Data Validation Package

April 2010
Groundwater Sampling at the Falls City, Texas, Disposal Site

June 2010

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Sampling Event Summary

Site: Falls City, Texas, Disposal Site

Sampling Period: April 8, 2010

Ten groundwater samples were collected at the Falls City, Texas, Disposal Site as specified in the March 2008 *Long-Term Surveillance Plan for the U.S. Department of Energy Falls City Uranium Mill Tailings Disposal Site Falls City, Texas*.

Sampling and analysis were conducted as specified in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites* (LMS/PLN/S04351, continually updated).

The wells sampled included the cell performance monitoring wells (0709, 0858, 0880, 0906, and 0921) and the groundwater compliance monitoring wells (0862, 0886, 0891, 0924, and 0963). A duplicate sample was collected from location 0891.

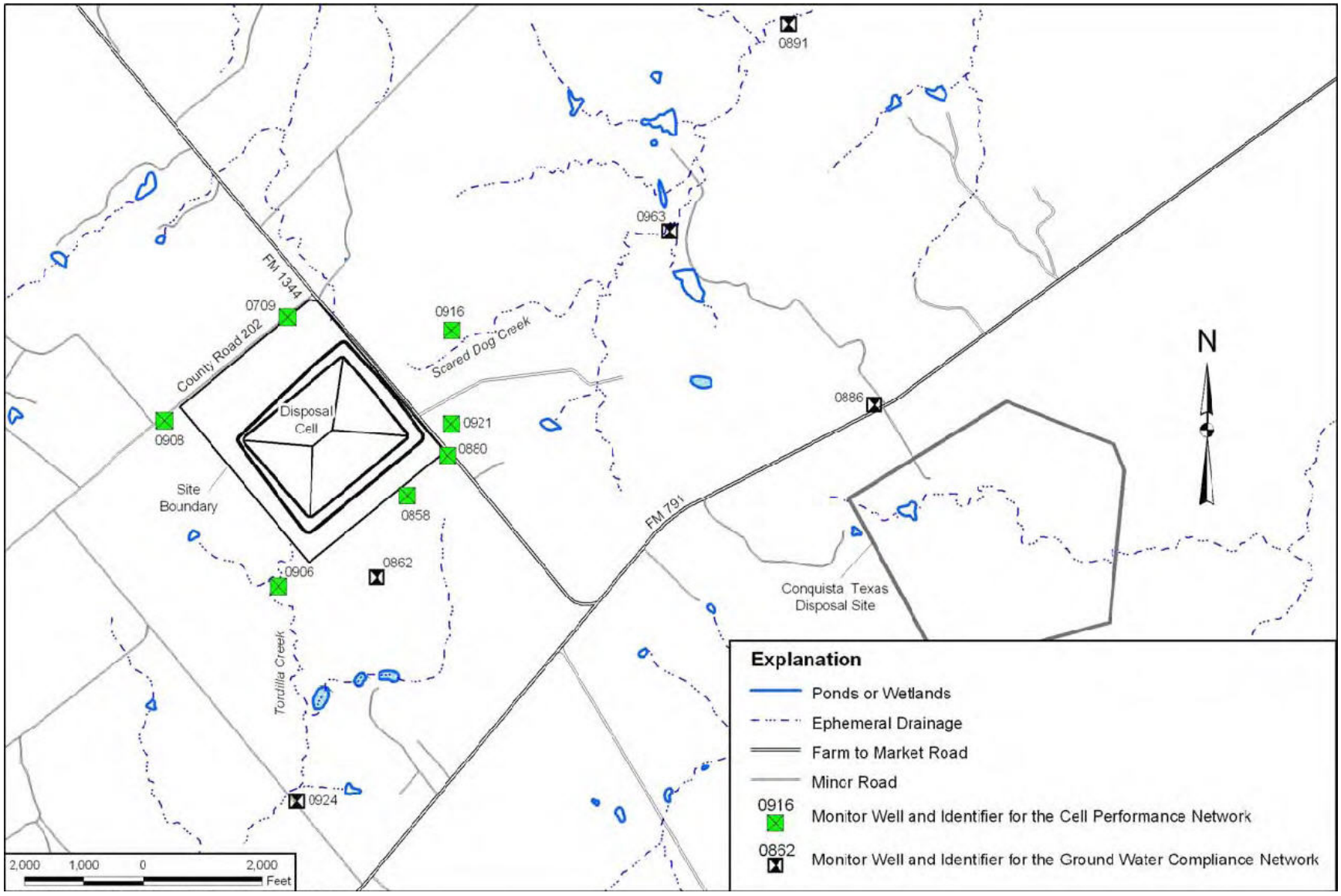
Water levels were measured at each sampled well. Historically, wells 0908 and 0916 have not produced water and were confirmed as dry. These wells are completed above the saturated interval in the formation. The water level has been trending lower at four wells (0709, 0858, 0880, and 0921) adjacent to the cell since 1996.

The time-concentration graphs included in this report show that analyte concentrations have increased significantly in well 0891 since 2006. As reported on Page 21, calcium, chloride, magnesium, potassium, and sodium at well 0891 in 2010 were all identified as potential outliers. The historical high concentration of uranium in this well observed in April 2009 (1.7 mg/L) was confirmed in 2010, with a measured uranium concentration of 2.1 mg/L. No other significant uranium concentration changes were observed in the other wells sampled.

Michele L. Miller
2010.07.02 10:18:41 -04'00'

Michele Miller
Site Lead, S.M. Stoller

Date



Falls City, Texas, Monitoring Well Location Map

Data Assessment Summary

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Water Sampling Field Activities Verification Checklist

Project	Falls City, Texas	**Date(s) of Water Sampling**	April 8, 2010
Date(s) of Verification	May 28, 2010	**Name of Verifier**	Steve Donivan

	Response (Yes, No, NA)	Comments
1. Is the SAP the primary document directing field procedures?	Yes	
List other documents, SOPs, instructions.		Work Order Letter dated March 15, 2010.
2. Were the sampling locations specified in the planning documents sampled?	Yes	Monitoring wells 0908 and 0916 were dry.
3. Was a pre-trip calibration conducted as specified in the above-named documents?	Yes	Pre-trip calibration was performed on April 1, 2010.
4. Was an operational check of the field equipment conducted daily?	Yes	
Did the operational checks meet criteria?	Yes	
5. Were the number and types (alkalinity, temperature, specific conductance, pH, turbidity, DO, ORP) of field measurements taken as specified?	Yes	
6. Was the category of the well documented?	Yes	
7. Were the following conditions met when purging a Category I well:		
Was one pump/tubing volume purged prior to sampling?	Yes	
Did the water level stabilize prior to sampling?	Yes	
Did pH, specific conductance, and turbidity measurements stabilize prior to sampling?	Yes	Turbidity in well 0963 remained above 10 NTUs; the sample was filtered.
Was the flow rate less than 500 mL/min?	Yes	
If a portable pump was used, was there a 4-hour delay between pump installation and sampling?	NA	

Water Sampling Field Activities Verification Checklist (continued)

	Response (Yes, No, NA)	Comments
8. Were the following conditions met when purging a Category II well:		
Was the flow rate less than 500 mL/min?	Yes	
Was one pump/tubing volume removed prior to sampling?	Yes	
9. Were duplicates taken at a frequency of one per 20 samples?	Yes	A duplicate sample was collected from well 0891.
10. Were equipment blanks taken at a frequency of one per 20 samples that were collected with nondedicated equipment?	NA	Dedicated bladder pumps were used for all samples.
11. Were trip blanks prepared and included with each shipment of VOC samples?	NA	
12. Were QC samples assigned a fictitious site identification number?	Yes	Location ID 2913 was used for the duplicate sample.
Was the true identity of the samples recorded on the Quality Assurance Sample Log or in the Field Data Collection System (FDCS) report?	Yes	
13. Were samples collected in the containers specified?	Yes	
14. Were samples filtered and preserved as specified?	Yes	
15. Were the number and types of samples collected as specified?	Yes	
16. Were chain of custody records completed and was sample custody maintained?	Yes	
17. Are field data sheets signed and dated by both team members (hardcopies) or are dates present for the “Date Signed” fields (FDCS)?	Yes	
18. Was all other pertinent information documented on the field data sheets?	Yes	
19. Was the presence or absence of ice in the cooler documented at every sample location?	Yes	
20. Were water levels measured at the locations specified in the planning documents?	Yes	

Laboratory Performance Assessment

General Information

Report Number (RIN): 10032948
Sample Event: April 8, 2010
Site(s): Falls City, Texas
Laboratory: ALS Laboratory Group, Fort Collins, Colorado
Work Order No.: 1004134
Analysis: Metals and Wet Chemistry
Validator: Steve Donivan
Review Date: May 27, 2010

This validation was performed according to the *Environmental Procedures Catalog* (LMS/PRO/S04325, continually updated), "Standard Practice for Validation of Laboratory Data." The procedure was applied at Level 3, Data Validation. See attached Data Validation Worksheets for supporting documentation on the data review and validation. All analyses were successfully completed. The samples were prepared and analyzed using accepted procedures based on methods specified by line item code, which are listed in Table 1.

Table 1. Analytes and Methods

Analyte	Line Item Code	Prep Method	Analytical Method
Ammonia as N	WCH-A-005	EPA 350.1	EPA 350.1
Chloride	MIS-A-039	SW-846 9056	SW-846 9056
Metals: Ca, Fe, K, Mg, Na	LMM-01	SW-846 3005A	SW-846 6010B
Nitrite + Nitrate as N	WCH-A-022	EPA 353.2	EPA 353.2
Sulfate	MIS-A-044	SW-846 9056	SW-846 9056
Uranium	LMM-02	SW-846 3005A	SW-846 6020A

Sample Shipping/Receiving

ALS Laboratory Group in Fort Collins, Colorado received 11 water samples on April 15, 2010, accompanied by a Chain of Custody (COC) form. The COC form was checked to confirm that each sample was listed on the form and that signatures and dates were present indicating sample relinquishment and receipt. The sample submittal documents including the COC form, and the sample tickets had no errors or omissions. Copies of the air waybill labels were included with the receiving documentation.

Preservation and Holding Times

The sample shipment was received intact with the temperature inside the iced cooler at 4.4 °C, which complies with requirements. The samples were received in the correct container types and had been preserved correctly for the requested analyses and all samples were analyzed within the applicable holding times.

Data Qualifier Summary

Analytical results were qualified as listed in Table 2. Refer to the sections below for an explanation of the data qualifiers applied.

Table 2. Data Qualifier Summary

Sample Number	Location	Analyte(s)	Flag	Reason
1004134-3	0862	Calcium	J	Serial dilution failure
1004134-3	0862	Potassium	J	Serial dilution failure
1004134-6	0891	Calcium	J	Serial dilution failure
1004134-6	0891	Potassium	J	Serial dilution failure
1004134-6	0891	Iron	J	Poor field duplicate precision
1004134-11	0891 Duplicate	Calcium	J	Serial dilution failure
1004134-11	0891 Duplicate	Potassium	J	Serial dilution failure
1004134-11	0891 Duplicate	Iron	J	Poor field duplicate precision

Laboratory Instrument Calibration

Compliance requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable qualitative and quantitative data for all analytes. Initial calibration demonstrates that the instrument is capable of acceptable performance in the beginning of the analytical run and of producing a linear curve. Compliance requirements for continuing calibration checks are established to ensure that the instrument continues to be capable of producing acceptable qualitative and quantitative data. All laboratory instrument calibrations were performed correctly in accordance with the cited methods. All calibration and laboratory spike standards were prepared from independent sources.

Method MCAWW 350.1
Calibration was performed for ammonia as N on April 27, 2010, using six calibration standards. The calibration curve correlation coefficient value was greater than 0.995 and the absolute value of the intercept was less than 3 times the method detection limit (MDL). Initial and continuing calibration verification checks were made at the required frequency resulting in three verification checks. All calibration checks met the acceptance criteria.

