Appendix F

December 14, 2018

Troy Bussey Jr.
Pioneer Technologies Corporation
5205 Corporate Ctr. Ct. SE
Suite A
Olympia, WA 98503-5901

RE: Port of Tacoma, Washington
Ex-situ Stabilization/Treatability Study for Arsenic

Troy:

The following letter report is a summary of the ex-situ stabilization/treatability study conducted by Free Flow Technologies, Ltd. (Free Flow).

Pioneer Technologies Corporation (Pioneer) submitted four (4) soil samples to Free Flow for the completion of a treatability study for Arsenic. The four samples received were as follows:

- PTC-102 Upper Aquifer (PTC-102 Upper)
- PTC-102 First Aguitard (PTC-102 First)
- PTC-103 Upper Aguifer (PTC-103 Upper)
- PTC-103 First Aguitard (PTC-103 First)

All samples generated as part of this treatability study were submitted to Pace Analytical Laboratories in Minneapolis, Minnesota. This facility holds a Washington State laboratory certification.

The treatability study was completed in steps or phases as follows:

- Submit a grab sample from each Pioneer sample to the laboratory for analysis of Total Arsenic, TCLP Arsenic and pH. (initial UNTREATED samples). The results of this analysis showed that all four Pioneer samples were hazardous for Arsenic.
- Upon receipt of the untreated analytical results, Free Flow prepared a sample from each Pioneer sample with a dosage of 3% and 6% by weight of the FF100-FS treatment reagent (TREATED FF100-FS 3% and TREATED FF100-FS 6%). The laboratory analytical results showed the following:
 - The FF100-FS at 3% and 6% by weight was able to reduce the TCLP Arsenic concentration in samples PTC-102 First and PTC-103 First, but not below the hazardous waste characteristic level for Arsenic (5.0 mg/L);

- The FF100-FS at 3% and 6% by weight was able to reduce the TCLP Arsenic concentration in sample PTC-103 Upper to less than 5.0 mg/L; and
- The FF100-FS at 3% and 6% by weight had no treatment effect on the TCLP Arsenic concentration in sample PTC-102 Upper.
- Upon receipt of this first set of treatment results Free Flow contacted Troy Bussey to discuss the results and the potential treatment using one of Free Flow's other treatment reagents (FF-FS). From this conversation, Pioneer gave Free Flow approval to submit a treated sample from Pioneer samples PTC-102 First, PTC-102 Upper and PTC-103 First.
- Free Flow proceeded to prepare a sample from Pioneer samples PTC-102 First, PTC-102 Upper and PTC-103 First with a dosage of 7% by weight of the FF-FS treatment reagent (TREATED FF-FS 7%). The laboratory analytical results showed the following:
 - The FF-FS at 7% by weight was able to reduce the TCLP Arsenic concentration in samples PTC-102 First and PTC-103 First, but not below the hazardous waste characteristic level for Arsenic (5.0 mg/L); and,
 - The FF-FS at 7% by weight had no treatment effect on the TCLP Arsenic concentration in sample PTC-102 Upper.

A summary table of all the laboratory analytical results is included in Attachment A and copies of the laboratory analytical reports are included in Attachment B.

Free Flow greatly appreciates the opportunity to be of service to Pioneer Technologies Corporation.

If you have any questions, please feel free to contact me at 815/636-0166 (office) or cproctor@freeflowtech.com.

Troctor

Sincerely,

Cristopher Proctor, PE Sr. Project Manager

Attachments:

- A. Summary Table of Results
- B. Laboratory Analytical Reports



Pioneer Technologies Corporation Port of Tacoma, Washington Ex-situ Stabilization/Treatability Study for Arsenic

SAMPLE ID	PTC-102 FIRST	PTC-102 UPPER	PTC-103 FIRST	PTC-103 UPPER
	UN	ITREATED		
TCLP Arsenic (mg/L)	181	97.3	139	8.2
Total Arsenic (mg/kg)	9070	35000	8060	1090
рН	8.2	8.5	7.9	8.4
	TREATED) (FF100-FS) - 3%		
TCLP Arsenic (mg/L)	49.8	128	42.9	0.19
pH	8.9	9.2	9	10.2
% change from untreated	-72.5%	31.6%	-69.1%	-97.7%
	TREATED) (FF100-FS) - 6%		
TCLP Arsenic (mg/L)	25.7	142	48.1	0.21
рН	9.7	8.6	9	11.2
% change from untreated	-85.8%	45.9%	-65.4%	-97.4%
	TREATE	ED (FF-FS) - 7%		
TCLP Arsenic (mg/L)	24.8	137	10.5	
рН	9.3	9.6	9.5	
% change from untreated	-86.3%	40.8%	-92.5%	

Phone: 815/636-0166

Fax: 815/636-0560 www.freeflowtech.com

Treatment Crite	eria
RCRA TCLP Level for Arsenic	5.0 mg/L







October 10, 2018

Cris Proctor Free Flow Technologies 4920 Forest Hills Rd Loves Park, IL 61111

RE: Project: 476.03 PTC

Pace Project No.: 10450017

Dear Cris Proctor:

Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jared Dickinson jared.dickinson@pacelabs.com (612)607-1700 Project Manager

Enclosures







CERTIFICATIONS

Project: 476.03 PTC
Pace Project No.: 10450017

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01 Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064 Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-

053-137

Florida Certification #: E87605 Georgia Certification #: 959

Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064

Maine Certification #: MN00064 Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647

North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382

Wyoming UST Certification #: via A2LA 2926.01

Wisconsin Certification #: 999407970





SAMPLE SUMMARY

Project: 476.03 PTC Pace Project No.: 10450017

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10450017001	PTC-102 FIRST	Solid	10/02/18 13:56	10/03/18 07:30
10450017002	PTC-102 UPPER	Solid	10/02/18 13:53	10/03/18 07:30
10450017003	PTC-103 FIRST	Solid	10/02/18 13:41	10/03/18 07:30
10450017004	PTC-103 UPPER	Solid	10/02/18 13:38	10/03/18 07:30





SAMPLE ANALYTE COUNT

Project: 476.03 PTC Pace Project No.: 10450017

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10450017001	PTC-102 FIRST	EPA 6010D	DM	1	PASI-M
		EPA 6010D	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
10450017002	PTC-102 UPPER	EPA 6010D	DM	1	PASI-M
		EPA 6010D	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
10450017003	PTC-103 FIRST	EPA 6010D	DM	1	PASI-M
		EPA 6010D	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
10450017004	PTC-103 UPPER	EPA 6010D	DM	1	PASI-M
		EPA 6010D	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M



Project: 476.03 PTC Pace Project No.: 10450017

Date: 10/10/2018 03:58 PM

Pace Project No.: 10450017											
Sample: PTC-102 FIRST	Lab ID: 104		Collected:					Matrix: Solid			
Results reported on a "dry weight"					_	-		0.0.1			
Parameters	Results	Units	PC	QL 	DF	Prepared	Analyzed	CAS No.	Qual		
6010D MET ICP, TCLP	Analytical Met Leachate Met		•			PA 3010 ial pH: 8.88; Fina	l pH: 1.79				
Arsenic	181	mg/L		0.50	5	10/05/18 13:33	10/08/18 17:04	7440-38-2			
6010D MET ICP	Analytical Met	thod: EPA 60	010D Prepar	ation Me	thod: El	PA 3050					
Arsenic	9070	mg/kg		15.8	10	10/05/18 05:37	10/10/18 11:48	7440-38-2	M6		
Dry Weight / %M by ASTM D2974	Analytical Met	thod: ASTM	D2974								
Percent Moisture	38.7	%		0.10	1		10/08/18 15:50)			
9045D pH	Analytical Met	thod: EPA 90	045D								
pH at 25 Degrees C	8.2	Std. Units	5	0.10	1		10/05/18 12:47	7			
Sample: PTC-102 UPPER	Lab ID: 104		Collected:					Matrix: Solid			
Results reported on a "dry weight"					-	_					
Parameters	Results —	Units	PG	QL 	DF	Prepared	Analyzed	CAS No.	Qual		
6010D MET ICP, TCLP	,	Analytical Method: EPA 6010D Preparation Method: EPA 3010 Leachate Method/Date: EPA 1311; 10/05/18 09:57 Initial pH: 9.37; Final pH: 1.77									
Arsenic	97.3	mg/L		0.50	5	10/05/18 13:33	10/08/18 17:05	7440-38-2			
6010D MET ICP	Analytical Met	thod: EPA 60	010D Prepar	ation Me	thod: El	PA 3050					
Arsenic	35000	mg/kg		117	100	10/05/18 05:37	10/10/18 13:37	7440-38-2			
Dry Weight / %M by ASTM D2974	Analytical Met	thod: ASTM	D2974								
Percent Moisture	17.8	%		0.10	1		10/08/18 15:50)			
9045D pH	Analytical Met	thod: EPA 90	045D								
pH at 25 Degrees C	8.5	Std. Units	3	0.10	1		10/05/18 12:46	3			
Sample: PTC-103 FIRST	Lab ID: 104	150017003	Collected:	10/02/1	8 13:41	Received: 10	/03/18 07:30	Matrix: Solid	_		
Results reported on a "dry weight"	basis and are ad	ljusted for p	oercent mois	sture, sa	mple si	ze and any dilu	tions.				
Parameters	Results	Units	PG	QL 	DF	Prepared	Analyzed	CAS No.	Qual		
6010D MET ICP, TCLP	Analytical Met Leachate Met		•			PA 3010 ial pH: 8.87; Fina	l pH: 1.79				
Arsenic	139	mg/L		0.50	5	10/05/18 13:33	10/08/18 17:07	7440-38-2			
6010D MET ICP	Analytical Met	thod: EPA 60	010D Prepar	ation Me	thod: El	PA 3050					
Arsenic	8060	mg/kg		19.5	10	10/05/18 05:37	10/10/18 13:40	7440-38-2			



ANALYTICAL RESULTS

Project: 476.03 PTC Pace Project No.: 10450017

Date: 10/10/2018 03:58 PM

Sample: PTC-103 FIRST	Lab ID: 104	50017003	Collected: 10/02/	18 13:41	Received: 10	0/03/18 07:30 N	Matrix: Solid	
Results reported on a "dry weight" b	pasis and are ad	justed for p	ercent moisture, sa	mple s	ize and any dilu	tions.		
Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qua
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM [D2974					
Percent Moisture	53.0	%	0.10	1		10/08/18 15:51		
9045D pH	Analytical Met	hod: EPA 90	45D					
pH at 25 Degrees C	7.9	Std. Units	0.10	1		10/05/18 12:45		
Sample: PTC-103 UPPER	Lab ID: 104	50017004	Collected: 10/02/	18 13:38	Received: 10	0/03/18 07:30 N	Matrix: Solid	
Results reported on a "dry weight" b	pasis and are ad	justed for p	ercent moisture, sa	mple s	ize and any dilu	tions.		
Parameters	Results	Units	PQL	DF	Prepared	Analyzed	CAS No.	Qua
6010D MET ICP, TCLP	Analytical Met		40D Dranauation M			.	•	
		nod: EPA 60	TOD Preparation Me	ethod: E	PA 3010			
	•		PA 1311; 10/05/18 09			al pH: 1.61		
Arsenic	•		•		ial pH: 8.03; Fina	al pH: 1.61 10/08/18 13:10	7440-38-2	
	Leachate Metl	hod/Date: EF mg/L	PA 1311; 10/05/18 09	9:57 Init 1	ial pH: 8.03; Fina 10/05/18 13:33	•	7440-38-2	
Arsenic 6010D MET ICP Arsenic	Leachate Metl	hod/Date: EF mg/L	PA 1311; 10/05/18 09	9:57 Init 1	ial pH: 8.03; Fina 10/05/18 13:33 PA 3050	•		
6010D MET ICP	Leachate Mether 8.2 Analytical Methere	nod/Date: EF mg/L hod: EPA 60 mg/kg	PA 1311; 10/05/18 09 0.10 10D Preparation Me 1.2	9:57 Init 1 ethod: E	ial pH: 8.03; Fina 10/05/18 13:33 PA 3050	10/08/18 13:10		
6010D MET ICP Arsenic	Leachate Meth 8.2 Analytical Meth 1090	nod/Date: EF mg/L hod: EPA 60 mg/kg	PA 1311; 10/05/18 09 0.10 10D Preparation Me 1.2	9:57 Init 1 ethod: E	ial pH: 8.03; Fina 10/05/18 13:33 PA 3050	10/08/18 13:10	7440-38-2	
6010D MET ICP Arsenic Dry Weight / %M by ASTM D2974	Leachate Meth 8.2 Analytical Meth 1090 Analytical Meth	nod/Date: EF mg/L hod: EPA 60 mg/kg hod: ASTM [PA 1311; 10/05/18 09 0.10 10D Preparation Me 1.2 02974 0.10	0:57 Init 1 ethod: E 1	ial pH: 8.03; Fina 10/05/18 13:33 PA 3050	10/08/18 13:10 10/08/18 20:37	7440-38-2	



Project:

Pace Project No.:

476.03 PTC

10450017

Parameter

MATRIX ORIVE & MATRIX ORIVE BURLOATE

Date: 10/10/2018 03:58 PM

Arsenic

Units

mg/L

QUALITY CONTROL DATA

QC Batch: 567473 Analysis Method: EPA 6010D QC Batch Method: EPA 3010 Analysis Description: 6010D TCLP Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004 METHOD BLANK: 3079330 Matrix: Water Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004 Blank Reporting Limit Qualifiers Parameter Units Result Analyzed Arsenic < 0.019 0.10 10/08/18 12:22 mg/L METHOD BLANK: 3077607 Matrix: Water Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004 Blank Reporting Parameter Units Result Limit Analyzed Qualifiers 10/08/18 13:12 Arsenic mg/L < 0.019 0.10 METHOD BLANK: 3077608 Matrix: Water Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004 Blank

METHOD BLANK: 30791	Matrix:	Water			
Associated Lab Samples: 10450017001, 10450017002, 104500			0450017004		
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Arsenic	mg/L	<0.019	0.10	10/08/18 13:15	

Result

< 0.019

Reporting

Limit

Analyzed

0.10 10/08/18 13:13

Qualifiers

LABORATORY CONTROL SAMPLE:	3079331	Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic	mg/L	5	5.1	102	80-120	

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	ATE: 30793	32		3079333							
			MS	MSD								
		10446325002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic	mg/L	ND	5	5	5.1	5.2	102	103	75-125	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10450017

QC Batch: 567077 Analysis Method: EPA 6010D
QC Batch Method: EPA 3050 Analysis Description: 6010D Solids

Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004

METHOD BLANK: 3077143 Matrix: Solid

Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

MS

Arsenic mg/kg <0.20 0.99 10/08/18 20:05

LABORATORY CONTROL SAMPLE: 3077144

Date: 10/10/2018 03:58 PM

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Arsenic mg/kg 49.5 48.5 98 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3077145 3077146

10450017001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 75-125 20 M6 Arsenic 9070 74.9 77 8900 10100 -220 1390 13 mg/kg

MSD

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10450017

QC Batch: 567865 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004

SAMPLE DUPLICATE: 3081947

10449975001 Dup Max Parameter Units Result Result **RPD** RPD Qualifiers 6.7 % Percent Moisture 6.4 4 30

SAMPLE DUPLICATE: 3081948

Date: 10/10/2018 03:58 PM

		10450072002	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	26.8	28.1	5	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10450017

QC Batch: 567405 Analysis Method: EPA 9045D
QC Batch Method: EPA 9045D Analysis Description: 9045D pH

Associated Lab Samples: 10450017001, 10450017002, 10450017003, 10450017004

LABORATORY CONTROL SAMPLE: 3079171

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Std. Units pH at 25 Degrees C 5 5.0 100 98-102

SAMPLE DUPLICATE: 3079172

10450284001 Dup Max RPD RPD Parameter Units Result Qualifiers Result pH at 25 Degrees C Std. Units 11.4 11.4 1 3

SAMPLE DUPLICATE: 3079173

Date: 10/10/2018 03:58 PM

10450284002 Dup Max Result RPD RPD Qualifiers Parameter Units Result 7.8 pH at 25 Degrees C Std. Units 7.8 1 3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 476.03 PTC Pace Project No.: 10450017

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

Date: 10/10/2018 03:58 PM

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 476.03 PTC Pace Project No.: 10450017

Date: 10/10/2018 03:58 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10450017001	PTC-102 FIRST	EPA 3010	567473	EPA 6010D	567779
10450017002	PTC-102 UPPER	EPA 3010	567473	EPA 6010D	567779
10450017003	PTC-103 FIRST	EPA 3010	567473	EPA 6010D	567779
10450017004	PTC-103 UPPER	EPA 3010	567473	EPA 6010D	567779
10450017001	PTC-102 FIRST	EPA 3050	567077	EPA 6010D	567524
10450017002	PTC-102 UPPER	EPA 3050	567077	EPA 6010D	567524
10450017003	PTC-103 FIRST	EPA 3050	567077	EPA 6010D	567524
10450017004	PTC-103 UPPER	EPA 3050	567077	EPA 6010D	567524
10450017001	PTC-102 FIRST	ASTM D2974	567865		
10450017002	PTC-102 UPPER	ASTM D2974	567865		
10450017003	PTC-103 FIRST	ASTM D2974	567865		
10450017004	PTC-103 UPPER	ASTM D2974	567865		
10450017001	PTC-102 FIRST	EPA 9045D	567405		
10450017002	PTC-102 UPPER	EPA 9045D	567405		
10450017003	PTC-103 FIRST	EPA 9045D	567405		
10450017004	PTC-103 UPPER	EPA 9045D	567405		

ō Page

MO#:10450017

FECH FECH

-REE TON

Branch/Location: Company Name:

(Please Print Clearly,

N: 612-607-1700 WI: 920-469-2436

PPER MIDWEST REGION

Profile # Present / Mot Present Cooler Custody Sea Intact / Not Intact
6.60 66/14/06
ORIGINAL eceipt Temp = (9, 6 Sample Receipt pH PACE Project No. OK / Adjusted LAB COMMENTS (Lab Use Only) 200 200 803 430 ξ 10/03/18 Date/Time: Invoice To Company: Invoice To Contact: Invoice To Address: Mail To Company: Invoice To Phone: Date/Time: Mail To Address: Date/Time Date/Time: Mail To Contact: COMMENTS Quote #: CLIENT Preservation Codes

B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanoi G=NaOH Repeived By: Received By: Received By: Received By: **CHAIN OF CUSTODY** J=Other I=Sodium Thiosulfate Hq Date/Time: Date/Time: Date/Time: H≂Sodium Bisulfate Solution PRESERVATION (CODE)* MATRIX ر DW = Drinking Water
GW = Ground Water
SW = Surface Water
WW = Waste Water
WP = Wipe 7 FILTERED? (YES/NO) **Matrix Codes** 333 35 Relinquished By: 34 telinquished By: Relinquished By: |= Sludge COLLECTION _ گ Regulatory Program: A = Air B = Biota C ≈ Charcoal O = Oil S = Soil DATE 5 _ 5 FREETON Transmit Prelim Rush Results by (complete what you want). Rush Turnaround Time Requested - Prelims 315 636 0166 UPPER (Rush TAT subject to approval/surcharge) (billable)
(billable)
(continueded on continued on contin PTC-102 UPPER ASH INCHON On your sample 元記さ 几万公司 **CLIENT FIELD ID** 476,03 MS/MSD 476.03 special pricing and release of liability Samples on HOLD are subject to 201-214 2 アドハーにの3 アフィラジ ズス Date Needed Data Package Options EPA Level IV EPA Level III Sampled By (Sign): Sampled By (Print): Project Contact: Project Number: Project Name: Project State: PACE LAB# Telephone: Phone: :mail #1: Email #2: Page 13 of 14

C019a(27Jun2006)

Pace Analytical*

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.23 Document Revised: 02May2018 Page 1 of 2

Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name:			Proj	ect #:	[110	4.40	4500		-
	FREE FLOW T	EcH				MU	<u>#:10</u>	<u>4500</u>	17	
Courier:	⊠ Fed Ex □∪		PS [Client		PM: (e: 10/10	/10
Commercial	☐Pace ☐S	peeDee 🔲 Ot		cnent		CLIEN	iT: FreeFl	ouTech	s. 10/10	7 10
Tracking Number:	C-1	6071				1		ow recm		
Custody Seal on Co	oler/Box Present? __Ye	es DiNo	Seals	Intact?	∐Ye	s Mo	Optional:	Proj. Due Da	ate: Proj	Name:
Packing Material:	☐Bubble Wrap ☐Bi	ubble Bags 🔲	None (☑0t her:	6)a				
Thermometer V	G87A9170600254 G87A9155100842		Type of Ice		7/-	□Blue	—— ■None [Temp Blank? □Dry □N		₩ 0
NC, NM, NY, OK, OR, SO			L, AR, CA,	FL, GA, ID), <u>LA</u> . M	d Initials of 1S, Did	logical Tissue I Person Exami	Frozen? []\ning Contents:	SOURCe (inters	/0/03/
Chain of Custody Prese								OMMENTS:		
Chain of Custody Filled		₩	es 🔲 N	0	1					
Chain of Custody Reling			es 🔲 N	0	2.					
_		\ X	es 🔲 No		3.					-
Sampler Name and/or		\Z +	es 🔲 No		4.					
Samples Arrived within		A v	es 🔲 No)	5.					
Short Hold Time Analys			s S Klo)	6.					
Rush Turn Around Time	Requested?		s (SANO		7.		*		<u>_</u>	
Sufficient Volume?		I			8.					
Correct Containers Used		₩	s 🔲 No		9.	 				
-Pace Containers Use	d?		.—		-					
Containers Intact?		V Z]Ye			10.	-				<u> </u>
Filtered Volume Receive	d for Dissolved Tests?			9 M/A	 	Al				
tne COC?	available to reconcile the sa Matrix:	mples to Yes		<u> YANIN</u> A	11.	Note if sec	liment is visible	in the dissolved	d container	RS
All containers needing ac checked?	id/base preservation have b	een	· · · · · ·		 					
All containers needing pr	eservation are found to be i	∏Yes n	□No	₹ N/A	13. Sami		HNO₃ ∏H₂	SO ₄ Na		ve for Res. ine? Y N
compliance with EPA reco	ommendation? OH >9 Sulfide, NaOH>12 Cya			,	Jann	uic # .				
Exceptions: VOA, Coliforn	1. TOC/DOC Oil and Grosco	nide) []Yes	□No	Æ (N/A						
DRO/8015 (water) and Di		Yes	No	Z N/A		í when vieted:		Lot # of added		
Headspace in VOA Vials (>6mm)?		□No	⊠ N/A	14.		 -	oreservative:		
Trip Blank Present? Trip Blank Custody Seals P		☐Yes	□No	ØN/A	15.					
Pace Trip Blank Lot # (if pu	,	∐Yes	□No	⊉ N/A						
										
Person Contacted:	FICATION/RESOLUTION						Field Dat	a Required?		
-					Date,	/Time:		a riequireus	∐Yes ∏N	VO
Comments/Resolution:										
Drainet 84	an David									
Project Manag Note: Whenever there is a di	er Keview:					Date:	10/3/18	-		
iold, incorrect preservative,	screpancy affecting North Car out of temp, incorrect contain	olina fomoliarice sa ers).	mples, a co	py of this f	form wi	ill be sent to	the North Carolir	na DEHNR Certif	ication Office	lie out of
		•					LAB	tud e	34: EF	DV





November 01, 2018

Cris Proctor Free Flow Technologies 4920 Forest Hills Rd Loves Park, IL 61111

RE: Project: 476.03 PTC

Pace Project No.: 10452645

Dear Cris Proctor:

Enclosed are the analytical results for sample(s) received by the laboratory on October 23, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jared Dickinson jared.dickinson@pacelabs.com (612)607-1700 Project Manager

Enclosures







CERTIFICATIONS

Project: 476.03 PTC Pace Project No.: 10452645

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01 Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064 Connecticut Certification #: PH-0256

Alaska DW Certification #: MN00064

EPA Region 8+Wyoming DW Certification #: via MN 027-

053-137

Florida Certification #: E87605 Georgia Certification #: 959

Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086

Maine Certification #: MN00064 Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Louisiana DW Certification #: MN00064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647

North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101 Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001
Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486

West Virginia DW Certification #: 9952 C West Virginia DEP Certification #: 382 Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01





SAMPLE SUMMARY

Project: 476.03 PTC Pace Project No.: 10452645

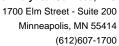
Lab ID	Sample ID	Matrix	Date Collected	Date Received
10452645001	PTC 102 FIRST + 3%	Solid	10/22/18 00:00	10/23/18 06:55
10452645002	PTC 102 FIRST + 6%	Solid	10/22/18 00:00	10/23/18 06:55
10452645003	PTC 102 UPPER + 3%	Solid	10/22/18 00:00	10/23/18 06:55
10452645004	PTC 102 UPPER + 6%	Solid	10/22/18 00:00	10/23/18 06:55
10452645005	PTC 103 FIRST + 3%	Solid	10/22/18 00:00	10/23/18 06:55
10452645006	PTC 103 FIRST + 6%	Solid	10/22/18 00:00	10/23/18 06:55
10452645007	PTC 103 UPPER + 3%	Solid	10/22/18 00:00	10/23/18 06:55
10452645008	PTC 103 UPPER + 6%	Solid	10/22/18 00:00	10/23/18 06:55



SAMPLE ANALYTE COUNT

Project: 476.03 PTC Pace Project No.: 10452645

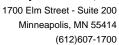
ab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
0452645001	PTC 102 FIRST + 3%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645002	PTC 102 FIRST + 6%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645003	PTC 102 UPPER + 3%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645004	PTC 102 UPPER + 6%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645005	PTC 103 FIRST + 3%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645006	PTC 103 FIRST + 6%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AJS	1	PASI-M
0452645007	PTC 103 UPPER + 3%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
0452645008	PTC 103 UPPER + 6%	EPA 6010D	DM	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 9045D	AR3	1	PASI-M





Project: 476.03 PTC Pace Project No.: 10452645

Sample: PTC 102 FIRST + 3%	Lab ID: 104		Collected: 10/22/1				Matrix: Solid	
Results reported on a "dry weight" I	basis and are ad	iusted for per	rcent moisture, sa	mple s	size and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	•		DD Preparation Me 1311; 10/25/18 12			ıl pH: 1.82		
Arsenic	49.8	mg/L	0.10	1	10/25/18 13:41	10/26/18 09:53	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	nod: ASTM D2	2974					
Percent Moisture	35.8	%	0.10	1		10/25/18 12:54		
9045D pH	Analytical Met	nod: EPA 904	5D					
pH at 25 Degrees C	8.9	Std. Units	0.10	1		10/25/18 12:22		





Project: 476.03 PTC
Pace Project No.: 10452645

Sample: PTC 102 FIRST + 6%	Lab ID: 104	52645002	Collected: 10/22/	18 00:00	Received: 10	D/23/18 06:55 N	/latrix: Solid	
Results reported on a "dry weight"	basis and are ad	justed for pe	rcent moisture, sa	ample s	ize and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	•		0D Preparation Mo			al pH: 1.98		
Arsenic	25.7	mg/L	0.10	1	10/25/18 13:41	10/26/18 09:54	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	29.7	%	0.10	1		10/25/18 12:55		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	9.7	Std. Units	0.10	1		10/25/18 12:23		





Project: 476.03 PTC Pace Project No.: 10452645

Sample: PTC 102 UPPER + 3%	Lab ID: 104	52645003	Collected: 10/22/1	18 00:0	0 Received: 10	0/23/18 06:55 N	Matrix: Solid	
Results reported on a "dry weight"	basis and are ad	justed for per	rcent moisture, sa	mple s	size and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	•		OD Preparation Me . 1311; 10/25/18 12			al pH: 2		
Arsenic	128	mg/L	0.50	5	10/25/18 13:41	10/26/18 10:20	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	21.9	%	0.10	1		10/25/18 12:55		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	9.2	Std. Units	0.10	1		10/25/18 12:24		





Project: 476.03 PTC Pace Project No.: 10452645

Sample: PTC 102 UPPER + 6%	Lab ID: 104	52645004	Collected: 10/22/1	18 00:0	0 Received: 10	0/23/18 06:55 N	Matrix: Solid	
Results reported on a "dry weight"	basis and are ad	justed for per	rcent moisture, sa	mple s	size and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	•		OD Preparation Me . 1311; 10/25/18 12			al pH: 1.78		
Arsenic	142	mg/L	0.50	5	10/25/18 13:41	10/26/18 10:21	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	18.3	%	0.10	1		10/25/18 12:55		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	8.6	Std. Units	0.10	1		10/25/18 12:25		

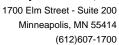




Project: 476.03 PTC Pace Project No.: 10452645

Date: 11/01/2018 05:30 PM

Sample: PTC 103 FIRST + 3%	Lab ID: 104		Collected: 10/22/1				Matrix: Solid	
Results reported on a "dry weight" I	basis and are adj	usted for per	rcent moisture, sa	mple s	size and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	,		OD Preparation Me 1311; 10/25/18 12			ıl pH: 2.05		
Arsenic	42.9	mg/L	0.10	1	10/25/18 13:41	10/26/18 09:59	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Meth	nod: ASTM D2	2974					
Percent Moisture	42.1	%	0.10	1		10/25/18 12:55		
9045D pH	Analytical Meth	nod: EPA 904	5D					
pH at 25 Degrees C	9.0	Std. Units	0.10	1		10/25/18 12:26		





Project: 476.03 PTC Pace Project No.: 10452645

Sample: PTC 103 FIRST + 6%	Lab ID: 104	52645006	Collected: 10/22/1	8 00:00	Received: 10)/23/18 06:55 N	/latrix: Solid	
Results reported on a "dry weight" l	basis and are ad	justed for per	rcent moisture, sa	mple s	ize and any dilu	tions.		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	•		0D Preparation Me 1311; 10/25/18 12			ıl pH: 1.94		
Arsenic	48.1	mg/L	0.10	1	10/25/18 13:41	10/26/18 10:01	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	55.8	%	0.10	1		10/25/18 12:55		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	9.0	Std. Units	0.10	1		10/25/18 12:27		

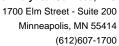




Project: 476.03 PTC
Pace Project No.: 10452645

Date: 11/01/2018 05:30 PM

Sample: PTC 103 UPPER + 3% Results reported on a "dry weight".	Lab ID: 104		Collected: 10/22/1				Matrix: Solid	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	,		DD Preparation Me 1311; 10/25/18 12			l pH: 1.76		
Arsenic	0.19	mg/L	0.10	1	10/25/18 13:41	10/26/18 10:03	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	17.9	%	0.10	1		10/25/18 12:56		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	10.2	Std. Units	0.10	1		10/30/18 10:46		





Project: 476.03 PTC Pace Project No.: 10452645

Sample: PTC 103 UPPER + 6%	Lab ID: 104		Collected: 10/22/				Matrix: Solid	
Results reported on a "dry weight"	·	•	•	•			0.0	
Parameters — — — — — — — — — — — — — — — — — — —	Results —	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D MET ICP, TCLP	,		OD Preparation Me					
	Leachate Met	nod/Date: EPA	. 1311; 10/25/18 12	2:07 Ini	tial pH: 6.85; Fina	l pH: 1.87		
Arsenic	0.21	mg/L	0.10	1	10/25/18 13:41	10/26/18 10:04	7440-38-2	
Dry Weight / %M by ASTM D2974	Analytical Met	hod: ASTM D2	2974					
Percent Moisture	17.8	%	0.10	1		10/25/18 12:56		
9045D pH	Analytical Met	hod: EPA 904	5D					
pH at 25 Degrees C	11.2	Std. Units	0.10	1		10/30/18 10:47		



Project:

Arsenic

Arsenic

Arsenic

Date: 11/01/2018 05:30 PM

QUALITY CONTROL DATA

Pace Project No.: 10452645

QC Batch: 571517 Analysis Method: EPA 6010D

QC Batch Method: EPA 3010 Analysis Description: 6010D TCLP

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006, 10452645007,

10452645008

476.03 PTC

METHOD BLANK: 3100576 Matrix: Water

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006, 10452645007,

10452645008

 Parameter
 Units
 Blank Reporting Result
 Limit
 Analyzed
 Qualifiers

 mg/L
 ND
 0.10
 10/26/18 09:27

METHOD BLANK: 3099198 Matrix: Water

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006, 10452645007,

10452645008

Parameter Units Blank Reporting
Result Limit Analyzed Qualifiers

mg/L ND 0.10 10/26/18 10:23

METHOD BLANK: 3099199 Matrix: Water

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006, 10452645007,

10452645008

 Parameter
 Units
 Blank Reporting Result
 Limit
 Analyzed
 Qualifiers

 mg/L
 ND
 0.10
 10/26/18 10:25

LABORATORY CONTROL SAMPLE: 3100577

LCS LCS Spike % Rec Parameter Units Conc. Result % Rec Limits Qualifiers 5 5.0 100 80-120 Arsenic mg/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3100578 3100579

MS MSD 10450602004 MS MSD MS Spike Spike MSD % Rec Max Units % Rec RPD Parameter Result Conc. Conc. Result Result % Rec Limits RPD Qual 5 5 Arsenic mg/L ND 5.1 5.1 101 101 75-125 0 30

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10452645

QC Batch: 571415 Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006, 10452645007,

10452645008

SAMPLE DUPLICATE: 3100195

 Percent Moisture
 Units
 10452324001 Result
 Dup Result
 Max Result
 RPD
 Qualifiers

 14.6
 14.7
 1
 30

SAMPLE DUPLICATE: 3100439

Date: 11/01/2018 05:30 PM

		10452645001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	35.8	35.6	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10452645

QC Batch: 571171 Analysis Method: EPA 9045D
QC Batch Method: EPA 9045D Analysis Description: 9045D pH

Associated Lab Samples: 10452645001, 10452645002, 10452645003, 10452645004, 10452645005, 10452645006

LABORATORY CONTROL SAMPLE: 3098911

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Std. Units pH at 25 Degrees C 5 5.0 101 98-102

SAMPLE DUPLICATE: 3098912

10452623001 Dup Max RPD RPD Units Qualifiers Parameter Result Result pH at 25 Degrees C Std. Units 12.0 12.0 0 3

SAMPLE DUPLICATE: 3098913

Date: 11/01/2018 05:30 PM

10452623002 Dup Max Result RPD RPD Qualifiers Parameter Units Result 8.3 pH at 25 Degrees C Std. Units 8.2 1 3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



1700 Elm Street - Suite 200 Minneapolis, MN 55414 (612)607-1700

QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10452645

QC Batch: 571987 Analysis Method: EPA 9045D
QC Batch Method: EPA 9045D Analysis Description: 9045D pH

Associated Lab Samples: 10452645007, 10452645008

LABORATORY CONTROL SAMPLE: 3103744

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Std. Units pH at 25 Degrees C 5 5.1 101 98-102

SAMPLE DUPLICATE: 3103745

10452607002 Dup Max RPD RPD Parameter Units Result Qualifiers Result pH at 25 Degrees C Std. Units 7.2 7.2 1 3

SAMPLE DUPLICATE: 3103746

Date: 11/01/2018 05:30 PM

10453276001 Dup Max Result RPD RPD Qualifiers Parameter Units Result 11.9 pH at 25 Degrees C Std. Units 12.0 0 3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 476.03 PTC Pace Project No.: 10452645

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 11/01/2018 05:30 PM

PASI-M Pace Analytical Services - Minneapolis



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 476.03 PTC Pace Project No.: 10452645

Date: 11/01/2018 05:30 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10452645001	PTC 102 FIRST + 3%	EPA 3010	<u>571517</u>	EPA 6010D	571673
10452645002	PTC 102 FIRST + 6%	EPA 3010	571517	EPA 6010D	571673
10452645003	PTC 102 UPPER + 3%	EPA 3010	571517	EPA 6010D	571673
10452645004	PTC 102 UPPER + 6%	EPA 3010	571517	EPA 6010D	571673
10452645005	PTC 103 FIRST + 3%	EPA 3010	571517	EPA 6010D	571673
10452645006	PTC 103 FIRST + 6%	EPA 3010	571517	EPA 6010D	571673
10452645007	PTC 103 UPPER + 3%	EPA 3010	571517	EPA 6010D	571673
10452645008	PTC 103 UPPER + 6%	EPA 3010	571517	EPA 6010D	571673
10452645001	PTC 102 FIRST + 3%	ASTM D2974	571415		
10452645002	PTC 102 FIRST + 6%	ASTM D2974	571415		
10452645003	PTC 102 UPPER + 3%	ASTM D2974	571415		
10452645004	PTC 102 UPPER + 6%	ASTM D2974	571415		
10452645005	PTC 103 FIRST + 3%	ASTM D2974	571415		
10452645006	PTC 103 FIRST + 6%	ASTM D2974	571415		
10452645007	PTC 103 UPPER + 3%	ASTM D2974	571415		
10452645008	PTC 103 UPPER + 6%	ASTM D2974	571415		
10452645001	PTC 102 FIRST + 3%	EPA 9045D	571171		
10452645002	PTC 102 FIRST + 6%	EPA 9045D	571171		
10452645003	PTC 102 UPPER + 3%	EPA 9045D	571171		
10452645004	PTC 102 UPPER + 6%	EPA 9045D	571171		
10452645005	PTC 103 FIRST + 3%	EPA 9045D	571171		
10452645006	PTC 103 FIRST + 6%	EPA 9045D	571171		
10452645007	PTC 103 UPPER + 3%	EPA 9045D	571987		
10452645008	PTC 103 UPPER + 6%	EPA 9045D	571987		

Profile # Present / Not Present Cooler Custody Sea Intact / Not Intact
rsion 6.0 06/14/06
ORIGINAL Sample Receipt pH PACE Project No. OK / Adjusted deceipt Temp = 30.1LAB COMMENTS WO#: 10452645 (Lab Use Only) P 25 200 なる 208 aou ech 500 Jeeg Invoice To Company: Invoice To Address: Mail To Company: Invoice To Contact: Mail To Address: Mail To Contact: Invoice To Phone: COMMENTS Date/Time: Date/Time: Date/Time: CLIENT UPPER MIDWEST RE MN: 612-607-1700 V Received By: B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH Received By: Received By: Received By: CHAIN OF CUSTODY J=Other OON 81/22/01 なしのよ メ × 外 Y X × =Sodium Thiosulfate ィ メ く K Pace Analytical ® Date/Time: Date/Time: Date/Time: Ý H=Sodium Bisulfate Solution \mathcal{Z} beiseupeā sesylanā PRESERVATION (CODE)* MATRIX DW = Drinking Water GW = Ground Water SW = Surface Water WW = Waste Water FILTERED? (YES/NO) Matrix Codes alinquished By: elinquished By: Relinquished By: Refinquished By: sipry, DATE が記 Regulatory Program: C = Charcoal O = Oil S = Soil Si = Studge Societ 2 بحر 5 5 5 5 5 GELS FROGREDE PTC 10 C FIRST + 3% PTC 102 UPPETC+6% PTCLOS FIRST+3% 815 436 ONOV PTC 102 FURST +6% FIC WZ UPPETCH3% F1257+69 PTC 103 UPPER+3% PTC 103 UPPER+6% Transmit Prelim Rush Results by (complete what you want) Jor's Jor's Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge) NOT needed on your sample On your sample 305 (Please Print Clearly) CLIENT FIELD ID MS/MSD 4776,03 476,03 ノクからよう special pricing and release of liability Samples on HOLD are subject to FREE 2 5 Date Needed: Data Package Options Pro 183 EPA Level IV EPA Level III Sampled By (Sign): Sampled By (Print): Company Name: Branch/Location: Project Number: Project Contact: Project Name: Project State: PACE LAB# Phone: elephone: Email #1: mail #2:

C019a(27Jun2006)

Pace Analytical*

Project Manager Review:

Document Name:

Sample Condition Upon Receipt Form

Document No.: F-MN-L-213-rev.23 Document Revised: 02May2018

Page 1 of 2

Issuing Authority:

Pace Minnesota Quality Office Sample Condition Client Name: Project # WO#:10452645 **Upon Receipt** Courier: Due Date: 10/30/18 Fed Ex USPS Client CLIENT: FreeFlowTech Commercial Pace SpeeDee Other: Tracking Number: Q 130 2003 6049 Custody Seal on Cooler/Box Present? ☐Yes . _ No Optional: Proj. Due Date: Seals Intact? ☐Yes Proj. Name: ₽No Packing Material: Bubble Wrap Bubble Bags None Other: Temp Blank? Yes **⊿**₩0 Thermometer G87A9170600254 G87A9155100842 Type of ice: □Wet Used: Blue Mone Dry Melted Cooler Temp Read (°C): | 9.9 Cooler Temp Corrected (°C): Biological Tissue Frozen? Yes Temp should be above freezing to 6°C Correction Factor: 10.2 Date and Initials of Person Examining Contents: USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, Did samples originate from a foreign source (internationally, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Yes -DNo including Hawaii and Puerto Rico)? If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork. Yes -₽NO COMMENTS: Chain of Custody Present? Yes □No 1. Chain of Custody Filled Out? ✓ Yes □No 2. Chain of Custody Relinquished? Yes □No 3. Sampler Name and/or Signature on COC? No 4. □N/A Samples Arrived within Hold Time? ₽₹es □No 5. Short Hold Time Analysis (<72 hr)? ₽Ño Yes 6. **Rush Turn Around Time Requested?** □Yes ₽Ño 7. Sufficient Volume? **Z**Yes ■ □No 8. Correct Containers Used? **Z**Yes □No 9, -Pace Containers Used? No ☐Yes Containers Intact? Yes □No 10. Filtered Volume Received for Dissolved Tests? ∐Yes □No Note if sediment is visible in the dissolved container Is sufficient information available to reconcile the samples to 1) NO Thut on coc as sample LABELS. Yes □No Matrix: All containers needing acid/base preservation have been Positive for Res. checked? 13. ☐HNO₃ ∏H₂SO₄ □NaOH Yes □No **☑**N/A Chlorine? Y N All containers needing preservation are found to be in Sample # compliance with EPA recommendation? (HNO₃, H₂SO₄, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide) □Yes N/A □No Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, Initial when Lot # of added DRO/8015 (water) and Dioxin/PFAS Yes □No **Z**N/A completed: preservative: Headspace in VOA Vials (>6mm)? Yes □No 14. Trip Blank Present? Yes □No **™**N/A 15. Trip Blank Custody Seals Present? Yes □No E/N/A Pace Trip Blank Lot # (if purchased): CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No Person Contacted: Date/Time: Comments/Resolution:

Note: Whenever there is a discrepancy affecting North Carolina committee samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

•





November 19, 2018

Cris Proctor Free Flow Technologies 4920 Forest Hills Rd Loves Park, IL 61111

RE: Project: 476.03 PTC

Pace Project No.: 10455177

Dear Cris Proctor:

Enclosed are the analytical results for sample(s) received by the laboratory on November 10, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

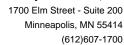
If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jared Dickinson jared.dickinson@pacelabs.com (612)607-1700 Project Manager

Enclosures







CERTIFICATIONS

Project: 476.03 PTC
Pace Project No.: 10455177

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01 Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Arizona Certification #: AZ0014 Arkansas DW Certification #: MN00064 Arkansas WW Certification #: 88-0680 California Certification #: 2929 CNMI Saipan Certification #: MP0003 Colorado Certification #: MN00064

Alaska DW Certification #: MN00064

Connecticut Certification #: PH-0256 EPA Region 8+Wyoming DW Certification #: via MN 027-

053-137

Florida Certification #: E87605 Georgia Certification #: 959 Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064 Maine Certification #: MN00064 Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 1240
Mississippi Certification #: MN00064
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081
New Jersey Certification #: MN002
New York Certification #: 11647

North Carolina DW Certification #: 27700 North Carolina WW Certification #: 530 North Dakota Certification #: R-036 Ohio DW Certification #: 41244 Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507
Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia Certification #: 460163
Washington Certification #: C486
West Virginia DW Certification #: 9952 C
West Virginia DEP Certification #: 382
Wisconsin Certification #: 999407970

Wyoming UST Certification #: via A2LA 2926.01

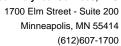




SAMPLE SUMMARY

Project: 476.03 PTC Pace Project No.: 10455177

Lab ID	Sample ID	Matrix	Date Collected	Date Received	
10455177001	PTC102 FIRST+7%	Solid	11/09/18 00:00	11/10/18 10:00	
10455177002	PTC103 FIRST+7%	Solid	11/09/18 00:00	11/10/18 10:00	
10455177003	PTC102 UPPER+7%	Solid	11/09/18 00:00	11/10/18 10:00	



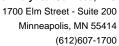


SAMPLE ANALYTE COUNT

Project: 476.03 PTC Pace Project No.: 10455177

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10455177001	PTC102 FIRST+7%	EPA 6010D	DM	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
10455177002	PTC103 FIRST+7%	EPA 6010D	DM	1	PASI-M
		EPA 9045D	AR3	1	PASI-M
10455177003	PTC102 UPPER+7%	EPA 6010D	DM	1	PASI-M
		EPA 9045D	AR3	1	PASI-M

11/13/18 16:31





ANALYTICAL RESULTS

Project: 476.03 PTC Pace Project No.: 10455177

pH at 25 Degrees C

Date: 11/19/2018 04:48 PM

 Sample:
 PTC102 FIRST+7%
 Lab ID:
 10455177001
 Collected:
 11/09/18 00:00
 Received:
 11/10/18 10:00
 Matrix:
 Solid

9.3

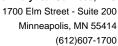
Std. Units

Results reported on a "wet-weight" basis **Parameters** Results Units Report Limit DF Prepared Analyzed CAS No. Qual Analytical Method: EPA 6010D Preparation Method: EPA 3010 6010D MET ICP, TCLP Leachate Method/Date: EPA 1311; 11/15/18 10:46 Initial pH: 9.98; Final pH: 2.57 24.8 0.50 11/15/18 12:39 11/16/18 10:28 7440-38-2 Arsenic 9045D pH Analytical Method: EPA 9045D

0.10

1

11/13/18 16:32





ANALYTICAL RESULTS

Project: 476.03 PTC Pace Project No.: 10455177

pH at 25 Degrees C

Date: 11/19/2018 04:48 PM

Sample: PTC103 FIRST+7% Lab ID: 10455177002 Collected: 11/09/18 00:00 Received: 11/10/18 10:00 Matrix: Solid

9.5

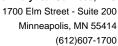
Std. Units

Results reported on a "wet-weight" basis **Parameters** Results Units Report Limit DF Prepared Analyzed CAS No. Qual Analytical Method: EPA 6010D Preparation Method: EPA 3010 6010D MET ICP, TCLP Leachate Method/Date: EPA 1311; 11/15/18 10:46 Initial pH: 10.16; Final pH: 2.36 10.5 0.50 11/15/18 12:39 11/16/18 10:29 7440-38-2 Arsenic 9045D pH Analytical Method: EPA 9045D

0.10

1

11/19/18 15:02





ANALYTICAL RESULTS

Project: 476.03 PTC Pace Project No.: 10455177

pH at 25 Degrees C

Date: 11/19/2018 04:48 PM

Sample: PTC102 UPPER+7% Lab ID: 10455177003 Collected: 11/09/18 00:00 Received: 11/10/18 10:00 Matrix: Solid

9.6

Std. Units

Results reported on a "wet-weight" basis **Parameters** Results Units Report Limit DF Prepared Analyzed CAS No. Qual Analytical Method: EPA 6010D Preparation Method: EPA 3010 6010D MET ICP, TCLP Leachate Method/Date: EPA 1311; 11/15/18 10:46 Initial pH: 9.68; Final pH: 2.43 137 2.5 11/15/18 12:39 11/16/18 10:47 7440-38-2 Arsenic 9045D pH Analytical Method: EPA 9045D

0.10

1



QUALITY CONTROL DATA

 Project:
 476.03 PTC

 Pace Project No.:
 10455177

QC Batch: 575776 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D TCLP

Associated Lab Samples: 10455177001, 10455177002, 10455177003

METHOD BLANK: 3124443 Matrix: Water

Associated Lab Samples: 10455177001, 10455177002, 10455177003

Blank Reporting

 Parameter
 Units
 Result
 Limit
 Analyzed
 Qualifiers

 Arsenic
 mg/L
 ND
 0.50
 11/16/18 10:03

METHOD BLANK: 3123448 Matrix: Water

Associated Lab Samples: 10455177001, 10455177002, 10455177003

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Arsenic mg/L ND 0.50 11/16/18 10:48

METHOD BLANK: 3123449 Matrix: Water

Associated Lab Samples: 10455177001, 10455177002, 10455177003

Blank Reporting
Parameter Units Result Limit

 Parameter
 Units
 Result
 Limit
 Analyzed
 Qualifiers

 Arsenic
 mg/L
 ND
 0.50
 11/16/18 10:50

METHOD BLANK: 3124435 Matrix: Water

Associated Lab Samples: 10455177001, 10455177002, 10455177003

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Arsenic mg/L ND 0.50 11/16/18 10:52

LABORATORY CONTROL SAMPLE: 3124444

Date: 11/19/2018 04:48 PM

Parameter Units Spike LCS LCS % Rec Limits Qualifiers

Areania

Arsenic mg/L 5 4.6 93 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3124445 3124446

MS MSD 10454348001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits **RPD** RPD Qual Arsenic mg/L ND 5 5 5.0 4.8 99 96 75-125 3 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10455177

QC Batch: 575145
QC Batch Method: EPA 9045D

Analysis Method: EPA 9045D Analysis Description: 9045D pH

Associated Lab Samples: 10455177001, 10455177002

LABORATORY CONTROL SAMPLE: 3121916

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Std. Units pH at 25 Degrees C 5 5.0 99 98-102

SAMPLE DUPLICATE: 3121917

10454916001 Dup Max RPD RPD Parameter Units Result Result Qualifiers pH at 25 Degrees C Std. Units 10.2 10.3 1 3

SAMPLE DUPLICATE: 3121918

Date: 11/19/2018 04:48 PM

10454916002 Dup Max Result RPD RPD Qualifiers Parameter Units Result 9.0 pH at 25 Degrees C Std. Units 9.0 0 3

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: 476.03 PTC Pace Project No.: 10455177

QC Batch: 576167 QC Batch Method: EPA 9045D

Date: 11/19/2018 04:48 PM

Associated Lab Samples: 10455177003 Analysis Method: EPA 9045D Analysis Description:

9045D pH

LABORATORY CONTROL SAMPLE: 3126356

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Std. Units pH at 25 Degrees C 5 5.0 100 98-102

SAMPLE DUPLICATE: 3126357 10454510001 Dup Max RPD RPD Parameter Units Result Result Qualifiers pH at 25 Degrees C Std. Units 11.6 11.6 0 3

SAMPLE DUPLICATE: 3126358 10455243001 Dup Max Result RPD RPD Qualifiers Parameter Units Result 12.4 pH at 25 Degrees C Std. Units 12.5 1 3 E

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 476.03 PTC Pace Project No.: 10455177

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

Date: 11/19/2018 04:48 PM

E Analyte concentration exceeded the calibration range. The reported result is estimated.





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 476.03 PTC Pace Project No.: 10455177

Date: 11/19/2018 04:48 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10455177001	PTC102 FIRST+7%	EPA 3010	575776	EPA 6010D	 575971
10455177002	PTC103 FIRST+7%	EPA 3010	575776	EPA 6010D	575971
10455177003	PTC102 UPPER+7%	EPA 3010	575776	EPA 6010D	575971
10455177001	PTC102 FIRST+7%	EPA 9045D	575145		
10455177002	PTC103 FIRST+7%	EPA 9045D	575145		
10455177003	PTC102 UPPER+7%	EPA 9045D	576167		

Intact / Not Intact special pricing and release of liability Present / Not Present Date/Time: :ve beviece By: Date/Time: Sejindnished By: Samples on HOLD are subject to Cooler Custody Seal XE. OK / Adjusted Date/Time: Seceived By: Date/Time: Seljudnispeq 8y: Telephone: Sample Receipt pH :S# lism3 Date/Time: seceived By: Date/Time: :ya bedaiupnile? :t# lism3 eceipt Temp = ᡆ᠕ Transmit Prelim Rush Results by (complete what you want): seceived By: Date/Time: 3elinquished By: Date Needed: (Rush TAT subject to approval/surcharge) Date/Time: PACE Project No. зесемер Ву: inquished By: Rush Turnaround Time Requested - Prelims 200 ρ_0 9,1+182/12801714 >JU) 3/2+1821/1201716 (Lab Use Only) COMMENTS CLIENT FIELD ID PACE LAB'# COLLECTION # alitor9 LAB COMMENTS CLIENT eqiw = qw your sample WW = Waste Water no bebeen TOM VI Ievel A93 SW = Surface Water invoice To Phone; GW = Ground Water (billable) III Ievel III DW = Drinking Water 타이션 = 원 On your sample N = Water JI∀ = ∀ (billable) Data Package Options Matrix Codes WS/WSD Program: Address: Sa · かアか :# Od Kegulatory combany: Sampled By (Sign): 11199401: #OM action. (CODE)* : Contact: Sampled By (Print): **b**ick PRESERVATION (VES/NO) N/X Project State: FILTERED? :ssənbbA oT lisM Project Name: J=Omo=n =Sodium Thiosulfate H=Sodium Bisulfate Solution B=HCF C=HSSO4 D=HINO3 E=DI Malet Mail To Company: Project Number: CHAIN OF CUSTODY न्याल ग्रम द्रार Mail To Contact: Phone: Quote #: 2125021 Project Contact: *ace Analytical Branch/Location: Company Name: 9642-694-026 :IW 0071-708-213 :MM Page **UPPER MIDWEST REGION**

(Please Print Clearly)

Pace Analytical

Document Revised: 310ct2018 Page 1 of 2 Sample Condition Upon Receipt Form

		F-MN-L-213-rev.24	.24	Issuing Authority: Pace Minnesota Quality Office
Sample Condition Client Name: Popul Receipt	ے۔ د	Pro	Project #:	JO#:10455177
Uurs	□ USPS	Client		PM: JDD Due Date: 11/19/18 CLIENT: FreeFlowTech
1 1 0		Seals Intact?	es l	Optional: Proj. Due Date: Proj. Name:
Packing Material: Bubble Wrap Bubble Bags	None	r le 🖂 Other:]	
A9170600254 A9155100842	ř]]]	□Wet □Blue	Though I was
Cooler Temp Read (°C): Temp should be above freezing to 6°C Conrection Factor: USDA Regulated Soil (N/A water comments)	rected (°C or:	8	Bi Date and Initials o	Ssue Frozen?
Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? If Yes to either question, fill out a Regulated Soil Charlick Transform.	itates: AL, /	AR, CA, FL, GA, I	\	ce (internati
		-cilectulist (L-l	///	iclude with SCUR/COC paperwork.
Chain of Custody Present?	Ž		-	COMMENTS:
Chain of Custody Filled Out?	Z Z S			
Chain of Custody Relinguished?	Ž,	N □	i m	
Sampler Name and/or Signature on COC?	Z	No □N/A	╂─	
Samples Arrived within Hold Time?	Z.]	╄	
Short Hold Time Analysis (<72 hr)?	Yes		. 9	
Rush Turn Around Time Requested?	, , , , ,	1	7	
Sufficient Volume?	2		; 0	
Correct Containers Used?	Š		j o	
-Pace Containers Used?		2 2	ni	
Containers Intact?	Z	o _N	10	
Filtered Volume Received for Dissolved Tests?	Yes	OND OND	11	Note if codiment is delible to the
Is sufficient information available to reconcile the samples to the COC? Matrix:	Áyes	Į	12.	carried is visible in the dissolved container
All containers needing acid/base preservation have been checked?			73	
All containers needing preservation are found to be in compliance with EPA recommendation?	, es	ONO DIN/A	Sample #	LINO3 LA2SO4 LINAOH CSIIVETO NES.
(HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Suffide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC Oil and Grease.	□yes	ONO BIN/A		
DRO/8015 (water) and Dioxin/PFAS	Yes	ON° DAYA	completed:	Lot # of added
Headspace in VOA Vials (>6mm)?	☐ Yes		[reservative:
Trip Blank Custody Seals Present?	, L		15.	
Pace Trip Blank Lot # (if purchased):	, Kes	□No [ZN/A		
CLIENT NOTIFICATION/RESOLUTION			_	Field Data Required? Nac No.
on monte (box)			Date/Time:	
continuents/ Resolution :				

Note: Whenever there is a discrepancy affecting North Carolibe compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of the North Carolina DEHNR Certification



February 22, 2019

Mr. Troy Bussey **PIONEER Technologies Corporation**5205 Corporate Ctr. Ct. SE, Ste. A
Olympia, WA 98503-5901

Subject: Bench Level Treatability Study Report for the Former Arkema Manufacturing Site, Tacoma, WA.

Mr. Bussey:

Ursus Remediation Testing & Technologies, LLC (Ursus) is pleased to provide Pioneer this bench level treatability study report for the Former Arkema Manufacturing Site.

BACKGROUND

Bench level treatability testing was performed on soils from the Former Arkema Manufacturing Site, Tacoma, WA. The purpose of the study was to treat soil for off-site non-hazardous waste disposal. The primary metal of concern is arsenic but the 8 RCRA metals, including arsenic, barium, chromium, cadmium, lead, mercury, selenium and silver were also monitored during the study.

Treatment of site soil with EnviroBlend® found stabilization alone was not effective in meeting arsenic disposal criteria (Appendix A). EnviroBlend® is a line of treatment chemistries. It does not conceal metal contamination via encapsulation or solidification; rather, it stabilizes metals of concern by regulating pH and forming insoluble compounds that will not leach into the environment.

The historical source of arsenic at the site was sodium arsenite, and it is suspected that a significant amount of arsenite was present in the samples submitted for this study. Arsenite (As(III)) is a reduced form of arsenic and is not readily treated by traditional stabilization. Arsenic in the form arsenate (As(V)) (oxidized form of arsenic) is readily treated by traditional stabilization.

Oxidizing arsenite to arsenate, combined with traditional stabilization amendments, was the approach in this phase of testing. The Eh pH diagram shown in Figure 1 illustrates various arsenic species. The objective was to generate conditions where arsenate dominate. As shown in the diagram, an Eh of > 0.2 and pH levels greater than neutral are conditions where arsenate will predominate. Therefore, oxidant dosages and buffer additions where formulated to achieve those conditions. To estimate the amount of oxidant necessary to

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oxidize arsenite to arsenate, a Total Oxidant Demand (TOD) study was performed (Appendix B).

OBJECTIVE

The objective of the study was to determine the following:

- 1. Determine the effectiveness of chemical oxidants to convert arsenite to more readily stabilized arsenate in site soil.
- 2. Treat soils with an oxidant and metal stabilization amendments to meet the Toxicity Characteristic Leaching Procedure (TCLP) non-hazardous disposal criteria.
- 3. Optimize amendment dosage for the different site soils.

SAMPLES

Four soil samples were received by Ursus. Samples received, descriptions, and comments are shown in Table 1.

Table 1. Samples Received for Testing

	Sample	Date	Sample	
Sample	Date	Received	Matrix	Sample Comments
PTC-102 Upper Aquifer	9/25/2018	9/27/2018	Soil	None
PTC-102 First Aquitard	9/25/2018	9/27/2018	Soil	None
PTC-103 Upper Aquifer	9/25/2018	9/27/2018	Soil	None
PTC-103 First Aquitard	9/25/2018	9/27/2018	Soil	None

MATERIALS AND METHODOLOGY

Materials

Sodium Persulfate – Na₂S₂O₈. Fisher reagent grade.

Potassium Permanganate – KMnO₄. JT Baker reagent grade.

EnviroBlend® HX – Provided by Premier Magnesia LLC.

EnviroBlend® CS – Provided by Premier Magnesia LLC.

Methodology

The 8 RCRA TCLP metals were analyzed during the study with arsenic as the primary metal of concern. The ORP and final pH of the TCLP leaching were also reported.

TCLP metal testing was performed using screening methodologies. The TCLP screening methodology employed uses the same guidelines as prescribed by EPA Method SW-846 1311, except the amount of sample is scaled down to one-tenth the prescribed sample weight and extraction solution volume. A scaled down TCLP was performed to maximize the number of treated samples prepared and minimize filtering time associated with the procedure.

Screening results are not intended for regulatory compliance.

RESULTS

- A semi-quantitative proof of concept testing was performed to examine the efficacy
 of treating the soils with a combination of oxidizers and metal stabilizers (data not
 shown). Testing found the combination was indeed effective in lowering TCLP
 arsenic concentrations. Testing also found potassium permanganate more effective
 than sodium persulfate in controlling soil pH and lowering TCLP arsenic
 concentrations. Therefore, potassium permanganate was used in subsequent testing.
- TOD data was used to estimate the amount of oxidant required to convert arsenite
 to arsenate. TOD testing found a lower demand than what was required in the
 TCLP testing; presumably the TCLP leaching solution (acetic acid/sodium
 hydroxide) is placing an oxidant demand on the oxidant that was not accounted for
 in the TOD study.
- All samples received for testing were greater than TCLP hazardous criterion for arsenic of 5.0 mg/L (Untreated results) (Table 2). All other RCRA metals did not exceed their respective TCLP limit in untreated tests.
- Numerous dosages of potassium permanganate (KMnO₄) and metals stabilizers (EnviroBlend® HX and EnviroBlend® CS) were tested with varying results. The two aquifer soil samples (PTC-102 Upper Aquifer and PTC-103 Upper Aquifer) required a minimum KMnO₄ dosage of 1% for effective treatment (Table 2). The aquitard samples (PTC-102 First Aquitard and PTC-103 First Aquitard) required a minimum KMnO₄ dosage of 7% for effective treatment. The higher oxidant demand in the aquitard samples was also observed in the TOD study. The aquitard samples were of a clay matrix while the aquifer samples were a granular soil. Therefore, it's not unexpected to have different oxidant requirements due to different soil matrices.
- A 3% EnviroBlend® HX and 5% EnviroBlend® CS showed the greatest treatment effectiveness for all samples tested. This blend provided the necessary metals stabilization and pH control to lower TCLP arsenic concentrations while minimizing leachability of other RCRA metals.

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Sample PTC-102 Upper Aquifer had TCLP mercury and/or selenium exceedances in some treated samples. As opposed to arsenic, where oxidized forms are more readily stabilized, selenium forms more stable compounds in a reduced form. Thus, in some situations, addition of too much oxidizer could mobilize selenium. Untreated mercury for sample PTC-102 Upper Aquifer was near the mercury TCLP criterion of 0.2 mg/L. No apparent mercury treatment was observed with various amendments and dosages. Some treated samples failed TCLP mercury, and some passed TCLP mercury, suggesting sample variability.

Sincerely,

Andrew blenzel

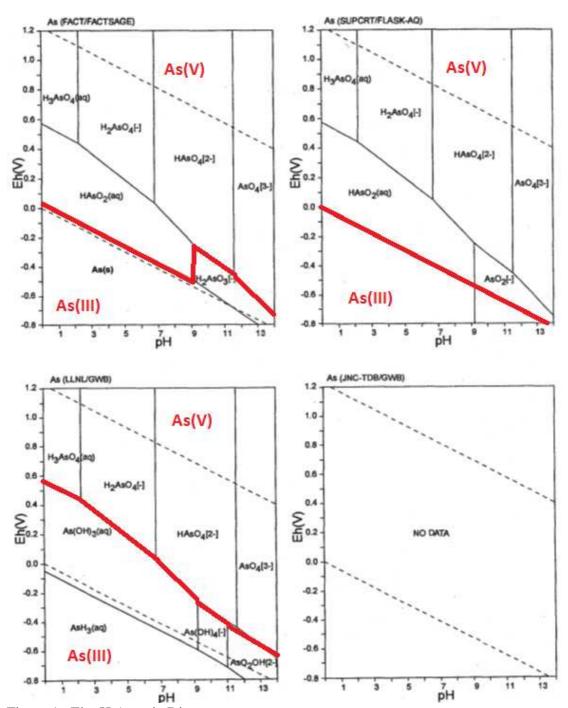


Figure 1. Eh pH Arsenic Diagram.

Table 2. TCLP Results

					TC	LP Leach	ning Results							
Sample	Amendmen	t® Dosage					s	creening Lea	aching Test Res	ults, mg/L				
Name	Chemical	Percentage wt/wt	Initial pH	Solution	Final pH	Eh (V)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TCLP Limit	-	-	-	-	•	-	5	100	1	5	5	0.2	1	5
	Untreated	-	1.56	TCLP 1	5.05	-	62.7	0.014	<0.024*	< 0.005	0.4	0.16	0.11	< 0.005
	KMnO ₄	5%												
	EnviroBlend® HX	5%	-	TCLP 1	9.45	0.65	0.46	< 0.001	0.28	0.066	<0.067	0.11	0.74	0.019
	EnviroBlend® CS	5%												
	KMnO ₄	3%												
	EnviroBlend® HX	5%	-	TCLP 1	8.34	0.41	0.54	<0.001	<0.024	0.043	<0.067	0.081	0.69	0.018
PTC-102 Upper Aquifer	EnviroBlend® CS	5%												
Aquilei	KMnO ₄	3%			5.07			0.008	0.33	0.037	0.093	0.54	0.49	0.017
	EnviroBlend® HX	3%	-	TCLP 1		0.75	1.63							
	EnviroBlend® CS	3%												
	KMnO ₄	2%												
	EnviroBlend® HX	5%	-	TCLP 1	8.90	0.41	0.54	< 0.001	<0.024	0.039	< 0.067	0.12	1.20	0.009
	EnviroBlend® CS	5%												

					TC	LP Leach	ning Result	s						
Sample	Amendmen	t® Dosage					Scree	ning Leach	ning Test Res	ults, mg/L				
Name	Chemical	Percentage wt/wt	Initial pH	Solution	Final pH	Eh (V)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TCLP Limit	-	-	-	-	-	-	5	100	1	5	5	0.2	1	5
	KMnO ₄	1%	_	TCLP 1	9.69	0.46	3.34	<0.001	0.052	0.031	<0.067	0.18	0.82	<0.005
	EnviroBlend® HX	3%		TOLK T	7.07	0.10	3.31	(0.001	0.032	0.031	νο.σσ	0.10	0.02	10.005
	EnviroBlend® CS	5%												
	$KMnO_4$	3%												
PTC-102 Upper Aquifer	EnviroBlend® HX	5%			ELP 1 8.26	0.47	0.31	<0.001	0.008	0.039	<0.067	0.16	1.20	0.016
Opper Aquiter	EnviroBlend® CS	5%	-	TCLP 1										
	EnviroBlend® C-PAC	1%												
	KMnO ₄	5%												
	EnviroBlend® HX	10%	-	TCLP 1	5.99	0.82	0.15	0.006	0.006 0.16	0.042	<0.067	0.23	1.20	0.018
	EnviroBlend® CS	5%	-	TCLI I		0.02							1.20	

					TCI	LP Leach	ning Result	S						
Sample	Amendmen	t® Dosage					Ser	ening Lea	ching Test Re	sults, mg/L				
Name	Chemical	Percentage wt/wt	Initial pH	Solution	Final pH	Eh (V)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TCLP Limit	-	-	-	-	-	-	5	100	1	5	5	0.2	1	5
	Untreated	=	1.53	TCLP 1	5	-	156	0.042	<0.024*	0.016	< 0.067	< 0.050	< 0.030	< 0.005
	KMnO ₄	1%												
	EnviroBlend® HX	3%	-	TCLP 1	8.12	0.29	11.5	0.002	0.090	0.014	< 0.067	< 0.050	< 0.030	< 0.005
	EnviroBlend® CS	5%												
PTC-102 First Aquitard	KMnO ₄	3%												
	EnviroBlend® HX	3%	-	TCLP 1	8.17	0.17	13.0	<0.001	0.074	0.041	<0.067	<0.050	<0.030	<0.005
	EnviroBlend® CS	5%												
7 Iquiture	KMnO ₄	7%												
	EnviroBlend® HX	3%	-	TCLP 1	8.85	0.32	2.35	< 0.001	0.088	0.12	<0.067	<0.050	<0.030	<0.005
	EnviroBlend® CS	5%												
	KMnO ₄	10%												
l <u> </u>	EnviroBlend® HX	3%	-	TCLP 1	8.70	0.45	1.52	<0.001	0.012	0.13	<0.067	< 0.050	< 0.030	0.011
	EnviroBlend® CS	5%		TCLI 1	6.70	0.15	1.02			0.13		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\0.030	

					TCI	LP Leach	ning Result	s						
Sample	Amendmen	t® Dosage					Scr	eening Lea	ching Test Re	esults, mg/L				
Name	Chemical	Percentage wt/wt	Initial pH	Solution	Final pH	Eh (V)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TCLP Limit	-	-	-	-	-	-	5	100	1	5	5	0.2	1	5
	Untreated	-	1.5	TCLP 1	4.97	-	9.6	0.014	<0.024*	0.005	< 0.067	< 0.050	< 0.030	< 0.005
DTC 102 Hansa	KMnO ₄	1%												
PTC-103 Upper Aquifer	EnviroBlend® HX	3%	-	TCLP 1	5.09	0.63	0.13	< 0.001	< 0.024	0.14	< 0.067	< 0.050	0.054	< 0.005
	EnviroBlend® CS	5%												
	Untreated	-	1.5	TCLP 1	4.99	-	135	0.012	<0.024*	0.014	0.069	< 0.050	< 0.030	< 0.005
	KMnO ₄	1%												
	EnviroBlend® HX	3%	-	TCLP 1	5.11	0.3	4.74	< 0.001	0.030	0.005	<0.067	<0.050	<0.030	<0.005
	EnviroBlend® CS	5%												
	KMnO ₄	3%		TCLP 1	8.74	0.17	5.46	< 0.001	0.032	0.056	<0.067	<0.050	<0.030	<0.005
	EnviroBlend® HX	3%	-											
PTC-103 First Aquitard	EnviroBlend® CS	5%												
1	KMnO4	7%												<0.005
	EnviroBlend® HX	3%	-	TCLP 1	8.94	0.31	2.38	< 0.001	0.053	0.11	< 0.067	< 0.050	< 0.030	
-	EnviroBlend® CS	5%												
	KMnO ₄	10%												
	EnviroBlend® HX	3%	-	TCLP 1	8.62	0.43	1.05	< 0.001	0.008	0.21	<0.067	< 0.050	0.032	<0.005
	EnviroBlend® CS	5%												

^{*}Concentration is estimated. Interference present.

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Appendix A Stabilization Study

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October 23, 2018

Ms. Charis Gehret Premier Magnesia, LLC 1275 Drummers Ln Wayne, PA 19373

Subject: Pioneer Technologies – Former Arkema Manufacturing Site.

Ms. Gehret:

Ursus Remediation Testing & Technologies, LLC (Ursus) is pleased to provide Premier Magnesia LLC, (Premier) this report for treatability testing of soil from the Pioneer Technologies – Former Arkema Manufacturing Site, Tacoma, WA.

OBJECTIVE

The objective of the study was to evaluate the effectiveness of EnviroBlend® to stabilize arsenic (and any other metals as necessary) in soil for disposal in a non-hazardous waste landfill. Arsenic is the primary metal of concern.

BACKGROUND

Four soil samples were received for the study on September 27, 2018. A description of the samples and comments are shown in Table 1.

Table 1. Sample Received for Treatability Testing

Sample Name	Sample Date	Matrix	Comments
PTC-102 Upper Aquifer	Unknown	Soil	Untreated Material
PTC-102 First Aquitard	Unknown	Soil	Untreated Material
PTC-103 Upper Aquifer	Unknown	Soil	Untreated Material
PTC-103 First Aquitard	Unknown	Soil	Untreated Material

Premier Magnesia, LLC

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MATERIAL & METHODOLOGY

TCLP metal testing was performed using screening methodologies. The TCLP screening methodology employed uses the same guidelines as prescribed by EPA Method SW-846 1311, except the amount of sample is scaled down to one-tenth the prescribed sample weight and extraction solution volume.

Screening results are not intended for regulatory compliance.

RESULTS

The 8 RCRA metals were analyzed during the study with arsenic as the primary metal of concern. Total metals for the samples received are shown in Table 2.

Soil was tested untreated and treated with various EnviroBlend® products and leached by TCLP (Table 3). All untreated samples exceeded the TCLP arsenic criterion of 5.0 mg/L. Sample PTC-102 Upper Aquifer also had detections of TCLP lead and mercury. Only samples PTC-102 Upper Aquifer and PTC-102 First Aquitard were treated with EnviroBlend® during the study.

An effective EnviroBlend® product and dosage was not found to meet the TCLP arsenic criterion. The historical source of arsenic at the site was sodium arsenite, and it is suspected that a significant amount of arsenite was present in the samples submitted for this study. Arsenite is more problematic to treat than its oxidized form of arsenate and likely the reason effective treatment with EnviroBlend® was not achieved.

Sincerely,

Andrew Wenzel

Andrew Wengel

Principal

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Table 2.
Total Metals

				Total Metals (n	ng/kg)				
Sample Name	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Solids
PTC-102 Upper Aquifer	10,300	2.31	<10.9*	18.2	473	856	297	<2.26	83%
PTC-102 First Aquitard	7,690	2.98	<8.94*	19.1	<25.0	<16.8	<11.2	<1.86	63%
PTC-103 Upper Aquifer	1,420	1.70	<11.0*	31.1	<30.8	<23.0	43.3	<2.31	81%
PTC-103 First Aquitard	6,470	3.24	<11.0*	15.9	<30.6	<22.9	<13.7	<2.28	60%

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Table 3. TCLP Metals

TCLF Metals													
TCLP Leaching Results													
Sample Name	EnviroBlend® Dosage		Screening Leaching Test Results, mg/L										
	Chemical	Percentage	Initial pH	Solution	Final pH	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
TCLP Limit	•	-	-	-	-	5.0	100	1.0	5.0	5.0	0.2	1.0	5.0
	Untreated	-	1.56	TCLP 1	5.05	62.7	0.014	<0.024*	< 0.005	0.40	0.16	0.11	< 0.005
	EnviroBlend® 1	4%	-	TCLP 1	6.57	89.0	0.008	<0.024*	0.011	< 0.067	< 0.050	< 0.030	< 0.005
		5%	-	TCLP 1	8.56	94.2	0.004	<0.024*	< 0.005	< 0.067	< 0.050	0.074	< 0.005
		6%	-	TCLP 1	9.47	118	0.002	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
PTC-102 Upper	EnviroBlend® 2	5%	-	TCLP 1	4.84	67.9	0.011	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
Aquifer		6%	-	TCLP 1	4.82	68.9	0.011	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
Aquitor		7%	-	TCLP 1	4.78	68.4	0.010	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
	EnviroBlend® 3	2%	-	TCLP 1	4.91	120	0.011	<0.024*	< 0.005	0.15	0.068	< 0.030	< 0.005
		3%	-	TCLP 1	4.83	135	0.012	<0.024*	< 0.005	0.23	< 0.050	< 0.030	< 0.005
		4%	-	TCLP 1	4.74	153	0.011	<0.024*	< 0.005	0.37	< 0.050	< 0.030	< 0.005
	Untreated	-	1.53	TCLP 1	5.00	156	0.042	<0.024*	0.016	< 0.067	< 0.050	< 0.030	< 0.005
	EnviroBlend® CR20	3%	-	TCLP 1	6.60	119	0.014	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
PTC-102 First Aquitard		4%	-	TCLP 1	7.53	97.8	0.005	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
		5%	-	TCLP 1	5.60	128	0.004	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
	EnviroBlend® HXM	4%	-	TCLP 1	4.81	58.8	0.007	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
		5%	-	TCLP 1	4.79	45.7	0.007	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
		6%	-	TCLP 1	4.75	36.8	0.006	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
	EnviroBlend® HXM	2%	-	TCLP 1	4.91	104	0.013	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
		3%	-	TCLP 1	4.83	82.8	0.009	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
		4%	-	TCLP 1	4.73	56.7	0.007	<0.024*	< 0.005	< 0.067	< 0.050	< 0.030	< 0.005
PTC-103 Upper													
Aquifer	Untreated	-	1.50	TCLP 1	4.97	9.60	0.014	<0.024*	0.005	< 0.067	< 0.050	< 0.030	< 0.005
PTC-103 First Aquitard	Untreated	-	1.50	TCLP 1	4.99	135	0.012	<0.024*	0.014	0.069	< 0.050	<0.030	< 0.005

^{*}Concentration is estimated. Interference present.

Appendix B TOD Report

December 6, 2018

Mr. Troy Bussey
PIONEER Technologies Corporation
5205 Corporate Ctr. Ct. SE, Ste. A
Olympia, WA 98503-5901

Subject: Persulfate and Permanganate TOD Testing Report for the Former Arkema Manufacturing Site, Tacoma, WA.

Mr. Bussey:

Ursus Remediation Testing & Technologies, LLC (Ursus) is pleased to provide Pioneer this report for Total Oxidant Demand (TOD) testing for the Former Arkema Manufacturing Site.

OBJECTIVE

The objective of the study was to determine the amount of sodium persulfate and permanganate required to overcome the oxidant demand in site soil.

BACKGROUND

The purpose of the TOD study is to determine the oxidant demand of site soils. The TOD provides the information needed to know the amount of oxidant required to oxidize readily available organic matter, reduced metals, and other matrix oxidant demand. The TOD study is in support of the arsenic stabilization bench tests.

It is suspected that a significant amount of arsenic in the samples submitted for the stabilization bench tests is in a reduced form (arsenite), which is not readily stabilized. Oxidizing arsenite to an oxidized form (arsenate), where conventional treatment amendments can be applied that are more effective in treating arsenate than arsenite, is the goal. Therefore, the TOD estimates the amount of oxidant required to produce an oxidizing environment and presumably, oxidize arsenite to arsenate.

Ursus tested two oxidants; persulfate (in the form of sodium persulfate) and permanganate (in the form of potassium permanganate). Ursus performed persulfate analytical procedures as described in Peroxychem/FMC's Klozur™ Treatability Protocol Template and Haselow et. al 2003. Permanganate TOD testing followed methodologies similar to those outlined by Haselow et. al 2003 and the USEPA. The TOD was measured after 24 hours reactive time.

Four soil samples were received by Ursus. Samples received, descriptions, and comments are shown in Table 1.

Table 1. Samples Received for TOD Testing

Sample	Sample Date	Date Received	Sample Matrix	Sample Comments
PTC-102 Upper Aquifer	9/25/2018	9/27/2018	Soil	None
PTC-102 First Aquitard	9/25/2018	9/27/2018	Soil	None
PTC-103 Upper Aquifer	9/25/2018	9/27/2018	Soil	None
PTC-103 First Aquitard	9/25/2018	9/27/2018	Soil	None

MATERIALS AND METHODOLOGY

Materials

Sodium Persulfate – Na₂S₂O₈. Fisher reagent grade.

Potassium Permanganate – KMnO₄. JT Baker reagent grade.

Methodology

The oxidant was mixed with deionized water for testing and each soil was slurried with the deionized water containing the oxidant. Persulfate and permanganate dosages of 2.5g/kg soil, 5.0 g/kg soil, and 7.5g/kg soil were tested. Persulfate was not activated for the study. A soil to liquid ratio of 1:4 (25 g soil/100 mls solution) was used.

Samples were exposed to ambient laboratory conditions in tightly capped reaction jars with periodic mixing. The TOD for each oxidant was measured at 24 hours.

RESULTS

Persulfate and permanganate TOD were set up on November 28, 2018. The 24 hour persulfate and permanganate TOD (TOD24_{Hr}) was measured on November 29, 2018.

At 24 hours, the soil slurry was allowed to settle, and an aliquot of the liquid fraction was decanted and analyzed for residual persulfate and permanganate. The TOD data are shown in Table 3.

TOD results are discussed below.

- 1. Both persulfate and permanganate oxidants had a low to moderate TOD. Low to moderate TOD's likely make these oxidants economically feasible as candidate oxidants.
- 2. The higher the persulfate or permanganate dosage, the higher the TOD. This is commonly observed with these oxidants.

- 3. Persulfate and permanganate TOD showed similar results. For both oxidants, PTC-102 First Aquitard and PTC-103 First Aquitard showed the highest TOD and samples PTC-102 Upper Aquifer and PTC-103 Upper Aquifer showed the lowest TOD.
- 4. Permanganate produced a greater TOD than persulfate. This is commonly observed in soils when these two oxidants are compared side by side.
- 5. Permanganate TOD is reported as the permanganate ion. Permanganate TOD can be converted to potassium permanganate or sodium permanganate TOD by multiplying the permanganate TOD by 1.33 and 1.19, respectively.

 $\label{eq:Table 3.} Table \ 3.$ Persulfate and Permanganate TOD $_{\rm 24Hr}$ Results

		TOD _{24Hr}				
Sample	Dosage g/kg	Permanganate g/kg as MnO4	Sodium Persulfate, g/kg			
DTC 102 H	2.5	1.9	1.0			
PTC-102 Upper Aquifer	5.0	3.4	1.7			
Aquilei	7.5	4.6	3.2			
DTC 102 E'	2.5	> 2.5	> 2.5			
PTC-102 First Aquitard	5.0	> 5.0	4.3			
Aquitatu	7.5	> 7.5	4.5			
DTC 102 Harray	2.5	1.1	0.8			
PTC-103 Upper Aquifer	5.0	2.9	0.9			
Aquilei	7.5	4.4	1.4			
DTC 102 Einst	2.5	> 2.5	> 2.5			
PTC-103 First	5.0	4.8	3.0			
Aquitard	7.5	7.0	2.5			

REFERENCES

Peroxychem/FMC. KlozurTM Activated Persulfate Treatability Protocol Template.

Haselow, J, S., Siegrist, R, L., Crimi, M., and Jarosch, T. 2003. Estimating the Total Oxidant Demand for In Situ Chemical Oxidation Design. Remediation Autumn 2003.

US EPA. Standard Test Method for Determining the Permanganate Soil Oxidant Demand (Screening Phase, PSOD-1)

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Sincerely,

Andrew Wenzel Principal

Andrew Wengel

Appendix G



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-119+25-ST1-100417 119+25-ST1 10/04/17 Pore Water	PW-119+25-ST1-100417- (20) 119+25-ST1 10/04/17 Pore Water	PW-120+75-ST1-100517 120+75-ST1 10/05/17 Pore Water	PW-120+75-ST1-100517- (20) 120+75-ST1 10/05/17 Pore Water	PW-120+75-ST1-DS-111 517 120+75-ST1-DS 11/15/17 Pore Water	PW-120+75-ST1-DS-1 ⁻¹ 1517-(20) 120+75-ST1-DS 11/15/17 Pore Water
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		488.00		917.00		109.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		488.00		917.00		109.00
Bromine anion (Br-)		41.90		25.30		54.30
Calcium		349.00		206.00		353.00
Chloride		18000.00		14200.00		16300.00
Dissolved Organic Carbon		10.40		21.80		2.56
Fluoride		10.00 U		10.00 U		1.00U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		10.00 UJ		10.00 UJ		1.00U
Nitrite		50.00 UJ		50.00 UJ		1.00U
Potassium		317.00		201.00		318.00
Sodium		9490.00		8010.00		8810.00
Sulfate		1780.00		866.00		2360.00
Total Dissolved Solids		26600.00		22700.00		26600.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		4.11		34.80		2.25
Arsenic, Inorganic		7.87		279.00		3.17
Arsenite Ion - As(O3)3-		3.86		55.90		1.41
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		2.69 U		2.69 U		3.71J
Iron		1360.00		32.50 J		163.00U
Lead and Compounds		0.61 U		0.61 U		0.30U
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Table G-1: 2017 Pore Water Results

Sample ID:	PW-119+25-ST1-100417	PW-119+25-ST1-100417-	PW-120+75-ST1-100517	PW-120+75-ST1-100517-		PW-120+75-ST1-DS-11
Site ID: Sample Date: Constituent Media:	10/04/17	(20) 119+25-ST1 10/04/17 Pore Water	120+75-ST1 10/05/17 Pore Water	(20) 120+75-ST1 10/05/17 Pore Water	517 120+75-ST1-DS 11/15/17 Pore Water	1517-(20) 120+75-ST1-DS 11/15/17 Pore Water
Magnesium		962000.00		536000.00		1040000.00
Manganese		306.00		40.40		7.54
Mercury (elemental)		0.0003 J		0.0007		0.0008J
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		0.34 J		0.85 J		0.61U
Silicon		10500.00		13100.00		4490.00U
Sum of arsenic species		7.97		90.70		3.66
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		10.00 UJ		10.00 UJ		
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.03		0.02		7.40	
Oxidation Reduction Potential (ORP) (mV)	-117.80		-261.70		27.10	
Specific Conductivity (uS/cm)	42171.00		34465.10		34522.00	
Temperature (Celsius) (C)	14.30		13.21		9.60	
Turbidity (NTU)	1.59		0.80		125.00	
pH ()	7.12		7.66		6.05	
Field TDS and Sulfide (mg/L)						
Sulfide	0		0.70>		0.01	
Total Dissolved Solids	27000.00		22000.00		31590.00	
Total Metals (ug/L)						
Arsenic, Inorganic	7.31		278.00		7.81	
Copper	2.69 U		2.69 U		7.81	
Lead and Compounds	0.61 U		0.61 U		7.49 J	
Mercury (elemental)	0.0003 J		0.0008		0.01	
Nickel Soluble Salts	0.44 J		1.03 J		3.38 J	



Sample ID Site ID Sample Date Constituent Media	: 119+25-ST1 : 10/04/17	PW-119+25-ST1-100417- (20) 119+25-ST1 10/04/17 Pore Water	PW-120+75-ST1-100517 120+75-ST1 10/05/17 Pore Water	PW-120+75-ST1-100517- (20) 120+75-ST1 10/05/17 Pore Water	PW-120+75-ST1-DS-111 517 120+75-ST1-DS 11/15/17 Pore Water	PW-120+75-ST1-DS-11 1517-(20) 120+75-ST1-DS 11/15/17 Pore Water
Field Ferrous Iron (ug/L)						
Ferrous Iron	1350.00		0		110.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U	1	0.20 U		0.20 U	



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	11/15/17	PW-122+60-0-DS-11151 7-(20) 122+60-0-DS 11/15/17 Pore Water	PW-123+25-ST1-100517 123+25-ST1 10/05/17 Pore Water	PW-123+25-ST1-100517- (20) 123+25-ST1 10/05/17 Pore Water	PW-124+00-0-DS-11151 7 124+00-0-DS 11/15/17 Pore Water	PW-124+00-0-DS-11151 7-(20) 124+00-0-DS 11/15/17 Pore Water
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		139.00		109.00		106.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		139.00		109.00		106.00
Bromine anion (Br-)		43.90		48.20		48.40
Calcium		266.00		384.00		318.00
Chloride		13300.00		16700.00		14500.00
Dissolved Organic Carbon		3.25		1.84		1.95
Fluoride		1.00 U		10.00 U		1.00U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		1.00 U		10.00 U		1.00U
Nitrite		1.00 U		50.00 UJ		1.00U
Potassium		254.00		360.00		278.00
Sodium		6580.00		8430.00		7710.00
Sulfate		1900.00		2290.00		2120.00
Total Dissolved Solids		21800.00		25700.00		23500.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		2.43		83.50		3.53
Arsenic, Inorganic		5.63		155.00		4.55
Arsenite Ion - As(O3)3-		0.32 J		76.70		1.00U
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		2.69 U		2.69 U		3.41J
Iron		52.20 J		55.10		163.00U
Lead and Compounds		0.30 U		0.61 U		0.30
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Table G-1: 2017 Pore Water Results

Sample ID:	PW-122+60-0-DS-11151	PW-122+60-0-DS-11151	PW-123+25-ST1-100517	PW-123+25-ST1-100517-	PW-124+00-0-DS-11151	PW-124+00-0-DS-11151
Site ID: Sample Date: Constituent Media:	11/15/17	7-(20) 122+60-0-DS 11/15/17 Pore Water	123+25-ST1 10/05/17 Pore Water	(20) 123+25-ST1 10/05/17 Pore Water	7 124+00-0-DS 11/15/17 Pore Water	7-(20) 124+00-0-DS 11/15/17 Pore Water
Magnesium	Total trails	747000.00	Total Water	1120000.00	Total Trailor	913000.00
Manganese		7390.00		61.70		5.70
Mercury (elemental)		0.001 J		0.0004 J		0.001J
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		13.90 J		0.69 J		0.61U
Silicon		10900.00		4610.00		3040.00
Sum of arsenic species		2.75 J		160.20		3.53
·		2.755		100.20		3.33
Dissolved Ortho-Phosphorus (mg/L)				40.0011		
o-Phosphate {PO4}, as P				10.00 U		
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	12.90		2.65		7.01	
Oxidation Reduction Potential (ORP) (mV)	34.20		-15.90		35.60	
Specific Conductivity (uS/cm)	28943.00		38265.00		32289.00	
Temperature (Celsius) (C)	10.03		13.20		10.43	
Turbidity (NTU)	540.00		22.10		11.32	
pH ()	6.11		7.61		6.18	
Field TDS and Sulfide (mg/L)						
Sulfide			0.10		0.09	
Total Dissolved Solids	17170.00		26000.00		24070.00	
Total Metals (ug/L)						
Arsenic, Inorganic	13.70		33.70 J		5.22	
Copper	23.70		5.06		5.52	
Lead and Compounds	8.98 J		0.72		0.30 U	
Mercury (elemental)	0.02		0.02		0.006 J	
Nickel Soluble Salts	16.90	İ	2.92		8.85	İ



Sample ID: Site ID:	7 122+60-0-DS	PW-122+60-0-DS-11151 7-(20) 122+60-0-DS	123+25-ST1	PW-123+25-ST1-100517- (20) 123+25-ST1	7 124+00-0-DS	PW-124+00-0-DS-11151 7-(20) 124+00-0-DS
Sample Date: Constituent Media:	11/15/17 Pore Water	11/15/17 Pore Water	10/05/17 Pore Water	10/05/17 Pore Water	11/15/17 Pore Water	11/15/17 Pore Water
Field Ferrous Iron (ug/L)						
Ferrous Iron	30000.00 >		200.00		610.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-125+00-ST1-100517 125+00-ST1 10/05/17 Pore Water	PW-125+00-ST1-100517- (20) 125+00-ST1 10/05/17 Pore Water	PW-125+00-ST1-DS-111 517 125+00-ST1-DS 11/15/17 Pore Water	PW-125+00-ST1-DS-111 517-(20) 125+00-ST1-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7 125+50-0-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7-(20) 125+50-0-DS 11/15/17 Pore Water
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		131.00		111.00		105.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		131.00		111.00		105.00
Bromine anion (Br-)		44.60		55.60		49.90
Calcium		374.00		358.00		335.00
Chloride		15900.00		16800.00		15400.00
Dissolved Organic Carbon		1.51		1.56		1.78
Fluoride		10.00 U		1.00 U		1.00U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		10.00 U		1.00 U		1.00U
Nitrite		50.00 UJ		1.00 U		1.00U
Potassium		340.00		323.00		295.00
Sodium		8290.00		8980.00		8300.00
Sulfate		2140.00		2450.00		2220.00
Total Dissolved Solids		25100.00		27500.00		24400.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		18.40		1.80		41.80
Arsenic, Inorganic		21.30		6.38		39.40
Arsenite Ion - As(O3)3-		1.26		1.00 U		1.00U
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		0.96 J		2.69 U		2.69U
Iron		73.40		322.00		163.00U
Lead and Compounds		0.61 U		0.30 U		0.30
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Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-125+00-ST1-100517 125+00-ST1 10/05/17 Pore Water	PW-125+00-ST1-100517- (20) 125+00-ST1 10/05/17 Pore Water	PW-125+00-ST1-DS-111 517 125+00-ST1-DS 11/15/17 Pore Water	PW-125+00-ST1-DS-111 517-(20) 125+00-ST1-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7 125+50-0-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7-(20) 125+50-0-DS 11/15/17 Pore Water
Magnesium		1080000.00		1060000.00		976000.00
Manganese		94.10		34.90		11.60
Mercury (elemental)		0.002		0.0004 U		0.002J
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		0.92 J	•	0.61 U		0.61U
Silicon		4440.00		4490.00 U		4490.00U
Sum of arsenic species		19.66		1.80		41.80
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		10.00 U				
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.20		9.32		5.87	
Oxidation Reduction Potential (ORP) (mV)	-9.70		28.20		25.60	
Specific Conductivity (uS/cm)	36926.80		35630.00		33391.00	
Temperature (Celsius) (C)	15.28		10.39		11.04	
Turbidity (NTU)	3.09		18.55		10.13	
pH ()	7.43		6.59		6.71	
Field TDS and Sulfide (mg/L)						
Sulfide	0.01				0.04	
Total Dissolved Solids	24000.00		32110.00		29590.00	
Total Metals (ug/L)						
Arsenic, Inorganic	22.10		10.70		32.20	
Copper	1.55 J		3.52 J		5.71	
Lead and Compounds	0.61 U		19.10 J		0.30 U	
Mercury (elemental)	0.005		0.01		0.006 J	
Nickel Soluble Salts	1.04 J		1.72		0.61 U	



Sample ID: Site ID: Sample Date: Constituent Media:	125+00-ST1 10/05/17	PW-125+00-ST1-100517- (20) 125+00-ST1 10/05/17 Pore Water	PW-125+00-ST1-DS-111 517 125+00-ST1-DS 11/15/17 Pore Water	PW-125+00-ST1-DS-111 517-(20) 125+00-ST1-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7 125+50-0-DS 11/15/17 Pore Water	PW-125+50-0-DS-11151 7-(20) 125+50-0-DS 11/15/17 Pore Water
Field Ferrous Iron (ug/L)						
Ferrous Iron	100.00		30000.00 >		240.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	•



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-126+80-ST1-100617 126+80-ST1 10/06/17 Pore Water	PW-126+80-ST1-100617- (20) 126+80-ST1 10/06/17 Pore Water	PW-126+90-0-DS-11151 7 126+90-0-DS 11/15/17 Pore Water	PW-126+90-0-DS-11151 7-(20) 126+90-0-DS 11/15/17 Pore Water	PW-128+30-0-DS-11151 7 128+30-0-DS 11/15/17 Pore Water	PW-128+30-0-DS-1115 ² 7-(20) 128+30-0-DS 11/15/17 Pore Water
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		103.00		103.00		123.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U	•	1.00U
Alkalinity, Total		103.00		103.00		123.00
Bromine anion (Br-)		49.50		50.30		47.70
Calcium		405.00		319.00		309.00
Chloride		17100.00		15500.00	•	14400.00
Dissolved Organic Carbon		1.18		1.82	•	1.94
Fluoride		10.00 U		1.00 U		1.00U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		10.00 U		1.00 U		1.00
Nitrite		50.00 U		1.00 U	•	1.00U
Potassium		374.00		316.00		206.00
Sodium		9080.00		7960.00		7660.00
Sulfate		2360.00		2280.00	•	2070.00
Total Dissolved Solids		26800.00		24200.00	•	23800.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		2.01		25.90		4.51
Arsenic, Inorganic		2.31		20.20		3.39J
Arsenite Ion - As(O3)3-		1.00 U		1.00 U		1.00U
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		2.69 U		2.29 J		2.72J
Iron		19.10 J		408.00 U		408.00U
Lead and Compounds		0.61 U		0.30 U		0.30U
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Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date:	PW-126+80-ST1-100617 126+80-ST1 10/06/17	PW-126+80-ST1-100617- (20) 126+80-ST1 10/06/17	PW-126+90-0-DS-11151 7 126+90-0-DS 11/15/17	PW-126+90-0-DS-11151 7-(20) 126+90-0-DS 11/15/17	PW-128+30-0-DS-11151 7 128+30-0-DS 11/15/17	PW-128+30-0-DS-1115 ⁻⁷ 7-(20) 128+30-0-DS 11/15/17
Constituent Media:	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water
Magnesium		1190000.00		926000.00		884000.00
Manganese		23.60		7.34		15.60
Mercury (elemental)		0.0002 J		0.0006 J		0.001ຝ
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts	•	0.48 J		0.61 U		12.90
Silicon	•	1890.00		3970.00		3320.00
Sum of arsenic species	•	2.01		25.90		4.51
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		10.00 U				
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	4.18		5.75		6.50	
Oxidation Reduction Potential (ORP) (mV)	35.30		24.90		23.10	
Specific Conductivity (uS/cm)	40229.00		34105.00		32498.00	
Temperature (Celsius) (C)	12.43		11.06		10.74	
Turbidity (NTU)	2.97		12.03		31.20	
pH ()	7.59		6.78		6.84	
Field TDS and Sulfide (mg/L)						
Sulfide	0		0.11		0.10	
Total Dissolved Solids	26000.00		30180.00		29030.00	
Total Metals (ug/L)						
Arsenic, Inorganic	2.47		27.20		6.99	
Copper	1.49 J		5.85		9.02	
Lead and Compounds	0.30 J		6.29 J		0.30 U	
Mercury (elemental)	0.0008		0.004 J		0.004 J	
Nickel Soluble Salts	0.89 J	İ	3.76 J		13.20	



Sample ID: Site ID: Sample Date: Constituent Media:	126+80-ST1 10/06/17	PW-126+80-ST1-100617- (20) 126+80-ST1 10/06/17 Pore Water	PW-126+90-0-DS-11151 7 126+90-0-DS 11/15/17 Pore Water	PW-126+90-0-DS-11151 7-(20) 126+90-0-DS 11/15/17 Pore Water	PW-128+30-0-DS-11151 7 128+30-0-DS 11/15/17 Pore Water	PW-128+30-0-DS-11151 7-(20) 128+30-0-DS 11/15/17 Pore Water
Field Ferrous Iron (ug/L)						
Ferrous Iron	0		590.00		290.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-128+50-ST1-100617 128+50-ST1 10/06/17 Pore Water	PW-128+50-ST1-100617- (20) 128+50-ST1 10/06/17 Pore Water	PW-128+50-ST1-DS-111 517 128+50-ST1-DS 11/15/17 Pore Water	PW-128+50-ST1-DS-111 517-(20) 128+50-ST1-DS 11/15/17 Pore Water	PW-130+75-ST1-100617 130+75-ST1 10/06/17 Pore Water	PW-130+75-ST1-1006 ² 7-(20) 130+75-ST1 10/06/17 Pore Water
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		104.00		138.00		1040.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		104.00		138.00		1040.00
Bromine anion (Br-)		49.20		53.90		50.60
Calcium		391.00		349.00		400.00
Chloride		16800.00		16200.00		17000.00
Dissolved Organic Carbon		1.31		1.67		1.24
Fluoride		10.00 U		1.00 U		10.0 0 U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		10.00 U		1.00 U		10.0 0 U
Nitrite		50.00 U		1.00 U		50.0 0 U
Potassium		362.00		242.00		366.00
Sodium		9020.00		8760.00		8620.00
Sulfate		2300.00		2380.00		2330.00
Total Dissolved Solids		26200.00		26700.00		26700.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		2.15		4.05		1.64
Arsenic, Inorganic		3.10		5.63		2.16
Arsenite Ion - As(O3)3-		0.31 J		14.30		0.28J
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		0.95 J		1.10 J		2.69J
Iron		55.50		46.60 J		21.10
Lead and Compounds		0.61 U		0.30 U		0.61U
		I	1	I	1	I



Table G-1: 2017 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	PW-128+50-ST1-100617 128+50-ST1 10/06/17 Pore Water	PW-128+50-ST1-100617- (20) 128+50-ST1 10/06/17 Pore Water	PW-128+50-ST1-DS-111 517 128+50-ST1-DS 11/15/17 Pore Water	PW-128+50-ST1-DS-111 517-(20) 128+50-ST1-DS 11/15/17 Pore Water	PW-130+75-ST1-100617 130+75-ST1 10/06/17 Pore Water	PW-130+75-ST1-10061 7-(20) 130+75-ST1 10/06/17 Pore Water
Magnesium	<u> </u>	1050000.00	<u> </u>	1020000.00		1170000.00
Manganese		34.70		76.70		28.10
Mercury (elemental)		0.0003 J		0.0008 J		0.0002J
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		0.74 J		0.61 U		0.58J
Silicon		2450.00		3000.00		2070.00
Sum of arsenic species		2.46 J		18.35		ا 1.92J
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		10.00 U				10.00U
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	4.13		7.03		3.34	
Oxidation Reduction Potential (ORP) (mV)	15.30		23.90		27.80	
Specific Conductivity (uS/cm)	39279.00		36135.00		39617.70	
Temperature (Celsius) (C)	13.87		10.92		15.34	
Turbidity (NTU)	3.97		5.53		0.04	
pH ()	7.59		6.83		7.59	
Field TDS and Sulfide (mg/L)						
Sulfide	0		0.17		2.34	
Total Dissolved Solids	26000.00		32120.00		26000.00	
Total Metals (ug/L)						
Arsenic, Inorganic	3.63		15.30		2.68	
Copper	2.16 J		5.99		2.18 J	
Lead and Compounds	0.26 J		0.30 U		0.37 J	
Mercury (elemental)	0.0008		0.006 J		0.001 J	
Nickel Soluble Salts	0.90 J		0.61 U		0.88 J	



Sample ID:		(20)	517	PW-128+50-ST1-DS-111 517-(20)		PW-130+75-ST1-10061 7-(20)
Site ID: Sample Date:		128+50-ST1 10/06/17	128+50-ST1-DS 11/15/17	128+50-ST1-DS 11/15/17	130+75-ST1 10/06/17	130+75-ST1 10/06/17
Constituent Media:		Pore Water	Pore Water	Pore Water	Pore Water	Pore Water
Field Ferrous Iron (ug/L)						
Ferrous Iron	110.00		660.00		160.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Sample ID:					
Site ID: Sample Date:	/ /	/ /	/ /	/ /	//
Constituent Media:					
Dissolved Conventionals (mg/L)					
Alkalinity, Bicarb. As CaCO3					
Alkalinity, Carb.As CaCO3					•
Alkalinity, Total					
Bromine anion (Br-)					•
Calcium					
Chloride					
Dissolved Organic Carbon					
Fluoride					
Hydroxide Alkalinity					
Nitrate					
Nitrite					
Potassium					
Sodium					
Sulfate					
Total Dissolved Solids					
Dissolved Metals (ug/L)					
Aluminum					
Arsenate Ion - As(O4)3-					
Arsenic, Inorganic					
Arsenite Ion - As(O3)3-					
Cacodylic Acid					
Copper					
Iron					
Lead and Compounds					



Sample ID:						
Site ID:						
Sample Date: Constituent Media:	11	/ /	/ /	/ /	/ /	/ /
Concutacin		1	<u> </u>	1		
Magnesium						
Manganese						
Mercury (elemental)						
Methylarsonic acid						
Nickel Soluble Salts						
Silicon						
Sum of arsenic species						
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)						
Oxidation Reduction Potential (ORP) (mV)						
Specific Conductivity (uS/cm)						
Temperature (Celsius) (C)						
Turbidity (NTU)						
pH ()						
Field TDS and Sulfide (mg/L)						
Sulfide						
Total Dissolved Solids						
Total Metals (ug/L)						
Arsenic, Inorganic						
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts		İ				
						<u> </u>



Sample ID:						
Site ID:						
Sample Date:	11	/ /	/ /	/ /	/ /	/ /
Constituent Media:						
Field Ferrous Iron (ug/L)						
Ferrous Iron						
VOCs (ug/L)						
Chloroform						
Tetrachloroethylene						
Trichloroethylene						
Vinyl Chloride						



Table G-2: 2017 Surface Water Results

Sample ID: Site ID: Sample Date:		SW-120+75-SW-111517- (20) 120+75-SW 11/15/17	SW-125+00-SW-111517 125+00-SW 11/15/17	SW-125+00-SW-111517- (20) 125+00-SW 11/15/17	SW-128+50-SW-111517 128+50-SW 11/15/17	SW-128+50-SW-111517 -(20) 128+50-SW 11/15/17
Constituent Media:	Surfacewater	Surfacewater	Surfacewater	Surfacewater	Surfacewater	Surfacewater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		102.00		102.00		103.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		102.00		102.00		103.00
Bromine anion (Br-)	•	55.30		56.40		56.10
Calcium		356.00		363.00		357.00
Chloride		17000.00		16900.00		17200.00
Dissolved Organic Carbon		1.56		1.32		1.54
Fluoride		1.00 U		1.00 U		1.00U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		1.00 U		1.00 U		1.00U
Nitrite		1.00 U		1.00 U		1.00U
Potassium		315.00		329.00		313.00
Sodium		8980.00		9040.00		8950.00
Sulfate		2480.00		2460.00		2520.00
Total Dissolved Solids	•	27500.00		26300.00		27900.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		2.06		2.05		1.99
Arsenic, Inorganic		2.92		2.55		2.36J
Arsenite Ion - As(O3)3-		1.00 U		1.00 U		1.00U
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		2.50 J		2.13 J		4.27J
Iron		163.00 U		163.00 U		408.00J
Lead and Compounds		0.30 U		0.30 U		0.30
	ı	1	1		1	1



Table G-2: 2017 Surface Water Results

		I		I		1
Sample ID:	SW-120+75-SW-111517	SW-120+75-SW-111517- (20)	SW-125+00-SW-111517	SW-125+00-SW-111517- (20)	SW-128+50-SW-111517	SW-128+50-SW-111517 -(20)
Site ID:	120+75-SW	120+75-SW	125+00-SW	125+00-SW	128+50-SW	128+50-SW
Sample Date: Constituent Media:	11/15/17 Surfacewater	11/15/17 Surfacewater	11/15/17 Surfacewater	11/15/17 Surfacewater	11/15/17 Surfacewater	11/15/17 Surfacewater
Magnesium		1050000.00		1070000.00		1050000.00
Manganese		7.44		5.43		9.12
Mercury (elemental)		0.0004 U		0.0004 U		0.0004U
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		0.61 U		0.61 U		0.61U
Silicon		4490.00 U		4490.00 U		2150.00
Sum of arsenic species		2.06		2.05		1.99
·		2.00		2.05		1.99
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	6.98		6.47		5.16	
Oxidation Reduction Potential (ORP) (mV)	33.90		26.20		23.70	
Specific Conductivity (uS/cm)	35687.00		36185.00		36932.00	
Temperature (Celsius) (C)	10.38		10.69		11.04	
Turbidity (NTU)	28.50		9.22		7.20	
pH ()	6.00		6.78		6.91	
Field TDS and Sulfide (mg/L)						
Sulfide	0.09		0.09		0.04	
Total Dissolved Solids	32180.00				32740.00	
Total Metals (ug/L)						
Arsenic, Inorganic	4.36		4.24		3.64 J	
Copper	5.37		6.03		4.67	
Lead and Compounds	5.25 J		0.30 U		0.30 U	
Mercury (elemental)	0.01		0.003 J		0.002 J	
Nickel Soluble Salts	0.61 U		0.61 U		0.61 U	
Field Ferrous Iron (ug/L)						
Ferrous Iron	680.00		360.00		160.00	



Table G-2: 2017 Surface Water Results

Site ID: Sample Date:	120+75-SW	SW-120+75-SW-111517- (20) 120+75-SW 11/15/17 Surfacewater	SW-125+00-SW-111517 125+00-SW 11/15/17 Surfacewater	SW-125+00-SW-111517- (20) 125+00-SW 11/15/17 Surfacewater	SW-128+50-SW-111517 128+50-SW 11/15/17 Surfacewater	SW-128+50-SW-111517 -(20) 128+50-SW 11/15/17 Surfacewater
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-120+75-2-103117 120+75-2 10/31/17 Groundwater	GW-120+75-2-103117-(2 0) 120+75-2 10/31/17 Groundwater	GW-121+80-1-110317 121+80-1 11/03/17 Groundwater	GW-121+80-1-110317-(2 0) 121+80-1 11/03/17 Groundwater	GW-121+80-2-103017 121+80-2 10/30/17 Groundwater	GW-121+80-2-103017-0 20) 121+80-2 10/30/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		1720.00		101.00		1330.00
Alkalinity, Carb.As CaCO3		1.00 U		303.00		611.00
Alkalinity, Total		1720.00		404.00		1940.00
Bromine anion (Br-)		13.70		0.11		6.56
Calcium		169.00		3.41		9.69
Chloride		16000.00		138.00		4470.00
Dissolved Organic Carbon		34.60		4.77		205.00
Fluoride		1.07		0.31		2.89
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.10 U		0.10 U		0.10U
Nitrite		0.10 U		0.10 U		0.10U
Potassium		203.00		5.28		39.20
Sodium		10400.00		264.00		4010.00
Sulfate		1.18		16.50		5.97
Total Dissolved Solids		23800.00		795.00		8480.00
Dissolved Metals (ug/L)				İ		
Aluminum		81.60 U		35.70 J		242.00
Arsenate Ion - As(O4)3-		12.40		91.90		496.00
Arsenic, Inorganic		64.90		735.00		81.70
Arsenite Ion - As(O3)3-		22.90		417.00		22.30
Cacodylic Acid		1.05 U		1.05 U		2.13
Copper		2.69 U		1.78 J		2.69U
Iron		914.00		256.00		545.00
Lead and Compounds		0.30 U		0.63		0.70
		1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date:	10/31/17	GW-120+75-2-103117-(2 0) 120+75-2 10/31/17	GW-121+80-1-110317 121+80-1 11/03/17	GW-121+80-1-110317-(2 0) 121+80-1 11/03/17	GW-121+80-2-103017 121+80-2 10/30/17	GW-121+80-2-103017- 20) 121+80-2 10/30/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium		341000.00		711.00		3460.00
Manganese		1040.00		3.25		18.90
Mercury (elemental)		0.0004 J		0.04		0.007
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		0.75		1.12		17.40
Silicon		35400.00		57500.00		79000.00
Sum of arsenic species		35.30		508.90		518.30
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		3.12 J		0.52		8.41
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•					
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0.05		0.21		0	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	-145.60		-88.20		-334.00	
Specific Conductivity (uS/cm)	33082.70		1207.80		14752.00	
Temperature (Celsius) (C)	15.12		13.71		15.47	
Turbidity (NTU)	5.19		6.97			
pH ()	6.88		9.93		8.90	
Field TDS and Sulfide (mg/L)						
Sulfide	0.10		0.43			
Total Dissolved Solids	22000.00		690.00		9590.00	
Total Metals (ug/L)						
Arsenic, Inorganic	86.50		767.00		118.00	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	120+75-2 10/31/17	GW-120+75-2-103117-(2 0) 120+75-2 10/31/17 Groundwater	GW-121+80-1-110317 121+80-1 11/03/17 Groundwater	GW-121+80-1-110317-(2 0) 121+80-1 11/03/17 Groundwater	GW-121+80-2-103017 121+80-2 10/30/17 Groundwater	GW-121+80-2-103017-(20) 121+80-2 10/30/17 Groundwater
Copper	1.55 J		66.90		2.70	
Lead and Compounds	2.16		14.20		1.11	
Mercury (elemental)	0.003		0.11		0.008	
Nickel Soluble Salts	1.06		6.62		19.80	
Field Ferrous Iron (ug/L)						
Ferrous Iron	830.00		100.00			
VOCs (ug/L)						
Chloroform	2.00 UJ		0.20 U		2.00 U	
Tetrachloroethylene	2.00 UJ		0.29		2.00 U	
Trichloroethylene	2.00 UJ		0.57		2.00 U	
Vinyl Chloride	2.00 UJ		0.68		2.00 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date:	GW-122+60-0-110317 122+60-0 11/03/17	0) 122+60-0	GW-122+60-1-110317 122+60-1	GW-122+60-1-110317-(2 0) 122+60-1	GW-122+60-2-110217 122+60-2 11/02/17	GW-122+60-2-110217-(20) 122+60-2
Constituent Sample Date:	Groundwater	11/03/17 Groundwater	11/03/17 Groundwater	11/03/17 Groundwater	Groundwater	11/02/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		127.00		109.00		1490.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		127.00		109.00		1490.00
Bromine anion (Br-)		42.30		34.80		18.10
Calcium		299.00		228.00		166.00
Chloride		11900.00		9990.00		10200.00
Dissolved Organic Carbon		2.33		2.02		37.80
Fluoride		0.64		0.69		0.50U
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.50 U		0.50 U		0.50U
Nitrite		0.50 U		0.50 U		0.50U
Potassium		273.00		222.00		171.00
Sodium		6680.00		5550.00		7330.00
Sulfate		1730.00		1490.00		183.00
Total Dissolved Solids		19600.00		15500.00		16500.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		9.01		20.80		50.40
Arsenic, Inorganic		9.71		15.00		3340.00
Arsenite Ion - As(O3)3-		1.00 U		0.22 J		710.00
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		5.90		4.37		2.69U
Iron		18.90 J		82.50		46.90
Lead and Compounds		0.30 U		0.30 U		0.30U



Table G-3: 2017 Groundwater Results

	Γ	T	T	T	T	T
Sample ID:	GW-122+60-0-110317	GW-122+60-0-110317-(2	GW-122+60-1-110317	GW-122+60-1-110317-(2	GW-122+60-2-110217	GW-122+60-2-110217-(
Site ID:	122+60-0	0) 122+60-0	122+60-1	0) 122+60-1	122+60-2	20) 122+60-2
Sample Date:	11/03/17	11/03/17	11/03/17	11/03/17	11/02/17	11/02/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium		785000.00		617000.00		283000.00
Manganese		6.77		97.30		23.20
Mercury (elemental)	•	0.002		0.001	•	0.001
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		515.00		335.00		45.60
Silicon		6930.00		14600.00		42600.00
Sum of arsenic species		9.01		21.02 J		760.40
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		0.50 U		0.50 U		8.40J
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)	•				•	
Dissolved Oxygen (DO) (mg/L)	6.89		6.46		0.70	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	46.00		39.50		-100.80	
Specific Conductivity (uS/cm)	36476.00		29484.80		30506.00	
Temperature (Celsius) (C)	7.44		9.92		15.30	
Turbidity (NTU)	5.18		2375.00		2.71	
pH ()	7.60		7.36		8.32	
Field TDS and Sulfide (mg/L)						
Sulfide	0				0.06	
Total Dissolved Solids	23000.00		19000.00		19820.00	
Total Metals (ug/L)						
Arsenic, Inorganic	10.00		5310.00		3240.00	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	11/03/17	GW-122+60-0-110317-(2 0) 122+60-0 11/03/17 Groundwater	GW-122+60-1-110317 122+60-1 11/03/17 Groundwater	GW-122+60-1-110317-(2 0) 122+60-1 11/03/17 Groundwater	GW-122+60-2-110217 122+60-2 11/02/17 Groundwater	GW-122+60-2-110217-(20) 122+60-2 11/02/17 Groundwater
Copper	6.02		398.00		2.00 J	
Lead and Compounds	0.30 U		6.43		0.14 J	
Mercury (elemental)	0.002		0.05		0.001	
Nickel Soluble Salts	490.00		2170.00		79.50	
Field Ferrous Iron (ug/L)						
Ferrous Iron	50.00		30400.00		120.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		1.00 U	
Tetrachloroethylene	0.20 U		0.20 U		1.00 U	
Trichloroethylene	0.20 U		0.20 U		1.00 U	
Vinyl Chloride	0.20 U		0.20 U		1.00 U	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-122+60-3-110317 122+60-3	0) 122+60-3	GW-124+00-0-103117 124+00-0	GW-124+00-0-103117-(2 0) 124+00-0	GW-124+00-1-103117	GW-124+00-1-103117-(20) 124+00-1
Sample Date: Constituent Media:	11/03/17 Groundwater	11/03/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		705.00		109.00		328.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		705.00		109.00		328.00
Bromine anion (Br-)		3.60		48.00		43.80
Calcium		149.00		338.00		327.00
Chloride		1670.00		14000.00		13400.00
Dissolved Organic Carbon		4.95		1.67		9.45
Fluoride		0.10 U		0.57		1.29
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.10 U		0.10 U		0.50U
Nitrite		0.10 U		0.10 U		0.50U
Potassium		51.60		275.00		263.00
Sodium		899.00		7410.00 J		7560.00
Sulfate		155.00		2070.00		1840.00
Total Dissolved Solids		3020.00		23000.00		22100.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		0.32 J		6.16		131.00
Arsenic, Inorganic		2.32 J		7.65		3130.00
Arsenite Ion - As(O3)3-		1.00 U		1.00 U		1840.00
Cacodylic Acid		1.05 U		1.05 U		2.10U
Copper		2.69 U		4.34		3.18
Iron		133.00		34.70 U		3330.00
Lead and Compounds		0.30 U		0.16 U		0.16U
	l	1		1	1	i e



Table G-3: 2017 Groundwater Results

Sample ID:	GW-122+60-3-110317	GW-122+60-3-110317-(2 0)	GW-124+00-0-103117	GW-124+00-0-103117-(2 0)	GW-124+00-1-103117	GW-124+00-1-103117- 20)
Site ID:		122+60-3	124+00-0	124+00-0	124+00-1	124+00-1
Sample Date: Constituent Media:	l .	11/03/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater	10/31/17 Groundwater
Oonstituent	Groundwater		Groundwater		Groundwater	
Magnesium		210000.00		882000.00		854000.00
Manganese		134.00		5.33		968.00
Mercury (elemental)		0.0004 U		0.0007		0.003
Methylarsonic acid		1.15 U		1.15 U		2.30U
Nickel Soluble Salts		0.47 J		311.00		65.20
Silicon		22200.00		4260.00		13100.00
Sum of arsenic species		0.32 J		6.16		1971.00
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		0.40		0.50 U		0.50JJ
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0.09				0.14	
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)	-95.40				-144.40	
Specific Conductivity (uS/cm)	5196.50				29847.10	
Temperature (Celsius) (C)	12.86				13.42	
Turbidity (NTU)	25.00		3.19		23.60	
pH ()	7.64				6.58	
Field TDS and Sulfide (mg/L)						
Sulfide	0		0.02		0.33	
Total Dissolved Solids	3380.00				19000.00	
Total Metals (ug/L)						
Arsenic, Inorganic	1.63 U		8.60		2520.00	



Table G-3: 2017 Groundwater Results

Sample II Site I Sample Dat Constituent Medi	0: 122+60-3 2: 11/03/17	GW-122+60-3-110317-(2 0) 122+60-3 11/03/17 Groundwater	GW-124+00-0-103117 124+00-0 10/31/17 Groundwater	GW-124+00-0-103117-(2 0) 124+00-0 10/31/17 Groundwater	GW-124+00-1-103117 124+00-1 10/31/17 Groundwater	GW-124+00-1-103117-(20) 124+00-1 10/31/17 Groundwater
Copper	5.66		5.09		9.26	
Lead and Compounds	0.30 U		0.16 U		0.94	
Mercury (elemental)	0.0004 U		0.001		0.02	
Nickel Soluble Salts	38.50		321.00		61.80	
Field Ferrous Iron (ug/L)						
Ferrous Iron	330.00		410.00		1500.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.16 J	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-124+00-2-103017	GW-124+00-2-103017-(2 0)	GW-124+00-3-110317	GW-124+00-3-110317-(2 0)	GW-125+50-0-103117	GW-125+50-0-103117-(
Site ID: Sample Date:	124+00-2 10/30/17	124+00-2 10/30/17	124+00-3 11/03/17	124+00-3 11/03/17	125+50-0 10/31/17	125+50-0 10/31/17
Constituent Media:		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		2000.00		303.00		100.00
Alkalinity, Carb.As CaCO3		37.30		1.00 U		1.00U
Alkalinity, Total		2040.00		303.00		100.00
Bromine anion (Br-)		16.60		2.29		43.10
Calcium		75.50		60.90		294.00
Chloride		10800.00		606.00		11900.00
Dissolved Organic Carbon		405.00		2.36		1.83
Fluoride		1.11		0.12		0.69
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.10 U		0.10 U		0.10U
Nitrite		0.10 UJ		0.10 U		0.10U
Potassium		143.00		24.60		268.00
Sodium		7530.00 J		273.00		6530.0W
Sulfate		395.00		0.80		1730.00
Total Dissolved Solids	•	19200.00		1260.00		19500.00
Dissolved Metals (ug/L)						
Aluminum		66.90 J		81.60 U		81.60U
Arsenate Ion - As(O4)3-		7940.00		0.23 J		60.20
Arsenic, Inorganic		39200.00		1.63 U		74.70
Arsenite Ion - As(O3)3-		48600.00		1.40		2.41
Cacodylic Acid		105.00 U		1.05 U		1.05U
Copper		2.69 U		2.69 U		5.00
Iron		464.00		852.00		292.00
Lead and Compounds		0.14 J		0.30 U		0.16U
	i	i .	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-124+00-2-103017	GW-124+00-2-103017-(2	GW-124+00-3-110317	GW-124+00-3-110317-(2	GW-125+50-0-103117	GW-125+50-0-103117-
Site ID:	124+00-2	0) 124+00-2	124+00-3	0) 124+00-3	125+50-0	20) 125+50-0
Sample Date:	10/30/17	10/30/17	11/03/17	11/03/17	10/31/17	10/31/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium		179000.00		75900.00		776000.00
Manganese		81.80		52.20		34.50
Mercury (elemental)		0.01		0.0004 U		0.005
Methylarsonic acid		115.00 U		1.15 U		1.15U
Nickel Soluble Salts		18.40		0.20 J		616.00
Silicon		19900.00		22000.00		7440.00
Sum of arsenic species		56540.00		1.63 J		62.61
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		6.55		0.39		0.50UJ
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0		0.07		5.37	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	-224.80		-104.80		-36.40	
Specific Conductivity (uS/cm)	25947.40		1982.20		26150.90	
Temperature (Celsius) (C)	14.64		11.81		13.76	
Turbidity (NTU)	0.37		19.70		2.53	
pH ()	8.39		7.47		7.08	
Field TDS and Sulfide (mg/L)						
Sulfide			0.11		0.02	
Total Dissolved Solids	17000.00		1290.00		17000.00	
Total Metals (ug/L)						
Arsenic, Inorganic	34400.00		5.63		87.00	
	I .	1	I .	1	I .	1



Table G-3: 2017 Groundwater Results

Sample I Site I Sample Da Constituent Med	D: 124+00-2 a: 10/30/17	GW-124+00-2-103017-(2 0) 124+00-2 10/30/17 Groundwater	GW-124+00-3-110317 124+00-3 11/03/17 Groundwater	GW-124+00-3-110317-(2 0) 124+00-3 11/03/17 Groundwater	GW-125+50-0-103117 125+50-0 10/31/17 Groundwater	GW-125+50-0-103117-(20) 125+50-0 10/31/17 Groundwater
Copper	2.69 U		5.72		10.20	1
Lead and Compounds	0.22		0.75		0.16 U	
Mercury (elemental)	0.02		0.001		0.008	
Nickel Soluble Salts	18.90		7.13		634.00	
Field Ferrous Iron (ug/L)						
Ferrous Iron	400.00		3300.00		270.00	
VOCs (ug/L)						
Chloroform	2.00 U		0.20 U		0.20 U	
Tetrachloroethylene	2.00 U		0.50		0.20 U	
Trichloroethylene	2.00 U		0.20 U		0.20 U	
Vinyl Chloride	0.93 J		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-125+50-1-103117 125+50-1 10/31/17 Groundwater	GW-125+50-1-103117-(2 0) 125+50-1 10/31/17 Groundwater	GW-125+50-2-103017 125+50-2 10/30/17 Groundwater	GW-125+50-2-103017-(2 0) 125+50-2 10/30/17 Groundwater	GW-125+50-3-110317 125+50-3 11/03/17 Groundwater	GW-125+50-3-110317- 20) 125+50-3 11/03/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		100.00		103.00		399.00
Alkalinity, Carb.As CaCO3	•	1.00 U		1.00 U		1.00U
Alkalinity, Total	•	100.00		103.00		399.00
Bromine anion (Br-)		36.80		45.40		2.64
Calcium		239.00		168.00		99.70
Chloride		10400.00		13100.00		827.00
Dissolved Organic Carbon		1.85		1.41		3.42
Fluoride		0.71		0.50 U		0.11
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.10 UJ		0.10 U		0.10U
Nitrite		0.18 J		0.10 U		0.10U
Potassium		233.00		131.00		31.40
Sodium		5510.00 J		6480.00 J		263.00
Sulfate		1500.00		1850.00		0.76
Total Dissolved Solids		17500.00		21500.00		1580.00
Dissolved Metals (ug/L)				İ		
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		66.50		25.00		0.45J
Arsenic, Inorganic		82.60		375.00		4.93
Arsenite Ion - As(O3)3-		1.00 U		613.00		4.64
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		4.60		2.69 U		2.69U
Iron		1620.00		2200.00		1290.00
Lead and Compounds		0.16 U		0.16 U		0.30U
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-125+50-1-103117	GW-125+50-1-103117-(2	GW-125+50-2-103017	GW-125+50-2-103017-(2	GW-125+50-3-110317	GW-125+50-3-110317-
Site ID:	125+50-1	0) 125+50-1	125+50-2	0) 125+50-2	125+50-3	20) 125+50-3
Sample Date:	10/31/17	10/31/17	10/30/17	10/30/17	11/03/17	11/03/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium		652000.00		830000.00		148000.00
Manganese		115.00	•	56.60	•	193.00
Mercury (elemental)		0.005	•	0.0005	•	0.0004U
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		462.00		2.82 U		0.39J
Silicon		8990.00		16300.00		22700.00
Sum of arsenic species		66.50		638.00		5.09J
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		0.50 UJ		0.50 U		0.25
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)			•		•	
Dissolved Oxygen (DO) (mg/L)	7.62		0.06		0.06	
Hydroxide Alkalinity (mg/L)			•		•	
Oxidation Reduction Potential (ORP) (mV)	-80.30		-187.20		-55.20	
Specific Conductivity (uS/cm)	29726.00		35717.00		2642.80	
Temperature (Celsius) (C)	12.58		15.50		11.75	
Turbidity (NTU)	6.53		3.47		7.54	
pH ()	7.76		7.19		7.08	
Field TDS and Sulfide (mg/L)						
Sulfide	0.02		0.05		0.06	
Total Dissolved Solids	18330.00		23200.00		1720.00	
Total Metals (ug/L)						
Arsenic, Inorganic	93.90		732.00		9.56	



Sample ID:		GW-125+50-1-103117-(2 0) 125+50-1	GW-125+50-2-103017	GW-125+50-2-103017-(2 0) 125+50-2	GW-125+50-3-110317	GW-125+50-3-110317-(20) 125+50-3
Sample Date:	10/31/17	10/31/17	10/30/17	10/30/17	11/03/17	11/03/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper	22.90		2.69 U		1.20 J	
Lead and Compounds	0.16 U		0.16 U		0.23 J	
Mercury (elemental)	0.007		0.002		0.005	
Nickel Soluble Salts	439.00		2.82 U		1.44	
Field Ferrous Iron (ug/L)						
Ferrous Iron	1840.00		2700.00		1160.00	
VOCs (ug/L)						
Chloroform	0.03 J		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.31	
Trichloroethylene	0.20 U		0.17 J		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-126+90-0-103117 126+90-0 10/31/17 Groundwater	GW-126+90-0-103117-(2 0) 126+90-0 10/31/17 Groundwater	GW-126+90-1-110217 126+90-1 11/02/17 Groundwater	GW-126+90-1-110217-(2 0) 126+90-1 11/02/17 Groundwater	GW-126+90-2-103017 126+90-2 10/30/17 Groundwater	GW-126+90-2-103017- 20) 126+90-2 10/30/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		103.00		119.00		135.00
Alkalinity, Carb.As CaCO3		1.00 U		1.00 U		1.00U
Alkalinity, Total		103.00		119.00		135.00
Bromine anion (Br-)		33.00		43.50		33.40
Calcium		205.00		330.00		367.00
Chloride		9410.00		13000.00		14000.00
Dissolved Organic Carbon		2.32		2.26		2.14
Fluoride		0.53		0.60		0.53
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.37		0.50 U		0.10U
Nitrite		0.10 U		0.50 U		0.10U
Potassium		201.00		299.00		252.00
Sodium		4750.00 J		7190.00		7020.00
Sulfate		1370.00		1940.00		1870.00
Total Dissolved Solids		15100.00		18700.00		21600.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		22.00		52.90		11.60
Arsenic, Inorganic		24.80		30.10		1130.00
Arsenite Ion - As(O3)3-		0.24 J		0.28 J		775.00
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		6.99		5.58		2.69U
Iron		34.70 U		203.00		265.00
Lead and Compounds		0.16 U		0.30 U		0.16U
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Table G-3: 2017 Groundwater Results

l l	126+90-0 10/31/17 Groundwater	0) 126+90-0 10/31/17 Groundwater 538000.00	126+90-1 11/02/17 Groundwater	0) 126+90-1 11/02/17 Groundwater	126+90-2 10/30/17 Groundwater	20) 126+90-2 10/30/17 Groundwater
Constituent Sample Date: Media: Magnesium	10/31/17	10/31/17 Groundwater 538000.00	11/02/17	11/02/17	10/30/17	10/30/17
Constituent Media: Magnesium		Groundwater 538000.00				
Magnesium	- Clouridates	538000.00	Crounawater	o real awater	or our id water	
				831000.00		886000.00
Manganese		0.00				l .
Maraum (alamantal)		2.02		107.00		25.90
Mercury (elemental)		0.002		0.01		0.001
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		316.00		463.00		1.16J
Silicon		6380.00		5890.00		30800.00
Sum of arsenic species		22.24 J		53.18 J		786.60
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		0.50 UJ		0.50 UJ		0.50U
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	7.75		8.60		0.07	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	36.20		12.80		-156.60	
Specific Conductivity (uS/cm)	19382.00		28094.70		29263.70	
Temperature (Celsius) (C)	11.04		10.16		15.41	
Turbidity (NTU)	19.10		3.85		0.75	
pH ()	7.08		6.39		7.38	
Field TDS and Sulfide (mg/L)						
Sulfide	0.10		0.02		0.23	
Total Dissolved Solids	13000.00		15000.00		19000.00	
Total Metals (ug/L)						
Arsenic, Inorganic	31.20		1190.00		1120.00	



