.6	3.8	2.2	3.0	17.2	6.5	7.2
Selenium (mg/L)		0.01	0.01	0.01	0.01	0.01	0.01	0.34
Sulfate (mg/L)		244	1,072	705	451	1,139	69	4,000
TDS (mg/L)		641	2,079	1,570	1,226	2,509	336	7,661
Thorium-230 (pCi/L)		0.70	<0.04	5.00	<0.04	0.90	<0.6	1.30
Uranium (pCi/ml)		0.15	1.12	0.94	0.51	1.82	0.03	2.71

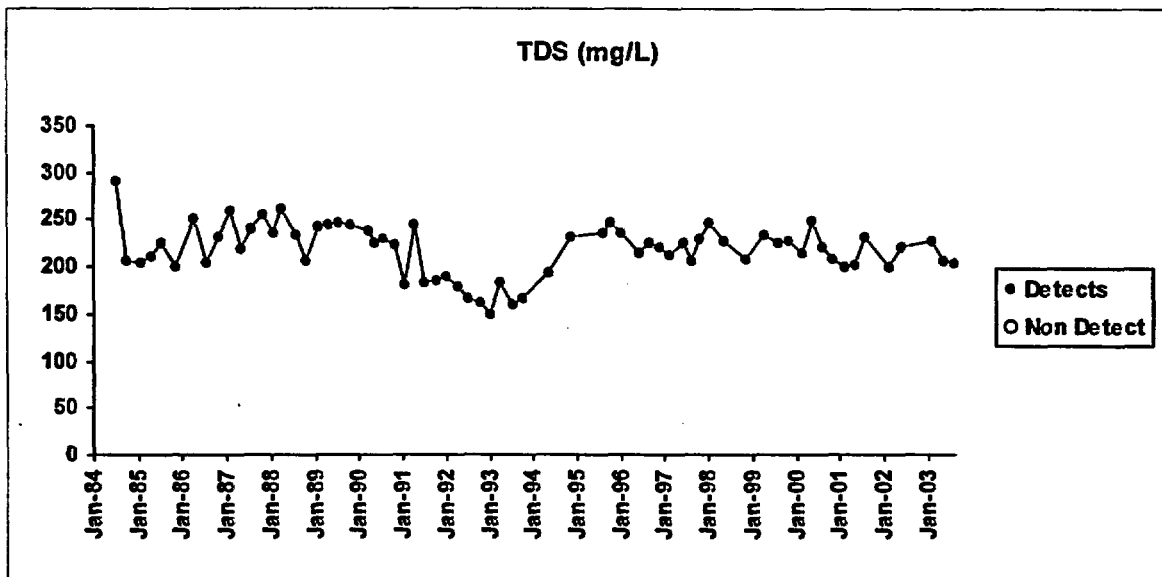
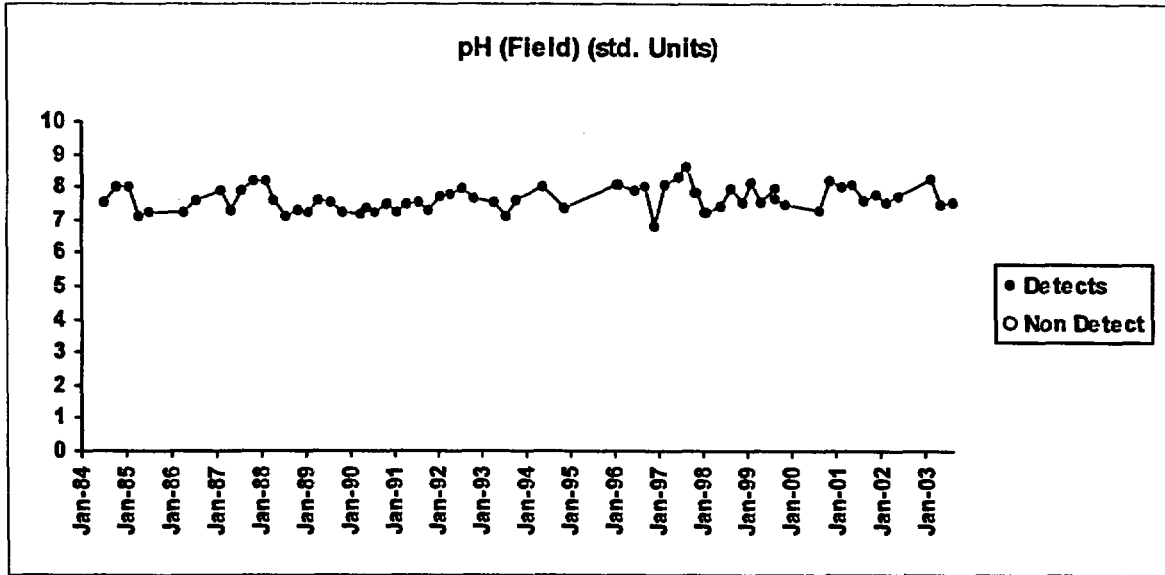
*pH values represent minimum field value recorded from January 1, 1990 through December 31, 1996.
Be and Se values represent the standard listed in license SUA-56 condition 74(b) because all recent values are below the listed standard.
POC = Point of Compliance Well*

DRINKING WATER

Note: Effective March 10, 1997, Well #27 is no longer used as a drinking water source. However, the report format has not been changed in an effort to maintain consistency with previous reports.

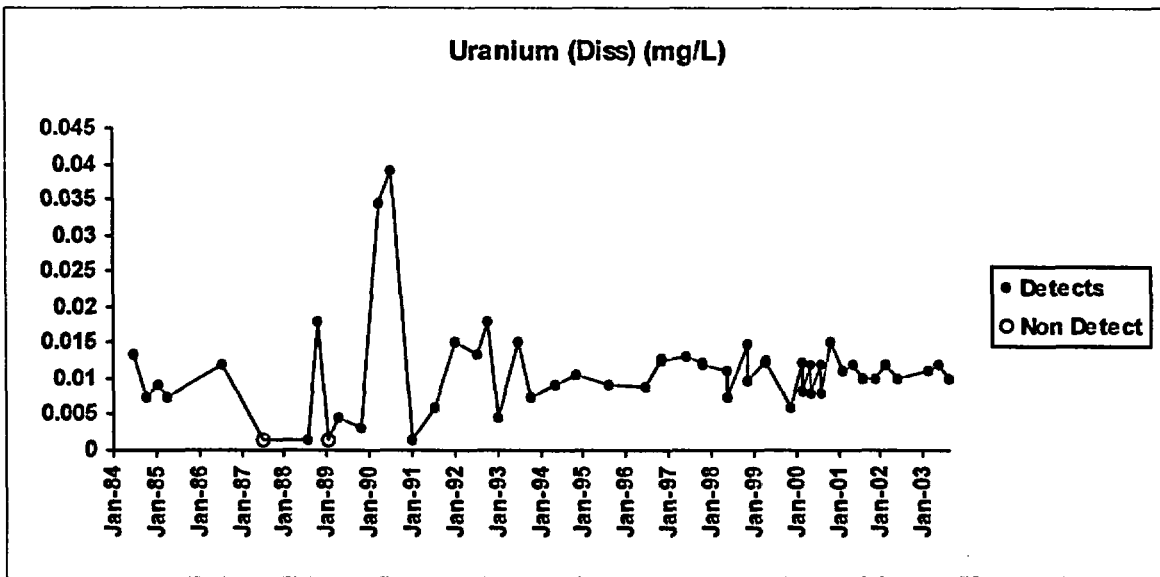
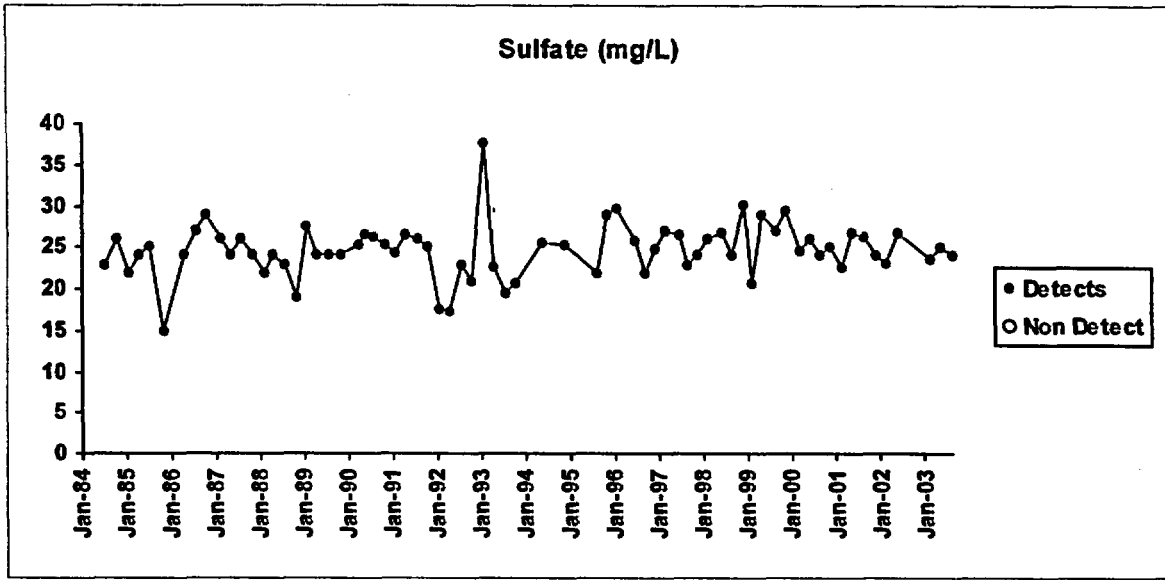
Jeffrey City

WELL-27



Jeffrey City

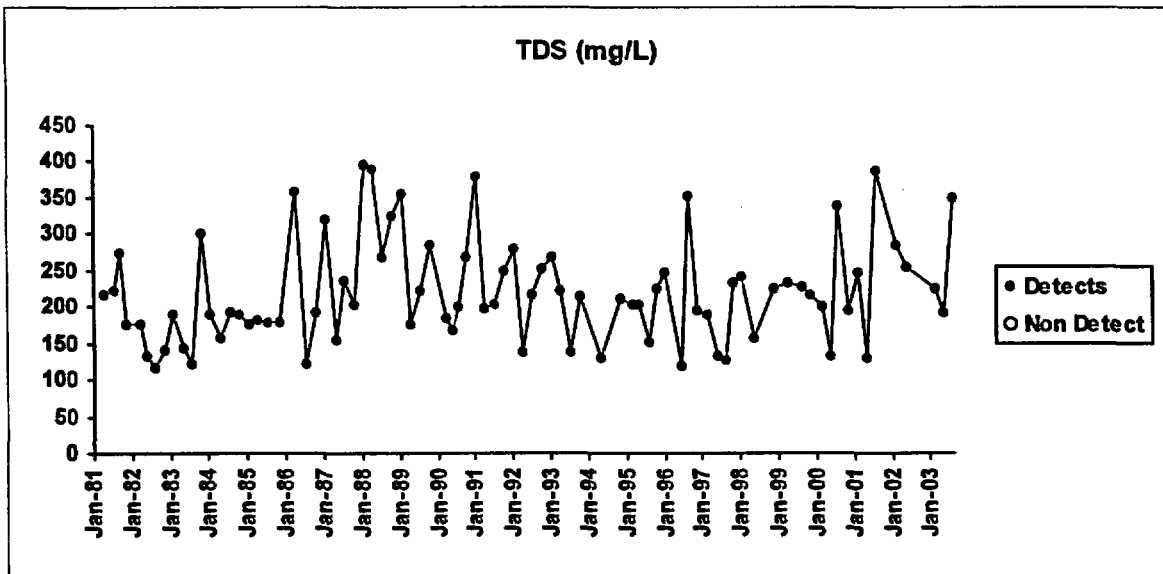
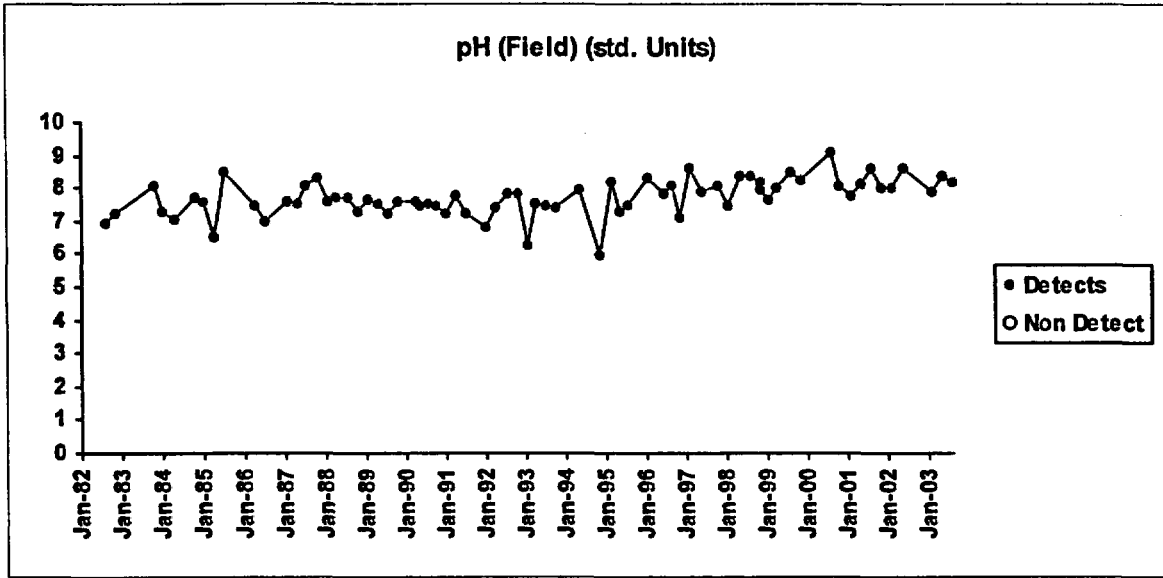
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SURFACE WATER

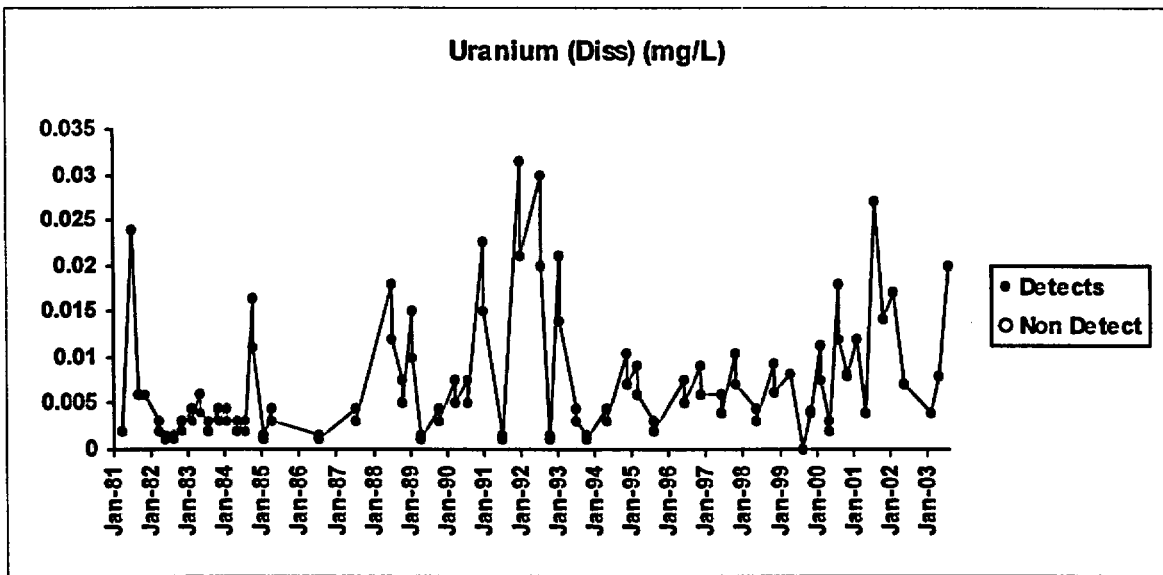
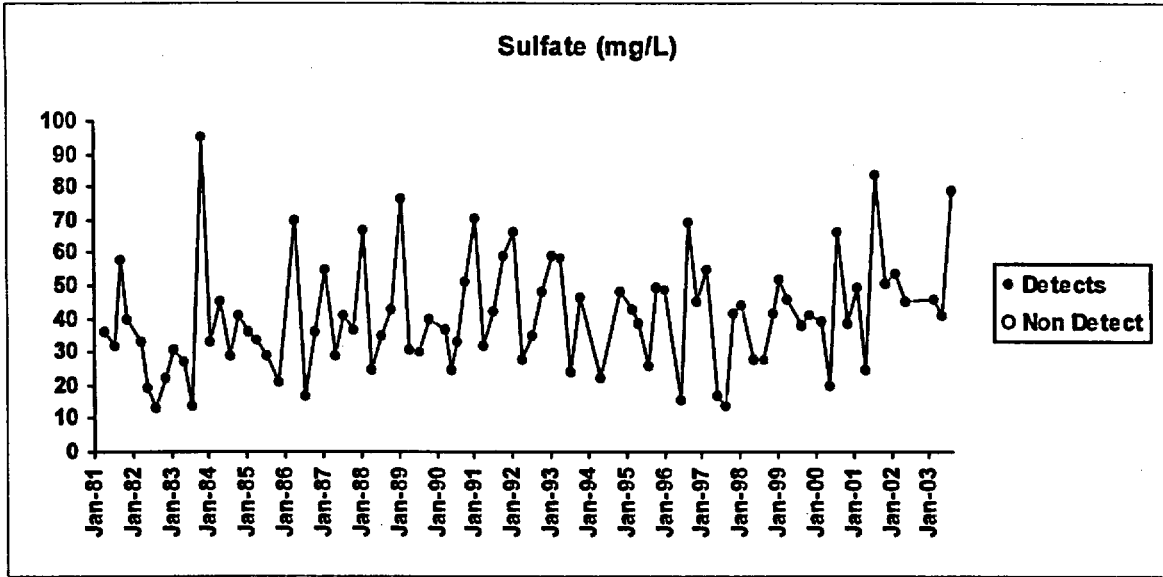
Jeffrey City

S-5



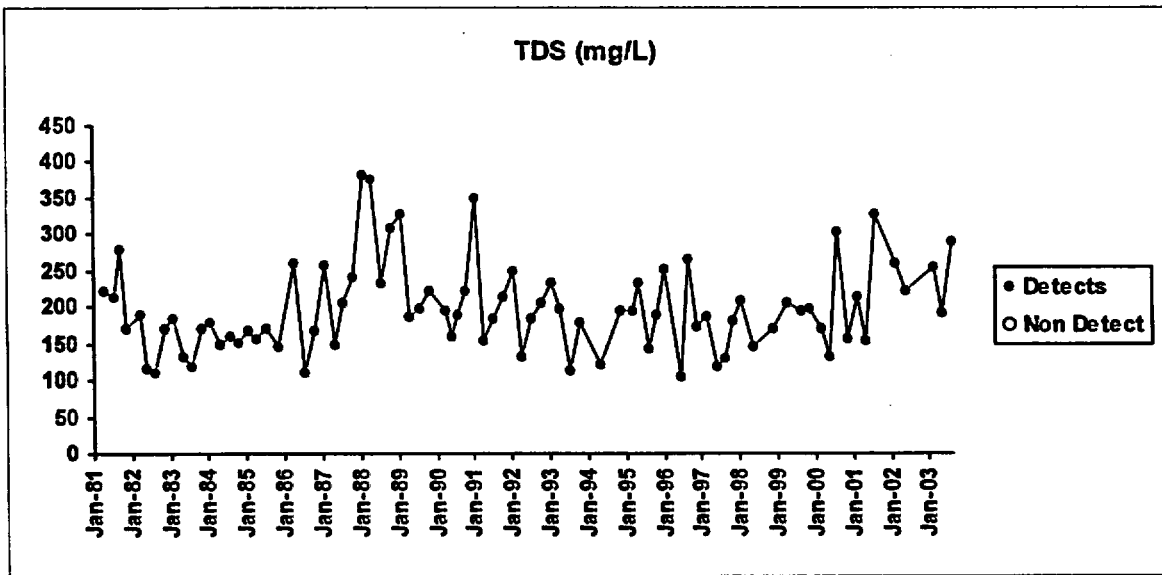
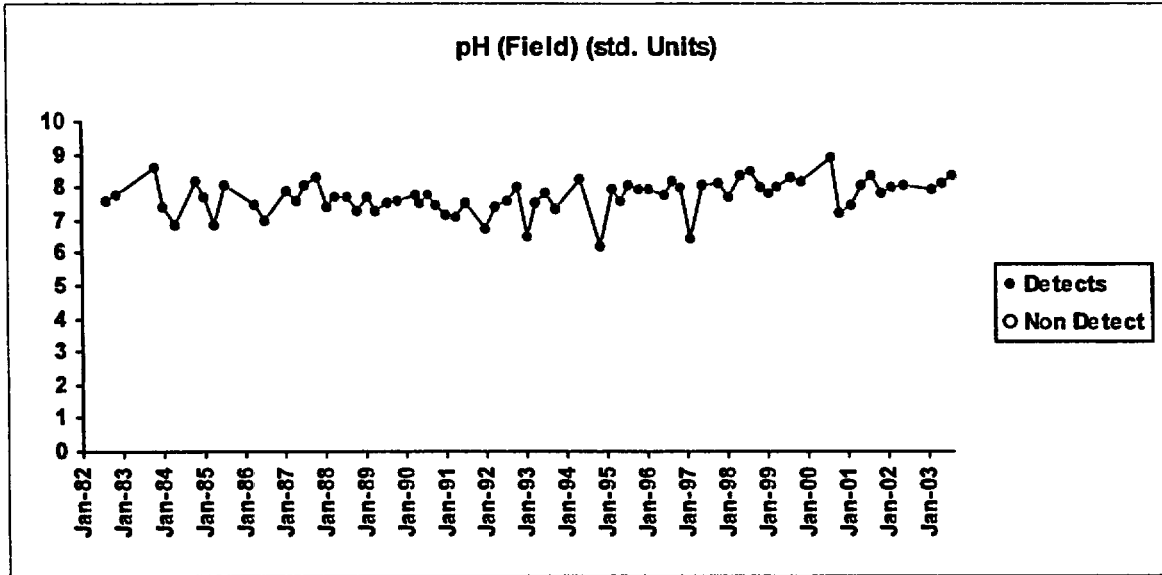
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S-5



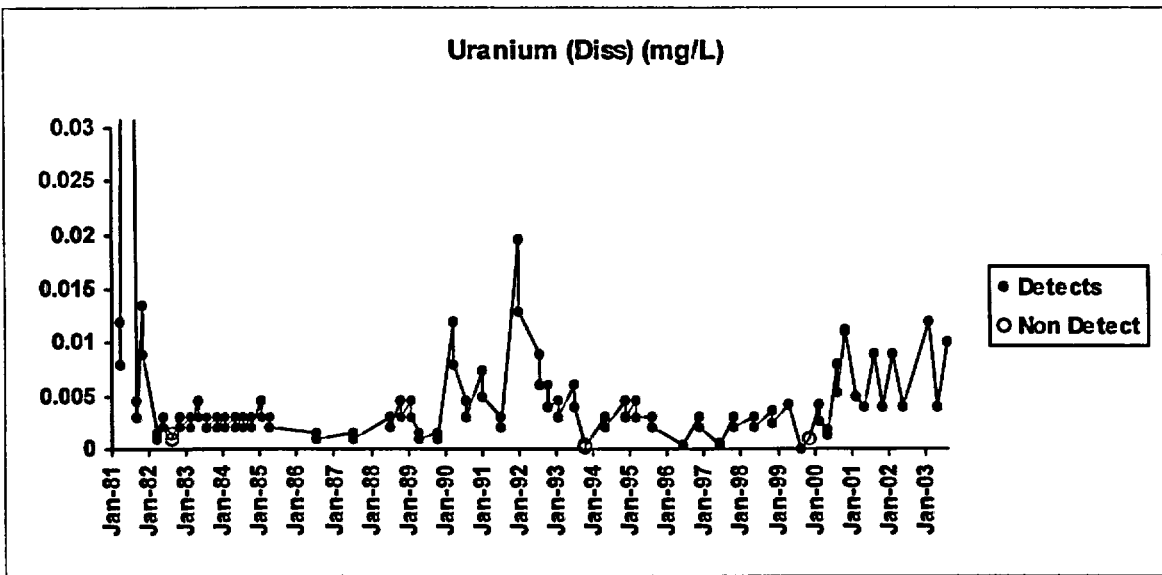
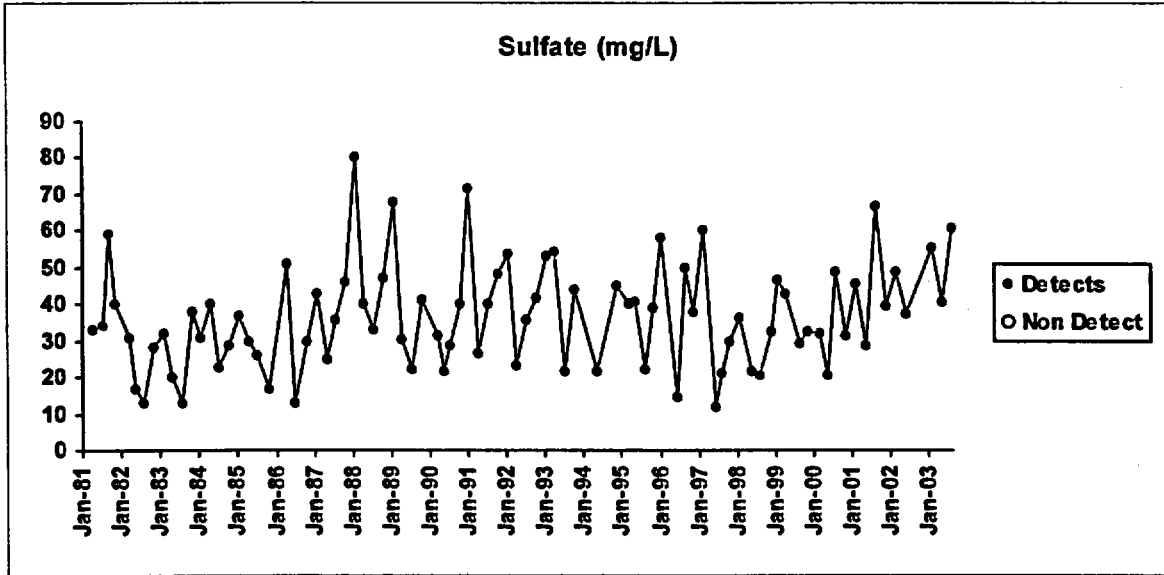
Jeffrey City

S-6



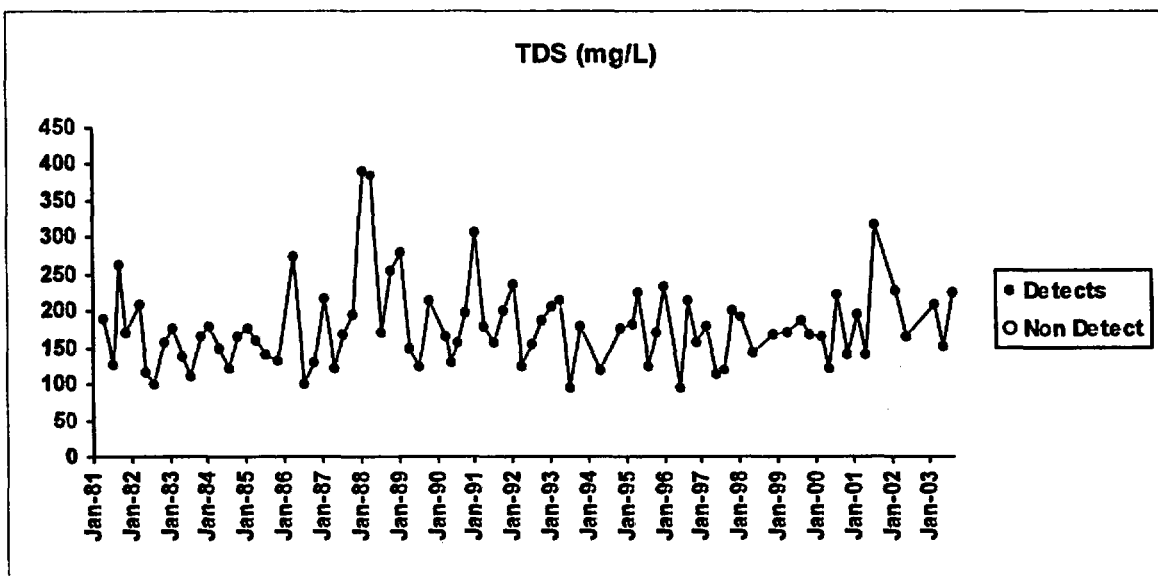
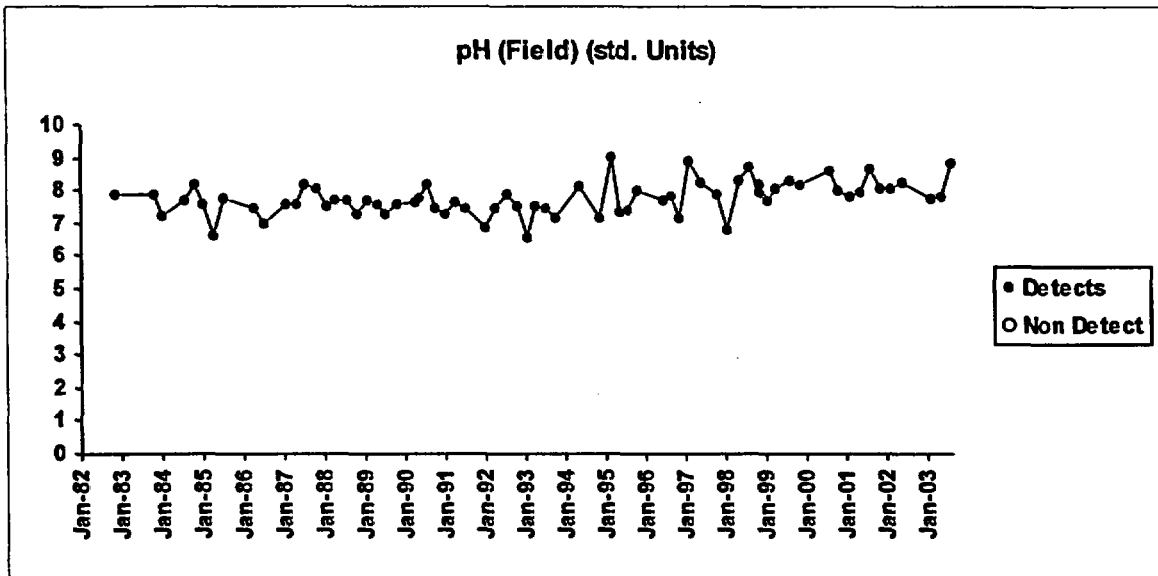
Jeffrey City

S-6



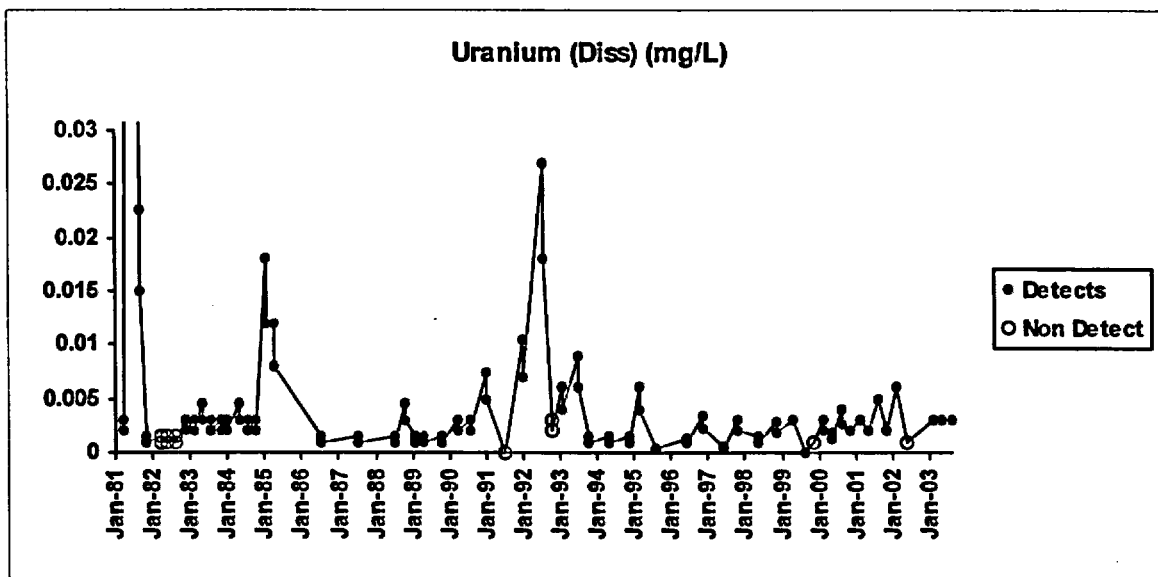
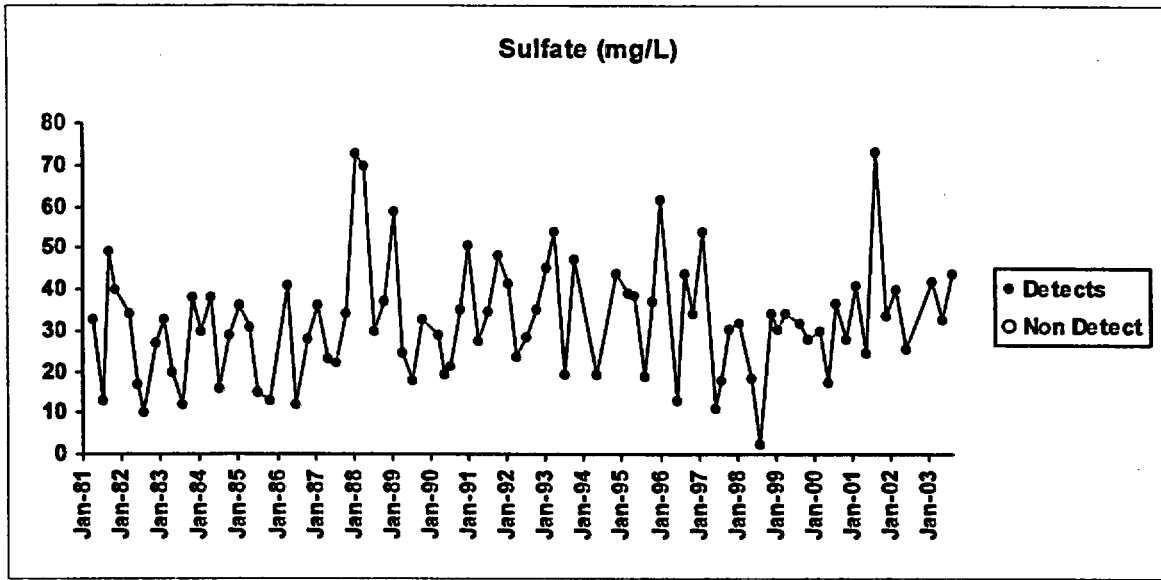
Jeffrey City

S-7



Jeffrey City

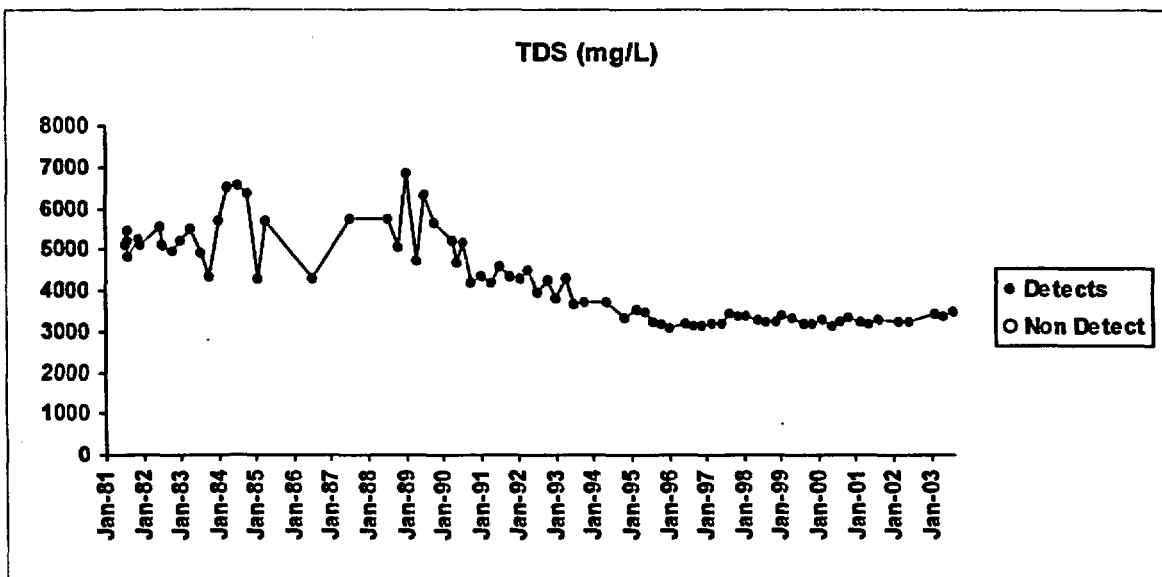
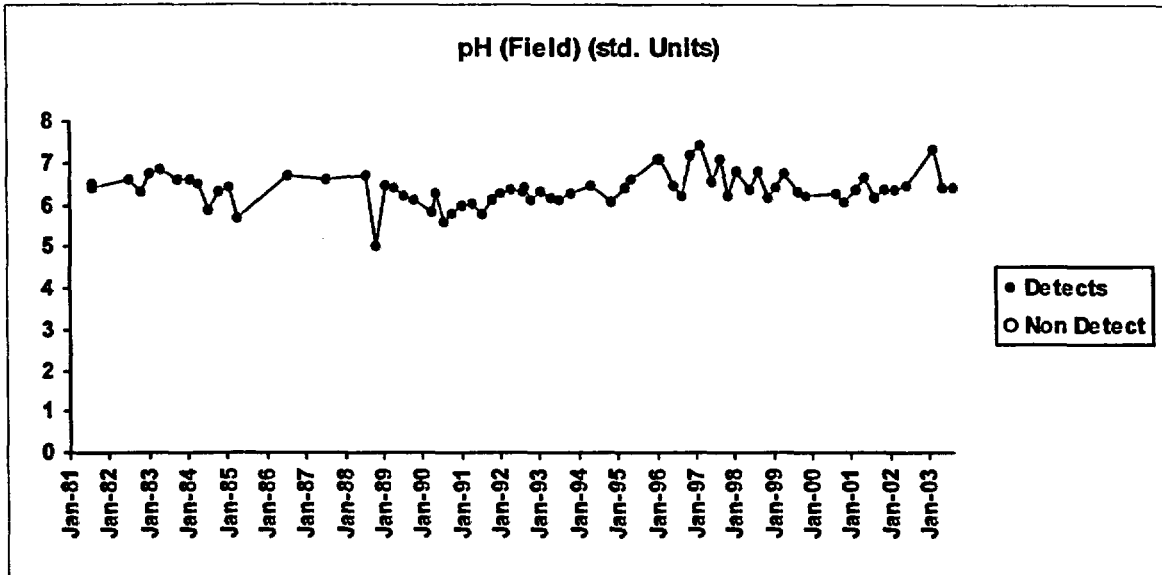
S-7