Method MCAWW 353.2
Calibration was performed for nitrate + nitrite as N on April 19, 2010, using seven calibration standards. The calibration curve correlation coefficient value was greater than 0.995 and the absolute value of the intercept was less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency resulting in five verification checks. All calibration checks met the acceptance criteria.

Method SW-846 6010B
Calibrations for calcium, iron, magnesium, potassium, and sodium were performed on April 30, 2010, using a single point calibration. Initial and continuing calibration verification checks were made at the required frequency resulting in 14 verification checks. All calibration

checks met the acceptance criteria. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curve near the practical quantitation limit (PQL) and all results were within the acceptance range.

Method SW-846 6020A, Uranium
Calibration was performed for uranium on April 30, 2010. The initial calibration was performed using seven calibration standards resulting in a calibration curve with a correlation coefficient (r^2) value greater than 0.995. The absolute value of the curve intercept was less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency resulting in four verification checks. All initial and continuing calibration verification results were within the acceptance range. Reporting limit verification checks were made at the required frequency to verify the linearity of the calibration curves near the PQL. All check results were within the acceptance range. The mass calibration and resolution was checked at the beginning of each analytical run in accordance with the procedure. Internal standard recoveries were stable and within acceptance ranges.

Method SW-846 9056
Calibrations were performed for chloride and sulfate on April 6, 2010, using five calibration standards. The calibration curve correlation coefficient values were greater than 0.995 and the absolute values of the intercepts were less than 3 times the MDL. Initial and continuing calibration verification checks were made at the required frequency resulting in four verification checks. All calibration checks met the acceptance criteria.

Method and Calibration Blanks

Method blanks are analyzed to assess any contamination that may have occurred during sample preparation. Calibration blanks are analyzed to assess instrument contamination prior to and during sample analysis. All method blank and initial and continuing calibration blank results were below the PQLs.

Inductively Coupled Plasma Interference Check Sample Analysis

Interference check samples A and AB were analyzed at the required frequency to verify the interelement and background correction factors for all inductively coupled plasma instruments. All check sample results met the acceptance criteria.

Matrix Spike Analysis

Matrix spike and matrix spike duplicate samples are used to measure method performance in the sample matrix. The matrix spike and matrix spike duplicate data are not evaluated when the concentration of the unspiked sample is greater than 4 times the spike concentration. The spike recoveries met the recovery and precision criteria for all analytes evaluated.

Laboratory Replicate Analysis

Laboratory replicate analyses are use to determine laboratory precision for each sample matrix. The relative percent difference for replicate results that are greater than 5 times the PQL should be less than 20 percent. For results that are less than the PQL, the range should be no greater than the PQL. The replicate results met these criteria demonstrating acceptable laboratory precision.

Laboratory Control Samples

Laboratory control samples were analyzed at the correct frequency to provide information on the accuracy of the analytical method and the overall laboratory performance, including sample preparation. The laboratory control sample results were acceptable for all analysis.

Metals Serial Dilution

Serial dilutions were performed during the metals analysis to monitor physical or chemical interferences that may exist in the sample matrix. Serial dilutions were prepared and analyzed for all metals. The acceptance criteria were met for all analytes with the exception of calcium and potassium. The sample calcium and potassium results are qualified with a "J" flag as estimated values.

Detection Limits/Dilutions

Samples were diluted in a consistent and acceptable manner when required. The samples were diluted prior to analysis of uranium to reduce interferences. The required detection limits were achieved for both analytes.

Completeness

Results were reported in the correct units for all analytes requested using contract-required laboratory qualifiers.

Electronic Data Deliverable (EDD) File

The EDD file arrived on May 5, 2010. The Sample Management System EDD validation module was used to verify that the EDD file was complete and in compliance with requirements. The module compares the contents of the file to the requested analyses to ensure all and only the requested data are delivered. The contents of the EDD were manually examined to verify that the sample results accurately reflect the data contained in the sample data package. The original EDD received contained additional data for sample 0709 beyond what was requested. A revised EDD was requested on May 26, 2010.

SAMPLE MANAGEMENT SYSTEM

General Data Validation Report

RIN: 10032948 **Lab Code:** PAR **Validator:** Steve Donivan **Validation Date:** 5/27/2010

Project: Falls City **Analysis Type:** ☑ Metals ☑ General Chem ☐ Rad ☐ Organics

# of Samples: 11 **Matrix:** WATER **Requested Analysis Completed:** Yes

Chain of Custody

Present: OK **Signed:** OK **Dated:** OK

Sample

Integrity: OK **Preservation:** OK **Temperature:** OK

Select Quality Parameters

☑ Holding Times	All analyses were completed within the applicable holding times.
☑ Detection Limits	The reported detection limits are equal to or below contract requirements.
☐ Field/Trip Blanks	
☑ Field Duplicates	There was 1 duplicate evaluated.

SAMPLE MANAGEMENT SYSTEM

Metals Data Validation Worksheet

RIN: 10032948 **Lab Code:** PAR **Date Due:** 5/13/2010

Matrix: Water **Site Code:** FCT **Date Completed:** 5/10/2010

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	Dup. RPD	ICSAB %R	Serial Dil. %R	CRI %R
		Int.	R^2	ICV	CCV	ICB	CCB								
CALCIUM	04/30/2010			OK	OK	OK	OK	OK	98.0	189.0	233.0	2.0	104.0	11.0	102.0
CALCIUM	04/30/2010												104.0		101.0
IRON	04/30/2010			OK	OK	OK	OK	OK	97.0	85.0	86.0	1.0	108.0		105.0
IRON	04/30/2010												107.0		102.0
MAGNESIUM	04/30/2010			OK	OK	OK	OK	OK	102.0	90.0	92.0	1.0	107.0	8.0	103.0
MAGNESIUM	04/30/2010												108.0		102.0
POTASSIUM	04/30/2010			OK	OK	OK	OK	OK	99.0	118.0	120.0	0.0		18.0	81.0
POTASSIUM	04/30/2010														80.0
SODIUM	04/30/2010			OK	OK	OK	OK	OK	97.0	166.0	210.0	2.0		4.0	90.0
SODIUM	04/30/2010														88.0
URANIUM	04/30/2010	0.0000	1.0000	OK	OK	OK	OK	OK	103.0	112.0	129.0	1.0	107.0	2.0	98.0

SAMPLE MANAGEMENT SYSTEM

Wet Chemistry Data Validation Worksheet

RIN: 10032948 **Lab Code:** PAR **Date Due:** 5/13/2010

Matrix: Water **Site Code:** FCT **Date Completed:** 5/10/2010

Analyte	Date Analyzed	CALIBRATION						Method Blank	LCS %R	MS %R	MSD %R	DUP RPD	Serial Dil. %R
		Int.	R^2	ICV	CCV	ICB	CCB						
AMMONIA AS N	04/27/2010	0.000	1.0000	OK	OK	OK	OK	OK	95.00	82.0	83.0	2.00	
CHLORIDE	04/16/2010	0.000	0.9999	OK	OK	OK	OK	OK	91.00	96.0	99.0	1.00	
NITRATE/NITRITE AS N	04/19/2010	0.000	0.9995	OK	OK	OK	OK	OK	103.00	110.0	108.0	2.00	
SULFATE	04/16/2010	0.000	0.9999	OK	OK	OK	OK	OK	93.00	102.0	102.0	0	

Sampling Quality Control Assessment

The following information summarizes and assesses quality control for this sampling event.

Sampling Protocol

Sample results for all monitoring wells met the Category I or II low-flow sampling criteria and were qualified with an "F" flag in the database, indicating the wells were purged and sampled using the low-flow sampling method.

The groundwater sample results for wells 0858, 0862, and 0886 were qualified with a "Q" flag in the database indicating the data are considered qualitative because the wells were sampled using Category II criteria.

Wells 0886 and 0963 had turbidity values greater than ten NTUs. The samples from these wells were filtered.

Equipment Blank Assessment

Collection and analysis of an equipment blank was not performed because all samples were collected with dedicated bladder pumps.

Field Duplicate Assessment

Field duplicate samples are collected and analyzed as an indication of overall precision of the measurement process. The precision observed includes both field and laboratory precision and has more variability than laboratory duplicates, which measure only laboratory performance. The relative percent difference for duplicate results that are greater than 5 times the PQL should be less than 20 percent. For results that are less than the PQL, the range should be no greater than the PQL. A duplicate sample was collected from location 0891. The duplicate results met these criteria, demonstrating acceptable overall precision for all analytes with the exception of iron. The iron results for the sample and duplicate are qualified with a "J" flag as estimated values.

SAMPLE MANAGEMENT SYSTEM

Validation Report: Field Duplicates

RIN: 10032948 **Lab Code:** PAR **Project:** Falls City **Validation Date:** 5/27/2010

Duplicate: 2913 **Sample:** 0891

Analyte	Sample Result	Sample Flag	Sample Error	Sample Dilution	Duplicate Result	Duplicate Flag	Duplicate Error	Duplicate Dilution	RPD	RER	Units
AMMONIA AS N	0.1	U		1	0.1	U		1			MG/L
CALCIUM	2500000			100	2500000			100	0		UG/L
CHLORIDE	10000			1000	9900			1000	1.01		MG/L
IRON	640			1	450			1	34.86		UG/L
MAGNESIUM	250000			1	240000			1	4.08		UG/L
NITRATE/NITRITE AS N	0.02			1	0.01	U		1			MG/L
POTASSIUM	110000			1	110000			1	0		UG/L
SODIUM	2800000			100	2800000			100	0		UG/L
SULFATE	1500			200	1500			200	0		MG/L
URANIUM	2000			500	2100			500	4.88		UG/L

Certification

All laboratory analytical quality control criteria were met except as qualified in this report. The data qualifiers listed on the SEEPro database reports are defined on the last page of each report. All data in this package are considered validated and available for use.

Laboratory Coordinator: Steve Donivan 2010.06.25 07:20:06 -06'00'

Steve Donivan — Date

Data Validation Lead: Steve Donivan 2010.06.25 07:20:27 -06'00'

Steve Donivan — Date

Attachment 1
Assessment of Anomalous Data

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Potential Outliers Report

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Potential Outliers Report

Potential outliers are measurements that are extremely large or small relative to the rest of the data and, therefore, are suspected of misrepresenting the population from which they were collected. Potential outliers may result from transcription errors, data-coding errors, or measurement system problems. However, outliers may also represent true extreme values of a distribution and indicate more variability in the population than was expected.

Statistical outlier tests give probabilistic evidence that an extreme value does not "fit" with the distribution of the remainder of the data and is therefore a statistical outlier. These tests should only be used to identify data points that require further investigation. The tests alone cannot determine whether a statistical outlier should be discarded or corrected within a data set.

There are three steps involved in identifying extreme values or outliers:

1. Identify extreme values that may be potential outliers by generating the Outliers Report using the Sample Management System from data in the SEEPro database. The application compares the new data set with historical data and lists the new data that fall outside the historical data range. A determination is also made if the data are normally distributed using the Shapiro-Wilk Test.
2. Apply the appropriate statistical test. Dixon's Extreme Value test is used to test for statistical outliers when the sample size is less than or equal to 25. This test considers both extreme values that are much smaller than the rest of the data (case 1) and extreme values that are much larger than the rest of the data (case 2). This test is valid only if the data without the suspected outlier are normally distributed. Rosner's Test is a parametric test that is used to detect outliers for sample sizes of 25 or more. This test also assumes that the data without the suspected outliers are normally distributed.
3. Scientifically review statistical outliers and decide on their disposition.

The calcium, chloride, magnesium, potassium, and sodium results from well 0891 were identified as potential outliers. These parameters have increased in concentration significantly in this well since 2006 (refer to the time-concentration graphs included in this report). These data are also confirmed by the duplicate sample results.

The April 2009 uranium result from well 0891 was listed on the Anomalous Data Review Checksheet because it was identified as anomalously high. The data from this event confirmed the increasing uranium concentration in this well and no further data qualification is necessary.