Sample ID: Site ID: Sample Date: Constituent Media:	10/31/17	GW-126+90-0-103117-(2 0) 126+90-0 10/31/17 Groundwater	GW-126+90-1-110217 126+90-1 11/02/17 Groundwater	GW-126+90-1-110217-(2 0) 126+90-1 11/02/17 Groundwater	GW-126+90-2-103017 126+90-2 10/30/17 Groundwater	GW-126+90-2-103017-(20) 126+90-2 10/30/17 Groundwater
Copper	11.10		632.00		2.69 U	
Lead and Compounds	0.16 U		0.48		0.16 U	
Mercury (elemental)	0.004		0.16		0.001	
Nickel Soluble Salts	320.00		623.00		1.17 J	
Field Ferrous Iron (ug/L)						
Ferrous Iron	2580.00		400.00		270.00	
VOCs (ug/L)						
Chloroform	0.03 J		0.20 U		0.20 U	
Tetrachloroethylene	0.20 U		0.20 U		0.20 U	
Trichloroethylene	0.20 U		0.20 U		0.09 J	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-126+90-3-103117-(2 0)_DC 126+90-3 10/31/17 Groundwater	GW-126+90-3-103117_D C 126+90-3 10/31/17 Groundwater	GW-128+30-0-103017 128+30-0 10/30/17 Groundwater	GW-128+30-0-103017-(2 0) 128+30-0 10/30/17 Groundwater	GW-128+30-1-103117 128+30-1 10/31/17 Groundwater	GW-128+30-1-103117- 20) 128+30-1 10/31/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	297.50			100.00		89.10
Alkalinity, Carb.As CaCO3	1.00 U			1.00 U		1.00U
Alkalinity, Total	297.50			100.00		89.10
Bromine anion (Br-)	1.43			42.60		36.10
Calcium	63.70		•	302.00		290.00
Chloride	356.50		•	12200.00		11300.00
Dissolved Organic Carbon	2.59			1.80		2.33
Fluoride	0.50 U			0.54		0.74
Hydroxide Alkalinity	1.00 U			1.00 U		1.00U
Nitrate	0.10 U			0.10 U		0.5 0 UJ
Nitrite	0.10 U			0.10 U		0.50UJ
Potassium	17.10			280.00		251.00
Sodium	133.50			6540.00 J		6710.00J
Sulfate	0.10 U			1760.00		1510.00
Total Dissolved Solids	887.00			21000.00		17900.00
Dissolved Metals (ug/L)				İ		
Aluminum	81.60 U			81.60 U		81.60U
Arsenate Ion - As(O4)3-	0.61 J			12.00		3.30
Arsenic, Inorganic	2.91			14.00		7.93
Arsenite Ion - As(O3)3-	5.41			0.27 J		2.21
Cacodylic Acid	1.05 U			1.05 U		1.05U
Copper	2.69 U			8.28		670.00
Iron	243.00			46.70		53700.00
Lead and Compounds	0.30 U			0.16 U		0.16U
	l	I	I	I	I	i



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-126+90-3-103117-(2 0)_DC 126+90-3 10/31/17 Groundwater	GW-126+90-3-103117_D C 126+90-3 10/31/17 Groundwater	GW-128+30-0-103017 128+30-0 10/30/17 Groundwater	GW-128+30-0-103017-(2 0) 128+30-0 10/30/17 Groundwater	GW-128+30-1-103117 128+30-1 10/31/17 Groundwater	GW-128+30-1-103117- 20) 128+30-1 10/31/17 Groundwater
Constituent Media: Magnesium	64100.00	Groundwater	Crodinawater	773000.00	Groundwater	757000.00
Manganese	60.45			20.40		3100.00
Mercury (elemental)	0.0003 J			0.002		0.0010
Methylarsonic acid	1.15 U			1.15 U		1.15U
Nickel Soluble Salts	0.24 J			434.00		8310.00
Silicon	22200.00			5750.00		10700.00
Sum of arsenic species	6.02 J			12.27 J		5.51
·	0.02 3			12.27 5		3.51
Dissolved Ortho-Phosphorus (mg/L)						
p-Phosphate {PO4}, as P	0.50 UJ			0.50 U		0.50UJ
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05	5.76		2.04	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-151.40	63.30		14.60	
Specific Conductivity (uS/cm)		1646.10	26443.90		32114.00	
Temperature (Celsius) (C)		13.44	13.83		16.06	
Turbidity (NTU)		11.70	3.82		107.50	
oH ()		8.09	6.90		6.32	
Field TDS and Sulfide (mg/L)						
Sulfide		0.11	0.02		0.47	
Total Dissolved Solids		1070.00	17000.00		21250.00	
Total Metals (ug/L)						
Arsenic, Inorganic		39.70	14.20	-	2610.00	



Sample ID: Site ID: Sample Date: Constituent Media:	0)_DC 126+90-3	GW-126+90-3-103117_D C 126+90-3 10/31/17 Groundwater	GW-128+30-0-103017 128+30-0 10/30/17 Groundwater	GW-128+30-0-103017-(2 0) 128+30-0 10/30/17 Groundwater	GW-128+30-1-103117 128+30-1 10/31/17 Groundwater	GW-128+30-1-103117-(20) 128+30-1 10/31/17 Groundwater
Copper		2.52 J	10.20		2000.00	
Lead and Compounds		0.63	0.16 U		1.24	
Mercury (elemental)		0.03	0.002		0.007	
Nickel Soluble Salts		2.04	455.00		11900.00	
Field Ferrous Iron (ug/L)						
Ferrous Iron		230.00	260.00		40000.00	
VOCs (ug/L)						
Chloroform		0.20 UJ	0.20 U		0.20 U	
Tetrachloroethylene		0.20 UJ	0.20 U		0.20 U	
Trichloroethylene		0.20 UJ	0.20 U		0.20 U	
Vinyl Chloride		0.20 UJ	0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-128+30-2-103017 128+30-2 10/30/17 Groundwater	GW-128+30-2-103017-(2 0) 128+30-2 10/30/17 Groundwater	GW-128+30-3-110317 128+30-3 11/03/17 Groundwater	GW-128+30-3-110317-(2 0) 128+30-3 11/03/17 Groundwater	GW-129+65-0-103017 129+65-0 10/30/17 Groundwater	GW-129+65-0-103017- 20) 129+65-0 10/30/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		593.00		285.00		92.40
Alkalinity, Carb.As CaCO3		1.00 U	•	1.00 U		1.00U
Alkalinity, Total		593.00		285.00		92.40
Bromine anion (Br-)		16.80		1.38		34.20
Calcium		70.50		35.60		236.00
Chloride		5740.00		390.00		10200.00
Dissolved Organic Carbon		12.40		2.72		1.91
Fluoride		0.14		0.11		0.57
Hydroxide Alkalinity		1.00 U		1.00 U		1.00U
Nitrate		0.10 U		0.10 U		0.10
Nitrite		0.10 U		0.10 U		0.10U
Potassium		117.00		14.30		224.00
Sodium		3840.00 J		226.00		5420.00
Sulfate		613.00		0.74		1430.00
Total Dissolved Solids		10000.00		931.00		16600.00
Dissolved Metals (ug/L)						
Aluminum		81.60 U		81.60 U		81.60U
Arsenate Ion - As(O4)3-		2.79		1.00 U		1.27
Arsenic, Inorganic		91.70		1.63 U		2.00
Arsenite Ion - As(O3)3-		17.30		1.00 U		1.00U
Cacodylic Acid		1.05 U		1.05 U		1.05U
Copper		2.69 U		2.69 U		3.82
Iron		34.70 U		648.00		34.70U
Lead and Compounds		0.16 U		0.30 U		0.16U
		i	I	1	I	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date:		GW-128+30-2-103017-(2 0) 128+30-2 10/30/17	GW-128+30-3-110317 128+30-3 11/03/17	GW-128+30-3-110317-(2 0) 128+30-3 11/03/17	GW-129+65-0-103017 129+65-0 10/30/17	GW-129+65-0-103017- 20) 129+65-0 10/30/17
Constituent Media:	1	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium		195000.00		45400.00		631000.00
Manganese		5.42		31.80		4.84
Mercury (elemental)		0.002		0.0004 U		0.001
Methylarsonic acid		1.15 U		1.15 U		1.15U
Nickel Soluble Salts		1.43 J		0.22 J		769.00
Silicon		26500.00		22700.00		6040.00
Sum of arsenic species		20.09		2.00 U		1.27
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P		1.59		0.41		0.50
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•		•			
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0.04		0.07		8.08	
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	-309.40		-120.70		47.20	
Specific Conductivity (uS/cm)	17830.00		1753.00		19159.50	
Temperature (Celsius) (C)	14.57		10.03		14.26	
Turbidity (NTU)	0.87		16.00		0.86	
pH ()	8.29		7.90		6.84	
Field TDS and Sulfide (mg/L)						
Sulfide	6.90		0.59		0.05	
Total Dissolved Solids	11580.00		1000.00		12000.00	
Total Metals (ug/L)						
Arsenic, Inorganic	190.00		4.83		1.81 J	



Sample ID: Site ID: Sample Date: Media:	GW-128+30-2-103017 128+30-2 10/30/17 Groundwater	GW-128+30-2-103017-(2 0) 128+30-2 10/30/17 Groundwater	GW-128+30-3-110317 128+30-3 11/03/17 Groundwater	GW-128+30-3-110317-(2 0) 128+30-3 11/03/17 Groundwater	GW-129+65-0-103017 129+65-0 10/30/17 Groundwater	GW-129+65-0-103017-(20) 129+65-0 10/30/17 Groundwater
Constituent		Orodridwater		Orodridwater		Groundwater
Copper	2.69 U		25.40		4.85	
Lead and Compounds	0.16 U		3.55		0.16 U	
Mercury (elemental)	0.002		0.01		0.002	
Nickel Soluble Salts	2.41 J		15.50		638.00	
Field Ferrous Iron (ug/L)						
Ferrous Iron	50.00		550.00		30.00	
VOCs (ug/L)						
Chloroform	0.20 U		0.20 U		0.04 J	
Tetrachloroethylene	0.20 U		0.22		0.20 U	
Trichloroethylene	0.06 J		0.20 U		0.20 U	
Vinyl Chloride	0.20 U		0.20 U		0.20 U	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-129+65-1-103017-(2 0)	GW-129+65-1-103117	GW-129+65-1-103117-(2 0)	GW-129+65-2-103017	GW-129+65-2-103017-(2 0)	GW-129+65-3-110317
Site ID:	129+65-1	129+65-1	129+65-1	129+65-2	129+65-2	129+65-3
Sample Date:		10/31/17	10/31/17	10/30/17	10/30/17	11/03/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			91.30		339.00	
Alkalinity, Carb.As CaCO3			1.00 U		1.00 U	
Alkalinity, Total			91.30		339.00	
Bromine anion (Br-)			36.10		33.10	
Calcium			199.00		240.00	
Chloride		•	10200.00		9800.00	
Dissolved Organic Carbon	1.96				8.89	
Fluoride			0.64		0.50 U	
Hydroxide Alkalinity			1.00 U		1.00 U	
Nitrate			0.50 UJ		0.10 U	
Nitrite			0.50 UJ		0.10 U	
Potassium			197.00		191.00	
Sodium			4920.00 J		5190.00 J	
Sulfate			1460.00		1280.00	
Total Dissolved Solids			17200.00		16400.00	
Dissolved Metals (ug/L)						
Aluminum			81.60 U		81.60 U	
Arsenate Ion - As(O4)3-			0.91 J		0.73 J	
Arsenic, Inorganic			5.69		3.85 J	
Arsenite Ion - As(O3)3-			0.22 J		1.00 U	
Cacodylic Acid			1.05 U		1.05 U	
Copper			52.90		6.73 U	
Iron			2050.00		408.00 U	
Lead and Compounds			0.09 J		0.30 J	
	I	I	1	1	1	I



Table G-3: 2017 Groundwater Results

Sample ID:	GW-129+65-1-103017-(2	GW-129+65-1-103117	GW-129+65-1-103117-(2	GW-129+65-2-103017	GW-129+65-2-103017-(2	GW-129+65-3-110317
·	0)		0)		0)	
Site ID: Sample Date:		129+65-1 10/31/17	129+65-1 10/31/17	129+65-2 10/30/17	129+65-2 10/30/17	129+65-3 11/03/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium			561000.00		657000.00	
Manganese			165.00		18.60	
Mercury (elemental)			0.006		0.0002 J	
Methylarsonic acid			1.15 U		1.15 U	
Nickel Soluble Salts			890.00		0.99 J	
Silicon			6460.00		23900.00	
Sum of arsenic species			1.13 J		0.73 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P			0.50 UJ		0.52	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)				0.02		0.08
Hydroxide Alkalinity (mg/L)				•		
Oxidation Reduction Potential (ORP) (mV)				-327.30		-94.50
Specific Conductivity (uS/cm)				22541.00		5852.40
Temperature (Celsius) (C)				14.99		9.84
Turbidity (NTU)				1.45		5.82
pH ()				7.12		7.76
Field TDS and Sulfide (mg/L)						
Sulfide				22.00		0.02
Total Dissolved Solids				15000.00		4000.00
Total Metals (ug/L)						
Arsenic, Inorganic		250.00		4.23		2.67J



Constituent	Sample ID: Site ID: Sample Date: Media:	GW-129+65-1-103017-(2 0) 129+65-1 10/30/17 Groundwater	GW-129+65-1-103117 129+65-1 10/31/17 Groundwater	GW-129+65-1-103117-(2 0) 129+65-1 10/31/17 Groundwater	GW-129+65-2-103017 129+65-2 10/30/17 Groundwater	GW-129+65-2-103017-(2 0) 129+65-2 10/30/17 Groundwater	GW-129+65-3-110317 129+65-3 11/03/17 Groundwater
Copper			689.00		2.69 U		1.27J
Lead and Compounds			0.23		0.16 U		0.13J
Mercury (elemental)			0.25		0.0002 J		0.002
Nickel Soluble Salts			999.00		1.03 J		3.43
Field Ferrous Iron (ug/L)							
Ferrous Iron					50.00		640.00
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		0.20U
Tetrachloroethylene			0.20 U		0.20 U		0.18J
Trichloroethylene			0.20 U		0.20 U		0.20U
Vinyl Chloride			0.20 U		0.20 U		0.20



Table G-3: 2017 Groundwater Results

Sample ID: Site ID:		GW-131+00-1-102717 131+00-1	GW-131+00-1-102717-(2 0) 131+00-1	GW-131+00-2-102717 131+00-2	GW-131+00-2-102717-(2 0) 131+00-2	GW-131+00-3-110317
Sample Date: Constituent Media:		10/27/17	10/27/17	10/27/17	10/27/17	11/03/17
	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	581.00		414.00		1180.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		87.00	
Alkalinity, Total	581.00		414.00		1260.00	
Bromine anion (Br-)	3.53		2.97		24.30	
Calcium	161.00		118.00		79.90	
Chloride	1650.00		844.00		9460.00	
Dissolved Organic Carbon	4.26		3.74		115.00	
Fluoride	0.10 U		0.10 U		0.50	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 U		0.10 UJ	
Nitrite	0.10 U		0.10 U		0.10 UJ	
Potassium	35.70		28.40		121.00	
Sodium	737.00		302.00 J		6130.00 J	
Sulfate	0.84		0.10 U		545.00	
Total Dissolved Solids	3010.00		1700.00		15800.00	
Dissolved Metals (ug/L)						
Aluminum	81.60 U		81.60 U		81.60 U	
Arsenate Ion - As(O4)3-	1.00 U		0.33 J		2.75	
Arsenic, Inorganic	1.63 U		1.63 U		1.66	
Arsenite Ion - As(O3)3-	1.00 U		1.00 U		5.31	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	2.69 U		0.91 U		2.69 U	
Iron	694.00		884.00		416.00	
Lead and Compounds	0.30 U		0.30 U		0.16 U	
	I	I	1	I	1	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	11/03/17	GW-131+00-1-102717 131+00-1 10/27/17 Groundwater	GW-131+00-1-102717-(2 0) 131+00-1 10/27/17 Groundwater	GW-131+00-2-102717 131+00-2 10/27/17 Groundwater	GW-131+00-2-102717-(2 0) 131+00-2 10/27/17 Groundwater	GW-131+00-3-11031 131+00-3 11/03/17 Groundwater
Magnesium	190000.00	Croundwater	126000.00	Crounawater	166000.00	Croditawater
Manganese	107.00		128.00		41.10	
Mercury (elemental)	0.0004 U		0.0004 U		0.004 U	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	0.21 J		0.30 J		128.00	
Silicon	32000.00		23100.00		34300.00	
Sum of arsenic species	2.00 U		0.33 J		8.06	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.32		0.10 U		2.30 J	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•					
Alkalinity, Total (mg/L)	•					
Dissolved Oxygen (DO) (mg/L)		0.08		0.23		0.08
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)		-133.90		-119.20		-118.50
Specific Conductivity (uS/cm)		3201.90		12806.20		2695.50
Temperature (Celsius) (C)		14.48		14.67		10.83
Turbidity (NTU)		8.01		15.10		3.91
oH ()		7.82		8.31		7.58
Field TDS and Sulfide (mg/L)						
Sulfide		0.05		0.80		0.01
Total Dissolved Solids		2080.00		8000.00		1740.00
Total Metals (ug/L)						
Arsenic, Inorganic		1.46 J		26.90		1.63U



Constituent	Sample ID: Site ID: Sample Date: Media:	11/03/17	GW-131+00-1-102717 131+00-1 10/27/17 Groundwater	GW-131+00-1-102717-(2 0) 131+00-1 10/27/17 Groundwater	GW-131+00-2-102717 131+00-2 10/27/17 Groundwater	GW-131+00-2-102717-(2 0) 131+00-2 10/27/17 Groundwater	GW-131+00-3-110317 131+00-3 11/03/17 Groundwater
Copper			2.68		2.11 J		2.69U
Lead and Compounds			0.23 J		0.19		0.30U
Mercury (elemental)			0.0009		0.001		0.0004U
Nickel Soluble Salts			1.82		33.70		0.35J
Field Ferrous Iron (ug/L)							
Ferrous Iron			750.00		770.00		780.00
VOCs (ug/L)							
Chloroform			0.20 U		2.00 U		0.20U
Tetrachloroethylene			0.20 U		2.00 U		0.13ป
Trichloroethylene			0.20 U		2.00 U		0.20
Vinyl Chloride			0.20 U		2.00 U		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	11/03/17	GW-1B4-1-102617-2.9-7. 9 1B4-1 10/26/17 Groundwater	GW-1B4-1-102617-2.9-7. 9-(20) 1B4-1 10/26/17 Groundwater	GW-1C1-3-110317 1C1-3 11/03/17 Groundwater	GW-1C1-3-110317-(20) 1C1-3 11/03/17 Groundwater	GW-1C2-2-101117-13.8 -23.6 1C2-2 10/11/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	425.00		509.00		302.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	425.00		509.00		302.00	
Bromine anion (Br-)	2.85		0.12		2.83	
Calcium	120.00		104.00		71.80	
Chloride	844.00		15.60		876.00	
Dissolved Organic Carbon	3.28	•	15.20	•	2.65	
Fluoride	0.50 U	•	0.82	•	0.50 U	
Hydroxide Alkalinity	1.00 U	•	1.00 U	•	1.00 U	
Nitrate	0.50 U		0.10 U		0.50 U	
Nitrite	0.50 U		0.10 U		0.50 U	
Potassium	30.10		4.16		50.10	
Sodium	309.00		50.90 J		376.00	
Sulfate	1.01		66.30		1.14	
Total Dissolved Solids	1680.00		648.00		1690.00	
Dissolved Metals (ug/L)						
Aluminum	81.60 U		17.00 J		50.00 U	
Arsenate Ion - As(O4)3-	1.00 U		41.60		0.82 J	
Arsenic, Inorganic	1.63 U		52.10		1.26	
Arsenite Ion - As(O3)3-	1.00 U		15.20		0.45 J	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	2.69 U		14.50		1.00 U	
Iron	921.00		407.00		1280.00	İ
Lead and Compounds	0.30 U		0.10 U		0.20 U	
	I	I	l	l	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date:	0) 131+00-3 11/03/17	GW-1B4-1-102617-2.9-7. 9 1B4-1 10/26/17	GW-1B4-1-102617-2.9-7. 9-(20) 1B4-1 10/26/17	GW-1C1-3-110317 1C1-3 11/03/17	GW-1C1-3-110317-(20) 1C1-3 11/03/17	GW-1C2-2-101117-13 -23.6 1C2-2 10/11/17
Constituent Media:		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium	128000.00		61400.00		96800.00	
Manganese	149.00		117.00		142.00	
Mercury (elemental)	0.0004 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	0.18 J		18.40		5.53	
Silicon	22200.00		16700.00		17600.00	
Sum of arsenic species	2.00 U		56.80		1.27 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.50 U		0.10 U		0.69	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)			•			
Dissolved Oxygen (DO) (mg/L)		2.59	•	0.07		0.01
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		5.40		-139.40		-106.80
Specific Conductivity (uS/cm)		860.40		3224.60		21055.90
Temperature (Celsius) (C)		15.33		12.37		13.77
Turbidity (NTU)		4.01		3.80		17.90
pH ()		6.93		7.78		6.56
Field TDS and Sulfide (mg/L)						
Sulfide		0.04		0		0.04
Total Dissolved Solids		1000.00		2000.00		14000.00
Total Metals (ug/L)						
Arsenic, Inorganic		129.00		1.58		5.02
	1	1		1		1



	Sample ID: Site ID: mple Date: Media:	11/03/17	GW-1B4-1-102617-2.9-7. 9 1B4-1 10/26/17 Groundwater	GW-1B4-1-102617-2.9-7. 9-(20) 1B4-1 10/26/17 Groundwater	GW-1C1-3-110317 1C1-3 11/03/17 Groundwater	GW-1C1-3-110317-(20) 1C1-3 11/03/17 Groundwater	GW-1C2-2-101117-13.8 -23.6 1C2-2 10/11/17 Groundwater
Copper			21.50		1.00 U		10.00U
Lead and Compounds			1.50		0.20 U		2.00U
Mercury (elemental)		•	0.10 U		0.10 U		0.20U
Nickel Soluble Salts			21.80		4.83		2.22J
Field Ferrous Iron (ug/L)							
Ferrous Iron			720.00		890.00		9900.00
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		0.20U
Tetrachloroethylene			0.20 U		0.10 J		0.20U
Trichloroethylene			0.20 U		0.20 U		0.20U
Vinyl Chloride			0.20 U		0.20 U		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/11/17	GW-1C3-1-101117-3.5-8. 5 1C3-1 10/11/17 Groundwater	GW-1C3-1-101117-3.5-8. 5-(20) 1C3-1 10/11/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6 1D1-1 10/12/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6-(20) 1D1-1 10/12/17 Groundwater	GW-2A1-1-101317-9-14 2A1-1 10/13/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1470.00		996.00		700.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		262.00	
Alkalinity, Total	1470.00		996.00		962.00	
Bromine anion (Br-)	5.22 J					
Calcium	137.00		31.30		2.08	
Chloride	8240.00		247.00		1010.00	
Dissolved Organic Carbon	88.50		38.20		51.20	
Fluoride	5.00 U		3.93		2.61	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	5.00 U		1.00 U		1.00 UJ	
Nitrite						
Potassium	165.00		11.50		5.17	
Sodium	5500.00		563.00		1150.00	
Sulfate	5.87		6.95		7.67	
Total Dissolved Solids	12800.00		1520.00		2570.00	
Dissolved Metals (ug/L)						
Aluminum	29.00 J		29.70 J		48.70 J	
Arsenate Ion - As(O4)3-	2.13		145.00		10.30	
Arsenic, Inorganic	5.24		751.00		24.00	
Arsenite Ion - As(O3)3-	1.24		584.00		6.36	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	10.00 U		2.50 U		14.80	
Iron	76800.00		20700.00		567.00	
Lead and Compounds	2.00 U		0.50 U		3.58	
	I	I		I	1	I



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	23.6-(20) 1C2-2 10/11/17	GW-1C3-1-101117-3.5-8. 5 1C3-1 10/11/17 Groundwater	GW-1C3-1-101117-3.5-8. 5-(20) 1C3-1 10/11/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6 1D1-1 10/12/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6-(20) 1D1-1 10/12/17 Groundwater	GW-2A1-1-101317-9-1 2A1-1 10/13/17 Groundwater
Magnesium	246000.00		36200.00		170.00	
Manganese	618.00		744.00		5.60	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		0.23 J	
Nickel Soluble Salts	2.10 J		1.38 J		22.20	
Silicon	21300.00		22800.00		40600.00	
Sum of arsenic species	3.37		729.00		16.66	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	5.00 U		1.49		7.17 J	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)			•			
Dissolved Oxygen (DO) (mg/L)		0.02	•	0.01		0.05
Hydroxide Alkalinity (mg/L)			•			
Oxidation Reduction Potential (ORP) (mV)		-174.70		-67.90		-50.00
Specific Conductivity (uS/cm)		2162.70		4571.50		1830.20
Temperature (Celsius) (C)		16.98	•	15.51		15.56
Turbidity (NTU)		15.70		7.20		4.82
pH ()		7.29		9.24		6.82
Field TDS and Sulfide (mg/L)						
Sulfide		0.06		0.27		0.08
Total Dissolved Solids		1000.00		3000.00		1000.00
Total Metals (ug/L)						
Arsenic, Inorganic		741.00		26.40		87.90
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Sample Site Sample D Constituent Me	23.6-(20) 1C2-2 te: 10/11/17	GW-1C3-1-101117-3.5-8. 5 1C3-1 10/11/17 Groundwater	GW-1C3-1-101117-3.5-8. 5-(20) 1C3-1 10/11/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6 1D1-1 10/12/17 Groundwater	GW-1D1-1-101217-9.6-1 4.6-(20) 1D1-1 10/12/17 Groundwater	GW-2A1-1-101317-9-14 2A1-1 10/13/17 Groundwater
Copper		2.50 U		17.50		6.36
Lead and Compounds		0.50 U		4.49		0.94
Mercury (elemental)		0.20 U		0.20 U		0.10U
Nickel Soluble Salts		1.53 J		24.80		4.43
Field Ferrous Iron (ug/L)						
Ferrous Iron		3000.00		380.00		7700.00
VOCs (ug/L)						
Chloroform		0.20 U		0.20 U		0.03J
Tetrachloroethylene		0.20 U		0.20 U		0.13J
Trichloroethylene		0.20 U		0.98		0.92
Vinyl Chloride		0.20 U		0.10 J		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	20) 2A1-1 10/13/17	GW-2B1-1-101317-3-10 2B1-1 10/13/17 Groundwater	GW-2B1-1-101317-3-10-(20) 2B1-1 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8 2B2-2 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8-(20) 2B2-2 10/13/17 Groundwater	GW-2C1-1R-101117-5.1 -10.1 2C1-1R 10/11/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	538.00		804.00		1330.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	538.00		804.00		1330.00	
Bromine anion (Br-)	0.32		3.95		33.80	
Calcium	118.00		106.00		232.00	
Chloride	238.00 J		5270.00		100000.00	
Dissolved Organic Carbon	11.90		160.00		65.20	
Fluoride	1.47		2.00 U		10.00 U	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		2.00 U		10.00 U	
Nitrite	0.10 U		2.00 U		10.00 U	
Potassium	7.14		28.30		375.00	
Sodium	253.00		3650.00		70400.00	
Sulfate	212.00		6.21		1440.00	
Total Dissolved Solids	1210.00		8760.00		157000.00	
Dissolved Metals (ug/L)						
Aluminum	100.00 U		957.00		2500.00 U	
Arsenate Ion - As(O4)3-	12.10		96.80		0.36 J	
Arsenic, Inorganic	90.10		147.00		14.80 J	
Arsenite Ion - As(O3)3-	72.80		55.60		0.65 J	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	1.00 U		13.30		10.00 U	İ
Iron	9360.00		38500.00		24800.00	
Lead and Compounds	0.20 U		9.50		2.00 U	
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Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	20) 2A1-1 10/13/17	GW-2B1-1-101317-3-10 2B1-1 10/13/17 Groundwater	GW-2B1-1-101317-3-10-(20) 2B1-1 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8 2B2-2 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8-(20) 2B2-2 10/13/17 Groundwater	GW-2C1-1R-101117-5 -10.1 2C1-1R 10/11/17 Groundwater
Magnesium	57000.00		48600.00		173000.00	
Manganese	78.10		354.00		5600.00	
Mercury (elemental)	0.20 U		0.20 U		0.20 U	
Methylarsonic acid	1.15 U		0.29 J		1.15 U	
Nickel Soluble Salts	4.09		10.60		10.00 U	
Silicon	17800.00		17200.00		9930.00	
Sum of arsenic species	84.90		152.40		1.01 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.21		6.11		10.00 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.01		0.02		0.01
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-144.40		-65.60		-154.50
Specific Conductivity (uS/cm)		17040.00		169951.80		3640.90
Temperature (Celsius) (C)		16.02		14.23		21.87
Turbidity (NTU)		1.12		1.67		3.88
pH ()		6.22		6.20		7.17
Field TDS and Sulfide (mg/L)						
Sulfide		0.30		0		0.63
Total Dissolved Solids		11000.00		111000.00		2000.00
Total Metals (ug/L)						
Arsenic, Inorganic		146.00		7.88		287.00
	1	1	1	1	1	i



	Sample ID: Site ID: mple Date: Media:	GW-2A1-1-101317-9-14-(20) 2A1-1 10/13/17 Groundwater	GW-2B1-1-101317-3-10 2B1-1 10/13/17 Groundwater	GW-2B1-1-101317-3-10-(20) 2B1-1 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8 2B2-2 10/13/17 Groundwater	GW-2B2-2-101317-30.8- 35.8-(20) 2B2-2 10/13/17 Groundwater	GW-2C1-1R-101117-5. -10.1 2C1-1R 10/11/17 Groundwater
Copper			9.78 J		10.00 U		21.20
Lead and Compounds			7.56		2.00 U		68.70
Mercury (elemental)			0.10 U		0.20 U		0.20U
Nickel Soluble Salts			8.22 J		1.02 J		5.73
Field Ferrous Iron (ug/L)							
Ferrous Iron			14800.00		43800.00		7400.00
VOCs (ug/L)							
Chloroform			0.04 J		2.67		0.20U
Tetrachloroethylene			0.20 U		0.20 U		0.20U
Trichloroethylene			0.20 U		0.20 U		0.20U
Vinyl Chloride			0.15 J	•	0.20 U	•	0.20U



Table G-3: 2017 Groundwater Results

Sample ID:	GW-2C1-1R-101117-5.1-	GW-2C2-2-101117-20.6-	GW-2C2-2-101117-20.6-	GW-2D1-1-101217-7.5-1	GW-2D1-1-101217-7.5-1	GW-2D3-2-101217-26.5
Site ID:	10.1-(20) 2C1-1R	25.6 2C2-2	25.6-(20) 2C2-2	2.5 2D1-1	2.5-(20) 2D1-1	-31.5 2D3-2
Sample Date:		10/11/17	10/11/17	10/12/17	10/12/17	10/12/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	859.00		518.00		599.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	859.00		518.00		599.00	
Bromine anion (Br-)	•					
Calcium	6.57		383.00		5.41	
Chloride	582.00		28600.00		1090.00	
Dissolved Organic Carbon	151.00		20.30		35.80	
Fluoride	4.22		10.00 U		5.64	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	1.00 U		10.00 U		2.00 U	
Nitrite	•					
Potassium	5.31		238.00		13.50	
Sodium	787.00		16900.00		1080.00	
Sulfate	7.59		311.00		5.36	
Total Dissolved Solids	2110.00		40600.00		2360.00	
Dissolved Metals (ug/L)						
Aluminum	1850.00		250.00 U		322.00	
Arsenate Ion - As(O4)3-	223.00		6.10		1.88	
Arsenic, Inorganic	288.00		8.70		3.61	
Arsenite Ion - As(O3)3-	81.70		1.63		1.97	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	14.90		10.00 U		1.86 J	
Iron	9400.00		112000.00		7230.00	
Lead and Compounds	36.20		2.00 U		0.99	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10.1-(20) 2C1-1R 10/11/17	GW-2C2-2-101117-20.6- 25.6 2C2-2 10/11/17 Groundwater	GW-2C2-2-101117-20.6- 25.6-(20) 2C2-2 10/11/17 Groundwater	GW-2D1-1-101217-7.5-1 2.5 2D1-1 10/12/17 Groundwater	GW-2D1-1-101217-7.5-1 2.5-(20) 2D1-1 10/12/17 Groundwater	GW-2D3-2-101217-26 -31.5 2D3-2 10/12/17 Groundwater
Magnesium	2730.00		247000.00		894.00	
Manganese	226.00		2930.00		309.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	0.49 J		1.15 U		1.15 U	
Nickel Soluble Salts	3.48		1.36 J		1.20 J	
Silicon	24300.00		6850.00		22200.00	
Sum of arsenic species	304.70		7.73		3.85	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	9.57		10.00 U		8.85	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)			•			
Alkalinity, Total (mg/L)			•			
Dissolved Oxygen (DO) (mg/L)		0.04	•	0.07		0.03
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-96.40	•	-127.80		-73.40
Specific Conductivity (uS/cm)		61476.90		3253.40		70618.00
Temperature (Celsius) (C)		15.04	•	18.36		14.40
Turbidity (NTU)		2.15	•	4.88		17.80
pH ()		6.11		7.12		6.26
Field TDS and Sulfide (mg/L)						
Sulfide		0.08		0.14		0.02
Total Dissolved Solids		40000.00		2000.00		46000.00
Total Metals (ug/L)						
Arsenic, Inorganic		9.22		2.57		2.32J
	1					



Sample D	10.1-(20) 2C1-1R	GW-2C2-2-101117-20.6- 25.6 2C2-2 10/11/17 Groundwater	GW-2C2-2-101117-20.6- 25.6-(20) 2C2-2 10/11/17 Groundwater	GW-2D1-1-101217-7.5-1 2.5 2D1-1 10/12/17 Groundwater	GW-2D1-1-101217-7.5-1 2.5-(20) 2D1-1 10/12/17 Groundwater	GW-2D3-2-101217-26.5 -31.5 2D3-2 10/12/17 Groundwater
Copper		12.80		1.79 J		10.00U
Lead and Compounds		1.76 J		8.15		2.00U
Mercury (elemental)		0.20 U		0.20 U		0.20U
Nickel Soluble Salts		3.68 J		0.98 J		1.24J
Field Ferrous Iron (ug/L)						
Ferrous Iron		8000.00		700.00		6500.00
VOCs (ug/L)						
Chloroform		0.20 UJ		0.20 U		0.20U
Tetrachloroethylene		0.20 UJ		0.20 U		0.20U
Trichloroethylene		0.20 UJ		0.20 U		0.20
Vinyl Chloride		0.20 UJ		0.20 U		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/12/17	GW-3A1-3R-110217 3A1-3R 11/02/17 Groundwater	GW-3A1-3R-110217-(20) 3A1-3R 11/02/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3 3A2-2R 10/16/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3-(20) 3A2-2R 10/16/17 Groundwater	GW-3A3-1R-101617-8.2 -13.2 3A3-1R 10/16/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1660.00		342.00		1660.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	1660.00		342.00		1660.00	
Bromine anion (Br-)			2.72		17.00	
Calcium	449.00		70.80		362.00	
Chloride	31900.00		810.00		34000.00	
Dissolved Organic Carbon	54.60		2.77		34.10	
Fluoride	10.00 U		0.50 U		1.49	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	10.00 U		0.50 U		1.00 U	
Nitrite			0.50 U		1.00 U	
Potassium	430.00		35.00		355.00	
Sodium	20200.00		346.00		20200.00	
Sulfate	1710.00		1.00		715.00	
Total Dissolved Solids	48800.00		1650.00		51700.00	
Dissolved Metals (ug/L)						
Aluminum	250.00 U		81.60 U		81.60 U	
Arsenate Ion - As(O4)3-	1.00 U		1.00 U		0.62 J	
Arsenic, Inorganic	2.46 J		1.63 U		3.38	
Arsenite Ion - As(O3)3-	1.00 U		0.24 J		1.01	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	10.00 U		2.69 U		2.69 U	
Iron	122000.00		515.00		7920.00	
Lead and Compounds	2.00 U		0.30 U		0.61 U	
	1					



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/12/17	GW-3A1-3R-110217 3A1-3R 11/02/17 Groundwater	GW-3A1-3R-110217-(20) 3A1-3R 11/02/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3 3A2-2R 10/16/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3-(20) 3A2-2R 10/16/17 Groundwater	GW-3A3-1R-101617-8.: -13.2 3A3-1R 10/16/17 Groundwater
Magnesium	619000.00		107000.00		587000.00	
Manganese	2650.00		129.00		1630.00	
Mercury (elemental)	0.10 U		0.0004 U		0.0005	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	10.00 U		0.61 U		0.61	
Silicon	20700.00		21600.00		19700.00	
Sum of arsenic species	2.00 U		0.24 J		1.63 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	10.00 U		0.55 J		1.00 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•					
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.04		0.07		9.04
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-117.50		-92.00		1.40
Specific Conductivity (uS/cm)		3132.20		3773.00		108.50
Temperature (Celsius) (C)		13.04		15.98		19.90
Turbidity (NTU)	•	1.81		2.37		1.76
pH ()		7.77		7.01		7.31
Field TDS and Sulfide (mg/L)						
Sulfide		0.03		0		0.04
Total Dissolved Solids		2000.00		2000.00		0
Total Metals (ug/L)						
Arsenic, Inorganic		1.63 U		4.54		54.00



Sample D	31.5-(20) ID: 2D3-2	GW-3A1-3R-110217 3A1-3R 11/02/17 Groundwater	GW-3A1-3R-110217-(20) 3A1-3R 11/02/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3 3A2-2R 10/16/17 Groundwater	GW-3A2-2R-101617-22.3 -27.3-(20) 3A2-2R 10/16/17 Groundwater	GW-3A3-1R-101617-8.2 -13.2 3A3-1R 10/16/17 Groundwater
Copper		2.69 U		2.69 U		1.58J
Lead and Compounds		0.30 U		0.61 U		0.61U
Mercury (elemental)		0.0004 U		0.0006		0.005
Nickel Soluble Salts		0.34 J		0.66		5.69
Field Ferrous Iron (ug/L)						
Ferrous Iron		530.00		6500.00		8200.00
VOCs (ug/L)						
Chloroform		0.20 U		0.20 U		0.20U
Tetrachloroethylene		0.20 U		0.20 U		0.11J
Trichloroethylene		0.20 U		0.20 U		0.20
Vinyl Chloride		0.20 U		0.15 J		0.54



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/16/17	GW-3A6-2R-101617 3A6-2R 10/16/17 Groundwater	GW-3A6-2R-101617-(20) 3A6-2R 10/16/17 Groundwater	GW-3A7-1R-101617 3A7-1R 10/16/17 Groundwater	GW-3A7-1R-101617-(20) 3A7-1R 10/16/17 Groundwater	GW-3C1-1-101217-3-8 3C1-1 10/12/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	824.00		1360.00		399.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	824.00		1360.00		399.00	
Bromine anion (Br-)			25.30		1.30	
Calcium	61.60		462.00		5.84	
Chloride	879.00		53500.00		236.00	
Dissolved Organic Carbon	27.90		42.20		149.00	
Fluoride	5.78		2.00 U		3.63	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 UJ		2.00 UJ		0.10 U	
Nitrite	0.10 UIJ		2.00 UJ		0.10 U	
Potassium	7.68		352.00		8.26	
Sodium	800.00		32300.00		329.00	
Sulfate	251.00		626.00		7.19	
Total Dissolved Solids	2480.00		80800.00		1030.00	
Dissolved Metals (ug/L)						
Aluminum	40.10 J		22.70 J		1510.00	
Arsenate Ion - As(O4)3-	29.40		1.63		28.70	
Arsenic, Inorganic	57.80		4.24		42.10	
Arsenite Ion - As(O3)3-	29.30		1.81		11.10	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	1.25 J		2.69 U		20.70	
Iron	10600.00		24800.00		12300.00	
Lead and Compounds	0.61 U		0.61 U		43.70	
	ı	I .	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID:	GW-3A3-1R-101617-8.2- 13.2-(20) 3A3-1R	GW-3A6-2R-101617 3A6-2R	GW-3A6-2R-101617-(20) 3A6-2R	GW-3A7-1R-101617 3A7-1R	GW-3A7-1R-101617-(20) 3A7-1R	GW-3C1-1-101217-3- 3C1-1
Sample Date:		10/16/17	10/16/17	10/16/17	10/16/17	10/12/17
Constituent Media:		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium	70800.00		538000.00		3600.00	
Manganese	249.00		3140.00		46.70	
Mercury (elemental)	0.004		0.001		0.05	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	5.55		3.75		6.22	
Silicon	24000.00		12800.00		23600.00	
Sum of arsenic species	58.70		3.44		39.80	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.57		2.00 UJ		9.54	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.08		0.01		0.01
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-18.30		-157.00		-180.40
Specific Conductivity (uS/cm)		95944.40		1242.90		7183.00
Temperature (Celsius) (C)		14.72		18.82		16.20
Turbidity (NTU)		8.28		5.42		
oH ()		6.39		8.58		8.04
Field TDS and Sulfide (mg/L)						
Sulfide		0.03		0.45		3.10
Total Dissolved Solids		62000.00		1000.00		5000.00
Total Metals (ug/L)						
Arsenic, Inorganic		4.13		62.40		178.00



	Sample ID:	GW-3A3-1R-101617-8.2-	GW-3A6-2R-101617	GW-3A6-2R-101617-(20)	GW-3A7-1R-101617	GW-3A7-1R-101617-(20)	GW-3C1-1-101217-3-8
	Site ID:	13.2-(20) 3A3-1R	3A6-2R	3A6-2R	3A7-1R	3A7-1R	3C1-1
	Sample Date:	10/16/17	10/16/17	10/16/17	10/16/17	10/16/17	10/12/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			2.69 U		67.90		90.40
Lead and Compounds			0.61 U		122.00		20.60
Mercury (elemental)			0.002		0.09		0.52
Nickel Soluble Salts			3.61		9.06		69.90
Field Ferrous Iron (ug/L)							
Ferrous Iron			9000.00		7900.00		8500.00
VOCs (ug/L)							
Chloroform			5.43		0.20 U		0.51
Tetrachloroethylene			0.20 U		0.20 U		0.29
Trichloroethylene			0.20 U		0.20 U		0.22
Vinyl Chloride			0.16 J		0.06 J		2.27



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-3C1-1-101217-3-8-(2 0) 3C1-1 10/12/17 Groundwater	GW-3C2-1-101217-7.5-1 2 3C2-1 10/12/17 Groundwater	GW-3C2-1-101217-7.5-1 2-(20) 3C2-1 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5 3C5-2 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5-(20) 3C5-2 10/12/17 Groundwater	GW-3C6-1R-101117-4.5 -9.5 3C6-1R 10/11/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	797.00		542.00		829.00	
Alkalinity, Carb.As CaCO3	1.00 U		552.00		1.00 U	
Alkalinity, Total	797.00		1090.00		829.00	
Bromine anion (Br-)					26.00 J	
Calcium	13.30		8.32		655.00	
Chloride	2890.00		3110.00		111000.00	
Dissolved Organic Carbon	666.00		98.20		25.80	
Fluoride	2.64	•	2.39		10.00 U	
Hydroxide Alkalinity	1.00 U	•	1.00 U		1.00 U	
Nitrate	2.00 U		2.00 UJ		10.00 U	
Nitrite						
Potassium	13.90		20.40		638.00	
Sodium	2310.00		2550.00		71000.00	
Sulfate	4.63		48.60		1050.00	
Total Dissolved Solids	5420.00	•	5320.00		138000.00	
Dissolved Metals (ug/L)						
Aluminum	2110.00		28.90 J		1000.00 U	
Arsenate Ion - As(O4)3-	91.10		7.21		5.72	
Arsenic, Inorganic	70.10		42.60		7.30 J	
Arsenite Ion - As(O3)3-	50.70		4.73		13.30	
Cacodylic Acid	2.12		0.30 J		0.36 J	
Copper	28.60		10.00 U		25.00 U	
Iron	13600.00		134.00		194000.00	
Lead and Compounds	6.72		2.06		5.00 U	
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Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	0) 3C1-1 10/12/17	GW-3C2-1-101217-7.5-1 2 3C2-1 10/12/17 Groundwater	GW-3C2-1-101217-7.5-1 2-(20) 3C2-1 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5 3C5-2 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5-(20) 3C5-2 10/12/17 Groundwater	GW-3C6-1R-101117-4. -9.5 3C6-1R 10/11/17 Groundwater
Magnesium	2120.00		639.00		83000.00	
Manganese	957.00		2.50	•	6550.00	
Mercury (elemental)	0.15	•	0.10 U		0.10 U	
Methylarsonic acid	14.30		0.38 J		0.46 J	
Nickel Soluble Salts	37.50		12.40		2.50	
Silicon	42400.00		23500.00		13700.00	
Sum of arsenic species	141.80		11.94		19.02	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	10.00		6.03 J		10.00 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.04		0.03		0
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-166.80		-81.50		-142.60
Specific Conductivity (uS/cm)		10452.40		164598.00		10430.00
Temperature (Celsius) (C)		15.93		13.78		18.74
Turbidity (NTU)		2.16		15.30		0.10
pH ()		9.81		6.01		6.52
Field TDS and Sulfide (mg/L)						
Sulfide		3.10		0.07		1.50
Total Dissolved Solids		7000.00		107000.00		7000.00
Total Metals (ug/L)						
Arsenic, Inorganic		43.90		23.80		32.10
	1					



S Sample	ite ID:	GW-3C1-1-101217-3-8-(2 0) 3C1-1 10/12/17 Groundwater	GW-3C2-1-101217-7.5-1 2 3C2-1 10/12/17 Groundwater	GW-3C2-1-101217-7.5-1 2-(20) 3C2-1 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5 3C5-2 10/12/17 Groundwater	GW-3C5-2-101217-17.5- 22.5-(20) 3C5-2 10/12/17 Groundwater	GW-3C6-1R-101117-4.5 -9.5 3C6-1R 10/11/17 Groundwater
Copper			10.00 U		54.60		105.00
Lead and Compounds			2.54		13.50		20.90
Mercury (elemental)			0.20 U		0.20 U		0.24
Nickel Soluble Salts	İ		15.30		41.00		16.40
Field Ferrous Iron (ug/L)							
Ferrous Iron			1000.00		7500.00		1180.00
VOCs (ug/L)							
Chloroform			3630.00 J		6.40 J		1.00U
Tetrachloroethylene			16400.00 J		0.60 J		1.00U
Trichloroethylene			588.00 J		0.14 J		1.00
Vinyl Chloride			789.00 J		0.90 J		1.00U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/11/17	GW-3C7-2R-101117-24.3 -29.3 3C7-2R 10/11/17 Groundwater	GW-3C7-2R-101117-24.3 -29.3-(20) 3C7-2R 10/11/17 Groundwater	GW-3D1-1-101217-4.5-1 2.5 3D1-1 10/12/17 Groundwater	GW-3D1-1-101217-4.5-1 2.5-(20) 3D1-1 10/12/17 Groundwater	GW-3E1-1-101217-5-10 3E1-1 10/12/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	563.00		1490.00		244.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	563.00		1490.00		244.00	
Bromine anion (Br-)			20.60 J		0.61 J	
Calcium	3.72		623.00		115.00	
Chloride	3560.00		48900.00			
Dissolved Organic Carbon	236.00		20.00		12.80	
Fluoride	8.02		10.00 U		0.57	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	2.00 UJ		10.00 U		0.20 U	
Nitrite	•					
Potassium	7.84		491.00		15.20	
Sodium	2700.00		29000.00		89.80	
Sulfate	4.17		168.00		128.00	
Total Dissolved Solids	6340.00		69200.00		687.00	
Dissolved Metals (ug/L)						
Aluminum	4740.00		500.00 U		50.00 U	
Arsenate Ion - As(O4)3-	9.73		1.00 U		8.48	
Arsenic, Inorganic	14.20		3.84 J		37.50	
Arsenite Ion - As(O3)3-	5.31		1.00 U		32.70	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	25.70		10.00 U		0.50 U	
Iron	20800.00		15500.00		14200.00	
Lead and Compounds	10.90		2.00 U		0.10 U	
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Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/11/17	GW-3C7-2R-101117-24.3 -29.3 3C7-2R 10/11/17 Groundwater	GW-3C7-2R-101117-24.3 -29.3-(20) 3C7-2R 10/11/17 Groundwater	GW-3D1-1-101217-4.5-1 2.5 3D1-1 10/12/17 Groundwater	GW-3D1-1-101217-4.5-1 2.5-(20) 3D1-1 10/12/17 Groundwater	GW-3E1-1-101217-5-1 3E1-1 10/12/17 Groundwater
Magnesium	2070.00		927000.00		4690.00	
Manganese	187.00		2930.00		172.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	•
Methylarsonic acid	0.42 J		1.15 U		1.15 U	•
Nickel Soluble Salts	6.66 J		10.00 U		0.61	•
Silicon	29700.00		15900.00		42200.00	
Sum of arsenic species	15.04		2.00 U		41.18	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	20.40 J		10.00 U		0.20 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)			•			•
Dissolved Oxygen (DO) (mg/L)		0.05	•	0.29		0.04
Hydroxide Alkalinity (mg/L)			•			•
Oxidation Reduction Potential (ORP) (mV)		-75.90		-115.00		-75.90
Specific Conductivity (uS/cm)		95690.70		875.50		772.00
Temperature (Celsius) (C)		15.58		16.35		15.69
Turbidity (NTU)		16.70		39.80		8.28
pH ()		6.54		7.18		6.79
Field TDS and Sulfide (mg/L)						
Sulfide		0		0.04		0.10
Total Dissolved Solids		62000.00		1000.00		1000.00
Total Metals (ug/L)						
Arsenic, Inorganic		3.38 J		37.30		148.00
	1	1	l .			1



	nple ID: Site ID: le Date:	GW-3C6-1R-101117-4.5- 9.5-(20) 3C6-1R 10/11/17	GW-3C7-2R-101117-24.3 -29.3 3C7-2R 10/11/17	GW-3C7-2R-101117-24.3 -29.3-(20) 3C7-2R 10/11/17	GW-3D1-1-101217-4.5-1 2.5 3D1-1 10/12/17	GW-3D1-1-101217-4.5-1 2.5-(20) 3D1-1 10/12/17	GW-3E1-1-101217-5-10 3E1-1 10/12/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			10.00 U		0.95		2.99
Lead and Compounds			2.00 U		0.33 J		0.67
Mercury (elemental)		•	0.20 U		0.10 U		0.20U
Nickel Soluble Salts			10.00 U		0.67		0.73
Field Ferrous Iron (ug/L)							
Ferrous Iron			5900.00		9500.00		1700.00
VOCs (ug/L)							
Chloroform			0.20 UJ		0.20 U		0.20U
Tetrachloroethylene			0.20 UJ		0.16 J		0.20U
Trichloroethylene			0.20 UJ		13.60		0.25
Vinyl Chloride			0.20 UJ		1.29		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/12/17	GW-3E1-2-101317-17.5- 22.5 3E1-2 10/13/17 Groundwater	GW-3E1-2-101317-17.5- 22.5-(20) 3E1-2 10/13/17 Groundwater	GW-4B1-3-110217 4B1-3 11/02/17 Groundwater	GW-4B1-3-110217-(20) 4B1-3 11/02/17 Groundwater	GW-4B2-2-101317-22.5- 27.5 4B2-2 10/13/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	369.00		1190.00		531.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	369.00		1190.00		531.00	
Bromine anion (Br-)	0.76 J	•	12.80		7.31	
Calcium	2.06		179.00		118.00	
Chloride	25.00		7670.00		5370.00	
Dissolved Organic Carbon	10.90		25.40		6.01	
Fluoride	1.48		1.00 U		0.10 U	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		1.00 U		0.10 U	
Nitrite			1.00 U		0.10 U	
Potassium	7.98		266.00		134.00	
Sodium	209.00		5060.00		3010.00	
Sulfate	50.20		133.00		59.80	
Total Dissolved Solids	572.00		11700.00		8220.00	
Dissolved Metals (ug/L)			!			
Aluminum	40.10 J		100.00 U		50.00 U	
Arsenate Ion - As(O4)3-	28.70		0.34 J		1.00 U	
Arsenic, Inorganic	154.00		2.42 J		0.83 J	
Arsenite Ion - As(O3)3-	142.00		0.26 J		1.00 U	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	1.08		10.00 U		2.50 U	
Iron	2670.00		29700.00		5250.00	
Lead and Compounds	0.24		2.00 U		0.50 U	
		ı	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-3E1-1-101217-5-10-(20) 3E1-1 10/12/17 Groundwater	GW-3E1-2-101317-17.5- 22.5 3E1-2 10/13/17 Groundwater	GW-3E1-2-101317-17.5- 22.5-(20) 3E1-2 10/13/17 Groundwater	GW-4B1-3-110217 4B1-3 11/02/17 Groundwater	GW-4B1-3-110217-(20) 4B1-3 11/02/17 Groundwater	GW-4B2-2-101317-22.5 27.5 4B2-2 10/13/17 Groundwater
Magnesium	5490.00		389000.00		195000.00	
Manganese	42.40		2580.00		424.00	
Mercury (elemental)	0.10 U	•	0.20 U		0.10 U	
Methylarsonic acid	1.15 U	•	1.15 U		1.15 U	
Nickel Soluble Salts	0.63		10.00 U		2.50 U	
Silicon	26300.00		25400.00		17500.00	
Sum of arsenic species	170.70		0.61 J		2.00 U	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.41		1.00 U		0.10 UJ	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)		•				
Alkalinity, Total (mg/L)		•				
Dissolved Oxygen (DO) (mg/L)		0.03		0.07		0.02
Hydroxide Alkalinity (mg/L)		•				
Oxidation Reduction Potential (ORP) (mV)		-41.20		-100.60		-63.50
Specific Conductivity (uS/cm)		21332.80		13454.00		66081.60
Temperature (Celsius) (C)		13.59		13.77		14.18
Turbidity (NTU)		11.20		2.05		13.90
pH ()		6.50		6.84		6.40
Field TDS and Sulfide (mg/L)						
Sulfide		0.02		0.03		0.09
Total Dissolved Solids		14000.00		8680.00		43000.00
Total Metals (ug/L)						
		l .		0.75 J		4.62



	Sample ID: Site ID: Imple Date: Media:	20) 3E1-1 10/12/17	GW-3E1-2-101317-17.5- 22.5 3E1-2 10/13/17 Groundwater	GW-3E1-2-101317-17.5- 22.5-(20) 3E1-2 10/13/17 Groundwater	GW-4B1-3-110217 4B1-3 11/02/17 Groundwater	GW-4B1-3-110217-(20) 4B1-3 11/02/17 Groundwater	GW-4B2-2-101317-22.5 27.5 4B2-2 10/13/17 Groundwater
Copper			10.00 U		2.50 U		10.00U
Lead and Compounds			2.00 U		0.50 U		2.00
Mercury (elemental)			0.10 U		0.10 U		0.10
Nickel Soluble Salts			10.00 U		2.50 U		2.34J
Field Ferrous Iron (ug/L)							
Ferrous Iron			24300.00		4100.00		27600.00
VOCs (ug/L)							
Chloroform			0.05 J		19.30		451.00
Tetrachloroethylene			0.20 U		0.90		0.84
Trichloroethylene			0.20 U		6.41		0.51
Vinyl Chloride			0.20 U		16.50		6.61



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/13/17	GW-4B2-3-110217 4B2-3 11/02/17 Groundwater	GW-4B2-3-110217-(20) 4B2-3 11/02/17 Groundwater	GW-4B3-1-101317-4.5-1 0.5 4B3-1 10/13/17 Groundwater	GW-4B3-1-101317-4.5-1 0.5-(20) 4B3-1 10/13/17 Groundwater	GW-4B3-2-101317-17.5- 27.5 4B3-2 10/13/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1200.00		1040.00		232.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	1200.00		1040.00		232.00	
Bromine anion (Br-)	21.20		14.50		0.30	
Calcium	351.00		185.00		0.15	
Chloride	29500.00		16800.00		39.20	
Dissolved Organic Carbon	40.80		13.20		13.20	
Fluoride	2.00 U		0.50		0.86	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	2.00 U		0.50 U		0.20 U	
Nitrite	2.00 U		0.50 U		0.20 U	
Potassium	362.00		163.00		0.98	
Sodium	19700.00		10700.00		154.00	
Sulfate	1290.00		21.10		31.70	
Total Dissolved Solids	44900.00		25700.00		437.00	
Dissolved Metals (ug/L)						
Aluminum	500.00 U		81.60 U		257.00	
Arsenate Ion - As(O4)3-	0.20 J		1.00 U		46.50	
Arsenic, Inorganic	6.34		1.63 U		223.00	
Arsenite Ion - As(O3)3-	0.47 J		1.00 U		191.00	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	10.00 U		2.69 U		3.15	
Iron	44100.00		21.40 J		2330.00	
Lead and Compounds	2.00 U		0.30 U		2.61	
	l	1	I	1	1	



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-4B2-2-101317-22.5- 27.5-(20) 4B2-2 10/13/17 Groundwater	GW-4B2-3-110217 4B2-3 11/02/17 Groundwater	GW-4B2-3-110217-(20) 4B2-3 11/02/17 Groundwater	GW-4B3-1-101317-4.5-1 0.5 4B3-1 10/13/17 Groundwater	GW-4B3-1-101317-4.5-1 0.5-(20) 4B3-1 10/13/17 Groundwater	GW-4B3-2-101317-17.5 27.5 4B3-2 10/13/17 Groundwater
Magnesium	557000.00		397000.00		189.00	
Manganese	2520.00		449.00		25.50	
Mercury (elemental)	0.20 U		0.0001 J		0.20 U	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	10.00 U		0.20 J		2.77	
Silicon	17500.00		24300.00		26300.00	
Sum of arsenic species	0.67 J		2.00 U		237.50	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	2.00 U		2.81 J		2.87	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05		0.03		0.07
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-209.70		-105.10		-43.10
Specific Conductivity (uS/cm)		45736.50		558.30		47032.00
Temperature (Celsius) (C)		13.91		17.91		14.99
Turbidity (NTU)		1.04		46.10		19.80
pH ()		7.01		7.39		6.37
Field TDS and Sulfide (mg/L)						
Sulfide		1.00		0.17		0.02
Total Dissolved Solids		30000.00		0		31000.00
Total Metals (ug/L)						
Arsenic, Inorganic		1.63 U		208.00		1.92J



	Sample ID: Site ID: ample Date: Media:	10/13/17	GW-4B2-3-110217 4B2-3 11/02/17	GW-4B2-3-110217-(20) 4B2-3 11/02/17	GW-4B3-1-101317-4.5-1 0.5 4B3-1 10/13/17	GW-4B3-1-101317-4.5-1 0.5-(20) 4B3-1 10/13/17	GW-4B3-2-101317-17.5 27.5 4B3-2 10/13/17
Constituent	Wieula.	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			2.69 U		35.60		10.00U
Lead and Compounds			0.30 U		14.00		2.00U
Mercury (elemental)			0.0004 U		0.10 U		0.10U
Nickel Soluble Salts			0.25 J		6.70		10.00
Field Ferrous Iron (ug/L)							
Ferrous Iron			0		3300.00		20800.00
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		0.06J
Tetrachloroethylene			0.20 U		0.20 U		0.20U
Trichloroethylene			0.20 U		0.57		0.06J
Vinyl Chloride			0.20 U		0.20 U		0.20U



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-4B3-2-101317-17.5- 27.5-(20) 4B3-2 10/13/17 Groundwater	GW-4B4-1-101617 4B4-1 10/16/17 Groundwater	GW-4B4-1-101617-(20) 4B4-1 10/16/17 Groundwater	GW-4B4-2-101617-(20)_ DC 4B4-2 10/16/17 Groundwater	GW-4B4-2-101617_DC 4B4-2 10/16/17 Groundwater	GW-4C1-1-101717 4C1-1 10/17/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1690.00		133.00	1440.00		
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U	1.00 U		
Alkalinity, Total	1690.00		133.00	1440.00		
Bromine anion (Br-)	21.80		0.35	6.52	•	
Calcium	444.00		42.30	420.00		
Chloride	19800.00		96.00	46100.00		
Dissolved Organic Carbon	22.90		8.04	35.40		
Fluoride	2.00 U		0.13	0.50 U		
Hydroxide Alkalinity	1.00 U		1.00 U	1.00 U		
Nitrate	2.00 U		0.10 U	0.50 U		
Nitrite	2.00 U		0.10 U	0.50 U		
Potassium	452.00		4.42	329.00		
Sodium	12300.00		27.70	26750.00		
Sulfate	479.00		2.68	466.50		
Total Dissolved Solids	30700.00		333.00	61450.00		
Dissolved Metals (ug/L)						
Aluminum	250.00 U		81.60 U	20.50 J		
Arsenate Ion - As(O4)3-	1.00 U		6.19	0.84 J		
Arsenic, Inorganic	3.82 J		45.40	3.78		
Arsenite Ion - As(O3)3-	1.00 U		47.20	1.44		
Cacodylic Acid	1.05 U		1.05 U	1.05 U		
Copper	10.00 U		2.69 U	2.69 U		
Iron	18900.00		3630.00	21850.00		
	i	1	1	1	i .	i .



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Media:	10/13/17	GW-4B4-1-101617 4B4-1 10/16/17 Groundwater	GW-4B4-1-101617-(20) 4B4-1 10/16/17 Groundwater	GW-4B4-2-101617-(20)_ DC 4B4-2 10/16/17 Groundwater	GW-4B4-2-101617_DC 4B4-2 10/16/17 Groundwater	GW-4C1-1-101717 4C1-1 10/17/17 Groundwater
Donatituent		Groundwater			Groundwater	Groundwater
Magnesium	997000.00		19200.00	645500.00		
Manganese	1050.00		35.00	1885.00		
Mercury (elemental)	0.20 U		0.0003 J	0.0002 J		
Methylarsonic acid	1.15 U		1.15 U	1.15 U		
Nickel Soluble Salts	10.00 U		0.82	0.64 J		
Silicon	18800.00		9270.00	16200.00		
Sum of arsenic species	2.00 U		53.39	2.27 J		
Dissolved Ortho-Phosphorus (mg/L)						
p-Phosphate {PO4}, as P	2.00 U		0.10 U	0.50 U		
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.09			0.03	0.02
Hydroxide Alkalinity (mg/L)					•	
Oxidation Reduction Potential (ORP) (mV)		-82.00			-76.70	-110.00
Specific Conductivity (uS/cm)		502.20			101026.00	3605.00
Temperature (Celsius) (C)		18.74			15.40	16.78
Turbidity (NTU)		0.54			9.32	1.96
pH ()		7.22			6.91	10.27
Field TDS and Sulfide (mg/L)						
Sulfide		0.04			0.03	5.00
Total Dissolved Solids		0			66000.00	2000.00
Total Metals (ug/L)						
Arsenic, Inorganic		49.00			3.72	163.00



Sample ID: Site ID: Sample Date: Constituent Media:	27.5-(20) 4B3-2 10/13/17	GW-4B4-1-101617 4B4-1 10/16/17 Groundwater	GW-4B4-1-101617-(20) 4B4-1 10/16/17 Groundwater	GW-4B4-2-101617-(20)_ DC 4B4-2 10/16/17 Groundwater	GW-4B4-2-101617_DC 4B4-2 10/16/17 Groundwater	GW-4C1-1-101717 4C1-1 10/17/17 Groundwater
Copper		2.69 U			2.69 U	24.90
Lead and Compounds		0.61 U			0.61 U	18.80
Mercury (elemental)		0.0006			0.0002 J	0.10U
Nickel Soluble Salts		0.84			1.22	17.00
Field Ferrous Iron (ug/L)						
Ferrous Iron		4500.00			16400.00	0
VOCs (ug/L)						
Chloroform		0.20 U			0.20 U	0.20U
Tetrachloroethylene		0.20 U			0.20 U	0.20U
Trichloroethylene		0.09 J			0.08 J	0.20U
Vinyl Chloride		0.20 U			0.08 J	0.20



Table G-3: 2017 Groundwater Results

Alkalinity, Carb.As CaCO3 1340.00 417.00 2820 Alkalinity, Total 1350.00 589.00 3610 Bromine anion (Br-) 1.92 2.02 8 Calcium 1.90 0.76 3	1
Alkalinity, Bicarb. As CaCO3 1.00 U 171.00 2820 Alkalinity, Carb.As CaCO3 1340.00 417.00 2820 Alkalinity, Total 1350.00 589.00 3610 Bromine anion (Br-) 1.92 2.02 8 Calcium 1.90 0.76 3	0.00 0.00 3.38
Alkalinity, Carb.As CaCO3 1340.00 417.00 2820 Alkalinity, Total 1350.00 589.00 3610 Bromine anion (Br-) 1.92 2.02 8 Calcium 1.90 0.76 3	0.00 0.00 3.38
Alkalinity, Total 1350.00 589.00 3610 Bromine anion (Br-) 1.92 2.02 8 Calcium 1.90 0.76 3	0.00
Bromine anion (Br-) 1.92 2.02 8 Calcium 1.90 0.76 3	3.38
Calcium 1.90 0.76	1
	3.27
Chlorido 200 00	
Chloride 641.00 286.00 2080	0.00
Dissolved Organic Carbon 69.70 11.80 259	9.00
Fluoride 4.90 0.74	3.76
Hydroxide Alkalinity 15.90 1.00 U 787	7.00
Nitrate 0.10 UJ 0.10 U).20 U
Nitrite 0.10 UJ 0.10 U).20 U
Potassium 20.80 7.47 79	9.10
Sodium 1060.00 454.00 3190	0.00
Sulfate 48.10 19.50 108	3.00
Total Dissolved Solids 3080.00 1250.00 8240	0.00
Dissolved Metals (ug/L)	
Aluminum 158.00 J 22.80 J 106	5.00 J
Arsenate Ion - As(O4)3- 66.20 1.61 2210	0.00
Arsenic, Inorganic 111.00 13.20 4690	0.00
Arsenite Ion - As(O3)3- 1.57 2.39	1.60
Cacodylic Acid 1.05 U <td< th=""><td>0.50 U</td></td<>	0.50 U
Copper 10.00 U 2.47 183	3.00
Iron 4260.00 204.00 1190).00
Lead and Compounds 5.02 1.76 75	5.80



Table G-3: 2017 Groundwater Results

Sample ID:	GW-4C1-1-101717-(20)	GW-4C2-1-102017	GW-4C2-1-102017-(20)	GW-4D1-1-101817	GW-4D1-1-101817-(20)	GW-4D2-1-101217-4.
Site ID:	4C1-1	4C2-1	4C2-1	4D1-1	4D1-1	4D2-1
Sample Date:	10/17/17	10/20/17	10/20/17	10/18/17	10/18/17	10/12/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium	250.00 U		178.00		141.00 J	
Manganese	5.00 U		8.60		10.10	
Mercury (elemental)	0.10 U		0.10 U		0.17	
Methylarsonic acid	0.51 J		1.15 U		2.61 J	
Nickel Soluble Salts	11.20		1.31		109.00	
Silicon	214000.00		59900.00		248000.00	
Sum of arsenic species	67.77		4.00		2241.60	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	13.30		0.82		6.85 J	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.01		0		0.04
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-75.50		-197.20		-168.80
Specific Conductivity (uS/cm)		1743.70		9184.00		2469.00
Temperature (Celsius) (C)		18.45		16.02		19.33
Turbidity (NTU)		1.45		0.21		2.16
pH ()		10.56		11.10		8.86
Field TDS and Sulfide (mg/L)						
Sulfide		4.90		14.00 >		0.62
Total Dissolved Solids		1000.00		6000.00		2000.00
Total Metals (ug/L)						
Arsenic, Inorganic		12.90		4620.00		290.00
		i .				



San	Site ID: Site ID: nple Date: Media:	4C1-1 10/17/17	GW-4C2-1-102017 4C2-1 10/20/17 Groundwater	GW-4C2-1-102017-(20) 4C2-1 10/20/17 Groundwater	GW-4D1-1-101817 4D1-1 10/18/17 Groundwater	GW-4D1-1-101817-(20) 4D1-1 10/18/17 Groundwater	GW-4D2-1-101217-4.3- 9.3 4D2-1 10/12/17 Groundwater
Constituent	weula.	Groundwater	1	Groundwater		Groundwater	
Copper			3.54		175.00		12.10
Lead and Compounds			2.33		74.70		9.29
Mercury (elemental)			0.10 U		0.20 U		0.20
Nickel Soluble Salts			1.56		99.10		3.04
Field Ferrous Iron (ug/L)							
Ferrous Iron			800.00		0		200.00
VOCs (ug/L)							
Chloroform			0.22		0.20 U		0.27
Tetrachloroethylene			0.32		0.20 U		0.49
Trichloroethylene			3.14		0.20 U		0.72
Vinyl Chloride			0.41		0.32		0.35



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-4D2-1-101217-4.3-9. 3-(20) 4D2-1 10/12/17 Groundwater	GW-4E1-2-101817 4E1-2 10/18/17 Groundwater	GW-4E1-2-101817-(20) 4E1-2 10/18/17 Groundwater	GW-4F1-1-101317-4.5-9. 5 4F1-1 10/13/17 Groundwater	GW-4F1-1-101317-4.5-9. 5-(20) 4F1-1 10/13/17 Groundwater	GW-4F1-2-101817-(20)_ DC 4F1-2 10/18/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	622.00		3030.00		105.00	1420.00
Alkalinity, Carb.As CaCO3	69.50		1.00 U		1.00 U	1.00
Alkalinity, Total	692.00		3030.00		105.00	1420.00
Bromine anion (Br-)	1.72		13.30		0.14	12.85
Calcium	2.57		241.00		9.60	141.00
Chloride	431.00		9130.00		19.00	5760.00
Dissolved Organic Carbon	18.80		42.70		8.98	55.50
Fluoride	1.60		0.10 U		1.32	0.24
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	1.00U
Nitrate	1.00 U		0.10 U		0.10 U	0.10U
Nitrite	1.00 U		0.10 U		0.10 U	0.12
Potassium	13.20		269.00		8.24	199.50
Sodium	569.00		6330.00		38.80	4010.00
Sulfate	18.80		137.00		13.70	795.50
Total Dissolved Solids	1370.00		18000.00		221.00	11500.00
Dissolved Metals (ug/L)						
Aluminum	51.90		250.00 U		462.00	64.45J
Arsenate Ion - As(O4)3-	116.00		1.00 U		13.10	1.29J
Arsenic, Inorganic	332.00		3.00 J		34.10	6.25
Arsenite Ion - As(O3)3-	63.30		0.26 J		20.80	2.57
Cacodylic Acid	1.05 U		1.05 U		1.05 U	1.05U
Copper	4.73		10.00 U		1.46	10.00U
Iron	235.00	İ	2810.00		11400.00	29750.00
Lead and Compounds	4.21	•	2.00 U		0.20 U	2.00
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-(20) 4D2-1 10/12/17	GW-4E1-2-101817 4E1-2 10/18/17 Groundwater	GW-4E1-2-101817-(20) 4E1-2 10/18/17 Groundwater	GW-4F1-1-101317-4.5-9. 5 4F1-1 10/13/17 Groundwater	GW-4F1-1-101317-4.5-9. 5-(20) 4F1-1 10/13/17 Groundwater	GW-4F1-2-101817-(20)_ DC 4F1-2 10/18/17 Groundwater
Magnesium	3960.00		676000.00		3800.00	336500.00
Manganese	12.10		711.00		196.00	1435.00
Mercury (elemental)	0.10 U		0.10 U		0.20 U	0.10U
Methylarsonic acid	1.15 U		1.15 U	•	1.15 U	1.15U
Nickel Soluble Salts	2.98		10.00 U		8.82	10.00
Silicon	12200.00		20500.00		30600.00	26450.00
Sum of arsenic species	179.30		0.26 J		33.90	3.86J
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.94		1.06		0.73	1.37
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.03		0.19		
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-53.60		80.60		
Specific Conductivity (uS/cm)		22876.00		290.90		
Temperature (Celsius) (C)		13.81		17.45		
Turbidity (NTU)		20.20		9.75		
pH ()		6.89		5.34		
Field TDS and Sulfide (mg/L)						
Sulfide		0.03		0.05		
Total Dissolved Solids		15000.00		0		
Total Metals (ug/L)						
Arsenic, Inorganic		4.20		35.30		
	I	I	1	I	I	1



Sample ID: Site ID: Sample Date: Constituent Media:	10/12/17	GW-4E1-2-101817 4E1-2 10/18/17 Groundwater	GW-4E1-2-101817-(20) 4E1-2 10/18/17 Groundwater	GW-4F1-1-101317-4.5-9. 5 4F1-1 10/13/17 Groundwater	GW-4F1-1-101317-4.5-9. 5-(20) 4F1-1 10/13/17 Groundwater	GW-4F1-2-101817-(20)_ DC 4F1-2 10/18/17 Groundwater
Copper		10.00 U		11.00		
Lead and Compounds		2.00 U		0.54		
Mercury (elemental)		0.10 U		0.10 U		
Nickel Soluble Salts		10.00 U		11.80		
Field Ferrous Iron (ug/L)						
Ferrous Iron		3900.00		13400.00		
VOCs (ug/L)						
Chloroform		0.20 UJ		4.71		
Tetrachloroethylene		0.20 UJ		0.20 U		
Trichloroethylene		0.20 UJ		0.20 U		
Vinyl Chloride		0.20 UJ		0.20 U		



Table G-3: 2017 Groundwater Results

Sample ID:	GW-4F1-2-101817_DC	GW-4G1-1-110117	GW-4G1-1-110117-(20)	GW-4G2-2-110117	GW-4G2-2-110117-(20)	GW-4H3-1-110117
Site ID: Sample Date: Constituent Media:	10/18/17	4G1-1 11/01/17 Groundwater	4G1-1 11/01/17 Groundwater	4G2-2 11/01/17 Groundwater	4G2-2 11/01/17 Groundwater	4H3-1 11/01/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			452.00		867.00	
Alkalinity, Carb.As CaCO3			1.00 U		1.00 U	
Alkalinity, Total			452.00		867.00	
Bromine anion (Br-)			0.52		5.01	
Calcium			9.18		47.60	
Chloride			82.70		1230.00	
Dissolved Organic Carbon			22.60		21.80	
Fluoride			0.86		0.79	
Hydroxide Alkalinity			1.00 U		1.00 U	
Nitrate			0.50 UJ		0.50 UJ	
Nitrite			0.50 UJ		0.50 UJ	
Potassium			5.43		42.20	
Sodium			239.00		784.00	
Sulfate			2.67		1.42	
Total Dissolved Solids			676.00		2830.00	
Dissolved Metals (ug/L)						
Aluminum			132.00		67.80 J	
Arsenate Ion - As(O4)3-			14.20		2.46	
Arsenic, Inorganic			145.00		10.40	
Arsenite Ion - As(O3)3-			110.00		5.26	
Cacodylic Acid			1.05 U		1.05 U	
Copper			2.27		1.00 U	
Iron			1030.00		8200.00	
Lead and Compounds			0.95		0.20 U	
	I	I	i	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-4F1-2-101817_DC	GW-4G1-1-110117	GW-4G1-1-110117-(20)	GW-4G2-2-110117	GW-4G2-2-110117-(20)	GW-4H3-1-110117
Site ID: Sample Date: Constituent Media:	10/18/17	4G1-1 11/01/17 Groundwater	4G1-1 11/01/17 Groundwater	4G2-2 11/01/17 Groundwater	4G2-2 11/01/17 Groundwater	4H3-1 11/01/17 Groundwater
Magnesium			8320.00		64400.00	
Manganese			165.00		468.00	
Mercury (elemental)			0.10 U		0.10 U	
Methylarsonic acid			1.15 U		1.15 U	
Nickel Soluble Salts			1.95		0.81 J	
Silicon			20200.00		21600.00	
Sum of arsenic species			124.20		7.72	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P			1.19		1.16	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0.03	0.05		0.03		0.02
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	-39.80	-136.90		-106.10		-444.80
Specific Conductivity (uS/cm)	15423.00	833.90		2806.90		19401.30
Temperature (Celsius) (C)	14.31	13.45		12.21		12.64
Turbidity (NTU)	6.44	3.88		4.16		
pH ()	6.32	7.20		6.55		11.59
Field TDS and Sulfide (mg/L)						
Sulfide	0.09	0.14		0.05		35.00
Total Dissolved Solids	10000.00	1000.00		2000.00		13000.00
T-(-1 M-(-1- //1)	İ					
Total Metals (ug/L)						



Sample ID	: GW-4F1-2-101817 DC	GW-4G1-1-110117	GW-4G1-1-110117-(20)	GW-4G2-2-110117	GW-4G2-2-110117-(20)	GW-4H3-1-110117
Sample II	. GW-41 1-2-101017_DC	GW-4G1-1-110117	GW-4G1-1-110117-(20)	GW-4G2-2-110117	GW-4G2-2-110117-(20)	GW-4113-1-110117
Site II): 4F1-2	4G1-1	4G1-1	4G2-2	4G2-2	4H3-1
Sample Date		11/01/17	11/01/17	11/01/17	11/01/17	11/01/17
Constituent Media	: Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper	10.00 U	10.10		2.41		10.30J
Lead and Compounds	2.00 U	1.91		0.63		2.50U
Mercury (elemental)	0.10 U	0.10 U		0.10 U		1.00U
Nickel Soluble Salts	1.36 J	2.99		1.10		138.00
Field Ferrous Iron (ug/L)						
Ferrous Iron	21700.00	980.00		8300.00		0
VOCs (ug/L)						
Chloroform	0.40 UJ	0.20 U		0.20 U		2.00U
Tetrachloroethylene	0.18 J	0.20 U		0.20 U		2.00U
Trichloroethylene	0.40 UJ	0.20 U		0.20 U		2.00U
Vinyl Chloride	0.40 UJ	0.20 U		0.20 U		2.00U



Table G-3: 2017 Groundwater Results

Sample ID:	GW-4H3-1-110117-(20)	GW-4H4-2-110117	GW-4H4-2-110117-(20)	GW-5B1-1R-101617	GW-5B1-1R-101617-(20)	GW-5B1-2R-101617
Site ID: Sample Date: Constituent Media:	4H3-1 11/01/17	4H4-2 11/01/17 Groundwater	4H4-2 11/01/17 Groundwater	5B1-1R 10/16/17 Groundwater	5B1-1R 10/16/17 Groundwater	5B1-2R 10/16/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			2080.00		204.00	
Alkalinity, Carb.As CaCO3	•		1.00 U		394.00	•
Alkalinity, Total	•		2080.00		598.00	
Bromine anion (Br-)	5.79		18.60		1.61	
Calcium	7.89 J		81.60		1.52	
Chloride	1190.00		3980.00		493.00	
Dissolved Organic Carbon			103.00		15.80	
Fluoride	11.70		0.82		0.68	
Hydroxide Alkalinity			1.00 U		1.00 U	
Nitrate	5.00 U		0.50 U		0.10 U	
Nitrite	5.00 U		0.50 U		0.10 U	
Potassium	158.00		162.00		8.03	
Sodium	10900.00		2860.00		613.00	
Sulfate	33.90		8.38		16.90	
Total Dissolved Solids	46800.00		8040.00		1590.00	
Dissolved Metals (ug/L)						
Aluminum	39800.00		19.60 J		23.50 J	
Arsenate Ion - As(O4)3-	303.00		1.00 UJ		109.00	
Arsenic, Inorganic	516.00		19.10		1040.00	
Arsenite Ion - As(O3)3-	2.83		0.39 J		76.50	
Cacodylic Acid	2.55		0.62 J		1.05 U	
Copper	16.50		2.50 U		9.83	
Iron	2530.00 J		94.20 J		248.00	
Lead and Compounds	2.50 U		0.50 U		3.97	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-4H3-1-110117-(20)	GW-4H4-2-110117	GW-4H4-2-110117-(20)	GW-5B1-1R-101617	GW-5B1-1R-101617-(20)	GW-5B1-2R-101617
Site ID: Sample Date: Constituent Media:	11/01/17	4H4-2 11/01/17 Groundwater	4H4-2 11/01/17 Groundwater	5B1-1R 10/16/17 Groundwater	5B1-1R 10/16/17 Groundwater	5B1-2R 10/16/17 Groundwater
Magnesium	10000.00 U		258000.00		347.00 U	
Manganese	132.00 J		65.50		7.94	
Mercury (elemental)	1.00 U		0.10 U		0.04	
Methylarsonic acid	1.22		1.15 U		0.88 J	
Nickel Soluble Salts	135.00		0.84 J		3.61	
Silicon	13800000.00		20500.00		63700.00	
Sum of arsenic species	305.83		0.39 J		185.50	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	31.40		1.39		0.99	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.03		0.06		0.04
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-124.50		-104.10		-109.20
Specific Conductivity (uS/cm)		11677.80		2202.60		42297.00
Temperature (Celsius) (C)		12.21		18.00		15.08
Turbidity (NTU)		1.50		1.60		30.30
pH ()		6.50		9.94		7.69
Field TDS and Sulfide (mg/L)						
Sulfide		0.27		4.30		0.03
Total Dissolved Solids		8000.00		1000.00		27000.00
Total Metals (ug/L)						
Arsenic, Inorganic		19.30		1040.00		1.00
	l .	1	1	1	1	1



	Sample ID:	GW-4H3-1-110117-(20)	GW-4H4-2-110117	GW-4H4-2-110117-(20)	GW-5B1-1R-101617	GW-5B1-1R-101617-(20)	GW-5B1-2R-101617
	Site ID:	4H3-1	4H4-2	4H4-2	5B1-1R	5B1-1R	5B1-2R
	Sample Date:	11/01/17	11/01/17	11/01/17	10/16/17	10/16/17	10/16/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			2.50 U		13.70		2.69U
Lead and Compounds			0.50 U		5.37		0.61U
Mercury (elemental)			0.10 U		0.04		0.0004U
Nickel Soluble Salts			1.31 J		3.79		0.61U
Field Ferrous Iron (ug/L)							
Ferrous Iron			90.00		70.00		16700.00
VOCs (ug/L)							
Chloroform			1.00 U		0.20 U		0.20U
Tetrachloroethylene			1.00 U		0.20 U		0.20U
Trichloroethylene			1.00 U		0.08 J		0.20
Vinyl Chloride			1.00 U		0.32		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5B1-2R-101617-(20)	GW-5B1-3R-110217	GW-5B1-3R-110217-(20)	GW-5C10-2-101717	GW-5C10-2-101717-(20)	GW-5C12-1-101717
Site ID: Sample Date: Constituent Media:	10/16/17	5B1-3R 11/02/17 Groundwater	5B1-3R 11/02/17 Groundwater	5C10-2 10/17/17 Groundwater	5C10-2 10/17/17 Groundwater	5C12-1 10/17/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1600.00		424.00		1200.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	1600.00		424.00		1200.00	
Bromine anion (Br-)	20.60		3.24		8.99	
Calcium	560.00		71.10		53.00	
Chloride	11400.00		1010.00		5910.00	
Dissolved Organic Carbon	20.90		3.33		524.00	
Fluoride	1.36		0.50 U		6.10	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.50 U		0.50 U		0.50 U	-
Nitrite	0.50 U		0.50 U		0.50 U	
Potassium	251.00		38.40		129.00	
Sodium	8840.00		504.00		4470.00	
Sulfate	2800.00				4.29	
Total Dissolved Solids	27300.00		2040.00		10700.00	
Dissolved Metals (ug/L)						
Aluminum	81.60 U		81.60 U		1580.00	
Arsenate Ion - As(O4)3-	0.38 J		1.00 U		678.00	
Arsenic, Inorganic	0.80 J		1.63 U		873.00	
Arsenite Ion - As(O3)3-	0.38 J		1.00 U		161.00	
Cacodylic Acid	1.05 U		1.05 U		0.96 J	
Copper	2.69 U		2.69 U		56.70	
Iron	15200.00		396.00		48600.00	
Lead and Compounds	0.61 U		0.30 U		6.32	
		i e		1		



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5B1-2R-101617-(20)	GW-5B1-3R-110217	GW-5B1-3R-110217-(20)	GW-5C10-2-101717	GW-5C10-2-101717-(20)	GW-5C12-1-101717
Site ID: Sample Date: Constituent Media:	10/16/17	5B1-3R 11/02/17 Groundwater	5B1-3R 11/02/17 Groundwater	5C10-2 10/17/17 Groundwater	5C10-2 10/17/17 Groundwater	5C12-1 10/17/17 Groundwater
Magnesium	1120000.00		111000.00		104000.00	
Manganese	566.00		113.00		594.00	
Mercury (elemental)	0.0004 U		0.0004 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		0.65 J	
Nickel Soluble Salts	0.24 J		0.27 J		22.20	
Silicon	21500.00		22000.00		25400.00	
Sum of arsenic species	0.76 J		2.00 U		839.00	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.63		0.50 UJ		3.42	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05		0		0.04
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-56.10		-189.10		-169.40
Specific Conductivity (uS/cm)		3112.70		14875.00		5805.60
Temperature (Celsius) (C)		13.39		14.68		18.25
Turbidity (NTU)		1.97				1.44
pH ()		7.44		7.35		11.65
Field TDS and Sulfide (mg/L)						
Sulfide		0.02		2.50		2.70
Total Dissolved Solids		2030.00		10000.00		4000.00
Total Metals (ug/L)						
Arsenic, Inorganic		1.63 U		1000.00		938.00



	Sample ID:	GW-5B1-2R-101617-(20)	GW-5B1-3R-110217	GW-5B1-3R-110217-(20)	GW-5C10-2-101717	GW-5C10-2-101717-(20)	GW-5C12-1-101717
	Site ID:	5B1-2R	5B1-3R	5B1-3R	5C10-2	5C10-2	5C12-1
	Sample Date:		11/02/17	11/02/17	10/17/17	10/17/17	10/17/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			2.69 U		74.10		3.08
Lead and Compounds			0.30 U		10.80		0.90
Mercury (elemental)			0.0001 J		0.10 U		0.10U
Nickel Soluble Salts			0.85		29.90		5.68
Field Ferrous Iron (ug/L)							
Ferrous Iron			320.00		29600.00		0
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		0.20U
Tetrachloroethylene			0.20 U		0.20 U		0.06J
Trichloroethylene			0.20 U		0.20 U		0.80
Vinyl Chloride			0.20 U		0.30		6.00



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date: Constituent Media:	GW-5C12-1-101717-(20) 5C12-1 10/17/17 Groundwater	GW-5C13-1-101717 5C13-1 10/17/17 Groundwater	GW-5C13-1-101717-(20) 5C13-1 10/17/17 Groundwater	GW-5C14-2-101717 5C14-2 10/17/17 Groundwater	GW-5C14-2-101717-(20) 5C14-2 10/17/17 Groundwater	GW-5C16-1R-101717-(2 0)_DC 5C16-1R 10/17/17 Groundwater
Constituent Media: Dissolved Conventionals (mg/L)	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Crodinawater
Alkalinity, Bicarb. As CaCO3	1.00 U		744.00		1980.00	307.50
Alkalinity, Carb.As CaCO3	1070.00		143.00		1.00 U	1.00U
Alkalinity, Total	1370.00		887.00		1980.00	307.50
Bromine anion (Br-)	1.92		1.11		13.40	0.45
Calcium	29.50		5.54		89.40	54.30
Chloride	1000.00		1410.00		9380.00	424.00
Dissolved Organic Carbon	12.10		18.20		42.80	9.35
Fluoride	0.85		1.04		2.59	0.31
Hydroxide Alkalinity	304.00		1.00 U		1.00 U	1.00U
Nitrate	0.10 U		0.10 UJ		1.58	0.10U
Nitrite	0.10 U		0.10 UJ		1.83	0.100
Potassium	44.40		34.20		204.00	9.90
Sodium	1270.00		1450.00		6130.00	339.50
Sulfate	52.60		162.00		5.48	18.10
Total Dissolved Solids	3780.00		3800.00		14400.00	1040.00
Dissolved Metals (ug/L)						
Aluminum	140.00 J		84.30		100.00 U	50.00U
Arsenate Ion - As(O4)3-	772.00		958.00		251.00	19.75
Arsenic, Inorganic	1020.00		1640.00		236.00	479.50
Arsenite Ion - As(O3)3-	1.89		499.00		8.02	407.00
Cacodylic Acid	1.05 U		0.29 J		1.05 U	1.05U
Copper	2.50 U		5.00 U		10.00 U	1.00U
Iron	169.00 J		2840.00		719.00	140.50
Lead and Compounds	0.20 U		1.07		2.00 U	0.20U
				I	1	1



Table G-3: 2017 Groundwater Results

Sample ID: Site ID: Sample Date:	GW-5C12-1-101717-(20) 5C12-1 10/17/17	GW-5C13-1-101717 5C13-1 10/17/17	GW-5C13-1-101717-(20) 5C13-1 10/17/17	GW-5C14-2-101717 5C14-2 10/17/17	GW-5C14-2-101717-(20) 5C14-2 10/17/17	GW-5C16-1R-101717-(2 0)_DC 5C16-1R 10/17/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium	13100.00		4950.00		241000.00	12400.00
Manganese	9.30 J	•	15.20		144.00	6.50
Mercury (elemental)	0.10 U	•	0.10 U		0.10 U	0.10U
Methylarsonic acid	0.24 J		0.93 J		1.15 U	1.15U
Nickel Soluble Salts	5.12		3.67 J		2.84 J	0.87J
Silicon	434000.00		56000.00		23700.00	20300.00
Sum of arsenic species	773.89		1457.00		259.02	426.75
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.23		8.88 J		1.51	0.39
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)		•				
Alkalinity, Total (mg/L)		•				
Dissolved Oxygen (DO) (mg/L)		0.01		0.04		
Hydroxide Alkalinity (mg/L)		•				
Oxidation Reduction Potential (ORP) (mV)		-98.50		-2.70		
Specific Conductivity (uS/cm)		8126.60		24486.30		
Temperature (Celsius) (C)		18.70		15.52		
Turbidity (NTU)		2.35		2.19		
pH ()		10.90		9.13		
Field TDS and Sulfide (mg/L)						
Sulfide		0.35		0.05		
Total Dissolved Solids		5000.00		16000.00		
Total Metals (ug/L)						
Arsenic, Inorganic		1960.00		270.00		



Sample ID: Site ID: Sample Date: Constituent Media:	5C12-1 10/17/17	GW-5C13-1-101717 5C13-1 10/17/17 Groundwater	GW-5C13-1-101717-(20) 5C13-1 10/17/17 Groundwater	GW-5C14-2-101717 5C14-2 10/17/17 Groundwater	GW-5C14-2-101717-(20) 5C14-2 10/17/17 Groundwater	GW-5C16-1R-101717-(2 0)_DC 5C16-1R 10/17/17 Groundwater
Copper		2.14 J		10.00 U		
Lead and Compounds		1.56		2.00 U		
Mercury (elemental)		0.10 U		0.10 U		
Nickel Soluble Salts		5.05		5.94 J		
Field Ferrous Iron (ug/L)						
Ferrous Iron		690.00		460.00		
VOCs (ug/L)						
Chloroform		0.20 UJ		0.20 U		
Tetrachloroethylene		0.20 UJ		0.20 U		
Trichloroethylene		0.27 J		0.07 J		
Vinyl Chloride		1.87 J		0.61		



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5C16-1R-101717_D	GW-5C16-2R-101717	GW-5C16-2R-101717-(20	GW-5C21-2-102017	GW-5C21-2-102017-(20)	GW-5D1-3-110117
Site ID: Sample Date: Constituent Media:	10/17/17	5C16-2R 10/17/17 Groundwater) 5C16-2R 10/17/17 Groundwater	5C21-2 10/20/17 Groundwater	5C21-2 10/20/17 Groundwater	5D1-3 11/01/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			938.00		1070.00	
Alkalinity, Carb.As CaCO3			1.00 U		1.00 U	
Alkalinity, Total			938.00		1070.00	
Bromine anion (Br-)			6.25		9.71	
Calcium			57.00		66.10	
Chloride			6160.00		6230.00	
Dissolved Organic Carbon			27.90		120.00	
Fluoride			0.10 U		2.87	
Hydroxide Alkalinity			1.00 U		1.00 U	
Nitrate			0.17		0.10 U	
Nitrite			0.10 U		0.10 U	
Potassium			134.00		123.00	
Sodium			5350.00		4500.00	
Sulfate			7.30		9.09	
Total Dissolved Solids			11900.00		11600.00	
Dissolved Metals (ug/L)						
Aluminum			100.00 U		65.70 J	
Arsenate Ion - As(O4)3-			338.00		1370.00	
Arsenic, Inorganic			736.00		1680.00	
Arsenite Ion - As(O3)3-			444.00		977.00	
Cacodylic Acid			0.44 J		10.50 U	
Copper			10.00 U		6.79	
Iron			80800.00		125000.00	
Lead and Compounds			2.00 U		1.00 U	
	I	i .	1	I	1	ı



Table G-3: 2017 Groundwater Results

Mercury (elemental) 0.10 U Methylarsonic acid 1.15 U Nickel Soluble Salts 10.00 U Silicon 41600.00 Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)	5C21-2 10/20/17 Groundwater	5C21-2 10/20/17 Groundwater 146000.00 1180.00 0.10 U 11.50 U 5.06	5D1-3 11/01/17 Groundwater
Manganese 864.00 Mercury (elemental) 0.10 U Methylarsonic acid 1.15 U Nickel Soluble Salts 10.00 U Silicon 41600.00 Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)		1180.00 0.10 U 11.50 U	
Mercury (elemental) 0.10 U Methylarsonic acid 1.15 U Nickel Soluble Salts 10.00 U Silicon 41600.00 Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)		0.10 U 11.50 U	
Methylarsonic acid Nickel Soluble Salts 10.00 U Silicon Sum of arsenic species Dissolved Ortho-Phosphorus (mg/L)		11.50 U	
Nickel Soluble Salts 10.00 U Silicon Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)			I .
Silicon 41600.00 Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)		5.06	
Sum of arsenic species 782.00 Dissolved Ortho-Phosphorus (mg/L)			
Dissolved Ortho-Phosphorus (mg/L)	1	27500.00	
		2347.00	
o-Phosphate {PO4}, as P 0.10 U			
		2.91	
Field Parameters and/or Alkalinity			
Alkalinity, Bicarb. As CaCO3 (mg/L)			
Alkalinity, Carb.As CaCO3 (mg/L)			
Alkalinity, Total (mg/L)			
Dissolved Oxygen (DO) (mg/L) 0.06 0.04	0.02		0.10
Hydroxide Alkalinity (mg/L)			
Oxidation Reduction Potential (ORP) (mV) -109.50 -118.10	-140.30		-109.70
Specific Conductivity (uS/cm) 1676.00 21957.60	18157.90		24944.80
Temperature (Celsius) (C) 16.58 14.26	14.80		14.64
Turbidity (NTU) 0.48 13.30	26.10		34.10
pH () 8.26 7.25	6.81		6.71
Field TDS and Sulfide (mg/L)			
Sulfide 0.18 0.05	0.34		0.03
Total Dissolved Solids 1000.00 14000.00	12000.00		16000.00
Total Metals (ug/L)		<u> </u>	
Arsenic, Inorganic 423.00 771.00			



	Sample ID:	GW-5C16-1R-101717_D	GW-5C16-2R-101717	GW-5C16-2R-101717-(20	GW-5C21-2-102017	GW-5C21-2-102017-(20)	GW-5D1-3-110117
	Site ID:	C 5C16-1R	5C16-2R) 5C16-2R	5C21-2	5C21-2	5D1-3
S	ample Date:	10/17/17	10/17/17	10/17/17	10/20/17	10/20/17	11/01/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper		2.50 U	2.50 U		6.15		10.00U
Lead and Compounds		0.50 U	0.50 U		1.00 U		2.00U
Mercury (elemental)		0.10 U	0.10 U		0.10 U		0.10U
Nickel Soluble Salts		0.51 J	0.74 J		4.50 J		10.00
Field Ferrous Iron (ug/L)							
Ferrous Iron		80.00	53000.00		24750.00		6000.00
VOCs (ug/L)							
Chloroform		0.20 U	0.20 U		0.03 J		1.00UJ
Tetrachloroethylene		0.20 U	0.20 U		0.20 UJ		1.000
Trichloroethylene		0.10 J	0.20 U		0.27 J		1.000
Vinyl Chloride		0.27	0.48		3.21 J		1.000



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5D1-3-110117-(20)	GW-5D2-1R-102517	GW-5D2-1R-102517-(20)	GW-5D5-1-101917	GW-5D5-1-101917-(20)	GW-5D7-1R-101917
Site ID: Sample Date: Constituent Media:	11/01/17	5D2-1R 10/25/17 Groundwater	5D2-1R 10/25/17 Groundwater	5D5-1 10/19/17 Groundwater	5D5-1 10/19/17 Groundwater	5D7-1R 10/19/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1540.00		1.00 U		699.00	
Alkalinity, Carb.As CaCO3	1.00 U		1880.00		1.00 U	
Alkalinity, Total	1540.00		2260.00		699.00	
Bromine anion (Br-)	13.40		5.00 U		3.74	
Calcium	215.00		2.20		66.60	
Chloride	10300.00		1280.00		4830.00	
Dissolved Organic Carbon	22.30		28.40		10.00	•
Fluoride	1.00		5.00 U		1.12	
Hydroxide Alkalinity	1.00 U		376.00		1.00 U	•
Nitrate	0.50 U		5.00 U		0.10 U	
Nitrite	0.50 U		5.00 U		0.10 U	
Potassium	259.00		22.60		95.60	
Sodium	6380.00		1800.00		3140.00	
Sulfate	443.00		41.50		32.20	
Total Dissolved Solids	17600.00		6160.00		7840.00	
Dissolved Metals (ug/L)						
Aluminum	58.30 J		156.00 J		100.00 U	
Arsenate Ion - As(O4)3-	5.27		2240.00		19900.00	
Arsenic, Inorganic	16.70		3990.00		44500.00	
Arsenite Ion - As(O3)3-	9.93		15.40 J		22600.00	
Cacodylic Acid	1.05 U		21.00 U		420.00 U	
Copper	10.00 U		32.10		10.00 U	
Iron	10700.00		263.00 J		126000.00	
Lead and Compounds	2.00 U		6.04		2.00 U	
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Table G-3: 2017 Groundwater Results

Sample ID:	GW-5D1-3-110117-(20)	GW-5D2-1R-102517	GW-5D2-1R-102517-(20)	GW-5D5-1-101917	GW-5D5-1-101917-(20)	GW-5D7-1R-10191
Site ID: Sample Date: Constituent Media:	11/01/17	5D2-1R 10/25/17 Groundwater	5D2-1R 10/25/17 Groundwater	5D5-1 10/19/17 Groundwater	5D5-1 10/19/17 Groundwater	5D7-1R 10/19/17 Groundwater
Magnesium	469000.00		500.00 U		71100.00	
Manganese	652.00		5.20 J		741.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		8.39 J		460.00 U	
Nickel Soluble Salts	10.00 U		14.10		10.00 U	
Silicon	19700.00		58400.00		33700.00	
Sum of arsenic species	15.20		2255.40 J		42500.00	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	2.22		5.00 U		0.10 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)	•					
Dissolved Oxygen (DO) (mg/L)	•	0.02		0.03		0.14
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)	•	-137.60		-139.00		-108.10
Specific Conductivity (uS/cm)		6207.10		12810.00		1025.00
Temperature (Celsius) (C)		17.90		18.30		17.67
Furbidity (NTU)		2.70		72.40		6.26
pH ()		10.42		6.67		7.73
Field TDS and Sulfide (mg/L)						
Sulfide		3.60		0.03		0.03
Total Dissolved Solids		4000.00		8000.00		1000.00
Гotal Metals (ug/L)						



	Sample ID:	GW-5D1-3-110117-(20)	GW-5D2-1R-102517	GW-5D2-1R-102517-(20)	GW-5D5-1-101917	GW-5D5-1-101917-(20)	GW-5D7-1R-101917
	Site ID:	5D1-3	5D2-1R	5D2-1R	5D5-1	5D5-1	5D7-1R
	Sample Date:		10/25/17	10/25/17	10/19/17	10/19/17	10/19/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			53.60		1.85		20.90
Lead and Compounds			10.50		0.34		2.44
Mercury (elemental)			0.11		0.10 U		1.41
Nickel Soluble Salts			15.70		0.55		1.23J
Field Ferrous Iron (ug/L)							
Ferrous Iron			20.00		60000.00 >		4000.00
VOCs (ug/L)							
Chloroform			1.00 U		0.20 U		0.20U
Tetrachloroethylene			0.45 J		0.20 U		0.50
Trichloroethylene			2.04		0.07 J		0.53
/inyl Chloride			24.60		0.20 U		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5D7-1R-101917-(20)	GW-5D8-2-101717	GW-5D8-2-101717-(20)	GW-5E1-1-101817	GW-5E1-1-101817-(20)	GW-5E1-2-101817
Site ID: Sample Date: Constituent Media:	10/19/17	5D8-2 10/17/17 Groundwater	5D8-2 10/17/17 Groundwater	5E1-1 10/18/17 Groundwater	5E1-1 10/18/17 Groundwater	5E1-2 10/18/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	265.00		1310.00		208.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	265.00		1310.00		208.00	
Bromine anion (Br-)	0.19		9.16		0.19	
Calcium	3.72		117.00		29.40	
Chloride	196.00		7580.00		27.10	
Dissolved Organic Carbon	6.43		21.90		5.01	
Fluoride	0.80		0.19		0.37	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 UJ		0.10 U	
Nitrite	0.10 U		0.10 UJ		0.10 U	
Potassium	4.60		210.00		7.56	
Sodium	246.00		4940.00		46.10	
Sulfate	26.40		49.60		3.20	
Total Dissolved Solids	787.00		13000.00		326.00	
Dissolved Metals (ug/L)						
Aluminum	250.00 U		100.00 U		50.00 U	
Arsenate Ion - As(O4)3-	8030.00		1.14 J		133.00	
Arsenic, Inorganic	90900.00		2.92 J		671.00	
Arsenite Ion - As(O3)3-	82600.00		0.49 J		576.00	
Cacodylic Acid	1050.00 U		1.05 U		1.05 U	
Copper	10.00 U		10.00 U		1.00 U	
Iron	3020.00		16300.00		39900.00	
Lead and Compounds	2.00 U		2.00 U		0.20 U	
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Table G-3: 2017 Groundwater Results

Sample ID:	GW-5D7-1R-101917-(20)	GW-5D8-2-101717	GW-5D8-2-101717-(20)	GW-5E1-1-101817	GW-5E1-1-101817-(20)	GW-5E1-2-101817
Site ID: Sample Date: Constituent Media:	10/19/17	5D8-2 10/17/17 Groundwater	5D8-2 10/17/17 Groundwater	5E1-1 10/18/17 Groundwater	5E1-1 10/18/17 Groundwater	5E1-2 10/18/17 Groundwater
Magnesium	3310.00		294000.00		9090.00	
Manganese	26.80		994.00		297.00	
Mercury (elemental)	0.33		0.10 U		0.10 U	
Methylarsonic acid	1150.00 U		1.15 U		1.15 U	
Nickel Soluble Salts	10.00 U		10.00 U		0.90 J	
Silicon	33600.00		22400.00		41800.00	
Sum of arsenic species	90630.00		1.63 J		709.00	
Dissolved Ortho-Phosphorus (mg/L)				<u>.</u>		
p-Phosphate {PO4}, as P	0.63		0.10 UJ		0.10 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		-0.03		0.09		0.03
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)		-58.20		-24.80		-67.80
Specific Conductivity (uS/cm)		18142.00		470.70		15994.00
Temperature (Celsius) (C)		15.03		17.32		14.84
Turbidity (NTU)		21.80		20.80		47.80
oH ()		6.71		7.00		6.57
Field TDS and Sulfide (mg/L)						
Sulfide		0.02		0.05		0.02
Total Dissolved Solids		12000.00		0		10000.00
Total Metals (ug/L)						
Arsenic, Inorganic		2.72 J		645.00		0.05



	Sample ID:	GW-5D7-1R-101917-(20)	GW-5D8-2-101717	GW-5D8-2-101717-(20)	GW-5E1-1-101817	GW-5E1-1-101817-(20)	GW-5E1-2-101817
	Site ID:	5D7-1R	5D8-2	5D8-2	5E1-1	5E1-1	5E1-2
	Sample Date:	10/19/17	10/17/17	10/17/17	10/18/17	10/18/17	10/18/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			10.00 U		2.50 U		0.50
Lead and Compounds			2.00 U		0.50 U		0.10
Mercury (elemental)			0.10 U		0.10 U		0.10
Nickel Soluble Salts			10.00 U		1.55 J		0.50
Field Ferrous Iron (ug/L)							
Ferrous Iron			10700.00		11800.00		60000.00>
VOCs (ug/L)							
Chloroform			0.20 UJ		0.20 U		0.20U
Tetrachloroethylene			0.20 UJ		0.20 U		0.20U
Trichloroethylene			0.21 J		0.20 U		0.20U
Vinyl Chloride			0.28 J		0.20 U		6.02



Table G-3: 2017 Groundwater Results

Site 1D: Sample Date: 10/18/17 10/18/18/17 10/18/17 10/18/18/17 10/18/18/17 10/18/18/17 10/18/18/17 10/18/18/18/18/18/18/18/18/18/18/18/18/18/	Sample ID:	GW-5E1-2-101817-(20)	GW-5E2-1-101817	GW-5E2-1-101817-(20)	GW-5E4-1-101917	GW-5E4-1-101917-(20)	GW-5E8-1-101817
Alkalinity, Bioarb, As CaCO3 Alkalinity, Carb. As CaCO3 Alkalinity, Carb. As CaCO3 Alkalinity, Total B83.00 Bromine anion (Br) Bromine anion (Bromine anion (Bromine anion (Bromine anio	Sample Date:	10/18/17	10/18/17	10/18/17	10/19/17	10/19/17	10/18/17
Alkalinity, Carb.As CaCO3 1.00 U 48,20 Alkalinity, Total 893.00 394.00 813.00 Bromine anion (Br-) 8.54 0.39 0.81 Calcium 0.007 J 13.10 12.20 Chloride 6470.00 577.00 2200.00 Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitrate 0.10 U 0.10 U 0.10 U Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenic Ion - As(O4)3- 261.00 117.00 303.00 O Arsenic Ion - As(O4)3- 42.40 266.00 1000.00 Caccdylic Acid 1.05 U 1.05 U 1050.00 U Capper	Dissolved Conventionals (mg/L)						
Alkalinity, Total 893.00 394.00 813.00 Bromine anion (Br-) 8.54 0.39 0.81 Calcium 0.007 J 13.10 12.20 Chloride 6470.00 577.00 2200.00 Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitrate 0.10 U 0.10 U 0.10 U Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenic Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic Ion - As(O4)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 10500.0U Copper </td <td>Alkalinity, Bicarb. As CaCO3</td> <td>893.00</td> <td></td> <td>394.00</td> <td></td> <td>765.00</td> <td></td>	Alkalinity, Bicarb. As CaCO3	893.00		394.00		765.00	
Bromine anion (Br-) 8.54 0.39 0.81 Calcium 0.007 J 13.10 12.20 Chloride 6470.00 577.00 2200.00 Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 0.10 U 0.10 U Nitrate 0.10 U 0.10 U 0.10 U Nitrate 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 303.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenic, Inorganic 266.00 101000.00	Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		48.20	
Calcium 0.007 J 13.10 12.20 Chloride 6470.00 577.00 2200.00 Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitrate 0.10 U 0.10 U 0.10 U Nitrate 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 177.0 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 1050.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Aluminum 50.00 U 809.00 236.00 J Arsenic Inorganic 0.40 U 353.00 96700.00 Arsenic Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1.050.00	Alkalinity, Total	893.00		394.00		813.00	
Chloride 6470.00 577.00 2200.00 Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitriate 0.10 U 0.10 U 0.10 U Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Bromine anion (Br-)	8.54		0.39		0.81	
Dissolved Organic Carbon 1.00 U 70.60 58.90 Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitrate 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Calcium	0.007 J		13.10		12.20	
Fluoride 0.33 1.64 1.51 Hydroxide Alkalinity 1.00 U 1.00 U 1.00 U Nitrate 0.10 U 0.10 U 0.10 U Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Chloride	6470.00		577.00		2200.00	
Hydroxide Alkalinity 1.00 U 1.	Dissolved Organic Carbon	1.00 U		70.60		58.90	
Nitrate 0.10 U 0.10 U 0.10 U Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenite, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Fluoride	0.33		1.64		1.51	
Nitrite 0.10 U 0.10 U 0.10 U Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenite Ion - As(O4)3- 266.00 101000.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Potassium 0.50 U 11.60 17.70 Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Nitrate	0.10 U		0.10 U		0.10 U	
Sodium 0.22 J 580.00 1770.00 Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Nitrite	0.10 U		0.10 U		0.10 U	
Sulfate 15.80 3.71 8.08 Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenit, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Potassium	0.50 U		11.60		17.70	
Total Dissolved Solids 10500.00 1590.00 4480.00 Dissolved Metals (ug/L) 809.00 236.00 J Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Sodium	0.22 J		580.00		1770.00	
Dissolved Metals (ug/L) 809.00 236.00 J Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Sulfate	15.80		3.71		8.08	
Aluminum 50.00 U 809.00 236.00 J Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Total Dissolved Solids	10500.00		1590.00		4480.00	
Arsenate Ion - As(O4)3- 261.00 117.00 3030.00 Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Dissolved Metals (ug/L)						İ
Arsenic, Inorganic 0.40 U 353.00 96700.00 Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Aluminum	50.00 U		809.00		236.00 J	
Arsenite Ion - As(O3)3- 42.40 266.00 101000.00 Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Arsenate Ion - As(O4)3-	261.00		117.00		3030.00	
Cacodylic Acid 1.05 U 1.05 U 1050.00 U Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Arsenic, Inorganic	0.40 U		353.00		96700.00	
Copper 1.00 U 3.05 65.10 Iron 1.70 J 4580.00 1250.00	Arsenite Ion - As(O3)3-	42.40		266.00		101000.00	
Iron 1.70 J 4580.00 1250.00	Cacodylic Acid	1.05 U		1.05 U		1050.00 U	
	Copper	1.00 U		3.05		65.10	
Lead and Compounds 0.20 U 1.03 32.70	Iron	1.70 J		4580.00		1250.00	
	Lead and Compounds	0.20 U		1.03		32.70	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5E1-2-101817-(20)	GW-5E2-1-101817	GW-5E2-1-101817-(20)	GW-5E4-1-101917	GW-5E4-1-101917-(20)	GW-5E8-1-101817
Site ID: Sample Date: Constituent Media:	10/18/17	5E2-1 10/18/17 Groundwater	5E2-1 10/18/17 Groundwater	5E4-1 10/19/17 Groundwater	5E4-1 10/19/17 Groundwater	5E8-1 10/18/17 Groundwater
Magnesium	50.00 U		4050.00		4330.00	
Manganese	1.00 U		138.00		33.70	•
Mercury (elemental)	0.10 U		0.10		1.03	
Methylarsonic acid	1.15 U		1.15 U		1150.00 U	
Nickel Soluble Salts	1.00 U		1.56 J		3.84 J	
Silicon	19.10 J		25200.00		19500.00	
Sum of arsenic species	303.40		383.00		104030.00	
Dissolved Ortho-Phosphorus (mg/L)						
p-Phosphate {PO4}, as P	0.10 U		2.97 J		4.35	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05		0		0.07
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-85.30		-200.00		-100.40
Specific Conductivity (uS/cm)		2166.00		6462.00		496.20
Temperature (Celsius) (C)		18.60		17.85		17.63
Turbidity (NTU)		2.29		2.15		3.37
oH ()		7.82		8.95		7.72
Field TDS and Sulfide (mg/L)						
Sulfide		0.32		0.22		0.04
Total Dissolved Solids		1000.00		4000.00		C
Total Metals (ug/L)						
Arsenic, Inorganic		431.00		93600.00		432.00



	Sample ID:	GW-5E1-2-101817-(20)	GW-5E2-1-101817	GW-5E2-1-101817-(20)	GW-5E4-1-101917	GW-5E4-1-101917-(20)	GW-5E8-1-101817
	Site ID:	5E1-2	5E2-1	5E2-1	5E4-1	5E4-1	5E8-1
:	Sample Date:	10/18/17	10/18/17	10/18/17	10/19/17	10/19/17	10/18/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			17.60		89.90		2.50U
Lead and Compounds			3.48		47.30		0.50U
Mercury (elemental)			0.10 U		0.44		0.10U
Nickel Soluble Salts			4.34 J		5.42 J		0.82J
Field Ferrous Iron (ug/L)							
Ferrous Iron			3100.00		8900.00		1600.00
VOCs (ug/L)							
Chloroform			0.20 UJ		0.20 U		0.20U
Tetrachloroethylene			0.20 UJ		0.20 U		0.20U
Trichloroethylene			0.20 UJ		0.31		0.20
Vinyl Chloride			0.20 UJ		0.08 J		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5E8-1-101817-(20)	GW-5F1-1-101817	GW-5F1-1-101817-(20)	GW-5G1-1-102017	GW-5G1-1-102017-(20)	GW-5G1-3-110117
Site ID: Sample Date: Constituent Media:	10/18/17	5F1-1 10/18/17 Groundwater	5F1-1 10/18/17 Groundwater	5G1-1 10/20/17 Groundwater	5G1-1 10/20/17 Groundwater	5G1-3 11/01/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	190.00		815.00		837.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	190.00		815.00		837.00	
Bromine anion (Br-)	0.10 U		4.39		0.74	
Calcium	12.40		127.00		3.70	
Chloride	87.80		7540.00		1470.00	
Dissolved Organic Carbon	7.23		35.10		167.00	
Fluoride	0.50		1.10		2.80	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		1.06		0.10 U	
Nitrite	0.10 U		0.10 U		0.10 U	
Potassium	4.18		122.00		12.90	
Sodium	115.00		5220.00		1350.00	
Sulfate	20.90		5.77		4.44	
Total Dissolved Solids	370.00		12600.00		3350.00	
Dissolved Metals (ug/L)						
Aluminum	11.10 J		68.00 J		520.00	
Arsenate Ion - As(O4)3-	131.00		98.00		202.00	
Arsenic, Inorganic	448.00		98.40		526.00	
Arsenite Ion - As(O3)3-	311.00		8.65		161.00	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	0.71 J		10.00 U		22.60	
Iron	2060.00		4450.00		4150.00	
_ead and Compounds	0.20 U		2.00 U		2.57	
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5E8-1-101817-(20)	GW-5F1-1-101817	GW-5F1-1-101817-(20)	GW-5G1-1-102017	GW-5G1-1-102017-(20)	GW-5G1-3-110117
Site ID: Sample Date: Constituent Media:	10/18/17	5F1-1 10/18/17 Groundwater	5F1-1 10/18/17 Groundwater	5G1-1 10/20/17 Groundwater	5G1-1 10/20/17 Groundwater	5G1-3 11/01/17 Groundwater
Magnesium	7240.00		106000.00		821.00	
Manganese	53.30		450.00		67.10	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		0.26 J	
Nickel Soluble Salts	0.81 J		1.16 J		11.70	
Silicon	30200.00		20300.00		32700.00	
Sum of arsenic species	442.00		106.65		363.00	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.25		5.54		4.16	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05		0.11		0.06
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-71.90		-54.70		-199.80
Specific Conductivity (uS/cm)		18187.00		6104.90		10303.50
Temperature (Celsius) (C)		16.52		16.52		13.14
Turbidity (NTU)		7.49		0.20		2.38
pH ()		6.74		6.77		6.73
Field TDS and Sulfide (mg/L)						
Sulfide		0.13		0.77		0.69
Total Dissolved Solids		12000.00		4000.00		7000.00
Fotal Metals (ug/L)						
Arsenic, Inorganic		121.00		465.00		1.1



	Sample ID:	GW-5E8-1-101817-(20)	GW-5F1-1-101817	GW-5F1-1-101817-(20)	GW-5G1-1-102017	GW-5G1-1-102017-(20)	GW-5G1-3-110117
	Site ID:	5E8-1	5F1-1	5F1-1	5G1-1	5G1-1	5G1-3
;	Sample Date:		10/18/17	10/18/17	10/20/17	10/20/17	11/01/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			10.00 U		23.00		2.50
Lead and Compounds			2.00 U		2.43		0.50
Mercury (elemental)			0.10 U		0.10 U		0.10
Nickel Soluble Salts			1.30 J		13.10		2.50
Field Ferrous Iron (ug/L)							
Ferrous Iron			6500.00		3800.00		90.00
VOCs (ug/L)							
Chloroform			0.20 UJ		0.20 UJ		0.20U
Tetrachloroethylene			0.20 UJ		0.20 UJ		0.20U
Trichloroethylene			0.20 UJ		0.20 UJ		0.20
Vinyl Chloride			0.20 UJ		0.20 UJ		0.20U



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5G1-3-110117-(20)	GW-5H1-1-110117	GW-5H1-1-110117-(20)	GW-5H2-2-110117	GW-5H2-2-110117-(20)	GW-5I2-1-110117
Site ID: Sample Date: Constituent Media:	11/01/17	5H1-1 11/01/17 Groundwater	5H1-1 11/01/17 Groundwater	5H2-2 11/01/17 Groundwater	5H2-2 11/01/17 Groundwater	5l2-1 11/01/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	991.00		375.00		1520.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	991.00		375.00		1520.00	
Bromine anion (Br-)	12.00		0.50 U		14.80	
Calcium	134.00		36.90		122.00	
Chloride	3470.00		37.50		3810.00	
Dissolved Organic Carbon	11.60		10.40		30.80	
Fluoride	0.50		1.29		0.91	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.50 UJ		0.50 UJ		0.50 UJ	
Nitrite	0.50 UJ		0.50 UJ		0.50 UJ	
Potassium	122.00		3.50		107.00	
Sodium	2140.00		136.00		2570.00	
Sulfate	327.00		33.30		88.00	
Total Dissolved Solids	6640.00		541.00		7300.00	
Dissolved Metals (ug/L)						
Aluminum	100.00 U		73.70		22.80 J	
Arsenate Ion - As(O4)3-	1.00 U		7.66		1.00 U	
Arsenic, Inorganic	0.92 J		56.10		1.53	
Arsenite Ion - As(O3)3-	1.00 U		31.20		1.00 U	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	2.50 U		4.38		2.50 U	
Iron	222.00		11300.00		2490.00	
Lead and Compounds	0.50 U		0.61		0.50 U	
	i	1	i e	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5G1-3-110117-(20)	GW-5H1-1-110117	GW-5H1-1-110117-(20)	GW-5H2-2-110117	GW-5H2-2-110117-(20)	GW-5I2-1-110117
Site ID: Sample Date: Constituent Media:	11/01/17	5H1-1 11/01/17 Groundwater	5H1-1 11/01/17 Groundwater	5H2-2 11/01/17 Groundwater	5H2-2 11/01/17 Groundwater	5l2-1 11/01/17 Groundwater
Magnesium	348000.00		18400.00		260000.00	
Manganese	306.00		3040.00		1030.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	2.50 U		4.71		0.39 J	
Silicon	21800.00		28300.00		20400.00	
Sum of arsenic species	2.00 U		38.86		2.00 U	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.65		0.77		1.24	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.22		0.10		
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-95.70		-108.00		-386.90
Specific Conductivity (uS/cm)		945.13		13490.00		11327.00
Temperature (Celsius) (C)		14.04		12.99		13.32
Turbidity (NTU)	•	4.83		5.78		
pH ()		6.50		6.76		11.49
Field TDS and Sulfide (mg/L)						
Sulfide		0.13		0.04		41.00
Total Dissolved Solids		610.00		8760.00		12560.00
Total Metals (ug/L)						
Arsenic, Inorganic		46.80		2.97		153.00
	I	I .		1	1	1



	Sample ID:	GW-5G1-3-110117-(20)	GW-5H1-1-110117	GW-5H1-1-110117-(20)	GW-5H2-2-110117	GW-5H2-2-110117-(20)	GW-5l2-1-110117
	Site ID:	5G1-3	5H1-1	5H1-1	5H2-2	5H2-2	512-1
	Sample Date:	11/01/17	11/01/17	11/01/17	11/01/17	11/01/17	11/01/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			7.38		2.50 U		46.00
Lead and Compounds			0.94		0.50 U		7.95
Mercury (elemental)			0.10 U		0.10 U		1.00.
Nickel Soluble Salts			4.86		0.33 J		115.00
Field Ferrous Iron (ug/L)							
errous Iron			11280.00		2240.00		0
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		2.00
Tetrachloroethylene			0.20 U		0.20 U		2.00
Trichloroethylene			0.20 U		0.20 U		2.00
Vinyl Chloride			0.20 U		0.20 U		2.00



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5I2-1-110117-(20)	GW-6B19-2-102417-(20)	GW-6B19-2-102417_DC	GW-6D14-1-102517	GW-6D14-1-102517-(20)	GW-6D25-1-102517
Site ID:	512-1	6B19-2	6B19-2	6D14-1	6D14-1	6D25-1
Sample Date:		10/24/17	10/24/17	10/25/17	10/25/17	10/25/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3		561.50			386.00	
Alkalinity, Carb.As CaCO3		1.00 U			1.00 U	
Alkalinity, Total		561.50			386.00	
Bromine anion (Br-)	5.00	1.82			2.33	
Calcium	6.76	37.90			73.20	
Chloride	732.00	3585.00			4830.00	
Dissolved Organic Carbon	897.00	14.50			9.97	
Fluoride	6.98	2.43			0.10 U	
Hydroxide Alkalinity		1.00 U			1.00 U	
Nitrate	5.00 U	0.10 U			0.10 U	
Nitrite	5.00 U	0.10 U			0.10 U	
Potassium	141.00	92.45			108.00	
Sodium	6910.00	2465.00			2830.00	
Sulfate	41.30	28.35			496.00	
Total Dissolved Solids	24100.00	4210.00			8300.00	
Dissolved Metals (ug/L)						
Aluminum	4480.00 J	50.00 U			100.00 U	
Arsenate Ion - As(O4)3-	84.30	692.00			17800.00	
Arsenic, Inorganic	139.00	2680.00			49600.00	
Arsenite Ion - As(O3)3-	1.28	2415.00			30900.00	
Cacodylic Acid	1.14	21.00 U			210.00 U	
Copper	43.10	2.03 J			5.00 U	
Iron	2470.00 J	2550.00			323000.00	
Lead and Compounds	7.75	0.50 U			1.00 U	
	I	I	I	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-5I2-1-110117-(20)	GW-6B19-2-102417-(20) _DC	GW-6B19-2-102417_DC	GW-6D14-1-102517	GW-6D14-1-102517-(20)	GW-6D25-1-102517
Site ID:	5 2-1	6B19-2	6B19-2	6D14-1	6D14-1	6D25-1
Sample Date:		10/24/17	10/24/17	10/25/17	10/25/17	10/25/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Magnesium	5000.00 U	70600.00			35400.00	
Manganese	54.80 J	86.75			1400.00	
Mercury (elemental)	0.10 U	0.10 U			0.10 U	
Methylarsonic acid	1.54	23.00 U			230.00 U	
Nickel Soluble Salts	113.00	3.25			5.21	
Silicon	5780000.00	34350.00			39200.00	
Sum of arsenic species	85.58	3107.00			48700.00	
Dissolved Ortho-Phosphorus (mg/L)		İ				
o-Phosphate {PO4}, as P	37.50	0.55			0.10 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)			0.09	0.08		0.20
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)			-157.20	-122.10		253.50
Specific Conductivity (uS/cm)			11303.00	15289.00		2449.70
Temperature (Celsius) (C)			15.03	15.24		17.99
Furbidity (NTU)			6.52	89.40		3.85
pH ()			7.54	6.31		8.85
Field TDS and Sulfide (mg/L)						
Sulfide			0.07	0.05		0.44
Total Dissolved Solids			7340.00	9870.00		1580.00
Fotal Metals (ug/L)						
Arsenic, Inorganic			2965.00	49100.00		5890.00



Sample ID:	GW-5I2-1-110117-(20)	GW-6B19-2-102417-(20) _DC	GW-6B19-2-102417_DC	GW-6D14-1-102517	GW-6D14-1-102517-(20)	GW-6D25-1-102517
Site ID:	5l2-1	6B19-2	6B19-2	6D14-1	6D14-1	6D25-1
Sample Date:	11/01/17	10/24/17	10/24/17	10/25/17	10/25/17	10/25/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			1.87 J	5.00 U		0.40
Lead and Compounds			2.00 U	1.00 U		0.28
Mercury (elemental)			0.10 U	0.10 U		0.10U
Nickel Soluble Salts			3.04	5.65		2.85
Field Ferrous Iron (ug/L)						
Ferrous Iron			6200.00	3300.00		0
VOCs (ug/L)						
Chloroform			0.06 J	1.35		0.20U
Tetrachloroethylene			0.84 J	0.96		0.43
Trichloroethylene			0.45 J	1.77		4.72
Vinyl Chloride			0.64 J	0.20 U		5.72



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6D25-1-102517-(20)	GW-6D25-2-102417	GW-6D25-2-102417-(20)	GW-6E1-1-102517	GW-6E1-1-102517-(20)	GW-6E12-2-102317
Site ID: Sample Date: Constituent Media:	6D25-1 10/25/17 Groundwater	6D25-2 10/24/17 Groundwater	6D25-2 10/24/17 Groundwater	6E1-1 10/25/17 Groundwater	6E1-1 10/25/17 Groundwater	6E12-2 10/23/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	498.00		468.00		338.00	
Alkalinity, Carb.As CaCO3	1.00 U		545.00		1.00 U	
Alkalinity, Total	498.00		1010.00		338.00	
Bromine anion (Br-)	0.20		0.60		0.22	
Calcium	23.50		2.04		28.30	
Chloride	408.00		1160.00		272.00	
Dissolved Organic Carbon	5.66		61.90		5.82	
Fluoride	0.44		1.20		0.56	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 U		0.12	
Nitrite	0.10 U		0.10 U		0.10 U	
Potassium	11.30		37.30		7.62	
Sodium	429.00		1280.00		283.00	
Sulfate	25.80		4.91		37.00	
Total Dissolved Solids	1270.00		2880.00		937.00	
Dissolved Metals (ug/L)					<u> </u>	İ
Aluminum	18.20 J		61.10		28.60 J	
Arsenate Ion - As(O4)3-	375.00		2760.00		11100.00	
Arsenic, Inorganic	5780.00		10500.00		35700.00	
Arsenite Ion - As(O3)3-	4810.00		2600.00		27200.00	
Cacodylic Acid	105.00 U		21.00 U		420.00 U	
Copper	1.00 U		127.00		3.60	
Iron	661.00		932.00		312.00	
Lead and Compounds	0.10 U		8.10		0.50 U	
				1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6D25-1-102517-(20)	GW-6D25-2-102417	GW-6D25-2-102417-(20)	GW-6E1-1-102517	GW-6E1-1-102517-(20)	GW-6E12-2-102317
Site ID: Sample Date: Constituent Media:	10/25/17	6D25-2 10/24/17 Groundwater	6D25-2 10/24/17 Groundwater	6E1-1 10/25/17 Groundwater	6E1-1 10/25/17 Groundwater	6E12-2 10/23/17 Groundwater
Magnesium	16700.00		69.20		21000.00	
Manganese	159.00		6.00		63.50	1
Mercury (elemental)	0.10 U		0.10 U		0.92	
Methylarsonic acid	115.00 U		23.00 U		460.00 U	
Nickel Soluble Salts	1.94		6.45 J		3.63	
Silicon	44900.00		63800.00		33900.00	
Sum of arsenic species	5185.00		5360.00		38300.00	
Dissolved Ortho-Phosphorus (mg/L)						
p-Phosphate {PO4}, as P	0.32		4.46		0.26	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•			•		
Alkalinity, Total (mg/L)	•			•		
Dissolved Oxygen (DO) (mg/L)		0.04		0.28		0
Hydroxide Alkalinity (mg/L)	•			•		
Oxidation Reduction Potential (ORP) (mV)		-154.60		-16.10		-43.50
Specific Conductivity (uS/cm)		4934.10		1542.10		37959.20
Гетрегаture (Celsius) (С)		15.03		16.47		14.68
Furbidity (NTU)		7.13		2.24		2.97
pH ()		9.66		7.09		7.03
Field TDS and Sulfide (mg/L)						
Sulfide		24.40		0.02		0.90
Total Dissolved Solids		3220.00		1000.00		25000.00
Total Metals (ug/L)						
Arsenic, Inorganic		9450.00		35300.00		10800.00



