KINROSS

FORT KNOX MINE
KINROSS GOLD CORPORATION

WASTE MANAGEMENT PERMIT #2006-DB0043
ANNUAL REPORT
FOURTH QUARTER 2010
MONITORING RESULTS

KINROSS Fort Knox

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February 28, 2011

Mr. Tim Pilon
State of Alaska
Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709-3643

RE: Waste Management Permit # 2006-DB0043, 4th Quarter Report 2010

Dear Mr. Pilon,

Fairbanks Gold Mining, Inc. (FGMI) submits this Annual 2010 report for the Waste Management Permit # 2006-DB0043, prepared in conformance with the requirements in Section 1.8 of the permit. The report contains the analytical results from compliance monitoring, an evaluation of the interceptor well system, pit lake study, yearly landfill report and a summary of the spills during 2010. The monitoring data has been collected and this report has been completed in accordance with the requirements of Waste Management Permit # 2006-DB0043.

Compliance Monitoring and Results of Sample Analysis

There were no significant weather or seismic events that could have potentially compromised the integrity of the Tailings Storage Facility, Freshwater Reservoir, or Heap Leach Dams during the 4th Qtr 2010. Surface water monitoring locations (Upper Wetlands, Lower Wetlands, Fresh Water Reservoir and Fresh Water Dam Seepage) and groundwater monitoring wells (MW-5, MW-6, MW-7 were sampled quarterly to demonstrate compliance. Neither surface water monitoring points nor groundwater monitoring wells showed any evidence of seepage water from the tailing impoundment.

MW-8

It was not possible to get a sample from MW-8 due to the well being completely frozen.

Monitoring data for the 4th quarter 2010 and the previous four (4) quarters is provided in Attachment A. The previous four quarters are included to provide an indication of any recent trends that might have developed. Attachment A contains the Fort Knox Mine Monitoring Data for process solutions, groundwater, surface water, and acid base accounting for tailing solids.

Monitoring of the tailing discharge for pH and Weak Acid Dissociable (WAD) cyanide levels continued in accordance with permit requirements. A composite sample for each 12-hour shift is collected and the samples are analyzed daily by FGMI laboratory personnel using Method OIA-1677 to determine the WAD cyanide concentration. The pH is determined using a pH meter. Table 1 contains a summary of the tailing discharge pH range (minimum, maximum, and average) for the period October 1, 2010 through December 31, 2010.

TABLE 1
Tailing Discharge pH Levels

	Minimum	Maximum	Average
October	7.5	9.5	9.04
November	7.65	9.54	9.0
December	7.76	10.13	9.3

Tailing discharge WAD cyanide levels (parts per million) recorded for the period October 1, 2010 through December 31, 2010, have been included in Table 2.

TABLE 2
Tailing Discharge WAD Cyanide parts per million (ppm)

	Minimum	Maximum	Average
October	0.93	13.9	9.10
November	0.005	17.10	8.8
December	0.780	16.15	9.5

All FGMI process records and daily logs for the cyanide detoxification circuit are available for inspection upon request.

FGMI collects monthly samples of seepage from the tailing impoundment. The samples are analyzed for Arsenic, Antimony, Selenium and Lead to evaluate the presence of any trends in the concentration of these metals. The results of that sampling are provided in Attachment D along with a graph of the data.

Quarterly analytical results from groundwater compliance sampling points MW-5, MW-6, & MW-7 and surface compliance sampling points Upper and Lower Wetlands indicate that the tailing impoundment continues to operate as a zero discharge facility. There were no exceedances of the Upper Tolerance Limits for surface water or groundwater in 4th Qtr 2010. Attachment A also provides the analytical results for ground water and surface water sampling for process water and compliance monitoring points. Attachment C has compliance sampling water quality graphs.

Tailing Impoundment Dam

Monitoring data on the tailing impoundment includes piezometer data, tailing pond elevations, and seepage pumping rates. The monitoring data did not display any unusual trends. The monitoring data is consistent with the recent measurements during 3rd quarter 2010 and the historic seasonal trends measured in previous years. Due to construction on the tailings dam lift, the six piezometers located on the south crest of the dam (KPPZ1-6) were not read between May 21, 2010 and November 4, 2010. On November 5, 2010, weekly monitoring continued.

Weekly visual monitoring is routinely conducted at the TSF and freshwater reservoir. The visual monitoring looks for signs of damage or potential damage from settlement, ponding, leakage, thermal instability, frost action, erosion and thawing of waste material. Operations at the site are monitored and recorded weekly by mill personnel.

All water within the seepage reclaim area below the TSF dam is collected and pumped back to the tailing storage facility in accordance with an approved design of the tailing dam. Groundwater and surface water compliance sampling points down gradient of the TSF continue to be free from cyanide.

Interceptor and Monitoring Wells

Except during times of maintenance, interceptor wells were pumped continuously throughout the 4th quarter 2010. This is to ensure a hydraulic break is maintained below the TSF in the Fish Creek Valley and that the impoundment continues to operate as a zero discharge facility.

The interceptor well system (IW-1, IW-2, IW-3, IW-4, IW-5, IW-6, IW-7, IW-8, IW-11, MW-1, MW-3, & Site 401) continued to perform successfully during the 4th quarter 2010, maintaining a cone of depression across the Fish Creek Valley down gradient of the tailing impoundment (Attachment E). Both depth to water measurements and water chemistry indicate the tailing impoundment is operating as a zero discharge facility.

Table 3 shows the depth of the wells, depth to the pump, current depth to water, and pumping rate for the interceptor wells and the monitoring wells. Table 4 contains construction information and depth to water measurements for the piezometers. Table 5 shows construction information and depth to water measurements for the 15 piezometers installed during the fourth quarter of 2008.

TABLE 3
Interceptor and Monitor Well Measurements and Change from the 3rd Quarter 2010

	Top of Casing Elevation	Depth of Well Feet	Depth to Pump Feet	Depth to Water Feet 9/26/2010	Depth to Water Feet 12/26/2010	Change from 3rd Quarter (ft)	Water Elevation at Pumping	Pumping Rate (gpm)
IW-1	1198	320	283	260.6	259.5	-1.1	938.5	55
IW-2	1205	329	252	151.5	198	46.5	1007	12
IW-3	1174	310	283	254.7	256.4	1.7	917.6	10
IW-4	1192	330	295	240.3	258.3	18	933.7	19
IW-5	1177	380	294	261.6	254.8	-6.8	922.2	100
IW-6	1176	380	320	262.4	251.9	-10.5	924.1	18
IW-7	1243	197	160	94.4	96.1	1.7	1146.9	30
IW-8	1267	184	172	57.9	58.8	0.9	1208.2	43
IW-11	1429	296	275	242.3	243.2	0.9	1185.8	12
MW-1	1178	305	232	163.3	165.3	2	1012.7	5
MW-3	1174	296	253	234	250.2	16.2	923.8	12
SITE 401	1206	35	25	13.6	14.8	1.2	1191.2	10
MW-2	1176	279	N/A	229	229.2	0.2	N/A	N/A
MW-4	1196	285	N/A	31.4	32.2	0.8	N/A	N/A
MW-5	1163	120	N/A	39.2	43	3.8	N/A	N/A
MW-6	1178	150	N/A	64.7	67.2	2.5	N/A	N/A
MW-7	1149	135	N/A	15.8	20.2	4.4	N/A	N/A
MW-8	1160	156	N/A	4	4	0	N/A	N/A

TABLE 4
Piezometer Measurements and Change from the 3rd Quarter 2010.

	Well Depth	Angle	Vertical Depth Feet	Vertical D. to Water Feet 9/26/2010	Vertical D. to Water Feet 12/26/2010	Change from 3rd Quarter (ft)
PZ-1	420	60°	324	96	96.3	0.3
PZ-2	450	60°	371	79	80.2	1.2
PZ-3	445	60°	365	80	86.6	6.6
PZ-4	550	60°	523	27	27.4	0.4
PZ-5	450	60°	190	260	260	0
PZ-6	150	60°	12	138	139.4	1.4
PZ-7	200	60°	85	115	115	0
KPPZ1	142	-	-	121.5	120.55	-0.95
KPPZ2	122	-	-	111.3	111.3	0
KPPZ3	133	-	-	118	118.25	0.25
KPPZ4	119	-	-	116	115.3	-0.7
KPPZ5	124	-	-	115.8	113	-2.8
KPPZ6	112	-	-	105.1	105.5	0.4

TABLE 5
Piezometers

	Well Depth	Depth to Water 9/27/2010	Depth to Water 12/26/2010	Change from 3rd Quarter (ft)
PZ08-01	120	74.51	75.66	1.15
PZ08-02	120	53.48	51.61	-1.87
PZ08-03	115	78.7	78.43	-0.27
PZ08-04	96	Pipe collapsed	Pipe collapsed	
PZ08-05	155	95.57	95.01	-0.56
PZ08-06	185	42.24	39.66	-2.58
PZ08-07	160	62.58	60.87	-1.71
PZ08-08	135	71.64	67.11	-4.53
PZ08-09	135	31.1	30.8	-0.3
PZ08-10	100	71.23	17.55	-53.68
PZ08-11	100	Dry	Dry	
PZ08-12	90	39.06	42.9	3.84
PZ08-13	62	Dry	Dry	
PZ08-14	37	15.04	17.55	2.51
PZ08-15	82	55.71	53.84	-1.87
	*PZ08-10 Well Thawed			

Heap Leach Sampling

Water samples and water levels were collected from the Heap Leach monitoring wells HL-1, HL-2, & HL-3, OL-296 as well as the Pregnant Solution. Analytical results are located in Attachment B. For the safety of mine personnel, samples were not taken on days marked "blocked" due to ongoing Heap Leach dam construction.

Pit Lake Evaluation

Analytical samples were collected monthly during 2010 from the dewatering wells located in and around the existing pit. An update of the pit lake model is included by Schlumberger Water Services projecting the short and long-term pit lake quality. Refer to the Technical Memo in Attachment F.

Petroleum, Hazardous Substances, and Process Solution Spills

During the 4th Quarter 2010 Fort Knox had 16 petroleum spills, 7 glycol spills, and 1 process solution spill. The spills were reported to the ADEC in accordance with discharge notification and reporting requirements, and there was no contamination of surface or groundwater. The Fort Knox Mine Spill Reporting Log, containing a list of the year to date spills, has been included in Attachment G for your review. If you have any questions or require additional information, please call me at (907) 490-2237.

Inert Solid Waste Landfill Summary

Attachment H contains a summary of activity in the Fort Knox Landfills for 2010. Closed landfills were covered and compacted according to permit requirements. New landfill sites located on the Upper Barnes Creek waste dump were surveyed and the coordinates are contained in the report.

Financial Assurance Bond

Attachment I has the financial assurance bond amount.

Respectfully,

Dave Stewart

Dave Stewart
Environmental Coordinator

cc: (by PDF file)

Jim Vohden, ADNR
Brent Martellaro, ADNR
Steve McGroarty PE, ADNR
Mary Romero, ACOE
Cindi Godsey, EPA
Alvin Ott, ADNR-OHM&P
Jack Dimarchi, ADNR
Lauren Roberts, FGMI
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ATTACHMENT A
Compliance Monitoring Data Report

Fort Knox Mine
4th Quarter 2010

FORT KNOX MINE
2010 COMPLIANCE SAMPLING DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

FORT KNOX MINE COMPLIANCE SAMPLING DATABASE

This document comprises a hard copy of the Fort Knox Mine compliance sampling results for the fourth quarter of 2010. The previous four (4) quarters of compliance and baseline sample data are also included for tracking purposes. The objective of this monitoring program is to document and track local surface and groundwater conditions and characterizes overburden, waste, and ore rock for acid rock drainage potential, as specified in Waste Management Permit 2006-DB0043 at the Fort Knox Mine.

The data is divided into the following sections:

- Major ion chemistry
- Minor ion chemistry
- Trace ion chemistry
- HL-1, HL-2, HL-3, OL-296, Monitoring Well Data, Pregnant Solution, Under Drain Water Levels
- Upper Tolerance Limits Table for Water Quality Exceedances for Compliance Groundwater and Surface Water Sampling Points
- Meteoric Water Mobility
- Acid Rock Drainage Characterization

COMPLIANCE SURFACE WATER
PROCESS WATER QUALITY DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Process Surface Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	SS	Lab Cond.	SO4	Temp. (C)	TDS	TSS	Tur
501	10/26/2009		37	37	31.8	32	80	67	16.3	7.8	3.5	4.2	60.3	<0.1	612	118	5.9	370	<5	0.3
501	01/14/2010		41	41	33.2	31	83	67	16.4	8	3.7	4.7	63	<0.1	574	118	2.4	400	<5	0.4
501	04/07/2010		44	44	37.1	33	93	69	16.8	7.9	3.7	3.8	62.6	<0.1	621	153	9.5	410	<5	0.3
501	07/08/2010		46	46	32.4	29	81	60	14.5	7.7	3.6	4.3	62.6	<0.1	582	140	8.5	380	17	4.7
501	11/08/2010		42	42	35	35	88	67	16.4	7.9	3.7	4.6	67.5	<0.1	632	137	6.9	400	<5	0.1
Tailing Decant	10/12/2009		75	75	52.7	28	132	27	6.5	8.2	9.4	7.1	62.3	<0.1	610	133		380	15	19
Tailing Decant	01/07/2010		75	75	49.6	20	124	29	7.1	8.1	6.6	6.4	42.1	<0.1	485	99	0.9	310	8	37.1
Tailing Decant	04/14/2010		86	87	55.1	29	138	25	6	8.3	9.3	8.8	67.1	<0.1	661	140	5.3	420	12	35.9
Tailing Decant	07/06/2010		73	73	48.8	27	122	20	4.8	8.1	10.9	9.7	71	<0.1	620	137	16.8	380	35	89.9
Tailing Decant	11/08/2010		65	65	50.8	43	127	19	4.6	8.1	10.6	8	87.7	<0.1	725	154	3.1	450	7	23.6
Tailing Filtrate	10/13/2009		23	46	31.5	46	79	5	1.2	9.2	25.7	46.1	96.6	<0.1	623	118		390	258	690
Tailing Filtrate	01/14/2010		41	43	37.2	57	93	6	1.4	8.5	12.9	10.8	83	<0.1	593	121	18.7	390	49	85.9
Tailing Filtrate	04/15/2010		18	46	30.9	53	77	4	1	9.4	17.5	30.1	98	<0.1	662	136	20	480	30	290
Tailing Filtrate	07/07/2010		<2	51	39.9	47	100	3	0.8	9.7	11.4	12.7	92.7	<0.1	614	139		400	19	55.2
Tailing Filtrate	11/02/2010		29	40	33.3	53	83	3	0.8	8.9	12.8	5.7	108	<0.1	711	161		470	18	367
Tailings Seepage	10/07/2009		95	95	71	27	178	61	14.9	7.9	5.5	5.8	42	<0.2	697	149		440	<5	0.7
Tailings Seepage	01/07/2010		93	93	73.5	27	184	66	16	7.9	5.5	4.9	44.4	<0.1	670	160	4.7	430	<5	0.4
Tailings Seepage	04/06/2010		95	95	75.2	27	188	66	16.1	7.7	6	4.9	45.2	<0.1	700	168	5.5	460	<5	0.8
Tailings Seepage	07/06/2010		102	102	81.4	28	204	72	17.6	7.9	6.6	5.5	49.2	<0.1	712	188	6.9	490	<5	1
Tailings Seepage	11/03/2010		96	96	76.8	28	192	70	17.1	7.7	5.9	5.5	44.7	<0.1	728	176	5.1	480	<5	0.7

Process Surface Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
501	10/26/2009		<0.05	0.0011	0.331	0.2	0.12	0.012	18	<0.01	0.04	<0.1	0.051
501	01/14/2010		<0.05	0.0008	0.72	0.2	0.24	0.017	13.6	<0.01	0.02	<0.1	0.134
501	04/07/2010		<0.05	0.0009	0.67	0.2	0.23	0.024	17.4	<0.01	<0.01	<0.1	0.115
501	07/08/2010		<0.05	0.0016	0.361	0.3	0.6	0.048	14.5	<0.01	0.03	<0.1	0.063
501	11/08/2010		<0.05	0.0007	0.63	0.2	0.21	0.015	13.7	<0.01	0.01	<0.1	0.064
Tailing Decant	10/12/2009		1.76	0.0166	0.073	0.6	0.23	0.099	11	1.11	0.03	<0.1	0.029
Tailing Decant	01/07/2010		1.09	0.0084	2.01	0.3	0.96	0.196	7.12	0.37	0.21	<0.1	1.48
Tailing Decant	04/14/2010		2.93	0.0125	1.28	0.6	0.79	0.137	10.5	0.32	0.05	<0.1	0.5
Tailing Decant	05/11/2010				1.2								1.11
Tailing Decant	05/18/2010				0.73								0.83
Tailing Decant	05/26/2010				0.445								0.382
Tailing Decant	06/04/2010				0.116								0.039
Tailing Decant	06/11/2010				0.116								0.034
Tailing Decant	07/06/2010		3.03	0.0135	0.101	0.6	1.26	0.107	7	0.72	0.07	<0.1	0.045
Tailing Decant	11/08/2010		3.35	0.0213	3.6	0.7	0.41	0.073	11.4	0.89	0.03	<0.1	3
Tailing Filtrate	10/13/2009		3.85	0.065	12.6	1.1	2.01	0.02	13.1	1.19	0.27	<0.1	10.2
Tailing Filtrate	01/14/2010		4.49	0.0237	19.3	1	1.66	0.006	8.16	0.36	0.06	<0.1	12.5
Tailing Filtrate	04/15/2010		4.8	0.0263	16.9	1	1.49	0.015	11.7	0.42	0.2	<0.1	15
Tailing Filtrate	07/07/2010		3.53	0.0297	10.6	0.9	1.73	0.046	10.1	0.8	0.04	<0.1	8.8
Tailing Filtrate	11/02/2010		4.5	0.0283	11.7	1.1	0.76	<0.005	11.4	0.91	0.12	<0.1	8.3
Tailings Seepage	10/07/2009		0.28	<0.0005	0.094	0.1	0.13	0.29	8.63	0.05	0.01	<0.09	0.022
Tailings Seepage	01/07/2010		0.3	0.0006	0.112	<0.1	0.12	0.286	8.94	0.04	0.01	<0.5	0.027
Tailings Seepage	04/06/2010		0.44	<0.0005	0.126	0.1	0.12	0.38	7.2	0.06	0.01	<0.1	0.03
Tailings Seepage	07/06/2010		0.57	<0.0005	0.112	0.1	0.15	0.463	7.06	0.06	0.01	<0.1	0.027
Tailings Seepage	11/03/2010		0.48	<0.0005	0.145	0.1	0.19	0.408	7.57	0.05	0.02	<0.1	0.034

Process Surface Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
501	10/26/2009		0.0124	0.01	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0027	<0.01	0.01
501	01/14/2010		0.011	0.009	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.02	0.0022	<0.01	<0.01
501	04/07/2010		0.01	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0033	<0.01	<0.01
501	07/08/2010		0.0114	0.013	<0.04	<0.0001	<0.01	<0.01	0.0011	<0.0002	<0.01	0.0039	<0.01	0.05
501	11/08/2010		0.0113	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0034	<0.01	<0.01
Tailing Decant	10/12/2009		0.0244	0.026	<0.04	<0.0001	<0.01	0.02	0.0015	<0.0002	<0.01	0.0028	<0.01	<0.01
Tailing Decant	01/07/2010		0.0182	0.038	<0.04	<0.0001	<0.01	0.06	0.0015	<0.0002	<0.01	0.0019	<0.01	0.02
Tailing Decant	04/14/2010		0.023	0.052	<0.04	<0.0001	0.01	0.31	0.0015	<0.0002	0.02	0.004	<0.01	0.01
Tailing Decant	07/06/2010		0.0163	0.069	<0.04	<0.0001	<0.01	0.07	0.0038	<0.0002	<0.01	0.0042	<0.01	<0.01
Tailing Decant	11/08/2010		0.024	0.041	<0.04	<0.0001	<0.01	0.14	0.0007	<0.0002	0.02	0.0062	<0.01	0.01
Tailing Filtrate	10/13/2009		0.021	0.413	<0.04	<0.0002	<0.01	0.07	0.0197	<0.0002	<0.01	0.0036	<0.01	0.04
Tailing Filtrate	01/14/2010		0.0181	0.07	<0.04	0.0012	<0.01	10.4	0.001	<0.0002	0.03	0.0183	<0.01	0.04
Tailing Filtrate	04/15/2010		0.018	0.316	0.05	0.0002	<0.01	0.35	0.0071	<0.0002	0.02	0.005	<0.01	0.08
Tailing Filtrate	07/07/2010		0.0153	0.046	<0.04	<0.0001	<0.01	0.1	0.0039	<0.0002	<0.01	0.0092	<0.01	0.02
Tailing Filtrate	11/02/2010		0.0225	0.022	<0.04	0.0001	<0.01	0.13	<0.0001	0.0003	0.01	0.0063	<0.01	0.07
Tailings Seepage	10/07/2009		0.0347	0.014	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0016	<0.01	<0.01
Tailings Seepage	01/07/2010		0.0394	0.011	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0014	<0.01	<0.01
Tailings Seepage	04/06/2010		0.0379	0.013	0.05	<0.0001	<0.01	<0.01	0.0007	<0.0002	<0.01	0.0014	<0.01	<0.01
Tailings Seepage	07/06/2010		0.0355	0.017	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0014	<0.01	<0.01
Tailings Seepage	11/03/2010		0.0306	0.016	<0.04	<0.0001	<0.01	<0.01	<0.0002	<0.0002	0.02	0.0018	<0.01	<0.01

COMPLIANCE SURFACE WATER
NON-PROCESS WATER QUALITY DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Non-Process Surface Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	SS	Lab Cond.	SO4	Temp. (C)	TDS	TSS	Tur
Lower Wetlands	10/06/2009		96	96	29.9	<1	75	26	6.4	8.3	1.7	3.8	4	<0.1	202	11		130	<5	2.3
Lower Wetlands	02/04/2010		118	118	40.6	<1	102	34	8.2	8.1	1.5	4.1	5.4	<0.1	273	28	1.1	170	<5	6.7
Lower Wetlands	05/11/2010		53	53	18.9	1	47	16	4	7.9	1.5	2.8	2.5	<0.1	127	<5	6.3	100	5	7.9
Lower Wetlands	07/06/2010		91	91	31.2	<1	78	27	6.6	8.3	1.4	2.7	4.7	<0.1	201	13	20	120	6	4.6
Lower Wetlands	11/10/2010		129	129	42.8	<1	107	36	8.7	8.1	1.5	4.8	5.5	<0.1	283	20		190	<5	3.7
Pearl Creek	10/12/2009		29	29	11.4	<1	29	4	0.9	7.8	0.4	8	2.8	<0.1	76	2		60	15	0.1
Pearl Creek	06/29/2010		30	30	11.5	<1	29	4	0.9	8	0.7	6	2.7	0.1	82	4	8.1	50	17	3.9
Pearl Creek	07/27/2010		31	31	11.8	<1	30	4	1	8	0.5	8.2	2.7	<0.1	84	2	11	60	13	0.3
Rinse	12/08/2009		<2	<2	<0.2				<0.2	6.1					2	<1		<10	<5	<0.1
Rinse	01/14/2010		<2	<2	<0.2	<1			<0.2	6.2	<0.3	0.2	<0.3	<0.1	3	<1		10	<5	0.1
Rinse	04/14/2010		<2	<2	<0.2	<1			<0.2	6.8	<0.3	<0.2	0.5	<0.1	3	<1		<10	<5	0.4
Rinse	07/26/2010		<2	<2	<0.2	<1			<0.2	6.2	<0.3	<0.2	<0.3	<0.1	2	<1		<10	<5	0.5
Rinse	11/15/2010		<2	<2	78.8	<1	197	72	17.4	6	6.4	6.5	47.5	<0.1	1	1		<10	<5	0.3
Upper Wetlands	10/07/2009		120	120	34.3	<1	86	26	6.3	8.1	1.4	6	8.6	<0.1	251	5		150	19	6
Upper Wetlands	01/07/2010		206	206	61.3	<5	153	44	10.8	7.8	1.8	8.5	14	<0.1	383	3	0.5	250	23	82.7
Upper Wetlands	05/11/2010		55	55	20.2	2	50	20	4.8	7.8	2.9	2.8	3.5	<0.1	157	9	6.9	110	15	8.6
Upper Wetlands	07/06/2010		93	93	28.2	<1	71	22	5.3	8.3	1.1	3.1	7	<0.1	191	5	20.2	120	13	6.9
Upper Wetlands	11/10/2010		167	167	48.6	<1	122	35	8.5	8	1.7	4.5	11.9	<0.1	323	6	0.7	210	5	2.1
Victoria Creek Lower	10/06/2009		43	43	15.2	<1	38	10	2.4	8.1	0.8	5.8	4.5	<0.1	118	22	5.6	70	<5	0.7
Victoria Creek Lower	11/02/2009		48	48	16.7	<1	42	10	2.4	7.9	0.5	5.8	5.9	<0.1	133	16	3.6	90	<5	0.7
Victoria Creek Lower	12/14/2009		50	50	17.9	<1	45	10	2.4	7.8	0.6	6.1	5.8	<0.1	134	14	0.5	90	6	1.1
Victoria Creek Lower	02/08/2010		66	66	22.7	<1	57	14	3.3	8.1	1	8	7.5	<0.1	178	18	0.8	110	<5	1.2
Victoria Creek Lower	04/26/2010		38	38	14.3	<1	36	9	2.1	8	1.1	6.5	4.9	<0.1	107	10	6.5	50	6	2.1
Victoria Creek Lower	05/31/2010		44	44	14.9	<1	37	9	2.1	8.1	0.7	5.4	5	<0.1	114	10	8.3	80	<5	0.9
Victoria Creek Lower	06/16/2010		44	44	15.2	<1	38	9	2.1	8	0.5	7.2	5	<0.1	120	11		90	<5	1.2
Victoria Creek Lower	07/13/2010		52	52	17.1	<1	43	9	2.3	8.1	0.6	5.6	5.8	<0.1	130	13	13	90	9	4.7
Victoria Creek Lower	08/10/2010		54	54	19.8	<1	49	11	2.6	8.2	0.6	5.1	6.3	<0.1	139	12	11.7	80	<5	2.3
Victoria Creek Lower	09/07/2010		53	53	18.1	<1	45	10	2.4	8.2	0.8	5.9	6	<0.1	135	10	12.3	90	<5	3.4
Victoria Creek Lower	10/27/2010		51	51	19.2	<1	48	10	2.5	8	0.6	6.9	6.1	<0.1	142	13	0.9	90	<5	1.6
Victoria Creek Lower	11/30/2010		49	49	18.3	<1	46	10	2.4	8	0.6	6.5	6.2	<0.1	138	12	0.4	70	<5	2.5
Victoria Creek Lower	12/27/2010		57	57	22.1	<1	55	13	3.1	7.9	0.8	7.8	7.7	<0.1	156	17	<0.1	100	<5	1.7
Victoria Creek Upper	10/06/2009		40	40	16.3	<1	41	5	1.2	8.1	0.5	5.6	2.4	<0.1	105	7	5.2	50	<5	0.1
Victoria Creek Upper	11/02/2009		39	39	15.6	<1	39	5	1.1	8	0.6	4.6	2.6	0.3	103	6	2.4	70	6	0.1
Victoria Creek Upper	12/14/2009		40	40	16.8	<1	42	5	1.2	7.9	0.6	4.8	2.5	<0.1	102	5	0.5	70	5	0.4
Victoria Creek Upper	04/26/2010		40	40	17.4	<1	44	5	1.3	8.1	0.7	6.5	2.5	0.1	106	4	5	60	38	7.1
Victoria Creek Upper	05/31/2010		41	41	16.9	<1	42	5	1.1	8	0.5	5.6	2.6	0.2	111	6	6.9	70	13	2.9
Victoria Creek Upper	06/16/2010		42	42	17.1	<1	43	5	1.2	8.1	0.5	6.7	2.6	<0.1	108	7		80	11	1.4
Victoria Creek Upper	07/13/2010		42	42	16.8	<1	42	5	1.1	8.1	0.6	4.9	2.7	0.1	109	7	12	70	5	1.4
Victoria Creek Upper	08/10/2010		43	43	19.1	<1	48	5	1.2	8.2	0.6	4.9	2.9	<0.1	114	6	11	70	<5	0.3
Victoria Creek Upper	09/07/2010		43	43	18	<1	45	5	1.2	8.1	0.7	5	2.7	<0.1	115	5	10.7	70	7	3.2
Victoria Creek Upper	11/30/2010		39	39	17.4	<1	44	4	1	8	0.5	5	2.6	<0.1	107	7	0.9	50	<5	1.9
Victoria Creek Upper	12/27/2010		43	43	19.2	<1	48	6	1.4	8	0.8	5.8	2.9	<0.1	113	8	<0.1	70	6	1
Water Dam Seepage	10/06/2009		80	80	23.5	<1	59	25	6	7.9	1.7	5.1	5.2	<0.1	183	13	6.1	130	<5	2.9
Water Dam Seepage	01/06/2010		91	91	27.4	1	69	28	6.9	7.7	1.5	5.4	6.2	<0.1	187	9	1.1	140	5	2
Water Dam Seepage	01/06/2010		92	92	28	1	70	28	6.8	7.7	1.7	5.7	6.4	<0.1	192	12		140	<5	4.4
Water Dam Seepage	04/07/2010		96	96	26.8	2	67	27	6.5	7.9	1.9	5.2	6.1	<0.1	211	16	3.8	160	<5	6
Water Dam Seepage	07/06/2010		84	84	26.1	<1	65	26	6.4	7.9	1.8	4.5	6.2	<0.1	194	13		120	<5	6.2
Water Dam Seepage	11/01/2010		87	87	25.6	<1	64	25	6.2	7.9	1.8	4.8	6.3	<0.1	201	15	1.2	140	<5	7.7

Non-Process Surface Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	SS	Lab Cond.	SO4	Temp. (C)	TDS	TSS	Tur
Water Reservoir	10/07/2009		49	49	16.5	<1	41	18	4.3	8	1	4.3	2.8	<0.1	132	14		80	<5	9.1
Water Reservoir	01/06/2010		55	55	20	<1	50	21	5	7.6	1	4.2	3.1	<0.1	140	14	2.2	100	<5	3.9
Water Reservoir	04/07/2010		67	67	21.1	<1	53	22	5.3	7.8	1.3	4.1	3.4	<0.1	163	17	2.9	120	<5	15.1
Water Reservoir	07/06/2010		52	52	17.7	<1	44	19	4.5	7.8	1.1	3.9	3	<0.1	134	11	10.5	90	<5	12.2
Water Reservoir	07/06/2010	Dup	53	53	18.1	<1	45	19	4.5	7.8	1.2	3.9	3	<0.1	135	10		90	<5	11.8
Water Reservoir	11/02/2010		56	56	45	<1	113	51	12.3	8.1	3.2	14.4	21	<0.1	146	14	1.9	120	<5	6.7

Non-Process Surface Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
Lower Wetlands	10/06/2009		<0.05	0.0011	<0.003	<0.1	0.67	0.056	<0.02	<0.01	0.02	<0.1	<0.003
Lower Wetlands	02/04/2010		0.13	0.0023	<0.003	0.2	1.75	0.617	<0.02	<0.01	0.04	<0.1	<0.003
Lower Wetlands	05/11/2010		<0.05	0.0012	<0.003	<0.1	1.34	0.224	0.05	<0.01	0.03	<0.1	<0.003
Lower Wetlands	07/06/2010		<0.05	0.0018	<0.003	<0.1	0.6	0.079	<0.02	<0.01	0.04	<0.1	<0.003
Lower Wetlands	11/10/2010		0.07	0.001	<0.003	0.1	0.91	0.406	0.03	<0.01	0.02	<0.1	<0.003
Pearl Creek	10/12/2009		<0.05	<0.0005	<0.003	0.7	0.22	<0.005	1.15	<0.01	0.02	<0.1	<0.003
Pearl Creek	06/29/2010		<0.05	<0.0005	<0.003	0.7	0.13	<0.005	1.08	<0.01	<0.01	<0.1	<0.003
Pearl Creek	07/27/2010		<0.05	<0.0005	<0.003	0.7	0.32	<0.005	1.06	<0.01	0.02	<0.1	<0.003
Rinse	12/08/2009		<0.05		<0.003				<0.02	<0.01	<0.01		<0.003
Rinse	01/14/2010		<0.05	<0.0005	<0.003	<0.1	0.03	<0.005	<0.02	<0.01	0.02		<0.003
Rinse	04/14/2010		<0.05	<0.0005	<0.003	<0.1	0.04	0.005	<0.02	<0.01	0.01		<0.003
Rinse	07/26/2010		<0.05	<0.0005	<0.003	<0.1	<0.02	<0.005	<0.02	<0.01	0.04		<0.003
Rinse	11/15/2010		<0.05	<0.0005	<0.003	<0.1	0.23	0.407	<0.02	<0.01	0.01		<0.003
Upper Wetlands	10/07/2009		<0.05	0.0023	<0.003	0.1	1.65	0.216	<0.02	<0.01	0.04	<0.1	<0.003
Upper Wetlands	01/07/2010		0.33	0.0061	<0.003	0.1	15.2	1.6	0.03	0.04	0.08	<0.09	<0.003
Upper Wetlands	05/11/2010		<0.05	0.002	<0.003	<0.1	2.08	0.27	<0.02	<0.01	0.07	<0.1	<0.003
Upper Wetlands	07/06/2010		<0.05	0.004	<0.003	<0.1	2.22	0.059	<0.02	<0.01	0.07	<0.1	<0.003
Upper Wetlands	08/04/2010				<0.003								<0.003
Upper Wetlands	11/10/2010		<0.05	0.001	<0.003	0.1	0.49	0.571	<0.02	<0.01	0.02	<0.1	<0.003
Victoria Creek Lower	10/06/2009		<0.05	<0.0005	<0.003	0.6	0.1	0.007	0.35	<0.01	0.01	<0.1	<0.003
Victoria Creek Lower	11/02/2009		<0.05	0.0009	<0.003	0.6	0.12	0.01	0.41	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	12/14/2009		<0.05	<0.0005	<0.003	0.6	0.18	0.021	0.48	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	02/08/2010		<0.05	<0.0005	<0.003	0.6	0.06	0.008	0.27	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	04/26/2010		<0.05	<0.0005	<0.003	0.5	0.26	0.032	0.19	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	05/31/2010		<0.05	<0.0005	<0.003	0.5	0.1	<0.005	0.22	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	06/16/2010		<0.05	<0.0005	<0.003	0.5	0.11	0.013	0.23	<0.01	<0.01		<0.003
Victoria Creek Lower	07/13/2010		<0.05	<0.0005	<0.003	0.7	0.27	0.017	0.14	<0.01	0.02	<0.1	<0.003
Victoria Creek Lower	08/10/2010		<0.05	0.0007	<0.003	0.6	0.17	0.028	0.09	<0.01	0.02		<0.003
Victoria Creek Lower	09/07/2010		<0.05	0.0007	<0.003	0.6	0.26	0.027	0.13	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	10/27/2010		<0.05	0.0005	<0.003	0.6	0.13	0.016	0.33	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	11/30/2010		<0.05	0.0005	<0.003	0.1	0.23	0.024	0.42	<0.01	<0.01	<0.1	<0.003
Victoria Creek Lower	12/27/2010		<0.05	<0.0005	<0.003	0.6	0.18	0.017	0.27	<0.01	0.01	<0.1	<0.003
Victoria Creek Upper	10/06/2009		<0.05	<0.0005	0.003	0.7	<0.02	<0.005	1.02	<0.01	<0.01	<0.1	<0.003

Non-Process Surface Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
Victoria Creek Upper	11/02/2009		<0.05	0.0008	<0.003	0.7	0.08	<0.005	1.16	<0.01	<0.01	<0.1	<0.003
Victoria Creek Upper	12/14/2009		<0.05	<0.0005	<0.003	0.7	0.08	<0.005	1.2	0.02	<0.01	<0.1	<0.003
Victoria Creek Upper	04/26/2010		<0.05	0.0006	<0.003	0.6	0.62	0.027	0.94	<0.01	0.02	<0.1	<0.003
Victoria Creek Upper	05/31/2010		<0.05	<0.0005	<0.003	0.7	0.12	<0.005	1.02	<0.01	0.01	<0.1	<0.003
Victoria Creek Upper	06/16/2010		<0.05	<0.0005	<0.003	0.7	0.12	0.006	0.93	<0.01	<0.01		<0.003
Victoria Creek Upper	07/13/2010		<0.05	0.0005	<0.003	0.8	0.06	<0.005	0.93	<0.01	<0.01	<0.1	<0.003
Victoria Creek Upper	08/10/2010		<0.05	<0.0005	<0.003	0.7	<0.02	<0.005	0.96	<0.01	0.02	<0.1	<0.003
Victoria Creek Upper	09/07/2010		<0.05	<0.0005	<0.003	0.6	0.16	<0.005	1.01	<0.01	0.01	<0.1	<0.003
Victoria Creek Upper	11/30/2010		<0.05	0.0005	<0.003	0.2	0.05	<0.005	1.18	<0.01	<0.01	<0.1	<0.003
Victoria Creek Upper	12/27/2010		<0.05	0.0007	<0.003	0.7	0.04	<0.005	0.99	<0.01	<0.01	<0.1	<0.003
Water Dam Seepage	10/06/2009		0.16	0.003	<0.003	0.4	2.85	1.2	<0.02	<0.01	0.04	<0.1	<0.003
Water Dam Seepage	01/06/2010		0.2	0.0033	<0.003	0.3	3.58	1.35	0.02	<0.01	0.05	<0.09	<0.003
Water Dam Seepage	01/06/2010		0.21	0.0035	<0.003	0.4	3.67	1.39	0.02	<0.01	0.06	<0.1	<0.003
Water Dam Seepage	04/07/2010		0.22	0.0032	<0.003	0.4	3.66	1.3	0.02	<0.01	0.05	0.2	<0.003
Water Dam Seepage	07/06/2010		0.17	0.0025	0.008	0.4	2.79	1.05	0.03	<0.01	0.04	<0.1	<0.003
Water Dam Seepage	11/01/2010		0.21	0.003	<0.006	0.4	3.37	1.24	<0.02	<0.01	0.05	<0.1	<0.003
Water Reservoir	10/07/2009		0.07	0.0018	<0.003	<0.1	1.45	0.244	<0.02	<0.01	0.03	<0.1	<0.003
Water Reservoir	01/06/2010		<0.05	0.001	<0.003	<0.1	1.14	0.246	0.13	<0.01	0.02	<0.09	<0.003
Water Reservoir	04/07/2010		0.11	0.0016	<0.003	<0.1	2.53	0.59	0.07	0.02	0.03	<0.1	<0.003
Water Reservoir	07/06/2010		0.09	0.0017	<0.003	<0.1	2.35	0.577	0.04	<0.01	0.03	<0.1	<0.003
Water Reservoir	07/06/2010		0.09	0.0016	<0.003	<0.1	2.42	0.591	0.1	<0.01	0.02	<0.1	<0.003
Water Reservoir	11/02/2010		0.07	0.0007	<0.003	<0.1	<0.02	0.035	0.03	<0.01	0.02	<0.1	<0.003