Data Validation Outliers Report - No Field Parameters
Comparison: All Historical Data
Laboratory: ALS Laboratory Group
RIN: 10032948
Report Date: 5/28/2010

					Current			Historical Maximum			Historical Minimum			Number of Data Points		Statistical Outlier
						Qualifiers			Qualifiers			Qualifiers				
Site Code	Location Code	Sample ID	Sample Date	Analyte	Result	*Lab*	*Data*	Result	*Lab*	*Data*	Result	*Lab*	*Data*	N	N Below Detect	
FCT03	0862	N001	04/08/2010	Ammonia Total as N	0.1	U	FQ	0.27		FQ	0.11		QF	6	0	No
FCT03	0891	N001	04/08/2010	Ammonia Total as N	0.1	U	F	0.24		F	0.11		F	5	0	No
FCT03	0891	N001	04/08/2010	Calcium	2500		FJ	1420			618		F	18	0	Yes
FCT03	0891	N001	04/08/2010	Chloride	10000		F	4400		F	1120	N	J	18	0	Yes
FCT03	0891	N001	04/08/2010	Magnesium	250		F	135	D	F	59.1		F	18	0	Yes
FCT03	0891	N001	04/08/2010	Potassium	110		FJ	93		F	45.2		F	18	0	Yes
FCT03	0891	N001	04/08/2010	Sodium	2800		F	1560			730		F	18	0	Yes
FCT03	0891	N001	04/08/2010	Uranium	2		F	1.7		F	0.013			20	0	No

STATISTICAL TESTS:
The distribution of the data is tested for normality or lognormality using the Shapiro-Wilk Test
Outliers are identified using Dixon's Test when there are 25 or fewer data points.
Outliers are identified using Rosner's Test when there are 26 or more data points.
See Data Quality Assessment: Statistical Methods for Practitioners, EPA QC/G-9S, February 2006.

Attachment 2
Data Presentation

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Groundwater Quality Data

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Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0709 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	12.65	-	32.65	148		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	12.65	-	32.65	1.24		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	12.65	-	32.65	263.8		F	#		
pH	s.u.	04/08/2010	N001	12.65	-	32.65	5.82		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	12.65	-	32.65	7410		F	#		
Temperature	C	04/08/2010	N001	12.65	-	32.65	24.13		F	#		
Turbidity	NTU	04/08/2010	N001	12.65	-	32.65	0.66		F	#		
Uranium	mg/L	04/08/2010	N001	12.65	-	32.65	0.45		F	#	0.000018	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0858 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	39.42	-	49.42	93		FQ	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	39.42	-	49.42	2.46		FQ	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	39.42	-	49.42	123		FQ	#		
pH	s.u.	04/08/2010	N001	39.42	-	49.42	5.96		FQ	#		
Specific Conductance	umhos /cm	04/08/2010	N001	39.42	-	49.42	9175		FQ	#		
Temperature	C	04/08/2010	N001	39.42	-	49.42	23.1		FQ	#		
Turbidity	NTU	04/08/2010	N001	39.42	-	49.42	3.33		FQ	#		
Uranium	mg/L	04/08/2010	N001	39.42	-	49.42	0.073		FQ	#	0.0000018	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0862 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)	Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	117.77 - 127.77	274		FQ	#		
Ammonia Total as N	mg/L	04/08/2010	N001	117.77 - 127.77	0.1	U	FQ	#	0.1	
Calcium	mg/L	04/08/2010	N001	117.77 - 127.77	390		FQJ	#	0.012	
Chloride	mg/L	04/08/2010	N001	117.77 - 127.77	560		FQ	#	10	
Dissolved Oxygen	mg/L	04/08/2010	N001	117.77 - 127.77	3.02		FQ	#		
Iron	mg/L	04/08/2010	N001	117.77 - 127.77	0.046	B	FQ	#	0.0049	
Magnesium	mg/L	04/08/2010	N001	117.77 - 127.77	22		FQ	#	0.013	
Nitrate + Nitrite as Nitrogen	mg/L	04/08/2010	N001	117.77 - 127.77	0.17		FQ	#	0.01	
Oxidation Reduction Potential	mV	04/08/2010	N001	117.77 - 127.77	-14.3		FQ	#		
pH	s.u.	04/08/2010	N001	117.77 - 127.77	6.79		FQ	#		
Potassium	mg/L	04/08/2010	N001	117.77 - 127.77	65		FQJ	#	0.11	
Sodium	mg/L	04/08/2010	N001	117.77 - 127.77	490		FQ	#	0.66	
Specific Conductance	umhos /cm	04/08/2010	N001	117.77 - 127.77	3609		FQ	#		
Sulfate	mg/L	04/08/2010	N001	117.77 - 127.77	1200		FQ	#	25	
Temperature	C	04/08/2010	N001	117.77 - 127.77	24.02		FQ	#		
Turbidity	NTU	04/08/2010	N001	117.77 - 127.77	1.39		FQ	#		
Uranium	mg/L	04/08/2010	N001	117.77 - 127.77	0.0018		FQ	#	0.0000018	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0880 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	32.3	-	42.3	0		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	32.3	-	42.3	3.65		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	32.3	-	42.3	166.5		F	#		
pH	s.u.	04/08/2010	N001	32.3	-	42.3	4.27		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	32.3	-	42.3	16672		F	#		
Temperature	C	04/08/2010	N001	32.3	-	42.3	23.2		F	#		
Turbidity	NTU	04/08/2010	N001	32.3	-	42.3	9.07		F	#		
Uranium	mg/L	04/08/2010	N001	32.3	-	42.3	7.6		F	#	0.00035	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0886 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	0001	19.17	-	49.17	51		FQ	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	19.17	-	49.17	4.37		FQ	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	19.17	-	49.17	72.2		FQ	#		
pH	s.u.	04/08/2010	N001	19.17	-	49.17	6.09		FQ	#		
Specific Conductance	umhos /cm	04/08/2010	N001	19.17	-	49.17	1356		FQ	#		
Temperature	C	04/08/2010	N001	19.17	-	49.17	22.2		FQ	#		
Turbidity	NTU	04/08/2010	N001	19.17	-	49.17	69.5		FQ	#		
Uranium	mg/L	04/08/2010	0001	19.17	-	49.17	0.019		FQ	#	0.0000018	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0891 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	10.74	-	20.74	339		F	#		
Ammonia Total as N	mg/L	04/08/2010	N001	10.74	-	20.74	0.1	U	F	#	0.1	
Ammonia Total as N	mg/L	04/08/2010	N002	10.74	-	20.74	0.1	U	F	#	0.1	
Calcium	mg/L	04/08/2010	N001	10.74	-	20.74	2500		FJ	#	1.2	
Calcium	mg/L	04/08/2010	N002	10.74	-	20.74	2500		FJ	#	1.2	
Chloride	mg/L	04/08/2010	N001	10.74	-	20.74	10000		F	#	200	
Chloride	mg/L	04/08/2010	N002	10.74	-	20.74	9900		F	#	200	
Dissolved Oxygen	mg/L	04/08/2010	N001	10.74	-	20.74	3.15		F	#		
Iron	mg/L	04/08/2010	N001	10.74	-	20.74	0.64		FJ	#	0.0049	
Iron	mg/L	04/08/2010	N002	10.74	-	20.74	0.45		FJ	#	0.0049	
Magnesium	mg/L	04/08/2010	N001	10.74	-	20.74	250		F	#	0.013	
Magnesium	mg/L	04/08/2010	N002	10.74	-	20.74	240		F	#	0.013	
Nitrate + Nitrite as Nitrogen	mg/L	04/08/2010	N001	10.74	-	20.74	0.02		F	#	0.01	
Nitrate + Nitrite as Nitrogen	mg/L	04/08/2010	N002	10.74	-	20.74	0.01	U	F	#	0.01	
Oxidation Reduction Potential	mV	04/08/2010	N001	10.74	-	20.74	183.4		F	#		
pH	s.u.	04/08/2010	N001	10.74	-	20.74	6.29		F	#		
Potassium	mg/L	04/08/2010	N001	10.74	-	20.74	110		FJ	#	0.11	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0891 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Potassium	mg/L	04/08/2010	N002	10.74	-	20.74	110		FJ	#	0.11	
Sodium	mg/L	04/08/2010	N001	10.74	-	20.74	2800		F	#	0.66	
Sodium	mg/L	04/08/2010	N002	10.74	-	20.74	2800		F	#	0.66	
Specific Conductance	umhos /cm	04/08/2010	N001	10.74	-	20.74	21723		F	#		
Sulfate	mg/L	04/08/2010	N001	10.74	-	20.74	1500		F	#	100	
Sulfate	mg/L	04/08/2010	N002	10.74	-	20.74	1500		F	#	100	
Temperature	C	04/08/2010	N001	10.74	-	20.74	22.19		F	#		
Turbidity	NTU	04/08/2010	N001	10.74	-	20.74	7.38		F	#		
Uranium	mg/L	04/08/2010	N001	10.74	-	20.74	2		F	#	0.000088	
Uranium	mg/L	04/08/2010	N002	10.74	-	20.74	2.1		F	#	0.000088	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0906 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	12.49	-	27.49	95		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	12.49	-	27.49	5.53		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	12.49	-	27.49	136.9		F	#		
pH	s.u.	04/08/2010	N001	12.49	-	27.49	5.48		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	12.49	-	27.49	9257		F	#		
Temperature	C	04/08/2010	N001	12.49	-	27.49	23.54		F	#		
Turbidity	NTU	04/08/2010	N001	12.49	-	27.49	4.16		F	#		
Uranium	mg/L	04/08/2010	N001	12.49	-	27.49	0.088		F	#	0.0000018	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0921 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	44.55	-	54.55	395		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	44.55	-	54.55	0.68		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	44.55	-	54.55	204.7		F	#		
pH	s.u.	04/08/2010	N001	44.55	-	54.55	5.83		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	44.55	-	54.55	8987		F	#		
Temperature	C	04/08/2010	N001	44.55	-	54.55	24.81		F	#		
Turbidity	NTU	04/08/2010	N001	44.55	-	54.55	0.64		F	#		
Uranium	mg/L	04/08/2010	N001	44.55	-	54.55	1.2		F	#	0.000088	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0924 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	N001	19.7	-	29.7	344		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	19.7	-	29.7	1.57		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	19.7	-	29.7	305.1		F	#		
pH	s.u.	04/08/2010	N001	19.7	-	29.7	5.96		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	19.7	-	29.7	10699		F	#		
Temperature	C	04/08/2010	N001	19.7	-	29.7	25.23		F	#		
Turbidity	NTU	04/08/2010	N001	19.7	-	29.7	1.13		F	#		
Uranium	mg/L	04/08/2010	N001	19.7	-	29.7	0.57		F	#	0.000035	

Groundwater Quality Data by Location (USEE100) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010
Location: 0963 WELL

Parameter	Units	Sample Date	Sample ID	Depth Range (Ft BLS)			Result	Qualifiers Lab	Qualifiers Data	Qualifiers QA	Detection Limit	Uncertainty
Alkalinity, Total (As CaCO3)	mg/L	04/08/2010	0001	4.38	-	14.38	0		F	#		
Dissolved Oxygen	mg/L	04/08/2010	N001	4.38	-	14.38	1.66		F	#		
Oxidation Reduction Potential	mV	04/08/2010	N001	4.38	-	14.38	393.8		F	#		
pH	s.u.	04/08/2010	N001	4.38	-	14.38	3.25		F	#		
Specific Conductance	umhos /cm	04/08/2010	N001	4.38	-	14.38	7434		F	#		
Temperature	C	04/08/2010	N001	4.38	-	14.38	19.97		F	#		
Turbidity	NTU	04/08/2010	N001	4.38	-	14.38	20.6		F	#		
Uranium	mg/L	04/08/2010	0001	4.38	-	14.38	0.092		F	#	0.0000018	

SAMPLE ID CODES: 000X = Filtered sample (0.45 µm). N00X = Unfiltered sample. X = replicate number.