	Sample ID:	GW-6D25-1-102517-(20)	GW-6D25-2-102417	GW-6D25-2-102417-(20)	GW-6E1-1-102517	GW-6E1-1-102517-(20)	GW-6E12-2-102317
	Site ID:	6D25-1	6D25-2	6D25-2	6E1-1	6E1-1	6E12-2
	Sample Date:	10/25/17	10/24/17	10/24/17	10/25/17	10/25/17	10/23/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			105.00 J		6.24		10.00U
Lead and Compounds			7.08		1.28		2.00U
Mercury (elemental)			0.10 U		1.78		0.10U
Nickel Soluble Salts			10.20		4.64		3.36J
Field Ferrous Iron (ug/L)							
Ferrous Iron			700.00		0		7700.00
VOCs (ug/L)							
Chloroform			0.05 J		0.14 J		0.20U
Tetrachloroethylene			0.79		1.17		0.20
Trichloroethylene			0.38		0.77		0.20
Vinyl Chloride			0.59		0.20 U		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E12-2-102317-(20)	GW-6E2-1-102417	GW-6E2-1-102417-(20)	GW-6E3-2-103017	GW-6E3-2-103017-(20)	GW-6E5-1-102017
Site ID: Sample Date: Constituent Media:	10/23/17	6E2-1 10/24/17 Groundwater	6E2-1 10/24/17 Groundwater	6E3-2 10/30/17 Groundwater	6E3-2 10/30/17 Groundwater	6E5-1 10/20/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	2460.00		410.00		680.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	2460.00		410.00		680.00	
Bromine anion (Br-)	18.80		0.83		8.94	
Calcium	286.00		13.90		351.00	
Chloride	17800.00		1880.00		16900.00	
Dissolved Organic Carbon	1.00 U		4.76		110.00	
Fluoride	0.10 U		0.18		2.63	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 U		0.10 U	
Nitrite	0.10 U		0.10 U		0.10 U	
Potassium	357.00		42.00		222.00	
Sodium	10600.00		1280.00		9350.00	
Sulfate	37.10		127.00		647.00	
Total Dissolved Solids	26700.00		3470.00		26800.00	
Dissolved Metals (ug/L)					!	
Aluminum	250.00 U		50.00 U		500.00 U	
Arsenate Ion - As(O4)3-	4670.00		1740.00		17200.00	
Arsenic, Inorganic	9250.00		10700.00		100000.00	
Arsenite Ion - As(O3)3-	5640.00		11800.00		39400.00	
Cacodylic Acid	105.00 U		210.00 U		105.00 U	
Copper	10.00 U		2.50 U		10.00 U	
Iron	413.00		34100.00		580000.00	
Lead and Compounds	2.00 U		0.50 U		2.00 U	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E12-2-102317-(20)	GW-6E2-1-102417	GW-6E2-1-102417-(20)	GW-6E3-2-103017	GW-6E3-2-103017-(20)	GW-6E5-1-102017
Site ID: Sample Date: Constituent Media:	10/23/17	6E2-1 10/24/17 Groundwater	6E2-1 10/24/17 Groundwater	6E3-2 10/30/17 Groundwater	6E3-2 10/30/17 Groundwater	6E5-1 10/20/17 Groundwater
Magnesium	898000.00		11200.00		445000.00	
Manganese	367.00		247.00		4340.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	22.90 J		230.00 U		115.00 U	
Nickel Soluble Salts	3.14 J		11.00		68.30	
Silicon	40300.00		32100.00		21900.00	
Sum of arsenic species	10310.00		13540.00		56600.00	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	2.82		0.10 U		0.50 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•					
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	•	0.22		3.31		0.13
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-53.20		-41.00		-136.10
Specific Conductivity (uS/cm)		6522.20		28972.60		3886.90
Temperature (Celsius) (C)		14.38		16.75		17.51
Turbidity (NTU)	•	26.50		1446.00		9.33
oH ()		6.42		6.19		6.98
Field TDS and Sulfide (mg/L)						
Sulfide		0.06		14.00 >		0.03
Total Dissolved Solids		4000.00		20000.00		3000.00
Total Metals (ug/L)						
Arsenic, Inorganic		21500.00		247000.00		30400.00



Sam	ple ID:	GW-6E12-2-102317-(20)	GW-6E2-1-102417	GW-6E2-1-102417-(20)	GW-6E3-2-103017	GW-6E3-2-103017-(20)	GW-6E5-1-102017
S	Site ID:	6E12-2	6E2-1	6E2-1	6E3-2	6E3-2	6E5-1
Sample			10/24/17	10/24/17	10/30/17	10/30/17	10/20/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			1.00 U		18.70		1.73
Lead and Compounds			0.50 U		2.02		0.95
Mercury (elemental)			0.10 U		0.10 U		0.10U
Nickel Soluble Salts			22.80		131.00		1.41
Field Ferrous Iron (ug/L)							
Ferrous Iron			22100.00				24100.00
VOCs (ug/L)							
Chloroform			0.54		1.59		0.20U
Tetrachloroethylene			5.90		1.56		0.20U
Trichloroethylene			2.42		6.65		0.11J
Vinyl Chloride			0.20 U		5.77		0.20U



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E5-1-102017-(20)	GW-6E6-1-102417	GW-6E6-1-102417-(20)	GW-6E7-3-110117	GW-6E7-3-110117-(20)	GW-6E8-3-110217
Site ID: Sample Date: Constituent Media:	10/20/17	6E6-1 10/24/17 Groundwater	6E6-1 10/24/17 Groundwater	6E7-3 11/01/17 Groundwater	6E7-3 11/01/17 Groundwater	6E8-3 11/02/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	804.00		1.00 U		391.00	
Alkalinity, Carb.As CaCO3	1.00 U		2110.00		1.00 U	
Alkalinity, Total	804.00		2590.00		391.00	
Bromine anion (Br-)	0.49		7.84		3.41	
Calcium	27.70		2.10		61.10	
Chloride	1170.00		3410.00		1010.00	
Dissolved Organic Carbon	23.40		117.00		4.06	
Fluoride	1.13		5.00 U		0.50 U	
Hydroxide Alkalinity	1.00 U		480.00		1.00 U	
Nitrate	0.10 U		5.00 U		0.50 U	
Nitrite	0.10 U		5.00 U		0.50 U	
Potassium	16.30		33.70		50.90	
Sodium	926.00		3500.00		550.00	
Sulfate	14.80		154.00		1.88	
Total Dissolved Solids	2770.00		8420.00		1950.00	
Dissolved Metals (ug/L)						
Aluminum	100.00 U		553.00		50.00 U	
Arsenate Ion - As(O4)3-	3520.00		1280.00		66.50	
Arsenic, Inorganic	29100.00		4760.00		229.00	
Arsenite Ion - As(O3)3-	38400.00		93.50 J		142.00	
Cacodylic Acid	420.00 U		210.00 U		1.05 U	
Copper	0.38 J		69.60		1.00 U	
Iron	25200.00		1960.00		414.00	
Lead and Compounds	20.00 U		20.60		0.20 U	
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E5-1-102017-(20)	GW-6E6-1-102417	GW-6E6-1-102417-(20)	GW-6E7-3-110117	GW-6E7-3-110117-(20)	GW-6E8-3-110217
Site ID: Sample Date: Constituent Media:	10/20/17	6E6-1 10/24/17 Groundwater	6E6-1 10/24/17 Groundwater	6E7-3 11/01/17 Groundwater	6E7-3 11/01/17 Groundwater	6E8-3 11/02/17 Groundwater
Magnesium	24300.00		183.00 J		106000.00	
Manganese	287.00		26.70		33.40	
Mercury (elemental)	0.10 U		0.63		0.10 U	
Methylarsonic acid	460.00 U		230.00 U		1.15 U	
Nickel Soluble Salts	0.81		18.50 J		0.28 J	
Silicon	43000.00		415000.00		24700.00	
Sum of arsenic species	41920.00		1373.50 J		208.50	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.43		5.00 U		0.63	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)	•					
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0		0.10		0.11
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-254.40		-126.80		-72.90
Specific Conductivity (uS/cm)		11888.00		3826.70		2046.00
Temperature (Celsius) (C)	•	15.71		14.90		12.87
Turbidity (NTU)	•	1.81				1.33
pH ()		10.80		7.65		7.92
Field TDS and Sulfide (mg/L)						
Sulfide		28.00 >				0.01
Total Dissolved Solids		8000.00		2490.00		1000.00
Total Metals (ug/L)						
Arsenic, Inorganic		5310.00		273.00		0.55



	Sample ID:	GW-6E5-1-102017-(20)	GW-6E6-1-102417	GW-6E6-1-102417-(20)	GW-6E7-3-110117	GW-6E7-3-110117-(20)	GW-6E8-3-110217
	Site ID:	6E5-1	6E6-1	6E6-1	6E7-3	6E7-3	6E8-3
	Sample Date:	10/20/17	10/24/17	10/24/17	11/01/17	11/01/17	11/02/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			78.80		0.93 J		0.500
Lead and Compounds			25.10		0.20 U		0.16
Mercury (elemental)			0.77		0.10 U		0.10
Nickel Soluble Salts			24.00		0.35 J		0.48J
Field Ferrous Iron (ug/L)							
Ferrous Iron			0				150.00
VOCs (ug/L)							
Chloroform			0.63 J		0.20 U		0.20
Tetrachloroethylene			10.80		0.20 U		0.20
Trichloroethylene			1.44 J		0.20 U		0.20
Vinyl Chloride			2.00 U		0.20 U		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E8-3-110217-(20)	GW-6E9-2-102517	GW-6E9-2-102517-(20)	GW-6F1-2-102017	GW-6F1-2-102017-(20)	GW-6F2-1-102017
Site ID: Sample Date: Constituent Media:	6E8-3 11/02/17 Groundwater	6E9-2 10/25/17 Groundwater	6E9-2 10/25/17 Groundwater	6F1-2 10/20/17 Groundwater	6F1-2 10/20/17 Groundwater	6F2-1 10/20/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	298.00		1200.00		895.00	
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U		1.00 U	
Alkalinity, Total	298.00		1200.00		895.00	
Bromine anion (Br-)	1.59		3.11		9.59	
Calcium	98.80		22.50		328.00	
Chloride	484.00		4990.00		10800.00	
Dissolved Organic Carbon	2.75		169.00		34.00	
Fluoride	0.50 U		2.69		0.56	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.50 U		0.50 U		0.10 U	
Nitrite	0.50 U		0.50 U		0.10 U	
Potassium	18.70		70.60		254.00	
Sodium	188.00		3600.00		5520.00	
Sulfate	0.50 U		4.84		6.99	
Total Dissolved Solids	1140.00		8320.00		16400.00	
Dissolved Metals (ug/L)						
Aluminum	50.00 U		80.70 J		250.00 U	
Arsenate Ion - As(O4)3-	1.00 U		571.00		0.26 J	
Arsenic, Inorganic	0.18 J		3000.00		1.92 J	
Arsenite Ion - As(O3)3-	1.00 U		2160.00		1.00 U	
Cacodylic Acid	1.05 U		21.00 U		1.05 U	
Copper	0.50 U		10.00 U		5.00 U	
Iron	135.00		11500.00		211000.00	
Lead and Compounds	0.10 U		2.00 U		1.00 U	
			1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6E8-3-110217-(20)	GW-6E9-2-102517	GW-6E9-2-102517-(20)	GW-6F1-2-102017	GW-6F1-2-102017-(20)	GW-6F2-1-102017
Site ID: Sample Date: Constituent Media:	11/02/17	6E9-2 10/25/17 Groundwater	6E9-2 10/25/17 Groundwater	6F1-2 10/20/17 Groundwater	6F1-2 10/20/17 Groundwater	6F2-1 10/20/17 Groundwater
Magnesium	62000.00		26700.00		720000.00	
Manganese	47.90		99.20		3130.00	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		23.00 U		1.15 U	
Nickel Soluble Salts	0.08 J		9.78 J		5.00 U	
Silicon	19600.00		25200.00		23400.00	
Sum of arsenic species	2.00 U		2731.00		0.26 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.68 J		5.74		0.10 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.02		0.03		3.79
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-235.40		-68.80		33.10
Specific Conductivity (uS/cm)		15143.00		24618.00		404.60
Геmperature (Celsius) (С)		14.68		14.36		13.40
Furbidity (NTU)		0.09		20.80		3.79
pH ()		7.69		6.30		7.94
Field TDS and Sulfide (mg/L)						
Sulfide		0.55		0.01		0.11
Total Dissolved Solids		9840.00		16000.00		
Fotal Metals (ug/L)						
Arsenic, Inorganic		2970.00		2.60		60.00



	Sample ID:	GW-6E8-3-110217-(20)	GW-6E9-2-102517	GW-6E9-2-102517-(20)	GW-6F1-2-102017	GW-6F1-2-102017-(20)	GW-6F2-1-102017
	Site ID:	6E8-3	6E9-2	6E9-2	6F1-2	6F1-2	6F2-1
	Sample Date:	11/02/17	10/25/17	10/25/17	10/20/17	10/20/17	10/20/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			4.84 J		5.00 U		61.50
Lead and Compounds			1.00 U		1.00 U		0.58
Mercury (elemental)			0.10 U		0.10 U		0.22
Nickel Soluble Salts			12.50		0.52 J		5.20
Field Ferrous Iron (ug/L)							
Ferrous Iron			0		55700.00		5900.00
VOCs (ug/L)							
Chloroform			1.00 UJ		0.20 UJ		0.03.
Tetrachloroethylene			1.00 UJ		0.20 UJ		0.20
Trichloroethylene			0.49 J		0.20 UJ		0.20
Vinyl Chloride			4.50 J		0.20 UJ		0.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6F2-1-102017-(20)	GW-6G1-1-102017	GW-6G1-1-102017-(20)	GW-6G2-3-110117	GW-6G2-3-110117-(20)	GW-6G3-2-102517
Site ID: Sample Date: Constituent Media:	10/20/17	6G1-1 10/20/17 Groundwater	6G1-1 10/20/17 Groundwater	6G2-3 11/01/17 Groundwater	6G2-3 11/01/17 Groundwater	6G3-2 10/25/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	89.30		87.10		335.00	
Alkalinity, Carb.As CaCO3	1.00 U		33.50		1.00 U	
Alkalinity, Total	89.30		121.00		335.00	
Bromine anion (Br-)	0.10 U		0.30		2.17	
Calcium	15.00		0.38		123.00	
Chloride	59.30		126.00		649.00	
Dissolved Organic Carbon	20.00		17.20		2.95	1
Fluoride	0.44		2.50		0.50 U	1
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	1
Nitrate	0.10 U		0.23		0.50 UJ	
Nitrite	0.10 U		0.10 U		0.50 UJ	
Potassium	1.32		1.61		22.00	
Sodium	81.90		158.00		188.00	
Sulfate	74.40		32.50		0.50 U	
Total Dissolved Solids	291.00		416.00		1360.00	
Dissolved Metals (ug/L)						
Aluminum	13.40 J		27.00 J		50.00 U	
Arsenate Ion - As(O4)3-	67.40		306.00		1.00 U	
Arsenic, Inorganic	64.40		295.00		0.29	
Arsenite Ion - As(O3)3-	0.97 J		1.04		1.00 U	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	54.70		15.20		0.50 U	
Iron	51.60		91.50		128.00	
Lead and Compounds	0.24		0.37		0.10 U	
	İ	1	i	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6F2-1-102017-(20)	GW-6G1-1-102017	GW-6G1-1-102017-(20)	GW-6G2-3-110117	GW-6G2-3-110117-(20)	GW-6G3-2-102517
Site ID: Sample Date: Constituent Media:	10/20/17	6G1-1 10/20/17 Groundwater	6G1-1 10/20/17 Groundwater	6G2-3 11/01/17 Groundwater	6G2-3 11/01/17 Groundwater	6G3-2 10/25/17 Groundwater
Magnesium	5730.00		61.50		119000.00	
Manganese	1.70		1.80		64.80	
Mercury (elemental)	0.16		0.10 U		0.10 U	
Methylarsonic acid	1.15 U		1.15 U		1.15 U	
Nickel Soluble Salts	4.88		11.90		0.11 J	
Silicon	7510.00		10600.00		21300.00	
Sum of arsenic species	68.37 J		307.04		2.00 U	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.10 U		0.57		0.50 UJ	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						1640.00
Alkalinity, Carb.As CaCO3 (mg/L)						1.00
Alkalinity, Total (mg/L)						1640.00
Dissolved Oxygen (DO) (mg/L)		2.90		0.02		0.09
Hydroxide Alkalinity (mg/L)						1.00
Oxidation Reduction Potential (ORP) (mV)		21.70		-100.90		-308.40
Specific Conductivity (uS/cm)		500.00		2581.10		28347.00
Temperature (Celsius) (C)		15.48		13.94		14.29
Turbidity (NTU)		86.00		0.26		88.40
oH ()		9.87		7.89		6.42
Field TDS and Sulfide (mg/L)						
Sulfide		0.45		0.03		0.32
Total Dissolved Solids		0		1680.00		18390.00
Total Metals (ug/L)						
Arsenic, Inorganic		261.00		0.58		2.94



Sar	mple ID:	GW-6F2-1-102017-(20)	GW-6G1-1-102017	GW-6G1-1-102017-(20)	GW-6G2-3-110117	GW-6G2-3-110117-(20)	GW-6G3-2-102517
Samp Constituent	Site ID: ole Date: Media:	6F2-1 10/20/17 Groundwater	6G1-1 10/20/17 Groundwater	6G1-1 10/20/17 Groundwater	6G2-3 11/01/17 Groundwater	6G2-3 11/01/17 Groundwater	6G3-2 10/25/17 Groundwater
Copper		- Orodinamator	69.10	Ordanamator	0.50 U	Groundwater	10.00
Lead and Compounds			21.40		0.10 U		2.00
Mercury (elemental)			0.10 U		0.10 UJ		0.10U
Nickel Soluble Salts			111.00		0.20 J		10.00U
Field Ferrous Iron (ug/L)							
Ferrous Iron			2400.00		110.00		270.00
VOCs (ug/L)							
Chloroform			0.20 U		0.20 U		0.03J
Tetrachloroethylene			0.20 U		0.20 U		0.08J
Trichloroethylene			0.20 U		0.20 U		0.20UJ
Vinyl Chloride			0.20 U		0.20 U		0.20UJ



Table G-3: 2017 Groundwater Results

Sample ID:	GW-6G3-2-102517-(20)	GW-6H1-1-102517	GW-6H1-1-102517-(20)	GW-7E10-1-102317	GW-7E10-1-102317-(20)	GW-7E13-2R-102517
Site ID: Sample Date: Constituent Media:	10/25/17	6H1-1 10/25/17 Groundwater	6H1-1 10/25/17 Groundwater	7E10-1 10/23/17 Groundwater	7E10-1 10/23/17 Groundwater	7E13-2R 10/25/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1610.00		143.00		427.00	
Alkalinity, Carb.As CaCO3	1.00 U		40.80		1250.00	
Alkalinity, Total	1610.00		184.00		1680.00	
Bromine anion (Br-)	12.70		0.10 U		1.79	
Calcium	220.00		0.85		2.88	
Chloride	8990.00		184.00		4000.00	
Dissolved Organic Carbon	31.20		20.90		2.50 U	
Fluoride	0.56 J		3.33		1.89	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 U		0.10 U	
Nitrite	0.10 UJ		0.10 U		0.10 U	
Potassium	233.00		2.24		51.60	
Sodium	5340.00		211.00		3870.00	
Sulfate	121.00		28.10		180.00	
Total Dissolved Solids	14200.00		640.00		7600.00	
Dissolved Metals (ug/L)						
Aluminum	52.60 J		646.00		100.00 U	
Arsenate Ion - As(O4)3-	0.40 J		86.80		1280.00	
Arsenic, Inorganic	2.60		556.00		2680.00	
Arsenite Ion - As(O3)3-	1.00 U		244.00		25.50 J	
Cacodylic Acid	1.05 U		0.68 J		105.00 U	
Copper	5.00 U		14.40		2.50 J	
Iron	4130.00		1740.00		737.00	
Lead and Compounds	1.00 U		2.24		0.50 U	
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Table G-3: 2017 Groundwater Results

Sample ID:	GW-6G3-2-102517-(20)	GW-6H1-1-102517	GW-6H1-1-102517-(20)	GW-7E10-1-102317	GW-7E10-1-102317-(20)	GW-7E13-2R-10251
Site ID: Sample Date: Constituent Media:	10/25/17	6H1-1 10/25/17 Groundwater	6H1-1 10/25/17 Groundwater	7E10-1 10/23/17 Groundwater	7E10-1 10/23/17 Groundwater	7E13-2R 10/25/17 Groundwater
Magnesium	452000.00		242.00		293.00	
Manganese	1020.00		21.80		7.50	
Mercury (elemental)	0.10 U		0.10 U		0.12	
Methylarsonic acid	1.15 U		1.15 U		115.00 U	
Nickel Soluble Salts	5.00 U		5.14		56.90	
Silicon	23900.00		12600.00		64500.00	
Sum of arsenic species	0.40 J		330.80		1305.50 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.57 J		3.89		4.52	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.03		0		0.02
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-193.70		-158.20		-136.20
Specific Conductivity (uS/cm)		962.40		13390.50		3950.90
Temperature (Celsius) (C)		14.65		17.10		13.85
Turbidity (NTU)		19.20		0		0.93
pH ()		8.78		9.81		9.54
Field TDS and Sulfide (mg/L)						
Sulfide		0.92		8.80		11.60
Total Dissolved Solids		1000.00		9000.00		3000.00
Fotal Metals (ug/L)						
Arsenic, Inorganic		563.00		1650.00	+	411.00



	Sample ID:	GW-6G3-2-102517-(20)	GW-6H1-1-102517	GW-6H1-1-102517-(20)	GW-7E10-1-102317	GW-7E10-1-102317-(20)	GW-7E13-2R-102517
	Site ID:	6G3-2	6H1-1	6H1-1	7E10-1	7E10-1	7E13-2R
	Sample Date:	10/25/17	10/25/17	10/25/17	10/23/17	10/23/17	10/25/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			25.60		2.50 U		25.70
Lead and Compounds			3.46		0.50 U		2.52
Mercury (elemental)			0.20		0.43		0.10U
Nickel Soluble Salts			7.97		55.30		12.80
Field Ferrous Iron (ug/L)							
Ferrous Iron			0		0		0
VOCs (ug/L)							
Chloroform			1.00 U		36900.00 J		1.00U
Tetrachloroethylene			1.00 U		5190.00 J		1.00
Trichloroethylene			1.00 U		714.00 J		3.86
Vinyl Chloride			1.00 U		359.00 J		19.80



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E13-2R-102517-(20	GW-7E16-2-102417	GW-7E16-2-102417-(20)	GW-7E3-1-102417	GW-7E3-1-102417-(20)	GW-7E4-2-102317
Site ID: Sample Date: Constituent Media:		7E16-2 10/24/17 Groundwater	7E16-2 10/24/17 Groundwater	7E3-1 10/24/17 Groundwater	7E3-1 10/24/17 Groundwater	7E4-2 10/23/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	717.00		531.00		825.00	
Alkalinity, Carb.As CaCO3	549.00		1.00 U		1.00 U	
Alkalinity, Total	1270.00		531.00		825.00	
Bromine anion (Br-)	1.92		0.36		0.31	
Calcium	6.13		49.70		59.80	
Chloride	904.00		815.00		2740.00	
Dissolved Organic Carbon	99.50		5.70		9.03	
Fluoride	0.59		0.55		5.47	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.10 U		0.10 U	
Nitrite	0.10 U		0.10 U		0.10 U	
Potassium	9.81		20.70		35.20	
Sodium	1150.00		676.00		2050.00	
Sulfate	16.50		38.80		52.50	
Total Dissolved Solids	2750.00		1990.00		4820.00	
Dissolved Metals (ug/L)						
Aluminum	333.00		50.00 U		50.00 U	
Arsenate Ion - As(O4)3-	59.50		648.00		349.00	
Arsenic, Inorganic	287.00		2910.00		14300.00	
Arsenite Ion - As(O3)3-	18.30		2130.00		12100.00	
Cacodylic Acid	1.05 U		21.00 U		210.00 U	
Copper	13.30		2.49		5.00 U	
Iron	2290.00		5570.00		1140.00	
Lead and Compounds	1.47		0.20 U		1.00 U	
	1	1				1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E13-2R-102517-(20	GW-7E16-2-102417	GW-7E16-2-102417-(20)	GW-7E3-1-102417	GW-7E3-1-102417-(20)	GW-7E4-2-102317
Site ID: Sample Date: Constituent Media:	10/25/17	7E16-2 10/24/17 Groundwater	7E16-2 10/24/17 Groundwater	7E3-1 10/24/17 Groundwater	7E3-1 10/24/17 Groundwater	7E4-2 10/23/17 Groundwater
Magnesium	417.00		45300.00		15800.00	
Manganese	70.70		170.00		327.00	
Mercury (elemental)	0.10 U		0.10 U		0.16	
Methylarsonic acid	1.15 U		23.00 U		230.00 U	
Nickel Soluble Salts	10.10		4.85		4.26 J	
Silicon	46800.00		29800.00		36700.00	
Sum of arsenic species	77.80		2778.00		12449.00	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	1.86		0.10 U		1.37	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.11		0.07		C
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-91.40		-144.40		-274.80
Specific Conductivity (uS/cm)		2876.80		10869.00		12600.60
Геmperature (Celsius) (С)		16.51		15.62		14.24
Furbidity (NTU)		3.33		6.04		0.43
pH ()		8.66		7.58		11.56
Field TDS and Sulfide (mg/L)						
Sulfide		0.02		0.04		28.00
Total Dissolved Solids		2000.00		7020.00		8000.00
Fotal Metals (ug/L)						
Arsenic, Inorganic		2550.00		15600.00		330.00



	Sample ID:	GW-7E13-2R-102517-(20	GW-7E16-2-102417	GW-7E16-2-102417-(20)	GW-7E3-1-102417	GW-7E3-1-102417-(20)	GW-7E4-2-102317
	Site ID:) 7E13-2R	7E16-2	7E16-2	7E3-1	7E3-1	7E4-2
	Sample Date:	10/25/17	10/24/17	10/24/17	10/24/17	10/24/17	10/23/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			2.96		2.00 J		2.98
Lead and Compounds			0.20 U		1.00 U		0.500
Mercury (elemental)		•	0.10 U		0.13		0.10
Nickel Soluble Salts		•	4.61		5.45		14.90
Field Ferrous Iron (ug/L)							
Ferrous Iron			3700.00		2000.00		
VOCs (ug/L)							
Chloroform			0.73		0.14 J		132.00
Tetrachloroethylene			24.90		0.91		14.70
Trichloroethylene			8.77		1.97		20.30
Vinyl Chloride			2.68		0.20 U		596.00



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E4-2-102317-(20)	GW-7E5-3-110217	GW-7E5-3-110217-(20)	GW-7E6-2-102417	GW-7E6-2-102417-(20)	GW-7E7-2-102517
Site ID: Sample Date: Constituent Media:	10/23/17	7E5-3 11/02/17 Groundwater	7E5-3 11/02/17 Groundwater	7E6-2 10/24/17 Groundwater	7E6-2 10/24/17 Groundwater	7E7-2 10/25/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1030.00		254.00		694.00	
Alkalinity, Carb.As CaCO3	675.00		1.00 U		986.00	
Alkalinity, Total	1700.00		254.00		1680.00	
Bromine anion (Br-)	5.88		1.02		9.16	
Calcium	24.20		67.10		4.45	
Chloride	4290.00		297.00		2910.00	
Dissolved Organic Carbon	4.02		2.62		250.00	
Fluoride	0.61		0.50 U		0.73	
Hydroxide Alkalinity	1.00 U		1.00 U		1.00 U	
Nitrate	0.10 U		0.50 U		0.10 U	
Nitrite	0.10 U		0.50 U		0.10 U	
Potassium	58.40		14.80		40.80	
Sodium	3580.00		120.00		2600.00	
Sulfate	17.30		1.02		9.41	
Total Dissolved Solids	7580.00		776.00		5740.00	
Dissolved Metals (ug/L)						
Aluminum	45.30 J		50.00 U		98.10	
Arsenate Ion - As(O4)3-	97.20		1.00 U		172.00	
Arsenic, Inorganic	303.00		0.09 J		347.00	
Arsenite Ion - As(O3)3-	28.70		1.00 U		15.90	
Cacodylic Acid	0.33 J		1.05 U		1.05 U	
Copper	2.54		0.50 U		9.10	
Iron	158.00		53.10		487.00	
Lead and Compounds	0.50 U		0.10 U		0.70	
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E4-2-102317-(20)	GW-7E5-3-110217	GW-7E5-3-110217-(20)	GW-7E6-2-102417	GW-7E6-2-102417-(20)	GW-7E7-2-102517
Site ID: Sample Date: Constituent Media:	10/23/17	7E5-3 11/02/17 Groundwater	7E5-3 11/02/17 Groundwater	7E6-2 10/24/17 Groundwater	7E6-2 10/24/17 Groundwater	7E7-2 10/25/17 Groundwater
Magnesium	42700.00		44400.00		325.00	
Manganese	82.20		30.50		19.80	
Mercury (elemental)	0.10 U		0.10 U		0.10 U	
Methylarsonic acid	4.82		1.15 U		3.19	
lickel Soluble Salts	12.30		0.50 U		15.70	
Silicon	24700.00		19400.00		42600.00	
Sum of arsenic species	125.90		2.00 U		187.90	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	5.34		0.74 J		3.90	
rield Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)	•					
Dissolved Oxygen (DO) (mg/L)	•	0.06		0		2.01
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)	•	-57.40		-250.60		-55.10
Specific Conductivity (uS/cm)	•	1136.70		8745.20		1928.90
emperature (Celsius) (C)	•	12.81		13.37		13.88
urbidity (NTU)		0.72		0.35		1.13
PH ()		7.87		10.54		9.40
rield TDS and Sulfide (mg/L)						
Sulfide		0.02		22.80		28.00
otal Dissolved Solids		60.00		6000.00		1000.00
otal Metals (ug/L)						
Arsenic, Inorganic		0.16 J	+	724.00		157.00



	Sample ID:	GW-7E4-2-102317-(20)	GW-7E5-3-110217	GW-7E5-3-110217-(20)	GW-7E6-2-102417	GW-7E6-2-102417-(20)	GW-7E7-2-102517
	Site ID:	7E4-2	7E5-3	7E5-3	7E6-2	7E6-2	7E7-2
	Sample Date:	10/23/17	11/02/17	11/02/17	10/24/17	10/24/17	10/25/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			0.35 J		21.60		3.91
Lead and Compounds			0.10 U		1.62		0.41
Mercury (elemental)			0.10 U		0.10 U		0.10
Nickel Soluble Salts			0.50 U		22.10		7.13
Field Ferrous Iron (ug/L)							
errous Iron			50.00				70.00
VOCs (ug/L)							
Chloroform			0.03 J		186.00		966.00
Tetrachloroethylene			0.20 U		962.00		351.00
Trichloroethylene			0.20 U		192.00		222.00
/inyl Chloride			0.20 U		254.00		66.80



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E7-2-102517-(20)	GW-7E8-1-102417	GW-7E8-1-102417-(20)	GW-7E9-2-102317	GW-7E9-2-102317-(20)	GW-7F1-2-102317
Site ID: Sample Date: Constituent Media:	10/25/17	7E8-1 10/24/17 Groundwater	7E8-1 10/24/17 Groundwater	7E9-2 10/23/17 Groundwater	7E9-2 10/23/17 Groundwater	7F1-2 10/23/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	296.00		1.00 U		478.00	
Alkalinity, Carb.As CaCO3	241.00		2510.00		1.00 U	
Alkalinity, Total	536.00		3180.00		478.00	
Bromine anion (Br-)	0.93		7.68		2.16	
Calcium	37.30		1.48		33.20	
Chloride	609.00		4970.00		2420.00	
Dissolved Organic Carbon	38.10		293.00		15.40	
Fluoride	0.35		5.00 U		0.10 U	
Hydroxide Alkalinity	1.00 U		665.00		1.00 U	
Nitrate	0.31		5.00 U		1.23	
Nitrite	0.10 U		5.00 U		0.10 U	
Potassium	8.51		30.40		55.50	
Sodium	575.00		4450.00		1740.00	
Sulfate	23.10		238.00		11.00	
Total Dissolved Solids	1570.00		11300.00		4100.00	
Dissolved Metals (ug/L)						
Aluminum	43.40 J		559.00		50.00 U	
Arsenate Ion - As(O4)3-	8.43		715.00		20.20	
Arsenic, Inorganic	155.00		3430.00		52.30	
Arsenite Ion - As(O3)3-	9.94		116.00		2.72 J	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	3.22		18.10		2.50 U	
Iron	157.00		713.00		39.20 J	
Lead and Compounds	0.11		5.60		0.50 U	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7E7-2-102517-(20)	GW-7E8-1-102417	GW-7E8-1-102417-(20)	GW-7E9-2-102317	GW-7E9-2-102317-(20)	GW-7F1-2-102317
Site ID: Sample Date: Constituent Media:	10/25/17	7E8-1 10/24/17 Groundwater	7E8-1 10/24/17 Groundwater	7E9-2 10/23/17 Groundwater	7E9-2 10/23/17 Groundwater	7F1-2 10/23/17 Groundwater
Magnesium	10800.00		500.00 U		91300.00	
Manganese	10.40		13.60		51.20	
Mercury (elemental)	0.10 U		0.10		0.10 U	
Methylarsonic acid	1.15 U		0.57 J		1.15 U	
Nickel Soluble Salts	5.62		61.20		0.73 J	
Silicon	21800.00		725000.00		16900.00	
Sum of arsenic species	18.37		831.00		22.92 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	0.66		5.94		0.54	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.05		3.35		c
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-241.60		-125.10		-199.00
Specific Conductivity (uS/cm)		17727.60		4814.70		25309.00
Temperature (Celsius) (C)		14.45		14.36		14.72
Turbidity (NTU)		0.97		1.71		1.81
pH ()		10.92		7.68		8.32
Field TDS and Sulfide (mg/L)						
Sulfide		28.00 >		1.10		8.00
Total Dissolved Solids		12000.00		3000.00		16000.00
Fotal Metals (ug/L)						
Arsenic, Inorganic		4020.00		51.70		31.50



	Sample ID:	GW-7E7-2-102517-(20)	GW-7E8-1-102417	GW-7E8-1-102417-(20)	GW-7E9-2-102317	GW-7E9-2-102317-(20)	GW-7F1-2-102317
	Site ID:	7E7-2	7E8-1	7E8-1	7E9-2	7E9-2	7F1-2
	Sample Date:		10/24/17	10/24/17	10/23/17	10/23/17	10/23/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			20.50		2.50 U		5.00
Lead and Compounds			6.64		0.50 U		1.00
Mercury (elemental)			0.10		0.10 U		0.10U
Nickel Soluble Salts			73.20		1.08 J		2.73J
Field Ferrous Iron (ug/L)							
Ferrous Iron					50.00		210.00
VOCs (ug/L)							
Chloroform			6.28		0.20 U		0.20U
Tetrachloroethylene			2520.00		12.20		0.20
Trichloroethylene			214.00		3.18		0.20
Vinyl Chloride			1.04		93.60		22.20



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7F1-2-102317-(20)	GW-7F2-1-102317	GW-7F2-1-102317-(20)	GW-7F3-1-102317	GW-7F3-1-102317-(20)	GW-7F4-1-102317
Site ID: Sample Date: Constituent Media:	10/23/17	7F2-1 10/23/17 Groundwater	7F2-1 10/23/17 Groundwater	7F3-1 10/23/17 Groundwater	7F3-1 10/23/17 Groundwater	7F4-1 10/23/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	1770.00		281.00			
Alkalinity, Carb.As CaCO3	1.00 U		1.00 U			
Alkalinity, Total	1770.00		281.00			
Bromine anion (Br-)	8.75		0.11		42.60	
Calcium	43.00		48.10		2.25 J	
Chloride	10800.00		593.00		11800.00	
Dissolved Organic Carbon	49.60		35.90		831.00	
Fluoride	0.10 U		0.75		5.59	
Hydroxide Alkalinity	1.00 U		1.00 U			
Nitrate	0.10 U		2.02		5.00 U	
Nitrite	0.10 U		0.10 U		5.00 U	
Potassium	181.00		11.00		176.00	
Sodium	7420.00		350.00		17700.00	
Sulfate	12.20		113.00		2040.00	
Total Dissolved Solids	17700.00		1290.00		63600.00	
Dissolved Metals (ug/L)						
Aluminum	250.00 U		26.80 J		42500.00	
Arsenate Ion - As(O4)3-	2.06		141.00		558.00	
Arsenic, Inorganic	42.20		154.00		2120.00	
Arsenite Ion - As(O3)3-	11.10		2.47		16.90	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	36.00		50.10		29.90	
Iron	49.70 J		78.80		6000.00 J	
Lead and Compounds	2.00 U		0.15		2.00 U	
		1		1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7F1-2-102317-(20)	GW-7F2-1-102317	GW-7F2-1-102317-(20)	GW-7F3-1-102317	GW-7F3-1-102317-(20)	GW-7F4-1-102317
Site ID: Sample Date: Constituent Media:	10/23/17	7F2-1 10/23/17 Groundwater	7F2-1 10/23/17 Groundwater	7F3-1 10/23/17 Groundwater	7F3-1 10/23/17 Groundwater	7F4-1 10/23/17 Groundwater
Magnesium	114000.00		60700.00		10000.00 U	
Manganese	8.20		10.70		200.00 U	
Mercury (elemental)	0.10 U		0.10 U		0.20 U	
Methylarsonic acid	1.15 U		1.15 U		0.36 J	
Nickel Soluble Salts	2.82 J		22.30		131.00	
Silicon	24400.00		5000.00		10600000.00	
Sum of arsenic species	13.16		143.47		574.90	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	4.53		1.39		28.40	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)	•					
Dissolved Oxygen (DO) (mg/L)	•	5.22		0.67		0
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)		-84.90		-292.20		-418.60
Specific Conductivity (uS/cm)		1735.60		44815.00		49374.00
Femperature (Celsius) (C)	•	13.88		12.67		17.09
Furbidity (NTU)		3.57				
pH ()		7.52		10.96		12.22
Field TDS and Sulfide (mg/L)						
Sulfide		0.04				28.00
Total Dissolved Solids		1000.00		30000.00		32000.00
Fotal Metals (ug/L)						



	Sample ID:	GW-7F1-2-102317-(20)	GW-7F2-1-102317	GW-7F2-1-102317-(20)	GW-7F3-1-102317	GW-7F3-1-102317-(20)	GW-7F4-1-102317
	Site ID:	7F1-2	7F2-1	7F2-1	7F3-1	7F3-1	7F4-1
	Sample Date:	10/23/17	10/23/17	10/23/17	10/23/17	10/23/17	10/23/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			58.10		100.00 U		33.70
Lead and Compounds			0.36		20.00 U		5.00
Mercury (elemental)		•	0.10 U		0.22		0.16
Nickel Soluble Salts			23.80		232.00		181.00
Field Ferrous Iron (ug/L)							
Ferrous Iron			120.00				
VOCs (ug/L)							
Chloroform			0.20 U		2.00 U		2.00U
Tetrachloroethylene			0.09 J		2.00 U		3.94
Trichloroethylene			0.20 U		2.00 U		5.15
Vinyl Chloride			0.20 U		2.00 U		2.00



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7F4-1-102317-(20)	GW-7G1-1-102717	GW-7G1-1-102717-(20)	GW-7G1-2-102717	GW-7G1-2-102717-(20)	GW-7I1-1-102717-(20)_ DC
Site ID:	l .	7G1-1	7G1-1	7G1-2	7G1-2	711-1
Sample Date:	10/23/17	10/27/17	10/27/17	10/27/17	10/27/17	10/27/17
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			448.00		1580.00	429.50
Alkalinity, Carb.As CaCO3			123.00		1.00 U	1.00U
Alkalinity, Total			571.00		1580.00	429.50
Bromine anion (Br-)	26.00		0.19		14.70	0.17
Calcium	1.78		32.30		219.00	49.10
Chloride	11600.00		660.00		10000.00	149.50
Dissolved Organic Carbon	821.00		16.40		29.60	9.29
Fluoride	5.00 U		0.73		0.10 U	2.45
Hydroxide Alkalinity			1.00 U		1.00 U	1.00U
Nitrate	5.00 U		0.10 U		0.10 U	0.10U
Nitrite	5.00 U		0.10 U		0.10 U	0.10U
Potassium	107.00		10.50		246.00	15.45
Sodium	9830.00		591.00		5690.00	133.50
Sulfate	1010.00		119.00		9.78	3.25
Total Dissolved Solids	38400.00		1750.00		15600.00	673.00
Dissolved Metals (ug/L)				İ		İ
Aluminum	1000.00 U		14.40 J		250.00 U	16.80J
Arsenate Ion - As(O4)3-	187.00		2.75		0.37 J	0.83J
Arsenic, Inorganic	256.00		40.70		1.40 J	0.56
Arsenite Ion - As(O3)3-	1.11		10.50		1.00 U	0.48J
Cacodylic Acid	1.05 U		1.05 U		1.05 U	1.05U
Copper	22.80 J		1.37		10.00 U	0.50U
Iron	1990.00		95.80		13400.00	4795.00
Lead and Compounds	5.00 U		0.20 U		2.00 U	0.10U
	I	1	1	1	1	1



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7F4-1-102317-(20)	GW-7G1-1-102717	GW-7G1-1-102717-(20)	GW-7G1-2-102717	GW-7G1-2-102717-(20)	GW-7I1-1-102717-(20)_
Site ID: Sample Date: Constituent Media:	10/23/17	7G1-1 10/27/17 Groundwater	7G1-1 10/27/17 Groundwater	7G1-2 10/27/17 Groundwater	7G1-2 10/27/17 Groundwater	DC 7I1-1 10/27/17 Groundwater
Magnesium	1000.00 U		78200.00		539000.00	61950.00
Manganese	20.00 U		49.00		787.00	1665.00
Mercury (elemental)	0.20 U		0.10 U		0.10 U	0.10U
Methylarsonic acid	1.15 U		1.15 U		1.15 U	1.15U
Nickel Soluble Salts	110.00		5.97		10.00 U	0.60
Silicon	930000.00		15900.00		20400.00	16700.00
Sum of arsenic species	188.11		13.25		0.37 J	1.31J
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	18.50		0.40		0.10 U	0.35
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)		0.06		0.07		
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)		-145.30		-42.60		
Specific Conductivity (uS/cm)		3277.50		28446.00		
Temperature (Celsius) (C)		15.12		12.89		
Turbidity (NTU)		1.44		9.23		
pH ()		8.43		6.42		
Field TDS and Sulfide (mg/L)						
Sulfide		0.39		0.02		
Total Dissolved Solids		2110.00		18510.00		
Total Metals (ug/L)						
Arsenic, Inorganic		38.10		2.70 J		



Sample ID: Site ID: Sample Date: Constituent Media:	7F4-1 10/23/17	GW-7G1-1-102717 7G1-1 10/27/17 Groundwater	GW-7G1-1-102717-(20) 7G1-1 10/27/17 Groundwater	GW-7G1-2-102717 7G1-2 10/27/17 Groundwater	GW-7G1-2-102717-(20) 7G1-2 10/27/17 Groundwater	GW-7l1-1-102717-(20)_ DC 7l1-1 10/27/17 Groundwater
Copper		3.13		10.00 U		
Lead and Compounds		1.20		2.00 U		
Mercury (elemental)	•	0.10 U		0.10 U		
Nickel Soluble Salts		6.05		10.00 U		
Field Ferrous Iron (ug/L)						
Ferrous Iron		120.00		14200.00		
VOCs (ug/L)						
Chloroform		0.05 J		0.20 U		
Tetrachloroethylene		0.12 J		0.20 U		
Trichloroethylene		0.33		0.20 U		
Vinyl Chloride		0.20 U		0.20 U		



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7I1-1-102717_DC	GW-7I3-2-102717	GW-7I3-2-102717-(20)	GW-8F1-1R-102517	GW-8F1-1R-102517-(20)	GW-8F2-2R-102717
Site ID: Sample Date: Constituent Media:	10/27/17	7l3-2 10/27/17 Groundwater	7l3-2 10/27/17 Groundwater	8F1-1R 10/25/17 Groundwater	8F1-1R 10/25/17 Groundwater	8F2-2R 10/27/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			770.00		50.80	
Alkalinity, Carb.As CaCO3			1.00 U		1860.00	
Alkalinity, Total			770.00		1910.00	
Bromine anion (Br-)			0.62		6.73	
Calcium			62.30		3.44	
Chloride			447.00		3100.00	
Dissolved Organic Carbon			19.00		135.00	
Fluoride			1.05		5.00 U	
Hydroxide Alkalinity			1.00 U		1.00 U	•
Nitrate			0.10 U		5.00 U	•
Vitrite			0.10 U		5.00 U	•
Potassium			33.60		20.90	•
Sodium			478.00		2780.00	
Sulfate			0.62		14.40	•
Total Dissolved Solids			1540.00		6320.00	
Dissolved Metals (ug/L)						
Aluminum			50.00 U		190.00 J	
Arsenate Ion - As(O4)3-			0.85 J		6.33	
Arsenic, Inorganic			0.98		22.40	
Arsenite Ion - As(O3)3-			0.91 J		0.86 J	
Cacodylic Acid			1.05 U		1.05 U	
Copper			0.50 U		18.10	
ron			9600.00		602.00	
ead and Compounds			0.10 U		1.27	



Table G-3: 2017 Groundwater Results

Sample ID:	GW-7I1-1-102717_DC	GW-7l3-2-102717	GW-7I3-2-102717-(20)	GW-8F1-1R-102517	GW-8F1-1R-102517-(20)	GW-8F2-2R-102717
Site ID: Sample Date: Constituent Media:	10/27/17	7I3-2 10/27/17 Groundwater	7I3-2 10/27/17 Groundwater	8F1-1R 10/25/17 Groundwater	8F1-1R 10/25/17 Groundwater	8F2-2R 10/27/17 Groundwater
Magnesium		Ī	45200.00		280.00 J	
Manganese			1810.00		6.70 J	
Mercury (elemental)			0.10 U		0.10 U	
Methylarsonic acid			1.15 U		1.15 U	
Nickel Soluble Salts			0.55		17.90	
Silicon			24400.00		194000.00	
Sum of arsenic species			1.76 J		7.19 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P			1.85		5.00 U	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)	0.11	0.08		0.01		0.01
Hydroxide Alkalinity (mg/L)						
Oxidation Reduction Potential (ORP) (mV)	-93.50	-38.90		-342.90		-432.80
Specific Conductivity (uS/cm)	1382.20	2245.80		12091.00		33001.00
Temperature (Celsius) (C)	16.02	15.89		15.67		14.35
Turbidity (NTU)	2.40	7.38		0.36		
pH ()	6.85	6.65		10.33		10.86
Field TDS and Sulfide (mg/L)						
Sulfide	0.02	0.04		28.00 >		28.00
Total Dissolved Solids	900.00	1000.00		7860.00		21440.00
Total Metals (ug/L)						
Total Metals (ug/L)						



Table G-3: 2017 Groundwater Results

\$	Sample ID:	GW-7I1-1-102717_DC	GW-7l3-2-102717	GW-7I3-2-102717-(20)	GW-8F1-1R-102517	GW-8F1-1R-102517-(20)	GW-8F2-2R-102717
	Site ID:	7 1-1	713-2	713-2	8F1-1R	8F1-1R	8F2-2R
Sai	mple Date:		10/27/17	10/27/17	10/25/17	10/25/17	10/27/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper		0.50 U	0.88		18.20		23.30
Lead and Compounds		0.10 U	0.12		1.28		2.00U
Mercury (elemental)		0.10 U	0.10 U		0.10 U		0.10U
Nickel Soluble Salts		0.58	0.90		18.70		0.48J
Field Ferrous Iron (ug/L)							
Ferrous Iron		3600.00	9600.00		0		0
VOCs (ug/L)							
Chloroform		0.20 U	0.20 UJ		2.00 U		2.00U
Tetrachloroethylene		0.20 U	0.20 UJ		2.00 U		2.00
Trichloroethylene		0.20 U	0.20 UJ		4.06		2.99
Vinyl Chloride		0.20 U	0.20 UJ		38.20		2.00



Table G-3: 2017 Groundwater Results

Sample ID:	GW-8F2-2R-102717-(20)	GW-8G2-1-102717	GW-8G2-1-102717-(20)	GW-8G3-2-102717	GW-8G3-2-102717-(20)	GW-8H1-1-102717
Site ID: Sample Date: Constituent Media:	8F2-2R 10/27/17	8G2-1 10/27/17 Groundwater	8G2-1 10/27/17 Groundwater	8G3-2 10/27/17 Groundwater	8G3-2 10/27/17 Groundwater	8H1-1 10/27/17 Groundwater
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3			422.00		1480.00	
Alkalinity, Carb.As CaCO3			1940.00		744.00	
Alkalinity, Total			2360.00		2220.00	
Bromine anion (Br-)	42.50		7.46		11.30	
Calcium	2.78		6.87		9.69	
Chloride	10900.00		10400.00		11900.00	
Dissolved Organic Carbon	703.00		136.00		85.00	
Fluoride	5.00 U		2.30		1.44	
Hydroxide Alkalinity			1.00 U		1.00 U	
Nitrate	5.00 U		0.10 U		0.10 U	
Nitrite	5.00 U		0.10 U		0.10 U	
Potassium	112.00		82.00		146.00	
Sodium	8590.00		7850.00		8710.00	
Sulfate	179.00		487.00		795.00	
Total Dissolved Solids	21600.00		18300.00		19600.00	
Dissolved Metals (ug/L)						
Aluminum	1000.00 U		250.00 U		250.00 U	
Arsenate Ion - As(O4)3-	1.82		152.00		0.42 J	
Arsenic, Inorganic	34.50		272.00		58.30	
Arsenite Ion - As(O3)3-	2.84		7.73		6.55	
Cacodylic Acid	1.05 U		1.05 U		1.05 U	
Copper	29.50		11.00		10.00 U	
Iron	2060.00	•	162.00 J		73.30 J	
Lead and Compounds	2.00 U		2.00 U		2.00 U	
						i



Table G-3: 2017 Groundwater Results

Sample ID:	GW-8F2-2R-102717-(20)	GW-8G2-1-102717	GW-8G2-1-102717-(20)	GW-8G3-2-102717	GW-8G3-2-102717-(20)	GW-8H1-1-102717
Site ID: Sample Date: Constituent Media:	10/27/17	8G2-1 10/27/17 Groundwater	8G2-1 10/27/17 Groundwater	8G3-2 10/27/17 Groundwater	8G3-2 10/27/17 Groundwater	8H1-1 10/27/17 Groundwater
Magnesium	1000.00 U		4140.00		8380.00	
Manganese	20.00 U		2.40 J		1.90 J	
Mercury (elemental)	0.10 U		0.12		0.10 U	
Methylarsonic acid	1.15 U		0.24 J		1.15 U	
Nickel Soluble Salts	84.10		48.00		5.76 J	
Silicon	83500.00		165000.00		33800.00	
Sum of arsenic species	4.66		159.73		6.97 J	
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	11.50		5.72		4.62	
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)	•					
Dissolved Oxygen (DO) (mg/L)	•	0.03		0.06		0.07
Hydroxide Alkalinity (mg/L)	•					
Oxidation Reduction Potential (ORP) (mV)		-253.00		-214.70		-77.80
Specific Conductivity (uS/cm)		27508.00		28428.40		20704.10
emperature (Celsius) (C)	•	15.55		13.26		15.05
Furbidity (NTU)		1.07		1.24		4000.00
pH ()		10.30		9.11		6.59
Field TDS and Sulfide (mg/L)						
Sulfide		25.20		0.40		
Total Dissolved Solids		18000.00		19000.00		13000.00
Total Metals (ug/L)						
Arsenic, Inorganic	 	194.00	+	69.40	+	14.20



	Sample ID:	GW-8F2-2R-102717-(20)	GW-8G2-1-102717	GW-8G2-1-102717-(20)	GW-8G3-2-102717	GW-8G3-2-102717-(20)	GW-8H1-1-102717
	Site ID:	8F2-2R	8G2-1	8G2-1	8G3-2	8G3-2	8H1-1
	Sample Date:	10/27/17	10/27/17	10/27/17	10/27/17	10/27/17	10/27/17
Constituent	Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Copper			9.08 J		0.35 J		5.00U
Lead and Compounds			2.00 U		2.00 U		1.00U
Mercury (elemental)			0.10 U		0.10 U		0.10U
Nickel Soluble Salts			0.09 J		6.04 J		5.70
Field Ferrous Iron (ug/L)							
Ferrous Iron			0		0		11260.00
VOCs (ug/L)							
Chloroform			2.00 U		2.00 U		2.00UJ
Tetrachloroethylene			2.00 U		2.00 U		2.000
Trichloroethylene			2.00 U		2.00 U		2.000
Vinyl Chloride			2.00 U		49.50		2.000



Table G-3: 2017 Groundwater Results

Sample ID:	GW-8H1-1-102717-(20)					
Site ID:						
Sample Date:		/ /	/ /	/ /	/ /	1 /
Constituent Media:	Groundwater					
Dissolved Conventionals (mg/L)						
Alkalinity, Bicarb. As CaCO3	2170.00					
Alkalinity, Carb.As CaCO3	1.00 U					
Alkalinity, Total	2170.00					
Bromine anion (Br-)	4.53					
Calcium	113.00					
Chloride	8940.00					
Dissolved Organic Carbon	110.00					
Fluoride	2.40					
Hydroxide Alkalinity	1.00 U					
Nitrate	0.10 U					
Nitrite	0.10 U				•	
Potassium	129.00				•	
Sodium	6030.00				•	
Sulfate	1.06				•	
Total Dissolved Solids	14600.00					
Dissolved Metals (ug/L)						
Aluminum	412.00					
Arsenate Ion - As(O4)3-	3.63					
Arsenic, Inorganic	12.90					
Arsenite Ion - As(O3)3-	5.46					
Cacodylic Acid	1.05 U					
Copper	5.00 U					
Iron	16100.00					
Lead and Compounds	1.00 U					
	I		1	1	I	I



Table G-3: 2017 Groundwater Results

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Sample ID:	GW-8H1-1-102717-(20)					
Site ID:						
Sample Date:		/ /	/ /	/ /	11	//
Constituent Media:	Groundwater					
Magnesium	92700.00					
Manganese	885.00					
Mercury (elemental)	0.10 U					
Methylarsonic acid	1.15 U					
Nickel Soluble Salts	5.40					
Silicon	21400.00					
Sum of arsenic species	9.09					
Dissolved Ortho-Phosphorus (mg/L)						
o-Phosphate {PO4}, as P	11.30					
Field Parameters and/or Alkalinity						
Alkalinity, Bicarb. As CaCO3 (mg/L)						
Alkalinity, Carb.As CaCO3 (mg/L)						
Alkalinity, Total (mg/L)						
Dissolved Oxygen (DO) (mg/L)					•	•
Hydroxide Alkalinity (mg/L)					•	•
Oxidation Reduction Potential (ORP) (mV)						
Specific Conductivity (uS/cm)						
Temperature (Celsius) (C)						
Turbidity (NTU)						
pH ()						•
Field TDS and Sulfide (mg/L)						
Sulfide						
Total Dissolved Solids						
Total Metals (ug/L)						
Arsenic, Inorganic						
	•	•	•	•	•	



Sample ID	: GW-8H1-1-102717-(20)					
Site ID Sample Date Constituent Media		//	//	//	//	11
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Ferrous Iron (ug/L)						
Ferrous Iron						
VOCs (ug/L)						
Chloroform						
Tetrachloroethylene						
Trichloroethylene						
Vinyl Chloride						



Table G-4: 2018 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/17/18	PW-119+25-0-DS-10171 8-(20) 119+25-0-DS 10/17/18 Pore Water	PW-119+25-ST1-091118 119+25-ST1 09/11/18 Pore Water	PW-119+25-ST1-091118- (20) 119+25-ST1 09/11/18 Pore Water	PW-119+25-ST1-DS-101 718 119+25-ST1-DS 10/17/18 Pore Water	PW-119+25-ST1-DS-1 1718-(20) 119+25-ST1-DS 10/17/18 Pore Water
Dissolved Metals (ug/L)						
Arsenic, Inorganic		2.79		9.92		33.20
Copper		1.27		0.46		0.15
Lead and Compounds		0.08		0.02		0.01J
Mercury (elemental)		0.0004 U		0.0002 J		0.0004U
Nickel Soluble Salts		1.60		0.92		0.34
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	3.68		2.65		0.68	
Oxidation Reduction Potential (ORP) (mV)	181.20		-5.40		100.50	
Specific Conductivity (uS/cm)	41897.00		47244.00		43779.00	
Temperature (Celsius) (C)	11.70		17.60		12.70	
Turbidity (NTU)	74.90		10.90		26.70	
pH ()	6.51		7.30		7.35	



Table G-4: 2018 Pore Water Results

	1			1	T	1
Sample ID:	PW-120+75-0-DS-10171	PW-120+75-0-DS-10171	PW-120+75-ST1-091118	PW-120+75-ST1-091118-	PW-120+75-ST1-DS-101	PW-120+75-ST1-DS-1
	8	8-(20)		(20)	718	1718-(20)
Site ID:	120+75-0-DS	120+75-0-DS	120+75-ST1	120+75-ST1	120+75-ST1-DS	120+75-ST1-DS
Sample Date:	10/17/18	10/17/18	09/11/18	09/11/18	10/17/18	10/17/18
Constituent Media:	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water
Dissolved Metals (ug/L)						
Arsenic, Inorganic		4.20		47.50		32.00
Copper		2.78		0.07		0.34
Lead and Compounds		0.08		0.02 U		0.06
Mercury (elemental)		0.0002 J		0.0001 J		0.0004U
Nickel Soluble Salts		1.02		0.56		0.73
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	4.81		0.16		0.67	
Oxidation Reduction Potential (ORP) (mV)	97.80		-79.30		94.50	
Specific Conductivity (uS/cm)	37666.00		46596.00		42447.00	
Temperature (Celsius) (C)	12.40		16.20		13.20	
Turbidity (NTU)	7.25		4.21		23.40	
pH ()	7.31		7.36		7.38	
			1	1	i	I



Table G-4: 2018 Pore Water Results

Sample ID:	PW-122+60-0-DS-10171	PW-122+60-0-DS-10171	PW-123+25-ST1-091218	PW-123+25-ST1-091218-	PW-123+25-ST1-DS-101	PW-123+25-ST1-DS-10
Site ID:	8 122+60-0-DS	8-(20) 122+60-0-DS	123+25-ST1	(20) 123+25-ST1	718 123+25-ST1-DS	1718-(20)_DC 123+25-ST1-DS
Sample Date:	10/17/18	10/17/18	09/12/18	09/12/18	10/17/18	10/17/18
Constituent Media:	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water
Dissolved Metals (ug/L)						
Arsenic, Inorganic		12.90		189.00		546.50
Copper		0.36		0.22	•	0.17
Lead and Compounds		0.03		0.006 J		0.01J
Mercury (elemental)		0.0007 J		0.0002 J		0.0003J
Nickel Soluble Salts		12.30		1.32		0.44
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.35		0.29		0.77	
Oxidation Reduction Potential (ORP) (mV)	92.10		16.70		87.00	
Specific Conductivity (uS/cm)	40384.00		46330.00		44209.00	
Temperature (Celsius) (C)	14.10		15.50		15.20	
Turbidity (NTU)	21.90		5.34		13.10	
pH ()	7.45		7.65		7.62	



Table G-4: 2018 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/17/18	PW-124+00-0-DS-10171 8-(20) 124+00-0-DS 10/17/18 Pore Water	PW-125+00-ST1-091218 125+00-ST1 09/12/18 Pore Water	PW-125+00-ST1-091218- (20) 125+00-ST1 09/12/18 Pore Water	PW-125+00-ST1-DS-101 718 125+00-ST1-DS 10/17/18 Pore Water	PW-125+00-ST1-DS-1 1718-(20) 125+00-ST1-DS 10/17/18 Pore Water
Dissolved Metals (ug/L)						
Arsenic, Inorganic		4.96		20.70		43.50
Copper		2.19		1.20	•	0.38
Lead and Compounds		0.08		0.02		0.04
Mercury (elemental)		0.0004 J		0.003		0.0004U
Nickel Soluble Salts		1.04		0.87		0.79
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.18		1.03		4.55	
Oxidation Reduction Potential (ORP) (mV)	81.00		35.00		90.00	
Specific Conductivity (uS/cm)	41567.00		44875.00		41779.00	
Temperature (Celsius) (C)	14.40		16.10		15.00	
Turbidity (NTU)	9.01		14.50		6.60	
pH ()	7.72		7.55		7.71	



Table G-4: 2018 Pore Water Results

Sample Date: Constituent Media:	1	8-(20) 125+50-0-DS 10/17/18 Pore Water	126+80-ST1 09/12/18 Pore Water	(20) 126+80-ST1 09/12/18 Pore Water	PW-126+80-ST1-DS-101 718 126+80-ST1-DS 10/17/18 Pore Water	PW-126+80-ST1-DS-1 1718-(20) 126+80-ST1-DS 10/17/18 Pore Water
Dissolved Metals (ug/L)						
rsenic, Inorganic		43.70		18.60		15.20
Copper		1.81		0.97		0.64
ead and Compounds		0.08		0.01 J		0.02
Mercury (elemental)		0.0006		0.0004 J		0.0004U
lickel Soluble Salts		2.93		0.67		0.65
ield Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	3.72		2.77		1.51	
Oxidation Reduction Potential (ORP) (mV)	87.00		39.50		90.70	
Specific Conductivity (uS/cm)	45272.00		47329.00		44011.00	
emperature (Celsius) (C)	15.70		16.80		14.90	
urbidity (NTU)	4.87		22.40		13.30	
oH ()	7.78		7.39		7.65	



Table G-4: 2018 Pore Water Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/17/18	PW-126+90-0-DS-10171 8-(20) 126+90-0-DS 10/17/18 Pore Water	PW-128+30-0-DS-10171 8 128+30-0-DS 10/17/18 Pore Water	PW-128+30-0-DS-10171 8-(20) 128+30-0-DS 10/17/18 Pore Water	PW-128+50-ST1-091318 128+50-ST1 09/13/18 Pore Water	PW-128+50-ST1-0913 ² 8-(20)_DC 128+50-ST1 09/13/18 Pore Water
Dissolved Metals (ug/L)						
Arsenic, Inorganic		30.90		8.81		69.85
Copper		2.60		1.88		0.04J
Lead and Compounds		0.36		0.21		0.006J
Mercury (elemental)		0.0005		0.0005		0.0005
Nickel Soluble Salts		1.44		7.70		0.54
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	4.74		3.84		0.12	
Oxidation Reduction Potential (ORP) (mV)	87.70		91.50		-239.80	
Specific Conductivity (uS/cm)	42545.00		41687.00		47029.00	
Temperature (Celsius) (C)	15.90		14.80		16.10	
Turbidity (NTU)	5.07		15.90		6.30	
pH ()	7.71		7.64		7.66	



Table G-4: 2018 Pore Water Results

Sample I	718 re ID: 128+50-ST1-DS	PW-128+50-ST1-DS-101 718-(20) 128+50-ST1-DS 10/17/18 Pore Water	PW-130+75-ST1-091318 130+75-ST1 09/13/18 Pore Water	PW-130+75-ST1-091318- (20) 130+75-ST1 09/13/18 Pore Water	/ /	11
Dissolved Metals (ug/L)						
Arsenic, Inorganic		35.00		5.51		
Copper		0.12		0.14		
Lead and Compounds		0.010 J		0.02 U		
Mercury (elemental)		0.0002 J		0.0002 J		
Nickel Soluble Salts		0.36 J		0.94		
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.86		0.86			
Oxidation Reduction Potential (ORP) (m	V) 89.80		-110.80			
Specific Conductivity (uS/cm)	43277.00		47610.00			
Temperature (Celsius) (C)	16.00		19.90			
Turbidity (NTU)	19.90		22.10			
pH ()	7.63		7.41			



Table G-5: 2018 Surface Water Results

Sample ID:		SW-120+75-SW-DS-101 718-(20) 120+75-SW	SW-125+00-SW-DS-101 718 125+00-SW	SW-125+00-SW-DS-101 718-(20) 125+00-SW	SW-128+50-SW-DS-101 718 128+50-SW	SW-128+50-SW-DS-10 718-(20) 128+50-SW
Sample Date: Constituent Media:		10/17/18 Surfacewater	10/17/18 Surfacewater	10/17/18 Surfacewater	10/17/18 Surfacewater	10/17/18 Surfacewater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		3.78		2.70		2.44
Copper		1.12		0.97		0.90
Lead and Compounds		0.08		0.09		0.06
Mercury (elemental)		0.0004 U		0.0004 U		0.0004U
Nickel Soluble Salts		0.53		0.59		0.43
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	3.83		1.08		2.44	
Oxidation Reduction Potential (ORP) (mV)	98.40		91.00		81.20	
Specific Conductivity (uS/cm)	44427.00		44309.00		39737.00	
Temperature (Celsius) (C)	14.20		14.50		16.80	
Turbidity (NTU)	5.95		15.40		3.81	
pH ()	7.71		7.71		7.68	



Table G-6: 2018 Groundwater Results

Sample ID:	GW-120+75-2-101118	GW-120+75-2-101118-(2 0)	GW-121+80-1-101118	GW-121+80-1-101118-(2 0)	GW-121+80-2-101118	GW-121+80-2-101118 20)
Site ID:	120+75-2	120+75-2	121+80-1	121+80-1	121+80-2	121+80-2
Sample Date:		10/11/18	10/11/18	10/11/18	10/11/18	10/11/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		139.00		1850.00		1560.00
Copper		0.46 U		8.72		4.99
Lead and Compounds		0.15 U		1.76		1.25
Mercury (elemental)		0.0003 J		0.29		0.01
Nickel Soluble Salts		3.03 U		11.30		16.80
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.22		0.25		0.08	
Oxidation Reduction Potential (ORP) (mV)	-13.00		-189.60		-210.50	
Specific Conductivity (uS/cm)	37464.00		6138.00		11455.00	
Temperature (Celsius) (C)	14.40		17.50		15.20	
Turbidity (NTU)	6.23				42.70	
pH ()	7.30		11.15		9.59	
	1	I	1	1	I	



Table G-6: 2018 Groundwater Results

Sample ID:	GW-122+60-0-101018	GW-122+60-0-101018-(2	GW-122+60-1-101018	GW-122+60-1-101018-(2	GW-122+60-2-101118	GW-122+60-2-101118
		0)		0)		20)
Site ID:		122+60-0	122+60-1	122+60-1	122+60-2	122+60-2
Sample Date: Constituent Media:	10/10/18 Groundwater	10/10/18 Groundwater	10/10/18 Groundwater	10/10/18 Groundwater	10/11/18 Groundwater	10/11/18 Groundwater
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Giodilawatei
Dissolved Metals (ug/L)						
Arsenic, Inorganic		9.68		26.10		2850.00
Copper		3.69		3.25		0.46J
Lead and Compounds		0.15 U		0.15 U		0.15U
Mercury (elemental)		0.002		0.0006		0.0004J
Nickel Soluble Salts		482.00		239.00		22.70
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.32		5.44		0.27	
Oxidation Reduction Potential (ORP) (mV)	6.10		37.10		45.20	
Specific Conductivity (uS/cm)	27375.00		30234.00		29764.00	
Temperature (Celsius) (C)	14.90		16.30		15.10	
Turbidity (NTU)	4.42		16.80		5.00	
pH ()	8.03		7.56		8.10	1



Table G-6: 2018 Groundwater Results

Sample ID:	GW-124+00-0-101018	GW-124+00-0-101018-(2	GW-124+00-0-101118	GW-124+00-0-101118-(2	GW-124+00-1-101018	GW-124+00-1-101018-
Site ID: Sample Date:	124+00-0 10/10/18	0) 124+00-0 10/10/18	124+00-0 10/11/18	0) 124+00-0 10/11/18	124+00-1 10/10/18	20) 124+00-1 10/10/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		8.11		8.42		1100.00
Copper		2.81		2.34		2.74
Lead and Compounds		0.15 U		0.15 U		0.15U
Mercury (elemental)		0.0009		0.0004 J		0.002
Nickel Soluble Salts		150.00		158.00		20.20
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.33		4.55		1.80	
Oxidation Reduction Potential (ORP) (mV)	107.10		161.30		95.60	
Specific Conductivity (uS/cm)	38590.00		32356.00		37297.00	
Temperature (Celsius) (C)	13.80		12.90		15.90	
Turbidity (NTU)	3.36		9.86		46.00	
pH ()	8.46		8.22		8.42	



Table G-6: 2018 Groundwater Results

Constituent	Sample ID: Site ID: Sample Date: Media:	10/10/18	GW-124+00-2-101018-(2 0) 124+00-2 10/10/18 Groundwater	GW-125+50-0-101018 125+50-0 10/10/18 Groundwater	GW-125+50-0-101018-(2 0) 125+50-0 10/10/18 Groundwater	GW-125+50-0-101118 125+50-0 10/11/18 Groundwater	GW-125+50-0-101118 20) 125+50-0 10/11/18 Groundwater
Dissolved Metals (ug/L)							
Arsenic, Inorganic			76200.00		101.00		106.00
Copper			0.38 J		4.88		7.63
Lead and Compounds			0.22		0.15 U		0.15U
Mercury (elemental)			0.01		0.010		0.008
Nickel Soluble Salts			16.90		427.00		492.00
Field Parameters and/or All	kalinity						
Dissolved Oxygen (DO) (mg/	L)	0.24		6.06		6.26	
Oxidation Reduction Potentia	I (ORP) (mV)	-11.90		85.00		129.10	
Specific Conductivity (uS/cm))	31580.00		30457.00		38521.00	
Temperature (Celsius) (C)		14.20		13.60		12.70	
Turbidity (NTU)		10.10		2.13		4.36	
pH ()		8.85		7.60		7.16	
		1			I		1



Table G-6: 2018 Groundwater Results

Sample ID:	GW-125+50-1-101018	GW-125+50-1-101018-(2	GW-125+50-2-101018	GW-125+50-2-101018-(2	GW-126+90-0-101018	GW-126+90-0-101018
Site ID:	125+50-1	0) 125+50-1	125+50-2	0) 125+50-2	126+90-0	20) 126+90-0
Sample Date:	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18	10/10/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		80.70		706.00		29.70
Copper		2.30		0.46 U		3.24
_ead and Compounds		0.15 U		0.15 U		0.15U
Mercury (elemental)		0.006		0.0006		0.002
Nickel Soluble Salts		32.90		0.91 J		438.00
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	7.76		0.14		5.90	
Oxidation Reduction Potential (ORP) (mV)	105.00		-64.20		142.20	
Specific Conductivity (uS/cm)	38238.00		29440.00		36721.00	
Temperature (Celsius) (C)	14.90		15.80		13.40	
Turbidity (NTU)	36.10		4.57		0	
oH ()	8.33	1	7.49		7.71	



Table G-6: 2018 Groundwater Results

Sample ID:	GW-126+90-0-101118	GW-126+90-0-101118-(2	GW-126+90-1-101018	GW-126+90-1-101018-(2	GW-126+90-2-100818	GW-126+90-2-100818
		0)		0)		20)
Site ID:	126+90-0	126+90-0	126+90-1	126+90-1	126+90-2	126+90-2
Sample Date:	10/11/18	10/11/18	10/10/18	10/10/18	10/08/18	10/08/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		28.70		95.20		909.00
Copper		5.20		3.06		0.46U
Lead and Compounds		0.15 U		0.15 U		0.15U
Mercury (elemental)		0.002		0.05		0.001
Nickel Soluble Salts		450.00		104.00		3.76
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.89		6.26		0.13	
Oxidation Reduction Potential (ORP) (mV)	172.40		108.30		-75.70	
Specific Conductivity (uS/cm)	28189.00		40955.00		28957.00	
Temperature (Celsius) (C)	13.00		14.70		14.60	
Turbidity (NTU)	5.26		40.00		0	
pH ()	7.74		8.04		7.92	



Table G-6: 2018 Groundwater Results

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S	ample ID:	GW-128+30-0-100918	GW-128+30-0-100918-(2	GW-128+30-1-100818	GW-128+30-1-100818-(2	GW-128+30-2-100818	GW-128+30-2-100818
	Site ID:	120.20.0	0)	120, 20, 1	0)	100.00.0	20)
Sam	nple Date:		128+30-0 10/09/18	128+30-1 10/08/18	128+30-1 10/08/18	128+30-2 10/08/18	128+30-2 10/08/18
Constituent	Media:	1	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)							
Arsenic, Inorganic			13.20		15.70		625.00
Copper			3.81		7.14		0.46U
Lead and Compounds			0.15 U		0.15 U		0.15U
Mercury (elemental)			0.001		0.0003 J		0.002
Nickel Soluble Salts			372.00		4230.00		1.54J
Field Parameters and/or Alkalinit	y						
Dissolved Oxygen (DO) (mg/L)		6.71		2.60		0.03	
Oxidation Reduction Potential (ORF	P) (mV)	63.10		46.90		-235.80	
Specific Conductivity (uS/cm)		39278.00		37838.00		18140.00	
Temperature (Celsius) (C)		13.60		15.20		13.90	
Turbidity (NTU)		4.16		309.00		1.80	
pH ()		6.81		6.59		8.54	
			1	ı	1	1	



Table G-6: 2018 Groundwater Results

Sample ID:	GW-129+65-0-100918	GW-129+65-0-100918-(2 0)	GW-129+65-1-100818	GW-129+65-1-100818-(2 0)	GW-129+65-2-100818	GW-129+65-2-100818 20)
Site ID:		129+65-0	129+65-1	129+65-1	129+65-2	129+65-2
Sample Date:		10/09/18	10/08/18	10/08/18	10/08/18	10/08/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		2.55		1.91		8.65
Copper		2.79		55.20		0.46U
Lead and Compounds		0.15 U		0.15 U		0.15U
Mercury (elemental)		0.0010		0.010		0.0004
Nickel Soluble Salts		1230.00		1520.00		5.60
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.78		7.16		0	
Oxidation Reduction Potential (ORP) (mV)	78.80		113.90		-210.00	
Specific Conductivity (uS/cm)	29216.00		33217.00		26500.00	
Temperature (Celsius) (C)	13.60		14.50		14.70	
Turbidity (NTU)	13.40		169.00		13.90	
pH ()	7.48		7.19		7.05	



Sample ID:	GW-131+00-1-100818	GW-131+00-1-100818-(2 0)	GW-131+00-2-100818	GW-131+00-2-100818-(2 0)	GW-4C1-1-100518	GW-4C1-1-100518-(20
Site ID:	131+00-1	131+00-1	131+00-2	131+00-2	4C1-1	4C1-1
Sample Date:	10/08/18	10/08/18	10/08/18	10/08/18	10/05/18	10/05/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		0.52 J		2.75		163.00
Copper		8.80		0.46 U		
Lead and Compounds		0.15 U		0.15 U		
Mercury (elemental)		0.0009		0.0003 J		
Nickel Soluble Salts		1260.00		13.70		
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	5.73		0.67		0	
Oxidation Reduction Potential (ORP) (mV)	88.70		-198.70		-76.00	
Specific Conductivity (uS/cm)	34090.00		13315.00		4548.00	
Temperature (Celsius) (C)	14.90		14.30		17.30	
Turbidity (NTU)			285.00		7.05	
pH ()	7.41		8.85		10.81	



Sample ID:	GW-4D1-1-100518	GW-4D1-1-100518-(20)	GW-5B1-1R-101118	GW-5B1-1R-101118-(20) _DC	GW-5B1-2R-101118	GW-5B1-2R-101118-(2
Site ID:	4D1-1	4D1-1	5B1-1R	5B1-1R	5B1-2R	5B1-2R
Sample Date:		10/05/18	10/11/18	10/11/18	10/11/18	10/11/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		4000.00		1360.00		0.88J
Copper				0.62		0.46U
Lead and Compounds				0.51 J		0.15U
Mercury (elemental)				0.02		0.0004U
Nickel Soluble Salts				3.00 J		3.03J
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0		0.28		0.38	
Oxidation Reduction Potential (ORP) (mV)	-313.90		-21.20		-92.60	
Specific Conductivity (uS/cm)	12134.00		2709.00		42316.00	
Temperature (Celsius) (C)	15.60		17.70		14.20	
Turbidity (NTU)	6.52		3.60		30.40	
pH ()	11.47		10.05		7.01	



Sample ID:	GW-5C12-1-100518	GW-5C12-1-100518-(20)	GW-5C13-1-100518	GW-5C13-1-100518-(20)	GW-5C16-1R-100518	GW-5C16-1R-100518-(
Sample Date:		5C12-1 10/05/18	5C13-1 10/05/18	5C13-1 10/05/18	5C16-1R 10/05/18	0) 5C16-1R 10/05/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		1380.00		1340.00		1190.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0		0		0	
Oxidation Reduction Potential (ORP) (mV)	-280.00		-291.80		-188.90	
Specific Conductivity (uS/cm)	6859.00		8750.00		1860.00	
Temperature (Celsius) (C)	18.90		18.90		17.50	
Turbidity (NTU)	3.21		6.35		0.68	
pH ()	11.59		10.30		8.45	



		1	1	1	1	1
Sample ID:	GW-5C16-2R-100518	GW-5C16-2R-100518-(20	GW-5C21-2-100418	GW-5C21-2-100418-(20)	GW-5D1-3-101218	GW-5D1-3-101218-(20
Site ID:	5C16-2R) 5C16-2R	5C21-2	5C21-2	5D1-3	5D1-3
Sample Date:	10/05/18	10/05/18	10/04/18	10/04/18	10/12/18	10/12/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		704.00		2080.00		12.40
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.17		0		0.30	
Oxidation Reduction Potential (ORP) (mV)	-132.80		-147.40		-16.90	
Specific Conductivity (uS/cm)	21515.00		22000.00		29480.00	
Temperature (Celsius) (C)	14.00		15.00		14.80	
Turbidity (NTU)	1.42		2.74		8.27	
pH ()	7.14		6.50		7.12	
	1	1	1	1	I	1



Sample ID:	GW-5D2-1R-100518	GW-5D2-1R-100518-(20) DC	GW-5D5-1-101518	GW-5D5-1-101518-(20)	GW-5D7-1R-100518	GW-5D7-1R-100518-(20
Site ID:	5D2-1R	5D2-1R	5D5-1	5D5-1	5D7-1R	5D7-1R
Sample Date:	10/05/18	10/05/18	10/15/18	10/15/18	10/05/18	10/05/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		2815.00		63200.00		86100.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.23		0.07		0.08	
Oxidation Reduction Potential (ORP) (mV)	-224.20		152.70		-152.50	
Specific Conductivity (uS/cm)	4896.00		8515.00		1108.00	
Temperature (Celsius) (C)	18.00		18.70		18.80	
Turbidity (NTU)	3.86		7.56		5.23	
pH ()	10.81		7.01		7.49	
	1	1	I	1	1	I



Sample ID:	GW-5E1-1-101518	GW-5E1-1-101518-(20)	GW-5E2-1-101518	GW-5E2-1-101518-(20)_	GW-5E4-1-100518	GW-5E4-1-100518-(2
Site ID:	5E1-1	5E1-1	5E2-1	5E2-1	5E4-1	5E4-1
Sample Date:	10/15/18	10/15/18	10/15/18	10/15/18	10/05/18	10/05/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		599.00		290.50		143000.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.32		0.11		0.04	
Oxidation Reduction Potential (ORP) (mV)	-51.30		-96.20		-218.40	
Specific Conductivity (uS/cm)	556.00		2190.00		6523.00	
Temperature (Celsius) (C)	18.40		19.50		18.20	
Turbidity (NTU)	4.90		7.62		1.74	
pH ()	6.40		7.21		8.83	



Sample ID:	GW-5E8-1-101518	GW-5E8-1-101518-(20)	GW-6D14-1-100418	GW-6D14-1-100418-(20)	GW-6D25-1-100418	GW-6D25-1-100418-(20
Site ID: Sample Date:	10/15/18	5E8-1 10/15/18	6D14-1 10/04/18	6D14-1 10/04/18	6D25-1 10/04/18) 6D25-1 10/04/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		791.00		43600.00		7170.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.45		0.10		0.07	
Oxidation Reduction Potential (ORP) (mV)	-86.20		-132.60		-216.70	
Specific Conductivity (uS/cm)	534.60		18140.00		2136.00	
Temperature (Celsius) (C)	18.80		16.20		18.60	
Turbidity (NTU)	6.30		3.49		7.00	
pH ()	7.50		6.01		8.70	



Sample ID:	GW-6D25-2-100418	GW-6D25-2-100418-(20)	GW-6E1-1-100418	GW-6E1-1-100418-(20)	GW-6E12-2-100318	GW-6E12-2-100318-(2
Site ID:	6D25-2	6D25-2	6E1-1	6E1-1	6E12-2	6E12-2
Sample Date:		10/04/18	10/04/18	10/04/18	10/03/18	10/03/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		1380.00		43500.00		7190.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0		0.08		0	
Oxidation Reduction Potential (ORP) (mV)	-221.10		-112.30		-193.40	
Specific Conductivity (uS/cm)	4785.00		1057.00		47963.00	
Temperature (Celsius) (C)	15.10		17.40		13.90	
Turbidity (NTU)	12.30		1.12		7.04	
pH ()	9.52		6.88		6.66	
	I	1	i	1	1	1



					1	
Sample ID	: GW-6E2-1-101618	GW-6E2-1-101618-(20)	GW-6E3-2-100918	GW-6E3-2-100918-(20)	GW-6E5-1-100518	GW-6E5-1-100518-(20
	6E2-1	6E2-1	6E3-2	6E3-2	6E5-1	6E5-1
Sample Date		10/16/18	10/09/18	10/09/18	10/05/18	10/05/18
Constituent Media	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		11100.00		66000.00		29800.00
Copper				0.46 U		
Lead and Compounds				0.15 U		
Mercury (elemental)				0.0003 J		
Nickel Soluble Salts				28.70		
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.20		1.01		1.31	
Oxidation Reduction Potential (ORP) (mV)	-26.20		-47.00		-101.50	
Specific Conductivity (uS/cm)	5946.00		32194.00		4433.00	
Temperature (Celsius) (C)	15.70		13.80		19.90	
Turbidity (NTU)	22.20		151.00		6.10	
pH ()	6.68		6.96		7.08	
	I	i .	1	i .	1	1



Sample	ID: GW-6E6-1-100418	GW-6E6-1-100418-(20)	GW-6E7-3-101518	GW-6E7-3-101518-(20)	GW-6E9-2-100418	GW-6E9-2-100418-(20
	ID : 6E6-1	6E6-1	6E7-3	6E7-3	6E9-2	6E9-2
Sample D		10/04/18	10/15/18	10/15/18	10/04/18	10/04/18
Constituent Me	dia: Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		3640.00		243.00		2610.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0		0.12		0	
Oxidation Reduction Potential (ORP) (mV	-348.50		-162.80		-211.30	
Specific Conductivity (uS/cm)	14217.00		3074.00		14709.00	
Temperature (Celsius) (C)	16.30		14.20		15.00	
Turbidity (NTU)	4.18		14.50		8.35	
pH ()	10.86		8.19		7.66	
	1	1	1	i	i e	1



Samp	le ID: GW-7E10-1-100318	GW-7E10-1-100318-(20)	GW-7E16-2-100418	GW-7E16-2-100418-(20)	GW-7E3-1-100418	GW-7E3-1-100418-(20
	te ID: 7E10-1	7E10-1	7E16-2	7E16-2	7E3-1	7E3-1
Sample Constituent M	Date: 10/03/18 edia: Groundwater	10/03/18 Groundwater	10/04/18 Groundwater	10/04/18 Groundwater	10/04/18 Groundwater	10/04/18 Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		291.00		3640.00		9720.00
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.15		0.27		1.18	
Oxidation Reduction Potential (ORP) (m	V) -328.50		-126.00		-144.60	
Specific Conductivity (uS/cm)	11400.00		3053.00		5961.00	
Temperature (Celsius) (C)	16.60		17.50		16.40	
Turbidity (NTU)	1.26		2.10		1.50	
pH ()	10.05		7.20		7.89	
		1		1	1	1



Sample ID:	GW-7E4-2-101618	GW-7E4-2-101618-(20)	GW-7E6-2-100318	GW-7E6-2-100318-(20)	GW-7E7-2-100318	GW-7E7-2-100318-(2
	7E4-2	7E4-2	7E6-2	7E6-2	7E7-2	7E7-2
Sample Date: Constituent Media:		10/16/18 Groundwater	10/03/18 Groundwater	10/03/18 Groundwater	10/03/18 Groundwater	10/03/18 Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		151.00		138.00		59.70
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.05		0.12		0.13	
Oxidation Reduction Potential (ORP) (mV)	-294.70		-365.50		-216.10	
Specific Conductivity (uS/cm)	10715.00		7858.00		1742.00	
Temperature (Celsius) (C)	13.10		13.70		14.00	
Turbidity (NTU)	4.60		2.07		1.61	
pH ()	9.98		10.30		9.54	



Sample	ID: GW-7E8-1-100318	GW-7E8-1-100318-(20)	GW-7E9-2-100318	GW-7E9-2-100318-(20)	GW-7F2-1-100318	GW-7F2-1-100318-(20
	• ID : 7E8-1	7E8-1	7E9-2	7E9-2	7F2-1	7F2-1
Sample D	l l	10/03/18	10/03/18	10/03/18	10/03/18	10/03/18
Constituent Me	dia: Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		3610.00		59.60		86.30
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0		2.36		0.35	
Oxidation Reduction Potential (ORP) (m\	') -432.60		-164.00		-97.50	
Specific Conductivity (uS/cm)	23890.00		8620.00		11000.00	
Temperature (Celsius) (C)	15.60		13.80		16.80	
Turbidity (NTU)	8.71		0.91		4.13	
pH ()	11.07		7.38		7.06	
	1	1	1		1	1



Sample ID:	GW-7F3-1-100318	GW-7F3-1-100318-(20)	GW-7F4-1-100518	GW-7F4-1-100518-(20)	GW-8F1-1R-101518	GW-8F1-1R-101518-(20
Site ID:	7F3-1	7F3-1	7F4-1	7F4-1	8F1-1R) 8F1-1R
Sample Date:	I .	10/03/18	10/05/18	10/05/18	10/15/18	10/15/18
Constituent Media:	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Dissolved Metals (ug/L)						
Arsenic, Inorganic		3340.00		192.00		6.92
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.23		0		0.69	
Oxidation Reduction Potential (ORP) (mV)	-254.30		-369.50		-145.80	
Specific Conductivity (uS/cm)	13768.00		54050.00		12600.00	
Temperature (Celsius) (C)	13.80		16.40		15.70	
Turbidity (NTU)	20.20		1.64		4.21	
pH ()	10.54		12.06		10.92	
	I	1	1	1	1	1



Sample ID:	GW-8G2-1-100218	GW-8G2-1-100218-(20)				
Site ID: Sample Date: Constituent Media:	10/02/18	8G2-1 10/02/18 Groundwater	11	//	11	//
Dissolved Metals (ug/L)						
Arsenic, Inorganic		475.00				
Copper						
Lead and Compounds						
Mercury (elemental)						
Nickel Soluble Salts						
Field Parameters and/or Alkalinity						
Dissolved Oxygen (DO) (mg/L)	0.11					
Oxidation Reduction Potential (ORP) (mV)	-328.50					
Specific Conductivity (uS/cm)	29435.00					
Temperature (Celsius) (C)	16.90					
Turbidity (NTU)	3.20					
pH ()	11.38					



Commite ID:	00 PT0 004 004547 0 4	00 DT0 004 004547.4.5	00 PT0 004 004547 40	00 PT0 004 004547.44	00 DT0 004 004547.44	00 PT0 004 004547 40
Sample ID:	SO-PTC-001-091517-0-1.	SO-PTC-001-091517-1.5- 2.5	11.5	SO-PTC-001-091517-11. 5-13	SO-PTC-001-091517-11. 5-13.5	SO-PTC-001-091517-13
	PTC-001	PTC-001	PTC-001	PTC-001	PTC-001	PTC-001
Sample Date:		09/15/17	09/15/17	09/15/17	09/15/17	09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic					4.34 J	
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	25.70	22.40	5.00 U	7.00 U		7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-001-091517-1.5- 2.5 PTC-001 09/15/17 Soil	SO-PTC-001-091517-10- 11.5 PTC-001 09/15/17 Soil	5-13 PTC-001	5-13.5 PTC-001	SO-PTC-001-091517-13 -15 PTC-001 09/15/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids				66.50	
Conventionals (-W)					
рН				7.44	



				I		I
Sample ID:	1	SO-PTC-001-091517-18.	SO-PTC-001-091517-2.5-	SO-PTC-001-091517-2.5-	SO-PTC-001-091517-20-	SO-PTC-001-091517-22
Cita ID.	18.2	2-20	3.5	4.5 PTC-001	22.5	.5-25
Site ID: Sample Date:		PTC-001 09/15/17	PTC-001 09/15/17	09/15/17	PTC-001 09/15/17	PTC-001 09/15/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)				0.04 J		
Sulfate (mg/kg)				35.30		
Sulfide (mg/kg)				1.09 U	•	
Total Organic Carbon (%)				0.06 J		
pH ()						
Metals (mg/kg)						
Aluminum				7100.00		
Arsenic, Inorganic				2.64 J	•	
Iron				10200.00		
Manganese				64.50	•	
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	7.00 U	17.30		7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P				11.30 U		



Site ID: Sample Date:		2-20 PTC-001 09/15/17	3.5 PTC-001 09/15/17	09/15/17	22.5 PTC-001 09/15/17	.5-25 PTC-001 09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)				0.11 J		
Total Solids				81.06		
Conventionals (-W)						
рН				7.11		



	I	I	1	I	1	
Sample ID:		SO-PTC-001-091517-25-	SO-PTC-001-091517-28-	SO-PTC-001-091517-30.	SO-PTC-001-091517-31.	SO-PTC-001-091517-33
Site ID:	0-25.0 PTC-001	28 PTC-001	30 PTC-001	4-31.3 PTC-001	5-33.5 PTC-001	.5-35 PTC-001
Sample Date:		09/15/17	09/15/17	09/15/17	09/15/17	09/15/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						•
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)	0.23 J					
Sulfate (mg/kg)	259.00					•
Sulfide (mg/kg)	1.26 U					
Total Organic Carbon (%)	0.16 J					
pH ()						
Metals (mg/kg)						
Aluminum	6230.00					
Arsenic, Inorganic	0.38 J				5.91 J	
Iron	10100.00					
Manganese	61.20					
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U	7.00 U	7.00 U	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	12.40 U					
	I	1				ı



Site ID: Sample Date:		28 PTC-001 09/15/17	30 PTC-001 09/15/17	4-31.3 PTC-001 09/15/17	5-33.5 PTC-001 09/15/17	.5-35 PTC-001 09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.23 J					
Total Solids	78.26				64.69	
Conventionals (-W)						
рН	7.78				7.92	



Sample Date	: PTC-001		111			
Sample Date	1	PTC-002	PTC-002	12 PTC-002	15 PTC-002	.5-17 PTC-002
		09/12/17	09/12/17	09/12/17	09/12/17	09/12/17
Constituent Media	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)					•	
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	21.30	7.00 U	7.90	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-001-091517-5-8	SO-PTC-002-091217-0-2	SO-PTC-002-091217-10-	SO-PTC-002-091217-11-	SO-PTC-002-091217-12- 15	SO-PTC-002-091217-15 .5-17
Site ID:	PTC-001	PTC-002	PTC-002	PTC-002	PTC-002	PTC-002
Sample Date:	09/15/17	09/12/17	09/12/17	09/12/17	09/12/17	09/12/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН						



Sample ID: Site ID: Sample Date: Constituent Media:	19 PTC-002 09/12/17	SO-PTC-002-091217-19- 20 PTC-002 09/12/17 Soil	SO-PTC-002-091217-2-3. 5 PTC-002 09/12/17 Soil	SO-PTC-002-091217-20- 22.5 PTC-002 09/12/17 Soil	SO-PTC-002-091217-22. 5-25 PTC-002 09/12/17 Soil	SO-PTC-002-091217-25 -26 PTC-002 09/12/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	7.00 U	34.20	7.00 U	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-002-091217-19- 20 PTC-002 09/12/17 Soil	SO-PTC-002-091217-2-3. 5 PTC-002 09/12/17 Soil	22.5 PTC-002	5-25 PTC-002	SO-PTC-002-091217-25 -26 PTC-002 09/12/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



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Sample ID:		SO-PTC-002-091217-27.	SO-PTC-002-091217-31-	SO-PTC-002-091217-33.	SO-PTC-002-091217-35-	SO-PTC-002-091217-37
Sito ID.	27.5 PTC-002	5-30 PTC-002	32 PTC-002	5-35 PTC-002	37.5 PTC-002	.5-39 PTC-002
Sample Date:	I .	09/12/17	09/12/17	09/12/17	09/12/17	09/12/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	7.00 U	7.00 U	7.00 U	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-002-091217-27. 5-30 PTC-002 09/12/17 Soil	SO-PTC-002-091217-31- 32 PTC-002 09/12/17 Soil	SO-PTC-002-091217-33. 5-35 PTC-002 09/12/17 Soil	SO-PTC-002-091217-37 .5-39 PTC-002 09/12/17 Soil
Conventionals (%-W)				
Total Carbon (Elemental + Organic) Total Solids				
Conventionals (-W)				
рН				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date:	40 PTC-002	SO-PTC-002-091217-5-7 PTC-002 09/12/17	SO-PTC-002-091217-7-9 PTC-002 09/12/17	SO-PTC-002-091217-9-1 0 PTC-002 09/12/17	SO-PTC-002-091317-13. 0-15.0 PTC-002 09/13/17	SO-PTC-002-091317-2 0-4.0 PTC-002 09/13/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						0.23J
Sulfate (mg/kg)						11.60
Sulfide (mg/kg)						14.20
Total Organic Carbon (%)						0.09J
pH ()						
Metals (mg/kg)						
Aluminum						7020.00
Arsenic, Inorganic					7.47 J	1.57J
Iron						10900.00
Manganese						78.50
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	27.10	7.00 U	7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						1.43J



·	SO-PTC-002-091217-39-		SO-PTC-002-091217-7-9	0	SO-PTC-002-091317-13. 0-15.0	0-4.0
Sample Date	D: PTC-002 D: 09/12/17 D: Soil	PTC-002 09/12/17 Soil	PTC-002 09/12/17 Soil	PTC-002 09/12/17 Soil	PTC-002 09/13/17 Soil	PTC-002 09/13/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						0.23J
Total Solids					45.20	83.89
Conventionals (-W)						
рН					7.36	9.08



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Sample ID:	1	SO-PTC-002-091317-31.	SO-PTC-101-091417-0-2	SO-PTC-101-091417-10-	SO-PTC-101-091417-13-	SO-PTC-101-091417-13
Site ID	0-25.0 PTC-002	0-33.0	DTC 404	13 PTC-101	15 PTC-101	.0-15.0
Sample Date		PTC-002 09/13/17	PTC-101 09/14/17	09/14/17	09/14/17	PTC-101 09/14/17
Constituent Media		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium					•	
Cadmium						
Chromium, Total						
Lead and Compounds					•	
Mercury (elemental)					•	
Selenium					•	
Silver						
Conventionals						
Inorganic Carbon, Total (%)	0.10 J					
Sulfate (mg/kg)	11.10					
Sulfide (mg/kg)	1.02 U					
Total Organic Carbon (%)	0.11 J					
pH ()						
Metals (mg/kg)						
Aluminum	5920.00					
Arsenic, Inorganic	5.84 U	5.45 J				4880.00
Iron	8720.00					
Manganese	55.20					
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			816.00	1407.00	10746.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	5.45 UJ					



-		SO-PTC-002-091317-31. 0-33.0 PTC-002 09/13/17 Soil	SO-PTC-101-091417-0-2 PTC-101 09/14/17 Soil	SO-PTC-101-091417-10- 13 PTC-101 09/14/17 Soil	SO-PTC-101-091417-13- 15 PTC-101 09/14/17 Soil	SO-PTC-101-091417-13 .0-15.0 PTC-101 09/14/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.10 J					
Total Solids	83.86	59.70				52.16
Conventionals (-W)						
рН	8.10	7.64				6.98



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:		SO-PTC-101-091417-15- 17.5 PTC-101 09/14/17 Soil	SO-PTC-101-091417-17. 5-19.3 PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3 PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 5-20 PTC-101 09/14/17 Soil	SO-PTC-101-091417-20 -22.5 PTC-101 09/14/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	87.50					
Barium	0.02					
Cadmium	0.10 U					
Chromium, Total	0.01 J					
Lead and Compounds	0.10 U					
Mercury (elemental)	0.00010 U					
Selenium	0.25 U					
Silver	0.02 U					
Conventionals						
Inorganic Carbon, Total (%)				0.18 J		
Sulfate (mg/kg)				142.00		
Sulfide (mg/kg)				2.65		
Total Organic Carbon (%)				0.39 J		
pH ()						
Metals (mg/kg)						
Aluminum				12500.00		
Arsenic, Inorganic	•			301.00		
Iron	•		•	18500.00		
Manganese	•			128.00		
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		1287.00	5599.00		1369.00	84.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P				12.60 U		



·	0-15.0-(10) PTC-101	SO-PTC-101-091417-15- 17.5 PTC-101 09/14/17	SO-PTC-101-091417-17. 5-19.3 PTC-101 09/14/17	3-20.3 PTC-101		SO-PTC-101-091417-20 -22.5 PTC-101 09/14/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)				0.57 J		
Total Solids				73.35		
Conventionals (-W)	_				_	
рН				6.40		



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Sample ID: Site ID: Sample Date:	5-24.5 PTC-101	SO-PTC-101-091417-25- 27.5 PTC-101 09/14/17	SO-PTC-101-091417-27. 5-29 PTC-101 09/14/17	SO-PTC-101-091417-30- 32.5 PTC-101 09/14/17	SO-PTC-101-091417-32. 5-35 PTC-101 09/14/17	SO-PTC-101-091417-36 -38.5 PTC-101 09/14/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						•
Cadmium						
Chromium, Total			•			
Lead and Compounds						
Mercury (elemental)			•			
Selenium			•			
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron			•			
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	160.00	7.80	57.10	7.00 U	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-	SO-PTC-101-091417-25- 27.5 PTC-101 09/14/17 Soil	SO-PTC-101-091417-27. 5-29 PTC-101 09/14/17 Soil	5-35 PTC-101	SO-PTC-101-091417-36 -38.5 PTC-101 09/14/17 Soil
Conventionals (%-W)				
Total Carbon (Elemental + Organic) Total Solids				
Conventionals (-W)				
рН				



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Sample ID:	SO-PTC-101-091417-36.	SO-PTC-101-091417-38.	SO-PTC-101-091417-40-	SO-PTC-101-091417-41.	SO-PTC-101-091417-44-	SO-PTC-101-091417-6-
0%-10	0-38.0	5-40	41.6	6-44	45	8.2
Site ID: Sample Date:	PTC-101 09/14/17	PTC-101 09/14/17	PTC-101 09/14/17	PTC-101 09/14/17	PTC-101 09/14/17	PTC-101 09/14/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						•
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic	5.47 J					•
Iron						•
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U	7.00 U	7.00 U	7.00 U	3160.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-101-091417-36. 0-38.0 PTC-101 09/14/17	SO-PTC-101-091417-38. 5-40 PTC-101 09/14/17	SO-PTC-101-091417-40- 41.6 PTC-101 09/14/17	6-44 PTC-101	PTC-101	SO-PTC-101-091417-6- 8.2 PTC-101 09/14/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids	59.34					
Conventionals (-W)						
рН	7.09					



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	10.2 PTC-101 09/14/17	SO-PTC-101-091417-8.2- 10.2-(10) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 8.5 PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.5- 10 PTC-101 09/14/17 Soil	SO-PTC-102-092118-11- 12 PTC-102 09/21/18 Soil	SO-PTC-102-092118-12 .5-13.5 PTC-102 09/21/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		10.10				
Barium		0.03				
Cadmium		0.06				
Chromium, Total		0.008 J				
Lead and Compounds		0.10 U				
Mercury (elemental)		0.00010 U				•
Selenium		0.25 U				•
Silver		0.02 U				
Conventionals						
Inorganic Carbon, Total (%)	0.13 J					
Sulfate (mg/kg)	41.20	•				•
Sulfide (mg/kg)	1.19 U					
Total Organic Carbon (%)	0.14 J					
pH ()		•				•
Metals (mg/kg)						
Aluminum	6760.00					
Arsenic, Inorganic	786.00					
Iron	9390.00					
Manganese	63.10					
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			5479.00	1057.00	1583.75	5313.25
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	10.90 U					



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Sample ID:	SO-PTC-101-091417-8.2-	SO-PTC-101-091417-8.2-	SO-PTC-101-091417-8.2-	SO-PTC-101-091417-8.5-	SO-PTC-102-092118-11-	SO-PTC-102-092118-12
	10.2	10.2-(10)	8.5	10	12	.5-13.5
Site ID:	PTC-101	PTC-101	PTC-101	PTC-101	PTC-102	PTC-102
Sample Date:	09/14/17	09/14/17	09/14/17	09/14/17	09/21/18	09/21/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.13 J					
Total Solids	82.39					
Conventionals (-W)	_					
рН	7.64					



Table G-7: General Soil Results

	<u> </u>	1	1	<u> </u>	1	
Sample ID:		SO-PTC-102-092118-14.	SO-PTC-102-092118-16-	SO-PTC-102-092118-18.	SO-PTC-102-092118-2-3	SO-PTC-102-092118-6-
Site ID:	5-15.0 PTC-102	5-15.0-(10) PTC-102	17 PTC-102	5-19 PTC-102	PTC-102	7 PTC-102
Sample Date:		09/21/18	09/21/18	09/21/18	09/21/18	09/21/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		239.00				
Barium		0.29 U				
Cadmium		0.22				
Chromium, Total		0.02 J				
Lead and Compounds		0.01				
Mercury (elemental)		0.0003				
Selenium		0.08				
Silver		0.004 U				
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic	9770.00					
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	12873.50		11393.50	1954.25	194.75	10555.75
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-102-092118-14. 5-15.0	SO-PTC-102-092118-14. 5-15.0-(10)	SO-PTC-102-092118-16-	SO-PTC-102-092118-18.	SO-PTC-102-092118-2-3	SO-PTC-102-092118-6-
Site ID:	PTC-102	PTC-102	PTC-102		PTC-102	PTC-102
Sample Date:	09/21/18	09/21/18	09/21/18	09/21/18	09/21/18	09/21/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH	8.16					



Table G-7: General Soil Results

	8 PTC-102 09/21/18	SO-PTC-102-092118-7.5- 8.5 PTC-102 09/21/18 Soil	SO-PTC-102-092118-7.5- 8.5-(10) PTC-102 09/21/18 Soil	SO-PTC-102-092118-8-8. 5 PTC-102 09/21/18 Soil	SO-PTC-102-092118-9-1 0 PTC-102 09/21/18 Soil	SO-PTC-103-092118-1. 5-2.5 PTC-103 09/21/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			124.00			
Barium			0.18 U			
Cadmium			0.40			
Chromium, Total			0.005 J			
Lead and Compounds			1.86			
Mercury (elemental)			0.02			
Selenium			0.04			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		165000.00				
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	100000.00 >			100000.00 >	20687.25	2938.25
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	: SO-PTC-102-092118-7.5- 8 I: PTC-102 I: 09/21/18	SO-PTC-102-092118-7.5- 8.5 PTC-102 09/21/18	SO-PTC-102-092118-7.5- 8.5-(10) PTC-102 09/21/18	SO-PTC-102-092118-8-8. 5 PTC-102 09/21/18	SO-PTC-102-092118-9-1 0 PTC-102 09/21/18	SO-PTC-103-092118-1 5-2.5 PTC-103 09/21/18
Constituent Media	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		7.72				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	12 PTC-103 09/21/18	SO-PTC-103-092118-12. 8-13.8 PTC-103 09/21/18 Soil	SO-PTC-103-092118-12. 8-13.8-(10) PTC-103 09/21/18 Soil	SO-PTC-103-092118-15- 16 PTC-103 09/21/18 Soil	SO-PTC-103-092118-17- 18 PTC-103 09/21/18 Soil	SO-PTC-103-092118-19 .5-20 PTC-103 09/21/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			194.00			
Barium			0.14 U			
Cadmium			0.19			
Chromium, Total			0.005			
Lead and Compounds			0.02 J			
Mercury (elemental)			0.00004 J			•
Selenium	•		0.08			•
Silver			0.004 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	•					•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		5820.00				
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	304.25	9934.75		5504.25	1434.25	214.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:		SO-PTC-103-092118-12. 8-13.8 PTC-103 09/21/18	SO-PTC-103-092118-12. 8-13.8-(10) PTC-103 09/21/18	SO-PTC-103-092118-15- 16 PTC-103 09/21/18		SO-PTC-103-092118-19 .5-20 PTC-103 09/21/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Total Solids						
Conventionals (-W)						
pH		8.54				



Table G-7: General Soil Results

Sample Date:	PTC-103 09/21/18	SO-PTC-103-092118-6-7 PTC-103 09/21/18 Soil	SO-PTC-103-092118-7.5- 8.5 PTC-103 09/21/18 Soil	SO-PTC-103-092118-7.5- 8.5-(10) PTC-103 09/21/18 Soil	SO-PTC-104-092018-10- 11 PTC-104 09/20/18 Soil	SO-PTC-104-092018-13 .4-13.9 PTC-104 09/20/18 Soil
Constituent Media: TCLP Metals (mg/L)						
Arsenic, Inorganic				45.50		
Barium						
				0.12 U		
Cadmium				0.04		
Chromium, Total				0.002		
Lead and Compounds				0.02 J		
Mercury (elemental)				0.00004 J		
Selenium				0.04		
Silver				0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			1500.00			902.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	753.00	2097.25	5228.50		1148.00	2066.75
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-103-092118-4-5	SO-PTC-103-092118-6-7		SO-PTC-103-092118-7.5- 8.5-(10)	SO-PTC-104-092018-10-	SO-PTC-104-092018-13 .4-13.9
Site ID:	PTC-103	PTC-103	PTC-103		PTC-104	PTC-104
Sample Date:	09/21/18	09/21/18	09/21/18	09/21/18	09/20/18	09/20/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)			_		_	
рН			7.00			8.58



Table G-7: General Soil Results

Ortho-phosphorus (mg/kg)	Sample ID:		SO-PTC-104-092018-14.	SO-PTC-104-092018-14.	SO-PTC-104-092018-16-	SO-PTC-104-092018-18-	SO-PTC-104-092018-2-
Constituent Sample Date: Oscill 09/20/18 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/20/20 Soil 09/	Site ID:			2-14.7-(10) PTC-104			
TCLP Metals (mg/L) Arsenic, Inorganic 2.72 198.00 Barium 0.04 0.03J 0.000 Cadmium 0.004U 0.10 Chromium, Total 0.003J 0.001U Mercury (elemental) 0.00002J 0.00005J Selenium 0.08U 0.00005J Selenium 0.08U 0.0004U 0.0004U 0.0004U 0.0004U 0.0004U 0.0004U 0.00005J Selenium 0.08U 0.0004U 0.	Sample Date:	09/20/18					
Arsenic, Inorganic 2.72 198.00 Barium 0.04 0.04 0.03 J Cadmium 0.004 0.010 Chromium, Total 0.003 J 0.03 J Lead and Compounds 0.02 J 0.010 U Mercury (elemental) 0.00002 J 0.00005 J Selenium 0.08 U 0.090 U Silver 0.002 U 0.0004 U Conventionals 0.002 U 0.0004 U Conventionals 0.000 U 0.0004 U Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfate (mg/kg) Total Organic Carbon (%) pH () Metals (mg/kg) Aluminum Arsenic, Inorganic 8260.00 Inon Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic (mg/kg) Arsenic, Inorganic (mg/kg) Arsenic, Inorganic (mg/kg) Arsenic, Inorganic (mg/kg) Arsenic, Inorganic (mg/kg)	Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Barium 0.04 0.03J 0.04 0.03J 0.06 0.07 0.00	TCLP Metals (mg/L)						
Cadmium 0.004 U 0.10 0.03 J 0.03 J 0.03 J 0.03 J 0.03 J 0.00 J 0.00 J 0.00 J 0.01 U 0.000 J 0.00005 J 0.00005 J 0.00005 J 0.00005 J 0.00005 J 0.000 J	Arsenic, Inorganic	2.72		198.00			
Chromium, Total 0.003 J 0.03 J 0.01 U Lead and Compounds 0.02 J 0.010 U 0.00005 J Mercury (elemental) 0.00002 J 0.00005 J 0.09 U Silver 0.002 U 0.004 U 0.004 U 0.004 U Conventionals 0.002 U 0.004 U </td <td>Barium</td> <td>0.04</td> <td></td> <td>0.03 J</td> <td></td> <td></td> <td></td>	Barium	0.04		0.03 J			
Lead and Compounds 0.02 J 0.01 U 0.00005 J 0.00005 J 0.00005 J 0.00005 J 0.0000 J 0.000 U 0.000	Cadmium	0.004 U		0.10			•
Mercury (elemental) 0.00002 J 0.00005 J 0.09 U 0.09 U 0.09 U 0.00 U	Chromium, Total	0.003 J		0.03 J			
Selenium 0.08 U 0.09 U 0.004 U <td< td=""><td>Lead and Compounds</td><td>0.02 J</td><td></td><td>0.01 U</td><td></td><td></td><td></td></td<>	Lead and Compounds	0.02 J		0.01 U			
Silver 0.002 U 0.004 U <th< td=""><td>Mercury (elemental)</td><td>0.00002 J</td><td></td><td>0.00005 J</td><td></td><td></td><td></td></th<>	Mercury (elemental)	0.00002 J		0.00005 J			
Conventionals Conventional (%) <td>Selenium</td> <td>0.08 U</td> <td></td> <td>0.09 U</td> <td></td> <td></td> <td></td>	Selenium	0.08 U		0.09 U			
Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)	Silver	0.002 U		0.004 U			•
Sulfate (mg/kg) Sulfate (mg/kg) Sulfate (mg/kg) Total Organic Carbon (%) pH () Metals (mg/kg) Aluminum 8260.00 Iron Manganese Field XRF Metals (mg/kg) 9763.00 Ortho-phosphorus (mg/kg) 4274.25 848.50 6	Conventionals						
Sulfide (mg/kg) Total Organic Carbon (%) Image: Carbon (%)	Inorganic Carbon, Total (%)						
Total Organic Carbon (%) pH () Metals (mg/kg)	Sulfate (mg/kg)	•					•
pH () Metals (mg/kg) Image: Control of the phosphorus (mg/kg)	Sulfide (mg/kg)	•					•
Metals (mg/kg) Section (mg/kg) Metals	Total Organic Carbon (%)						
Aluminum 8260.00 Iron Manganese Field XRF Metals (mg/kg) 9763.00 Ortho-phosphorus (mg/kg) 4274.25 848.50 6	pH ()	•					
Arsenic, Inorganic 8260.00 Iron Manganese Field XRF Metals (mg/kg) Section of the phosphorus (mg/kg) Ortho-phosphorus (mg/kg) 9763.00 Ortho-phosphorus (mg/kg) Section of the phosphorus (mg/kg)	Metals (mg/kg)						
Iron Manganese Field XRF Metals (mg/kg) September 19763.00 4274.25 848.50 6 Ortho-phosphorus (mg/kg) September 19763.00 Sep	Aluminum						
Manganese Manganese <t< td=""><td>Arsenic, Inorganic</td><td></td><td>8260.00</td><td></td><td></td><td></td><td></td></t<>	Arsenic, Inorganic		8260.00				
Field XRF Metals (mg/kg) 9763.00 4274.25 848.50 6 Ortho-phosphorus (mg/kg) 0 </td <td>Iron</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Iron						
Arsenic, Inorganic 9763.00 4274.25 848.50 6 Ortho-phosphorus (mg/kg) <	Manganese						
Ortho-phosphorus (mg/kg)	Field XRF Metals (mg/kg)						
	Arsenic, Inorganic		9763.00		4274.25	848.50	669.00
o-Phosphate {PO4}, as P	Ortho-phosphorus (mg/kg)						
	o-Phosphate {PO4}, as P						



Site ID: Sample Date:	4-13.9-(10) PTC-104 09/20/18	SO-PTC-104-092018-14. 2-14.7 PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(10) PTC-104 09/20/18 Soil	SO-PTC-104-092018-16- 17 PTC-104 09/20/18 Soil	19 PTC-104	SO-PTC-104-092018-2- 2.5 PTC-104 09/20/18 Soil
Constituent Media: Conventionals (%-W)	3011	3011	3011	3011		
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		8.70				



Sam	nple ID:	SO-PTC-104-092018-5-5.	SO-PTC-104-092018-7-7.	SO-PTC-105-092418-1-2	SO-PTC-105-092418-11-	SO-PTC-105-092418-13-	SO-PTC-105-092418-13
		5	5		12	14	.0-14.0
	Site ID: le Date:	PTC-104 09/20/18	PTC-104 09/20/18	PTC-105 09/24/18	PTC-105 09/24/18	PTC-105 09/24/18	PTC-105 09/24/18
			Soil	09/24/16 Soil	09/24/16 Soil	09/24/16 Soil	09/24/18 Soil
TCLP Metals (mg/L)							
Arsenic, Inorganic							
Barium	•						
Cadmium	•						
Chromium, Total							
Lead and Compounds							
Mercury (elemental)							
Selenium							
Silver							
Conventionals							
Inorganic Carbon, Total (%)							
Sulfate (mg/kg)							
Sulfide (mg/kg)	•						
Total Organic Carbon (%)							
pH ()							
Metals (mg/kg)							
Aluminum							
Arsenic, Inorganic							7940.00
Iron							
Manganese							
Field XRF Metals (mg/kg)							
Arsenic, Inorganic		639.50	1715.25	35.00	459.25	11366.50	
Ortho-phosphorus (mg/kg)							
o-Phosphate {PO4}, as P							



	1	SO-PTC-104-092018-7-7. 5 PTC-104 09/20/18 Soil	SO-PTC-105-092418-1-2 PTC-105 09/24/18 Soil	SO-PTC-105-092418-11- 12 PTC-105 09/24/18 Soil	SO-PTC-105-092418-13- 14 PTC-105 09/24/18 Soil	SO-PTC-105-092418-13 .0-14.0 PTC-105 09/24/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						7.28



Table G-7: General Soil Results

Sample Date Constituent Media		PTC-105 09/24/18 Soil	19 PTC-105 09/24/18 Soil	PTC-105 09/24/18 Soil	PTC-105 09/24/18 Soil	0-9.0-(10)_DC PTC-105 09/24/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	46.80					4.76
Barium	0.08 U				•	0.14U
Cadmium	0.04					0.01U
Chromium, Total	0.01 J					0.008J
Lead and Compounds	0.007 U					0.007U
Mercury (elemental)	0.00002 J					0.0002
Selenium	0.04 U					0.04U
Silver	0.002 U					0.002U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		957.75	18.50	232.50	924.75	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site Sample Da	D: SO-PTC-105-092418-13. 0-14.0-(10) D: PTC-105 e: 09/24/18 a: Soil	SO-PTC-105-092418-16- 17 PTC-105 09/24/18 Soil	SO-PTC-105-092418-18- 19 PTC-105 09/24/18 Soil	SO-PTC-105-092418-3-4 PTC-105 09/24/18 Soil	SO-PTC-105-092418-6-7 PTC-105 09/24/18 Soil	SO-PTC-105-092418-8. 0-9.0-(10)_DC PTC-105 09/24/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



	1	I	1	I	1	
Sample ID:		I .	SO-PTC-106-092418-12.	SO-PTC-106-092418-13.	SO-PTC-106-092418-13.	SO-PTC-106-092418-2-
Site ID:	9.0_DC PTC-105	12 PTC-106	6-12.9 PTC-106	0-14.0 PTC-106	0-14.0-(10) PTC-106	2.5 PTC-106
Sample Date:	I .	09/24/18	09/24/18	09/24/18	09/24/18	09/24/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					11.70	
Barium					0.11 U	
Cadmium					0.02	
Chromium, Total					0.02 J	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	•
Selenium					0.04 U	•
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						•
Total Organic Carbon (%)						•
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic	1130.00			4690.00		
Iron						•
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	995.50	713.00	2661.00	6033.75		510.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·		SO-PTC-106-092418-11- 12 PTC-106 09/24/18 Soil	SO-PTC-106-092418-12. 6-12.9 PTC-106 09/24/18 Soil	PTC-106	0-14.0-(10) PTC-106	SO-PTC-106-092418-2- 2.5 PTC-106 09/24/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН	9.92			6.01		



Table G-7: General Soil Results

Sample ID:	SO-PTC-106-092418-5-6	SO-PTC-106-092418-7.0-	SO-PTC-106-092418-7.0-	SO-PTC-107-092418-1.5-	SO-PTC-107-092418-10-	SO-PTC-107-092418-11
-		8.0	8.0-(10)	2	11	.0-12.0
Site ID: Sample Date:	PTC-106 09/24/18	PTC-106 09/24/18	PTC-106 09/24/18	PTC-107 09/24/18	PTC-107 09/24/18	PTC-107 09/24/18
Constituent Media:		09/24/18 Soil	09/24/18 Soil	09/24/18 Soil	09/24/18 Soil	09/24/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			4.61			
Barium			0.10 U			
Cadmium			0.02			
Chromium, Total			0.002 U			
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000010 J			
Selenium			0.04 U			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	•					
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		1430.00				20.30
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	1386.00	1751.75		122.75	961.50	68.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-106-092418-5-6			SO-PTC-107-092418-1.5-	SO-PTC-107-092418-10-	SO-PTC-107-092418-11 .0-12.0
Site ID: Sample Date:	PTC-106 09/24/18	8.0 PTC-106 09/24/18	8.0-(10) PTC-106 09/24/18		PTC-107 09/24/18	PTC-107 09/24/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		8.00				6.92



Table G-7: General Soil Results

Site ID	0-12.0-(10) PTC-107	SO-PTC-107-092418-14- 15 PTC-107	SO-PTC-107-092418-6.0- 7.0 PTC-107	SO-PTC-107-092418-6.0- 7.0-(10) PTC-107	SO-PTC-108-092118-1.5- 2 PTC-108	SO-PTC-108-092118-12 .0-12.5 PTC-108
Sample Date	•	09/24/18	09/24/18	09/24/18		09/21/18
Constituent Media	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	0.42			4.03		
Barium	0.18 U			0.10 U		
Cadmium	0.004 U			0.009 U		
Chromium, Total	0.02 J			0.004 J		
Lead and Compounds	0.007 U			0.007 U		
Mercury (elemental)	0.000007 J			0.000007 U		
Selenium	0.04 U			0.04 U		
Silver	0.002 U			0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			150.00			825.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		8.33	252.75		317.00	908.75
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



					1	I
Sample ID:	SO-PTC-107-092418-11.	SO-PTC-107-092418-14-	SO-PTC-107-092418-6.0-	SO-PTC-107-092418-6.0-	SO-PTC-108-092118-1.5-	SO-PTC-108-092118-12
	0-12.0-(10)	15	7.0	7.0-(10)	2	.0-12.5
Site ID:	PTC-107	PTC-107	PTC-107	PTC-107	PTC-108	PTC-108
Sample Date:	09/24/18	09/24/18	09/24/18	09/24/18	09/21/18	09/21/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН			6.95			8.93



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-12.5-(10) PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2 PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(10) PTC-108 09/21/18 Soil	SO-PTC-108-092118-15. 5-16.5 PTC-108 09/21/18 Soil	SO-PTC-108-092118-18- 18.5 PTC-108 09/21/18 Soil	SO-PTC-108-092118-3. 5-4 PTC-108 09/21/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	15.80		13.40			
Barium	0.12 U		0.14 U			
Cadmium	0.02 U		0.01 U			
Chromium, Total	0.003 J		0.008 J			
Lead and Compounds	0.007		0.007			
Mercury (elemental)	0.000008 J		0.00007			•
Selenium	0.04		0.04			•
Silver	0.002 U		0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						•
Total Organic Carbon (%)						•
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		11000.00				•
Iron						
Manganese						•
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		8944.25		2301.75	367.50	805.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-108-092118-12. 0-12.5-(10) PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2 PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2-(10) PTC-108 09/21/18	SO-PTC-108-092118-15. 5-16.5 PTC-108 09/21/18	18.5 PTC-108	SO-PTC-108-092118-3. 5-4 PTC-108 09/21/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		5.12				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	6.5 PTC-108 09/21/18	SO-PTC-108-092118-8.5- 9.5 PTC-108 09/21/18 Soil	SO-PTC-109-092418-11- 12 PTC-109 09/24/18 Soil	SO-PTC-109-092418-13. 0-14.0 PTC-109 09/24/18 Soil	SO-PTC-109-092418-13. 0-14.0-(10) PTC-109 09/24/18 Soil	SO-PTC-109-092418-16 -17 PTC-109 09/24/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					30.60	
Barium					0.11 U	
Cadmium					0.05	•
Chromium, Total					0.002 U	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	
Selenium					0.04 U	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				6340.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	850.00	368.00	839.50	8372.25		1252.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-108-092118-5.5- 6.5 PTC-108	SO-PTC-108-092118-8.5- 9.5 PTC-108	SO-PTC-109-092418-11- 12 PTC-109	0-14.0	SO-PTC-109-092418-13. 0-14.0-(10) PTC-109	SO-PTC-109-092418-16 -17 PTC-109
Sample Date:		09/21/18	09/24/18	1		09/24/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH				4.94		



Table G-7: General Soil Results

Sample ID:		SO-PTC-109-092418-2-3	SO-PTC-109-092418-5.0-		SO-PTC-109-092418-8-9	SO-PTC-110-091818-11
Site ID:	19 PTC-109	PTC-109	6.0 PTC-109	6.0-(10) PTC-109	PTC-109	-12 PTC-110
Sample Date:	09/24/18	09/24/18	09/24/18	09/24/18	09/24/18	09/18/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic				65.60		
Barium				0.10 U		
Cadmium				0.10		
Chromium, Total				0.007 J		
Lead and Compounds				0.007 U		
Mercury (elemental)				0.000007 U		
Selenium				0.04 U		
Silver				0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)				•		
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			4700.00			295.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	97.50	275.00	981.75		114.00	202.25
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-109-092418-2-3 PTC-109 09/24/18 Soil		6.0-(10) PTC-109	PTC-109	SO-PTC-110-091818-11 -12 PTC-110 09/18/18 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН		8.79			6.92



Table G-7: General Soil Results

		I	1	I	1	
Sample ID:		SO-PTC-110-091818-14.	SO-PTC-110-091818-16-	SO-PTC-110-091818-16-	SO-PTC-110-091818-19-	SO-PTC-110-091818-2-
Site ID:	12-(10) PTC-110	5-15 PTC-110	17 PTC-110	17-(10) PTC-110	20 PTC-110	2.5 PTC-110
Sample Date:	09/18/18	09/18/18	09/18/18	09/18/18	09/18/18	09/18/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	0.49			135.00		
Barium	0.02			0.03 J		
Cadmium	0.003 U			0.003 U		
Chromium, Total	0.002 U			0.02 J		
Lead and Compounds	0.009 J			0.01 U		
Mercury (elemental)	0.000007 U			0.00002 J		
Selenium	0.04 U			0.08 U		
Silver	0.002 U			0.005 J		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			9300.00			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		2015.00	8700.50		3240.00	61.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-110-091818-11- 12-(10) PTC-110 09/18/18	SO-PTC-110-091818-14. 5-15 PTC-110 09/18/18	SO-PTC-110-091818-16- 17 PTC-110 09/18/18	SO-PTC-110-091818-16- 17-(10) PTC-110 09/18/18	20 PTC-110	SO-PTC-110-091818-2- 2.5 PTC-110 09/18/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН			7.84			



Sample ID:	SO-PTC-110-091818-5-5.	SO-PTC-110-091818-7.5-	SO-PTC-111-091817-0-2	SO-PTC-111-091817-10-	SO-PTC-111-091817-11.	SO-PTC-111-091817-12 .4-13.1
Site ID:	PTC-110	PTC-110	PTC-111	PTC-111	PTC-111	PTC-111
Sample Date:		09/18/18	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()				•		•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	273.00	149.75	64.20	423.00	812.20	2621.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-110-091818-7.5-8 PTC-110 09/18/18 Soil	SO-PTC-111-091817-0-2 PTC-111 09/18/17 Soil	SO-PTC-111-091817-10- 11.6 PTC-111 09/18/17 Soil	SO-PTC-111-091817-11. 6-12.4 PTC-111 09/18/17 Soil	SO-PTC-111-091817-12 .4-13.1 PTC-111 09/18/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Table G-7: General Soil Results

	I	I	I	<u> </u>	1	
Sample ID:	SO-PTC-111-091817-13.	SO-PTC-111-091817-13. 1-15.0	SO-PTC-111-091817-13.	SO-PTC-111-091817-15- 17.9	SO-PTC-111-091817-17. 9-20	SO-PTC-111-091817-2-
Site ID:		PTC-111	1-15.0-(10) PTC-111	PTC-111	9-20 PTC-111	4 PTC-111
Sample Date:	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			72.30			
Barium			0.06 U			
Cadmium			0.02 J			
Chromium, Total			0.02 J			
Lead and Compounds			0.40 U			
Mercury (elemental)			0.00010 U			
Selenium			1.00 U			
Silver			0.06 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		10200.00				
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	13248.00			2379.00	55.30	126.10
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID:	SO-PTC-111-091817-13. 1-15 PTC-111	1-15.0 PTC-111	1-15.0-(10) PTC-111		9-20 PTC-111	4 PTC-111
Sample Date: Constituent Media:	l	09/18/17 Soil	09/18/17 Soil	09/18/17 Soil	09/18/17 Soil	09/18/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids		39.91				
Conventionals (-W)						
рН		8.54				



Table G-7: General Soil Results

		<u> </u>	1	<u> </u>	1	<u> </u>
Sample ID:		SO-PTC-111-091817-20.	SO-PTC-111-091817-23.	SO-PTC-111-091817-25.	SO-PTC-111-091817-28-	SO-PTC-111-091817-30
Site ID:	23.3 PTC-111	0-22.0 PTC-111	3-25.5 PTC-111	5-28 PTC-111	30 PTC-111	-32.5 PTC-111
Sample Date:		09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						•
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)		0.05 J				
Sulfate (mg/kg)		37.10				•
Sulfide (mg/kg)		3.47				
Total Organic Carbon (%)		0.31 J				
pH ()						
Metals (mg/kg)						
Aluminum		8770.00				
Arsenic, Inorganic		39.40				
Iron		8500.00				
Manganese		59.60				
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	62.40		18.80	21.80	12.10	9.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P		5.99 UJ				



	SO-PTC-111-091817-20- 23.3 PTC-111	SO-PTC-111-091817-20. 0-22.0 PTC-111	SO-PTC-111-091817-23. 3-25.5 PTC-111	SO-PTC-111-091817-25. 5-28 PTC-111	30	SO-PTC-111-091817-30 -32.5 PTC-111
Sample Date:	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)		0.35 J				
Total Solids		81.10				
Conventionals (-W)						
рН		7.08				



	1	1	1	<u> </u>	<u> </u>	I
Sample ID:		SO-PTC-111-091817-35-	SO-PTC-111-091817-37.	SO-PTC-111-091817-37.	SO-PTC-111-091817-5-6	SO-PTC-111-091817-6-
Site ID:	5-35 PTC-111	37.3 PTC-111	3-39.5 PTC-111	3-40 PTC-111	PTC-111	9 PTC-111
Sample Date:	I .	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						•
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			4.03 J			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	7.00 U		7.00 U	1307.00	1492.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-111-091817-32.	SO-PTC-111-091817-35-	SO-PTC-111-091817-37.	SO-PTC-111-091817-37.	SO-PTC-111-091817-5-6	SO-PTC-111-091817-6-
	5-35	37.3	3-39.5	3-40		9
Site ID:	PTC-111	PTC-111	PTC-111	PTC-111	PTC-111	PTC-111
Sample Date:	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids			58.51			
Conventionals (-W)						
рН			7.15			



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	8.0 PTC-111	SO-PTC-111-091817-6.0- 8.0-(10) PTC-111 09/18/17 Soil	SO-PTC-112-092018-1.5- 2.5 PTC-112 09/20/18 Soil	SO-PTC-112-092018-10. 5-11.0 PTC-112 09/20/18 Soil	SO-PTC-112-092018-10. 5-11.0-(10) PTC-112 09/20/18 Soil	SO-PTC-112-092018-12 .5-13 PTC-112 09/20/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		0.44			1.70	
Barium		0.02			0.009 J	
Cadmium		0.01 U			0.004 J	
Chromium, Total		0.003 J		•	0.002 U	•
Lead and Compounds		0.10 U			0.007 U	
Mercury (elemental)		0.00010 U			0.000007 U	
Selenium		0.25 U			0.06 U	
Silver		0.02 U			0.002 U	
Conventionals						
Inorganic Carbon, Total (%)	0.04 UJ					
Sulfate (mg/kg)	35.00	•		•		•
Sulfide (mg/kg)	1.15 U					
Total Organic Carbon (%)	0.07 J					
pH ()						
Metals (mg/kg)						
Aluminum	9740.00					
Arsenic, Inorganic	955.00			723.00		
Iron	10500.00					
Manganese	78.70					
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			70.75	1346.50		601.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	5.72 UJ					