Non-Process Surface Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
Lower Wetlands	10/06/2009		<0.0004	0.028	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Lower Wetlands	02/04/2010		<0.0004	0.03	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0002	<0.01	<0.01
Lower Wetlands	05/11/2010		<0.0004	0.024	<0.04	<0.0001	<0.01	0.02	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
Lower Wetlands	07/06/2010		<0.0004	0.033	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Lower Wetlands	11/10/2010		<0.0004	0.026	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Pearl Creek	10/12/2009		<0.0004	0.004	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	<0.01	<0.0001	<0.01	<0.01
Pearl Creek	06/29/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Pearl Creek	07/27/2010		<0.0004	0.006	<0.04	0.0007	<0.01	<0.01	0.0003	<0.0002	<0.01	0.0002	<0.01	<0.01
Rinse	01/14/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	0.0005	<0.0002	<0.01	<0.0001	<0.01	<0.01
Rinse	04/14/2010		<0.0004	0.004	<0.04	<0.0001	<0.01	<0.01	0.0005	<0.0002	<0.01	<0.0001	<0.01	0.02
Rinse	07/26/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Rinse	11/15/2010		<0.0004	0.016	<0.04	<0.0001	0.02	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	0.01
Upper Wetlands	10/07/2009		<0.0004	0.032	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
Upper Wetlands	01/07/2010		<0.0004	0.053	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	0.0001	<0.01	<0.01
Upper Wetlands	05/11/2010		<0.0004	0.023	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
Upper Wetlands	07/06/2010		<0.0004	0.037	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
Upper Wetlands	11/10/2010		<0.0004	0.035	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	10/06/2009		<0.0004	0.01	<0.04	<0.0001	0.01	<0.01	0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	11/02/2009		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	0.01	<0.01
Victoria Creek Lower	12/14/2009		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Victoria Creek Lower	02/08/2010		<0.0004	0.017	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Victoria Creek Lower	04/26/2010		<0.0004	0.013	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	05/31/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	06/16/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	07/13/2010		<0.0004	0.013	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	08/10/2010		<0.0004	0.014	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	09/07/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	10/27/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Lower	11/30/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.02	<0.0001	<0.01	<0.01
Victoria Creek Lower	12/27/2010		<0.0004	0.017	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	10/06/2009		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	11/02/2009		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Victoria Creek Upper	12/14/2009		<0.0004	0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Victoria Creek Upper	04/26/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	0.0005	<0.0002	<0.01	0.0001	<0.01	0.01
Victoria Creek Upper	05/31/2010		<0.0004	0.006	0.05	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	06/16/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	07/13/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	08/10/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	09/07/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Victoria Creek Upper	11/30/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
Victoria Creek Upper	12/27/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	0.01	<0.01
Water Dam Seepage	10/06/2009		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
Water Dam Seepage	01/06/2010		<0.0004	0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Dam Seepage	01/06/2010		<0.0004	0.004	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Dam Seepage	04/07/2010		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Dam Seepage	07/06/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Dam Seepage	11/01/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Reservoir	10/07/2009		<0.0004	0.019	<0.04	<0.0001	<0.01	<0.01	0.0007	<0.0002	<0.01	<0.0001	<0.01	0.02

Non-Process Surface Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
Water Reservoir	01/06/2010		<0.0004	0.016	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Reservoir	04/07/2010		<0.0004	0.022	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Reservoir	07/06/2010		<0.0004	0.022	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Reservoir	07/06/2010		<0.0004	0.023	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
Water Reservoir	11/02/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01

COMPLIANCE GROUNDWATER PROCESS WATER QUALITY DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
401	10/21/2009			58	40.7	12	104	42	9.9	7.6	1.3	5.1	6.6	318	56	<0.02		210	<5	1.2
401	01/06/2010		53	53	41	15	111	43	9.7	7.4	1.3	5.3	7.2	325	55	<0.02	2	220	<5	0.4
401	04/07/2010		56	56	47	18	118	46	11.5	7.6	1.9	5.2	8.4	379	66	<0.02	3.2	240	<5	2.6
401	07/08/2010		57	57	43.6	16	110	43	10.8	7.3	1.4	5.5	8.8	352	62	<0.02	4.9	240	<5	0.5
401	11/01/2010		68	68	45.1	16	115	44	10.7	7.5	1.5	5.2	9.6	369	67	<0.02	3.9	240	<5	0.6
IW-1	10/26/2009		190	190	81.1	6	204	59	14.5	8.3	4.2	7.3	7.8	537	69	<0.02	2.9	320	<5	0.2
IW-1	06/30/2010		185	185	88.4	8	216	63	15.3	8.3	4.4	6.1	7.6	539	88	<0.02	5.3	330	<5	<0.1
IW-1	07/27/2010		187	191	83.1	7	214	61	14.6	8.3	4.3	6.5	8.3	520	68	<0.02	11.5	360	<5	0.3
IW-1	11/08/2010		196	196	82	7	214	61	15.3	8.2	4.6	6.9	8.5	523	67	<0.02	2.3	310	<5	0.1
IW-11	01/06/2010		52	52	50.9	28	143	69	14.5	7.5	1.5	5.8	26.8	505	106	<0.02	4.4	340	<5	0.2
IW-11	04/07/2010		54	54	52.3	27	129	60	15.2	7.7	2	5.4	29.1	518	107	<0.02	4.7	340	<5	1.7
IW-11	04/07/2010	Dup		53						7.2		5.9		476	123	<0.5		350	<5	0.2
IW-11	07/08/2010		54	54	49.8	26	128	59	14.6	7.6	1.7	5.8	29.6	515	113	<0.02	6.6	350	<5	0.2
IW-11	11/03/2010		55	55	53.4	27	132	65	16.3	7.6	1.6	5.5	34.3	549	119	<0.02	2.9	350	<5	0.8
IW-2	10/26/2009		208	208	123	26	318	81	19.3	8.1	4.2	9	36	889	220	<0.02	4.6	580	8	2.8
IW-2	01/05/2010		218	218	129	25	323	84	20.3	7.8	4.4	8.4	34.9	824	190	<0.02		600	<5	3.1
IW-2	04/07/2010		212	212	121	26	315	79	19.3	8.1	4.4	8.4	32.7	837	190	<0.02	5.1	590	<5	3.2
IW-2	07/08/2010		241	241	133	24	345	88	21.4	7.9	4.7	9.1	36.1	868	200	<0.02	6.1	630	<5	3.9
IW-2	11/09/2010		243	243	135	24	335	85	21	8.2	4.6	8.6	36.5	877	195	<0.02	4.9	580	<5	3.1
IW-3	12/16/2009		87	87	65.9	17	168	32	7.6	8.1	1.9	6.5	36.7	537	143	0.05		360	<5	7.4
IW-3	02/22/2010		88	88	68.4	16	166	31	8.1	8.2	1.9	6.9	37.5	532	153	0.03	8	360	<5	0.3
IW-3	04/06/2010		101	101	60.9	15	186	35	9.6	8.2	1.9	5.4	36.9	583	154	<0.02	5.8	390	<5	1
IW-3	07/12/2010		95	95	65.1	16	169	32	7.6	8.2	2.1	6.8	38	535	151	<0.02	8.5	350	<5	0.4
IW-3	11/09/2010		90	90	69.7	17	175	33	7.9	8.3	1.8	6.3	38	550	149	<0.02	4.4	360	<5	1.9
IW-4	10/21/2009			143	70.4	8	183	19	4.4	8.3	1.6	7.6	44.5	548	120	<0.02		370	<5	0.3
IW-4	01/05/2010		138	138	66.4	8	174	19	4.1	8.1	1.7	7.5	44	516	73	<0.02	6	350	<5	1.1
IW-4	04/06/2010		97	97	55.9	12	135	28	7.8	7.9	1.5	6.5	30.3	457	84	<0.02	5.5	300	<5	0.3
IW-4	08/09/2010		133	133	81.1	10	195	20	5.1	8.3	1.8	7.7	46.5	597	140	<0.02	5.3	400	<5	0.9
IW-4	10/27/2010		92	92	54.5	11	132	28	7	7.7	1.3	6.7	31.4	441	93	<0.02	2.5	280	<5	0.3
IW-5	10/21/2009			137	96.1	29	233	64	16.3	8.1	8.2	6.4	43.7	771	210	<0.02		530	<5	2.9
IW-5	01/05/2010		146	146	98.2	27	246	70	16.6	7.8	8.8	6.4	42.4	744	185	<0.02	4.6	520	<5	2.2
IW-5	04/06/2010		139	139	97.5	28	234	64	17.2	7.9	8.4	6.2	43.4	765	180	<0.02	5.9	510	<5	1.6
IW-5	07/08/2010		146	146	94.6	28	244	66	16.6	7.9	8.9	6.9	44.4	757	210	<0.02	7.1	530	<5	4.1
IW-5	10/27/2010		143	143	97	27	247	68	16.2	7.9	8.9	6.7	46.3	777	195	<0.02	4.1	510	<5	3
IW-6	11/09/2009		162	162	99.8	15	249	56	13.5	8	3.3	9.5	31.1	676	148	<0.02	2.7	440	<5	0.6
IW-6	01/05/2010		164	164	96.7	16	247	58	13.2	7.9	3.3	8.6	29.1	342	147	<0.02	3.8	450	<5	1.5
IW-6	06/30/2010		174	174	109	19	263	63	15.6	8.2	3.8	8.3	32.2	711	180	<0.02	5.1	480	<5	0.8
IW-6	07/26/2010		175	175	105	18	263	63	15.6	8.2	3.8	9.3	33.9	728	163	<0.02	5.4	520	<5	1.1
IW-6	10/27/2010		174	174	109	17	263	59	14.9	8.1	3.4	8.3	30.8	701	162	<0.02	3.8	470	<5	2.9
IW-7	02/08/2010		107	107	60.5	11	143	39	9.9	7.9	2.1	5.1	5.3	394	55	0.02	1.7	230	12	0.5
IW-7	04/07/2010		105	105	58	12	142	38	9.7	8	2.2	5.2	5	388	53	<0.02	2.1	250	<5	0.9
IW-7	07/08/2010		102	102	56.5	13	147	41	10	7.9	1.8	5.4	5.4	384	60	<0.02	4.4	250	<5	0.5
IW-7	11/03/2010		103	103	62.1	13	149	42	10.8	7.9	1.9	5.2	5.6	404	55	<0.02	3	250	<5	<0.1
IW-8	01/06/2010		50	50	48.1	20	131	47	10.5	7.7	1.8	5.1	13.1	392	77	<0.02	2.1	260	<5	0.1
IW-8	04/07/2010		51	51	51.6	22	129	46	10.8	7.8	2.2	4.8	14.7	441	86	<0.02	2.7	290	<5	0.5
IW-8	07/08/2010		51	51	47.7	20	124	44	10.9	7.7	1.8	5.1	15.2	415	82	<0.02	4.5	270	<5	1.1
IW-8	11/03/2010		53	53	54.7	21	132	48	12.2	7.8	1.9	4.9	17.7	455	89	<0.02	3.2	280	6	8.5
MW-1	10/26/2009		484	484	161	5	438	110	24.8	8	2.5	12.3	16.9	964	39	<0.02	5	590	<5	3.9

Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
MW-1	02/22/2010		514	514	180	6	458	120	29	7.8	3	12.5	17.8	966	36	0.12	6.5	640	41	30.8
MW-1	04/07/2010		497	497	162	7	420	105	24.4	8	3.1	11.2	16.2	932	45	<0.02	4.4	620	<5	6.9
MW-1	07/12/2010		323	323	150	20	400	99	22.7	8	5.4	8.5	24.8	928	160	<0.02	8.2	630	<5	10.4
MW-1	11/08/2010		508	508	182	9	470	119	27.4	8	4	11	19.9	1020	62	<0.02	5.6	660	<5	15.2
MW-2	12/16/2009		173	173	86.3	6	222	51	11.5	8	2.6	7.4	25.8	594	115	0.35		410	44	145
MW-2	06/30/2010		216	216	90.1	6	221	53	12.2	8.2	2.5	8.3	24.4	584	77	0.31	5	370	88	116
MW-2	07/26/2010		229	229	88.1	7	225	49	11.9	8.2	2.5	10.1	25.8	583	66	0.28	6.3	410	49	114
MW-2	11/03/2010		230	230	90.6	6	221	47	11.9	8.1	2.4	9.5	25.6	578	60	0.06	1.9	380	15	52.6
MW-3	02/22/2010		92	92	76	21	188	33	8.2	8.1	1.4	6.3	39.6	586	161	0.03	8.2	380	<5	2.6
MW-3	06/30/2010		110	110	93.3	24	229	42	10.1	8.2	1.3	5.4	31.4	632	170	<0.02		410	<5	0.4
MW-3	07/26/2010		103	103	86.1	22	213	38	9.5	8.2	1.4	6.4	35.3	625	161	<0.02	5.7	440	<5	0.4
MW-3	11/08/2010		111	111	90.5	24	234	41	8.8	8.2	1	5.5	36.2	655	172	<0.02	2.1	430	<5	0.2

Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
401	10/21/2009		<0.05	<0.0005	0.106	<0.1	0.06	0.022	5.41	<0.01	<0.01		0.018
401	01/06/2010		<0.05	<0.0005	0.118	<0.1	0.1	0.01	7.01	<0.01	<0.01		0.029
401	04/07/2010		<0.05	<0.0005	0.153	<0.1	0.15	0.009	8.16	<0.01	0.01		0.033
401	07/08/2010		<0.05	<0.0005	0.149	<0.1	0.08	0.012	7.5	<0.01	0.02		0.047
401	11/01/2010		<0.05	<0.0005	0.162	<0.1	0.06	0.015	6.57	<0.01	0.01		0.03
IW-1	10/26/2009		<0.05	0.003	<0.006	<0.1	<0.02	0.062	0.27	0.15	<0.01		<0.003
IW-1	06/30/2010		<0.05	0.0036	<0.003	<0.1	<0.02	0.059	0.32	0.16	<0.01		<0.003
IW-1	07/27/2010		<0.05	0.0041	<0.003	<0.1	0.12	0.059	0.39	0.19	<0.01		<0.003
IW-1	11/08/2010		<0.05	0.0041	<0.003	<0.1	<0.02	0.062	0.21	0.19	<0.01		<0.003
IW-11	01/06/2010		<0.05	<0.0005	0.278	<0.1	0.16	0.008	12.2	0.02	<0.01		0.043
IW-11	04/07/2010		<0.05	<0.0005	0.387	<0.1	0.16	0.009	12.6	0.02	<0.01		0.061
IW-11	04/07/2010	Dup	<0.1	<0.005	0.4		0.2	0.012			<0.05		0.052
IW-11	07/08/2010		<0.05	<0.0005	0.336	<0.1	0.11	0.006	12.7	0.02	<0.01		0.065
IW-11	11/03/2010		<0.05	0.0006	0.293	<0.1	0.13	0.006	11.2	0.02	<0.01		0.062
IW-2	10/26/2009		0.06	<0.0005	<0.006	<0.1	0.44	0.67	<0.02	<0.01	<0.01		<0.003
IW-2	01/05/2010		<0.05	<0.0005	0.003	<0.1	0.37	0.708	0.03	<0.01	<0.01		<0.003
IW-2	04/07/2010		0.06	<0.0005	0.006	<0.1	0.39	0.702	0.03	<0.01	<0.01		0.004
IW-2	07/08/2010		<0.05	<0.0005	<0.003	<0.1	0.47	0.73	0.03	<0.01	0.01		<0.003
IW-2	11/09/2010		0.05	<0.0005	0.005	<0.1	0.39	0.751	<0.02	<0.01	<0.01		0.003
IW-3	12/16/2009		<0.05	0.0012	<0.003	<0.1	0.02	0.118	<0.02	<0.01	<0.01		<0.003
IW-3	02/22/2010		<0.05	0.0015	<0.003	0.1	0.04	0.13	<0.02	<0.01	<0.01		<0.003
IW-3	04/06/2010		<0.05	0.0009	<0.003	0.1	0.04	0.163	0.04	<0.01	<0.01		<0.003
IW-3	07/12/2010		<0.05	0.0016	<0.003	0.1	0.02	0.131	0.03	<0.01	0.01		<0.003
IW-3	11/09/2010		<0.05	0.0009	<0.003	0.1	0.03	0.133	<0.02	<0.01	<0.01		<0.003
IW-4	10/21/2009		<0.05	<0.0005	<0.003	0.4	0.09	0.099	0.07	<0.01	0.01		<0.003
IW-4	01/05/2010		<0.05	0.0006	0.003	0.4	0.06	0.102	0.11	<0.01	<0.01		<0.003
IW-4	04/06/2010		<0.05	<0.0005	0.071	0.3	0.12	0.079	3.56	<0.01	<0.01		0.019
IW-4	08/09/2010		<0.05	<0.0005	0.007	0.4	0.2	0.069	0.51	0.04	0.02		0.004
IW-4	10/27/2010		<0.05	<0.0005	0.066	0.3	0.1	0.064	3.08	<0.01	<0.01		0.017
IW-5	10/21/2009		0.25	<0.0005	0.012	0.1	0.51	0.562	3.03	0.01	<0.01		<0.003
IW-5	01/05/2010		0.26	0.0008	0.01	<0.1	0.44	0.558	3.18	0.03	<0.01		0.005
IW-5	04/06/2010		0.29	0.0005	0.012	<0.1	0.49	0.622	2.8	0.02	<0.01		0.008
IW-5	07/08/2010		0.29	0.0009	0.009	0.1	0.96	0.592	2.21	0.01	0.03		0.005

Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
IW-5	10/27/2010		0.28	<0.0005	0.011	0.1	0.52	0.634	2.39	0.01	<0.01		0.005
IW-6	11/09/2009		<0.05	<0.0005	<0.003	<0.1	0.26	0.496	0.03	<0.01	<0.01		<0.003
IW-6	01/05/2010		<0.05	0.0006	<0.003	<0.1	0.39	0.461	0.06	<0.01	<0.01		<0.003
IW-6	06/30/2010		<0.05	0.0006	<0.003	<0.1	0.33	0.497	0.02	<0.01	<0.01		<0.003
IW-6	07/26/2010		<0.05	0.0005	<0.003	<0.1	0.39	0.49	0.03	<0.01	<0.01		<0.003
IW-6	10/27/2010		<0.05	<0.0005	<0.003	<0.1	0.42	0.502	<0.02	<0.01	0.02		<0.003
IW-7	02/08/2010		<0.05	<0.0005	0.037	<0.1	<0.02	0.166	3.46	<0.01	<0.01		0.015
IW-7	04/07/2010		<0.05	<0.0005	0.038	<0.1	<0.02	<0.005	3.89	<0.01	0.01		0.011
IW-7	07/08/2010		<0.05	<0.0005	0.039	<0.1	0.04	<0.005	3.64	<0.01	0.02		0.017
IW-7	11/03/2010		<0.05	<0.0005	0.043	<0.1	0.02	<0.005	3.92	<0.01	<0.01		0.018
IW-8	01/06/2010		<0.05	<0.0005	0.18	<0.1	0.14	0.006	9.16	<0.01	<0.01		0.036
IW-8	04/07/2010		<0.05	<0.0005	0.215	<0.1	0.08	0.007	9.9	<0.01	<0.01		0.04
IW-8	07/08/2010		<0.05	<0.0005	0.203	<0.1	0.08	<0.005	9.9	<0.01	0.02		0.055
IW-8	11/03/2010		<0.05	0.0006	0.213	<0.1	0.1	<0.005	9.1	<0.01	<0.01		0.05
MW-1	10/26/2009		<0.05	<0.0005	<0.006	<0.1	0.75	0.675	0.18	<0.01	0.02		<0.003
MW-1	02/22/2010		0.08	0.0008	<0.003	<0.1	2.74	0.824	0.23	0.01	0.02		<0.003
MW-1	04/07/2010		0.07	<0.0005	<0.003	<0.1	0.98	0.75	0.3	0.03	0.01		<0.003
MW-1	07/12/2010		0.06	0.0009	<0.003	<0.1	0.09	0.358	<0.02	<0.01	0.03		<0.003
MW-1	11/08/2010		<0.05	0.0012	<0.003	<0.1	1.81	0.824	0.26	0.02	0.01		<0.003
MW-2	12/16/2009		<0.05	<0.0005	<0.003	<0.1	4.61	0.68	0.05	0.02	0.08		<0.003
MW-2	06/30/2010		0.05	0.0007	<0.003	<0.1	6.84	0.727	<0.02	0.04	0.08		<0.003
MW-2	07/26/2010		0.07	0.0007	<0.003	<0.1	9.02	0.738	0.04	0.01	0.05		<0.003
MW-2	11/03/2010		<0.05	0.0016	<0.003	<0.1	4.57	0.668	<0.02	0.02	0.02		<0.003
MW-3	02/22/2010		<0.05	0.0018	<0.003	<0.1	0.02	0.121	0.11	<0.01	<0.01		<0.003
MW-3	06/30/2010		<0.05	0.0018	<0.003	<0.1	0.05	0.185	0.02	<0.01	<0.01		<0.003
MW-3	07/26/2010		<0.05	0.0018	<0.003	0.1	<0.02	0.165	<0.02	<0.01	0.02		<0.003
MW-3	11/08/2010		<0.05	0.0021	<0.003	<0.1	<0.02	0.173	<0.02	<0.01	0.01		<0.003

Process Ground Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
401	10/21/2009		<0.0004	0.016	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0011	<0.01	<0.01
401	01/06/2010		<0.0004	0.017	<0.04	0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	0.0012	<0.01	<0.01
401	04/07/2010		<0.0004	0.026	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0013	<0.01	<0.01
401	07/08/2010		<0.0004	0.022	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	0.01	0.0012	<0.01	<0.01
401	11/01/2010		<0.0004	0.024	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0014	<0.01	<0.01
IW-1	10/26/2009		0.0013	0.039	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0004	<0.01	<0.01
IW-1	06/30/2010		0.0017	0.036	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.02	0.0006	<0.01	<0.01
IW-1	07/27/2010		0.0017	0.04	0.06	<0.0001	<0.01	<0.01	0.0008	<0.0002	0.02	0.0005	<0.01	<0.01
IW-1	11/08/2010		0.0016	0.038	<0.04	<0.0001	<0.01	<0.01	0.0011	<0.0002	<0.01	0.0006	0.01	<0.01
IW-11	01/06/2010		0.001	<0.003	<0.04	<0.0001	<0.01	<0.01	0.0017	<0.0002	<0.01	0.0022	<0.01	0.02
IW-11	04/07/2010		0.0009	0.009	<0.08	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0023	<0.01	0.01
IW-11	04/07/2010	Dup	<0.0013	<0.005	<0.02	<0.0005	<0.005	<0.01	<0.002	<0.0002	<0.005	<0.005	<0.01	<0.01
IW-11	07/08/2010		0.0011	0.003	<0.04	<0.0001	<0.01	<0.01	0.0006	<0.0002	0.01	0.0024	<0.01	<0.01
IW-11	11/03/2010		0.0009	0.006	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0027	<0.01	<0.01
IW-2	10/26/2009		0.0004	0.013	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
IW-2	01/05/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
IW-2	04/07/2010		<0.0004	0.016	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
IW-2	07/08/2010		0.0005	0.013	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.02	<0.0001	<0.01	<0.01
IW-2	11/09/2010		0.0004	0.014	<0.04	<0.0001	<0.01	<0.01	0.0012	<0.0002	<0.01	<0.0001	<0.01	0.04
IW-3	12/16/2009		<0.0004	0.008	0.1	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.01	<0.0001	<0.01	<0.01
IW-3	02/22/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	0.01	<0.01
IW-3	04/06/2010		<0.0004	0.014	<0.08	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.01	<0.0001	<0.01	<0.01
IW-3	07/12/2010		<0.0004	0.009	0.07	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	0.01
IW-3	11/09/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
IW-4	10/21/2009		0.0005	<0.003	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0004	<0.01	<0.01
IW-4	01/05/2010		0.0006	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0004	<0.01	<0.01
IW-4	04/06/2010		<0.0004	0.017	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0007	<0.01	<0.01
IW-4	08/09/2010		0.0012	0.004	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0021	<0.01	<0.01
IW-4	10/27/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	0.0008	<0.01	<0.01
IW-5	10/21/2009		0.008	0.026	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.05	0.0007	<0.01	<0.01
IW-5	01/05/2010		0.0092	0.027	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.03	0.0008	<0.01	<0.01
IW-5	04/06/2010		0.0092	0.034	0.07	<0.0001	0.01	<0.01	0.0002	<0.0002	0.02	0.0009	<0.01	<0.01
IW-5	07/08/2010		0.009	0.028	<0.04	<0.0001	<0.01	<0.01	0.0034	<0.0002	0.05	0.0007	<0.01	0.02
IW-5	10/27/2010		0.01	0.029	<0.04	<0.0001	<0.01	<0.01	0.0005	<0.0002	0.02	0.0007	<0.01	<0.01
IW-6	11/09/2009		0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
IW-6	01/05/2010		0.0005	0.006	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	<0.0001	<0.01	<0.01
IW-6	06/30/2010		0.0006	0.01	0.06	<0.0001	<0.01	<0.01	0.0007	<0.0002	0.02	<0.0001	<0.01	<0.01
IW-6	07/26/2010		0.0005	0.01	0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.03	<0.0001	<0.01	<0.01
IW-6	10/27/2010		0.0006	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.02	<0.0001	<0.01	<0.01
IW-7	02/08/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	0.02	<0.0001	<0.0002	<0.01	0.0007	<0.01	<0.01
IW-7	04/07/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	<0.01	0.0008	<0.01	0.02
IW-7	07/08/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.01	0.0006	<0.01	<0.01
IW-7	11/03/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.0006	<0.01	<0.01
IW-8	01/06/2010		<0.0004	0.003	<0.04	<0.0001	<0.01	0.03	0.0044	<0.0002	0.03	0.0018	<0.01	0.07
IW-8	04/07/2010		<0.0004	0.008	<0.08	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0017	<0.01	<0.01
IW-8	07/08/2010		<0.0004	0.003	<0.04	<0.0001	<0.01	<0.01	0.0008	<0.0002	<0.01	0.0018	<0.01	0.02
IW-8	11/03/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	0.002	<0.01	<0.01
MW-1	10/26/2009		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	0.01

Process Ground Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
MW-1	02/22/2010		0.001	0.015	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.02	0.0002	0.02	<0.01
MW-1	04/07/2010		0.0011	0.018	<0.08	<0.0001	<0.01	0.01	0.0002	<0.0002	0.02	0.0002	<0.01	<0.01
MW-1	07/12/2010		0.0006	0.02	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.06	0.0002	<0.01	0.02
MW-1	11/08/2010		0.0011	0.016	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.02	0.0002	<0.01	<0.01
MW-2	12/16/2009		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.04	0.0001	<0.01	0.5
MW-2	06/30/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	0.3
MW-2	07/26/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.02	<0.0001	<0.01	0.26
MW-2	11/03/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	0.37
MW-3	02/22/2010		<0.0004	0.006	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	0.01
MW-3	06/30/2010		0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-3	07/26/2010		<0.0004	0.006	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	<0.0001	<0.01	0.02
MW-3	11/08/2010		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	0.01	<0.0001	<0.01	0.02

COMPLIANCE GROUNDWATER
NON-PROCESS WATER QUALITY DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
MW-5	10/13/2009			364	112	3	275	52	12.7	8	1.8	13	22.6	638	<1	0.05		430	<5	13.4
MW-5	01/04/2010		397	397	115	3	288	58	13.3	7.9	1.5	13.1	20.9	668	<5	0.06	1	420	<5	12.6
MW-5	04/12/2010		390	390	119	3	293	57	13.6	8	1.7	14.4	20.3	683	<1	0.08	4.8	450	<5	19.3
MW-5	07/12/2010		344	344	98.2	3	260	49	11.3	7.9	1.7	12.2	24.3	619	<1	0.05	6.4	400	<5	6.6
MW-5	11/03/2010		363	363	120	3	290	55	14.1	7.8	1.5	13.4	20.7	672	<1	0.05	3.1	440	<5	11.8
MW-6	10/13/2009			472	141	2	348	101	24.3	8.2	2.1	15	20.7	821	6	0.08		520	7	7.1
MW-6	01/04/2010		481	481	139	3	355	108	24.5	8.1	1.6	14.9	20	837	6	0.11	3.1	500	6	5
MW-6	04/12/2010		473	473	139	2	343	101	24.6	8	1.9	16.1	20.2	846	8	0.08	5.4	510	<5	5
MW-6	07/12/2010		457	457	128	2	340	99	22.9	8	1.9	14.8	21.2	812	7	0.08	7.2	500	7	12.8
MW-6	11/03/2010		446	446	142	2	345	102	26	8	1.7	14.7	21	819	6	0.07	3.1	500	6	4.9
MW-7	10/14/2009			105	16.2	<1	42	3	0.9	8.8	1.1	7	36.4	229	18	<0.02		130	<5	0.1
MW-7	01/05/2010		96	105	16.1	1	45	5	0.8	8.7	1.3	6.4	37.6	230	17	<0.02	1.3	150	<5	0.7
MW-7	04/13/2010		99	106	17.3	<1	43	5	0.9	8.8	1.2	6.3	38.4	247	18	<0.02	3.9	160	<5	0.3
MW-7	07/12/2010		97	105	15.8	<1	43	4	0.7	8.7	1.2	6.4	37.9	243	18	<0.02	9.4	150	<5	<0.1
MW-7	12/06/2010		90	102	16.3	1	43	2	0.8	8.7	1	6.5	36.7	245	18	<0.02	6.9	170	<5	1.8

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
MW-5	10/13/2009		0.12	<0.0005	<0.003	<0.1	8.48	1.28	<0.02	<0.01	0.02		<0.003
MW-5	01/04/2010		0.13	0.0009	<0.003	<0.1	9.8	1.41	<0.02	<0.01	0.02		<0.003
MW-5	04/12/2010		0.17	<0.0005	<0.003	<0.1	8.56	1.36	0.03	<0.01	0.03		<0.003
MW-5	07/12/2010		0.14	<0.0005	<0.003	<0.1	0.08	1.09	0.05	<0.01	0.02		<0.003
MW-5	11/03/2010		0.1	0.0009	<0.003	<0.1	8.71	1.32	<0.02	<0.01	0.02		<0.003
MW-6	10/13/2009		<0.05	<0.0005	<0.003	<0.1	0.67	0.716	<0.02	<0.01	0.01		<0.003
MW-6	01/04/2010		<0.05	<0.0005	<0.003	<0.1	0.71	0.764	<0.02	<0.01	0.01		<0.003
MW-6	04/12/2010		<0.05	<0.0005	<0.003	<0.1	0.75	0.73	<0.02	<0.01	0.01		<0.003
MW-6	07/12/2010		<0.05	<0.0005	<0.06	<0.1	0.03	0.678	<0.02	<0.01	0.01		<0.003
MW-6	11/03/2010		<0.05	0.0005	<0.003	<0.1	0.71	0.658	<0.02	<0.01	0.01		<0.003
MW-7	10/14/2009		<0.05	0.0012	<0.003	0.7	<0.02	0.042	<0.02	<0.01	0.02		<0.003
MW-7	01/05/2010		<0.05	0.0014	<0.003	0.6	<0.02	0.041	0.03	<0.01	0.02		<0.003
MW-7	04/13/2010		<0.05	0.0014	<0.003	0.7	<0.02	0.042	0.04	<0.01	0.03		0.003
MW-7	07/12/2010		0.06	0.0014	<0.003	0.7	<0.02	0.04	<0.02	<0.01	0.03		<0.003
MW-7	12/06/2010		<0.05	0.0013	<0.003	0.8	<0.02	0.029	<0.02	<0.01	0.02		<0.003

Non-Process Ground Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
MW-5	10/13/2009		<0.0004	0.034	<0.04	<0.0001	<0.01	0.02	<0.0001	<0.0002	0.02	0.0001	<0.01	<0.01
MW-5	01/04/2010		<0.0004	0.038	<0.04	<0.0001	<0.01	<0.01	<0.0001	0.0003	<0.01	<0.0001	<0.01	<0.01
MW-5	04/12/2010		<0.0004	0.04	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
MW-5	07/12/2010		<0.0004	0.029	0.08	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.01	<0.0001	<0.01	<0.01
MW-5	11/03/2010		<0.0004	0.04	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
MW-6	10/13/2009		<0.0004	<0.003	<0.04	<0.0001	<0.01	0.03	<0.0001	<0.0002	0.03	0.0002	<0.01	<0.01
MW-6	01/04/2010		<0.0004	<0.003	0.05	<0.0001	<0.01	<0.01	<0.0001	0.0002	0.02	<0.0001	<0.01	<0.01
MW-6	04/12/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-6	07/12/2010		<0.0004	0.004	<0.04	<0.0001	<0.01	0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	0.06
MW-6	11/03/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-7	10/14/2009		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-7	01/05/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-7	04/13/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-7	07/12/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
MW-7	12/06/2010		<0.0004	0.007	0.06	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01

Heap Leach
Water Quality Data

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

ATTACHMENT B
Heap Leach Compliance Monitoring Data Report

Fort Knox Mine
4th Quarter 2010

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	GW Elev.	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
HL-1	10/09/2009	Blocked					1476.055														
HL-1	10/15/2009						1478.175														
HL-1	10/16/2009						1479.325														
HL-1	10/19/2009	Blocked					1476.175														
HL-1	10/19/2009			63	29.2	1		69	14	3.5	8.1	1.2	9	3.9	179	21	<0.02	4.9	120	<5	1.8
HL-1	10/20/2009	Blocked					1473.185														
HL-1	10/21/2009	Blocked					1476.015														
HL-1	10/22/2009						1475.985														
HL-1	10/23/2009						1475.945														
HL-1	10/26/2009						1475.885														
HL-1	10/27/2009						1475.885														
HL-1	10/28/2009						1475.875														
HL-1	10/29/2009						1475.875														
HL-1	10/30/2009						1475.865														
HL-1	11/02/2009						1475.855														
HL-1	11/03/2009						1475.845														
HL-1	11/04/2009						1475.865														
HL-1	11/05/2009						1475.865														
HL-1	11/06/2009						1476.095														
HL-1	11/09/2009						1475.825														
HL-1	11/10/2009						1475.825														
HL-1	11/11/2009						1475.825														
HL-1	11/12/2009	Blocked					1476.095														
HL-1	11/13/2009	Blocked					1476.095														
HL-1	11/16/2009						1475.815														
HL-1	11/17/2009						1475.815														
HL-1	11/18/2009						1475.815														
HL-1	11/19/2009	Blocked					1479.325														
HL-1	11/20/2009	Blocked					1479.325														
HL-1	11/23/2009	Blocked					1479.325														
HL-1	11/24/2009	Blocked					1479.325														
HL-1	11/25/2009						1475.855														
HL-1	11/30/2009						1475.845														
HL-1	11/30/2009		120	120	160	6		418	106	25	7.9	3.6	6	14.6	1080	115	<0.02	3.9	770	<5	1.6
HL-1	12/09/2009						1475.865														
HL-1	12/14/2009	Blocked					1475.865														
HL-1	12/21/2009		127	127	157	6		408	102	24.4	7.7	3.5	5.8	14.5	1080	115	<0.02	3.8	760	5	8.4
HL-1	12/21/2009						1475.845														
HL-1	12/28/2009						1475.855														
HL-1	01/04/2010						1475.855														
HL-1	01/04/2010		41	41	19.6	<1		48	12	2.9	8	1.1	7.9	3.5	143	19	<0.02	2	80	<5	2.4
HL-1	01/11/2010						1476.055														
HL-1	01/19/2010	Blocked					1476.055														
HL-1	02/03/2010		39	39	18.5	<1		46	12	2.8	8	0.9	7.7	3.6	143	20	<0.02		70	<5	3.3
HL-1	02/09/2010	Blocked					1476.055														
HL-1	02/16/2010						1478.255														
HL-1	03/03/2010						1477.005														
HL-1	03/10/2010		45	45	51.4	2		132	37	8.8	7.7	2.4	7.9	8.5	376	41	<0.02		250	<5	4.9
HL-1	03/10/2010						1477.125														