GROUNDWATER

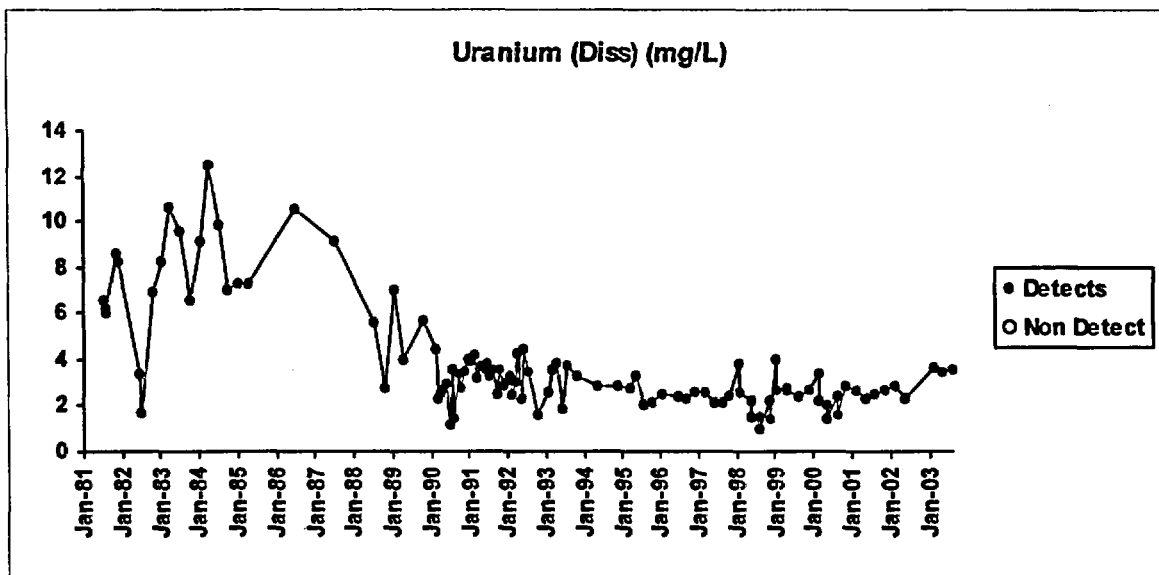
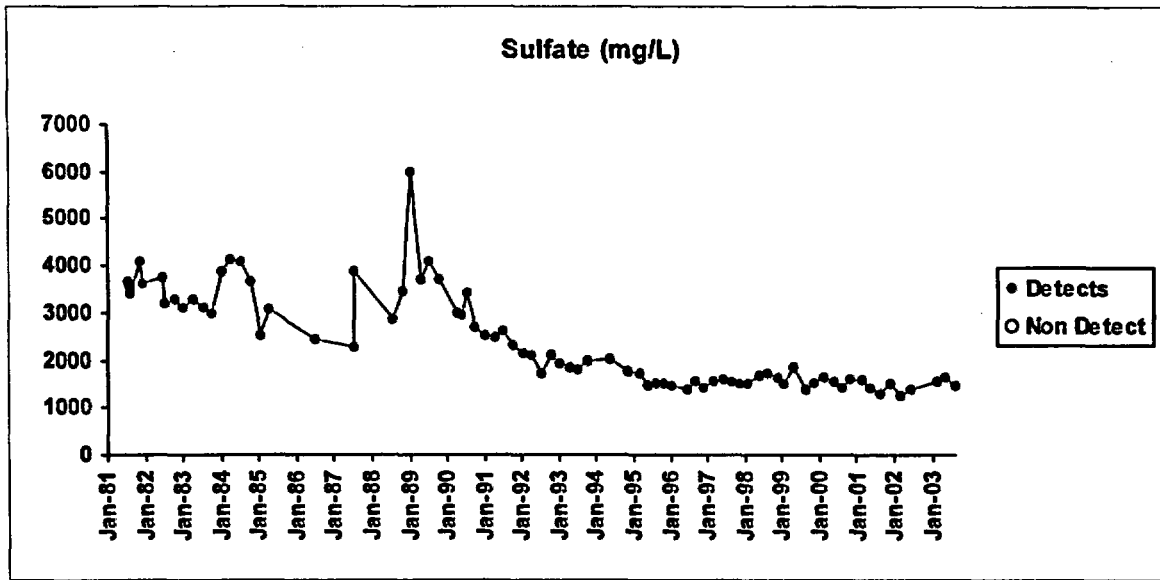
Jeffrey City

WELL-1



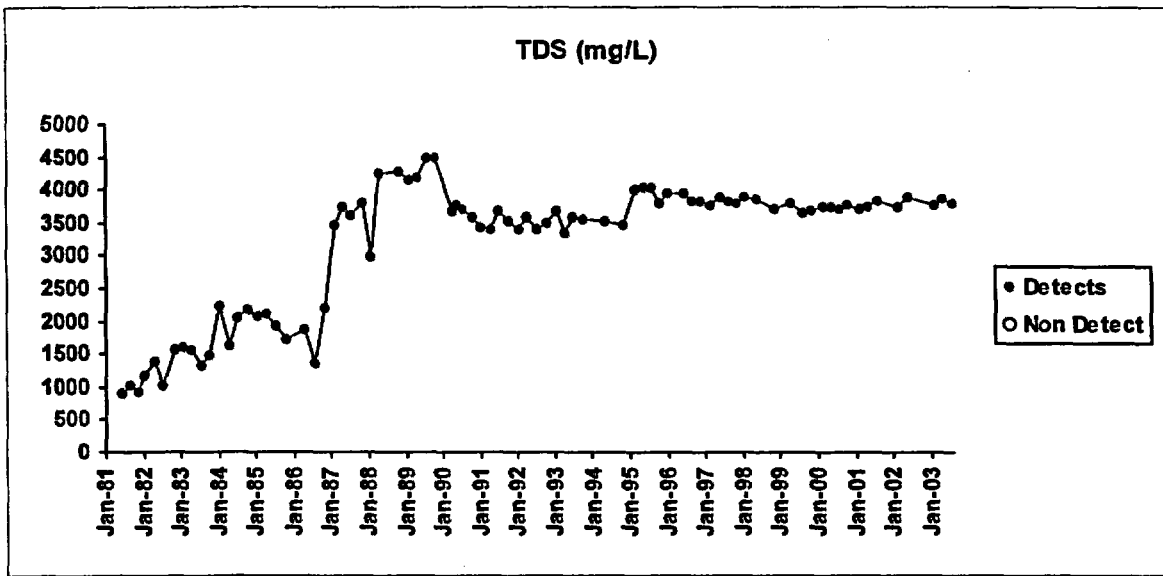
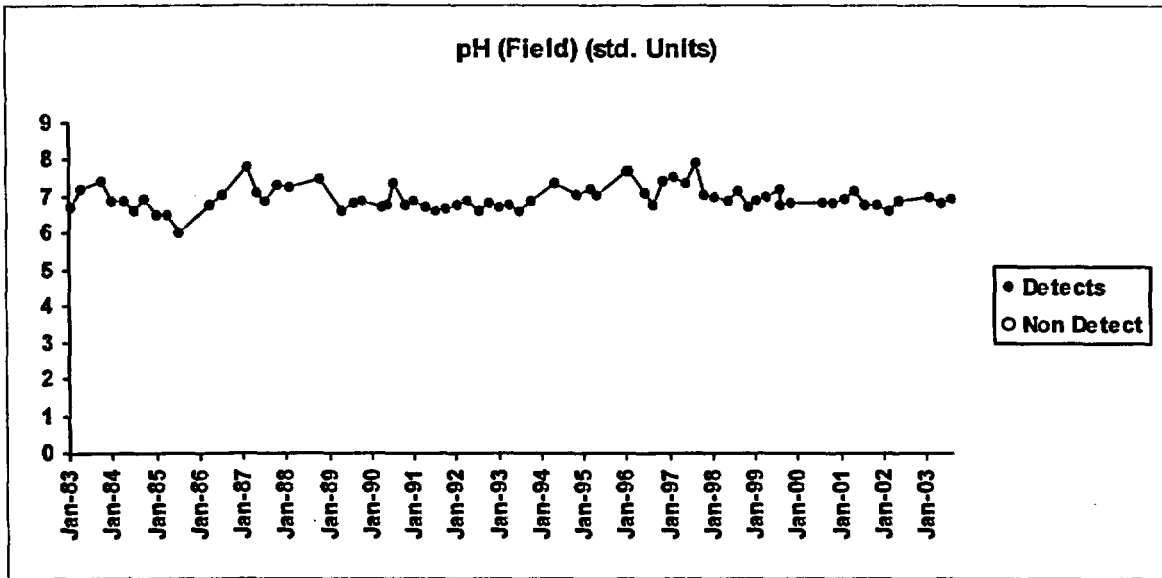
Jeffrey City

WELL-1



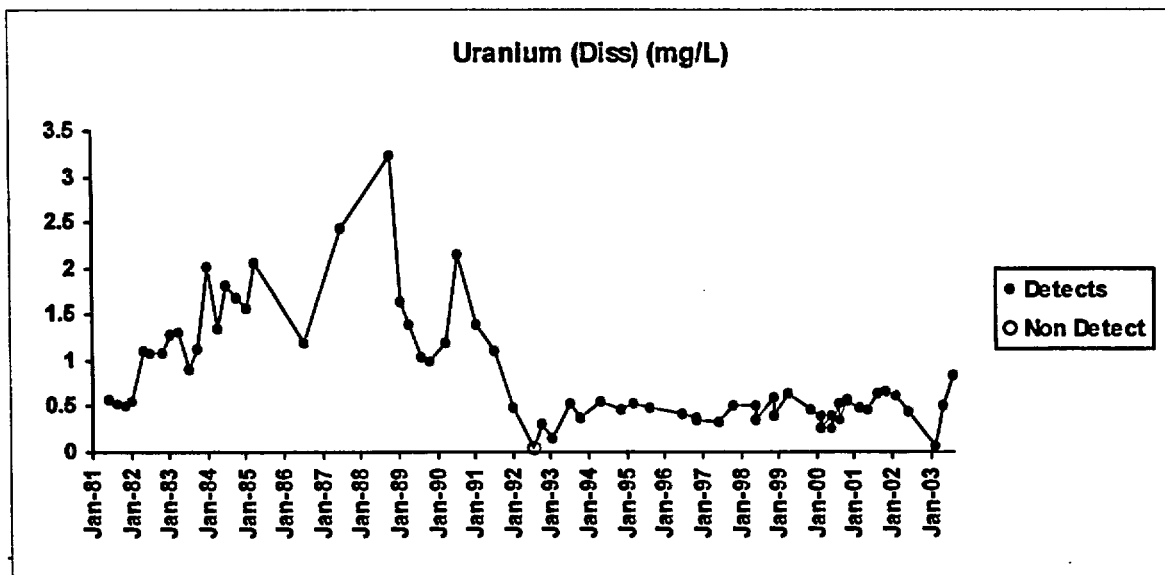
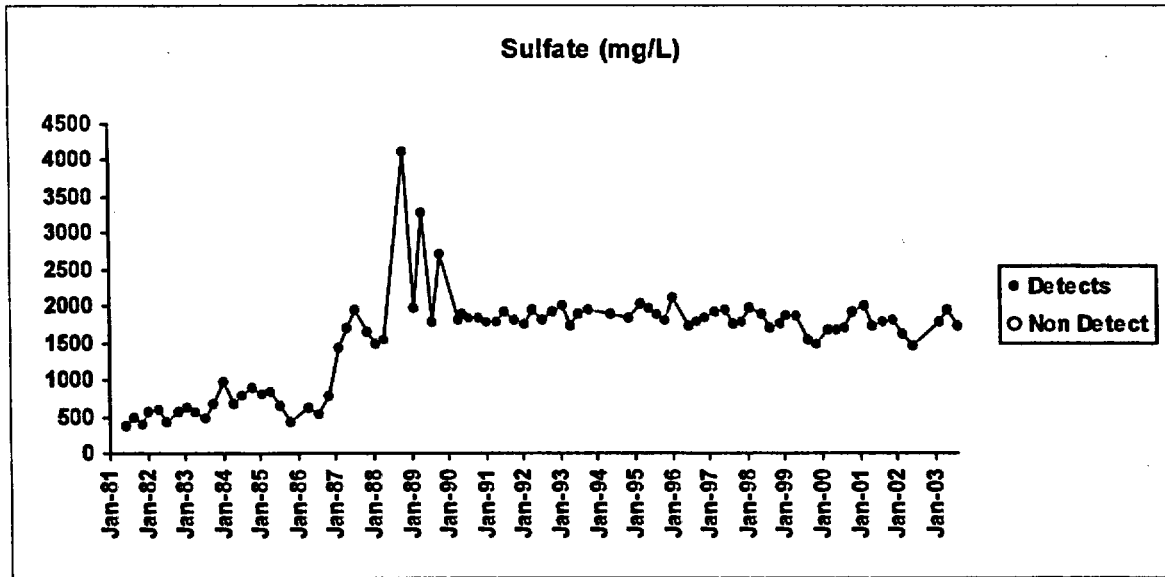
Jeffrey City

WELL-2



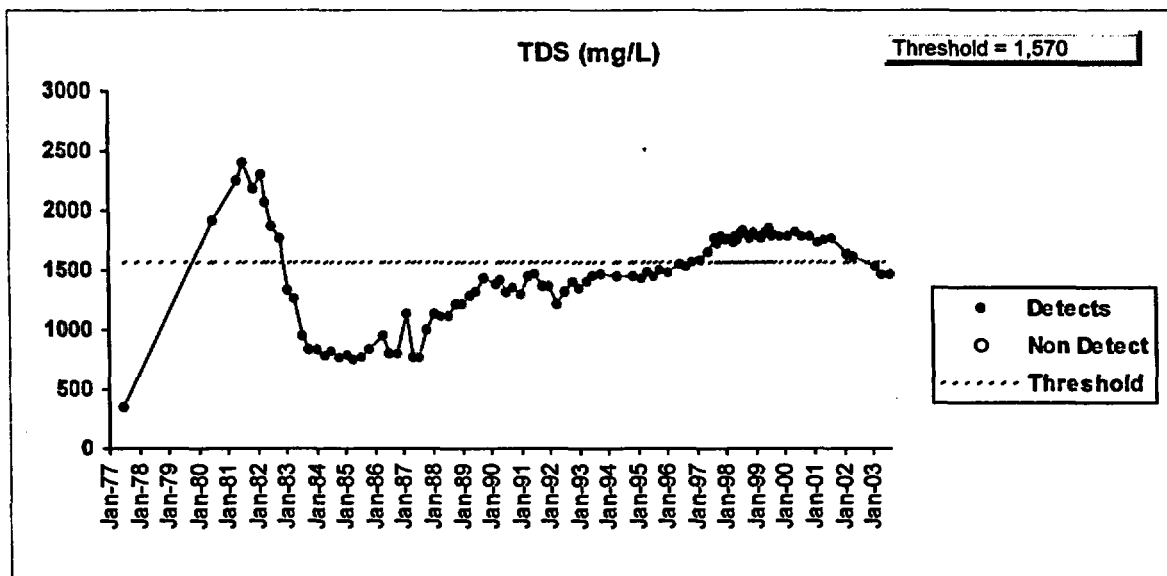
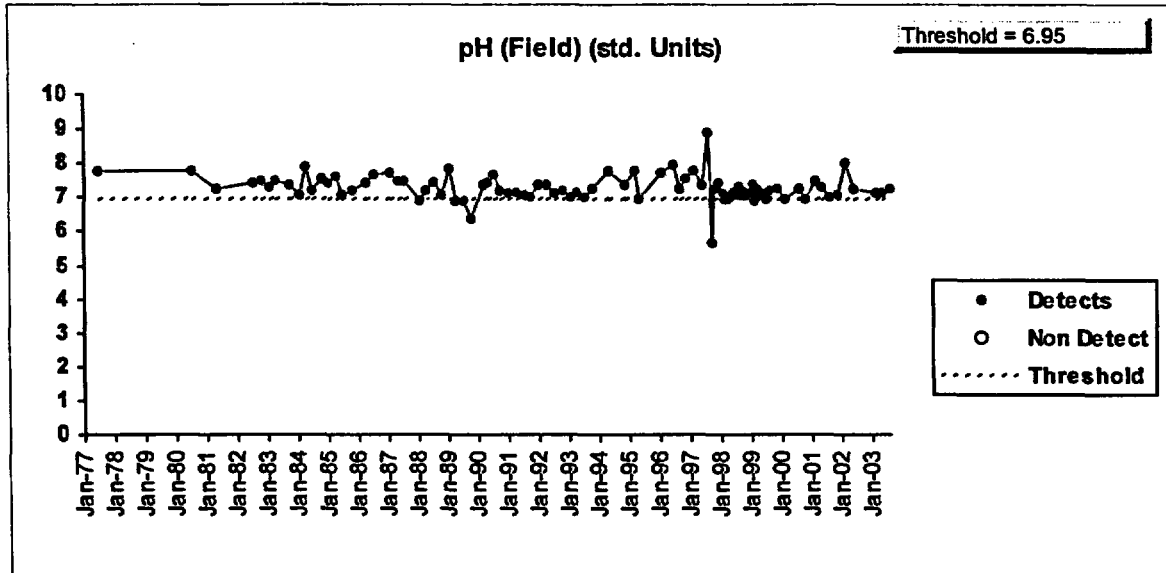
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WELL-2



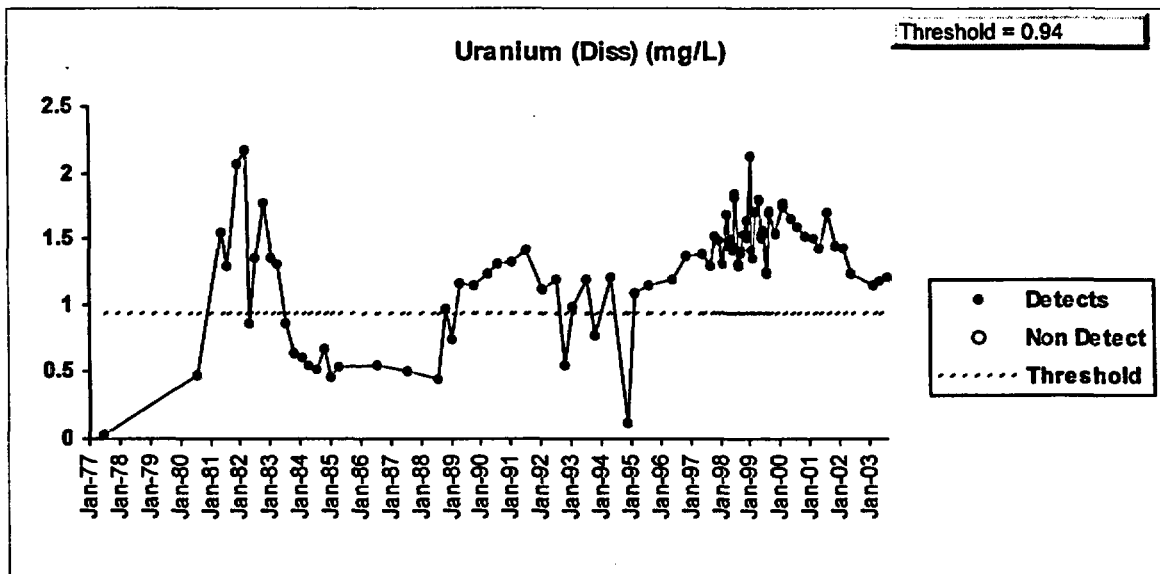
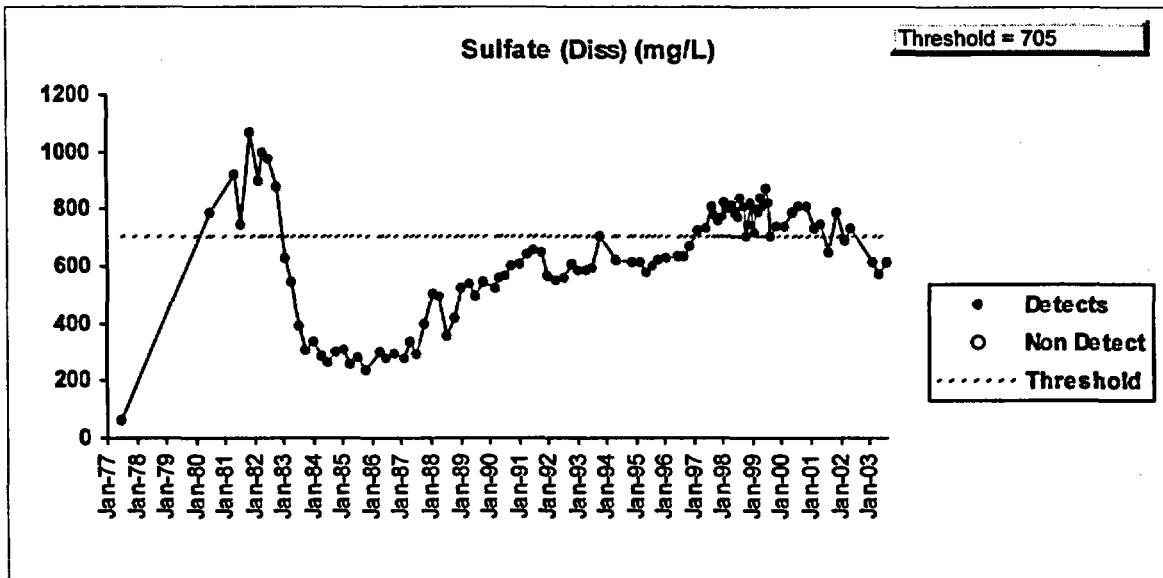
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WELL-3



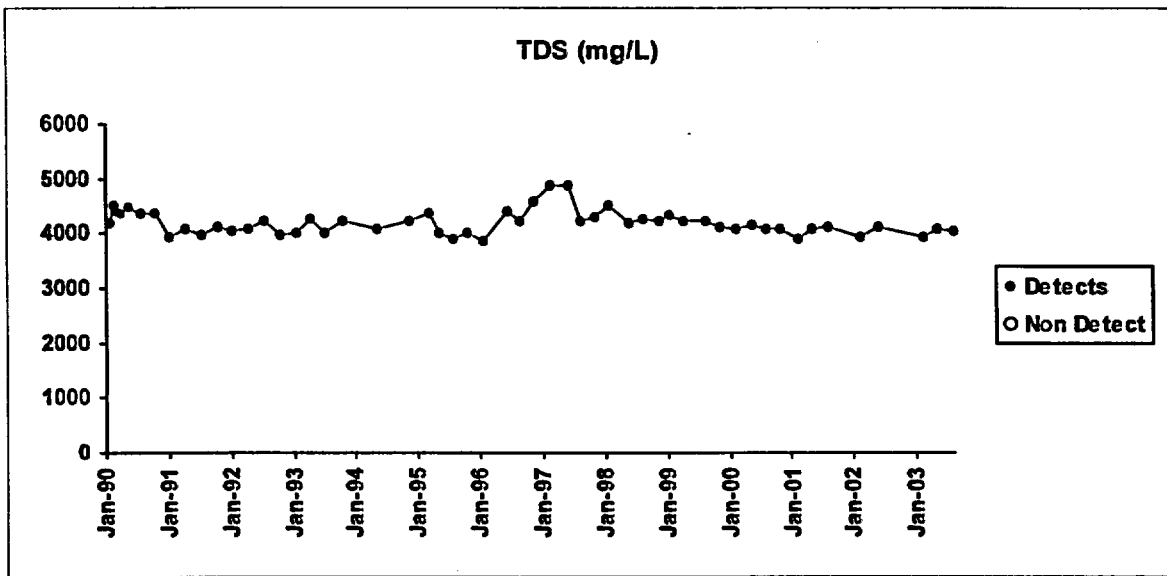
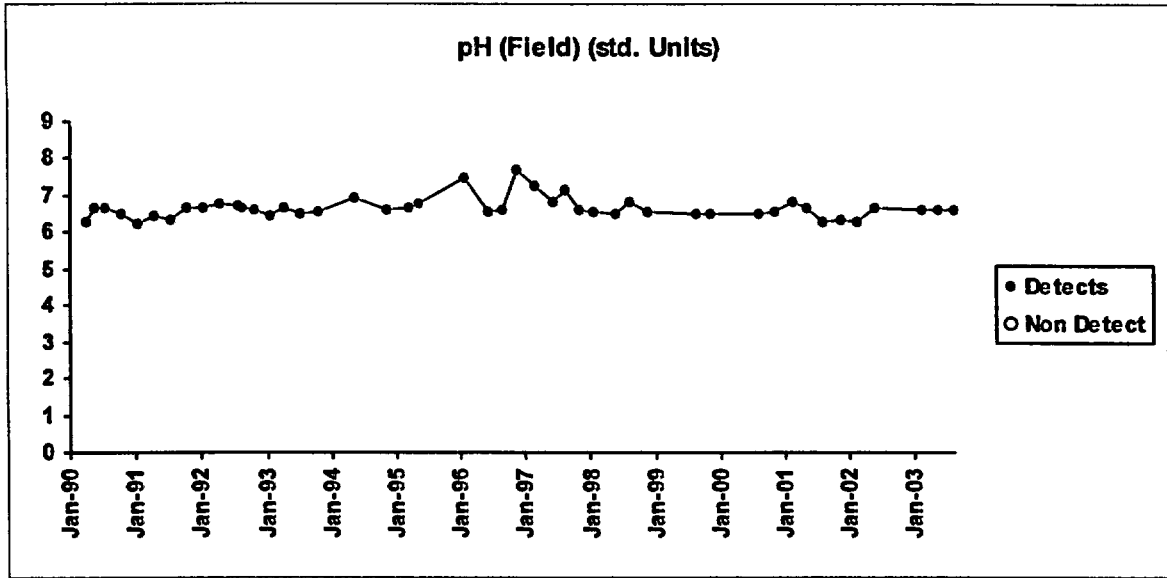
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WELL-3



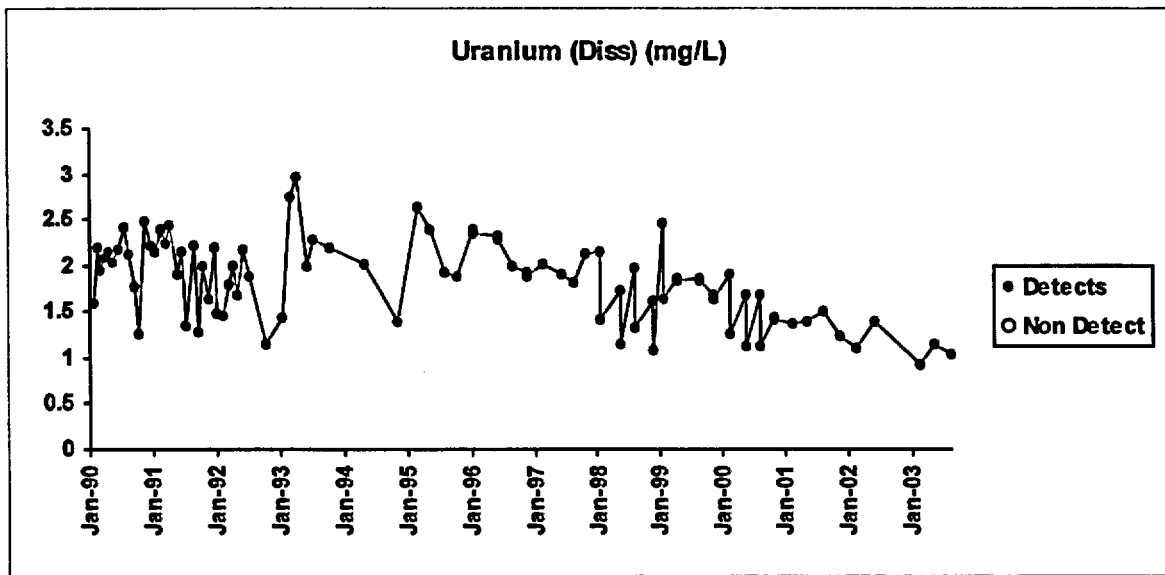
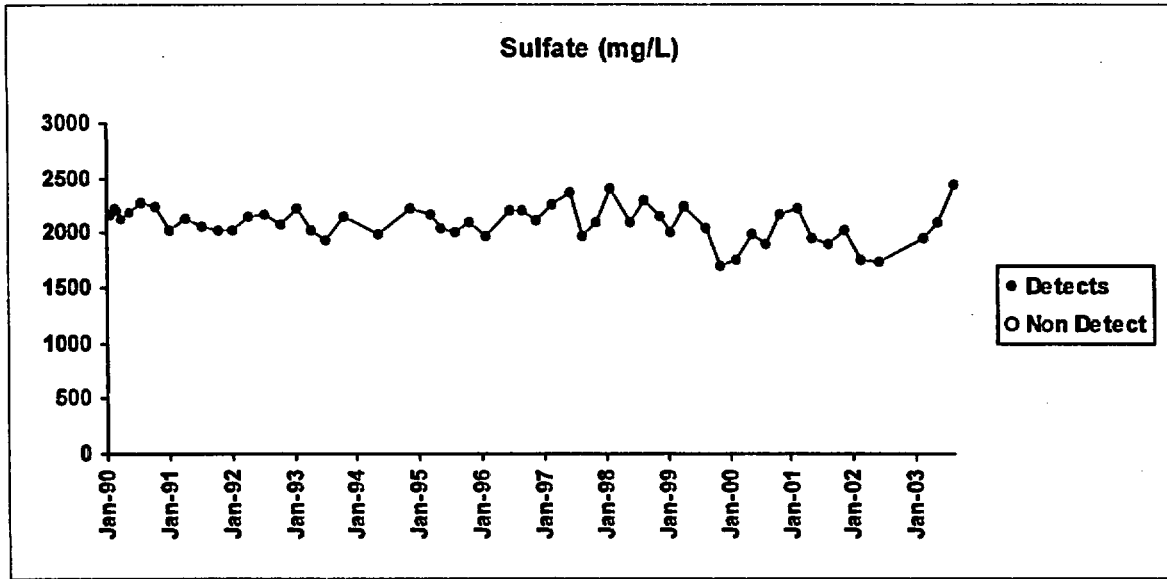
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WELL-4E



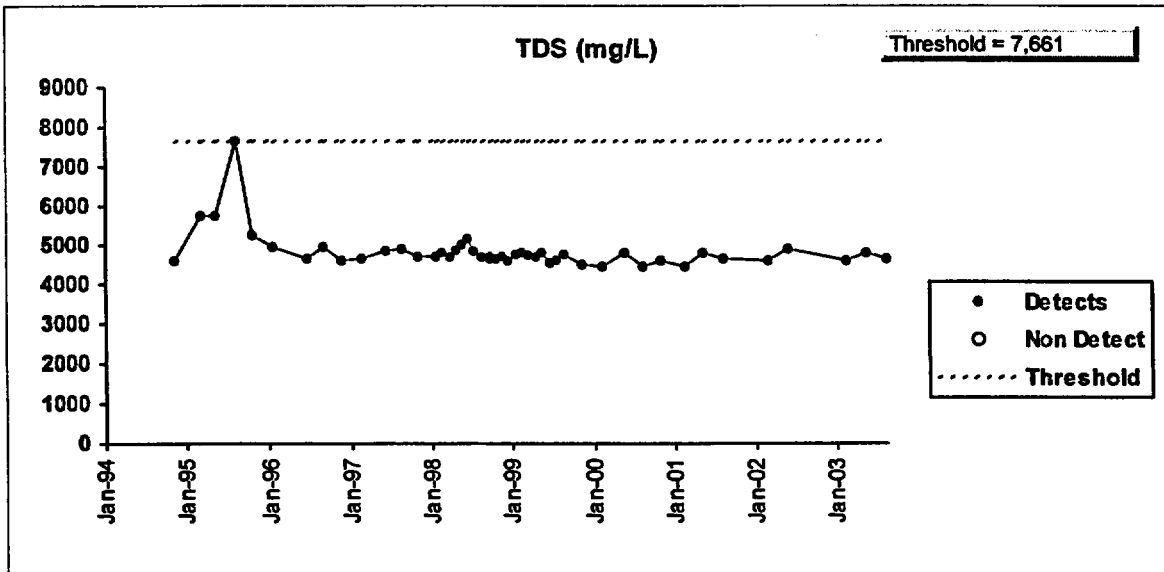
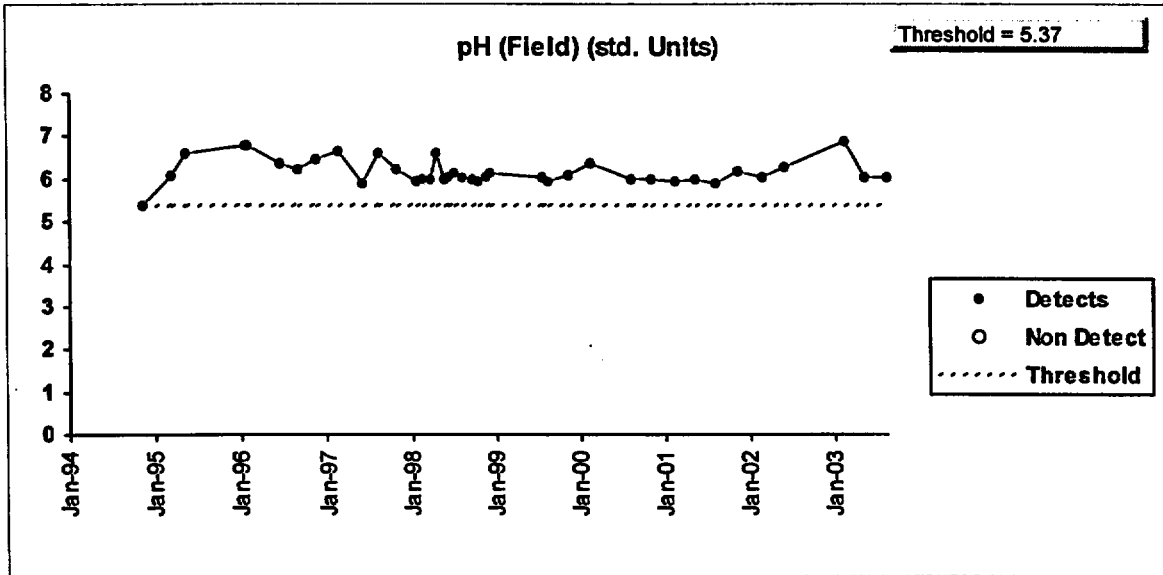
Jeffrey City