·		SO-PTC-111-091817-6.0- 8.0-(10) PTC-111	SO-PTC-112-092018-1.5- 2.5 PTC-112	5-11.0	SO-PTC-112-092018-10. 5-11.0-(10) PTC-112	SO-PTC-112-092018-12 .5-13 PTC-112
Sample Date:	09/18/17	09/18/17	09/20/18	09/20/18	09/20/18	09/20/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.06 J					
Total Solids	82.43					
Conventionals (-W)						
pH	7.66			6.90		



Table G-7: General Soil Results

		1	1	1	1	<u> </u>
Sample ID:		SO-PTC-112-092018-17.	SO-PTC-112-092018-17.	SO-PTC-112-092018-19-	SO-PTC-112-092018-3.5-	
Site ID:	5-14.5 PTC-112	0-18.0 PTC-112	0-18.0-(10) PTC-112	20 PTC-112	4 PTC-112	5-7.5 PTC-112
Sample Date:		09/20/18	09/20/18	09/20/18	09/20/18	09/20/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			35.00			
Barium			0.03			
Cadmium			0.03			
Chromium, Total			0.005 J			
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000007 U			
Selenium			0.09 U			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		2530.00				
Iron						
Manganese					•	
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	1367.00	5434.50		6.00 U	80.50	76.25
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	5-14.5 PTC-112	SO-PTC-112-092018-17. 0-18.0 PTC-112 09/20/18	SO-PTC-112-092018-17. 0-18.0-(10) PTC-112 09/20/18	SO-PTC-112-092018-19- 20 PTC-112 09/20/18	_	SO-PTC-112-092018-6. 5-7.5 PTC-112 09/20/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		6.96				



Sample ID:	SO-PTC-112-092018-8-8.	SO-PTC-113-092017-0-1.	SO-PTC-113-092017-1.8-	SO-PTC-113-092017-10- 11.3	SO-PTC-113-092017-11. 3-12.5	SO-PTC-113-092017-12 .3-14.3
Site ID	PTC-112	PTC-113	PTC-113	PTC-113	PTC-113	PTC-113
Sample Date		09/20/17	09/20/17	09/20/17	09/20/17	09/20/17
Constituent Media	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						6210.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	243.50	56.70	18.50	2834.00	7415.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						
	1	1	I	I .	I	ı



		SO-PTC-112-092018-8-8.	8	4	11.3	3-12.5	.3-14.3
Constituent	Site ID: Sample Date: Media:		PTC-113 09/20/17 Soil	PTC-113 09/20/17 Soil	PTC-113 09/20/17 Soil	PTC-113 09/20/17 Soil	PTC-113 09/20/17 Soil
Conventionals (%-W)							
Total Carbon (Elementa Total Solids	I + Organic)						57.80
Conventionals (-W)							
рН							8.14



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-14.3-(10) PTC-113 09/20/17	SO-PTC-113-092017-12. 5-15 PTC-113 09/20/17 Soil	SO-PTC-113-092017-15- 17 PTC-113 09/20/17 Soil	SO-PTC-113-092017-17- 18 PTC-113 09/20/17 Soil	SO-PTC-113-092017-18- 20 PTC-113 09/20/17 Soil	SO-PTC-113-092017-18 .0-20.0 PTC-113 09/20/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	39.90					
Barium	0.01 J					
Cadmium	0.02					
Chromium, Total	0.03 U					
Lead and Compounds	0.008 J					
Mercury (elemental)	0.00010 U					
Selenium	0.25 U					
Silver	0.02 U					
Conventionals						
Inorganic Carbon, Total (%)						0.28J
Sulfate (mg/kg)						338.00
Sulfide (mg/kg)						4.64
Total Organic Carbon (%)						0.64J
pH ()						
Metals (mg/kg)						
Aluminum						9030.00
Arsenic, Inorganic						1430.00
Iron						10000.00
Manganese						51.30
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		4369.00	1863.00	2369.00	2395.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						21.10
					i e	



Constituent	·	SO-PTC-113-092017-12. 5-15 PTC-113 09/20/17 Soil	SO-PTC-113-092017-15- 17 PTC-113 09/20/17 Soil	SO-PTC-113-092017-17- 18 PTC-113 09/20/17 Soil	SO-PTC-113-092017-18- 20 PTC-113 09/20/17 Soil	SO-PTC-113-092017-18 .0-20.0 PTC-113 09/20/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental Total Solids	I + Organic)					0.92J 72.08
Conventionals (-W)						
рН						7.84



Sample ID:	SO-PTC-113-092017-23-	SO-PTC-113-092017-25-	SO-PTC-113-092017-27.	SO-PTC-113-092017-30-	SO-PTC-113-092017-32.	SO-PTC-113-092017-35
·	25	27.5	5-30	32.5	5-35	-37
	PTC-113	PTC-113	PTC-113	PTC-113	PTC-113	PTC-113
Sample Date: Constituent Media:		09/20/17 Soil	09/20/17 Soil	09/20/17 Soil	09/20/17 Soil	09/20/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium			•		•	
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
	<u> </u>	1	1	1	1	<u> </u>
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	1596.00	241.50	152.20	9.00	11.20	21.80
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



•	SO-PTC-113-092017-23- 25 PTC-113	SO-PTC-113-092017-25- 27.5 PTC-113	SO-PTC-113-092017-27. 5-30 PTC-113	SO-PTC-113-092017-30- 32.5 PTC-113	5-35	SO-PTC-113-092017-35 -37 PTC-113
Sample Date:	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH						



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	40 PTC-113 09/20/17	SO-PTC-113-092017-37. 0-39.0 PTC-113 09/20/17 Soil	SO-PTC-113-092017-5-7. 5 PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10 PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(10) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7 5-10.0_DC PTC-113 09/20/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.35	
Barium					0.02 U	
Cadmium					0.0009 J	
Chromium, Total					0.04	
Lead and Compounds					0.10 U	
Mercury (elemental)			•		0.00010 U	
Selenium					0.25 U	
Silver					0.02 U	
Conventionals						
Inorganic Carbon, Total (%)						0.04UJ
Sulfate (mg/kg)						36.80
Sulfide (mg/kg)						1.26U
Total Organic Carbon (%)						0.06J
pH ()						•
Metals (mg/kg)						
Aluminum						7535.00
Arsenic, Inorganic		6.64 J				413.50
Iron						10150.00
Manganese						69.00
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U		99.00	684.60		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						5.8 2 UJ



Constituent	-	PTC-113 09/20/17	SO-PTC-113-092017-37. 0-39.0 PTC-113 09/20/17 Soil	SO-PTC-113-092017-5-7. 5 PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10 PTC-113 09/20/17 Soil	10.0-(10) PTC-113	SO-PTC-113-092017-7. 5-10.0_DC PTC-113 09/20/17 Soil
Conventionals (%-W)							
Total Carbon (Elemental +	- Organic)						0.07J
Total Solids			58.60				81.65
Conventionals (-W)							
рН			6.63				6.81



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	2 PTC-114 09/20/18	SO-PTC-114-092018-10- 10.5 PTC-114 09/20/18 Soil	SO-PTC-114-092018-13. 3-13.8 PTC-114 09/20/18 Soil	SO-PTC-114-092018-13. 3-13.8-(10) PTC-114 09/20/18 Soil	SO-PTC-114-092018-15- 15.5 PTC-114 09/20/18 Soil	SO-PTC-114-092018-18 -18.5 PTC-114 09/20/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic				8.43		
Barium				0.12 U		
Cadmium				0.007 U		
Chromium, Total				0.06		•
Lead and Compounds				0.007 U		
Mercury (elemental)				0.000007 U		
Selenium				0.11 J		
Silver				0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			2670.00			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	75.25	52.75	6113.00		130.50	6.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-114-092018-1.5- 2 PTC-114 09/20/18	SO-PTC-114-092018-10- 10.5 PTC-114 09/20/18	SO-PTC-114-092018-13. 3-13.8 PTC-114 09/20/18	3-13.8-(10) PTC-114		SO-PTC-114-092018-18 -18.5 PTC-114 09/20/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН			9.53			



Table G-7: General Soil Results

Sample ID:	SO-PTC-114-092018-3.5-	SO PTC 114 002018 7.0	SO-PTC-114-092018-7.0-	SO-PTC-115-091918-10.	SO-PTC-115-091918-12.	SO-PTC-115-091918-14
Sample ID.	4	7.5	7.5-(10)	5-11	5-13	.5-15.0
	PTC-114	PTC-114	PTC-114	PTC-115	PTC-115	PTC-115
Sample Date:		09/20/18	09/20/18	09/19/18	09/19/18	09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			0.19 J			
Barium			0.03 U			
Cadmium			0.003 U			
Chromium, Total			0.002 U			
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000007 U			
Selenium			0.09 J			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)	•	•				•
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		121.00				156.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	56.25	135.75		18.50	42.25	101.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



•	SO-PTC-114-092018-7.0- 7.5 PTC-114 09/20/18 Soil	SO-PTC-114-092018-7.0- 7.5-(10) PTC-114 09/20/18 Soil	SO-PTC-115-091918-10. 5-11 PTC-115 09/19/18 Soil	5-13 PTC-115	SO-PTC-115-091918-14 .5-15.0 PTC-115 09/19/18 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
pH	10.40				11.10



Table G-7: General Soil Results

Sample ID:			SO-PTC-115-091918-5-5.			l .
Site ID:	5-15.0-(10) PTC-115	5 PTC-115	5 PTC-115	8.0 PTC-115	8.0-(10) PTC-115	1.5 PTC-116
Sample Date:	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	1.07				0.13 J	
Barium	0.03 U				0.04 U	
Cadmium	0.003 U				0.002 U	
Chromium, Total	0.008 J				0.003 J	
Lead and Compounds	0.007 U				0.007 U	
Mercury (elemental)	0.00004 J				0.000007 U	
Selenium	0.04 U				0.04 U	
Silver	0.002 U				0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				35.50		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		18.00	47.75	24.25		11.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-	SO-PTC-115-091918-14. 5-15.0-(10) PTC-115	SO-PTC-115-091918-2-2. 5 PTC-115	SO-PTC-115-091918-5-5. 5 PTC-115	8.0	8.0-(10)	SO-PTC-116-091918-1- 1.5 PTC-116
Sample Date:		09/19/18	09/19/18	09/19/18	09/19/18	09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)	_				_	
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)					_	
pH				8.78		



Table G-7: General Soil Results

				Ī	<u> </u>	<u> </u>
Sample ID:		SO-PTC-116-091918-13.	SO-PTC-116-091918-13.	SO-PTC-116-091918-16-	SO-PTC-116-091918-18-	SO-PTC-116-091918-5.
Site ID:	11.5 PTC-116	1-13.6 PTC-116	1-13.6-(10) PTC-116	16.5 PTC-116	18.5 PTC-116	5-6 PTC-116
Sample Date:	l .	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			8.52			
Barium			0.02			
Cadmium			0.003 U			•
Chromium, Total			0.002 U			•
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000007 U			
Selenium			0.04 U			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		7490.00				
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	122.25	3542.75		1314.75	1498.25	24.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-116-091918-11-			SO-PTC-116-091918-16-		
	11.5	1-13.6	1-13.6-(10)	16.5	18.5	5-6
Site ID:	PTC-116	PTC-116	PTC-116	PTC-116	PTC-116	PTC-116
Sample Date:	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН		10.40				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	9.0 PTC-116 09/19/18	SO-PTC-116-091918-8.5- 9.0-(10) PTC-116 09/19/18 Soil	SO-PTC-117-092018-0.9- 1.5 PTC-117 09/20/18 Soil	SO-PTC-117-092018-10. 5-11.5 PTC-117 09/20/18 Soil	SO-PTC-117-092018-12- 13 PTC-117 09/20/18 Soil	SO-PTC-117-092018-14 .5-15.0 PTC-117 09/20/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		0.24 J				
Barium		0.01 J				
Cadmium		0.003 U				
Chromium, Total		0.002 U				
Lead and Compounds		0.007 U				
Mercury (elemental)		0.000007 U				
Selenium		0.04 U				
Silver		0.002 U				
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic	77.10				•	4580.00
Iron					•	
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	40.00		10.50	166.25	1898.75	6769.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-		SO-PTC-116-091918-8.5- 9.0-(10) PTC-116 09/19/18 Soil	SO-PTC-117-092018-0.9- 1.5 PTC-117 09/20/18 Soil	SO-PTC-117-092018-10. 5-11.5 PTC-117 09/20/18 Soil	13 PTC-117	SO-PTC-117-092018-14 .5-15.0 PTC-117 09/20/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН	7.05					7.69



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-15.0-(10) PTC-117 09/20/18	SO-PTC-117-092018-6.4- 6.9-(10)_DC PTC-117 09/20/18 Soil	SO-PTC-117-092018-6.4- 6.9_DC PTC-117 09/20/18 Soil	SO-PTC-117-092018-9-9. 5 PTC-117 09/20/18 Soil	SO-PTC-118-092018-10. 5-11.0 PTC-118 09/20/18 Soil	SO-PTC-118-092018-10 .5-11.0-(10) PTC-118 09/20/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	95.20	0.16 J				1.74
Barium	0.02	0.01 J				0.01J
Cadmium	0.05	0.0008 U				0.00 2 U
Chromium, Total	0.03	0.01 J				0.006J
Lead and Compounds	0.007 U	0.007 U				0.007U
Mercury (elemental)	0.000007 U	0.000007 U				0.000007U
Selenium	0.08 U	0.07 U				0.1 2 U
Silver	0.002 U	0.002 U				0.002U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)				•		
Total Organic Carbon (%)				•		
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			297.50	•	6200.00	
Iron						
Manganese				•		
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			287.75	67.50	4493.25	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID:	PTC-117	6.9-(10)_DC PTC-117	6.9_DC PTC-117	5 PTC-117	5-11.0 PTC-118	.5-11.0-(10) PTC-118
Sample Date:		09/20/18	09/20/18	1		09/20/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH			8.85		6.99	



Sample ID: Site ID: Sample Date: Constituent Media:	12.5 PTC-118 09/20/18	SO-PTC-118-092018-14. 5-15 PTC-118 09/20/18 Soil	SO-PTC-118-092018-2-2. 5 PTC-118 09/20/18 Soil	SO-PTC-118-092018-5-5. 5 PTC-118 09/20/18 Soil	SO-PTC-118-092018-8.0- 8.5 PTC-118 09/20/18 Soil	SO-PTC-118-092018-8 0-8.5-(10) PTC-118 09/20/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						0.43
Barium						0.03U
Cadmium						0.00 2 U
Chromium, Total						0.00 2 U
Lead and Compounds						0.007U
Mercury (elemental)						0.000007U
Selenium			•			0.06J
Silver						0.00 2 U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)					•	
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			•		70.90	
Iron			•			
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	490.00	42.75	7.00	43.75	46.50	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-118-092018-14. 5-15 PTC-118 09/20/18 Soil	SO-PTC-118-092018-2-2. 5 PTC-118 09/20/18 Soil	5 PTC-118	PTC-118	SO-PTC-118-092018-8. 0-8.5-(10) PTC-118 09/20/18 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН				10.10	



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	5 PTC-119 09/19/18	SO-PTC-119-091918-11. 5-12.0 PTC-119 09/19/18 Soil	SO-PTC-119-091918-11. 5-12.0-(10) PTC-119 09/19/18 Soil	SO-PTC-119-091918-14. 5-15 PTC-119 09/19/18 Soil	SO-PTC-119-091918-3.5- 4 PTC-119 09/19/18 Soil	SO-PTC-119-091918-6 0-6.5 PTC-119 09/19/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			15.20			
Barium			0.04			
Cadmium			0.007 U			
Chromium, Total			0.002 U			
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000007 U			
Selenium			0.04 U			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		2860.00				590.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	60.25	2271.25		760.25	324.25	818.75
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID:	SO-PTC-119-091918-1-1. 5 PTC-119	5-12.0 PTC-119	5-12.0-(10) PTC-119	5-15 PTC-119	PTC-119	0-6.5 PTC-119
Sample Date: Constituent Media:		09/19/18 Soil	09/19/18 Soil	09/19/18 Soil	09/19/18 Soil	09/19/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		7.31				8.02



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	6.5-(10) PTC-119 09/19/18	SO-PTC-119-091918-8.5- 9 PTC-119 09/19/18 Soil	SO-PTC-120-092118-11. 0-12.0 PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(10) PTC-120 09/21/18 Soil	SO-PTC-120-092118-14- 15 PTC-120 09/21/18 Soil	SO-PTC-120-092118-3- 3.5 PTC-120 09/21/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	2.02			0.78		
Barium	0.02			0.10 U		
Cadmium	0.003 U			0.004 U		•
Chromium, Total	0.04			0.004 J		
Lead and Compounds	0.007 U			0.007		
Mercury (elemental)	0.0001			0.000007		
Selenium	0.04 U			0.04		
Silver	0.002 U			0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)			•	•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()				•		•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			3850.00			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		391.00	4995.25		85.50	211.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-119-091918-6.0- 6.5-(10)	9	0-12.0	0-12.0-(10)	15	3.5
Site ID: Sample Date: Constituent Media:		PTC-119 09/19/18 Soil	PTC-120 09/21/18 Soil	PTC-120 09/21/18 Soil	PTC-120 09/21/18 Soil	PTC-120 09/21/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН			7.18			



Table G-7: General Soil Results

Sample ID:	SO-PTC-120-092118-4-4.	SO-PTC-120-092118-6-7	SO-PTC-120-092118-6.5-	SO-PTC-120-092118-9.0- 10.0	SO-PTC-120-092118-9.0- 10.0-(10)	SO-PTC-121-091817-1 5-3.5
Site ID:	PTC-120	PTC-120	PTC-120	PTC-120	PTC-120	PTC-121
Sample Date:	09/21/18	09/21/18	09/21/18	09/21/18	09/21/18	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					4.17	
Barium					0.10 U	
Cadmium					0.005 U	
Chromium, Total					0.002	
Lead and Compounds				•	0.007	
Mercury (elemental)					0.000007 J	
Selenium					0.04	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)				•		
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				765.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	301.25	89.75	1000.25	661.25		285.90
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-120-092118-4-4.	SO-PTC-120-092118-6-7	SO-PTC-120-092118-6.5-			
	5		7	10.0	10.0-(10)	5-3.5
Site ID:	PTC-120	PTC-120	PTC-120	PTC-120	PTC-120	PTC-121
Sample Date:	09/21/18	09/21/18	09/21/18	09/21/18	09/21/18	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)					_	
рН				7.67		



Table G-7: General Soil Results

Sample ID:	SO-PTC-121-091817-10- 11.2	SO-PTC-121-091817-11.	SO-PTC-121-091817-11.	SO-PTC-121-091817-11. 2-13.1	SO-PTC-121-091817-13.	SO-PTC-121-091817-13
Site ID:		0-13.0 PTC-121	0-13.0-(10) PTC-121	PTC-121	1-15 PTC-121	.1-15.0 PTC-121
Sample Date:		09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			5.87			
Barium			0.02			
Cadmium			0.01 U			
Chromium, Total			0.008 J			
Lead and Compounds			0.10 U			
Mercury (elemental)			0.00010 U			
Selenium			0.25 U			
Silver			0.02 U			
Conventionals						
Inorganic Carbon, Total (%)		0.43 J				
Sulfate (mg/kg)		96.10				
Sulfide (mg/kg)		3.12				
Total Organic Carbon (%)		1.83 J				
pH ()						
Metals (mg/kg)						
Aluminum		13300.00				
Arsenic, Inorganic		2140.00				1130.00
Iron		16600.00				
Manganese		90.10				
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	455.70			1739.00	1451.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P		7.63 UJ				



	Sample ID:	SO-PTC-121-091817-10-	SO-PTC-121-091817-11.	SO-PTC-121-091817-11.	SO-PTC-121-091817-11.	SO-PTC-121-091817-13.	SO-PTC-121-091817-13
		11.2	0-13.0	0-13.0-(10)	2-13.1	1-15	.1-15.0
	Site ID:	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121
	Sample Date:	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent	Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W))						
Total Carbon (Element	tal + Organic)		2.26 J				
Total Solids			80.65				70.79
Conventionals (-W)							
рН			5.28				8.03



Table G-7: General Soil Results

Sample ID:	SO-PTC-121-091817-13.	SO-PTC-121-091817-15-	SO-PTC-121-091817-17-	SO-PTC-121-091817-18.	SO-PTC-121-091817-21.	SO-PTC-121-091817-22
Cample 15.	1-15.0-(10)	17	18.2	2-20	3-22.4	.0-24.0
	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121
Sample Date: Constituent Media:	09/18/17 Soil	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
	5011	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	10.40					
Barium	0.02					
Cadmium	0.01 U					
Chromium, Total	0.006 J					
Lead and Compounds	0.10 U					
Mercury (elemental)	0.00010 U					
Selenium	0.25 U				•	
Silver	0.02 U					
Conventionals						
Inorganic Carbon, Total (%)						0.04UJ
Sulfate (mg/kg)						36.10
Sulfide (mg/kg)						1.23U
Total Organic Carbon (%)						0.05J
pH ()						
Metals (mg/kg)						
Aluminum						5830.00
Arsenic, Inorganic						37.60
Iron						10800.00
Manganese						76.20
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		1216.00	1503.00	1130.00	630.80	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						6.14UJ



	T	1		1	1	T
Sample ID:	SO-PTC-121-091817-13.	SO-PTC-121-091817-15-	SO-PTC-121-091817-17-	SO-PTC-121-091817-18.	SO-PTC-121-091817-21.	SO-PTC-121-091817-22
	1-15.0-(10)	17	18.2	2-20	3-22.4	.0-24.0
Site ID:	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121	PTC-121
Sample Date:	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17	09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						0.06J
Total Solids						77.80
Conventionals (-W)						
рН						7.38



Sample ID: Site ID: Sample Date: Constituent Media:	4-23.7 PTC-121 09/18/17	SO-PTC-121-091817-23. 7-25 PTC-121 09/18/17 Soil	SO-PTC-121-091817-25- 26.7 PTC-121 09/18/17 Soil	SO-PTC-121-091817-26. 7-28.2 PTC-121 09/18/17 Soil	SO-PTC-121-091817-28. 2-30 PTC-121 09/18/17 Soil	SO-PTC-121-091817-30 -32.6 PTC-121 09/18/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	214.60	7.00 U	7.00	7.00 U	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-121-091817-22. 4-23.7 PTC-121 09/18/17	SO-PTC-121-091817-23. 7-25 PTC-121 09/18/17	SO-PTC-121-091817-25- 26.7 PTC-121 09/18/17	SO-PTC-121-091817-26. 7-28.2 PTC-121 09/18/17	SO-PTC-121-091817-28. 2-30 PTC-121 09/18/17	SO-PTC-121-091817-30 -32.6 PTC-121 09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Sample ID: Site ID: Sample Date: Constituent Media:	6-33.7 PTC-121 09/18/17	SO-PTC-121-091817-33. 7-35 PTC-121 09/18/17 Soil	SO-PTC-121-091817-35- 36 PTC-121 09/18/17 Soil	SO-PTC-121-091817-36- 38.6 PTC-121 09/18/17 Soil	SO-PTC-121-091817-36. 0-38.0 PTC-121 09/18/17 Soil	SO-PTC-121-091817-38 .6-40 PTC-121 09/18/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			•		4.09 J	
Iron					•	
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	12.10	7.00 U	7.00 U		7.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-121-091817-32. 6-33.7 PTC-121 09/18/17	SO-PTC-121-091817-33. 7-35 PTC-121 09/18/17	SO-PTC-121-091817-35- 36 PTC-121 09/18/17	PTC-121	0-38.0 PTC-121	SO-PTC-121-091817-38 .6-40 PTC-121 09/18/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids					66.20	
Conventionals (-W)						
рН					7.59	



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Sample ID:	8.3	10	12.5	SO-PTC-122-091818-14- 14.5	SO-PTC-122-091818-2-2.	0-3.0
Sample Date:	PTC-121 09/18/17	PTC-121 09/18/17	PTC-122 09/18/18	PTC-122 09/18/18	PTC-122 09/18/18	PTC-122 09/18/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						•
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						•
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						353.00
Iron						•
Manganese						•
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	236.90	364.30	154.50	8.75	423.50	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



						1	
	Sample ID:	SO-PTC-121-091817-6.3-	SO-PTC-121-091817-8.3-	SO-PTC-122-091818-12-	SO-PTC-122-091818-14-	SO-PTC-122-091818-2-2.	SO-PTC-122-091818-2.
		8.3	10	12.5	14.5	5	0-3.0
	Site ID:	PTC-121	PTC-121	PTC-122	PTC-122	PTC-122	PTC-122
\$	Sample Date:	09/18/17	09/18/17	09/18/18	09/18/18	09/18/18	09/18/18
Constituent	Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)							
Total Carbon (Elemental + Orga	anic)						
Total Solids							
Conventionals (-W)							
рН							9.15



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	3.0-(10) PTC-122 09/18/18	SO-PTC-122-091818-5-5. 5 PTC-122 09/18/18 Soil	SO-PTC-122-091818-7-7. 5 PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10 PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5 PTC-122 09/18/18 Soil	SO-PTC-122-091818-9. 5-10.5-(10) PTC-122 09/18/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	4.23					7.55
Barium	0.02 U					0.03U
Cadmium	0.002 U					0.002U
Chromium, Total	0.007 U					0.005U
Lead and Compounds	0.009 J					0.007U
Mercury (elemental)	0.000007 U					0.000007U
Selenium	0.04 U					0.04U
Silver	0.002 U					0.002U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)		•				•
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic					3760.00	
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		177.00	190.75	4172.00		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	I -	SO-PTC-122-091818-5-5. 5 PTC-122 09/18/18	SO-PTC-122-091818-7-7. 5 PTC-122 09/18/18	10 PTC-122	10.5 PTC-122	SO-PTC-122-091818-9. 5-10.5-(10) PTC-122 09/18/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН					8.07	



Table G-7: General Soil Results

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Sample ID:		SO-PTC-123-091718-13.	SO-PTC-123-091718-13.	SO-PTC-123-091718-14-	SO-PTC-123-091718-2-2.	
Site ID:	12 PTC-123	0-14.0 PTC-123	0-14.0-(10) PTC-123	15 PTC-123	6 PTC-123	5-4.0 PTC-123
Sample Date:		09/17/18	09/17/18	09/17/18	09/17/18	09/17/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			8.80			
Barium			0.04 U			•
Cadmium			0.002 U			
Chromium, Total			0.005 U			
Lead and Compounds			0.007 U			
Mercury (elemental)			0.000007 U			
Selenium			0.04 U			
Silver			0.002 U			
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		4560.00				646.00
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	1336.50	10167.00		256.25	957.00	826.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:	PTC-123 09/17/18	SO-PTC-123-091718-13. 0-14.0 PTC-123 09/17/18 Soil	SO-PTC-123-091718-13. 0-14.0-(10) PTC-123 09/17/18 Soil		6 PTC-123	5-4.0 PTC-123 09/17/18
Oonstituent	3011	5011	5011	5011	5011	Soil
Conventionals (%-W) Total Carbon (Elemental + Organic)						
Total Solids Conventionals (-W)						
рН		5.35				8.55



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	4.0-(10) PTC-123 09/17/18	SO-PTC-123-091718-6.5- 7.5 PTC-123 09/17/18 Soil	SO-PTC-123-091718-9-1 0 PTC-123 09/17/18 Soil	SO-PTC-124-091718-11- 12 PTC-124 09/17/18 Soil	SO-PTC-124-091718-12. 0-13.0 PTC-124 09/17/18 Soil	SO-PTC-124-091718-12 .0-13.0-(10) PTC-124 09/17/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	2.65					0.01J
Barium	0.07 U					0.07U
Cadmium	0.002 U					0.00 2 U
Chromium, Total	0.005 U					0.010U
Lead and Compounds	0.007 U					0.008J
Mercury (elemental)	0.00002 J					0.000007U
Selenium	0.04 U					0.04U
Silver	0.002 U					0.002U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)		•	•			
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic					23.70	
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		558.00	448.25	35.00		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-123-091718-3.5- 4.0-(10) PTC-123 09/17/18	SO-PTC-123-091718-6.5- 7.5 PTC-123 09/17/18	SO-PTC-123-091718-9-1 0 PTC-123 09/17/18	12 PTC-124	0-13.0 PTC-124	SO-PTC-124-091718-12 .0-13.0-(10) PTC-124 09/17/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН					7.22	



Sample ID:	I .		SO-PTC-124-091718-6-7		SO-PTC-124-091718-8.5-	
Site ID:	15 PTC-124	3.5 PTC-124	PTC-124	9.5 PTC-124	9.5-(10) PTC-124	9-5 PTC-124
Sample Date:		09/17/18	09/17/18	09/17/18	09/17/18	09/17/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.37	
Barium					0.03 U	
Cadmium					0.002 U	
Chromium, Total					0.005 U	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	
Selenium					0.04 U	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)					•	
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				1210.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00	493.00	284.00			651.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Commis ID.	00 PTO 404 004740 44	00 PTO 404 004740 0 5	00 PTO 404 004740 0 7	00 PTO 404 004740 0 5	00 PTO 404 004740 0 5	00 070 404 004740 0
Sample ID:	SO-PTC-124-091718-14-		SO-PTC-124-091718-6-7			SO-PTC-124-091718-9- 9-5
Site ID:	15 PTC-124	3.5 PTC-124	PTC-124		9.5-(10) PTC-124	PTC-124
Sample Date:	_ ·	09/17/18	09/17/18	_	I -	09/17/18
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН				5.91		



Table G-7: General Soil Results

Sample ID:			1	SO-PTC-125-091718-12.	SO-PTC-125-091718-12.	SO-PTC-125-091718-14
Site ID:	2.0 PTC-125	2.0-(10) PTC-125	12 PTC-125	0-13.0 PTC-125	0-13.0-(10) PTC-125	-15 PTC-125
Sample Date:	l .	09/17/18	09/17/18	09/17/18	09/17/18	09/17/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		0.03 J			0.01 U	
Barium		0.04 U			0.01 J	
Cadmium		0.002 U			0.003 U	
Chromium, Total		0.005 U			0.002 U	
Lead and Compounds		0.01 J			0.007 U	
Mercury (elemental)		0.000007 U			0.000007 U	
Selenium		0.04 U			0.04 U	
Silver		0.002 U			0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic	45.60			6.86 J		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	35.00		7.00 U			8.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	1	I	1	1	1	1
Sample ID:	SO-PTC-125-091718-1.0-	SO-PTC-125-091718-1.0-	SO-PTC-125-091718-11-	SO-PTC-125-091718-12.	SO-PTC-125-091718-12.	SO-PTC-125-091718-14
	2.0	2.0-(10)	12	0-13.0	0-13.0-(10)	-15
Site ID:	PTC-125	PTC-125	PTC-125	PTC-125	PTC-125	PTC-125
Sample Date:	09/17/18	09/17/18	09/17/18	09/17/18	09/17/18	09/17/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН	7.90			7.11		



Table G-7: General Soil Results

Sample ID:	SO-PTC-125-091718-4-5	SO-PTC-125-091718-6.5-		SO-PTC-126-091818-13.	SO-PTC-126-091818-13.	SO-PTC-126-091818-17
	PTC-125	7.5 PTC-125	11.5 PTC-126	5-14 PTC-126	5-14-(10) PTC-126	-17.5 PTC-126
Sample Date: Constituent Media:		09/17/18 Soil	09/18/18 Soil	09/18/18 Soil	09/18/18 Soil	09/18/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.40	
Barium					0.03	
Cadmium					0.003 U	
Chromium, Total					0.002 U	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	
Selenium					0.04 U	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				423.00		
Iron						
Manganese						•
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	11.00	8.00	328.00	410.00		280.75
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-125-091718-4-5	SO-PTC-125-091718-6.5- 7.5	SO-PTC-126-091818-11- 11.5	SO-PTC-126-091818-13.	SO-PTC-126-091818-13. 5-14-(10)	SO-PTC-126-091818-17 -17.5
Site ID:	PTC-125	PTC-125	PTC-126	PTC-126	· '	PTC-126
Sample Date:	09/17/18	09/17/18	09/18/18	09/18/18	09/18/18	09/18/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH				5.62		



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-20 PTC-126 09/18/18	SO-PTC-126-091818-2-2. 5 PTC-126 09/18/18 Soil	SO-PTC-126-091818-3.5- 4 PTC-126 09/18/18 Soil	SO-PTC-126-091818-6-6. 8 PTC-126 09/18/18 Soil	SO-PTC-126-091818-9-1 0 PTC-126 09/18/18 Soil	SO-PTC-126-091818-9 10-(10) PTC-126 09/18/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						2.91
Barium						0.01J
Cadmium						0.004U
Chromium, Total						0.00 2 U
Lead and Compounds						0.007U
Mercury (elemental)						0.000007U
Selenium						0.04U
Silver						0.002U
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()				•		
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic					307.00	
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	181.75	413.00	131.75	229.50	472.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID:	5-20 PTC-126	5 PTC-126	SO-PTC-126-091818-3.5- 4 PTC-126	8 PTC-126	0 PTC-126	10-(10) PTC-126
Sample Date: Constituent Media:		09/18/18 Soil	09/18/18 Soil	09/18/18 Soil	09/18/18 Soil	09/18/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН					6.94	



Table G-7: General Soil Results

			<u> </u>		1	1
Sample ID:		SO-PTC-127-091818-12-	SO-PTC-127-091818-14.	SO-PTC-127-091818-17.	SO-PTC-127-091818-17.	SO-PTC-127-091818-19
Site ID:	10.5 PTC-127	12.5 PTC-127	5-15 PTC-127	0-17.5 PTC-127	0-17.5-(10) PTC-127	.5-20 PTC-127
Sample Date:		09/18/18	09/18/18	09/18/18	09/18/18	09/18/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					38.30	
Barium					0.05	
Cadmium					0.004 U	
Chromium, Total					0.02 J	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	
Selenium					0.04 U	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				984.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	185.50	21.50	91.25	4008.25		9.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-127-091818-10- 10.5 PTC-127	SO-PTC-127-091818-12- 12.5 PTC-127 09/18/18	SO-PTC-127-091818-14. 5-15 PTC-127 09/18/18	0-17.5 PTC-127	0-17.5-(10) PTC-127	SO-PTC-127-091818-19 .5-20 PTC-127 09/18/18
Constituent Media:		Soil	Soil	Soil	09/18/18 Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН				8.67		



Table G-7: General Soil Results

Sample ID:	SO-PTC-127-091818-2-2.	SO-PTC-127-091818-4.5-	SO-PTC-127-091818-7.0- 7.5	SO-PTC-127-091818-7.0- 7.5-(10)	SO-PTC-128-091918-1.5-	SO-PTC-128-091918-10
Site ID:	PTC-127	PTC-127	PTC-127	PTC-127	PTC-128	PTC-128
Sample Date:		09/18/18	09/18/18	09/18/18	09/19/18	09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic				0.17 J		
Barium				0.008 J		
Cadmium				0.004 U		
Chromium, Total				0.002 U		
Lead and Compounds				0.007 U		
Mercury (elemental)				0.0002		
Selenium				0.04 U		
Silver				0.002 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			933.00			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	77.50	54.25	208.75		20.25	36.25
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID:	SO-PTC-127-091818-2-2. 5 PTC-127	5 PTC-127	7.5 PTC-127	7.5-(10) PTC-127	2 PTC-128	.5-11 PTC-128
Sample Date: Constituent Media:		09/18/18 Soil	09/18/18 Soil	09/18/18 Soil	09/19/18 Soil	09/19/18 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН			10.10			



Table G-7: General Soil Results

Sample ID:	SO-PTC-128-091918-12. 5-13	SO-PTC-128-091918-6.0- 6.5	SO-PTC-128-091918-6.0- 6.5-(10)	SO-PTC-128-091918-7.5- 8.0	SO-PTC-128-091918-7.5- 8.0-(10)	
Site ID:		0.5 PTC-128	0.5-(10) PTC-128	PTC-128	8.0-(10) PTC-128	2 PTC-129
Sample Date:	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18	09/20/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			3.43		1.13	
Barium			0.03		0.03	
Cadmium			0.005 U		0.003 U	•
Chromium, Total			0.002 U		0.002 U	
Lead and Compounds			0.007 U		0.007 U	
Mercury (elemental)			0.000007 U		0.000007 U	
Selenium			0.04 U		0.04 U	
Silver			0.002 U		0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		55.60		4060.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	203.25	1688.00		1214.00		28.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·		SO-PTC-128-091918-6.0- 6.5 PTC-128 09/19/18	SO-PTC-128-091918-6.0- 6.5-(10) PTC-128 09/19/18	8.0 PTC-128	8.0-(10) PTC-128	SO-PTC-129-092017-0- 2 PTC-129 09/20/17
Constituent Media:	l	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН		8.00		8.30		



Table G-7: General Soil Results

Sample ID:	12	SO-PTC-129-092017-10. 0-12.0 PTC-129	SO-PTC-129-092017-10. 0-12.0-(10) PTC-129	SO-PTC-129-092017-12- 15 PTC-129	SO-PTC-129-092017-15- 17.3 PTC-129	SO-PTC-129-092017-17 .3-20 PTC-129
Sample Date:	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic			0.20 J			
Barium			0.01 J			
Cadmium			0.0008 J			
Chromium, Total			0.03 U			
Lead and Compounds			0.10 U			
Mercury (elemental)			0.00010 U			
Selenium			0.25 U			
Silver			0.02 U			
Conventionals						
Inorganic Carbon, Total (%)		0.05 J				
Sulfate (mg/kg)		358.00 J				
Sulfide (mg/kg)		1.09 U				
Total Organic Carbon (%)		0.05 J				
pH ()						
Metals (mg/kg)						
Aluminum		5250.00				
Arsenic, Inorganic		353.00				
Iron		13400.00				
Manganese		79.80				
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	1066.00			88.80	38.10	89.40
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P		5.39 UJ				



·	PTC-129 09/20/17	SO-PTC-129-092017-10. 0-12.0 PTC-129 09/20/17 Soil	SO-PTC-129-092017-10. 0-12.0-(10) PTC-129 09/20/17 Soil	SO-PTC-129-092017-12- 15 PTC-129 09/20/17 Soil	17.3 PTC-129	SO-PTC-129-092017-17 .3-20 PTC-129 09/20/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)		0.10 J				
Total Solids		87.67				
Conventionals (-W)						
рН		5.79				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	09/20/17	SO-PTC-129-092017-17. 3-20.0-(10) PTC-129 09/20/17 Soil	SO-PTC-129-092017-2-4 PTC-129 09/20/17 Soil	SO-PTC-129-092017-20- 22.5 PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25 PTC-129 09/20/17 Soil	SO-PTC-129-092017-22 .5-25.0 PTC-129 09/20/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		0.26				
Barium		0.01 J				
Cadmium		0.002 J				
Chromium, Total		0.03 U				
Lead and Compounds		0.10 U				
Mercury (elemental)		0.00010 U				
Selenium		0.25 U				
Silver		0.02 U				
Conventionals						
Inorganic Carbon, Total (%)						0.04UJ
Sulfate (mg/kg)						158.0໙
Sulfide (mg/kg)						24.60
Total Organic Carbon (%)						0.19J
pH ()						
Metals (mg/kg)						
Aluminum						4720.00
Arsenic, Inorganic	66.10					239.00
Iron						7210.00
Manganese						49.60
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			66.80	1816.00	657.30	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						5.74UJ



Site Sample D	D: SO-PTC-129-092017-17. 3-20.0 ID: PTC-129 te: 09/20/17 ia: Soil	SO-PTC-129-092017-17. 3-20.0-(10) PTC-129 09/20/17 Soil	SO-PTC-129-092017-2-4 PTC-129 09/20/17 Soil	SO-PTC-129-092017-20- 22.5 PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25 PTC-129 09/20/17 Soil	SO-PTC-129-092017-22 .5-25.0 PTC-129 09/20/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						0.20
Total Solids	69.42					83.49
Conventionals (-W)						
рН	10.20					5.96



Constituent Media: TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental)	PTC-129	2-28.6 PTC-129 09/20/17 Soil	6-30 PTC-129 09/20/17 Soil	35 PTC-129 09/20/17 Soil	35.8 PTC-129 09/20/17 Soil	.8-36.5 PTC-129 09/20/17 Soil
Constituent Media: TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental)	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17	09/20/17
Constituent Media: TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental)						1
Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental)						
Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental)						
Cadmium Chromium, Total Lead and Compounds Mercury (elemental)						
Chromium, Total Lead and Compounds Mercury (elemental)						
Lead and Compounds Mercury (elemental)						
Mercury (elemental)						
				İ	l .	l
Selenium		i				
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						•
Total Organic Carbon (%)						
pH ()						•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						6.79J
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	101.40	82.20	11.80	19.20	7.00 U	7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-129-092017-27. 2-28.6 PTC-129 09/20/17 Soil	SO-PTC-129-092017-28. 6-30 PTC-129 09/20/17 Soil	SO-PTC-129-092017-33- 35 PTC-129 09/20/17 Soil	35.8 PTC-129	SO-PTC-129-092017-35 .8-36.5 PTC-129 09/20/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids					56.72
Conventionals (-W)					
рН					7.02



Sample ID: Site ID: Sample Date: Constituent Media:	5-40 PTC-129 09/20/17	SO-PTC-129-092017-5.5- 8.2 PTC-129 09/20/17 Soil	SO-PTC-130-091918-1-1. 5 PTC-130 09/19/18 Soil	SO-PTC-130-091918-11. 0-11.5 PTC-130 09/19/18 Soil	SO-PTC-130-091918-11. 0-11.5-(10) PTC-130 09/19/18 Soil	SO-PTC-130-091918-13 -13.5 PTC-130 09/19/18 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.51	
Barium					0.03	
Cadmium					0.004 U	
Chromium, Total					0.002 U	
Lead and Compounds					0.007 U	
Mercury (elemental)					0.000007 U	
Selenium					0.04 U	
Silver					0.002 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()						
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				263.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U	511.60	13.00	267.00		100.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-129-092017-36. 5-40 PTC-129 09/20/17	SO-PTC-129-092017-5.5- 8.2 PTC-129 09/20/17	SO-PTC-130-091918-1-1. 5 PTC-130 09/19/18	0-11.5 PTC-130	0-11.5-(10) PTC-130	SO-PTC-130-091918-13 -13.5 PTC-130 09/19/18
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН				7.60		



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-16 PTC-130 09/19/18	SO-PTC-130-091918-17. 5-18 PTC-130 09/19/18 Soil	SO-PTC-130-091918-7-7. 5 PTC-130 09/19/18 Soil	SO-PTC-130-091918-9.5- 10.0 PTC-130 09/19/18 Soil	SO-PTC-130-091918-9.5- 10.0-(10) PTC-130 09/19/18 Soil	SO-PTC-204-091917-0 1.5 PTC-204 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.27	
Barium					0.02	
Cadmium					0.003 U	
Chromium, Total					0.002 U	
Lead and Compounds					0.007 U	
Mercury (elemental)				•	0.000008 J	•
Selenium			•	•	0.04 U	•
Silver					0.002 U	•
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		•
Sulfide (mg/kg)				•		•
Total Organic Carbon (%)						
pH ()				•		•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				129.00		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	84.25	229.50	98.75	100.25		33.10
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-130-091918-15.	SO-PTC-130-091918-17.	SO-PTC-130-091918-7-7.	SO-PTC-130-091918-9.5-	SO-PTC-130-091918-9.5-	SO-PTC-204-091917-0-
	5-16	5-18	5	10.0	10.0-(10)	1.5
Site ID:	PTC-130	PTC-130	PTC-130	PTC-130	PTC-130	PTC-204
Sample Date:	09/19/18	09/19/18	09/19/18	09/19/18	09/19/18	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						•
Conventionals (-W)						
рН				6.34		



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	0.5 PTC-204 09/19/17	SO-PTC-204-091917-1-1 PTC-204 09/19/17 Soil	SO-PTC-204-091917-1.5- 5 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10- 10 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10- 12.8 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10 .8-12.8 PTC-204 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total		•		•		
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						0.08J
Sulfate (mg/kg)		•		•		77.60
Sulfide (mg/kg)						5.66
Total Organic Carbon (%)						0.21J
pH ()	7.30	8.90		11.10		
Metals (mg/kg)						
Aluminum						7880.00
Arsenic, Inorganic						34.10
Iron						9240.00
Manganese						59.90
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U		40.30	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						11.70



Sit Sample D	ID: SO-PTC-204-091917-0.5- 0.5 PTC-204 ate: 09/19/17 dia: Soil	SO-PTC-204-091917-1-1 PTC-204 09/19/17 Soil	SO-PTC-204-091917-1.5- 5 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10- 10 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10- 12.8 PTC-204 09/19/17 Soil	SO-PTC-204-091917-10 .8-12.8 PTC-204 09/19/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						0.29J 75.49
Conventionals (-W)						
рН						10.70



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	11 PTC-204 09/19/17	SO-PTC-204-091917-12- 12 PTC-204 09/19/17 Soil	SO-PTC-204-091917-12. 8-14.8 PTC-204 09/19/17 Soil	SO-PTC-204-091917-12. 8-14.8-(10) PTC-204 09/19/17 Soil	SO-PTC-204-091917-12. 8-15 PTC-204 09/19/17 Soil	SO-PTC-204-091917-13 -13 PTC-204 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic				0.46		
Barium				0.02		
Cadmium				0.01 U		
Chromium, Total				0.02 J		
Lead and Compounds				0.10 U		
Mercury (elemental)				0.00010 U		
Selenium				0.25 U		
Silver				0.02 U		
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	11.20	11.10				9.10
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			38.10			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic					63.90	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:		SO-PTC-204-091917-12- 12 PTC-204 09/19/17	SO-PTC-204-091917-12. 8-14.8 PTC-204 09/19/17		8-15 PTC-204	SO-PTC-204-091917-13 -13 PTC-204 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids	-		60.72			
Conventionals (-W)						
рН			9.18			



Table G-7: General Soil Results

Sample ID:		SO-PTC-204-091917-15-	SO-PTC-204-091917-15-	SO-PTC-204-091917-16-	SO-PTC-204-091917-17-	SO-PTC-204-091917-17
Site ID:	14 PTC-204	15 PTC-204	17.5 PTC-204	16 PTC-204	17 PTC-204	.5-20 PTC-204
Sample Date:		09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						•
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	8.50	7.80		6.90	6.90	•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			8.00			7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-204-091917-15- 15 PTC-204 09/19/17 Soil	SO-PTC-204-091917-15- 17.5 PTC-204 09/19/17 Soil	SO-PTC-204-091917-16- 16 PTC-204 09/19/17 Soil	17 PTC-204	SO-PTC-204-091917-17 .5-20 PTC-204 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids					
Conventionals (-W)					
рН					



	I	I	I	I	1	
Sample ID:		SO-PTC-204-091917-19-	SO-PTC-204-091917-2-2		SO-PTC-204-091917-22-	SO-PTC-204-091917-22
Site ID:	18 PTC-204	19 PTC-204	PTC-204	20 PTC-204	22 PTC-204	-23.5 PTC-204
Sample Date:		09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium	•					•
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	7.00	7.20	8.90	7.30	7.80	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese	•					•
Field XRF Metals (mg/kg)						
Arsenic, Inorganic						30.30
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-204-091917-19- 19 PTC-204 09/19/17 Soil	SO-PTC-204-091917-2-2 PTC-204 09/19/17 Soil	20 PTC-204	22 PTC-204	SO-PTC-204-091917-22 -23.5 PTC-204 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



	I	Ī	I	Ī	<u> </u>	ı
Sample ID:	SO-PTC-204-091917-23- 23	SO-PTC-204-091917-23. 0-25.0	SO-PTC-204-091917-23. 5-25	SO-PTC-204-091917-24- 24	SO-PTC-204-091917-25- 25	SO-PTC-204-091917-25
Site ID:		PTC-204	PTC-204	PTC-204	PTC-204	PTC-204
Sample Date:		09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)		0.04 UJ				
Sulfate (mg/kg)		45.90				•
Sulfide (mg/kg)		36.10				
Total Organic Carbon (%)		0.68 J				
pH ()	7.20			6.80	9.80	
Metals (mg/kg)						
Aluminum		5430.00				
Arsenic, Inorganic		56.20				
Iron		10500.00				
Manganese		80.60				
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			61.90			131.90
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P		5.71 U				



·	SO-PTC-204-091917-23. 0-25.0 PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 5-25 PTC-204 09/19/17 Soil	25 PTC-204	SO-PTC-204-091917-25 -26 PTC-204 09/19/17 Soil
Conventionals (%-W)				
Total Carbon (Elemental + Organic)	0.52 J			
Total Solids	82.60			
Conventionals (-W)				
рН	8.56			



Sample ID: Site ID: Sample Date: Constituent Media:	26 PTC-204 09/19/17	SO-PTC-204-091917-26- 27.5 PTC-204 09/19/17 Soil	SO-PTC-204-091917-27- 27 PTC-204 09/19/17 Soil	SO-PTC-204-091917-27. 5-30 PTC-204 09/19/17 Soil	SO-PTC-204-091917-28- 28 PTC-204 09/19/17 Soil	SO-PTC-204-091917-29 -29 PTC-204 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	9.20		7.80		7.20	7.70
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U		7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-204-091917-26- 26 PTC-204 09/19/17	SO-PTC-204-091917-26- 27.5 PTC-204 09/19/17	SO-PTC-204-091917-27- 27 PTC-204 09/19/17	SO-PTC-204-091917-27. 5-30 PTC-204 09/19/17	SO-PTC-204-091917-28- 28 PTC-204 09/19/17	SO-PTC-204-091917-29 -29 PTC-204 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



					1	<u> </u>
Sample ID:	SO-PTC-204-091917-3-3	SO-PTC-204-091917-30-	SO-PTC-204-091917-30-	SO-PTC-204-091917-31-	SO-PTC-204-091917-32-	SO-PTC-204-091917-32
Site ID:	PTC-204	30 PTC-204	32.3 PTC-204	31 PTC-204	32 PTC-204	.3-35 PTC-204
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	8.20	7.20		6.70	6.70	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U			7.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-204-091917-3-3	SO-PTC-204-091917-30- 30	SO-PTC-204-091917-30- 32.3	SO-PTC-204-091917-31- 31	SO-PTC-204-091917-32- 32	SO-PTC-204-091917-32 .3-35
Site ID:	PTC-204	PTC-204	PTC-204	-		PTC-204
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids	•	-		-		
Conventionals (-W)						
рН						



Sample ID: Site ID: Sample Date: Constituent Media:	33 PTC-204 09/19/17	SO-PTC-204-091917-33. 3-34.3 PTC-204 09/19/17 Soil	SO-PTC-204-091917-34- 34 PTC-204 09/19/17 Soil	SO-PTC-204-091917-35- 35 PTC-204 09/19/17 Soil	SO-PTC-204-091917-35- 37.5 PTC-204 09/19/17 Soil	SO-PTC-204-091917-36 -36 PTC-204 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	6.70		6.50	6.50		6.80
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		2.51 J	•		•	
Iron					•	
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic					7.00 U	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	l	SO-PTC-204-091917-33. 3-34.3 PTC-204 09/19/17 Soil	SO-PTC-204-091917-34- 34 PTC-204 09/19/17 Soil	37.5 PTC-204	SO-PTC-204-091917-36 -36 PTC-204 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids		70.18			
Conventionals (-W)					
рН		7.22			



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Sample ID:		SO-PTC-204-091917-37.	SO-PTC-204-091917-38-	SO-PTC-204-091917-39-	SO-PTC-204-091917-4-4	SO-PTC-204-091917-40
Site ID:	37 PTC-204	5-40 PTC-204	38 PTC-204	39 PTC-204	PTC-204	-40 PTC-204
Sample Date:		09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	6.60		6.40	6.60	8.60	6.90
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U				
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-204-091917-37. 5-40 PTC-204 09/19/17 Soil	SO-PTC-204-091917-38- 38 PTC-204 09/19/17 Soil	SO-PTC-204-091917-39- 39 PTC-204 09/19/17 Soil	PTC-204	SO-PTC-204-091917-40 -40 PTC-204 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Table G-7: General Soil Results

	<u> </u>	I	<u> </u>	<u> </u>	1	<u> </u>
Sample ID:	SO-PTC-204-091917-5-5		SO-PTC-204-091917-6-6	SO-PTC-204-091917-7-7	SO-PTC-204-091917-7.5-	
Site ID:	PTC-204	5 PTC-204	PTC-204	PTC-204	10 PTC-204	8 PTC-204
Sample Date:	1	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•			•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	10.60		9.30	11.00		11.10
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		34.30			58.30	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-204-091917-5-5	SO-PTC-204-091917-5-7.	SO-PTC-204-091917-6-6	SO-PTC-204-091917-7-7	SO-PTC-204-091917-7.5-	SO-PTC-204-091917-8-
Site ID:	PTC-204	PTC-204	PTC-204	PTC-204	PTC-204	PTC-204
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
pH						



Table G-7: General Soil Results

		<u> </u>			<u> </u>	<u> </u>
Sample ID:	SO-PTC-204-091917-9-9	SO-PTC-204-101917-10.		SO-PTC-205-091917-0-2	SO-PTC-205-091917-0.5-	SO-PTC-205-091917-1-
Site ID:	PTC-204	8-12.8-(10) PTC-204	5-12.4 PTC-205	PTC-205	0.5 PTC-205	1 PTC-205
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic		0.83				
Barium		0.02				
Cadmium		0.01 U				
Chromium, Total		0.01 J				
Lead and Compounds		0.10 U				
Mercury (elemental)		0.00010 U				
Selenium		0.25 U				
Silver		0.02 U				
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•			•		•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	11.00				8.30	10.80
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			17.30			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic				43.20		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-204-091917-9-9	SO-PTC-204-101917-10. 8-12.8-(10)	SO-PTC-205-09191710.	SO-PTC-205-091917-0-2	SO-PTC-205-091917-0.5- 0.5	SO-PTC-205-091917-1-
	PTC-204	PTC-204	PTC-205			PTC-205
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids			43.97			
Conventionals (-W)					_	
рН			11.60			



	T	T	1	T	ī	T .
Sample ID:		SO-PTC-205-091917-10.	SO-PTC-205-091917-11-	SO-PTC-205-091917-12-	SO-PTC-205-091917-12.	SO-PTC-205-091917-13
Site ID:	10 PTC-205	5-12.4 PTC-205	11 PTC-205	12 PTC-205	4-15 PTC-205	-13 PTC-205
Sample Date:		09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	11.40		11.50	11.40		11.00
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese			•			
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		39.10			15.90	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



	SO-PTC-205-091917-10- 10 PTC-205 09/19/17	SO-PTC-205-091917-10. 5-12.4 PTC-205 09/19/17	SO-PTC-205-091917-11- 11 PTC-205 09/19/17		4-15 PTC-205	SO-PTC-205-091917-13 -13 PTC-205 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Sample ID:		SO-PTC-205-091917-15-	SO-PTC-205-091917-15-	SO-PTC-205-091917-16-	SO-PTC-205-091917-16.	SO-PTC-205-091917-17
Site ID:	14 PTC-205	15 PTC-205	16.7 PTC-205	16 PTC-205	7-20 PTC-205	-17 PTC-205
Sample Date:	I .	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						•
Cadmium						•
Chromium, Total						•
Lead and Compounds						
Mercury (elemental)						•
Selenium						•
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						•
Total Organic Carbon (%)						
pH ()	10.30	9.50		9.20		9.80
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U		7.00 U	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-205-091917-15- 15 PTC-205 09/19/17 Soil	SO-PTC-205-091917-15- 16.7 PTC-205 09/19/17 Soil	SO-PTC-205-091917-16- 16 PTC-205 09/19/17 Soil	7-20 PTC-205	SO-PTC-205-091917-17 -17 PTC-205 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids					
Conventionals (-W)					
pH					



Sample ID: Site ID: Sample Date: Constituent Media:	18 PTC-205 09/19/17	SO-PTC-205-091917-19- 19 PTC-205 09/19/17 Soil	SO-PTC-205-091917-2-2 PTC-205 09/19/17 Soil	SO-PTC-205-091917-2-3 PTC-205 09/19/17 Soil	SO-PTC-205-091917-20- 20 PTC-205 09/19/17 Soil	SO-PTC-205-091917-20 -22.5 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total				•		
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	10.40	10.70	11.10	•	10.70	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic				29.70		7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-205-091917-18- 18 PTC-205 09/19/17	SO-PTC-205-091917-19- 19 PTC-205 09/19/17	SO-PTC-205-091917-2-2 PTC-205 09/19/17		20 PTC-205	SO-PTC-205-091917-20 -22.5 PTC-205 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:		SO-PTC-205-091917-21- 21 PTC-205 09/19/17 Soil	SO-PTC-205-091917-22- 22 PTC-205 09/19/17 Soil	SO-PTC-205-091917-22. 5-25 PTC-205 09/19/17 Soil	SO-PTC-205-091917-23- 23 PTC-205 09/19/17 Soil	SO-PTC-205-091917-24 -24 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)	0.05 J					
Sulfate (mg/kg)	63.00					
Sulfide (mg/kg)	45.90					
Total Organic Carbon (%)	0.30 J					
pH ()		10.70	10.70		10.50	10.50
Metals (mg/kg)						
Aluminum	10500.00					
Arsenic, Inorganic	5.45 J					
Iron	12400.00					
Manganese	71.70					
Field XRF Metals (mg/kg)						
Arsenic, Inorganic				14.50		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	18.00					



Site ID: Sample Date:		21 PTC-205 09/19/17	22 PTC-205 09/19/17	1	23 PTC-205 09/19/17	-24 PTC-205 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.35 J					
Total Solids	76.25					
Conventionals (-W)						
рН	11.00					



Sample ID: Site ID: Sample Date: Constituent Media:	25 PTC-205 09/19/17	SO-PTC-205-091917-25- 27.5 PTC-205 09/19/17 Soil	SO-PTC-205-091917-26- 26 PTC-205 09/19/17 Soil	SO-PTC-205-091917-27- 27 PTC-205 09/19/17 Soil	SO-PTC-205-091917-27. 5-29.5 PTC-205 09/19/17 Soil	SO-PTC-205-091917-28 -28 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	10.30		9.20	9.00		9.00
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		17.50			23.80	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:		SO-PTC-205-091917-25- 27.5 PTC-205 09/19/17	SO-PTC-205-091917-26- 26 PTC-205 09/19/17		SO-PTC-205-091917-27. 5-29.5 PTC-205 09/19/17	SO-PTC-205-091917-28 -28 PTC-205 09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



	I	I	<u> </u>		1	<u> </u>
Sample ID:		SO-PTC-205-091917-3-3	SO-PTC-205-091917-30-	SO-PTC-205-091917-30-	SO-PTC-205-091917-31-	SO-PTC-205-091917-32
Site ID:	29 PTC-205	PTC-205	30 PTC-205	34 PTC-205	31 PTC-205	-32 PTC-205
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						•
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	9.30	11.40	9.20		7.30	7.20
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic				10.50		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-205-091917-3-3 PTC-205 09/19/17 Soil	SO-PTC-205-091917-30- 30 PTC-205 09/19/17 Soil	34 PTC-205	31 PTC-205	SO-PTC-205-091917-32 -32 PTC-205 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Sample ID: Site ID: Sample Date: Constituent Media:	33 PTC-205 09/19/17	SO-PTC-205-091917-34- 34 PTC-205 09/19/17 Soil	SO-PTC-205-091917-34- 35 PTC-205 09/19/17 Soil	SO-PTC-205-091917-35- 35 PTC-205 09/19/17 Soil	SO-PTC-205-091917-35- 36 PTC-205 09/19/17 Soil	SO-PTC-205-091917-36 -36 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	6.70	6.60		6.60		7.10
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U		20.20	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-205-091917-34- 34 PTC-205 09/19/17 Soil	SO-PTC-205-091917-34- 35 PTC-205 09/19/17 Soil	SO-PTC-205-091917-35- 35 PTC-205 09/19/17 Soil	36 PTC-205	SO-PTC-205-091917-36 -36 PTC-205 09/19/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids					
Conventionals (-W)					
рН					



Sample ID: Site ID: Sample Date: Constituent Media:	37.2 PTC-205 09/19/17	SO-PTC-205-091917-36. 0-37.2 PTC-205 09/19/17 Soil	SO-PTC-205-091917-37- 37 PTC-205 09/19/17 Soil	SO-PTC-205-091917-37. 2-40 PTC-205 09/19/17 Soil	SO-PTC-205-091917-38- 38 PTC-205 09/19/17 Soil	SO-PTC-205-091917-39 -39 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()			6.40		6.40	6.40
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic		6.62 J				
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U			7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·		SO-PTC-205-091917-36. 0-37.2 PTC-205 09/19/17 Soil	SO-PTC-205-091917-37- 37 PTC-205 09/19/17 Soil	SO-PTC-205-091917-37. 2-40 PTC-205 09/19/17 Soil	38 PTC-205	SO-PTC-205-091917-39 -39 PTC-205 09/19/17 Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids		59.75				
Conventionals (-W)	_					
рН		7.76				



Sample ID: Site ID: Sample Date: Constituent Media:	40 PTC-205 09/19/17	SO-PTC-205-091917-5-5 PTC-205 09/19/17 Soil	SO-PTC-205-091917-5-7. 5 PTC-205 09/19/17 Soil	SO-PTC-205-091917-6-6 PTC-205 09/19/17 Soil	SO-PTC-205-091917-7-7 PTC-205 09/19/17 Soil	SO-PTC-205-091917-7. 5-10 PTC-205 09/19/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)				•		
Total Organic Carbon (%)				•		
pH ()	6.30	11.20		11.30	11.40	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			17.00			20.50
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-205-091917-40-	SO-PTC-205-091917-5-5	SO-PTC-205-091917-5-7.	SO-PTC-205-091917-6-6	SO-PTC-205-091917-7-7	SO-PTC-205-091917-7 5-10
Site ID:	PTC-205	PTC-205	PTC-205	PTC-205	PTC-205	PTC-205
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН						



Table G-7: General Soil Results

Sample ID:	SO-PTC-205-091917-8-8	SO-PTC-205-091917-8.0-	SO-PTC-205-091917-9-9	SO-PTC-205-101917-10.	SO-PTC-205-101917-8.0-	SO-PTC-207-091517-0.
Site ID: Sample Date: Constituent Media:	09/19/17	10.0 PTC-205 09/19/17 Soil	PTC-205 09/19/17 Soil	5-12.4-(10) PTC-205 09/19/17 Soil	10.0-(10) PTC-205 09/19/17 Soil	5-0.5 PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic				0.05 J	0.17 J	
Barium				0.010 J	0.010 J	
Cadmium				0.01 U	0.01 U	
Chromium, Total				0.01 J	0.01 J	
Lead and Compounds				0.10 U	0.10 U	
Mercury (elemental)				0.00010 U	0.00010 U	
Selenium				0.25 U	0.25 U	
Silver				0.02 U	0.02 U	
Conventionals						
Inorganic Carbon, Total (%)		0.14 J				
Sulfate (mg/kg)		65.50				
Sulfide (mg/kg)		1.97				
Total Organic Carbon (%)		0.17 J				
pH ()	11.20		11.40			11.00
Metals (mg/kg)						
Aluminum		21100.00				
Arsenic, Inorganic		14.80				
Iron		14100.00				
Manganese		113.00				
Field XRF Metals (mg/kg)						
Arsenic, Inorganic						
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P		26.00				
			i e			



Sample ID:	SO-PTC-205-091917-8-8	SO-PTC-205-091917-8.0- 10.0		SO-PTC-205-101917-10. 5-12.4-(10)	SO-PTC-205-101917-8.0- 10.0-(10)	SO-PTC-207-091517-0. 5-0.5
Site ID:	PTC-205	PTC-205	PTC-205	\	1 ' '	PTC-207
Sample Date:	09/19/17	09/19/17	09/19/17	09/19/17	09/19/17	09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)		0.32 J				
Total Solids		71.39				
Conventionals (-W)	_		_		_	_
рН		11.40				



Table G-7: General Soil Results

Sample ID:	SO-PTC-207-091517-1-1	SO-PTC-207-091517-1-1.	SO-PTC-207-091517-1.5-	SO-PTC-207-091517-10-	SO-PTC-207-091517-10. 0-12.0	SO-PTC-207-091517-10 .0-12.0-(10)
	PTC-207	PTC-207	PTC-207	PTC-207	PTC-207	PTC-207
Sample Date:		09/15/17	09/15/17	09/15/17	09/15/17	09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						0.25U
Barium						0.08
Cadmium						0.01U
Chromium, Total						0.03U
Lead and Compounds						0.1 0 U
Mercury (elemental)					•	0.0001aU
Selenium						0.25U
Silver						0.02U
Conventionals						
Inorganic Carbon, Total (%)					0.04 UJ	
Sulfate (mg/kg)					28.80	
Sulfide (mg/kg)					1.24 U	
Total Organic Carbon (%)					0.30 J	
pH ()	10.90					
Metals (mg/kg)						
Aluminum					19800.00	
Arsenic, Inorganic					2.75 J	
Iron					15300.00	
Manganese					128.00	
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		53.40	6.00 U	7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P					11.70 U	



	Sample ID:	SO-PTC-207-091517-1-1	SO-PTC-207-091517-1-1.	SO-PTC-207-091517-1.5-	SO-PTC-207-091517-10-	SO-PTC-207-091517-10. 0-12.0	SO-PTC-207-091517-10 .0-12.0-(10)
	Site ID: Sample Date:	PTC-207 09/15/17	PTC-207 09/15/17	PTC-207 09/15/17	PTC-207 09/15/17	PTC-207 09/15/17	PTC-207 09/15/17
Constituent	Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)							
Total Carbon (Elemental + 0	Organic)					0.33 J	
Total Solids						76.95	
Conventionals (-W)							
рН						8.80	



Sample ID:	SO-PTC-207-091517-11-	SO-PTC-207-091517-11- 13	SO-PTC-207-091517-12-	SO-PTC-207-091517-13- 13	SO-PTC-207-091517-13- 15	SO-PTC-207-091517-14
Site ID:		PTC-207	PTC-207	PTC-207	PTC-207	PTC-207
Sample Date:		09/15/17	09/15/17	09/15/17	09/15/17	09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds	•			•		
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)	•			•		
Total Organic Carbon (%)						
pH ()	8.70		9.10	10.80		11.20
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U			12.00	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-207-091517-11- 13 PTC-207 09/15/17 Soil	SO-PTC-207-091517-12- 12 PTC-207 09/15/17 Soil	SO-PTC-207-091517-13- 13 PTC-207 09/15/17 Soil	15 PTC-207	SO-PTC-207-091517-14 -14 PTC-207 09/15/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	15 PTC-207 09/15/17	SO-PTC-207-091517-15- 16.5 PTC-207 09/15/17 Soil	SO-PTC-207-091517-16- 16 PTC-207 09/15/17 Soil	SO-PTC-207-091517-16. 5-17.5 PTC-207 09/15/17 Soil	SO-PTC-207-091517-16. 5-17.5-(10) PTC-207 09/15/17 Soil	SO-PTC-207-091517-16 .5-18 PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic					0.02 J	
Barium					0.01 J	
Cadmium					0.01 U	
Chromium, Total					0.01 J	
Lead and Compounds					0.10 U	
Mercury (elemental)					0.00010 U	
Selenium					0.25 U	
Silver					0.02 U	
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	10.50		9.70			
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				4.98 J	•	
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U				7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:		16.5 PTC-207 09/15/17	16 PTC-207 09/15/17	5-17.5 PTC-207 09/15/17	1	.5-18 PTC-207 09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids				53.77		
Conventionals (-W)						
рН				8.41		



Sample ID: Site ID: Sample Date: Constituent Media:	17 PTC-207 09/15/17	SO-PTC-207-091517-18- 18 PTC-207 09/15/17 Soil	SO-PTC-207-091517-19- 19 PTC-207 09/15/17 Soil	SO-PTC-207-091517-2-2 PTC-207 09/15/17 Soil	SO-PTC-207-091517-20- 20 PTC-207 09/15/17 Soil	SO-PTC-207-091517-20 -23 PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	8.80	8.40	6.80	9.00	7.70	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic						7.00U
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-207-091517-18- 18 PTC-207 09/15/17 Soil	SO-PTC-207-091517-19- 19 PTC-207 09/15/17 Soil	PTC-207	20 PTC-207	SO-PTC-207-091517-20 -23 PTC-207 09/15/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Sample ID: Site ID: Sample Date: Constituent Media:	21 PTC-207 09/15/17	SO-PTC-207-091517-22- 22 PTC-207 09/15/17 Soil	SO-PTC-207-091517-23- 23 PTC-207 09/15/17 Soil	SO-PTC-207-091517-23- 25 PTC-207 09/15/17 Soil	SO-PTC-207-091517-24- 24 PTC-207 09/15/17 Soil	SO-PTC-207-091517-25 -25 PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	7.20	7.20	7.70		7.80	7.50
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic				7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-207-091517-21- 21 PTC-207 09/15/17	SO-PTC-207-091517-22- 22 PTC-207 09/15/17	SO-PTC-207-091517-23- 23 PTC-207 09/15/17	25 PTC-207	24 PTC-207	SO-PTC-207-091517-25 -25 PTC-207 09/15/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	27.5 PTC-207 09/15/17	SO-PTC-207-091517-26- 26 PTC-207 09/15/17 Soil	SO-PTC-207-091517-27- 27 PTC-207 09/15/17 Soil	SO-PTC-207-091517-27. 5-30 PTC-207 09/15/17 Soil	SO-PTC-207-091517-28- 28 PTC-207 09/15/17 Soil	SO-PTC-207-091517-28 .0-30.0_DC PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						•
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						0.19J
Sulfate (mg/kg)						51.60
Sulfide (mg/kg)						1.15U
Total Organic Carbon (%)						0.33J
pH ()		5.80	6.80		7.40	
Metals (mg/kg)						
Aluminum						15550.00
Arsenic, Inorganic						2.33J
Iron						15300.00
Manganese						84.15
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U			7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						12.10U
	•					



·	SO-PTC-207-091517-26- 26 PTC-207 09/15/17 Soil	SO-PTC-207-091517-27- 27 PTC-207 09/15/17 Soil	SO-PTC-207-091517-27. 5-30 PTC-207 09/15/17 Soil	SO-PTC-207-091517-28- 28 PTC-207 09/15/17 Soil	SO-PTC-207-091517-28 .0-30.0_DC PTC-207 09/15/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					0.49J 75.44
Conventionals (-W)					
рН					7.64



Table G-7: General Soil Results

		Ī		Ī	1	<u> </u>
Sample ID:		SO-PTC-207-091517-3-3	SO-PTC-207-091517-30-	SO-PTC-207-091517-32-	SO-PTC-207-091517-32-	SO-PTC-207-091517-33
Site ID:	29 PTC-207	PTC-207	30 PTC-207	32 PTC-207	33 PTC-207	-33 PTC-207
Sample Date:	I .	09/15/17	09/15/17	09/15/17	09/15/17	09/15/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	7.40	9.10	7.30	6.20		6.90
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic					7.00 U	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-207-091517-3-3 PTC-207 09/15/17 Soil	SO-PTC-207-091517-30- 30 PTC-207 09/15/17 Soil	32 PTC-207	33 PTC-207	SO-PTC-207-091517-33 -33 PTC-207 09/15/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic) Total Solids					
Conventionals (-W)					
рН					



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	35 PTC-207 09/15/17	SO-PTC-207-091517-34- 34 PTC-207 09/15/17 Soil	SO-PTC-207-091517-35- 35 PTC-207 09/15/17 Soil	SO-PTC-207-091517-35- 37.5 PTC-207 09/15/17 Soil	SO-PTC-207-091517-36- 36 PTC-207 09/15/17 Soil	SO-PTC-207-091517-37 -37 PTC-207 09/15/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()		6.80	7.90		7.30	7.50
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U			7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-207-091517-33- 35 PTC-207	SO-PTC-207-091517-34- 34 PTC-207 09/15/17	SO-PTC-207-091517-35- 35 PTC-207 09/15/17	37.5 PTC-207	36 PTC-207	SO-PTC-207-091517-37 -37 PTC-207 09/15/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



5-39 5-39.0 38 39 Site ID: PTC-207 PTC-207 PTC-207 PTC-207	C-207 /15/17	SO-PTC-207-091517-4-4 PTC-207 09/15/17 Soil	SO-PTC-207-091517-40 -40 PTC-207 09/15/17 Soil
PTC-207	C-207 /15/17	09/15/17	PTC-207 09/15/17
Constituent Media: Soil Soil Soil Soil Soil TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)		5011	SOII
Arsenic, Inorganic Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Barium Cadmium Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Cadmium Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Chromium, Total Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Lead and Compounds Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Mercury (elemental) Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Selenium Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Silver Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg)			
Sulfate (mg/kg) Sulfide (mg/kg)			
Sulfide (mg/kg)			
Total Organic Carbon (%)			
pH () 7.40	7.10	9.60	7.30
Metals (mg/kg)			
Aluminum			
Arsenic, Inorganic 1.85 J			
Iron			
Manganese			
Field XRF Metals (mg/kg)			
Arsenic, Inorganic 7.00 U			
Ortho-phosphorus (mg/kg)			
o-Phosphate {PO4}, as P			



Site ID: Sample Date:		5-39.0 PTC-207 09/15/17	38 PTC-207 09/15/17	09/15/17	PTC-207 09/15/17	-40 PTC-207 09/15/17
Constituent Media:	5011	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids		69.25				
Conventionals (-W)						
рН		7.58				



OI-ID	00 070 007 004547 5 5	00 070 007 004547 5 5	00 070 007 004547 0 0	00 070 007 004547 7 7	00 070 000 004047.05	00 870 000 004047.0
Sample ID:	SO-PTC-207-091517-5-5	SO-PTC-207-091517-5.5-	SO-PTC-207-091517-6-6	SO-PTC-207-091517-7-7	SO-PTC-208-091317-0.5- 0.5	SO-PTC-208-091317-0. 5-3
	PTC-207	PTC-207	PTC-207	PTC-207	PTC-208	PTC-208
Sample Date:		09/15/17	09/15/17	09/15/17	09/13/17	09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						•
Total Organic Carbon (%)						
pH ()	9.50		7.60	8.70	10.50	•
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		11.50				55.30
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-207-091517-5-5	SO-PTC-207-091517-5.5-	SO-PTC-207-091517-6-6		SO-PTC-208-091317-0.5- 0.5	SO-PTC-208-091317-0.
Site ID:	PTC-207	PTC-207	PTC-207			PTC-208
Sample Date:	09/15/17	09/15/17	09/15/17	09/15/17	09/13/17	09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН						



Sample ID:	SO-PTC-208-091317-1-1	SO-PTC-208-091317-10- 10	SO-PTC-208-091317-10- 12.5	SO-PTC-208-091317-11-	SO-PTC-208-091317-12-	SO-PTC-208-091317-12 .0-14.0
	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208
Sample Date: Constituent Media:		09/13/17 Soil	09/13/17 Soil	09/13/17 Soil	09/13/17 Soil	09/13/17 Soil
	1 3011	3011	3011	1 3011	3011	3011
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						•
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						0.08J
Sulfate (mg/kg)						81.70
Sulfide (mg/kg)				•		77.80
Total Organic Carbon (%)						0.26J
pH ()	7.60	7.60		7.20	10.60	
Metals (mg/kg)						
Aluminum						13600.00
Arsenic, Inorganic				•		2.16J
Iron						15200.00
Manganese						149.00
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U			
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						11.70/



Sar	nple ID:	SO-PTC-208-091317-1-1	SO-PTC-208-091317-10- 10	SO-PTC-208-091317-10- 12.5	SO-PTC-208-091317-11-	SO-PTC-208-091317-12-	SO-PTC-208-091317-12 .0-14.0
	Site ID:	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208
Samp	le Date:	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17
Constituent	Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)							
Total Carbon (Elemental + Organic)							0.34J
Total Solids							83.34
Conventionals (-W)	·						
рН							10.30



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-14.0-(10) PTC-208 09/13/17	SO-PTC-208-091317-12. 5-15 PTC-208 09/13/17 Soil	SO-PTC-208-091317-13- 13 PTC-208 09/13/17 Soil	SO-PTC-208-091317-14- 14 PTC-208 09/13/17 Soil	SO-PTC-208-091317-15- 15 PTC-208 09/13/17 Soil	SO-PTC-208-091317-15 -17 PTC-208 09/13/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic	0.25 U					
Barium	0.02 U					
Cadmium	0.001 J					
Chromium, Total	0.008 J					
Lead and Compounds	0.10 U					
Mercury (elemental)	0.00010 U					
Selenium	0.25 U					
Silver	0.02 U					
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)	•					
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()			10.80	10.80	10.80	
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic			•			
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U				6.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-	SO-PTC-208-091317-12. 5-15 PTC-208 09/13/17 Soil	SO-PTC-208-091317-13- 13 PTC-208 09/13/17 Soil	SO-PTC-208-091317-14- 14 PTC-208 09/13/17 Soil	15 PTC-208	SO-PTC-208-091317-15 -17 PTC-208 09/13/17 Soil
Conventionals (%-W)					
Total Carbon (Elemental + Organic)					
Total Solids					
Conventionals (-W)					
рН					



Table G-7: General Soil Results

Site ID: 16			T					
Site ID PTC-208 PTC-	C-208-091317-2					SO-PTC-208-091317-16.		Sample ID:
Constituent Sample Date: Online 09/13/17 Soil 00	18							Site ID:
TCLP Metals (mg/L) Arsenic, Inorganic Barium Cadmium Cadmium Codmium Compounds Conceptionals Conventionals Inorganic Carbon, Total (%) Sulfate (mg/kg) Sulfate (mg/kg) Arsenic, Inorganic Inon Metals (mg/kg) Arsenic, Inorganic Inon Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic Inorganic Inon Manganese Inorganic Inorganic Inon Manganese Inorganic Inorganic Inon Manganese Inorganic Inon Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Manganese Inorganic Inon Inon Inon Inon Inon Inon Inon Manganese Inorganic Inon In		1	1					
Arsenic, Inorganic		Soil	Soil	Soil	Soil	Soil	Soil	nstituent Media:
Barium Cadmium Chromium, Total Cadmium Chromium, Total Cadmium Chromium, Total Cadmium Chromium, Total Cadmium Chromium, Total Cadmium Chromium, Total Cadmium Campounds								LP Metals (mg/L)
Cadmium Chromium, Total 0.01 U 0.002 J 0.002 J 0.002 J 0.0001 U					0.25 U			enic, Inorganic
Chromium, Total 0.002J 0.002J 0.000 H					0.01 J			ium
Lead and Compounds 0.10 U 0.00010 U					0.01 U			dmium
Mercury (elemental) 0.00010U 0.25U 0.25U 0.02U 0.00U					0.002 J			romium, Total
Selenium 0.25U 0.02U					0.10 U			ad and Compounds
Silver 0.02 U Image: Conventionals 0.02 U Image: Conventionals Image: Conventionals of the properties					0.00010 U	•		rcury (elemental)
Conventionals Image: Conventional of the conve					0.25 U			enium
Norganic Carbon, Total (%) Sulfate (mg/kg) Sulfide (mg/kg) Total Organic Carbon (%) PH ()					0.02 U			ver
Sulfate (mg/kg) 7.10 7.10 8.00 Metals (mg/kg) 10.70<								nventionals
Sulfide (mg/kg) 7.10 8.00 PH () 7.10 8.00 Metals (mg/kg) 10.70 10.70 Aluminum 10.70 10.70 Iron Manganese 10.70 Field XRF Metals (mg/kg) 10.70 10.70 Arsenic, Inorganic 10.70 10.70 Field XRF Metals (mg/kg) 10.70 10.70								rganic Carbon, Total (%)
Total Organic Carbon (%) 7.10 8.00 Metals (mg/kg) 10.70 10.70 Aluminum 10.70 10.70 Iron Manganese 10.70 Field XRF Metals (mg/kg) 10.70 Arsenic, Inorganic 10.70								fate (mg/kg)
pH () 7.10 8.00 Metals (mg/kg) 9 <td></td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td>fide (mg/kg)</td>						•		fide (mg/kg)
Metals (mg/kg) Aluminum Arsenic, Inorganic Inon Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic		ĺ						al Organic Carbon (%)
Aluminum Arsenic, Inorganic Iron Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic Inorganic Iron Iron Iron Iron Iron Iron Iron Iron	7.20		8.00	7.10			7.10	0
Arsenic, Inorganic Iron Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic								tals (mg/kg)
Iron Manganese Field XRF Metals (mg/kg) Arsenic, Inorganic								minum
Manganese		ĺ				10.70		enic, Inorganic
Field XRF Metals (mg/kg) Arsenic, Inorganic								1
Arsenic, Inorganic								nganese
								ld XRF Metals (mg/kg)
								enic, Inorganic
Ortho-phosphorus (mg/kg)								ho-phosphorus (mg/kg)
o-Phosphate {PO4}, as P								hosphate {PO4}, as P



	SO-PTC-208-091317-16- 16 PTC-208 09/13/17	SO-PTC-208-091317-16. 0-18.0 PTC-208 09/13/17	SO-PTC-208-091317-16. 0-18.0-(10) PTC-208 09/13/17		PTC-208	SO-PTC-208-091317-20 -20 PTC-208 09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids		55.81				
Conventionals (-W)						
рН		8.06				



Table G-7: General Soil Results

Sample ID: Site ID: Sample Date: Constituent Media:	22 PTC-208 09/13/17	SO-PTC-208-091317-21- 21 PTC-208 09/13/17 Soil	SO-PTC-208-091317-22- 22 PTC-208 09/13/17 Soil	SO-PTC-208-091317-22- 25 PTC-208 09/13/17 Soil	SO-PTC-208-091317-23- 23 PTC-208 09/13/17 Soil	SO-PTC-208-091317-23 .0-25.0 PTC-208 09/13/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						0.0 2 UJ
Sulfate (mg/kg)						60.20
Sulfide (mg/kg)						2.49
Total Organic Carbon (%)						0.88J
pH ()		7.20	7.10		8.10	
Metals (mg/kg)						
Aluminum						7020.00
Arsenic, Inorganic						10.00
Iron						11800.00
Manganese						72.10
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U			7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						17.40



Constituent	•	SO-PTC-208-091317-21- 21 PTC-208 09/13/17 Soil	SO-PTC-208-091317-22- 22 PTC-208 09/13/17 Soil	SO-PTC-208-091317-22- 25 PTC-208 09/13/17 Soil	SO-PTC-208-091317-23- 23 PTC-208 09/13/17 Soil	SO-PTC-208-091317-23 .0-25.0 PTC-208 09/13/17 Soil
Conventionals (%-W)						
Total Carbon (Elementa Total Solids	ıl + Organic)					0.90J 79.66
Conventionals (-W)						
рН						8.65



Sample ID: Site ID: Sample Date: Constituent Media:	24 PTC-208 09/13/17	SO-PTC-208-091317-25- 25 PTC-208 09/13/17 Soil	SO-PTC-208-091317-25- 27 PTC-208 09/13/17 Soil	SO-PTC-208-091317-26- 26 PTC-208 09/13/17 Soil	SO-PTC-208-091317-27- 27 PTC-208 09/13/17 Soil	SO-PTC-208-091317-28 -28 PTC-208 09/13/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	9.70	9.10		8.00	7.20	7.00
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			7.00 U			
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-	SO-PTC-208-091317-24- 24 PTC-208 09/13/17	SO-PTC-208-091317-25- 25 PTC-208 09/13/17	SO-PTC-208-091317-25- 27 PTC-208 09/13/17	26 PTC-208	SO-PTC-208-091317-27- 27 PTC-208 09/13/17	SO-PTC-208-091317-28 -28 PTC-208 09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
pH						



Sample ID: Site ID: Sample Date: Constituent Media:	30 PTC-208 09/13/17	SO-PTC-208-091317-29- 29 PTC-208 09/13/17 Soil	SO-PTC-208-091317-3-3 PTC-208 09/13/17 Soil	SO-PTC-208-091317-30- 30 PTC-208 09/13/17 Soil	SO-PTC-208-091317-30- 32.5 PTC-208 09/13/17 Soil	SO-PTC-208-091317-31 -31 PTC-208 09/13/17 Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()		7.00	7.60	7.00		7.00
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U				7.00 U	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



·	SO-PTC-208-091317-28- 30 PTC-208 09/13/17	SO-PTC-208-091317-29- 29 PTC-208 09/13/17	SO-PTC-208-091317-3-3 PTC-208 09/13/17	30 PTC-208	32.5 PTC-208	SO-PTC-208-091317-31 -31 PTC-208 09/13/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Sample ID:	SO-PTC-208-091317-32-	SO-PTC-208-091317-32.	SO-PTC-208-091317-33-	SO-PTC-208-091317-33.	SO-PTC-208-091317-34-	SO-PTC-208-091317-35
	32	5-35	33	0-35.0	34	-35
Site ID: Sample Date:		PTC-208 09/13/17	PTC-208 09/13/17	PTC-208 09/13/17	PTC-208 09/13/17	PTC-208 09/13/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	7.10		7.00		6.90	6.80
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic				3.84 J		
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic		7.00 U				
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



-	SO-PTC-208-091317-32- 32 PTC-208 09/13/17	SO-PTC-208-091317-32. 5-35 PTC-208 09/13/17	SO-PTC-208-091317-33- 33 PTC-208 09/13/17	0-35.0 PTC-208		SO-PTC-208-091317-35 -35 PTC-208 09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids				70.39		
Conventionals (-W)						
рН				6.99		



Sample ID:		SO-PTC-208-091317-36-	SO-PTC-208-091317-37-	SO-PTC-208-091317-37.	SO-PTC-208-091317-38-	SO-PTC-208-091317-39
Site ID:	37.5 PTC-208	36 PTC-208	37 PTC-208	5-40 PTC-208	38 PTC-208	-39 PTC-208
Sample Date:		09/13/17	09/13/17	09/13/17	09/13/17	09/13/17
Constituent Media:		Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()		7.00	7.10		7.20	7.10
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	7.00 U			7.00 U		
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Site ID: Sample Date:		SO-PTC-208-091317-36- 36 PTC-208 09/13/17	SO-PTC-208-091317-37- 37 PTC-208 09/13/17	SO-PTC-208-091317-37. 5-40 PTC-208 09/13/17		SO-PTC-208-091317-39 -39 PTC-208 09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)	_					
рН						



Table G-7: General Soil Results

						<u> </u>
Sample ID:		SO-PTC-208-091317-5-5	SO-PTC-208-091317-5.8-	SO-PTC-208-091317-6-6	SO-PTC-208-091317-6-7.	SO-PTC-208-091317-7
Site ID:	40 PTC-208	PTC-208	6 PTC-208	PTC-208	5 PTC-208	7 PTC-208
Sample Date:	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds				•		
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)				•		
Sulfide (mg/kg)						
Total Organic Carbon (%)						
pH ()	7.20	7.40		8.70		10.30
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic			55.30		7.00 U	
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						
	1	1	1	l .	1	1



Sample ID:	SO-PTC-208-091317-40-	SO-PTC-208-091317-5-5	SO-PTC-208-091317-5.8-	SO-PTC-208-091317-6-6	SO-PTC-208-091317-6-7.	SO-PTC-208-091317-7-
	40		6		5	7
Site ID:	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208	PTC-208
Sample Date:	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17	09/13/17
Constituent Media:	Soil	Soil	Soil	Soil	Soil	Soil
Conventionals (%-W)						
Total Carbon (Elemental + Organic)						
Total Solids						
Conventionals (-W)						
рН						



Sample ID:	SO-PTC-208-091317-7.5-	SO-PTC-208-091317-8-8	SO-PTC-208-091317-9-9			
	PTC-208	PTC-208	PTC-208			
Sample Date:		09/13/17	09/13/17	/ /	/ /	/ /
Constituent Media:	Soil	Soil	Soil			
TCLP Metals (mg/L)						
Arsenic, Inorganic						
Barium						
Cadmium						
Chromium, Total						
Lead and Compounds						
Mercury (elemental)						
Selenium						
Silver						
Conventionals						
Inorganic Carbon, Total (%)						
Sulfate (mg/kg)						
Sulfide (mg/kg)		•				•
Total Organic Carbon (%)		•				•
pH ()		10.70	11.10			
Metals (mg/kg)						
Aluminum						
Arsenic, Inorganic						
Iron						
Manganese						
Field XRF Metals (mg/kg)						
Arsenic, Inorganic	8.00 U					
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P						



Sample ID:	SO-PTC-208-091317-7.5-	SO-PTC-208-091317-8-8	SO-PTC-208-091317-9-9			
Site ID: Sample Date: Constituent Media:	09/13/17	PTC-208 09/13/17 Soil	PTC-208 09/13/17 Soil	//	/ /	//
Conventionals (%-W)						
Total Carbon (Elemental + Organic) Total Solids						
Conventionals (-W)						
рН						



Table G-8: General Sediment Results

Sample ID:	SD-120+75-ST1-SED-10 0417-0-0.33	SD-122+60-0-SED-10031 7-0-0.33	SD-124+00-0-SED-10031 7-0-0.33	SD-125+00-ST1-SED-10 0417-0-0.33	SD-125+50-0-SED-10031 7-0-0.33	SD-126+90-0-SED-1003 17-0-0.33
Site ID:		122+60-0-SED	124+00-0-SED	125+00-ST1-SED	125+50-0-SED	126+90-0-SED
Sample Date:	10/04/17	10/03/17	10/03/17	10/04/17	10/03/17	10/03/17
Constituent Media:	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Conventionals						
Inorganic Carbon, Total (%)	0.31 J	0.06 J	0.05 J	0.05 J	0.10 J	0.23J
Sulfate (mg/kg)	624.00 J	450.00 J	474.00 J	275.00 J	267.00 J	169.0໙
Sulfide (mg/kg)	178.00	3.61	1.17 U	5.98	1.10 U	1.04U
Total Organic Carbon (%)	0.18 J	0.07 J	0.15 J	0.13 J	0.17 J	0.18J
Metals (mg/kg)						
Aluminum	10700.00	17100.00	15000.00	9170.00	12100.00	10800.00
Arsenic, Inorganic	9.79	3.60 J	12.60	5.64	42.20	14.90
Iron	22000.00	23300.00	22500.00	16700.00	19300.00	17400.00
Manganese	154.00	540.00	512.00	160.00	438.00	361.00
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	2.44	2.15 U	3.11	2.38	2.12 U	1.89U
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.49 J	0.13 J	0.19 J	0.18 J	0.27 J	0.41J
Total Solids	82.07	83.73	84.28	87.84	88.92	88.46
Conventionals (-W)						
рН	7.76	7.57	7.75	7.68	7.75	7.74



Table G-8: General Sediment Results

Sample ID: Site ID: Sample Date: Constituent Media:	SD-128+30-0-SED-10031 7-0-0.33 128+30-0-SED 10/03/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33_DC 128+50-ST1 10/04/17 Sediment	11	11	//	//
Conventionals						
Inorganic Carbon, Total (%)	0.10 J	0.29 J				
Sulfate (mg/kg)	437.00 J	1220.00 J				
Sulfide (mg/kg)	1.17 U	129.20				
Total Organic Carbon (%)	0.16 J	0.50 J				
Metals (mg/kg)						
Aluminum	14800.00	11200.00				
Arsenic, Inorganic	9.31	10.40				
Iron	22400.00	16350.00				
Manganese	556.00	124.50				
Ortho-phosphorus (mg/kg)						
o-Phosphate {PO4}, as P	2.97	6.85 U				
Conventionals (%-W)						
Total Carbon (Elemental + Organic)	0.26 J	0.79 J				
Total Solids	83.41	65.58				
Conventionals (-W)						
рН	7.80	7.52				



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	1218-0-0.33 125+00-ST1 09/12/18	SD-125+00-ST1-SED-09 1218-0-0.33-(41) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(42) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(43) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(44) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-0 91218-0-0.33-(45) 125+00-ST1 09/12/18 Sediment
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)		5.29	509.00	322.00	8050.00	21900.00 J-1
Aluminum (WEN3)		5.29	509.00	322.00	8050.00	21900.00 J-1
Aluminum (WEN4)		5.29	509.00	322.00	8050.00	21900.00 J-1
Aluminum (WEN5)		5.29	509.00	322.00	8050.00	21900.00 J-1
Aluminum (WEN6)		5.29	509.00	322.00	8050.00	21900.00 J-1
Arsenic (WEN2)	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Arsenic (WEN3)	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Arsenic (WEN4)	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Arsenic (WEN5)	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Arsenic (WEN6)	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Arsenic, Inorganic	12.60	2.35	1.39	0.45 J	4.02	10.20 U
Iron (WEN2)		620.00	3240.00	731.00	10200.00	8850.00
Iron (WEN3)		620.00	3240.00	731.00	10200.00	8850.00
Iron (WEN4)		620.00	3240.00	731.00	10200.00	8850.00
Iron (WEN5)		620.00	3240.00	731.00	10200.00	8850.00
Iron (WEN6)		620.00	3240.00	731.00	10200.00	8850.00
Manganese (WEN2)		5.66	16.00	3.80	127.00	173.00
Manganese (WEN3)		5.66	16.00	3.80	127.00	173.00
Manganese (WEN4)		5.66	16.00	3.80	127.00	173.00
Manganese (WEN5)		5.66	16.00	3.80	127.00	173.00
Manganese (WEN6)		5.66	16.00	3.80	127.00	173.00
Silicon (WEN2)		228.00	243.00	203.00	46.20 J-1	208000.00
Silicon (WEN3)		228.00	243.00	203.00	46.20 J-1	208000.00
Silicon (WEN4)		228.00	243.00	203.00	46.20 J-1	208000.00
Silicon (WEN5)		228.00	243.00	203.00	46.20 J-1	208000.00
	1	I	1	I	I	1



Table G-9: Sequential Extraction Results

<u> </u>						
Sample IE Site IE Sample Date Constituent Media	1218-0-0.33 125+00-ST1 125+00-ST1	SD-125+00-ST1-SED-09 1218-0-0.33-(41) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(42) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(43) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-09 1218-0-0.33-(44) 125+00-ST1 09/12/18 Sediment	SD-125+00-ST1-SED-0 91218-0-0.33-(45) 125+00-ST1 09/12/18 Sediment
Silicon (WEN6)		228.00	243.00	203.00	46.20 J-1	208000.00
Aluminum						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date:	1218-0-0.33 125+00-ST1	SD-125+00-ST1-SED-09 1218-0-0.33-(41) 125+00-ST1 09/12/18	SD-125+00-ST1-SED-09 1218-0-0.33-(42) 125+00-ST1 09/12/18	SD-125+00-ST1-SED-09 1218-0-0.33-(43) 125+00-ST1 09/12/18	SD-125+00-ST1-SED-09 1218-0-0.33-(44) 125+00-ST1 09/12/18	SD-125+00-ST1-SED-0 91218-0-0.33-(45) 125+00-ST1 09/12/18
Constituent Media:	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Silicon (WEN6)						
Sequential Extraction Conventionals						
Total Solid	74.89					
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	SD-125+50-0-SED-09121 8-0-0.33 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(41) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(42) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(43) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(44) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-0912 18-0-0.33-(45) 125+50-0 09/12/18 Sediment
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)		3.22 M	229.00	351.00	10600.00	25900.00 J-1,
Aluminum (WEN3)		3.22 M	229.00	351.00	10600.00	25900.00 J-1,
Aluminum (WEN4)		3.22 M	229.00	351.00	10600.00	25900.00 J-1,
Aluminum (WEN5)		3.22 M	229.00	351.00	10600.00	25900.00 J-1,
Aluminum (WEN6)		3.22 M	229.00	351.00	10600.00	25900.00 J-1,
Arsenic (WEN2)	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Arsenic (WEN3)	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Arsenic (WEN4)	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Arsenic (WEN5)	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Arsenic (WEN6)	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Arsenic, Inorganic	3.95	0.54	1.06	0.88	1.94 J	10.00 U
Iron (WEN2)		0.94	808.00 M	2400.00 M	14500.00	11100.00 M
Iron (WEN3)		0.94	808.00 M	2400.00 M	14500.00	11100.00 M
Iron (WEN4)		0.94	808.00 M	2400.00 M	14500.00	11100.00 M
Iron (WEN5)		0.94	808.00 M	2400.00 M	14500.00	11100.00 M
Iron (WEN6)		0.94	808.00 M	2400.00 M	14500.00	11100.00 M
Manganese (WEN2)		60.80	140.00 M	22.80 M	229.00	259.00 M
Manganese (WEN3)		60.80	140.00 M	22.80 M	229.00	259.00 M
Manganese (WEN4)		60.80	140.00 M	22.80 M	229.00	259.00 M
Manganese (WEN5)		60.80	140.00 M	22.80 M	229.00	259.00 M
Manganese (WEN6)		60.80	140.00 M	22.80 M	229.00	259.00 M
Silicon (WEN2)		86.40	110.00	253.00 M	55.80 J-1	306000.00
Silicon (WEN3)		86.40	110.00	253.00 M	55.80 J-1	306000.00
Silicon (WEN4)		86.40	110.00	253.00 M	55.80 J-1	306000.00
Silicon (WEN5)		86.40	110.00	253.00 M	55.80 J-1	306000.00
	I	l	l	l	l	I



Table G-9: Sequential Extraction Results

Constituent	Sample ID: Site ID: Sample Date: Media:	8-0-0.33	SD-125+50-0-SED-09121 8-0-0.33-(41) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(42) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(43) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09121 8-0-0.33-(44) 125+50-0 09/12/18 Sediment	SD-125+50-0-SED-09 ⁻¹ 18-0-0.33-(45) 125+50-0 09/12/18 Sediment
Silicon (WEN6)			86.40	110.00	253.00 M	55.80 J-1	306000.00
Aluminum							
Aluminum (WEN2)							
Aluminum (WEN3)							
Aluminum (WEN4)							
Aluminum (WEN5)							
Aluminum (WEN6)							
Arsenic (WEN2)							
Arsenic (WEN3)							
Arsenic (WEN4)							
Arsenic (WEN5)							
Arsenic (WEN6)							
Arsenic, Inorganic							
ron							
ron (WEN2)							
ron (WEN3)							
ron (WEN4)							
ron (WEN5)							
ron (WEN6)							
Manganese							
Manganese (WEN2)							
Manganese (WEN3)							
Manganese (WEN4)							
Manganese (WEN5)							
Manganese (WEN6)							
Silicon							



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date:	8-0-0.33 125+50-0	SD-125+50-0-SED-09121 8-0-0.33-(41) 125+50-0 09/12/18	SD-125+50-0-SED-09121 8-0-0.33-(42) 125+50-0 09/12/18	SD-125+50-0-SED-09121 8-0-0.33-(43) 125+50-0 09/12/18	SD-125+50-0-SED-09121 8-0-0.33-(44) 125+50-0 09/12/18	SD-125+50-0-SED-0912 18-0-0.33-(45) 125+50-0 09/12/18
•	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)		•				
Silicon (WEN5)						
Silicon (WEN6)						
Sequential Extraction Conventionals						
Total Solid	80.51					
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	10/04/17	SD-128+50-ST1-SED-10 0417-0-0.33-(42) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(43) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(44) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(45) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED- 00417-0-0.33_DC 128+50-ST1 10/04/17 Sediment
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)	2.27	703.00	376.00	7920.00	18300.00 J-1	
Aluminum (WEN3)	2.27	703.00	376.00	7920.00	18300.00 J-1	
Aluminum (WEN4)	2.27	703.00	376.00	7920.00	18300.00 J-1	
Aluminum (WEN5)	2.27	703.00	376.00	7920.00	18300.00 J-1	
Aluminum (WEN6)	2.27	703.00	376.00	7920.00	18300.00 J-1	•
Arsenic (WEN2)	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Arsenic (WEN3)	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Arsenic (WEN4)	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Arsenic (WEN5)	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Arsenic (WEN6)	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Arsenic, Inorganic	1.79	0.85	0.42 J	5.56	9.91 U	10.60 H
Iron (WEN2)	187.00	1780.00	950.00	12600.00	16500.00	
Iron (WEN3)	187.00	1780.00	950.00	12600.00	16500.00	
Iron (WEN4)	187.00	1780.00	950.00	12600.00	16500.00	
Iron (WEN5)	187.00	1780.00	950.00	12600.00	16500.00	
Iron (WEN6)	187.00	1780.00	950.00	12600.00	16500.00	•
Manganese (WEN2)	4.44	8.50	4.81	89.10	335.00	
Manganese (WEN3)	4.44	8.50	4.81	89.10	335.00	
Manganese (WEN4)	4.44	8.50	4.81	89.10	335.00	
Manganese (WEN5)	4.44	8.50	4.81	89.10	335.00	
Manganese (WEN6)	4.44	8.50	4.81	89.10	335.00	
Silicon (WEN2)	240.00	262.00	234.00	31.60 J-1, J	246000.00	
Silicon (WEN3)	240.00	262.00	234.00	31.60 J-1, J	246000.00	
Silicon (WEN4)	240.00	262.00	234.00	31.60 J-1, J	246000.00	
Silicon (WEN5)	240.00	262.00	234.00	31.60 J-1, J	246000.00	
Blank cells indicate that no analysis was performed.	240.00	262.00	234.00	31.60 J-1, J	246000.00	



Table G-9: Sequential Extraction Results

Silicon (WEN6) 240.00 262.00 234.00 31.60 J-1, J 246000.00 Aluminum (WEN2) Aluminum (WEN3) Aluminum (WEN3) Aluminum (WEN4) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN8) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN8)	Sample D	0417-0-0.33-(41) 1D: 128+50-ST1	SD-128+50-ST1-SED-10 0417-0-0.33-(42) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(43) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(44) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-10 0417-0-0.33-(45) 128+50-ST1 10/04/17 Sediment	SD-128+50-ST1-SED-1 00417-0-0.33_DC 128+50-ST1 10/04/17 Sediment
Aluminum (WEN2) Aluminum (WEN3) Aluminum (WEN4) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN8) Anganese (WEN8) Anganese (WEN8) Anganese (WEN8) Anganese (WEN8)	Silicon (WEN6)	240.00	262.00	234.00	31.60 J-1, J	246000.00	
Aluminum (WEN3) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN8) Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Iron (Aluminum						•
Aluminum (WEN4) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (MEN6) Arsenic (WEN6) Ars	Aluminum (WEN2)						
Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Iron (WEN2) Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Aluminum (WEN3)						•
Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Iron (WEN2) Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Aluminum (WEN4)						•
Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Iron (WEN2) Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Aluminum (WEN5)						
Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic, Inorganic Iron Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Aluminum (WEN6)						•
Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Arsenic (WEN2)						•
Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Arsenic (WEN3)						
Arsenic (WEN6) Arsenic, Inorganic Iron Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Arsenic (WEN4)						
Arsenic, Inorganic Iron Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Iron (WEN6)	Arsenic (WEN5)						
Iron	Arsenic (WEN6)						
Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Arsenic, Inorganic						
Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron						
Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron (WEN2)						•
Iron (WEN5) Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron (WEN3)						
Iron (WEN6) Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron (WEN4)						
Manganese Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron (WEN5)						
Manganese (WEN2) Manganese (WEN3) Manganese (WEN4)	Iron (WEN6)						
Manganese (WEN3) Manganese (WEN4)	Manganese						
Manganese (WEN4)	Manganese (WEN2)						
	Manganese (WEN3)						
Manganese (WEN5)	Manganese (WEN4)						
manganose (WE110)	Manganese (WEN5)						
Manganese (WEN6)	Manganese (WEN6)						
Silicon	Silicon						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date:	0417-0-0.33-(41) 128+50-ST1	SD-128+50-ST1-SED-10 0417-0-0.33-(42) 128+50-ST1 10/04/17	SD-128+50-ST1-SED-10 0417-0-0.33-(43) 128+50-ST1 10/04/17	SD-128+50-ST1-SED-10 0417-0-0.33-(44) 128+50-ST1 10/04/17	SD-128+50-ST1-SED-10 0417-0-0.33-(45) 128+50-ST1 10/04/17	SD-128+50-ST1-SED-1 00417-0-0.33_DC 128+50-ST1 10/04/17
Constituent Media:	Sediment	Sediment	Sediment	Sediment	Sediment	Sediment
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Silicon (WEN6)						
Sequential Extraction Conventionals						
Total Solid						71.96
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-13.5 PTC-001 09/15/17	SO-PTC-001-091517-11. 5-13.5-(41) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(42) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(43) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(44) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11 .5-13.5-(45) PTC-001 09/15/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-13.5 PTC-001 09/15/17	SO-PTC-001-091517-11. 5-13.5-(41) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(42) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(43) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(44) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11 .5-13.5-(45) PTC-001 09/15/17 Soil
Silicon (WEN6)						
Aluminum		126.00	1300.00	772.00	16400.00	34200.00 J-1
Aluminum (WEN2)		126.00	1300.00	772.00	16400.00	34200.00 J-1
Aluminum (WEN3)		126.00	1300.00	772.00	16400.00	34200.00 J-1
Aluminum (WEN4)		126.00	1300.00	772.00	16400.00	34200.00 J-1
Aluminum (WEN5)		126.00	1300.00	772.00	16400.00	34200.00 J-1
Aluminum (WEN6)		126.00	1300.00	772.00	16400.00	34200.00 J-1
Arsenic (WEN2)	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Arsenic (WEN3)	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Arsenic (WEN4)	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Arsenic (WEN5)	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Arsenic (WEN6)	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Arsenic, Inorganic	3.46 H	0.35	0.31	1.04 U	2.97 J	13.80 U
Iron		87.10	1350.00	2350.00	18900.00	17000.00
Iron (WEN2)		87.10	1350.00	2350.00	18900.00	17000.00
Iron (WEN3)		87.10	1350.00	2350.00	18900.00	17000.00
Iron (WEN4)		87.10	1350.00	2350.00	18900.00	17000.00
Iron (WEN5)		87.10	1350.00	2350.00	18900.00	17000.00
Iron (WEN6)		87.10	1350.00	2350.00	18900.00	17000.00
Manganese		2.36	11.90	10.30	135.00	301.00
Manganese (WEN2)		2.36	11.90	10.30	135.00	301.00
Manganese (WEN3)		2.36	11.90	10.30	135.00	301.00
Manganese (WEN4)		2.36	11.90	10.30	135.00	301.00
Manganese (WEN5)		2.36	11.90	10.30	135.00	301.00
Manganese (WEN6)		2.36	11.90	10.30	135.00	301.00
Silicon		479.00	503.00	424.00	63.80 J-1	350000.00
Rlank calls indicate that no analysis was performed	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-13.5 PTC-001 09/15/17	SO-PTC-001-091517-11. 5-13.5-(41) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(42) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(43) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(44) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11 .5-13.5-(45) PTC-001 09/15/17 Soil
Silicon (WEN2)		479.00	503.00	424.00	63.80 J-1	350000.00
Silicon (WEN3)		479.00	503.00	424.00	63.80 J-1	350000.00
Silicon (WEN4)		479.00	503.00	424.00	63.80 J-1	350000.00
Silicon (WEN5)	•	479.00	503.00	424.00	63.80 J-1	350000.00
Silicon (WEN6)		479.00	503.00	424.00	63.80 J-1	350000.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid	69.51					



Table G-9: Sequential Extraction Results

	<u> </u>	T	T	ī	ı	1
Sample ID Site ID	3-20.3-(41)	SO-PTC-101-091417-19. 3-20.3-(42) PTC-101	SO-PTC-101-091417-19. 3-20.3-(43) PTC-101	SO-PTC-101-091417-19. 3-20.3-(44) PTC-101	SO-PTC-101-091417-19. 3-20.3-(45) PTC-101	SO-PTC-101-091417-8. 2-10.2-(41) PTC-101
Sample Date		09/14/17	09/14/17	09/14/17	09/14/17	09/14/17
Constituent Media	: Soil	Soil	Soil	Soil	Soil	Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	1	I	1	1	1	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-20.3-(41) PTC-101 09/14/17	SO-PTC-101-091417-19. 3-20.3-(42) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(43) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(44) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(45) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8. 2-10.2-(41) PTC-101 09/14/17 Soil
Silicon (WEN6)						
Aluminum	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Aluminum (WEN2)	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Aluminum (WEN3)	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Aluminum (WEN4)	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Aluminum (WEN5)	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Aluminum (WEN6)	11.50	510.00	569.00	9650.00	39500.00 J-1	3.78
Arsenic (WEN2)	190.00	168.00	10.80	49.40	4.94 J	294.00
Arsenic (WEN3)	190.00	168.00	10.80	49.40	4.94 J	294.00
Arsenic (WEN4)	190.00	168.00	10.80	49.40	4.94 J	294.00
Arsenic (WEN5)	190.00	168.00	10.80	49.40	4.94 J	294.00
Arsenic (WEN6)	190.00	168.00	10.80	49.40	4.94 J	294.00
Arsenic, Inorganic	190.00	168.00	10.80	49.40	4.94 J	294.00
Iron	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Iron (WEN2)	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Iron (WEN3)	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Iron (WEN4)	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Iron (WEN5)	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Iron (WEN6)	9.75	1340.00	1040.00	16300.00	16600.00	82.10
Manganese	3.95	6.12	6.65	127.00	310.00	3.39
Manganese (WEN2)	3.95	6.12	6.65	127.00	310.00	3.39
Manganese (WEN3)	3.95	6.12	6.65	127.00	310.00	3.39
Manganese (WEN4)	3.95	6.12	6.65	127.00	310.00	3.39
Manganese (WEN5)	3.95	6.12	6.65	127.00	310.00	3.39
Manganese (WEN6)	3.95	6.12	6.65	127.00	310.00	3.39
Silicon	102.00	222.00	413.00	221.00	243000.00	51.00
Rlank cells indicate that no analysis was performed	1	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-20.3-(41) PTC-101 09/14/17	SO-PTC-101-091417-19. 3-20.3-(42) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(43) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(44) PTC-101 09/14/17 Soil	SO-PTC-101-091417-19. 3-20.3-(45) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8. 2-10.2-(41) PTC-101 09/14/17 Soil
Silicon (WEN2)	102.00	222.00	413.00	221.00	243000.00	51.00
Silicon (WEN3)	102.00	222.00	413.00	221.00	243000.00	51.00
Silicon (WEN4)	102.00	222.00	413.00	221.00	243000.00	51.00
Silicon (WEN5)	102.00	222.00	413.00	221.00	243000.00	51.00
Silicon (WEN6)	102.00	222.00	413.00	221.00	243000.00	51.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	10.2-(42) PTC-101 09/14/17	SO-PTC-101-091417-8.2- 10.2-(43) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(44) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(45) PTC-101 09/14/17 Soil	SO-PTC-104-092018-14. 2-14.7 PTC-104 09/20/18 Soil	SO-PTC-104-092018-14 .2-14.7-(41) PTC-104 09/20/18 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)	•					
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID Sample Date Constituent Media	10.2-(42) PTC-101 : 09/14/17	SO-PTC-101-091417-8.2- 10.2-(43) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(44) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(45) PTC-101 09/14/17 Soil	SO-PTC-104-092018-14. 2-14.7 PTC-104 09/20/18 Soil	SO-PTC-104-092018-14 .2-14.7-(41) PTC-104 09/20/18 Soil
Silicon (WEN6)						
Aluminum	191.00	199.00	4780.00	31400.00 J-1	•	28.10
Aluminum (WEN2)	191.00	199.00	4780.00	31400.00 J-1		28.10
Aluminum (WEN3)	191.00	199.00	4780.00	31400.00 J-1		28.10
Aluminum (WEN4)	191.00	199.00	4780.00	31400.00 J-1		28.10
Aluminum (WEN5)	191.00	199.00	4780.00	31400.00 J-1		28.10
Aluminum (WEN6)	191.00	199.00	4780.00	31400.00 J-1		28.10
Arsenic (WEN2)	280.00	18.60	51.30	6.97	8690.00	3960.00
Arsenic (WEN3)	280.00	18.60	51.30	6.97	8690.00	3960.00
Arsenic (WEN4)	280.00	18.60	51.30	6.97	8690.00	3960.00
Arsenic (WEN5)	280.00	18.60	51.30	6.97	8690.00	3960.00
Arsenic (WEN6)	280.00	18.60	51.30	6.97	8690.00	3960.00
Arsenic, Inorganic	280.00	18.60	51.30	6.97	8690.00	3960.00
Iron	2130.00	1090.00	6740.00	25600.00		59.00
Iron (WEN2)	2130.00	1090.00	6740.00	25600.00	•	59.00
Iron (WEN3)	2130.00	1090.00	6740.00	25600.00		59.00
Iron (WEN4)	2130.00	1090.00	6740.00	25600.00		59.00
Iron (WEN5)	2130.00	1090.00	6740.00	25600.00		59.00
Iron (WEN6)	2130.00	1090.00	6740.00	25600.00		59.00
Manganese	8.64	4.54	62.10	517.00		2.05
Manganese (WEN2)	8.64	4.54	62.10	517.00		2.05
Manganese (WEN3)	8.64	4.54	62.10	517.00		2.05
Manganese (WEN4)	8.64	4.54	62.10	517.00		2.05
Manganese (WEN5)	8.64	4.54	62.10	517.00		2.05
Manganese (WEN6)	8.64	4.54	62.10	517.00		2.05
Silicon	56.40	142.00	167.00	261000.00		774.00
	1	I		I .	1	1



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	10.2-(42) PTC-101 09/14/17	SO-PTC-101-091417-8.2- 10.2-(43) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(44) PTC-101 09/14/17 Soil	SO-PTC-101-091417-8.2- 10.2-(45) PTC-101 09/14/17 Soil	SO-PTC-104-092018-14. 2-14.7 PTC-104 09/20/18 Soil	SO-PTC-104-092018-14 .2-14.7-(41) PTC-104 09/20/18 Soil
Silicon (WEN2)	56.40	142.00	167.00	261000.00		774.00
Silicon (WEN3)	56.40	142.00	167.00	261000.00		774.00
Silicon (WEN4)	56.40	142.00	167.00	261000.00		774.00
Silicon (WEN5)	56.40	142.00	167.00	261000.00		774.00
Silicon (WEN6)	56.40	142.00	167.00	261000.00		774.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid					53.25	



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	2-14.7-(42) PTC-104 09/20/18	SO-PTC-104-092018-14. 2-14.7-(43) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(44) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(45) PTC-104 09/20/18 Soil	SO-PTC-108-092118-13. 2-14.2 PTC-108 09/21/18 Soil	SO-PTC-108-092118-13 .2-14.2-(41) PTC-108 09/21/18 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)			•			
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID Site II Sample Date Constituent Media	2-14.7-(42) D: PTC-104 09/20/18	SO-PTC-104-092018-14. 2-14.7-(43) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(44) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(45) PTC-104 09/20/18 Soil	SO-PTC-108-092118-13. 2-14.2 PTC-108 09/21/18 Soil	SO-PTC-108-092118-13 .2-14.2-(41) PTC-108 09/21/18 Soil
Silicon (WEN6)						
Aluminum	291.00	580.00	9890.00	21400.00 J-1		19.90
Aluminum (WEN2)	291.00	580.00	9890.00	21400.00 J-1		19.90
Aluminum (WEN3)	291.00	580.00	9890.00	21400.00 J-1		19.90
Aluminum (WEN4)	291.00	580.00	9890.00	21400.00 J-1		19.90
Aluminum (WEN5)	291.00	580.00	9890.00	21400.00 J-1		19.90
Aluminum (WEN6)	291.00	580.00	9890.00	21400.00 J-1		19.90
Arsenic (WEN2)	475.00	111.00	1190.00	23.90	6190.00	2370.00
Arsenic (WEN3)	475.00	111.00	1190.00	23.90	6190.00	2370.00
Arsenic (WEN4)	475.00	111.00	1190.00	23.90	6190.00	2370.00
Arsenic (WEN5)	475.00	111.00	1190.00	23.90	6190.00	2370.00
Arsenic (WEN6)	475.00	111.00	1190.00	23.90	6190.00	2370.00
Arsenic, Inorganic	475.00	111.00	1190.00	23.90	6190.00	2370.00
Iron	1030.00	1240.00	12000.00	10400.00	•	650.00
Iron (WEN2)	1030.00	1240.00	12000.00	10400.00	•	650.00
Iron (WEN3)	1030.00	1240.00	12000.00	10400.00	•	650.00
Iron (WEN4)	1030.00	1240.00	12000.00	10400.00	•	650.00
Iron (WEN5)	1030.00	1240.00	12000.00	10400.00	•	650.00
Iron (WEN6)	1030.00	1240.00	12000.00	10400.00	•	650.00
Manganese	17.80	8.60	92.30	182.00		52.50
Manganese (WEN2)	17.80	8.60	92.30	182.00		52.50
Manganese (WEN3)	17.80	8.60	92.30	182.00	•	52.50
Manganese (WEN4)	17.80	8.60	92.30	182.00		52.50
Manganese (WEN5)	17.80	8.60	92.30	182.00		52.50
Manganese (WEN6)	17.80	8.60	92.30	182.00		52.50
Silicon	379.00	523.00	68.00 J-1	226000.00		229.00
Blank calls indicate that no analysis was performed	I	I	I	I	I	I



Sample ID: Site ID: Sample Date: Constituent Media:	2-14.7-(42) PTC-104 09/20/18	SO-PTC-104-092018-14. 2-14.7-(43) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(44) PTC-104 09/20/18 Soil	SO-PTC-104-092018-14. 2-14.7-(45) PTC-104 09/20/18 Soil	SO-PTC-108-092118-13. 2-14.2 PTC-108 09/21/18 Soil	SO-PTC-108-092118-13 .2-14.2-(41) PTC-108 09/21/18 Soil
Silicon (WEN2)	379.00	523.00	68.00 J-1	226000.00		229.00
Silicon (WEN3)	379.00	523.00	68.00 J-1	226000.00		229.00
Silicon (WEN4)	379.00	523.00	68.00 J-1	226000.00		229.00
Silicon (WEN5)	379.00	523.00	68.00 J-1	226000.00		229.00
Silicon (WEN6)	379.00	523.00	68.00 J-1	226000.00		229.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid					44.97	



Table G-9: Sequential Extraction Results

Sample Site Sample Da	2-14.2-(42) PTC-108 te: 09/21/18	SO-PTC-108-092118-13. 2-14.2-(43) PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2-(44) PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2-(45) PTC-108 09/21/18	SO-PTC-111-091817-20. 0-22.0-(41) PTC-111 09/18/17	SO-PTC-111-091817-20 .0-22.0-(42) PTC-111 09/18/17
Constituent Med	ia: Soil	Soil	Soil	Soil	Soil	Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)					•	
Arsenic (WEN6)					•	
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)					•	
Iron (WEN6)						
Manganese (WEN2)					•	
Manganese (WEN3)					•	
Manganese (WEN4)					•	
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
		1	1	1	1	I



Table G-9: Sequential Extraction Results

	Site ID: Site ID: mple Date: Media:	SO-PTC-108-092118-13. 2-14.2-(42) PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(43) PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(44) PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(45) PTC-108 09/21/18 Soil	SO-PTC-111-091817-20. 0-22.0-(41) PTC-111 09/18/17 Soil	SO-PTC-111-091817-20 .0-22.0-(42) PTC-111 09/18/17 Soil
Silicon (WEN6)							
luminum		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
Numinum (WEN2)		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
Numinum (WEN3)		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
Numinum (WEN4)		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
Numinum (WEN5)		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
Numinum (WEN6)		1210.00	1050.00	12400.00	21600.00 J-1	8.54	170.00
arsenic (WEN2)		695.00	128.00	5300.00	78.80	8.14	9.05
arsenic (WEN3)		695.00	128.00	5300.00	78.80	8.14	9.05
arsenic (WEN4)		695.00	128.00	5300.00	78.80	8.14	9.05
arsenic (WEN5)		695.00	128.00	5300.00	78.80	8.14	9.05
arsenic (WEN6)		695.00	128.00	5300.00	78.80	8.14	9.05
Arsenic, Inorganic		695.00	128.00	5300.00	78.80	8.14	9.05
ron		11600.00	2320.00	11200.00	9060.00	8.12	370.00
ron (WEN2)		11600.00	2320.00	11200.00	9060.00	8.12	370.00
ron (WEN3)		11600.00	2320.00	11200.00	9060.00	8.12	370.00
ron (WEN4)		11600.00	2320.00	11200.00	9060.00	8.12	370.00
ron (WEN5)		11600.00	2320.00	11200.00	9060.00	8.12	370.00
ron (WEN6)		11600.00	2320.00	11200.00	9060.00	8.12	370.00
/langanese		129.00	16.60	81.40	154.00	1.30	2.10
/langanese (WEN2)		129.00	16.60	81.40	154.00	1.30	2.10
/langanese (WEN3)		129.00	16.60	81.40	154.00	1.30	2.10
/langanese (WEN4)		129.00	16.60	81.40	154.00	1.30	2.10
Manganese (WEN5)		129.00	16.60	81.40	154.00	1.30	2.10
/langanese (WEN6)		129.00	16.60	81.40	154.00	1.30	2.10
Silicon		418.00	704.00	55.30 J-1	224000.00	50.60	91.30



Sample ID: Site ID: Sample Date: Constituent Media:	2-14.2-(42) PTC-108 09/21/18	SO-PTC-108-092118-13. 2-14.2-(43) PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(44) PTC-108 09/21/18 Soil	SO-PTC-108-092118-13. 2-14.2-(45) PTC-108 09/21/18 Soil	SO-PTC-111-091817-20. 0-22.0-(41) PTC-111 09/18/17 Soil	SO-PTC-111-091817-20 .0-22.0-(42) PTC-111 09/18/17 Soil
Silicon (WEN2)	418.00	704.00	55.30 J-1	224000.00	50.60	91.30
Silicon (WEN3)	418.00	704.00	55.30 J-1	224000.00	50.60	91.30
Silicon (WEN4)	418.00	704.00	55.30 J-1	224000.00	50.60	91.30
Silicon (WEN5)	418.00	704.00	55.30 J-1	224000.00	50.60	91.30
Silicon (WEN6)	418.00	704.00	55.30 J-1	224000.00	50.60	91.30
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

·						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Sample ID: Site ID: Sample Date: Constituent Media:	0-22.0-(43) PTC-111 09/18/17	SO-PTC-111-091817-20. 0-22.0-(44) PTC-111 09/18/17 Soil	SO-PTC-111-091817-20. 0-22.0-(45) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6.0- 8.0-(41) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6.0- 8.0-(42) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6. 0-8.0-(43) PTC-111 09/18/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
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Table G-9: Sequential Extraction Results

Sample ID: Site ID Sample Date Constituent Media	0-22.0-(43) PTC-111 : 09/18/17	SO-PTC-111-091817-20. 0-22.0-(44) PTC-111 09/18/17 Soil	SO-PTC-111-091817-20. 0-22.0-(45) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6.0- 8.0-(41) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6.0- 8.0-(42) PTC-111 09/18/17 Soil	SO-PTC-111-091817-6. 0-8.0-(43) PTC-111 09/18/17 Soil
Silicon (WEN6)						
Aluminum	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Aluminum (WEN2)	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Aluminum (WEN3)	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Aluminum (WEN4)	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Aluminum (WEN5)	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Aluminum (WEN6)	268.00	5140.00	36200.00 J-1	11.80	3110.00	286.00
Arsenic (WEN2)	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Arsenic (WEN3)	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Arsenic (WEN4)	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Arsenic (WEN5)	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Arsenic (WEN6)	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Arsenic, Inorganic	2.24 J	13.40	2.87 J	78.20	479.00	26.00
Iron	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Iron (WEN2)	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Iron (WEN3)	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Iron (WEN4)	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Iron (WEN5)	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Iron (WEN6)	671.00	7640.00	24600.00	0.70 J	2360.00	1290.00
Manganese	3.80	59.20	481.00	1.66	14.10	5.17
Manganese (WEN2)	3.80	59.20	481.00	1.66	14.10	5.17
Manganese (WEN3)	3.80	59.20	481.00	1.66	14.10	5.17
Manganese (WEN4)	3.80	59.20	481.00	1.66	14.10	5.17
Manganese (WEN5)	3.80	59.20	481.00	1.66	14.10	5.17
Manganese (WEN6)	3.80	59.20	481.00	1.66	14.10	5.17
Silicon	222.00	143.00	272000.00	229.00	752.00	236.00
Blank cells indicate that no analysis was performed	I	I	I	I	I	I



Sample ID: Site ID: Sample Date: Constituent Media:	0-22.0-(43) PTC-111 09/18/17	SO-PTC-111-091817-20. 0-22.0-(44) PTC-111 09/18/17 Soil	SO-PTC-111-091817-20. 0-22.0-(45) PTC-111 09/18/17 Soil	l ' '		SO-PTC-111-091817-6. 0-8.0-(43) PTC-111 09/18/17 Soil
Silicon (WEN2)	222.00	143.00	272000.00	229.00	752.00	236.00
Silicon (WEN3)	222.00	143.00	272000.00	229.00	752.00	236.00
Silicon (WEN4)	222.00	143.00	272000.00	229.00	752.00	236.00
Silicon (WEN5)	222.00	143.00	272000.00	229.00	752.00	236.00
Silicon (WEN6)	222.00	143.00	272000.00	229.00	752.00	236.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	8.0-(44) PTC-111 09/18/17	SO-PTC-111-091817-6.0- 8.0-(45) PTC-111 09/18/17 Soil	SO-PTC-112-092018-17. 0-18.0 PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(41) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(42) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17 .0-18.0-(43) PTC-112 09/20/18 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
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Table G-9: Sequential Extraction Results

Sample ID Site II Sample Date Constituent Media	8.0-(44) PTC-111 9: 09/18/17	SO-PTC-111-091817-6.0- 8.0-(45) PTC-111 09/18/17 Soil	SO-PTC-112-092018-17. 0-18.0 PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(41) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(42) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17 .0-18.0-(43) PTC-112 09/20/18 Soil
Silicon (WEN6)						
Aluminum	5790.00	29500.00 J-1		67.10	776.00	1160.00
Aluminum (WEN2)	5790.00	29500.00 J-1		67.10	776.00	1160.00
Aluminum (WEN3)	5790.00	29500.00 J-1		67.10	776.00	1160.00
Aluminum (WEN4)	5790.00	29500.00 J-1		67.10	776.00	1160.00
Aluminum (WEN5)	5790.00	29500.00 J-1		67.10	776.00	1160.00
Aluminum (WEN6)	5790.00	29500.00 J-1		67.10	776.00	1160.00
Arsenic (WEN2)	46.40	4.75 J	1080.00	648.00	70.70	34.40
Arsenic (WEN3)	46.40	4.75 J	1080.00	648.00	70.70	34.40
Arsenic (WEN4)	46.40	4.75 J	1080.00	648.00	70.70	34.40
Arsenic (WEN5)	46.40	4.75 J	1080.00	648.00	70.70	34.40
Arsenic (WEN6)	46.40	4.75 J	1080.00	648.00	70.70	34.40
Arsenic, Inorganic	46.40	4.75 J	1080.00	648.00	70.70	34.40
Iron	7340.00	27700.00		15.70	292.00	1620.00
Iron (WEN2)	7340.00	27700.00		15.70	292.00	1620.00
Iron (WEN3)	7340.00	27700.00		15.70	292.00	1620.00
Iron (WEN4)	7340.00	27700.00		15.70	292.00	1620.00
Iron (WEN5)	7340.00	27700.00		15.70	292.00	1620.00
Iron (WEN6)	7340.00	27700.00		15.70	292.00	1620.00
Manganese	68.50	558.00		2.00	6.13	10.20
Manganese (WEN2)	68.50	558.00		2.00	6.13	10.20
Manganese (WEN3)	68.50	558.00		2.00	6.13	10.20
Manganese (WEN4)	68.50	558.00		2.00	6.13	10.20
Manganese (WEN5)	68.50	558.00		2.00	6.13	10.20
Manganese (WEN6)	68.50	558.00		2.00	6.13	10.20
Silicon	145.00	276000.00		224.00	232.00	651.00
Blank calls indicate that no analysis was performed	I	I	I	I	I	I



Sample ID: Site ID: Sample Date: Constituent Media:	8.0-(44) PTC-111 09/18/17	SO-PTC-111-091817-6.0- 8.0-(45) PTC-111 09/18/17 Soil	SO-PTC-112-092018-17. 0-18.0 PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(41) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(42) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17 .0-18.0-(43) PTC-112 09/20/18 Soil
Silicon (WEN2)	145.00	276000.00		224.00	232.00	651.00
Silicon (WEN3)	145.00	276000.00		224.00	232.00	651.00
Silicon (WEN4)	145.00	276000.00		224.00	232.00	651.00
Silicon (WEN5)	145.00	276000.00		224.00	232.00	651.00
Silicon (WEN6)	145.00	276000.00		224.00	232.00	651.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid			62.75			