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	GW Elev.	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
HL-1	03/12/2010						1478.255														
HL-1	03/15/2010						1477.215														
HL-1	03/22/2010						1477.325														
HL-1	03/29/2010						1477.405														
HL-1	04/05/2010		44	44	24.7	2	1477.465	61	14	3.5	7.9	1.2	7.5	4.4	177	23	<0.02	6.6	120	<5	2.3
HL-1	04/12/2010						1477.405				7.55										
HL-1	04/19/2010						1477.525				7.54										
HL-1	04/26/2010						1476.905				7.36										
HL-1	05/03/2010						1476.505				7.32										
HL-1	05/11/2010						1475.835														
HL-1	05/26/2010										6.94										
HL-1	06/03/2010						1475.675														
HL-1	06/09/2010						1475.675														
HL-1	06/15/2010		22	22	9.8	1	1475.725	27	22	3.8	7.4	1	8	3.9	116	15	<0.02	6.6	90	106	119
HL-1	06/15/2010						1475.725														
HL-1	06/28/2010						1475.605				7.64										
HL-1	07/07/2010		57	57	22.6	<1	1468.515	59	13	2.9	7.8	1.2	8	3.7	160	19	<0.02	8.7	110	<5	8.5
HL-1	07/08/2010						1466.915														
HL-1	07/15/2010						1466.175														
HL-1	08/05/2010						1470.145														
HL-1	08/12/2010										8.73										
HL-1	08/16/2010		77	77	30.4	<1	1470.435	80	16	3.8	8.2	1.1	8.2	3.9	197	20	<0.02	7.5	130	6	1.1
HL-1	08/20/2010						1470.685														
HL-1	08/23/2010						1469.575														
HL-1	08/24/2010						1466.625														
HL-1	09/01/2010		100	100	49.8	1	1470.925	120	27	6.4	8.2	1.6	7.4	5	306	31	<0.02	12.5	210	<5	2.2
HL-1	09/22/2010						1478.655														
HL-1	09/27/2010						1479.945														
HL-1	10/05/2010		88	88	37.9	1	1480.705	98	20	4.7	8.1	1.5	5.8	5.1	264	23	<0.02		150	<5	19.7
HL-1	11/16/2010						1463.345											2.8			
HL-1	12/21/2010																				
HL-1	12/27/2010		110	110	71.9	2		194	49	11.1	8	2.5	6.6	9.1	498	51	<0.02	3.2	320	<5	6.9
HL-2	10/09/2009	Blocked					1476.119														
HL-2	10/14/2009			82	165	7		413	104	25	7.7	3.7	7.9	16.5	1080	105	0.03		1060	9	9.6
HL-2	10/15/2009						1477.149														
HL-2	10/16/2009						1478.439														
HL-2	10/19/2009	Blocked					1476.459														
HL-2	10/20/2009	Blocked					1476.219														
HL-2	10/21/2009	Blocked					1476.099														
HL-2	10/22/2009						1476.059														
HL-2	10/23/2009						1476.019														
HL-2	10/26/2009						1475.979														
HL-2	10/27/2009						1475.979														
HL-2	10/28/2009						1475.979														
HL-2	10/29/2009						1475.959														
HL-2	10/30/2009						1475.949														
HL-2	11/02/2009						1475.929														
HL-2	11/03/2009						1475.929														
HL-2	11/04/2009						1475.929														

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	GW Elev.	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
HL-2	11/05/2009						1475.949														
HL-2	11/06/2009						1475.919														
HL-2	11/09/2009						1475.879														
HL-2	11/10/2009						1475.919														
HL-2	11/11/2009						1475.909														
HL-2	11/12/2009	Blocked					1475.919														
HL-2	11/13/2009	Blocked					1475.919														
HL-2	11/16/2009						1475.909														
HL-2	11/17/2009						1475.889														
HL-2	11/18/2009						1475.889														
HL-2	11/25/2009						1475.919														
HL-2	11/30/2009		48	48	91.2	7		242	166	36.3	7.4	2.9	7.9	12.9	889	38	0.3	4.1	620	262	263
HL-2	11/30/2009						1475.949														
HL-2	12/09/2009						1475.889														
HL-2	12/14/2009						1475.889														
HL-2	12/21/2009						1475.829														
HL-2	12/28/2009						1475.789														
HL-2	01/04/2010		40	40	85.9	7		213	154	34.6	7.3	2.4	8	12.1	843	37	<0.02	1.7	500	122	125
HL-2	01/04/2010						1475.809														
HL-2	01/05/2010		190	190	67.9	5		189	49	8.7	8	2.2	6.6	25	485	61	0.64	0.9	320	99	157
HL-2	01/11/2010						1476.099														
HL-2	01/19/2010						1475.929														
HL-2	01/26/2010	Blocked					1475.929														
HL-2	02/03/2010		39	39	86.9	4		218	56	13.7	7.9	2.7	6.6	10.2	634	62	<0.02		460	5	4.4
HL-2	02/03/2010						1476.509														
HL-2	02/09/2010						1476.619														
HL-2	02/15/2010						1476.709														
HL-2	03/03/2010						1477.059														
HL-2	03/10/2010		89	89	86.2	3		213	68	16.7	7.8	2.7	6.4	10.5	623	73	<0.02		390	<5	4.3
HL-2	03/10/2010						1477.159														
HL-2	03/15/2010						1477.279														
HL-2	03/22/2010						1477.369														
HL-2	03/29/2010						1477.449														
HL-2	04/05/2010		117	117	24.2	2	1477.509	59	19	4.6	7.6	1.4	7.1	4.5	193	22	<0.02	7.9	130	5	13.4
HL-2	04/12/2010						1477.469				7.21										
HL-2	04/19/2010						1477.599				7.03										
HL-2	04/26/2010						1476.959				7.37										
HL-2	05/03/2010						1476.849				7.25										
HL-2	05/11/2010						1475.939														
HL-2	05/26/2010										6.92										
HL-2	06/03/2010						1475.799														
HL-2	06/09/2010						1475.799														
HL-2	06/15/2010		73	73	29.6	1	1475.799	80	18	4.1	8.2	1.2	7.8	3.9	215	21	<0.02	9.1	150	<5	2.7
HL-2	06/28/2010						1475.729				6.36										
HL-2	07/07/2010						1467.999														
HL-2	07/08/2010						1467.999														
HL-2	07/15/2010	Dry					1466.175														
HL-2	08/05/2010	Dry					1470.145														
HL-2	08/16/2010	Dry					1470.435														

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	GW Elev.	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
HL-2	08/20/2010	Dry					1470.685														
HL-2	08/23/2010	Dry					1469.575														
HL-2	08/24/2010	Dry					1466.625														
HL-2	09/01/2010	Dry					1470.925														
HL-2	09/22/2010						1478.699														
HL-2	09/27/2010						1480.039														
HL-2	10/05/2010		76	76	37.5	1	1477.059	88	23	5.7	8	1.6	7.8	4.8	253	25	<0.02		160	6	3.7
HL-2	11/16/2010						1488.359														
HL-3	10/09/2009	Blocked					1481.507														
HL-3	10/14/2009			29	12.2	1		50	81	3.3	7.3	1.2	8.5	3.5	113	19	0.3		50	2070	614
HL-3	10/15/2009						1481.507														
HL-3	10/16/2009						1482.497														
HL-3	10/19/2009	Blocked					1481.487														
HL-3	10/20/2009	Blocked					1481.867														
HL-3	10/21/2009	Blocked					1481.517														
HL-3	10/22/2009						1481.527														
HL-3	10/23/2009						1481.507														
HL-3	10/26/2009						1481.497														
HL-3	10/27/2009						1481.497														
HL-3	10/28/2009						1481.517														
HL-3	10/29/2009						1481.517														
HL-3	10/30/2009						1481.497														
HL-3	11/02/2009						1481.497														
HL-3	11/03/2009						1481.507														
HL-3	11/04/2009						1481.507														
HL-3	11/05/2009						1481.247														
HL-3	11/06/2009						1481.497														
HL-3	11/09/2009						1481.517														
HL-3	11/10/2009						1481.497														
HL-3	11/11/2009						1481.507														
HL-3	11/12/2009						1481.497														
HL-3	11/13/2009						1481.507														
HL-3	11/16/2009	Blocked					1481.507														
HL-3	11/17/2009						1481.507														
HL-3	11/18/2009						1481.507														
HL-3	11/25/2009						1481.497														
HL-3	11/30/2009		24	24	9.6	<1		27	19	3.5	7.4	1.2	7.5	3.7	103	21	<0.02	5.2	80	132	118
HL-3	11/30/2009						1481.507														
HL-3	12/09/2009						1481.487														
HL-3	12/14/2009						1481.497														
HL-3	12/21/2009						1481.497														
HL-3	12/28/2009						1481.497														
HL-3	01/04/2010		18	18	9.5	1		24	20	3.7	7.3	1	7.5	3.7	98	21	0.04	4.8	60	139	82.3
HL-3	01/04/2010						1481.477														
HL-3	01/11/2010						1481.517														
HL-3	01/19/2010						1481.857														
HL-3	01/26/2010						1481.517														
HL-3	02/03/2010		16	16	10.7	1		29	23	3.6	7.5	1.1	7.3	3.6	119	24	<0.02		80	132	76.6
HL-3	02/03/2010						1481.497														

Non-Process Ground Water - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	GW Elev.	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
HL-3	02/09/2010						1481.497														
HL-3	02/15/2010						1481.587														
HL-3	03/03/2010						1481.577														
HL-3	03/10/2010		<2	<2	9.3	<1		23	18	3.5		1	8.7	3.6	714	22	<0.02	8.4	60	89	93.8
HL-3	03/10/2010						1481.457														
HL-3	03/15/2010						1481.527														
HL-3	03/22/2010						1481.527														
HL-3	03/29/2010						1481.527														
HL-3	04/05/2010		17	17	9.2	2	1481.557	26	21	3.6	7.2	1.1	7.2	3.8	106	22	<0.02	11.1	70	221	111
HL-3	04/12/2010						1481.447				6.35										
HL-3	04/19/2010						1481.487				6.5										
HL-3	04/26/2010						1481.457				6.55										
HL-3	05/03/2010						1481.477				6.45										
HL-3	05/11/2010						1481.417														
HL-3	05/26/2010										6.92										
HL-3	06/03/2010						1481.447														
HL-3	06/09/2010						1481.447														
HL-3	06/15/2010		35	35	37.9	3	1481.457	104	72	14.2	7.5	1.5	8	7.9	409	29	<0.02	14	320	208	230
HL-3	06/28/2010						1481.447				6.32										
HL-3	07/07/2010		23	23	12	<1	1481.397	32	24	3.9	7	1.3	7.4	4	126	39	<0.02	11.6	90	228	154
HL-3	07/08/2010						1481.397														
HL-3	07/08/2010						1481.397														
HL-3	07/15/2010						1481.347														
HL-3	08/05/2010						1481.357														
HL-3	08/12/2010										6.4										
HL-3	08/16/2010		28	28	13.4	<1	1481.347	37	23	4.3	7.6	1.3	7.9	4.5	136	27	<0.02	15.9	100	72	62.4
HL-3	08/20/2010						1481.767														
HL-3	08/23/2010						1481.357														
HL-3	08/24/2010						1481.347														
HL-3	09/01/2010		28	28	14.6	<1	1481.367	36	25	4.4	7.6	1.3	7.6	4	136	26	<0.02	15.3	100	131	101
HL-3	09/22/2010						1481.447														
HL-3	09/27/2010						1481.477														
HL-3	10/05/2010		38	38	19.9	1	1481.757	51	26	4.9	7.5	1.5	8	4.5	182	28	<0.02		110	112	104
HL-3	11/11/2010						1487.567														
HL-3	11/16/2010						1488.347														
HL-3	11/29/2010		62	62	27	<1	1490.167	71	16	3.7	8.1	1.2	7.7	3.7	180	21	<0.02	6.6	110	<5	1
HL-3	12/13/2010						1489.257														
HL-3	12/21/2010						1489.247											4.8			
HL-3	12/27/2010		52	52	20.8	<1		58	13	2.9	8.1	1.3	7.7	3.6	151	22	<0.02	4.6	100	<5	3.2
OL-296	02/17/2010		20	20	7.4	<1		19	10	2.4	7.1	0.8	9.3	4.3	91	21	<0.02	3.5	60	<5	4.9
OL-296	04/14/2010		24	24	9	<1		23	12	2.8	7.6	0.7	8.6	4.3	101	21	<0.02	7.4	80	6	8
OL-296	07/07/2010		8	8	1.6	<1		5	4	0.9	6.9	0.4	8.7	3.7	49	11	<0.02	9.7	50	<5	10.2
OL-296	11/10/2010		25	25	9.5	<1		23	12	3	7.5	0.6	10.1	4.4	111	22	<0.02	3.8	90	<5	5.2

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-1	10/19/2009		<0.05	<0.0005	<0.003	0.1	0.04	<0.005	2.55	<0.01	0.01		<0.003
HL-1	11/03/2009				<0.003								<0.003
HL-1	11/10/2009				<0.003								<0.003
HL-1	11/17/2009				<0.003								<0.003
HL-1	11/25/2009				0.006								0.005
HL-1	11/30/2009		0.26	<0.0005	0.005	<0.1	<0.02	0.422	79	0.03	<0.01		<0.003
HL-1	12/21/2009		0.31	0.0011	0.008	<0.1	0.02	0.472	74	0.04	<0.01		0.004
HL-1	12/28/2009				0.003								0.005
HL-1	01/04/2010		<0.05	0.0009	<0.003	<0.1	0.04	0.015	1.98	<0.01	<0.01		<0.003
HL-1	01/11/2010				0.042								0.005
HL-1	01/19/2010				<0.003								<0.003
HL-1	01/26/2010				<0.003								<0.003
HL-1	02/03/2010		<0.05	0.0006	<0.003	0.1	0.08	<0.005	2.2	<0.01	<0.01		<0.003
HL-1	02/09/2010				<0.003								<0.003
HL-1	02/15/2010				<0.003								<0.003
HL-1	02/23/2010				<0.003								<0.003
HL-1	03/03/2010				<0.003								<0.003
HL-1	03/10/2010		<0.05	<0.0005	0.009	0.2	0.04	0.32	21.4	<0.01	0.01		0.008
HL-1	03/15/2010				0.004								0.004
HL-1	03/22/2010				<0.003								<0.003
HL-1	03/29/2010				<0.003								<0.003
HL-1	04/05/2010		<0.05	<0.0005	<0.003	<0.1	0.05	<0.005	3.53	<0.01	<0.01		<0.003
HL-1	04/12/2010				<0.003								<0.003
HL-1	04/19/2010				<0.003								<0.003
HL-1	04/26/2010				<0.003								<0.003
HL-1	05/03/2010				<0.003								<0.003
HL-1	05/11/2010				<0.003								<0.003
HL-1	05/20/2010				<0.003								<0.003
HL-1	05/26/2010				<0.003								<0.003
HL-1	06/03/2010				<0.003								<0.003
HL-1	06/09/2010				<0.003								<0.003
HL-1	06/15/2010		0.07	<0.0005	<0.003	0.1	0.04	0.101	1.29	<0.01	0.13		<0.003
HL-1	06/21/2010				0.01								0.01

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-1	06/28/2010				<0.003								<0.003
HL-1	07/07/2010		<0.05	0.0009	<0.003	<0.1	0.04	<0.005	1.06	<0.01	0.03		<0.003
HL-1	07/15/2010				0.003								<0.003
HL-1	07/22/2010				<0.003								<0.003
HL-1	07/26/2010				0.004								<0.003
HL-1	08/05/2010				<0.003								<0.003
HL-1	08/12/2010				<0.003								<0.003
HL-1	08/16/2010		<0.05	0.0005	<0.003	<0.1	<0.02	<0.005	1	<0.01	<0.01		<0.003
HL-1	08/24/2010				<0.003								<0.003
HL-1	09/01/2010		0.17	0.0006	<0.003	0.1	0.02	0.134	5.96	0.05	<0.01		<0.003
HL-1	09/08/2010				0.003								<0.003
HL-1	09/14/2010				0.007								0.005
HL-1	09/22/2010				<0.003								<0.003
HL-1	09/27/2010				<0.003								<0.003
HL-1	10/05/2010		<0.05	<0.0005	<0.003	0.1	2.07	0.119	3.89	0.03	<0.01		<0.003
HL-1	10/12/2010				<0.003								<0.003
HL-1	10/20/2010				<0.003								<0.003
HL-1	12/21/2010				<0.003								<0.003
HL-1	12/27/2010		<0.05	<0.0005	<0.003	0.2	<0.02	0.032	21.6	0.02	0.01		<0.003
HL-2	10/14/2009		0.12	<0.0005	0.034	0.1	0.14	1.11	97.9	0.09	0.04		0.028
HL-2	11/03/2009				0.037								0.032
HL-2	11/10/2009				0.038								0.033
HL-2	11/17/2009				0.039								0.029
HL-2	11/25/2009				0.037								0.032
HL-2	11/30/2009		0.37	<0.0005	0.035	<0.1	0.21	4.83	0.02	0.05	0.29		0.029
HL-2	12/14/2009				0.02								0.012
HL-2	12/21/2009				0.031								0.027
HL-2	12/28/2009				0.03								0.025
HL-2	01/04/2010		0.28	<0.0005	0.032	<0.1	0.09	3.23	75.7	0.11	0.27		0.026
HL-2	01/05/2010		<0.05	<0.0005	<0.003	<0.1	1.03	0.493	0.04	<0.01	0.14		<0.003
HL-2	01/19/2010				<0.003								<0.003
HL-2	01/28/2010				0.015								0.014
HL-2	02/03/2010		<0.05	<0.0005	0.019	0.2	0.03	0.272	54.2	<0.01	<0.01		0.015
HL-2	02/09/2010				0.013								0.013

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-2	02/15/2010				0.013								0.013
HL-2	02/23/2010				0.012								0.011
HL-2	03/03/2010				0.01								0.009
HL-2	03/10/2010		0.96	<0.0005	0.004	0.2	0.07	0.174	33.4	0.06	<0.01		<0.003
HL-2	03/15/2010				0.008								0.007
HL-2	03/22/2010				0.006								0.005
HL-2	03/29/2010				0.003								0.003
HL-2	04/05/2010		<0.05	<0.0005	0.01	<0.1	0.02	0.177	4.9	0.01	0.02		0.009
HL-2	04/12/2010				<0.003								<0.003
HL-2	04/19/2010				<0.003								<0.003
HL-2	04/26/2010				0.003								0.003
HL-2	05/03/2010				0.008								0.007
HL-2	05/11/2010				0.008								0.007
HL-2	05/20/2010				<0.003								<0.003
HL-2	05/26/2010				<0.003								<0.003
HL-2	06/03/2010				0.01								0.005
HL-2	06/09/2010				0.011								0.009
HL-2	06/15/2010		<0.05	0.0013	<0.003	<0.1	0.02	0.006	2.62	<0.01	<0.01		<0.003
HL-2	06/21/2010				0.011								0.01
HL-2	06/28/2010				0.012								0.009
HL-2	09/14/2010				<0.003								<0.003
HL-2	09/22/2010				<0.003								<0.003
HL-2	09/27/2010				<0.003								<0.003
HL-2	10/05/2010		<0.05	<0.0005	<0.003	0.1	<0.02	0.141	5.08	<0.01	0.01		<0.003
HL-2	10/12/2010				<0.003								<0.003
HL-2	10/20/2010				<0.003								<0.003
HL-3	10/14/2009		<0.05	<0.0005	<0.003	<0.1	0.12	0.051	0.8	<0.01	0.73		<0.003
HL-3	11/03/2009				<0.003								<0.003
HL-3	11/10/2009				<0.003								<0.003
HL-3	11/17/2009				<0.003								<0.003
HL-3	11/25/2009				<0.003								<0.003
HL-3	11/30/2009		0.06	<0.0005	<0.003	0.1	0.1	0.056	21.6	0.48	0.13		<0.003
HL-3	12/14/2009				<0.003								<0.003
HL-3	12/21/2009				<0.003								<0.003

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-3	12/28/2009				<0.003								<0.003
HL-3	01/04/2010		<0.05	<0.0005	<0.003	<0.1	0.1	0.155	0.85	<0.01	0.12		<0.003
HL-3	01/11/2010				<0.003								<0.003
HL-3	01/19/2010				<0.003								<0.003
HL-3	01/26/2010				<0.003								<0.003
HL-3	02/03/2010		<0.05	<0.0005	<0.003	0.2	0.07	0.041	1.74	<0.01	0.13		<0.003
HL-3	02/09/2010				<0.003								<0.003
HL-3	02/15/2010				<0.003								<0.003
HL-3	02/23/2010				<0.003								<0.003
HL-3	03/03/2010				<0.003								<0.003
HL-3	03/10/2010		<0.05	<0.0005	<0.003	0.2	0.15	0.097	0.85	<0.01	0.07		<0.003
HL-3	03/15/2010				<0.003								<0.003
HL-3	03/22/2010				<0.003								<0.003
HL-3	03/29/2010				<0.003								<0.003
HL-3	04/05/2010		<0.05	<0.0005	<0.003	0.1	0.08	0.042	0.99	<0.01	0.2		<0.003
HL-3	04/12/2010				<0.003								<0.003
HL-3	04/19/2010				<0.003								<0.003
HL-3	04/26/2010				<0.003								<0.003
HL-3	05/03/2010				<0.003								<0.003
HL-3	05/11/2010				<0.003								<0.003
HL-3	05/20/2010				<0.003								<0.003
HL-3	05/26/2010				0.009								0.009
HL-3	06/03/2010				<0.003								<0.003
HL-3	06/09/2010				<0.003								<0.003
HL-3	06/15/2010		0.3	<0.0005	0.013	<0.1	0.06	1.66	31.1	0.07	0.32		0.011
HL-3	06/21/2010				<0.003								<0.003
HL-3	06/28/2010				<0.003								<0.003
HL-3	07/07/2010		0.07	<0.0005	<0.003	<0.1	0.04	0.098	2.03	<0.01	0.07		<0.003
HL-3	07/15/2010				<0.003								<0.003
HL-3	07/22/2010				<0.003								<0.003
HL-3	07/26/2010				<0.003								<0.003
HL-3	08/05/2010				<0.003								<0.003
HL-3	08/12/2010				<0.003								<0.003
HL-3	08/16/2010		0.11	<0.0005	<0.003	<0.1	0.04	0.101	1.96	<0.01	0.07		<0.003

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-3	08/24/2010				<0.003								<0.003
HL-3	09/01/2010		0.05	<0.0005	<0.003	0.1	0.05	0.071	1.96	<0.01	0.1		<0.003
HL-3	09/08/2010				<0.003								<0.003
HL-3	09/14/2010				<0.003								<0.003
HL-3	09/22/2010				<0.003								<0.003
HL-3	09/27/2010				<0.003								<0.003
HL-3	10/05/2010		<0.05	<0.0005	<0.003	<0.1	0.25	0.04	2.82	<0.01	0.06		<0.003
HL-3	10/12/2010				<0.003								<0.003
HL-3	10/20/2010				<0.003								<0.003
HL-3	10/29/2010				<0.003								<0.003
HL-3	11/04/2010				<0.003								<0.003
HL-3	11/11/2010				<0.003								<0.003
HL-3	11/16/2010				<0.003								<0.003
HL-3	11/26/2010				<0.003								<0.003
HL-3	11/29/2010		<0.05	0.0012	<0.003	<0.1	0.05	0.071	0.88	<0.01	<0.01		<0.003
HL-3	12/13/2010				<0.003								<0.003
HL-3	12/15/2010				0.181								0.03
HL-3	12/21/2010				<0.003								<0.003
HL-3	12/27/2010		<0.05	0.0011	<0.003	0.2	<0.02	<0.005	0.61	<0.01	<0.01		<0.003
OL-296	02/17/2010		<0.05	<0.0005	<0.003	<0.1	2.63	0.126	0.05	<0.01	0.01		<0.003
OL-296	04/14/2010		<0.05	<0.0005	<0.003	0.1	2.71	0.123	0.04	<0.01	<0.01		<0.003
OL-296	07/07/2010		<0.05	<0.0005	<0.003	<0.1	2.91	0.1	0.04	<0.01	0.02		<0.003
OL-296	11/10/2010		<0.05	<0.0005	<0.003	0.1	2.2	0.107	0.06	<0.01	<0.01		<0.003
HL-1	10/09/2009	Blocked											
HL-1	10/19/2009	Blocked											
HL-1	10/20/2009	Blocked											
HL-1	10/21/2009	Blocked											
HL-1	11/12/2009	Blocked											
HL-1	11/13/2009	Blocked											
HL-1	11/19/2009	Unsafe Access											
HL-1	11/20/2009	Unsafe Access											
HL-1	11/23/2009	Unsafe Access											
HL-1	11/24/2009	Unsafe Access											
HL-1	12/14/2009	Blocked											

Non-Process Ground Water - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
HL-1	01/19/2010	Unsafe Access											
HL-1	02/09/2010	Unsafe Access											
HL-2	10/09/2009	Blocked											
HL-2	10/19/2009	Blocked											
HL-2	10/20/2009	Blocked											
HL-2	10/21/2009	Blocked											
HL-2	11/12/2009	Blocked											
HL-2	11/13/2009	Blocked											
HL-2	01/26/2010	Frozen											
HL-2	07/15/2010	Dry											
HL-2	08/05/2010	Dry											
HL-2	08/16/2010	Dry											
HL-2	08/20/2010	Dry											
HL-2	08/23/2010	Dry											
HL-2	08/24/2010	Dry											
HL-2	09/01/2010	Dry											
HL-3	10/09/2009	Blocked											
HL-3	10/19/2009	Blocked											
HL-3	10/20/2009	Blocked											
HL-3	10/21/2009	Blocked											
HL-3	11/16/2009	Blocked											

Non-Process Ground Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
HL-1	10/19/2009		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.03	0.0002	<0.01	<0.01
HL-1	11/30/2009		<0.0004	0.061	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.02	0.0006	0.02	<0.01
HL-1	12/21/2009		<0.0004	0.056	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	0.0003	<0.01	<0.01
HL-1	01/04/2010		<0.0004	0.003	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
HL-1	02/03/2010		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0002	<0.01	<0.01
HL-1	03/10/2010		<0.0004	0.016	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.02	0.0006	<0.01	<0.01
HL-1	04/05/2010		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0003	<0.01	<0.01
HL-1	06/15/2010		<0.0004	0.006	<0.04	<0.0001	<0.01	0.02	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
HL-1	07/07/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	0.0005	<0.0002	<0.01	0.0002	<0.01	<0.01
HL-1	08/16/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
HL-1	09/01/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
HL-1	10/05/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
HL-1	12/27/2010		<0.0004	0.026	0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0005	<0.01	<0.01
HL-2	10/14/2009		<0.0004	0.041	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.03	0.002	<0.01	<0.01
HL-2	11/30/2009		<0.0004	0.051	<0.04	0.0002	<0.01	<0.01	<0.0001	<0.0002	0.13	0.001	<0.01	<0.01
HL-2	01/04/2010		<0.0004	0.044	<0.04	0.0002	<0.01	<0.01	<0.0001	<0.0002	0.1	0.0006	<0.01	0.03
HL-2	01/05/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	3.08
HL-2	02/03/2010		<0.0004	0.026	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0014	<0.01	<0.01
HL-2	03/10/2010		<0.0004	0.026	0.05	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0003	<0.01	<0.01
HL-2	04/05/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0003	<0.01	<0.01
HL-2	06/15/2010		<0.0004	0.004	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	<0.0001	<0.01	<0.01
HL-2	10/05/2010		0.0006	0.006	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.02	0.0001	<0.01	<0.01
HL-3	10/14/2009		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.01	0.0001	<0.01	<0.01
HL-3	11/30/2009		<0.0004	0.009	<0.04	<0.0001	0.01	<0.01	<0.0001	<0.0002	0.01	0.0002	0.01	<0.01
HL-3	01/04/2010		<0.0004	0.008	<0.04	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.02	<0.0001	<0.01	0.06
HL-3	02/03/2010		<0.0004	0.01	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0002	<0.01	<0.01
HL-3	03/10/2010		<0.0004	0.009	0.08	<0.0001	<0.01	<0.01	0.0001	<0.0002	0.02	0.0001	<0.01	<0.01
HL-3	04/05/2010		<0.0004	0.005	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0002	<0.01	<0.01
HL-3	06/15/2010		<0.0004	0.019	<0.04	<0.0001	<0.01	0.02	<0.0001	<0.0002	0.05	0.0003	<0.01	<0.01
HL-3	07/07/2010		<0.0004	0.009	<0.04	<0.0001	<0.01	0.01	0.0005	<0.0002	<0.01	0.0001	<0.01	<0.01
HL-3	08/16/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0002	<0.01	<0.01
HL-3	09/01/2010		<0.0004	0.01	0.06	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	0.0001	<0.01	<0.01
HL-3	10/05/2010		<0.0004	0.007	<0.04	<0.0001	<0.01	<0.01	0.0004	<0.0002	0.01	<0.0001	<0.01	<0.01
HL-3	11/29/2010		0.0005	0.006	<0.04	<0.0001	<0.01	<0.01	0.0003	<0.0002	<0.01	<0.0001	<0.01	<0.01
HL-3	12/27/2010		<0.0004	0.012	<0.04	<0.0001	<0.01	<0.01	0.0002	<0.0002	<0.01	0.0002	<0.01	<0.01
OL-296	02/17/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	0.01	0.0002	<0.01	<0.01
OL-296	04/14/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0001	<0.01	<0.01
OL-296	07/07/2010		<0.0004	<0.003	0.04	<0.0001	<0.01	<0.01	0.0006	<0.0002	<0.01	0.0002	<0.01	<0.01
OL-296	11/10/2010		<0.0004	<0.003	<0.04	<0.0001	<0.01	<0.01	<0.0001	<0.0002	<0.01	0.0016	<0.01	<0.01
HL-1	10/09/2009	Blocked												
HL-1	10/19/2009	Blocked												
HL-1	10/20/2009	Blocked												
HL-1	10/21/2009	Blocked												
HL-1	11/12/2009	Blocked												
HL-1	11/13/2009	Blocked												
HL-1	11/19/2009	Blocked												
HL-1	11/20/2009	Blocked												
HL-1	11/23/2009	Blocked												

Non-Process Ground Water - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
HL-1	11/24/2009	Blocked												
HL-1	12/14/2009	Blocked												
HL-1	01/19/2010	Blocked												
HL-1	02/09/2010	Blocked												
HL-2	10/09/2009	Blocked												
HL-2	10/19/2009	Blocked												
HL-2	10/20/2009	Blocked												
HL-2	10/21/2009	Blocked												
HL-2	11/12/2009	Blocked												
HL-2	11/13/2009	Blocked												
HL-2	01/26/2010	Frozen												
HL-2	07/15/2010	Dry												
HL-2	08/05/2010	Dry												
HL-2	08/16/2010	Dry												
HL-2	08/20/2010	Dry												
HL-2	08/23/2010	Dry												
HL-2	08/24/2010	Dry												
HL-2	09/01/2010	Dry												
HL-3	10/09/2009	Blocked												
HL-3	10/19/2009	Blocked												
HL-3	10/20/2009	Blocked												
HL-3	10/21/2009	Blocked												
HL-3	11/16/2009	Blocked												

Pregnant Solution - Major Ion Chemistry

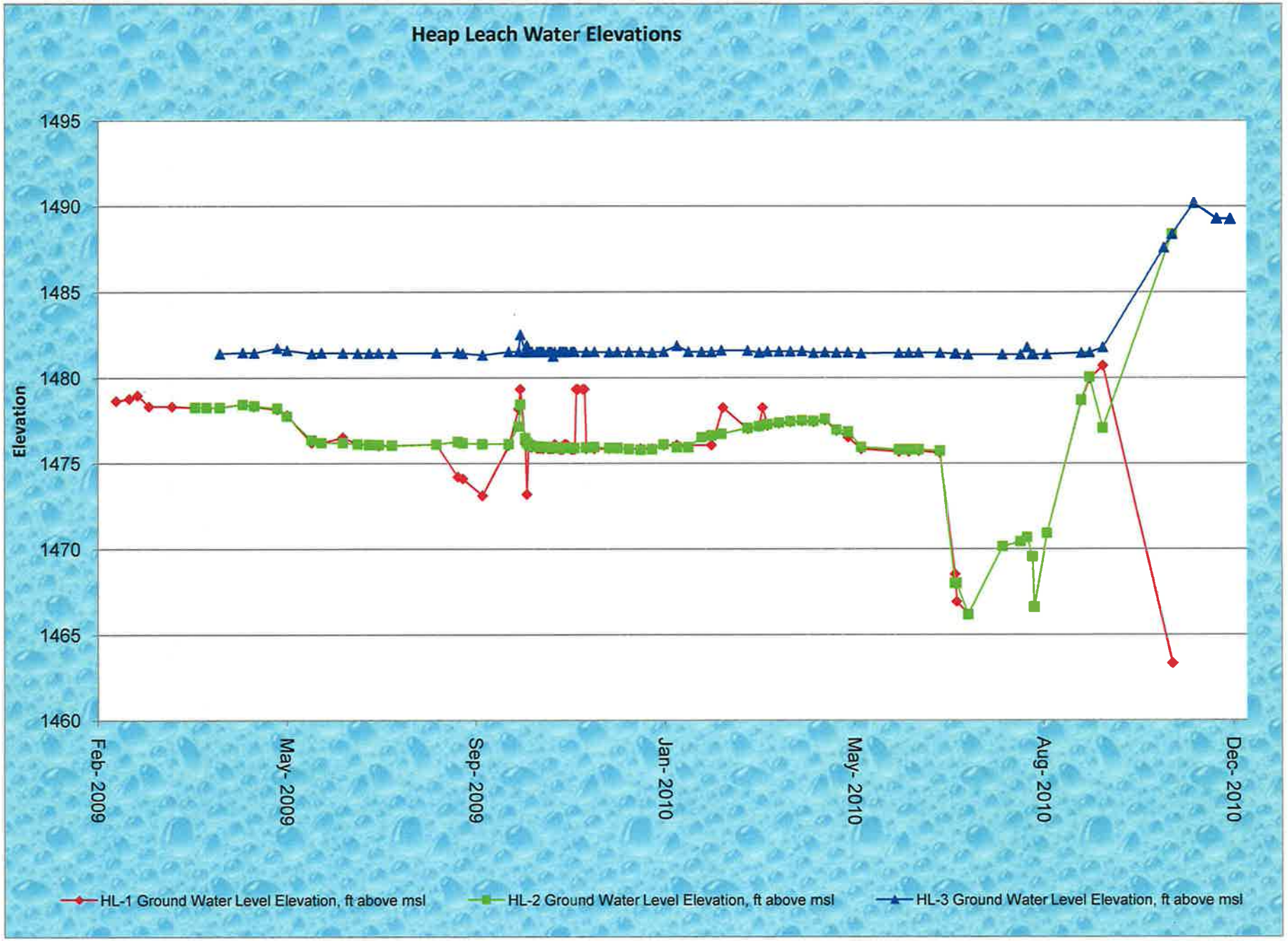
Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	S	Temp. (C)	TDS	TSS	Tur
Pregnant Solution	12/16/2009		<2	452	191	240	480		<0.2		7.2	7.4	128	1750	95	0.06	11.3	890	<5	0.6
Pregnant Solution	01/13/2010		<2	494	204	220	520		<0.2		6.6	6	109	1860	51	<0.02		230	<5	0.4
Pregnant Solution	04/07/2010				227	250	588		<0.2		6.4	5.3	112	2380	22	<0.02		980	12	3.9
Pregnant Solution	07/06/2010		<2	454	235	230	593		<0.2		6.5	5.4	85.6	1680	23	<0.02		930	7	0.3
Pregnant Solution	12/28/2010		<2	250	174	170	458	1	<0.2	20	6.2	5.7	81	1300	56	0.02		820	<5	0.2

Pregnant Solution - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
Pregnant Solution	12/16/2009		8.6	0.0123	133	<1	0.35	<0.005	29.5	1.47	<0.01		131
Pregnant Solution	01/13/2010		9.6	0.0104	127	0.8	0.35	0.006	27.7	1.4	0.02		120
Pregnant Solution	04/07/2010		30.5	0.0089	158	0.5	0.19	<0.005	34.8	1.8	0.02		144
Pregnant Solution	07/06/2010		12.9	0.0096	134	0.5	0.11	<0.005	59	2.2	<0.1		122
Pregnant Solution	12/28/2010		9.2	0.0202	105	0.9	0.57	<0.005	57	3.2	0.01		98

Pregnant Solution - Trace Ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
Pregnant Solution	12/16/2009		0.0054	0.01	<0.04	0.003	0.01	0.11	0.0002	0.0022	0.02	0.0128	0.04	0.42
Pregnant Solution	01/13/2010		0.0029	0.016	<0.04	0.0035	<0.01	0.11	0.0004	0.0027	<0.01	0.0116	0.01	0.38
Pregnant Solution	04/07/2010		0.0014	0.013	<0.04	0.0049	0.01	0.1	0.0005	0.0036	0.02	0.0141	<0.01	0.57
Pregnant Solution	07/06/2010		0.0019	0.006	<0.04	0.0069	<0.01	0.1	0.0004	0.0053	0.01	0.0185	0.05	0.66
Pregnant Solution	12/28/2010		0.0031	0.016	<0.04	0.0091	<0.01	0.19	<0.0001	0.0073	0.02	0.0179	0.02	1.39


Heap Leach Water Elevations
Elevation
1495
1490
1485
1480
1475
1470
1465
1460
Feb- 2009
May- 2009
Sep- 2009
Jan- 2010
May- 2010
Aug- 2010
Dec- 2010
HL-1 Ground Water Level Elevation, ft above msl
HL-2 Ground Water Level Elevation, ft above msl
HL-3 Ground Water Level Elevation, ft above msl

METEORIC WATER MOBILITY DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Meteoric Water Mobility - Major Ion Chemistry

Site	Date	Reason If No Sample	Bic Alk	Tot Alk	Ca	Cl	Ca Hard	Mg Hard	Mg	Lab pH	K	Si	Na	Lab Cond.	SO4	TDS	TSS
Low Grade Stockpile	12/21/2009				13.1				0.5		5.5		16.2				
Tailing Solids	11/11/2009				4				<0.2		7.2		74.4				
Tailing Solids	01/22/2010				5.1				<0.2		8.2		123				
Tailing Solids	04/06/2010				4.2				0.3		9		202				
Tailing Solids	08/09/2010				2.1				0.2		6.3		211				
Tailing Solids	11/10/2010				2.5				<0.2		4.8		119				
Topsoil Sample	12/21/2009				9.1				2.6		5.8		6.3				
Topsoil Sample	11/10/2010				9.7				2.8		2.7		5.9				
Yearly A-Ore	12/21/2009				17.1				0.6		6.4		19.6				
Yearly A-Ore	11/10/2010				9				0.7		3.6		15.4				