WELL-4E



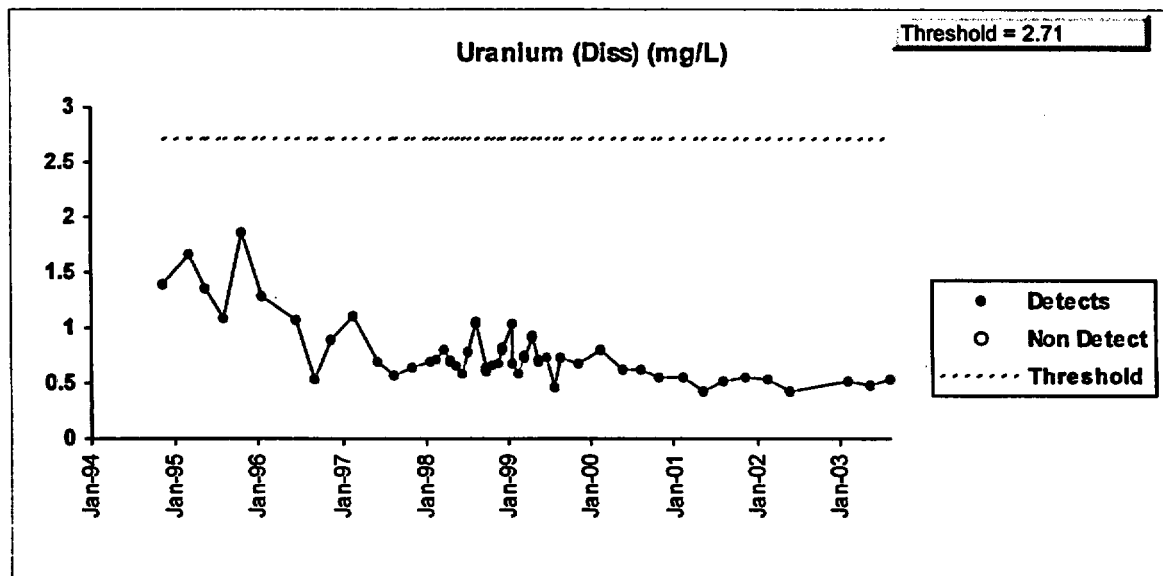
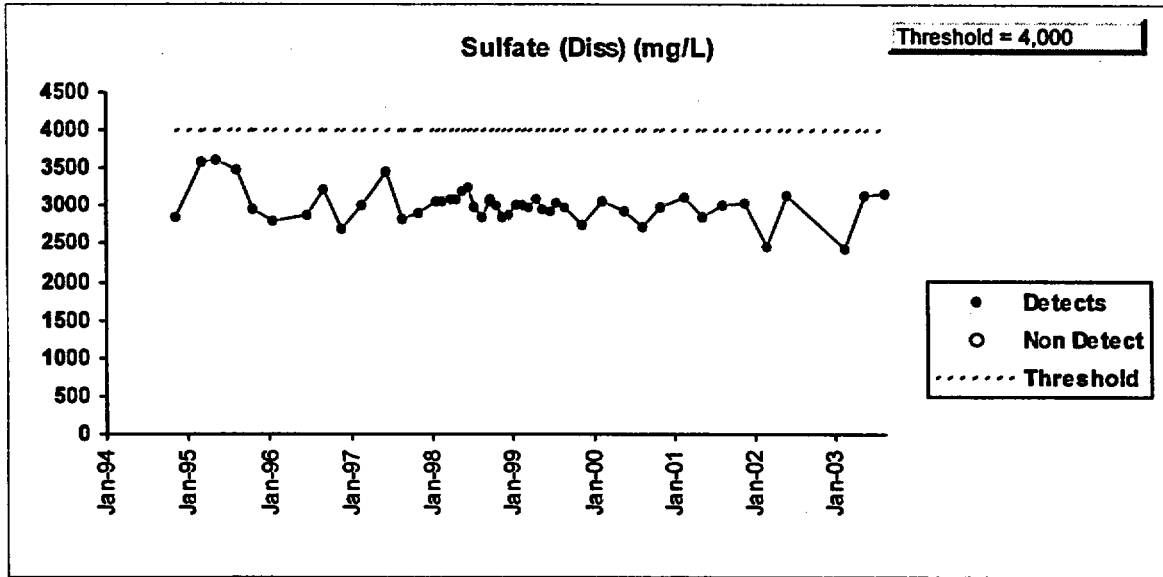
Jeffrey City

WELL-4R



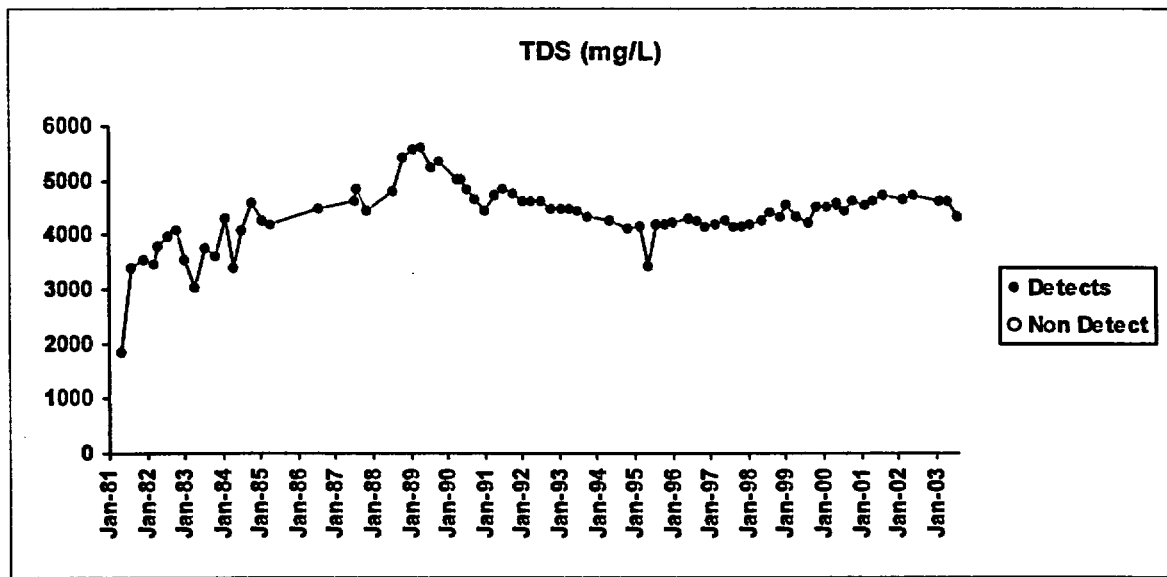
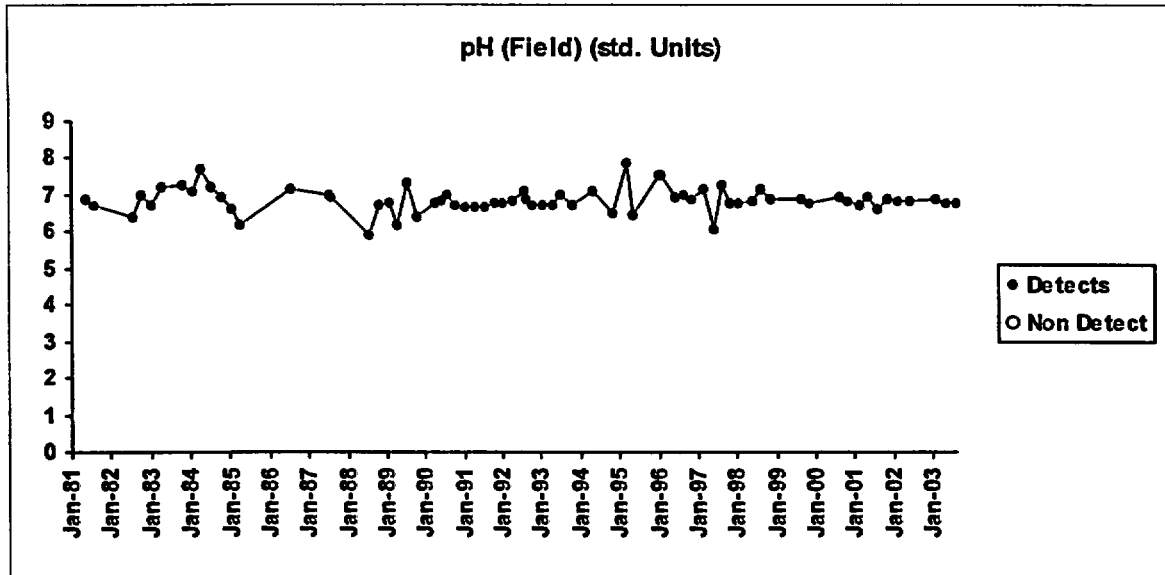
Jeffrey City

WELL-4R



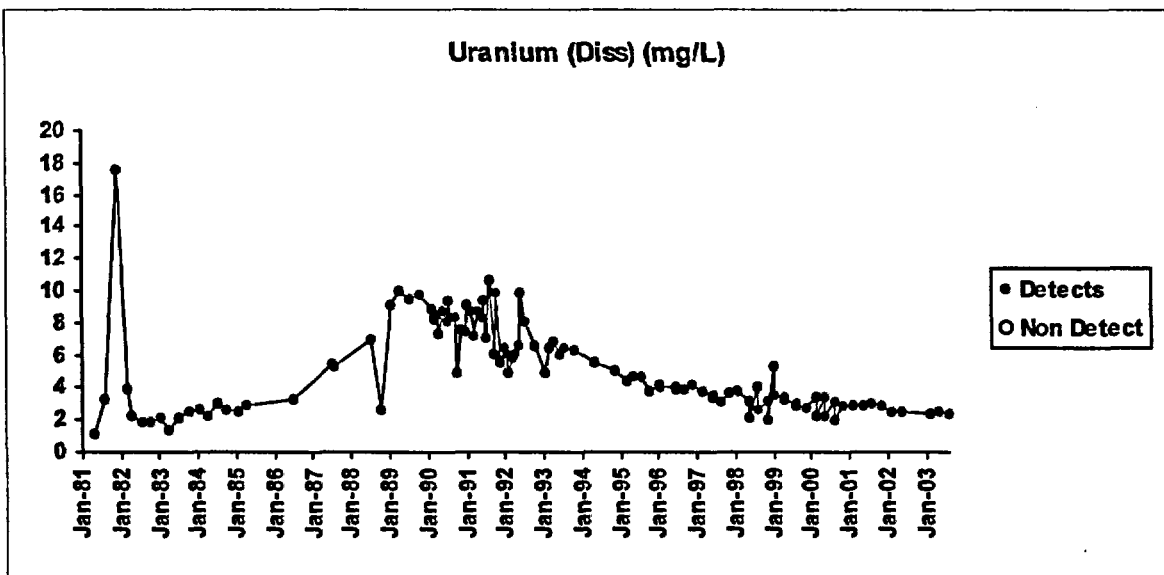
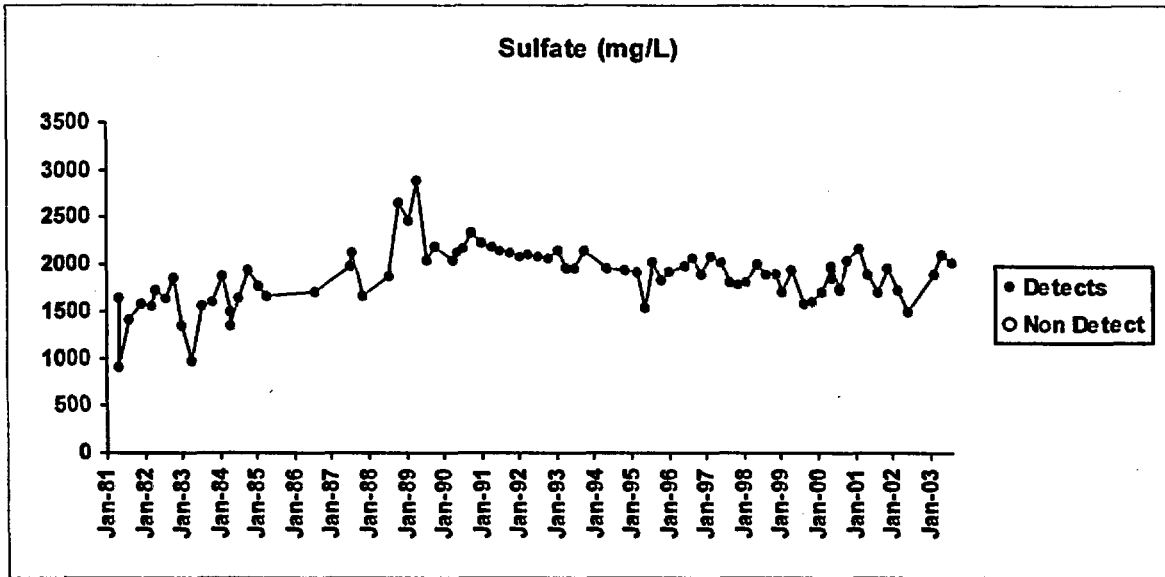
Jeffrey City

WELL-5



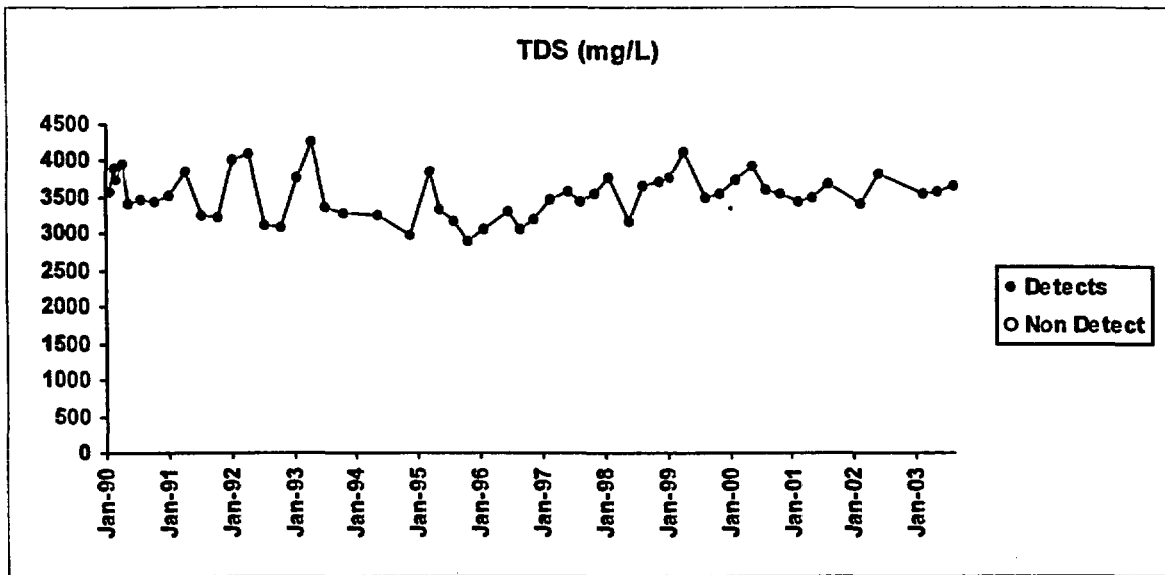
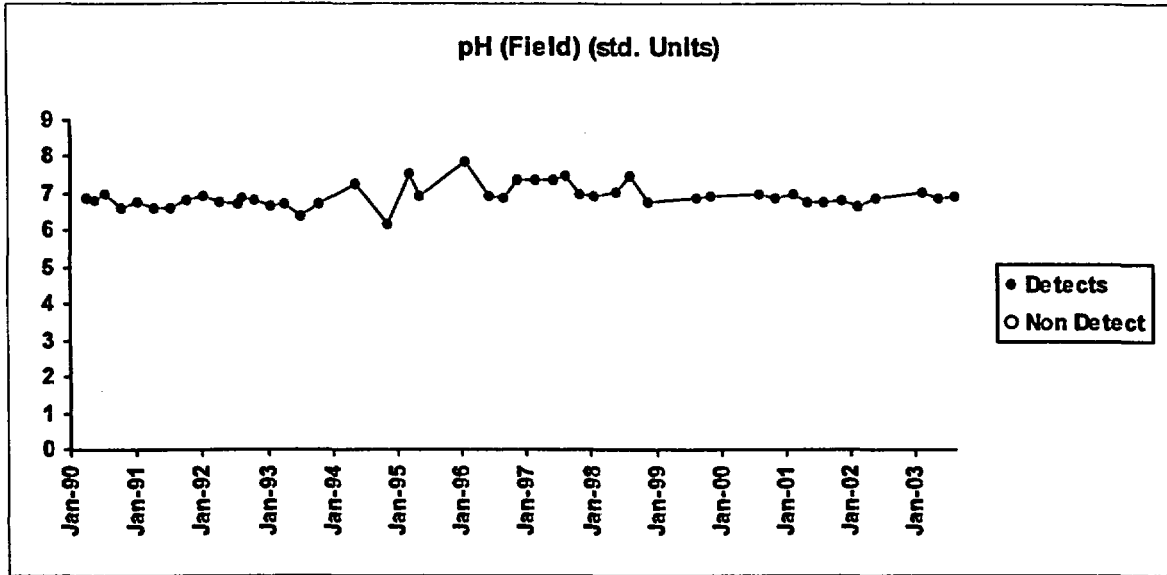
Jeffrey City

WELL-5



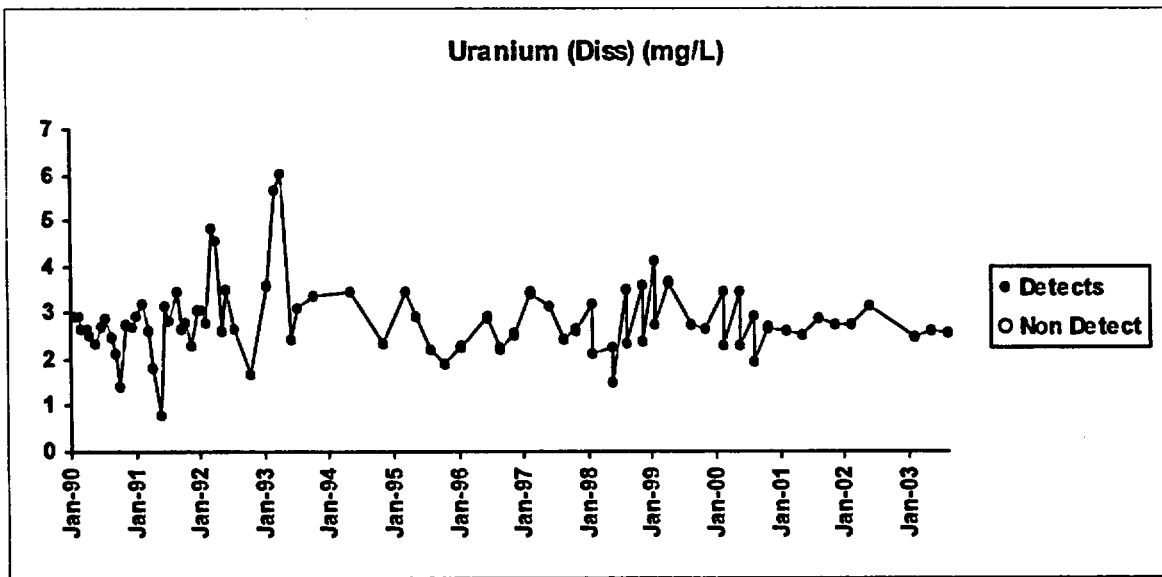
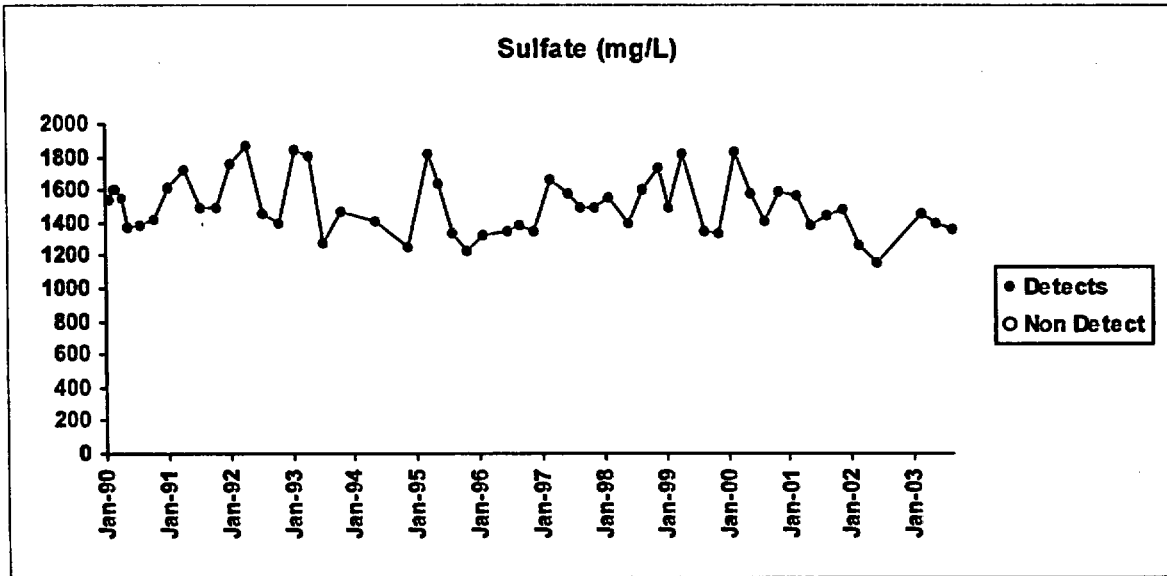
Jeffrey City

WELL-5E



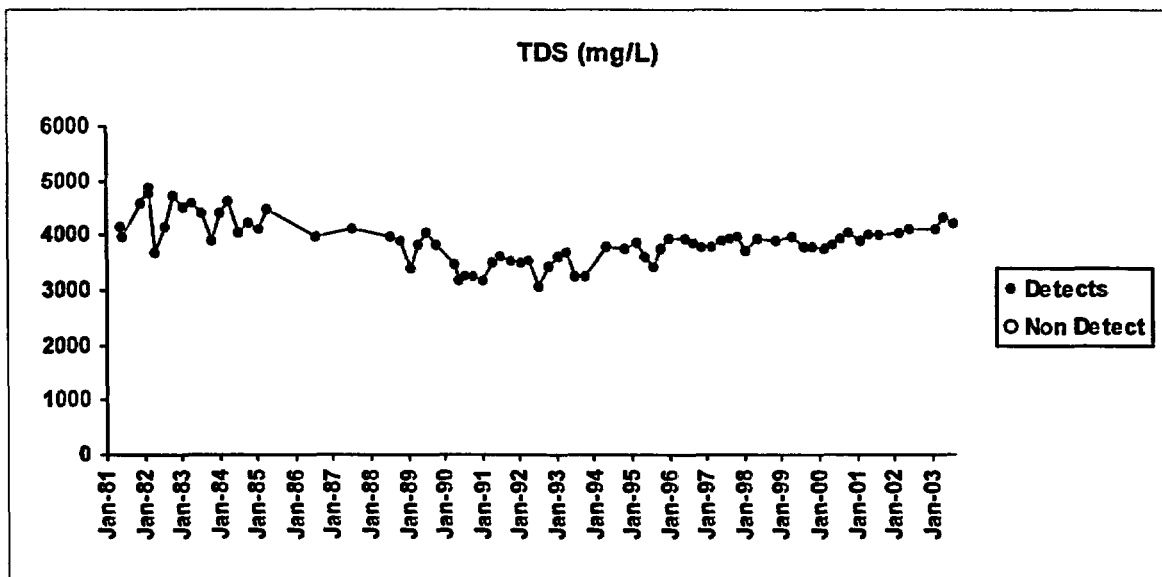
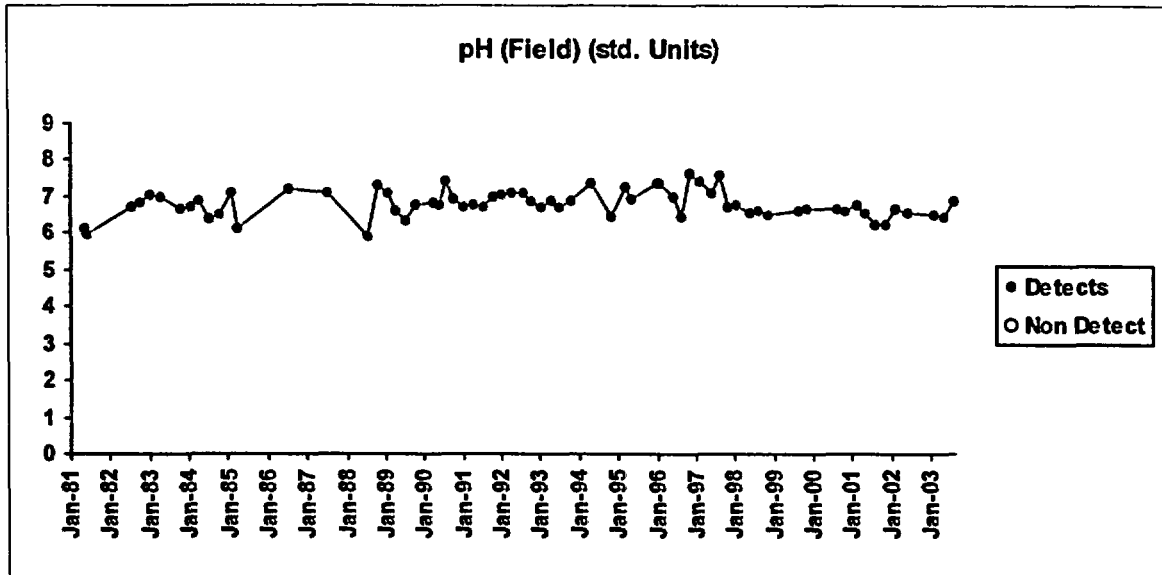
Jeffrey City

WELL-5E



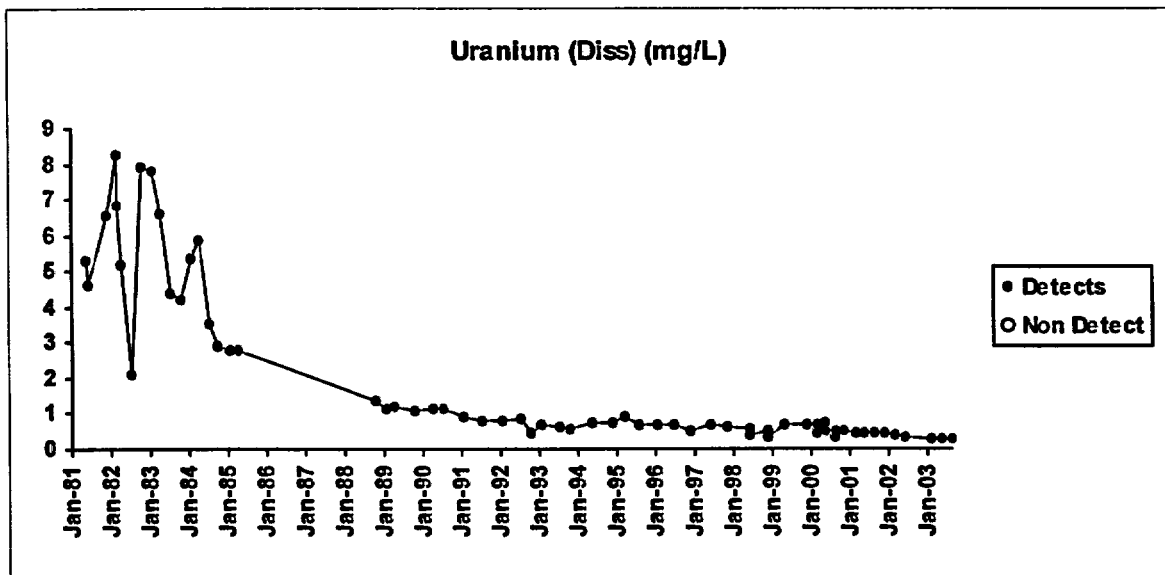
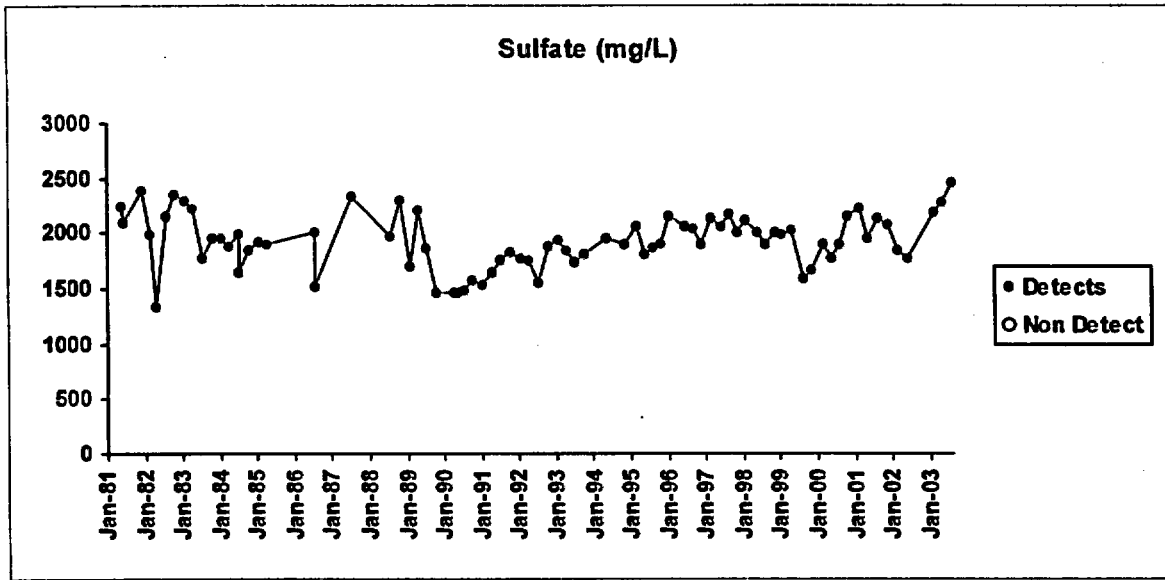
Jeffrey City

WELL-7



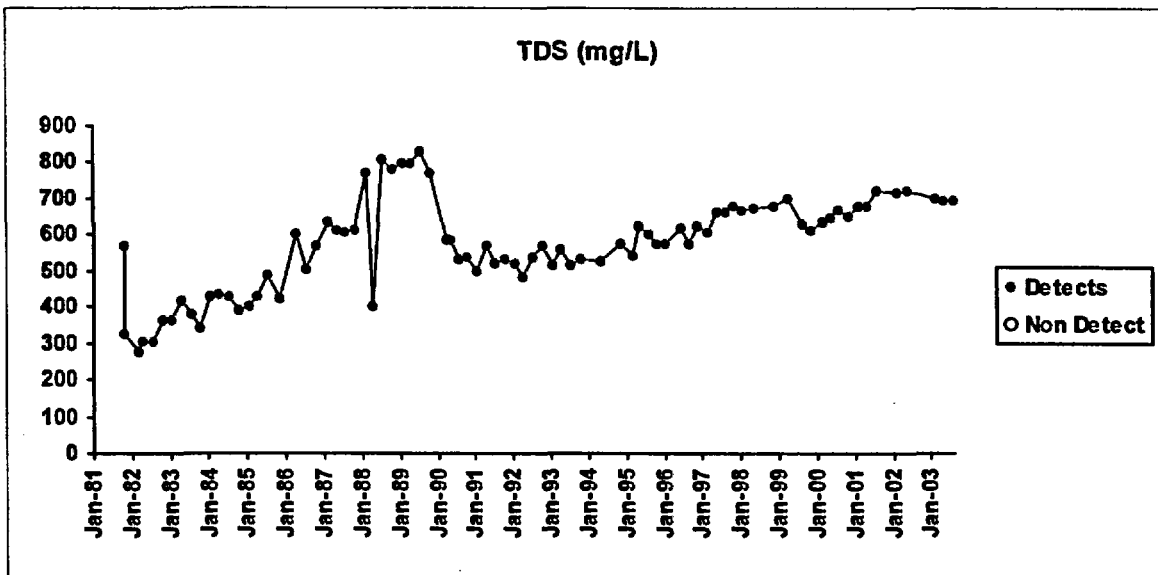
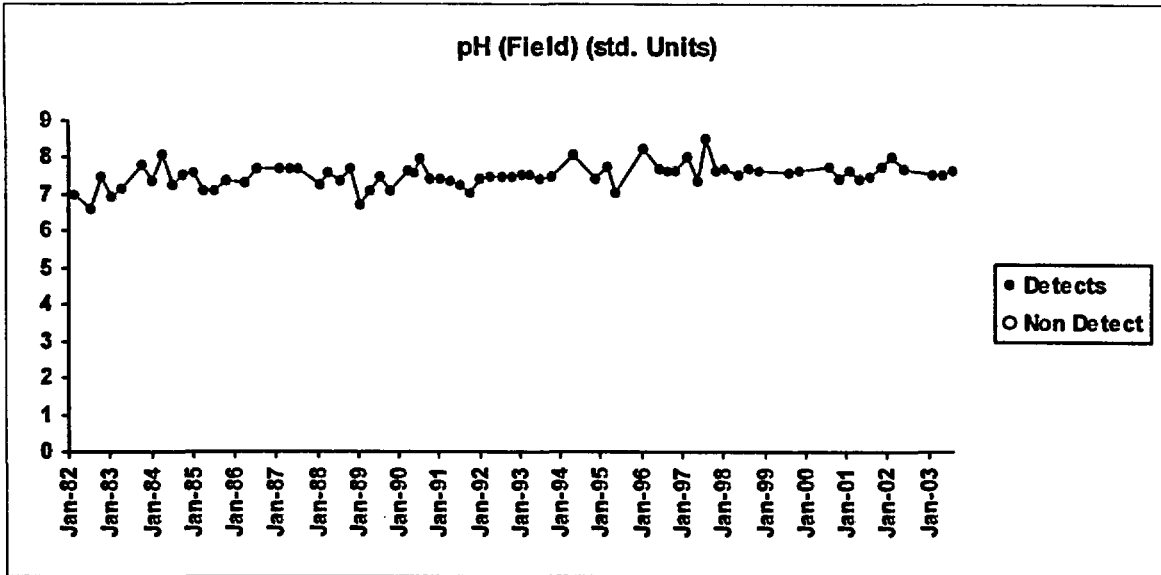
Jeffrey City

WELL-7



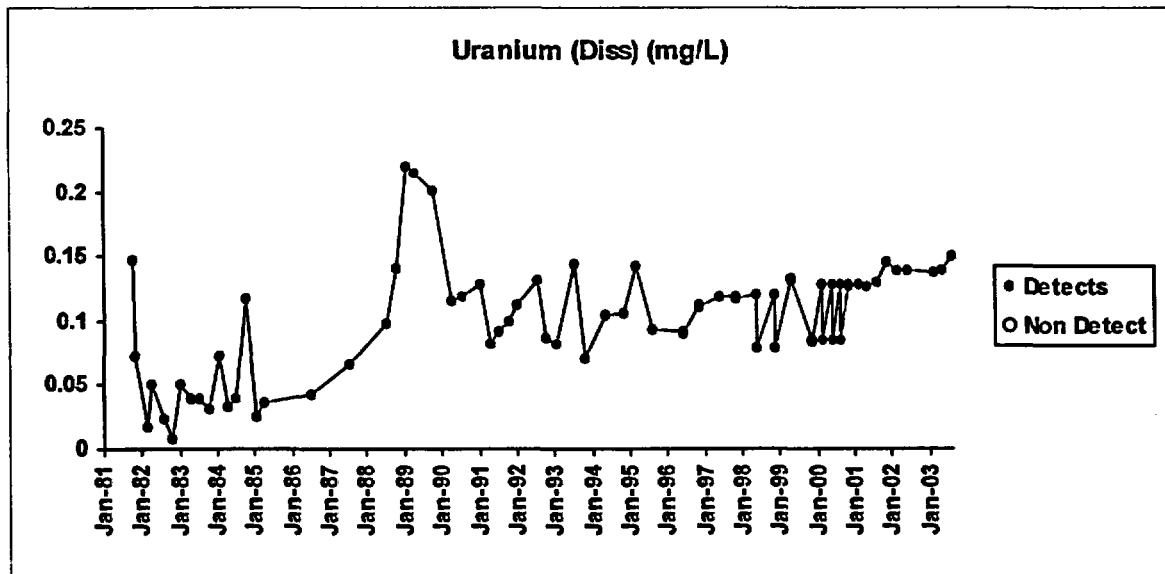
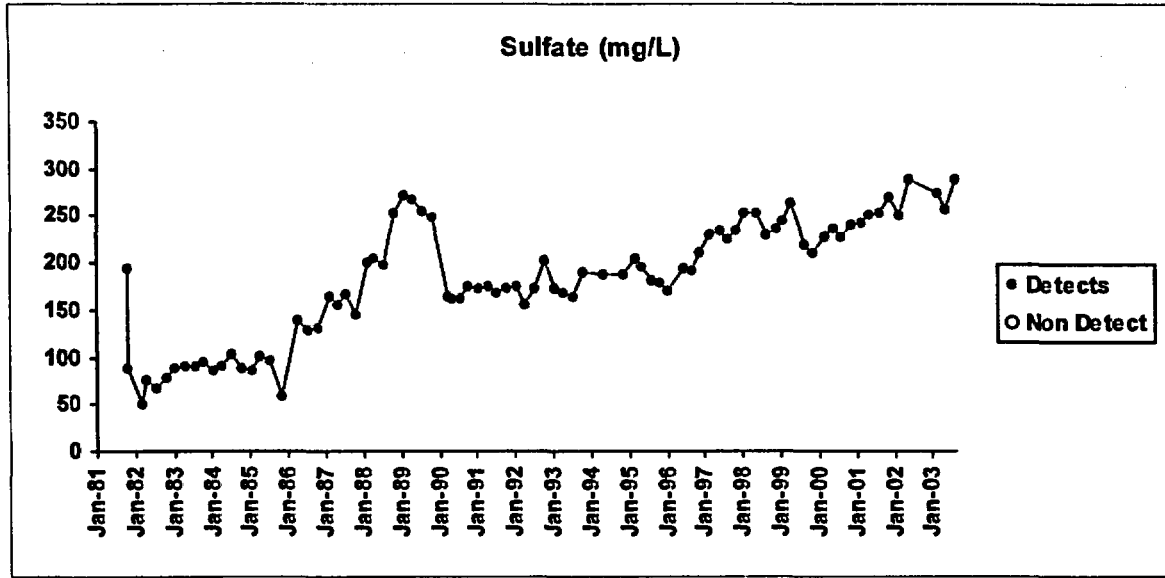
Jeffrey City