Table G-9: Sequential Extraction Results

Sequential Extraction Metals (mg/kg)	-PTC-113-092017-18 20.0-(44) C-113 20/17 I	3)	SO-PTC-113-092017-18. 0-20.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18. 0-20.0-(41) PTC-113 09/20/17 Soil	SO-PTC-112-092018-17. 0-18.0-(45) PTC-112 09/20/18 Soil	SO-PTC-112-092018-17. 0-18.0-(44) PTC-112 09/20/18 Soil	Sample ID: Site ID: Sample Date: Constituent Media:
Aluminum (WEN3) Aluminum (WEN4) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Ar							Sequential Extraction Metals (mg/kg)
Aluminum (WEN4) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Ars							Aluminum (WEN2)
Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Aluminum (WEN3)
Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN5) Arsenic (WEN6) Arsen							Aluminum (WEN4)
Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN2) Iron (WEN4) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN5)							Aluminum (WEN5)
Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Aluminum (WEN6)
Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Arsenic (WEN2)
Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Arsenic (WEN3)
Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN5)							Arsenic (WEN4)
Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Arsenic (WEN5)
Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Arsenic (WEN6)
Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Arsenic, Inorganic
Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Iron (WEN2)
Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Iron (WEN3)
Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Iron (WEN4)
Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Iron (WEN5)
Manganese (WEN3) Manganese (WEN4) Manganese (WEN5)							Iron (WEN6)
Manganese (WEN4) Manganese (WEN5)							Manganese (WEN2)
Manganese (WEN5)							Manganese (WEN3)
							Manganese (WEN4)
							Manganese (WEN5)
Manganese (WEN6)							Manganese (WEN6)
Silicon (WEN2)							Silicon (WEN2)
Silicon (WEN3)							Silicon (WEN3)
Silicon (WEN4)							Silicon (WEN4)
Silicon (WEN5)							Silicon (WEN5)



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-18.0-(44) : PTC-112 : 09/20/18	SO-PTC-112-092018-17. 0-18.0-(45) PTC-112 09/20/18 Soil	SO-PTC-113-092017-18. 0-20.0-(41) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18. 0-20.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18. 0-20.0-(43) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18 .0-20.0-(44) PTC-113 09/20/17 Soil
Silicon (WEN6)						
Aluminum	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Aluminum (WEN2)	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Aluminum (WEN3)	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Aluminum (WEN4)	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Aluminum (WEN5)	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Aluminum (WEN6)	12200.00	24800.00 J-1	75.40	367.00	560.00	8950.00
Arsenic (WEN2)	809.00	11.60	896.00	127.00	29.50	1140.00
Arsenic (WEN3)	809.00	11.60	896.00	127.00	29.50	1140.00
Arsenic (WEN4)	809.00	11.60	896.00	127.00	29.50	1140.00
Arsenic (WEN5)	809.00	11.60	896.00	127.00	29.50	1140.00
Arsenic (WEN6)	809.00	11.60	896.00	127.00	29.50	1140.00
Arsenic, Inorganic	809.00	11.60	896.00	127.00	29.50	1140.00
Iron	11500.00	8750.00	52.30	213.00	999.00	9770.00
Iron (WEN2)	11500.00	8750.00	52.30	213.00	999.00	9770.00
Iron (WEN3)	11500.00	8750.00	52.30	213.00	999.00	9770.00
Iron (WEN4)	11500.00	8750.00	52.30	213.00	999.00	9770.00
Iron (WEN5)	11500.00	8750.00	52.30	213.00	999.00	9770.00
Iron (WEN6)	11500.00	8750.00	52.30	213.00	999.00	9770.00
Manganese	105.00	157.00	1.93	3.91	5.43	51.50
Manganese (WEN2)	105.00	157.00	1.93	3.91	5.43	51.50
Manganese (WEN3)	105.00	157.00	1.93	3.91	5.43	51.50
Manganese (WEN4)	105.00	157.00	1.93	3.91	5.43	51.50
Manganese (WEN5)	105.00	157.00	1.93	3.91	5.43	51.50
Manganese (WEN6)	105.00	157.00	1.93	3.91	5.43	51.50
Silicon	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
	1	1	1	1	1	1



Sample ID: Site ID: Sample Date: Constituent Media:	0-18.0-(44) PTC-112 09/20/18	SO-PTC-112-092018-17. 0-18.0-(45) PTC-112 09/20/18 Soil	SO-PTC-113-092017-18. 0-20.0-(41) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18. 0-20.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18. 0-20.0-(43) PTC-113 09/20/17 Soil	SO-PTC-113-092017-18 .0-20.0-(44) PTC-113 09/20/17 Soil
Silicon (WEN2)	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
Silicon (WEN3)	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
Silicon (WEN4)	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
Silicon (WEN5)	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
Silicon (WEN6)	56.70 J-1	211000.00	151.00	132.00	424.00	227.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

<u> </u>						TERMINE CONTENT OF THE PROPERTY OF THE PROPERT
Sample ID: Site ID: Sample Date: Constituent Media:	09/20/17	SO-PTC-113-092017-7.5- 10.0-(41) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(43) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(44) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7. 5-10.0-(45) PTC-113 09/20/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						•
Iron (WEN3)						
Iron (WEN4)						•
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	i e	I .	I .	I .	1	ı



Table G-9: Sequential Extraction Results

Sample II Site I Sample Dat Constituent Medi	0-20.0-(45) D: PTC-113 e: 09/20/17	SO-PTC-113-092017-7.5- 10.0-(41) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(43) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(44) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7. 5-10.0-(45) PTC-113 09/20/17 Soil
Silicon (WEN6)						
Aluminum	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Aluminum (WEN2)	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Aluminum (WEN3)	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Aluminum (WEN4)	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Aluminum (WEN5)	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Aluminum (WEN6)	40800.00 J-1	4.50	534.00	251.00	4940.00	29800.00 J-1
Arsenic (WEN2)	11.90	53.60	276.00	20.20	33.10	4.59 J
Arsenic (WEN3)	11.90	53.60	276.00	20.20	33.10	4.59 J
Arsenic (WEN4)	11.90	53.60	276.00	20.20	33.10	4.59 J
Arsenic (WEN5)	11.90	53.60	276.00	20.20	33.10	4.59 J
Arsenic (WEN6)	11.90	53.60	276.00	20.20	33.10	4.59 J
Arsenic, Inorganic	11.90	53.60	276.00	20.20	33.10	4.59 J
Iron	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Iron (WEN2)	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Iron (WEN3)	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Iron (WEN4)	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Iron (WEN5)	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Iron (WEN6)	21600.00	17.60	4880.00	1400.00	7380.00	25300.00
Manganese	398.00	3.20	7.99	4.94	68.60	513.00
Manganese (WEN2)	398.00	3.20	7.99	4.94	68.60	513.00
Manganese (WEN3)	398.00	3.20	7.99	4.94	68.60	513.00
Manganese (WEN4)	398.00	3.20	7.99	4.94	68.60	513.00
Manganese (WEN5)	398.00	3.20	7.99	4.94	68.60	513.00
Manganese (WEN6)	398.00	3.20	7.99	4.94	68.60	513.00
Silicon	257000.00	122.00	275.00	191.00	196.00	270000.00
	1	1	I .	1	1	1



Sample ID: Site ID: Sample Date: Constituent Media:	0-20.0-(45) PTC-113 09/20/17	SO-PTC-113-092017-7.5- 10.0-(41) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(42) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(43) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7.5- 10.0-(44) PTC-113 09/20/17 Soil	SO-PTC-113-092017-7. 5-10.0-(45) PTC-113 09/20/17 Soil
Silicon (WEN2)	257000.00	122.00	275.00	191.00	196.00	270000.00
Silicon (WEN3)	257000.00	122.00	275.00	191.00	196.00	270000.00
Silicon (WEN4)	257000.00	122.00	275.00	191.00	196.00	270000.00
Silicon (WEN5)	257000.00	122.00	275.00	191.00	196.00	270000.00
Silicon (WEN6)	257000.00	122.00	275.00	191.00	196.00	270000.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-12.0 PTC-120 09/21/18	SO-PTC-120-092118-11. 0-12.0-(41) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(42) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(43) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(44) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11 .0-12.0-(45) PTC-120 09/21/18 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-12.0 PTC-120 09/21/18	SO-PTC-120-092118-11. 0-12.0-(41) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(42) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(43) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(44) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11 .0-12.0-(45) PTC-120 09/21/18 Soil
Silicon (WEN6)						
Aluminum		84.90	1230.00	495.00	11900.00	21800.00 J-1
Aluminum (WEN2)		84.90	1230.00	495.00	11900.00	21800.00 J-1
Aluminum (WEN3)		84.90	1230.00	495.00	11900.00	21800.00 J-1
Aluminum (WEN4)		84.90	1230.00	495.00	11900.00	21800.00 J-1
Aluminum (WEN5)		84.90	1230.00	495.00	11900.00	21800.00 J-1
Aluminum (WEN6)		84.90	1230.00	495.00	11900.00	21800.00 J-1
Arsenic (WEN2)	3470.00	127.00	80.70	19.50	3660.00	28.20
Arsenic (WEN3)	3470.00	127.00	80.70	19.50	3660.00	28.20
Arsenic (WEN4)	3470.00	127.00	80.70	19.50	3660.00	28.20
Arsenic (WEN5)	3470.00	127.00	80.70	19.50	3660.00	28.20
Arsenic (WEN6)	3470.00	127.00	80.70	19.50	3660.00	28.20
Arsenic, Inorganic	3470.00	127.00	80.70	19.50	3660.00	28.20
Iron		113.00	7140.00	889.00	9520.00	14700.00
Iron (WEN2)		113.00	7140.00	889.00	9520.00	14700.00
Iron (WEN3)		113.00	7140.00	889.00	9520.00	14700.00
Iron (WEN4)		113.00	7140.00	889.00	9520.00	14700.00
Iron (WEN5)		113.00	7140.00	889.00	9520.00	14700.00
Iron (WEN6)		113.00	7140.00	889.00	9520.00	14700.00
Manganese		5.00	83.50	3.93	80.70	268.00
Manganese (WEN2)		5.00	83.50	3.93	80.70	268.00
Manganese (WEN3)		5.00	83.50	3.93	80.70	268.00
Manganese (WEN4)		5.00	83.50	3.93	80.70	268.00
Manganese (WEN5)		5.00	83.50	3.93	80.70	268.00
Manganese (WEN6)		5.00	83.50	3.93	80.70	268.00
Silicon		330.00	431.00	300.00	47.60 J-1	259000.00
	1	1	1	1	1	1



Sample ID: Site ID: Sample Date: Constituent Media:	0-12.0 PTC-120 09/21/18	SO-PTC-120-092118-11. 0-12.0-(41) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(42) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(43) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11. 0-12.0-(44) PTC-120 09/21/18 Soil	SO-PTC-120-092118-11 .0-12.0-(45) PTC-120 09/21/18 Soil
Silicon (WEN2)		330.00	431.00	300.00	47.60 J-1	259000.00
Silicon (WEN3)		330.00	431.00	300.00	47.60 J-1	259000.00
Silicon (WEN4)		330.00	431.00	300.00	47.60 J-1	259000.00
Silicon (WEN5)	•	330.00	431.00	300.00	47.60 J-1	259000.00
Silicon (WEN6)		330.00	431.00	300.00	47.60 J-1	259000.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid	59.32					



Table G-9: Sequential Extraction Results

Aluminum (WEN2) Aluminum (WEN3) Aluminum (WEN4) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN8)	Sample ID: Site ID: Sample Date: Constituent Media:	0-13.0-(41) PTC-121 09/18/17	SO-PTC-121-091817-11. 0-13.0-(42) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(43) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(44) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(45) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22 .0-24.0-(41) PTC-121 09/18/17 Soil
Aluminum (WEN3) Aluminum (WEN4) Aluminum (WEN5) Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN6	Sequential Extraction Metals (mg/kg)						
Aluminum (WEN4) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN6) Aluminum (WEN8) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic, Inorganic Iron (WEN2) Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WE	Aluminum (WEN2)						
Aluminum (WEN5) Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN5) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Arsenic (WEN8) Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN6) Manganese (WEN6) Manganese (WEN6) Silicon (WEN8) Silicon (WEN8) Silicon (WEN8) Silicon (WEN8) Silicon (WEN8) Silicon (WEN8)	Aluminum (WEN3)						
Aluminum (WEN6) Arsenic (WEN2) Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN2) Silicon (WEN3) Silicon (WEN3) Silicon (WEN4)	Aluminum (WEN4)						
Arsenic (WEN2) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN6) Arsenic (WEN8) Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN2) Silicon (WEN2) Silicon (WEN3) Silicon (WEN3)	Aluminum (WEN5)						
Arsenic (WEN3) Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic (MEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN2) Manganese (WEN4) Manganese (WEN5) Manganese (WEN5) Manganese (WEN6) Silicon (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN3) Silicon (WEN4)	Aluminum (WEN6)						İ
Arsenic (WEN4) Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN4) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Ir	Arsenic (WEN2)						İ
Arsenic (WEN5) Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN5) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN5) Manganese (WEN6) Silicon (WEN6) Silicon (WEN7) Silicon (WEN7) Silicon (WEN7)	Arsenic (WEN3)						İ
Arsenic (WEN6) Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN6) Manganese (WEN6) Silicon (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Arsenic (WEN4)						
Arsenic, Inorganic Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN3)	Arsenic (WEN5)						
Iron (WEN2) Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Arsenic (WEN6)						
Iron (WEN3) Iron (WEN4) Iron (WEN5) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Arsenic, Inorganic						
Iron (WEN4) Iron (WEN5) Iron (WEN6) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Iron (WEN2)						
Iron (WEN5) Iron (WEN6) Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Iron (WEN3)						
Iron (WEN6) Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Iron (WEN4)						
Manganese (WEN2) Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Iron (WEN5)						
Manganese (WEN3) Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Iron (WEN6)						
Manganese (WEN4) Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Manganese (WEN2)						
Manganese (WEN5) Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Manganese (WEN3)						
Manganese (WEN6) Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Manganese (WEN4)						
Silicon (WEN2) Silicon (WEN3) Silicon (WEN4)	Manganese (WEN5)						
Silicon (WEN3) Silicon (WEN4)	Manganese (WEN6)						
Silicon (WEN4)	Silicon (WEN2)						
	Silicon (WEN3)						•
Silicon (WEN5)	Silicon (WEN4)						•
	Silicon (WEN5)						•



Table G-9: Sequential Extraction Results

Sample IE Site IE Sample Date Constituent Media	0-13.0-(41) D: PTC-121 09/18/17	SO-PTC-121-091817-11. 0-13.0-(42) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(43) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(44) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(45) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22 .0-24.0-(41) PTC-121 09/18/17 Soil
Silicon (WEN6)						
Aluminum	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Aluminum (WEN2)	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Aluminum (WEN3)	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Aluminum (WEN4)	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Aluminum (WEN5)	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Aluminum (WEN6)	2.90	274.00	225.00	5120.00	33700.00 J-1	5.58
Arsenic (WEN2)	248.00	181.00	14.70	162.00	7.11	10.20
Arsenic (WEN3)	248.00	181.00	14.70	162.00	7.11	10.20
Arsenic (WEN4)	248.00	181.00	14.70	162.00	7.11	10.20
Arsenic (WEN5)	248.00	181.00	14.70	162.00	7.11	10.20
Arsenic (WEN6)	248.00	181.00	14.70	162.00	7.11	10.20
Arsenic, Inorganic	248.00	181.00	14.70	162.00	7.11	10.20
Iron	97.90	2420.00	940.00	8310.00	23600.00	18.60
Iron (WEN2)	97.90	2420.00	940.00	8310.00	23600.00	18.60
Iron (WEN3)	97.90	2420.00	940.00	8310.00	23600.00	18.60
Iron (WEN4)	97.90	2420.00	940.00	8310.00	23600.00	18.60
Iron (WEN5)	97.90	2420.00	940.00	8310.00	23600.00	18.60
Iron (WEN6)	97.90	2420.00	940.00	8310.00	23600.00	18.60
Manganese	2.75	10.80	3.75	68.60	454.00	1.33
Manganese (WEN2)	2.75	10.80	3.75	68.60	454.00	1.33
Manganese (WEN3)	2.75	10.80	3.75	68.60	454.00	1.33
Manganese (WEN4)	2.75	10.80	3.75	68.60	454.00	1.33
Manganese (WEN5)	2.75	10.80	3.75	68.60	454.00	1.33
Manganese (WEN6)	2.75	10.80	3.75	68.60	454.00	1.33
Silicon	75.70	92.20	166.00	191.00	264000.00	35.20
Blank calls indicate that no analysis was performed	I	I	I	I	I	I



Sample ID: Site ID: Sample Date: Constituent Media:	0-13.0-(41) PTC-121 09/18/17	SO-PTC-121-091817-11. 0-13.0-(42) PTC-121 09/18/17 Soil	SO-PTC-121-091817-11. 0-13.0-(43) PTC-121 09/18/17 Soil		SO-PTC-121-091817-11. 0-13.0-(45) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22 .0-24.0-(41) PTC-121 09/18/17 Soil
Silicon (WEN2)	75.70	92.20	166.00	191.00	264000.00	35.20
Silicon (WEN3)	75.70	92.20	166.00	191.00	264000.00	35.20
Silicon (WEN4)	75.70	92.20	166.00	191.00	264000.00	35.20
Silicon (WEN5)	75.70	92.20	166.00	191.00	264000.00	35.20
Silicon (WEN6)	75.70	92.20	166.00	191.00	264000.00	35.20
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample I	0-24.0-(42) D: PTC-121	SO-PTC-121-091817-22. 0-24.0-(43) PTC-121	SO-PTC-121-091817-22. 0-24.0-(44) PTC-121	SO-PTC-121-091817-22. 0-24.0-(45) PTC-121	SO-PTC-122-091818-9.5- 10.5 PTC-122	5-10.5-(41) PTC-122
Sample Da Constituent Med	l l	09/18/17 Soil	09/18/17 Soil	09/18/17 Soil	09/18/18 Soil	09/18/18 Soil
Sequential Extraction Metals (mg/kg)	<u> </u>	1		1		
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	i .	1	I	I	1	I



Table G-9: Sequential Extraction Results

Si Sample	ite ID: ite ID: Date: //edia:	SO-PTC-121-091817-22. 0-24.0-(42) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22. 0-24.0-(43) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22. 0-24.0-(44) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22. 0-24.0-(45) PTC-121 09/18/17 Soil	SO-PTC-122-091818-9.5- 10.5 PTC-122 09/18/18 Soil	SO-PTC-122-091818-9. 5-10.5-(41) PTC-122 09/18/18 Soil
Silicon (WEN6)							
Aluminum		140.00	191.00	3950.00	28600.00 J-1		57.90
Aluminum (WEN2)		140.00	191.00	3950.00	28600.00 J-1		57.90
Aluminum (WEN3)		140.00	191.00	3950.00	28600.00 J-1		57.90
Aluminum (WEN4)		140.00	191.00	3950.00	28600.00 J-1		57.90
Aluminum (WEN5)		140.00	191.00	3950.00	28600.00 J-1		57.90
Aluminum (WEN6)		140.00	191.00	3950.00	28600.00 J-1		57.90
Arsenic (WEN2)		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Arsenic (WEN3)		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Arsenic (WEN4)		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Arsenic (WEN5)		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Arsenic (WEN6)		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Arsenic, Inorganic		5.83	1.42 J	9.73	2.68 J	7720.00	599.00
Iron		292.00	967.00	8350.00	27200.00		99.10
Iron (WEN2)		292.00	967.00	8350.00	27200.00		99.10
Iron (WEN3)		292.00	967.00	8350.00	27200.00		99.10
Iron (WEN4)		292.00	967.00	8350.00	27200.00		99.10
Iron (WEN5)		292.00	967.00	8350.00	27200.00		99.10
Iron (WEN6)		292.00	967.00	8350.00	27200.00		99.10
Manganese		1.99	4.10	65.00	546.00		12.80
Manganese (WEN2)		1.99	4.10	65.00	546.00		12.80
Manganese (WEN3)		1.99	4.10	65.00	546.00		12.80
Manganese (WEN4)		1.99	4.10	65.00	546.00		12.80
Manganese (WEN5)		1.99	4.10	65.00	546.00		12.80
Manganese (WEN6)		1.99	4.10	65.00	546.00		12.80
Silicon		61.90	147.00	134.00	261000.00		871.00
		l	I	I	I	I	l



Sample ID: Site ID: Sample Date: Constituent Media:	0-24.0-(42) PTC-121 09/18/17	SO-PTC-121-091817-22. 0-24.0-(43) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22. 0-24.0-(44) PTC-121 09/18/17 Soil	SO-PTC-121-091817-22. 0-24.0-(45) PTC-121 09/18/17 Soil	SO-PTC-122-091818-9.5- 10.5 PTC-122 09/18/18 Soil	SO-PTC-122-091818-9. 5-10.5-(41) PTC-122 09/18/18 Soil
Silicon (WEN2)	61.90	147.00	134.00	261000.00		871.00
Silicon (WEN3)	61.90	147.00	134.00	261000.00		871.00
Silicon (WEN4)	61.90	147.00	134.00	261000.00		871.00
Silicon (WEN5)	61.90	147.00	134.00	261000.00		871.00
Silicon (WEN6)	61.90	147.00	134.00	261000.00		871.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid					48.30	



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	10.5-(42) PTC-122 09/18/18	SO-PTC-122-091818-9.5- 10.5-(43) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(44) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(45) PTC-122 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5 PTC-127 09/18/18 Soil	SO-PTC-127-091818-17 .0-17.5-(41) PTC-127 09/18/18 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	I	I	1	1	1	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID Sample Date Constituent Media	10.5-(42) : PTC-122 : 09/18/18	SO-PTC-122-091818-9.5- 10.5-(43) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(44) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(45) PTC-122 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5 PTC-127 09/18/18 Soil	SO-PTC-127-091818-17 .0-17.5-(41) PTC-127 09/18/18 Soil
Silicon (WEN6)						
Aluminum	990.00	929.00	11300.00	24600.00 J-1		199.00
Aluminum (WEN2)	990.00	929.00	11300.00	24600.00 J-1		199.00
Aluminum (WEN3)	990.00	929.00	11300.00	24600.00 J-1		199.00
Aluminum (WEN4)	990.00	929.00	11300.00	24600.00 J-1	•	199.00
Aluminum (WEN5)	990.00	929.00	11300.00	24600.00 J-1		199.00
Aluminum (WEN6)	990.00	929.00	11300.00	24600.00 J-1	•	199.00
Arsenic (WEN2)	220.00	38.60	8250.00	83.10	4150.00	2230.00
Arsenic (WEN3)	220.00	38.60	8250.00	83.10	4150.00	2230.00
Arsenic (WEN4)	220.00	38.60	8250.00	83.10	4150.00	2230.00
Arsenic (WEN5)	220.00	38.60	8250.00	83.10	4150.00	2230.00
Arsenic (WEN6)	220.00	38.60	8250.00	83.10	4150.00	2230.00
Arsenic, Inorganic	220.00	38.60	8250.00	83.10	4150.00	2230.00
Iron	8220.00	2190.00	10100.00	10300.00		216.00
Iron (WEN2)	8220.00	2190.00	10100.00	10300.00		216.00
Iron (WEN3)	8220.00	2190.00	10100.00	10300.00		216.00
Iron (WEN4)	8220.00	2190.00	10100.00	10300.00		216.00
Iron (WEN5)	8220.00	2190.00	10100.00	10300.00		216.00
Iron (WEN6)	8220.00	2190.00	10100.00	10300.00		216.00
Manganese	295.00	20.60	86.40	184.00		3.29
Manganese (WEN2)	295.00	20.60	86.40	184.00		3.29
Manganese (WEN3)	295.00	20.60	86.40	184.00		3.29
Manganese (WEN4)	295.00	20.60	86.40	184.00		3.29
Manganese (WEN5)	295.00	20.60	86.40	184.00		3.29
Manganese (WEN6)	295.00	20.60	86.40	184.00		3.29
Silicon	703.00	593.00	55.30 J-1	237000.00		668.00
Rlank cells indicate that no analysis was performed	I	I	I	I	I	I



Sample ID: Site ID: Sample Date: Constituent Media:	10.5-(42) PTC-122 09/18/18	SO-PTC-122-091818-9.5- 10.5-(43) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(44) PTC-122 09/18/18 Soil	SO-PTC-122-091818-9.5- 10.5-(45) PTC-122 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5 PTC-127 09/18/18 Soil	SO-PTC-127-091818-17 .0-17.5-(41) PTC-127 09/18/18 Soil
Silicon (WEN2)	703.00	593.00	55.30 J-1	237000.00		668.00
Silicon (WEN3)	703.00	593.00	55.30 J-1	237000.00		668.00
Silicon (WEN4)	703.00	593.00	55.30 J-1	237000.00		668.00
Silicon (WEN5)	703.00	593.00	55.30 J-1	237000.00		668.00
Silicon (WEN6)	703.00	593.00	55.30 J-1	237000.00		668.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid					42.73	



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-17.5-(42) PTC-127 09/18/18	SO-PTC-127-091818-17. 0-17.5-(43) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(44) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(45) PTC-127 09/18/18 Soil	SO-PTC-129-092017-10. 0-12.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10 .0-12.0-(42) PTC-129 09/20/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)			•			
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	1	I				1



Table G-9: Sequential Extraction Results

Sample IE Site II Sample Date Constituent Media	0-17.5-(42) D: PTC-127 09/18/18	SO-PTC-127-091818-17. 0-17.5-(43) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(44) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(45) PTC-127 09/18/18 Soil	SO-PTC-129-092017-10. 0-12.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10 .0-12.0-(42) PTC-129 09/20/17 Soil
Silicon (WEN6)						
Aluminum	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Aluminum (WEN2)	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Aluminum (WEN3)	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Aluminum (WEN4)	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Aluminum (WEN5)	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Aluminum (WEN6)	936.00	860.00	10800.00	22300.00 J-1	2.29	333.00
Arsenic (WEN2)	75.80	34.20	2050.00	38.40	46.50	402.00
Arsenic (WEN3)	75.80	34.20	2050.00	38.40	46.50	402.00
Arsenic (WEN4)	75.80	34.20	2050.00	38.40	46.50	402.00
Arsenic (WEN5)	75.80	34.20	2050.00	38.40	46.50	402.00
Arsenic (WEN6)	75.80	34.20	2050.00	38.40	46.50	402.00
Arsenic, Inorganic	75.80	34.20	2050.00	38.40	46.50	402.00
Iron	835.00	951.00	10000.00	5770.00	3.91	7010.00
Iron (WEN2)	835.00	951.00	10000.00	5770.00	3.91	7010.00
Iron (WEN3)	835.00	951.00	10000.00	5770.00	3.91	7010.00
Iron (WEN4)	835.00	951.00	10000.00	5770.00	3.91	7010.00
Iron (WEN5)	835.00	951.00	10000.00	5770.00	3.91	7010.00
Iron (WEN6)	835.00	951.00	10000.00	5770.00	3.91	7010.00
Manganese	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Manganese (WEN2)	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Manganese (WEN3)	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Manganese (WEN4)	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Manganese (WEN5)	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Manganese (WEN6)	18.00	9.06	57.80	101.00	2.61 M	27.70 M
Silicon	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
	1	I	1	1	1	I



Sample ID: Site ID: Sample Date: Constituent Media:	0-17.5-(42) PTC-127 09/18/18	SO-PTC-127-091818-17. 0-17.5-(43) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(44) PTC-127 09/18/18 Soil	SO-PTC-127-091818-17. 0-17.5-(45) PTC-127 09/18/18 Soil	SO-PTC-129-092017-10. 0-12.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10 .0-12.0-(42) PTC-129 09/20/17 Soil
Silicon (WEN2)	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
Silicon (WEN3)	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
Silicon (WEN4)	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
Silicon (WEN5)	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
Silicon (WEN6)	298.00	658.00	52.80 J-1	179000.00	190.00	549.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	SO-PTC-129-092017-10. 0-12.0-(43) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10. 0-12.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10. 0-12.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0 PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17 .3-20.0-(42) PTC-129 09/20/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						



Table G-9: Sequential Extraction Results

Sample IE Site II Sample Date Constituent Media	0-12.0-(43) D: PTC-129 09/20/17	SO-PTC-129-092017-10. 0-12.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10. 0-12.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0 PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17 .3-20.0-(42) PTC-129 09/20/17 Soil
Silicon (WEN6)						
Aluminum	166.00	4420.00	23900.00 J-1		20.30	481.00
Aluminum (WEN2)	166.00	4420.00	23900.00 J-1		20.30	481.00
Aluminum (WEN3)	166.00	4420.00	23900.00 J-1		20.30	481.00
Aluminum (WEN4)	166.00	4420.00	23900.00 J-1		20.30	481.00
Aluminum (WEN5)	166.00	4420.00	23900.00 J-1		20.30	481.00
Aluminum (WEN6)	166.00	4420.00	23900.00 J-1		20.30	481.00
Arsenic (WEN2)	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Arsenic (WEN3)	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Arsenic (WEN4)	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Arsenic (WEN5)	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Arsenic (WEN6)	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Arsenic, Inorganic	15.20	17.20 M	3.58 J	72.70 H	29.70	11.40
Iron	1150.00	6120.00	30500.00		20.90	1470.00
Iron (WEN2)	1150.00	6120.00	30500.00		20.90	1470.00
Iron (WEN3)	1150.00	6120.00	30500.00		20.90	1470.00
Iron (WEN4)	1150.00	6120.00	30500.00		20.90	1470.00
Iron (WEN5)	1150.00	6120.00	30500.00		20.90	1470.00
Iron (WEN6)	1150.00	6120.00	30500.00		20.90	1470.00
Manganese	4.44	56.80	627.00		1.29	9.78
Manganese (WEN2)	4.44	56.80	627.00		1.29	9.78
Manganese (WEN3)	4.44	56.80	627.00		1.29	9.78
Manganese (WEN4)	4.44	56.80	627.00		1.29	9.78
Manganese (WEN5)	4.44	56.80	627.00		1.29	9.78
Manganese (WEN6)	4.44	56.80	627.00		1.29	9.78
Silicon	140.00	162.00	256000.00		432.00	328.00
	1	1	1	1	I .	1



Sample ID: Site ID: Sample Date: Constituent Media:	09/20/17	SO-PTC-129-092017-10. 0-12.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-10. 0-12.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0 PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17 .3-20.0-(42) PTC-129 09/20/17 Soil
Silicon (WEN2)	140.00	162.00	256000.00		432.00	328.00
Silicon (WEN3)	140.00	162.00	256000.00		432.00	328.00
Silicon (WEN4)	140.00	162.00	256000.00		432.00	328.00
Silicon (WEN5)	140.00	162.00	256000.00		432.00	328.00
Silicon (WEN6)	140.00	162.00	256000.00		432.00	328.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid				68.74		



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-20.0-(43) PTC-129 09/20/17	SO-PTC-129-092017-17. 3-20.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(42) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22 .5-25.0-(43) PTC-129 09/20/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)					•	
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	1	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID Sample Date Constituent Media	3-20.0-(43) PTC-129 09/20/17	SO-PTC-129-092017-17. 3-20.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(42) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22 .5-25.0-(43) PTC-129 09/20/17 Soil
Silicon (WEN6)						
Aluminum	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Aluminum (WEN2)	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Aluminum (WEN3)	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Aluminum (WEN4)	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Aluminum (WEN5)	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Aluminum (WEN6)	528.00	11900.00	22100.00 J-1	3.48	149.00	208.00
Arsenic (WEN2)	9.39	24.50	10.00 U	25.80	22.70	6.31
Arsenic (WEN3)	9.39	24.50	10.00 U	25.80	22.70	6.31
Arsenic (WEN4)	9.39	24.50	10.00 U	25.80	22.70	6.31
Arsenic (WEN5)	9.39	24.50	10.00 U	25.80	22.70	6.31
Arsenic (WEN6)	9.39	24.50	10.00 U	25.80	22.70	6.31
Arsenic, Inorganic	9.39	24.50	10.00 U	25.80	22.70	6.31
Iron	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Iron (WEN2)	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Iron (WEN3)	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Iron (WEN4)	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Iron (WEN5)	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Iron (WEN6)	2390.00	14700.00	14100.00	20.30	1320.00	1070.00
Manganese	10.60	79.60	263.00	2.66	5.13	4.16
Manganese (WEN2)	10.60	79.60	263.00	2.66	5.13	4.16
Manganese (WEN3)	10.60	79.60	263.00	2.66	5.13	4.16
Manganese (WEN4)	10.60	79.60	263.00	2.66	5.13	4.16
Manganese (WEN5)	10.60	79.60	263.00	2.66	5.13	4.16
Manganese (WEN6)	10.60	79.60	263.00	2.66	5.13	4.16
Silicon	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Blank cells indicate that no analysis was performed	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	3-20.0-(43) PTC-129 09/20/17	SO-PTC-129-092017-17. 3-20.0-(44) PTC-129 09/20/17 Soil	SO-PTC-129-092017-17. 3-20.0-(45) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(41) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22. 5-25.0-(42) PTC-129 09/20/17 Soil	SO-PTC-129-092017-22 .5-25.0-(43) PTC-129 09/20/17 Soil
Silicon (WEN2)	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Silicon (WEN3)	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Silicon (WEN4)	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Silicon (WEN5)	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Silicon (WEN6)	356.00	50.00 J-1	268000.00	65.70	84.40	163.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-25.0-(44) PTC-129 09/20/17	SO-PTC-129-092017-22. 5-25.0-(45) PTC-129 09/20/17 Soil	SO-PTC-204-091917-10. 8-12.8-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10 .8-12.8-(44) PTC-204 09/19/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)					•	
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)	1					
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	1	I	I	I



Table G-9: Sequential Extraction Results

Sample ID Site ID Sample Date Constituent Media	5-25.0-(44) : PTC-129 : 09/20/17	SO-PTC-129-092017-22. 5-25.0-(45) PTC-129 09/20/17 Soil	SO-PTC-204-091917-10. 8-12.8-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10 .8-12.8-(44) PTC-204 09/19/17 Soil
Silicon (WEN6)						
Aluminum	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Aluminum (WEN2)	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Aluminum (WEN3)	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Aluminum (WEN4)	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Aluminum (WEN5)	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Aluminum (WEN6)	4650.00	27200.00 J-1	47.90	225.00	272.00	5900.00
Arsenic (WEN2)	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Arsenic (WEN3)	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Arsenic (WEN4)	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Arsenic (WEN5)	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Arsenic (WEN6)	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Arsenic, Inorganic	267.00	4.31 J	22.60	2.77	2.97 U	10.90
Iron	6240.00	29600.00	35.90	578.00	949.00	8530.00
Iron (WEN2)	6240.00	29600.00	35.90	578.00	949.00	8530.00
Iron (WEN3)	6240.00	29600.00	35.90	578.00	949.00	8530.00
Iron (WEN4)	6240.00	29600.00	35.90	578.00	949.00	8530.00
Iron (WEN5)	6240.00	29600.00	35.90	578.00	949.00	8530.00
Iron (WEN6)	6240.00	29600.00	35.90	578.00	949.00	8530.00
Manganese	49.90	597.00	0.76	3.92	4.35	57.50
Manganese (WEN2)	49.90	597.00	0.76	3.92	4.35	57.50
Manganese (WEN3)	49.90	597.00	0.76	3.92	4.35	57.50
Manganese (WEN4)	49.90	597.00	0.76	3.92	4.35	57.50
Manganese (WEN5)	49.90	597.00	0.76	3.92	4.35	57.50
Manganese (WEN6)	49.90	597.00	0.76	3.92	4.35	57.50
Silicon	200.00	260000.00	8700.00	182.00	200.00	167.00
Blank calls indicate that no analysis was performed	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	5-25.0-(44) PTC-129 09/20/17	SO-PTC-129-092017-22. 5-25.0-(45) PTC-129 09/20/17 Soil	SO-PTC-204-091917-10. 8-12.8-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10. 8-12.8-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-10 .8-12.8-(44) PTC-204 09/19/17 Soil
Silicon (WEN2)	200.00	260000.00	8700.00	182.00	200.00	167.00
Silicon (WEN3)	200.00	260000.00	8700.00	182.00	200.00	167.00
Silicon (WEN4)	200.00	260000.00	8700.00	182.00	200.00	167.00
Silicon (WEN5)	200.00	260000.00	8700.00	182.00	200.00	167.00
Silicon (WEN6)	200.00	260000.00	8700.00	182.00	200.00	167.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	8-12.8-(45) PTC-204 09/19/17	SO-PTC-204-091917-23. 0-25.0-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(44) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23 .0-25.0-(45) PTC-204 09/19/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)			•			
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
Blank cells indicate that no analysis was performed.	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sampl	8-12 Site ID: PT0	2.8-(45) C-204 19/17	SO-PTC-204-091917-23. 0-25.0-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(44) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23 .0-25.0-(45) PTC-204 09/19/17 Soil
Silicon (WEN6)							
Aluminum		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Aluminum (WEN2)		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Aluminum (WEN3)		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Aluminum (WEN4)		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Aluminum (WEN5)		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Aluminum (WEN6)		37100.00 J-1	0.62	86.50	143.00	4600.00	28800.00 J-1
Arsenic (WEN2)		3.40 J	29.00	8.33	3.89	64.40	3.62 J
Arsenic (WEN3)		3.40 J	29.00	8.33	3.89	64.40	3.62 J
Arsenic (WEN4)		3.40 J	29.00	8.33	3.89	64.40	3.62 J
Arsenic (WEN5)		3.40 J	29.00	8.33	3.89	64.40	3.62 J
Arsenic (WEN6)		3.40 J	29.00	8.33	3.89	64.40	3.62 J
Arsenic, Inorganic		3.40 J	29.00	8.33	3.89	64.40	3.62 J
ron		22600.00	4.87	1470.00	588.00	9890.00	27200.00
ron (WEN2)		22600.00	4.87	1470.00	588.00	9890.00	27200.00
ron (WEN3)		22600.00	4.87	1470.00	588.00	9890.00	27200.00
ron (WEN4)		22600.00	4.87	1470.00	588.00	9890.00	27200.00
ron (WEN5)		22600.00	4.87	1470.00	588.00	9890.00	27200.00
ron (WEN6)		22600.00	4.87	1470.00	588.00	9890.00	27200.00
Manganese		430.00	3.34	11.90	5.38	99.40	534.00
Manganese (WEN2)		430.00	3.34	11.90	5.38	99.40	534.00
Manganese (WEN3)		430.00	3.34	11.90	5.38	99.40	534.00
Manganese (WEN4)		430.00	3.34	11.90	5.38	99.40	534.00
Manganese (WEN5)		430.00	3.34	11.90	5.38	99.40	534.00
Manganese (WEN6)		430.00	3.34	11.90	5.38	99.40	534.00
Silicon		249000.00	380.00	151.00	207.00	195.00	280000.00



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	8-12.8-(45) PTC-204 09/19/17	SO-PTC-204-091917-23. 0-25.0-(41) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(42) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(43) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23. 0-25.0-(44) PTC-204 09/19/17 Soil	SO-PTC-204-091917-23 .0-25.0-(45) PTC-204 09/19/17 Soil
Silicon (WEN2)	249000.00	380.00	151.00	207.00	195.00	280000.00
Silicon (WEN3)	249000.00	380.00	151.00	207.00	195.00	280000.00
Silicon (WEN4)	249000.00	380.00	151.00	207.00	195.00	280000.00
Silicon (WEN5)	249000.00	380.00	151.00	207.00	195.00	280000.00
Silicon (WEN6)	249000.00	380.00	151.00	207.00	195.00	280000.00
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	09/13/17	SO-PTC-208-091317-12. 0-14.0-(42) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(45) PTC-208 09/13/17 Soil	SO-PTC-208-091317-2 .0-25.0-(41) PTC-208 09/13/17 Soil
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						
	1	I	1	i .	1	1



Table G-9: Sequential Extraction Results

Sample ID Site ID Sample Date Constituent Media	0-14.0-(41) : PTC-208 : 09/13/17	SO-PTC-208-091317-12. 0-14.0-(42) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(45) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23 .0-25.0-(41) PTC-208 09/13/17 Soil
Silicon (WEN6)						
Aluminum	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Aluminum (WEN2)	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Aluminum (WEN3)	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Aluminum (WEN4)	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Aluminum (WEN5)	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Aluminum (WEN6)	4.84	688.00	300.00	7650.00	27400.00 J-1	15.10
Arsenic (WEN2)	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Arsenic (WEN3)	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Arsenic (WEN4)	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Arsenic (WEN5)	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Arsenic (WEN6)	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Arsenic, Inorganic	0.52	0.17 J	2.47 U	2.04 J	4.70 U	1.00
Iron	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Iron (WEN2)	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Iron (WEN3)	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Iron (WEN4)	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Iron (WEN5)	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Iron (WEN6)	31.40	1790.00	1180.00	11500.00	24600.00	4.40
Manganese	1.80	11.20	5.09	102.00	514.00	0.68
Manganese (WEN2)	1.80	11.20	5.09	102.00	514.00	0.68
Manganese (WEN3)	1.80	11.20	5.09	102.00	514.00	0.68
Manganese (WEN4)	1.80	11.20	5.09	102.00	514.00	0.68
Manganese (WEN5)	1.80	11.20	5.09	102.00	514.00	0.68
Manganese (WEN6)	1.80	11.20	5.09	102.00	514.00	0.68
Silicon	338.00	181.00	207.00	204.00	272000.00	88.80
Blank calls indicate that no analysis was performed	I	I	I	I	I	I



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-14.0-(41) PTC-208 09/13/17	SO-PTC-208-091317-12. 0-14.0-(42) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-12. 0-14.0-(45) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23 .0-25.0-(41) PTC-208 09/13/17 Soil
Silicon (WEN2)	338.00	181.00	207.00	204.00	272000.00	88.80
Silicon (WEN3)	338.00	181.00	207.00	204.00	272000.00	88.80
Silicon (WEN4)	338.00	181.00	207.00	204.00	272000.00	88.80
Silicon (WEN5)	338.00	181.00	207.00	204.00	272000.00	88.80
Silicon (WEN6)	338.00	181.00	207.00	204.00	272000.00	88.80
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Table G-9: Sequential Extraction Results

<u> </u>						
Sample ID: Site ID: Sample Date: Constituent Media:	0-25.0-(42) PTC-208 09/13/17	SO-PTC-208-091317-23. 0-25.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(45) PTC-208 09/13/17 Soil	11	11
Sequential Extraction Metals (mg/kg)						
Aluminum (WEN2)						
Aluminum (WEN3)						
Aluminum (WEN4)						
Aluminum (WEN5)						
Aluminum (WEN6)						
Arsenic (WEN2)						
Arsenic (WEN3)						
Arsenic (WEN4)						
Arsenic (WEN5)						
Arsenic (WEN6)						
Arsenic, Inorganic						
Iron (WEN2)						
Iron (WEN3)						
Iron (WEN4)						
Iron (WEN5)						
Iron (WEN6)						
Manganese (WEN2)						
Manganese (WEN3)						
Manganese (WEN4)						
Manganese (WEN5)						
Manganese (WEN6)						
Silicon (WEN2)						
Silicon (WEN3)						
Silicon (WEN4)						
Silicon (WEN5)						



Table G-9: Sequential Extraction Results

ç Constituent	Sample ID: Site ID: Sample Date: Media:	09/13/17	SO-PTC-208-091317-23. 0-25.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(45) PTC-208 09/13/17 Soil	//	//
Silicon (WEN6)							
Aluminum		292.00	375.00	6770.00	33500.00 J-1		
Aluminum (WEN2)		292.00	375.00	6770.00	33500.00 J-1		
Aluminum (WEN3)		292.00	375.00	6770.00	33500.00 J-1		
Aluminum (WEN4)		292.00	375.00	6770.00	33500.00 J-1		
Aluminum (WEN5)		292.00	375.00	6770.00	33500.00 J-1		
Aluminum (WEN6)		292.00	375.00	6770.00	33500.00 J-1		
Arsenic (WEN2)		0.32	2.62 U	2.99 J	2.90 J		
Arsenic (WEN3)		0.32	2.62 U	2.99 J	2.90 J		
Arsenic (WEN4)		0.32	2.62 U	2.99 J	2.90 J	•	
Arsenic (WEN5)		0.32	2.62 U	2.99 J	2.90 J		
Arsenic (WEN6)		0.32	2.62 U	2.99 J	2.90 J	•	
Arsenic, Inorganic		0.32	2.62 U	2.99 J	2.90 J	•	
Iron		175.00	844.00	9900.00	21900.00	•	
Iron (WEN2)		175.00	844.00	9900.00	21900.00	•	
Iron (WEN3)		175.00	844.00	9900.00	21900.00	•	
Iron (WEN4)		175.00	844.00	9900.00	21900.00		
Iron (WEN5)		175.00	844.00	9900.00	21900.00		
Iron (WEN6)		175.00	844.00	9900.00	21900.00		
Manganese		3.39	4.97	64.20	420.00		
Manganese (WEN2)		3.39	4.97	64.20	420.00		
Manganese (WEN3)		3.39	4.97	64.20	420.00		
Manganese (WEN4)		3.39	4.97	64.20	420.00		
Manganese (WEN5)		3.39	4.97	64.20	420.00		
Manganese (WEN6)		3.39	4.97	64.20	420.00		
Silicon		147.00	287.00	132.00	260000.00		



Table G-9: Sequential Extraction Results

Sample ID: Site ID: Sample Date: Constituent Media:	0-25.0-(42) PTC-208 09/13/17	SO-PTC-208-091317-23. 0-25.0-(43) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(44) PTC-208 09/13/17 Soil	SO-PTC-208-091317-23. 0-25.0-(45) PTC-208 09/13/17 Soil	11	11
Silicon (WEN2)	147.00	287.00	132.00	260000.00		
Silicon (WEN3)	147.00	287.00	132.00	260000.00		
Silicon (WEN4)	147.00	287.00	132.00	260000.00		
Silicon (WEN5)	147.00	287.00	132.00	260000.00		
Silicon (WEN6)	147.00	287.00	132.00	260000.00		
Sequential Extraction Conventionals						
Total Solid						
Total Solid						



Constituent	Sample ID: Site ID: Sample Date: Media:	10/03/17	SD-122+60-0-SED-10031 7-0-0.33-(82) 122+60-0-SED 10/03/17 Sediment	SD-122+60-0-SED-10031 7-0-0.33-(83) 122+60-0-SED 10/03/17 Sediment	SD-122+60-0-SED-10031 7-0-0.33-(84) 122+60-0-SED 10/03/17 Sediment	SD-122+60-0-SED-10031 7-0-0.33-(91) 122+60-0-SED 10/03/17 Sediment	SD-122+60-0-SED-1003 17-0-0.33-(92) 122+60-0-SED 10/03/17 Sediment
BAT Conventionals ()							
рН		7.89	8.18	8.13	8.34	8.28	8.22
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-		0.76	2.63	16.20	94.70		
Arsenite Ion - As(O3)3-		•	•			1.01	2.60
Sum of arsenic species		0.76	2.63	16.20	94.70	1.01	2.60
BAT Conventionals ()							
рН							
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-							
Arsenite Ion - As(O3)3-							
Sum of arsenic species		•	•				
BAT Conventionals (%-W)							
Total Solids		97.25	97.25	97.25	97.25	97.25	97.25
Total Solids							



Constituent	Sample ID: Site ID: Sample Date: Media:	SD-122+60-0-SED-10031 7-0-0.33-(93) 122+60-0-SED 10/03/17 Sediment	SD-122+60-0-SED-10031 7-0-0.33-(94) 122+60-0-SED 10/03/17 Sediment	SD-125+00-ST1-SED-10 0417-0-0.33-(81) 125+00-ST1-SED 10/04/17 Sediment	SD-125+00-ST1-SED-10 0417-0-0.33-(82) 125+00-ST1-SED 10/04/17 Sediment	SD-125+00-ST1-SED-10 0417-0-0.33-(83) 125+00-ST1-SED 10/04/17 Sediment	SD-125+00-ST1-SED-1 00417-0-0.33-(84) 125+00-ST1-SED 10/04/17 Sediment
BAT Conventionals ()							
рН		8.21	8.21	8.61	8.66	8.63	8.64
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-				2.82	7.39	33.60	137.00
Arsenite Ion - As(O3)3-		18.50	125.00				
Sum of arsenic species		18.50	125.00	2.82	7.39	33.60	137.00
BAT Conventionals ()							
рН							
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-							
Arsenite Ion - As(O3)3-							
Sum of arsenic species							
BAT Conventionals (%-W)							
Total Solids		97.25	97.25	98.83	98.83	98.83	98.83
Total Solids							



	Sample ID: Site ID: ample Date: Media:	0417-0-0.33-(91) 125+00-ST1-SED 10/04/17	SD-125+00-ST1-SED-10 0417-0-0.33-(92) 125+00-ST1-SED 10/04/17 Sediment	SD-125+00-ST1-SED-10 0417-0-0.33-(93) 125+00-ST1-SED 10/04/17 Sediment	SD-125+00-ST1-SED-10 0417-0-0.33-(94) 125+00-ST1-SED 10/04/17 Sediment	SO-PTC-001-091517-11. 5-13.5-(85) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11 .5-13.5-(86) PTC-001 09/15/17 Soil
BAT Conventionals ()							
рН		8.68	8.63	8.61	8.69		
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-							
Arsenite Ion - As(O3)3-		3.18	6.82	35.80	169.00		
Sum of arsenic species		3.18	6.82	35.80	169.00		
BAT Conventionals ()							
рН						9.05	9.04
BAT Metals (mg/kg)							
Arsenate Ion - As(O4)3-						1.83	6.25
Arsenite Ion - As(O3)3-							
Sum of arsenic species						1.83	6.25
BAT Conventionals (%-W)							
Total Solids		98.83	98.83	98.83	98.83		
Total Solids						95.14	95.14



Sample ID: Site ID: Sample Date: Constituent Media:	5-13.5-(87) PTC-001 09/15/17	SO-PTC-001-091517-11. 5-13.5-(88) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(95) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(96) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11. 5-13.5-(97) PTC-001 09/15/17 Soil	SO-PTC-001-091517-11 .5-13.5-(98) PTC-001 09/15/17 Soil
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-						
Sum of arsenic species						
BAT Conventionals ()						
рН	9.03	9.03	9.03	9.06	8.81	9.03
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-	25.40	128.00				
Arsenite Ion - As(O3)3-			2.62	6.47	29.00	147.00
Sum of arsenic species	25.40	128.00	2.62	6.47	29.00	147.00
BAT Conventionals (%-W)	!					!
Total Solids						
Total Solids	95.14	95.14	95.14	95.14	95.14	95.14



Sample ID Site ID Sample Date Constituent Media	4.5-(85) PTC-001 09/15/17	SO-PTC-001-091517-2.5- 4.5-(86) PTC-001 09/15/17 Soil	SO-PTC-001-091517-2.5- 4.5-(87) PTC-001 09/15/17 Soil	SO-PTC-001-091517-2.5- 4.5-(88) PTC-001 09/15/17 Soil	SO-PTC-001-091517-2.5- 4.5-(95) PTC-001 09/15/17 Soil	SO-PTC-001-091517-2. 5-4.5-(96) PTC-001 09/15/17 Soil
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-						
Sum of arsenic species						
BAT Conventionals ()						
рН	9.11	9.08	9.02	9.10	9.07	9.05
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-	1.58	3.51	15.30	80.40		
Arsenite Ion - As(O3)3-					1.98	5.05
Sum of arsenic species	1.58	3.51	15.30	80.40	1.98	5.05
BAT Conventionals (%-W)						
Total Solids						
Total Solids	98.62	98.62	98.62	98.62	98.62	98.62



Sample ID Site ID Sample Date Constituent Media	4.5-(97) : PTC-001 : 09/15/17	SO-PTC-001-091517-2.5- 4.5-(98) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(81) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(82) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(83) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23 .0-25.0-(84) PTC-001 09/15/17 Soil
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-			•			
Sum of arsenic species			•			
BAT Conventionals ()						
рН	9.08	9.06	8.41	8.53	8.49	8.21
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-			2.26	6.50	38.60	167.00
Arsenite Ion - As(O3)3-	28.60	144.00	•			
Sum of arsenic species	28.60	144.00	2.26	6.50	38.60	167.00
BAT Conventionals (%-W)		!	!			
Total Solids						
Total Solids	98.62	98.62	99.49	99.49	99.49	99.49



Sample II Site II Sample Dat Constituent Medi	0-25.0-(85) PTC-001 09/15/17	SO-PTC-001-091517-23. 0-25.0-(86) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(87) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(88) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(88)-RE PTC-001 09/15/17 Soil	SO-PTC-001-091517-23 .0-25.0-(91) PTC-001 09/15/17 Soil
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-						
Sum of arsenic species			•		•	
BAT Conventionals ()						
рН	9.63	9.63	9.63	9.61	9.57	8.78
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-	3.31	8.14	42.00	190.00	178.00	
Arsenite Ion - As(O3)3-			•		•	2.47
Sum of arsenic species	3.31	8.14	42.00	190.00	178.00	2.47
BAT Conventionals (%-W)			!		!	!
Total Solids						
Total Solids	99.49	99.49	99.49	99.49	99.49	99.49



Sample ID Site ID Sample Date Constituent Media	0-25.0-(92) PTC-001 09/15/17	SO-PTC-001-091517-23. 0-25.0-(93) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(94) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(95) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23. 0-25.0-(96) PTC-001 09/15/17 Soil	SO-PTC-001-091517-23 .0-25.0-(97) PTC-001 09/15/17 Soil
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-						
Sum of arsenic species						
BAT Conventionals ()						
рН	8.53	8.50	8.59	9.62	9.62	9.62
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-	6.66	37.30	179.00	3.31	8.04	41.10
Sum of arsenic species	6.66	37.30	179.00	3.31	8.04	41.10
BAT Conventionals (%-W)						
Total Solids						
Total Solids	99.49	99.49	99.49	99.49	99.49	99.49



Sample ID: Site ID: Sample Date: Constituent Media:	0-25.0-(98) PTC-001	SO-PTC-002-091317-23. 0-25.0-(85) PTC-002 09/13/17 Soil	SO-PTC-002-091317-23. 0-25.0-(86) PTC-002 09/13/17 Soil	SO-PTC-002-091317-23. 0-25.0-(87) PTC-002 09/13/17 Soil	SO-PTC-002-091317-23. 0-25.0-(88) PTC-002 09/13/17 Soil	11
BAT Conventionals ()						
рН						
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-						
Arsenite Ion - As(O3)3-						
Sum of arsenic species						
BAT Conventionals ()						
pH	9.63	9.62	9.65	9.67	9.65	
BAT Metals (mg/kg)						
Arsenate Ion - As(O4)3-		3.33	8.44	44.60	175.00	
Arsenite Ion - As(O3)3-	184.00					
Sum of arsenic species	184.00	3.33	8.44	44.60	175.00	
BAT Conventionals (%-W)						
Total Solids						
Total Solids	99.49	99.67	99.67	99.67	99.67	

Appendix H



2017 Dissolved Arsenite Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



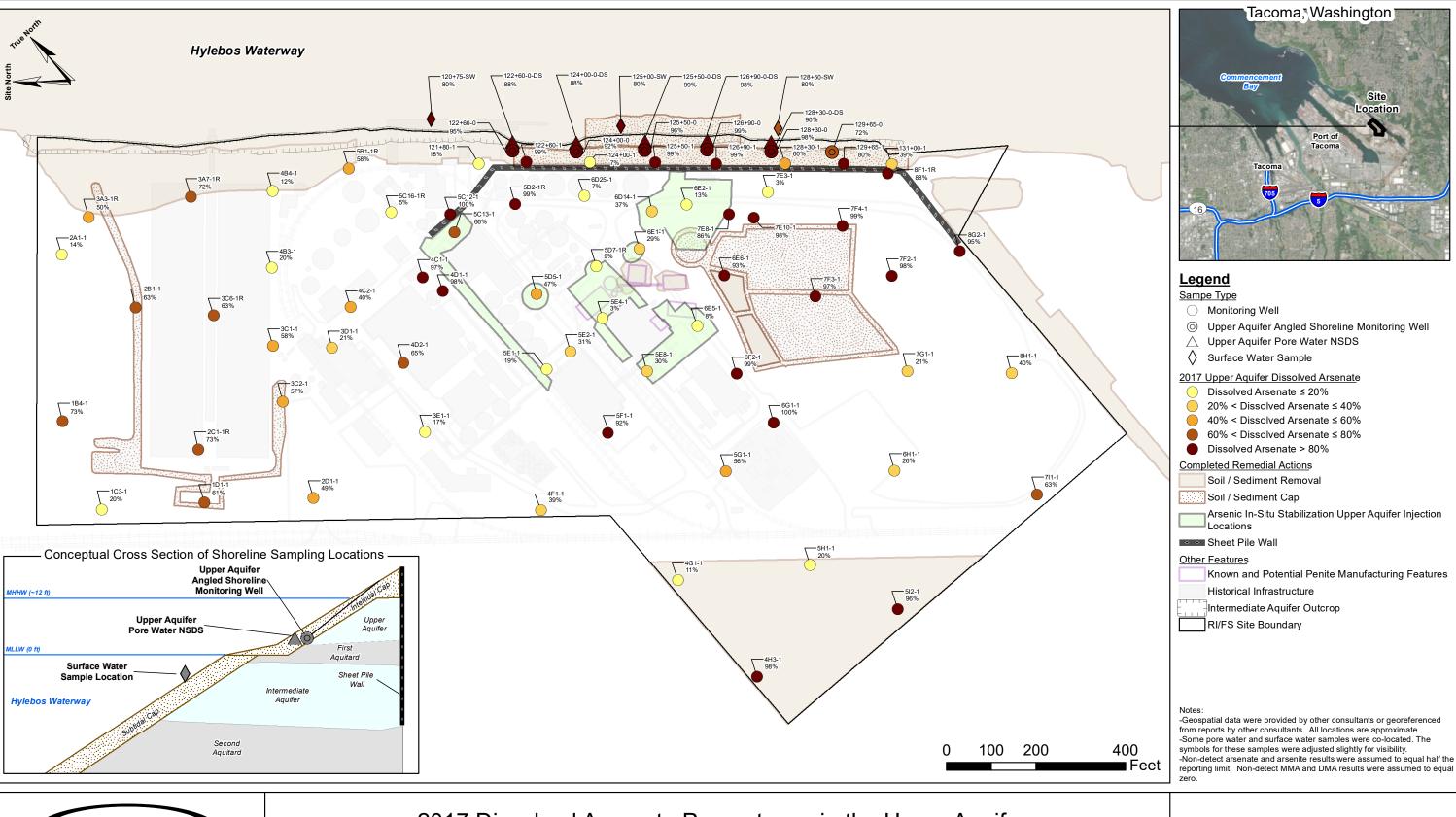
2017 Dissolved Arsenite Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Arsenate Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

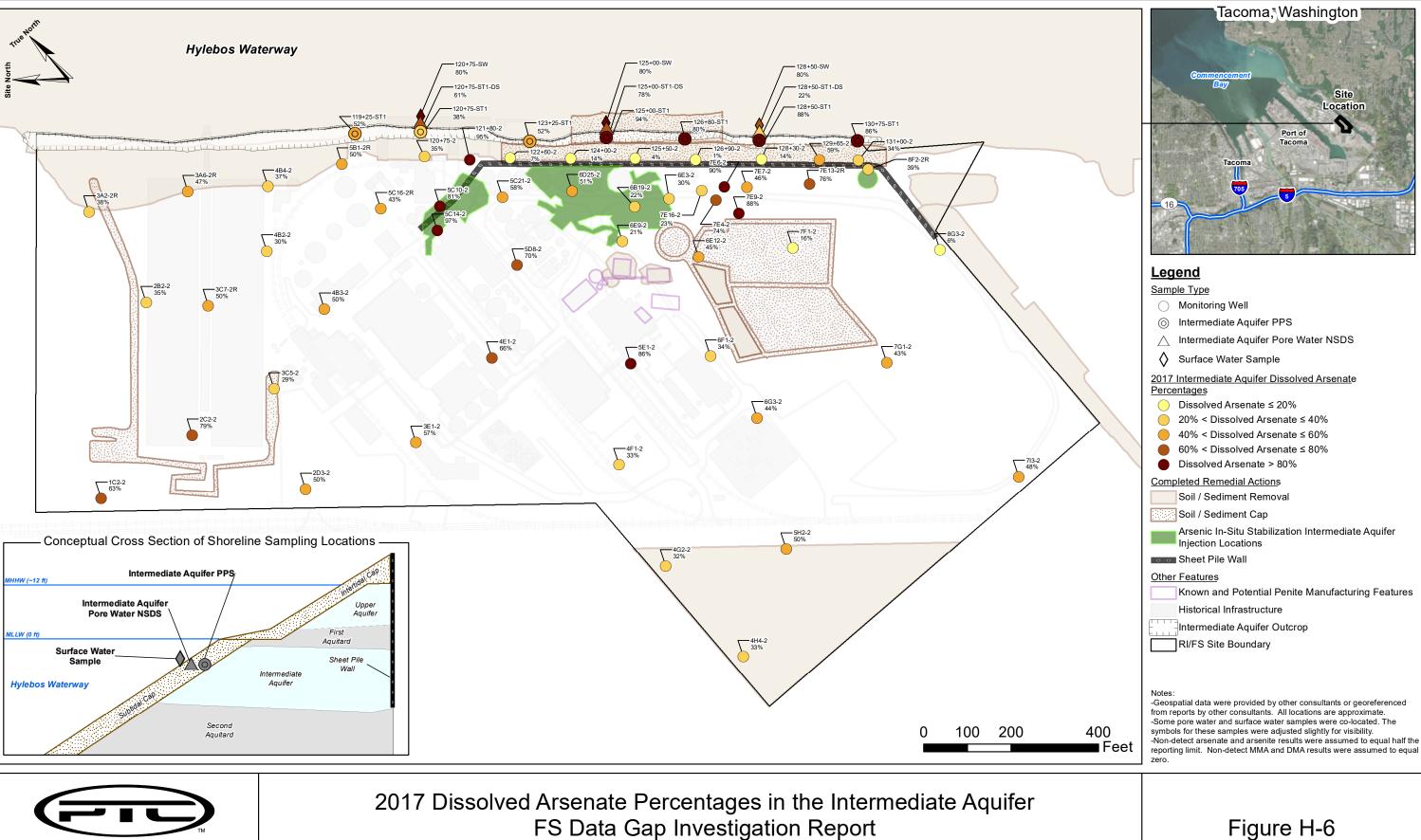


2017 Dissolved Arsenate Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site





2017 Dissolved Arsenate Percentages in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site





FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Bromide Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Bromide Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

Former Arkema Manufacturing Site

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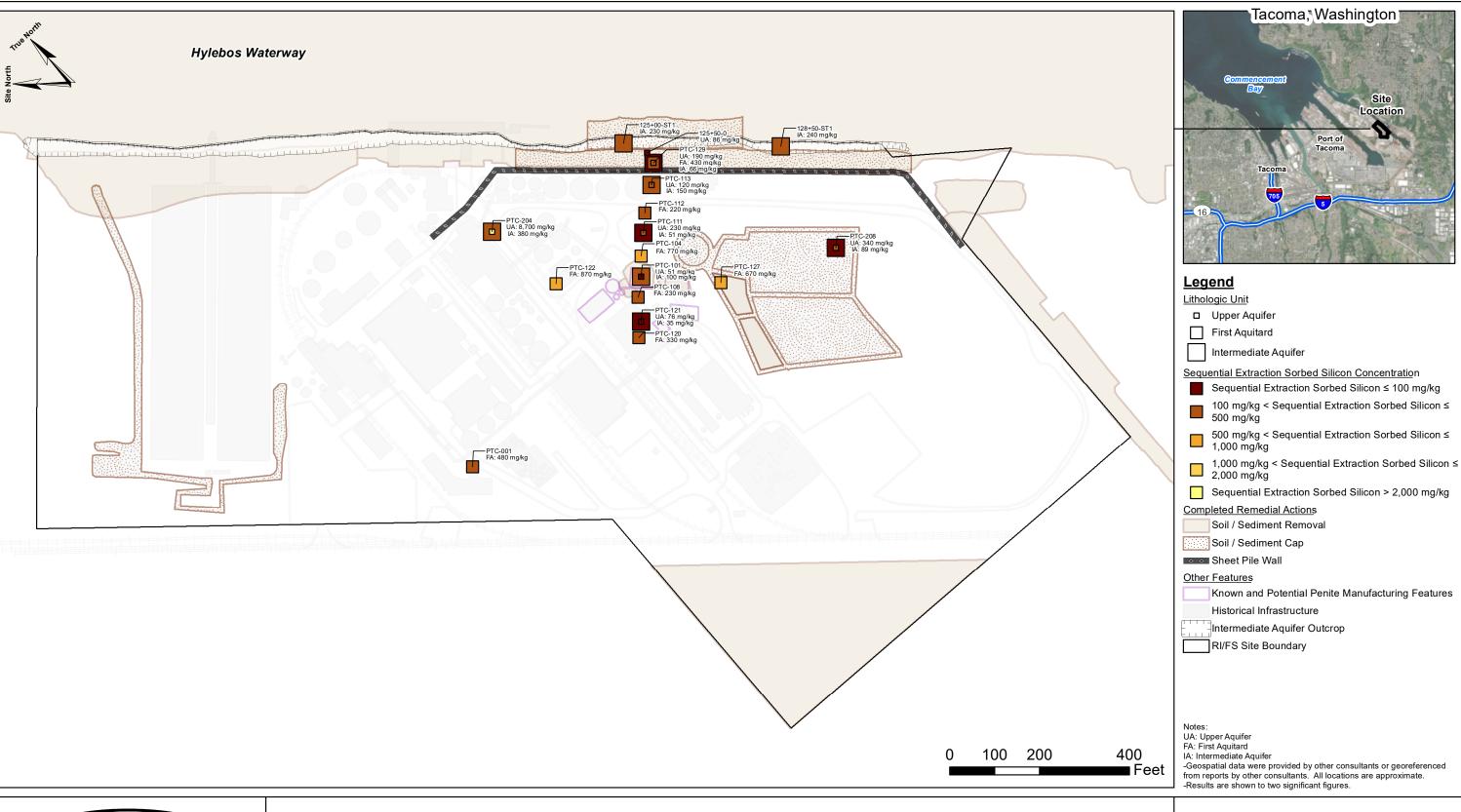
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2017 Field Dissolved Oxygen Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

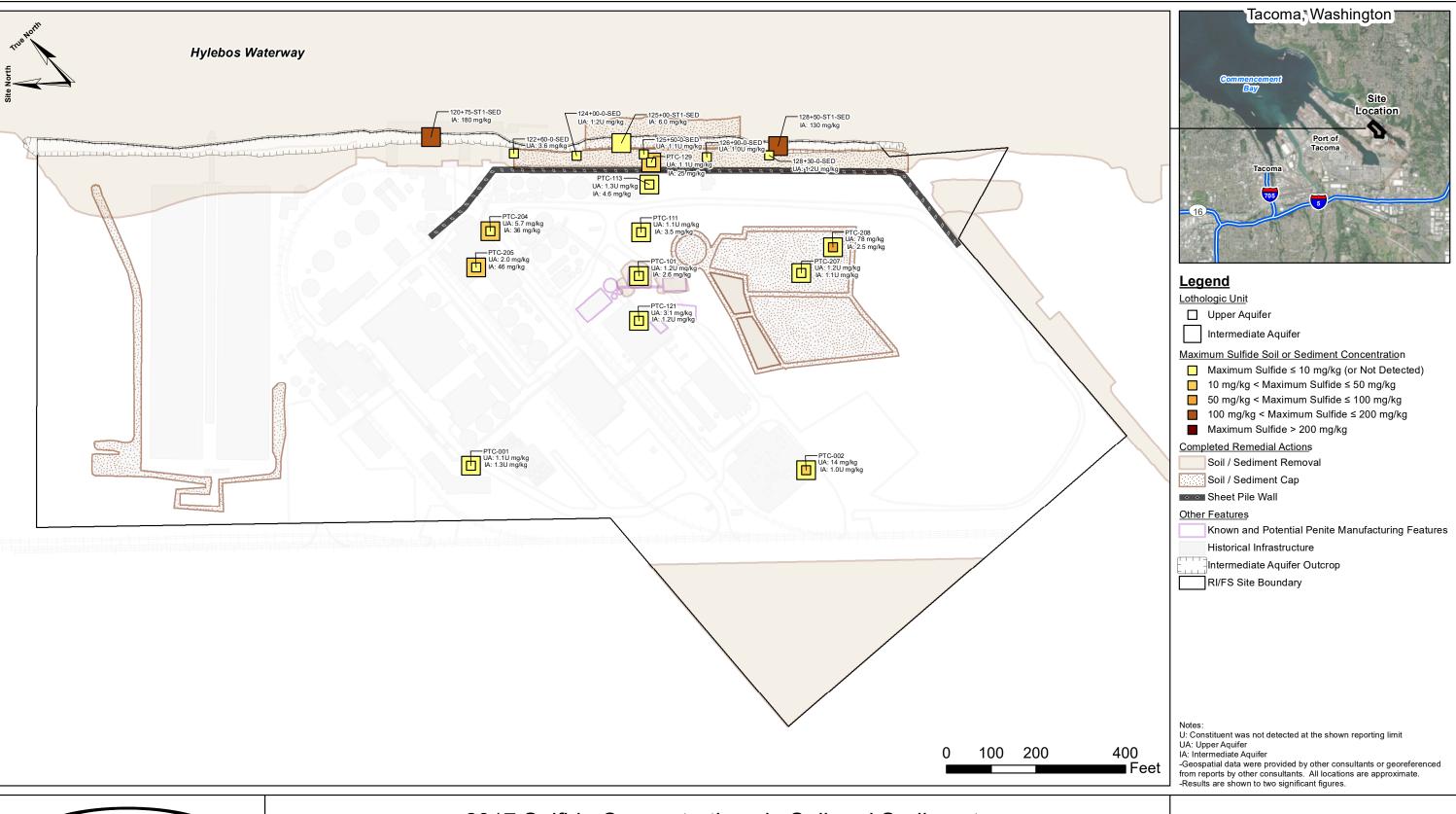


2017 Ortho-phosphorus Concentrations in Soil and Sediment FS Data Gap Investigation Report Former Arkema Manufacturing Site





Sequential Extraction Sorbed Silicon Concentrations for Soil and Sediment FS Data Gap Investigation Report Former Arkema Manufacturing Site





2017 Sulfide Concentrations in Soil and Sediment FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Field Sulfide Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Field Sulfide Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Copper Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Copper Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Lead Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

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2017 Dissolved Lead Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Mercury Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



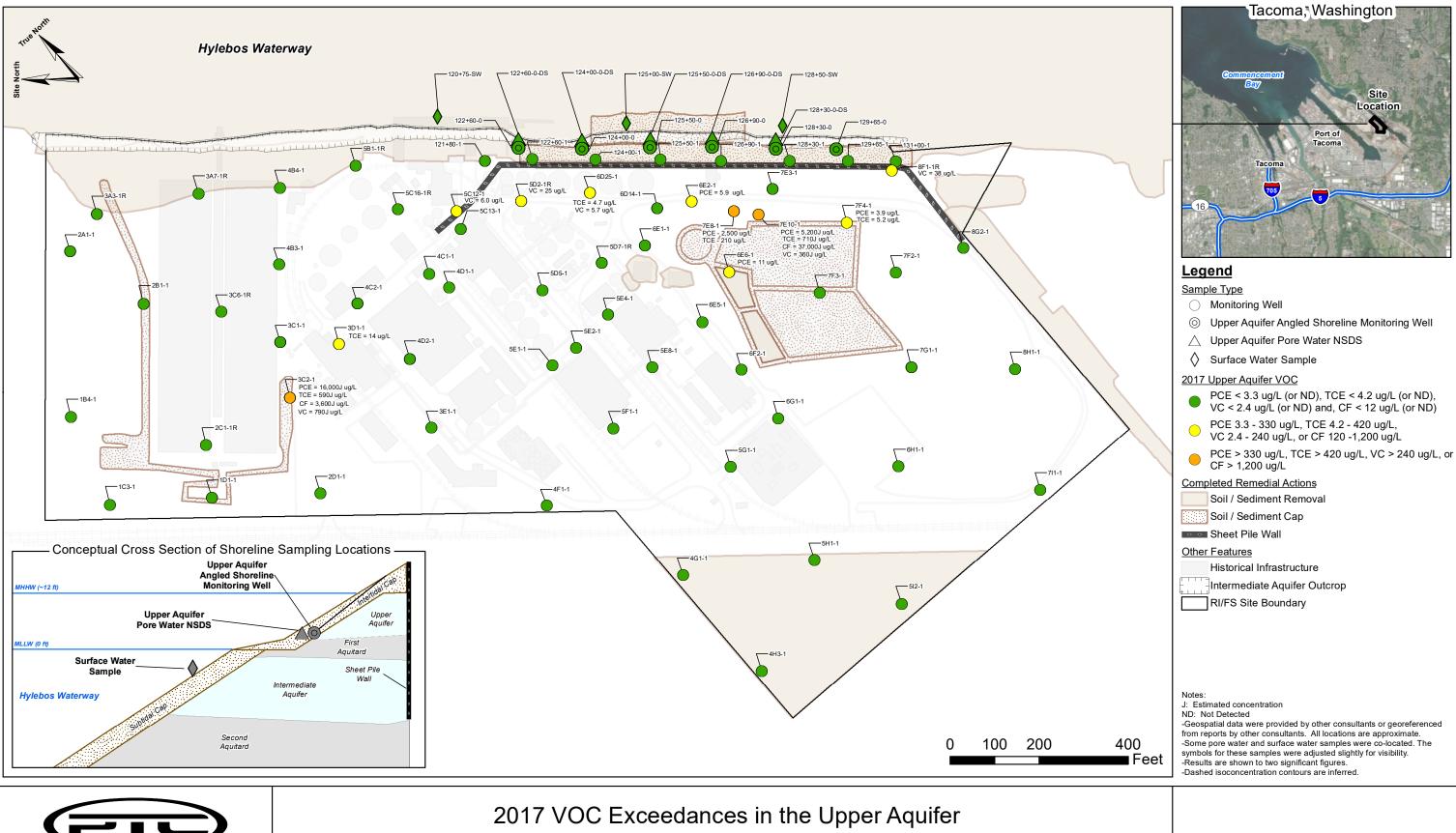
2017 Dissolved Mercury Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Nickel Concentrations in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



2017 Dissolved Nickel Concentrations in the Intermediate Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site



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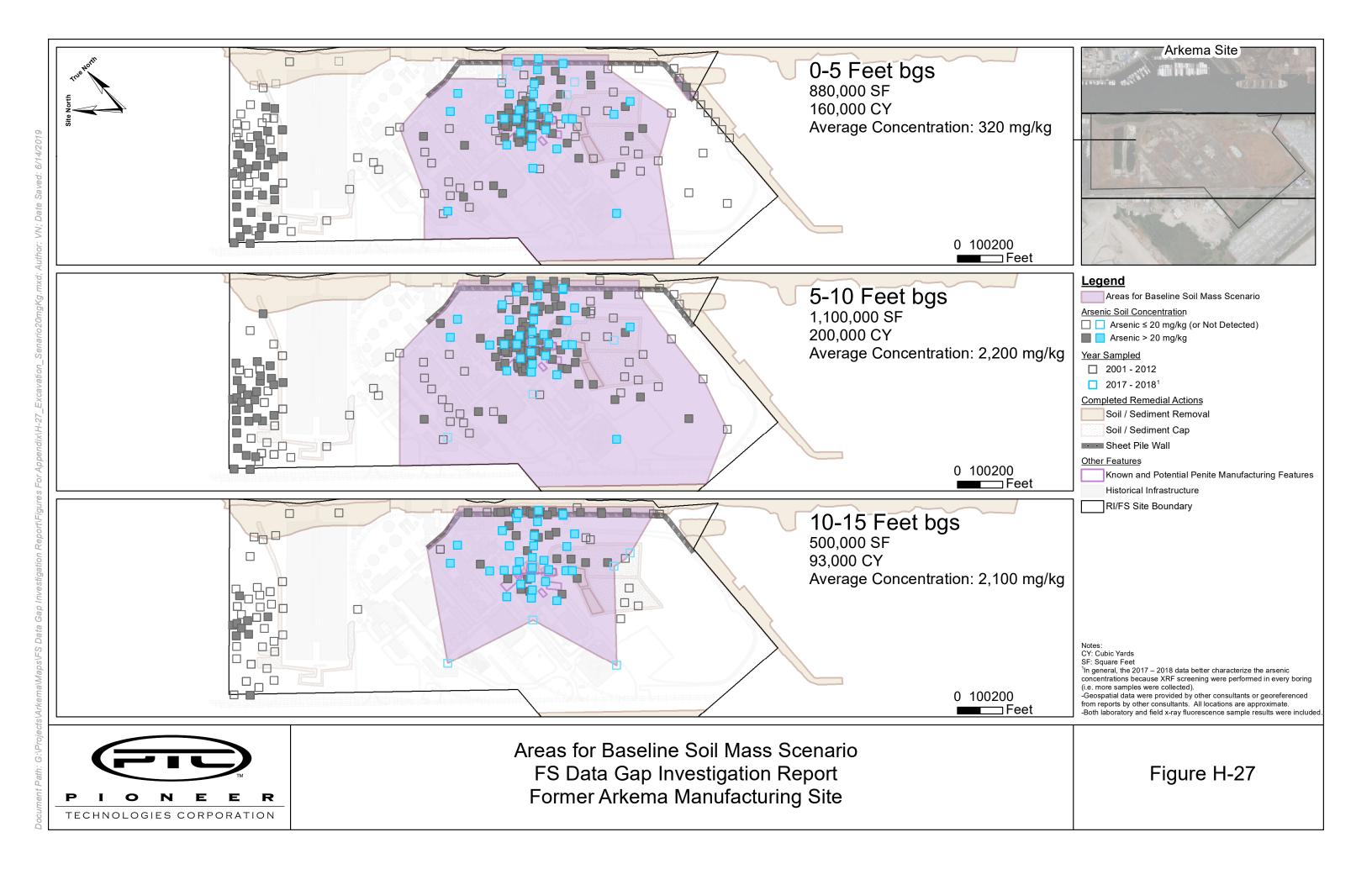
2017 VOC Exceedances in the Upper Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

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FS Data Gap Investigation Report Former Arkema Manufacturing Site

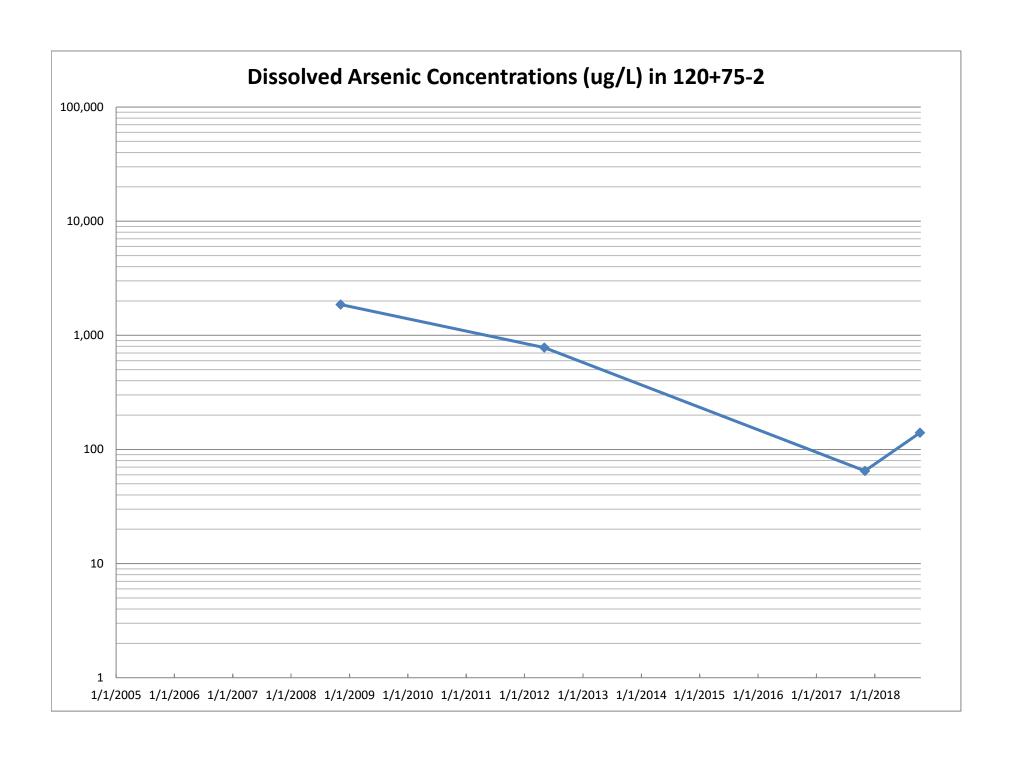


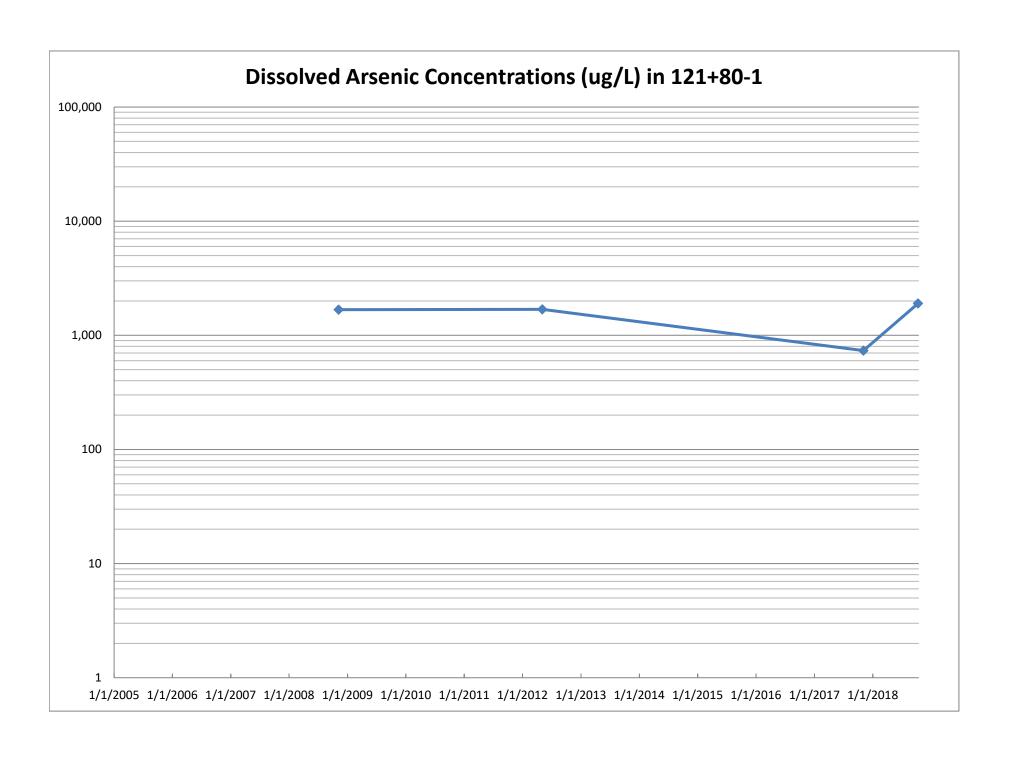
2017 Non-Arsenic Exceedances in the Deep Aquifer FS Data Gap Investigation Report Former Arkema Manufacturing Site

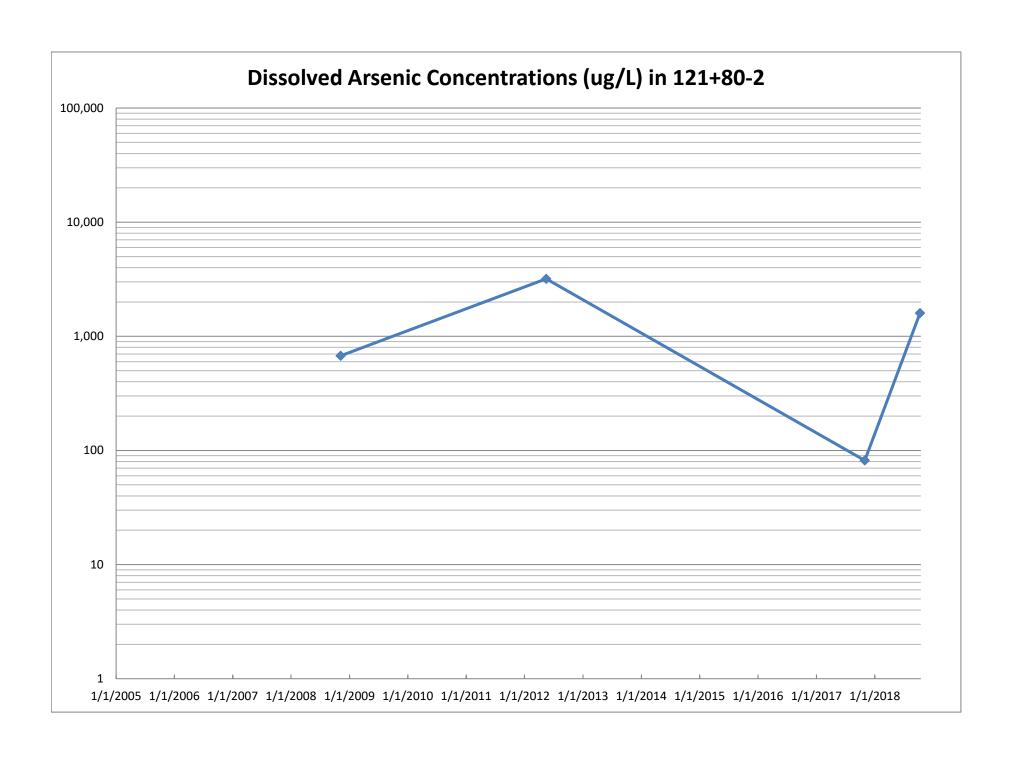


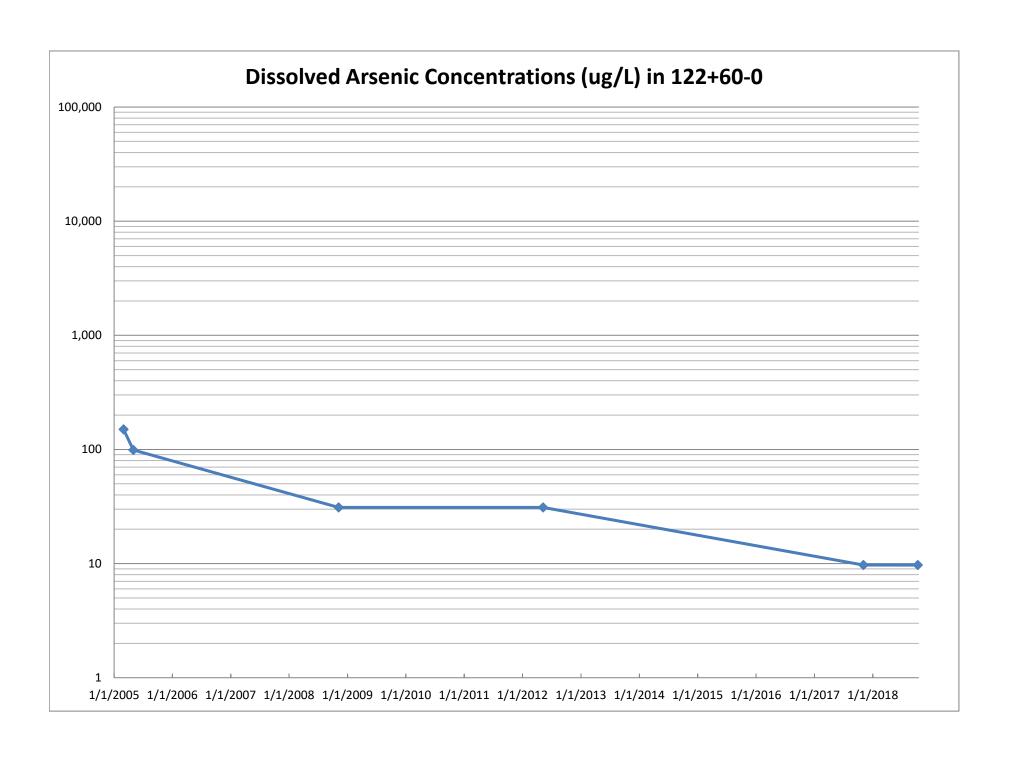
Appendix I

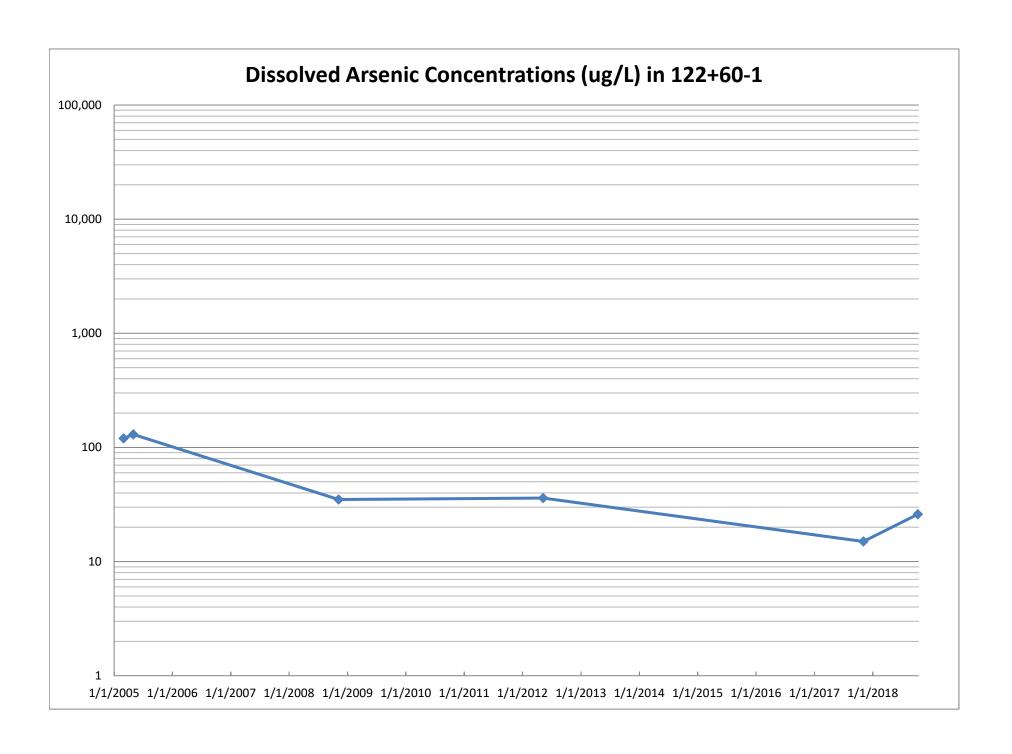
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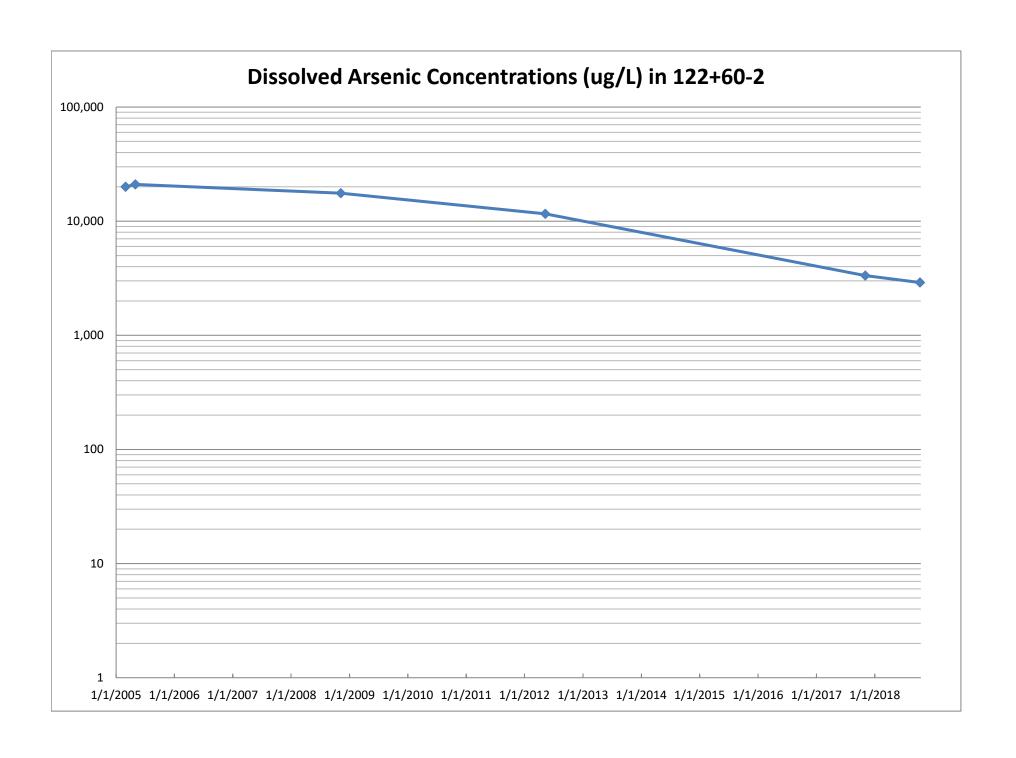


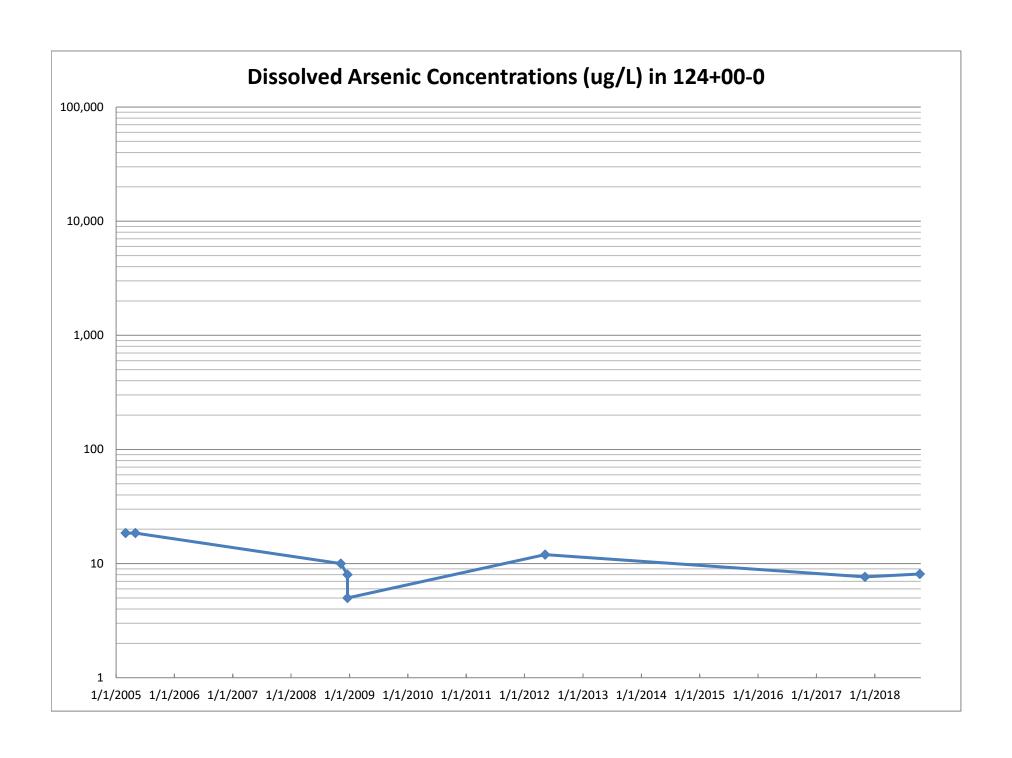


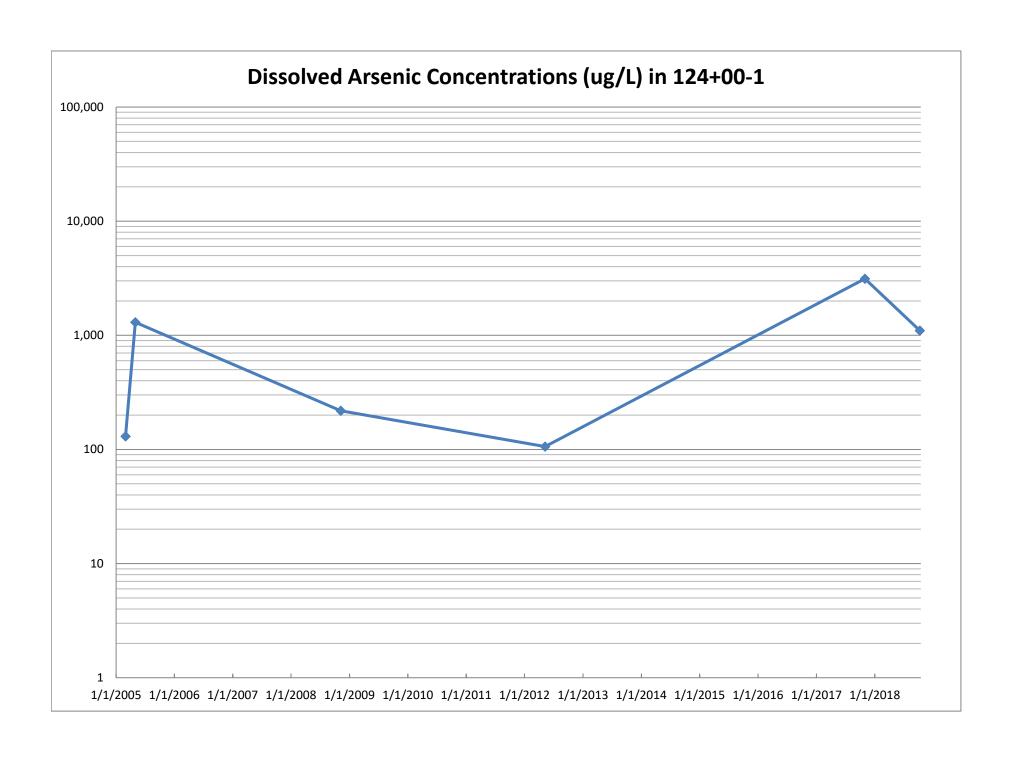


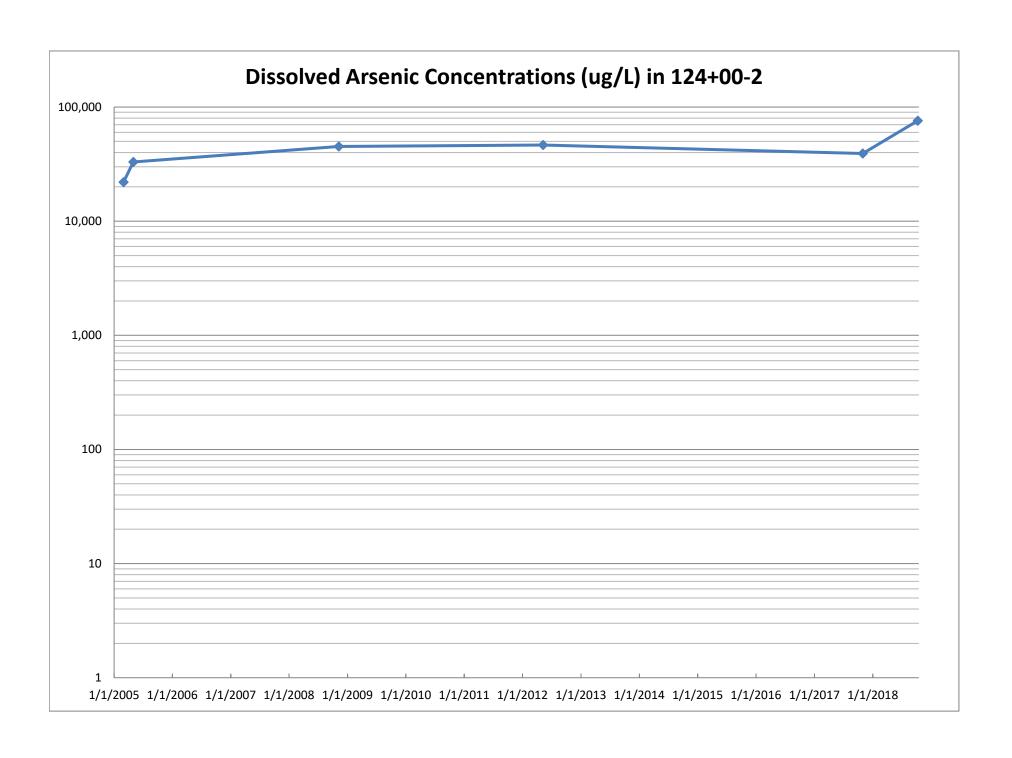


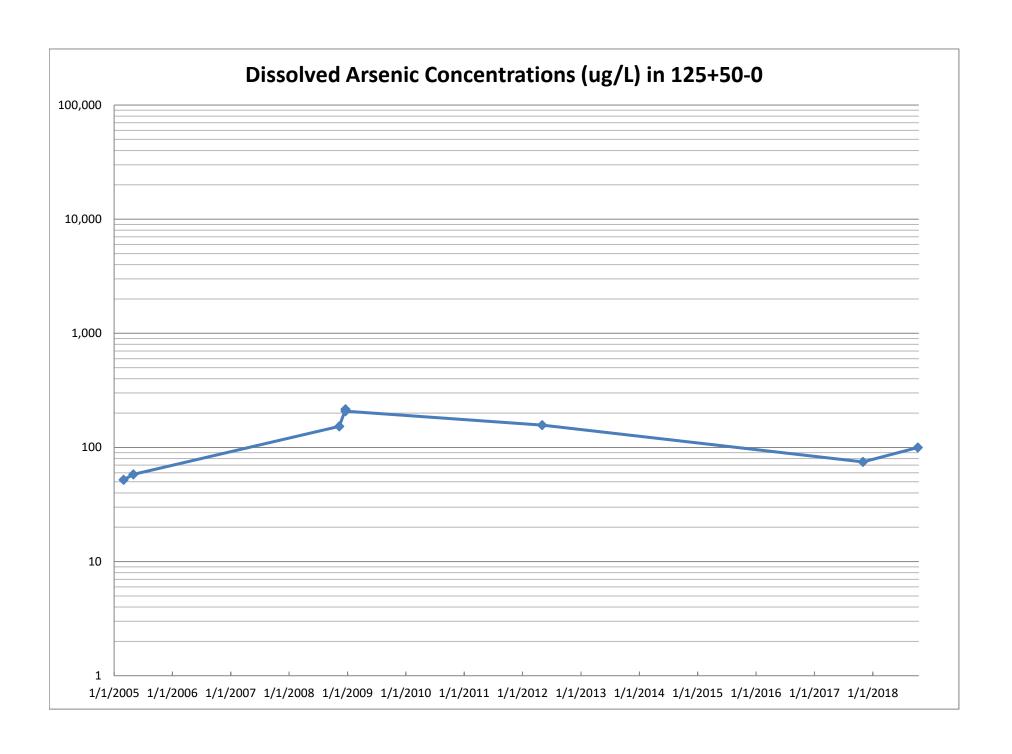


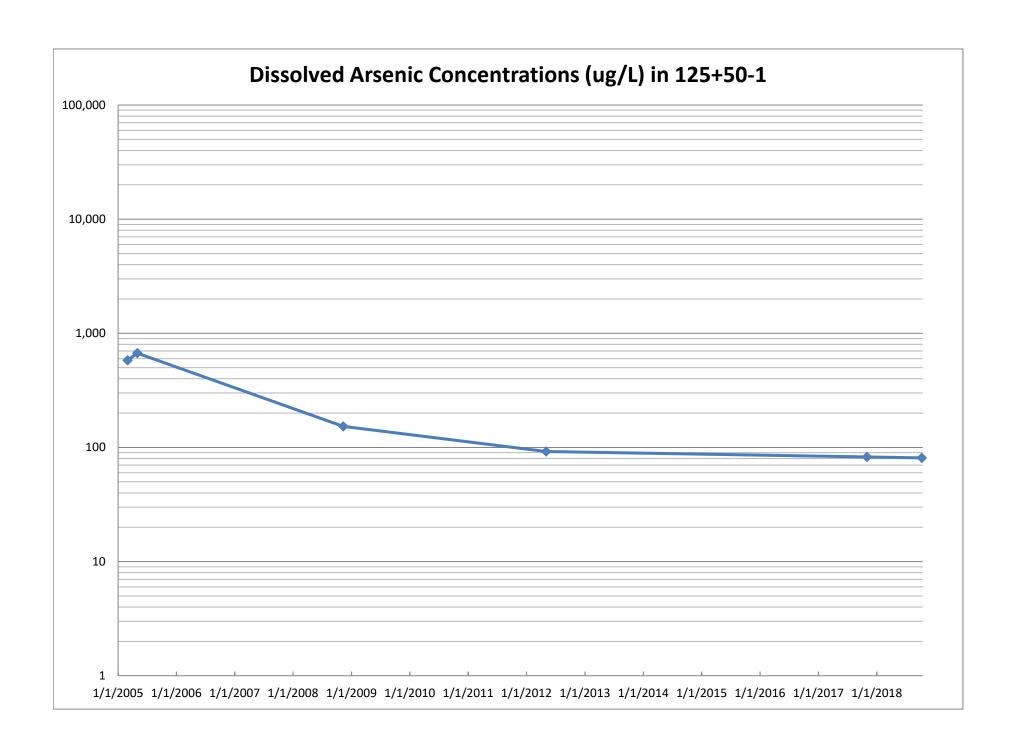


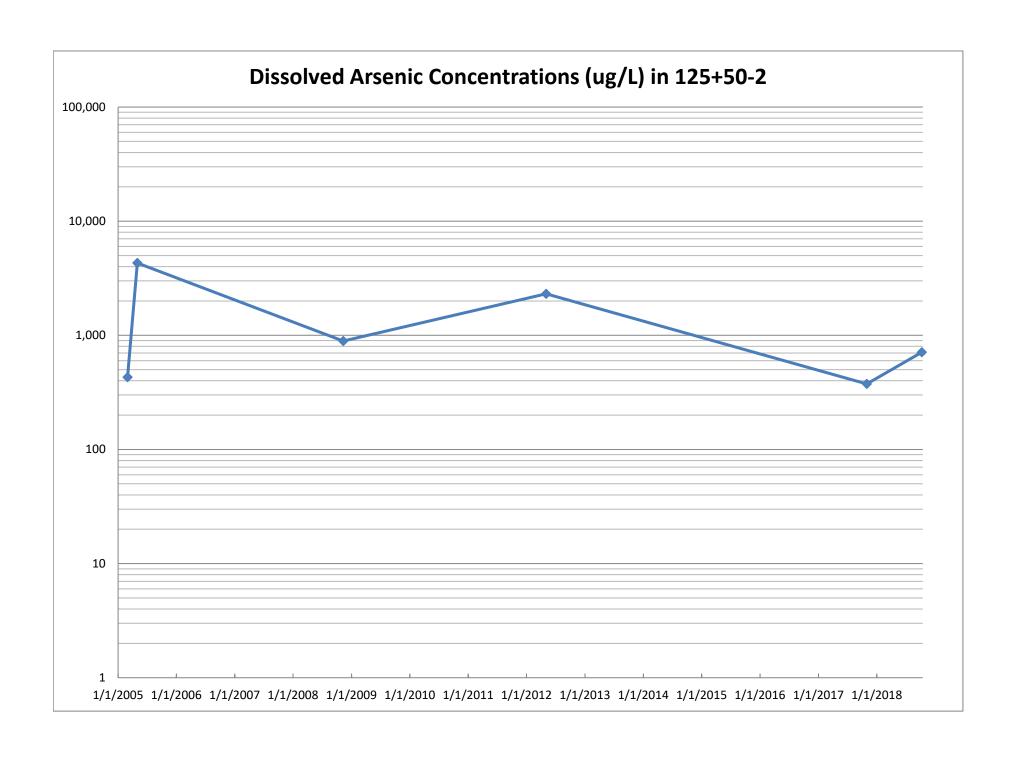




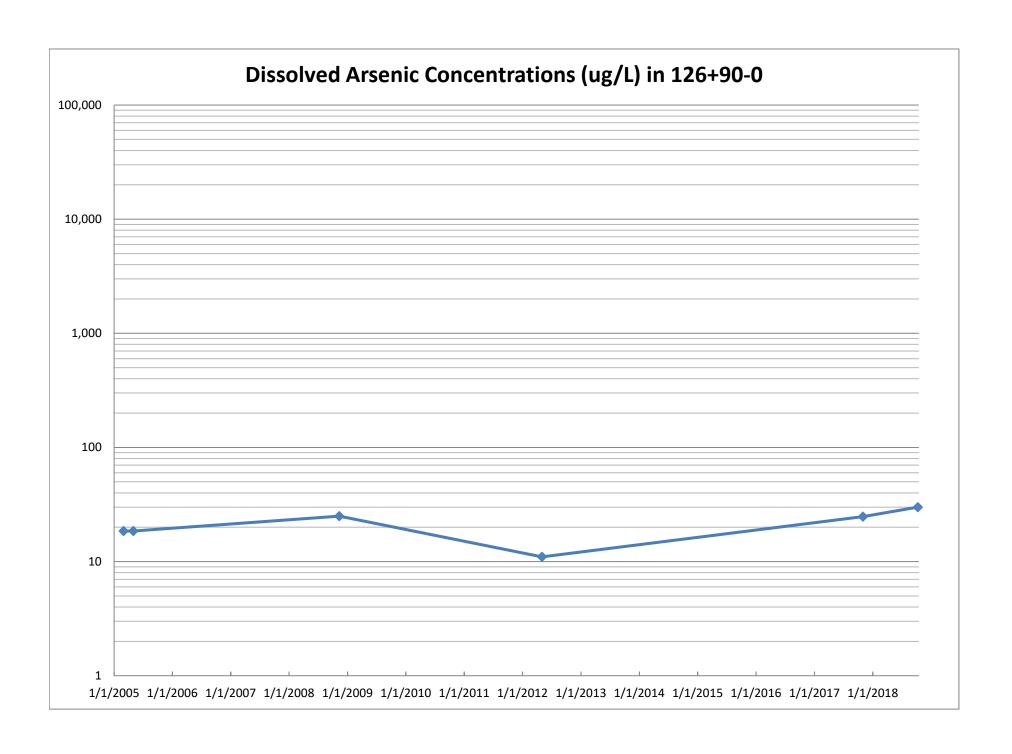


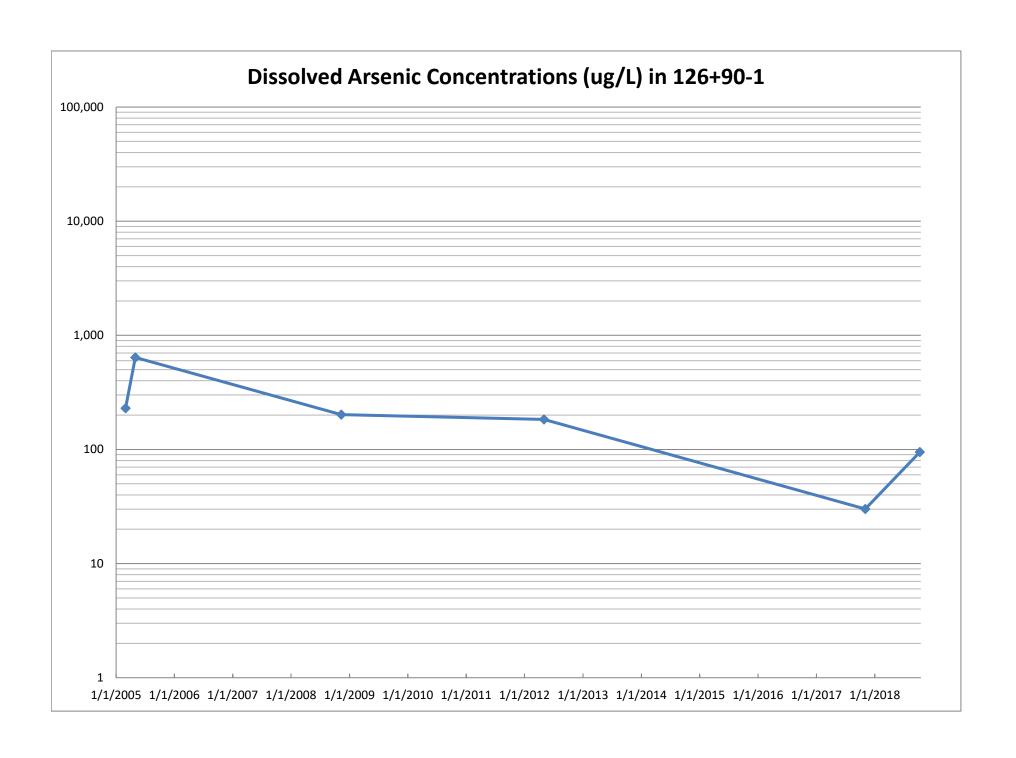


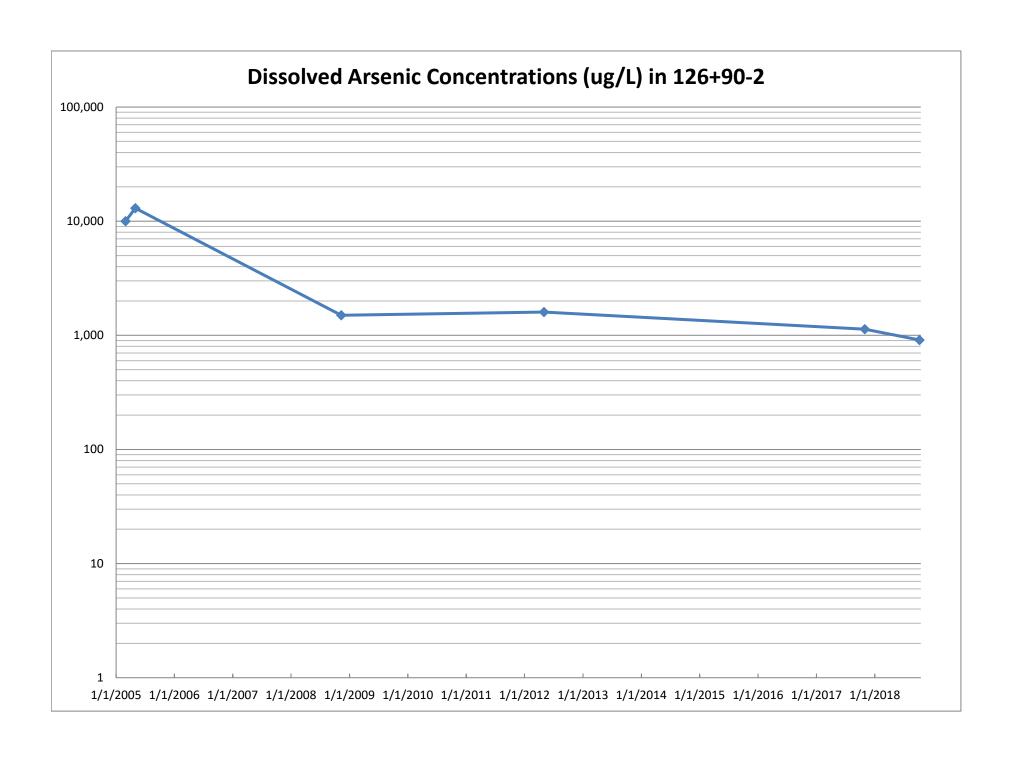


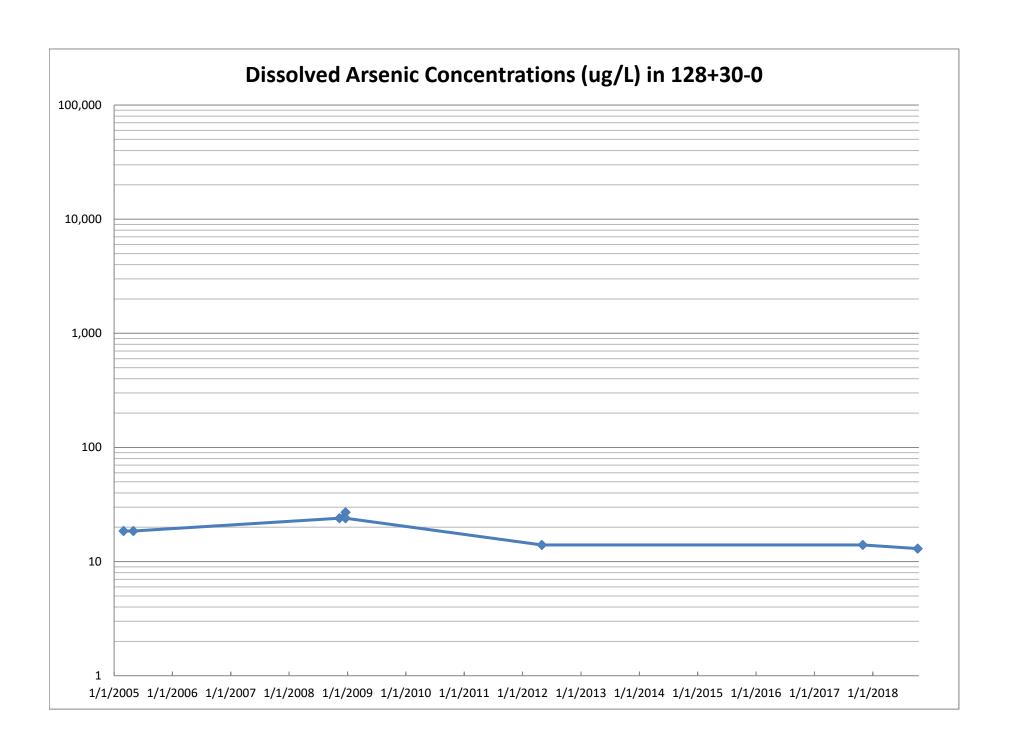


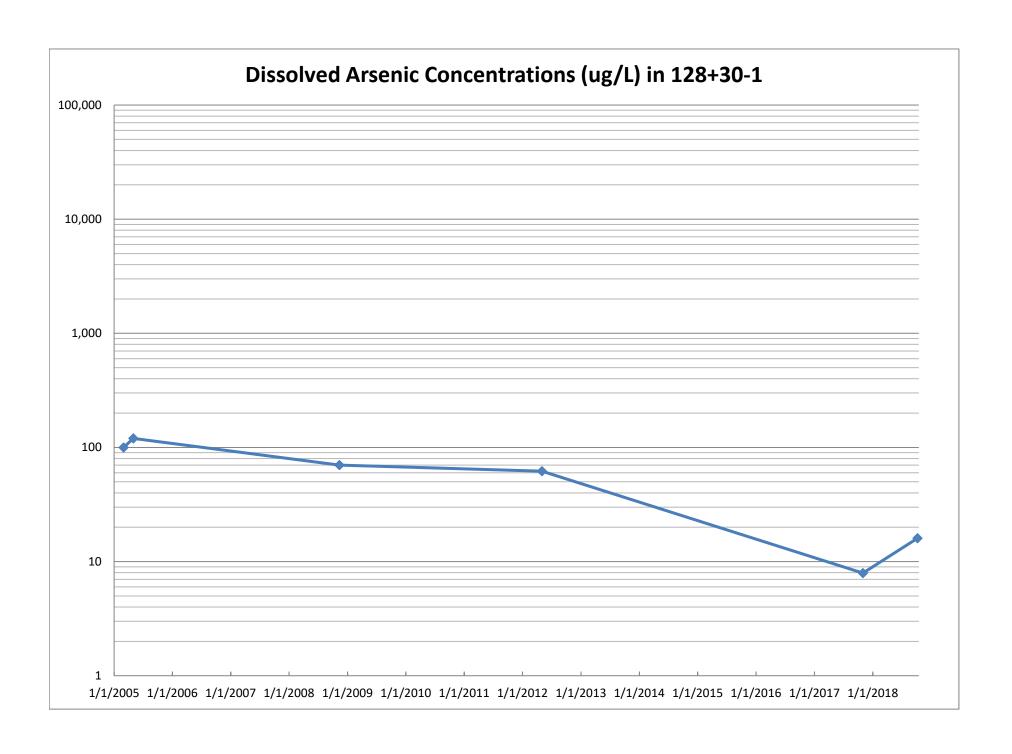
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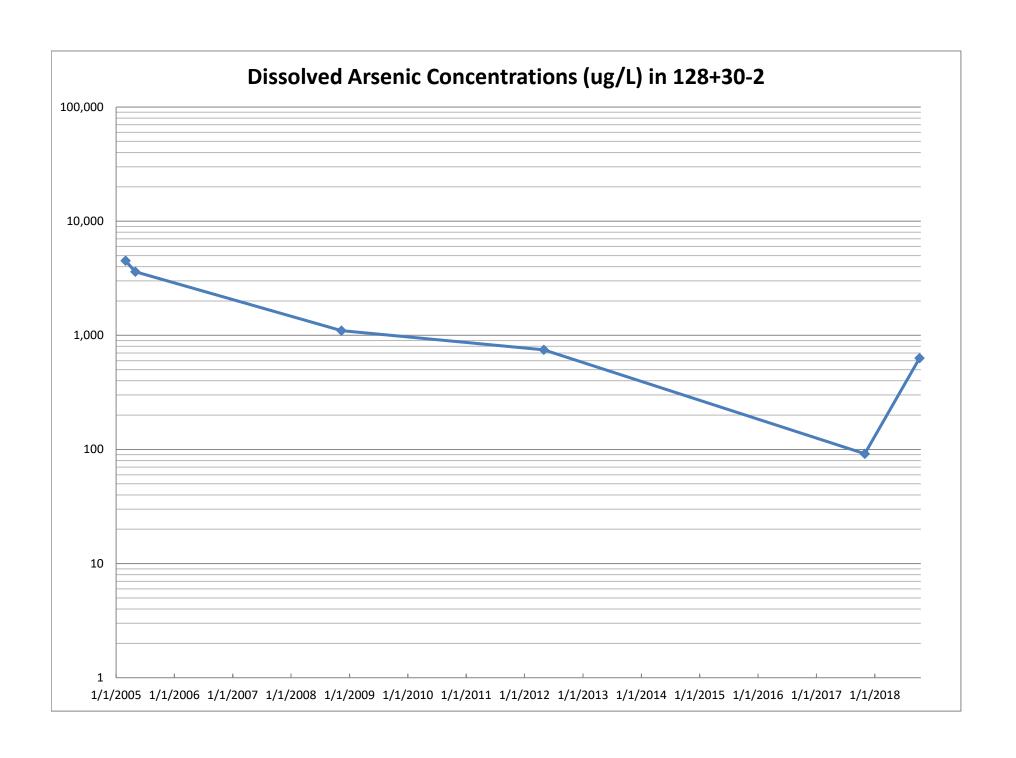