Meteoric Water Mobility - Minor Ion Chemistry

Site	Date	Reason If No Sample	NH4	As	CN	F	Fe	Mn	NO3	NO2	P	TPH	WAD CN
Low Grade Stockpile	12/21/2009			0.0125			0.07	0.006					
Tailing Solids	11/11/2009			0.0379			<0.02	<0.005					
Tailing Solids	01/22/2010			0.0325			0.03	<0.005					
Tailing Solids	04/06/2010			0.0494			0.49	0.01					
Tailing Solids	08/09/2010			0.289			0.74	0.019					
Tailing Solids	11/10/2010			0.0658			0.08	<0.005					
Topsoil Sample	12/21/2009			0.0014			0.41	0.565					
Topsoil Sample	11/10/2010			0.002			0.52	0.948					
Yearly A-Ore	12/21/2009			0.0381			0.04	<0.005					
Yearly A-Ore	11/10/2010			0.017			0.04	<0.005					

Meteoric Water Mobility - Trace ion Chemistry

Site	Date	Reason If No Sample	Sb	Ba	Bi	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn
Low Grade Stockpile	12/21/2009		0.007	<0.003	<0.04	<0.0001	0.0008	0.0008	0.0006	<0.0002	<0.0006	0.0005	<5E-05	<0.01
Tailing Solids	11/11/2009		0.0118	<0.003	<0.04	<0.0001	0.0011	0.0017	<0.0001	<0.0002	<0.0006	0.001	0.00032	<0.01
Tailing Solids	01/22/2010		0.0139	0.003	<0.04	<0.0001	0.0019	0.0025	<0.0001	<0.0002	<0.0006	0.0015	<5E-05	<0.01
Tailing Solids	04/06/2010		0.0129	0.008	0.07	0.0002	0.0095	0.0051	0.0017	<0.0002	0.0021	0.002	<5E-05	<0.01
Tailing Solids	08/09/2010		0.021	0.029	<0.04	<0.0005	0.005	0.003	0.004	<0.0002	<0.003	0.0019	<5E-05	<0.01
Tailing Solids	11/10/2010		0.0132	0.003	<0.04	<0.0001	0.0033	0.0026	0.0005	<0.0002	<0.0006	0.0022	<5E-05	<0.01
Topsoil Sample	12/21/2009		0.0005	0.022	<0.04	<0.0001	0.0015	0.0071	0.001	<0.0002	0.0062	0.0006	<5E-05	<0.01
Topsoil Sample	11/10/2010		0.0008	0.109	<0.04	0.0002	0.0029	0.0192	0.0008	<0.0002	0.0058	0.0005	<5E-05	0.01
Yearly A-Ore	12/21/2009		0.03	<0.003	<0.04	<0.0001	<0.0005	<0.0005	0.0002	<0.0002	<0.0006	<0.0005	<5E-05	<0.01
Yearly A-Ore	11/10/2010		0.005	0.003	<0.04	<0.001	<0.005	<0.005	<0.001	<0.0002	<0.006	<0.001	<0.0005	<0.01

ACID ROCK DRAINAGE CHARACTERIZATION DATA

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

Static Acid/Base Accounting

Site	Date	Reason If No Sample	Acid Generation Potential AGP (tons/100tons)	Acid Neutralization Potential ANP (tons/100tons)	ANP/AGP
Low Grade Stockpile	12/21/2009		<1	51	51
Tailing Solids	11/11/2009		<1	48	48
Tailing Solids	01/22/2010		<1	49	49
Tailing Solids	04/06/2010		<1	55	55
Tailing Solids	08/09/2010		<1	36	36
Tailing Solids	11/10/2010		<1	34	34
Topsoil Sample	12/21/2009		<1	6	6
Topsoil Sample	11/10/2010		<1	4	4
Yearly A-Ore	12/21/2009		<1	51	51
Yearly A-Ore	11/10/2010		<1	37	37

UPPER TOLERANCE LIMITS FOR GROUNDWATER & SURFACE WATER COMPLIANCE SAMPLING POINTS

FAIRBANKS GOLD MINING, INC.
FORT KNOX MINE

4th Qtr 2010

UTLs for Groundwater Monitoring Locations

Parameter	MW-5, MW-6, and MW-8 Upper Tolerance Limit (mg/L)	MW-7 Upper Tolerance Limit (mg/L)
As	0.005	0.002
Cu	0.02	0.02
Cl	17	26
CN WAD	ML	ML
NO_2	1	1
NO_3	3.87	13
NH_4	0.33	0.36
Sb	0.002	0.0155
SO_4	70	910

Dissolved Concentrations

Note: If the minimum level (ML) for any indicator parameter is greater than the calculated tolerance limit, the ML will be adopted as the tolerance limit

Outlined In the Fort Knox Compliance Monitoring Plan April 11, 2008

UTLs for Surface Water Monitoring Locations

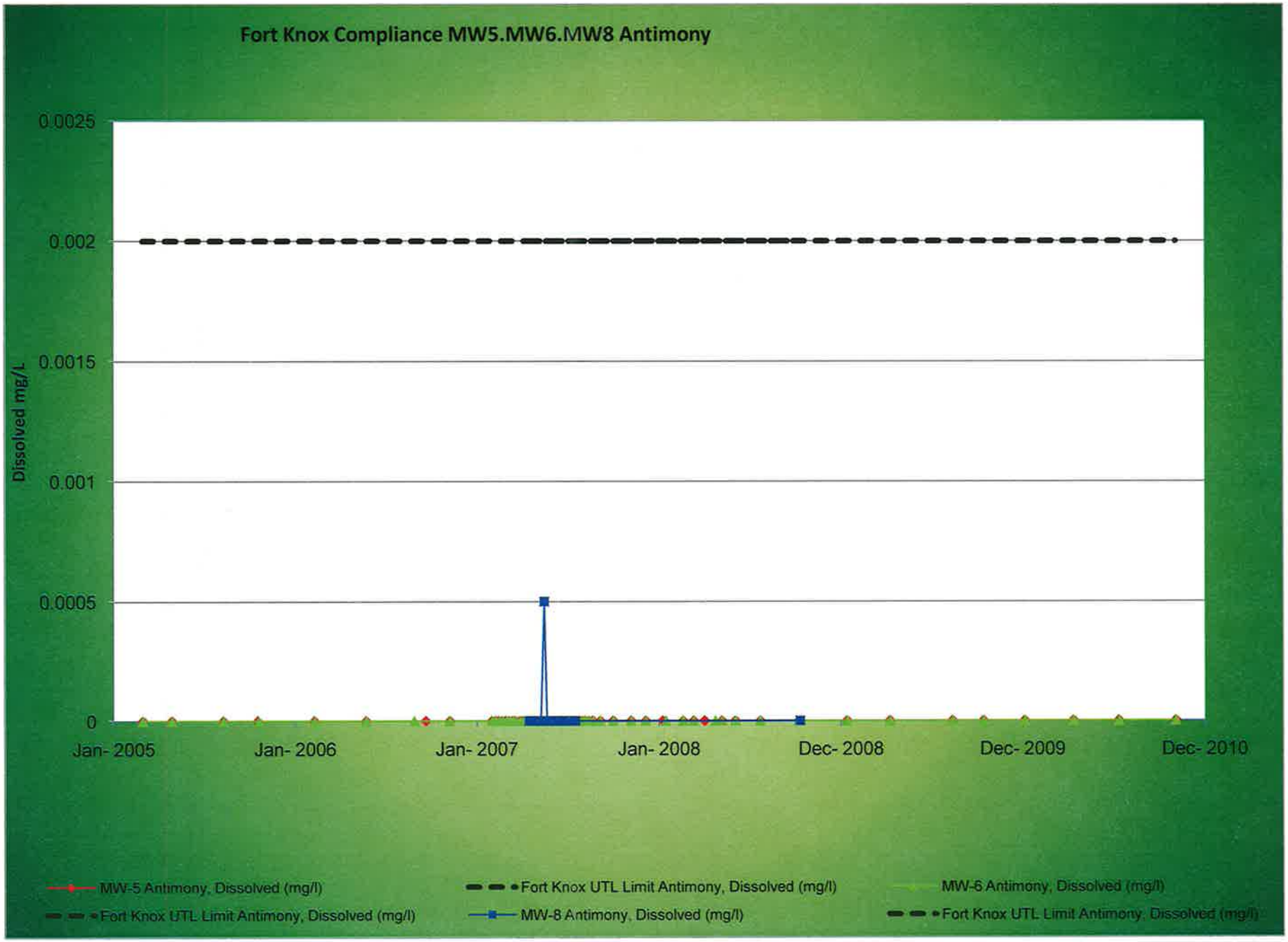
Parameter	Upper and Lower Wetlands Upper Tolerance Limit (mg/L)
As	0.0437
Cu	0.01
Cl	2.5
CN WAD	ML
NO_2	1
NO_3	1.4
NH_4	1.1
Sb	0.005
SO_4	53

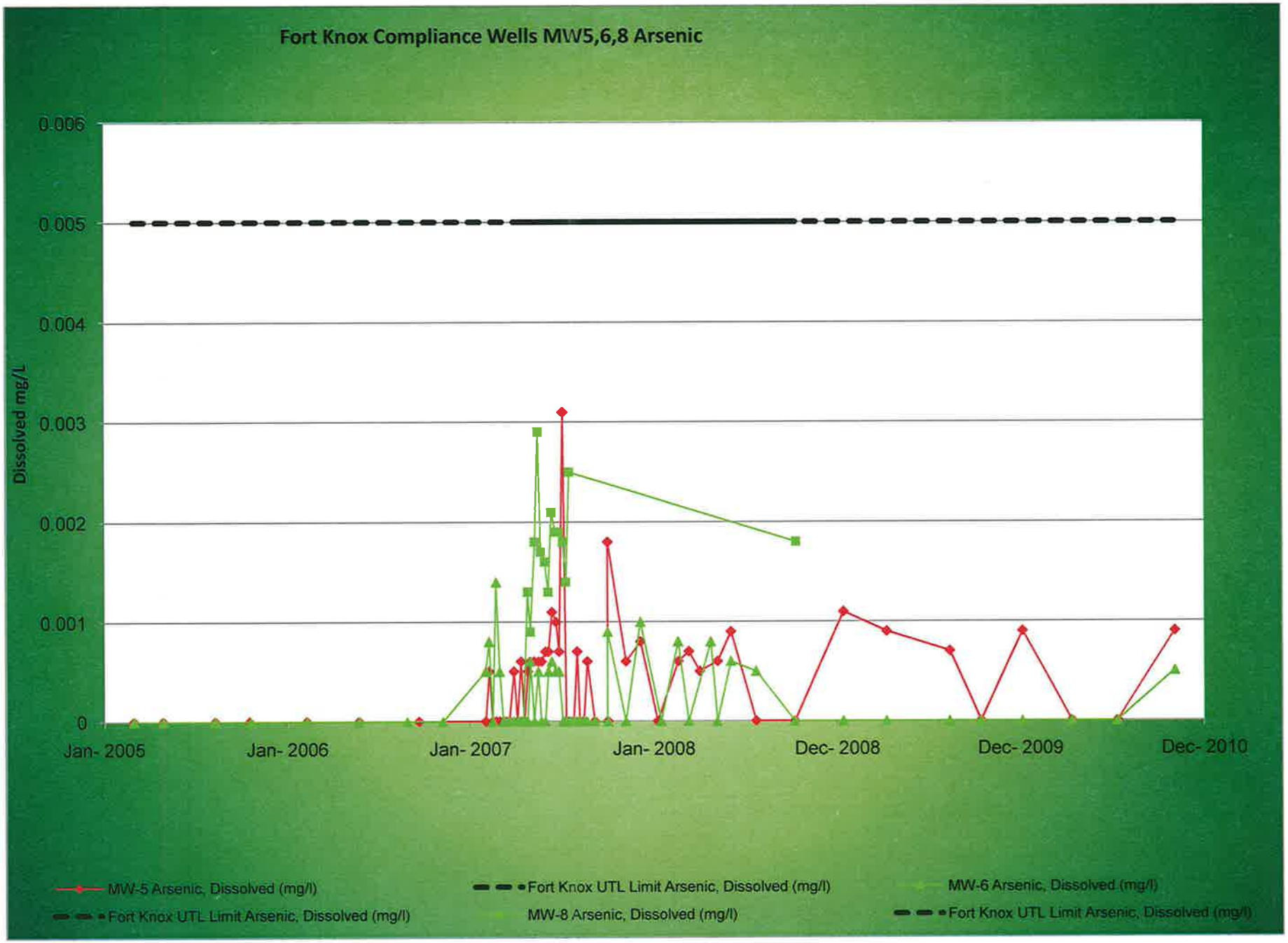
Total Concentrations

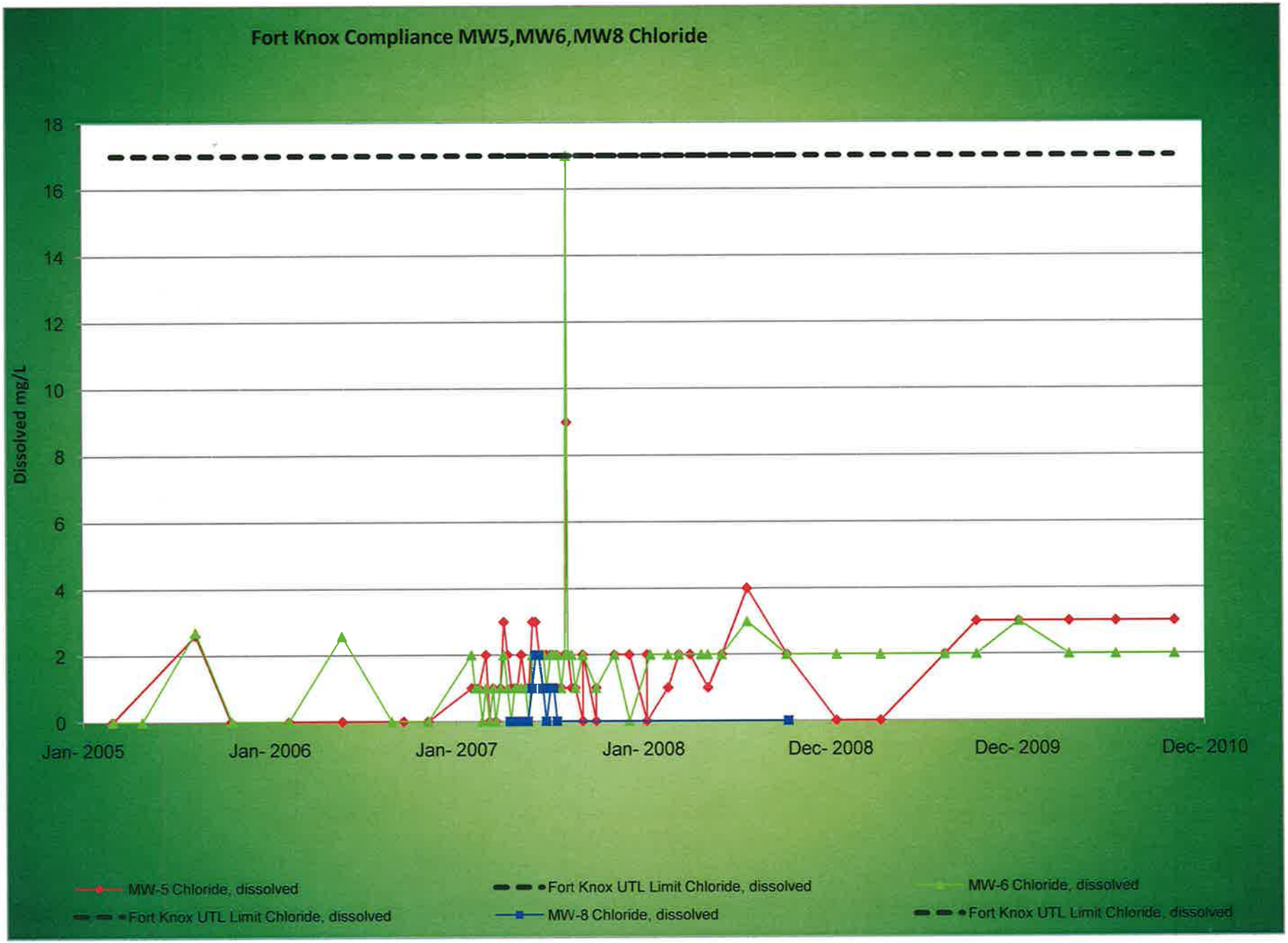
Note: If the minimum level (ML) for any indicator parameter is greater than the calculated tolerance limit, the ML will be adopted as the tolerance limit

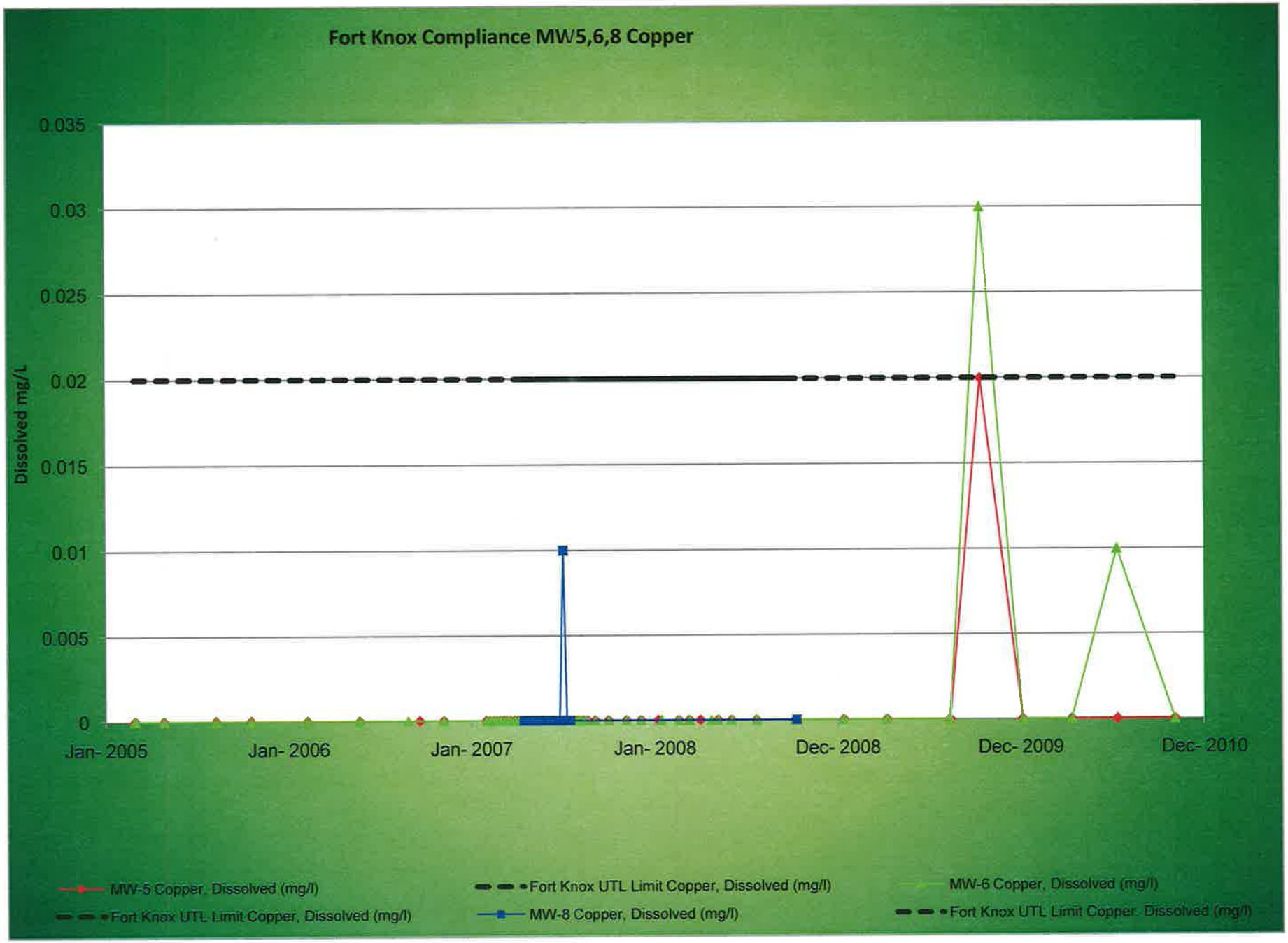
Outlined In the Fort Knox Compliance Monitoring Plan April 11, 2008

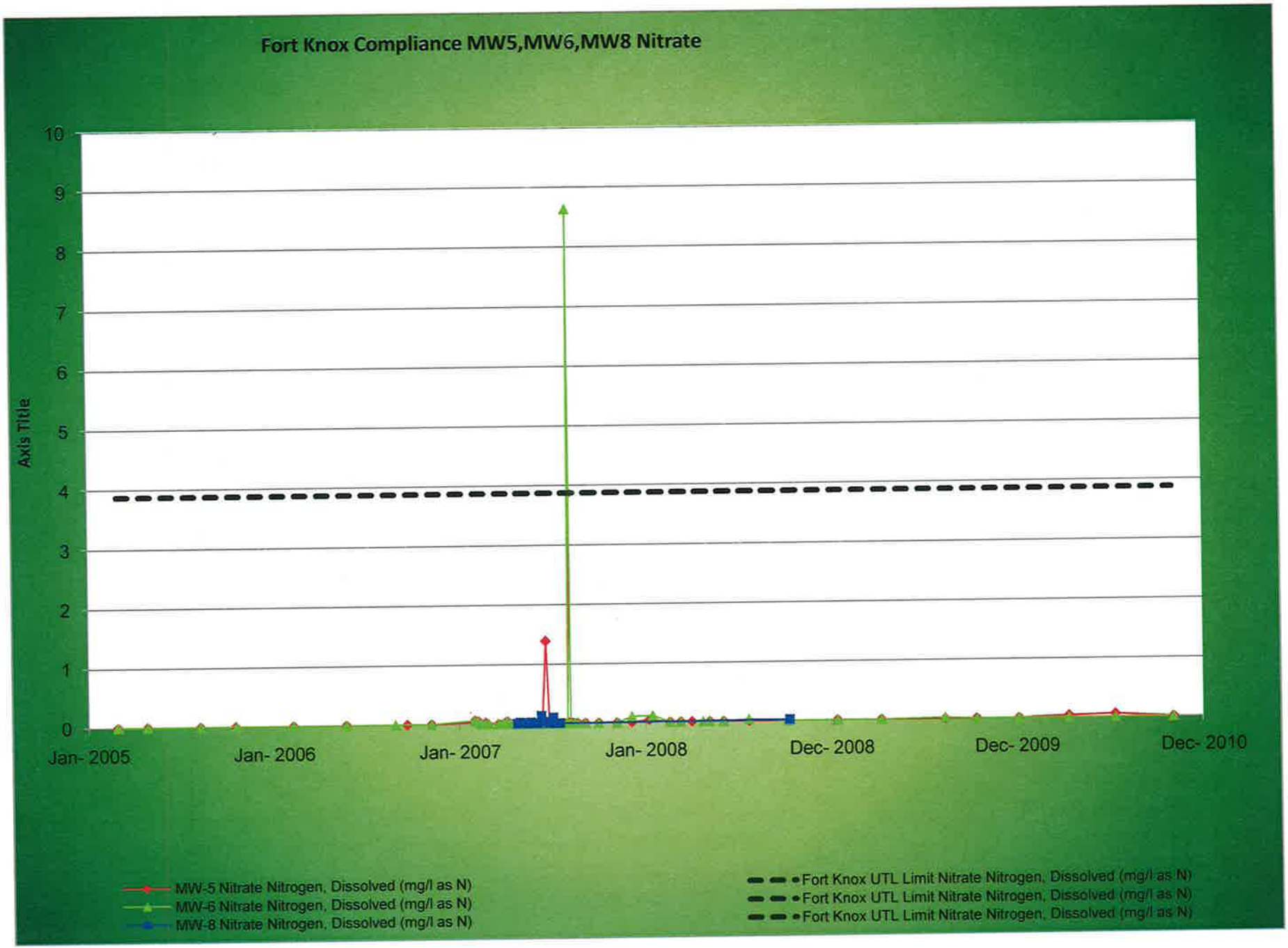
ATTACHMENT C
Compliance Sampling
Water Quality Graphs

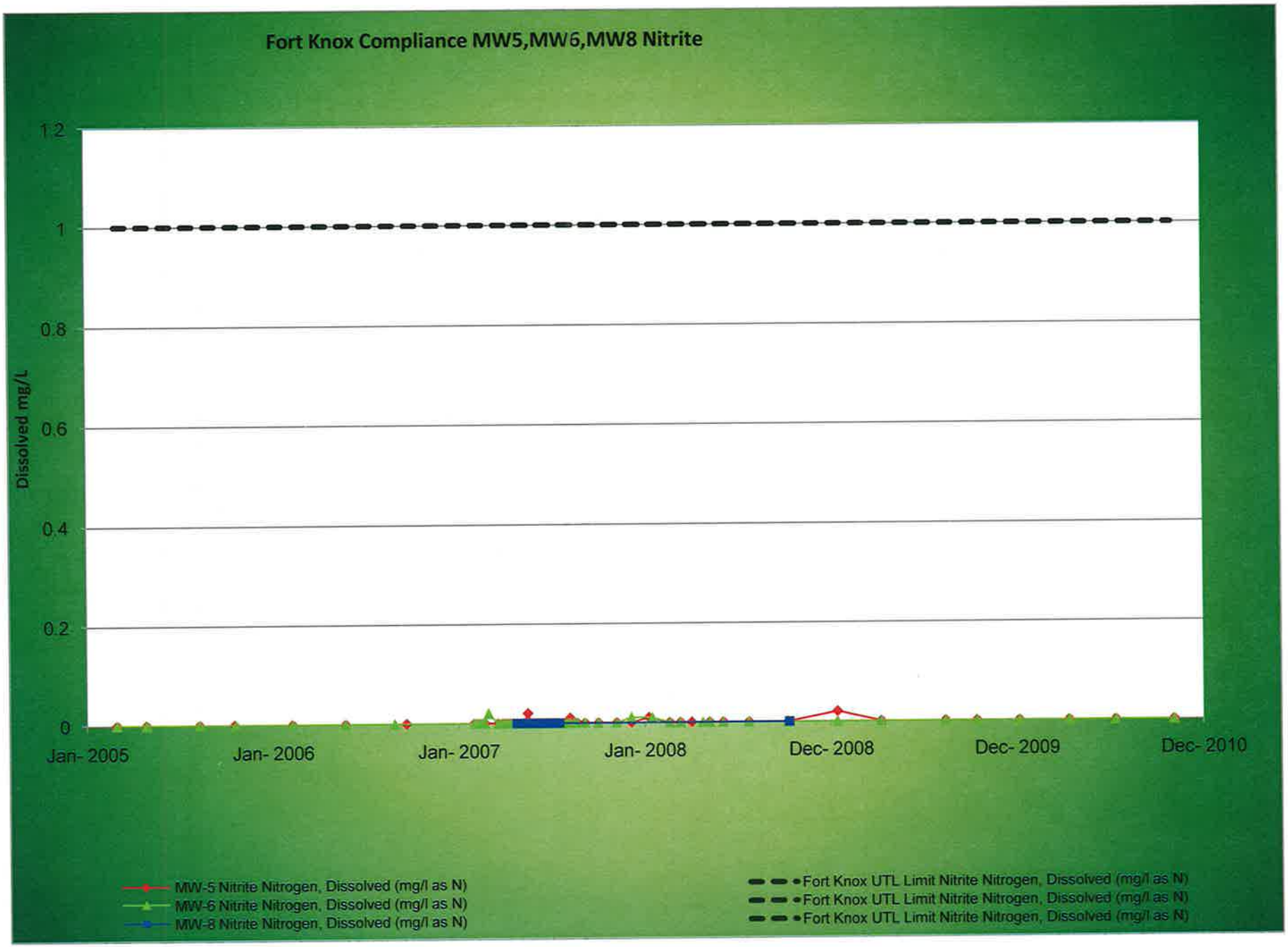

Fort Knox Compliance MW5.MW6.MW8 Antimony
0.0025
0.002
0.0015
0.001
0.0005
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Antimony, Dissolved (mg/l)
Fort Knox UTL Limit Antimony, Dissolved (mg/l)
MW-6 Antimony, Dissolved (mg/l)
Fort Knox UTL Limit Antimony, Dissolved (mg/l)
MW-8 Antimony, Dissolved (mg/l)
Fort Knox UTL Limit Antimony, Dissolved (mg/l)

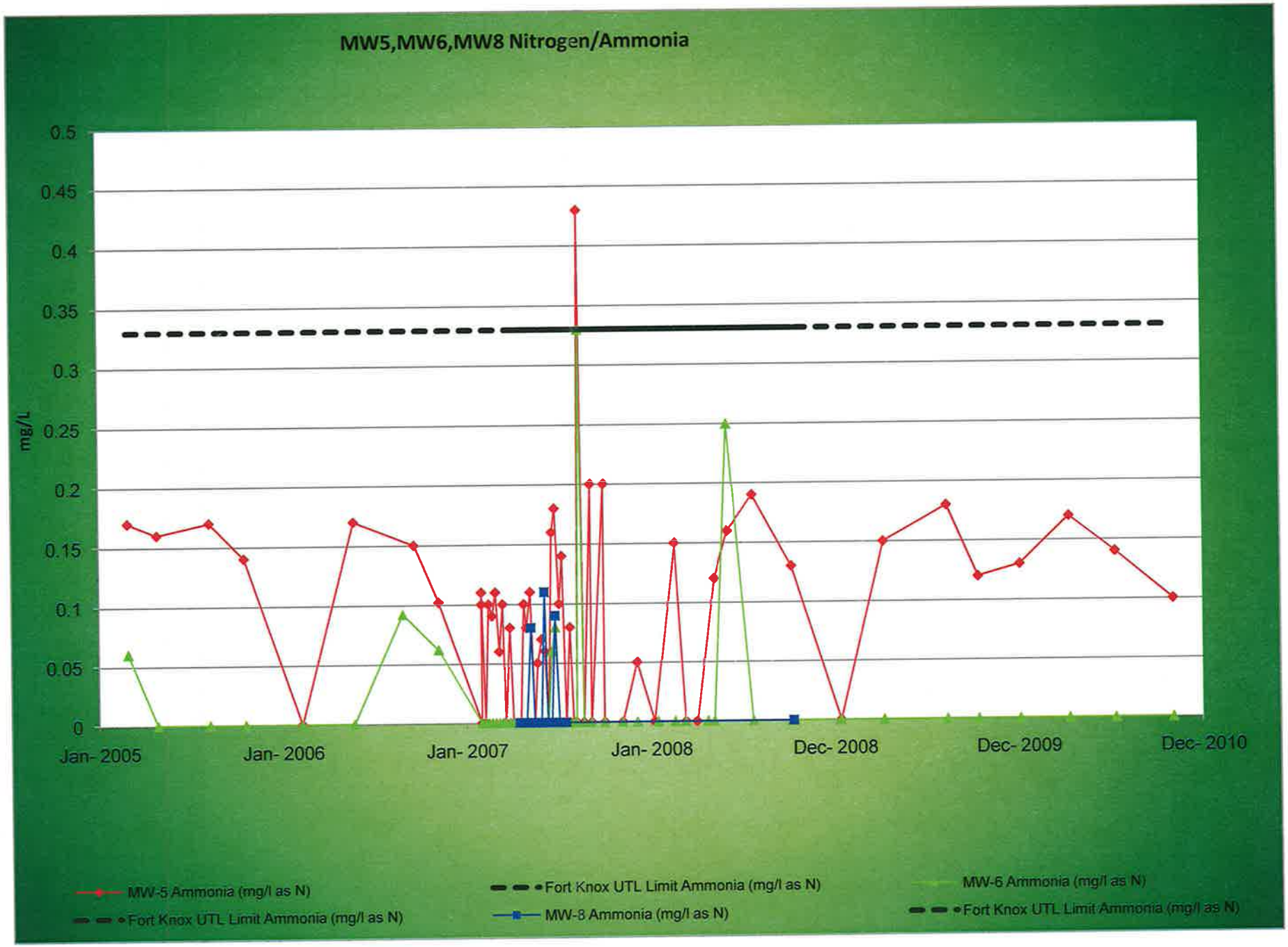

Fort Knox Compliance Wells MW5,6,8 Arsenic
Dissolved mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Arsenic, Dissolved (mg/l)
Fort Knox UTL Limit Arsenic, Dissolved (mg/l)
Fort Knox UTL Limit Arsenic, Dissolved (mg/l)
MW-8 Arsenic, Dissolved (mg/l)
MW-6 Arsenic, Dissolved (mg/l)
Fort Knox UTL Limit Arsenic, Dissolved (mg/l)

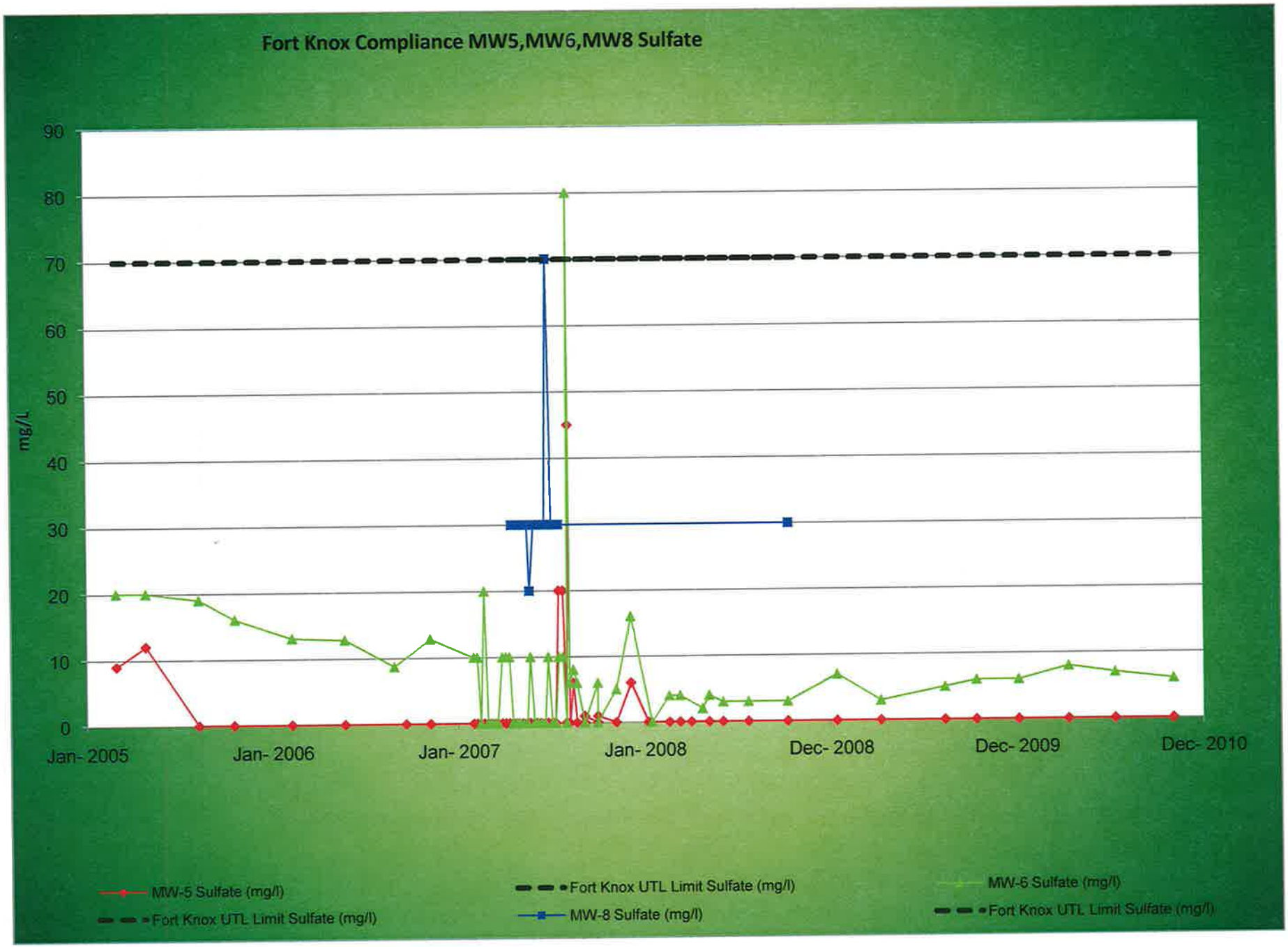

Fort Knox Compliance MW5,MW6,MW8 Chloride
Dissolved mg/L
18
16
14
12
10
8
6
4
2
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Chloride, dissolved
Fort Knox UTL Limit Chloride, dissolved
Fort Knox UTL Limit Chloride, dissolved
MW-8 Chloride, dissolved
MW-6 Chloride, dissolved
Fort Knox UTL Limit Chloride, dissolved