LAB QUALIFIERS:
- * Replicate analysis not within control limits.
- > Result above upper detection limit.
- A TIC is a suspected aldol-condensation product.
- B Inorganic: Result is between the IDL and CRDL. Organic: Analyte also found in method blank.
- C Pesticide result confirmed by GC-MS.
- D Analyte determined in diluted sample.
- E Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
- H Holding time expired, value suspect.
- I Increased detection limit due to required dilution.
- J Estimated
- N Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compound (TIC).
- P > 25% difference in detected pesticide or Aroclor concentrations between 2 columns.
- U Analytical result below detection limit.
- W Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
- X,Y,Z Laboratory defined qualifier, see case narrative.

DATA QUALIFIERS:
- F Low flow sampling method used.
- G Possible grout contamination, pH > 9.
- J Estimated value.
- L Less than 3 bore volumes purged prior to sampling.
- Q Qualitative result due to sampling technique.
- R Unusable result.
- U Parameter analyzed for but was not detected.
- X Location is undefined.

QA QUALIFIER:
- # Validated according to quality assurance guidelines.

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Static Water Level Data

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STATIC WATER LEVELS (USEE700) FOR SITE FCT03, Falls City Disposal Site
REPORT DATE: 5/28/2010

Location Code	Flow Code	Top of Casing Elevation (Ft)	Measurement Date	Measurement Time	Depth From Top of Casing (Ft)	Water Elevation (Ft)	Water Level Flag
0709	D	451.58	04/08/2010	14:35:22	31.49	420.09	
0858	O	441.03	04/08/2010	12:20:41	28.34	412.69	
0862	O	428.67	04/08/2010	12:40:08	67.47	361.2	
0880	O	446.84	04/08/2010	11:40:55	28.02	418.82	
0886	D	403.52	04/08/2010	08:45:07	34.9	368.62	
0891	D	349.63	04/08/2010	10:35:33	11.32	338.31	
0906	D	420.17	04/08/2010	13:05:32	11.38	408.79	
0908	D	495.67	04/08/2010	14:47:00			D
0916	D	420.39	04/08/2010	14:44:00			D
0921	D	435.75	04/08/2010	13:50:12	31.18	404.57	
0924	D	396.44	04/08/2010	15:20:47	13.88	382.56	
0963	D	373.23	04/08/2010	09:40:48	8.92	364.31	

FLOW CODES: B BACKGROUND C CROSS GRADIENT D DOWN GRADIENT F OFF SITE
N UNKNOWN O ON SITE U UPGRADIENT

WATER LEVEL FLAGS: D Dry F FLOWING

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Hydrographs

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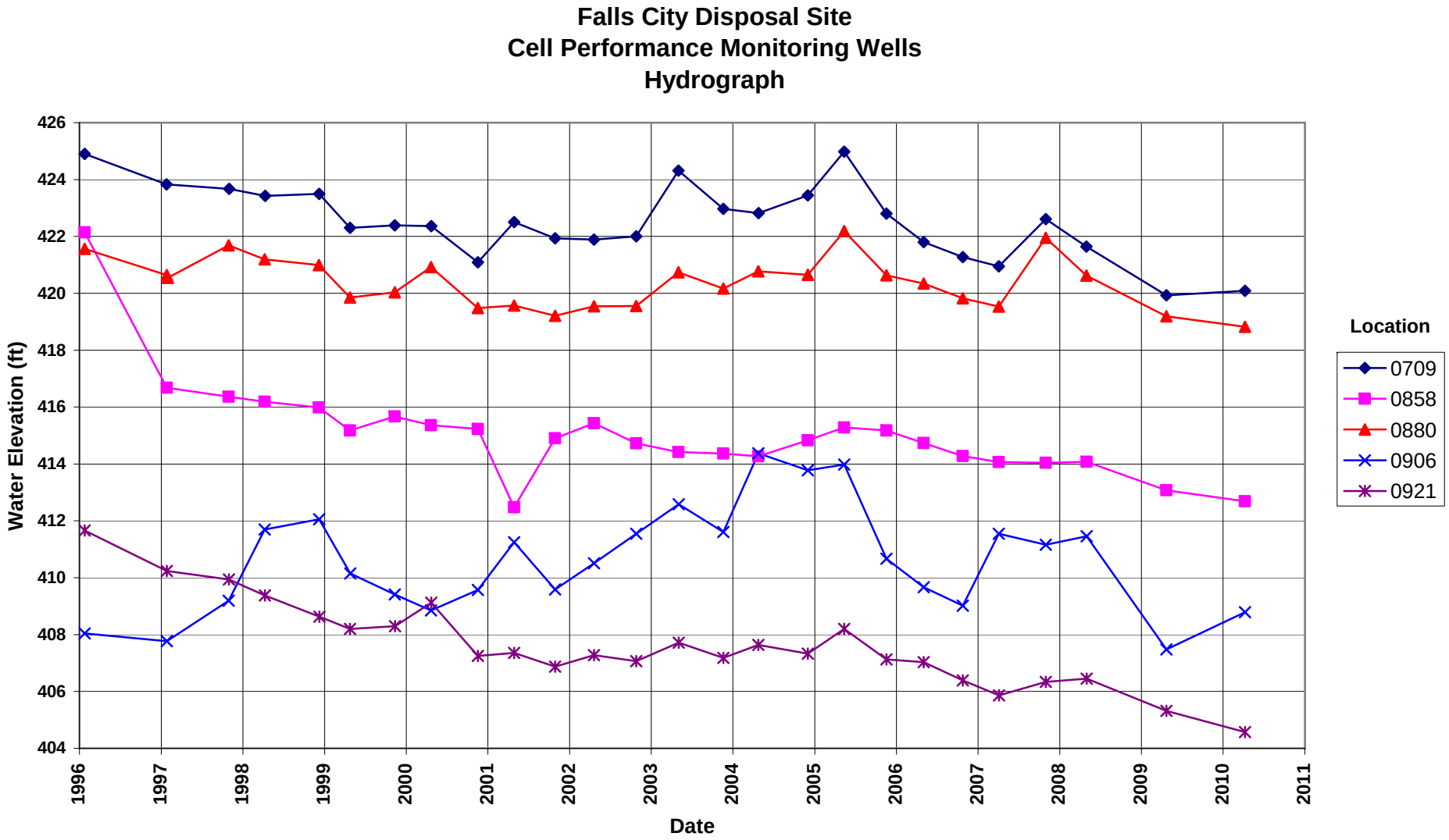
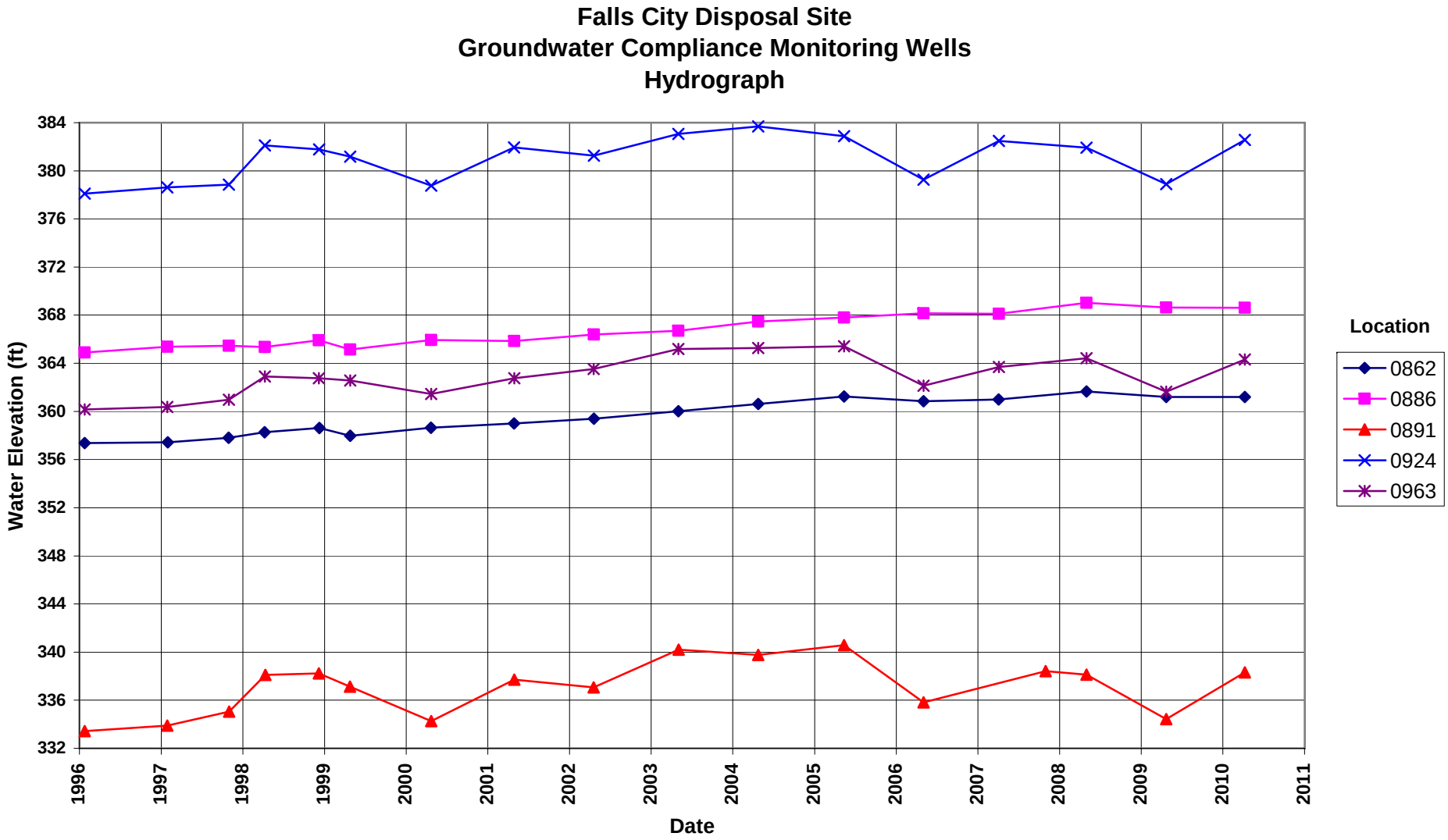

Falls City Disposal Site
Cell Performance Monitoring Wells
Hydrograph
Water Elevation (ft)
426
424
422
420
418
416
414
412
410
408
406
404
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0709
0858
0880
0906
0921


Falls City Disposal Site
Groundwater Compliance Monitoring Wells
Hydrograph
Water Elevation (ft)
384
380
376
372
368
364
360
356
352
348
344
340
336
332
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0886
0891
0924
0963