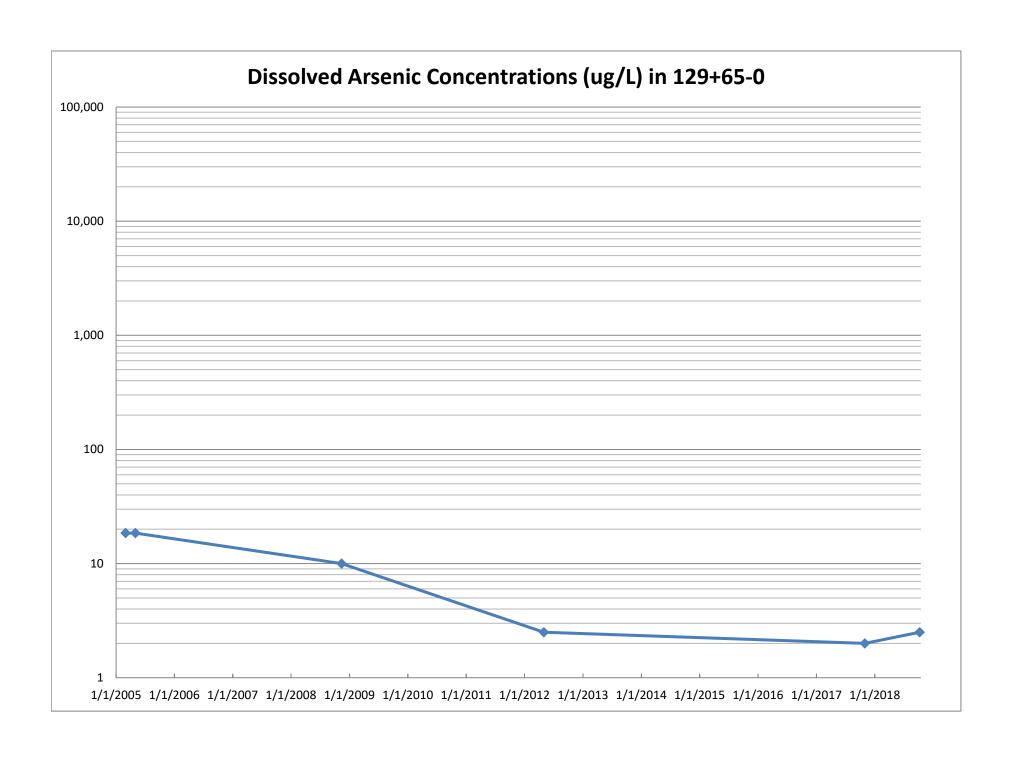


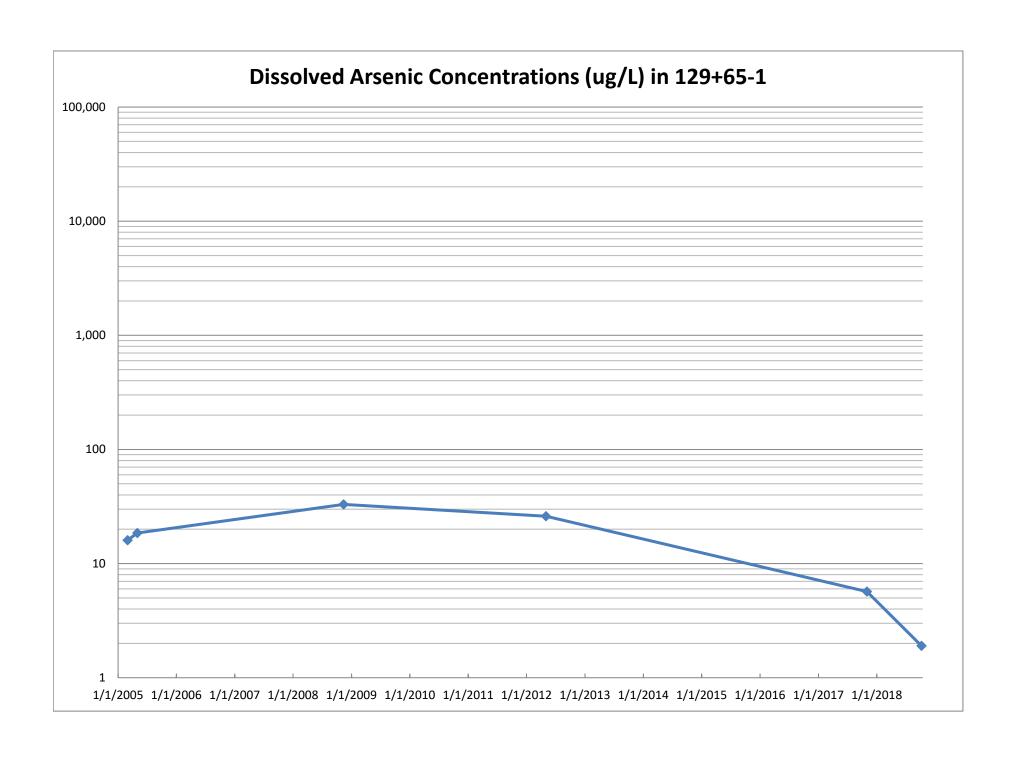


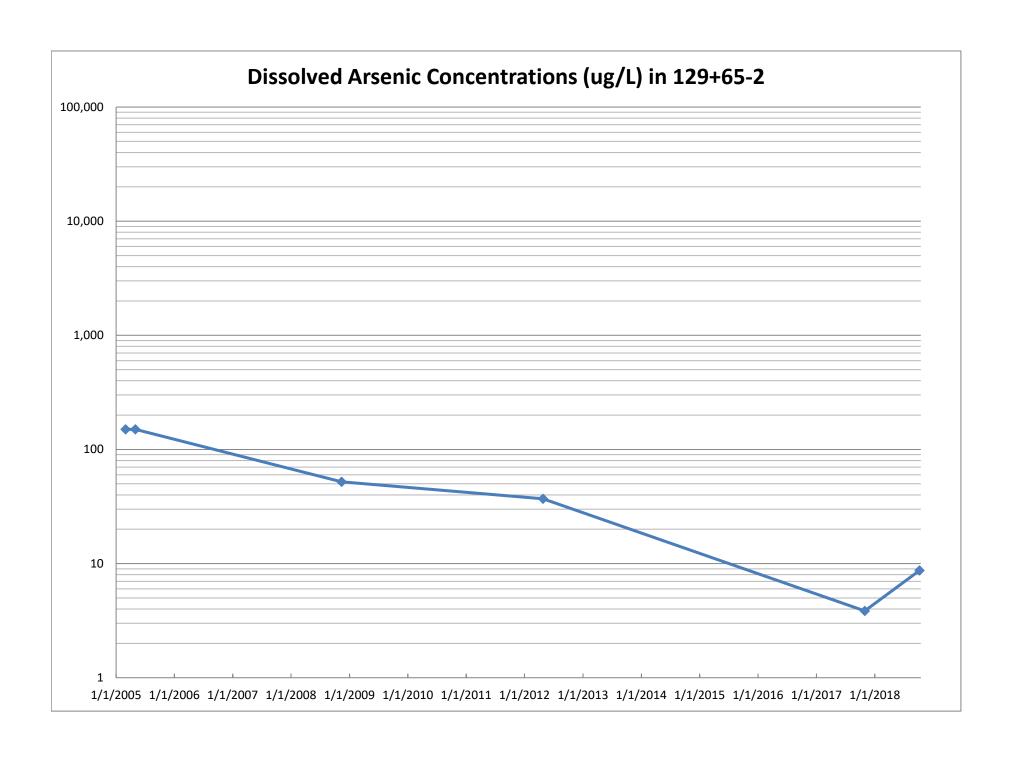


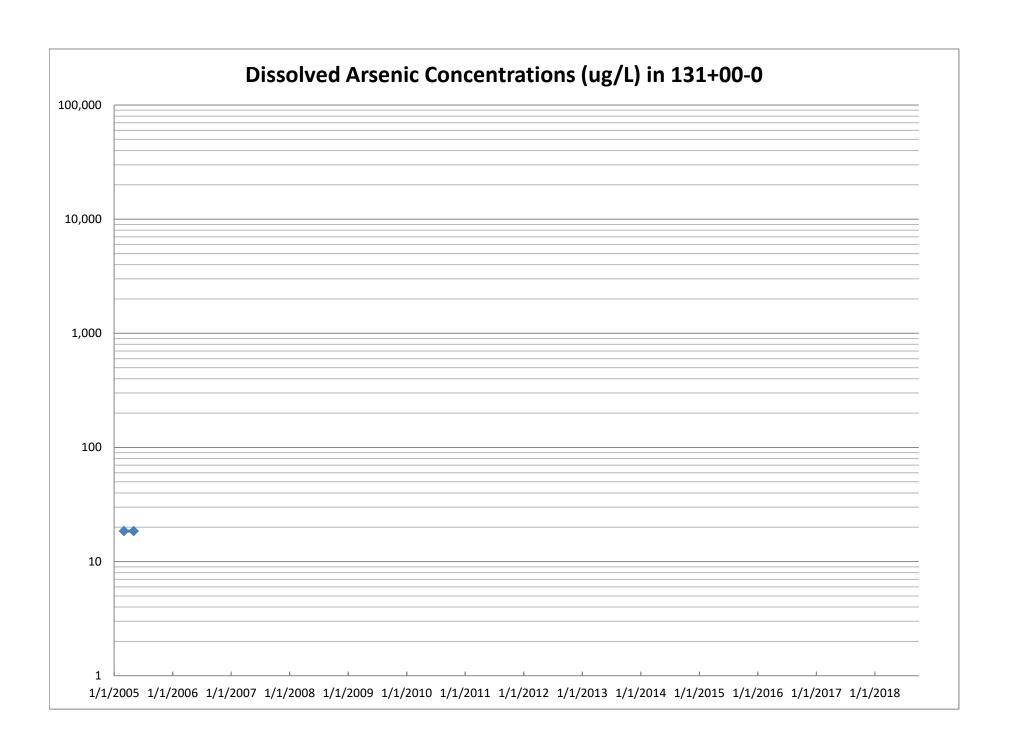


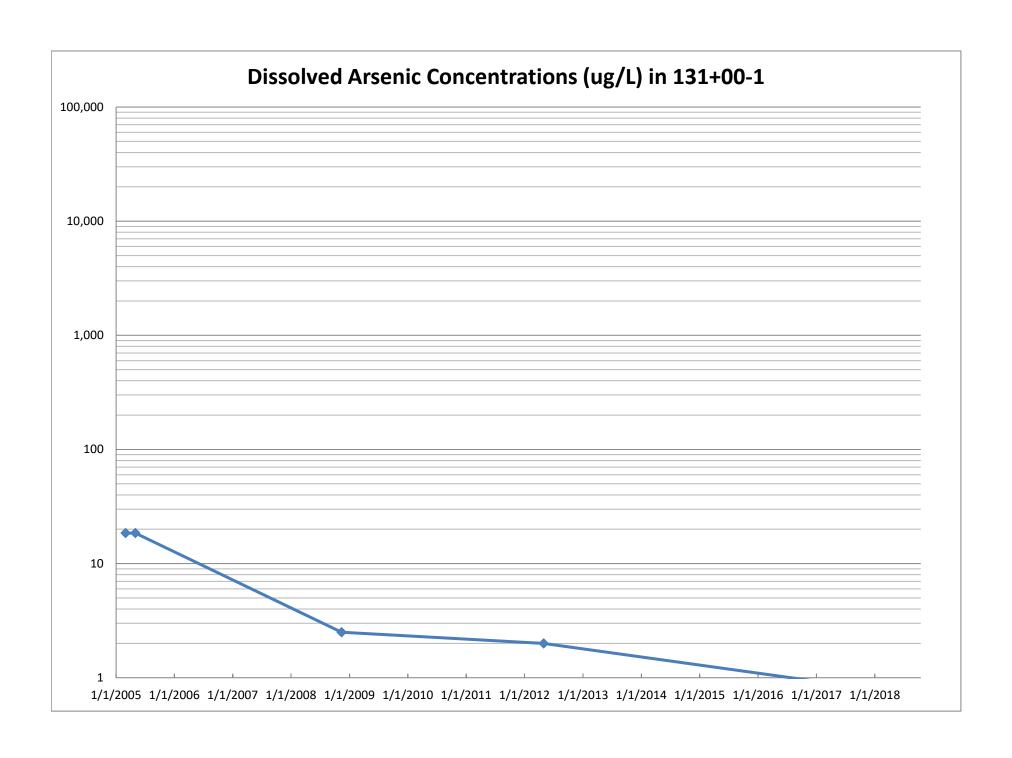


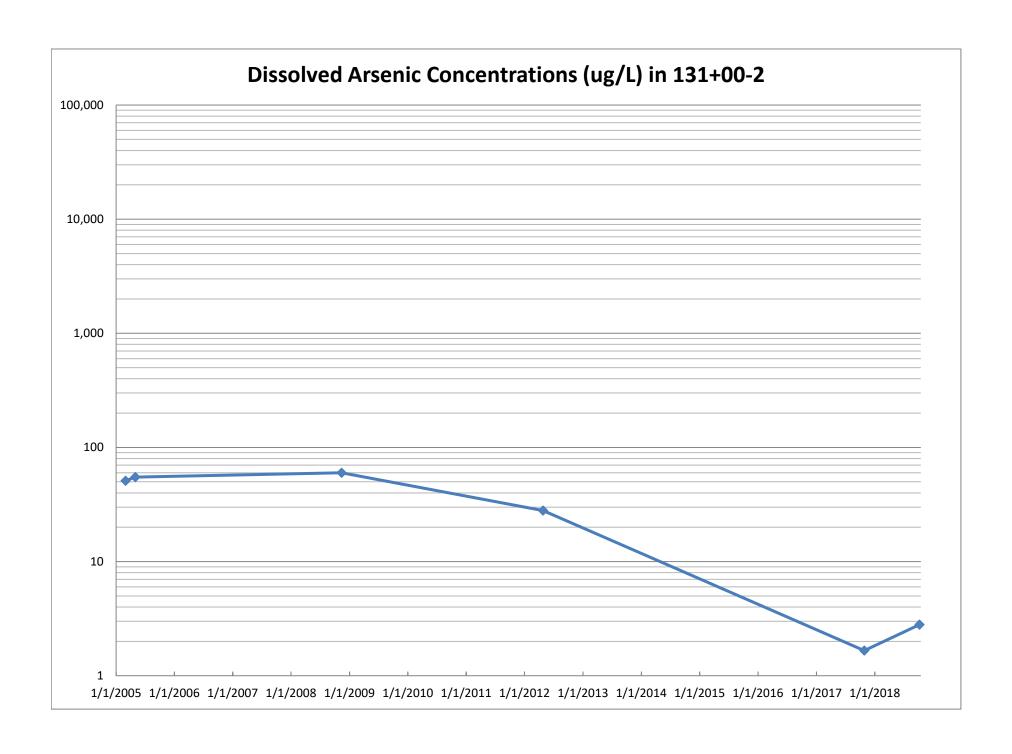




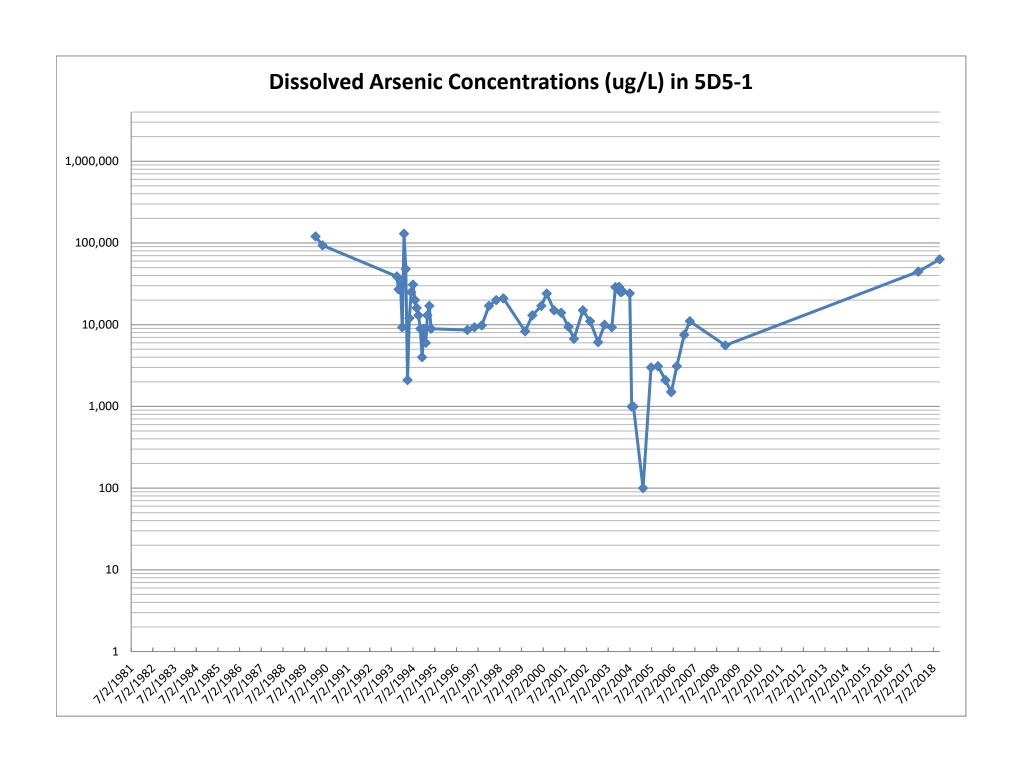


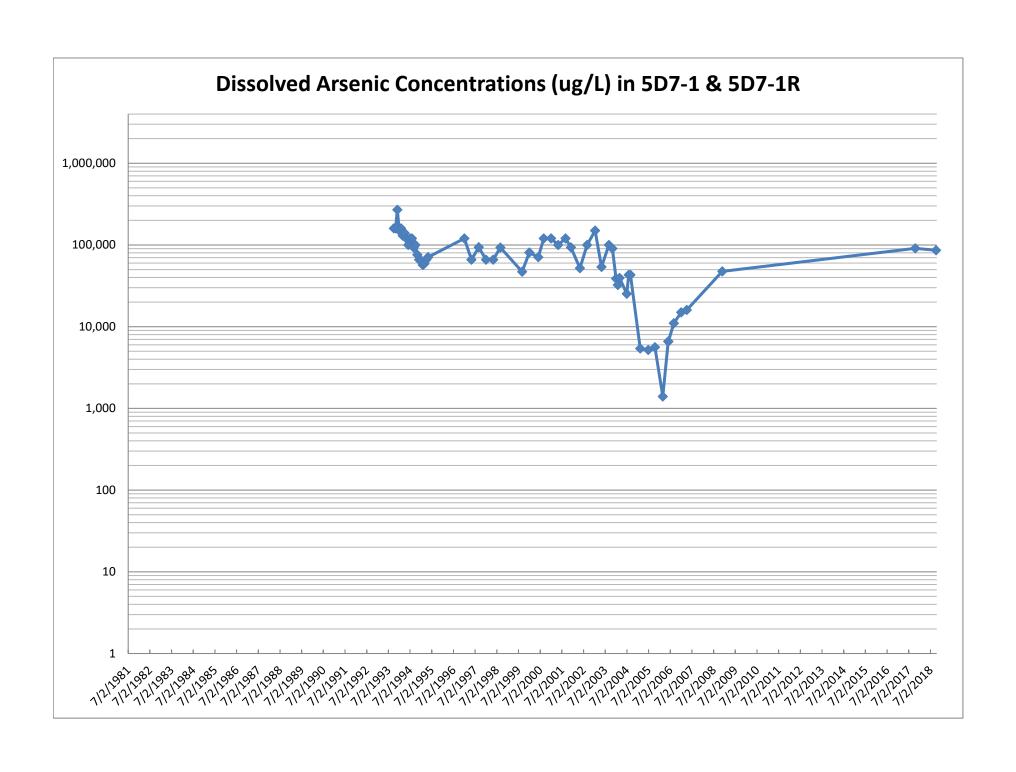


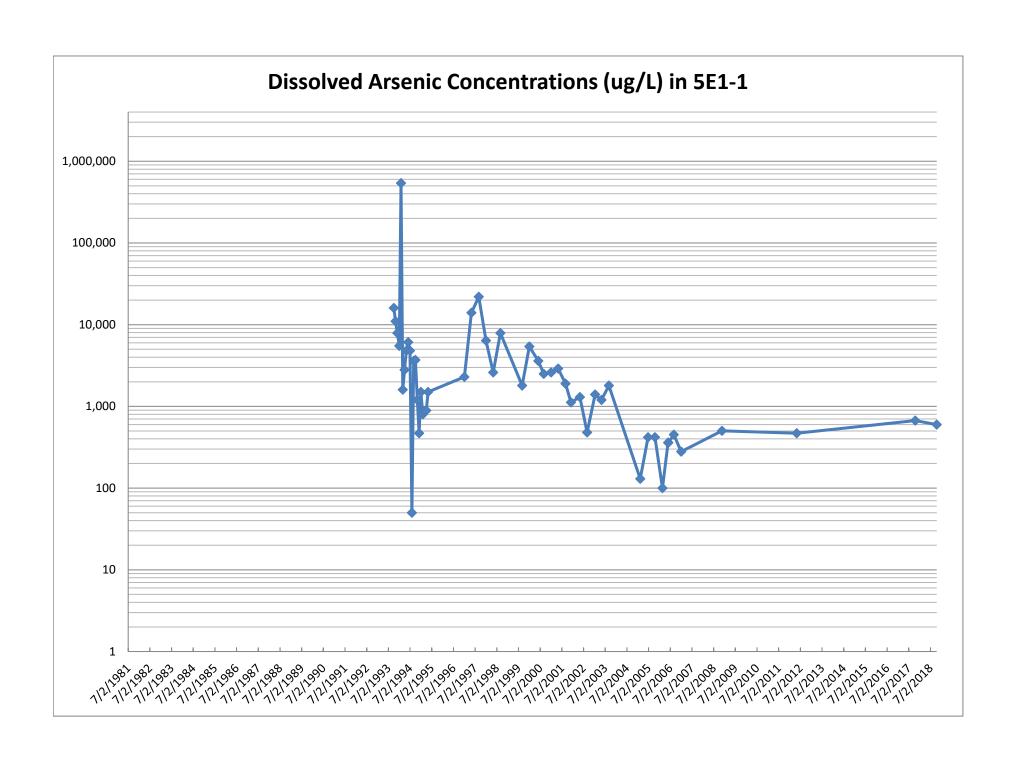


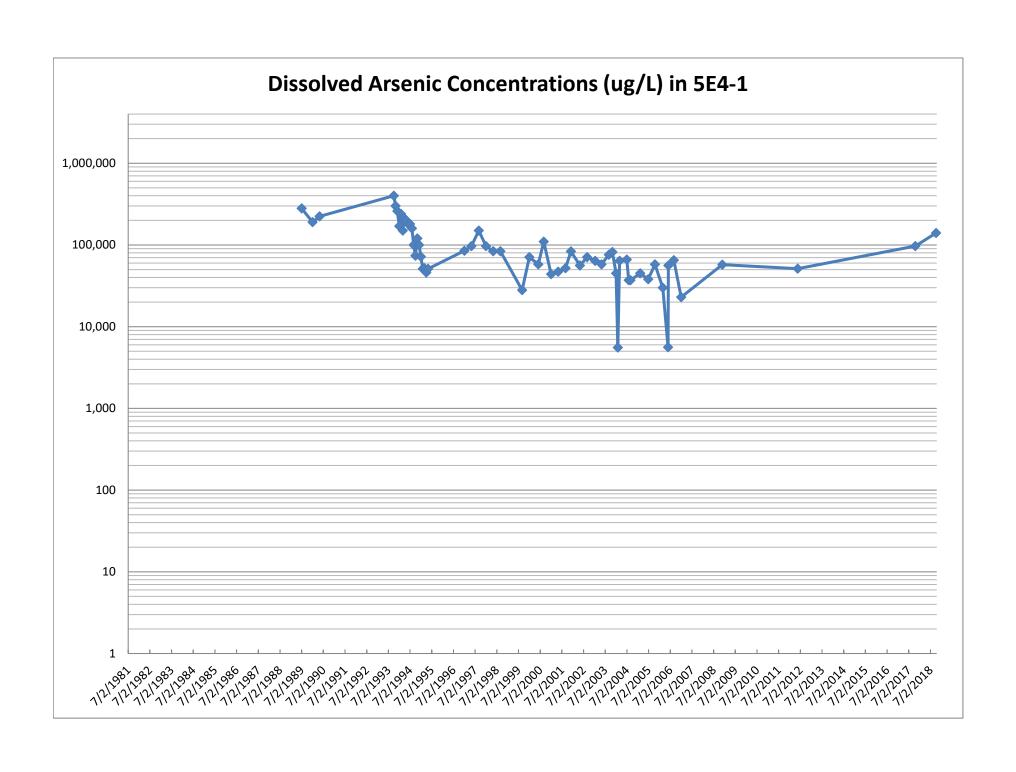


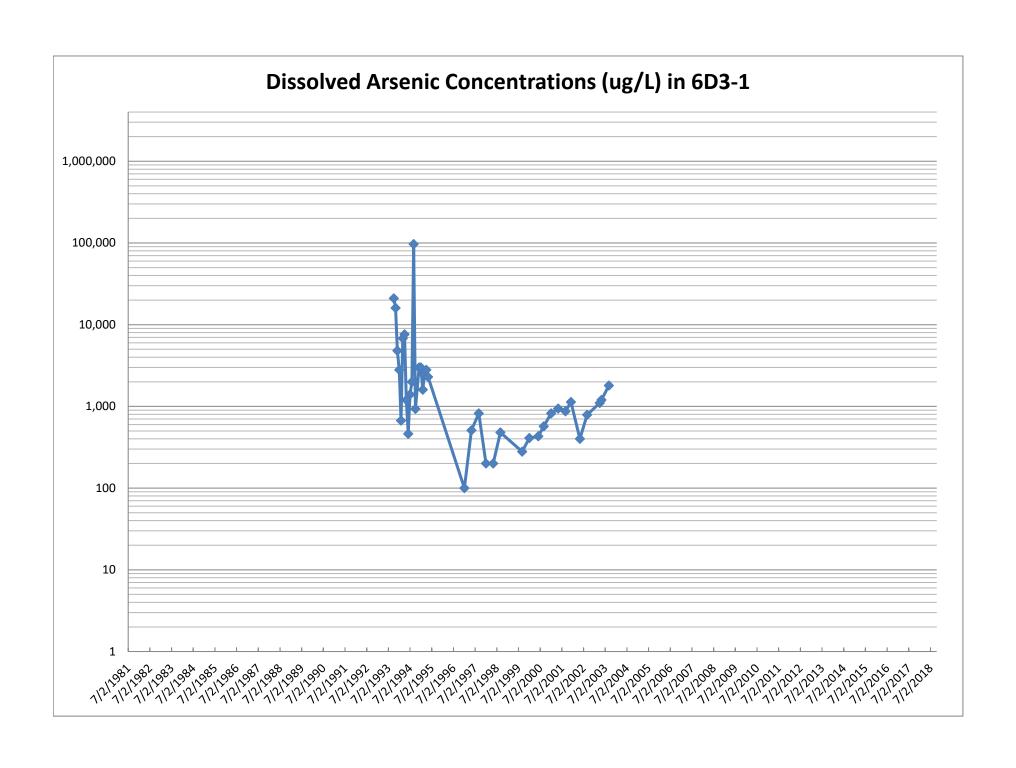
Backup for Figure 6-3

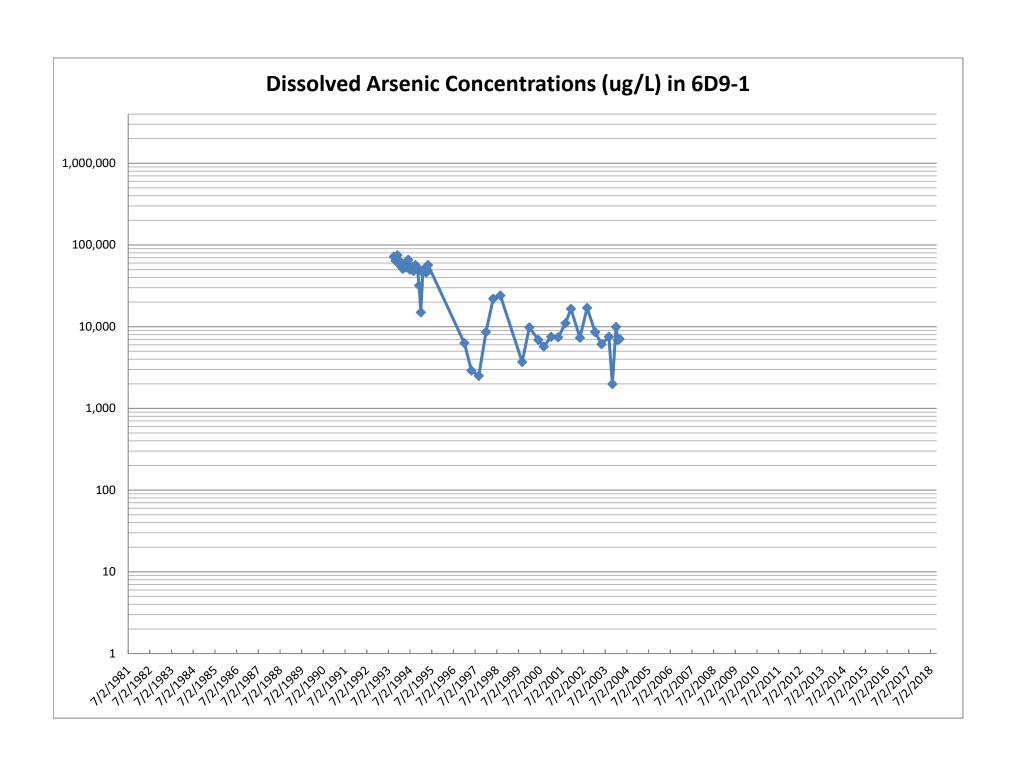


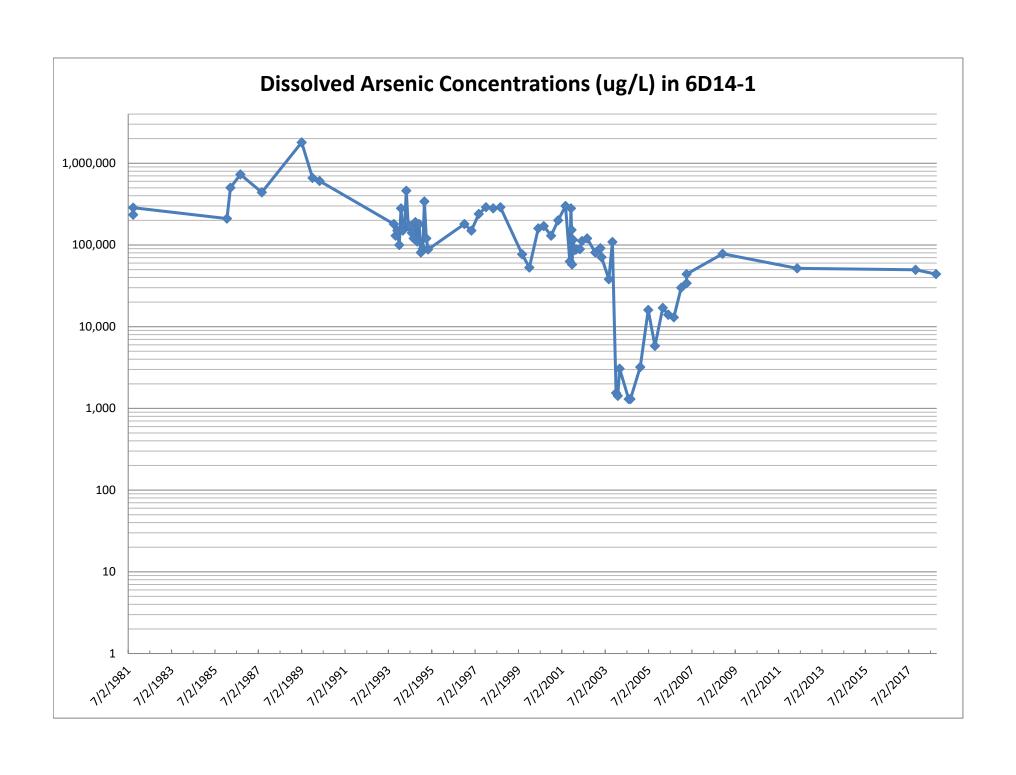


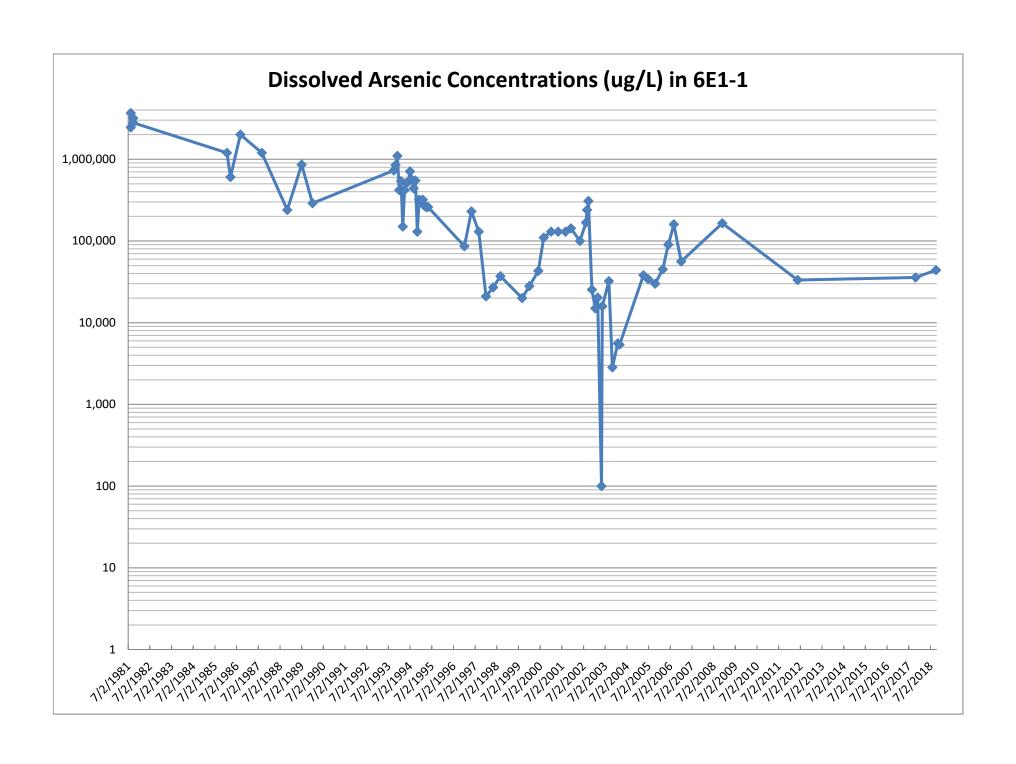


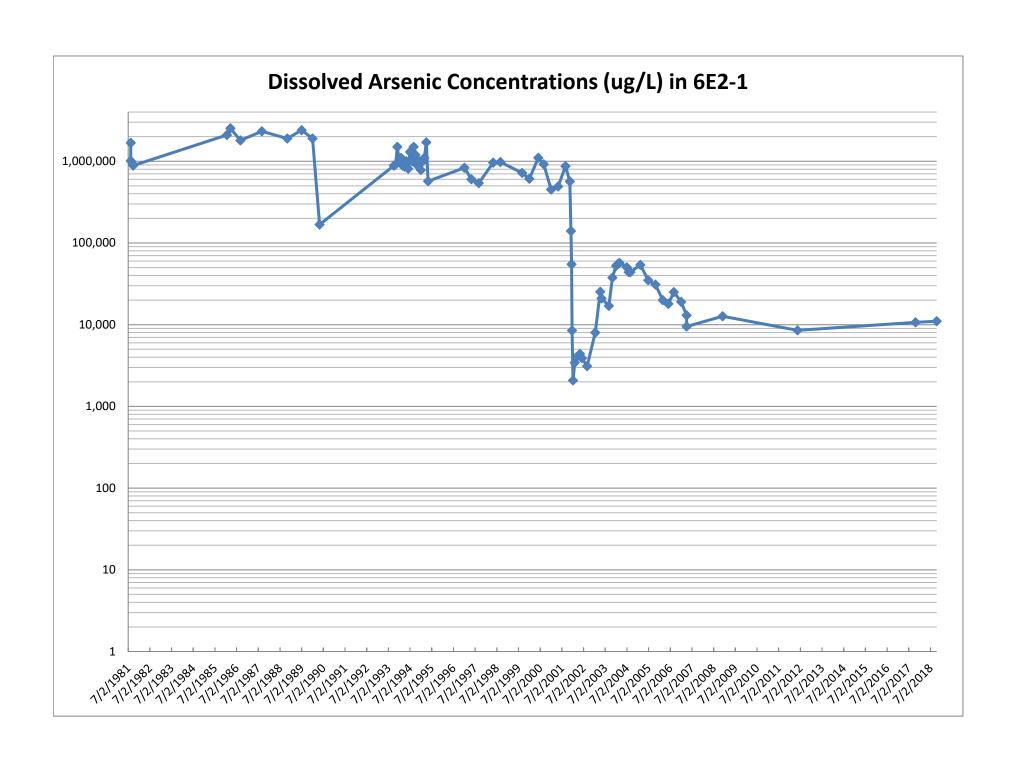


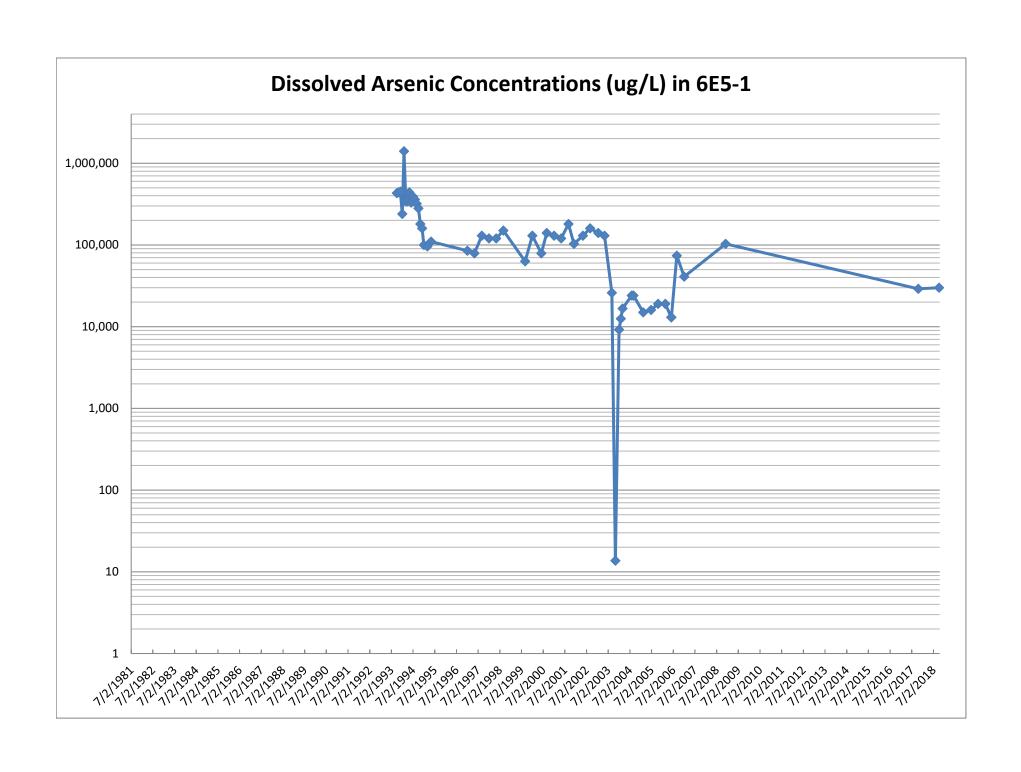


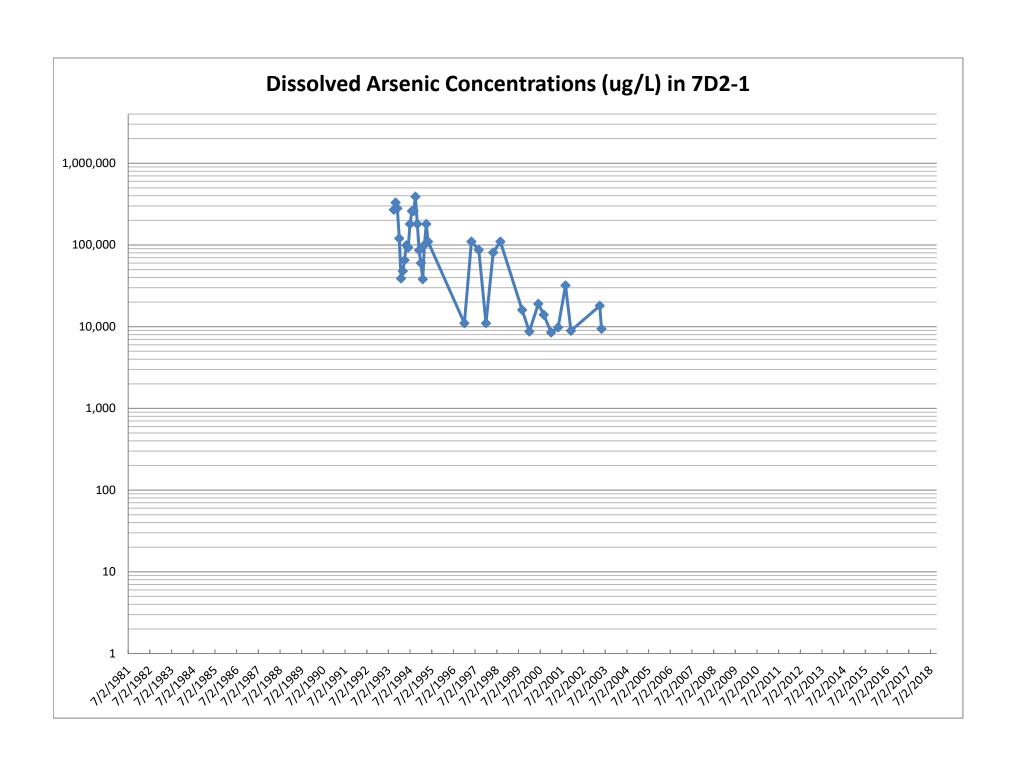


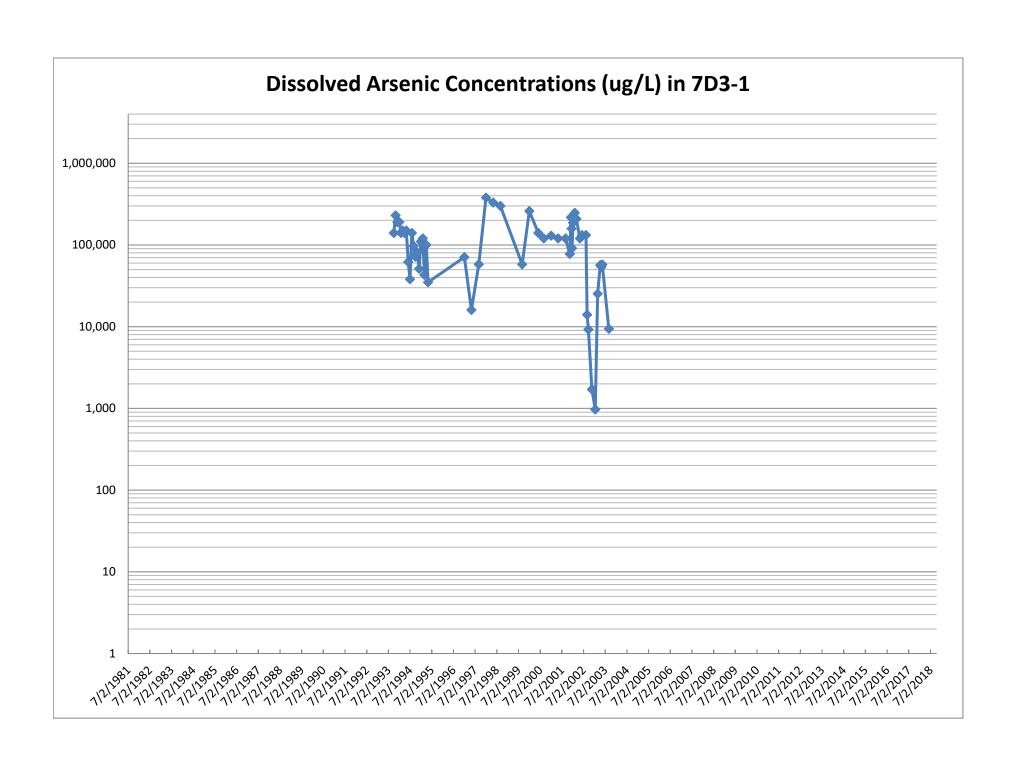


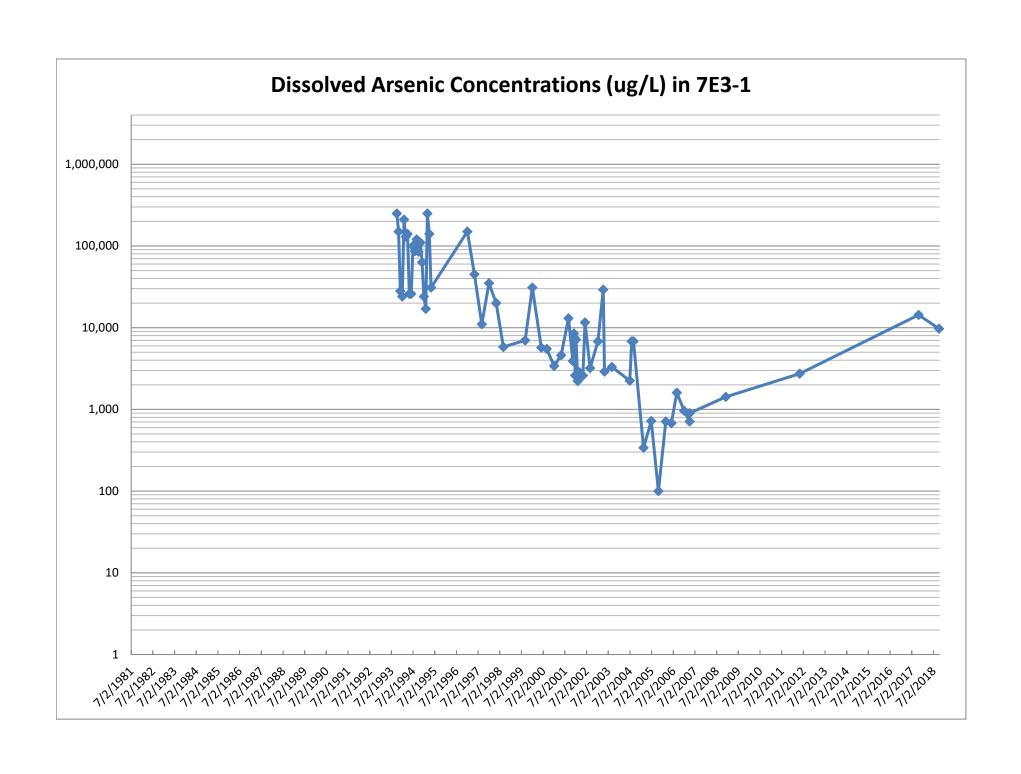


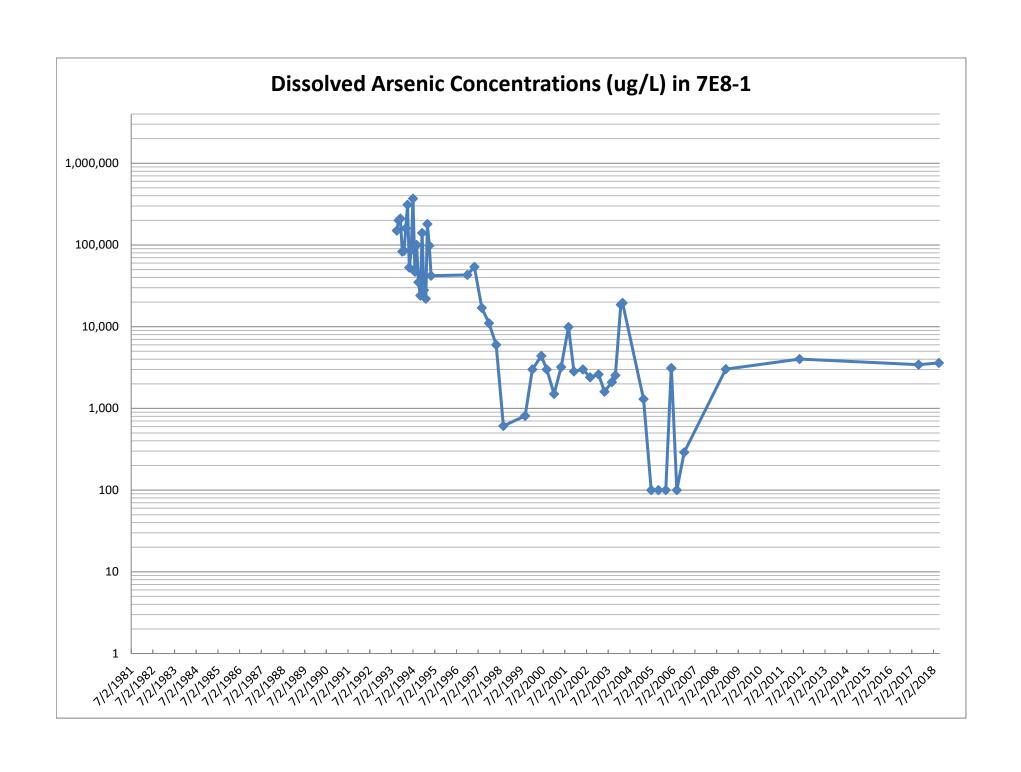


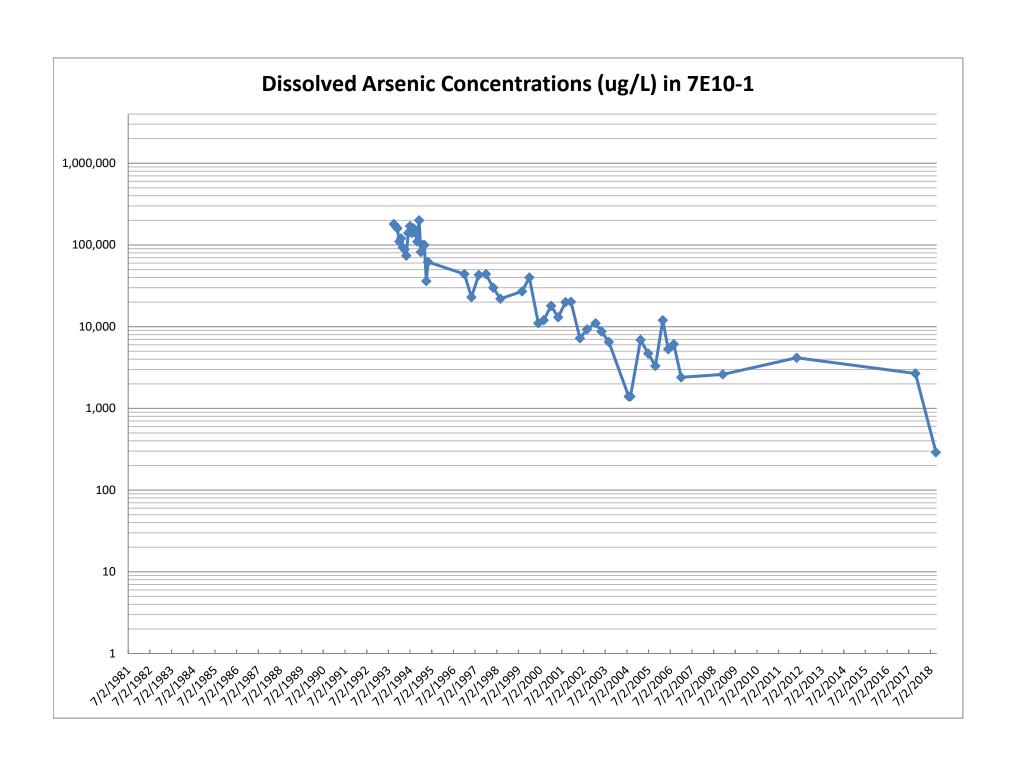


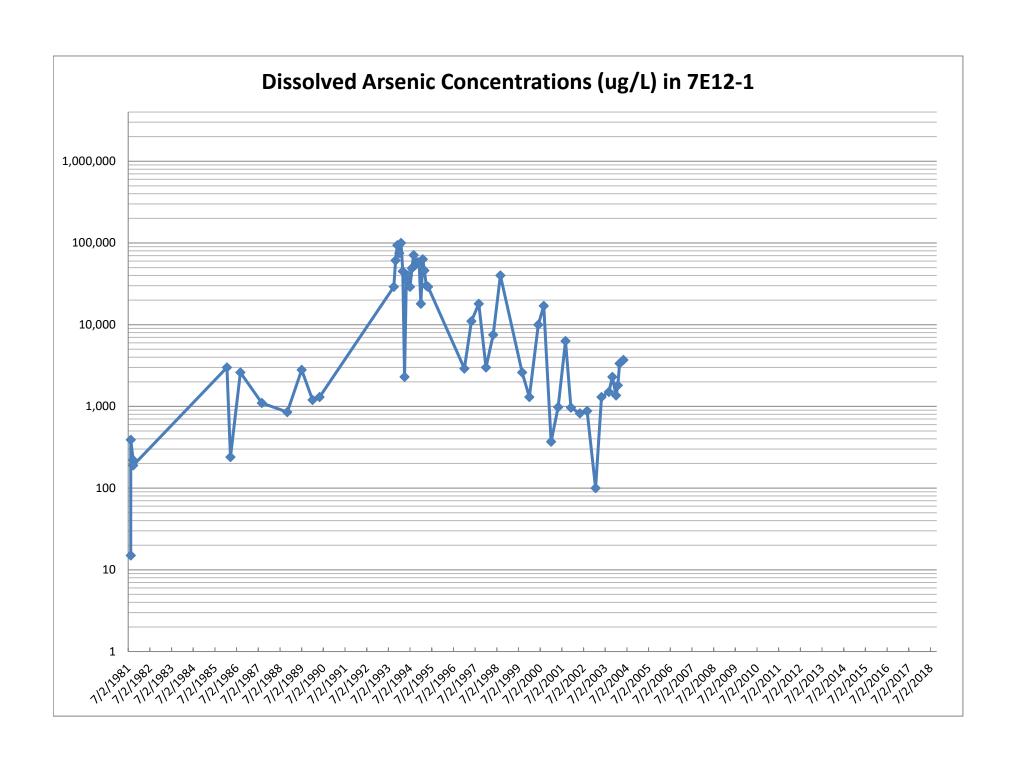




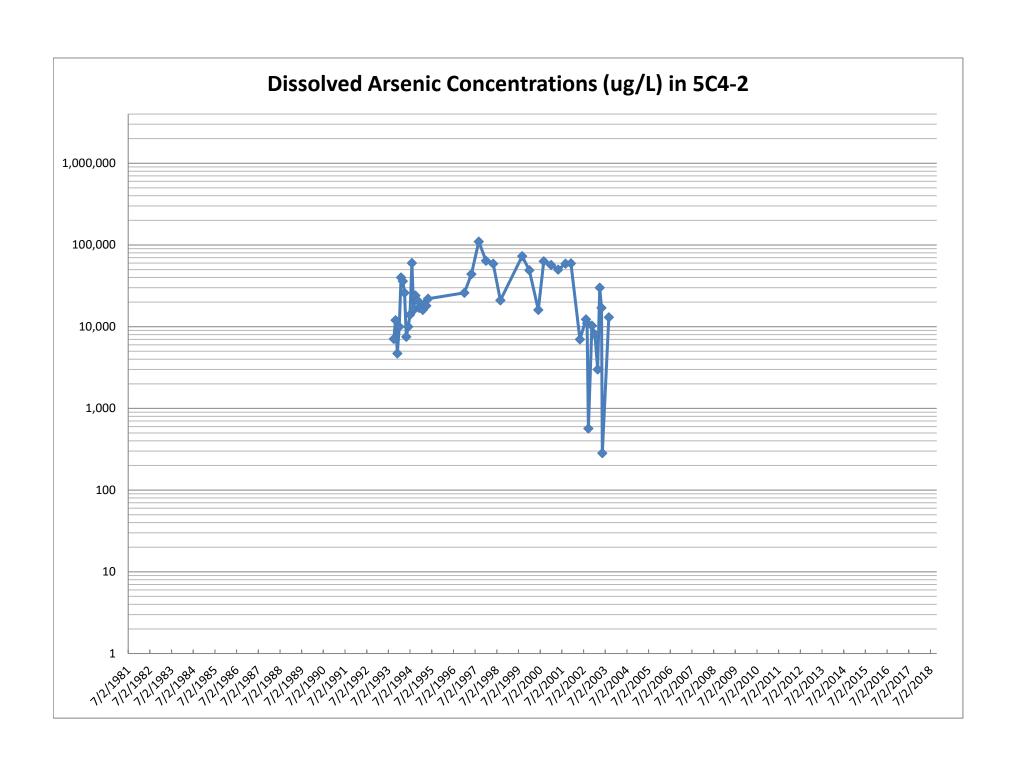


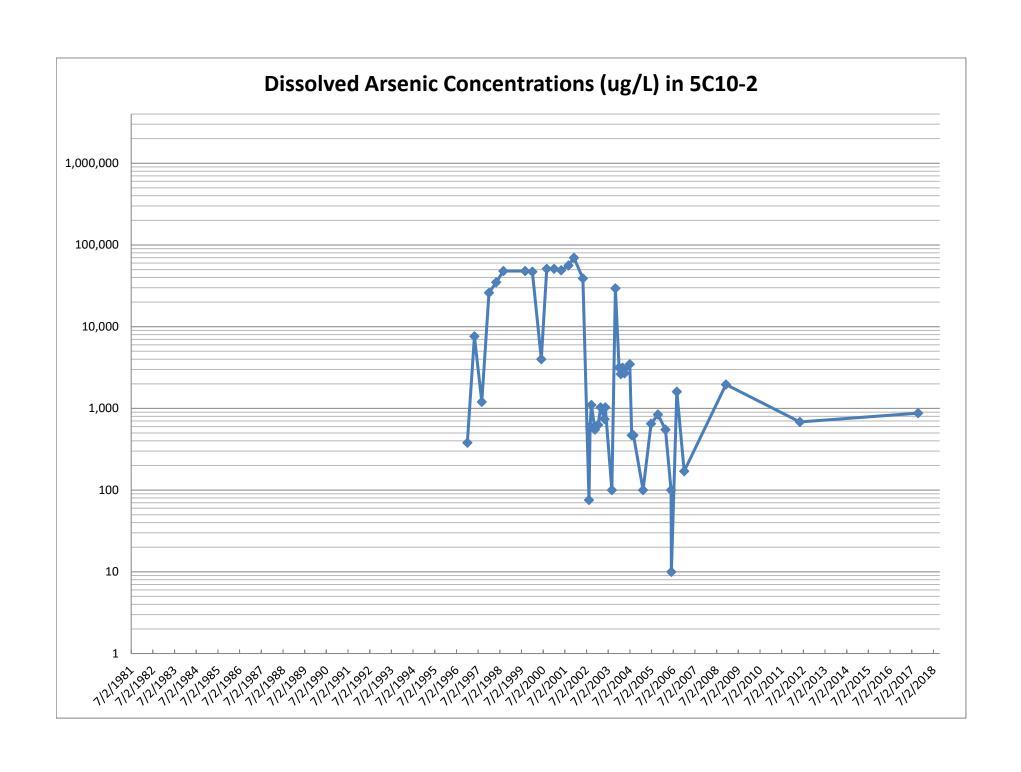


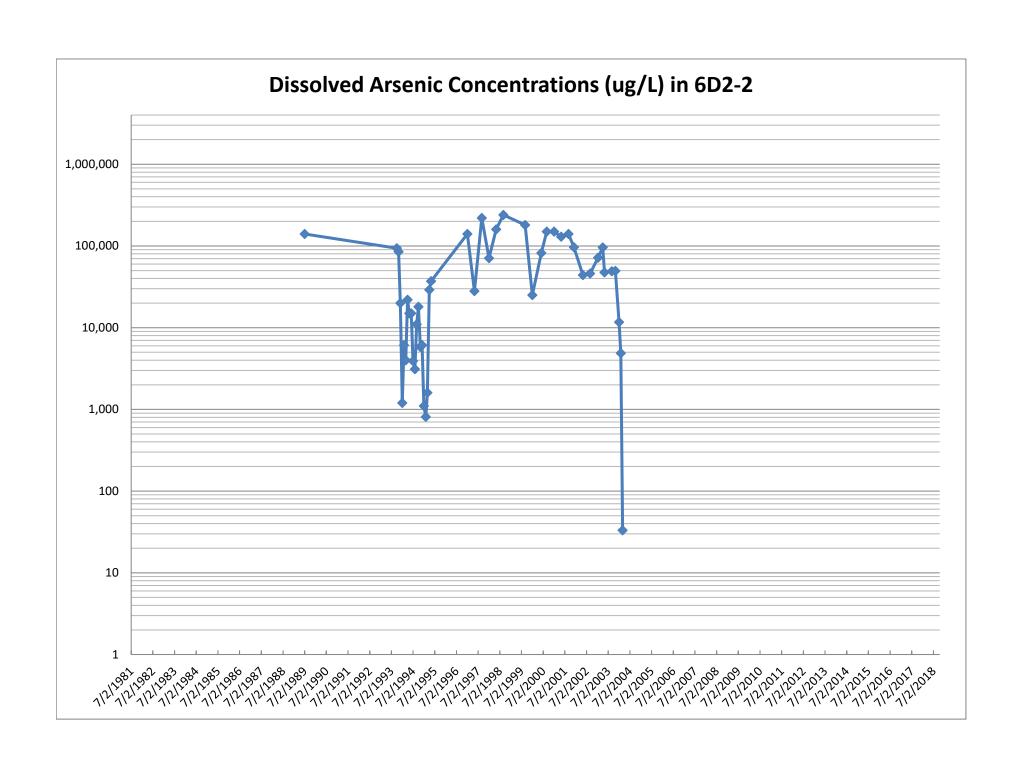


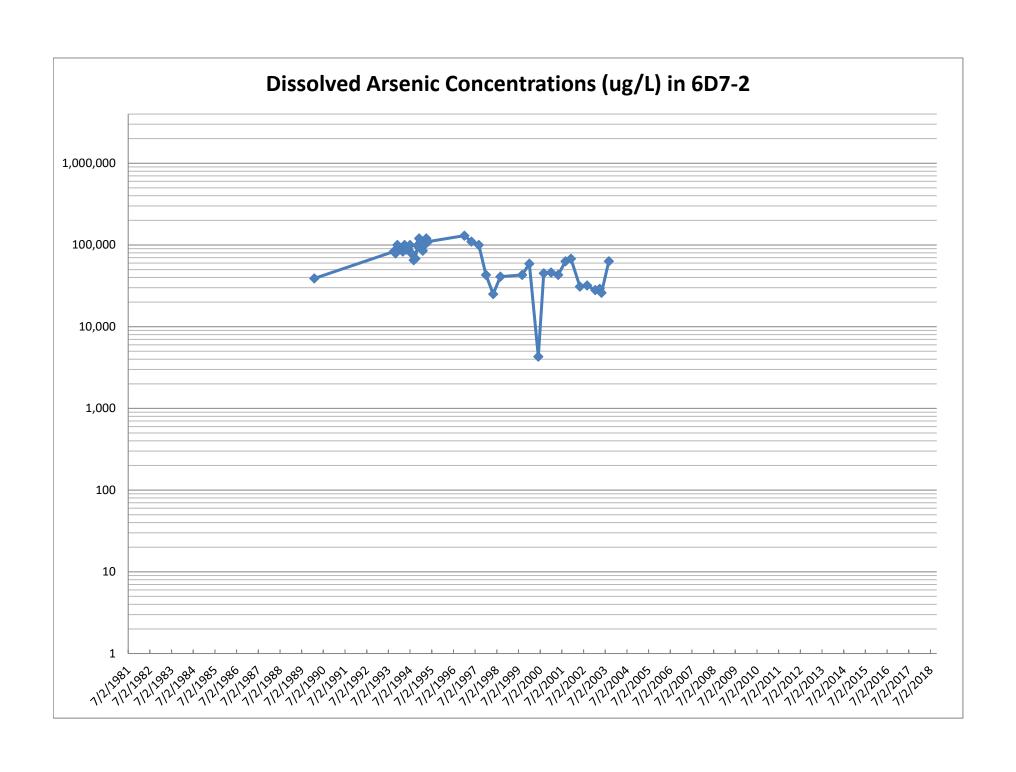


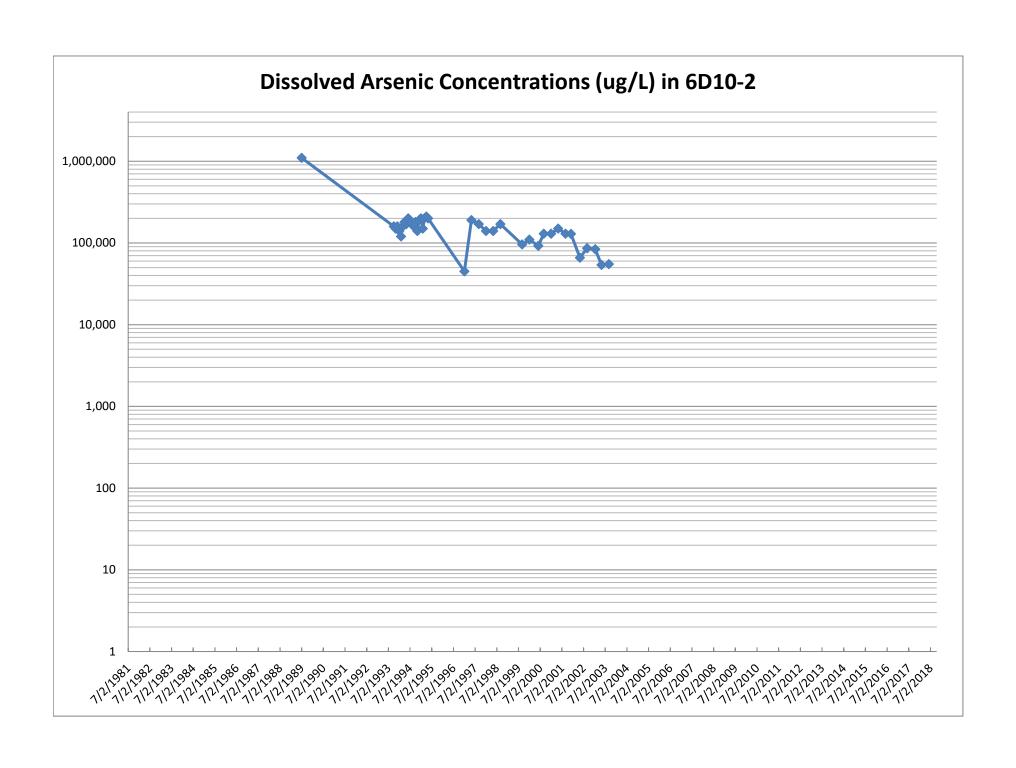
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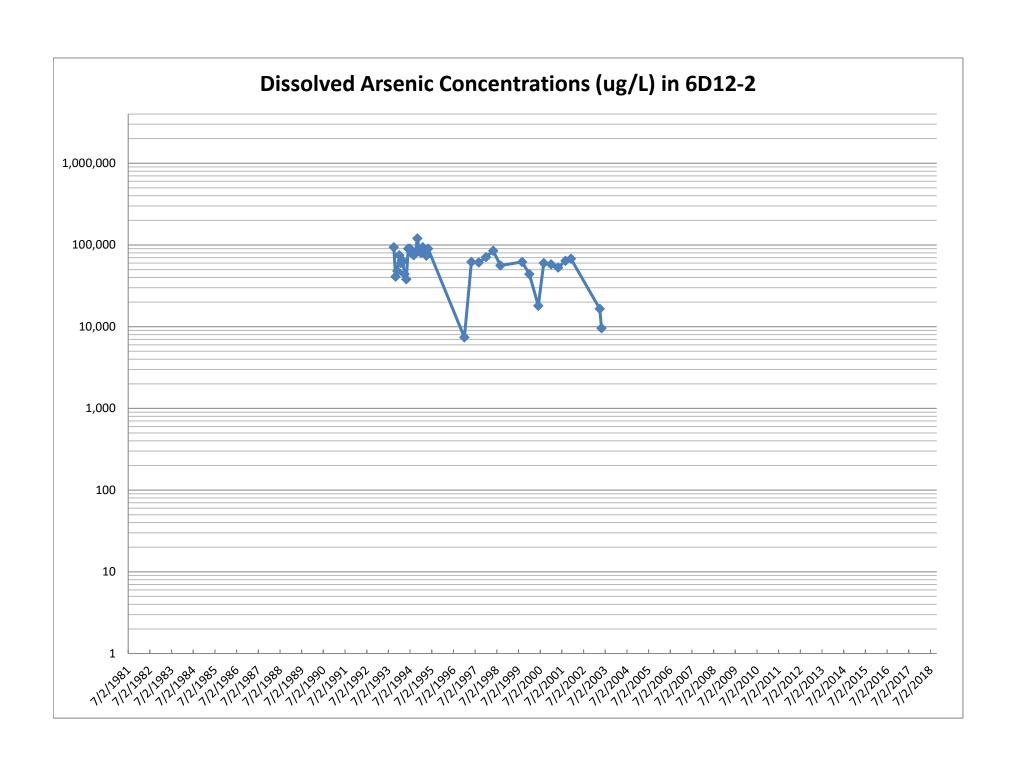