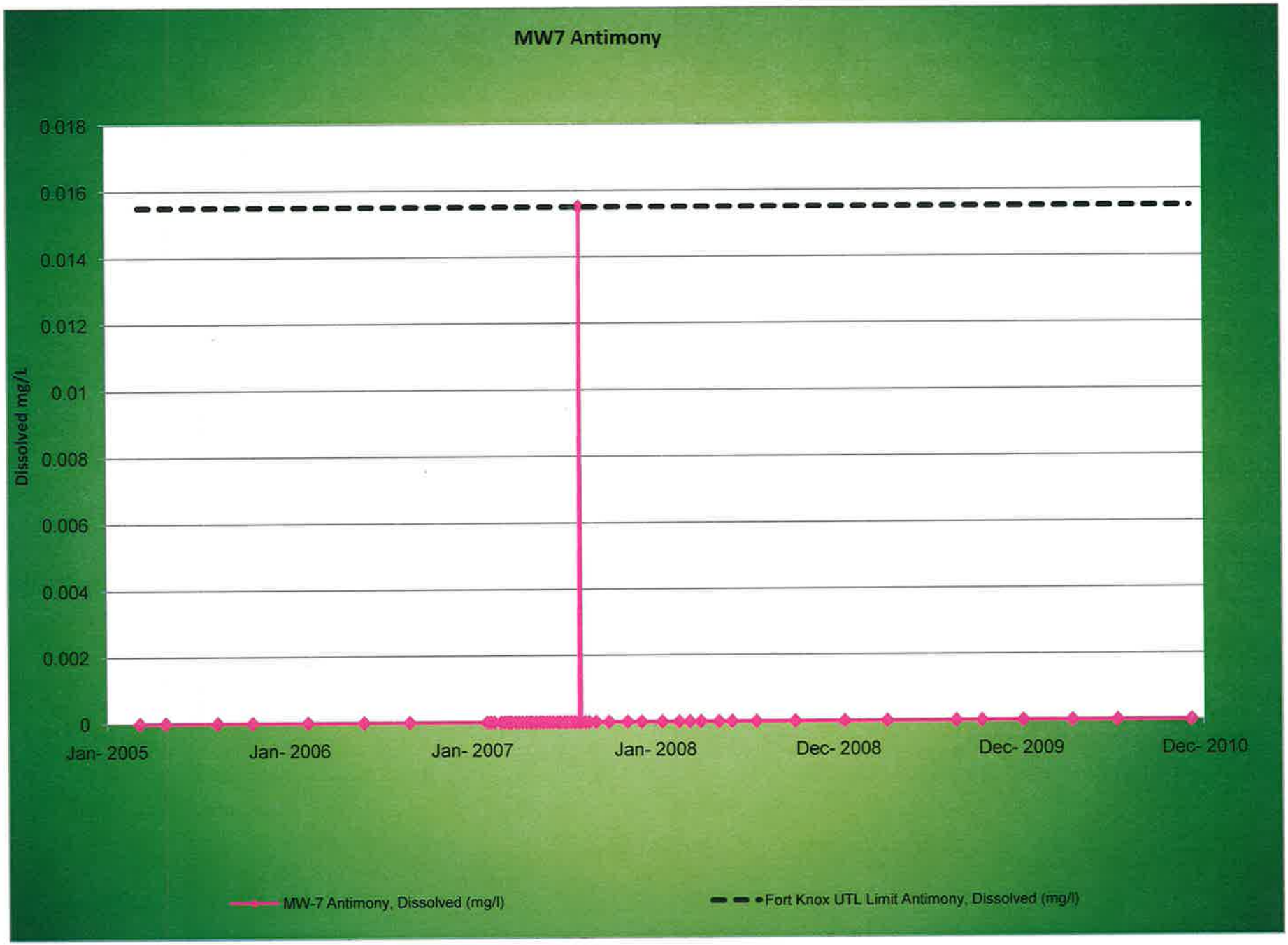

Fort Knox Compliance MW/5,6,8 Copper
Dissolved mg/L
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Copper, Dissolved (mg/l)
Fort Knox UTL Limit Copper, Dissolved (mg/l)
MW-6 Copper, Dissolved (mg/l)
Fort Knox UTL Limit Copper, Dissolved (mg/l)
MW-8 Copper, Dissolved (mg/l)
Fort Knox UTL Limit Copper, Dissolved (mg/l)

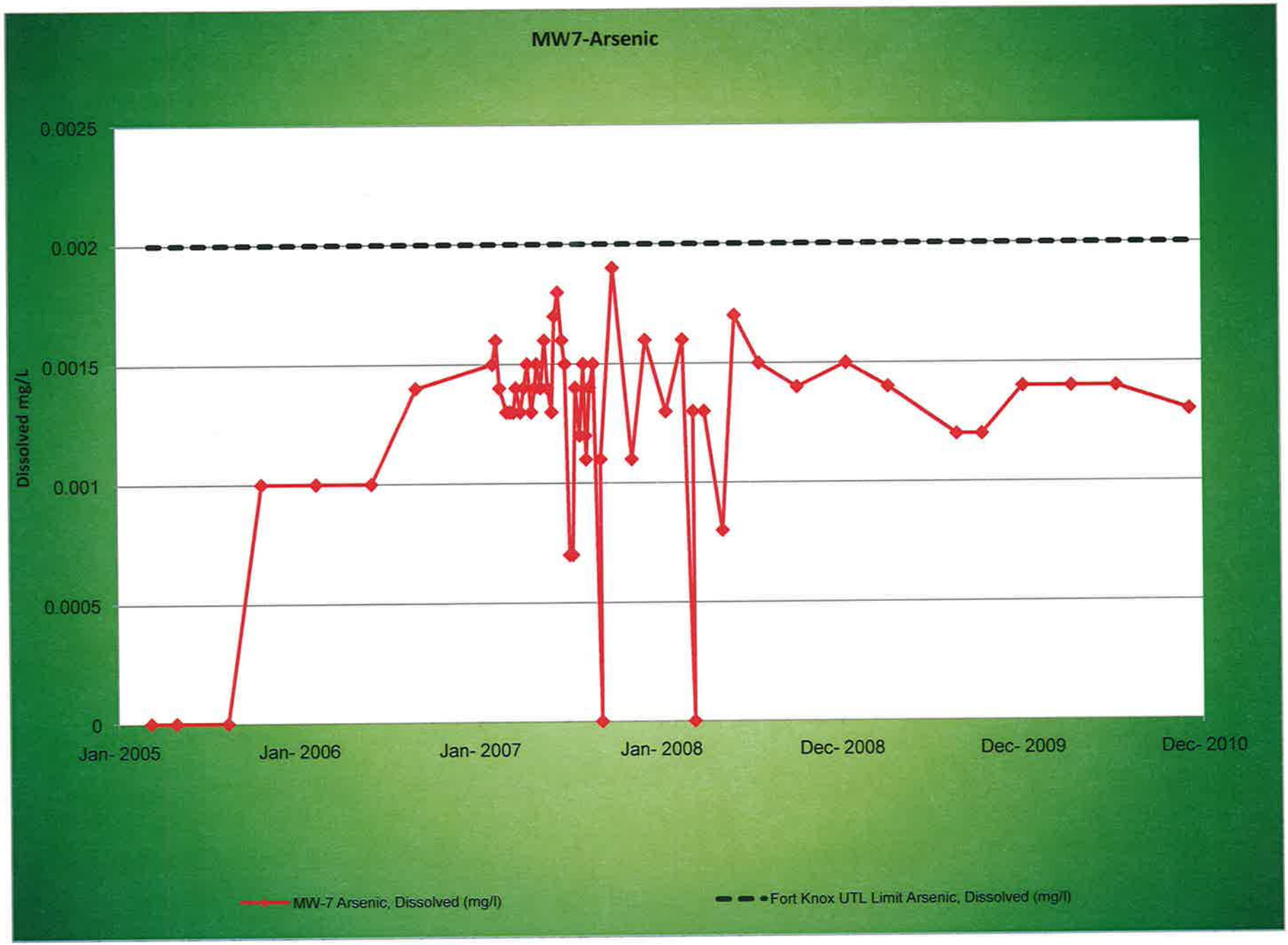

Fort Knox Compliance MW5,MW6,MW8 Nitrate
Axis Title
10
9
8
7
6
5
4
3
2
1
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Nitrate Nitrogen, Dissolved (mg/l as N)
MW-6 Nitrate Nitrogen, Dissolved (mg/l as N)
MW-8 Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)

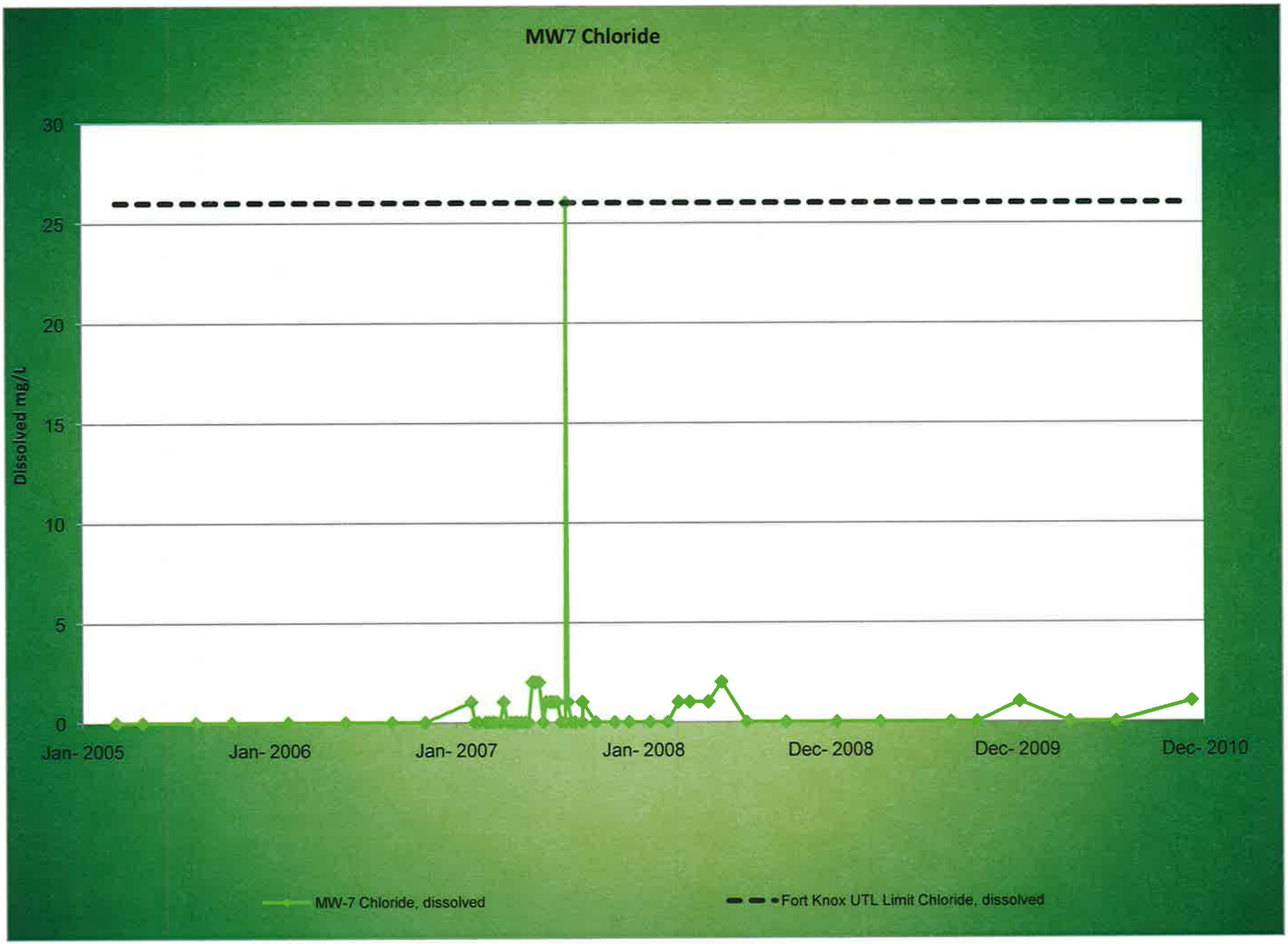

Fort Knox Compliance MW5,MW6,MW8 Nitrite
Dissolved mg/L
1.2
1
0.8
0.6
0.4
0.2
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Nitrite Nitrogen, Dissolved (mg/l as N)
MW-6 Nitrite Nitrogen, Dissolved (mg/l as N)
MW-8 Nitrite Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrite Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrite Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrite Nitrogen, Dissolved (mg/l as N)

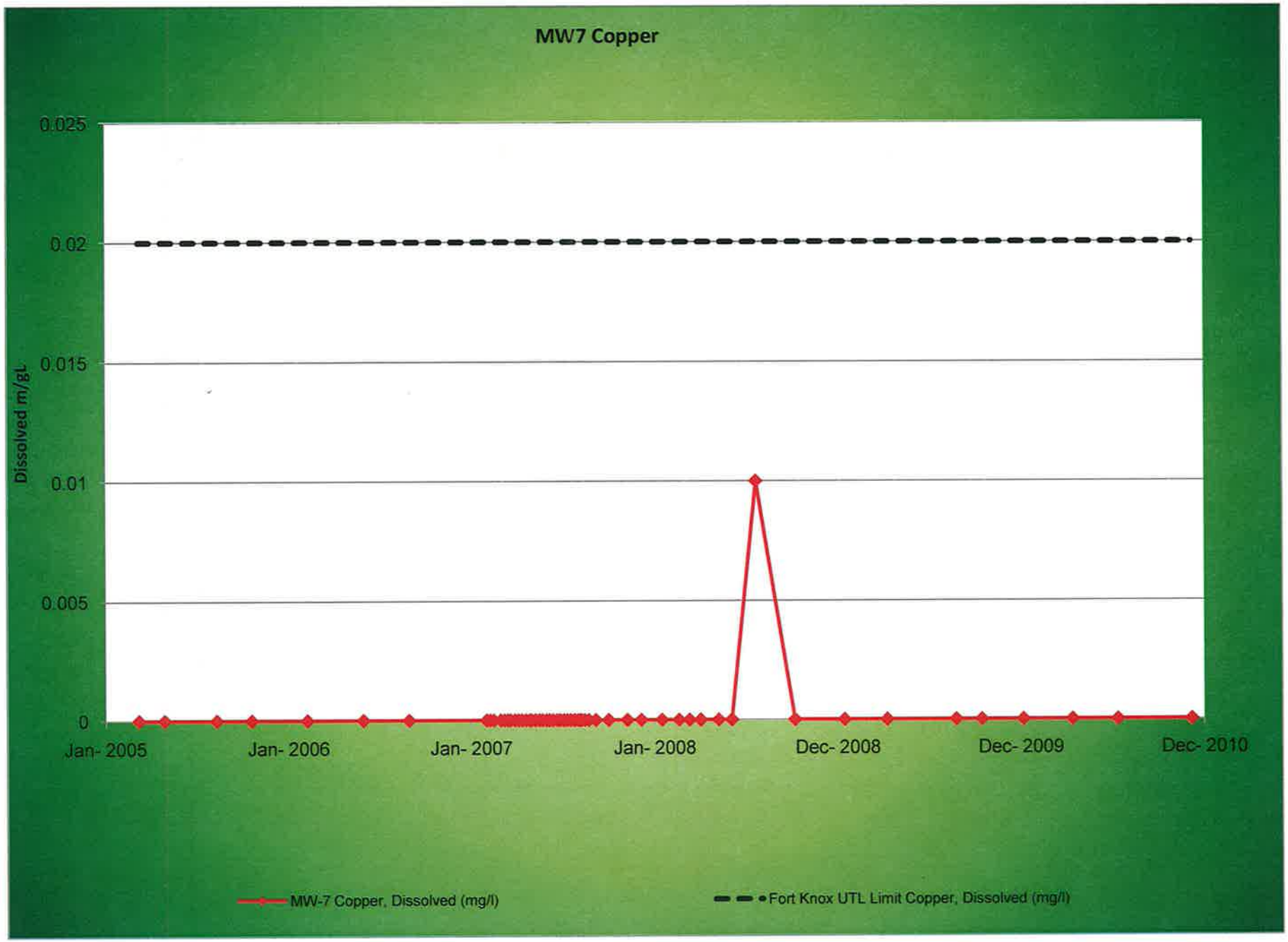

MW5,MW6,MW8 Nitrogen/Ammonia
mg/L
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)
MW-8 Ammonia (mg/l as N)
MW-6 Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)

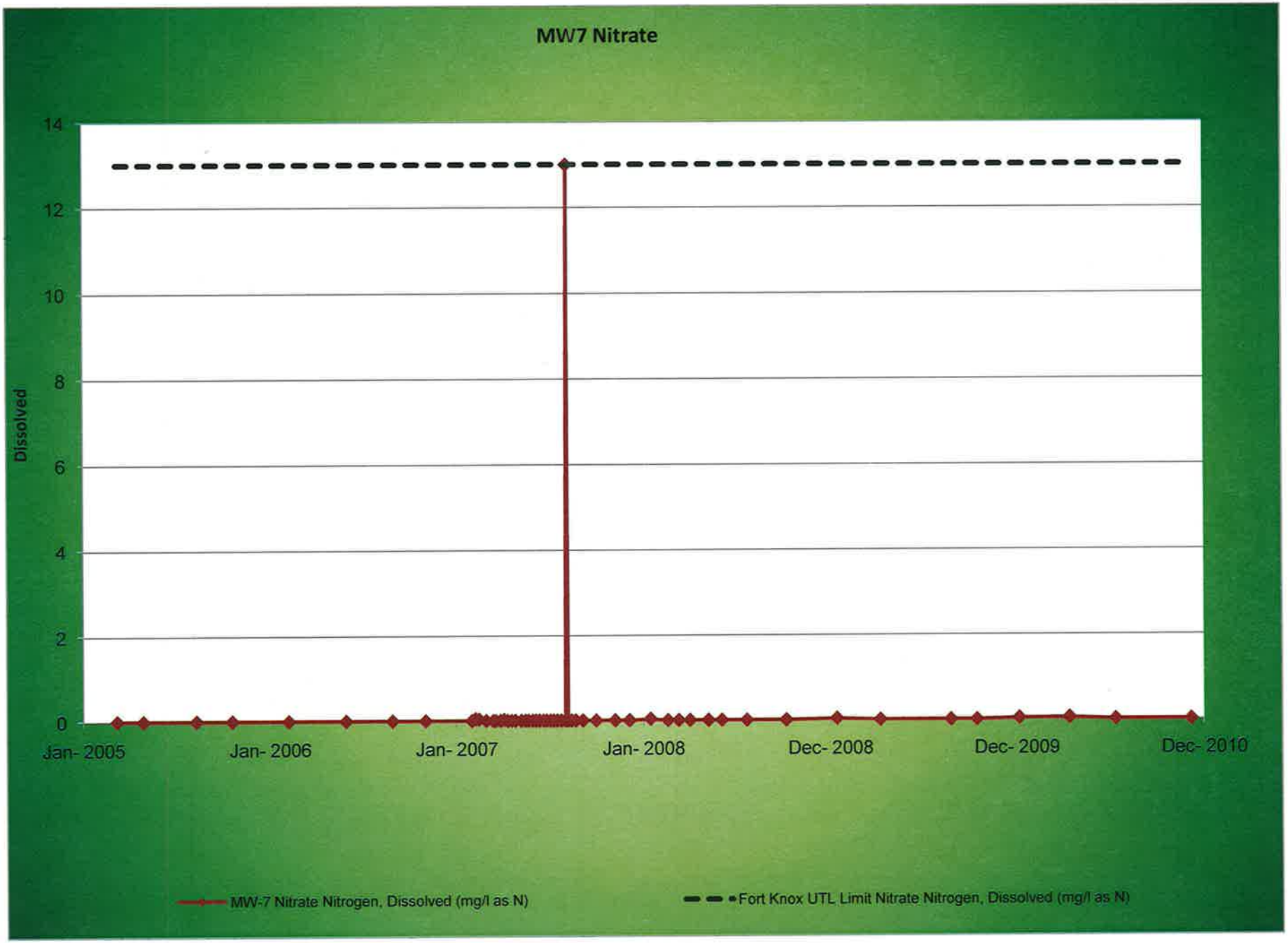

Fort Knox Compliance MW5,MW6,MW8 Sulfate
mg/L
90
80
70
60
50
40
30
20
10
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-5 Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)
MW-8 Sulfate (mg/l)
MW-6 Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)

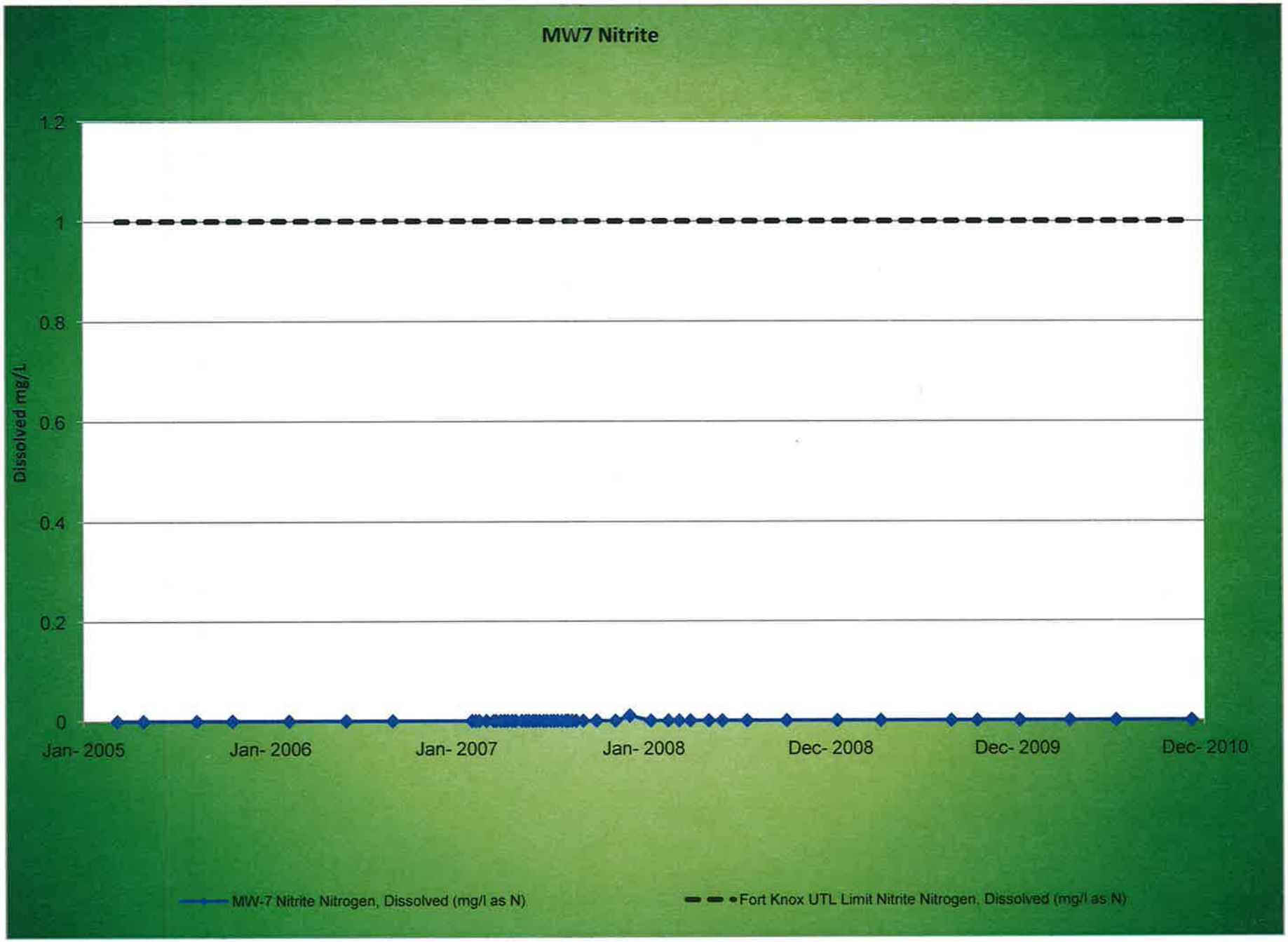

MW7 Antimony
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Antimony, Dissolved (mg/l)
Fort Knox UTL Limit Antimony, Dissolved (mg/l)

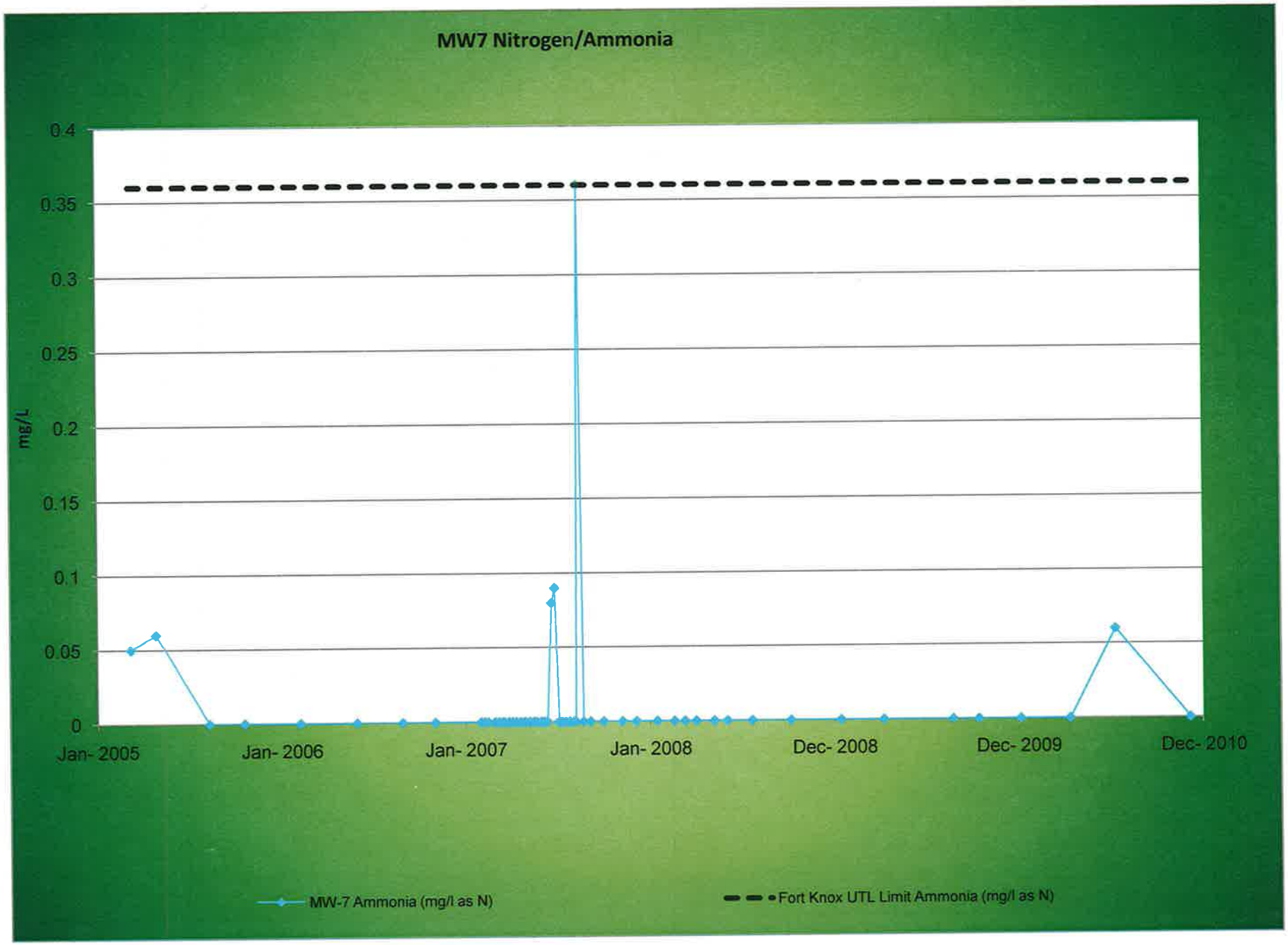

MW7-Arsenic
0.0025
0.002
0.0015
0.001
0.0005
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Arsenic, Dissolved (mg/l)
Fort Knox UTL Limit Arsenic, Dissolved (mg/l)

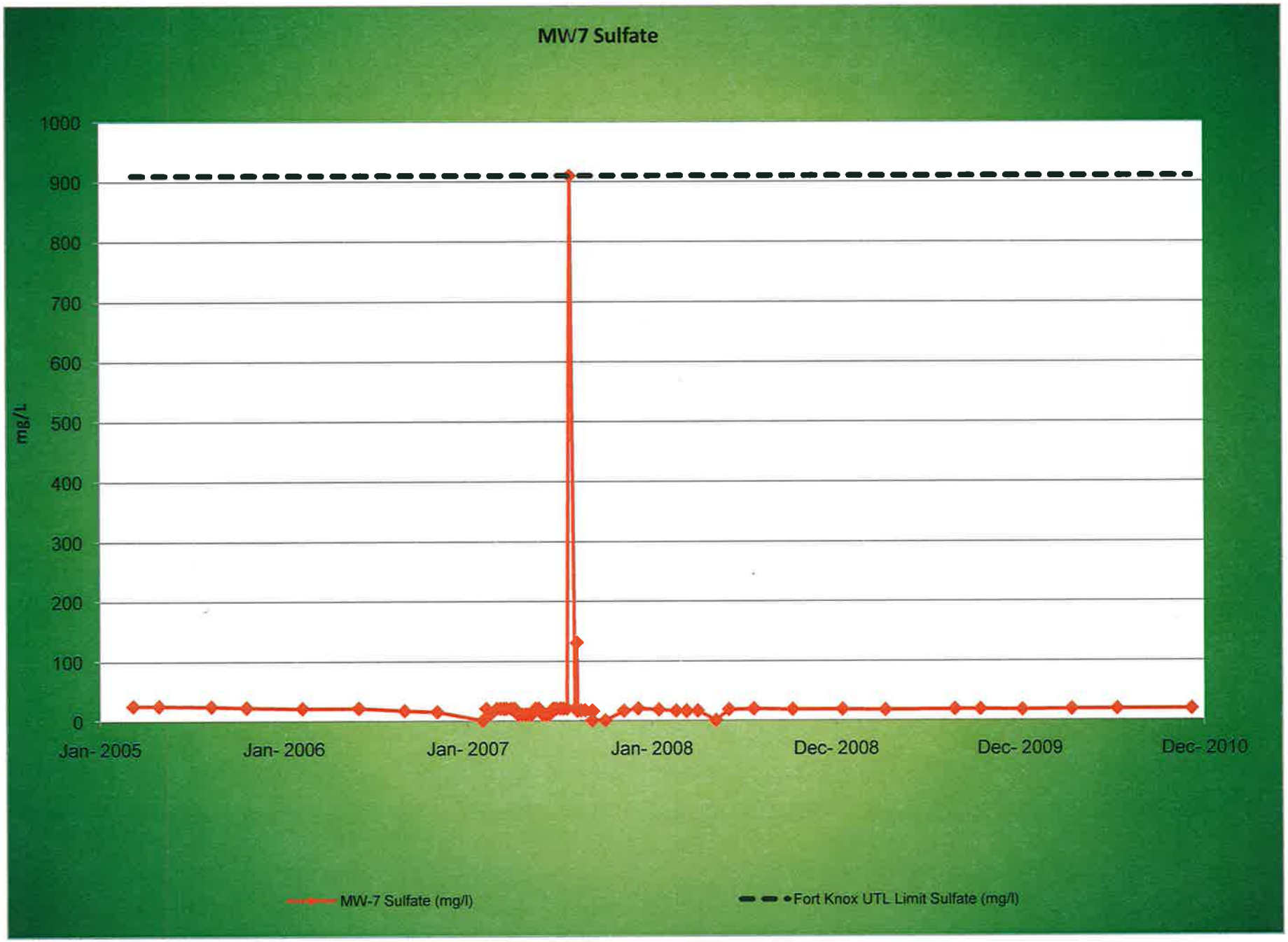

MW7 Chloride
30
25
20
15
10
5
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Chloride, dissolved
Fort Knox UTL Limit Chloride, dissolved

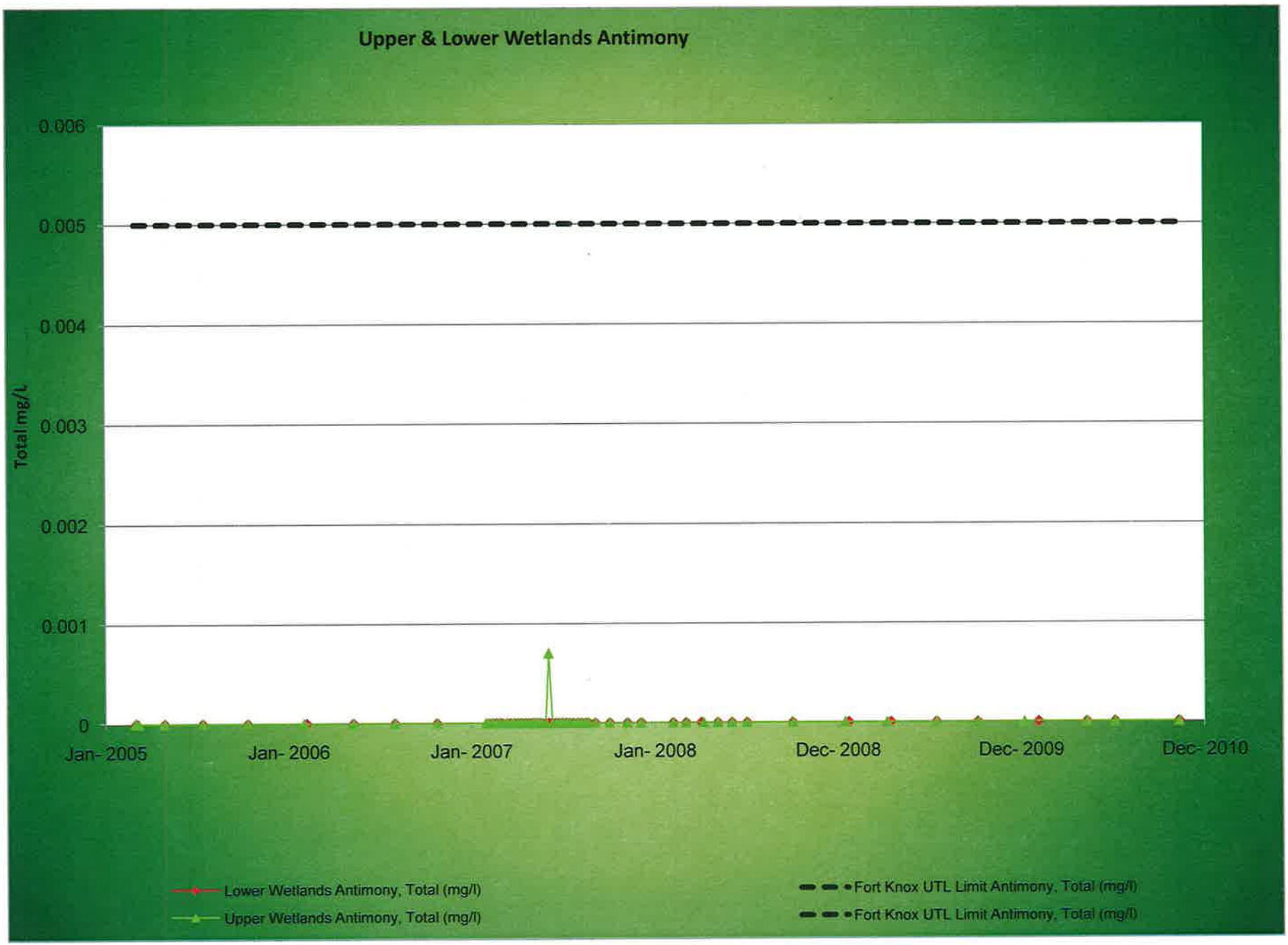

MW7 Copper
0.025
0.02
0.015
0.01
0.005
0
Dissolved m/gL
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Copper, Dissolved (mg/l)
Fort Knox UTL Limit Copper, Dissolved (mg/l)

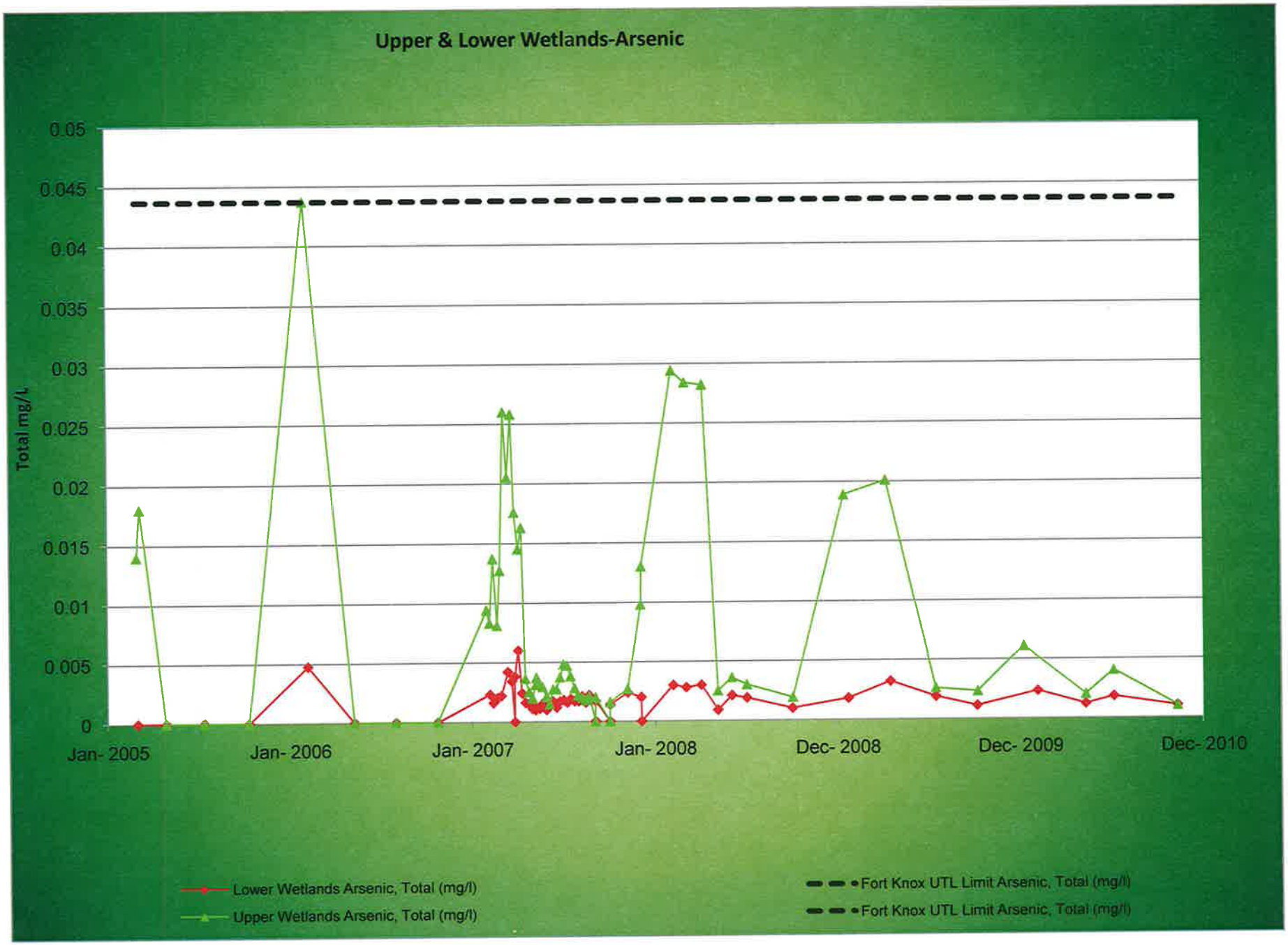

MW7 Nitrate
14
12
10
8
6
4
2
0
Dissolved
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)