Time-Concentration Graphs

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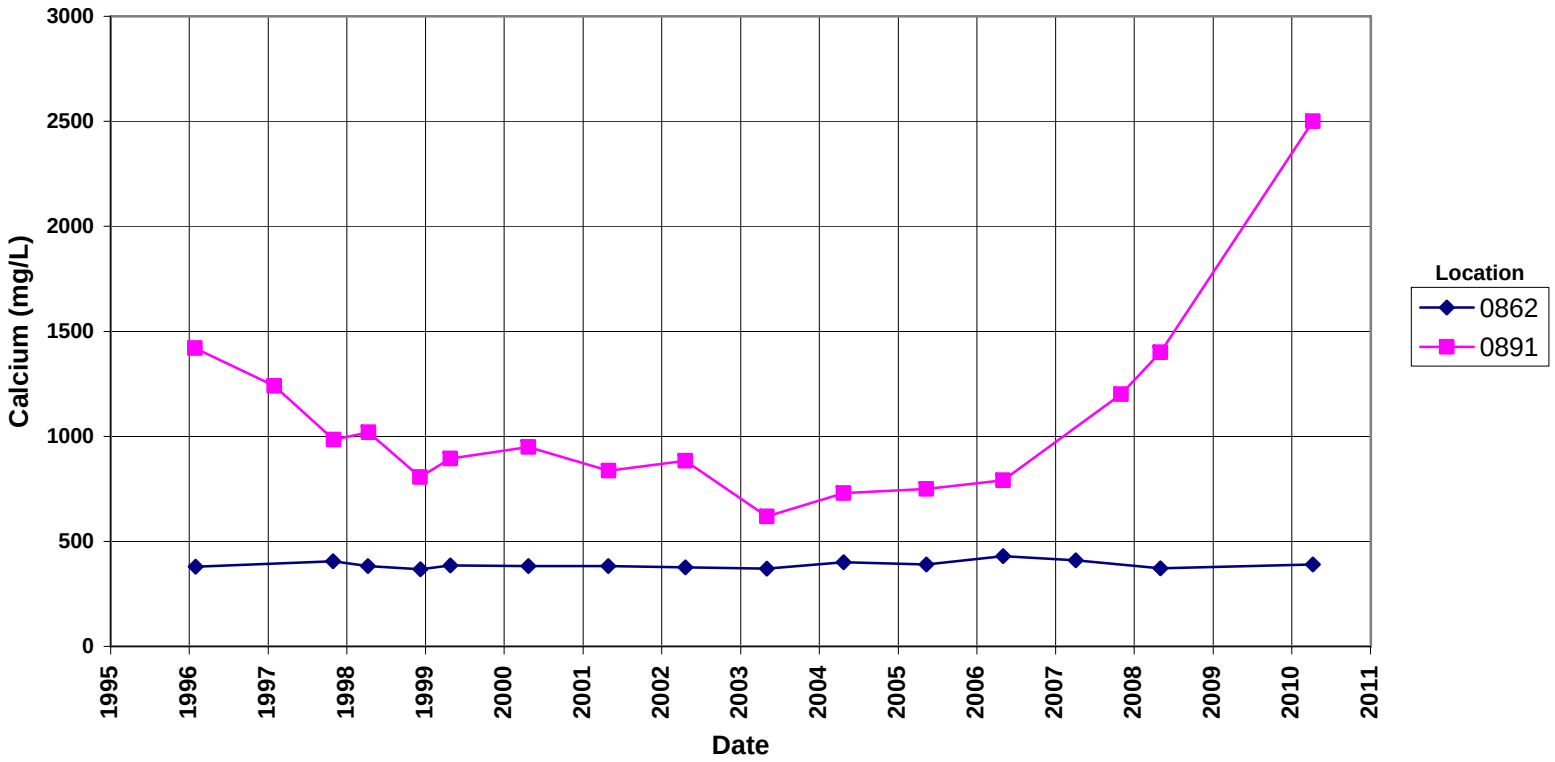
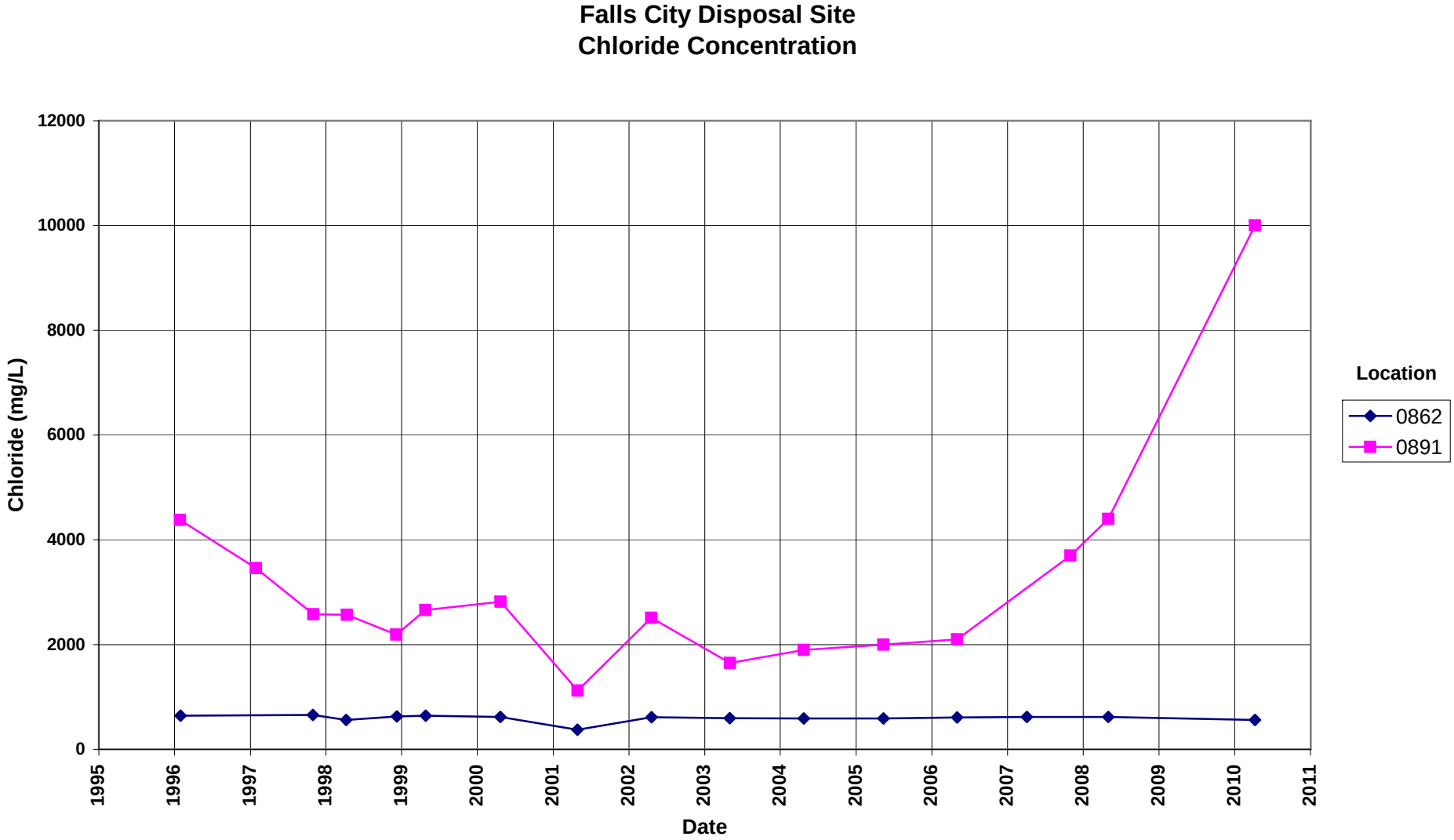
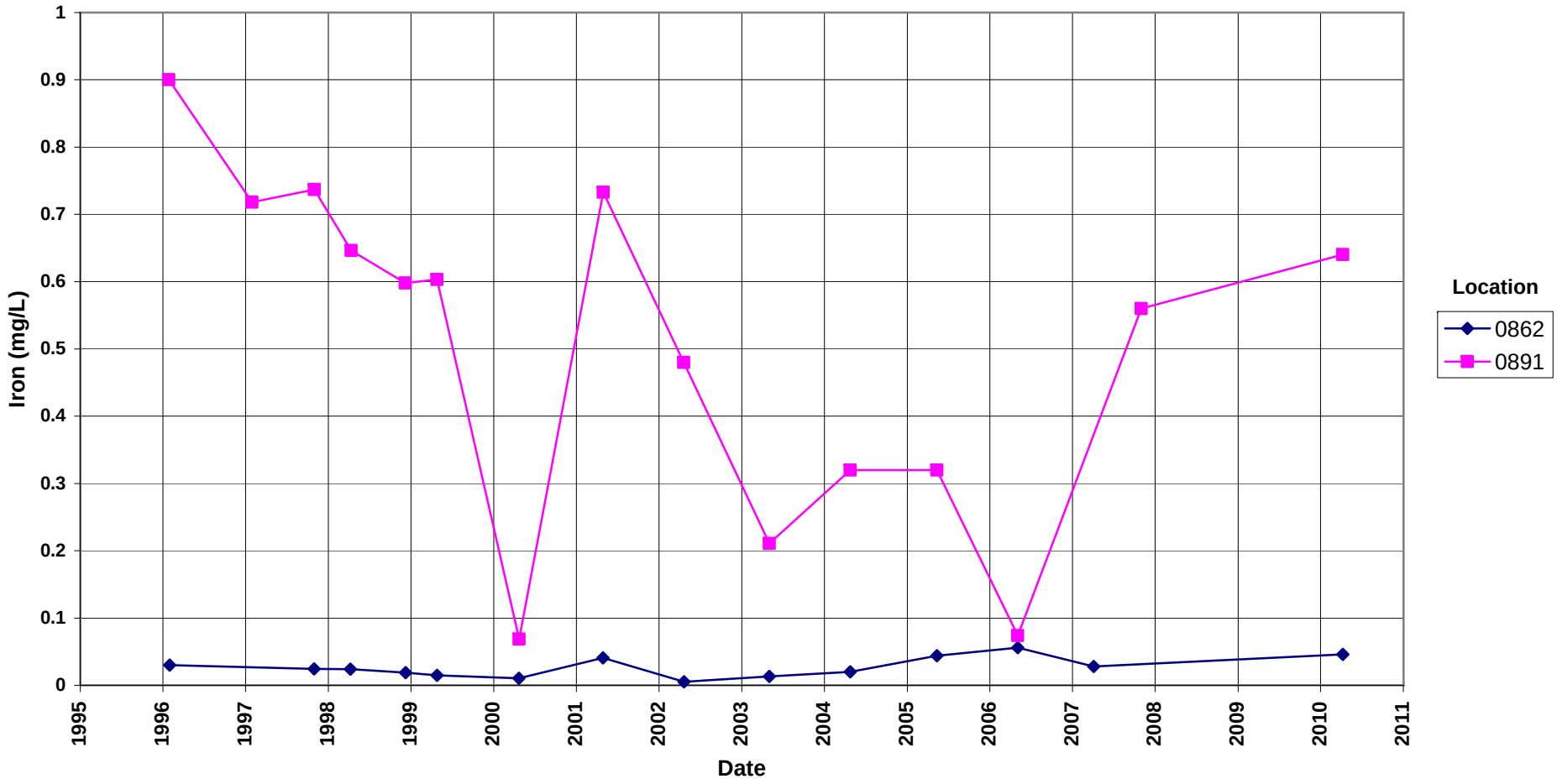
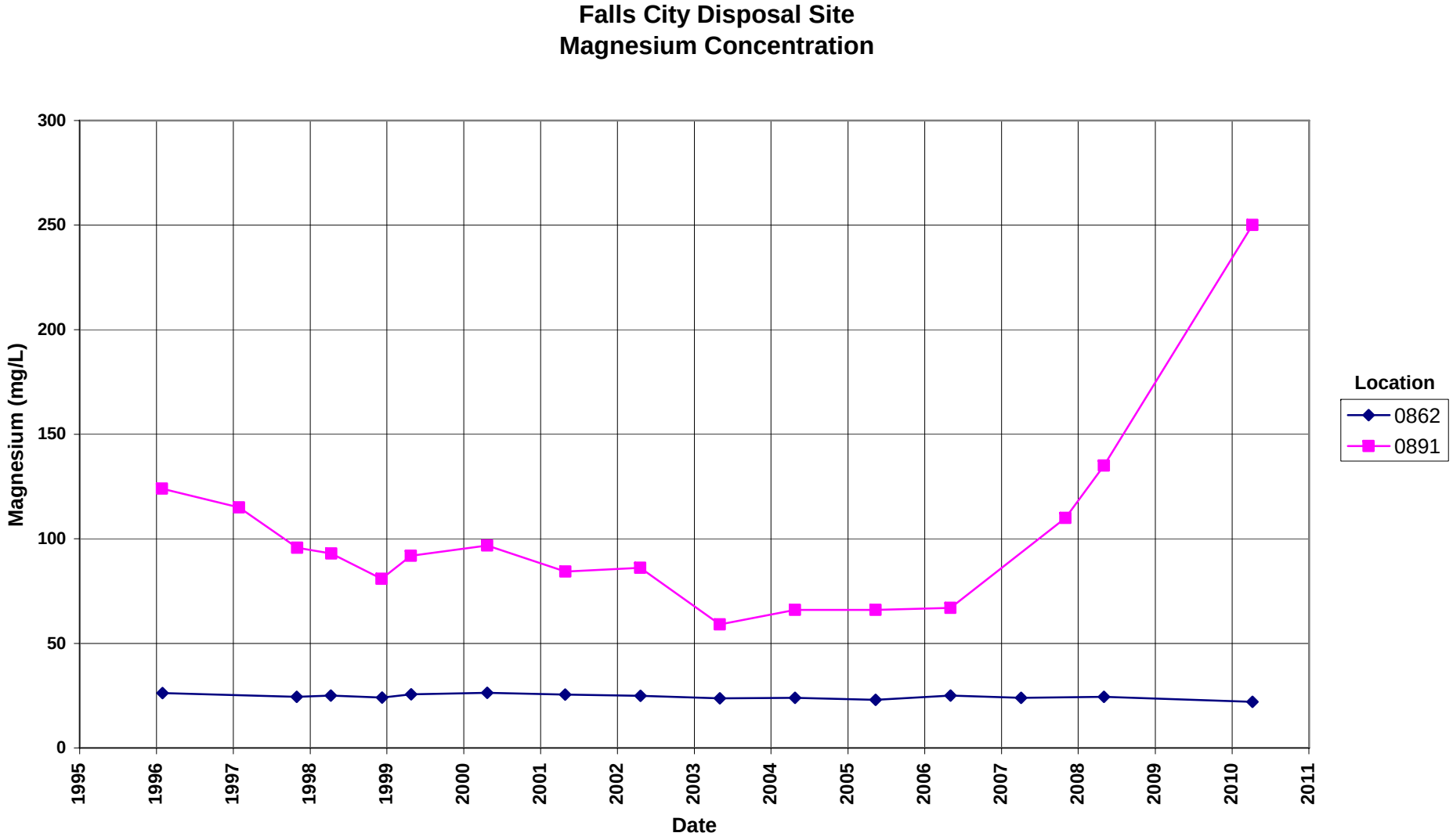
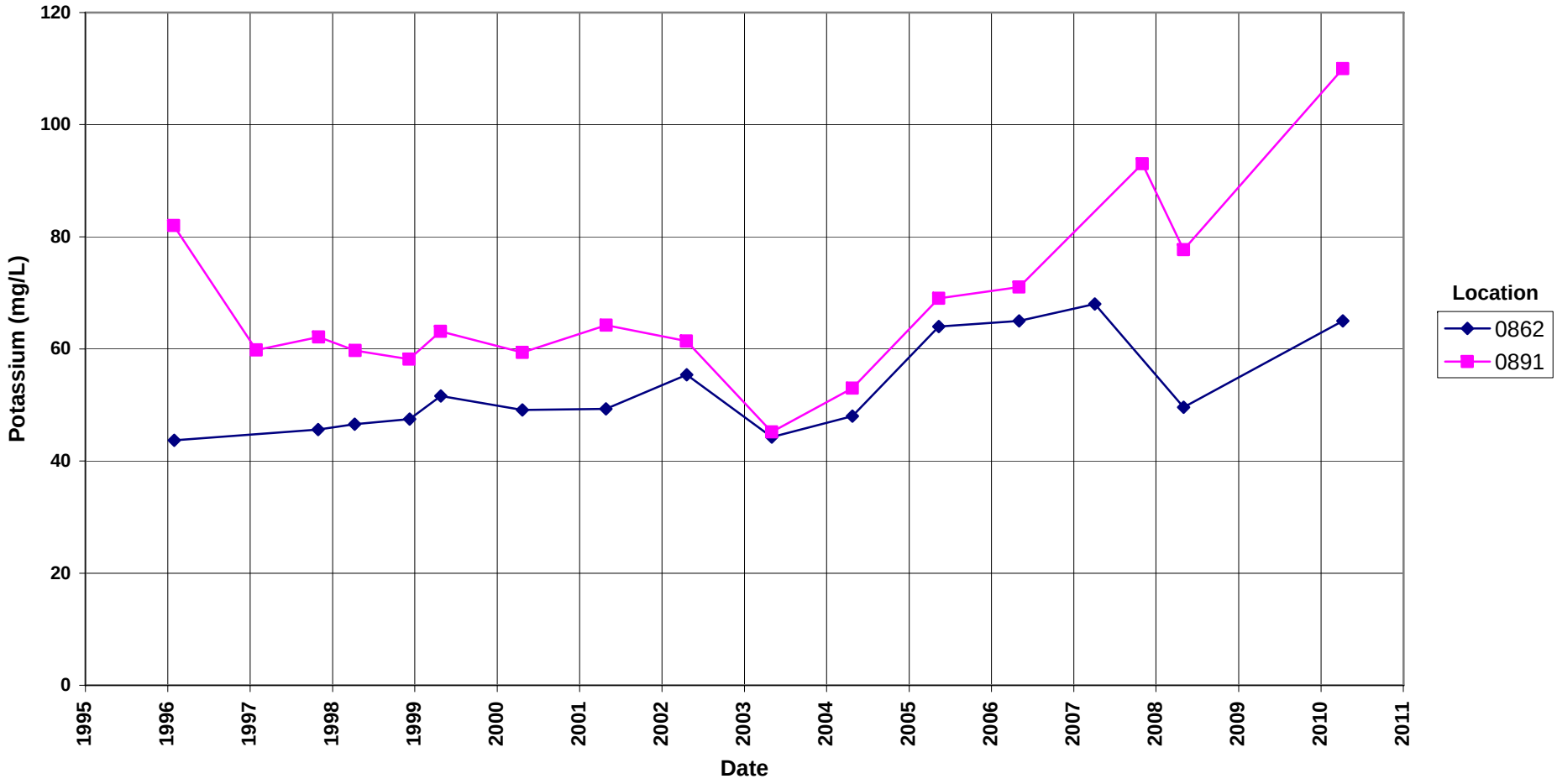
Falls City Disposal Site
Calcium Concentration