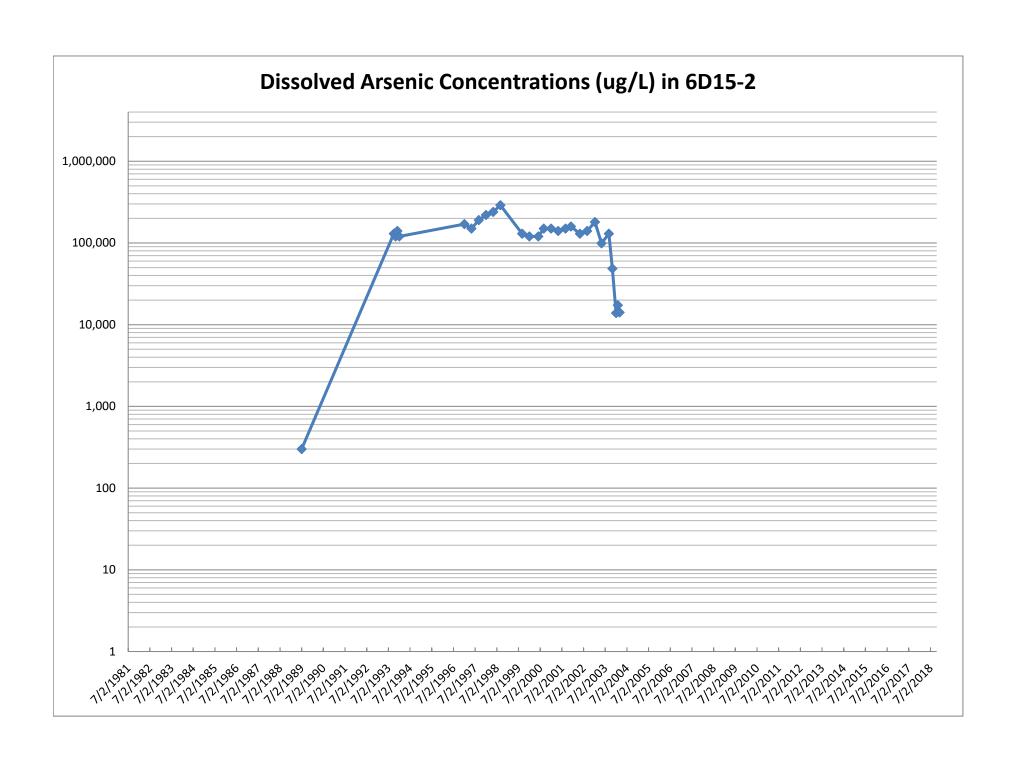


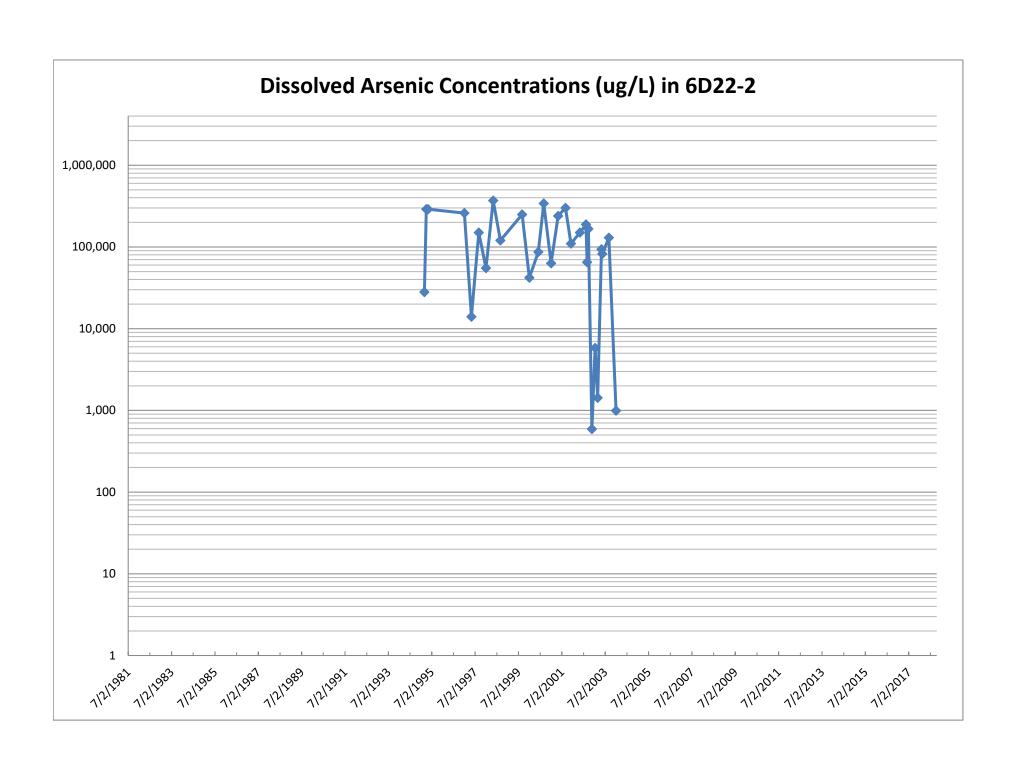


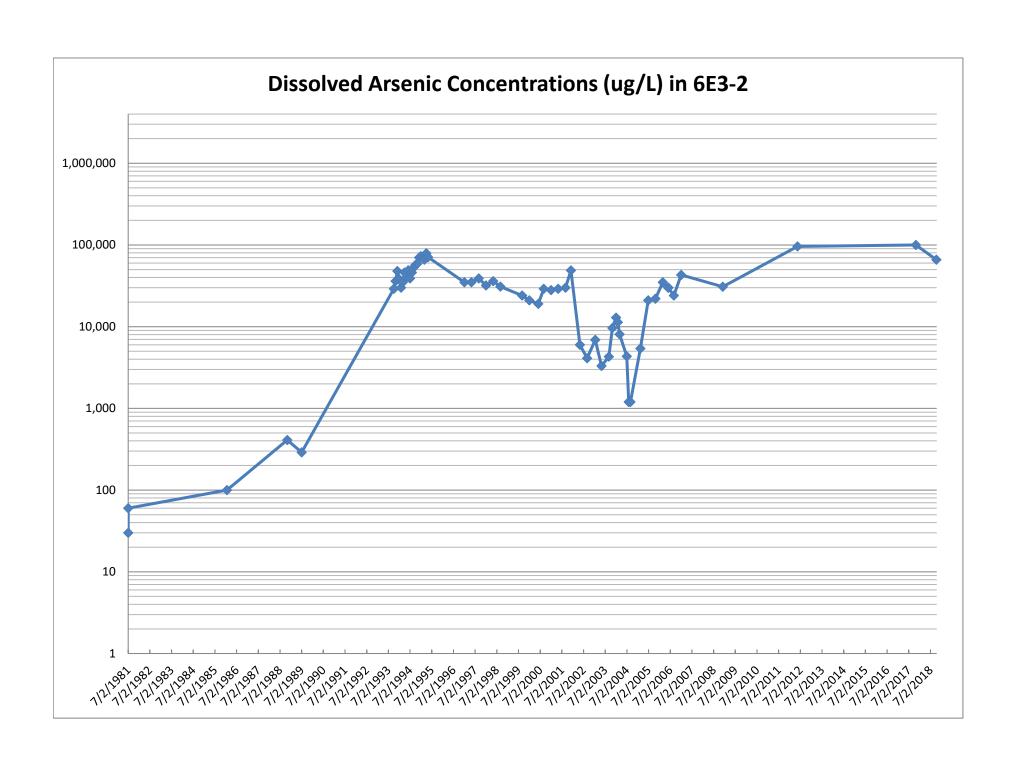


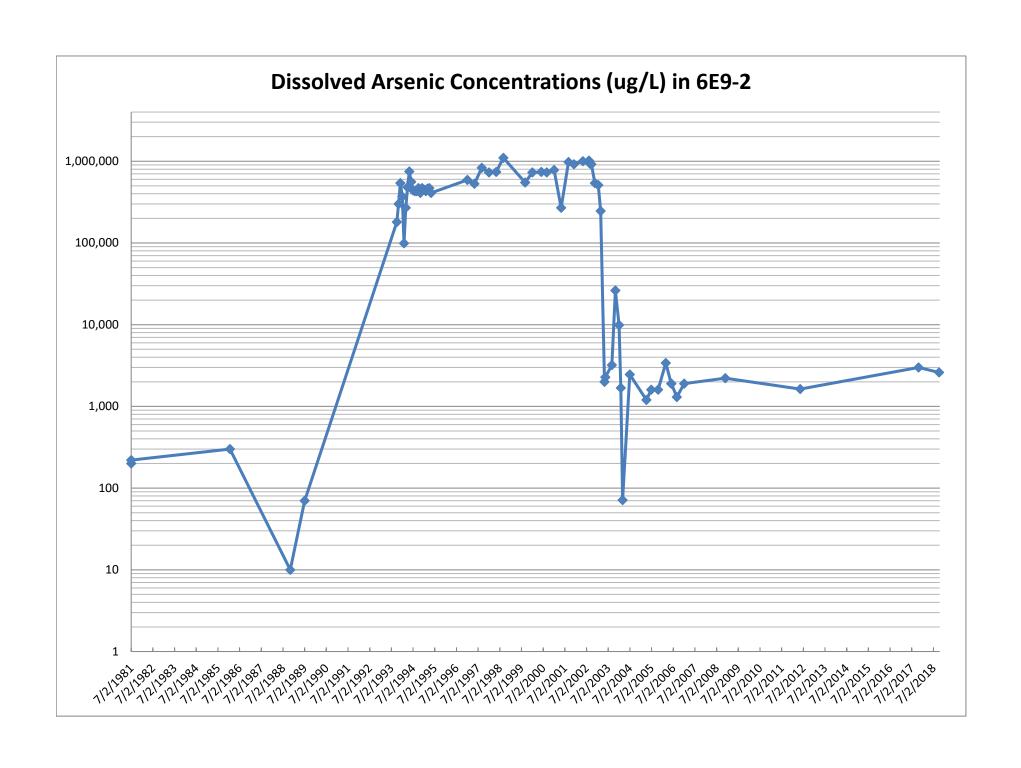


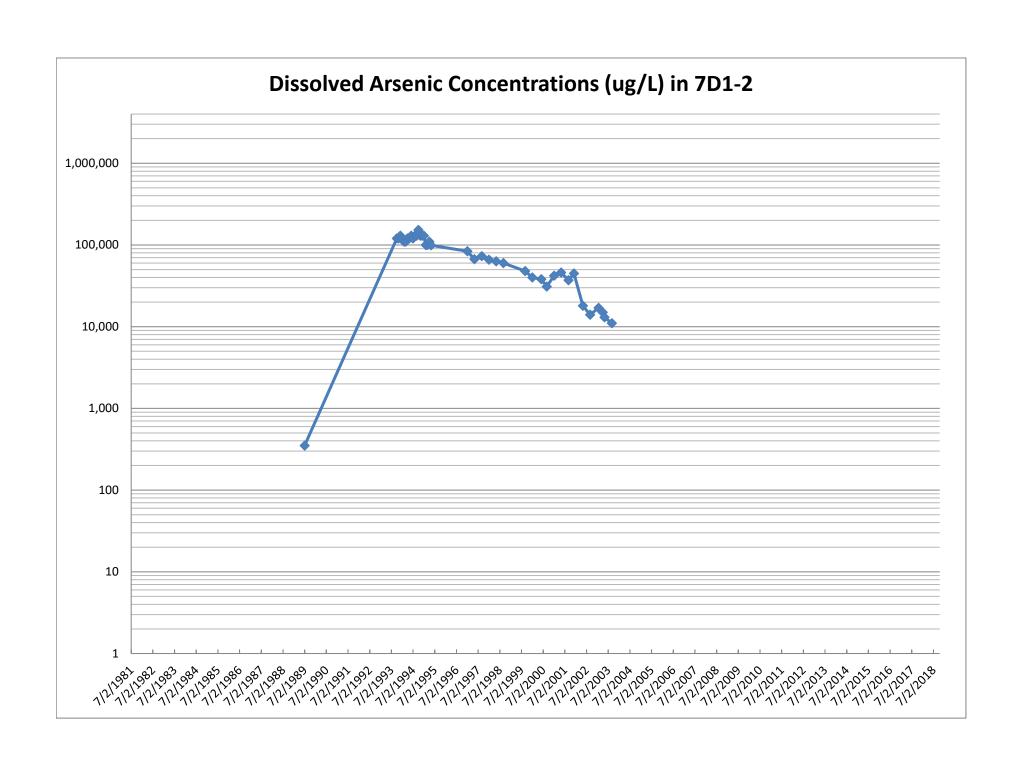


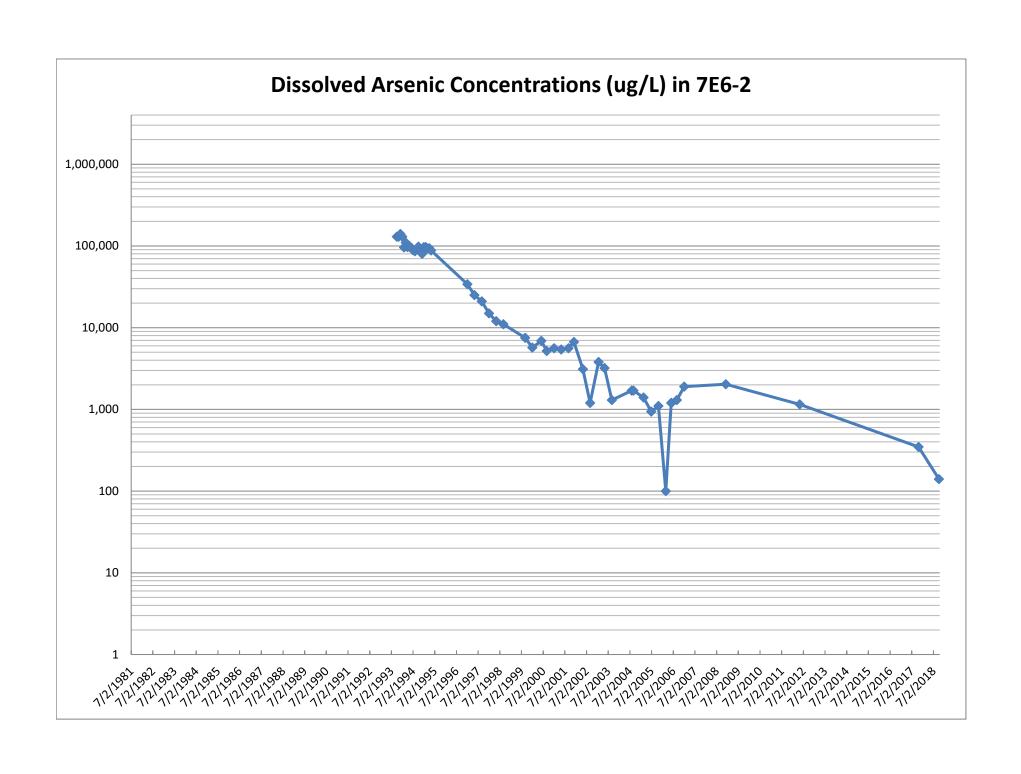


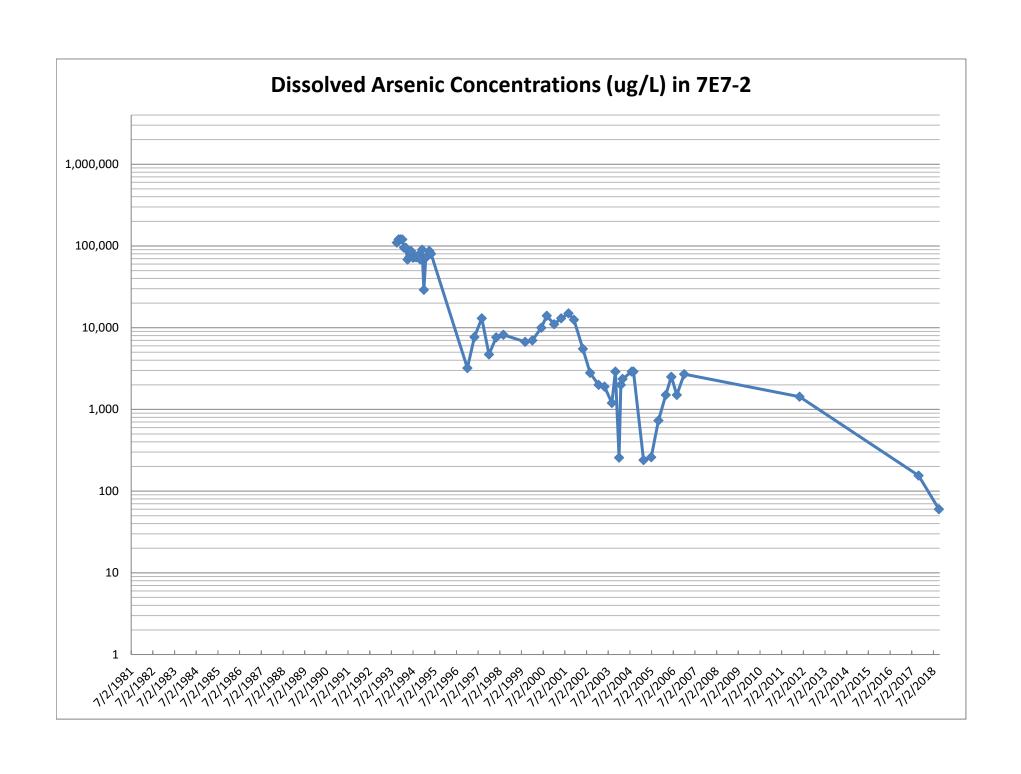




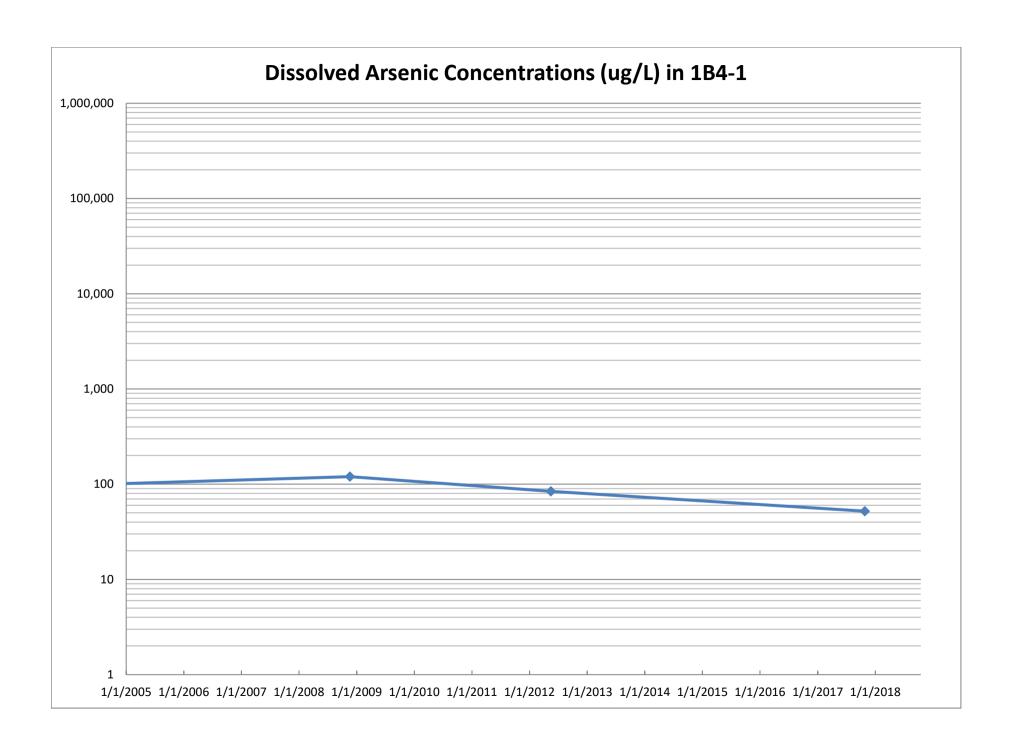


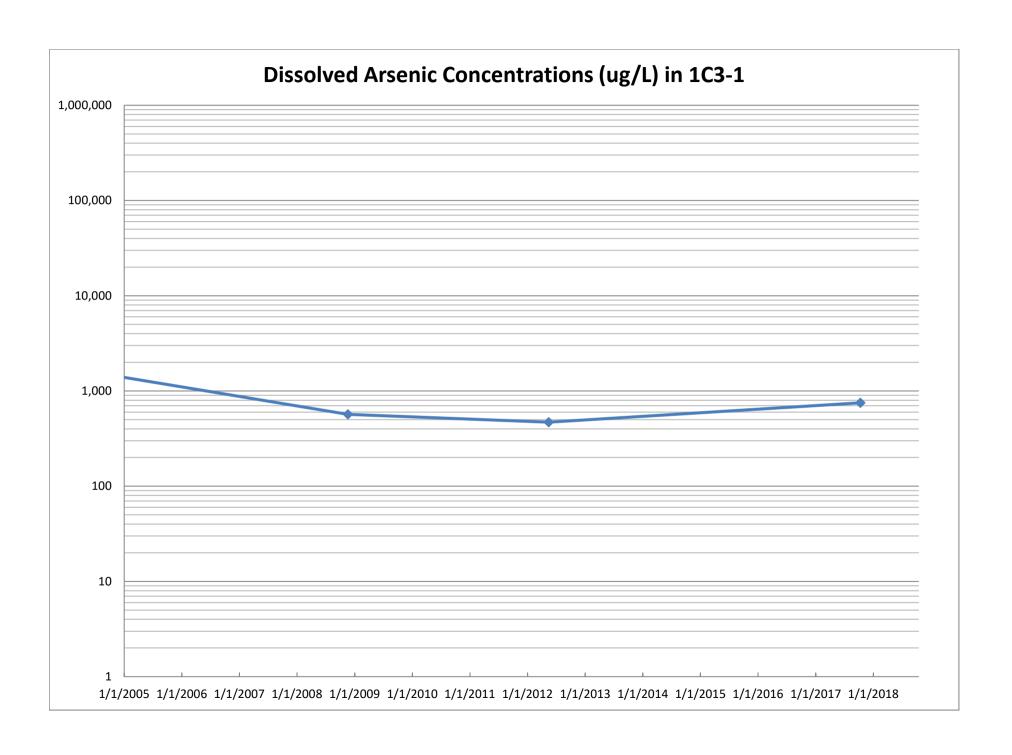


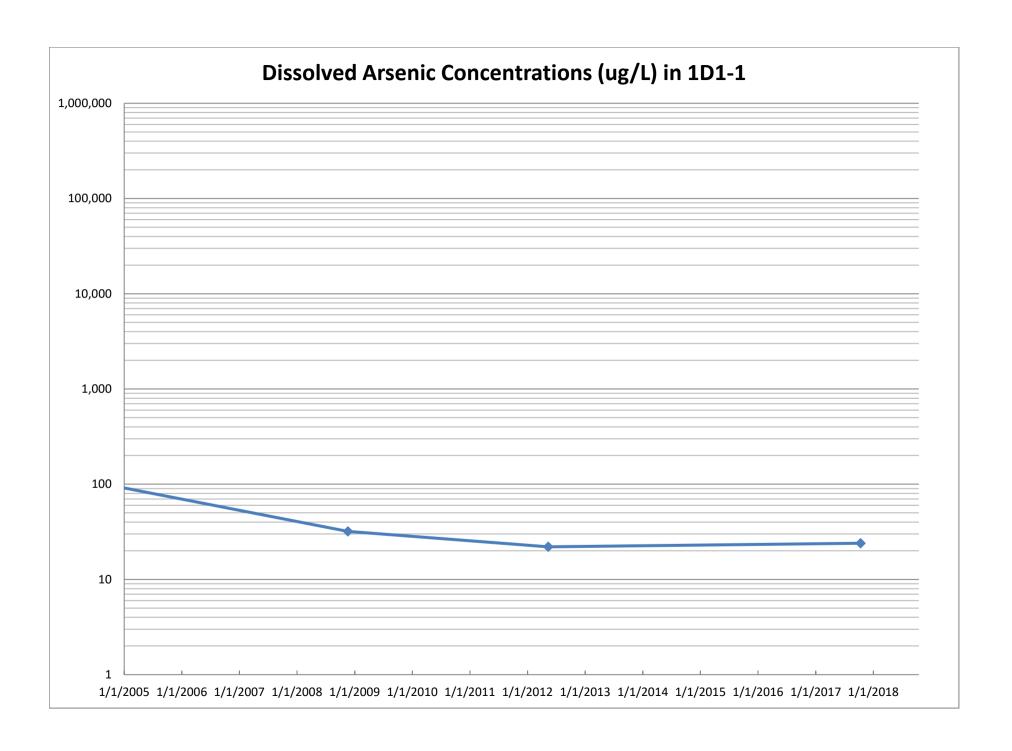


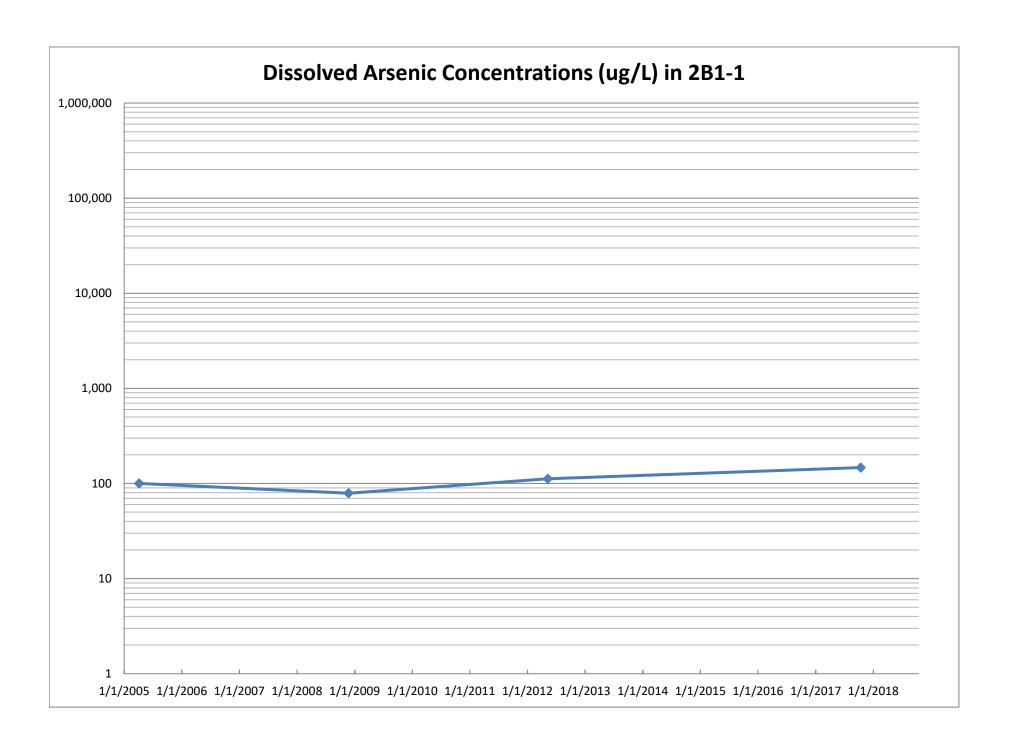


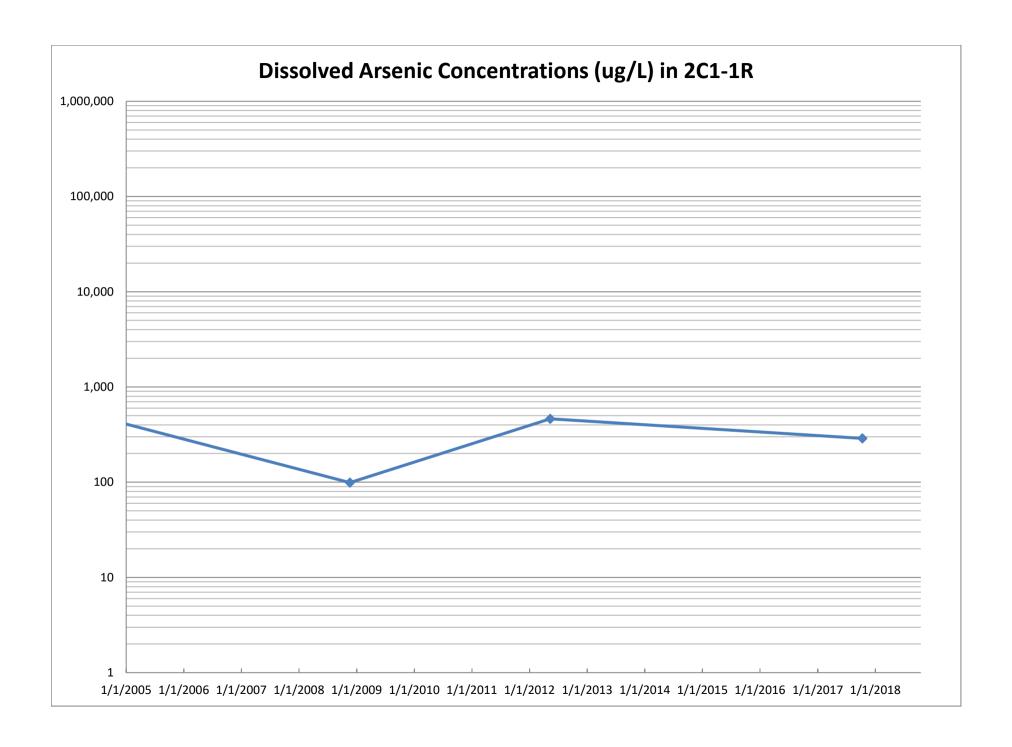
Backup for Figure 6-11

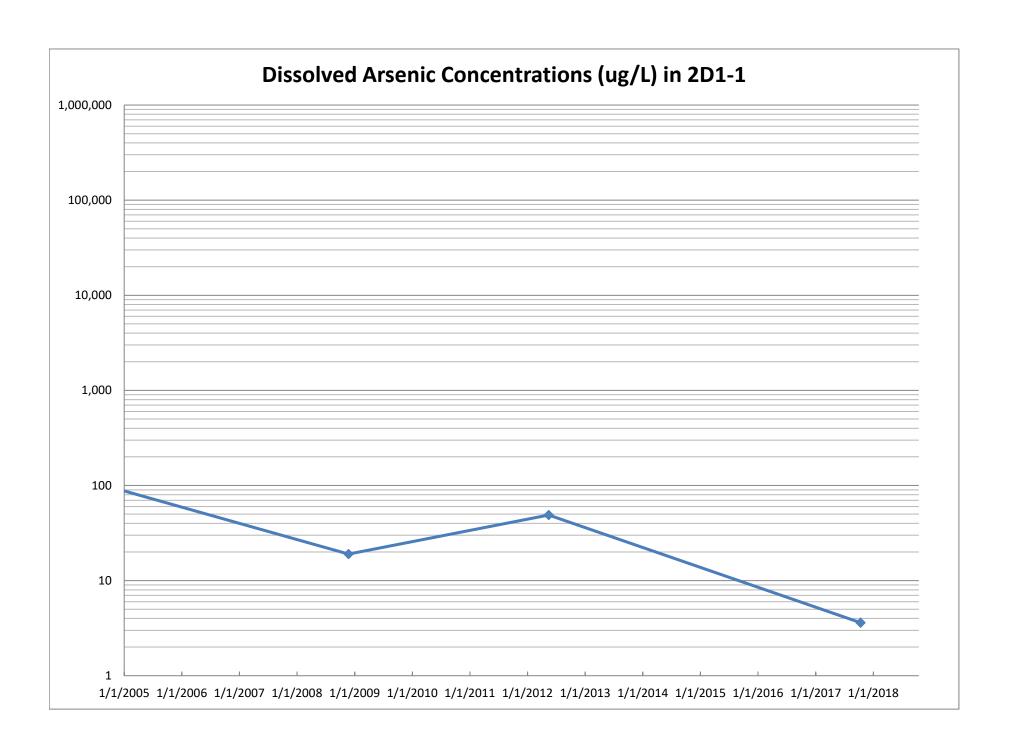


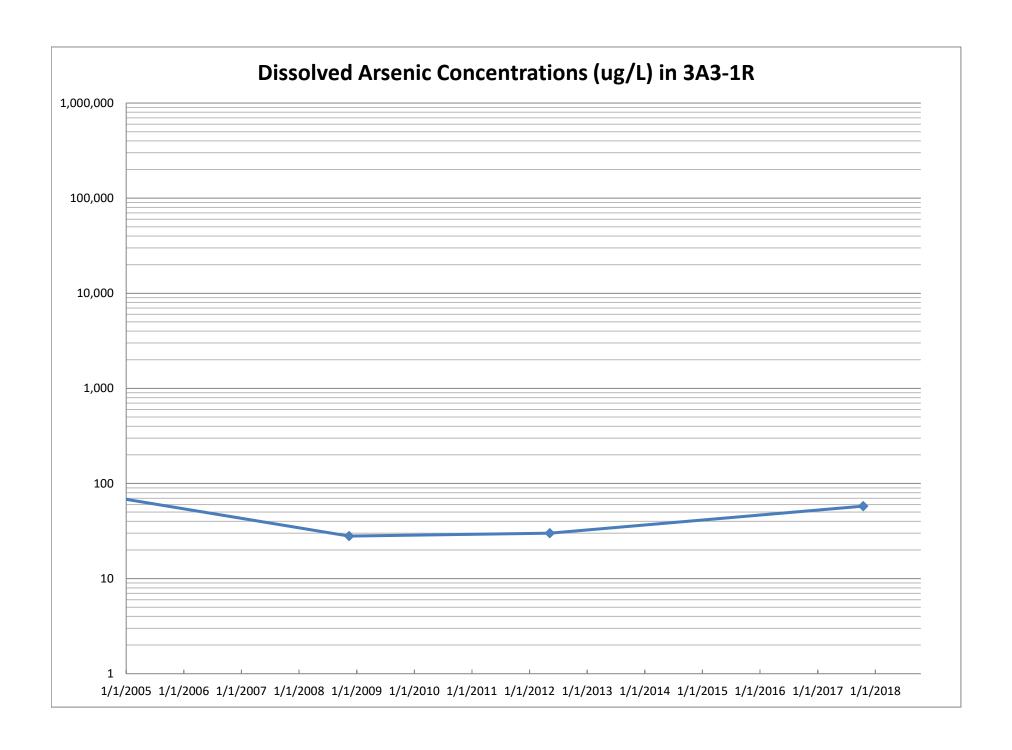


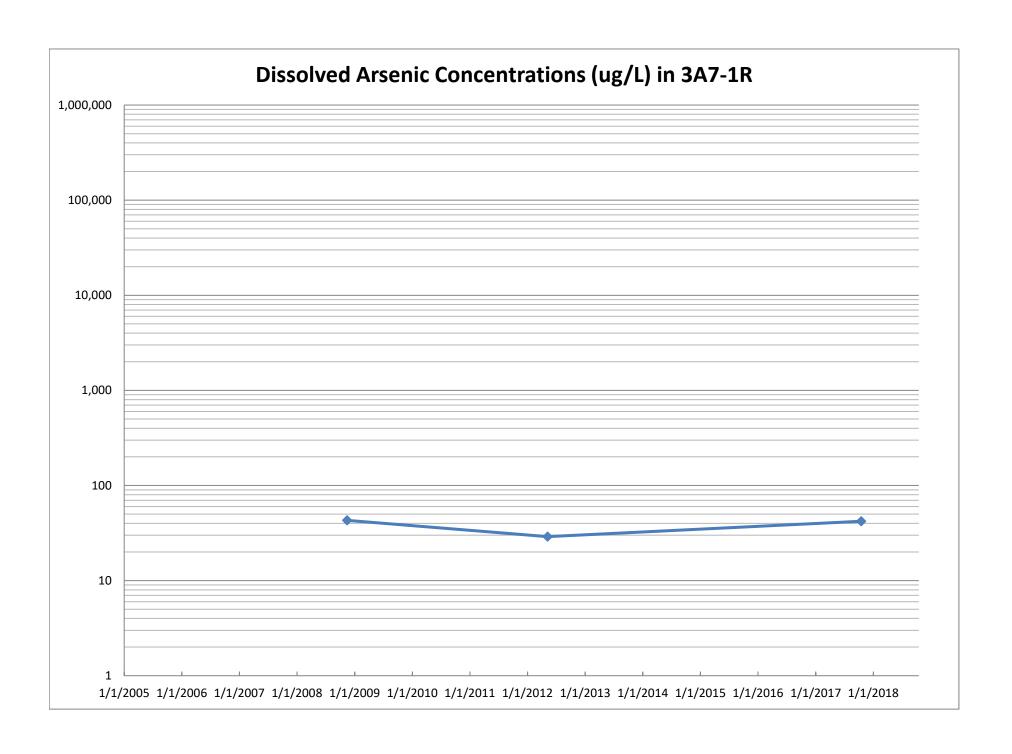


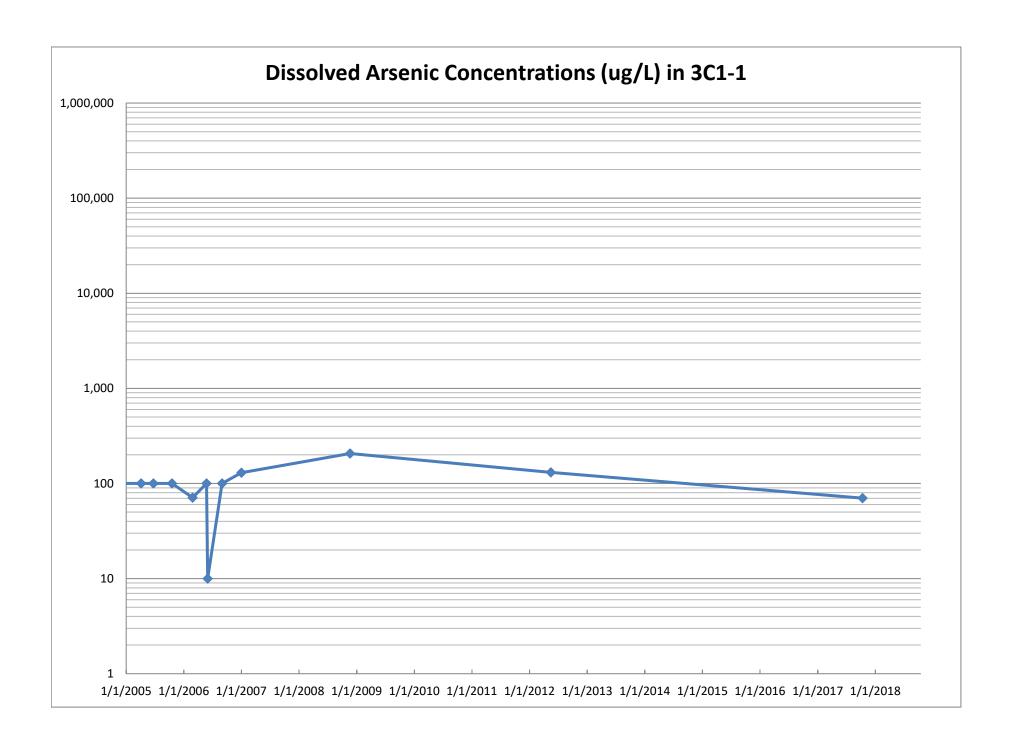


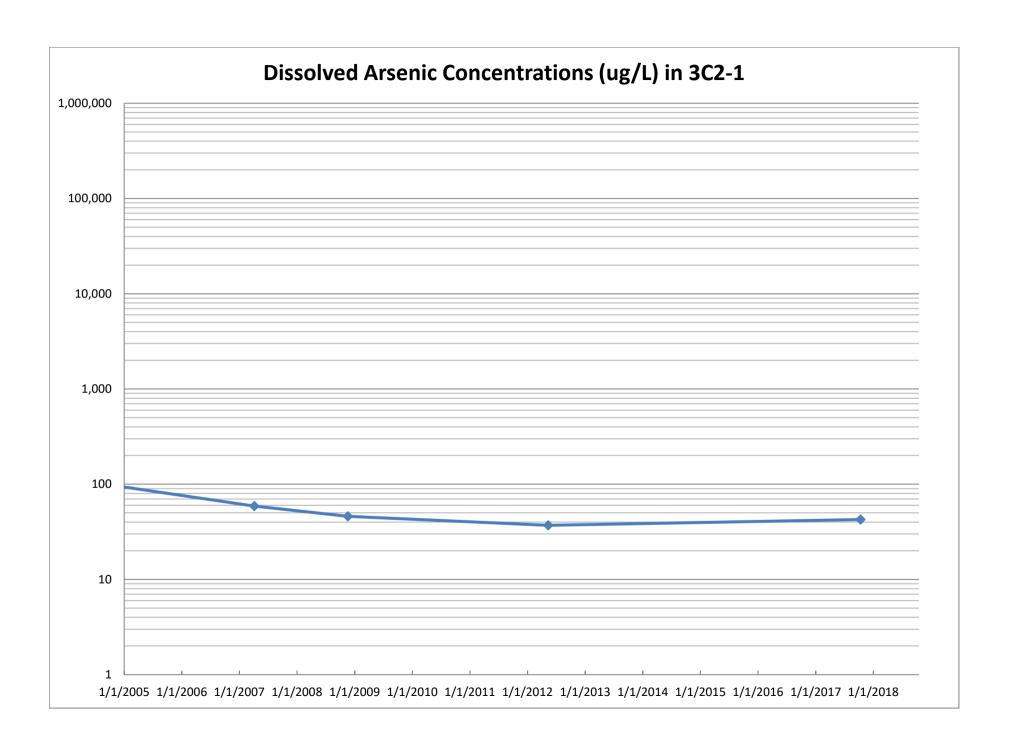


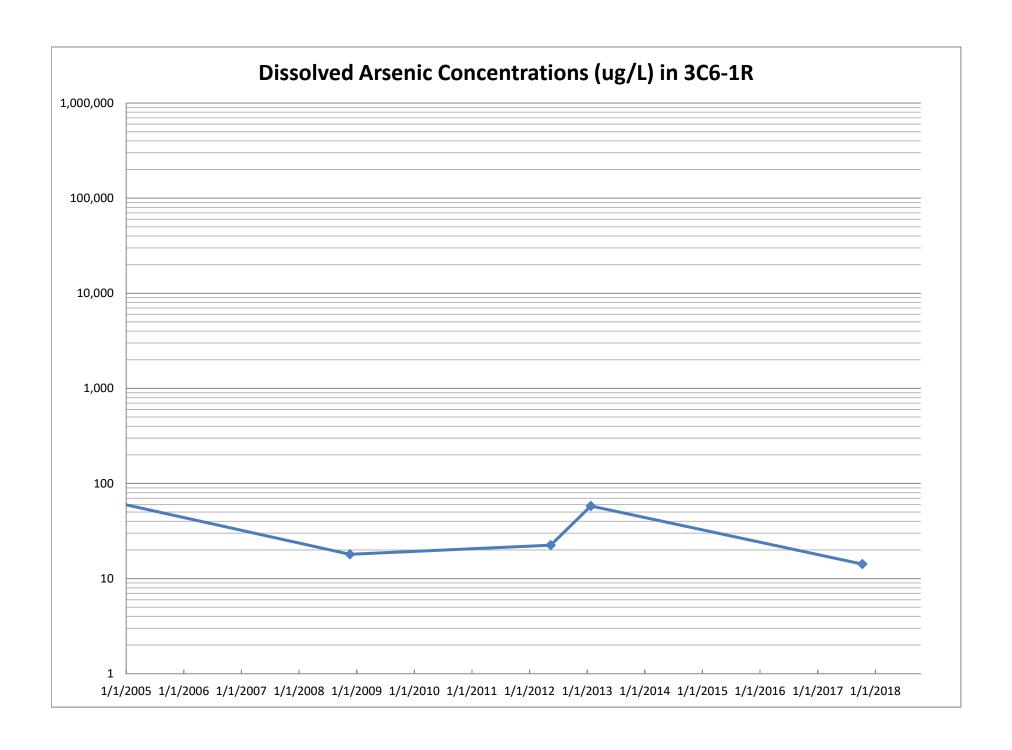


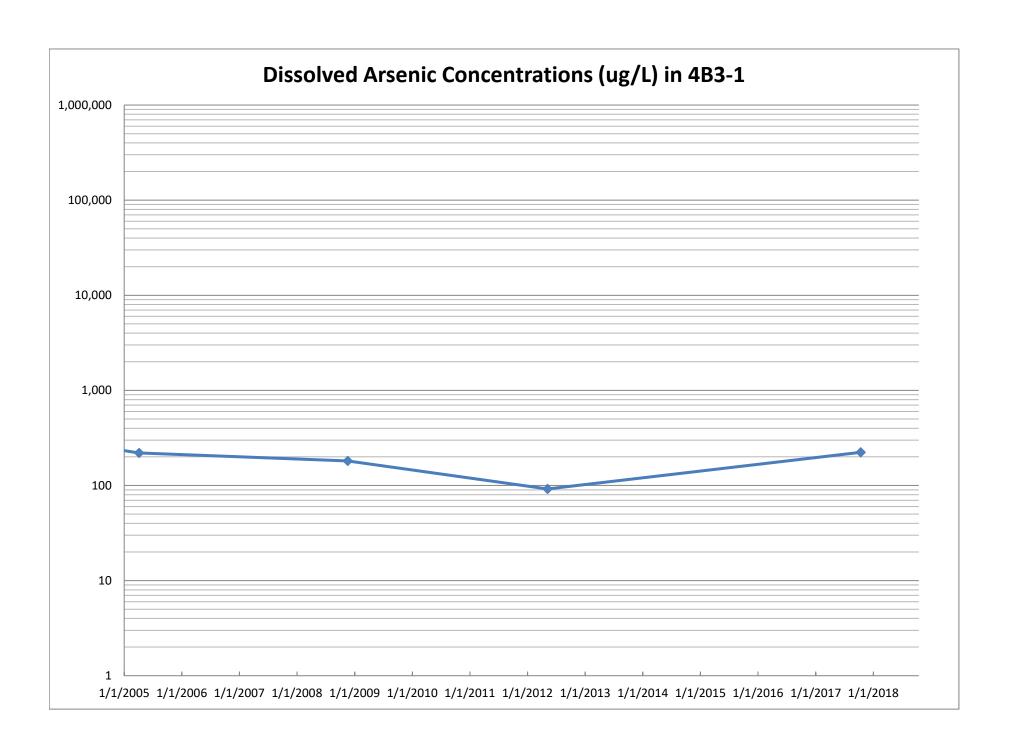


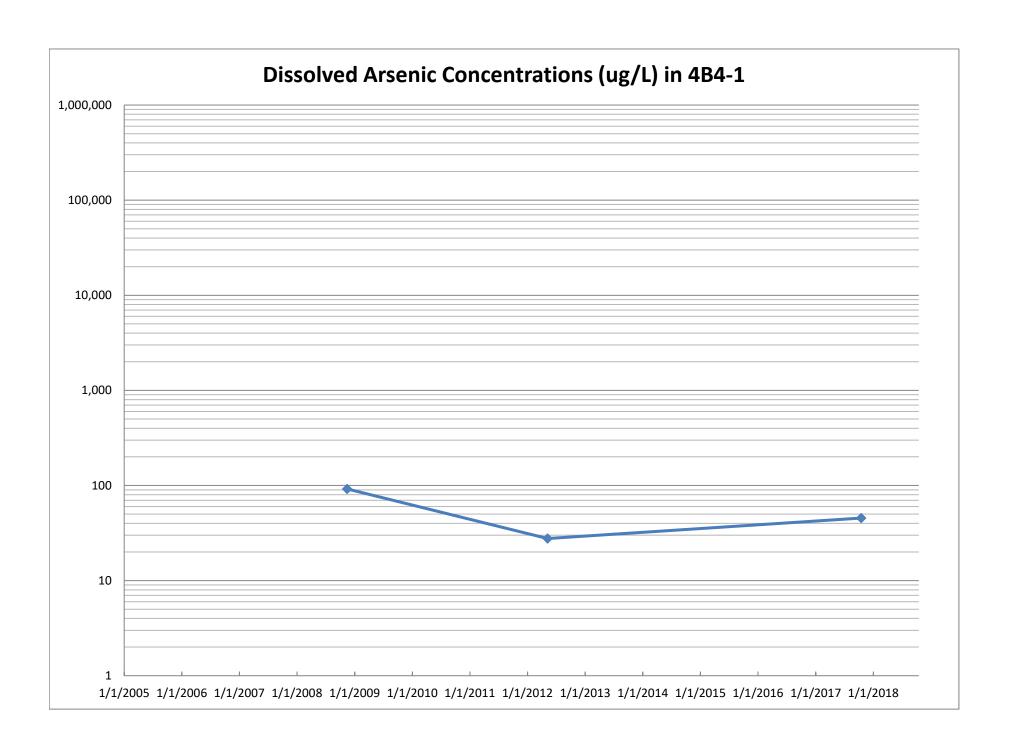


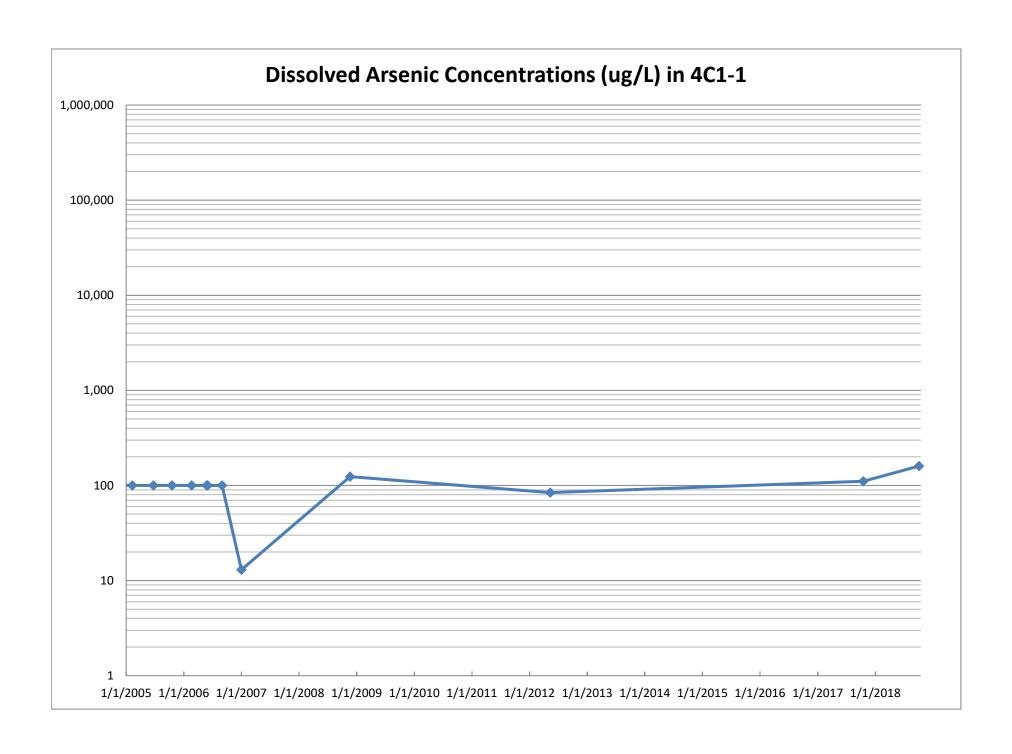


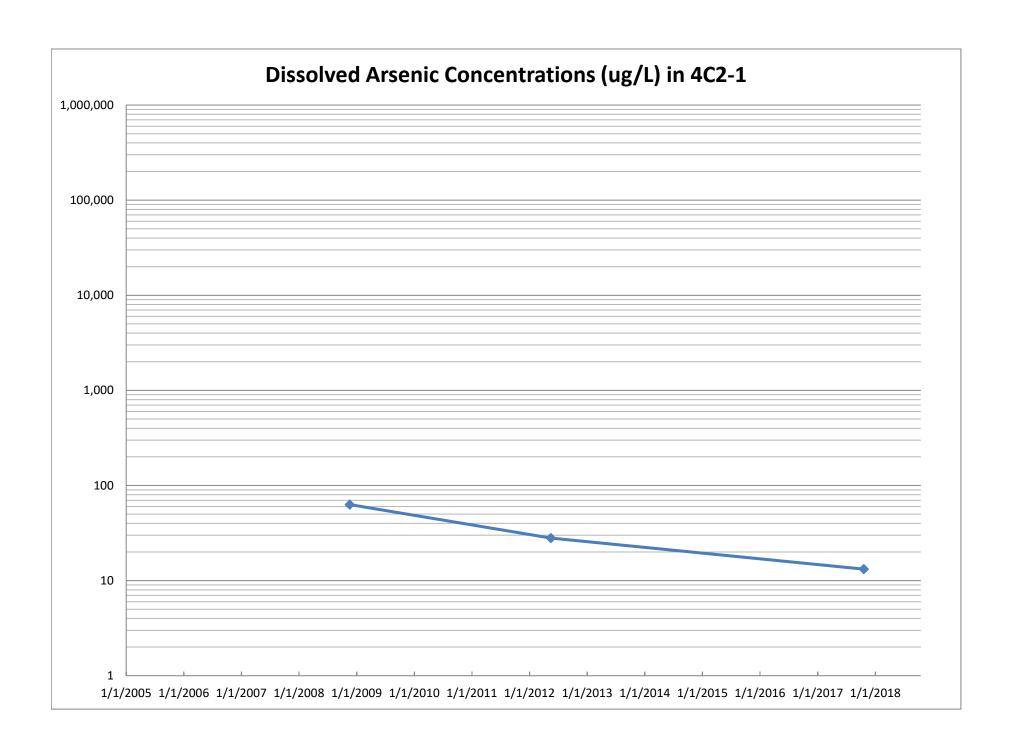


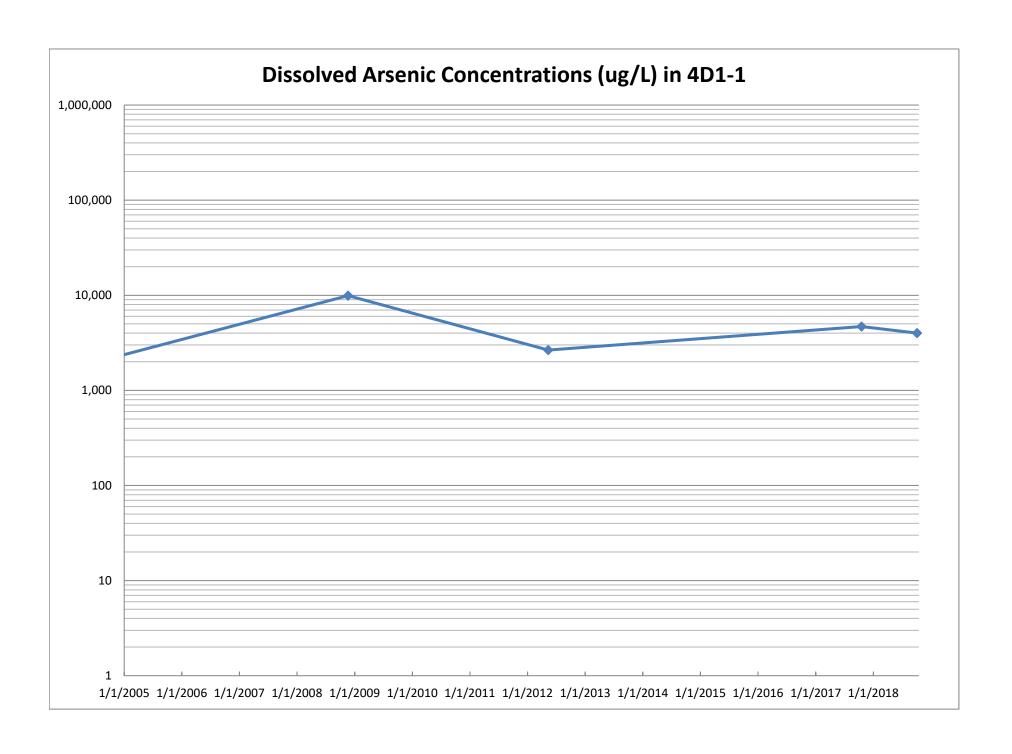


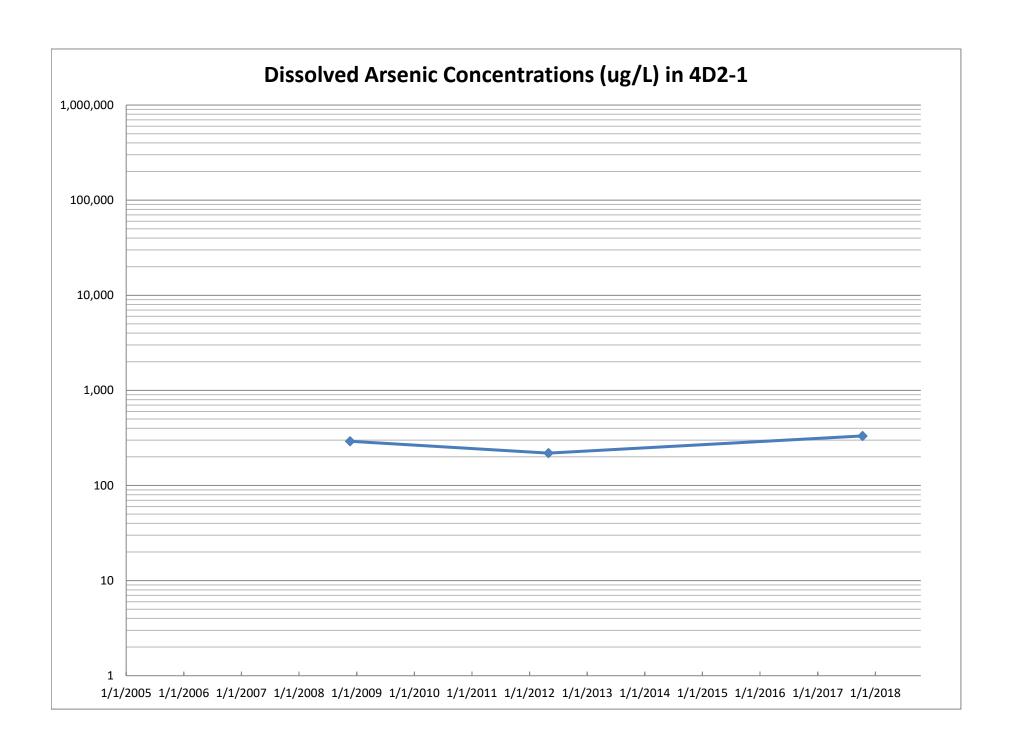


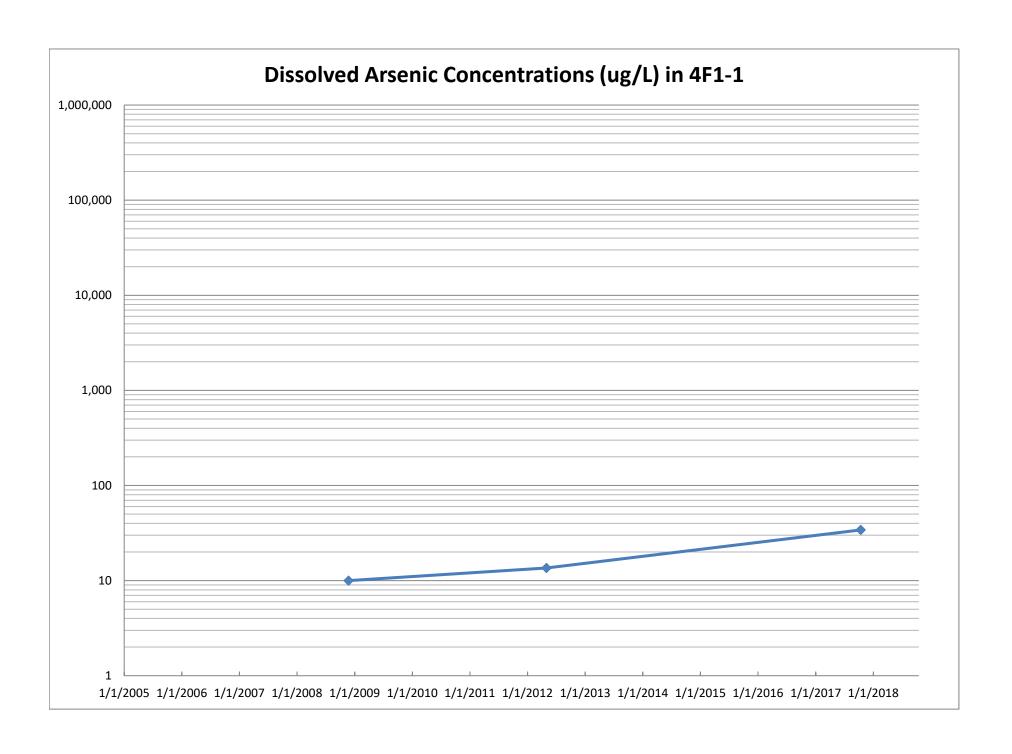


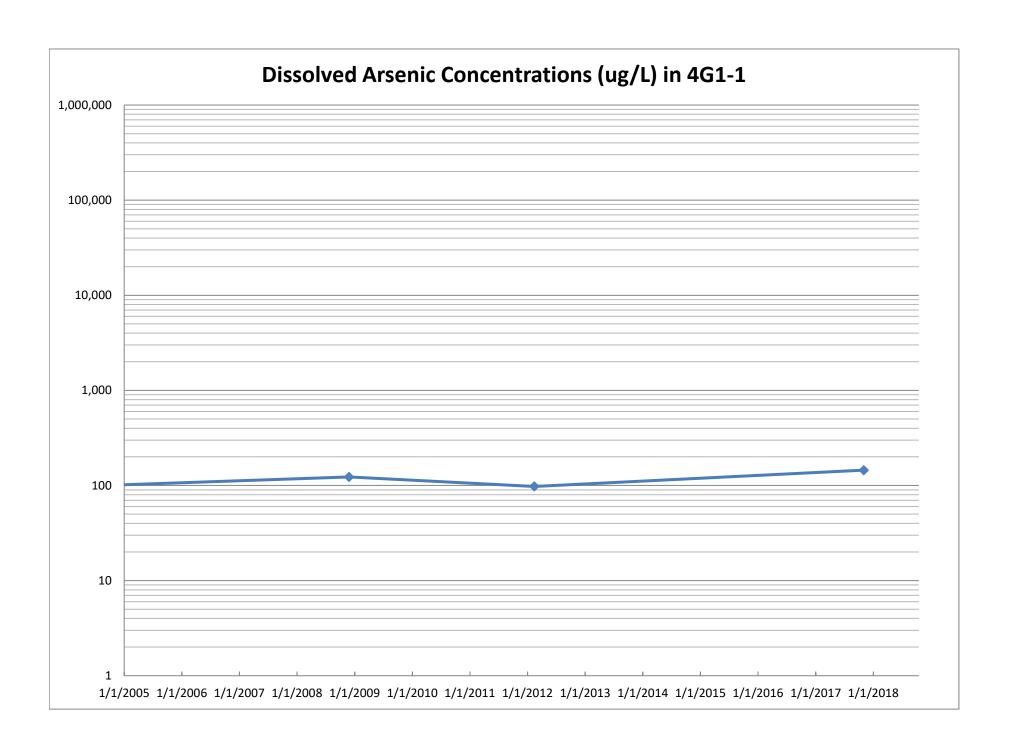


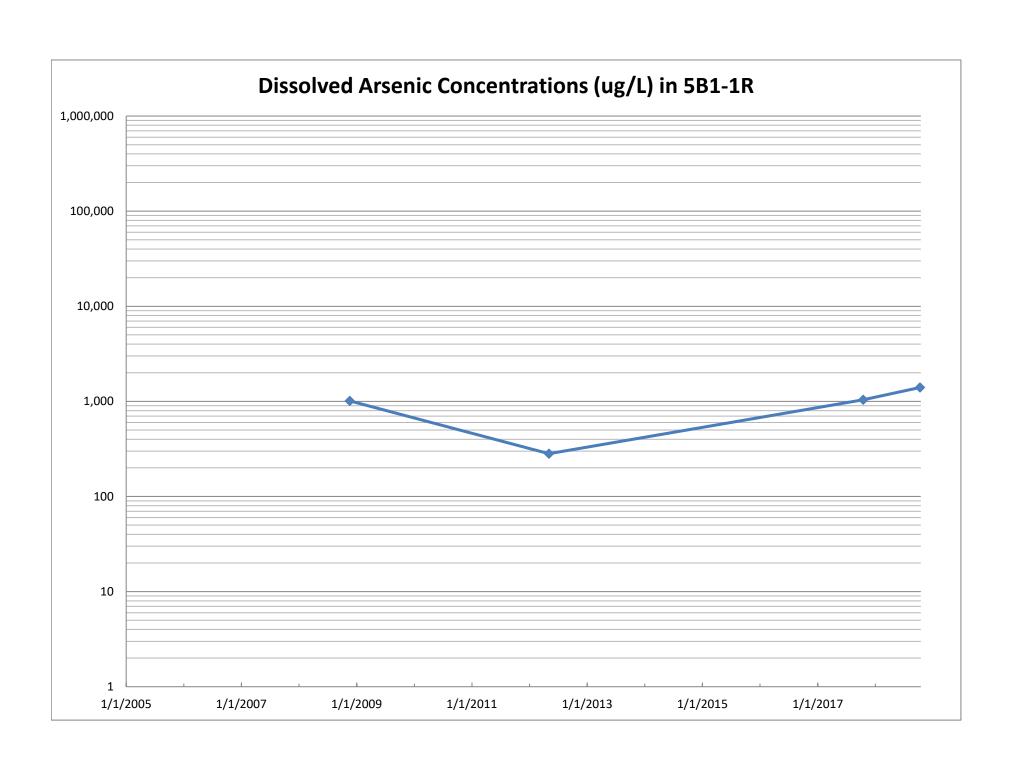


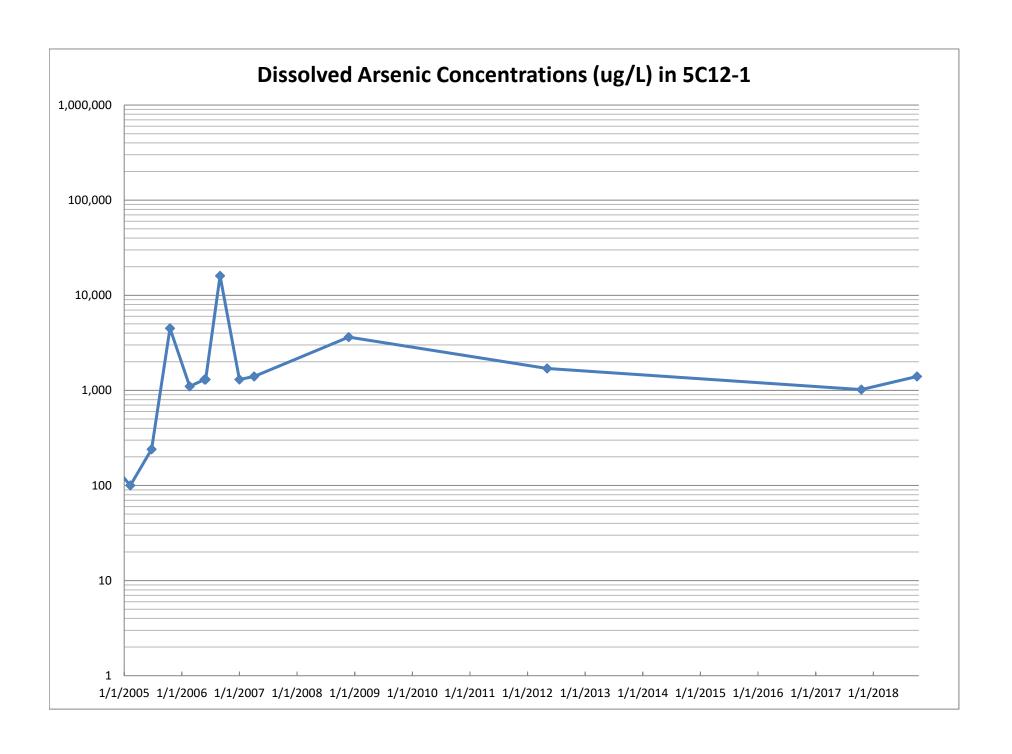


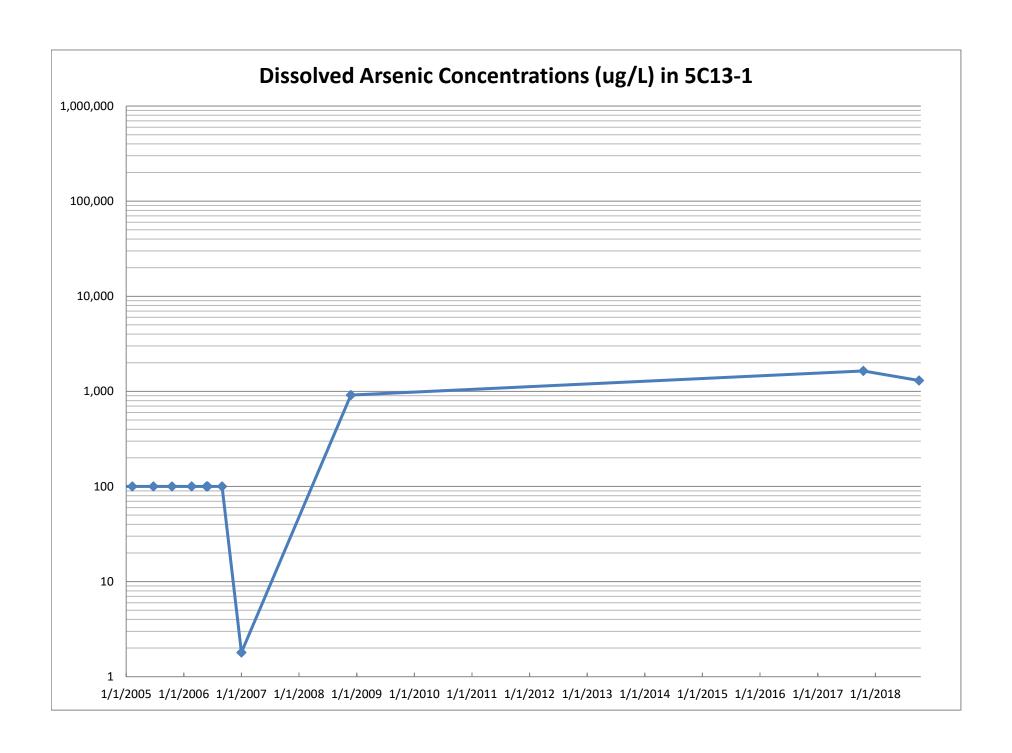


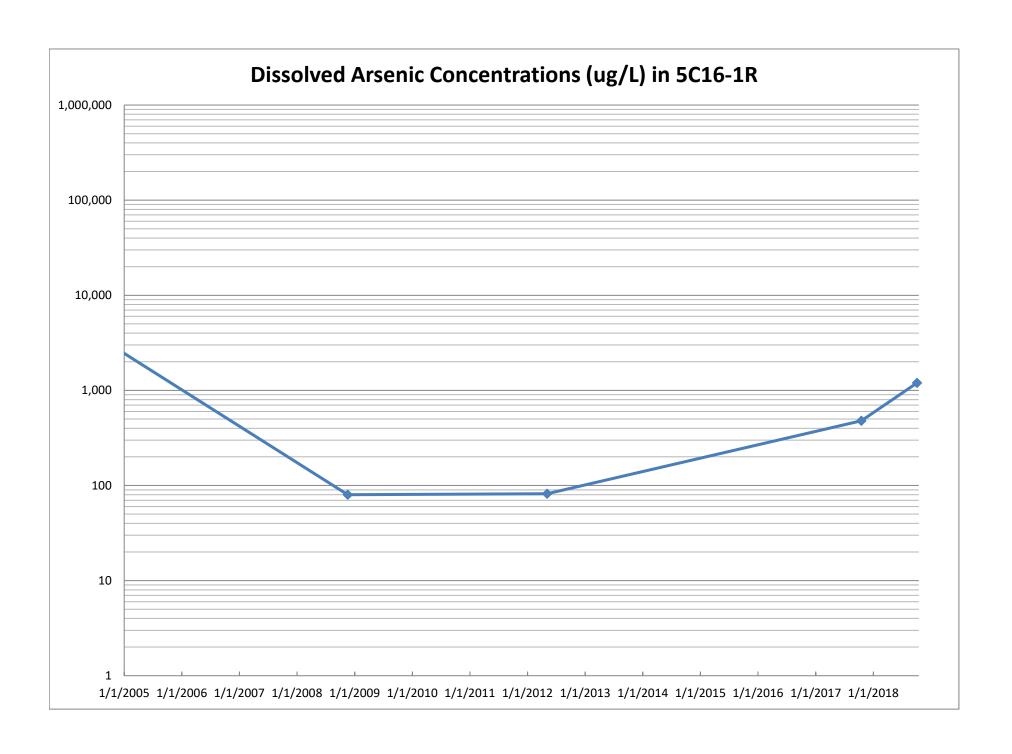


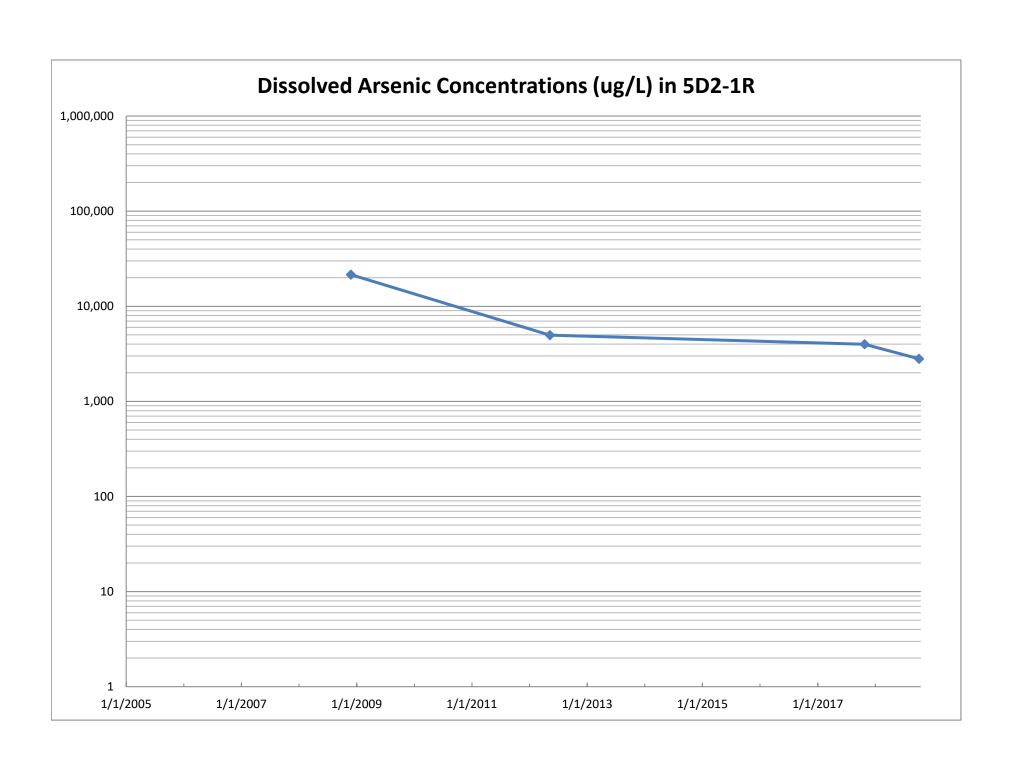


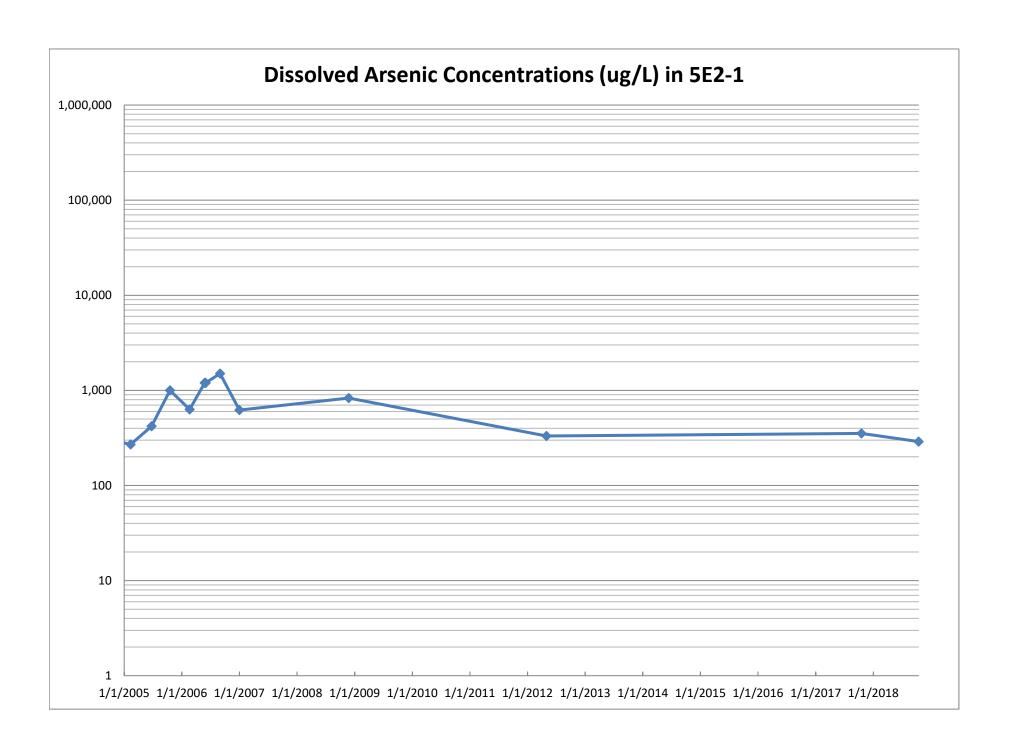


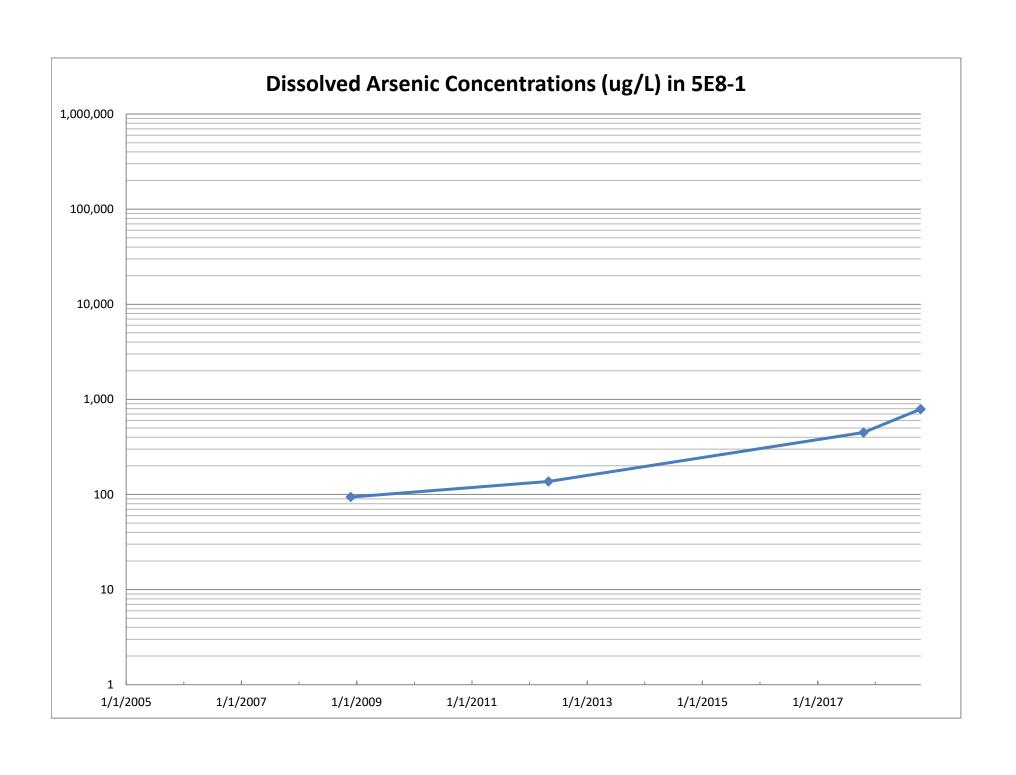


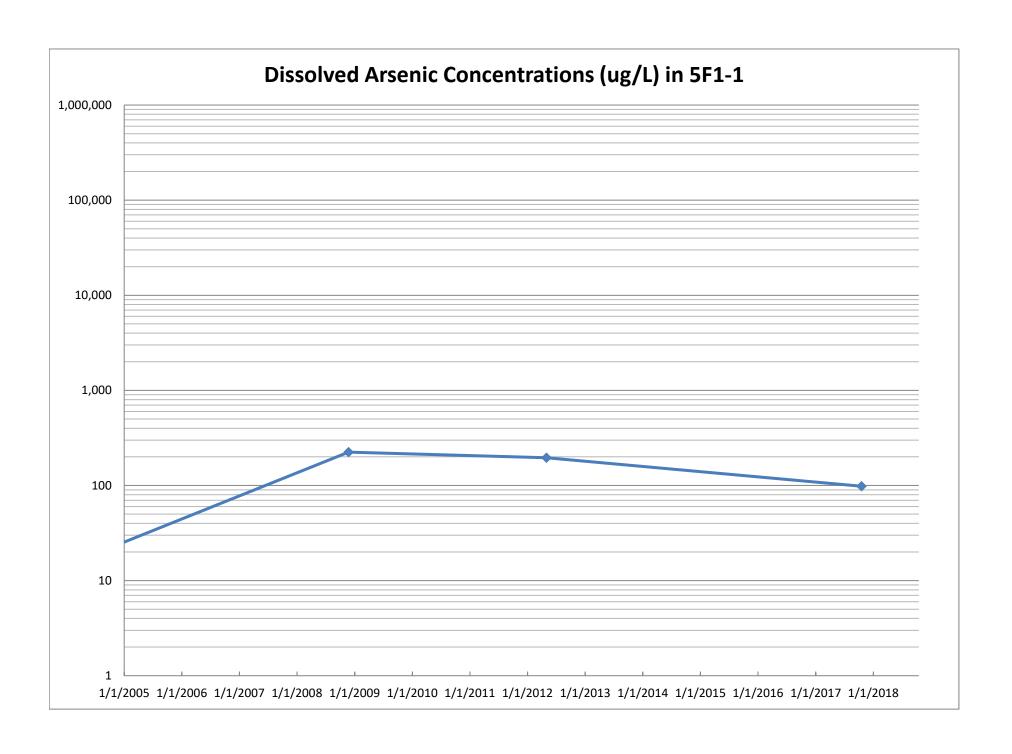


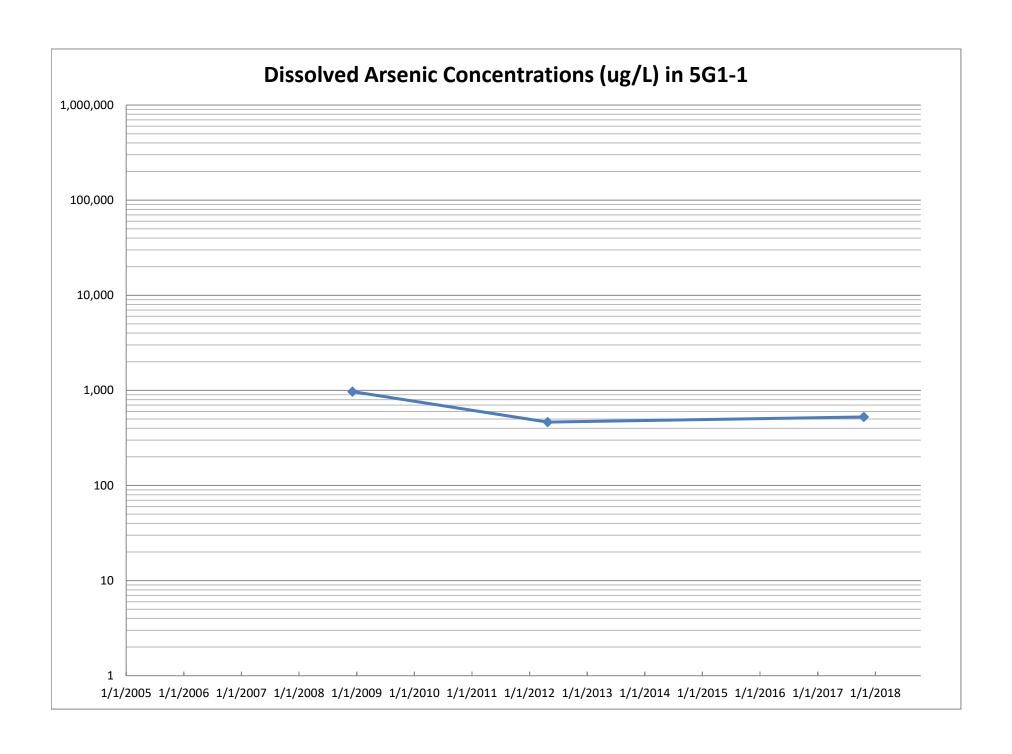


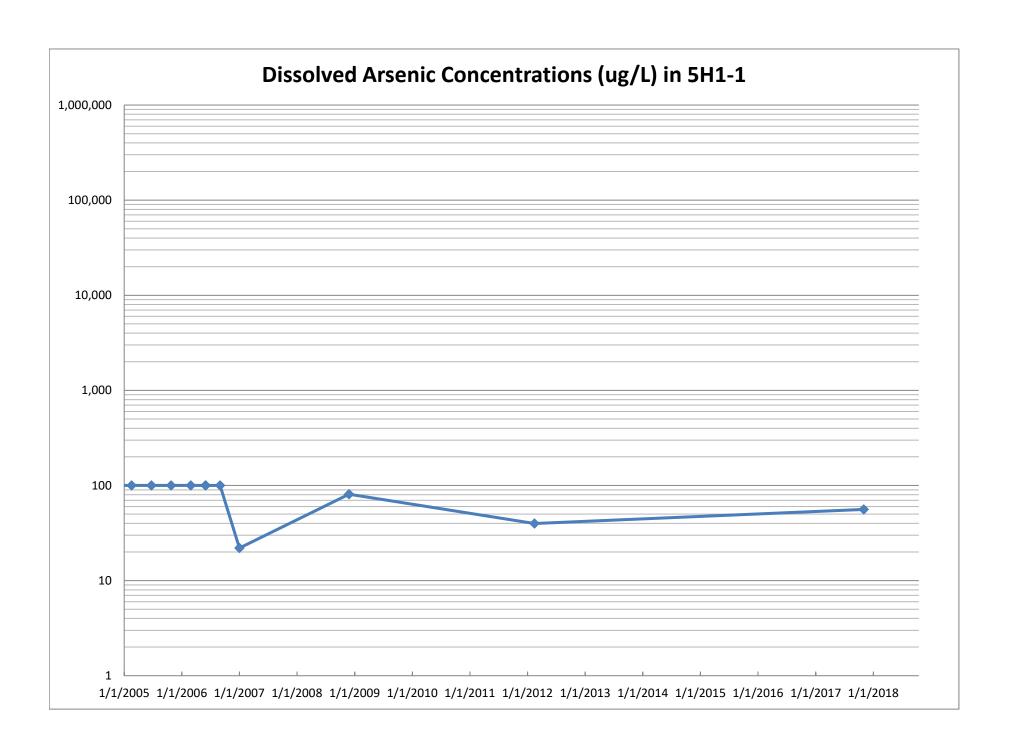


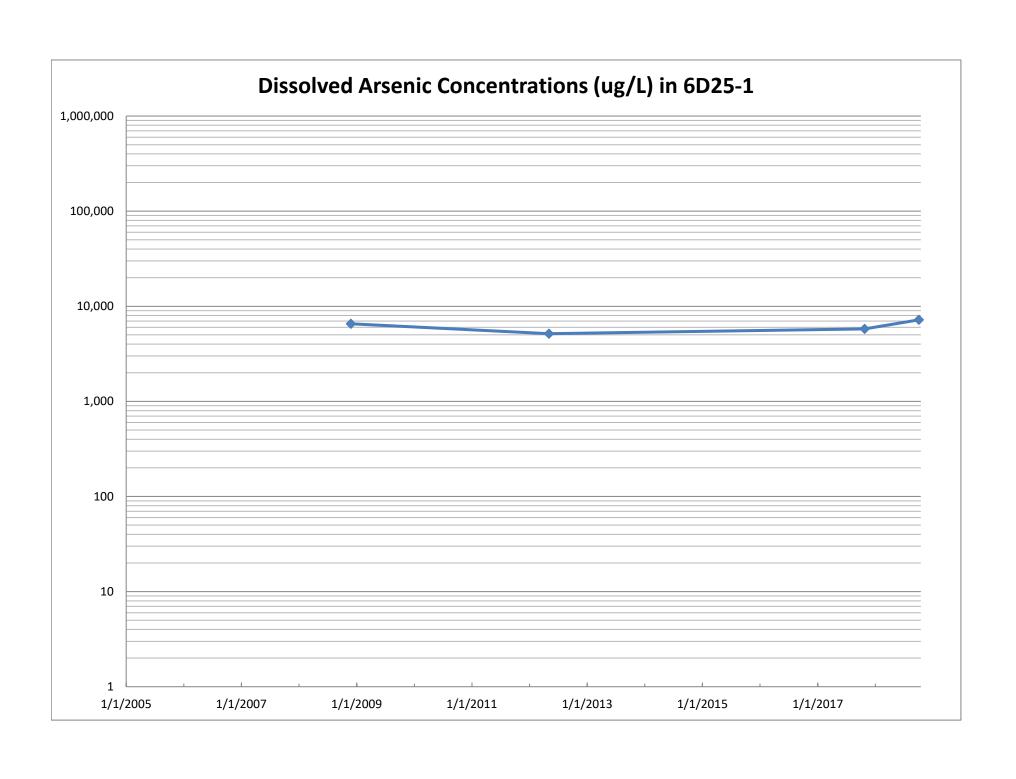


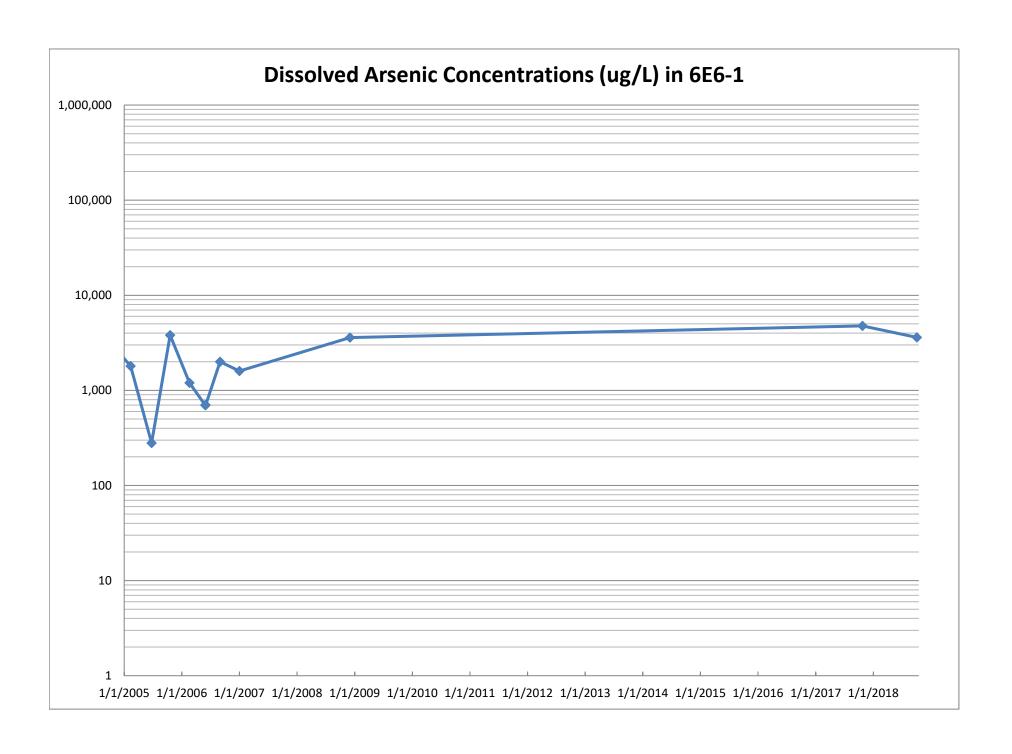


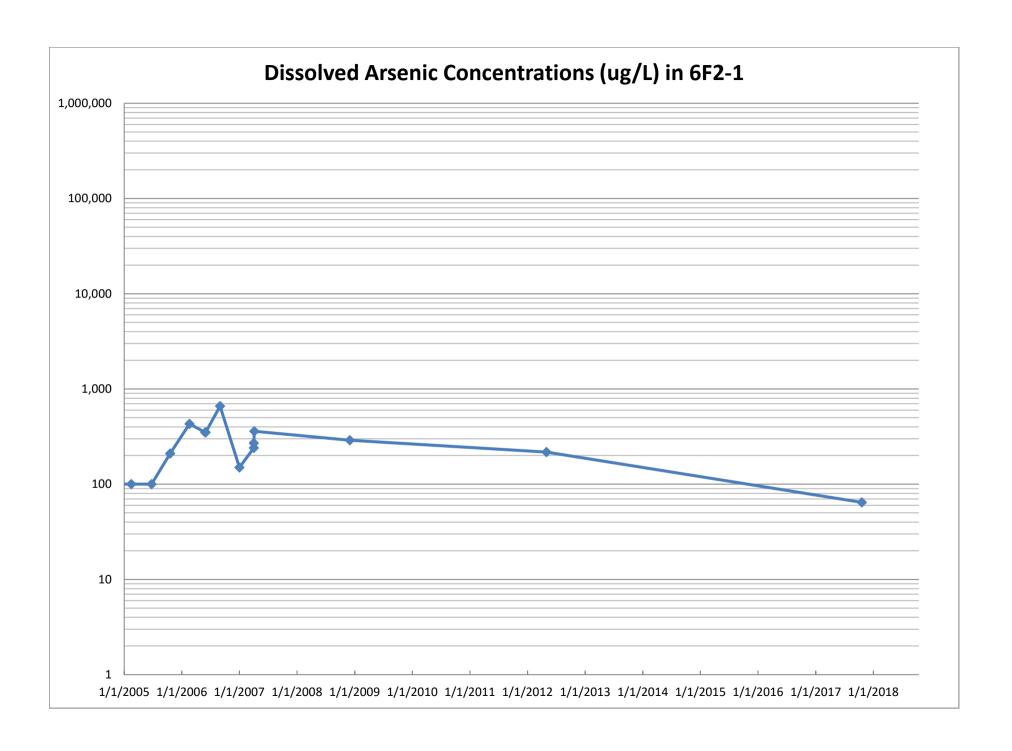


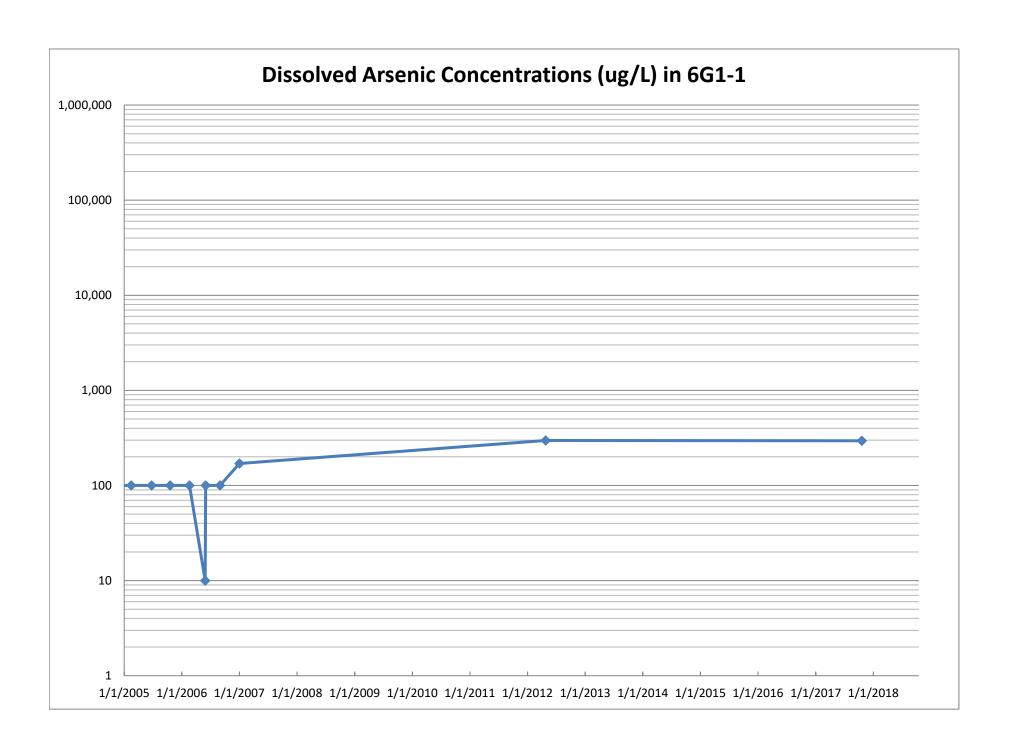


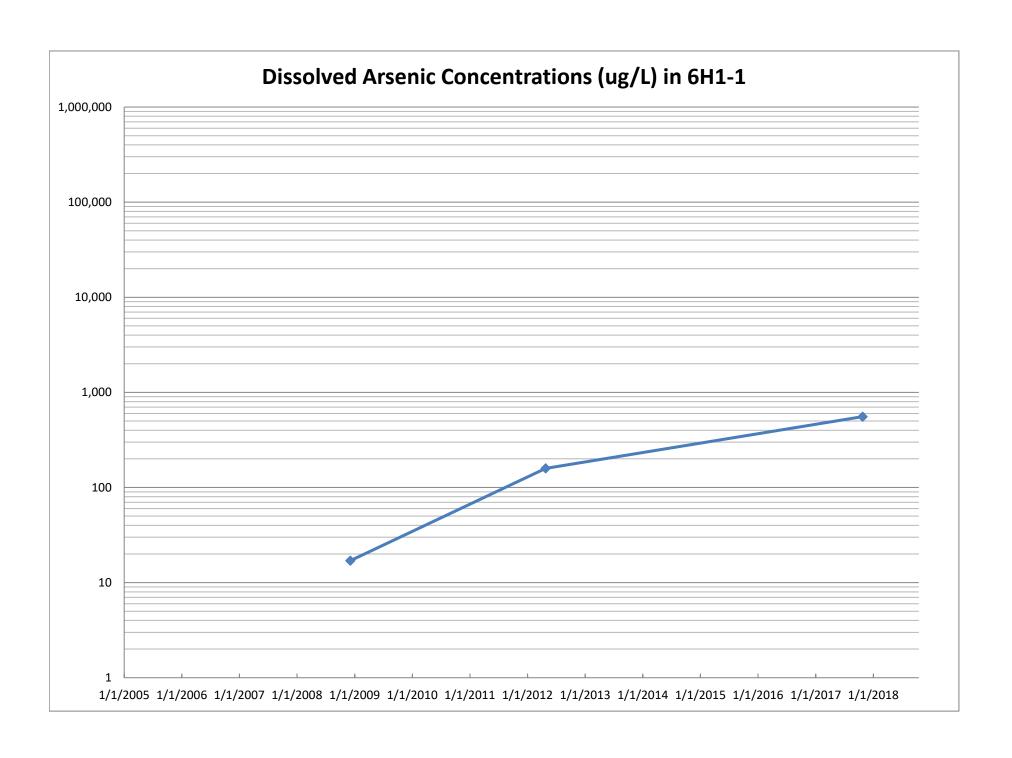


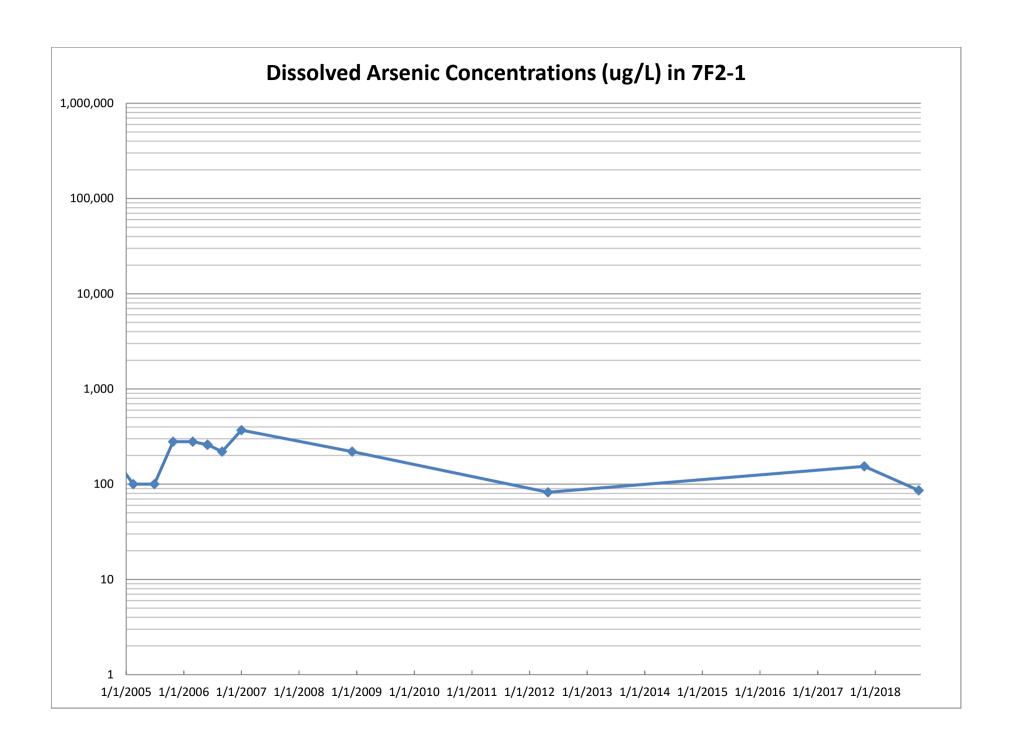


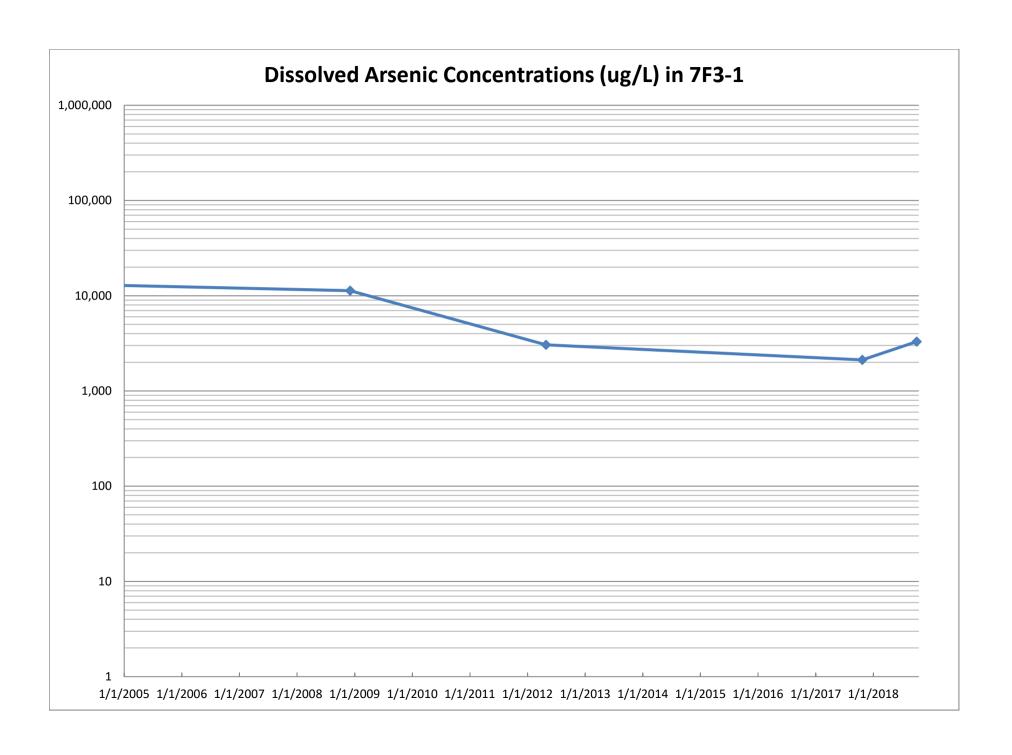


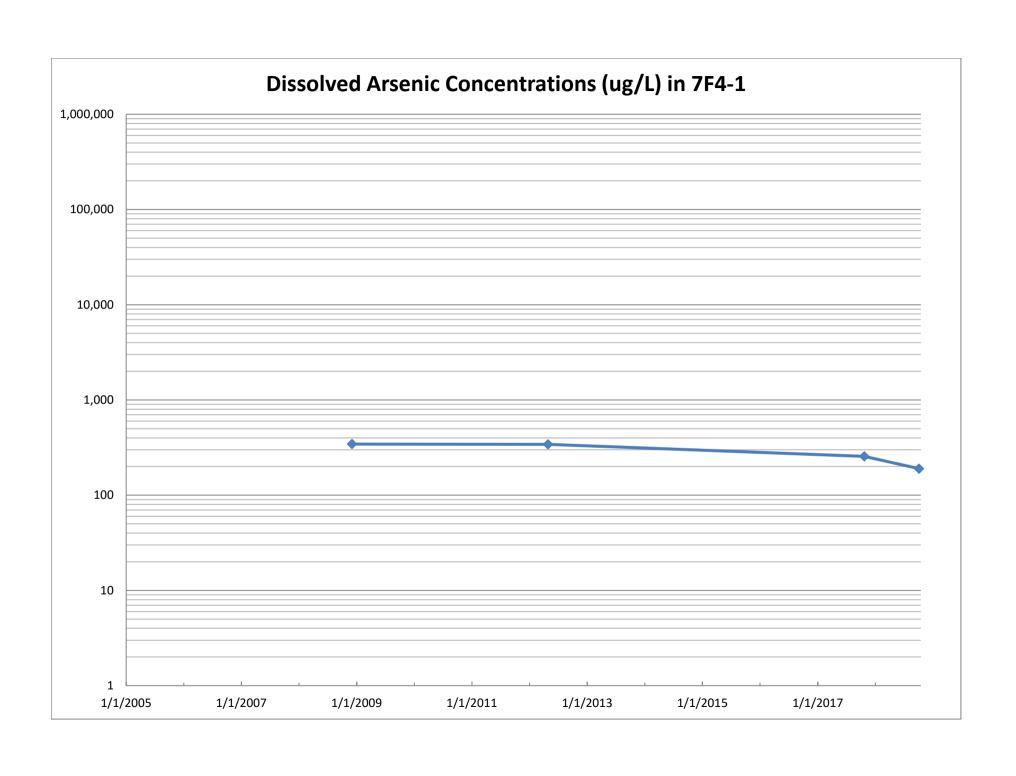


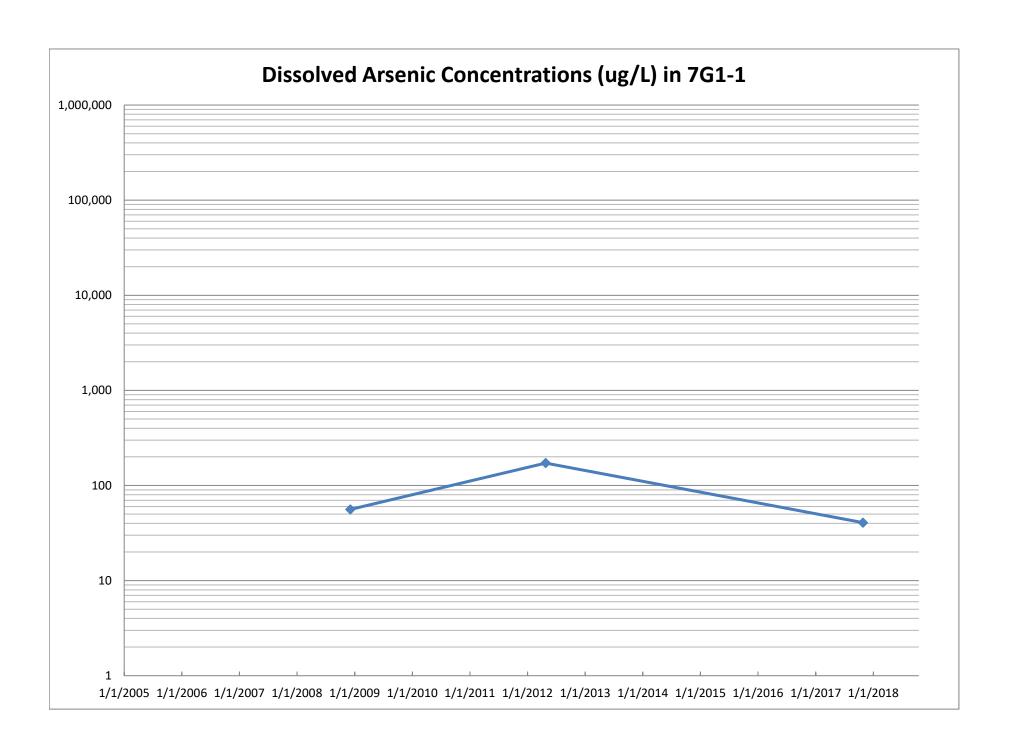


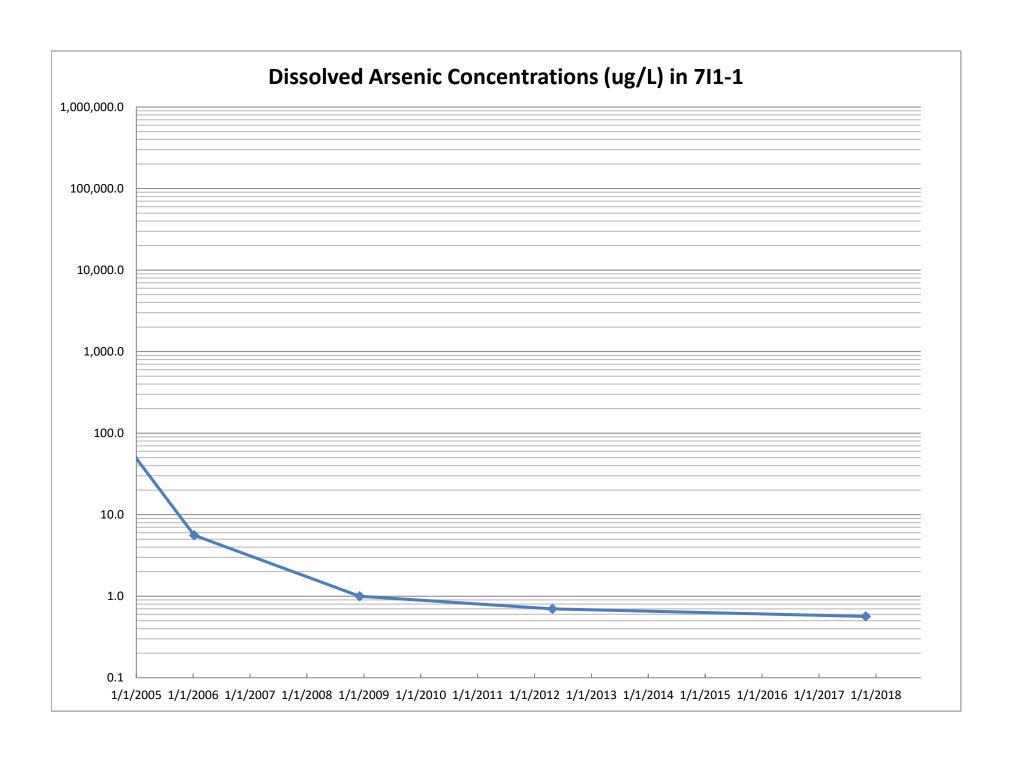


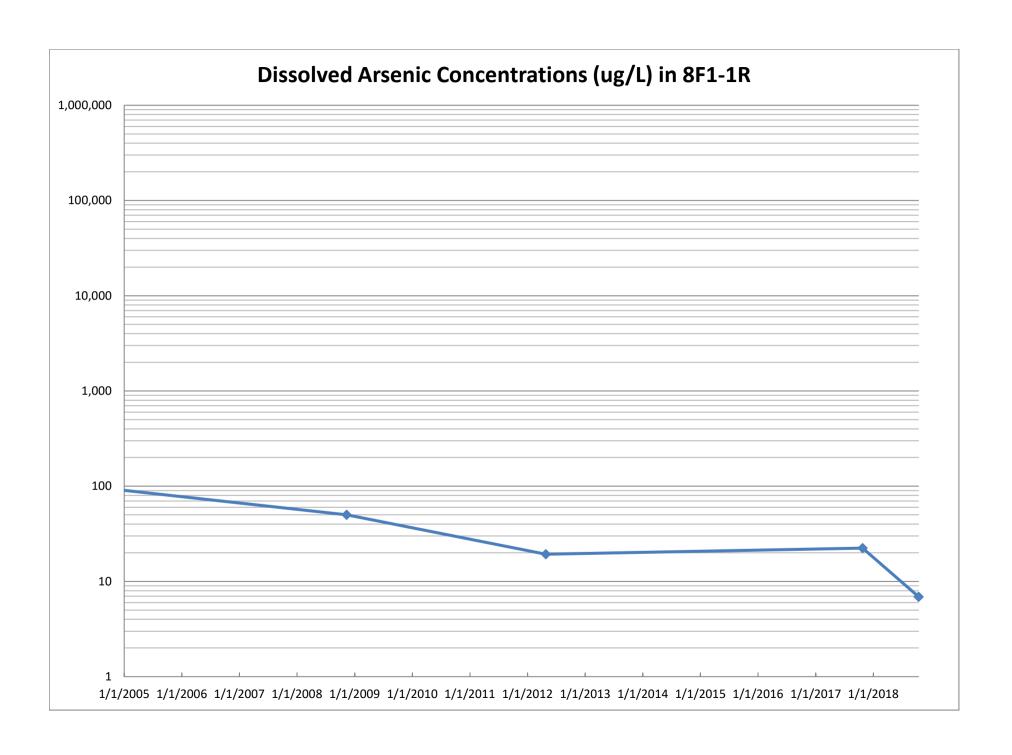


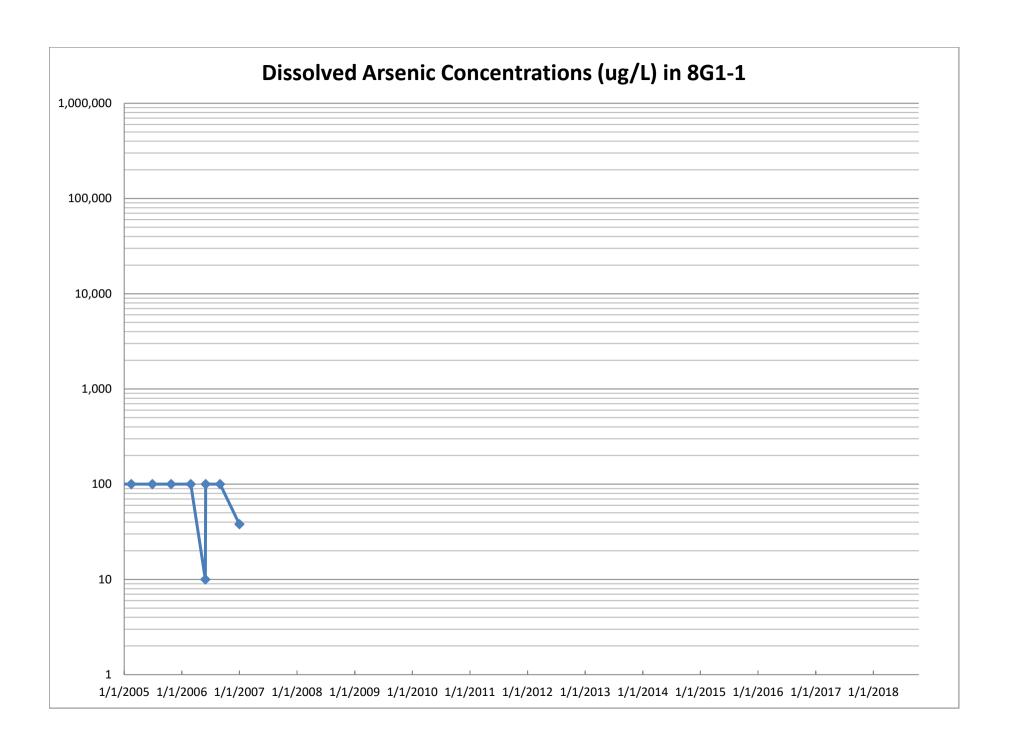


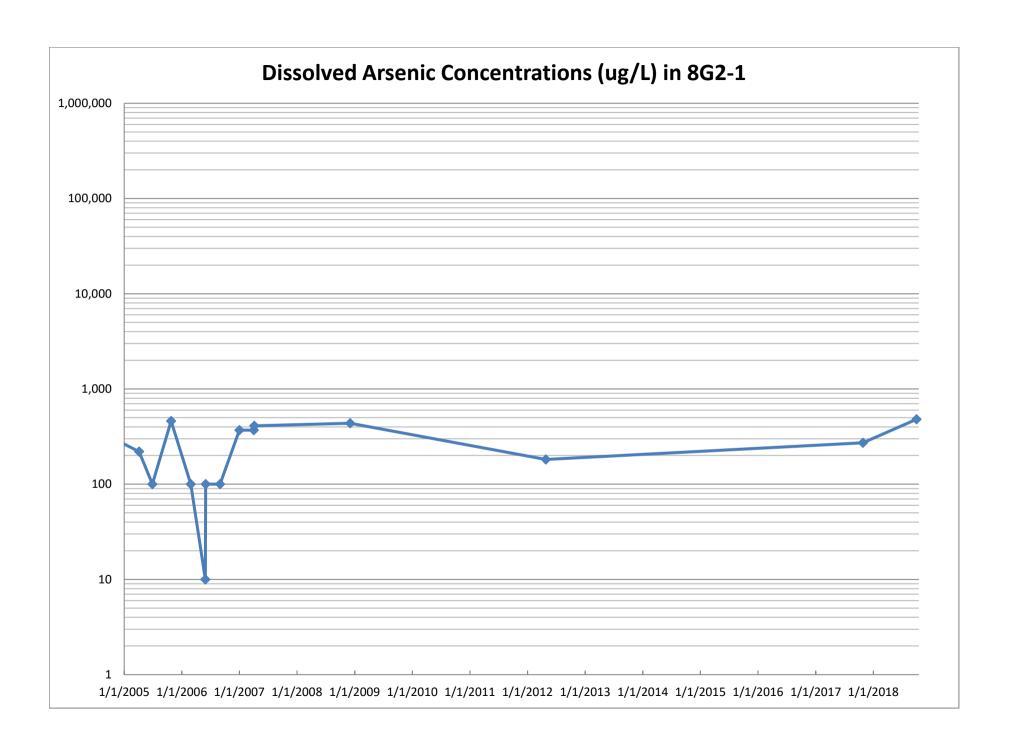


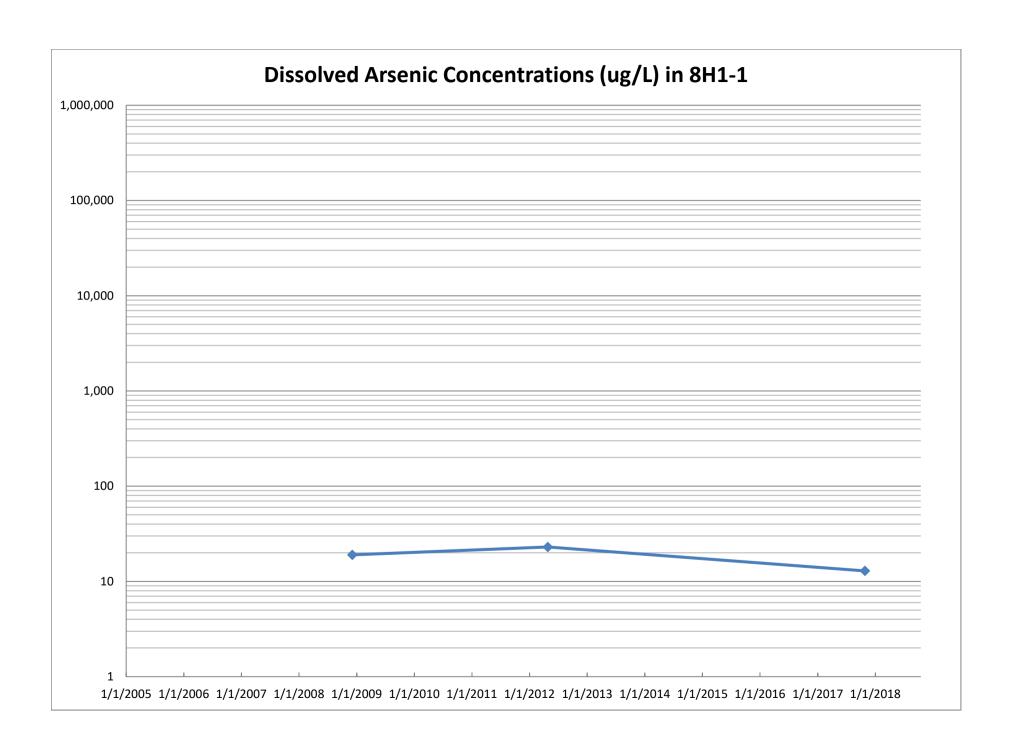




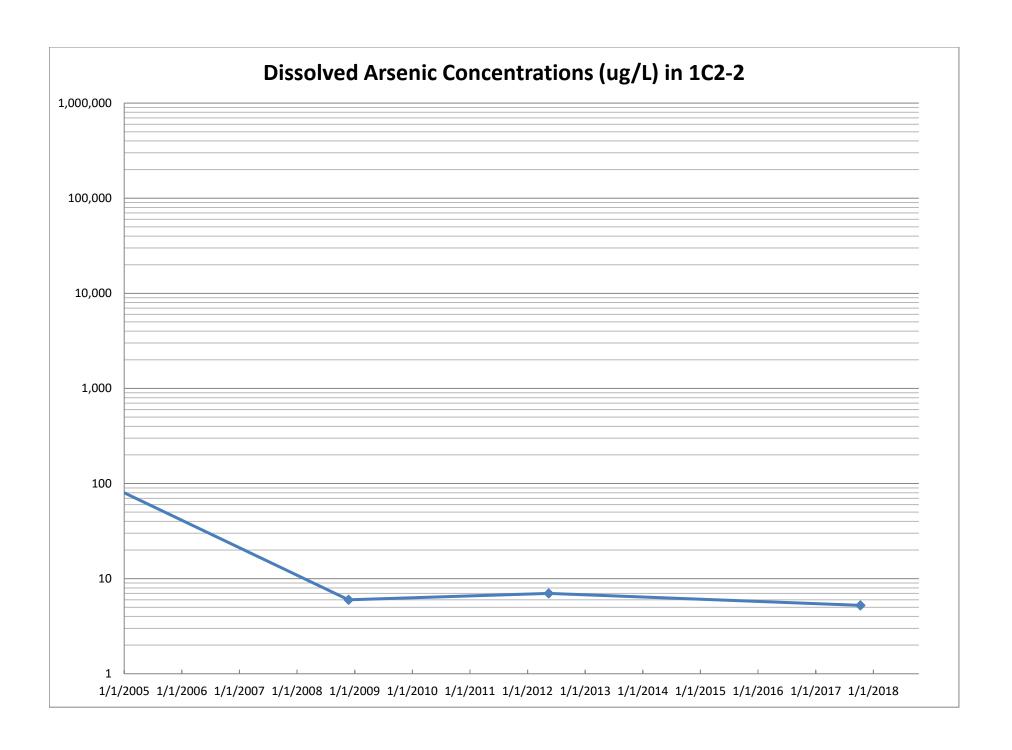


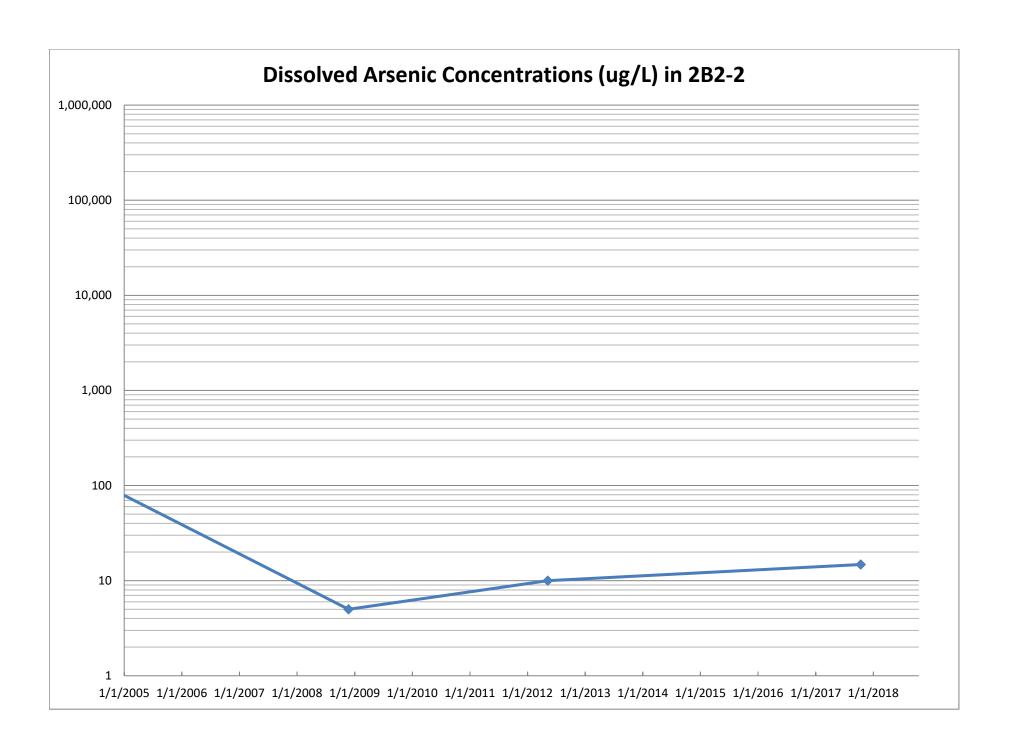


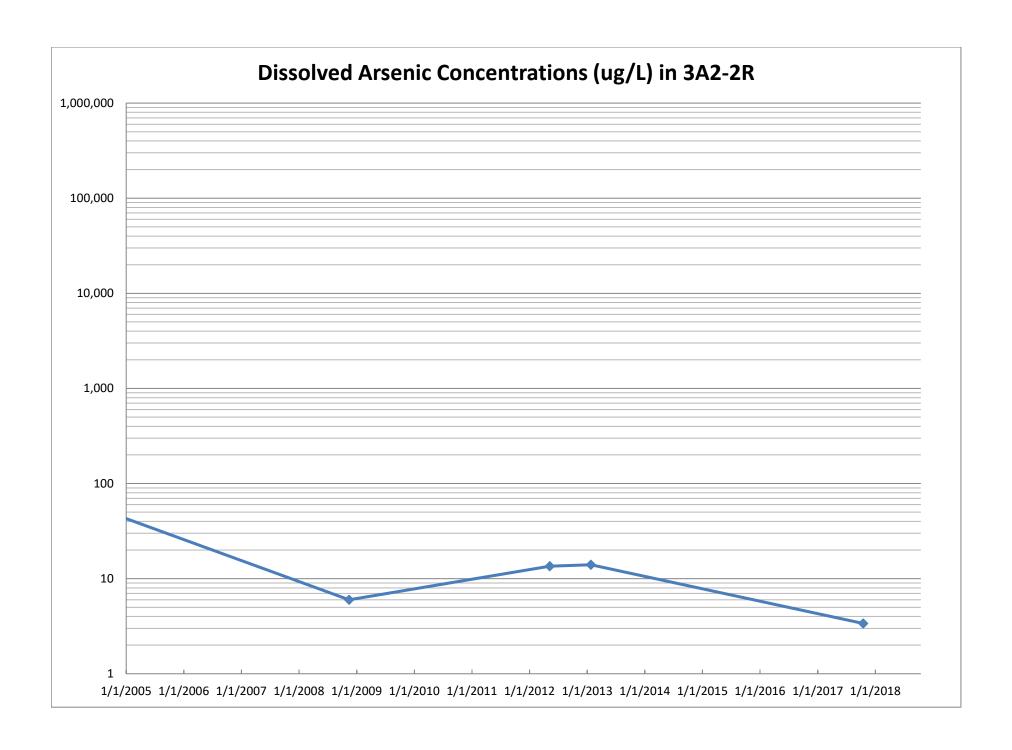


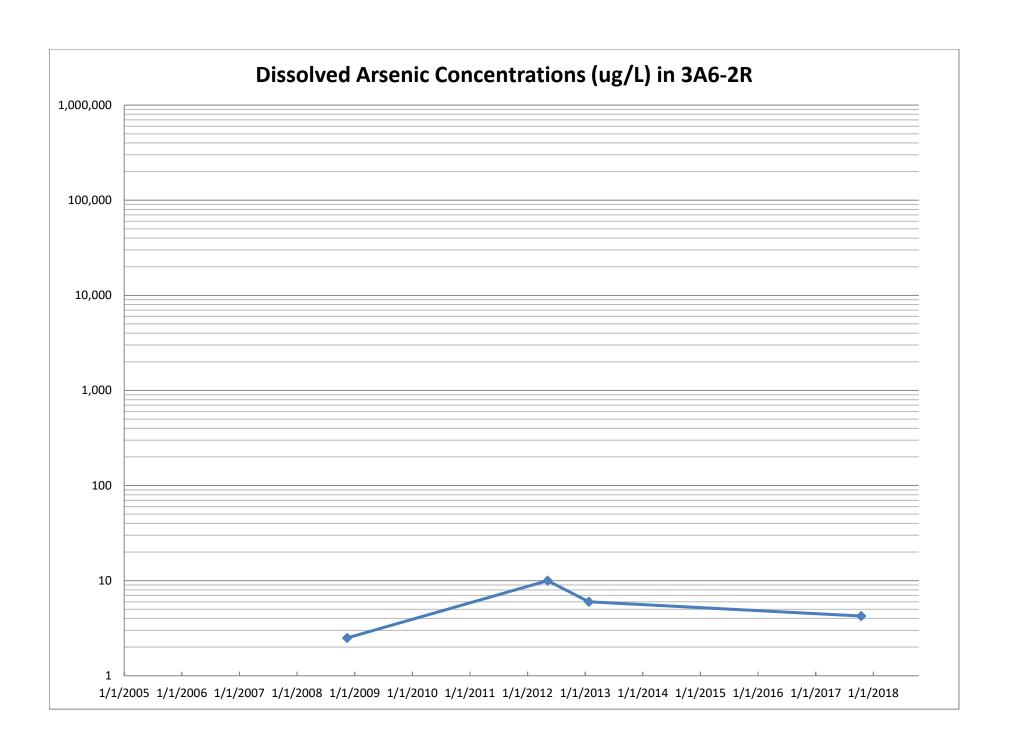


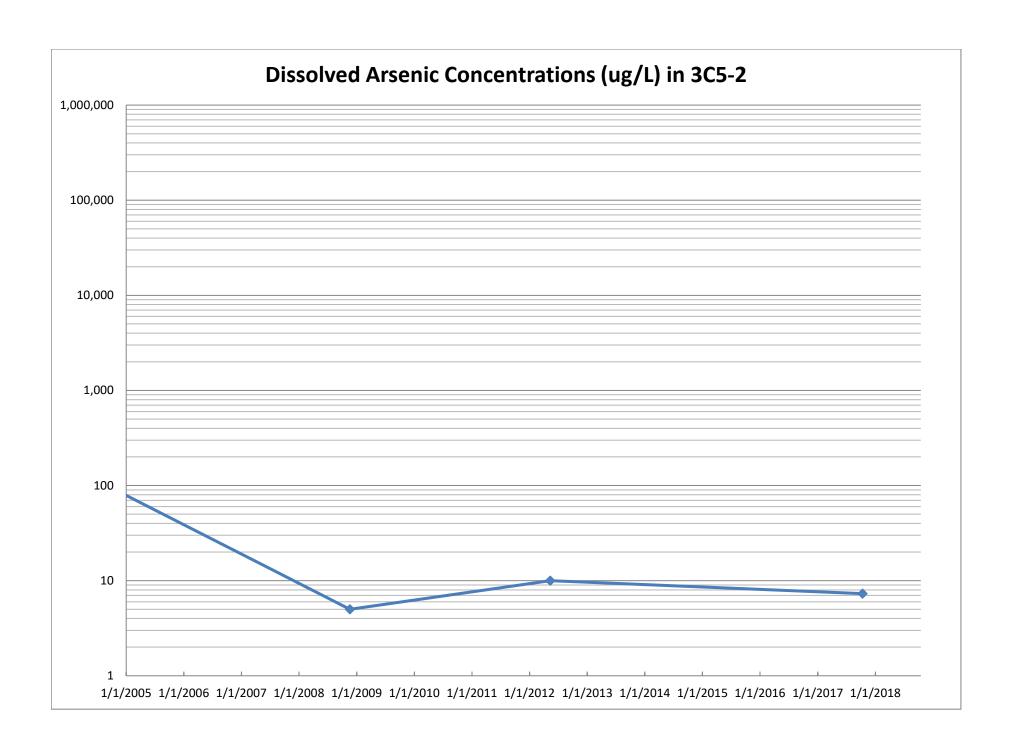
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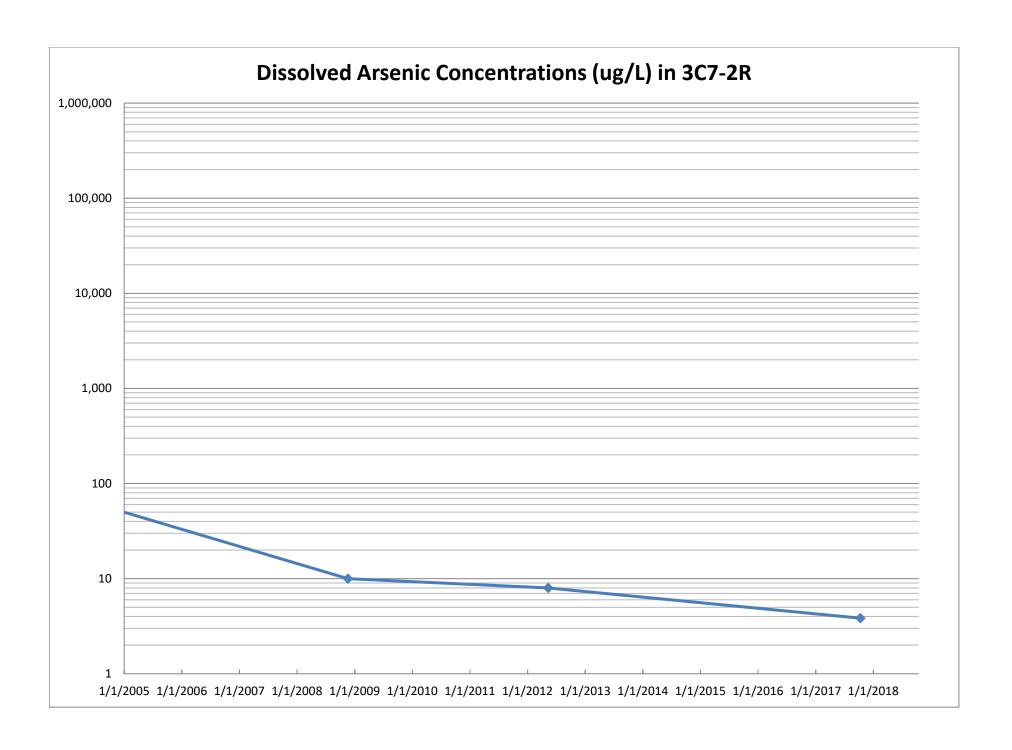


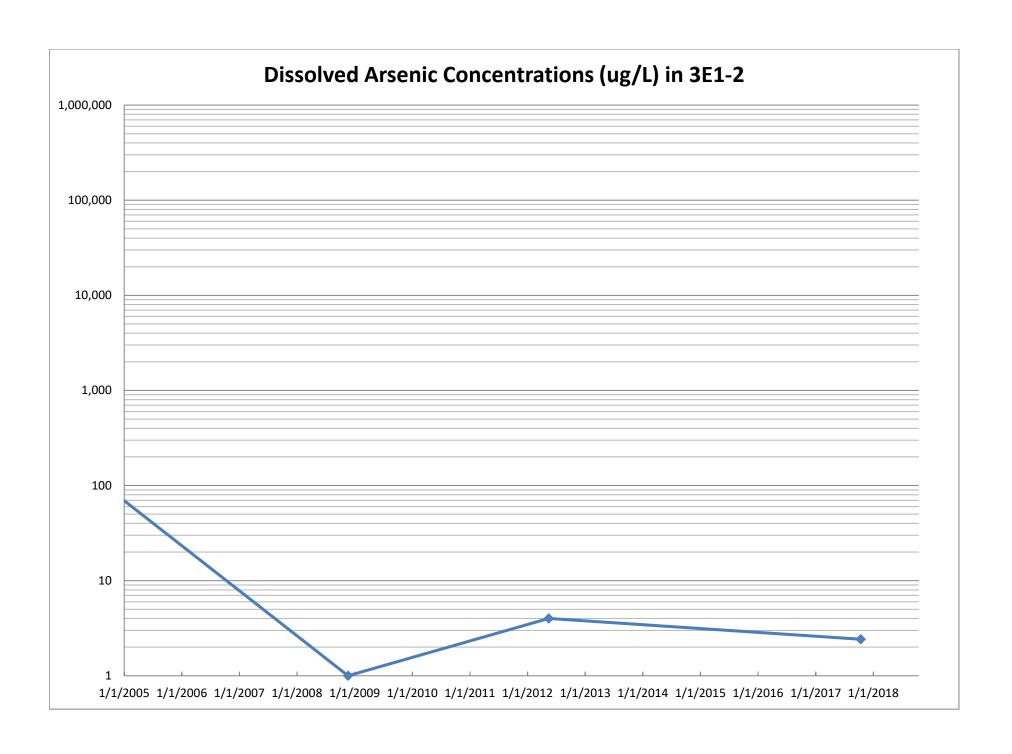


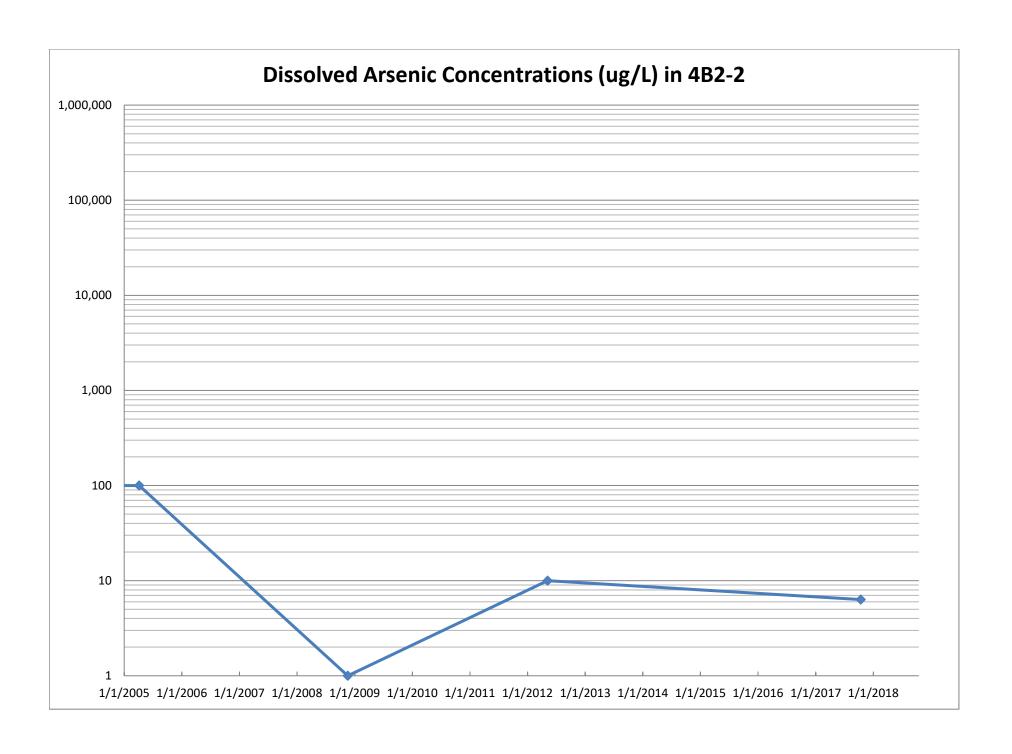


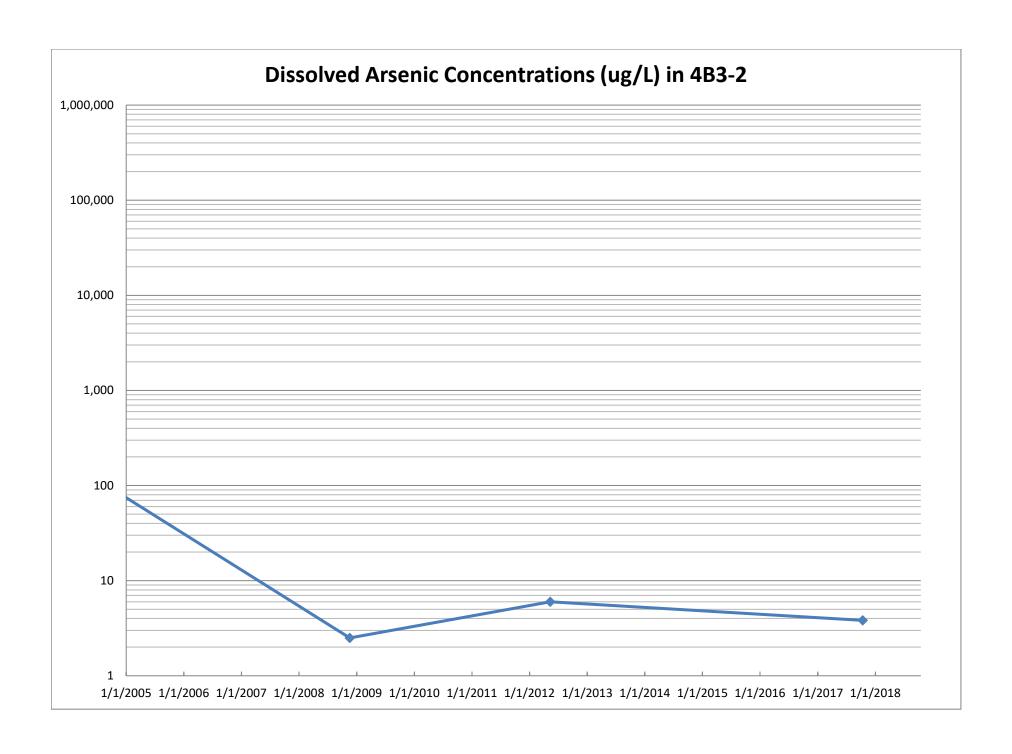


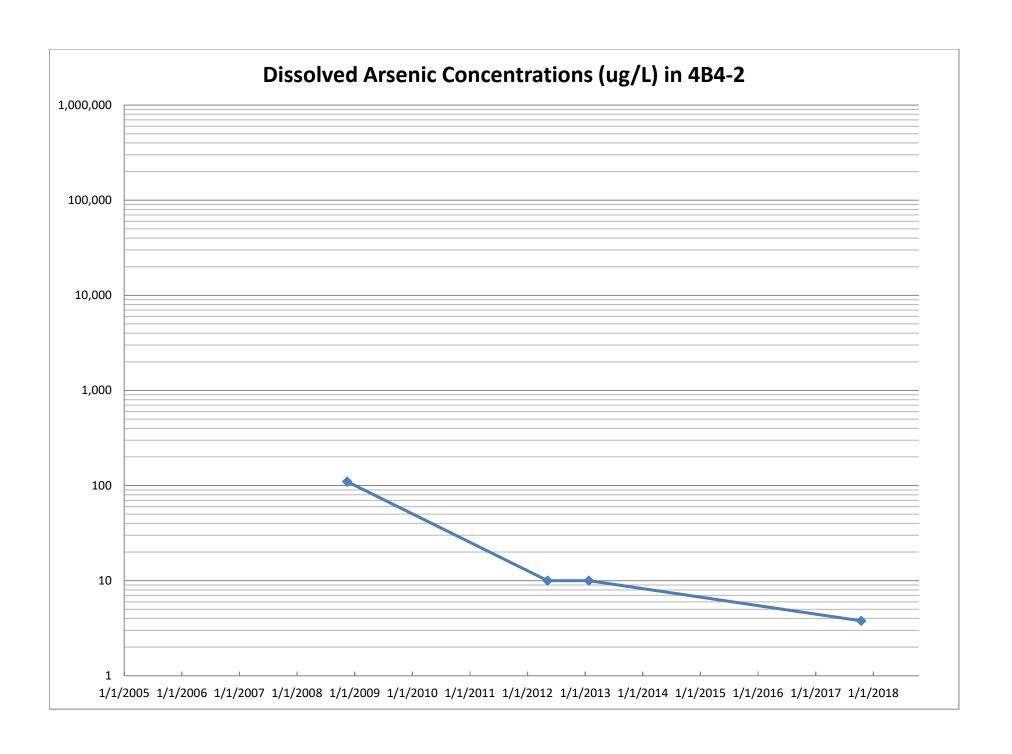


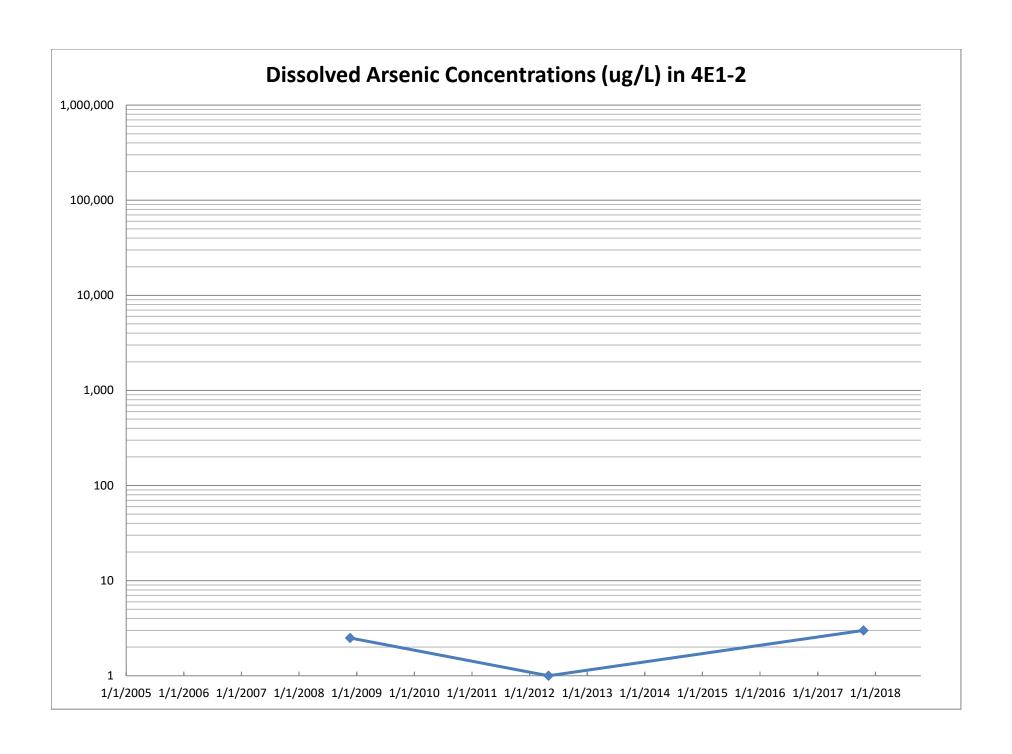


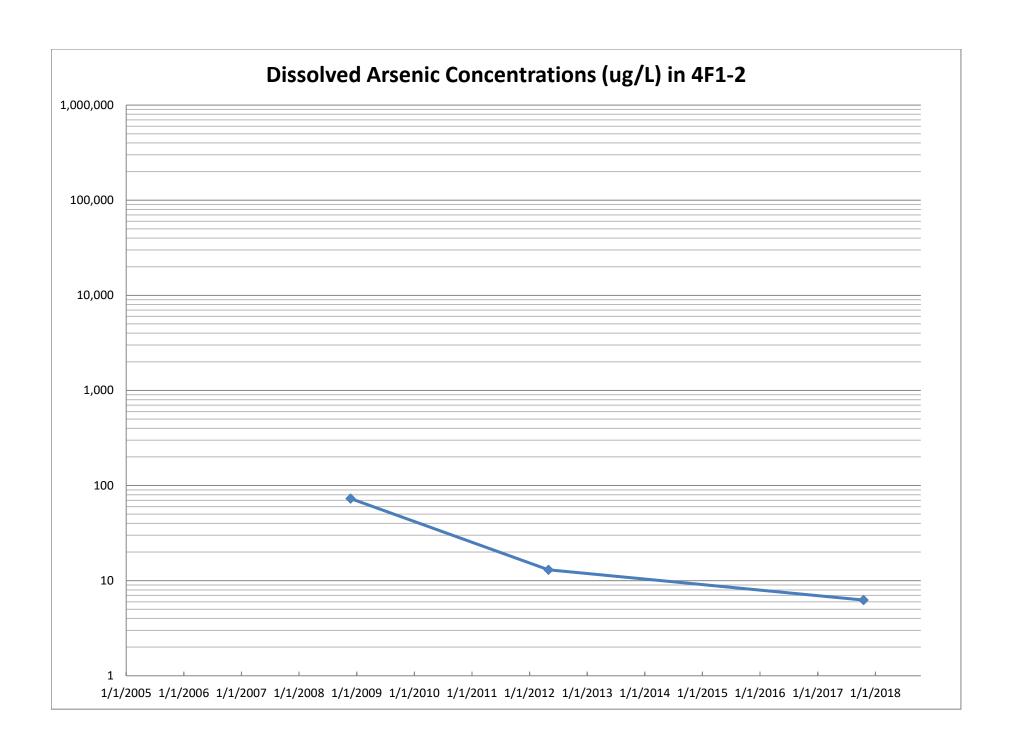


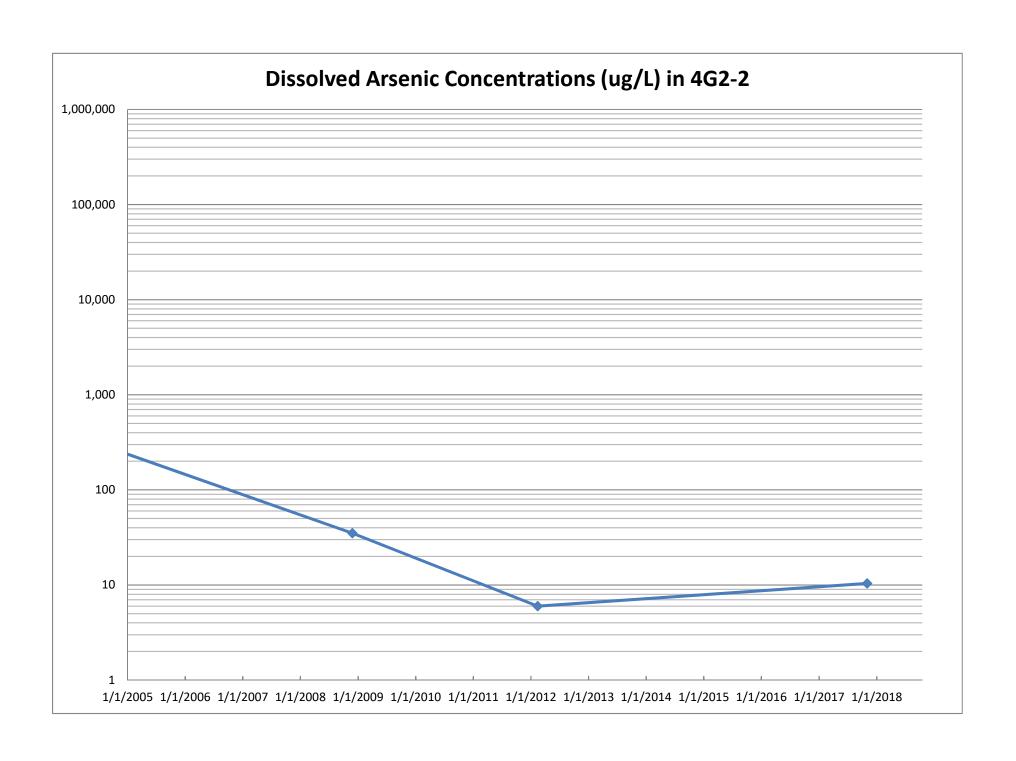


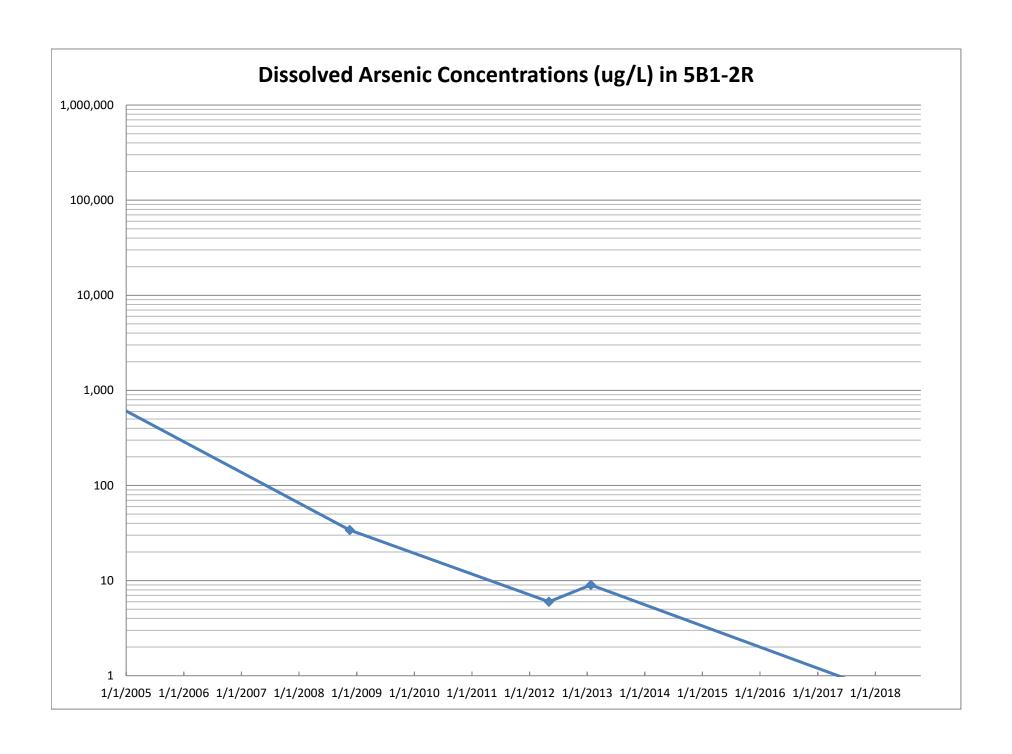


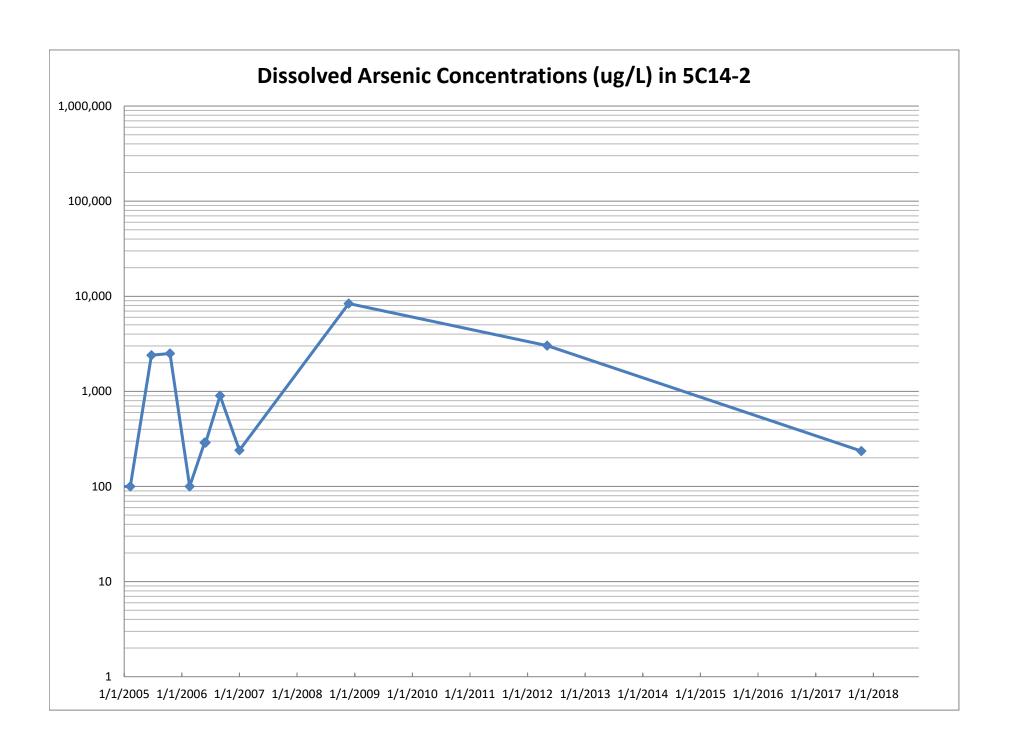


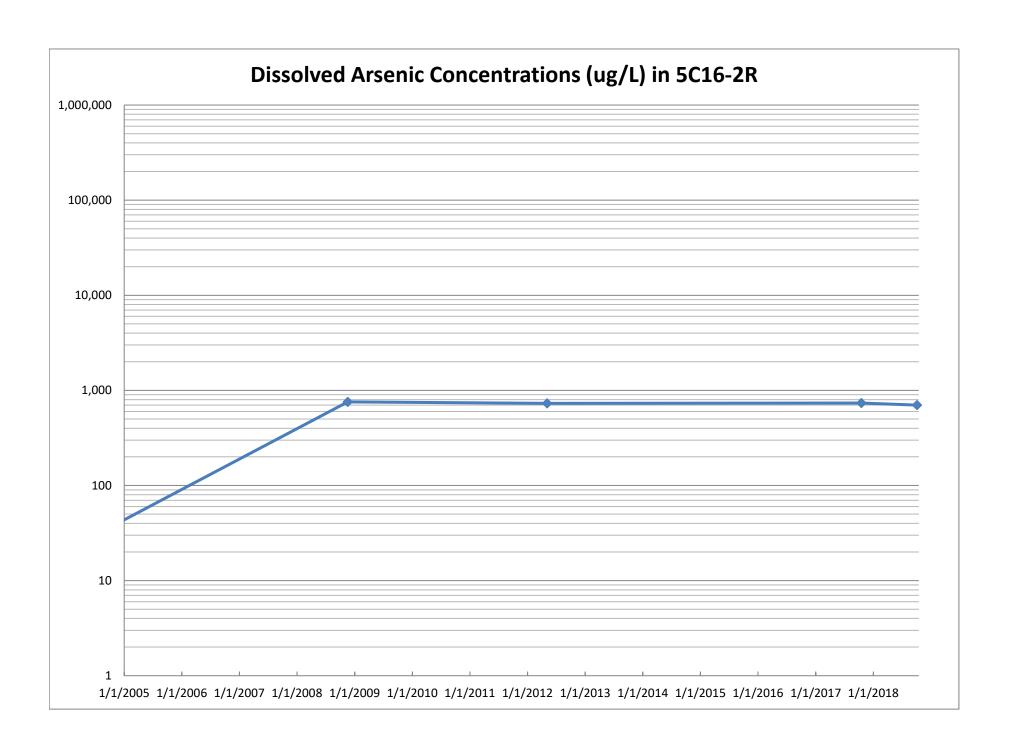


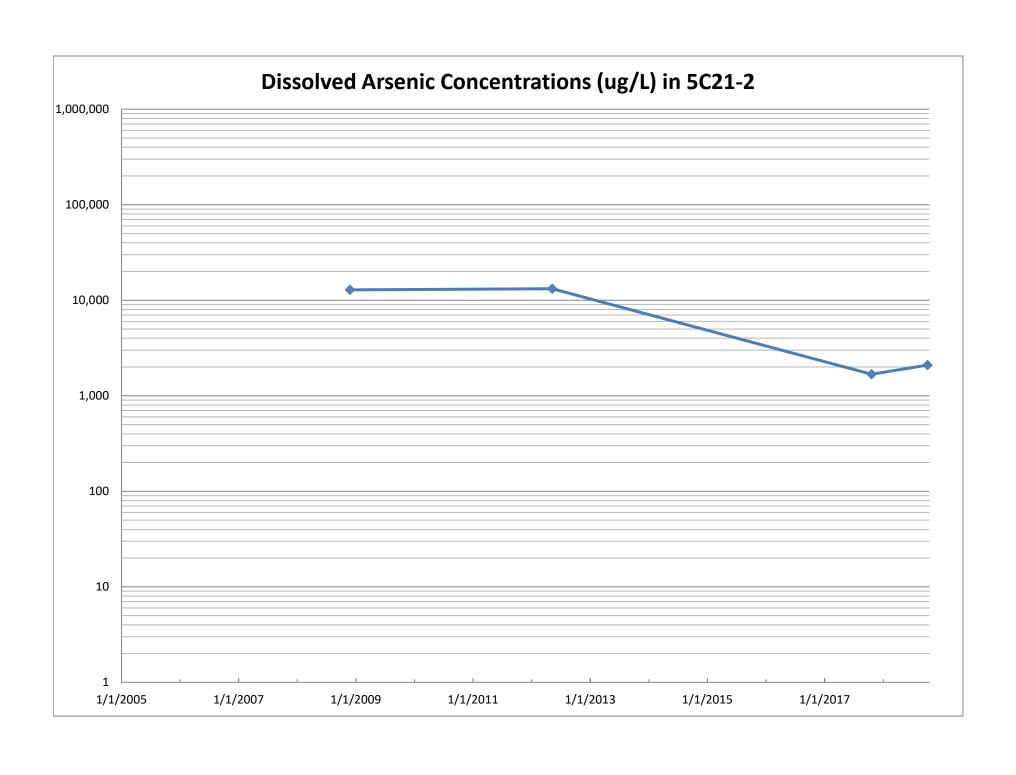


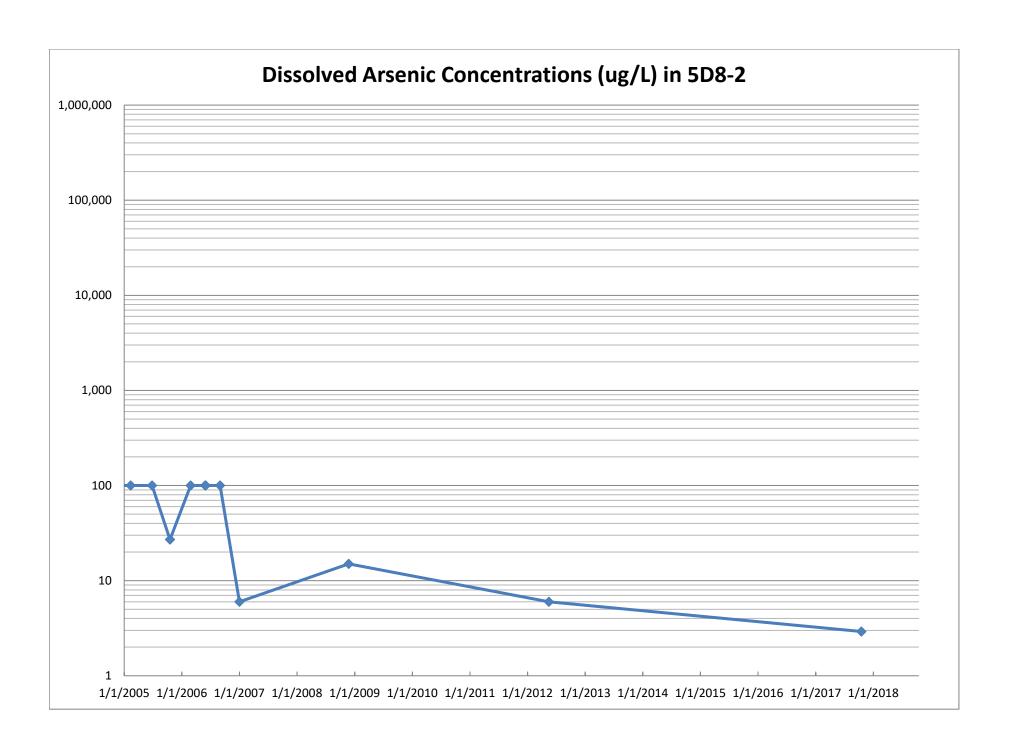


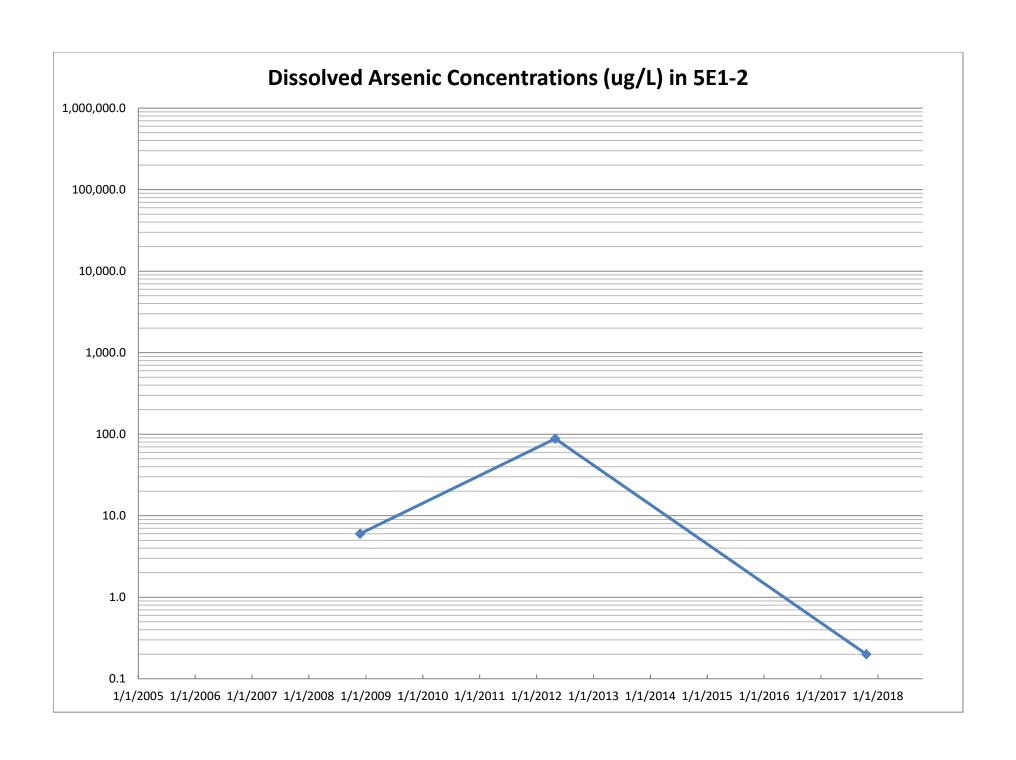


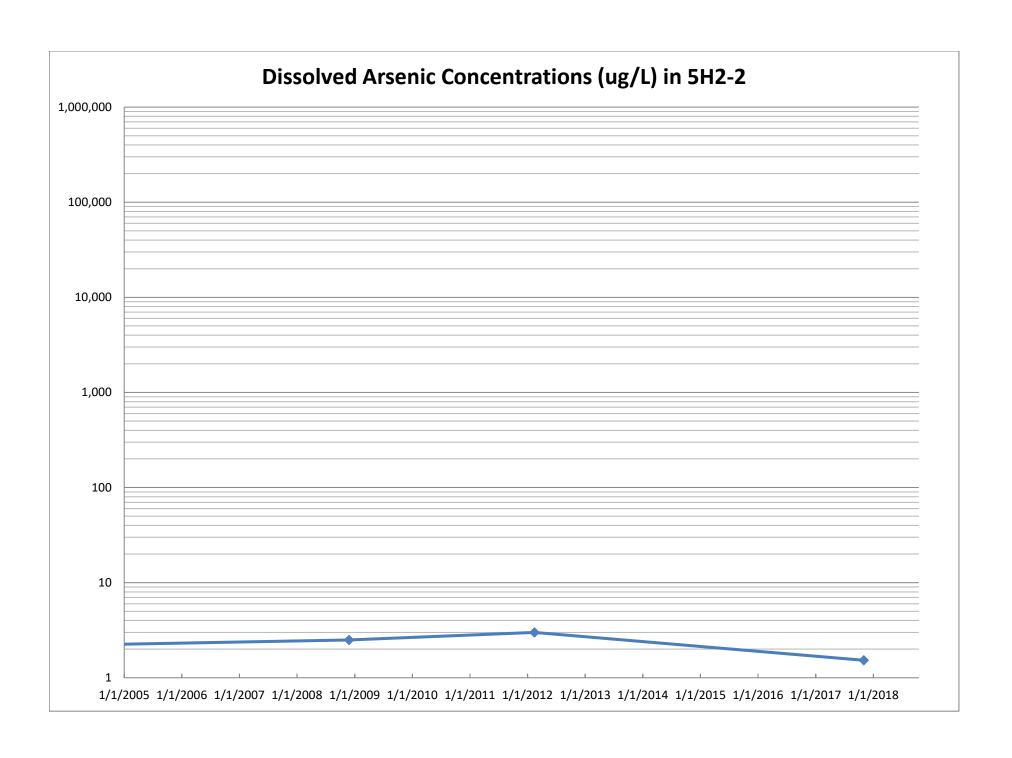


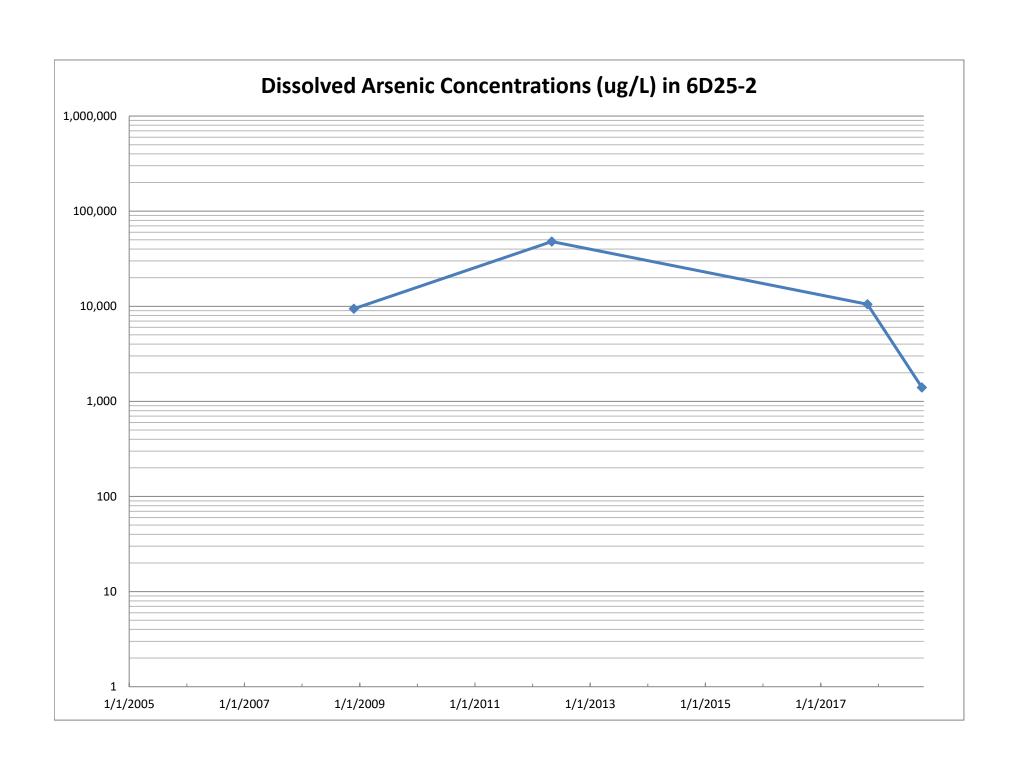


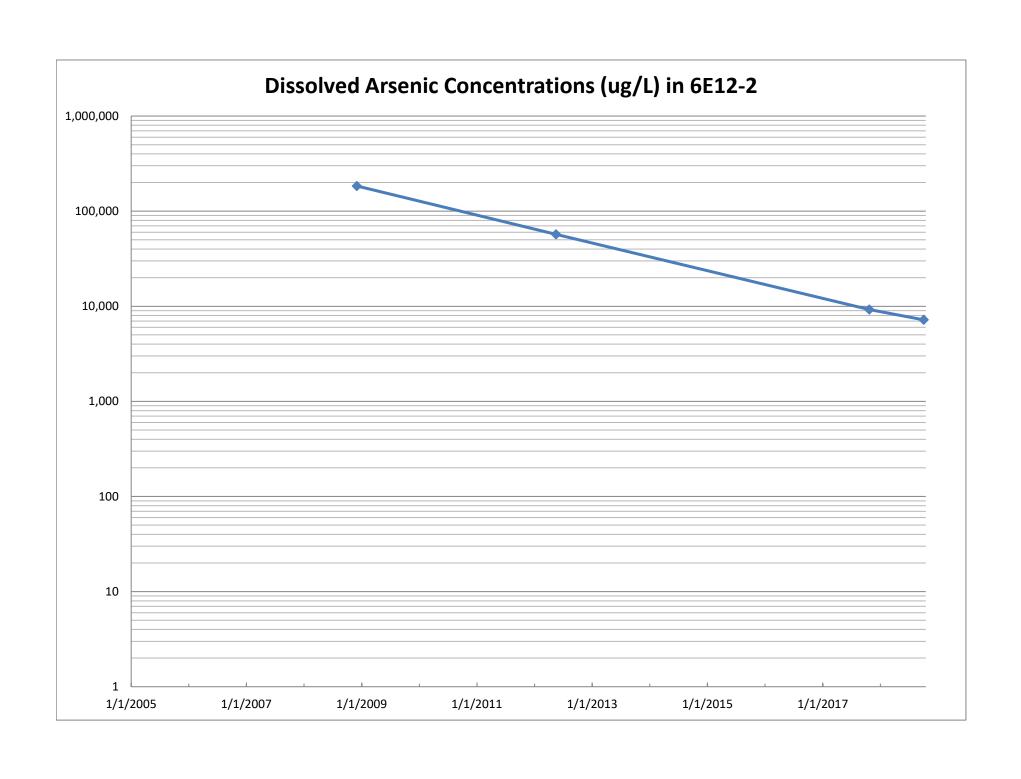


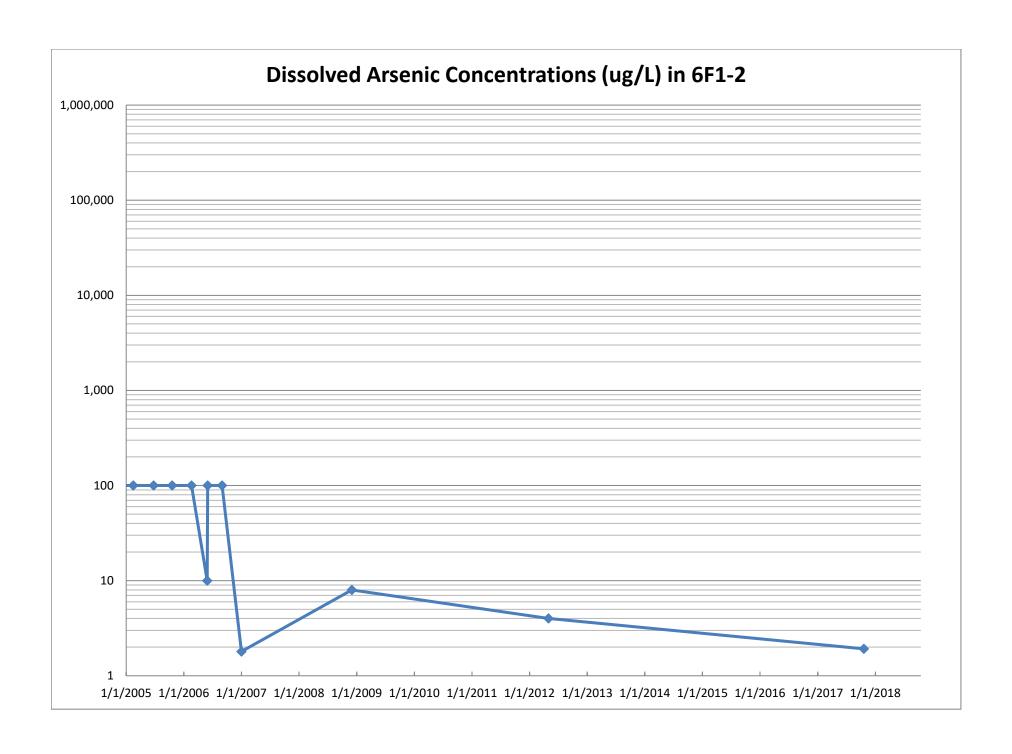


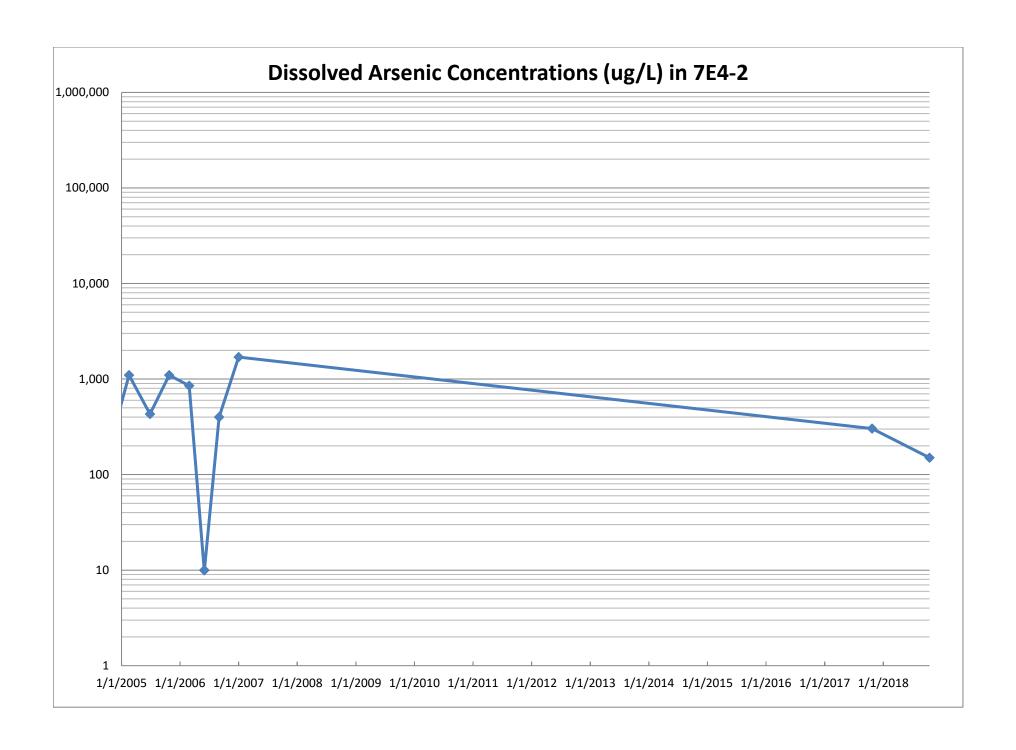


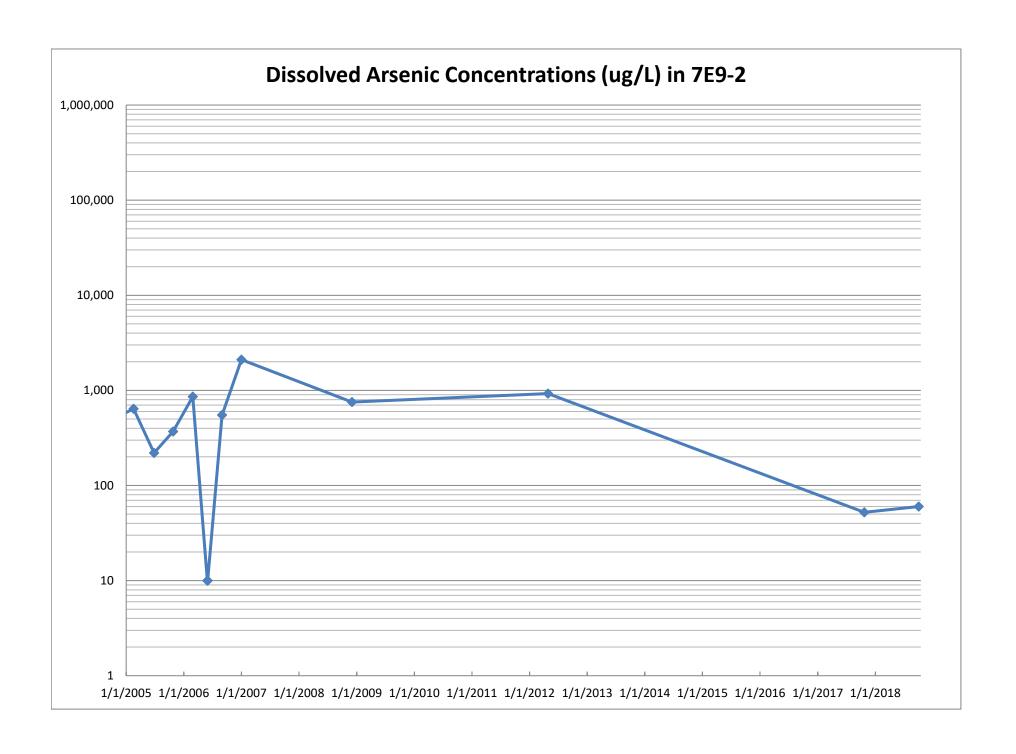


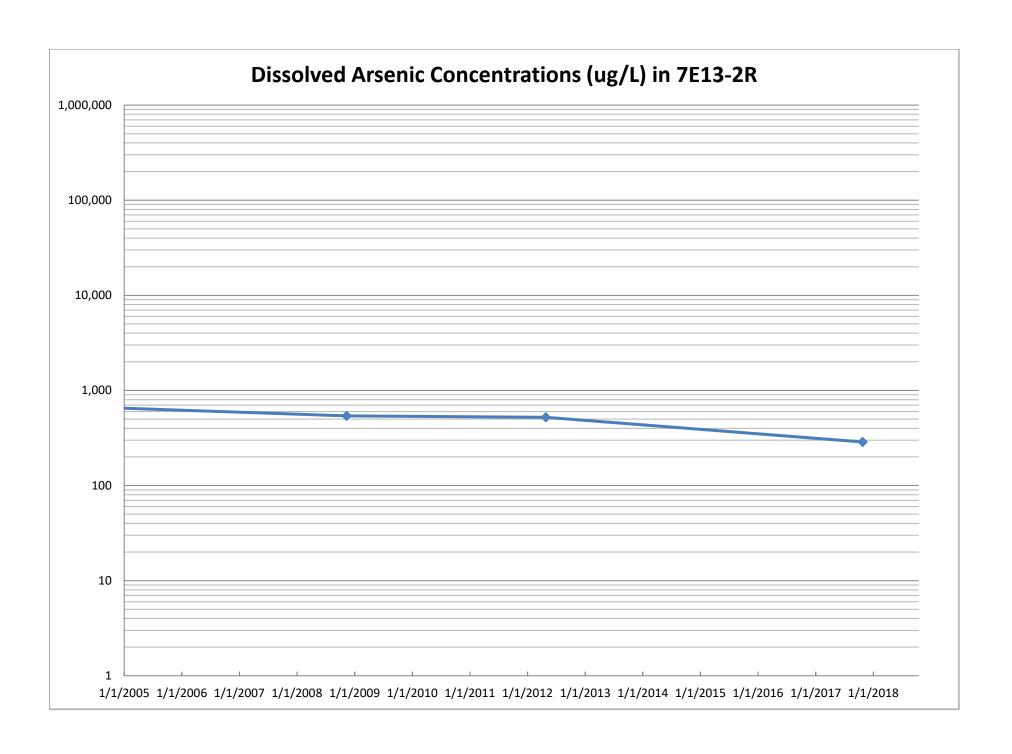


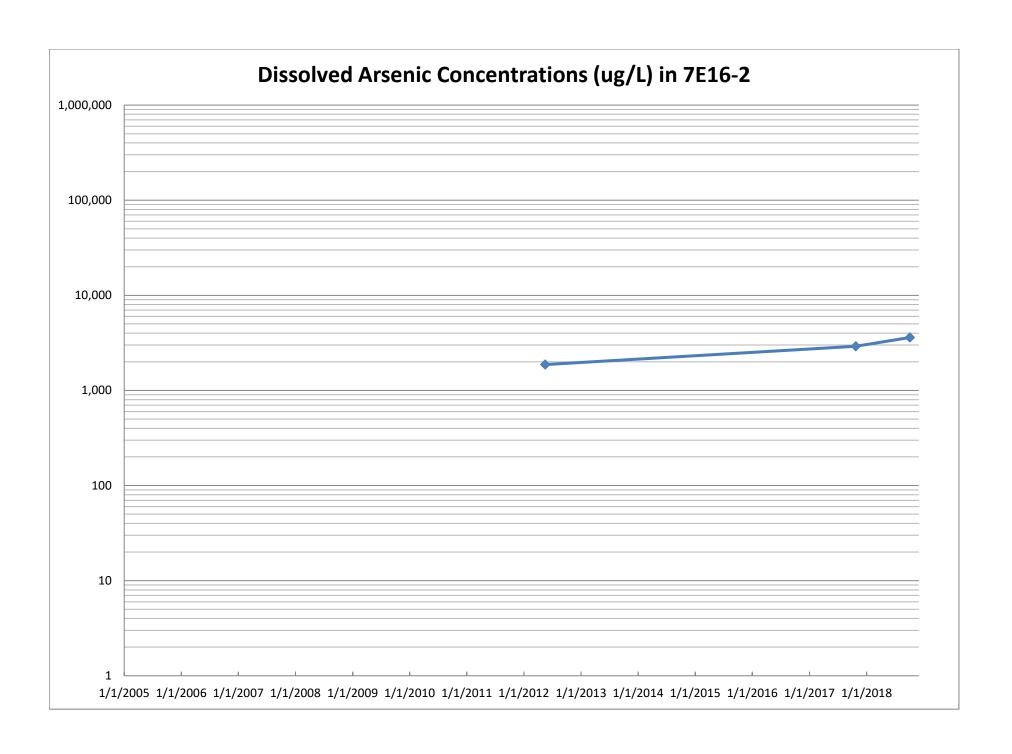


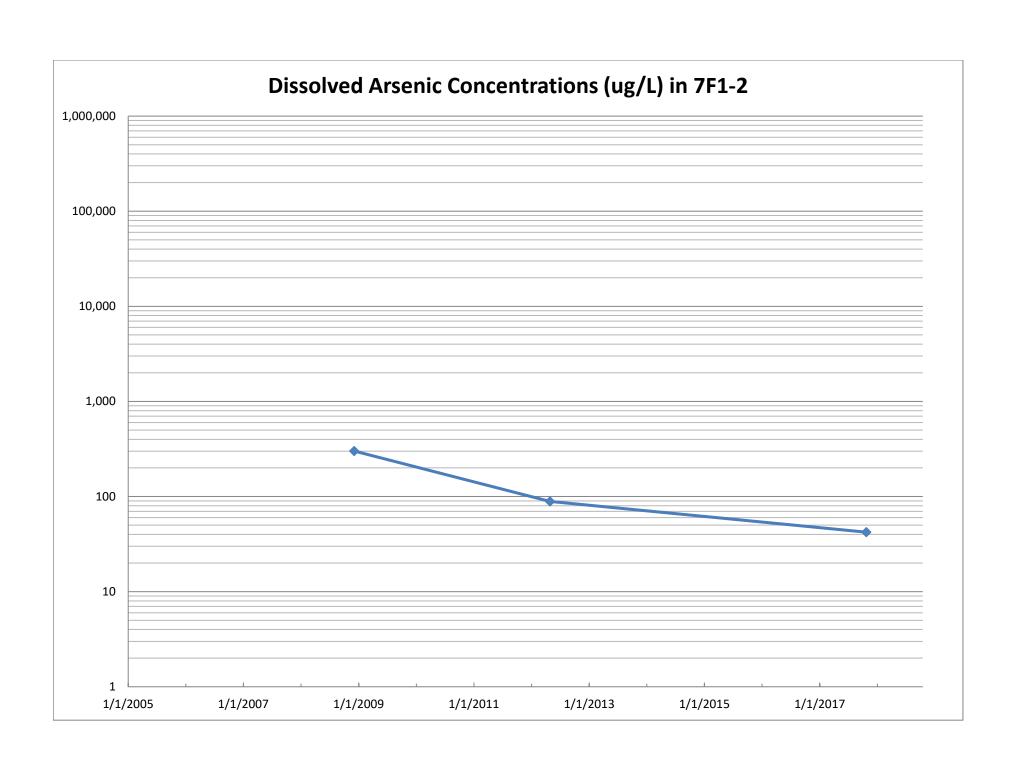


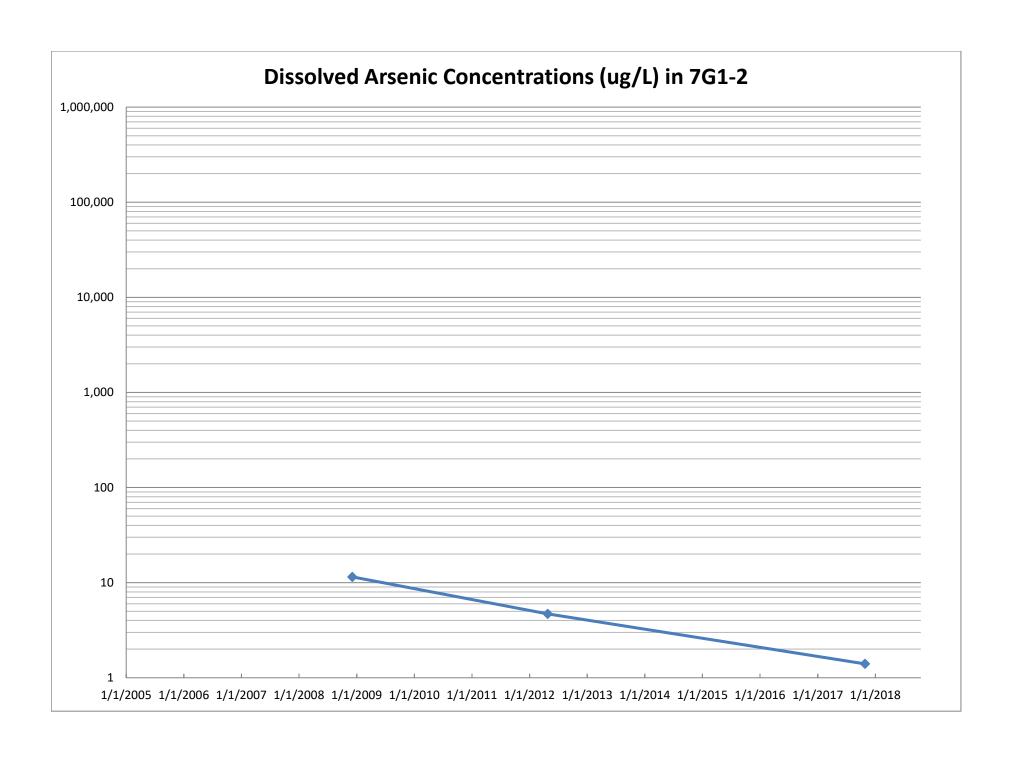


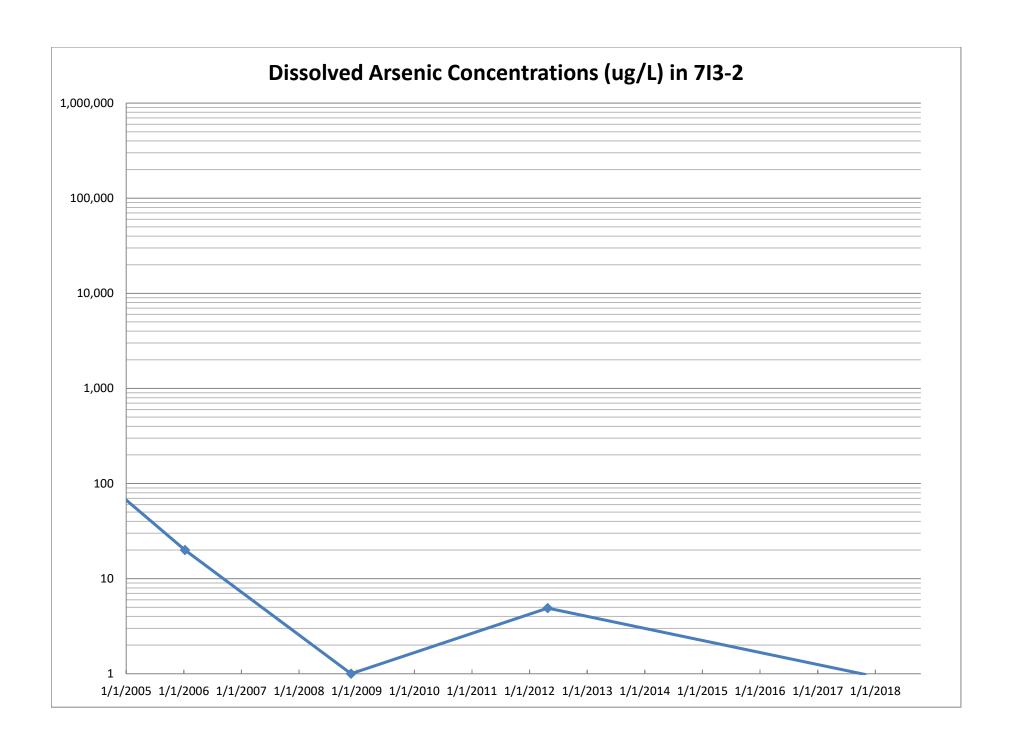


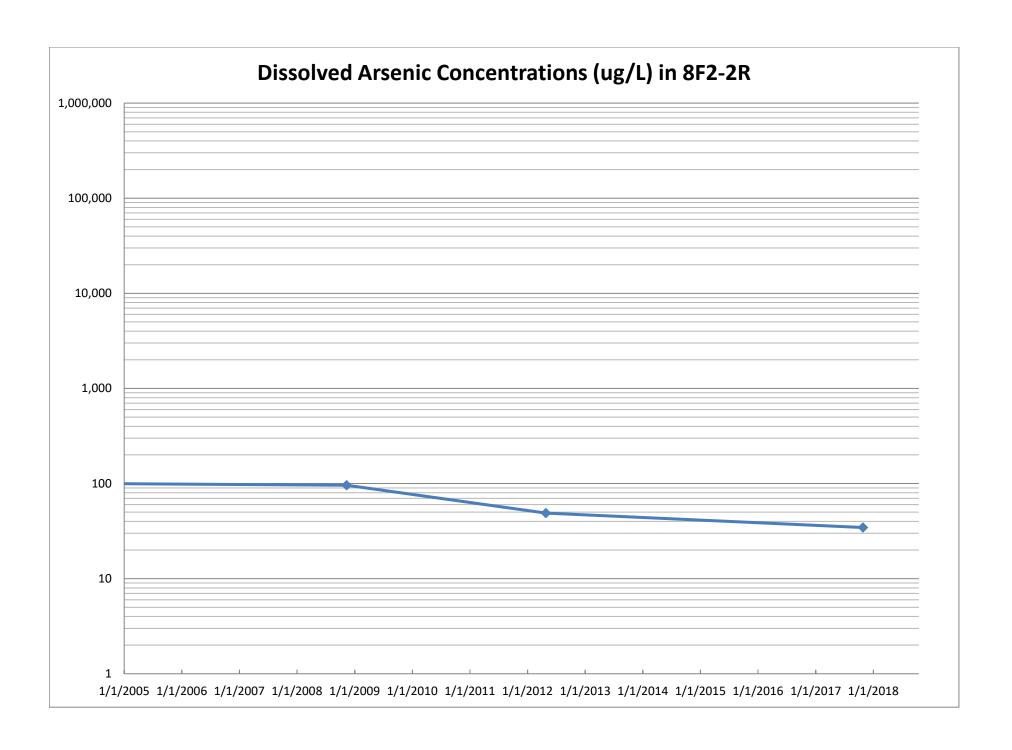


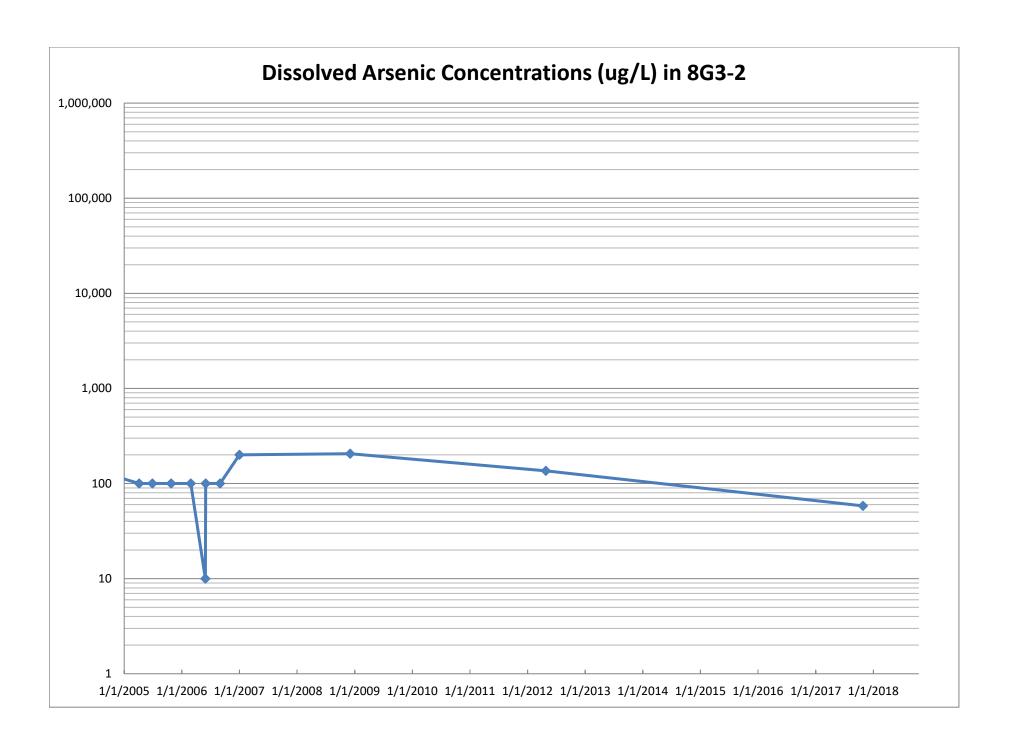






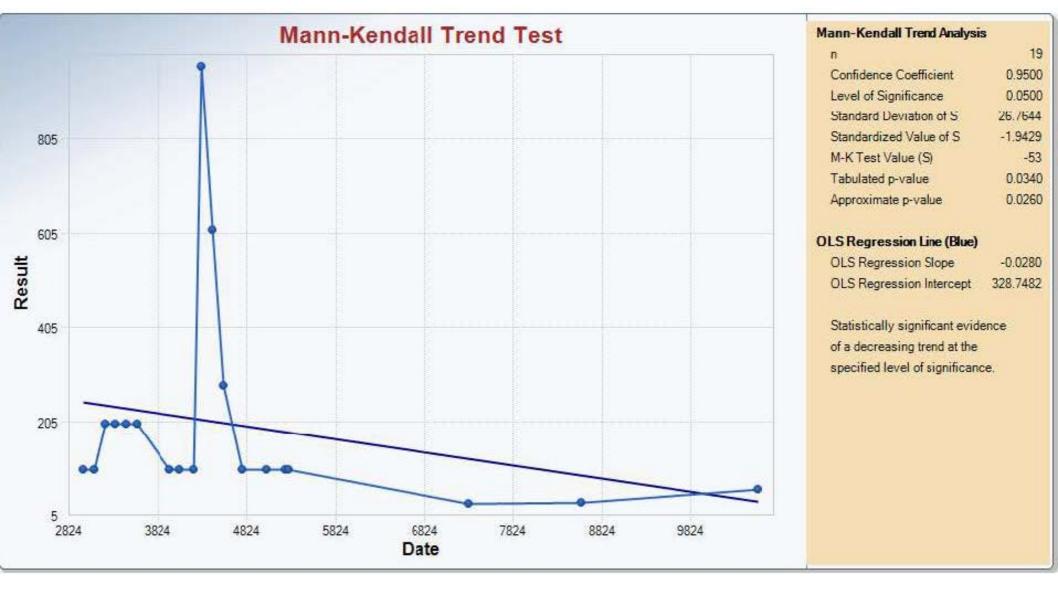




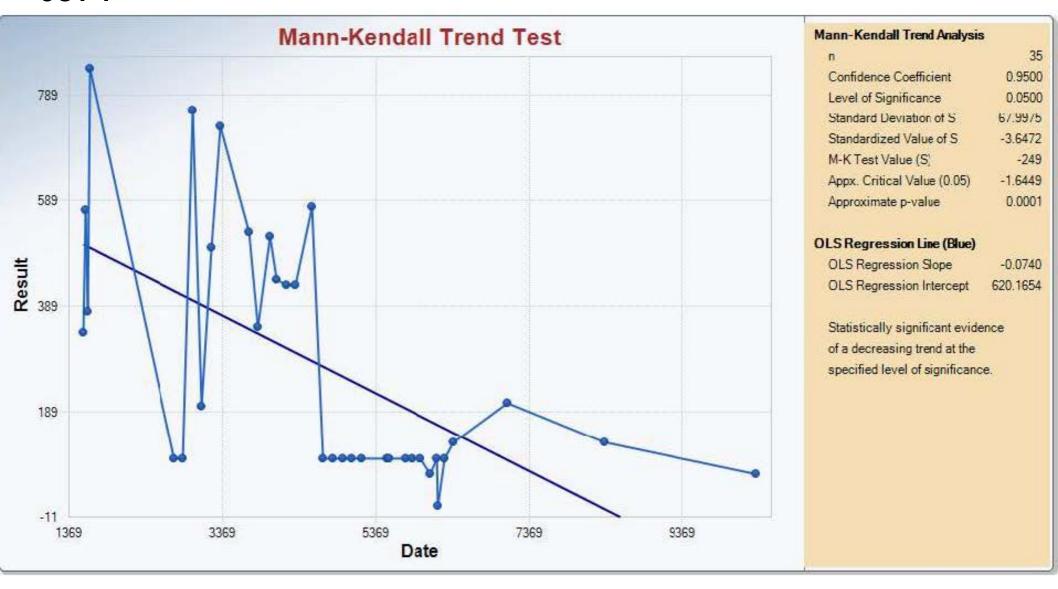


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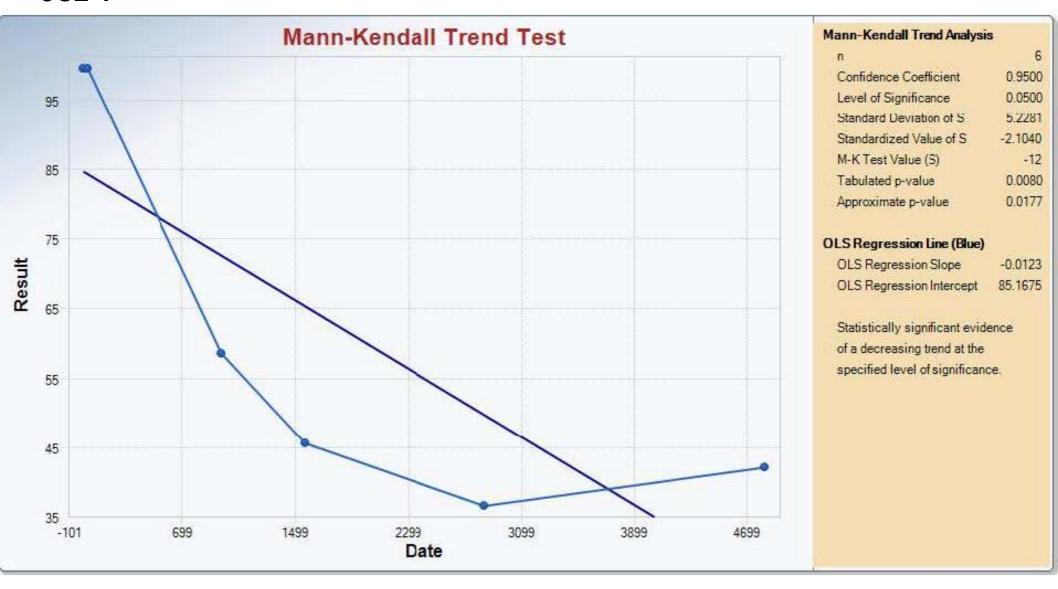
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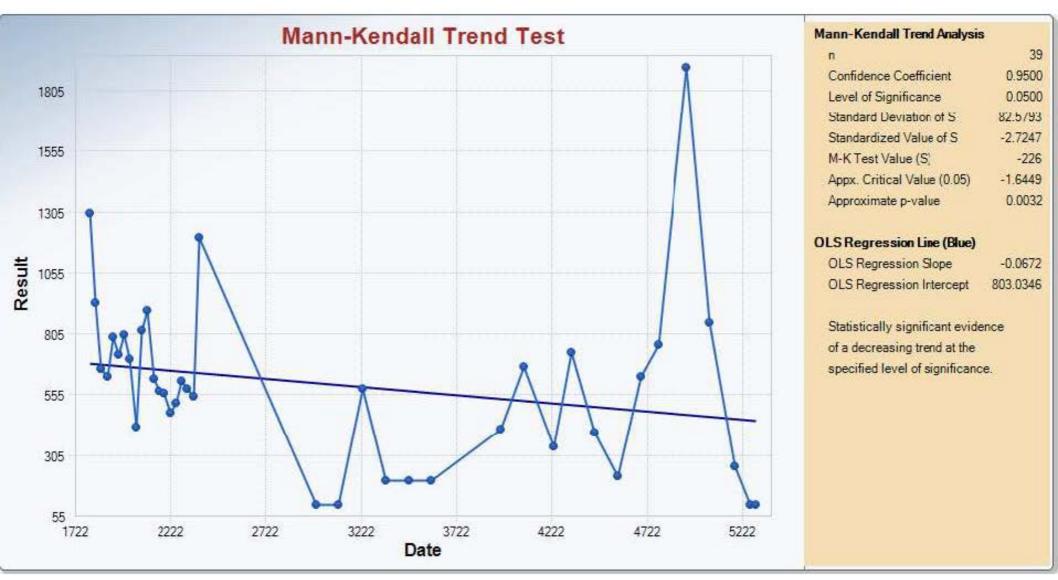
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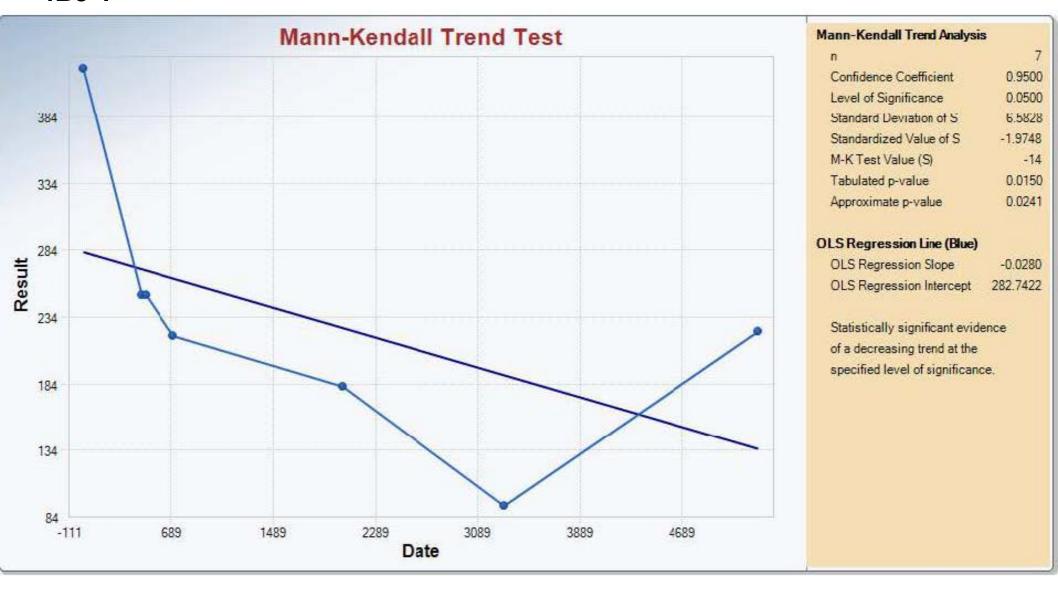
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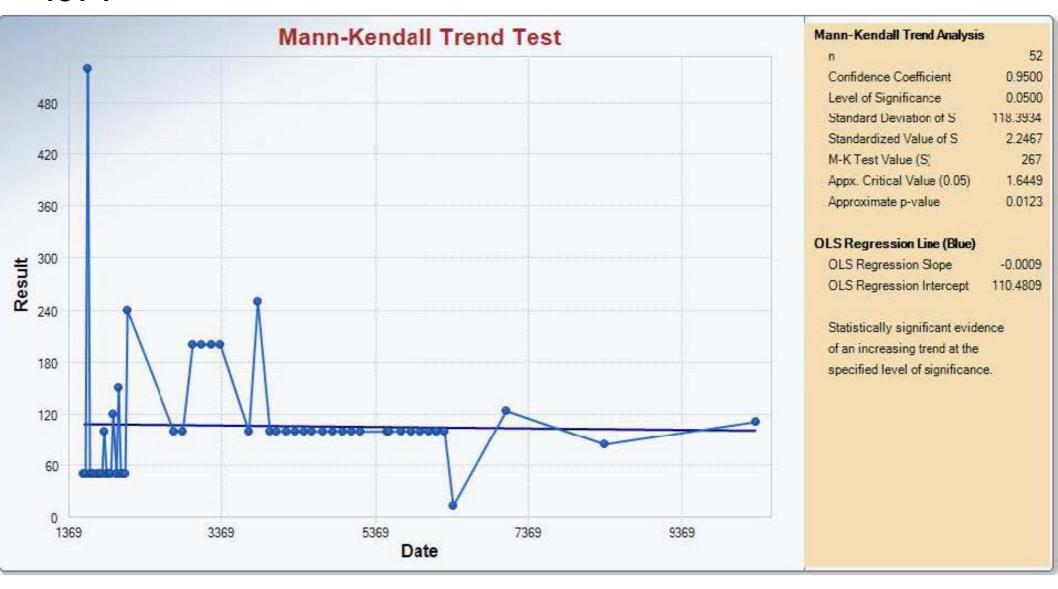
4B1-1