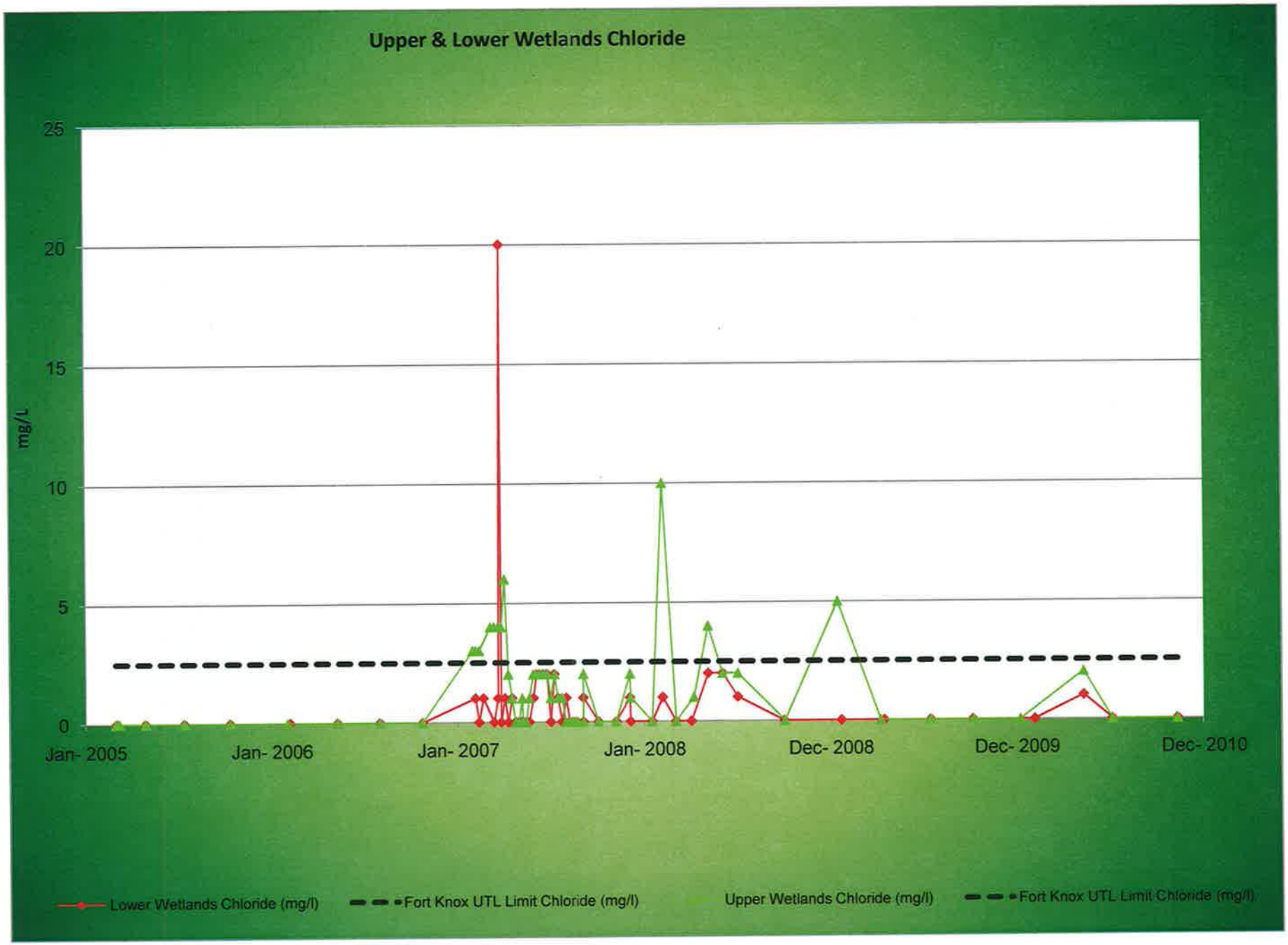

MW7 Nitrite
1.2
1
0.8
0.6
0.4
0.2
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Nitrite Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrite Nitrogen, Dissolved (mg/l as N)

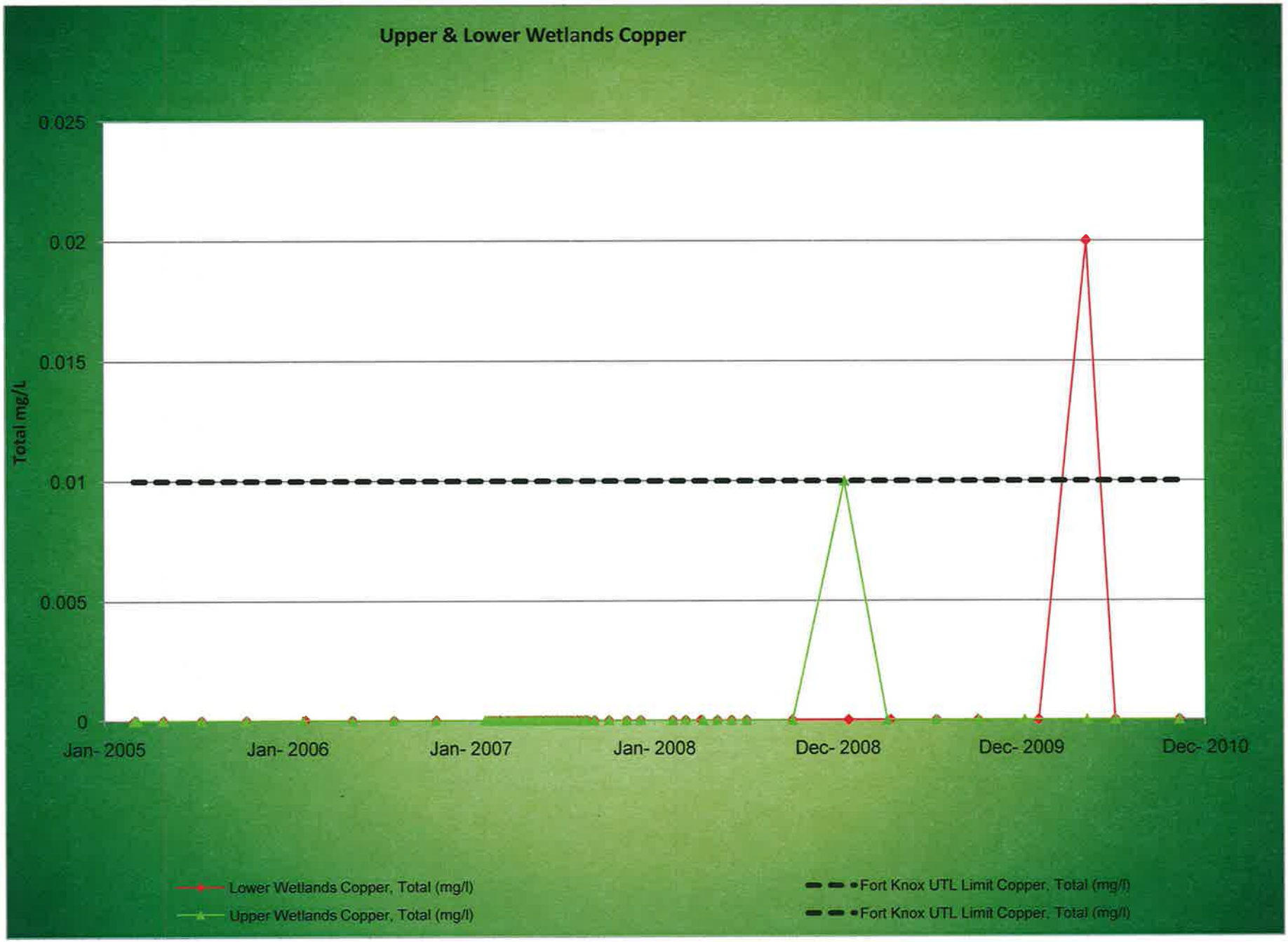

MW7 Nitrogen/Ammonia
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)

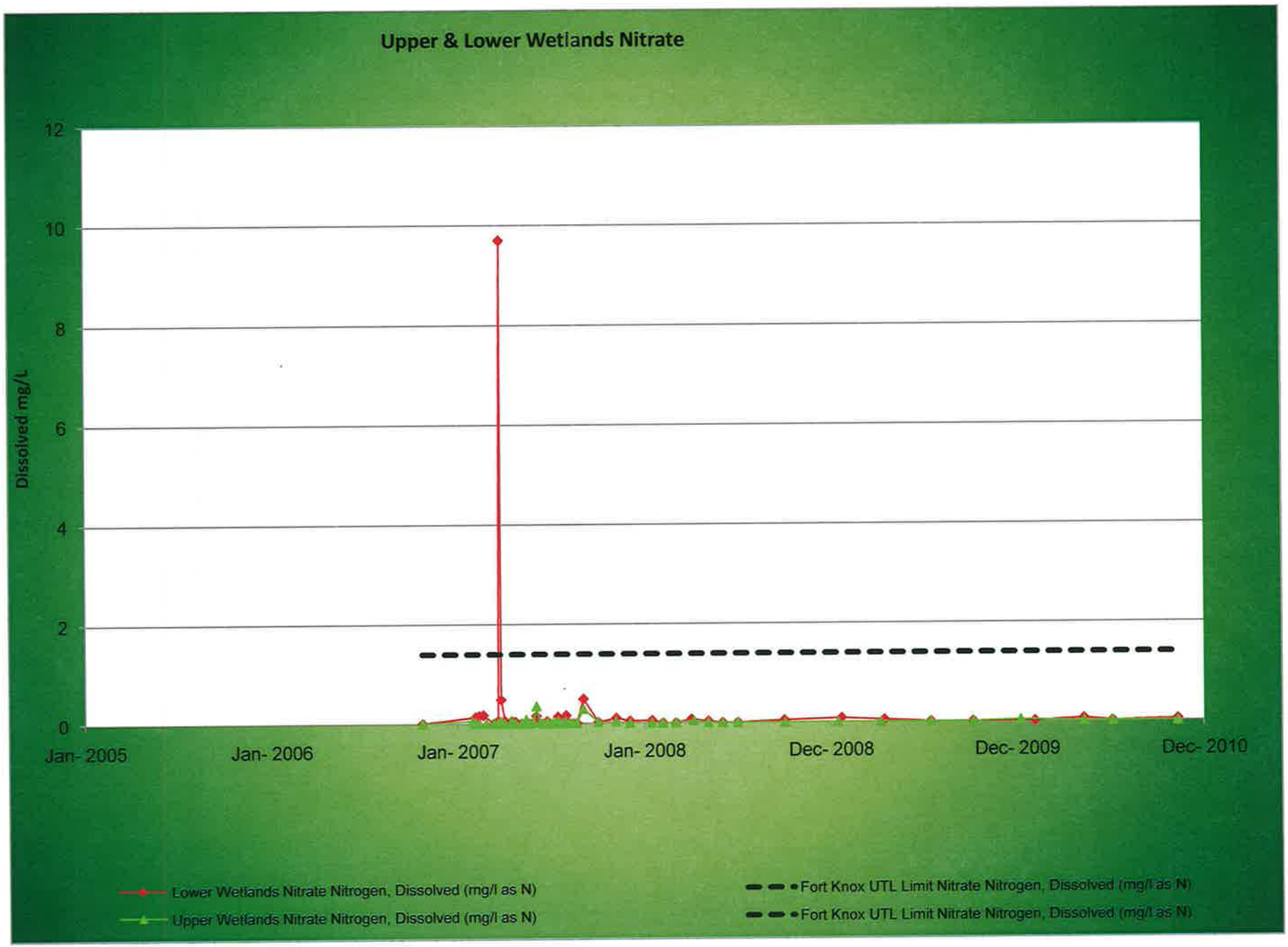

MW7 Sulfate
1000
900
800
700
600
500
400
300
200
100
0
mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
MW-7 Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)

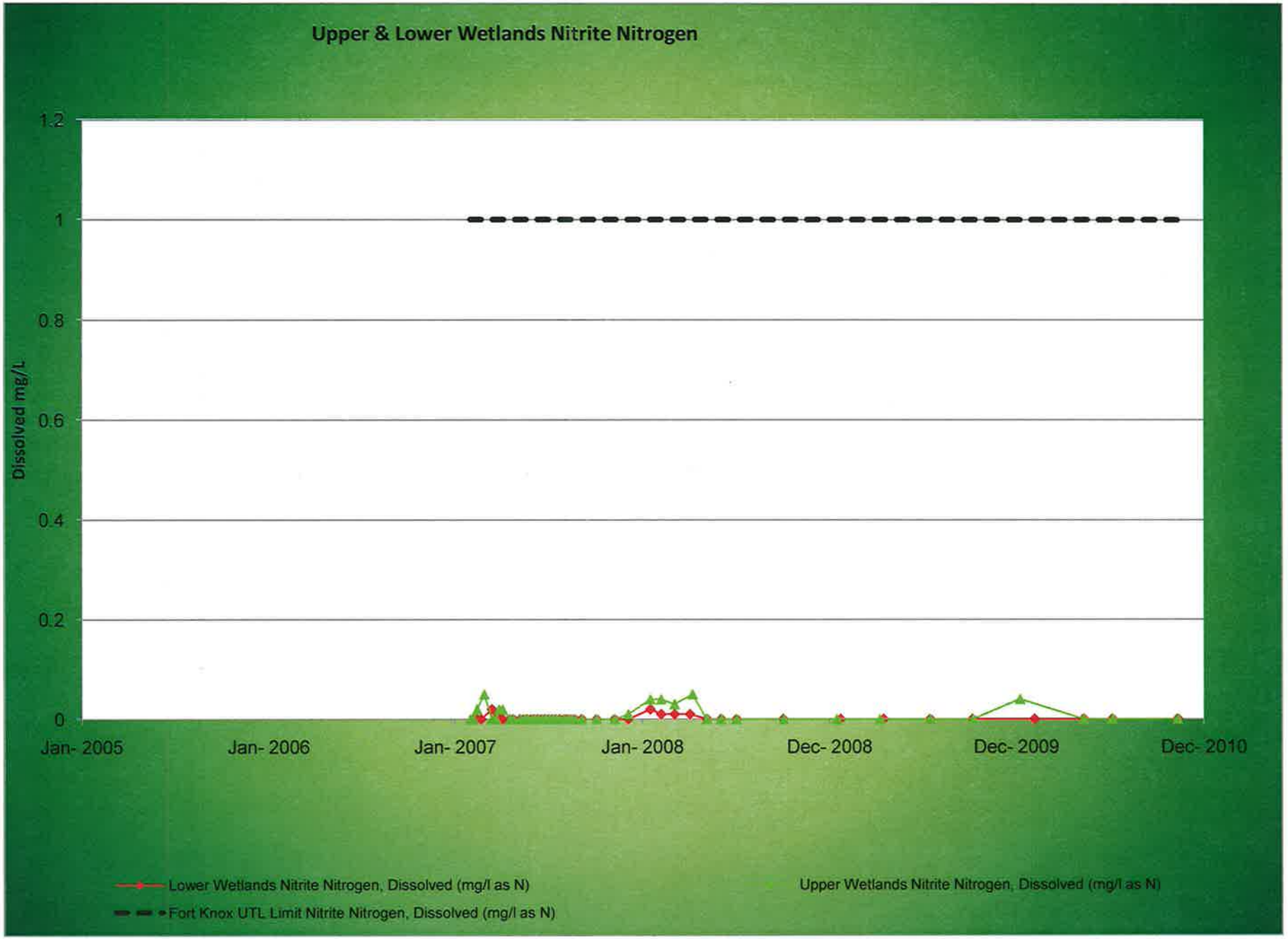

Upper & Lower Wetlands Antimony
0.006
0.005
0.004
0.003
0.002
0.001
0
Total mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Antimony, Total (mg/l)
Upper Wetlands Antimony, Total (mg/l)
Fort Knox UTL Limit Antimony, Total (mg/l)
Fort Knox UTL Limit Antimony, Total (mg/l)

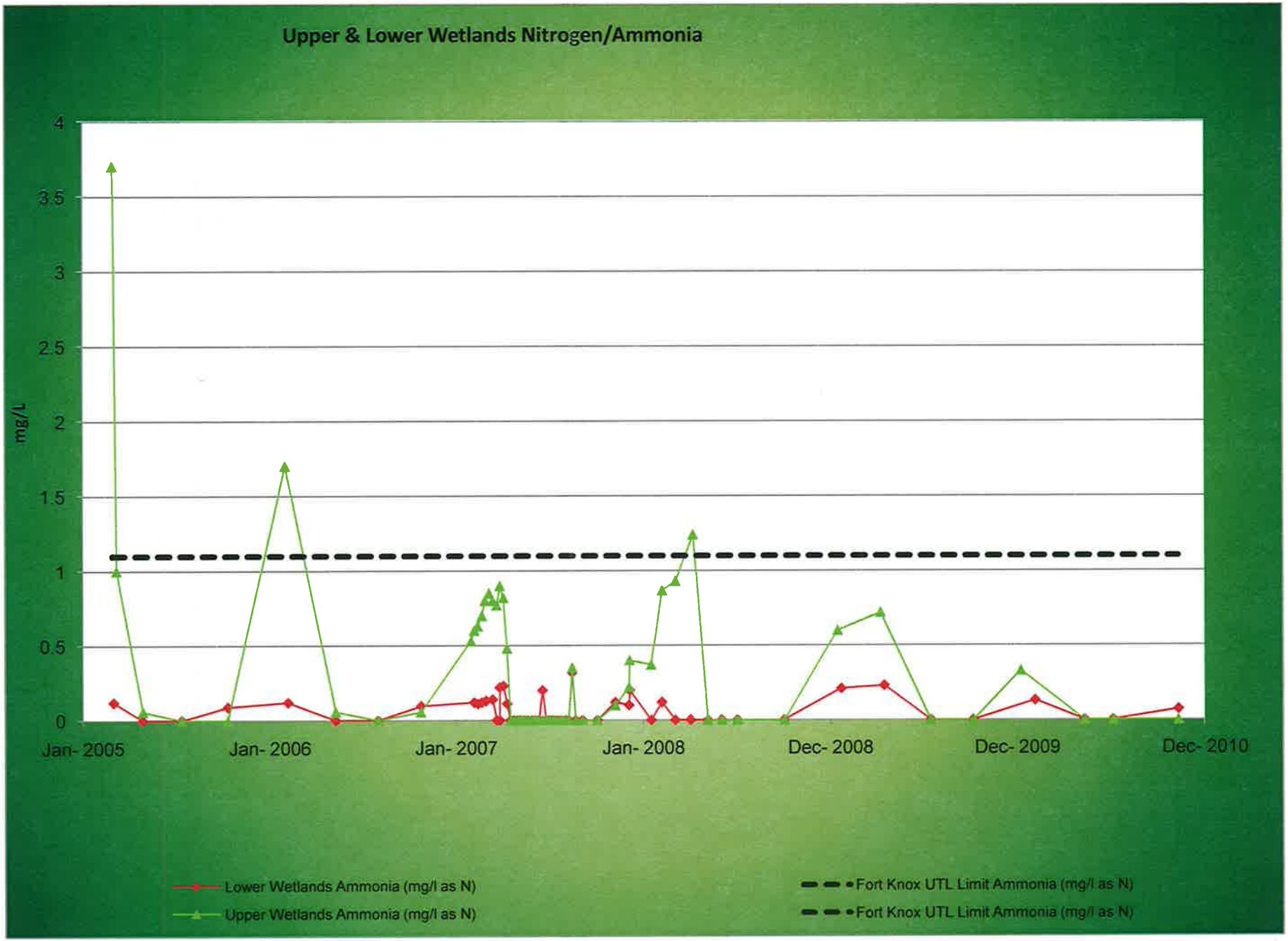

Upper & Lower Wetlands-Arsenic
Total mg/L
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Arsenic, Total (mg/l)
Upper Wetlands Arsenic, Total (mg/l)
Fort Knox UTL Limit Arsenic, Total (mg/l)
Fort Knox UTL Limit Arsenic, Total (mg/l)

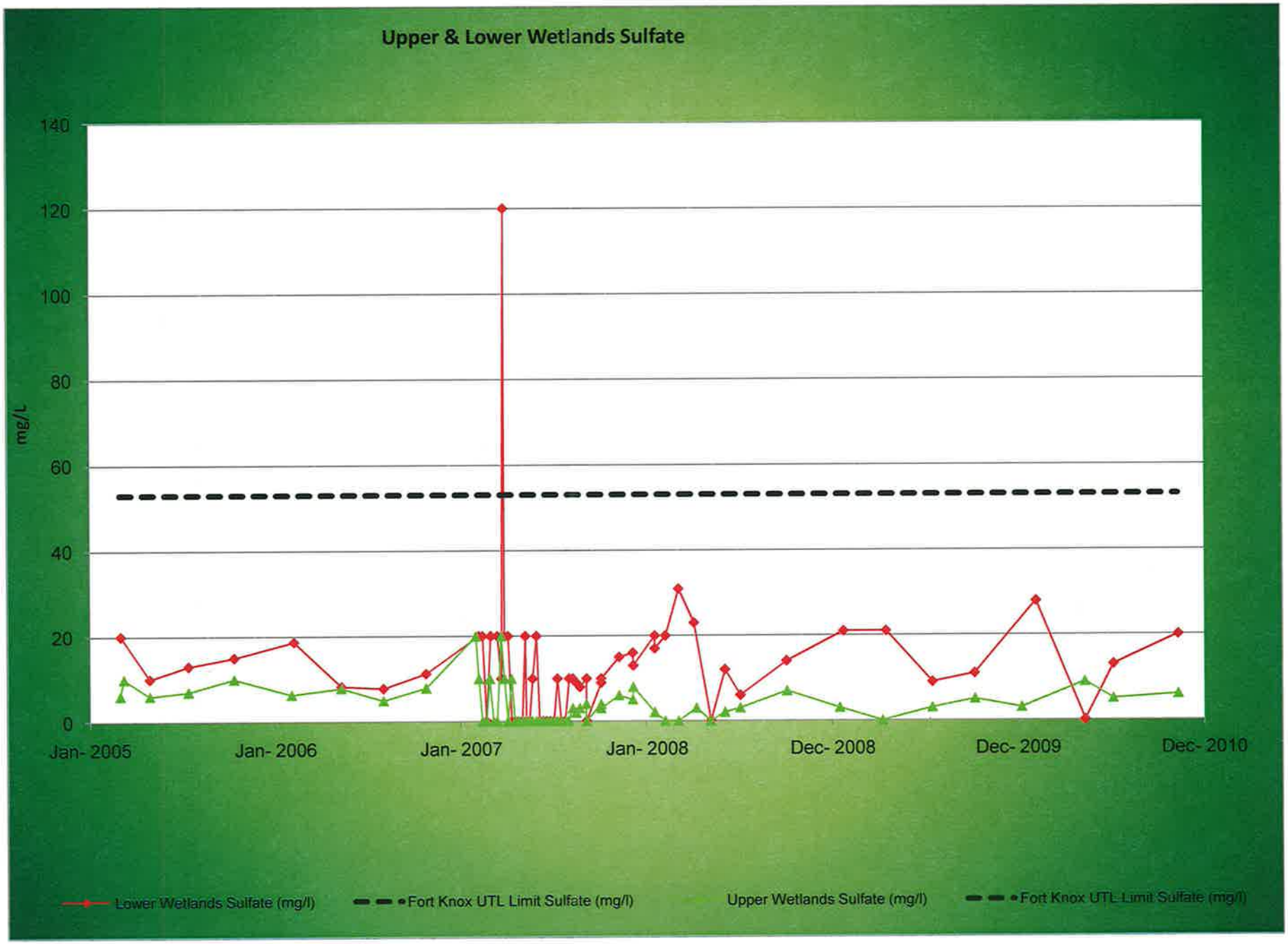

Upper & Lower Wetlands Chloride
25
20
15
10
5
0
mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Chloride (mg/l)
Fort Knox UTL Limit Chloride (mg/l)
Upper Wetlands Chloride (mg/l)
Fort Knox UTL Limit Chloride (mg/l)


Upper & Lower Wetlands Copper
0.025
0.02
0.015
0.01
0.005
0
Total mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Copper, Total (mg/l)
Upper Wetlands Copper, Total (mg/l)
Fort Knox UTL Limit Copper, Total (mg/l)
Fort Knox UTL Limit Copper, Total (mg/l)

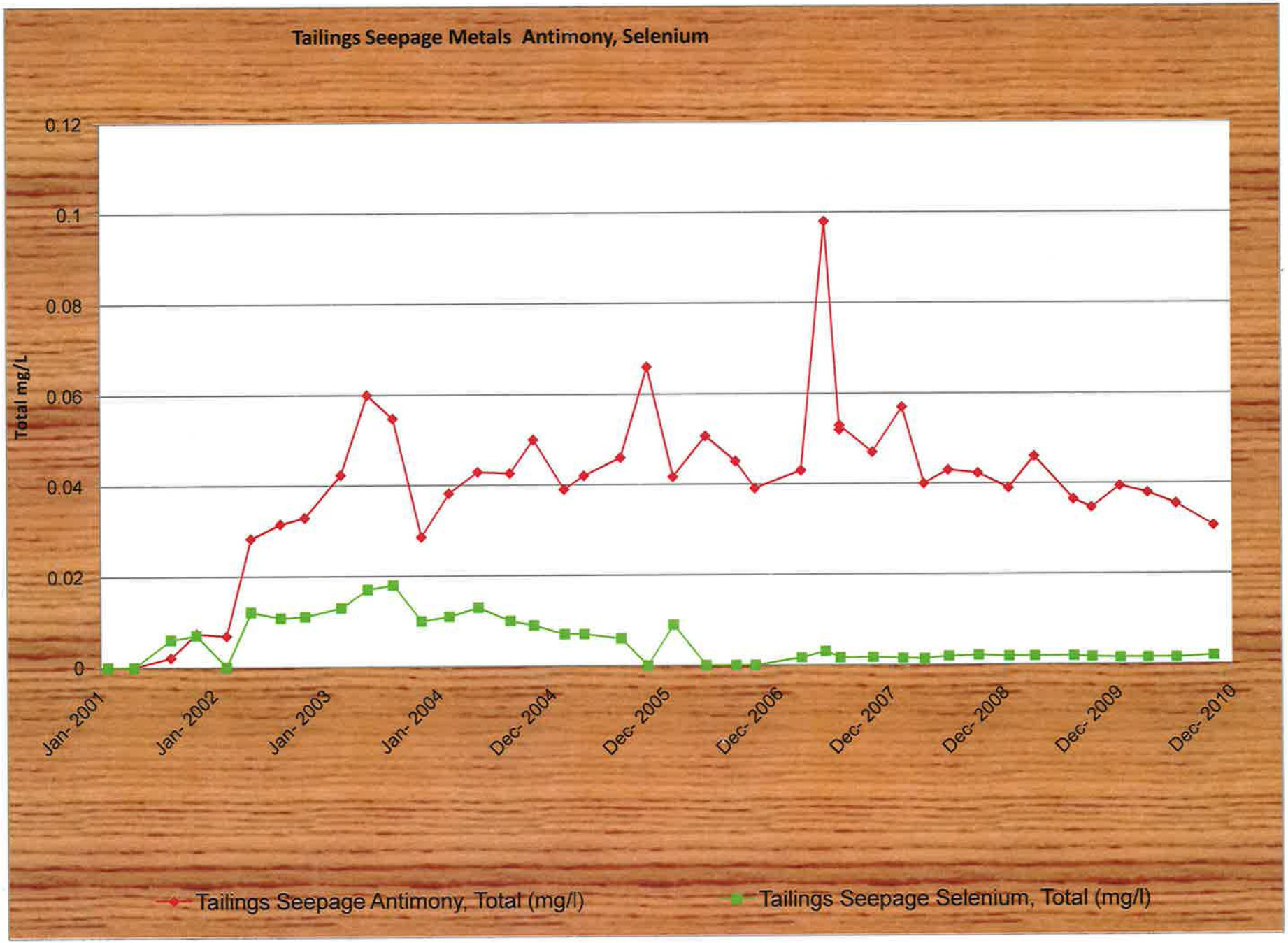

Upper & Lower Wetlands Nitrate
12
10
8
6
4
2
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Nitrate Nitrogen, Dissolved (mg/l as N)
Upper Wetlands Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrate Nitrogen, Dissolved (mg/l as N)

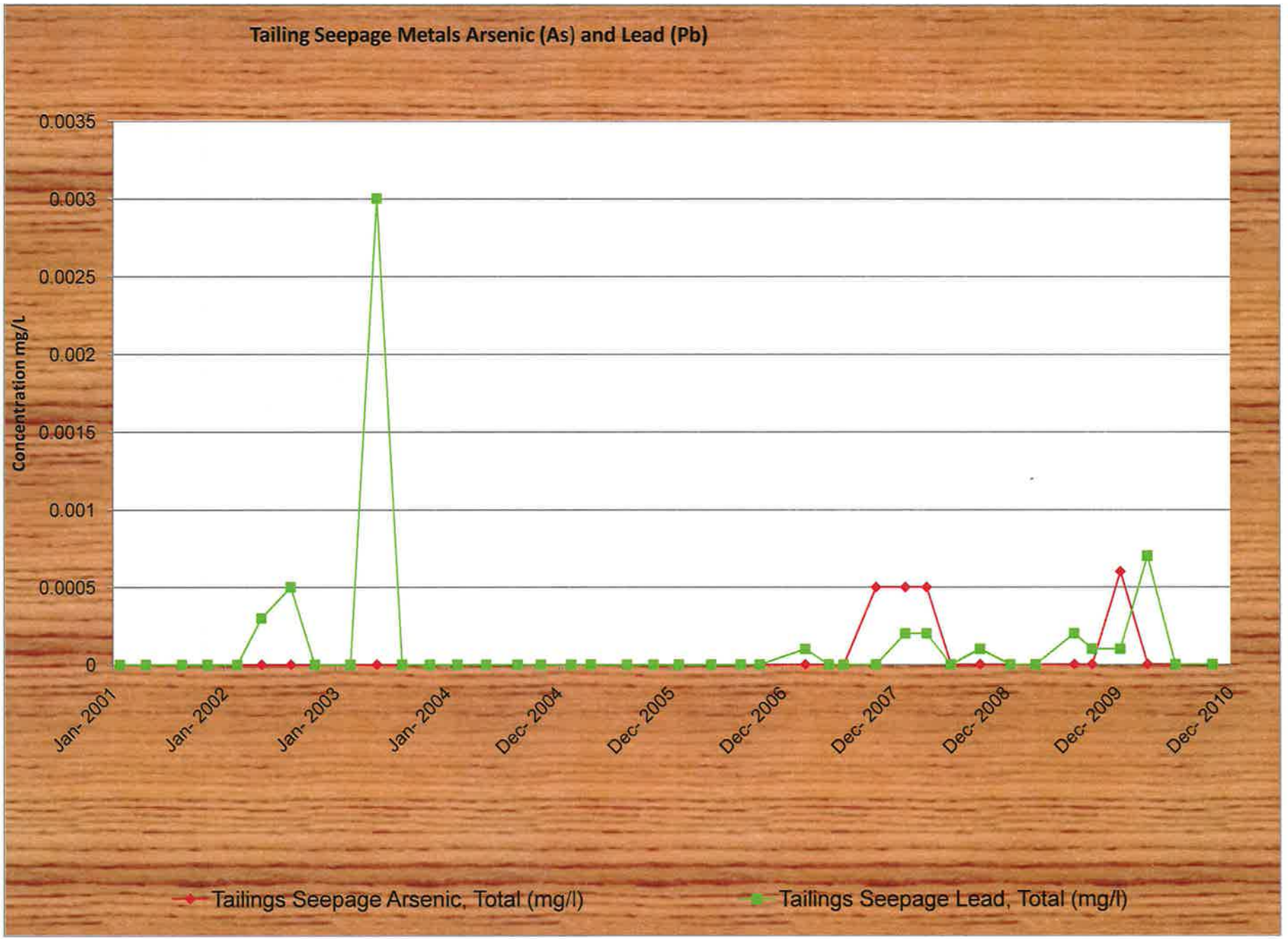

Upper & Lower Wetlands Nitrite Nitrogen
1.2
1
0.8
0.6
0.4
0.2
0
Dissolved mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Nitrite Nitrogen, Dissolved (mg/l as N)
Upper Wetlands Nitrite Nitrogen, Dissolved (mg/l as N)
Fort Knox UTL Limit Nitrite Nitrogen, Dissolved (mg/l as N)


Upper & Lower Wetlands Nitrogen/Ammonia
mg/L
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Ammonia (mg/l as N)
Upper Wetlands Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)
Fort Knox UTL Limit Ammonia (mg/l as N)


Upper & Lower Wetlands Sulfate
140
120
100
80
60
40
20
0
mg/L
Jan- 2005
Jan- 2006
Jan- 2007
Jan- 2008
Dec- 2008
Dec- 2009
Dec- 2010
Lower Wetlands Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)
Upper Wetlands Sulfate (mg/l)
Fort Knox UTL Limit Sulfate (mg/l)

ATTACHMENT D
Monthly Metal Samples of Tailing Impoundment Seepage As, Sb, Pb, Se

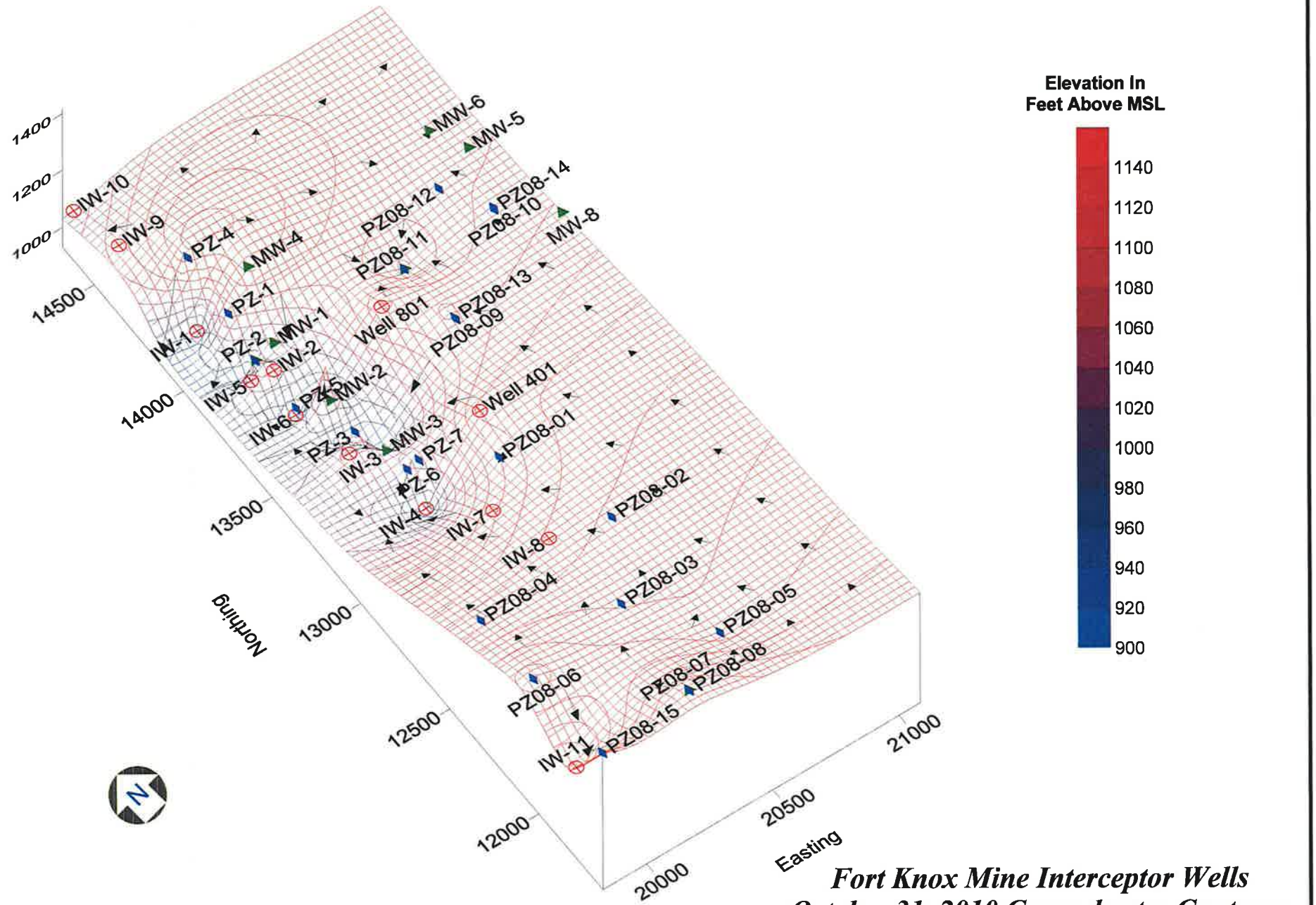

Tailings Seepage Metals Antimony, Selenium
Total mg/L
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan- 2001
Jan- 2002
Jan- 2003
Jan- 2004
Dec- 2004
Dec- 2005
Dec- 2006
Dec- 2007
Dec- 2008
Dec- 2009
Dec- 2010
Tailings Seepage Antimony, Total (mg/l)
Tailings Seepage Selenium, Total (mg/l)