WN-15



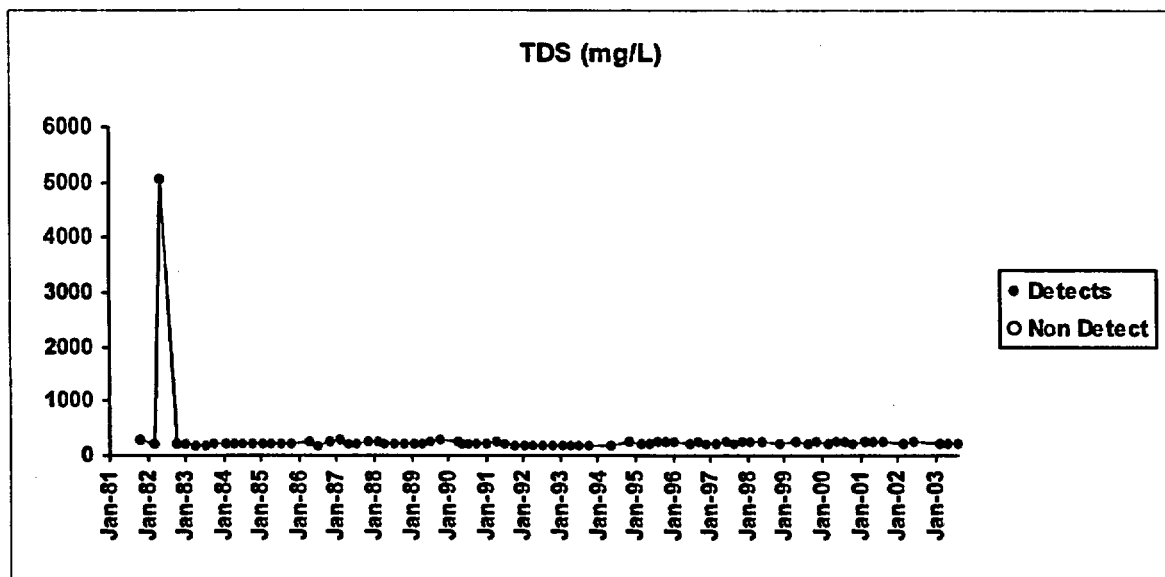
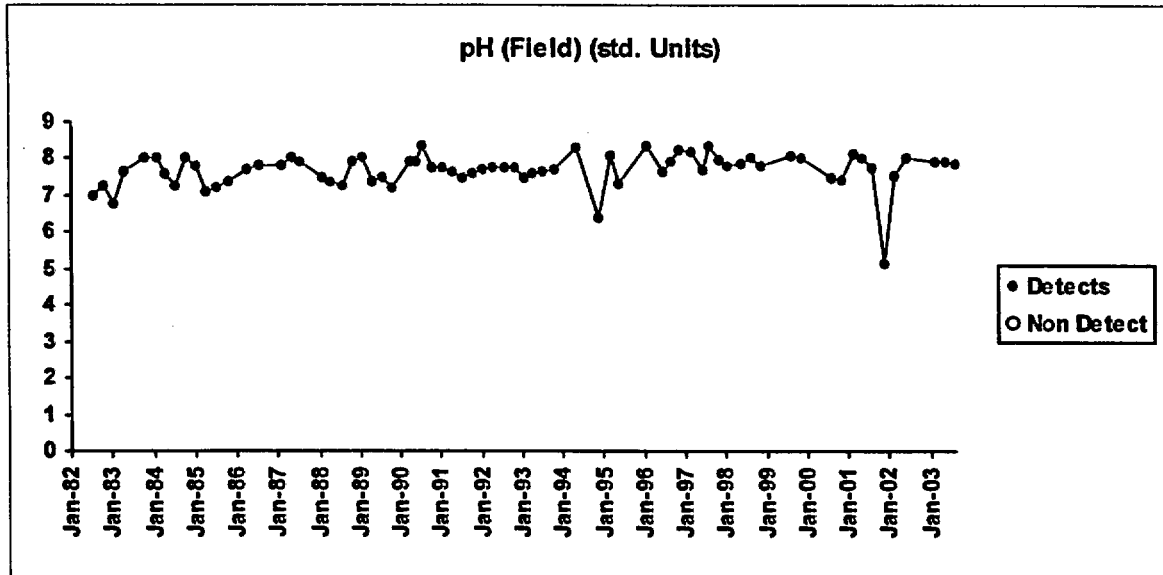
Jeffrey City

WN-15



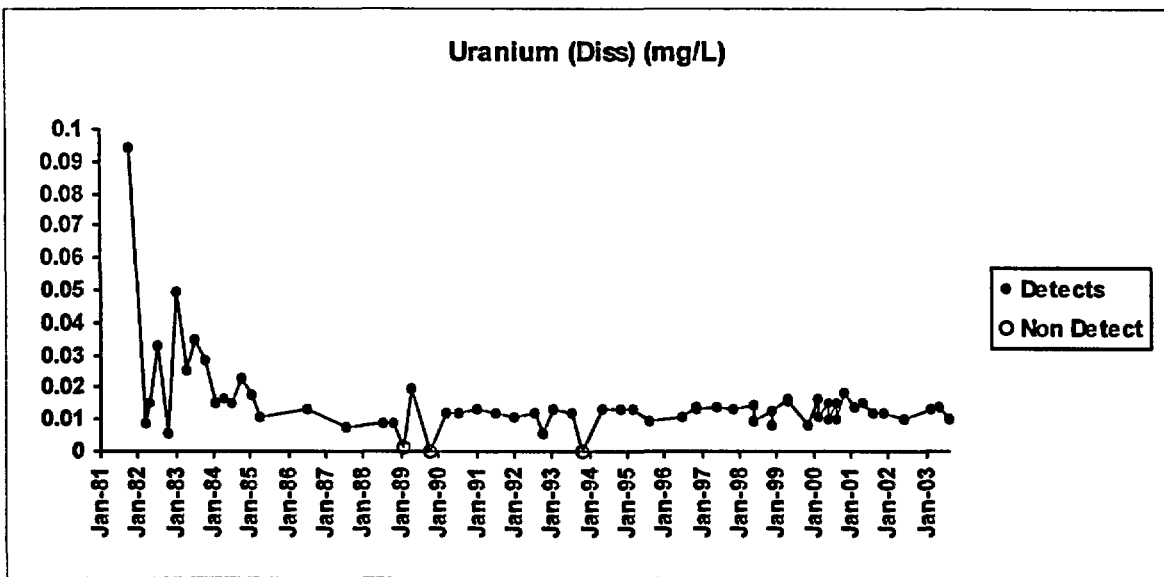
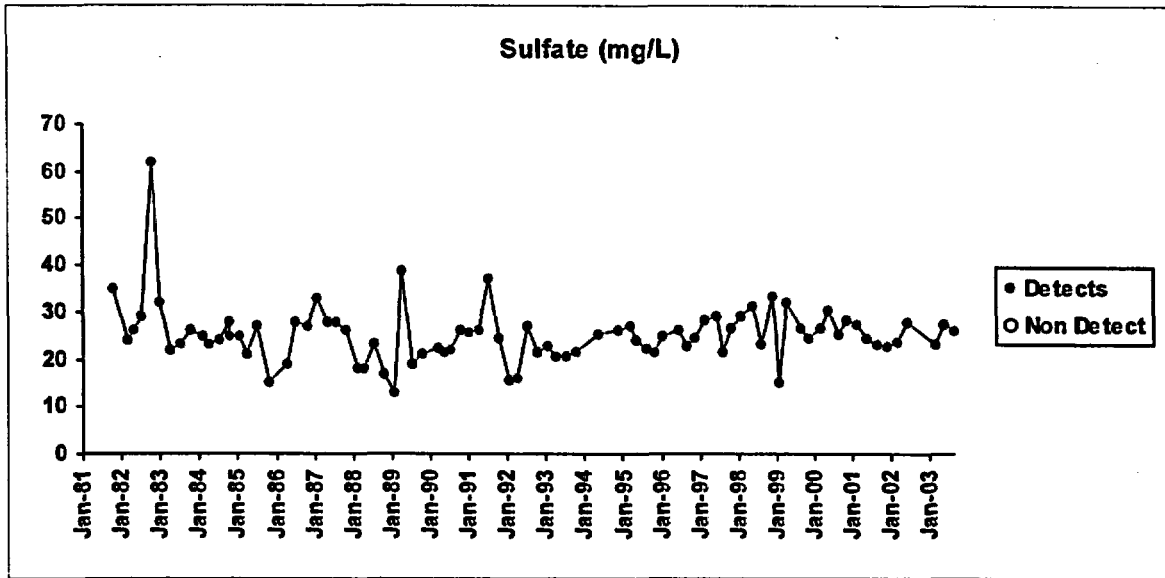
Jeffrey City

WN-16



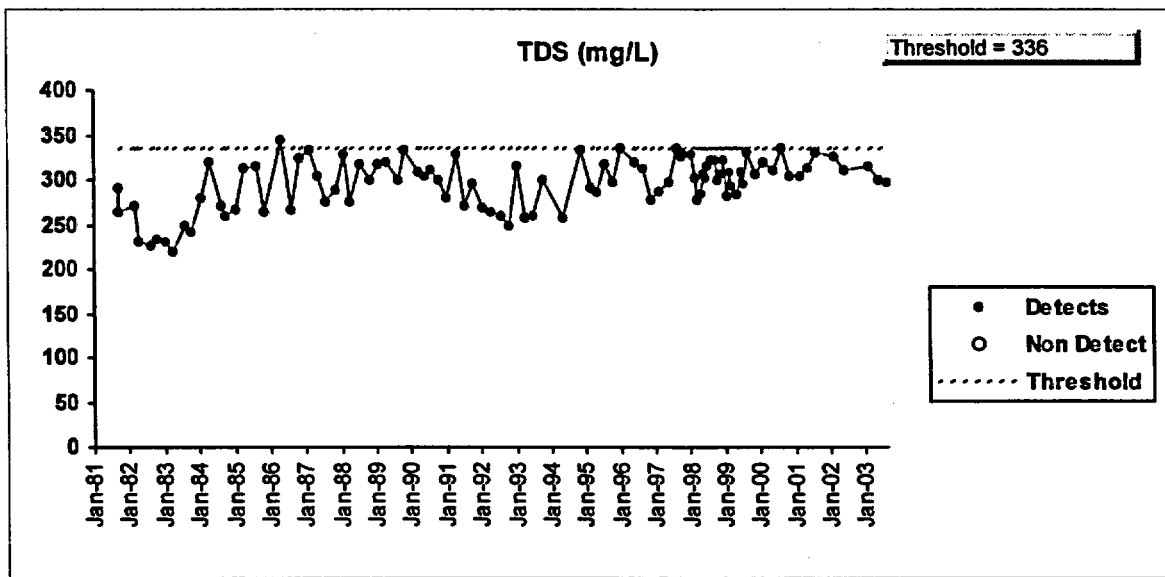
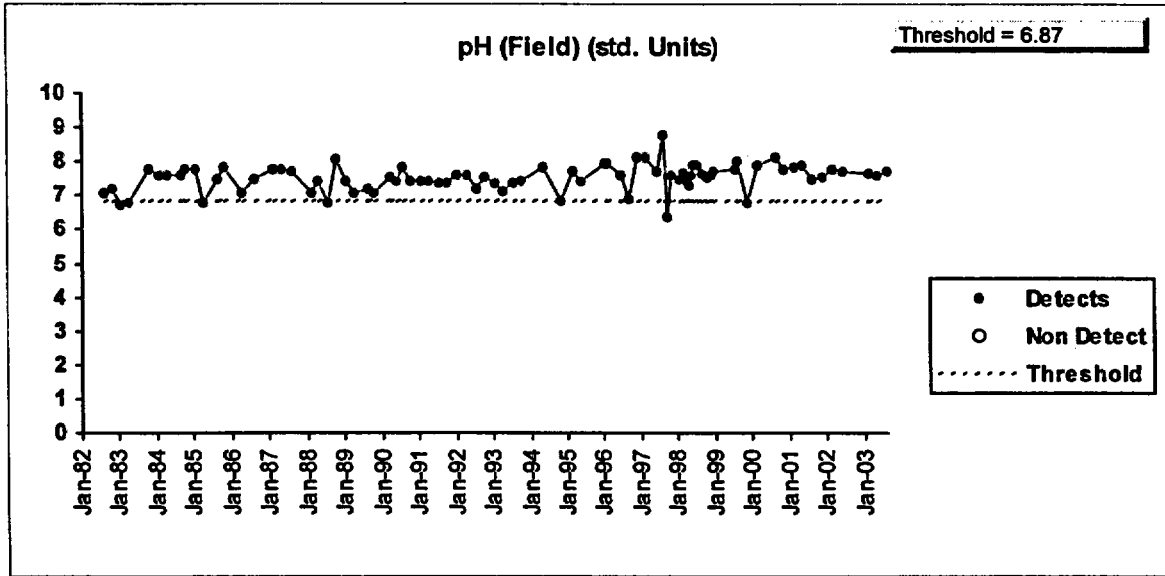
Jeffrey City

WN-16



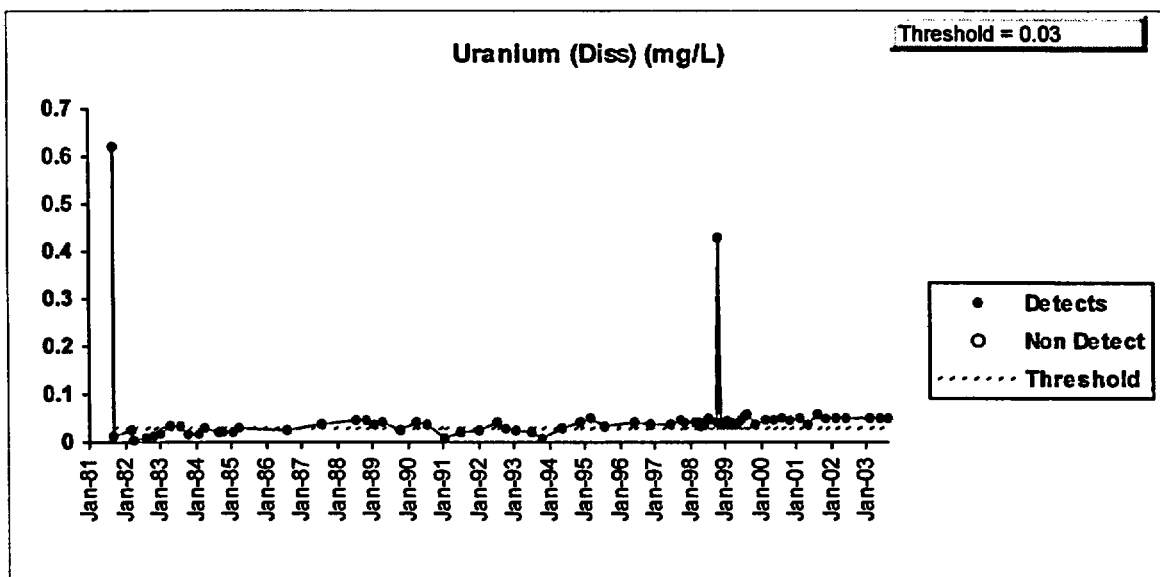
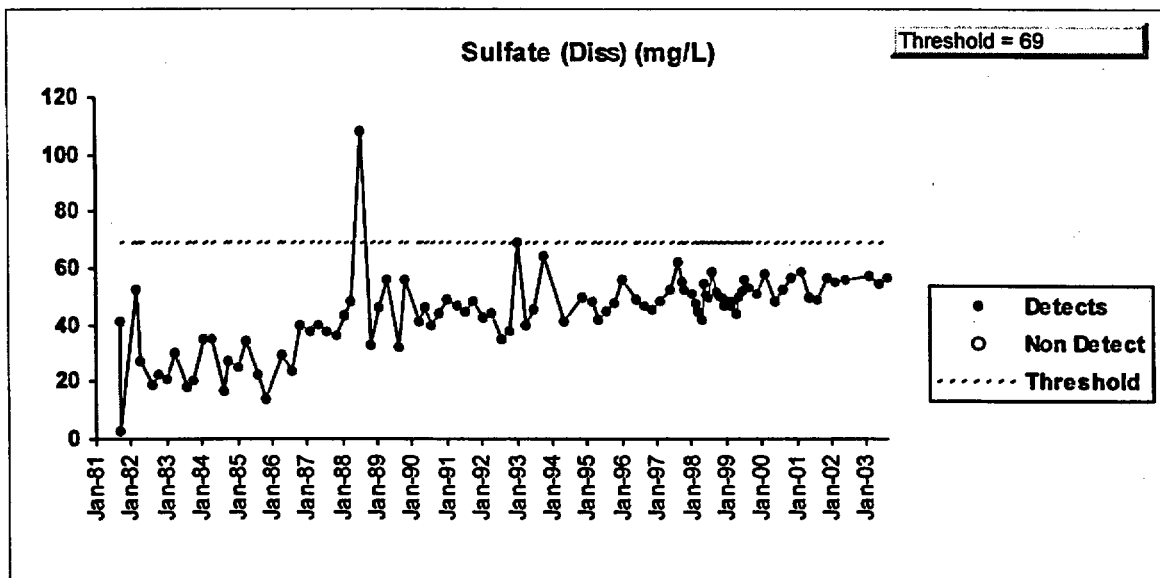
Jeffrey City

WN-17



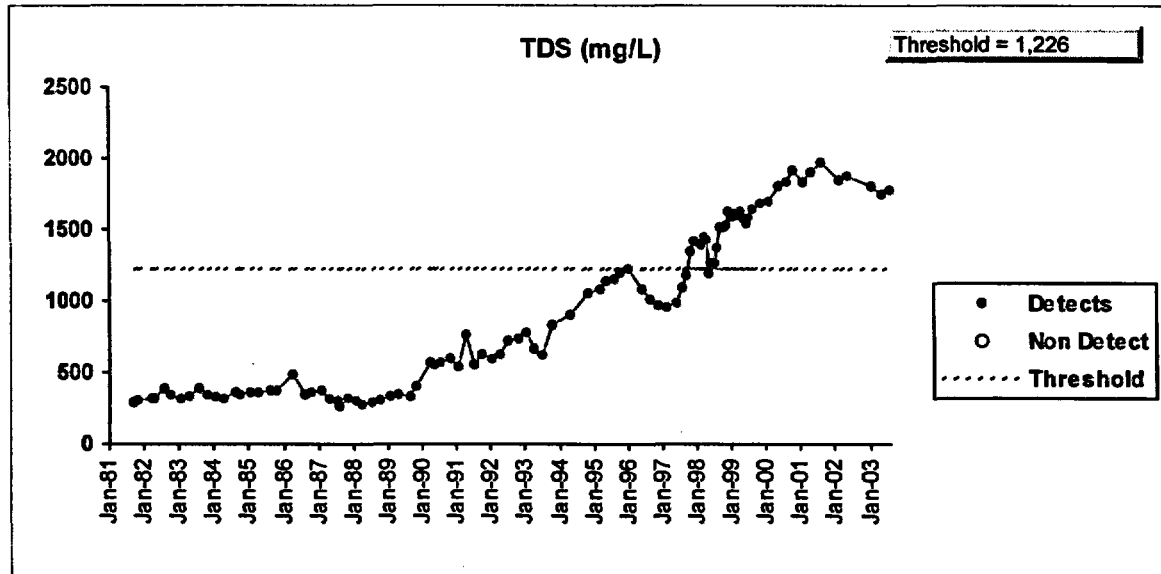
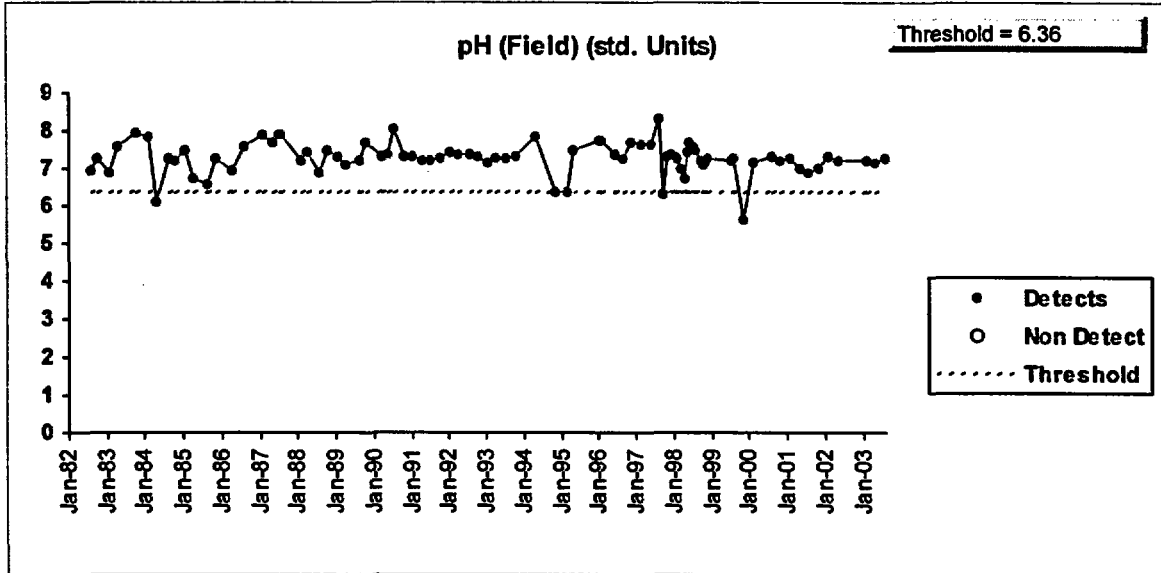
Jeffrey City

WN-17



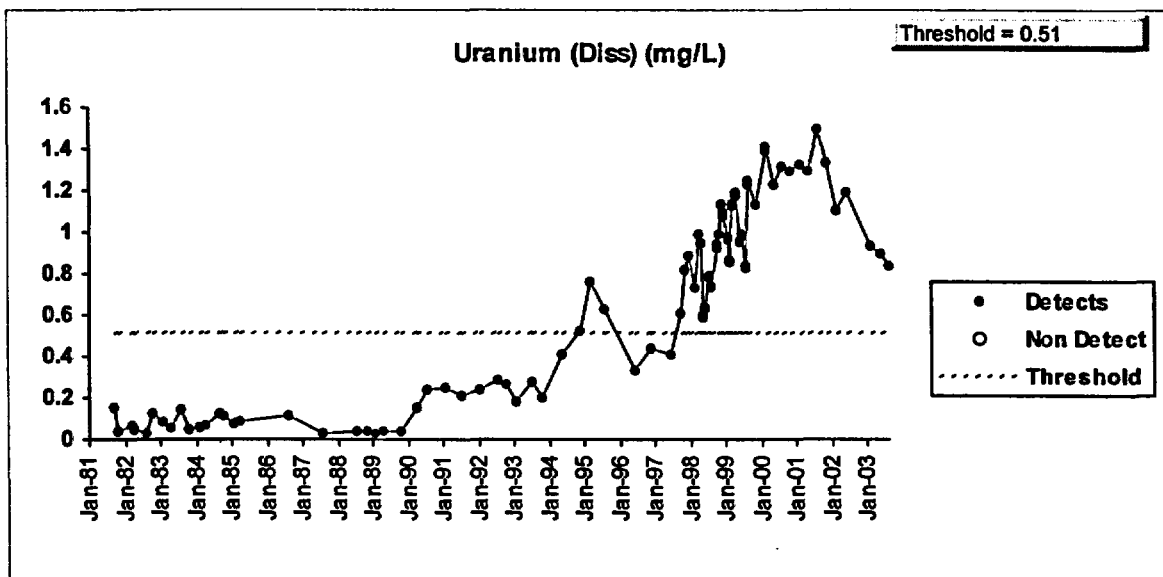
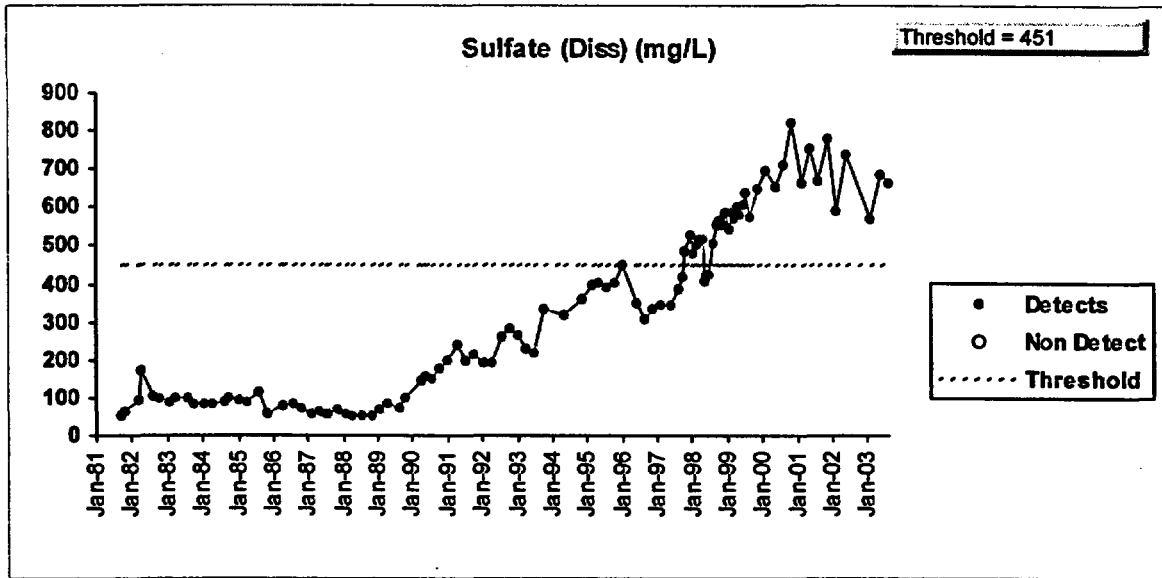
Jeffrey City

WN-18



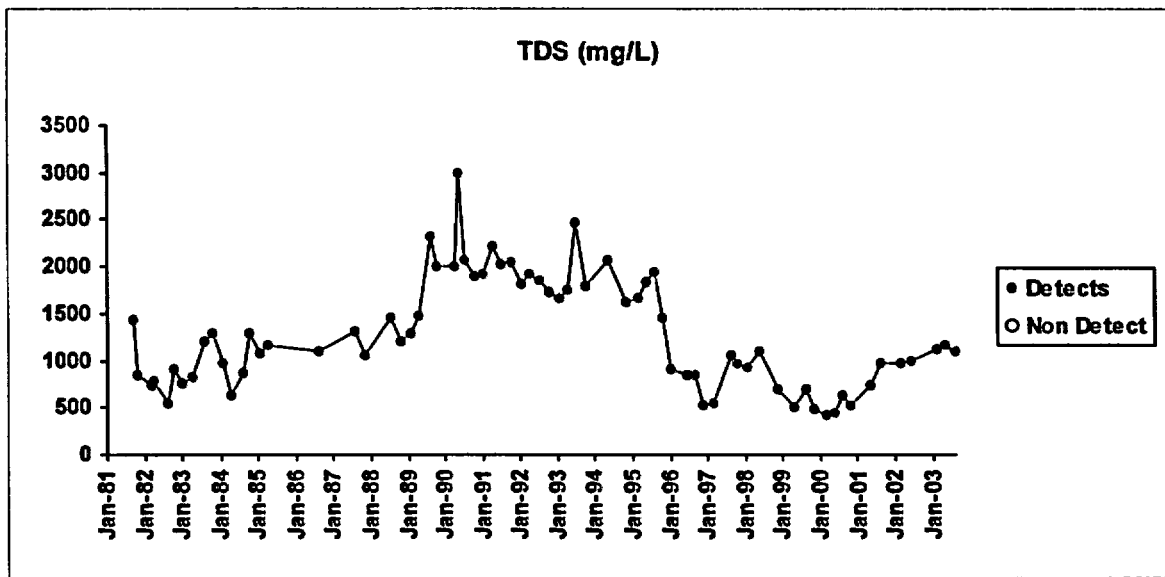
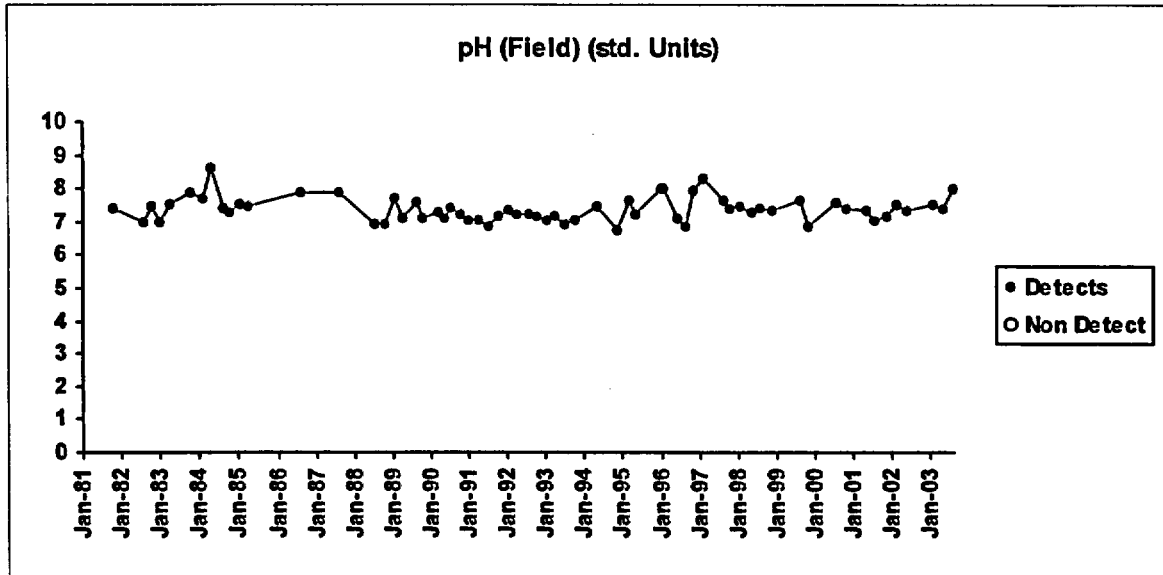
Jeffrey City

WN-18



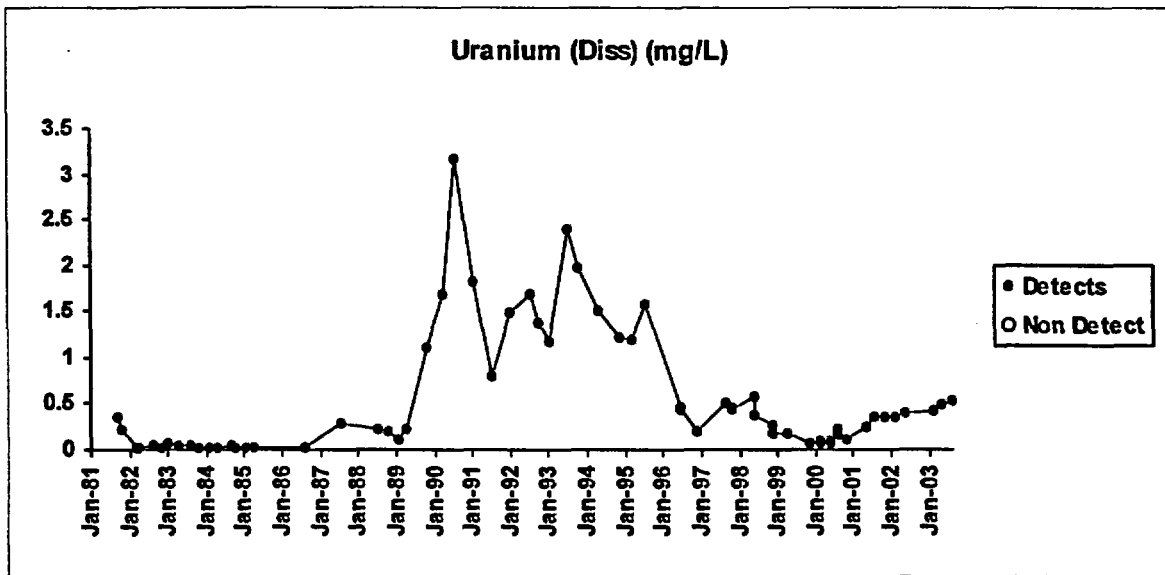
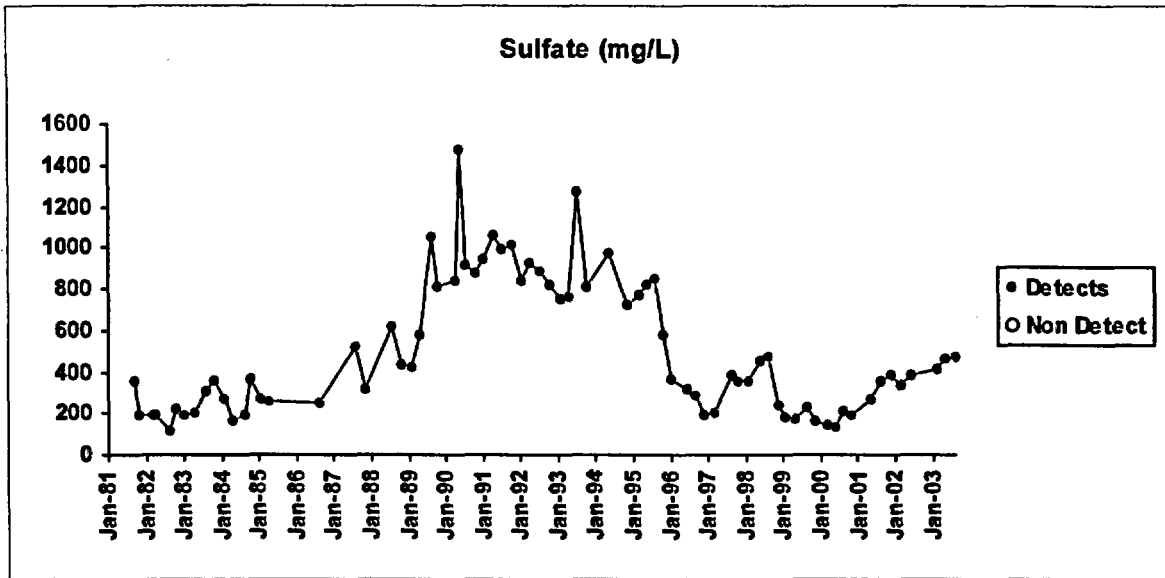
Jeffrey City

WN-19



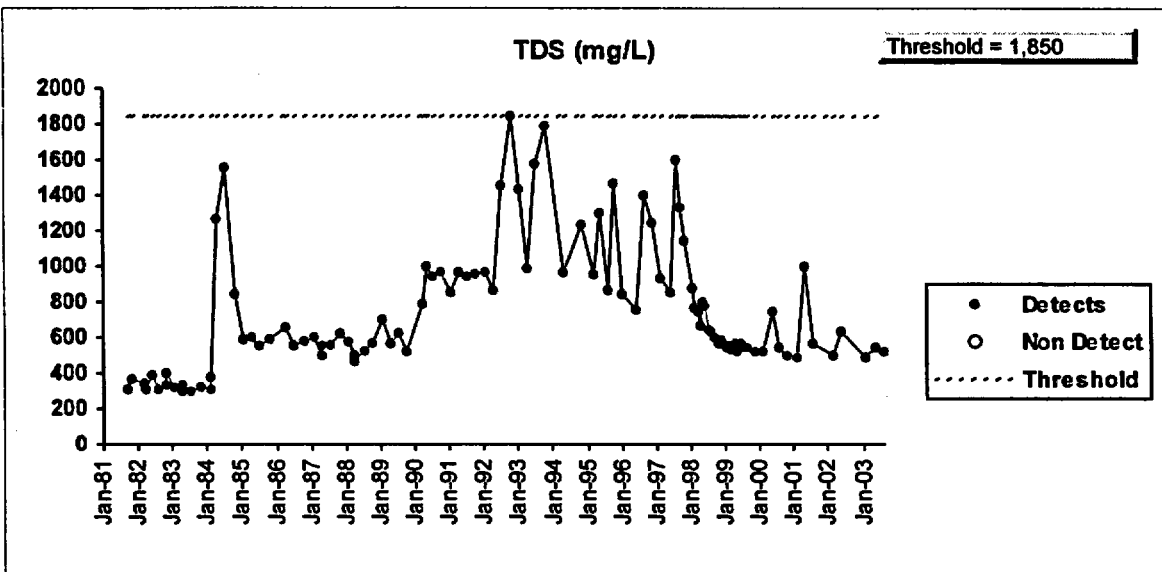
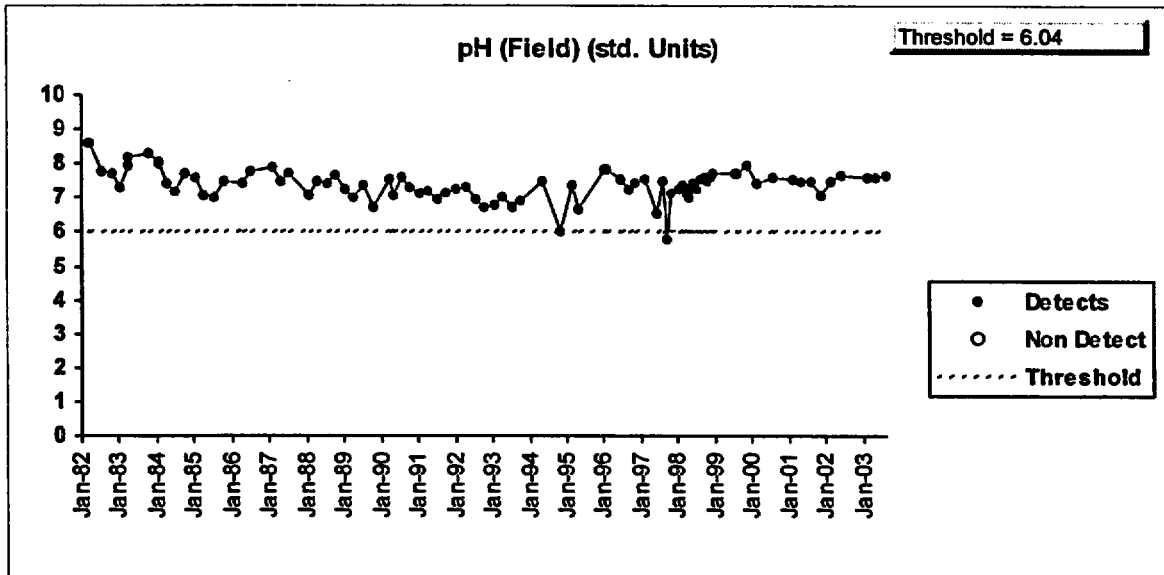
Jeffrey City