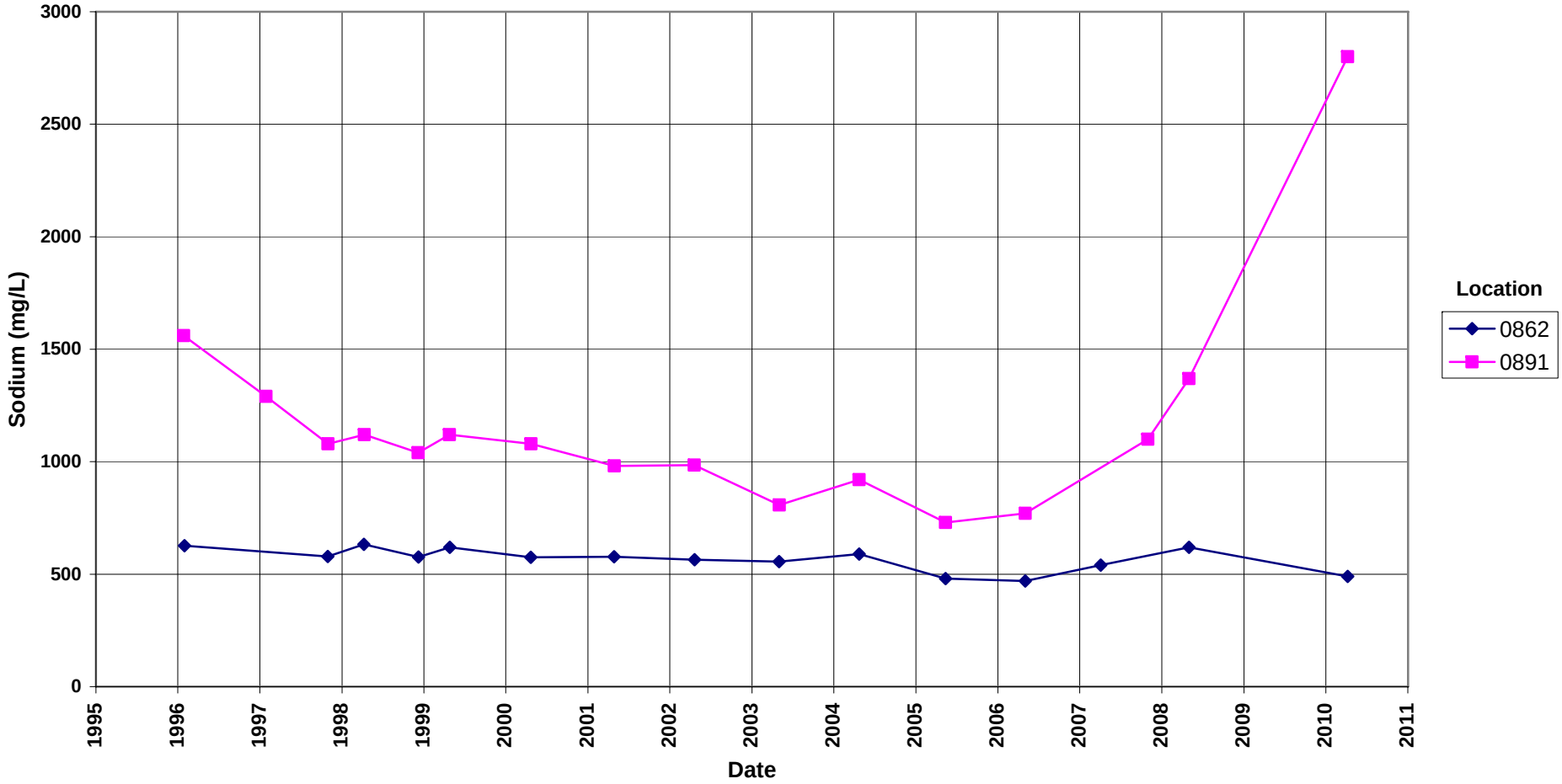

Falls City Disposal Site
Chloride Concentration
Chloride (mg/L)
12000
10000
8000
6000
4000
2000
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0891


Falls City Disposal Site
Iron Concentration
Iron (mg/L)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0891

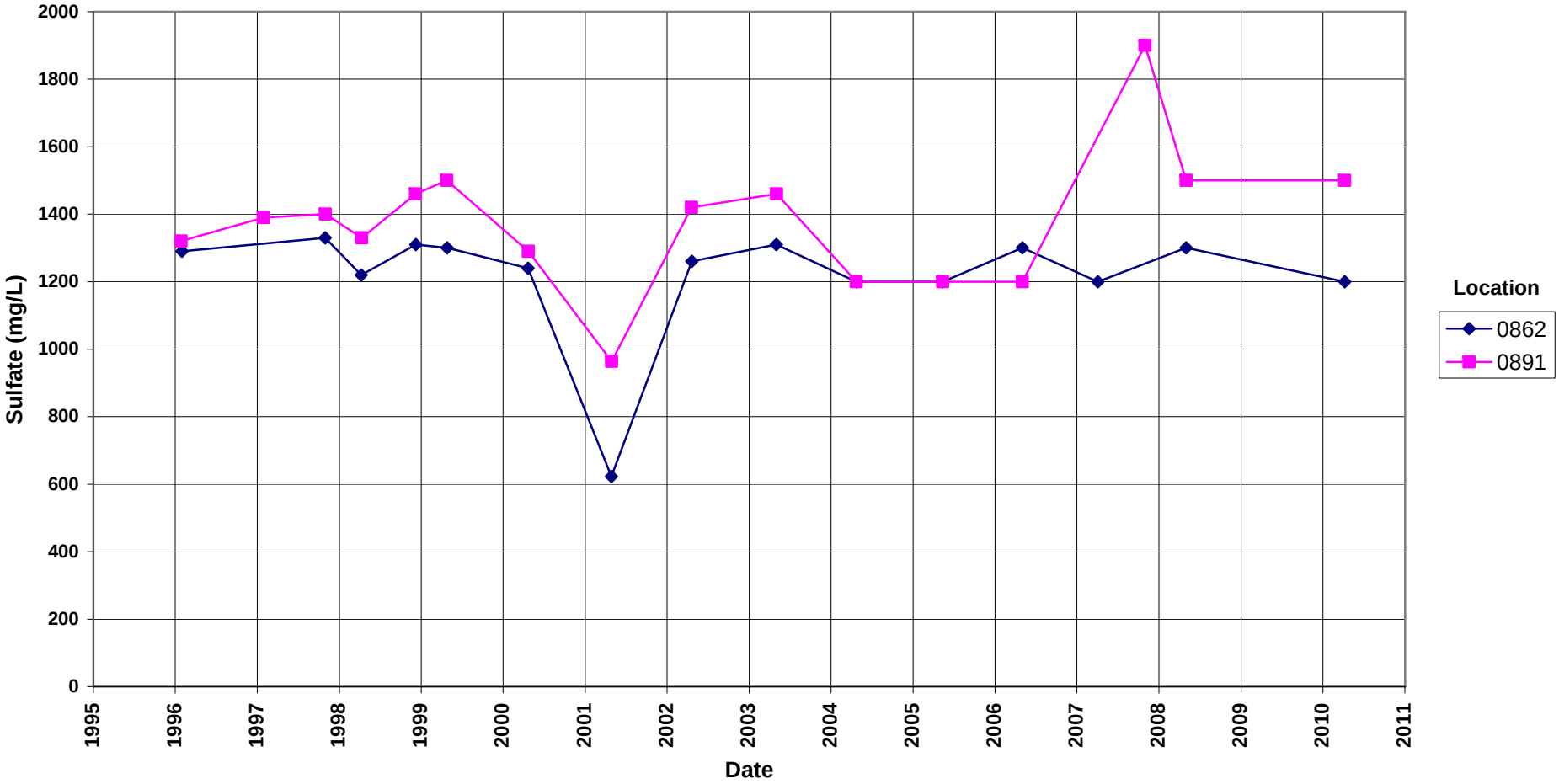

Falls City Disposal Site
Magnesium Concentration
Magnesium (mg/L)
300
250
200
150
100
50
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0891