Tailing Seepage Metals Arsenic (As) and Lead (Pb)
Concentration mg/L
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Jan- 2001
Jan- 2002
Jan- 2003
Jan- 2004
Dec- 2004
Dec- 2005
Dec- 2006
Dec- 2007
Dec- 2008
Dec- 2009
Dec- 2010
Tailings Seepage Arsenic, Total (mg/l)
Tailings Seepage Lead, Total (mg/l)

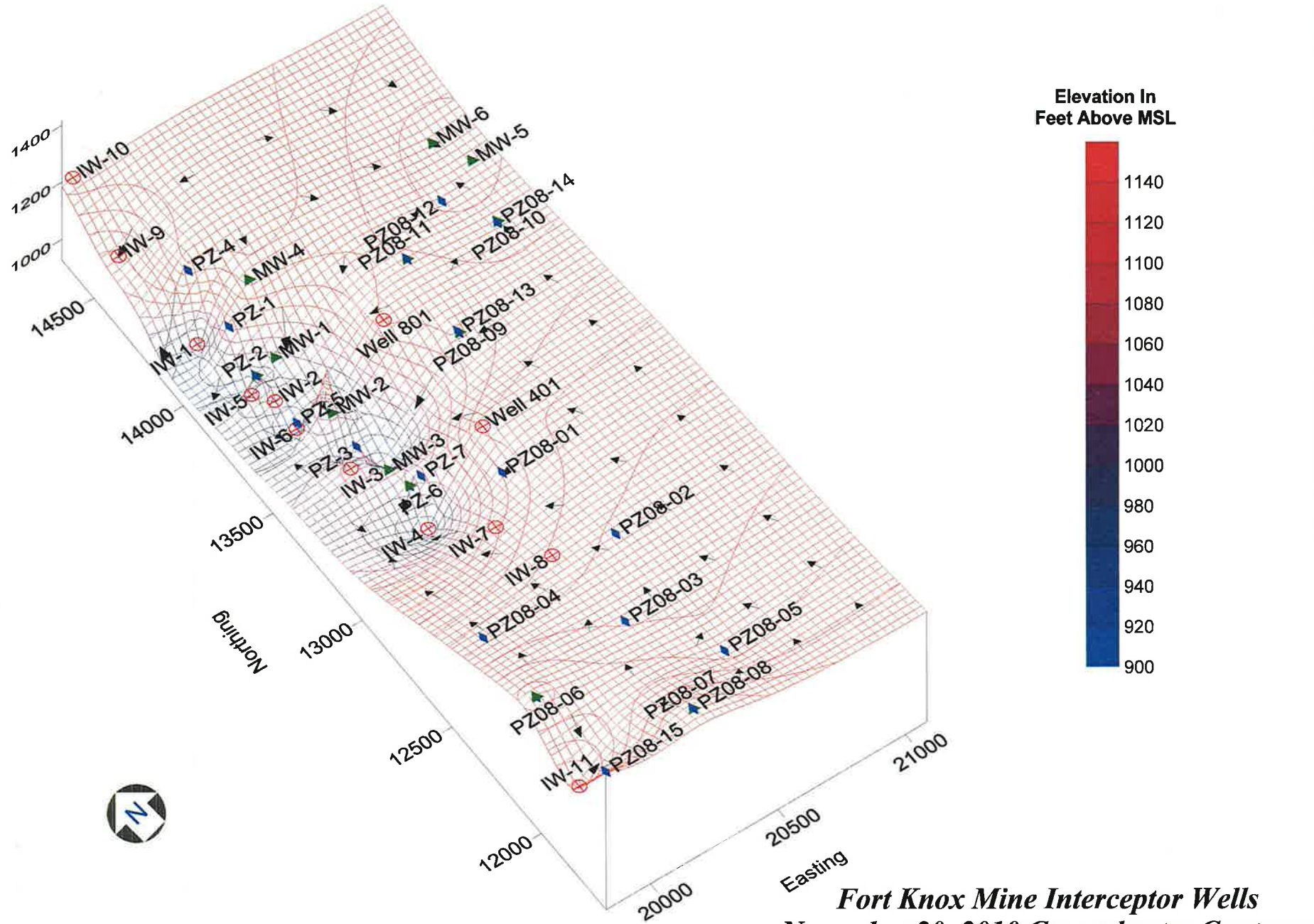
ATTACHMENT E

Interceptor and Monitoring Well Groundwater Contour

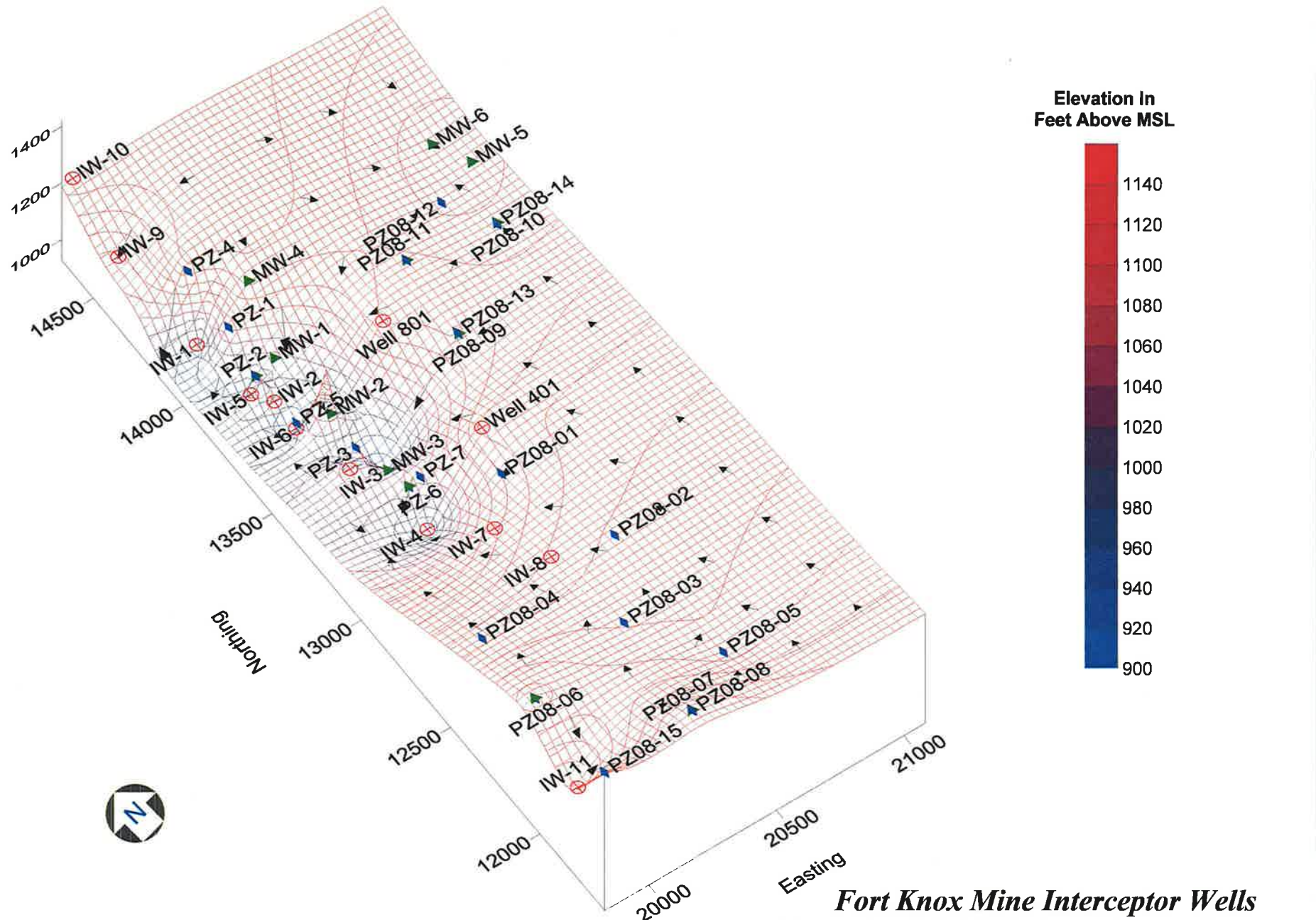
Fort Knox Mine
4th Quarter 2010



Fort Knox Mine Interceptor Wells
October 31, 2010 Groundwater Contours



Fort Knox Mine Interceptor Wells
November 20, 2010 Groundwater Contours



Fort Knox Mine Interceptor Wells
December 26, 2010 Groundwater Contours

ATTACHMENT F
Pit Lake Evaluation 2010 Update

TECHNICAL MEMORANDUM

Schlumberger WATER SERVICES

To: Delbert Parr
Company: Fairbanks Gold Mining, Inc.
Project No.: 2903
From: Liane George/Dusty Earley
Date: February 16, 2011

1875 LAWRENCE STREET, SUITE 500
DENVER, COLORADO 80202, USA

TELEPHONE: (303) 297 9005
TELEFAX: (303) 297 9007
www.water.slb.com

Subject: Fort Knox pit lake evaluation 2010 update

1 INTRODUCTION

This document presents an update to the Fort Knox pit lake evaluation technical memoranda (WMC, December 2006; WMC, February 2008; WMC, February 2009, and SWS, March 2010) completed in support of the Reclamation and Closure Plan for the Fort Knox Mine. This update reflects the revised closure strategy in support of the proposed mine expansion, which includes an enlarged pit and a modified centerline tailing dam raise. A site-wide water balance and chemical mixing model has been prepared in support of site closure analysis. Water balance and water quality results from this model are used along with updated dewatering water quality data to complete the pit lake evaluation. The pit lake study was prepared to evaluate the short- and long-term pit lake quality following the solution management approach proposed for the Fort Knox Mine.

The Fort Knox Mine is located approximately 15 miles northeast of Fairbanks, Alaska. The site includes several sections in T2N, R2E and T2N, R3E, Fairbanks Meridian near the headwaters of the Fish Creek drainage. The site is located on land owned by the State of Alaska, the Alaska Mental Health Trust, and private parties.

1.1 Purpose

The proposed Reclamation and Closure Plan for the Fort Knox Mine incorporates pumping decant and seepage water from the Tailing Storage Facility (TSF) to the pit once mining/milling activity has been completed. In order to evaluate long-term water quality of the pit lake at the time discharge is predicted to occur, a straight-forward mixing model was completed. The results of that analysis indicated that even under these conservative assumptions, water quality criteria would be met at the time discharge from the pit lake occurs.

The purpose of the evaluation presented in this document is to provide a more detailed analysis of pit lake quality during the recovery period and demonstrate the viability of the proposed solution management approach. This update incorporates recent water balance/flow data for the pit lake, revised water quality estimates, and the most recent dewatering well chemistry data (2008–2010 sampling data) as input to the pit lake model.

1.2 Objectives

The objectives of this update are to:

- present the revised water balance/flow data for the pit lake filling period
- present revised estimates of tailings decant and heap leach water quality
- present the updated groundwater quality data
- predict short and long-term, post-closure, pit lake water quality using the recent dataset
- demonstrate the viability of the current reclamation approach from a water quality perspective

2 PROJECT BACKGROUND

The December 2006 technical memo provides a description of the site climate, topography, hydrology and hydrogeology.

Following is a summary of the relevant elements of the Fort Knox Mine Reclamation and Closure Plan and TSF Closure Management Plan as they relate to the pit lake, including details of the site-wide water balance and mixing model prepared in support of closure.

The pit volume is based on the mine plan expansion, and a spill point elevation of 1,470 ft amsl. The site-wide water balance and chemistry mixing model were developed based on the actions listed below.

Discharge from the heap leach (draindown and rinse water) facility may be pumped to the pit or discharged to the TSF decant pond. This model update presents predicted pit lake water quality without including draindown/rinse water from the heap leach facility (this water would be directed to the decant pond).

Once mining/milling is completed, the following activities will be initiated:

- TSF decant water will be pumped to the pit.
- seepage collected from the interception system will be pumped back to the TSF and to the pit for a period of approximately five years (or as long as necessary to meet discharge quality standards).
- TSF decant water will be diluted over the pump-back period by the inflow of upgradient surface water.
- operation of the heap leach will continue with remaining stockpiled ore and continued leaching (estimated additional 10 years, post-mining/milling).
- TSF decant water will be pumped to the pit to maintain freeboard elevation in TSF.
- based on the mine plan and water balance model, TSF decant water will be periodically pumped to the pit for 10 years, post-mining.

3 MODELING APPROACH AND UPDATED DATA

The pit lake geochemical modeling approach is described in detail in the December 2006 memo. The same approach was used for this update.

The site-wide water balance model defines the magnitude and relative proportions of inflows to the pit during the recovery period. Time steps of 2, 5, 15, 51, 75, and 94 years are used to evaluate water quality

over time. According to the water balance model, the pit lake will reach the spill point at year 51, post-mining. The calculated inflow/outflows are presented in Table 3.1.

Table 3.1 Inflow volumes to pit lake

Post-mining timestep (years)	Time period		AVERAGE INFLOWS TO PIT LAKE (gpm)						AVERAGE OUTFLOWS FROM PIT LAKE (gpm)	
	Years	Duration	Direct precipitation to lake	Pit wall runoff	Surface water runoff to lake	TSF decant/ seepage pumped water	Heap leach draindown/ rinse	Groundwater Inflow	Evaporation	Overflow
2	0-2	2	21	167	25	753	0	1780	23	0
5	2-5	3	102	350	59	1639	0	2923	73	0
15	5-15	10	198	323	60	902	126	2369	123	0
51	15-51	36	1034	896	205	0	0	6184	629	0
75	51-75	24	759	489	129	0	0	3251	459	1046
94	75-94	19	1271	749	207	0	0	4907	768	2380

The site-wide water balance model also includes mixing calculations to estimate chemical concentrations over time for: the TSF decant pond, TSF seepage, heap leach draindown, and the pit lake based on observed water quality data, and accounting for direct precipitation, surface water runon, and evaporation based on site climate data. The mixing model is conservative in that it does not account for any geochemical reactions over time.

Input water quality data for the TSF decant water over the selected timesteps have been calculated based on the results of the mixing model. These data are presented in Table 3.2. During years 0 – 2, the decant pond water quality is dominated by the most recent water quality data (measured) from the decant pond; during model years 2 – 5, the decant pond water reflects a mixture of initial pond chemistry, pumped seepage water, upgradient surface water runon, and direct precipitation; and during years 5–15, the decant pond chemistry is dominated by surface water runon and direct precipitation.

Table 3.2 Input chemistry data used in 2011 pit lake modeling update

	Precipitation	Groundwater	Surface Water	Pit Wall Runoff	Pit Wall Runoff	Tailings Decant Pond			Heap Leach Draindown
Parameter	**Pure water equilibrated with atmospheric CO_2 and O_2**	**Average 2008/2009/2010 dewatering well samples**	**Upper Barnes Creek, average background data**	**Average 2002/2004 MWMP "composite waste dump" samples Unscaled**	**Average 2002/2004 MWMP "composite waste dump" samples Scaled**	**Average chemistry years 0-2**	**Average chemistry years 2-5**	**Average chemistry years 5-15**	**Average composition over period of rinsing/draindown**
pH (su)	5.6	8.3	7.0	8.5	8.5	8.3	7.5	7.0	7.5
Alkalinity as CaCO3	0	85	15	67	4.0	81	67	10	19
Ammonia	0	0.035	0.010	0.95	0.057	2.4	1.3	0.1	0.13
Antimony	0	0.0022	0.0025	0.0053	0.00031	0.024	0.014	0.002	0.0015
Arsenic	0	0.0072	0.0030	0.013	0.00075	0.0112	0.0066	0.0012	0.0022
Barium	0	0.0028	0.0050	0.0055	0.00033	0.028	0.016	0.002	0.0008
Cadmium	0	0.000068	0.00010	0.00055	0.000033	0.000007	0.000015	0.000021	0.00024
Calcium	0	47.9	4.4	10.1	0.60	52	35	4	0.9
Chloride	0	1.2	0.70	4.9	0.29	23	13	1	0.2
Chromium	0	0.0052	0.0020	0.0025	0.00015	0.00014	0.00030	0.00042	0.00024
Copper	0	0.0055	0	0.014	0.00084	0.0168	0.0097	0.0008	0.0011
Cyanide	0	0	0	0.026	0.0015	0.074	0.033	0.002	0.017
Fluoride	0	0.26	0.060	1.1	0.064	0.49	0.30	0.04	0.011
Iron	0	0.041	0.22	0.13	0.0075	0.42	0.27	0.07	0.08
Lead	0	0.00026	0.0040	0.0013	0.000075	0.0044	0.0029	0.0010	0.0005
Magnesium	0	6.4	1.6	1.3	0.078	6.1	4.4	0.8	0.2
Manganese	0	0.014	0	0.0045	0.00027	0.13	0.11	0.01	0.009
Mercury	0	0.00010	0.00030	0.00015	0.000009	0.000021	0.000045	0.000063	0.00004
Nitrate, as N	0	0.68	0.25	0.46	0.028	10.09	5.58	0.52	0.211
Nitrite, as N	0	0.023	0.010	0.15	0.0090	0.7	0.4	0.0	0.01
Phosphorus	0	0.011	0.080	0.13	0.0075	0.030	0.025	0.018	0.010
Potassium	0	0.96	0.50	9.1	0.5	7.9	4.5	0.5	0.11
Selenium	0	0.00045	0.0020	0.0038	0.00022	0.0037	0.0023	0.0006	0.0005
Silver	0	0.0054	0.0010	0.0030	0.00018	0.00007	0.00015	0.00021	0.00012
Sodium	0	12.2	2.0	17.9	1.1	56	33	3	0.6
Sulfate	0	39.3	6.7	3.8	0.22	111	63	7	5
Zinc	0	0.015	0.003	0.0040	0.00024	0.0071	0.0047	0.0010	0.0004

All units are in mg/L, unless otherwise noted.
Precipitation chemistry derived in geochemical model (PhreeqC)
Groundwater and surface water data are based on analytical sample data from site. Pit wall runoff chemistry based on meteoric water mobility procedure (MWMP) test data on site waste rock samples.
Tailings decant pond chemistry averages calculated using site water balance mixing model (SWS 2010, pending).
Decant pond chemistry is a mixture of recent pond water quality data, upgradient surface water, and seepage chemistry. Heap leach draindown chemistry average calculated using site water balance mixing model (SWS 2010, pending).
Chemistry is based on estimate of initial draindown chemistry and rinsing with decant pond water over time.

Similarly, the heap leach facility draindown is estimated in the site-wide water balance chemical mixing model based on estimates of initial draindown mixed with rinse water from the TSF decant pond over time. The water quality used in this pit lake model update is an average composition over the period that the draindown/rinse water is pumped to the pit lake. These data are also presented in Table 3.2.

Consistent with previous updates, the cyanide concentrations from the decant pond and the heap leach facility were decreased by 60 percent to account for volatilization and degradation.

For this update, dewatering well data from 2008, 2009 and 2010 were used to estimate the quality of groundwater inflow to the pit.

Updated groundwater chemistry was calculated based on the mean composition of water quality from each dewatering well pumped during 2008, 2009 and 2010. For major ion chemistry, arithmetic averages were used, as these data are typically normally distributed. For trace metal chemistry, geometric mean data were used because these datasets are often skewed and a log-normal distribution best describes the data. By convention, if all analyses for a constituent in a well were non-detect, the concentration for that well was set to zero for calculating arithmetic and geometric means. If only some analyses were non-detect, the mean concentration for that well was calculated by substituting all non-detect values with one-half of the method detection limit for the analysis. All wells were weighted equally to calculate the groundwater inflow chemistry. The data used to represent groundwater chemistry for the revised modeling are presented in Table 3.2. In Table 3.3, the values are presented with the December 2006, February 2008, and February 2009 estimates for comparison.

Table 3.3 Comparison of dewatering well chemistry data used in modeling updates

Parameter	February 2011 Modeling Groundwater Average/geomean data from dewatering wells (2008/2009/2010 data)	February 2010 Modeling Groundwater Average/geomean data from dewatering wells (2008/2009 data)	February 2009 Modeling Groundwater Average/geomean data from dewatering wells (2008 data)	February 2008 Modeling Groundwater Weighted average data from dewatering wells (2007 data)	December 2006 Modeling Groundwater Weighted average data from dewatering wells (2000-2004)
pH (su)	8.35	8.34	8.37	8.2	8
Alkalinity as $CaCO_3$	85.5	85.5	85.4	86.2	78.6
Ammonia	0.035	0.035	0.03	0.1	0.103
Antimony	0.0022	0.0022	0.0016	0.0013	0.0019
Arsenic	0.0072	0.0072	0.008	0.008	0.014
Barium	0.0028	0.0029	0.0026	0.0024	0.001
Cadmium	0.00007	0.000068	0.000058	0.000054	0.00015
Calcium	48	48	40.2	37.5	35.6
Chloride	1.2	1.3	1.1	1.6	0.52
Chromium	0.0052	0.0052	0.0053	0	0
Copper	0.0055	0.0055	0.0053	0.0056	0.0051
Cyanide	0.003	0	0.0029	0.0032	0
Fluoride	0.26	0.26	0.22	0.2	0.29
Iron	0.041	0.041	0.02	0.039	0.13
Lead	0.0003	0.00025	0.00017	0.000082	0.00071
Magnesium	6.4	6.4	6.6	6.6	6.5
Manganese	0.014	0.014	0.0084	0.012	0.045
Mercury	0.0001	0.0001	0	0.0001	0.0002
Nitrate, as N	0.68	0.69	1.4	1.3	0.91
Nitrite, as N	0.023	0.023	0.013	0.061	0.054
Phosphorus	0.011	0.011	0	0	0.051
Potassium	0.96	0.97	1	1.1	1.1
Selenium	0.0005	0.00045	0.00039	0.00044	0.007
Silver	0.0054	0.0054	0.0055	0.0056	0
Sodium	12	12	9.6	10.5	9.3
Sulfate	39.3	41.3	46.8	46.2	50.5
Zinc	0.02	0.015	0.0091	0.012	0.011

All data is in mg/L, unless otherwise noted.

If all analytical data for a constituent were reported below detection limits (non-detect), that value was set to zero for modeling.

4 REVISED PIT LAKE MODELING

The geochemical modeling process involves simulation of solution mixing, chemical reactions, and mineral surface adsorption to predict the pit lake composition at each selected time step. The process is detailed in the December 2006 memo.

Results of the revised modeling are summarized in Table 4.1, and compared to applicable water quality standards. Results from the December 2006, February 2008, February 2009 and February 2010 modeling are also presented in Tables 4.2 through 4.5 for comparison. End notes for Tables 4.1 through 4.5, describing sources of the applicable water quality standards, are presented at the end of this memo. As presented in these tables, the predicted concentrations of pit lake water chemistry have improved slightly based on the updated water balance and chemical data; as a result, the conclusions described in the December 2006 memo are unchanged.

The dominant factor affecting the prediction of improved water quality in the pit lake is the significant increase in the amount of dilute TSF decant water entering the pit over approximately ten years, post-mining. As stated earlier, previous pit lake modeling used an estimate of 5,500 acre-feet of decant water pumped to the pit and did not account for any dilution by upgradient surface water or direct precipitation. Because of freeboard requirements for the TSF during heap leach operation, a larger volume of dilute TSF decant water (over 15,000 acre-feet) is planned to be pumped to the pit.

Pit lake water quality results were predicted for years 2, 5, 15, 51, 75, and 94. Standards for cadmium, chromium, copper, lead, silver and zinc represent hardness-based aquatic standards, which were calculated using a hardness value of 103.7 mg/L as $CaCO_3$.

Hardness was calculated based on the average calcium and magnesium concentrations in the lower wetland surface water samples collected between February 2000 and November 2005. Any surface water discharges from the TSF will report to this drainage. For comparison, the average hardness of the pit lake is predicted to be 69-80 mg/L as $CaCO_3$ at the time of first discharge.

The predicted pH of the pit lake water remains above 7 su throughout filling and once discharge is estimated to begin. The alkalinity values were predicted between 99 and 120 mg/L as $CaCO_3$, indicating excess buffering capacity of the pit lake water. During Years 1-2, concentrations of total cyanide, and manganese are predicted to be elevated compared to standards; total cyanide is predicted to remain above standards through year 5. The main source of these constituents is the tailings decant and seepage water that are pumped to the pit lake during the first two years. Volatilization over time (beyond the estimated level of volatilization occurring during the transfer from one facility to another) and other attenuation reactions were not included in the modeling, and will likely act to further reduce total cyanide concentrations.

Table 4.1 2011 Update prediction of pit lake composition through time after closure

Parameter/ Analyte	Reference standards	Source	Timestep 1	Timestep 2	Timestep 3	Timestep 4*	Timestep 5	Timestep 6
			Year 2	Year 5	Year 15	Year 51	Year 75	Year 94
pH, std units	6.5 - 8.5	18 AAC 70	7.8	7.8	7.7	7.8	7.8	7.8
Alkalinity, as $CaCO_3$	NS		120	115	99	110	110	109
Chloride	NS		7	5.7	2.4	3.4	2.7	2.1
Fluoride	NS		0.31	0.27	0.20	0.24	0.23	0.22
Nitrate, as N	10	MCL/Table 1	4.2	3.2	1.4	2.0	1.6	1.2
Nitrite, as N	1	MCL/Table 1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	2.43-6.67	Table VII chronic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulfate, as $SO4^{2-}$	250	SDWR	57	48	33	40	37	35
Total cyanide	0.0052**	Table III chronic	**0.021**	**0.014**	0.005	0.005	0.005	0.004
Antimony	0.006	MCL/Table 1	**0.008**	0.0064	0.0032	0.004	0.003	0.003
Arsenic	0.01	MCL/Table 1	0.0035	0.0032	0.0035	0.0039	0.0042	0.0043
Barium	NS		0.010	0.008	0.0039	0.0051	0.0042	0.0036
Cadmium	0.0003 H	Table III chronic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	NS		31	28	20	23	22	21
Chromium	NS		<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Copper	0.009 H	Table III chronic	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Iron	1	Table III chronic	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	NS		0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium	NS		5.9	5.5	4.6	5.2	5.2	5.1
Manganese	0.05	Table Va	0.045	0.044	0.021	0.025	0.020	0.017
Mercury	NS		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Phosphorus	NS		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	NS		2.9	2.3	1.2	1.6	1.4	1.2
Selenium	0.005	Table III chronic	0.0013	0.0011	<0.001	<0.001	<0.001	<0.001
Silver	NS		0.0036	0.0034	0.0035	0.0039	0.0040	0.0040
Sodium	NS		18	15	10	12	11	11
Zinc	0.12 H	Table III acute	0.0110	0.010	0.010	0.011	0.011	0.011
Hardness (Ca, Mg)	NS		101	91	69	80	77	74

** Discharge from the pit occurs at Year 51, post filling.*
All concentrations are in milligrams per liter, unless otherwise noted.
< Analyte concentration result is below typical analytical detection limits. Value shown is the detection limit.
NS = No standard
Exceedences of the reference standards are highlighted in bold with blue shading.
*** The reference standard applies to WAD cyanide; however, model results report total cyanide.*

Table 4.2
2010 Update prediction of pit lake composition through time after closure

Parameter/ Analyte	Reference standards	Source	Timestep 1	Timestep 2	Timestep 3	Timestep 4	Timestep 5*
			Year 2	Year 5	Year 15	Year 75	Year 94
pH, std units	6.5 - 8.5	18 AAC 70	7.7	7.7	7.7	7.8	7.8
Alkalinity, as $CaCO_3$	NS		98	106	99	106	105
Chloride	NS		12	8.5	4.2	2.3	2.1
Fluoride	NS		0.34	0.30	0.23	0.22	0.21
Nitrate, as N	10	MCL/Table 1	7.0	4.8	2.4	1.3	1.3
Nitrite, as N	1	MCL/Table 1	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	2.43-6.67	Table VII chronic	<0.01	<0.01	<0.01	<0.01	<0.01
Sulfate, as SO_4^{2-}	250	SDWR	71	58	41	36	36
Total cyanide	0.0052**	Table III chronic	**0.041**	**0.026**	**0.012**	0.0049	0.0045
Antimony	0.006	MCL/Table 1	**0.013**	**0.0093**	0.0051	0.0031	0.003
Arsenic	0.01	MCL/Table 1	0.0025	0.0033	0.0034	0.0042	0.0042
Barium	NS		0.016	0.011	0.0062	0.0038	0.0036
Cadmium	0.0003 H	Table III chronic	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	NS		35	31	23	22	22
Chromium	NS		<0.006	<0.006	<0.006	<0.006	<0.006
Copper	0.009 H	Table III chronic	<0.003	<0.003	<0.003	<0.003	<0.003
Iron	1	Table III chronic	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	NS		0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium	NS		5.3	5.4	4.8	5.0	4.9
Manganese	0.05	Table Va	**0.071**	**0.053**	0.032	0.019	0.018
Mercury	NS		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Phosphorus	NS		<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	NS		4.4	3.2	1.8	1.2	1.2
Selenium	0.005	Table III chronic	0.0021	0.0015	<0.001	<0.001	<0.001
Silver	NS		0.0019	0.0028	0.0032	0.0039	0.0039
Sodium	NS		23	18	12	10	10
Zinc	0.12 H	Table III acute	0.0080	0.010	0.010	0.011	0.011
Hardness (Ca, Mg)	NS		110	99	78	75	74

Notes:
Water balance revised based on updated mine plan.
Tailings decant water and heap leach pad draindown chemistry based on site-wide water balance mixing model.
Groundwater chemistry input revised based on average 2008/2009 dewatering well analytical data.
** Discharge from the pit occurs at Year 94, post filling.*
All concentrations are in milligrams per liter, unless otherwise noted.
< Analyte concentration result is below typical analytical detection limits. Value shown is the detection limit.
NS = No standard
Exceedences of the reference standards are highlighted in bold with blue shading.
*** The reference standard applies to WAD cyanide; however, model results report total cyanide.*

Table 4.3
2009 Update prediction of pit lake composition through time after closure

Parameter/ Analyte	Reference standards	Source	Timestep 1	Timestep 2	Timestep 3	Timestep 4*	Timestep 5
			Year 2	Year 5	Year 15	Year 75	Years 100
pH, std units	6.5 - 8.5	18 AAC 70	7.7	7.7	7.6	7.5	7.5
Alkalinity, as	NS		114	100	80	53	52
Chloride	NS		15.4	11.9	7.1	2.6	2.3
Fluoride	NS		0.40	0.33	0.24	0.13	0.12
Nitrate, as N	10	MCL/Table 1	6.6	5.2	3.2	1.3	1.17
Nitrite, as N	1	MCL/Table 1	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	2.43-6.67	Table VII chronic	<0.01	<0.01	<0.01	<0.01	<0.01
Sulfate, as SO_4^{2-}	250	SDWR	198	154	95	38	35
Total cyanide	0.0052**	Table III chronic	**0.033**	**0.026**	**0.015**	0.0051	0.0044
Antimony	0.006	MCL/Table 1	**0.032**	**0.025**	**0.015**	0.0058	0.005
Arsenic	0.01	MCL/Table 1	0.00063	0.0008	0.0012	0.0018	0.0018
Barium	NS		0.017	0.014	0.0092	0.0051	0.0052
Cadmium	0.0003 H	Table III chronic	0.00014	0.00013	0.00010	<0.0001	<0.0001
Calcium	NS		76.6	61.0	39.6	18.1	16.7
Chromium	NS		<0.006	<0.006	<0.006	<0.006	<0.006
Copper	0.009 H	Table III chronic	**0.017**	**0.012**	0.0046	<0.003	<0.003
Iron	1	Table III chronic	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	NS		0.0025	0.0018	0.0008	0.00023	0.00019
Magnesium	NS		14.5	11.7	7.8	3.9	3.7
Manganese	0.05	Table Va	**0.43**	**0.33**	**0.19**	**0.059**	0.050
Mercury	NS		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Phosphorus	NS		<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	NS		5.7	4.5	2.8	1.2	1.2
Selenium	0.005	Table III chronic	**0.015**	**0.012**	**0.0072**	0.0031	0.0029
Silver	NS		**0.0061**	**0.0051**	0.0038	0.0023	0.0022
Sodium	NS		23.3	18.7	12.3	5.9	5.5
Zinc	0.12 H	Table III acute	0.039	0.030	0.019	0.008	0.007
TDS	NS		455	368	249	125	118
Hardness	NS		251	200	131	61	57

Notes:
Groundwater chemistry input revised based on average 2008 dewatering well analytical data.
Input 5,500 ac-ft of TSF decant (550 ac-ft) and seepage (4,950 ac-ft) in 2 years.
** Discharge from the pit occurs at Year 88, post filling.*
All concentrations are in milligrams per liter, unless otherwise noted.
< Analyte concentration result is below typical analytical detection limits. Value shown is the detection limit.
NS = No standard
Exceedences of the reference standards are highlighted in bold with blue shading.
*** The reference standard applies to WAD cyanide; however, model results report total cyanide.*

Table 4.4
2008 Update prediction of pit lake composition through time after closure

Parameter/ Analyte	Reference standards	Source	Timestep 1 Year 2	Timestep 2 Year 5	Timestep 3 Year 15	Timestep 4* Year 75	Timestep 5 Years 100
pH, std units	6.5 - 8.5	18 AAC 70	7.7	7.7	7.6	7.4	7.4
Alkalinity, as	NS		113	99	78	51	50
Chloride	NS		15.5	11.9	7.2	2.7	2.4
Fluoride	NS		0.40	0.33	0.23	0.13	0.12
Nitrate, as N	10	MCL/Table 1	6.6	5.2	3.2	1.3	1.16
Nitrite, as N	1	MCL/Table 1	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	2.43-6.67	Table VII chronic	<0.01	<0.01	<0.01	<0.01	<0.01
Sulfate, as SO_4^{2-}	250	SDWR	198	155	96	39	35
Total cyanide	0.0052**	Table III chronic	**0.033**	**0.026**	**0.015**	0.0052	0.0045
Antimony	0.006	MCL/Table 1	**0.032**	**0.025**	**0.015**	0.0058	0.005
Arsenic	0.01	MCL/Table 1	0.00062	0.0008	0.0012	0.0017	0.0018
Barium	NS		0.017	0.014	0.0091	0.0051	0.0051
Cadmium	0.0003 H	Table III chronic	0.00014	0.00012	0.00010	<0.0001	<0.0001
Calcium	NS		77.2	62.0	41.0	19.5	18.1
Chromium	NS		<0.006	<0.006	<0.006	<0.006	<0.006
Copper	0.009 H	Table III chronic	**0.017**	**0.011**	0.0044	<0.003	<0.003
Iron	1	Table III chronic	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	NS		0.0024	0.0017	0.0008	0.00022	0.00019
Magnesium	NS		14.5	11.7	7.8	3.9	3.7
Manganese	0.05	Table Va	**0.43**	**0.33**	**0.19**	**0.060**	**0.051**
Mercury	NS		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Phosphorus	NS		<0.05	<0.05	<0.05	<0.05	<0.05
Potassium	NS		5.7	4.5	2.8	1.3	1.2
Selenium	0.005	Table III chronic	**0.015**	**0.012**	**0.0072**	0.0031	0.0029
Silver	NS		**0.0061**	**0.0052**	0.0039	0.0024	0.0023
Sodium	NS		22.6	17.5	10.5	4.2	3.8
Zinc	0.12 H	Table III acute	0.039	0.031	0.020	0.009	0.008
TDS	NS		454	367	247	123	116
Hardness	NS		252	203	135	65	60

Notes:
Input 5,500 ac-ft of TSF decant (550 ac-ft) and seepage (4,950 ac-ft) in 2 years.
** Discharge from the pit occurs at Year 88, post filling.*
Groundwater chemistry input revised based on average 2007 dewatering well analytical data.
All concentrations are in milligrams per liter, unless otherwise noted.
< Analyte concentration result is below typical analytical detection limits. Value shown is the detection limit.
NS = No standard
Exceedences of the reference standards are highlighted in bold with blue shading.
*** The reference standard applies to WAD cyanide; however, model results report total cyanide.*

Table 4.5
2006 Prediction of pit lake composition through time after closure

Parameter/ Analyte	Reference standards	Source	Timestep 1	Timestep 2	Timestep 3	Timestep 4*	Timestep 5
			Year 2	Year 5	Year 15	Year 75	Years 100
pH, std units	6.5 - 8.5	18 AAC 70	7.7	7.7	7.6	7.4	7.4
Alkalinity, as $CaCO_3$	NS		113	98	78	51	50
Alkalinity, as $CaCO_3$	NS		15.4	11.8	6.9	2.5	2.2
Fluoride	NS		0.41	0.34	0.25	0.14	0.14
Nitrate, as N	10	MCL/Table 1	6.6	5.1	3.1	1.2	1.09
Nitrite, as N	1	MCL/Table 1	<0.01	<0.01	<0.01	<0.01	<0.01
Ammonia	2.43-6.67	Table VII chronic	<0.01	<0.01	<0.01	<0.01	<0.01
Sulfate, as SO_4^{2-}	250	SDWR	198	155	96	39	35
Total cyanide	0.0052**	Table III chronic	**0.033**	**0.025**	**0.014**	0.0046	0.0039
Antimony	0.006	MCL/Table 1	**0.033**	**0.025**	**0.015**	0.0059	0.0054
Arsenic	0.01	MCL/Table 1	0.00080	0.0012	0.0020	0.0026	0.0027
Barium	NS		0.017	0.014	0.0088	0.0048	0.0048
Cadmium	0.0003 H	Table III chronic	0.00015	0.00014	0.00012	<0.0001	0.00010
Calcium	NS		77.0	61.7	40.6	19.1	17.7
Chromium	NS		<0.006	<0.006	<0.006	<0.006	<0.006
Copper	0.009 H	Table III chronic	**0.016**	**0.010**	0.0034	<0.003	<0.003
Iron	1	Table III chronic	<0.06	<0.06	<0.06	<0.06	<0.06
Lead	NS		0.0023	0.0015	0.0006	0.00016	0.00015
Magnesium	NS		14.5	11.7	7.8	3.9	3.7
Manganese	0.05	Table Va	**0.43**	**0.33**	**0.20**	**0.066**	**0.057**
Mercury	NS		<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Phosphorus	NS		<0.05	<0.05	<0.05	<0.05	0.054
Potassium	NS		5.7	4.5	2.8	1.3	1.2
Selenium	0.005	Table III chronic	**0.016**	**0.013**	**0.0086**	0.0044	0.0042
Silver	NS		**0.0056**	**0.0044**	0.0027	0.0012	0.0012
Sodium	NS		22.6	17.6	10.7	4.4	4.1
Zinc	0.12 H	Table III acute	0.039	0.031	0.019	0.008	0.008
TDS	NS		454	366	246	123	115
Hardness	NS		252	202	134	64	59

Notes:
Input 5,500 ac-ft of TSF decant (550 ac-ft) and seepage (4,950 ac-ft) in 2 years.
** Discharge from the pit occurs at Year 88, post-filling groundwater chemistry input based on average 2004 dewatering well analytical data.*
All concentrations are in milligrams per liter, unless otherwise noted. < Analyte concentration result is below typical analytical detection limits. Value shown is the detection limit.
NS = No standard
Exceedences of the reference standards are highlighted in bold with blue shading.
*** The reference standard applies to WAD cyanide; however, model results report total cyanide.*

5 CONCLUSIONS

The results of the updated pit lake modeling indicate the following:

- The proposed, updated mine plan and revised closure approach results in additional, relatively fresh water being pumped to the pit from the TSF.
- The revised water balance and decant pond chemistry estimates result in improvements to the predicted pit lake water quality relative to previous evaluations.
- Addition of heap leach draindown/rinse water to the pit lake following closure of that facility does not significantly or detrimentally affect pit lake water quality.
- The most recent groundwater chemistry data from dewatering wells is largely consistent with that used in the previous analyses.