WN-19



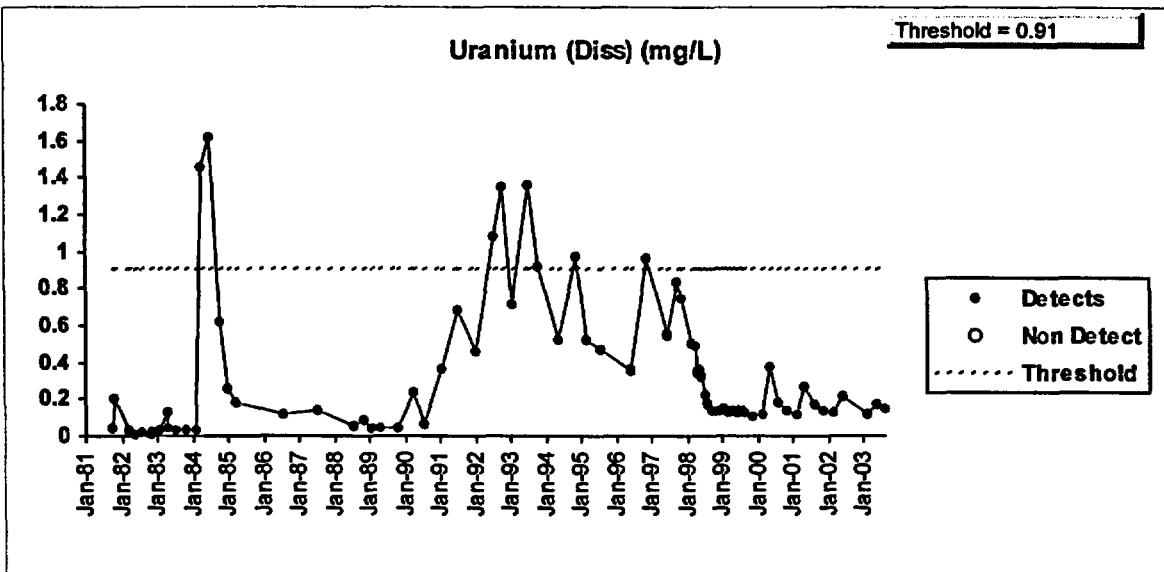
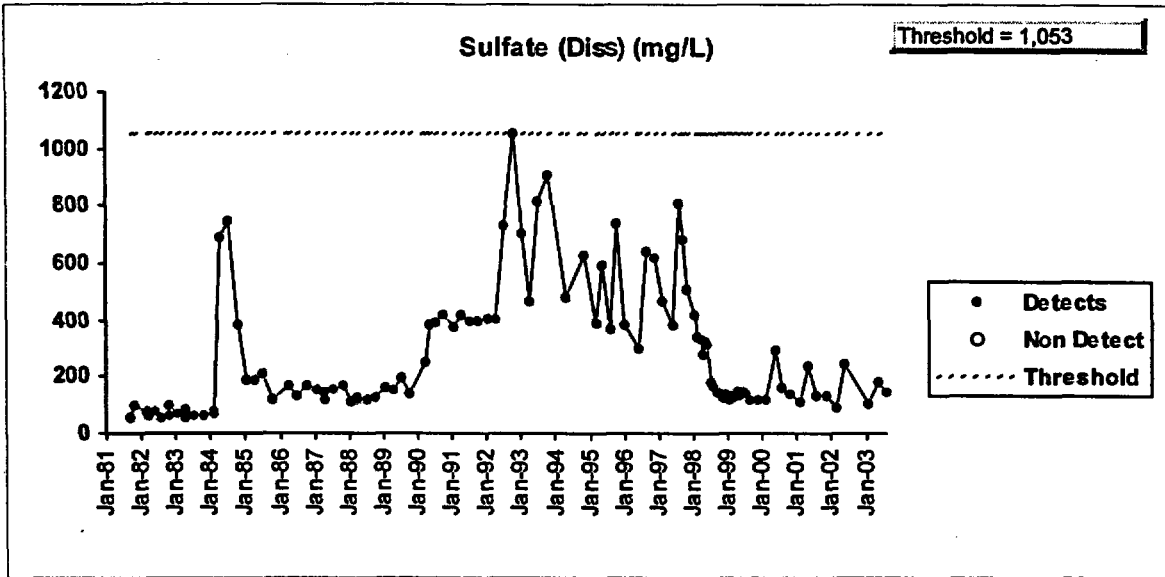
Jeffrey City

WN-21 (POC)



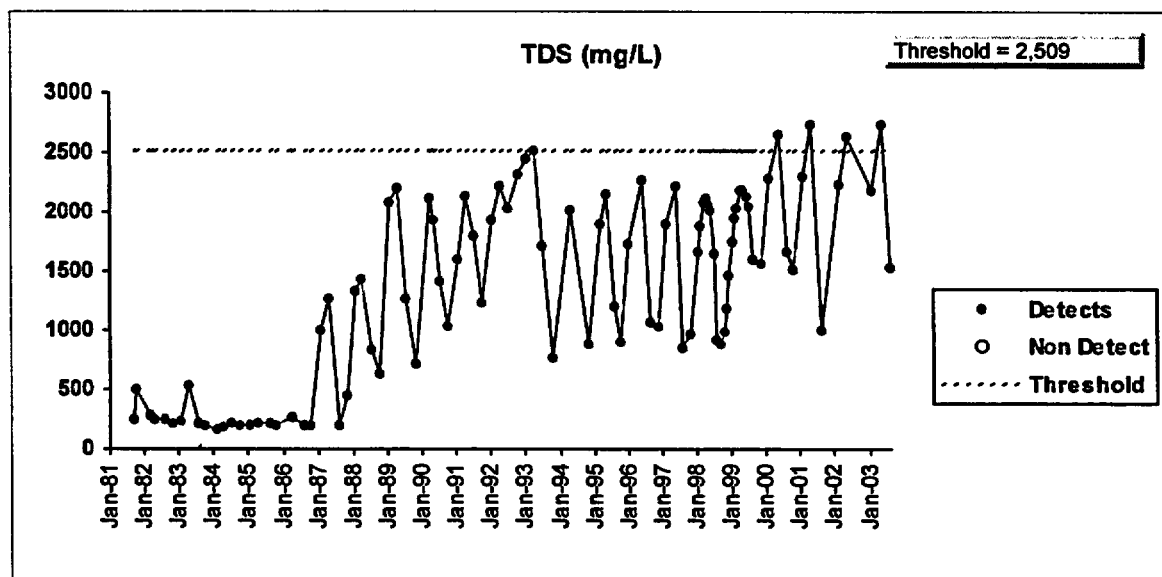
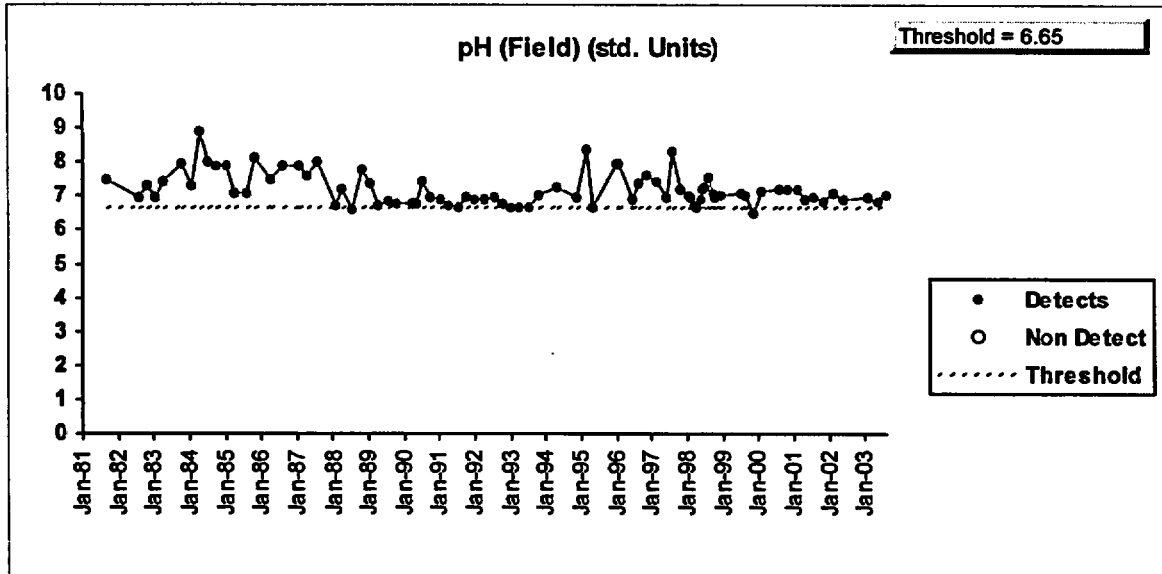
Jeffrey City

WN-21 (POC)



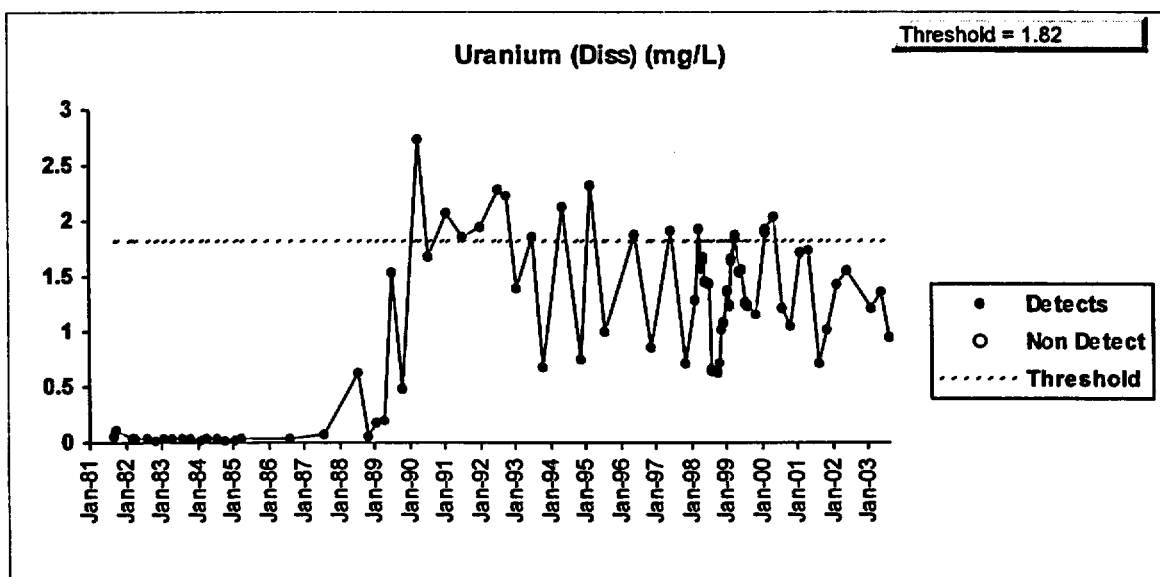
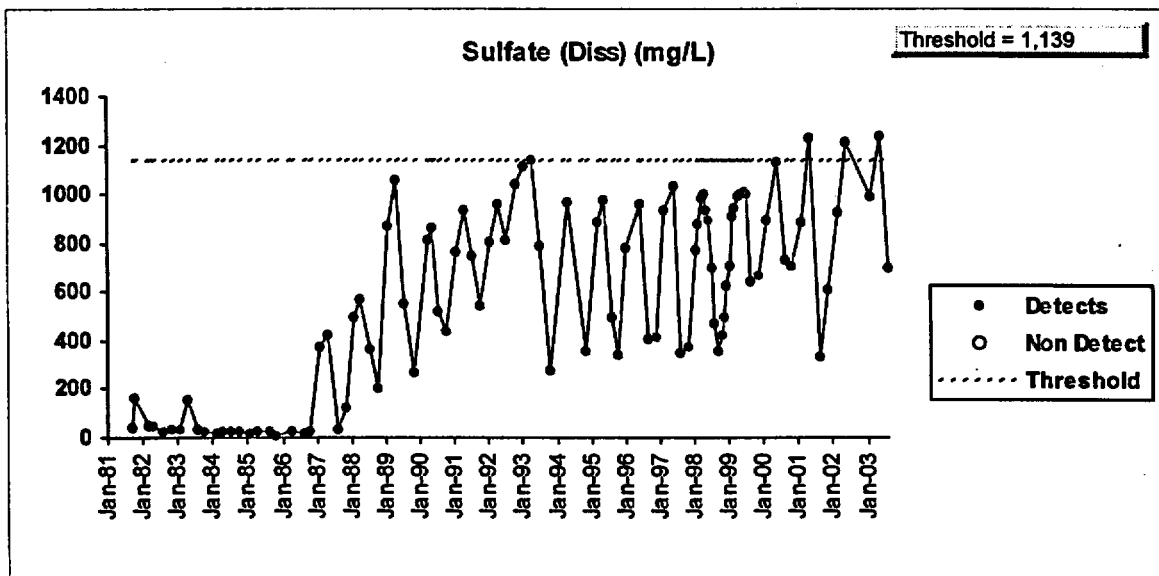
Jeffrey City

WN-23



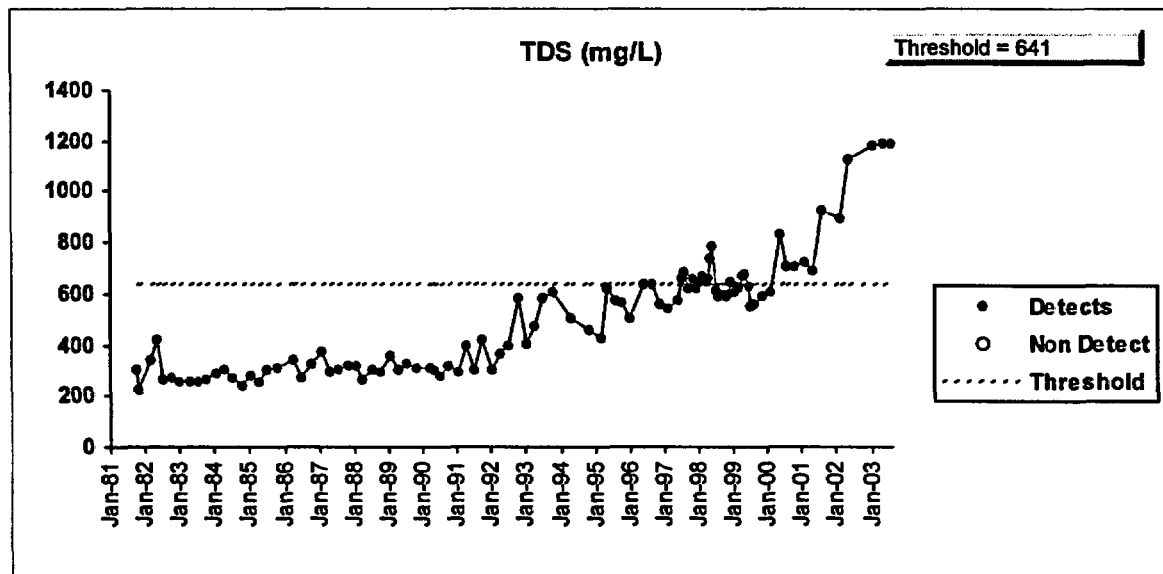
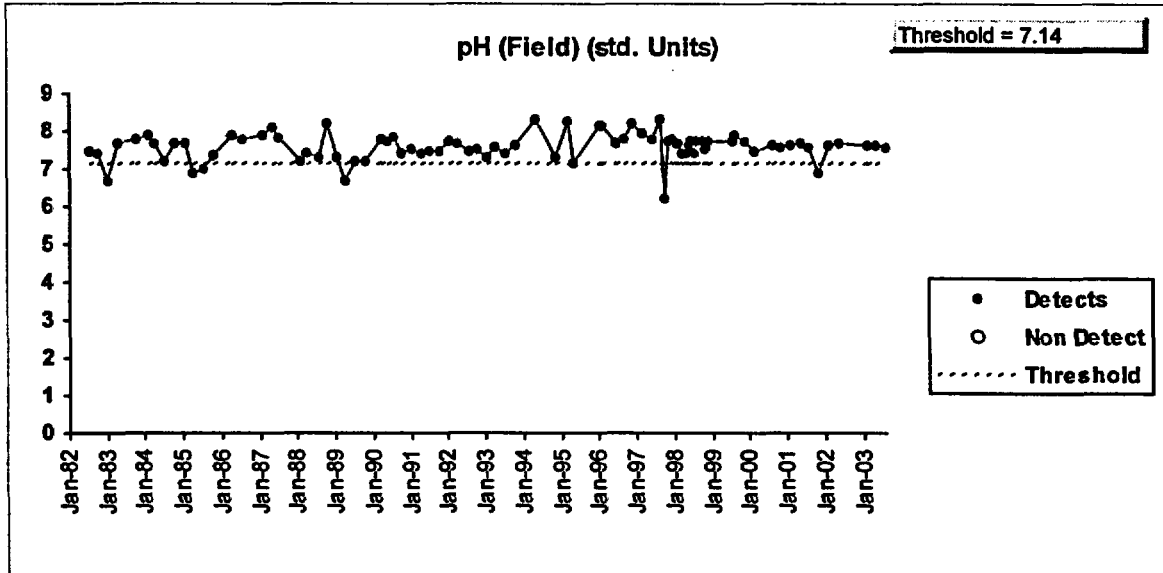
Jeffrey City

WN-23



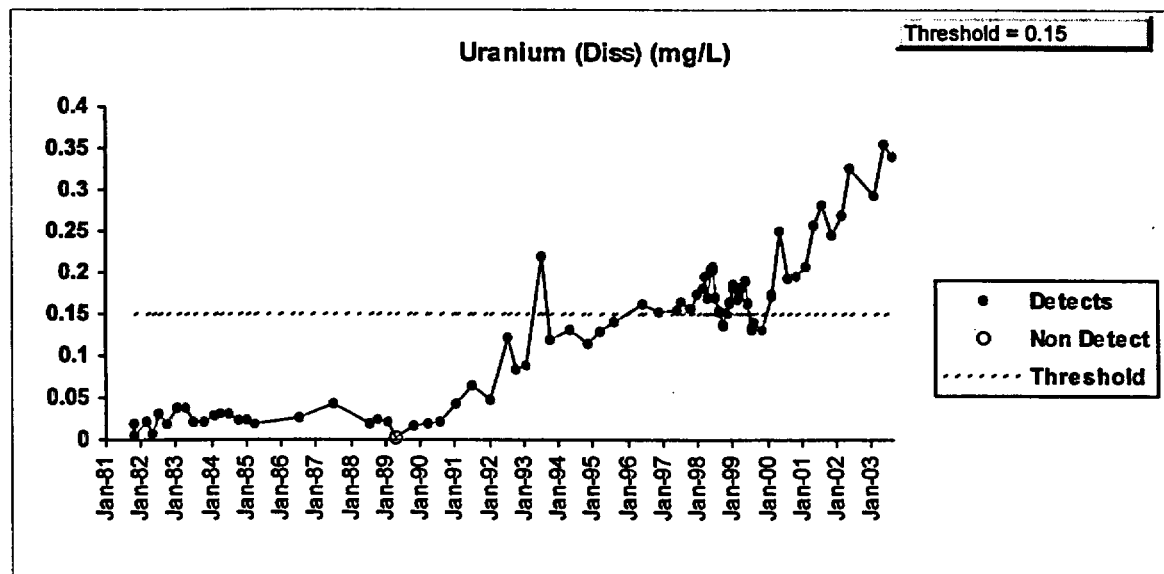
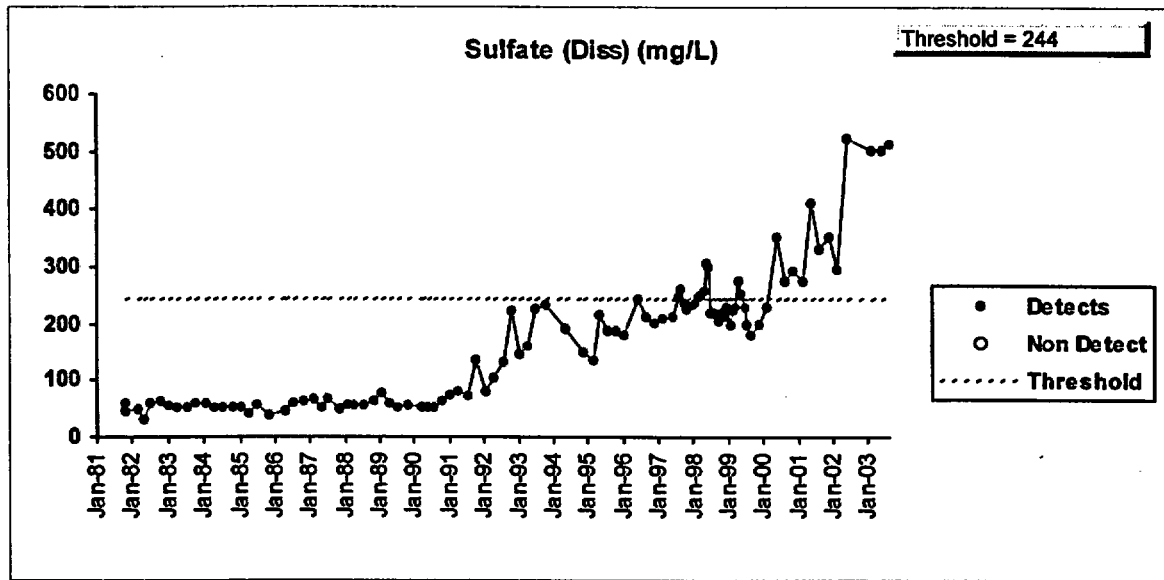
Jeffrey City

WN-24



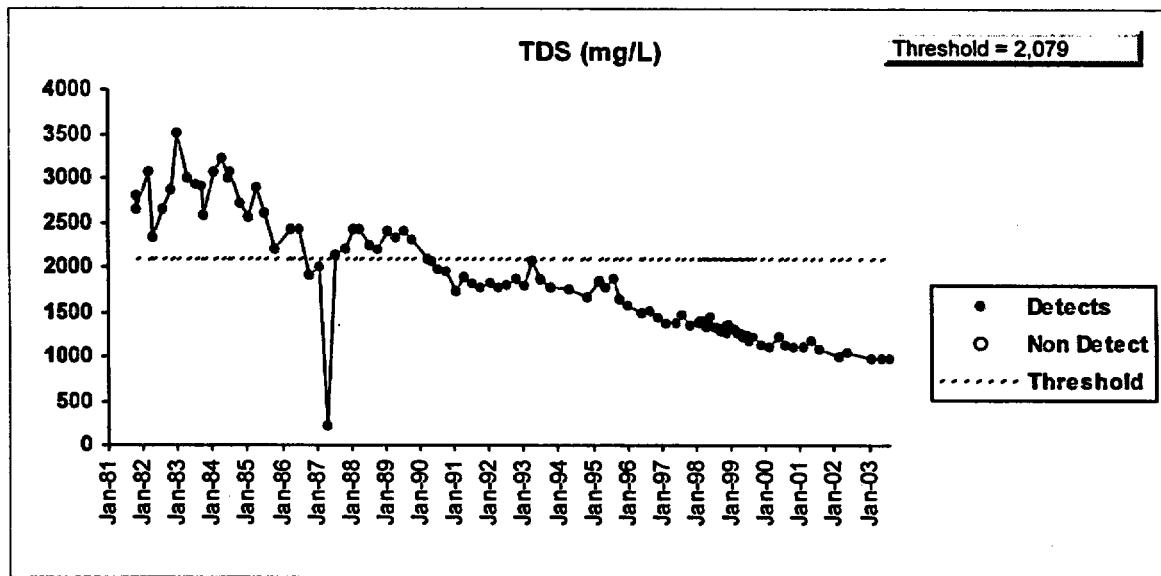
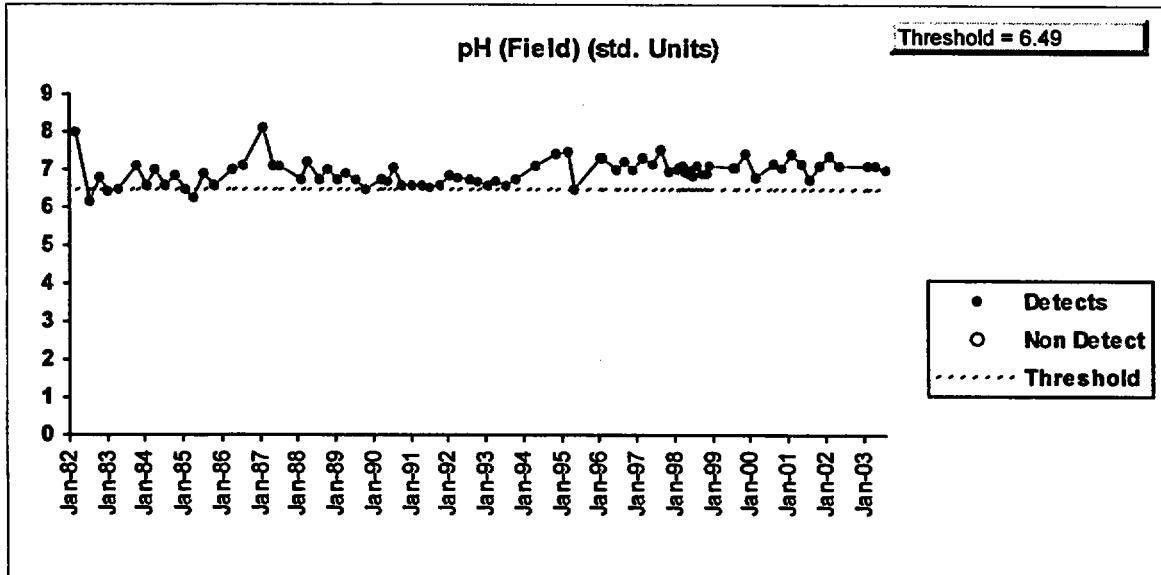
Jeffrey City

WN-24



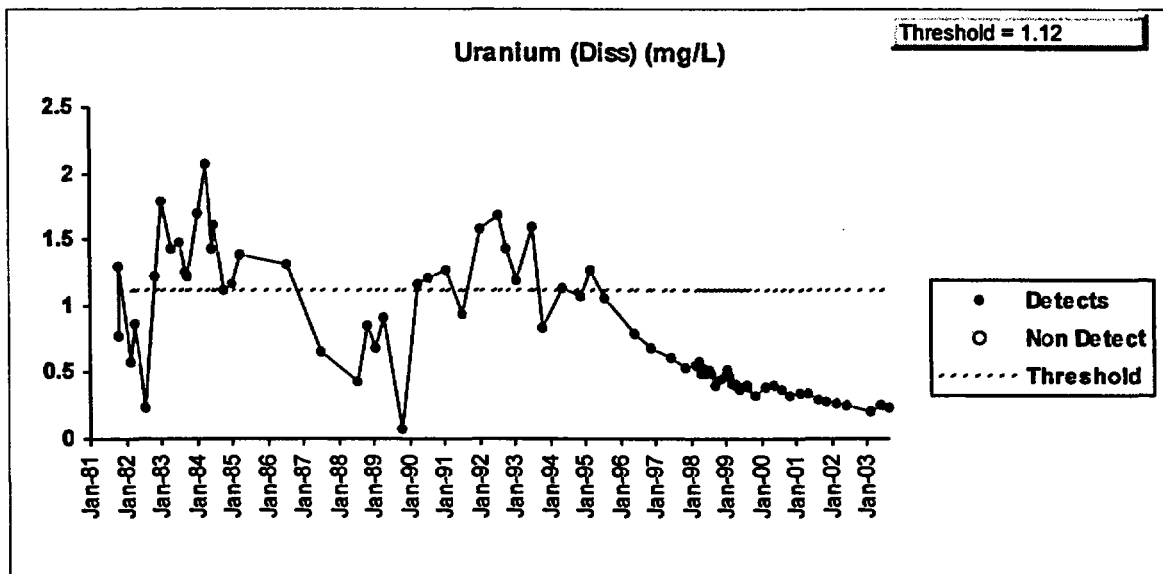
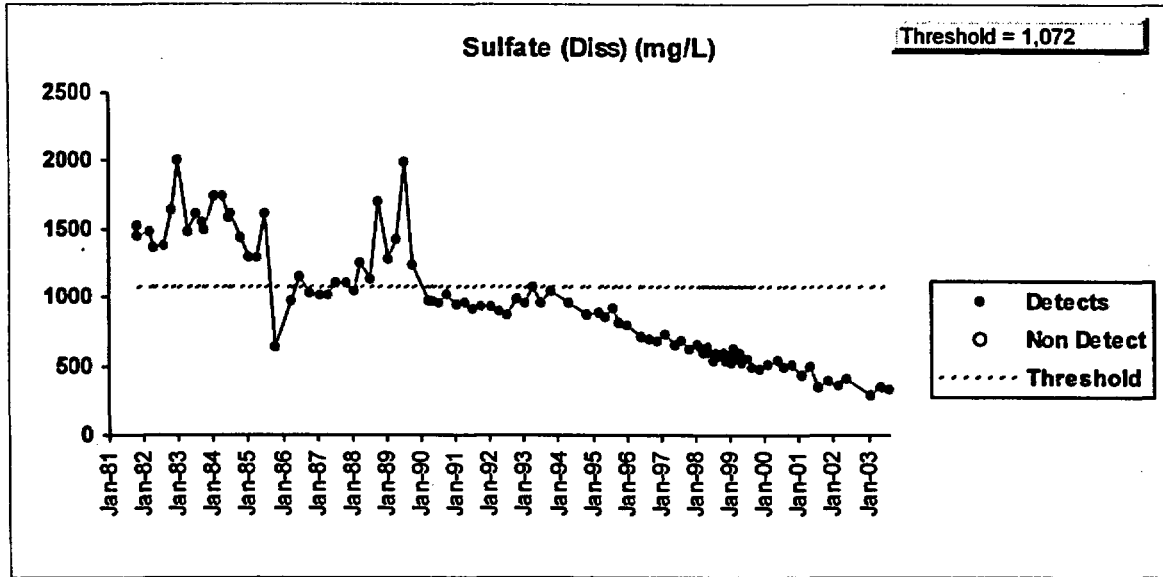
Jeffrey City

WN-25



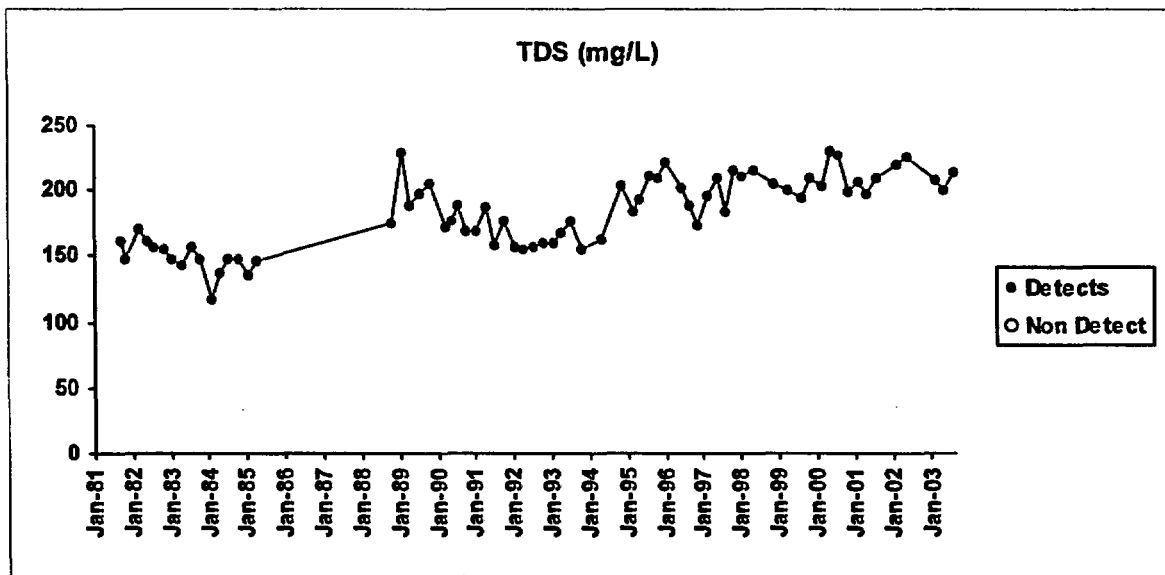
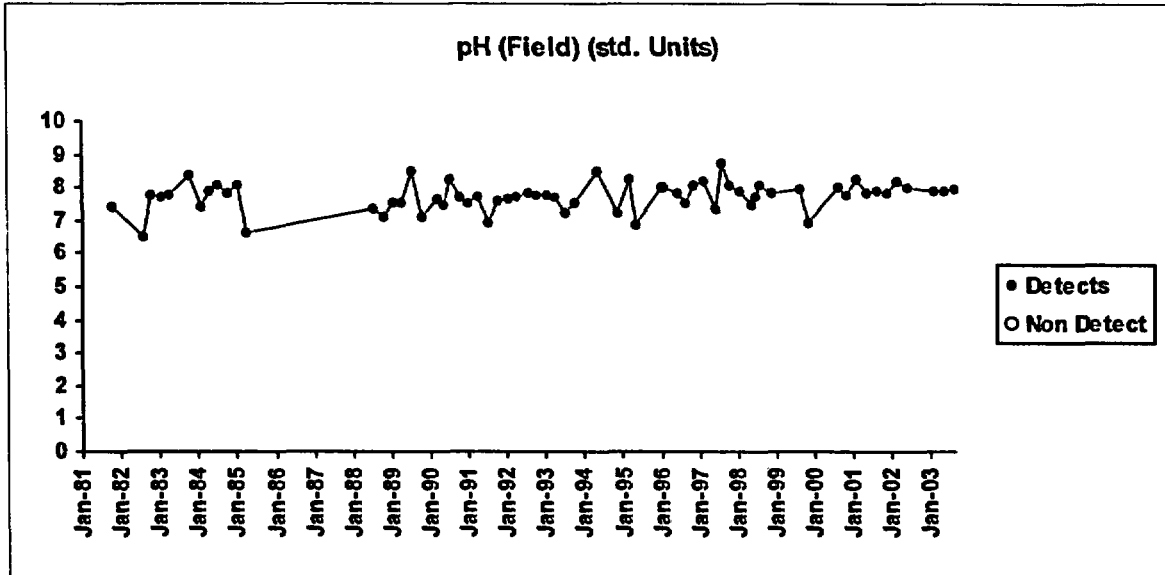
Jeffrey City

WN-25



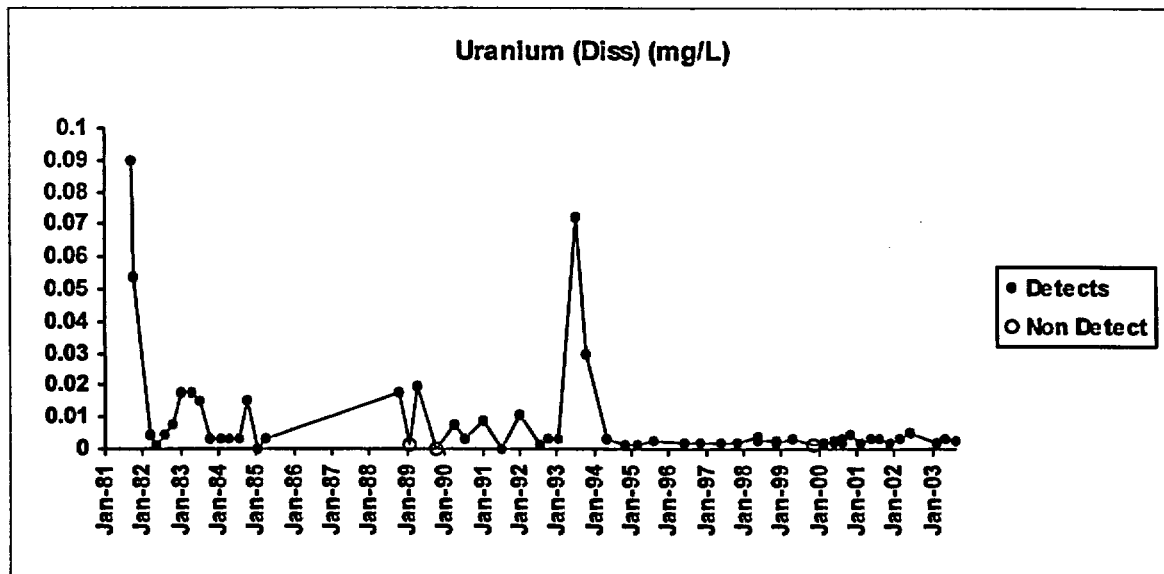
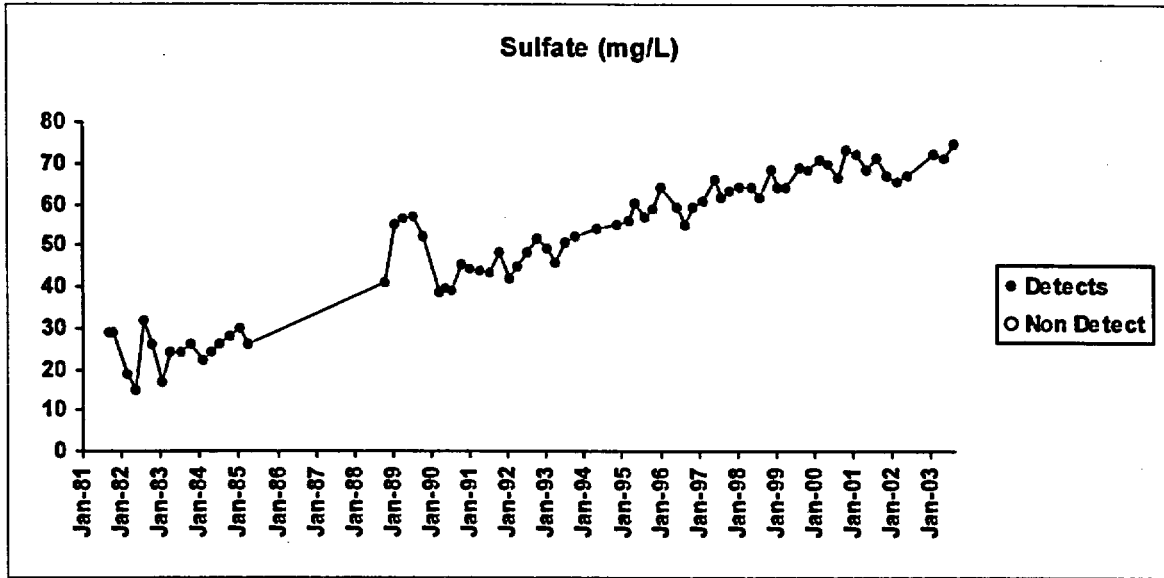
Jeffrey City