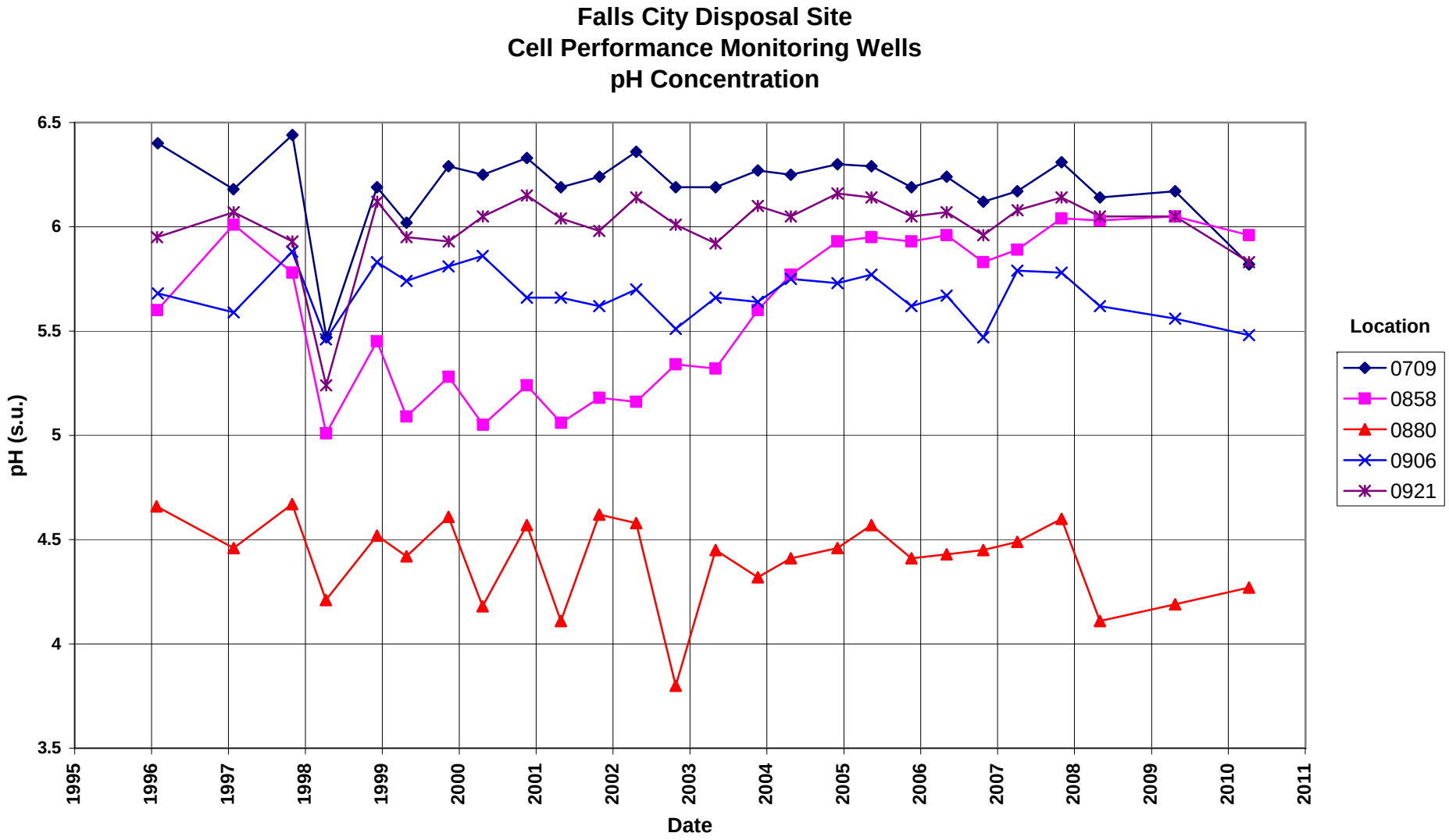

Falls City Disposal Site
Potassium Concentration
Potassium (mg/L)
120
100
80
60
40
20
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0891

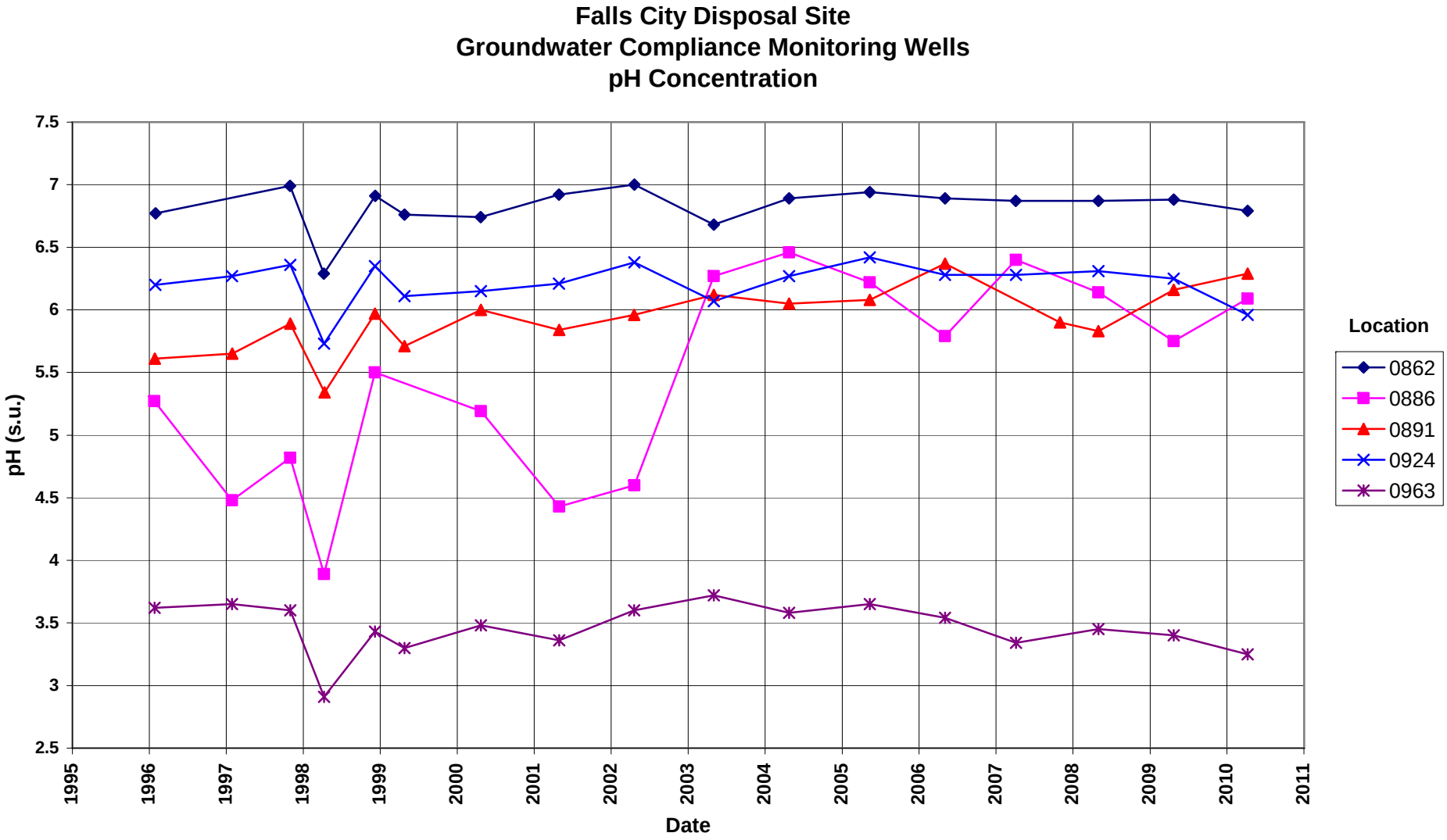
Falls City Disposal Site
Sodium Concentration