- Water quality standards can be met with no active management or treatment after 15 years following cessation of dewatering.
- The overall conclusion that water quality standards will be met in the pit lake prior to discharge is still valid and not affected by the new data.
- Pumping decant/seepage water and heap leach draindown to the pit will have no short- or long-term effects on water quality.
- Over the short-term, the pit will act as a hydraulic sink with hydraulic gradients toward the pit lake; and over the long term, the pit lake water will comply with water quality standards.

REFERENCES

Water Management Consultants (WMC). December 2006. Fort Knox Pit Lake Evaluation, December 28, 2006.

WMC. February 2008. Fort Knox Pit Lake Evaluation, Updated 2007 groundwater analytical data, February 27, 2008.

WMC. February 2009. Fort Knox Pit Lake Evaluation, Updated using 2008 groundwater chemistry data, February 27, 2009.

Schlumberger Water Services (SWS), March 2010. Fort Knox Pit Lake Evaluation, Updated using 2009 groundwater chemistry data, March 1, 2010.

END NOTES FOR TABLES 4.1 through 4.5

Applicable water quality standards

18 AAC 70	*Alaska Department of Environmental Conservation Water Quality Standards for fresh water uses, growth and propagation of fish, shellfish and other aquatic life and wildlife.*
MCL	*Maximum Contaminant Level (USEPA, 2004)*
SDWR	*Secondary Drinking Water Regulation (USEPA, 2004)*
Tables 1 - VIIa	*Water Quality Criteria for Toxic and Other Deleterious Organic and Inorganic Substances [Title XVIII, Chapter 70, Alaska Administrative Code (18 AAC 70)]* Table 1 - Drinking water maximum contaminant levels (MCL) Table III - Criteria for freshwater aquatic life Table V - Human health criteria for noncarcinogens Tables VI and VIIa = Specific criteria for ammonia
H	Standard is calculated based on a hardness of 103.7 mg/L as $CaCO_3$. Hardness is calculated based on the average calcium and magnesium concentrations in the lower wetland surface water samples collected between February 2000 and November 2005.

ATTACHMENT G
Spill Reporting Log

Fort Knox Mine Spill Log 2010

Spill Number	Date	Time	Location	Material	Quantity	Equipment	Cause	Cleanup Measures	Disposal	Agency Notified	Date	Time
10-01-01	1/13/10	11:50 AM	Hot Start Area	Hydraulic Oil	2 gallons	HT-1	Hose Failure	Absorbs/Excavation	Burn Absorbs/Ship barrels to OIT	ADEC/EOM Report	Jan EOM	8:00 AM
10-01-02	1/16/10	3:20 PM	Tire Pad	Hydraulic Oil	15 gallons	HT-37	Torn Seal	Absorbs/Excavation	Burn Absorbs/Ship barrels to OIT	ADEC/Voice Mail	1/18/10	11:56 AM
10-01-03	1/25/10	1:45 PM	Tire Pad	50 WT Oil	10 gallons	FT-1	Drain Cart Overfill	Absorbs	Burn Absorbs in Smart Ash Burners	ADEC-Paul Lhotka	1/25/10	2:11 PM
10-03-04	2/11/10	9:30 AM	Fish Creek Fuel Island	Diesel	3 gallons	NA	Faulty Fuel Nozzle	Excavate Snow	Wash Bay - Oil Water Separator	ADEC-Brian Jackson	2/11/10	11:48 AM
10-05-05	2/22/10	7:00 PM	Phase 7	Ethylene Glycol	10 gallons	SH-6	Fan Blade into Radiator	Absorbs/Excavation	Burn Absorbs/Soil to Yellow Pup	ADEC-Wes Ghormley	2/23/10	3:00 PM
10-01-06	2/23/10	6:24 PM	Heap Leach Ramp	Hydraulic Oil	10 gallons	HT-37	Hydraulic Hose Failure	Absorbs/Excavation	Burn Absorbs/Soil to Yellow Pup	ADEC-Wes Ghormley	2/24/10	3:30 PM
10-01-07	3/5/10	2:00 PM	Phase 6	10W Oil	55 gallons	DR-7	Hydraulic Hose Failure	Absorbs/Excavation	Burn Absorbs/Soil to Yellow Pup	ADEC-Peggy Wandel	3/5/10	2:34 PM
10-01-08	3/9/10	1:20 PM	MEM-Bulk Oil Room	30W Oil	350 gallons	30W Tank	Tank Overfill	Absorbs/Excavation	340 gallons recovered	ADEC-Paul Lhotka	3/9/10	1:30 PM
								Recovery	Absorbs burned at Sourdough	Final Report in 3/12/10	3/12/10	10:30 AM
10-01-09	03/19/10	6:30 AM	Decant Tower	Hydraulic Oil	20 gallons	Decant Pump	Hose Failure	Absorbs/Excavation	burn absorbs/Ship barrels to OIT	ADEC-Peggy Wandell	3/19/10	10:45 AM
10-03-10	3/26/10	10:30 PM	Pearl Creek Random Fill	Diesel	700 gallons	HT-47	Truck ran up on berm	Excavation	Spread out on Yellow Pup Dump	ADEC Hotline	3/27/10	5:45 AM
10-01-11	3/30/10	11:30 PM	Tire Yard	Hydraulic Oil	20 gallons	HT-41	Failed Line Seal	Absorbs/Excavation	burn absorbs/Ship barrels to OIT	ADEC-Paul Lhotka	3/31/10	8:31 AM
10-05-12	4/1/10	6:30 PM	940 Level of Pit	Ethylene Glycol	5 gallons	HT-45	Coolant Line Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Spill Hotline	4/1/10	7:20 AM
10-05-13	4/1/10	10:30 AM	Heap Leach Ramp	Ethylene Glycol	50 gallons	HT-45	Coolant Line Failure	Absorbs/Excavation	Burn Absorbs/ Soil to Yellow Pup	ADEC- Spill Hotline	4/1/10	11:00 AM
10-05-14	4/2/10	11:57 PM	940 Level of Pit	Ethylene Glycol	5 gallons	HT-44	Coolant Line Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	4/3/10	1:45 AM
10-01-15	4/6/10	5:45 PM	910 Level of Pit	Hydraulic Oil	40 gallons	SH-6	O-Ring Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	4/6/10	9:15 PM
10-01-16	4/8/10	12:00 AM	In front of Bay 9	Hydraulic Oil	1.5 Gallons	Unk	Unk	Absorbs/Excavation	Burn absorbs/ ship barrels to OIT	DEC - EOM Report	Apr EOM	8:00 AM
10-05-17	4/9/10	9:00PM	940 Level of Pit	Ethylene Glycol	5 gallons	HT-47	Pump Drive Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	4/10/10	7:13 AM
10-01-18	4/12/10	2:01 AM	A Grade Stockpile	Hydraulic Oil	44 6	RTD 3	Transmission Damage	Absorbs/Excavation	Burn absorbs/ ship barrels to OIT	ADEC-Wes Ghormley	4/12/10	8:00 PM
10-01-19	4/14/10	10:30 AM	910 Level of Pit	Hydraulic Oil	2 gallons	DZ-8	Loose Final	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	Apr EOM	8:00 AM
10-01-20	4/16/10	12:01 PM	Contractor Laydown Yard	Hydraulic Oil	2 Gallons	D-9	Hydraulic Hose Failure	Absorbs/Excavation	Burn Absorbs/Ship barrels to OIT	ADEC-EOM	Apr EOM	8:00 AM
10-01-21	4/23/10	5:00 PM	Bay 8 & ALPM Shop	ATF Fluid	5 gallons	DR-4	Hydraulic Hose Failure	Absorbs/Excavation	Burn Absorbs/Ship barrels to OIT	ADEC- Spill Hotline	4/24/10	1:31 PM
10-01-22	4/25/10	2:45 AM	910 Level of Pit	Hydraulic Oil	5 gallons	HT-47	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	Apr EOM	8:00 AM
10-01-23	4/27/10	4:00 PM	1630 Level of Pit	Hydraulic Oil	2 gallons	HT-1	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	Apr EOM	8:00 AM
10-01-24	4/28/10	9:45 PM	Heap Leach-Cell 8-1710 Elev	Hydraulic Oil	30 gallons	HT-1	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Paul Lhotka	4/29/10	8:16 PM
10-01-25	5/3/10	1:20 AM	East Fish Creek Haul Road	Hydraulic Oil	8 gallons	GR-7	Broken Ecology Valve	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	6/1/10	8:00 AM
10-06-26	5/4/10	8:40 PM	Fort Knox Mill-CIC	Pregnant Solution	35 000 gallons	Barren Pump PLC	PLC Tripped Barren Pump	Excavation	Deposited in Heap Leach	ADEC- Spill Hotline	5/4/10	9:30 PM
10-01-27	5/7/10	3:00 PM	MEM-Bulk Oil Room	Oil	6 Gallons	Unknown		Absorbs/Excavation	burn absorbs/Ship barrels to OIT	ADEC/EOM Report	May EOM	
10-01-28	5/11/10	10:30 AM	Phase 6 Ramp	15-40 Engine Oil	15 gallons	HT-43	Blown Engine	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Peggy Wandel	5/11/10	2:30 PM
10-01-29	5/12/10	1200 AM	North Side of Fish Creek Bull Rail	Hydraulic Oil	10 Gallons	HT-44	Hydraulic Hose Failure	Absorbs/Excavation	Burn Absorbs/Ship barrels to OIT	ADEC- John Ebel	5/12/10	0840 AM
10-01-30	5/12/10	2:00 AM	Heap Leach Haul Road	Hydraulic Oil	20 gallons	HT-5	Broken Shaft	Absorbs	Awaiting repair/ then clean up	ADEC-Paul Lhotka	5/1310	8:20 AM
10-06-31	5/13/10	5:05 AM	East Side of Detox	Process Solution	100 gallons	Tails Line	Valve left open/should have been closed	Excavation	Deposited in Heap Leach	ADEC-Paul Lhotka	5/13/10	8:20 AM
10-06-32	5/15/10	12:30 PM	FGMI Lab-East Side	Process Solution	25 gallons	Dust Conveyor	Opened panel in outside conveyor	Excavation	Ran back threw process in mill	ADEC Spill Hotline	5/15/10	2:53 PM
10-05-33	5/16/10	11:45 PM	880 Level of Pit	Ethylene Glycol	2 gallons	HT-30	Heater Hose Failure	Absorbs, Duck Pond	Burn Absorbs in Smart Ash Burners	ADEC Spill Hotline	5/17/10	7:17 AM
10-01-34	5/17/10	6:30 AM	B-Stockpile	Hydraulic Oil	5 gallons	DZ-13	Hydraulic Hose Failure	Cleaned in Wash Bay	Ran threw oil/water separated	ADEC-EOM	6/1/10	8:00 AM
10-05-35	5/21/10	10:05 PM	970 Level of pit	Ethylene Glycol	2 gallons	HT-46	Coolant Line Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	5/21/10	10:25 PM
10-01-36	5/25/10	10:15AM	Fish Creek Fuel Island	Diesel	4 gallons	RTD 2	Fuel Nozzle Failure	Excavation	Barreled up Contaminated Soil	ADEC/EOM Report	6/1/10	8:00AM
10-05-37	5/29/10	4:35 AM	B Stockpile	Ethylene Glycol	3 gallons	HT-5	Coolant Line Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	5/29/10	5:00 AM
10-03-38	6/2/10	8:00 AM	Fish Creek Fuel Island	Diesel	4 gallons	PT-10	Overfilled Tank	Absorbs, Duck Pond	Burn Absorbs in Smart Ash Burners	ADEC/EOM Report	7/1/10	8:00 AM
10-01-39	6/2/10	10:15 AM	A Grade Stockpile	Hydraulic Oil	135 gallons	HT-45	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Peggy Wandel	6/2/10	12:12 PM
10-03-40	6/6/10	6:50 PM	Fish Creek Fuel Island	Diesel	5 gallons	GR-4	Overfilled Tank	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	7/1/10	8:00 AM
10-01-41	6/10/10	3:15 PM	850 Level of Pit	Hydraulic Oil	10 gallons	SH-6	Leaking Hydraulic Line During Maint.	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Brian Jackson	6/11/10	9:08 AM
10-05-42	6/10/10	7:00 PM	850 Level of Pit	Ethylene Glycol	5 gallons	Boom Truck	Coolant Line Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	6/10/10	7:30 PM
10-05-43	6/12/10	6:30 AM	Phase 6 Ramp	Ethylene Glycol	10 gallons	HT-46	Coolant Line Failure	No Clean-up	Spray from hose not recoverable	ADEC- Spill Hotline	6/12/10	7:03 AM
10-01-44	6/13/10	1:30 AM	910 Floor of Pit	ATF Fluid	20 gallons	Drill 2	Loss of fluid during repair	Absorbs for pooled fluid	Burn Absorbs in Smart Ash Burners	ADEC-Paul Lhotka	6/14/10	8:10 AM
10-03-45	6/14/10	12:00 PM	Phase 6	Diesel	80 gallons	FT-7	Overfill of Tank due to Mech. Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC Spill Hotline	6/15/10	2:45 AM
10-01-46	6/17/10	5:00 AM	Crushed Reject Pile	Hydraulic Oil	8 gallons	LR-21	Hydraulic Hose Failure	Excavation	Barreled up Contaminated Soil	ADEC-EOM	7/1/10	12:00 AM
10-05-47	6/18/10	8:00 PM	Phase 6 Ramp	Ethylene Glycol	2 gallons	HT-43	After Cooler Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC- Spill Hotline	6/18/10	9:00 PM
10-01-48	6/20/10	6:30 AM	Decant Tower	Hydraulic Oil	10 gallons	Drill 9	Containment Pool Leak	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Paul Lhotka	6/21/10	8:06 AM
10-03-49	6/21/10	1:00 PM	Decant Tower	Diesel	20 gallons	Storage Tank	Tank Overfill	Excavation	Barreled up Contaminated Soil	ADEC-Brian Jackson	6/21/10	3:35 PM
10-06-50	6/24/10	1:30 PM	Outside Refinery/Mill	Process Solution	5 gallons	Exhaust Pipe	Leaking Exhaust Pipe	Excavation	Returned to Mill process	ADEC Spill Hotline	6/24/10	5:15 PM
10-01-51	6/26/10	1:10 PM	910 Floor of Pit	15/40 oil	14 gallons	SH-5	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC Spill Hotline	6/26/10	1:45 PM
10-01-52	6/27/10	12:30 AM	850 pit floor	Hydraulic Oil	15 gallons	SH-6	O-Ring Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM Report	6/28/10	8:00 AM

Fort Knox Mine Spill Log 2010

Spill Number	Date	Time	Location	Material	Quantity	Equipment	Cause	Cleanup Measures	Disposal	Agency Notified	Date	Time
10-01-53	6/27/10	1:00 AM	850 pit floor	Hydraulic Oil	4 gallons	Drill 4	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM Report	6/28/10	8:00 AM
10-02-54	6/27/10	10:30 AM	Barnes Creek Waste Dump	Grease	1.36 gallons	Service Truck	Grease bucket fell off truck	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM Report	6/28/10	8:00 AM
10-01-55	6/28/10	8:00 AM	MEM-Bulk Oil Room	Rock Oil	10 gallons	Rock Oil Hose	Hose Failure	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-EOM Report	6/28/10	8:00 AM
10-01-56	7/1/10	11:30 AM	850 Bench	ATF Fluid	5 gallons	Drill 4	Hose Fitting Failure		Burn absorbs/Soil to Barnes Creek	ADEC-EOM Report	8/1/10	8:00 AM
10-01-57	7/2/10	10:30 AM	Phase 6 Ramp	50 WT Oil	20 gallons	HT-45	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Wes Ghormley	7/2/10	11:55 AM
10-01-58	7/2/10	2:30 PM	910 Level of Pit	Hydraulic Oil	50 gallons	HT-45	Hydraulic Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC Spill Hotline	7/3/10	2:59 PM
10-01-59	7/3/10	11:20 PM	Mill Freshwater Tank	Hydraulic Oil	15 gallons	WT-4	Hydraulic Fitting Failure	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC Spill Hotline	7/5/10	10:55 AM
10-01-60	7/12/10	11:45 AM	880 Floor	Ethylene Glycol	3 gallons	FHT-004	Broken Coolant Line	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC Spill Hotline	7/12/10	11:48 AM
10-05-61	7/14/10	3:30 PM	N. Side of Cold Storage	Ethylene Glycol	0.5 gallons	FKL010	Radiator Damage`	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC Spill Hotline	7/14/10	4:00 AM
10-05-62	7/21/10	6:00 PM	Haul Road	Ethylene Glycol	45 gallons	HT45	Hose Failure	Absorbs	Burn Absorbs	ADEC Spill Hotline	7/22/10	11:02 AM
10-01-63	7/22/10	10:00 PM	Barnes Creek Waste Dump	Hydraulic Oil	5 gallons	DR2	Hose Leak	Absorbs	Burn Absorbs	ADEC Spill Hotline	7/22/10	13:23 PM
10-01-64	7/25/10	3:00 PM	Level 820	Hydraulic Oil	20 gallons	SH5	Hydraulic Hose Failure	Absorbs	Burn Absorbs	ADEC-Paul Lhotka	7/26/10	1:16 PM
10-03-65	7/26/10	10:30 AM	Low Boy Ramp	Diesel	4 gallons	DR-8	Cracked Fuel Tank	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-EOM Report	8/2/10	8:00 AM
10-01-66	7/29/10	5:30 AM	Pearl Creek Random Fill	Hydraulic Oil	2 gallons	1800 Hitachi	Leaky Hydraulic Line	Absorbs	Burn Absorbs	ADEC-EOM Report	8/2/10	8:00 AM
10-05-67	8/7/10	5:00 AM	Q-1 & Haul Road	Ethylene Glycol	20 gallons	HI-34	Hose Failure	Aborbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC Spill Hotline	8/7/10	6:39 AM
10-01-68	8/8/10	3:25 AM	Q-1	Hydraulic Oil	5 gallons	Ht-10	Hose Failure	Absorbs	Burn Absorbs	ADEC-EOM Report	9/1/10	8:00 AM
10-06-69	8/11/10	5:00 AM	By Belt 7	Process Solution	198 gallons	Mill Sump Pump	Pump Failure	Excavation	Returned to Mill process	ADEC-Paul Lhotka	8/11/10	9:25 AM
10-01-70	8/17/10	6:30 AM	Front of MEM Shop	ATF Fluid	2 gallons	DR-3	Plug in Cylinder blew out	Absorbs	Burned in Smart Ash Burners	ADEC-EOM	9/1/10	8:00 AM
10-05-71	8/19/10	2:00 AM	Haul Road & Q1	Ethylene Glycol	31 gallons	HT-45	Hose Failure	Absorbs	Barreled up for disposal	DEC Spill Hotline	8/19/10	3:00 AM
10-03-72	8/20/10	1:00 PM	Pearl Creek Causeway	Diesel	10 gallons	Water Truck	Rock hit diesel tank	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-Wes Ghormley	8/20/10	4:14 PM
10-05-73	8/29/10	11:45 PM	Haul Road & Q1	Ethylene Glycol	40 gallons	HT-46	Hose Failure	Absorbs	Barreled up for disposal	ADEC Spill Hotline	8/30/10	12:10 AM
10-05-74	8/31/10	11:45 AM	Tailings Dam	Ethylene Glycol	1 quart	GC Haultruck	Leak during maintenance	Absorbs	Barreled up for disposal	ADEC-Paul Lhotka	8/31/10	13:10 PM
10-03-75	9/15/10	6:15 PM	Fish Creek Fuel Island	Diesel	2.5 gallons	HT-46	Wiggins Nozzle Failure	Absorbs	Burned in Smart Ash Burners	ADEC-EOM	10/1/10	8:00 AM
10-05-76	9/15/10	6:25 PM	Heap Leach 1780 Elevation	Ethylene Glycol	3 gallons	HT-45	Hose Failure	Absorbs	Barreled up for disposal	ADEC Spill Hotline	9/15/10	6:45 PM
10-03-77	9/20/10	4:00 PM	Fish Creek Fuel Island	Diesel	7 gallons	GC Fuel Truck	Containment Box Leak	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-EOM	10/1/10	8:00 AM
10-01-78	9/22/10	4:30 AM	Tire Pad	15/40 Engine Oil	9 gallons	MT-10	Oil pan contacted stand	Absorbs	Burned in Smart Ash Burners	ADEC-EOM	10/1/10	8:00 AM
10-01-79	9/24/10	8:50 AM	Phase 7	Hydraulic Oil	5 Gallons	SH-5	Blown Hydraulic Line	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	10/1/10	8:00 AM
10-03-80	9/30/10	9:30 AM	Q-1	Diesel	5 gallons	RTD-2	Tank Overfill	Absorbs	Burned in Smart Ash Burners	ADEC-EOM	10/1/10	8:00 AM
10-01-81	10/3/10	2:00 AM	Heap Leach Pad	Hydraulic Oil	3 gallons	FKTRK463	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM	11/1/10	8:00 AM
10-01-82	10/3/10	8:00 PM	Heap Leach Pad	Hydraulic Oil	40 gallons	FKTRK430	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Spill Hotline	10/3/10	9:42 PM
10-01-83	10/5/10	2:00 AM	A Grade Stockpile	Hydraulic Oil	6 gallons	FKTRK465	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-EOM Report	11/1/10	8:00 AM
10-05-84	10/5/10	2:30 PM	1630 Level of Pit	Ethylene Glycol	25 gallons	HT-45	Hose Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Wes Ghormley	10/6/10	3:45 PM
10-01-85	10/5/10	11:40 PM	Tire Yard	Hydraulic Oil	25 gallons	FKTRK444	Hose Failure	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-Peggy Wandel	10/6/10	9:24 AM
10-05-86	10/8/10	7:20 AM	1800 Dump Ramp	Ethylene Glycol	3 gallons	Blast Truck 7	Engine Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADED-John Ebel	10/8/10	8:50 AM
10-05-87	10/11/10	9:25 AM	Phase 6 Ramp	Ethylene Glycol	10 gallons	HT-44	Water Pump Failure	Absorbs/Excavation	Burn absorbs/Soil to Barnes Creek	ADEC-Peggy Wandell	10/11/10	10:31 AM
10-01-88	10/12/10	6:00 PM	Upper Lay Down Yard	Hydraulic Oil	3 gallons	GC 992 Loader	Drain Cart Overfill	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-EOM	11/1/10	8:00 AM
10-01-89	10/16/10	4:45 PM	ALPM Containment Area	ATF Fluid/50W Oil	1800 gallons	Delivery Hose	Hose Failure	Absorbs/Pumps	ATF pumped to used oil tank	ADEC-DEC Spill Hotline	10/16/10	5:23 PM
10-03-90	10/20/10	11:30 AM	Phase 7 Waste Rock	Diesel	5 gallons	FT-7	Hose Leak	Absorbs	Burned in Smart Ash Burners	ADEC-EOM Report	11/1/10	8:00 AM
10-03-91	10/22/10	8:15 PM	Fish Creek Fuel Island	Diesel	15 gallons	AK Petroleum	Nozzle Failure	Excavation	Barreled up for disposal	ADEC-Ashley	10/25/10	8:00 AM
10-03-92	10/26/10	11:30 PM	Phase 6	Diesel	5 gallons	SH-6	Wiggins Nozzle Failure	Excavation	Rock to Upper Barnes Creek Dump	ADEC-EOM	11/1/10	8:00 AM
10-05-93	10/27/10	4:20 PM	Fish Creek Fuel Island	Ethylene Glycol	10 gallons	TRK464	Broken Oil Cooler Mount	Absorbs/Excavation	Burn Absorbs/Barrel up rock/soil	ADEC-Peggy Wandell	10/27/10	4:52 PM
10-03-94	10/30/10	5:15 PM	Fish Creek Fuel Island	Diesel	5 gallons	HT-43	Fuel Tank Overfill	Excavation	Barreled up for disposal	ADEC-EOM	11/1/10	8:00 PM
10-01-95	11/6/10	2:30 PM	1630 Q	Hydraulic Oil	20 gallons	FKTRK426	Hydraulic Hose Failure	Absorbs	Burned in Smart Ash Burners	ADEC-Wes Ghormley	11/8/10	8:27 AM
10-05-96	11/10/10	7:00 AM	Main Admin Boiler Room	Propylene Glycol	10 gallons	Boiler Valve	Valve Failure	Recovery/Absorbs	Recycle/Burn Absorbs	ADEC-Brian Jackson	11/10/10	4:55 PM
10-01-97	11/15/10	8:30 PM	760 Level of Pit	15/40 Oil	18 gallons	DZ-13	Damage to Belly Pan	Excavation	Rock to Upper Barnes Creek Dump	ADEC-Peggy Wandell	11/16/10	9:36 AM
10-05-98	11/17/10	12:50 PM	In Front of Wash Bay	Ethylene Glycol	1 gallon	FTRK-464	Residual washed from radiator	Excavate Snow	Oil/Water Seperator	ADEC-Brian Jackson	11/17/10	1:29 PM
10-06-99	11/18/10	2:00 PM	Conveyor 8 Area of Mill	Process Water	25 gallons	Tail Pulley	Water in Feed Shute	Excavation	Returned to Mill process	ADEC-Brian Jackson	11/18/10	4:25 PM
10-03-100	11/26/10	6:20 AM	Fish Creek Fuel Island	Diesel	3 gallons	GR-7	Fuel Vent Failure	Absorbs	Burned in Smart Ash Burners	ADEC-EOM Report	12/1/10	8:00 AM
10-05-101	12/4/10	11:30 AM	Fish Creek Fuel Island	Ethylene Glycol	4 gallons	AK Petroleum	Coolant Line Failure	Absorbs	Burned in Smart Ash Burners	ADEC Spill Hotline	12/4/10	1:00 PM
10-04-102	12/8/10	12:50 AM	Admin Fuel Island	Gasoline	3 gallons	Gas Pump	Broken Seal	Absorbs	Burned in Smart Ash Burners	ADEC-EOM Report	1/3/11	8:00 AM
10-03,01,05-103	12/17/10	1:30 PM	730 Level of Pit	Diesel/Oil/Coolant	15.1.1 gallons	FT-7	Truck Tipped Over	Absorbs	Burned in Smart Ash Burners	ADEC Spill Hotline	12/17/10	6:48 PM
10-01-104	12/29/10	8:00 AM	1870 Level of Pit	Hydraulic Oil	50 gallons	FKFTK703	Split Filter Housing	Absorbs/Excavation	Burn absorbs/Rock to Barnes Creek	ADEC-Brian Jackson	12/29/10	9:28 AM

ATTACHMENT H
Inert Solid Waste Landfill Summary

KINROSS Fort Knox Mine
FAIRBANKS, ALASKA

Fairbanks Gold Mining, Inc
A subsidiary of Kinross Gold Corp.
PO Box 73726
Fairbanks, AK 99707-3726

Phone: (907) 488-4653
Fax: (907) 490-2290
www.kinross.com

Fort Knox Annual Inert Solid Waste Landfill Report

Solid Waste Disposal Permit #2006-DB0043.

This is a summary of activity in the solid waste disposal sites at the Fort Knox Mine during 2010. All solid waste landfills for 2010 are located on the Upper Barnes Creek Waste Rock Dump.
When the solid waste in a landfill trench is within four feet of the surface, a cover layer of rock is placed on top, compacted and the landfill closed.

The landfill opened 2/24/09 was closed on 9/7/2010. This landfill was compacted and covered according to permit requirements. Please find the coordinates below for the new landfill opened the same day.

The coordinates for the landfill opened 9/7/2010 are:

Name	Northing	Easting	Elevation
Landfill	16686.21	7156.437	1906.179
Landfill	16700.53	7297.122	1904.52
Landfill	16659.56	7306.774	1904.378
Landfill	16644.43	7158.665	1905.579

The landfill that was opened 9/7/2010 was closed on 11/10/2010. This landfill was compacted and covered according to permit requirements. A new landfill was opened adjacent to the old one the same day. Please find the coordinates below for the new landfill.

The coordinates for the landfill opened 11/10/2010 are:

Name	Northing	Easting	Elevation
Landfill	16927.12	7172.624	1905.613
Landfill	17001.37	7099.027	1905.538
Landfill	16968.64	7060.772	1907.022
Landfill	16896.63	7138.176	1907.186

This landfill remains active at this time.

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Fax: (907) 490-2290
www.kinross.com

The Crushed Barrel Pit opened 2/24/2009 was compacted and covered according to permit requirements, and a new crushed barrel pit was opened adjacent to the new landfill on 9/7/2010.

The coordinates for the Crushed Barrel Pit opened 9/7/2010:

Name	Northing	Easting	Elevation
Crushed Barrel Pit	16366.741	6216.365	1889.643
Crushed Barrel Pit	16422.944	6264.555	1890.613
Crushed Barrel Pit	16470.346	6216.138	1893.668
Crushed Barrel Pit	16402.684	6168.540	1892.179

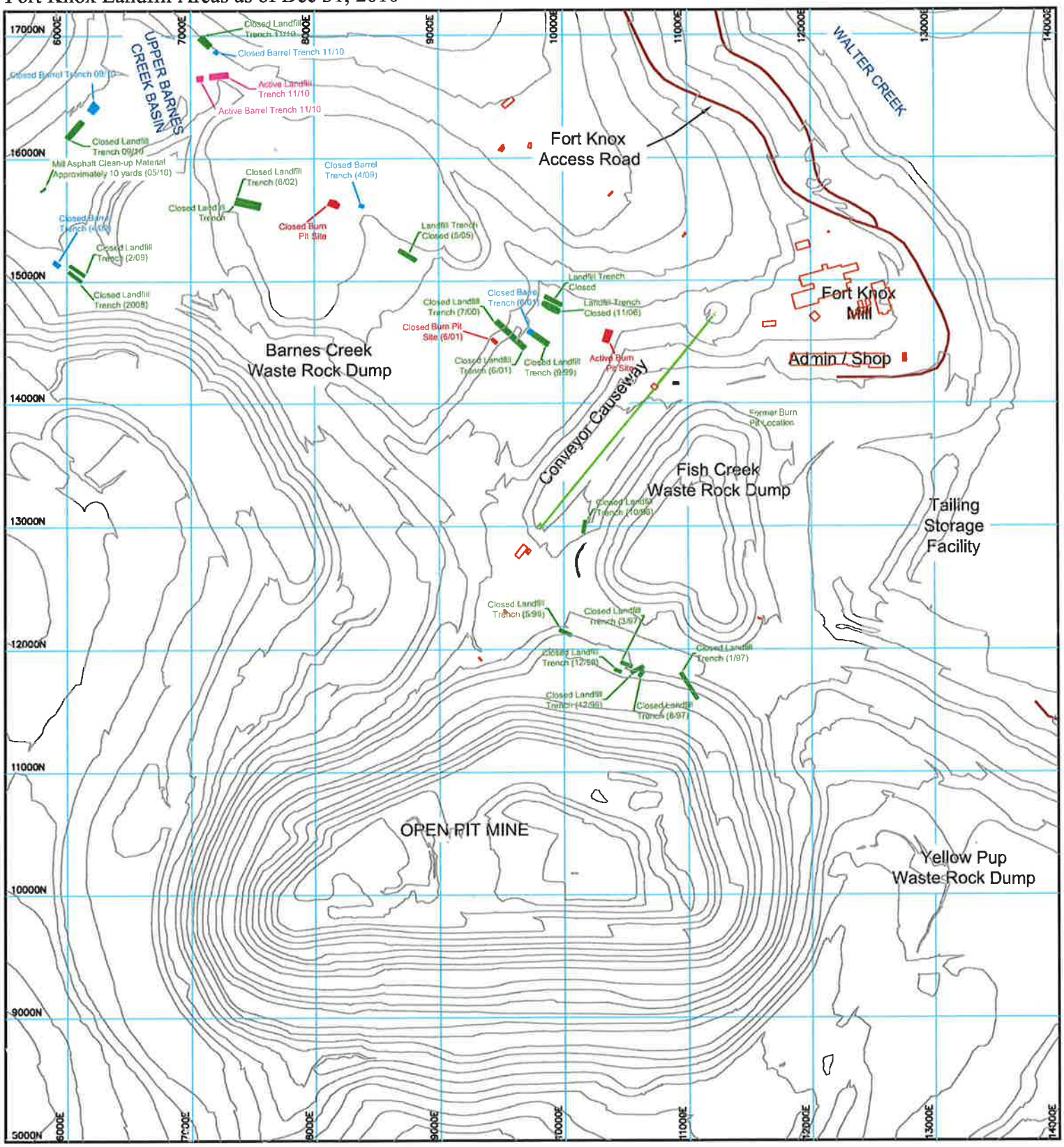
The Crushed Barrel Pit opened 9/7/2010 was compacted and covered according to permit requirements, and a new crushed barrel pit was opened adjacent to the new landfill on 11/10/2010.

The coordinates for the Crushed Barrel Pit opened 11/10/2010:

Name	Northing	Easting	Elevation
Crushed Barrel Pit	16848.02	7210.623	1907.341
Crushed Barrel Pit	16864.24	7223.345	1906.489
Crushed Barrel Pit	16889.1	7210.085	1906.459
Crushed Barrel Pit	16864.42	7184.536	1907.123

This crushed barrel pit remains active at this time.

Fort Knox Landfill Areas as of Dec 31, 2010



ATTACHMENT I
Financial Assurance

Scotiabank®

Banque Scotia®

ONTARIO INTL TRADE
SERVICES,
61 FRONT STREET WEST, 4TH FLOOR,
TORONTO, ONTARIO, CANADA M5H 1H1 TEL. NO.: 416-847-6257

SAM STDAMEND

DATE: APRIL 8, 2010

AMENDMENT TO IRREVOCABLE
STANDBY LETTER OF CREDIT NO.
S18572/260177
DATED : JULY 9, 2007
AMOUNT: USD 37,614,878.84
AMENDMENT NUMBER: 3

APPLICANT:
FAIRBANKS GOLD MINING, INC.,
1 FORT KNOX ROAD,
FAIRBANKS, ALASKA,
99712, USA

BENEFICIARY:
STATE OF ALASKA, DEPT. OF NATURAL
RESOURCES, DIVISION OF MINING LAND
AND WATER, 550 W. 7TH AVE., SUITE 920
ANCHORAGE, ALASKA 99501-3577, U.S.A.

THIS AMENDMENT IS TO BE CONSIDERED AS
PART OF THE ABOVE STANDBY LETTER OF
CREDIT AND MUST BE ATTACHED THERETO.

DEAR SIR(S) :

THE ABOVE MENTIONED CREDIT IS AMENDED AS FOLLOWS:

THE AMOUNT OF THIS CREDIT HAS BEEN INCREASED BY USD 439,724.19
THE AMOUNT OF THIS CREDIT IS AMENDED TO: USD 39,620,280.48 .

THE FOLLOWING ADDITIONAL CONDITION HAS BEEN ADDED:

THE DETAIL DESCRIPTIONS AND AMOUNTS ON THE PARAGRAPH BEGINNING WITH: "THIS LETTER OF CREDIT IS ISSUED IN CONNECTION WITH THE FOLLOWING: ..."
HAVE BEEN AMENDED AS FOLLOWS:

1. THE AMOUNT FOR "POST RECLAMATION MAINTENANCE" IS AMENDED TO USD 777,173.77 INSTEAD OF USD 767,958.27

2. THE AMOUNT FOR "FORT KNOX LEASES ADL 414960 AND 414961, PLAN OF OPERATIONS APPROVAL F20079852, AND WASTE MANAGEMENT PERMIT 2006-DB0043" IS AMENDED TO USD 36,306,232.71 INSTEAD OF USD 35,875,724.02

AUTHORIZED SIGNATURE/SIGNATAIRE AUTORISÉ

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AUTHORIZED SIGNATURE/SIGNATAIRE AUTORISÉ

® Registered trademark of The Bank of Nova Scotia. ® Marque déposée de La Banque de Nouvelle-Écosse.

3. THE TOTAL AMOUNT IS AMENDED TO USD 39,620,280.48 INSTEAD OF USD 39,180,556.29

APPLICANTS NAME HAS BEEN AMENDED TO READ AS: KINROSS GOLD U.S.A. INC ON BEHALF OF FAIRBANKS GOLD MINING INC.

ALL OTHER TERMS AND CONDITIONS UNCHANGED.

YOURS TRULY,

THIS DOCUMENT CONSISTS OF 2 PAGE(S)

AUTHORIZED SIGNATURE/SIGNATAIRE AUTORISÉ

B52

AUTHORIZED SIGNATURE/SIGNATAIRE AUTORISÉ

® Registered trademark of The Bank of Nova Scotia, ® Marque déposée de La Banque de Nouvelle-Écosse.