WN-26



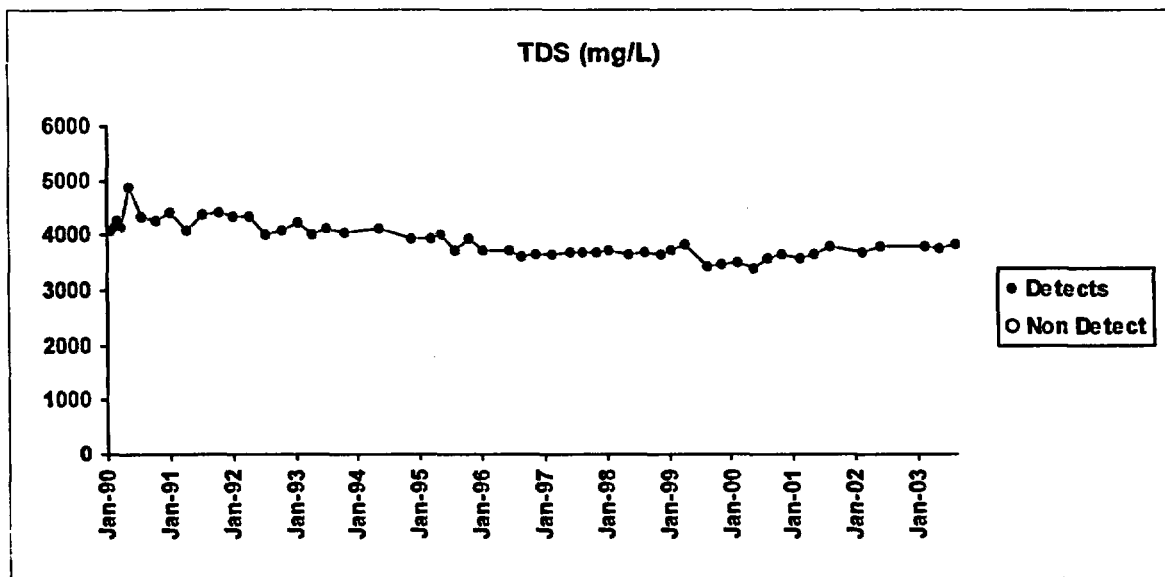
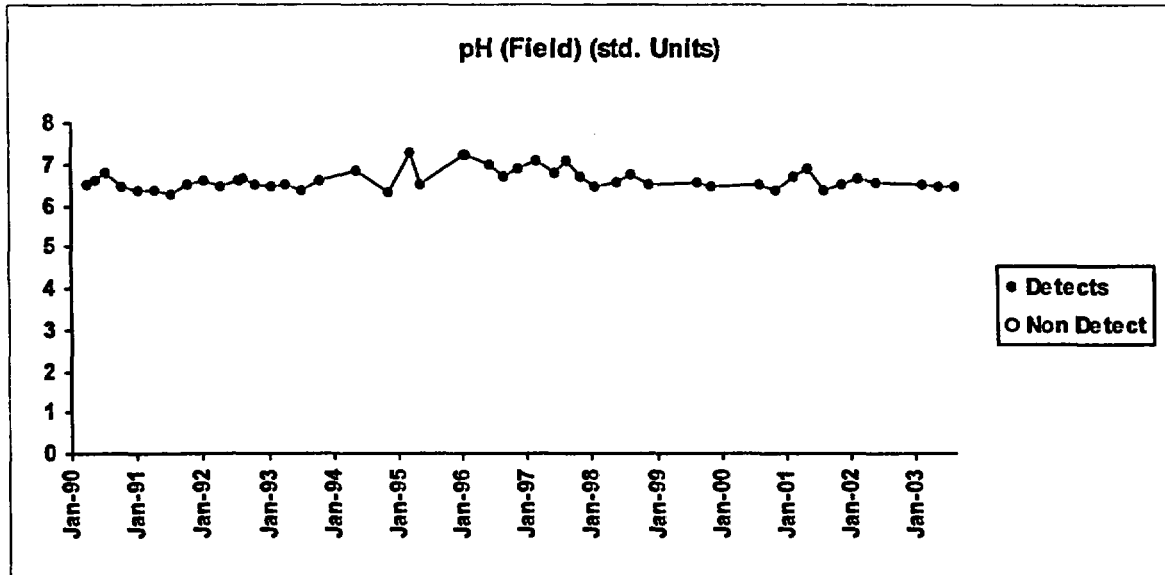
Jeffrey City

WN-26



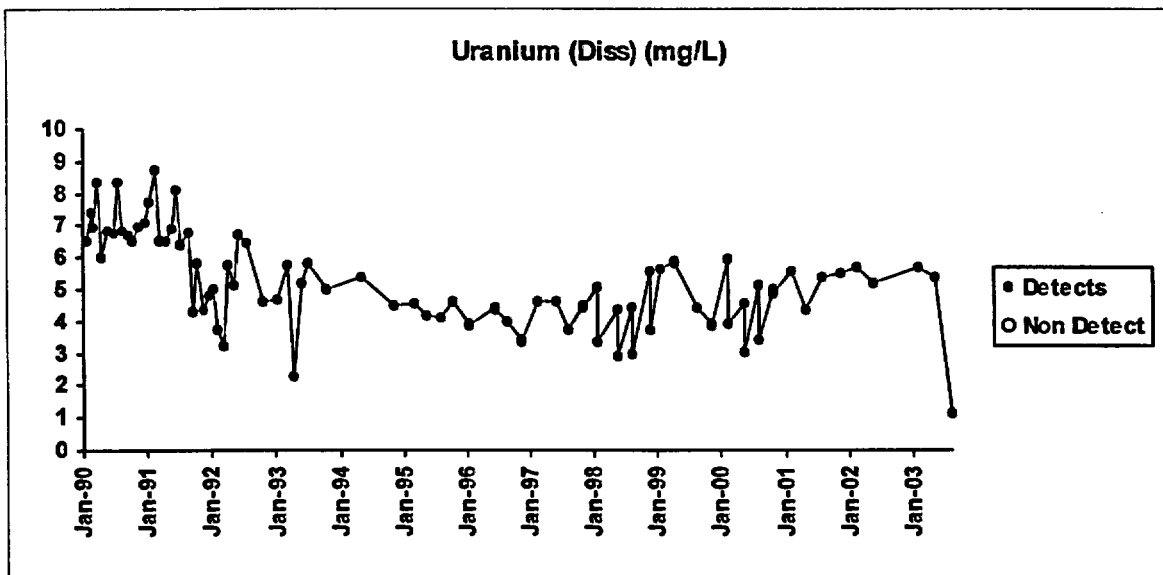
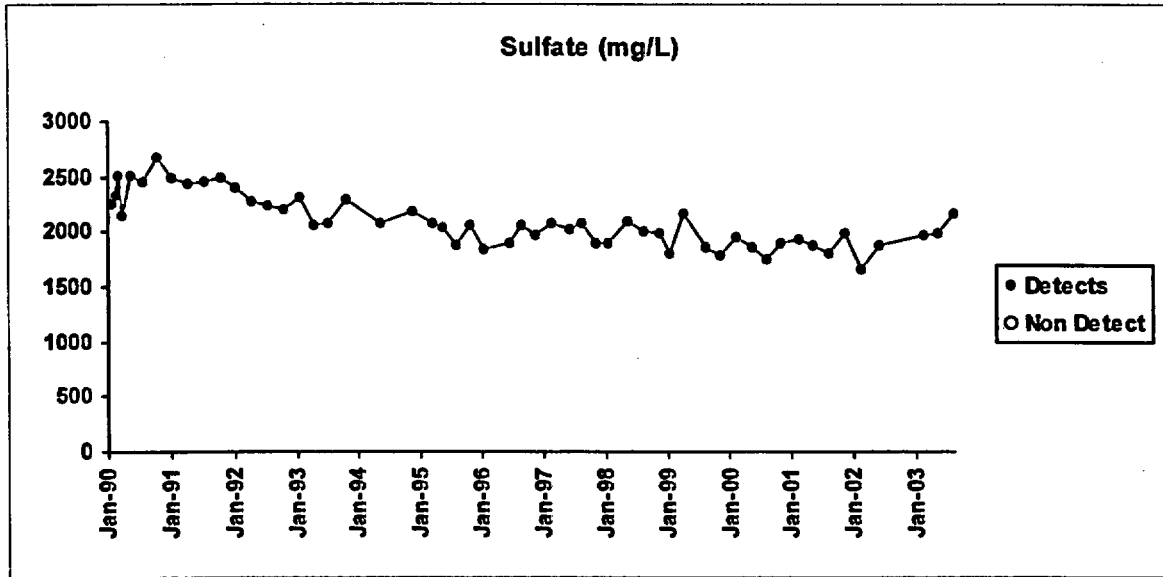
Jeffrey City

WELL-28



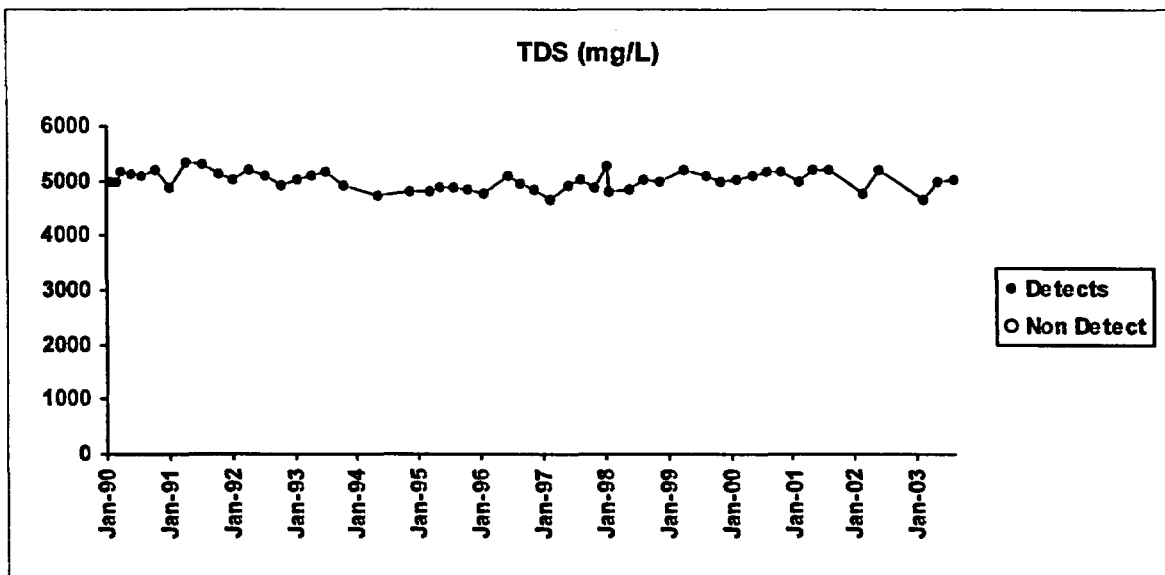
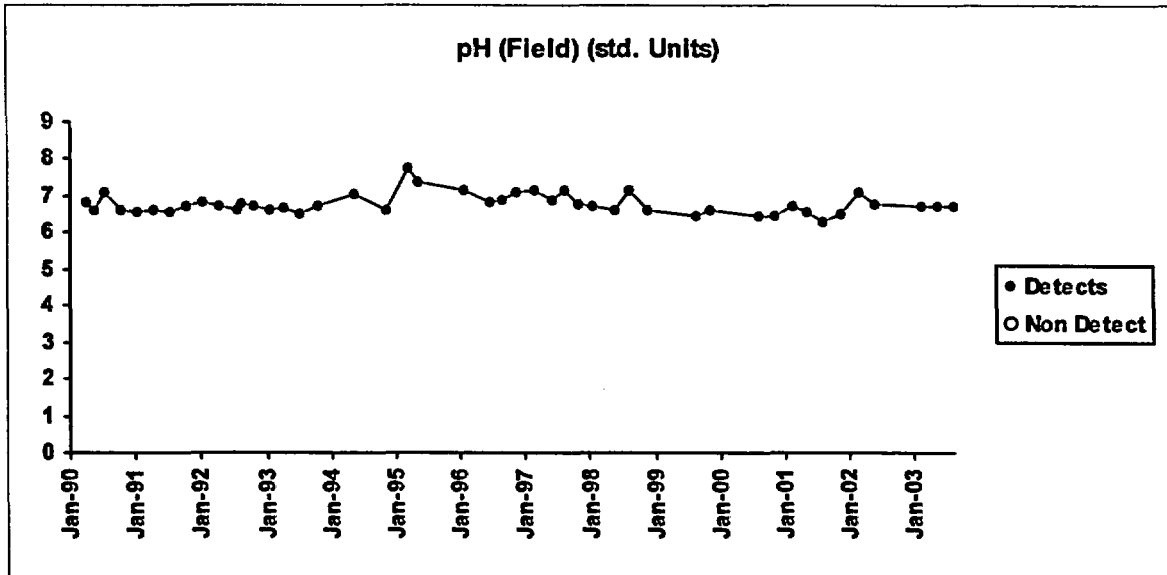
Jeffrey City

WELL-28



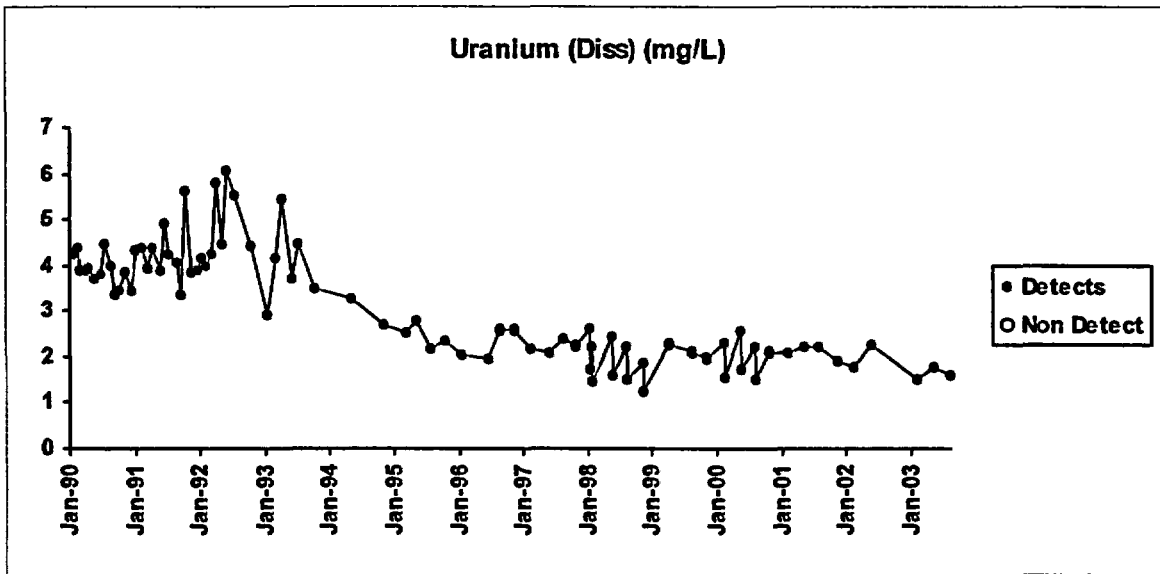
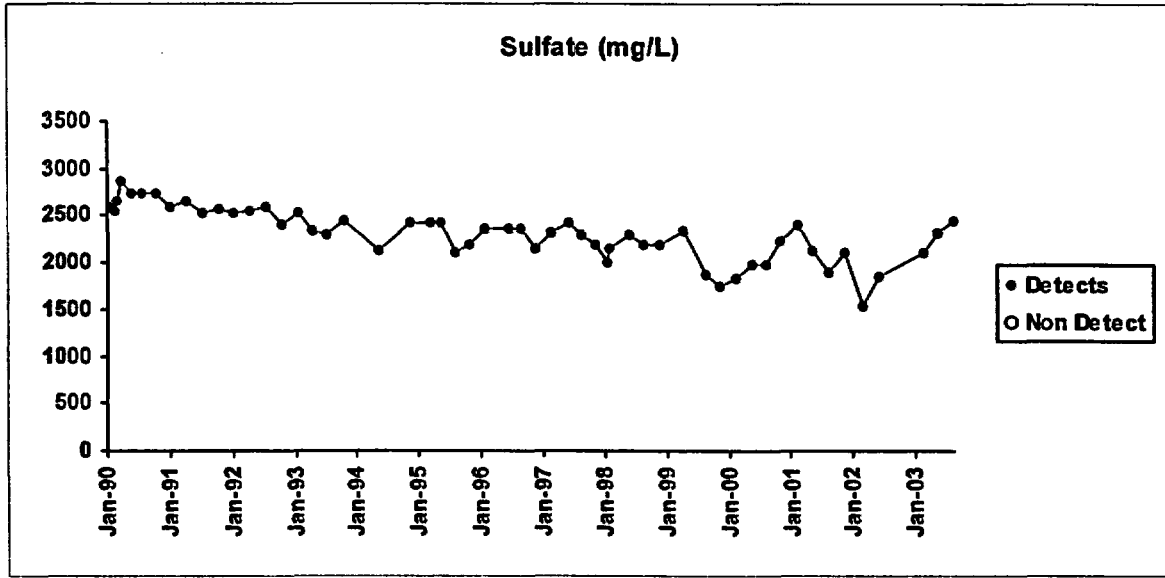
Jeffrey City

WELL-30



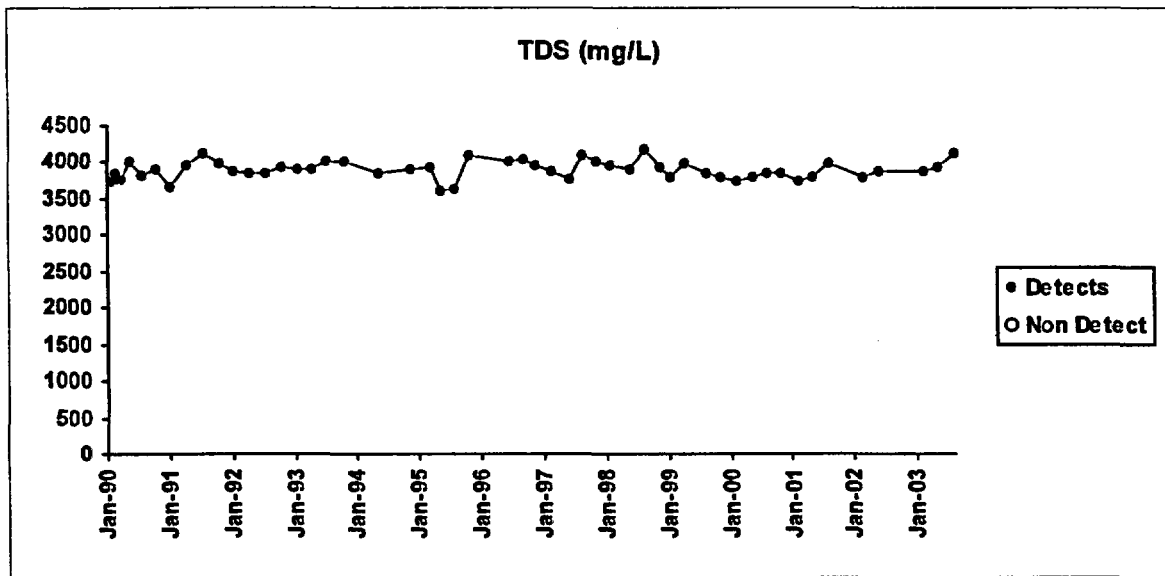
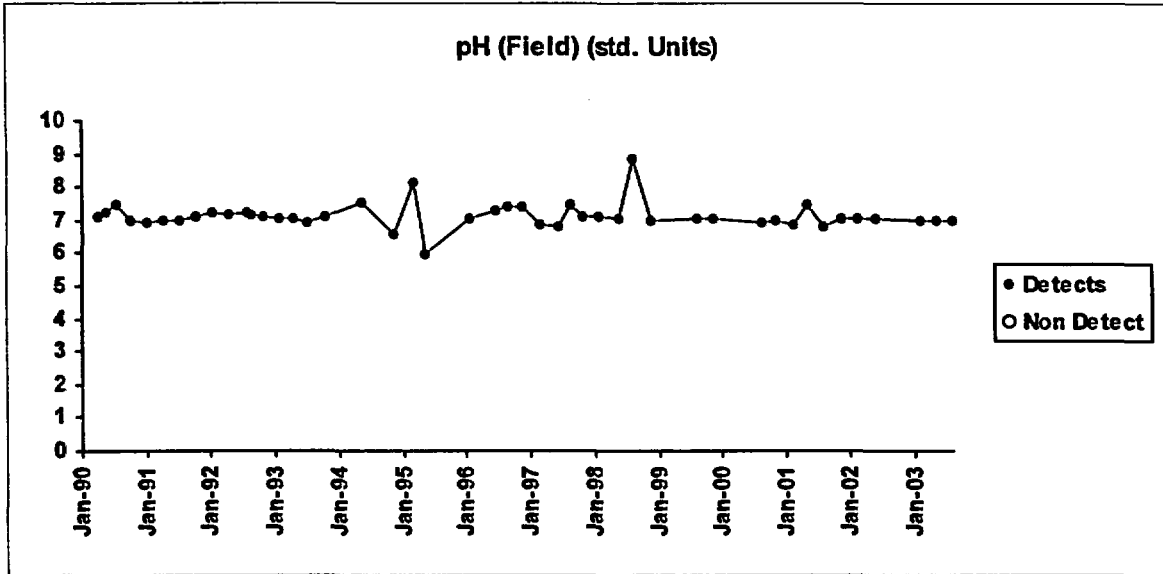
Jeffrey City

WELL-30



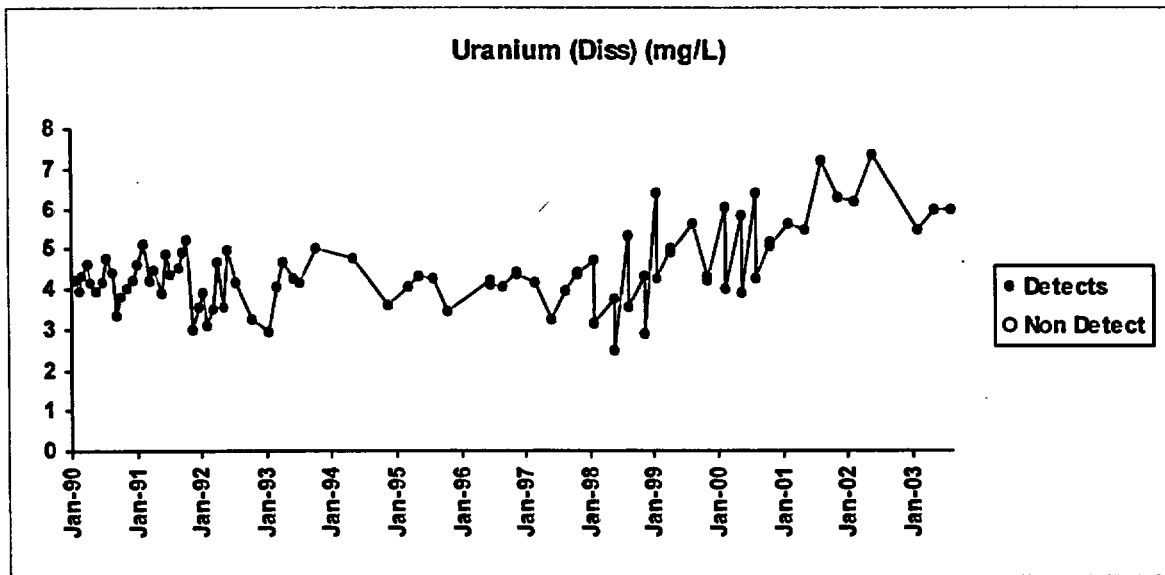
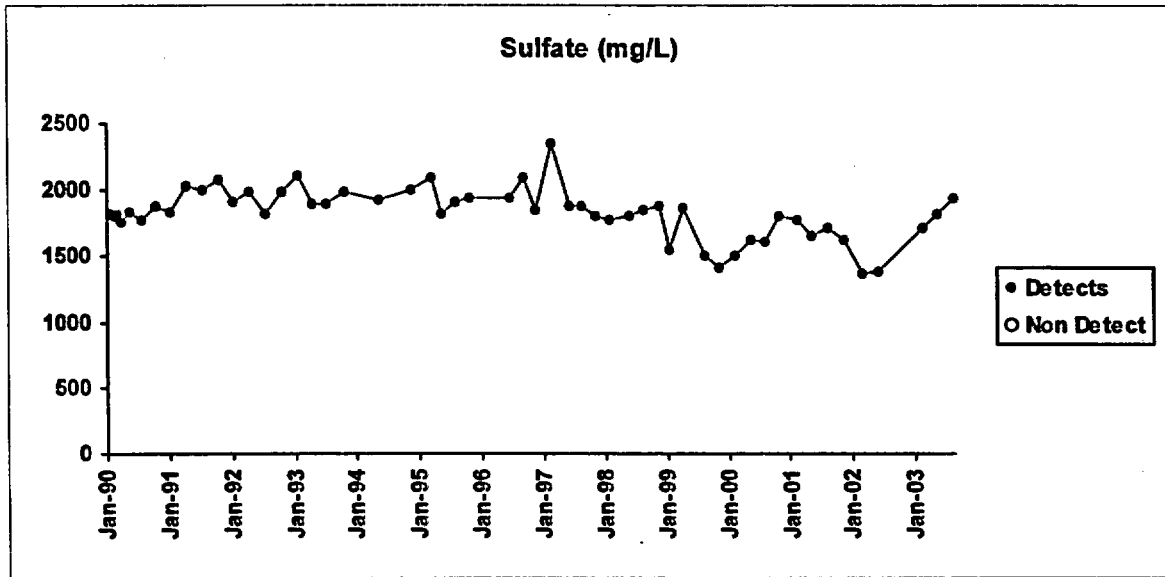
Jeffrey City

WELL-31



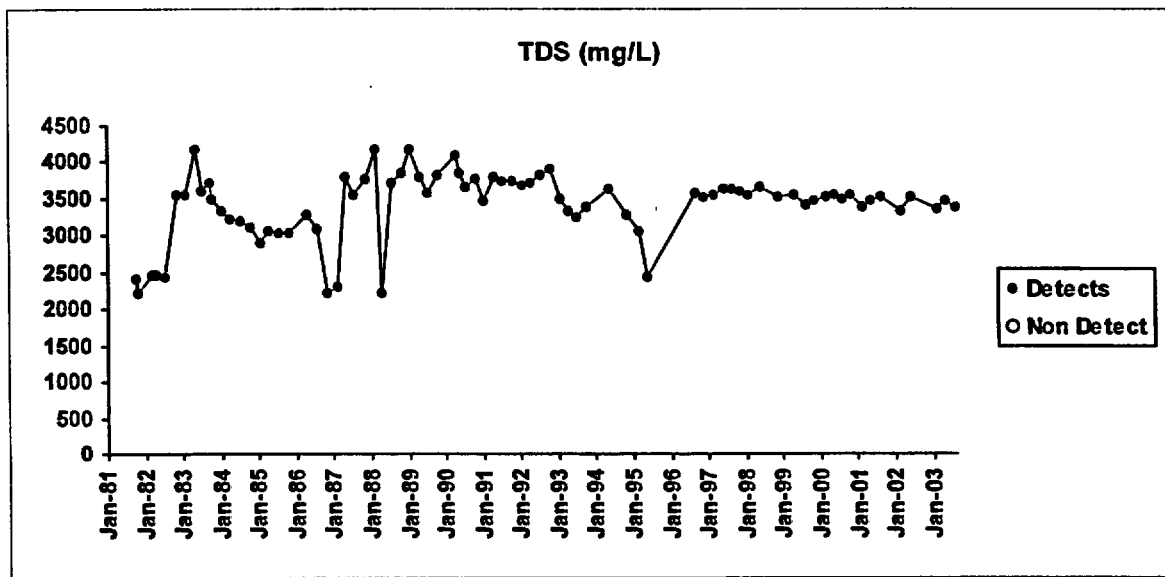
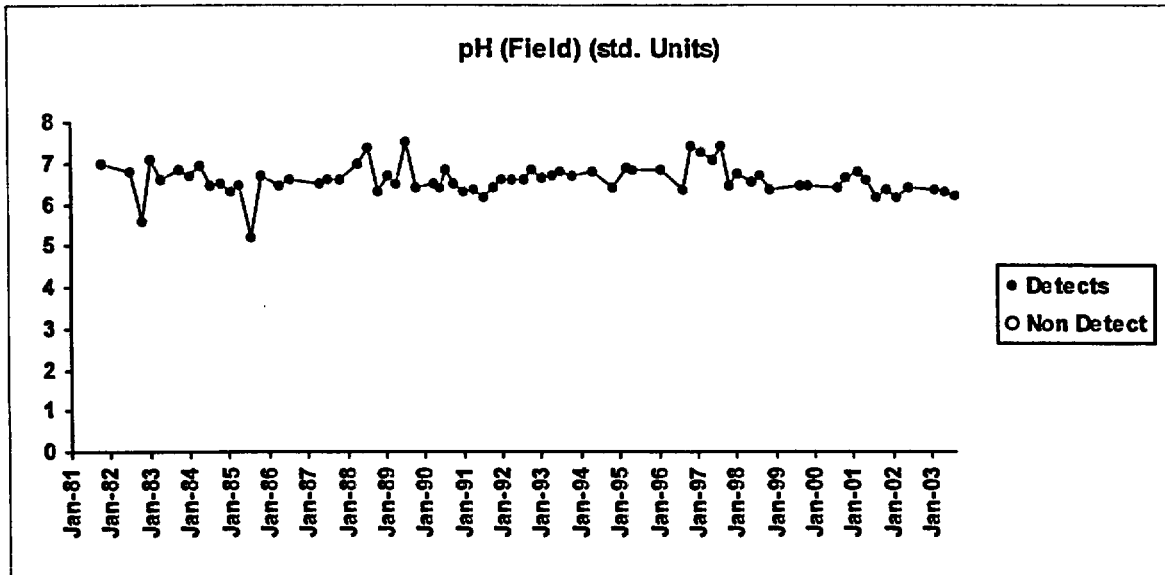
Jeffrey City

WELL-31



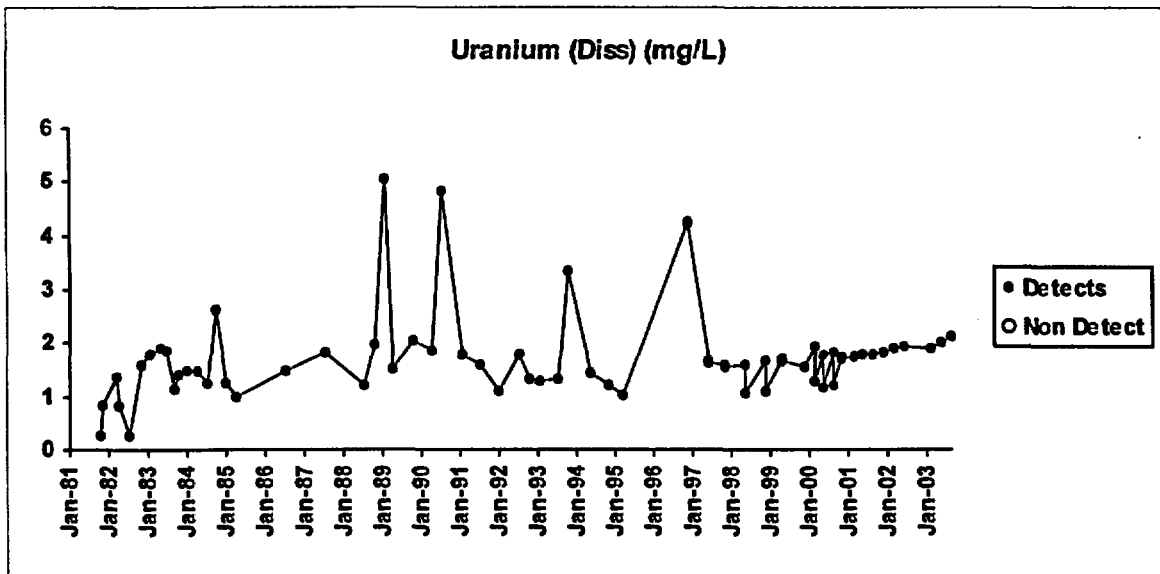
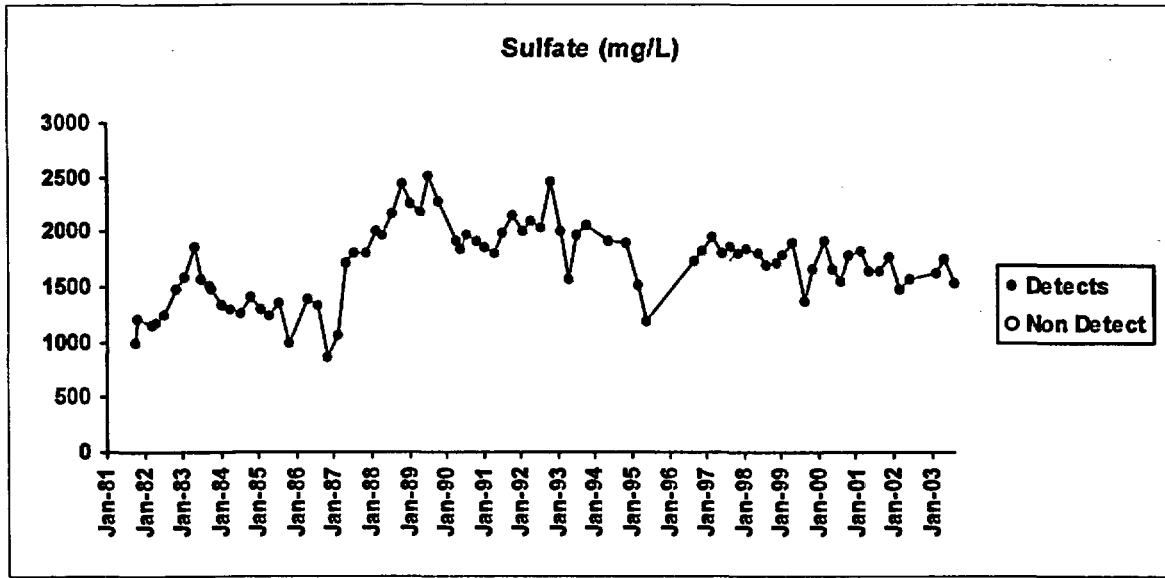
Jeffrey City