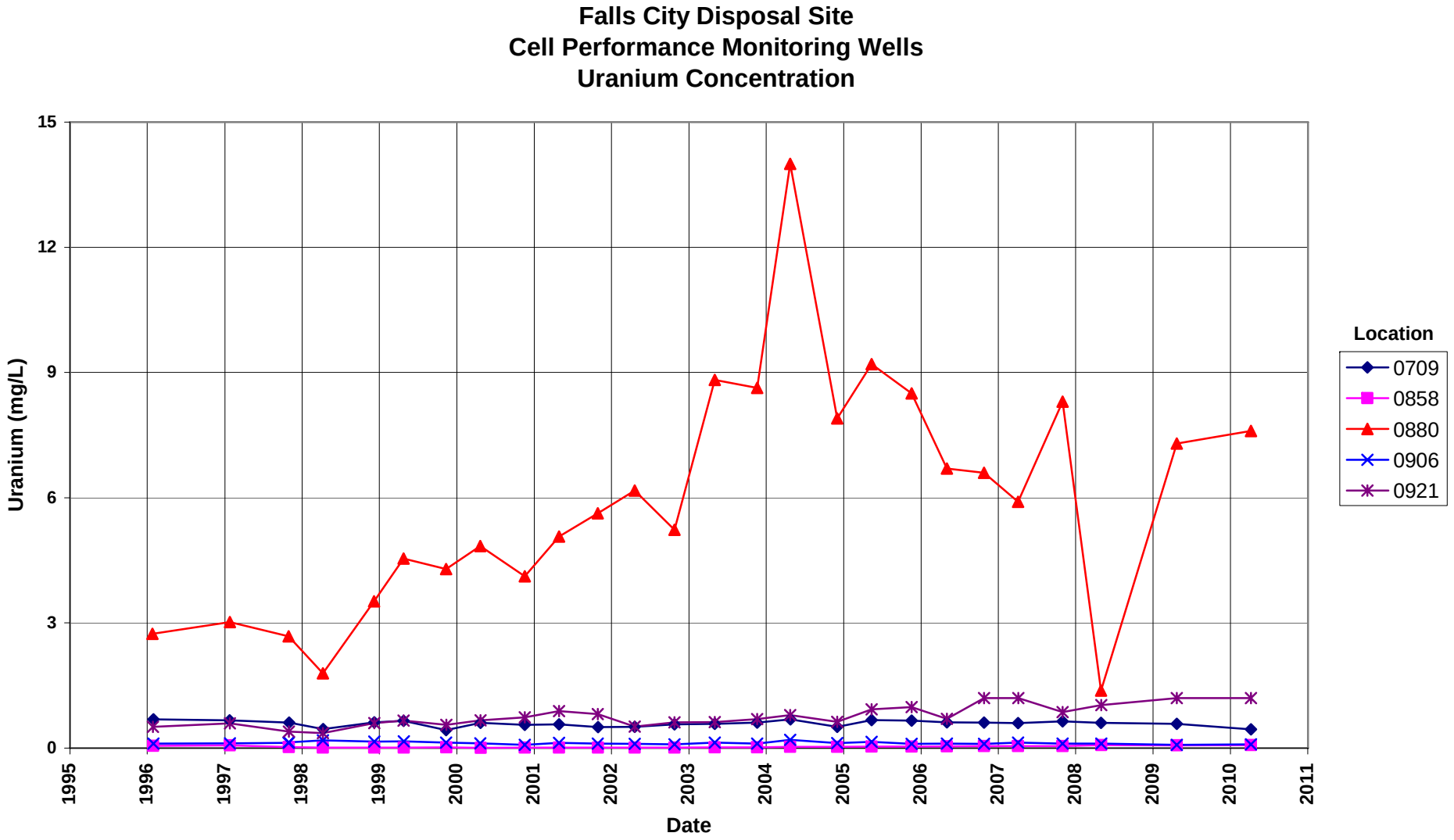


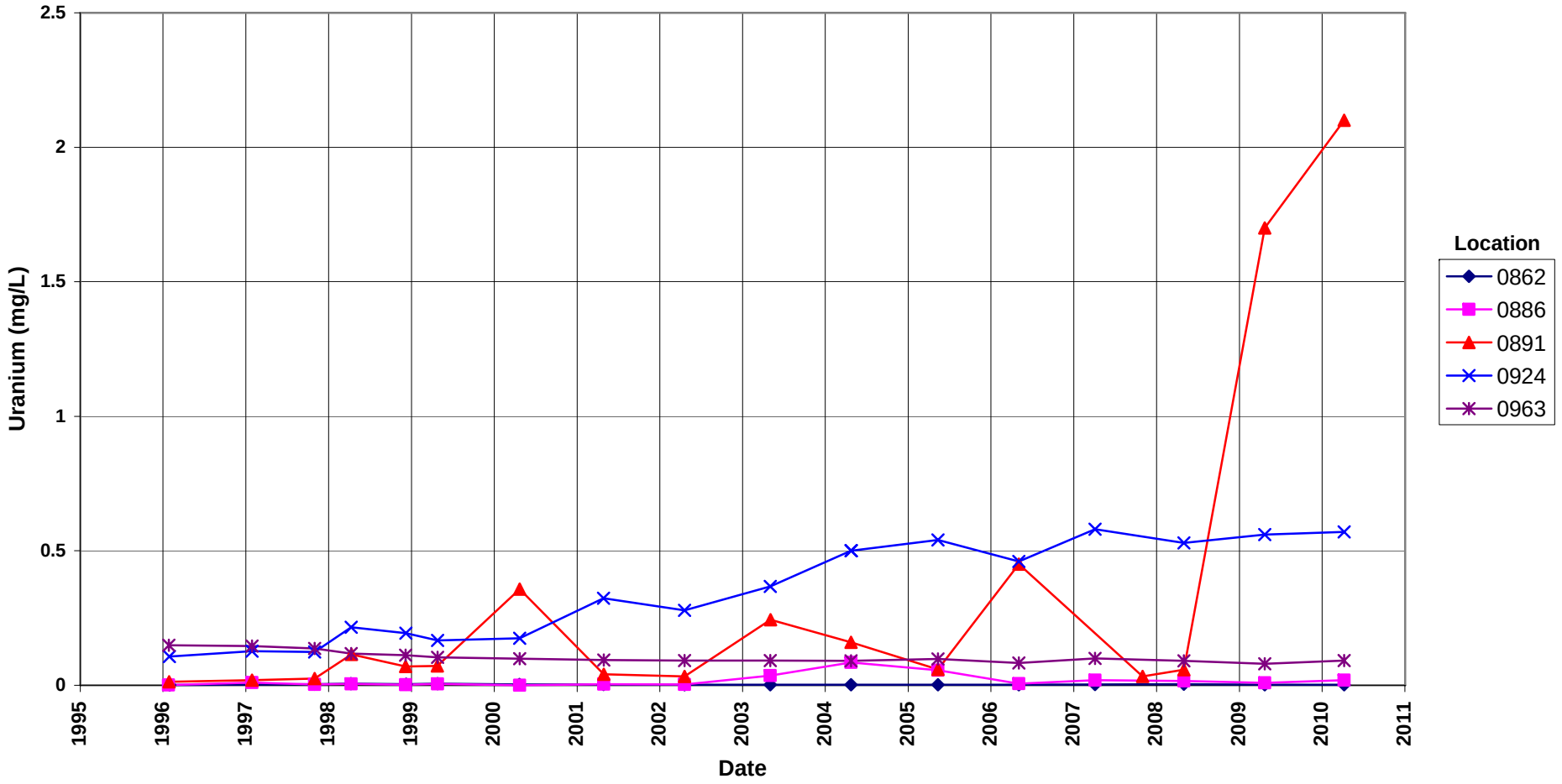
Falls City Disposal Site
Sulfate Concentration




Falls City Disposal Site
Cell Performance Monitoring Wells
pH Concentration
pH (s.u.)
6.5
6
5.5
5
4.5
4
3.5
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0709
0858
0880
0906
0921


Falls City Disposal Site
Groundwater Compliance Monitoring Wells
pH Concentration
pH (s.u.)
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0886
0891
0924
0963


Falls City Disposal Site
Cell Performance Monitoring Wells
Uranium Concentration
Uranium (mg/L)
15
12
9
6
3
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0709
0858
0880
0906
0921


Falls City Disposal Site
Groundwater Compliance Monitoring Wells
Uranium Concentration
Uranium (mg/L)
2.5
2
1.5
1
0.5
0
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
Date
Location
0862
0886
0891
0924
0963

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Attachment 3
Sampling and Analysis Work Order

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Stoller established 1959

Task Order LM-501
Control Number 10-0432

March 15, 2010

U.S. Department of Energy
Office of Legacy Management
ATTN: Jalena Dayvault
Site Manager
2597 B ¾ Road
Grand Junction, CO 81503

SUBJECT: Contract No. DE-AM01-07LM00060, Stoller
April 2010 Environmental Sampling at the Falls City, Texas, Disposal Site

REFERENCE: Task Order LM00-501-02-105-402, Falls City, TX, Site

Dear Ms. Dayvault:

The purpose of this letter is to inform you of the upcoming sampling at Falls City, Texas. Enclosed are the map and tables specifying sample locations and analytes for monitoring at the Falls City disposal site. Water quality data will be collected at this site as part of the routine environmental sampling currently scheduled to begin the week of April 5, 2010.

The following list shows the monitor wells (with associated zone of completion) scheduled to be sampled during this event.

Monitoring Wells*

709 Cq/Ct	862 Dl	886 De	906 Cq	916 Cq	924 Cq	963 Cq
858 Cq	880 De	891 Dl	908 Cq	921 Cq		

*NOTE: Cq = Conquista Clay – Whitsett Formation; Ct = Claystone; De = DeWeesville Sand – Whitsett Formation; Dl = Dilworth Sand – Whitsett Formation

All samples will be collected as directed in the *Sampling and Analysis Plan for U.S. Department of Energy Office of Legacy Management Sites*. Access agreements are being reviewed and are expected to be complete by the beginning of fieldwork.

Please call me at (412) 818-7015 if you have any questions.

Sincerely,

2010.03.15
10:09:43 -04'00'

Michele Miller
Project Manager

The S.M. Stoller Corporation 2597 B¾ Road Grand Junction, CO 81503 (970) 248–6000 Fax: (970) 248–6040

MM/lcg/lb

Enclosures (3)

cc: (electronic)
Cheri Bahrke, Stoller
Steve Donivan, Stoller
Bev Gallagher, Stoller
Lauren Goodknight, Stoller
EDD Delivery
rc-grand.junction

The S.M. Stoller Corporation 2597 B¾ Road Grand Junction, CO 81503 (970) 248–6000 Fax: (970) 248–6040

Sampling Frequencies for Locations at Falls City, Texas

Location ID	Quarterly	Semiannually	Annually	Biennially	Not Sampled	Notes
Monitoring Wells						
709			X			
858			X			
862			X			
880			X			
886			X			
891			X			Download data logger; **collect duplicate from this well**
906			X			Download data logger
908			X			
916			X			
921			X			
924			X			Download data logger
963			X			Download data logger

Annual sampling conducted in April
Based on LTSP dated March 2008

Constituent Sampling Breakdown

Site	Falls City				
Analyte	Groundwater	Surface Water	Required Detection Limit (mg/L)	Analytical Method	Line Item Code
Approx. No. Samples/yr	12	0			
Field Measurements					
Alkalinity	862 and 891 only				
Dissolved Oxygen	X				
Redox Potential	X				
pH	X				
Specific Conductance	X				
Turbidity	X				
Temperature	X				
Laboratory Measurements					
Aluminum					
Ammonia as N (NH3-N)	862 and 891 only		0.1	EPA 350.1	WCH-A-005
Calcium	862 and 891 only		5	SW-846 6010	LMM-01
Chloride	862 and 891 only		0.5	SW-846 9056	WCH-A-039
Chromium					
Iron	862 and 891 only		0.05	SW-846 6020	LMM-02
Lead					
Magnesium	862 and 891 only		5	SW-846 6010	LMM-01
Manganese					
Molybdenum					
Nickel					
Nickel-63					
Nitrate + Nitrite as N (NO3+NO2)-N	862 and 891 only		0.05	EPA 353.1	WCH-A-022
Potassium	862 and 891 only		1	SW-846 6010	LMM-01
Selenium					
Silica					
Sodium	862 and 891 only		1	SW-846 6010	LMM-01
Strontium					
Sulfate	862 and 891 only		0.5	SW-846 9056	MIS-A-044
Sulfide					
Uranium	X		0.0001	SW-846 6020	LMM-02
Vanadium					
Zinc					
Total No. of Analytes	10	0			

Note: All analyte samples are considered unfiltered unless stated otherwise. All private well samples are to be unfiltered. The total number of analytes does not include field parameters.

Attachment 4
Trip Report

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Stoller
established 1959
Grand Junction Office

Memorandum

Control Number N/A

DATE: April 21, 2010

TO: Michele Miller

FROM: Jeff Price

SUBJECT: Sampling Trip Report

Site: Falls City, Texas

Dates of Sampling Event: April 8, 2010

Team Members: Dan Sellers and Jeff Price.

Number of Locations Sampled: 10 monitoring wells and 1 duplicate sample.

Locations Not Sampled/Reason: Monitoring wells 0908 and 0916 were dry.

Location Specific Information: None**.**

Quality Control Sample Cross Reference: The following are the false identifications assigned to the quality control sample:

False ID	True ID	Sample Type	Associated Matrix	Ticket Number
2913	0891	Duplicate	Groundwater	IEZ 437

Field Variance: None.

Requisition Numbers Assigned: All samples were assigned to RIN 10032948.

Sample Shipment: Samples were shipped to ALS Laboratory Group in Fort Collins, CO, from Grand Junction on April 14, 2010.

Water Level Measurements: Water level measurements were collected at all sampled wells.

Well Inspection Summary: Well inspections were conducted at all sampled wells; all wells were in good condition.

Equipment: All wells are equipped with dedicated bladder pumps.

Institutional Controls: All gates accessed during the sampling event were appropriately closed and locked.

Fences, Gates, Locks: OK
Signs: OK
Trespassing/Site Disturbances: None observed.

Site Issues

Disposal Cell/Drainage Structure Integrity: Looked OK
Vegetation/Noxious Weed Concerns: N/A
Maintenance Requirements: None.
Safety Issues: None.

Corrective Action Taken: None.

(JP/lcg)

cc: (electronic)
Jalena Dayvault, DOE
Cheri Bahrke, Stoller
Steve Donivan, Stoller
EDD Delivery

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