WN-A



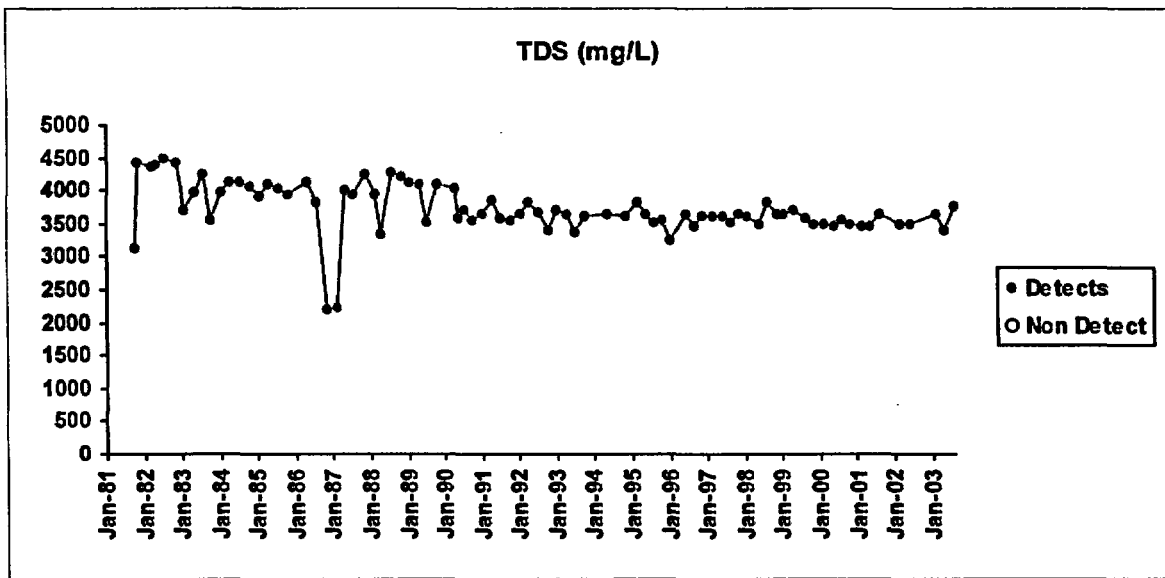
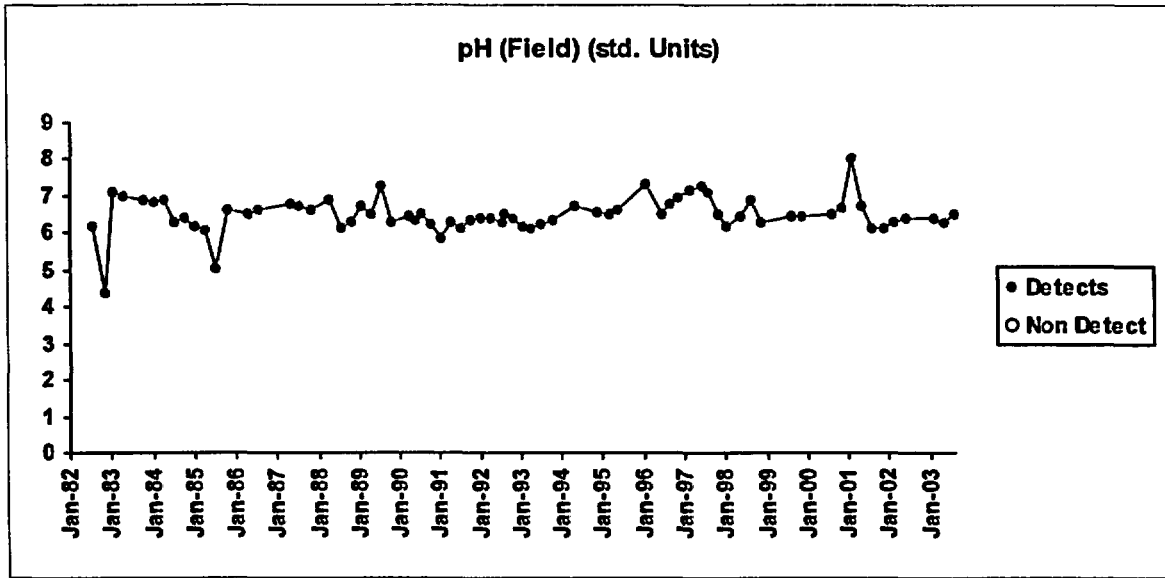
Jeffrey City

WN-A



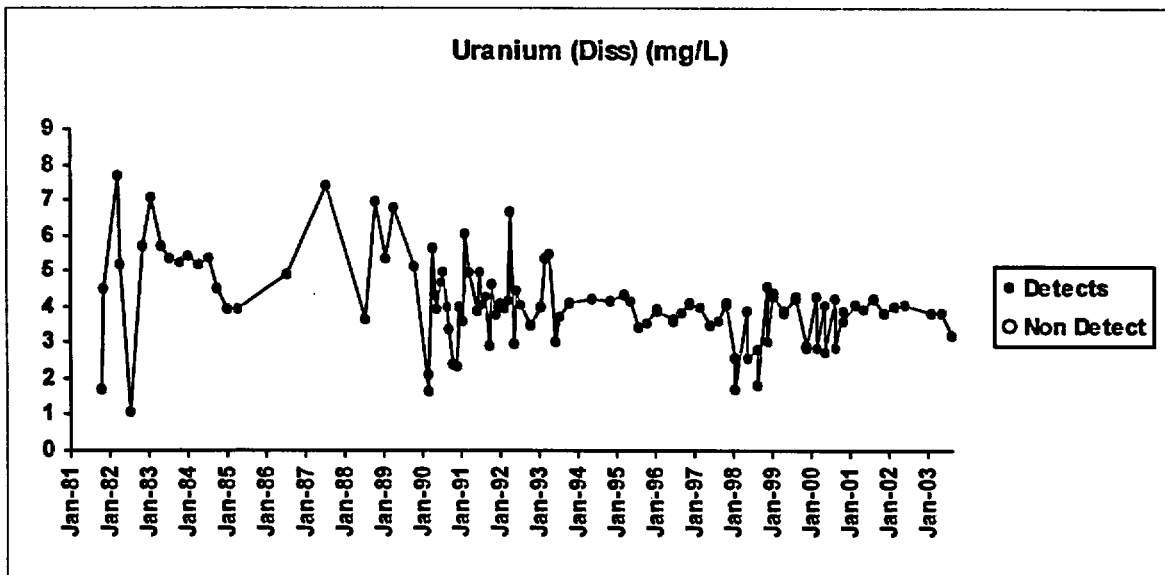
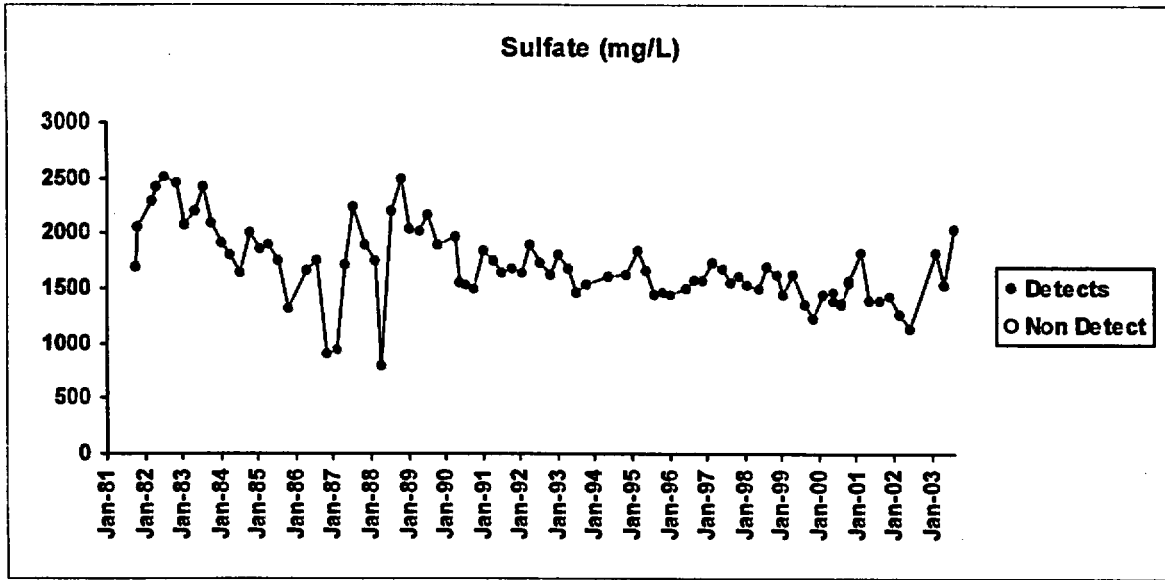
Jeffrey City

WN-B



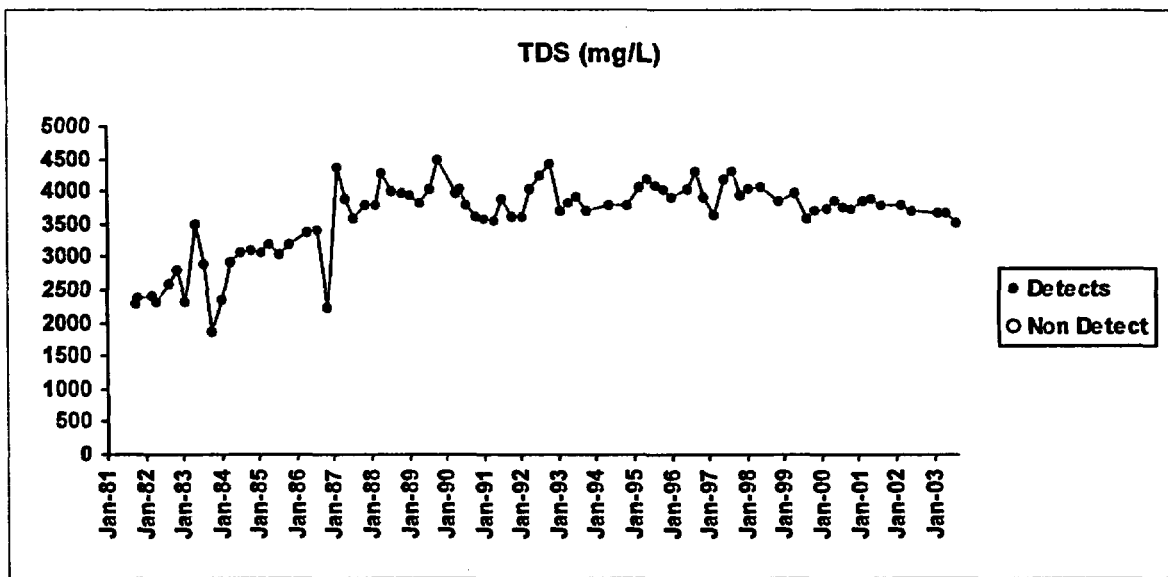
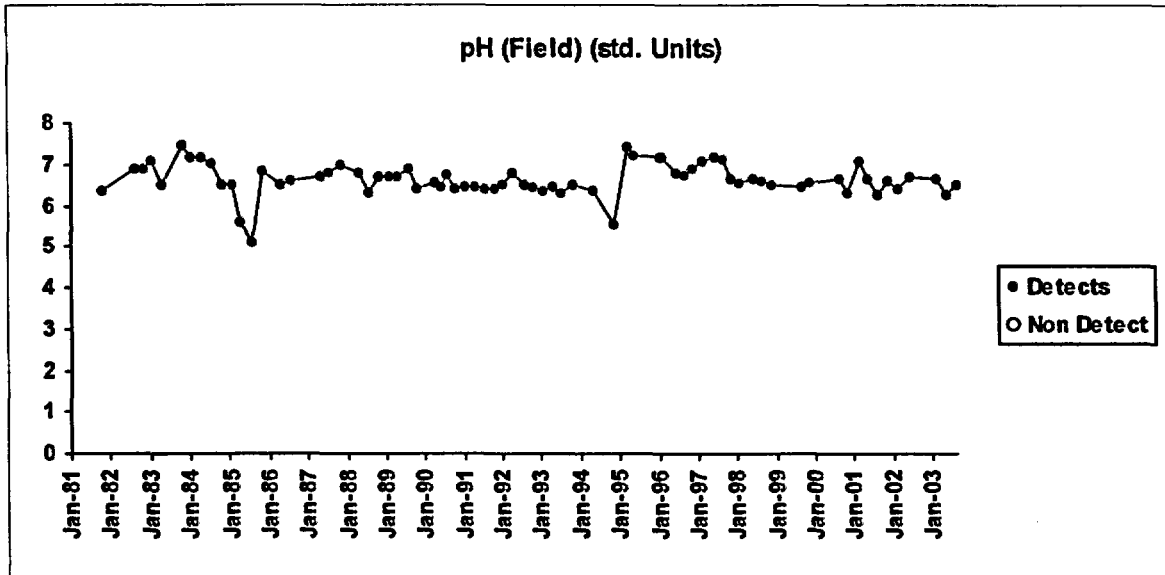
Jeffrey City

WN-B



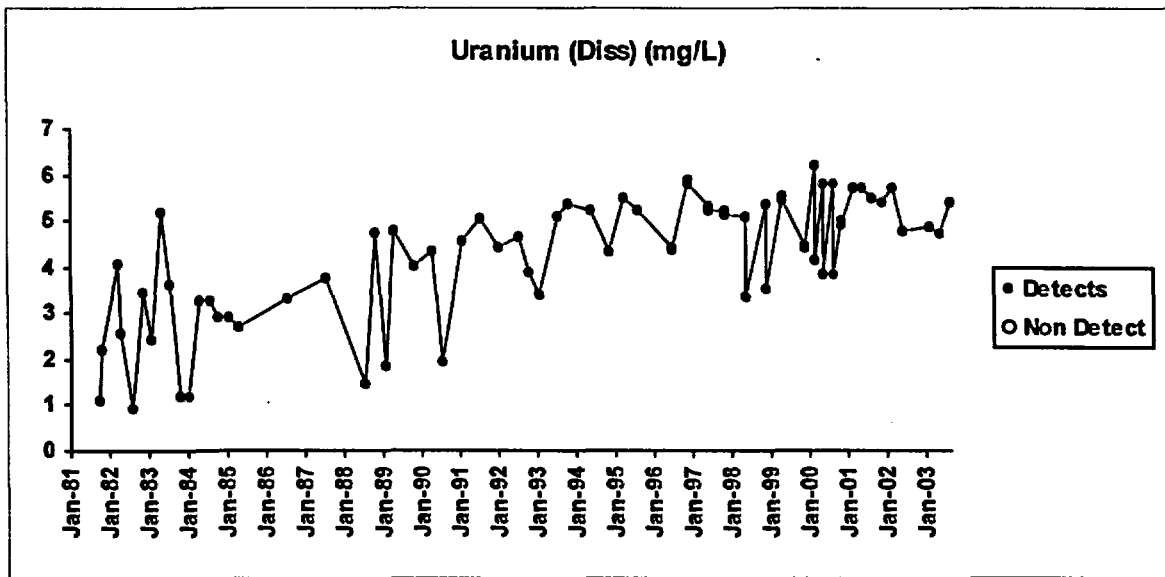
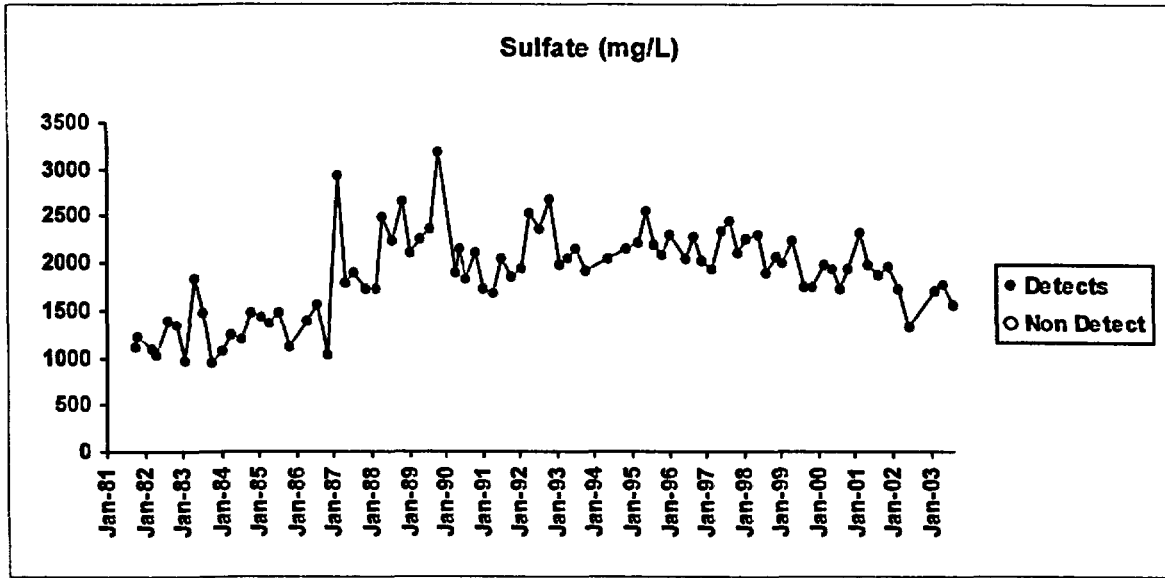
Jeffrey City

WN-C



Jeffrey City

WN-C



DRINKING WATER

Note: Effective March 10, 1997, Well #27 is no longer used as a drinking water source. However, the report format has not been changed in an effort to maintain consistency with previous reports.



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project:
 Sample ID:
 Sample Date:
 Date Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-27	WN-27	WN-27	WN-27
08/20/2002 NST	11/11/2002 NST	02/13/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 18:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080785-008	C02110442-007	C03020476-027	C03050562-017
September 16, 2002	December 13, 2002	March 19, 2003	June 30, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	34.3	-	40.6
Magnesium	EPA 200.7	mg/L	1.0	-	4.8	-	5.7
Sodium	EPA 200.7	mg/L	1.0	-	16.4	-	21.1
Potassium	EPA 200.7	mg/L	1.0	-	4.9	-	6.8
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	142	-	154
Sulfate	EPA 200.7	mg/L	5.0	23.3	24.4	23.7	25.1
Chloride	EPA 200.7	mg/L	5.0	< 5.0	< 5.0	< 5.0	7.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	0.70	0.80	0.90	0.90

Non-Metals							
Alkalinity	SM 2320-B	mg/L	10.0	-	116	-	127
Total Dissolved Solids	SM 2540-C	mg/L	10.0	237	170	228	206
Conductivity	SM 2510-B	µmhos/cm	1.0	-	298	-	298
pH	SM 4510-II-B	std. units	0.01	7.34	7.84	7.37	7.59

Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	0.13	-	0.35
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics							
Uranium	EPA 200.8	mg/L	0.001	0.012	0.011	0.011	0.012
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data		Target Range	
Anion	meq	-	3.03
Cation	meq	-	2.96
SM A/C Balance	%	-5 - 15	-1.11
Calc TDS	mg/L	-	151
TDS A/C Balance	dec. %	0.80 - 1.20	1.12

SURFACE WATER



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
SWR-AB	SWR-AB	SWR-AB	SWR-AB
08/21/2002 NST	11/12/2002 NST	02/12/2003 NST	05/14/2003 NST
08/22/2002 14:30	11/14/2002 14:15	02/12/2003 16:21	05/14/2003 16:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080785-010	C02110482-029	C03020470-032	C03050552-029
September 16, 2002	December 15, 2002	March 30, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Class	Results	Results
Calcium	EPA 200.7	mg/l.	1.0	-	41.4	-	34.0
Magnesium	EPA 200.7	mg/l.	1.0	-	7.7	-	6.7
Sodium	EPA 200.7	mg/L	1.0	-	24.0	-	16.9
Potassium	EPA 200.7	mg/l.	1.0	-	4.9	-	4.1
Carbonate	SM 2320-II	mg/l.	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	154	-	120
Sulfate	EPA 200.7	mg/l.	5.0	56.6	44.6	41.8	32.8
Chloride	EPA 200.7	mg/l.	5.0	22.0	15.5	5.6	5.8
Ammonia as N	SM 4500-NH3-G	mg/l.	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20

Non-Metals	Method	Units	Reporting Limit	Results	Class	Results	Results
Alkalinity	SM 2320-II	mg/l.	10.0	-	127	-	99
Total Dissolved Solids	SM 2540-C	mg/l.	10.0	333	177	210	151
Conductivity	SM 2510-B	µmho/cm	1.0	-	345	-	271
pH	SM 4500-I-I-I	std. units	0.01	7.60	8.13	7.32	7.76

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Class	Results	Results
Aluminum	EPA 200.8	mg/l.	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/l.	0.05	-	0.07	-	0.05
Beryllium	EPA 200.8	mg/l.	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/l.	0.05	-	< 0.05	-	0.16
Lead	EPA 200.8	mg/l.	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/l.	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/l.	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/l.	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	EPA 200.8	mg/l.	0.004	-	< 0.004	-	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Class	Results	Results
Uranium	EPA 200.8	mg/l.	0.001	0.003	0.006	0.003	0.003
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Class	Results	Results
Anion	meq			-	3.90	-	2.83
Cation	meq			-	3.88	-	3.10
SM A/C Balance	%		-5 - +5	-	-0.26	-	4.61
Calc TDS	mg/L			-	231	-	176
TDS A/C Balance	dec. %		0.80 - 1.20	-	0.77	-	0.86



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
SWR-AC	SWR-AC	SWR-AC	SWR-AC
08/21/2002 NST	11/14/2002 NST	02/12/2003 NST	05/14/2003 NST
08/22/2002 1630	11/14/2002 1515	02/12/2003 1631	05/13/2003 1430
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C2080745-011	C01119462-030	C03020479-031	C03050542-030
September 14, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	44.3	-	39.8
Magnesium	EPA 200.7	mg/L	1.0	-	8.1	-	7.6
Sodium	EPA 200.7	mg/L	1.0	-	28.9	-	22.2
Potassium	EPA 200.7	mg/L	1.0	-	5.1	-	4.7
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	167	-	134
Sulfate	EPA 200.7	mg/L	5.0	82.9	49.4	55.1	40.6
Chloride	HPA 200.7	mg/L	5.0	35.3	24.3	14.5	8.9
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	137	-	110
Total Dissolved Solids	SM 2540-C	mg/L	10.0	360	239	255	192
Conductivity	SM 2510-B	µmho/cm	1.0	-	388	-	321
pH	SM 4500-H-B	std. units	0.01	8.01	7.89	7.54	7.79

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	HPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	0.06	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	0.16
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	HPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.009	0.007	0.012	0.004
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±	-	-	-	-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq	-	-	-	4.46	-	3.31
Cation	meq	-	-	-	4.28	-	3.71
SM A/C Balance	%	-5 - +5	-	-	-2.05	-	5.77
Calc TDS	mg/L	-	-	-	259	-	207
TDS A/C Balance	dec. %	0.80 - 1.20	-	-	0.92	-	0.93



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
SWR-BE	SWR-BE	SWR-BE	SWR-BE
08/21/2002 NST	11/13/2002 NST	02/12/2003 NST	05/14/2003 NST
08/22/2002 1629	11/14/2002 15113	02/13/2003 10531	05/15/2003 13100
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080785-012	C02110882-031	C03020470-030	C02050562-031
September 16, 2002	December 12, 2002	March 19, 2003	June 24, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	48.2	-	40.2
Magnesium	EPA 200.7	mg/L	1.0	-	9.5	-	7.8
Sodium	EPA 200.7	mg/L	1.0	-	42.2	-	25.1
Potassium	EPA 200.7	mg/L	1.0	-	5.7	-	4.7
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	201	-	143
Sulfate	EPA 200.7	mg/L	5.0	66.3	57.9	45.7	41.2
Chloride	EPA 200.7	mg/L	5.0	35.5	19.8	8.8	11.6
Ammonia as N	SM 4500-NH-G	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	< 0.20	< 0.20	< 0.20	< 0.20

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	165	-	117
Total Dissolved Solids	SM 2540-C	mg/L	10.0	407	290	224	193
Conductivity	SM 2510-B	µmhos/cm	1.0	-	469	-	339
pH	SM 4500-H-B	std. units	0.01	8.07	8.20	7.58	7.88

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	0.06	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	0.093
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.008	< 0.008
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.036	0.024	0.004	0.008
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±	-	-	-	-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq	-	-	-	5.07	-	3.54
Cation	meq	-	-	-	5.19	-	3.88
SM A/C Balance	%	-5 - +5	-	-	1.10	-	4.47
Calc TDS	mg/L	-	-	-	300	-	218
TDS A/C Balance	dec. %	0.80 - 1.20	-	-	0.97	-	0.89

GROUNDWATER



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-1	WN-1	WN-1	WN-1
09/20/2002 NST	11/12/2002 NST	02/11/2003 NST	05/15/2003 NST
09/22/2002 18:30	11/19/2002 16:16	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-013	C02110462-015	C03010470-117	C03050562-013
September 18, 2002	December 13, 2002	March 13, 2003	June 30, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/l.	1.0	649	696	698	712
Magnesium	EPA 200.7	mg/l.	1.0	83.3	138	137	143
Sodium	EPA 200.7	mg/l.	1.0	109	118	83.0	124
Potassium	EPA 200.7	mg/l.	1.0	17.1	17.4	18.3	20.7
Carbonate	SM 2320-B	mg/l.	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/l.	1.0	679	782	806	746
Sulfate	EPA 200.7	mg/l.	5.0	1490	1720	1540	1633
Chloride	EPA 200.7	mg/l.	5.0	62.2	61.9	71.3	61.3
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	20.5	21.4	21.1	23.8
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	34.0	47.1	47.3	49.9

Non-Metals							
Alkalinity	SM 2320-B	mg/l.	10.0	357	641	661	612
Total Dissolved Solids	SM 2340-C	mg/L	10.0	3290	2910	3430	3370
Conductivity	SM 2510-B	µmho/cm	1.0	3780	4200	3900	4150
pH	SM 4500-11-B	nd. units	0.01	7.32	7.56	7.48	6.84

Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/l.	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	7.73	7.23	5.94	7.62
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/l.	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.010	0.009	0.012	0.008
Silver	EPA 200.8	mg/l.	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides							
Uranium	EPA 200.8	mg/L	0.001	3.02	3.98	3.64	3.48
Radium 226	EPA 903.0	pCi/L	1.0	1.4	1.5	< 1.0	2.0
Radium Error Estimate ±				0.2	0.2	-	0.3
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data		Target Range :				
Anion	meq		47.8	53.8	50.7	51.5
Cation	meq		46.0	53.4	51.9	55.1
SM A/C Balance	%	-5 - +5	-1.86	-0.33	1.17	3.37
Calc TDS	mg/L		3004	3366	3176	3303
TDS A/C Balance	dec. %	0.30 - 1.20	1.10	0.86	1.08	1.02



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-1	WN-2	WN-3	WN-7
08/19/2002 NST	11/14/2002 NST	01/10/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:45	01/13/2003 16:31	05/12/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C01080785-004	C02110482-019	C03020470-024	C03050562-015
September 16, 2002	December 13, 2002	March 19, 2003	June 10, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	862	-	918
Magnesium	EPA 200.7	mg/L	1.0	-	119	-	82.8
Sodium	EPA 200.7	mg/L	1.0	-	59.6	-	61.9
Potassium	EPA 200.7	mg/L	1.0	-	18.2	-	18.6
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2330-B	mg/L	1.0	-	793	-	752
Sulfate	EPA 200.7	mg/L	5.0	1860	1980	1790	1958
Chloride	EPA 200.7	mg/L	5.0	85.0	85.8	81.6	101
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	0.56	-	0.54
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	32.4	30.5	30.5	27.8

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	650	-	616
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3890	3290	3770	3860
Conductivity	SM 2510-B	µmho/cm	1.0	-	4200	-	4180
pH	SM 4500-11-B	std. units	0.01	7.90	7.72	7.11	7.33

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	0.24	-	0.23
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	1.22	-	1.16
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.049	0.043	0.057	0.051
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.767	0.714	0.644	0.501
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		-	58.8	-	58.0
Cation		meq		-	56.1	-	56.0
SM A/C Balance		%	-5 - +5	-	-2.38	-	-1.71
Calc TDS		mg/L		-	3671	-	3654
TDS A/C Balance		dec. %	0.80 - 1.20	-	0.90	-	1.06



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-3	WN-3	WN-3	WN-3
08/19/2002 NST	11/11/2002 NST	02/11/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/12/2003 16:30	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
CO2080777-010	CO2110482-010	CO3020476-010	CO3050562-024
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	277	320	276	277
Magnesium	EPA 200.7	mg/L	1.0	36.0	38.1	35.2	36.7
Sodium	EPA 200.7	mg/L	1.0	65.0	72.2	71.6	69.2
Potassium	EPA 200.7	mg/L	1.0	10.8	11.2	12.6	11.6
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-D	mg/L	1.0	310	320	311	300
Sulfate	EPA 200.7	mg/L	5.0	597	672	612	571
Chloride	EPA 200.7	mg/L	5.0	43.6	50.3	48.9	41.2
Ammonia as N	SM 4500-NH-G	mg/L	0.05	0.10	< 0.05	0.12	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	26.3	26.0	26.3	25.4

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	254	263	255	246
Total Dissolved Solids	SM 2540-C	mg/L	10.0	1610	1440	1540	1460
Conductivity	SM 2510-B	µmho/cm	1.0	1940	1960	1890	1840
pH	SM 4500-H-B	std. units	0.01	7.70	7.74	7.67	7.05

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	0.006	0.009
Silver	EPA 300.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	1.35	1.25	1.14	1.17
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			20.6	22.5	21.1	19.8
Cation	meq			20.0	22.6	20.2	20.2
SM A/C Balance	%	-5 - 15		-1.68	0.19	-2.24	1.07
Calc TDS	mg/L			1317	1454	1343	1284
TDS A/C Balance	dec. %	0.80 - 1.20		1.22	0.99	1.15	1.14



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

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SPLIT ROCK MINE SITE	SPLIT ROCK MINE SITE	SPLIT ROCK MINE SITE	SPLIT ROCK MINE SITE
WN-4E	WN-4E	WN-4E	WN-4E
08/19/2002 NST	11/14/2002 NST	2/10/2003 NST	05/13/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-012	C02116482-012	C03020476-001	E03020562-012
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	719	595	586	760
Magnesium	EPA 200.7	mg/L	1.0	109	177	144	168
Sodium	EPA 200.7	mg/L	1.0	180	198	200	187
Potassium	EPA 200.7	mg/L	1.0	23.6	76.0	45.0	22.1
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	504	537	592	597
Sulfate	EPA 200.7	mg/L	5.0	1730	2410	1960	2100
Chloride	EPA 200.7	mg/L	5.0	112	107	105	109
Ammonia as N	SM 4500-NH-G	mg/L	0.05	4.60	57.7	20.0	2.4
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	32.4	26.0	23.6	37.1

Non-Metals							
Alkalinity	SM 2320-H	mg/L	10.0	414	441	485	489
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4150	3290	3950	4090
Conductivity	SM 2510-B	µmho/cm	1.0	4410	5290	4420	4700
pH	SM 4500-H-B	std. units	0.01	7.33	7.59	7.25	7.08

Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	0.08	0.09	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	13.2	33.9	17.9	12.0
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	0.10	0.20	< 0.10	0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.017	0.020	0.023	0.015
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics							
Uranium	EPA 200.8	mg/L	0.001	1.29	1.22	0.922	1.15
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data		Target Range					
Anion	meq			49.8	63.9	55.2	59.3
Cation	meq			53.8	59.2	52.6	60.9
SM A/C Balance	%	-5 - +5		3.88	-3.82	-3.42	1.34
Calc TDS	mg/L			3275	4021	3466	3812
TDS A/C Balance	doc. %	0.80 - 1.20		1.27	0.82	1.14	1.07



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-4B	WN-4B	WN-4B	WN-4B
08/19/2002 NST	11/17/2002 NST	02/17/2003 NST	03/12/2003 NST
08/22/2002 16:30	11/14/2002 16:18	02/13/2003 16:51	03/18/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050777-002	Cuz110482-003	C0320476-004	C03050562-011
September 18, 2002	December 15, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	462	501	412	496
Magnesium	EPA 200.7	mg/L	1.0	230	247	192	252
Sodium	EPA 200.7	mg/L	1.0	213	192	194	217
Potassium	EPA 200.7	mg/L	1.0	70.1	64.3	65.6	77.2
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dicarbonate	SM 2320-B	mg/L	1.0	325	310	321	309
Sulfate	EPA 200.7	mg/L	5.0	2880	3020	2430	3140
Chloride	EPA 200.7	mg/L	5.0	103	96.0	95.6	96.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	240	219	213	239
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	22.9	21.9	22.0	17.0

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	266	255	263	253
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4610	3540	4580	4810
Conductivity	SM 2510-B	µmho/cm	1.0	5870	6770	5700	7060
pH	SM 4500-H-B	std. units	0.01	6.72	6.69	6.91	6.62

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	2.53	2.31	1.58	2.08
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	0.004	0.005	< 0.004	0.005
Cadmium	EPA 200.8	mg/L	0.001	0.018	0.018	0.018	0.018
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	73.1	69.9	79.5	71.5
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.41	0.44	0.41	0.45
Selenium	EPA 200.8	mg/L	0.005	0.028	0.026	0.025	0.020
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.384	0.490	0.516	0.484
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			69.9	72.3	60.2	74.4
Cation	meq			70.5	71.3	61.9	74.3
SM A/C Balance	%	-5 - +5		0.43	-0.69	1.46	-0.09
Calc TDS	mg/L			4237	4387	3662	4524
TDS A/C Balance	dec. %	0.80 - 1.20		1.09	0.81	1.25	1.06



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date/Time:

Date/Time Received:

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Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-5	WN-5	WN-5	WN-5
09/19/2002 NST	11/14/2002 NST	02/19/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	2/19/2003 16:43	05/15/2003 NST
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-003	C02110482-015	C03020470-001	C03050562-005
September 18, 2002	December 15, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	927	937	890	965
Magnesium	EPA 200.7	mg/L	1.0	72.2	124	54.6	126
Sodium	EPA 200.7	mg/L	1.0	158	183	144	197
Potassium	EPA 200.7	mg/L	1.0	21.8	22.9	24.5	24.3
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	518	514	478	451
Sulfate	EPA 200.7	mg/L	5.0	1900	2160	1900	2110
Chloride	EPA 200.7	mg/L	5.0	171	190	175	204
Ammonia as N	SM 4500-NH3-C	mg/L	0.05	0.32	0.18	0.31	0.29
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	112	120	122	145

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	425	421	392	370
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4710	3810	4620	4630
Conductivity	SM 2510-B	µmho/cm	1.0	5050	5670	5080	5600
pH	SM 4500-H-B	std. units	0.01	7.63	7.31	7.34	7.08

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.10	0.14	0.09	0.09
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.024	0.026	0.026	0.017
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	2.63	2.78	2.44	2.47
Radium 226	EPA 903.0	µCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	µCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	µCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			60.9	67.3	61.1	67.5
Cation	meq			59.8	65.7	56.0	68.0
SM A/C Balance	%		-5 - +5	-0.89	-1.21	-4.36	0.38
Calc TDS	mg/L			4006	4406	3968	4495
TDS A/C Balance	dec. %		0.80 - 1.20	1.18	0.86	1.16	1.03



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

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SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-5E	WN-5E	WN-5E	WN-5E
05/18/2002 NST	02/19/2002 NST	02/19/2003 NST	05/12/2003 NST
05/30/2002 18:00	02/22/2002 16:30	02/19/2003 16:31	05/12/2003 13:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C0205024C-015	C02040777-011	C03020470-011	C03050522-007
July 2, 2002	September 12, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	815	760	754	818
Magnesium	EPA 200.7	mg/L	1.0	78.1	86.2	61.7	128
Sodium	EPA 200.7	mg/L	1.0	75.2	71.4	55.6	71.4
Potassium	EPA 200.7	mg/L	1.0	15.8	15.8	17.2	16.9
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	903	692	684	709
Sulfate	EPA 200.7	mg/L	5.0	1160	1250	1460	1400
Chloride	EPA 200.7	mg/L	5.0	111	93.5	91.6	106
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.06	0.24	0.34	0.29
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	83.6	76.8	82.0	90.0

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	740	567	561	581
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3820	3620	3560	3570
Conductivity	SM 2510-B	µmho/cm	1.0	4090	3910	3900	4250
pH	SM 4500-H-B	std. units	0.01	7.26	7.52	7.68	7.18

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.23	0.24	0.22	0.21
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.011	0.014	0.009	0.017
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radioisotopes	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	3.15	2.74	2.46	2.60
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			48.0	45.5	50.1	50.2
Cation	meq			51.0	48.7	45.7	55.1
SM A/C Balance	%		-5 - +5	3.10	3.40	-4.53	4.67
Calc TDS	mg/L			3080	2978	3160	3309
TDS A/C Balance	dec. %		0.80 - 1.20	1.24	1.22	1.13	1.08



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-5E	WN-5E	WN-5E	WN-5E
08/19/2002 NST	11/14/2002 NST	02/19/2003 NST	05/13/2003 NST
08/22/2002 16:30	11/14/2002 16:15	02/19/2003 16:31	05/13/2003 13:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C0204877-007	C02110482-016	C03020470-005	C03050562-010
September 14, 2002	December 13, 2002	March 19, 2003	June 10, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	916	951	840	982
Magnesium	EPA 200.7	mg/L	1.0	82.3	125	69	128
Sodium	EPA 200.7	mg/L	1.0	177	185	167	194
Potassium	EPA 200.7	mg/L	1.0	22.6	23.8	24.8	25.0
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	517	514	485	455
Sulfate	EPA 200.7	mg/L	5.0	1860	2160	1860	2130
Chloride	EPA 200.7	mg/L	5.0	168	197	179	200
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.29	0.20	0.31	0.28
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	103	123	132	127

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	424	421	398	365
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4690	3770	4620	4630
Conductivity	SM 2510-B	µmho/cm	1.0	5060	5680	5070	5620
pH	SM 4500-H-B	std. units	0.01	7.60	7.31	7.52	6.80

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.10	0.15	0.09	0.09
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.022	0.021	0.017	0.024
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radioisotopes	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	2.62	2.66	2.41	2.40
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		59.3	67.8	61.2	66.5
Cation		meq		61.0	66.6	55.6	68.9
SM A/C Balance		%	-5 - +5	1.36	-0.84	-4.73	1.72
Calc TDS		mg/L		3941	4444	3967	4449
TDS A/C Balance		dec. %	0.80 - 1.20	1.19	0.85	1.16	1.04



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:
 Sample ID:
 Sample Date:
 Date Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-65	WN-65	WN-65	WN-65
05/28/2002 NST	08/19/2002 NST	02/10/2003 NST	05/12/2003 NST
05/30/2002 18:00	08/22/2002 14:30	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050946-011	C02080777-008	C03020470-005	C03050562-009
July 7, 2002	September 18, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	913	913	857	973
Magnesium	EPA 200.7	mg/L	1.0	88.8	76.0	66.2	127
Sodium	EPA 200.7	mg/L	1.0	175	165	161	196
Potassium	EPA 200.7	mg/L	1.0	21.6	22.4	24.3	24.9
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dicarbonate	SM 2320-B	mg/L	1.0	437	517	479	450
Sulfate	EPA 200.7	mg/L	5.0	1630	1880	1890	2110
Chloride	EPA 200.7	mg/L	5.0	250	174	180	194
Ammonia as N	SM 4500-NID-G	mg/L	0.05	0.08	0.30	0.32	0.28
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	129	115	129	140

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-H	mg/L	10.0	359	424	393	369
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4720	4730	4620	4620
Conductivity	SM 2510-B	µmhos/cm	1.0	4970	5060	5080	5600
pH	SM 4500-H-D	std. units	0.01	7.10	7.60	7.54	7.10

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.15	0.10	0.10	0.09
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.027	0.024	0.022	0.023
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	2.43	2.36	2.50	2.44
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		57.3	60.8	61.5	66.8
Cation		meq		61.3	59.8	56.0	68.5
SM A/C Balance		%	-5 - +5	3.34	-0.83	-4.68	1.27
Calc TDS		mg/L		3870	4013	3990	4472
TDS A/C Balance		dec. %	0.80 - 1.20	1.22	1.18	1.16	1.03



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project
 Sample ID:
 Sample Date:
 Date Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-7	WN-7	WN-7	WN-7
08/19/2002 NST	11/14/2002 NST	02/19/2003 NST	05/13/2003 NST
08/22/2002 16:30	11/14/2002 15:45	02/19/2003 16:31	05/13/2003 16:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080785-002	C02130432-002	C03020470-011	C03030562-013
September 16, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	758	-	785
Magnesium	EPA 200.7	mg/L	1.0	-	175	-	203
Sodium	EPA 200.7	mg/L	1.0	-	126	-	146
Potassium	EPA 200.7	mg/L	1.0	-	19.7	-	21.9
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	524	-	526
Sulfate	EPA 200.7	mg/L	5.0	2170	2280	2180	2270
Chloride	EPA 200.7	mg/L	5.0	142	144	129	138
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	1.12	-	2.16
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	22.2	23.3	24.9	25.7

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	430	-	432
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4190	3540	4120	4320
Conductivity	SM 2510-B	µmho/cm	1.0	-	4770	-	4790
pH	SM 4500-II-B	std. units	0.01	7.59	7.41	6.76	6.94

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	0.011	0.011	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	0.48	-	0.70
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	12.8
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.029	0.022	0.032	0.026
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.358	0.330	0.288	0.272
Radium 226		pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±							
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	3.7
Radium Error Estimate ±							2.0
Thorium 230		pCi/L	0.4	< 0.4	< 0.4	0.4	< 0.4
Thorium Error Estimate ±						0.4	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		-	61.8	-	61.7
Cation		meq		-	58.5	-	63.9
SM A/C Balance		%	-5 - +5	-	-2.72	-	1.81
Calc TDS		mg/L		-	3822	-	3909
TDS A/C Balance		doc. %	0.80 - 1.20	-	0.93	-	1.11



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-15	WN-15	WN-15	WN-15
08/20/2002 NST	11/12/2002 NST	02/17/2003 NST	05/13/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 18:31	05/13/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080785-009	C02110482-024	C03020478-028	C03050542-025
September 16, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	163	-	158
Magnesium	EPA 200.7	mg/L	1.0	-	25.2	-	24.4
Sodium	EPA 200.7	mg/L	1.0	-	14.6	-	13.9
Potassium	EPA 200.7	mg/L	1.0	-	6.5	-	6.2
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	210	-	201
Sulfate	EPA 200.7	mg/L	5.0	267	288	274	257
Chloride	EPA 200.7	mg/L	5.0	13.0	24.2	14.2	11.8
Ammonia as N	SM 4500-NH-G	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	13.1	13.5	13.5	14.6

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	172	-	165
Total Dissolved Solids	SM 2540-C	mg/L	10.0	734	628	701	692
Conductivity	SM 2510-B	µmho/cm	1.0	-	944	-	931
pH	SM 4500-H-B	std. units	0.01	7.48	7.85	7.49	7.41

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	0.01	-	0.01
Barium	EPA 200.8	mg/L	0.05	-	0.14	-	0.12
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	0.006	0.006
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.151	0.157	0.138	0.139
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±	-	-	-	-	-	-	-

Quality Assurance Data	Method	Units	Reporting Limit	Results	Results	Results	Results
Anion	-	meq	-	-	11.1	-	10.0
Cation	-	meq	-	-	11.1	-	10.7
SM A/C Balance	-	%	-5 - +5	-	-0.08	-	3.30
Calc TDS	-	mg/L	-	-	686	-	637
TDS A/C Balance	-	dec. %	0.80 - 1.20	-	0.92	-	1.09



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project:
 Sample ID:
 Sample Date:
 Date Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-16	WN-16	WN-16	WN-16
08/19/2002 NST	11/14/2002 NST	02/12/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C020497AS-003	C02110482-010	C03020470-029	C03050562-016
September 16, 2002	December 13, 2002	March 13, 2003	June 26, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	42.4	-	44.6
Magnesium	EPA 200.7	mg/L	1.0	-	5.5	-	5.8
Sodium	EPA 200.7	mg/L	1.0	-	15.0	-	17.5
Potassium	EPA 200.7	mg/L	1.0	-	5.2	-	7.2
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	164	-	160
Sulfate	EPA 200.7	mg/L	5.0	24.8	28.8	23.0	27.2
Chloride	EPA 200.7	mg/L	5.0	5.6	< 5.0	5.3	9.8
Ammonia as N	SM 4500-NID-C	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 357.2	mg/L	0.20	1.15	1.20	1.20	1.20

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	135	-	131
Total Dissolved Solids	SM 2540-C	mg/L	10.0	247	162	227	216
Conductivity	SM 2510-B	µmho/cm	1.0	-	319	-	308
pH	SM 4500-11-B	std. units	0.01	8.22	8.01	7.55	7.66

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	0.07	-	0.06
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	0.024	0.024	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.014	0.016	0.013	0.014
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		-	3.53	-	3.55
Cation		meq		-	3.37	-	3.67
SM A/C Balance		%	-5 - 45	-	-2.27	-	1.62
Calc TDS		mg/L		-	175	-	183
TDS A/C Balance		dec. %	0.80 - 1.20	-	0.93	-	1.18



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-17	WN-17	WN-17	WN-17
03/19/2002 NST	11/14/2002 NST	02/18/2003 NST	05/12/2003 NST
03/22/2002 16:30	11/14/2002 15:15	02/18/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C0208077-003	C0210482-023	C03020474-002	C03030562-001
September 19, 2002	December 13, 2002	March 19, 2003	June 30, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	51.4	59.1	60.4	58.8
Magnesium	EPA 200.7	mg/L	1.0	9.8	11.6	11.0	11.7
Sodium	EPA 200.7	mg/L	1.0	23.1	28.0	30.4	28.0
Potassium	EPA 200.7	mg/L	1.0	7.9	8.8	10.0	9.0
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	212	218	225	213
Sulfate	EPA 200.7	mg/L	5.0	57.7	58.7	57.2	54.7
Chloride	EPA 200.7	mg/L	5.0	9.1	13.0	12.5	9.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	0.31	0.20	< 0.20	< 0.20

Non-Metals							
Alkalinity	SM 2320-B	mg/L	10.0	174	179	185	175
Total Dissolved Solids	SM 2540-C	mg/L	10.0	347	242	316	301
Conductivity	SM 2510-B	µmho/cm	1.0	467	463	482	455
pH	SM 4500-H-B	md. units	0.01	8.10	8.06	7.65	7.35

Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	0.02	0.02	0.02	0.02
Barium	EPA 200.8	mg/L	0.05	0.06	0.06	0.06	0.06
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.10	0.09	< 0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics							
Uranium	EPA 200.8	mg/L	0.001	0.046	0.051	0.048	0.048
Radium 226		pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230		pCi/L	0.4	0.9	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				0.5	-	-	-

Quality Assurance Data	Target Range						
Anion	mcq			4.96	5.18	5.25	4.92
Cation	mcq			4.60	5.37	5.52	5.37
SM A/C Balance	%	-5 - +5		-3.76	1.81	2.52	4.33
Calc TDS	mg/L			281	304	310	294
TDS A/C Balance	dec. %	0.80 - 1.20		1.23	0.80	1.02	1.02



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

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Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-18	WN-18	WN-18	WN-18
08/19/2002 NST	11/14/2002 NST	02/10/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:30	02/10/2003 18:30	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-001	C02110482-414	C03020370-008	C03050562-002
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	331	355	364	333
Magnesium	EPA 200.7	mg/L	1.0	53.8	51.4	36.3	52.8
Sodium	EPA 200.7	mg/L	1.0	86.3	86.3	79.1	98.3
Potassium	EPA 200.7	mg/L	1.0	13.8	14.2	16.6	15.4
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	413	420	408	383
Sulfate	EPA 200.7	mg/L	5.0	750	716	572	685
Chloride	EPA 200.7	mg/L	5.0	62.6	60.2	63.1	65.3
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.12	0.06	0.13	0.13
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	41.5	41.0	42.1	42.3

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	339	344	335	314
Total Dissolved Solids	SM 2540-C	mg/L	10.0	1910	1590	1800	1750
Conductivity	SM 2510-B	µmho/cm	1.0	2230	2300	2190	2190
pH	SM 4500-H-B	std. units	0.01	7.66	7.42	7.74	7.40

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	0.07	0.06	0.06	0.06
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	0.010	0.010	< 0.005
Manganese	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.007	0.006	0.011	< 0.005
Silver	EPA 200.8	mg/L	0.004	0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.99	1.08	0.926	0.900
Radium 226		pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	3.9
Radium Error Estimate ±				-	-	-	2.1
Thorium 230		pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		27.1	26.4	23.4	25.4
Cation		meq		25.1	26.2	25.1	25.7
SM A/C Balance		%	-5 - +5	-3.78	-0.52	3.53	0.62
Calc TDS		mg/L		1688	1675	1522	1629
TDS A/C Balance		dec. %	0.80 - 1.20	1.13	0.95	1.18	1.07



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-19	WN-19	WN-19	WN-19
08/19/2002 NST	11/17/2002 NST	02/19/2003 NST	05/27/2003 NST
08/22/2002 16:30	11/17/2002 15:15	02/19/2003 16:15	05/27/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050783-001	C02110482-020	C030201470-021	C06050562-004
September 16, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ion	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	141	-	162
Magnesium	EPA 200.7	mg/L	1.0	-	31.2	-	35.1
Sodium	EPA 200.7	mg/L	1.0	-	131	-	137
Potassium	EPA 200.7	mg/L	1.0	-	16.3	-	16.2
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	278	-	267
Sulfate	EPA 200.7	mg/L	5.0	407	416	419	458
Chloride	EPA 200.7	mg/L	5.0	83	111	101	103
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	< 0.05	-	0.06
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	2.72	4.80	5.00	5.60

Non-Metals							
Alkalinity	SM 2320-B	mg/L	10.0	-	228	-	219
Total Dissolved Solids	SM 2540-C	mg/L	10.0	1080	924	1120	1170
Conductivity	SM 2510-II	µmho/cm	1.0	-	1540	-	1650
pH	SM 4500-II-B	std. units	0.01	8.08	7.97	7.50	7.53

Trace Metals, dissolved							
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	0.07	-	0.07
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	0.075
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	0.17	-	0.18
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	0.007	0.006
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics							
Uranium	EPA 200.8	mg/L	0.001	0.483	0.437	0.420	0.479
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±					-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±					-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±					-	-	-

Quality Assurance Data		Target Range	
Anion	meq	-	16.7
Cation	meq	-	15.8
SM A/C Balance	%	-5 - +5	-2.83
Calc TDS	mg/L	-	982
TDS A/C Balance	dev. %	0.80 - 1.20	0.94



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-31	WN-31	WN-31	WN-31
08/20/2002 NST	11/11/2002 NST	02/11/2003 NST	05/13/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-014	C02110482-026	C03020478-013	C03050562-027
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	91.7	90.3	79.8	97.9
Magnesium	EPA 200.7	mg/L	1.0	16.8	15.0	12.0	19.4
Sodium	EPA 200.7	mg/L	1.0	30.9	32.0	31.8	34.2
Potassium	EPA 200.7	mg/L	1.0	8.1	7.8	9.4	8.3
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	234	242	240	223
Sulfate	EPA 200.7	mg/L	5.0	149	130	108	184
Chloride	EPA 200.7	mg/L	5.0	14.7	8.7	17.6	12.7
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	5.3	2.60	2.17	5.73
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	10.0	9.80	9.90	8.70

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	192	199	197	183
Total Dissolved Solids	SM 2540-C	mg/L	10.0	573	433	489	547
Conductivity	SM 2510-B	µmho/cm	1.0	786	719	716	807
pH	SM 4500-H-B	std. units	0.01	8.06	7.90	7.89	7.54

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.91	0.54	0.37	0.96
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	0.005
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.181	0.142	0.116	0.176
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	mcq			8.07	7.62	7.39	8.47
Cation	mcq			7.91	7.54	6.77	8.62
SM A/C Balance	%	-5 - +5		-0.95	-0.52	-4.37	0.89
Calc TDS	mg/L			487	463	437	522
TDS A/C Balance	dec. %	0.80 - 1.20		1.18	0.93	1.12	1.05



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project:
 Sample ID:
 Sample Date/Time:
 Date/Time Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-33	WN-25	WN-23	WN-23
08/19/2002 NST	11/11/2002 NST	02/10/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:16	02/13/2003 16:31	05/15/2003 18:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-809	C02110442-021	C03020478-809	C03050562-003
September 18, 2002	December 13, 2002	March 19, 2003	June 10, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	164	306	499	634
Magnesium	EPA 200.7	mg/L	1.0	19.7	34.3	36.0	62.4
Sodium	EPA 200.7	mg/L	1.0	30.3	44.0	52.8	76.8
Potassium	EPA 200.7	mg/L	1.0	11.1	14.5	17.8	18.8
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	257	320	371	372
Sulfate	EPA 200.7	mg/L	5.0	300	604	992	1240
Chloride	EPA 200.7	mg/L	5.0	26.8	46.1	70.1	97.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.07	0.06	0.22	0.17
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	10.1	18.2	32.9	43.2

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	211	262	304	305
Total Dissolved Solids	SM 2540-C	mg/L	10.0	918	1240	2190	2740
Conductivity	SM 2510-B	µmho/cm	1.0	1190	1740	2560	3220
pH	SM 4500-H-H	std. units	0.01	7.65	7.85	7.69	7.19

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	0.06	0.06
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	0.005	0.008	0.010
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.592	0.883	1.21	1.35
Radium 226		pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230		pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		11.9	20.4	31.1	37.8
Cation		meq		11.1	20.4	30.7	40.7
SM A/C Balance		%	-5 - +5	-2.10	0.05	-0.58	1.78
Calc TDS		mg/L		740	1305	2014	2522
TDS A/C Balance		dec. %	0.80 - 1.20	1.24	0.95	1.09	1.09



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

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Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-24	WN-24	WN-24	WN-24
08/29/2002 NST	11/12/2002 NST	02/19/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/19/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C0208777-019	C0211042-027	E03020470-15	E03050562-023
September 18, 2002	December 12, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	220	232	231	237
Magnesium	EPA 200.7	mg/L	1.0	31.3	32.7	31.5	33.6
Sodium	EPA 200.7	mg/L	1.0	45.3	49.4	51.3	48.9
Potassium	EPA 200.7	mg/L	1.0	9.6	10.2	11.2	10.2
Carbonate	SM 2320-A	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	256	261	260	253
Sulfate	EPA 200.7	mg/L	5.0	498	505	503	501
Chloride	EPA 200.7	mg/L	5.0	30.9	21.6	31.1	24.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	0.11	< 0.05	0.11	0.07
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	14.7	15.1	15.7	17.1

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	210	214	213	208
Total Dissolved Solids	SM 2540-C	mg/L	10.0	1160	1010	1180	1190
Conductivity	SM 2510-B	µmho/cm	1.0	1440	1460	1490	1510
pH	SM 4500-H-D	nd. units	0.01	8.05	7.93	7.90	7.54

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	0.06	0.06	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.007	< 0.005	< 0.005	0.012
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.343	0.343	0.293	0.354
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	2.1
Radium Error Estimate ±				-	-	-	1.1
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		16.5	16.5	16.7	16.5
Cation		meq		15.8	16.7	16.7	17.0
SM A/C Balance		%	-5 - +5	-2.04	0.76	-0.12	1.65
Calc TDS		mg/L		1028	1048	1059	1057
TDS A/C Balance		dec. %	0.80 - 1.20	1.13	0.96	1.11	1.13



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

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Sample Date/Time:

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Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-25	WN-25	WN-25	WN-25
08/22/2002 NST	11/14/2002 NST	02/13/2003 NST	08/15/2003 NST
08/22/2002 16:50	11/14/2002 15:15	02/13/2003 16:41	08/15/2003 16:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
CO2080777-015	CO2119483-028	CO20520716-010	CO2050552-026
September 18, 2002	December 13, 2002	March 19, 2003	June 16, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	HPA 200.7	mg/L	1.0	168	164	142	180
Magnesium	EPA 200.7	mg/L	1.0	33.5	32.7	25.8	35.4
Sodium	HPA 200.7	mg/L	1.0	38.6	40.3	38.8	41.7
Potassium	EPA 200.7	mg/L	1.0	9.8	9.8	11.9	10.1
Carbonate	SM 2320-II	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-II	mg/L	1.0	218	215	214	217
Sulfate	EPA 200.7	mg/L	5.0	356	331	295	352
Chloride	EPA 200.7	mg/L	5.0	18.7	21.2	21.2	16.1
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	9.90	8.00	7.70	7.80
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	37.8	33.3	38.1	35.4

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-II	mg/L	10.0	179	177	175	178
Total Dissolved Solids	SM 2540-C	mg/L	10.0	1030	807	968	983
Conductivity	SM 2510-II	µmho/cm	1.0	1360	1250	1310	1350
pH	SM 4500-H-B	std. units	0.01	7.82	7.80	7.27	7.23

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	0.01	0.02	0.02	0.01
Barium	HPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	HPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	4.49	3.71	3.44	3.82
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.007	0.006	0.008	< 0.005
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.270	0.238	0.211	0.255
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	0.6	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				0.4	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		14.2	13.4	13.0	13.9
Cation		meq		13.8	13.5	11.8	14.6
SM A/C Balance		%	-5 - +5	-1.39	0.33	-4.77	2.48
Calc TDS		mg/L		916	870	825	916
TDS A/C Balance		dec. %	0.80 - 1.20	1.12	0.93	1.17	1.07



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date:

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Sample Matrix:

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Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-26	WN-26	WN-26	WN-26
04/19/2002 NST	11/17/2002 NST	02/10/2003 NST	05/14/2003 NST
04/22/2002 16:34	11/14/2002 15:16	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C0208078-005	C0110482-021	C03020376-023	C0305086E-005
September 16, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Unit	Reporting Limit	Residue	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	53.9	-	54.2
Magnesium	EPA 200.7	mg/L	1.0	-	4.4	-	4.4
Sodium	EPA 200.7	mg/L	1.0	-	7.8	-	8.3
Potassium	EPA 200.7	mg/L	1.0	-	2.7	-	3.1
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	101	-	101
Sulfate	EPA 200.7	mg/L	5.0	68.1	77.4	72.1	71.1
Chloride	EPA 200.7	mg/L	5.0	1.6	< 5.0	< 5.0	6.6
Amonium as N	SM 4500-NH3-G	mg/L	0.05	-	< 0.05	-	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	0.59	0.50	0.50	0.06

Non-Metals	Method	Unit	Reporting Limit	Residue	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	83.0	-	83.0
Total Dissolved Solids	SM 2540-C	mg/L	10.0	230	172	208	201
Conductivity	SM 2510-B	µmho/cm	1.0	-	307	-	305
pH	SM 4500-H1-B	nd. units	0.01	7.59	8.02	7.67	7.71

Trace Metals; dissolved	Method	Unit	Reporting Limit	Residue	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	0.10	-	0.09
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	< 0.05	-	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Unit	Reporting Limit	Residue	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	0.002	0.003	0.002	0.003
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	3.4
Radium Error Estimate ±				-	-	-	1.1
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Unit	Target Range	Residue	Results	Results	Results
Anion		meq		-	3.44	-	3.33
Cation		meq		-	3.47	-	3.52
SM A/C Balance		%	-5 - +5	-	0.42	-	2.82
Calc TDS		mg/L		-	219	-	213
TDS A/C Balance		dec. %	0.80 - 1.20	-	0.79	-	0.94



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Date Received:

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Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-16	WN-2A	WN-1A	WN-2B
08/28/2002 NST	11/14/2002 NST	02/13/2003 NST	05/13/2003 NST
08/22/2002 16:36	11/14/2002 15:15	02/13/2003 16:31	05/13/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-016	C02119482-005	C03020470-018	C03050562-023
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	661	676	678	703
Magnesium	EPA 200.7	mg/L	1.0	166	170	167	174
Sodium	EPA 200.7	mg/L	1.0	120	116	85.8	131
Potassium	EPA 200.7	mg/L	1.0	29.9	27.9	26.0	30.9
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	669	718	751	692
Sulfate	EPA 200.7	mg/L	5.0	1860	2170	1970	1990
Chloride	EPA 200.7	mg/L	5.0	107	117	102	105
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	104	94.0	94.0	91.0
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	38.5	34.6	34.9	43.1

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	549	589	616	567
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3800	3540	3780	3750
Conductivity	SM 2510-D	µmho/cm	1.0	4720	5210	4650	5130
pH	SM 4500-H1-B	std. units	0.01	7.55	7.31	7.21	6.91

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	14.0	14.2	14.8	13.9
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.06	0.07	0.08	0.07
Selenium	EPA 200.8	mg/L	0.005	0.032	0.022	0.028	0.030
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	5.90	5.61	5.67	5.41
Radium 226	EPA 903.0	pCi/L	1.0	0.8	1.5	< 1.0	1.1
Radium Error Estimate ±				0.2	0.3	-	0.2
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	0.5	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				0.3	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			55.5	62.7	58.7	58.8
Cation	meq			60.3	60.4	58.9	62.6
SM A/C Balance	%		-5 - +5	4.16	-1.87	0.18	3.13
Calc TDS	mg/L			3464	3804	3574	3686
TDS A/C Balance	dec. %		0.80 - 1.20	1.10	0.93	1.06	1.02



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project:
 Sample ID:
 Sample Date/Time:
 Date/Time Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-30	WN-30	WN-30	WN-30
08/19/2002 NST	11/11/2002 NST	02/10/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-004	C02110462-011	C03020470-003	C03050362-006
September 18, 2002	December 13, 2002	March 19, 2003	April 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	857	840	785	894
Magnesium	EPA 200.7	mg/L	1.0	195	190	169	205
Sodium	EPA 200.7	mg/L	1.0	213	178	158	215
Potassium	EPA 200.7	mg/L	1.0	42.5	35.3	34.7	41.3
Carbonate	SM 2320-H	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	476	492	493	439
Sulfate	EPA 200.7	mg/L	5.0	2110	2360	2100	2320
Chloride	EPA 200.7	mg/L	5.0	117	101	101	96.8
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	34.4	31.3	29.0	30.0
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	196	171	167	209

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-LI	mg/L	10.0	391	403	404	360
Total Dissolved Solids	SM 2540-C	mg/L	10.0	5000	3870	4670	4980
Conductivity	SM 2510-13	µmhos/cm	1.0	5670	6160	5290	6390
pH	SM 4500-11-B	std. units	0.01	7.40	7.59	7.36	7.20

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	0.01	0.01	< 0.01	0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	4.38	4.52	4.12	3.97
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	0.30	0.30	0.20	0.30
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.030	0.028	0.024	0.031
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	1.84	1.74	1.51	1.77
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Target Range	Results	Results	Results	Results
Anion	meq	69.1	72.3	66.6	73.2
Cation	meq	71.9	68.7	63.2	74.3
SM A/C Balance	%	2.02	-2.54	-2.65	0.78
Calc TDS	mg/L	4685	4748	4371	4956
TDS A/C Balance	dec. %	0.80 - 1.20	1.07	0.82	1.07



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project:
 Sample ID:
 Sample Date:
 Date Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPLIT ROCK HILL SITE	SPLIT ROCK HILL SITE	SPLIT ROCK HILL SITE	SPLIT ROCK HILL SITE
WN-31	WN-31	WN-31	WN-31
08/19/2002 NST	11/11/2002 NST	02/13/2003 NST	05/12/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 16:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050777-005	C02110482-004	C03020470-019	C03050562-014
September 18, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	864	910	884	940
Magnesium	EPA 200.7	mg/L	1.0	85.3	131	128	134
Sodium	EPA 200.7	mg/L	1.0	52.3	60.0	49.3	65.5
Potassium	EPA 200.7	mg/L	1.0	15.7	16.4	16.5	19.2
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	710	714	656	666
Sulfate	EPA 200.7	mg/L	5.0	1410	1810	1710	1817
Chloride	EPA 200.7	mg/L	5.0	158	146	125	147
Ammonia as N	SM 4500-NH3-O	mg/L	0.05	0.33	0.17	0.30	0.21
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	74.5	74.0	67.0	70.0

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	582	585	538	645
Total Dissolved Solids	SM 2540-C	mg/L	10.0	4110	3350	3890	3930
Conductivity	SM 2510-B	µmho/cm	1.0	4280	4650	4160	4590
pH	SM 4500-H-B	std. units	0.01	7.60	7.73	7.46	6.84

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	0.11	0.13	0.11	0.12
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	0.20	0.20	0.20	0.20
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.012	0.011	0.009	0.007
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	7.63	7.59	5.45	5.98
Radium 226	EPA 901.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 901.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		50.8	58.8	54.7	57.9
Cation		meq		53.0	59.5	57.5	61.5
SM A/C Balance		%	-5 - +5	2.14	0.55	2.47	3.02
Calc TDS		mg/L		3285	3773	3553	3781
TDS A/C Balance		doc. %	0.80 - 1.20	1.25	0.89	1.09	1.04



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-A	WN-A	WN-A	WN-A
08/20/2002 NST	11/11/2002 NST	02/11/2003 NST	05/13/2003 NST
09/22/2002 16:30	11/14/2002 15:15	02/18/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050785-006	C02110382-006	C03020470-025	C03050562-018
September 16, 2002	December 13, 2002	March 19, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	826	-	858
Magnesium	EPA 200.7	mg/L	1.0	-	117	-	118
Sodium	EPA 200.7	mg/L	1.0	-	46.6	-	48.0
Potassium	EPA 200.7	mg/L	1.0	-	16.6	-	18.6
Carbonate	SM 2320-B	mg/L	1.0	-	< 1.0	-	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	-	811	-	787
Sulfate	EPA 200.7	mg/L	5.0	1680	1830	1620	1750
Chloride	EPA 200.7	mg/L	5.0	96.9	93.7	84.2	96.9
Ammonia as N	SM 4500-NIB-G	mg/L	0.05	-	7.30	-	4.90
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	3.37	3.80	2.80	2.30

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	665	-	645
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3470	2950	3360	3460
Conductivity	SM 2510-B	µmho/cm	1.0	-	4050	-	3940
pH	SM 4500-IF-B	acid units	0.01	7.08	7.09	6.92	6.90

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	11.1	-	14.1
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	2.38	-	1.11
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	0.010	< 0.005
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radioisotopes	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	1.98	2.12	1.88	2.00
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	2.2
Radium Error Estimate ±				-	-	-	1.1
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion		meq		-	54.3	-	52.3
Cation		meq		-	54.2	-	55.7
SM A/C Balance		%	-5 - 15	-	-0.17	-	3.20
Calc TDS		mg/L		-	3291	-	3230
TDS A/C Balance		dec. %	0.80 - 1.20	-	0.90	-	1.07



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project:

Sample ID:

Sample Date/Time:

Date/Time Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-B	WN-B	WN-B	WN-B
08/10/2002 NST	11/11/2002 NST	02/11/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:01	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080777-017	C02110482-001	C03020470-016	C03050562-200
September 18, 2002	December 13, 2002	March 19, 2003	June 10, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	748	661	713	776
Magnesium	EPA 200.7	mg/L	1.0	91.0	122	166	147
Sodium	EPA 200.7	mg/L	1.0	60.4	63.1	86.0	90.0
Potassium	EPA 200.7	mg/L	1.0	20.2	21.3	31.8	23.9
Carbonate	SM 2320-D	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	930	1040	904	888
Sulfate	EPA 200.7	mg/L	5.0	1230	1360	1820	1544
Chloride	EPA 200.7	mg/L	5.0	75.5	72.6	84.4	75.2
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	12.0	19.7	63.6	18.3
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	44.3	25.3	18.8	48.6

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-F	mg/L	10.0	762	851	741	728
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3490	3080	3640	3410
Conductivity	SM 2510-F	µmho/cm	1.0	3930	4460	4320	4200
pH	SM 4500-F-H	std. units	0.01	7.25	6.92	7.06	7.11

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	0.05	0.10	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	1.43	2.60	7.46	1.96
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.018	0.007	0.015	0.020
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	4.14	4.82	3.83	3.79
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Method	Units	Target Range	Results	Results	Results	Results
Anion	meq			46.2	49.2	56.5	52.3
Cation	meq			49.0	47.9	58.7	56.9
SM A/C: Balance	%		-5 - +3	2.97	-1.36	1.93	4.18
Calc TDS	mg/L			2902	2957	3521	3339
TDS A/C: Balance	dec. %		0.80 - 1.20	1.20	1.04	1.03	1.02



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-BS	WN-BS	WN-BS	WN-BS
08/20/2002 NST	11/11/2002 NST	02/13/2003 NST	05/15/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/13/2003 16:31	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02050777-018	C02110452-002	C03020470-017	C03050502-021
September 18, 2002	December 15, 2002	March 18, 2003	June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	658	676	717	784
Magnesium	EPA 200.7	mg/L	1.0	105	146	167	146
Sodium	EPA 200.7	mg/L	1.0	69.1	61.1	76.8	90.0
Potassium	EPA 200.7	mg/L	1.0	21.0	21.6	29.9	23.9
Carbonate	SM 2320-B	mg/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	922	1020	902	899
Sulfate	EPA 200.7	mg/L	5.0	1330	1520	1840	1534
Chloride	EPA 200.7	mg/L	5.0	72.6	74.3	88.5	72.2
Ammonia as N	SM 4500-NH3-C	mg/L	0.05	12.6	20.2	62.8	17.4
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	44.2	25.6	19.0	47.8

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	756	835	739	737
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3480	3030	3650	3420
Conductivity	SM 2510-II	µmho/cm	1.0	3930	4470	4330	4190
pH	SM 4500-H-H	std. units	0.01	7.37	7.35	7.02	6.88

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	< 0.01	< 0.01	< 0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05	< 0.05	0.10	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	1.47	2.28	7.25	1.91
Mercury	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.19	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.018	0.008	0.009	0.020
Silver	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004

Radionuclides	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	4.15	4.29	3.95	3.67
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Radium Error Estimate ±				-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Radium Error Estimate ±				-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±				-	-	-	-

Quality Assurance Data	Target Range	Results	Results	Results	Results
Anion	meq	48.0	52.3	57.0	52.1
Cation	meq	46.1	50.6	58.4	57.1
SM A/C Balance	%	-2.05	-1.64	1.20	4.57
Calc TDS	mg/L	2928	3137	3469	3326
TDS A/C Balance	dec. %	0.80 - 1.20	1.19	0.97	1.05



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR

Project

Sample ID:

Sample Date:

Date Received:

Sample Matrix:

Laboratory ID:

Report Date:

SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE	SPLIT ROCK MILL SITE
WN-C	WN-C	WN-C	WN-C
08/20/2002 NST	11/11/2002 NST	02/17/2003 NST	05/23/2003 NST
08/22/2002 16:30	11/14/2002 15:15	02/17/2003 16:23	05/15/2003 15:00
Liquid, Water	Liquid, Water	Liquid, Water	Liquid, Water
C02080745-007	C02110482-003	C03070470-026	C03050502-019
September 16, 2002	December 13, 2002	March 19, 2003	June 26, 2003

Major Ions	Method	Units	Reporting Limit	Results	Results	Results	Results
Calcium	EPA 200.7	mg/L	1.0	-	743	-	751
Magnesium	EPA 200.7	mg/L	1.0	-	142	-	108
Sodium	EPA 200.7	mg/L	1.0	-	90.6	-	108
Potassium	EPA 200.7	mg/L	1.0	-	20.9	-	26.4
Carbonate	SM 2320-D	mg/L	1.0	-	< 1.0	-	< 1.0
Dicarbonate	SM 2320-B	mg/L	1.0	-	869	-	794
Sulfate	EPA 200.7	mg/L	5.0	1730	1810	1710	1764
Chloride	EPA 200.7	mg/L	5.0	78.3	142	64.3	84.6
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	-	88.0	-	48.0
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	43.0	43.5	46.0	49.3

Non-Metals	Method	Units	Reporting Limit	Results	Results	Results	Results
Alkalinity	SM 2320-B	mg/L	10.0	-	712	-	651
Total Dissolved Solids	SM 2540-C	mg/L	10.0	3730	3050	3660	3670
Conductivity	SM 2510-B	µmho/cm	1.0	-	4570	-	4640
pH	SM 4500-H-H	std. units	0.01	6.64	7.48	6.99	7.25

Trace Metals, dissolved	Method	Units	Reporting Limit	Results	Results	Results	Results
Aluminum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Arsenic	EPA 200.8	mg/L	0.01	-	< 0.01	-	< 0.01
Barium	EPA 200.8	mg/L	0.05	-	< 0.05	-	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004	< 0.004	< 0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	-	0.05	-	0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005	0.006	0.006	< 0.005
Manganese	EPA 200.8	mg/L	0.05	-	7.89	-	11.0
Mercury	EPA 200.8	mg/L	0.001	-	< 0.001	-	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	-	< 0.10	-	< 0.10
Nickel	EPA 200.8	mg/L	0.05	0.07	< 0.05	< 0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	0.015	0.013	0.011	0.015
Silver	EPA 200.8	mg/L	0.004	-	< 0.004	-	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results	Results	Results	Results
Uranium	EPA 200.8	mg/L	0.001	4.93	4.79	4.86	4.76
Radium 226	EPA 903.0	pCi/L	1.0	-	< 1.0	-	< 1.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Radium 228	EPA 904.0	pCi/L	2.0	-	< 2.0	-	< 2.0
Radium Error Estimate ±	-	-	-	-	-	-	-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4	< 0.4	< 0.4	< 0.4
Thorium Error Estimate ±	-	-	-	-	-	-	-

Quality Assurance Data	Units	Target Range	Results	Results	Results	Results
Anion	meq	-	-	59.1	-	55.7
Cation	meq	-	-	60.2	-	56.0
SM A/C Balance	%	-5 - +5	-	0.94	-	0.25
Calc TDS	mg/L	-	-	3619	-	3459
TDS A/C Balance	dec. %	0.80 - 1.20	-	0.84	-	1.06



LABORATORY ANALYSIS REPORT

Client: WESTERN NUCLEAR
 Project
 Sample ID:
 Sample Date/Time:
 Date/Time Received:
 Sample Matrix:
 Laboratory ID:
 Report Date:

SPHIT ROCK MILL SITE
Field Blank
05/14/2003 NST
05/13/2003 15:00
Liquid, Water
C03050562-032
June 20, 2003

Major Ions	Method	Units	Reporting Limit	Results
Calcium	EPA 200.7	mg/L	1.0	< 1.0
Magnesium	EPA 200.7	mg/L	1.0	< 1.0
Sodium	EPA 200.7	mg/L	1.0	< 1.0
Potassium	EPA 200.7	mg/L	1.0	< 1.0
Carbonate	SM 2320-B	mg/L	1.0	< 1.0
Bicarbonate	SM 2320-B	mg/L	1.0	1.8
Sulfate	EPA 200.7	mg/L	5.0	< 5.0
Chloride	EPA 200.7	mg/L	5.0	< 5.0
Ammonia as N	SM 4500-NH3-G	mg/L	0.05	< 0.05
Nitrate + Nitrite as N	EPA 353.2	mg/L	0.20	< 0.20

Non-Metals	Method	Units	Reporting Limit	Results
Alkalinity	SM 2320-B	mg/L	10.0	< 10.0
Total Dissolved Solids	SM 2540-C	mg/L	10.0	< 10.0
Conductivity	SM 2510-B	µmho/cm	1.0	1.2
pH	SM 4500-H-B	std. units	0.01	4.99

Trace Metals, dissolved	Method	Units	Reporting Limit	Results
Aluminum	EPA 200.8	mg/L	0.10	0.23
Arsenic	EPA 200.8	mg/L	0.01	< 0.01
Barium	EPA 200.8	mg/L	0.05	< 0.05
Beryllium	EPA 200.8	mg/L	0.004	< 0.004
Cadmium	EPA 200.8	mg/L	0.001	< 0.001
Chromium	EPA 200.8	mg/L	0.005	< 0.005
Iron	EPA 200.7	mg/L	0.05	< 0.05
Lead	EPA 200.8	mg/L	0.005	< 0.005
Manganese	EPA 200.8	mg/L	0.05	< 0.05
Mercury	EPA 200.8	mg/L	0.001	< 0.001
Molybdenum	EPA 200.8	mg/L	0.10	< 0.10
Nickel	EPA 200.8	mg/L	0.05	< 0.05
Selenium	EPA 200.8	mg/L	0.005	< 0.005
Silver	EPA 200.8	mg/L	0.004	< 0.004

Radiometrics	Method	Units	Reporting Limit	Results
Uranium	EPA 200.8	mg/L	0.001	< 0.001
Radium 226	EPA 903.0	pCi/L	1.0	< 1.0
Radium Error Estimate ±				-
Radium 228	EPA 904.0	pCi/L	2.0	< 2.0
Radium Error Estimate ±				-
Thorium 230	EPA 907.0	pCi/L	0.4	< 0.4
Thorium Error Estimate ±				-

Quality Assurance Data	Units	Target Range	Results
Anion	meq		0.29
Cation	meq		0.21
SM A/C Balance	%	-5 - +5	* -16.7
Calc TDS	mg/L		17.2
TDS A/C Balance	dec. %	0.80 - 1.20	* 0.58

* Balances inappropriate for near blank samples.

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