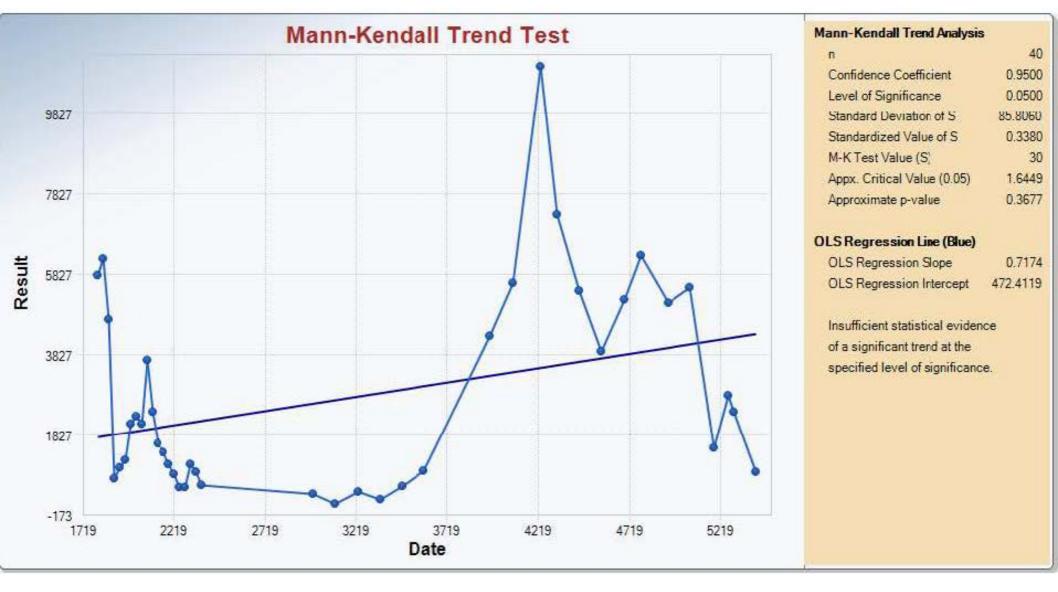
4B3-1



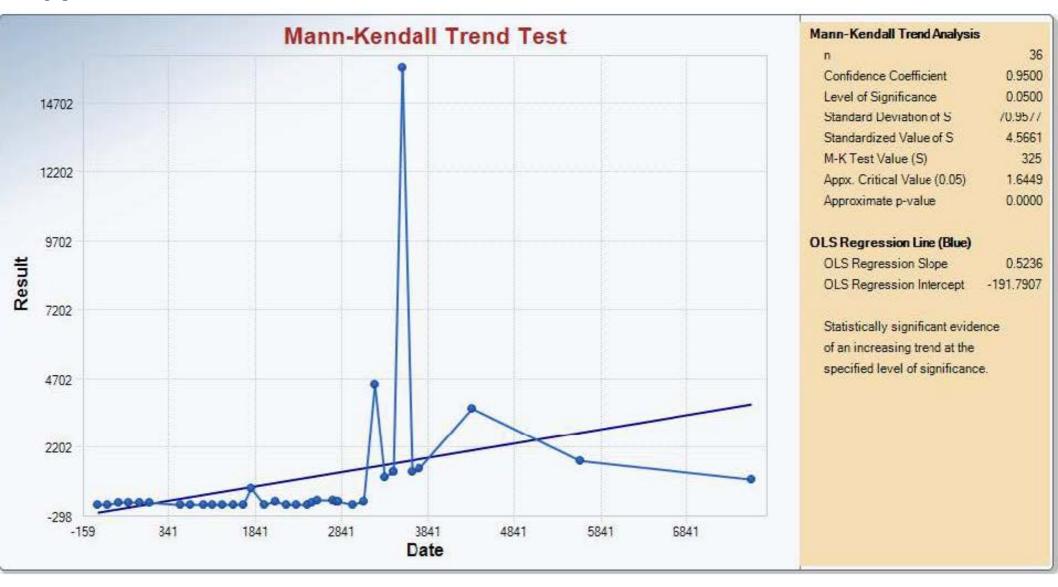
4C1-1



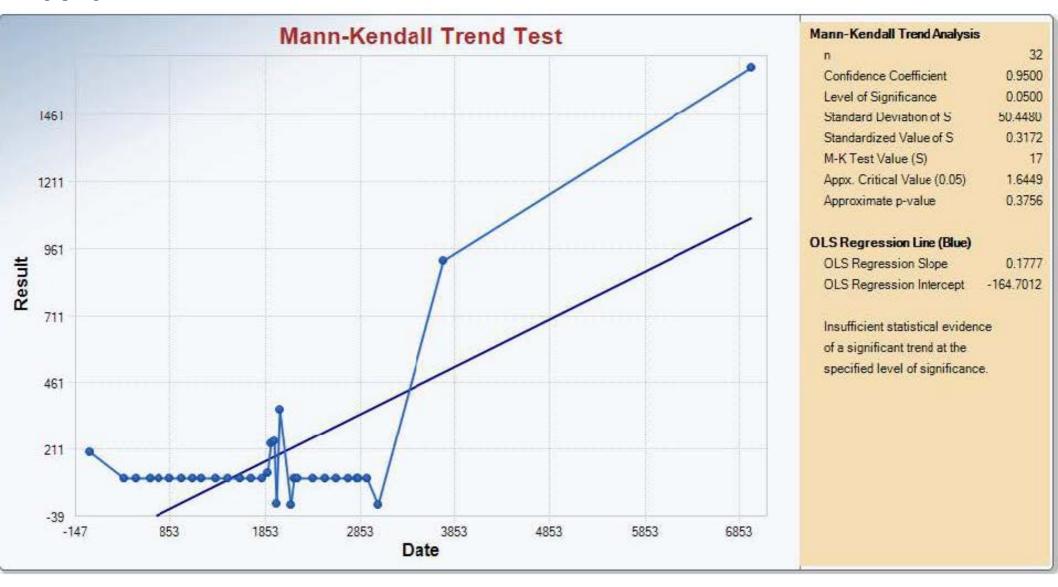
5C3-1



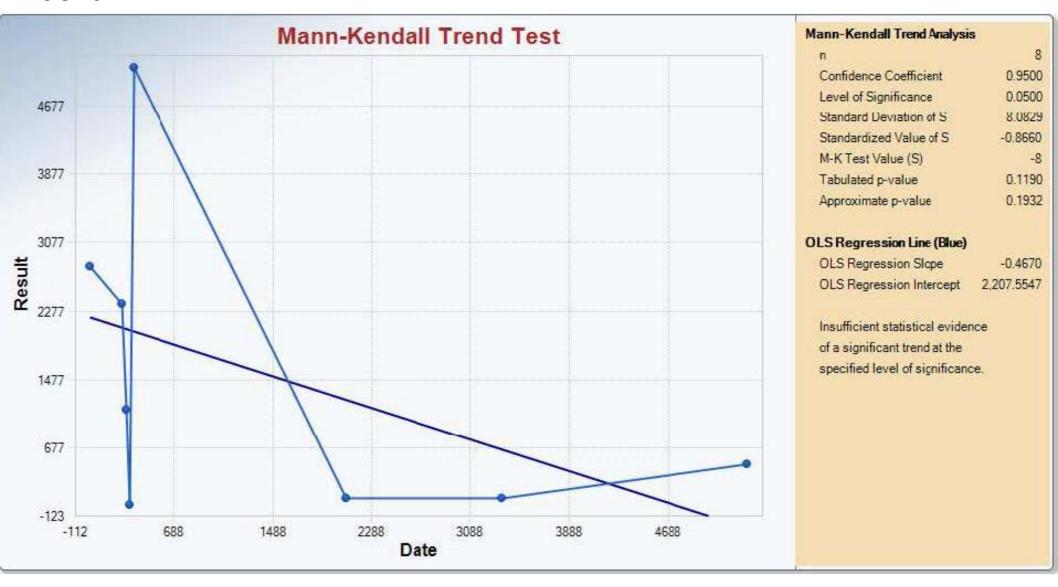
5C12-1



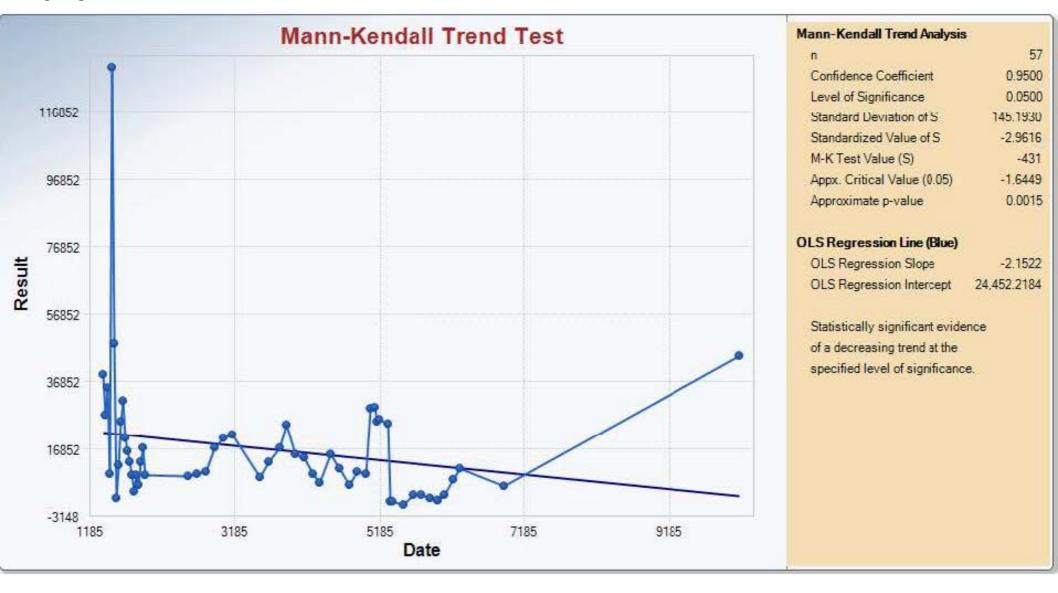
5C13-1



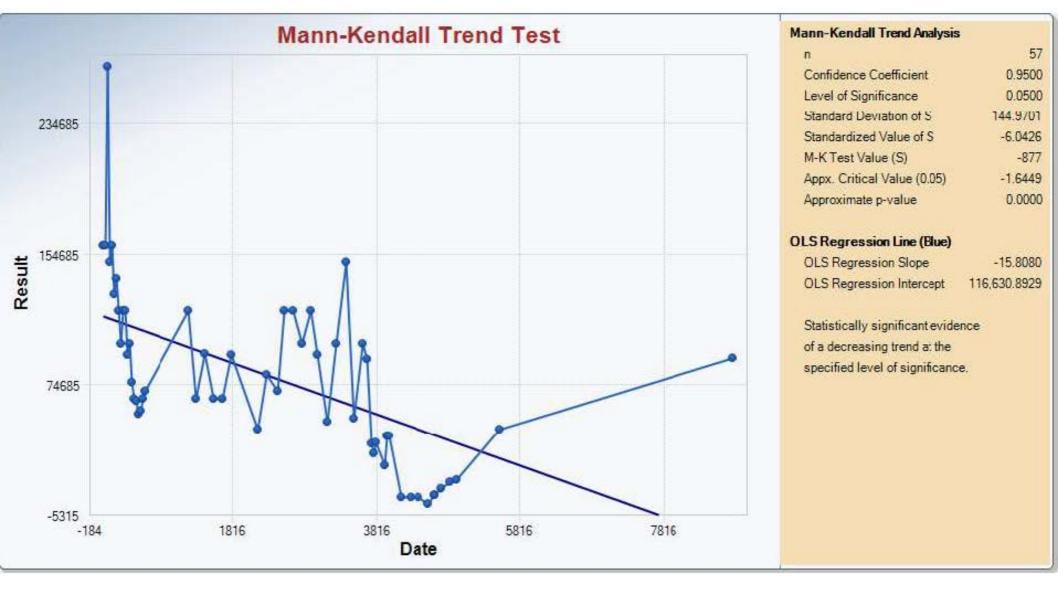
5C16-1R



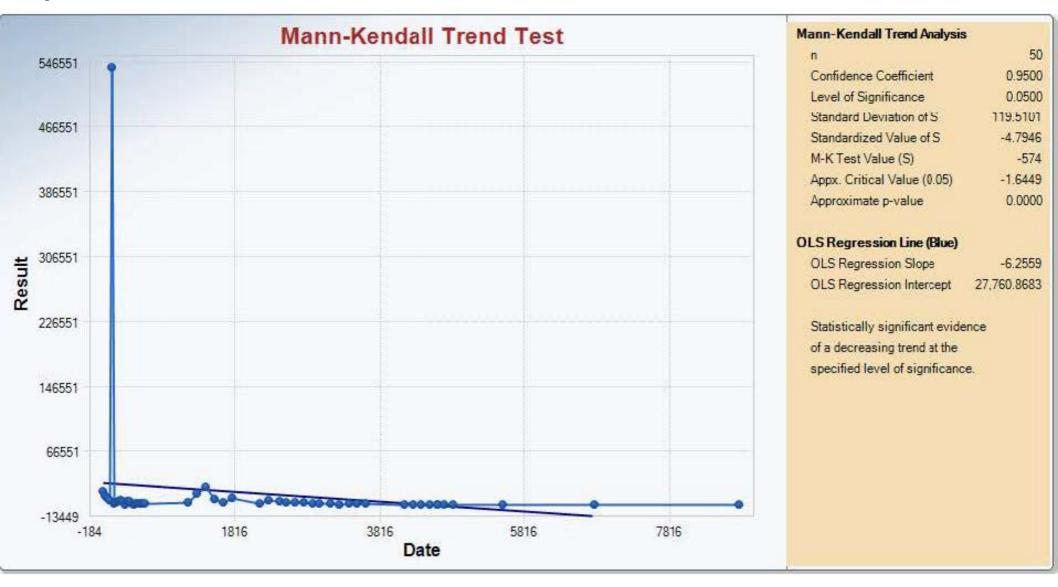
5D5-1



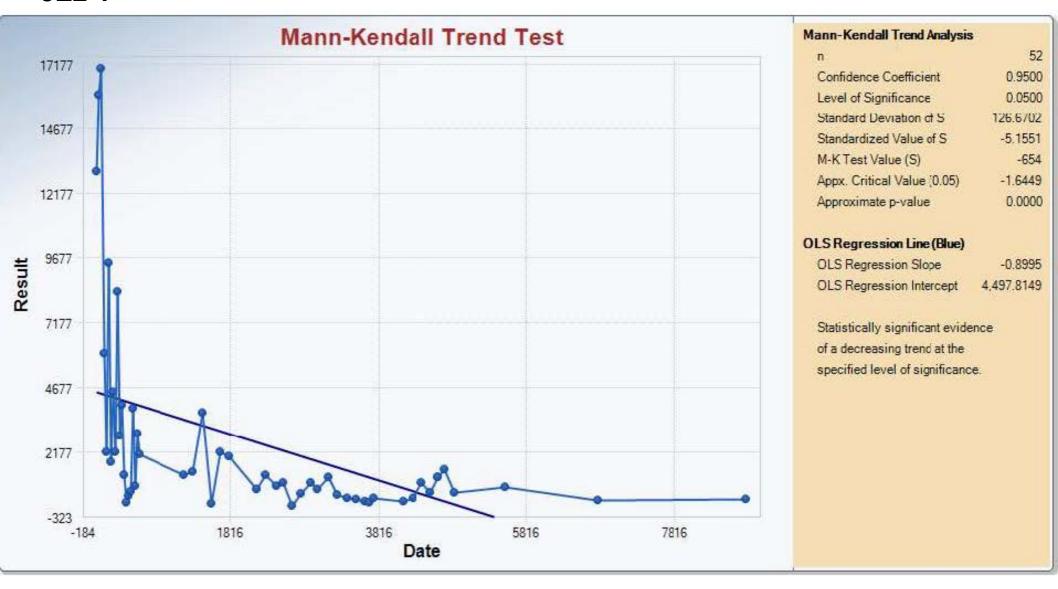
5D7-1R



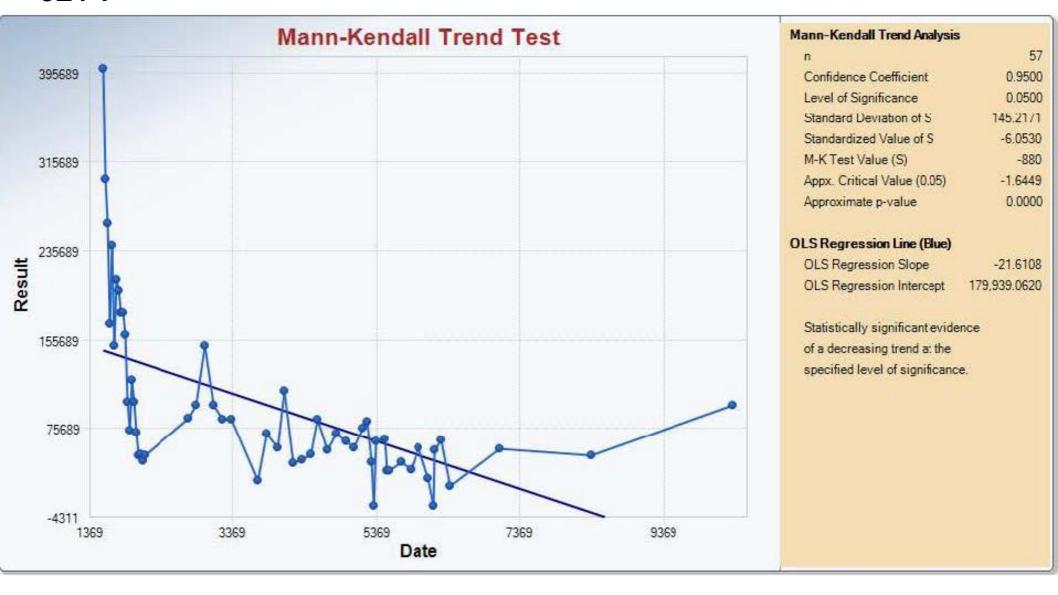
5E1-1



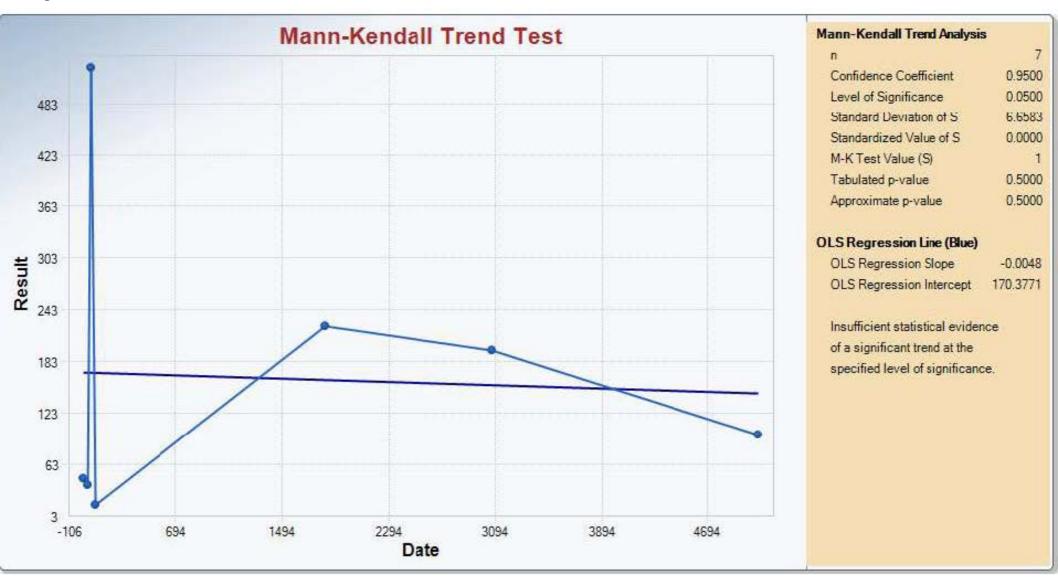
5E2-1



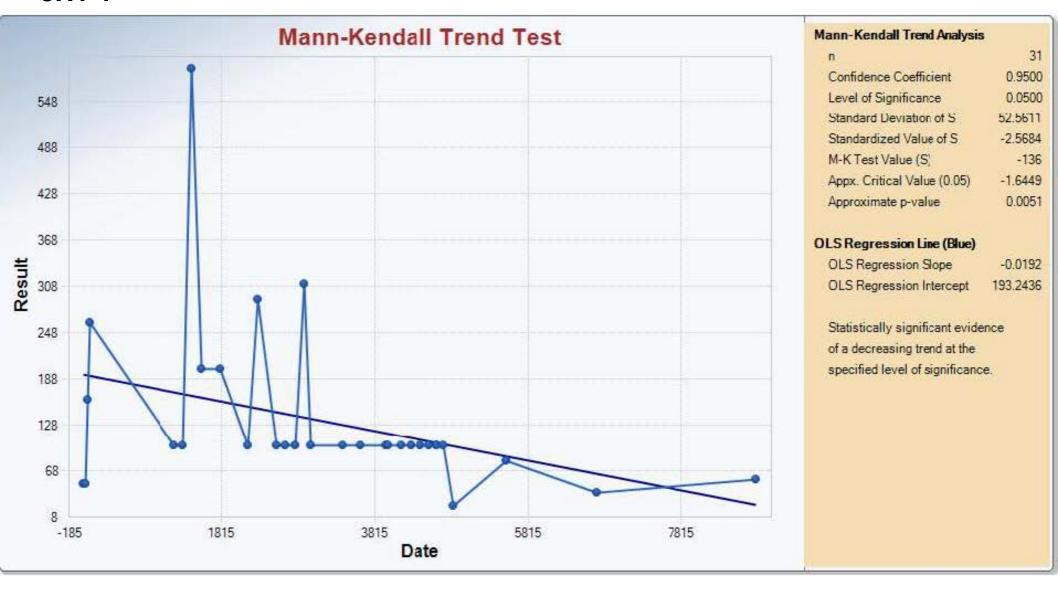
5E4-1



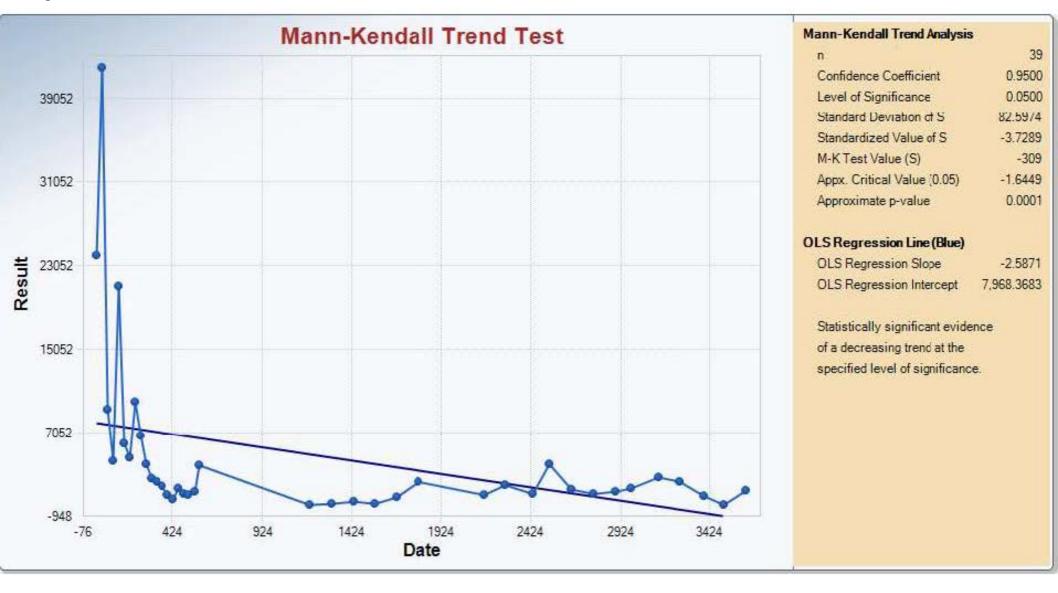
5F1-1



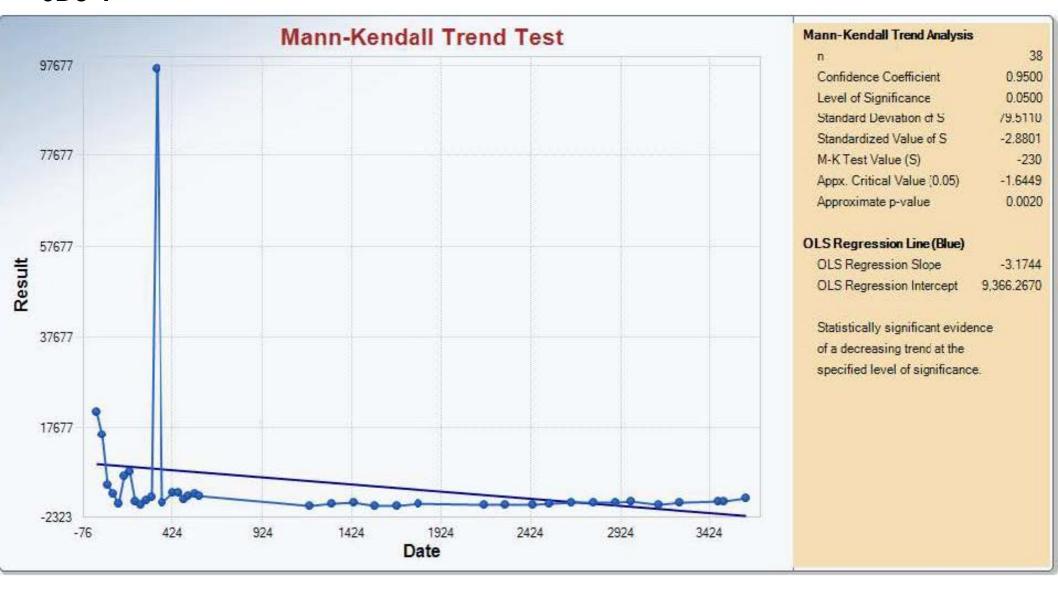
5H1-1



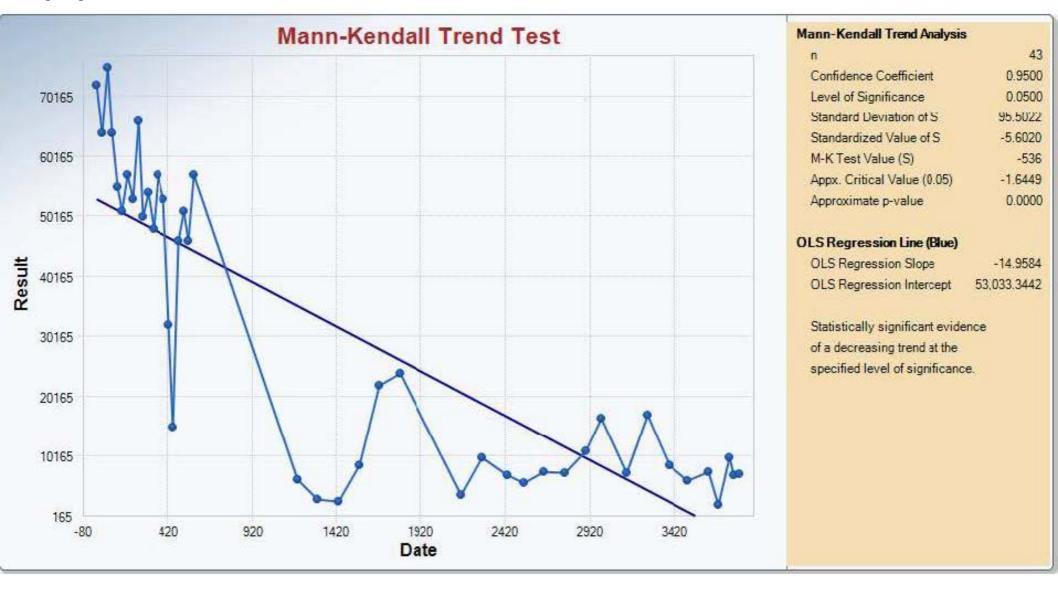
6D1-1



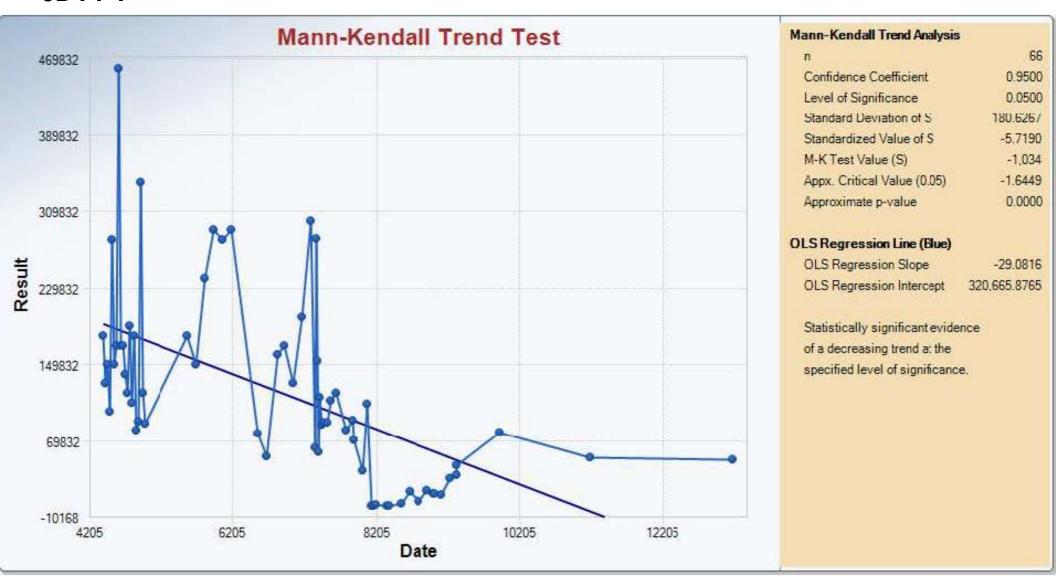
6D3-1



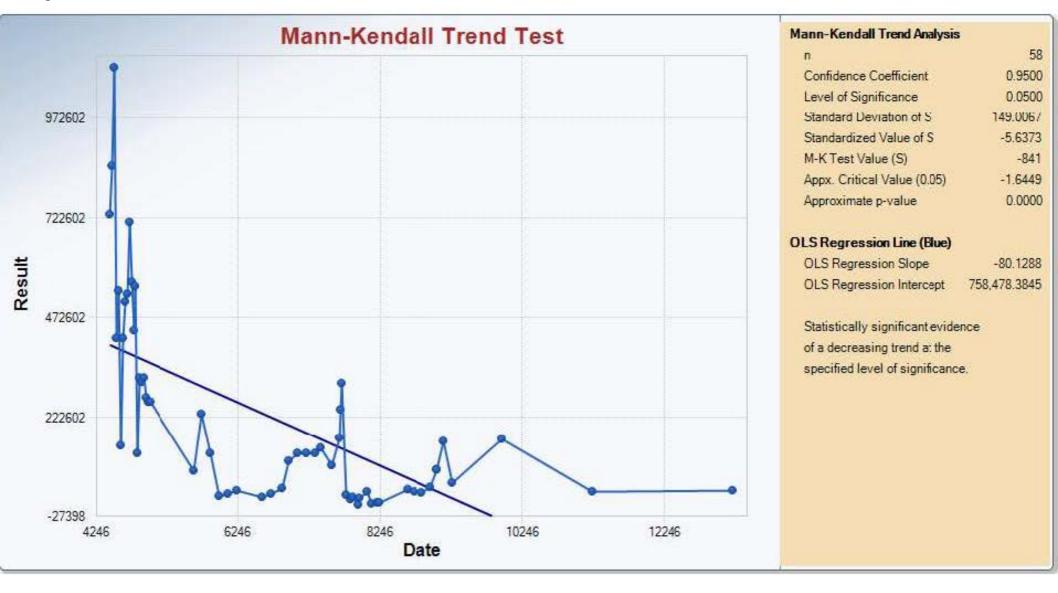
6D9-1



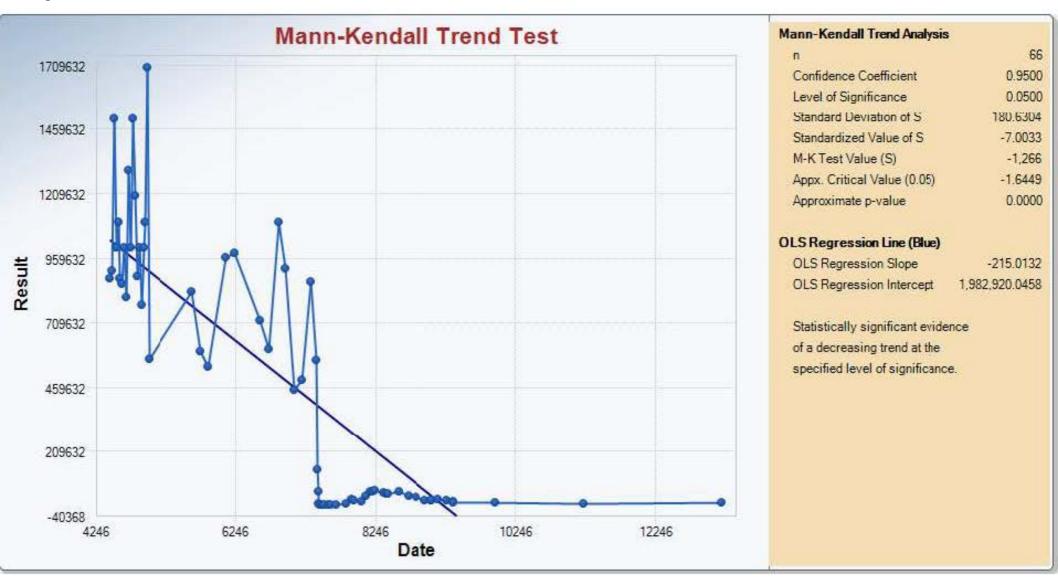
6D14-1



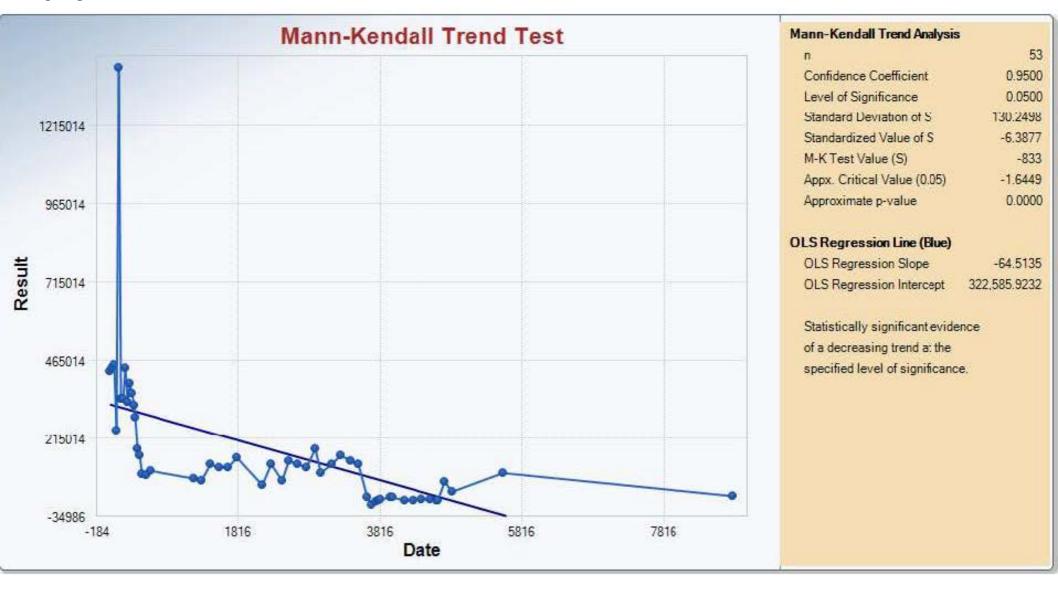
6E1-1



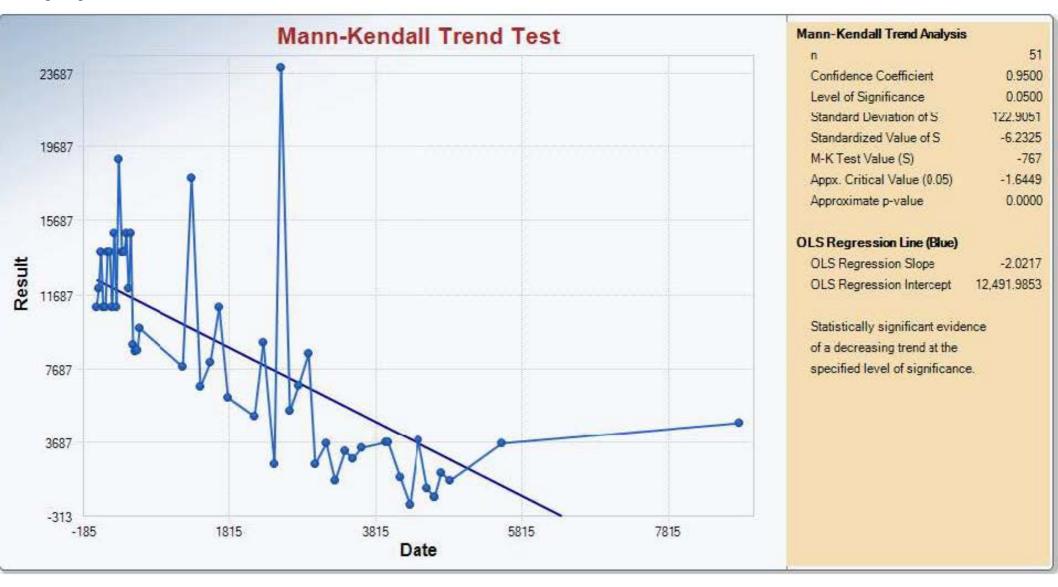
6E2-1



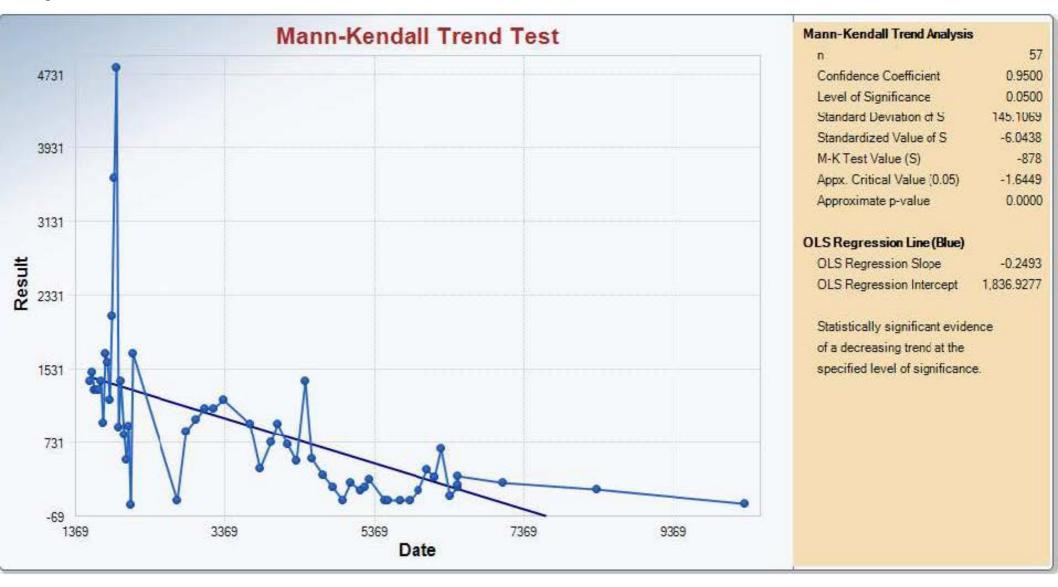
6E5-1



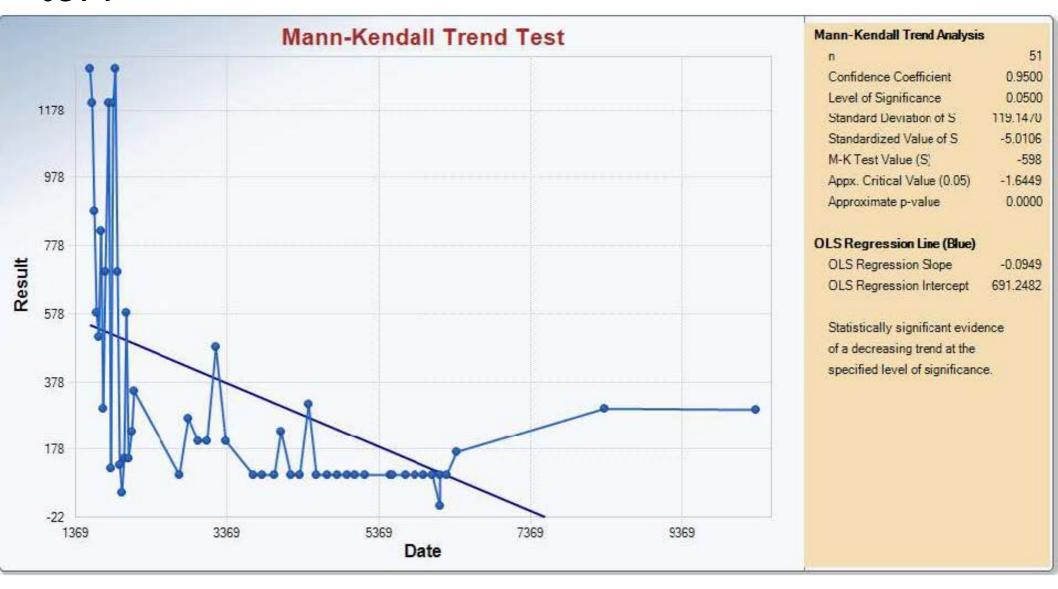
6E6-1



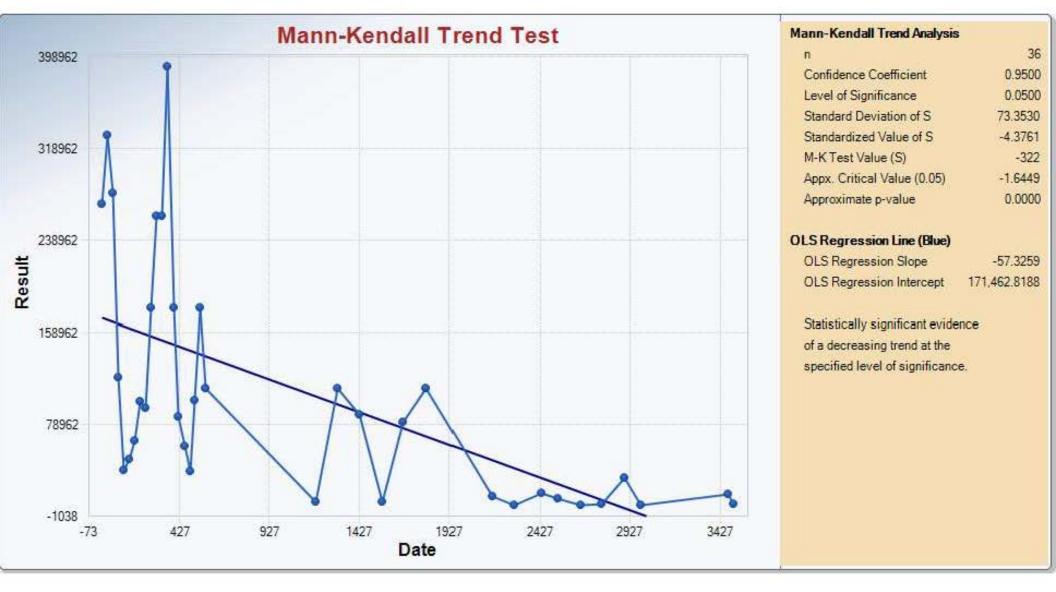
6F2-1



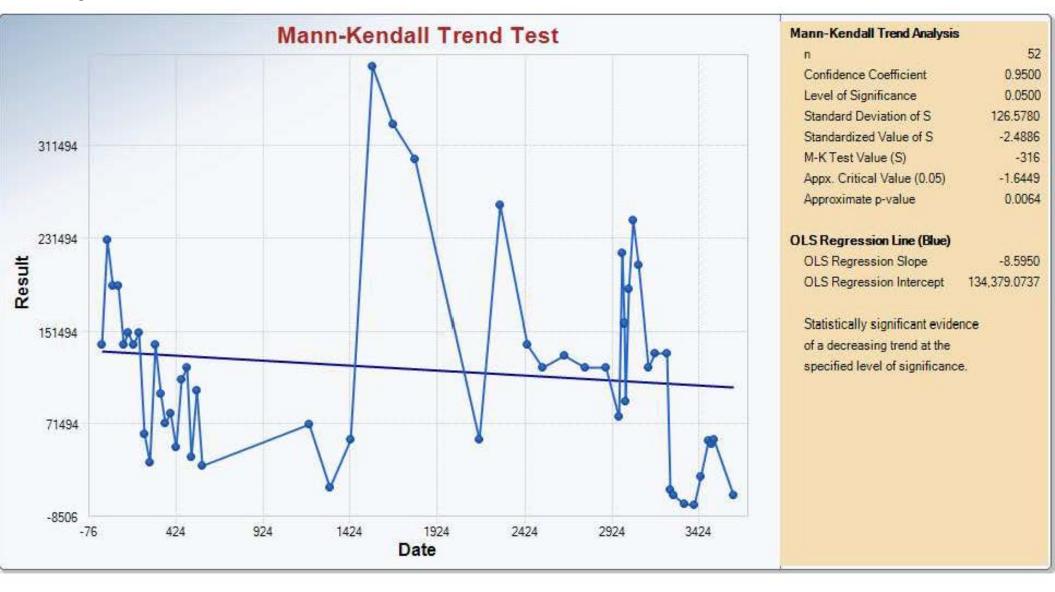
6G1-1



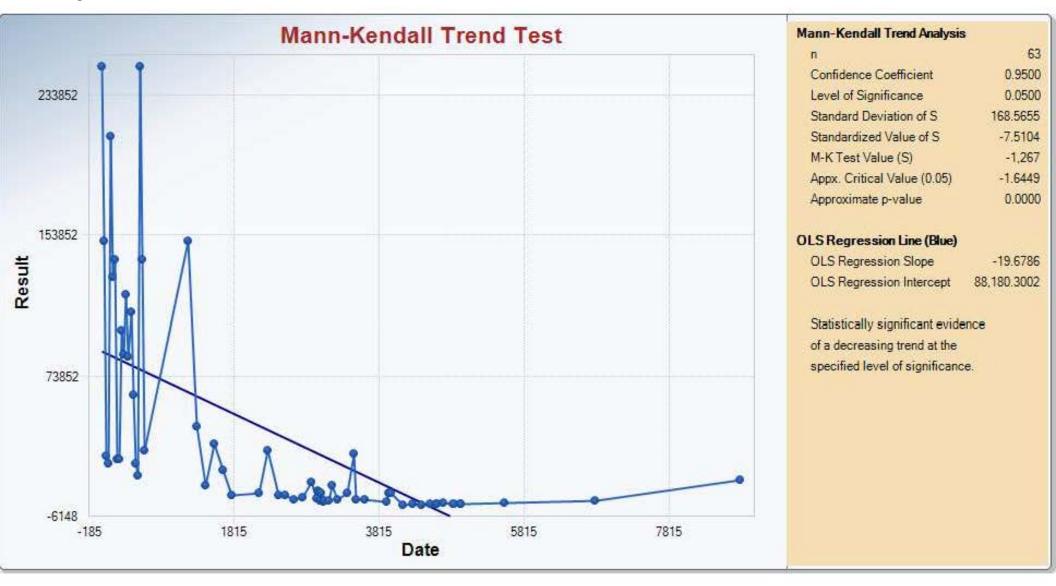
7D2-1



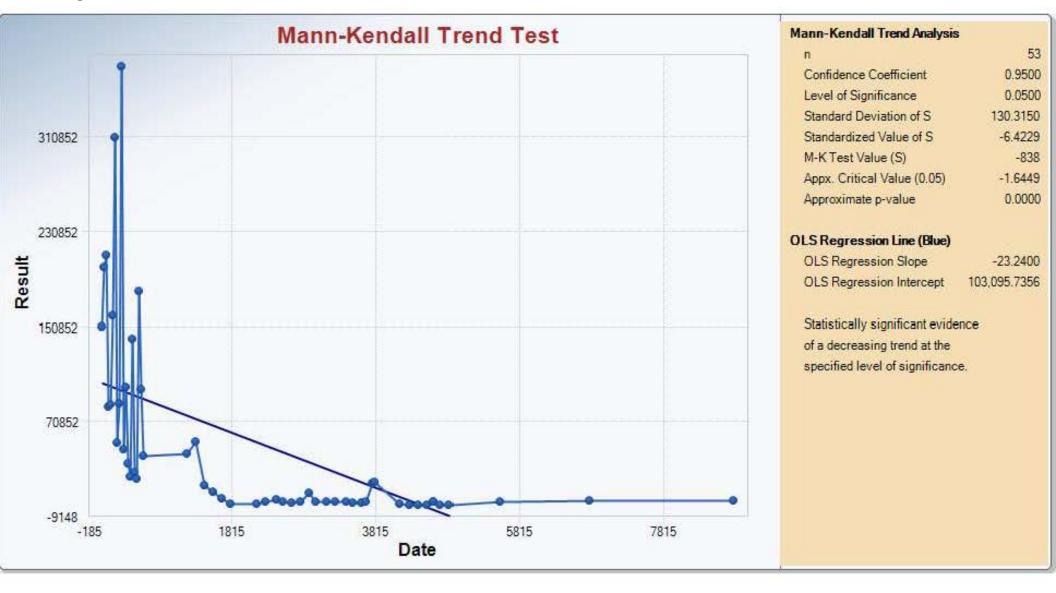
7D3-1



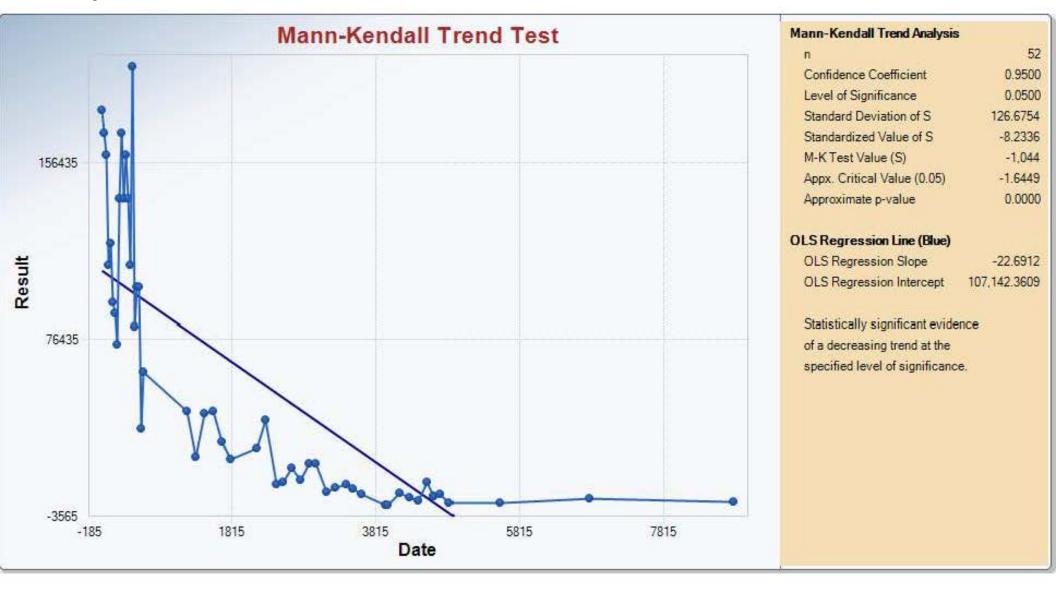
7E3-1



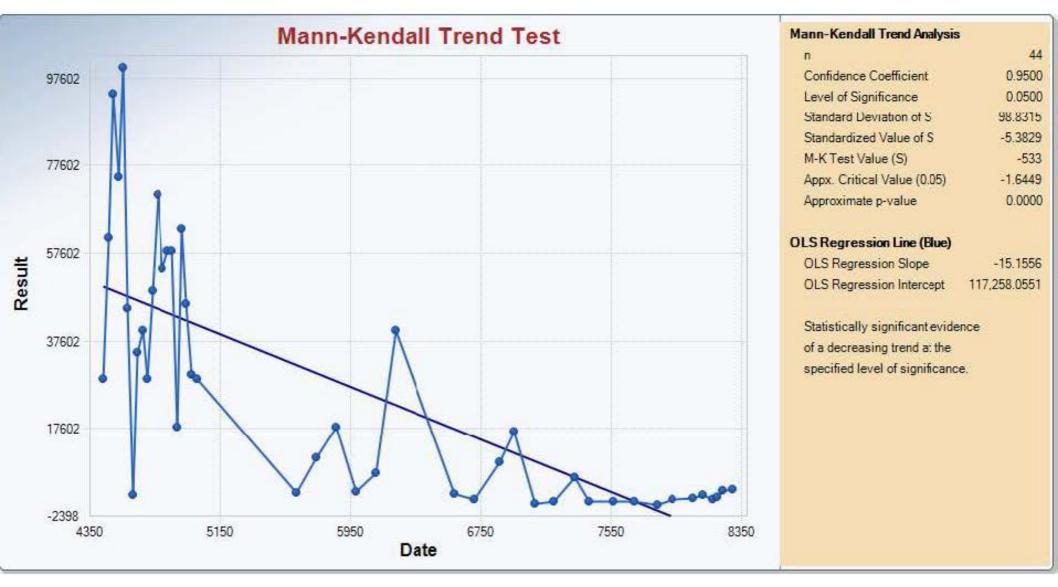
7E8-1



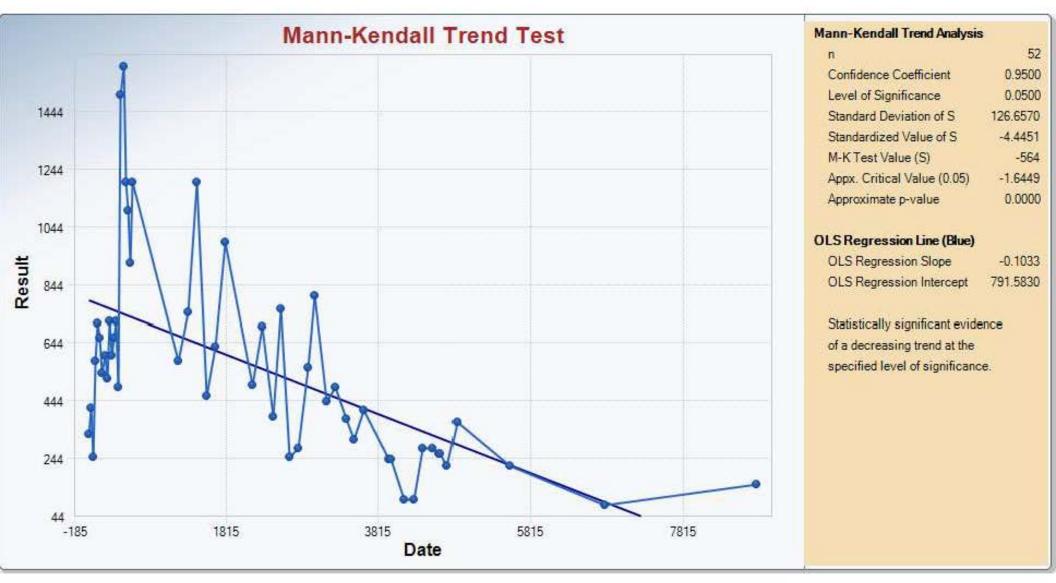
7E10-1



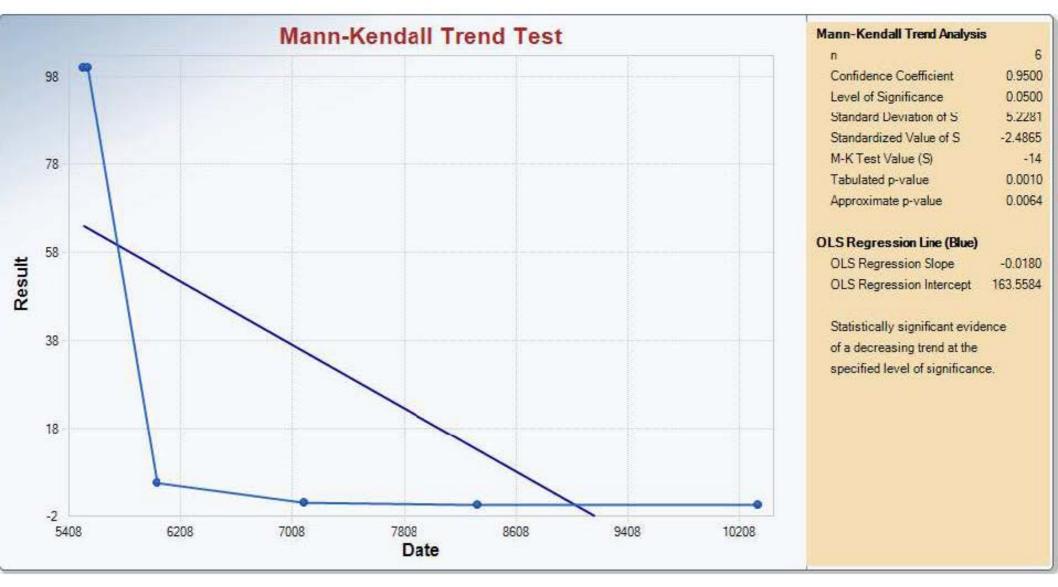
7E12-1



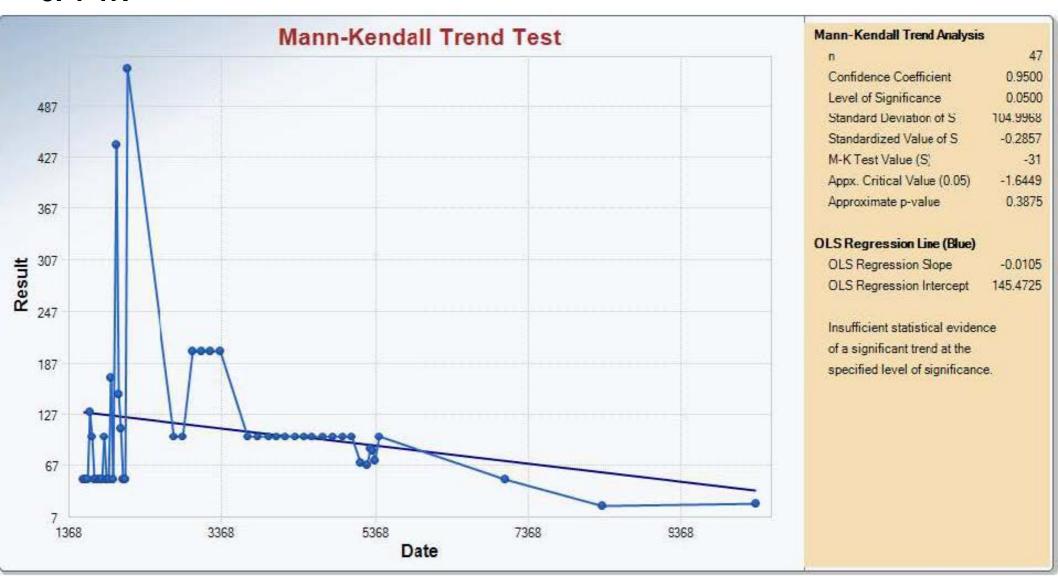
7F2-1



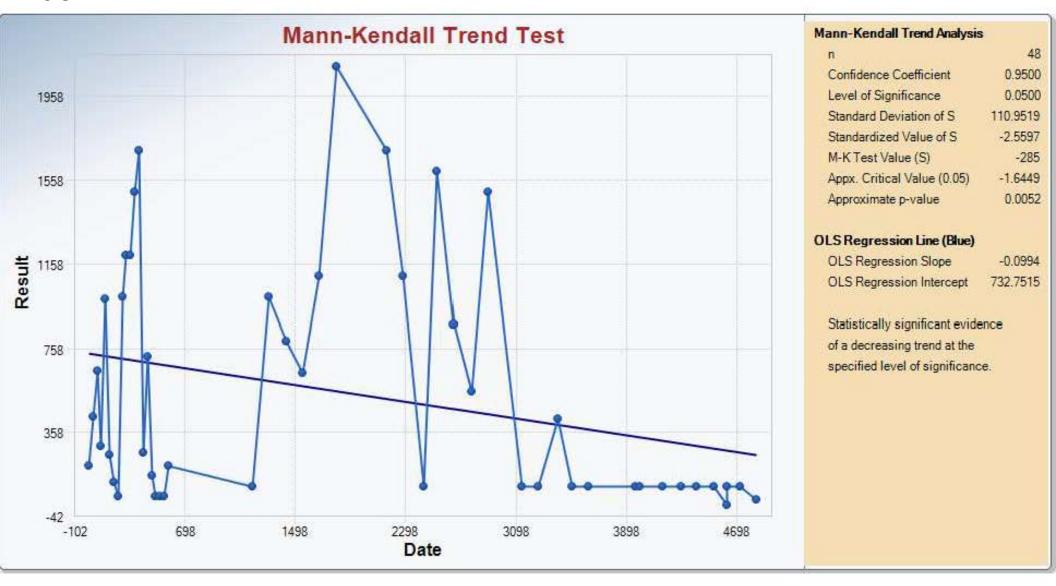
7I1-1



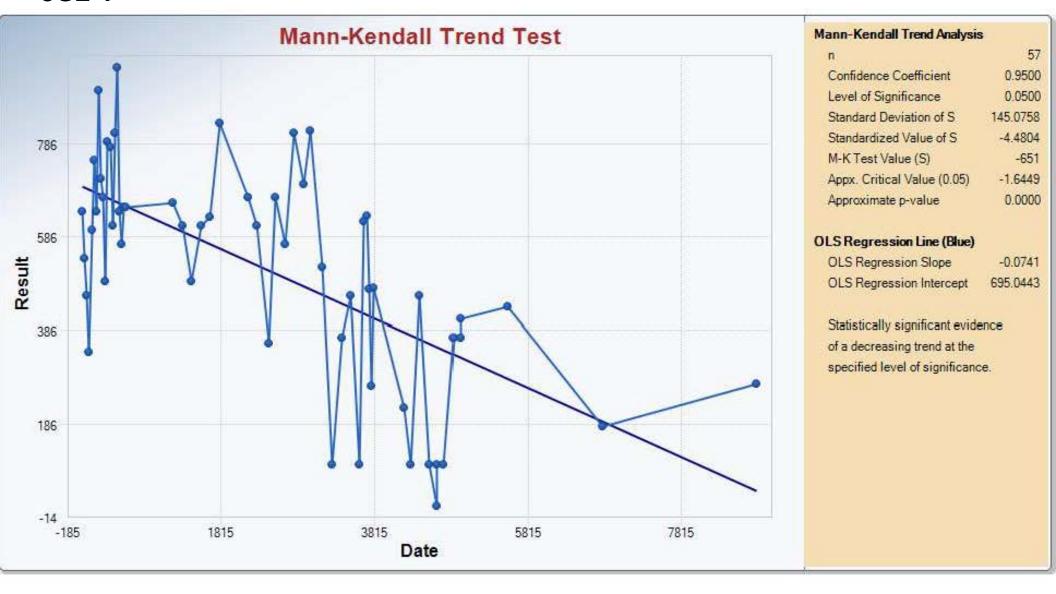
8F1-1R



8G1-1

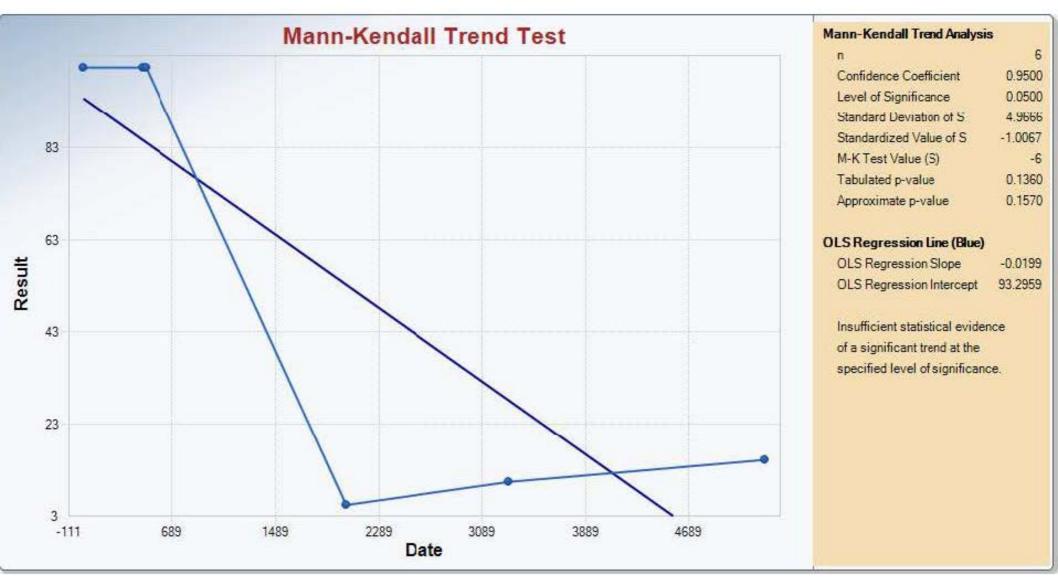


8G2-1

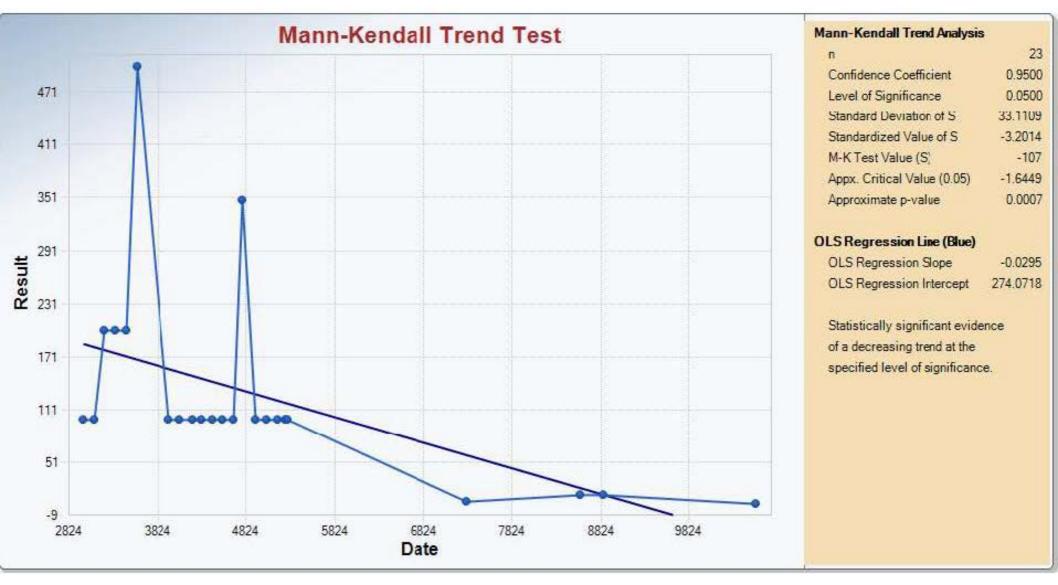


Backup for Figure 6-6

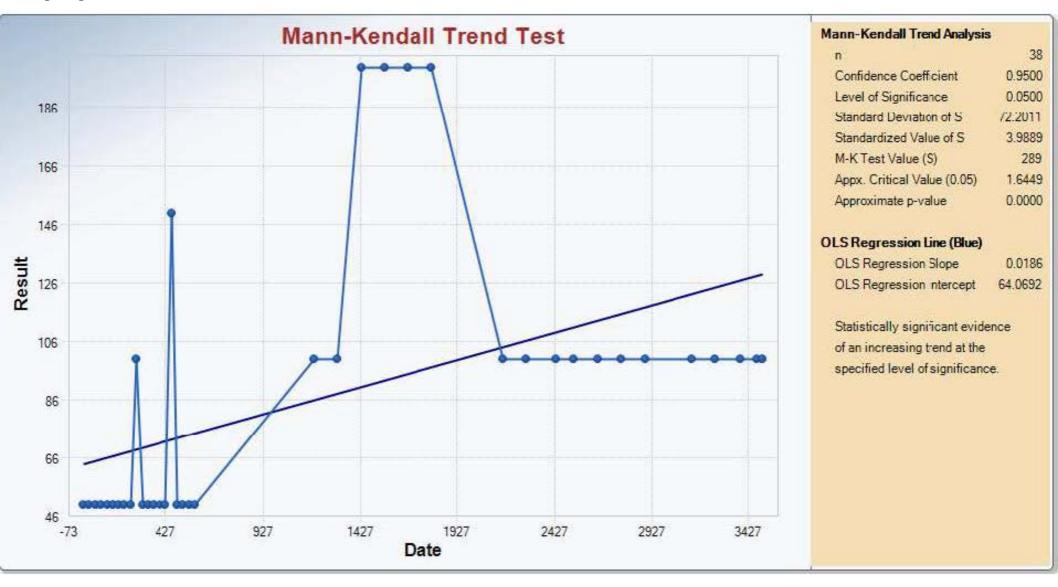
2B2-2



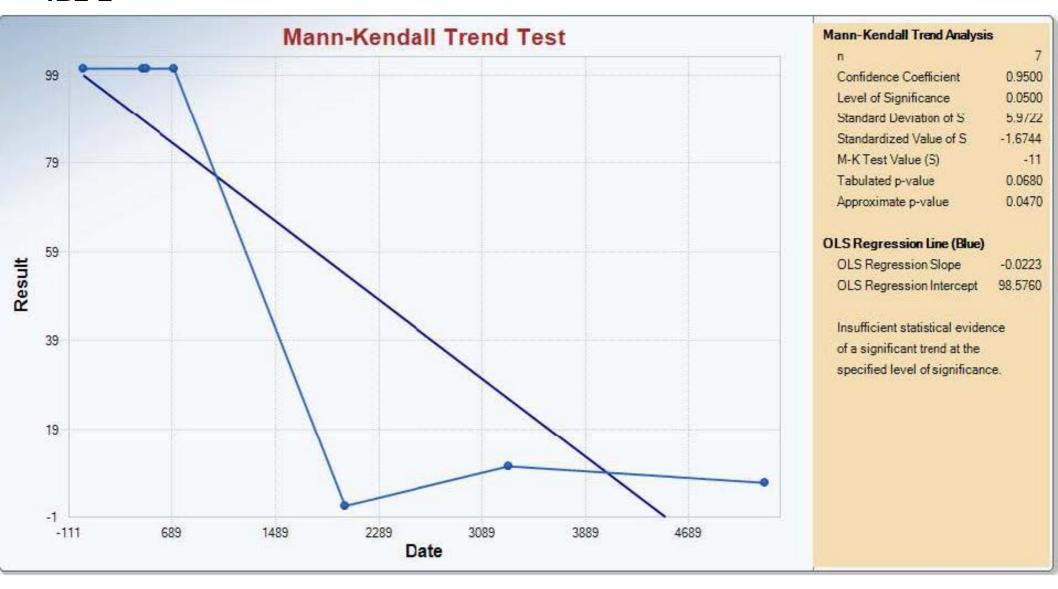
3A2-2R



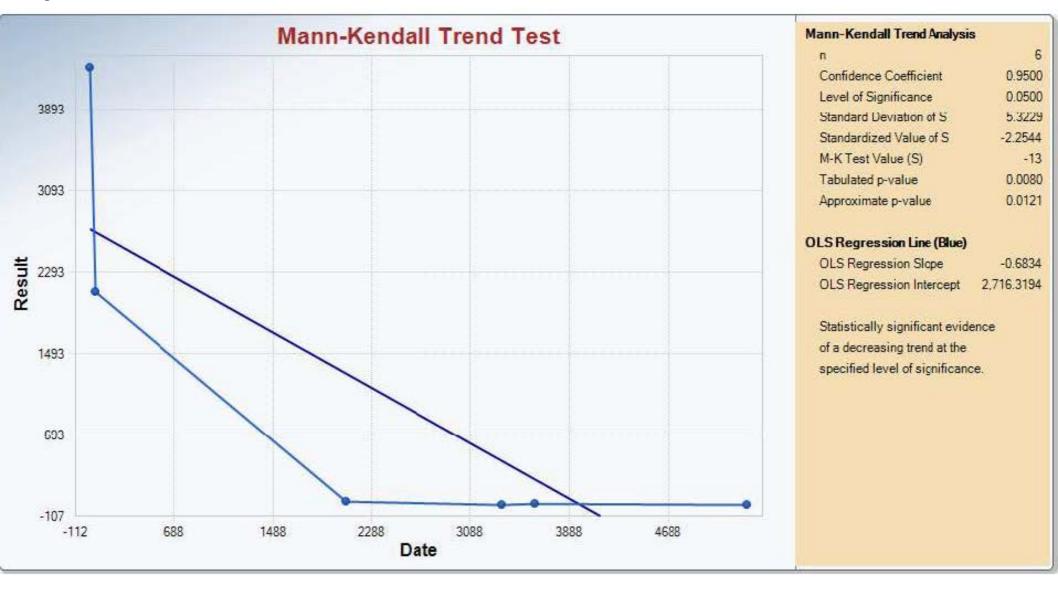
3A5-2



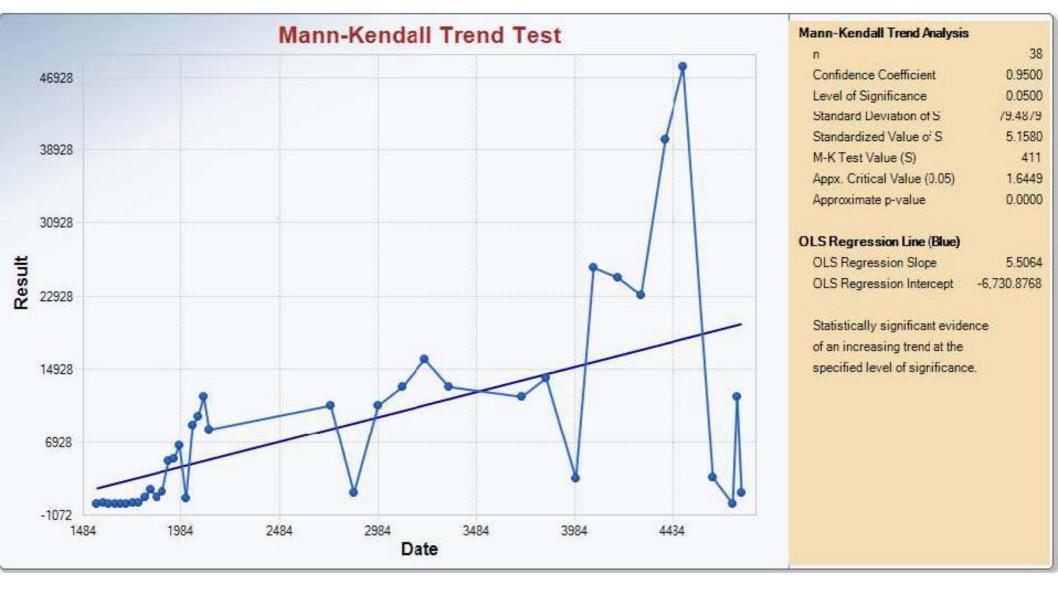
4B2-2



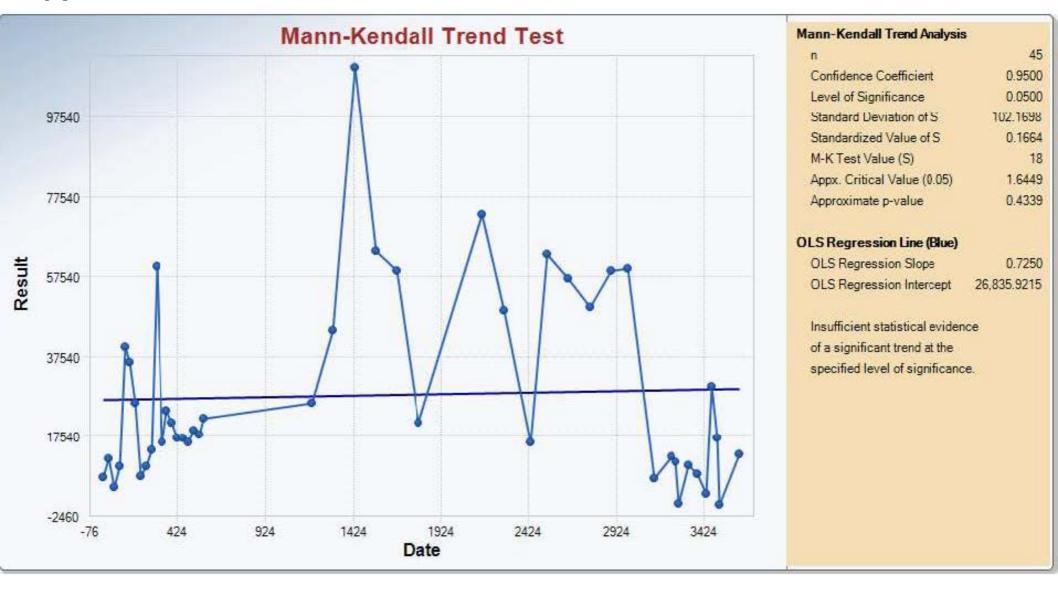
5B1-2R



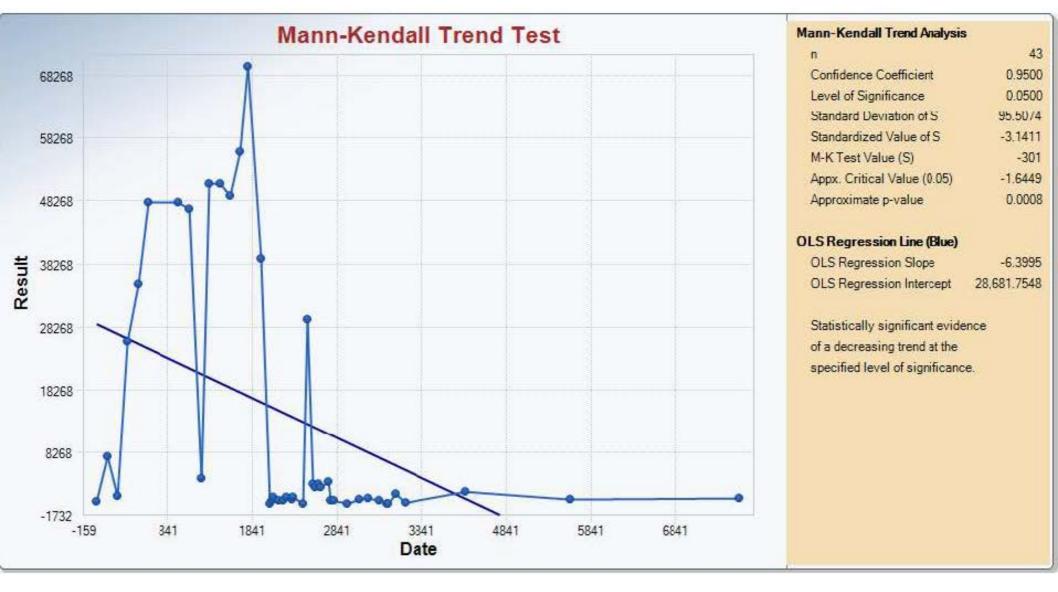
5C2-2



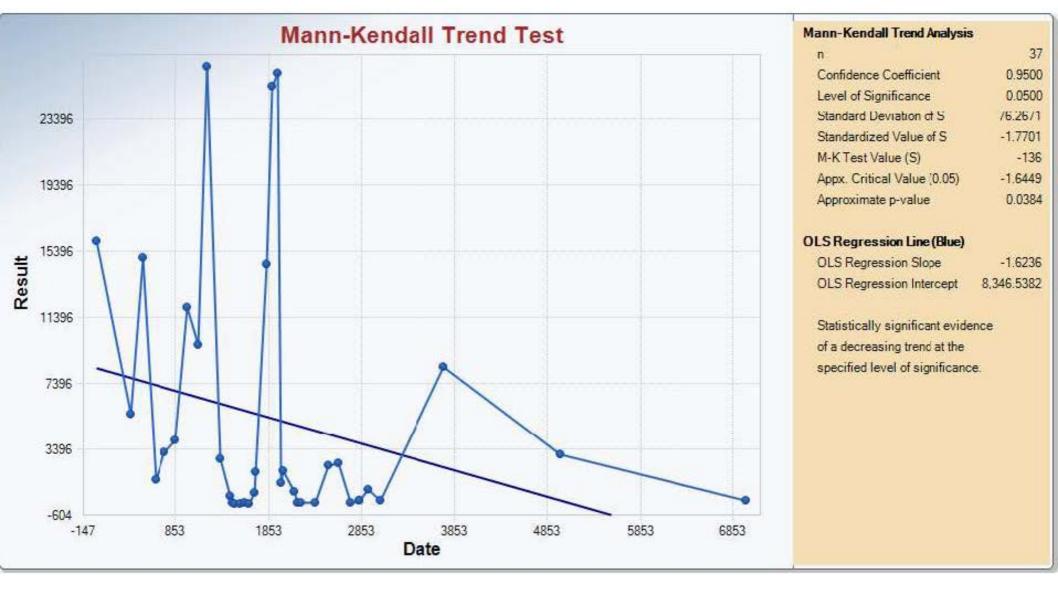
5C4-2



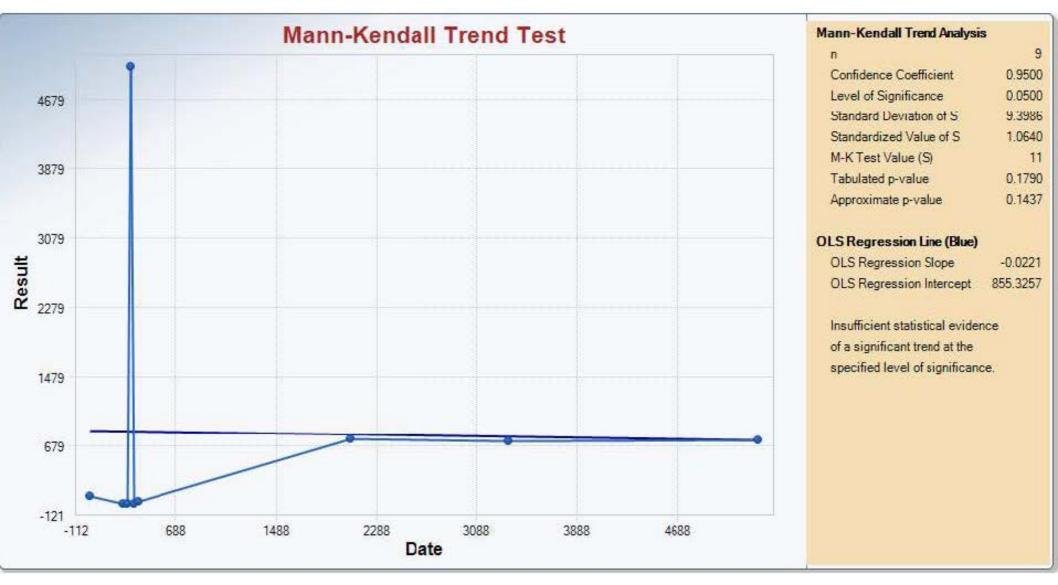
5C10-2



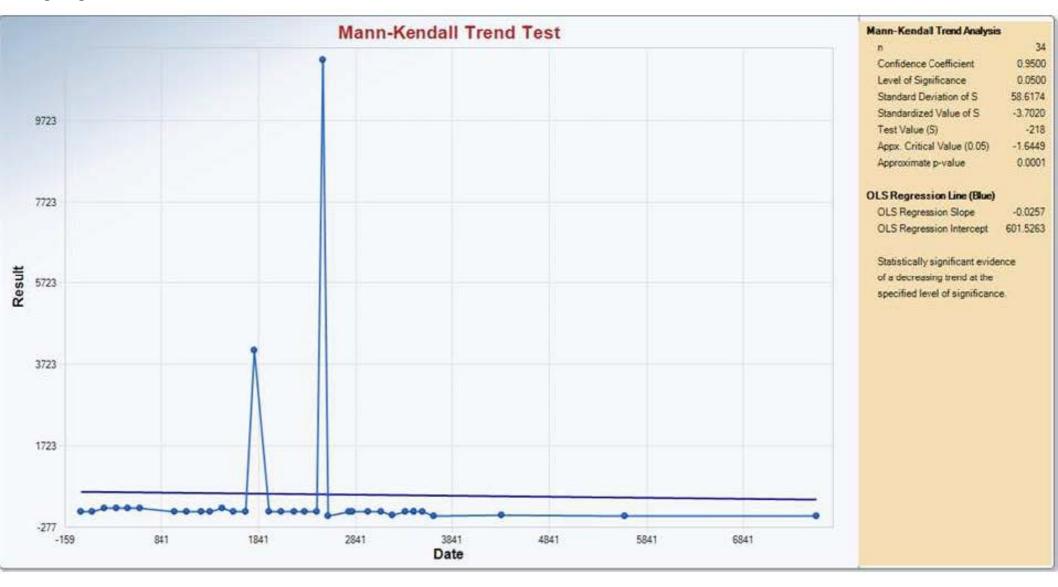
5C14-2



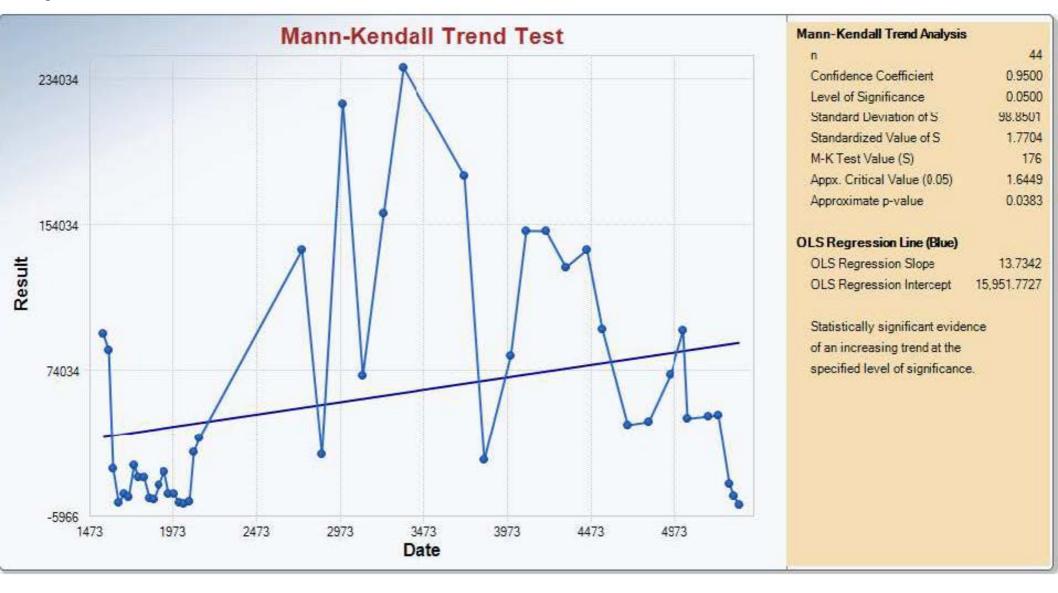
5C16-2R



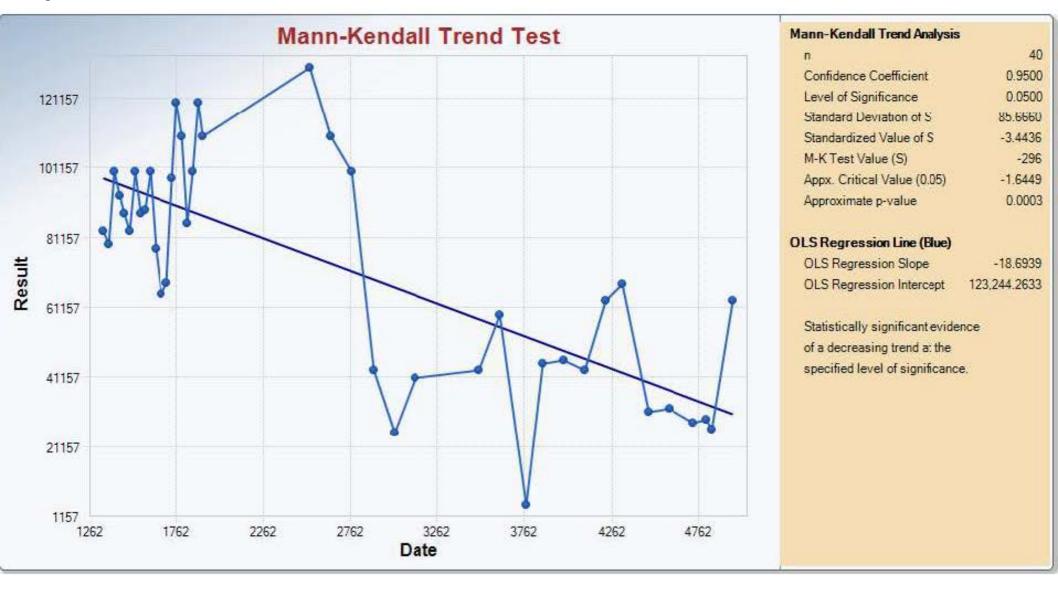
5D8-2



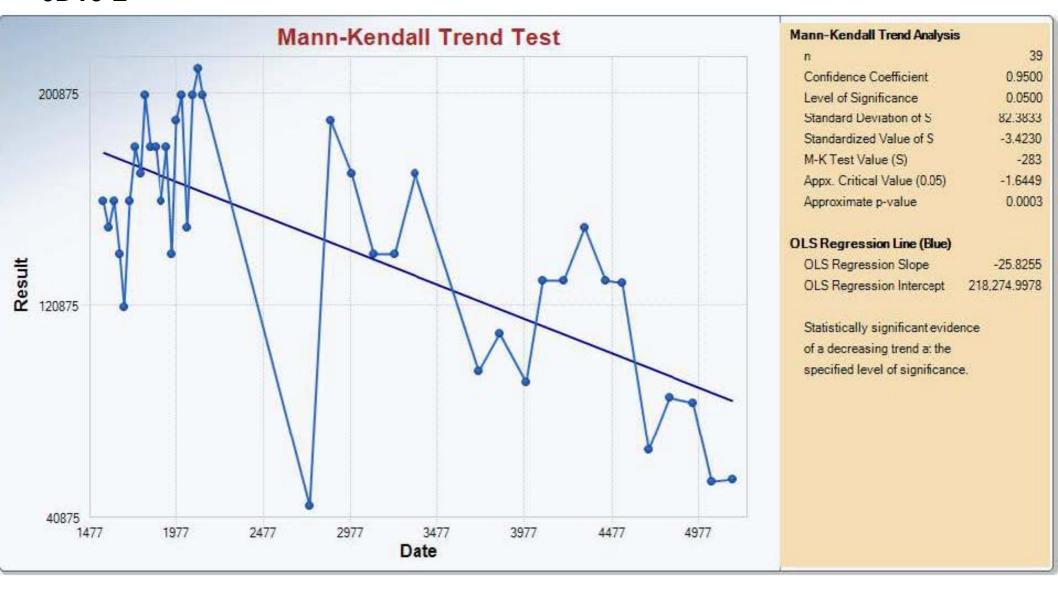
6D2-2



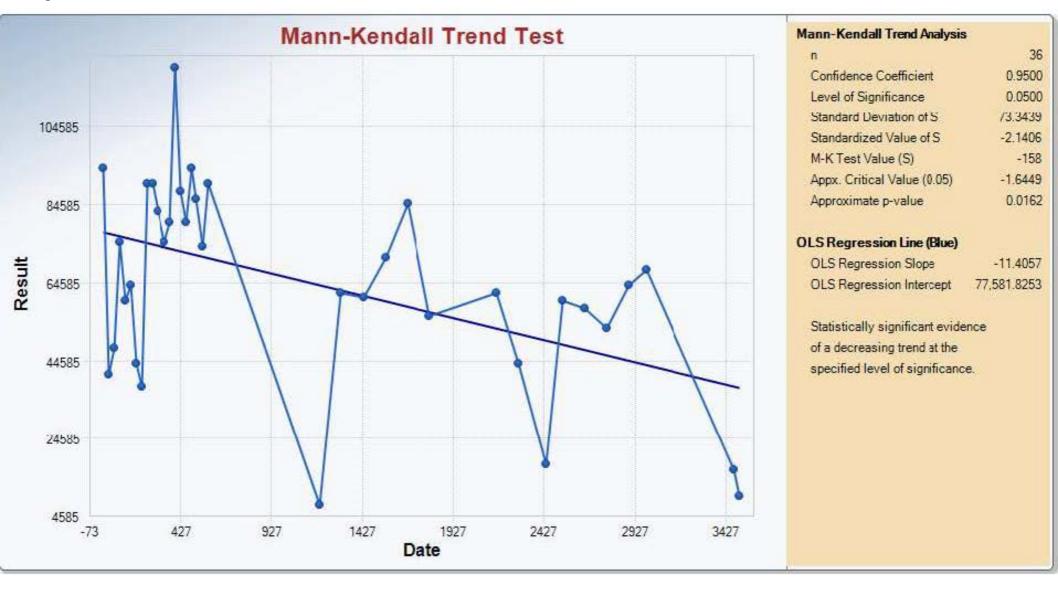
6D7-2



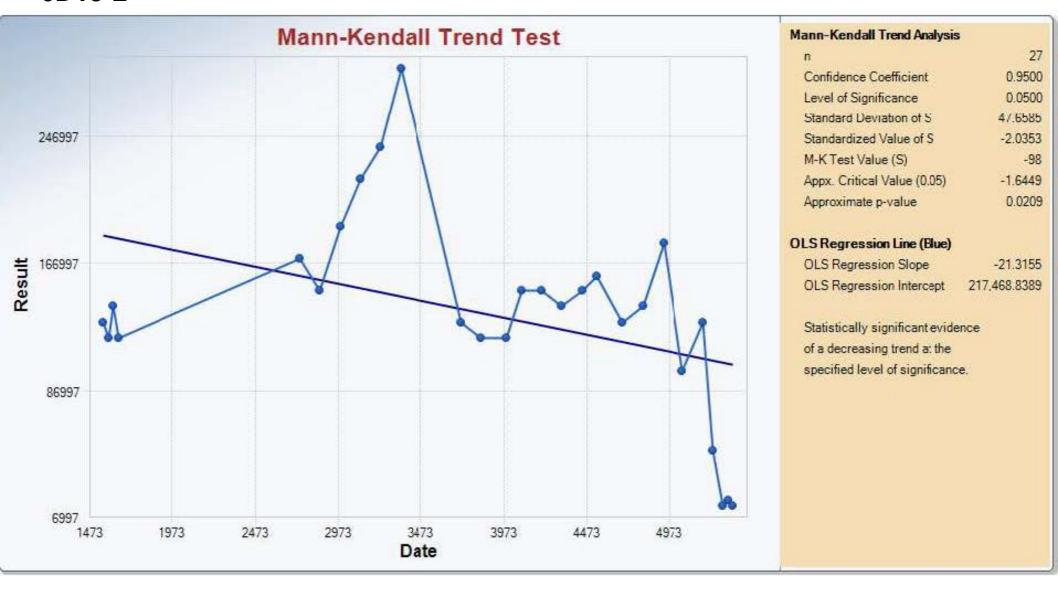
6D10-2



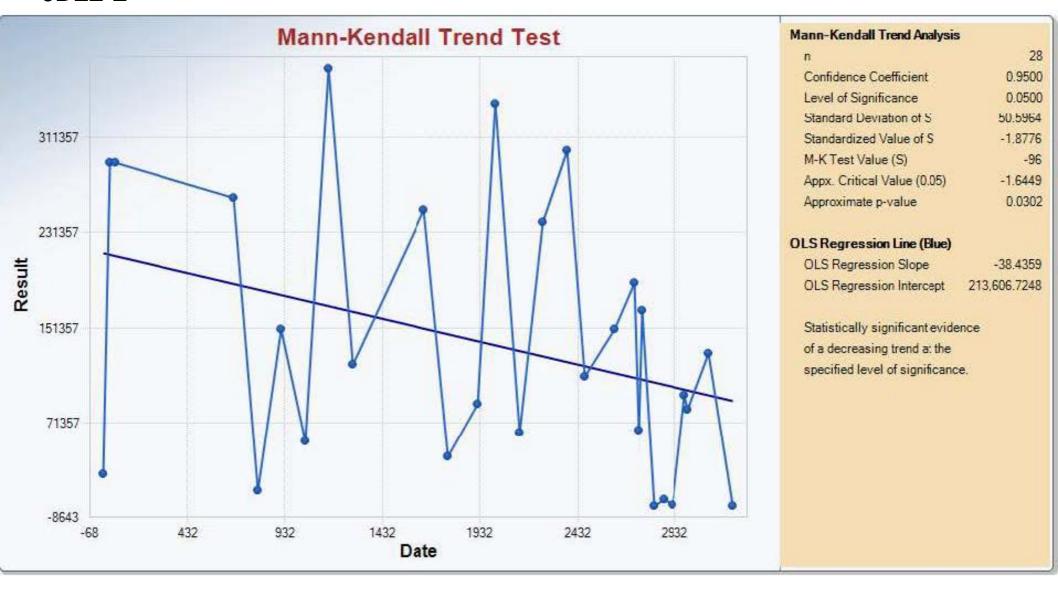
6D12-2



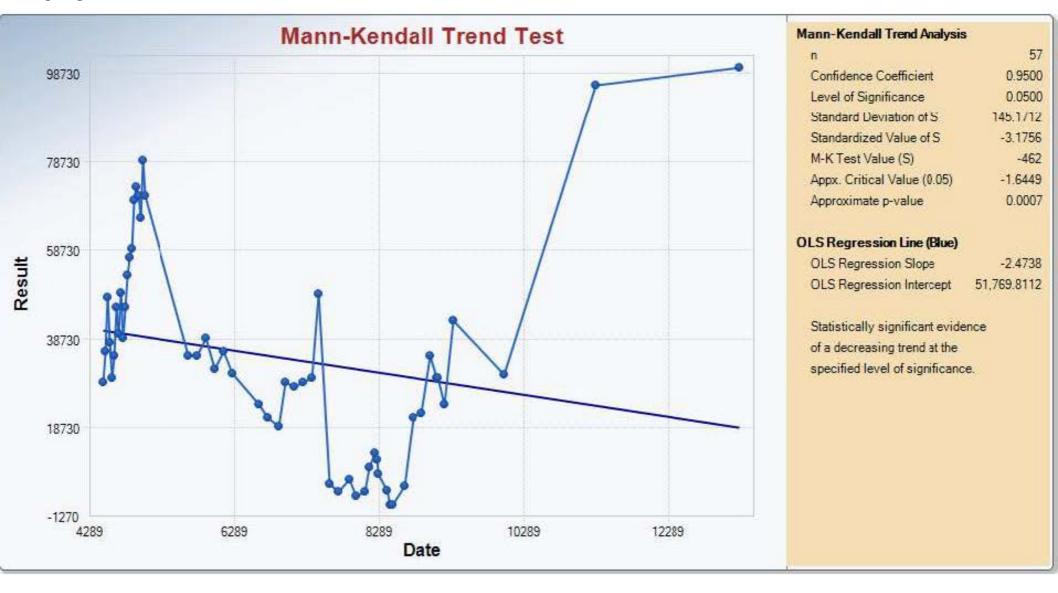
6D15-2



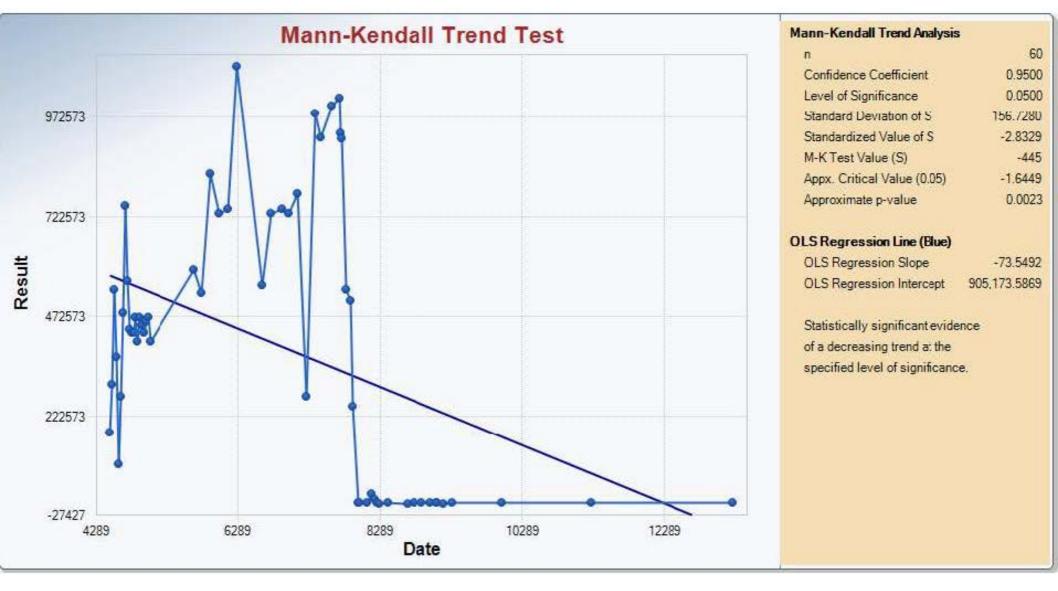
6D22-2



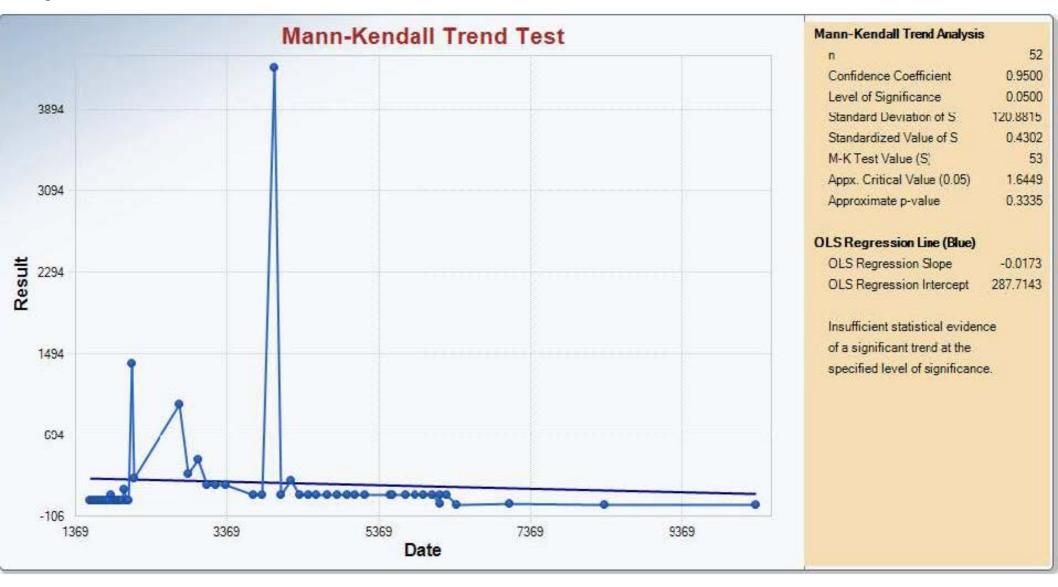
6E3-2



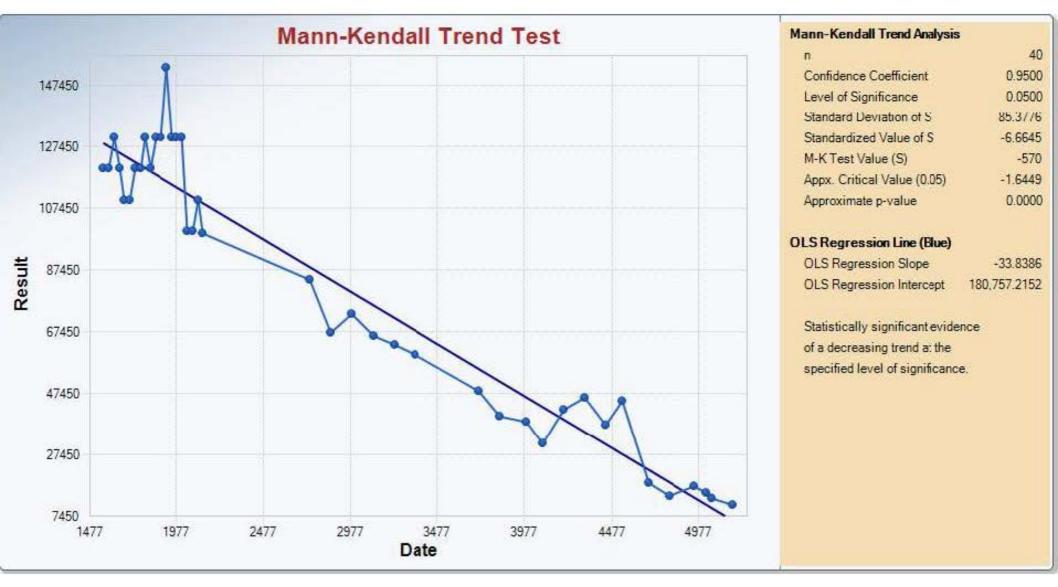
6E9-2



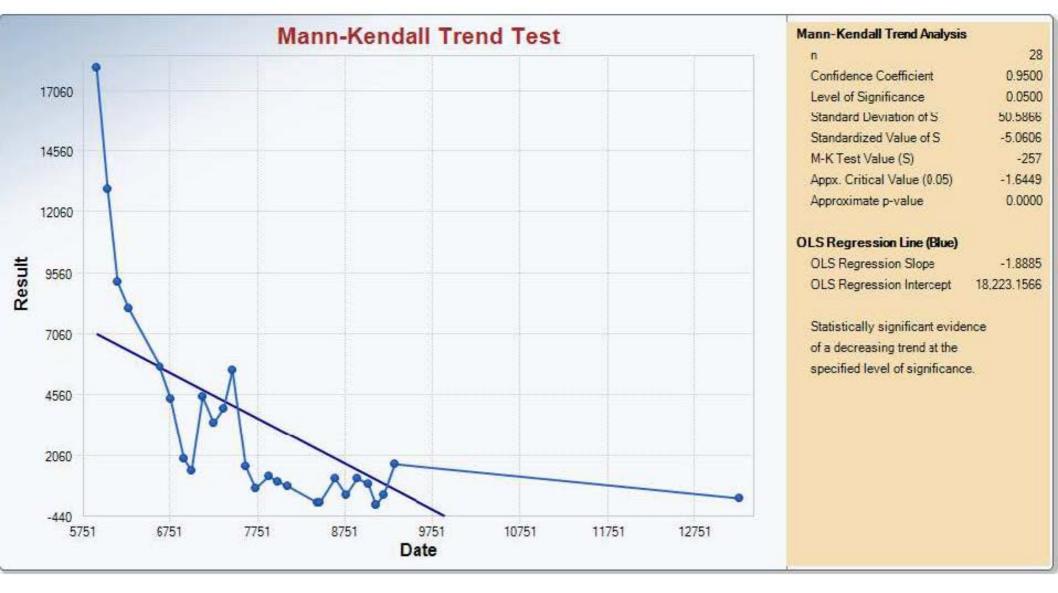
6F1-2



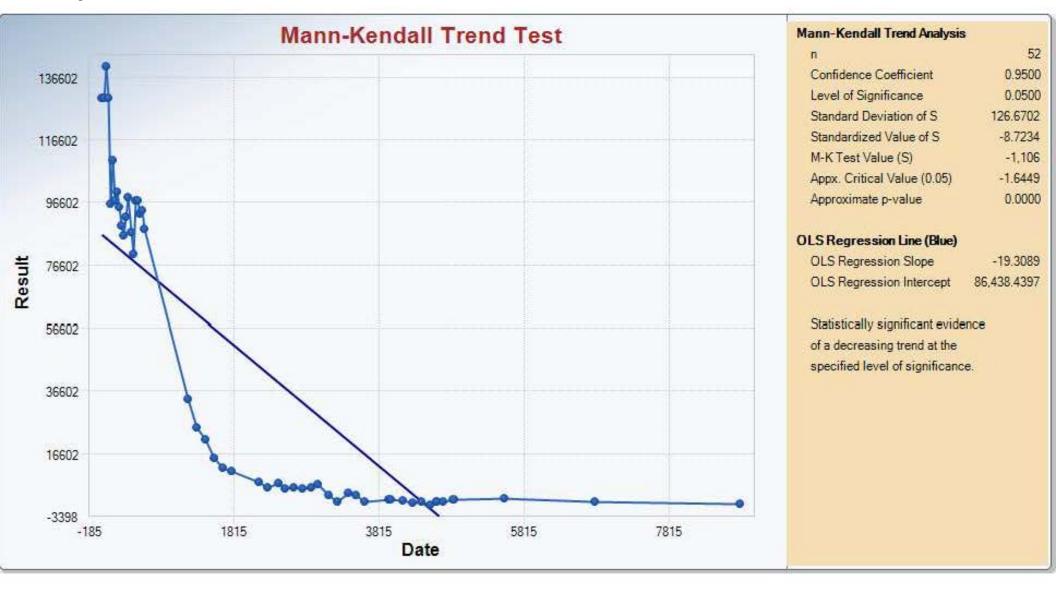
7D1-2



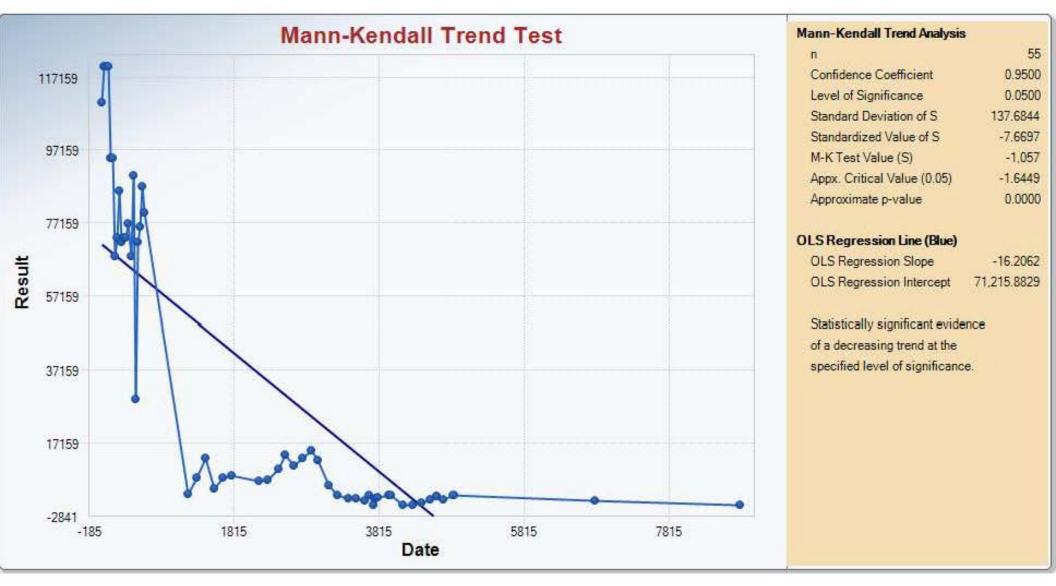
7E4-2



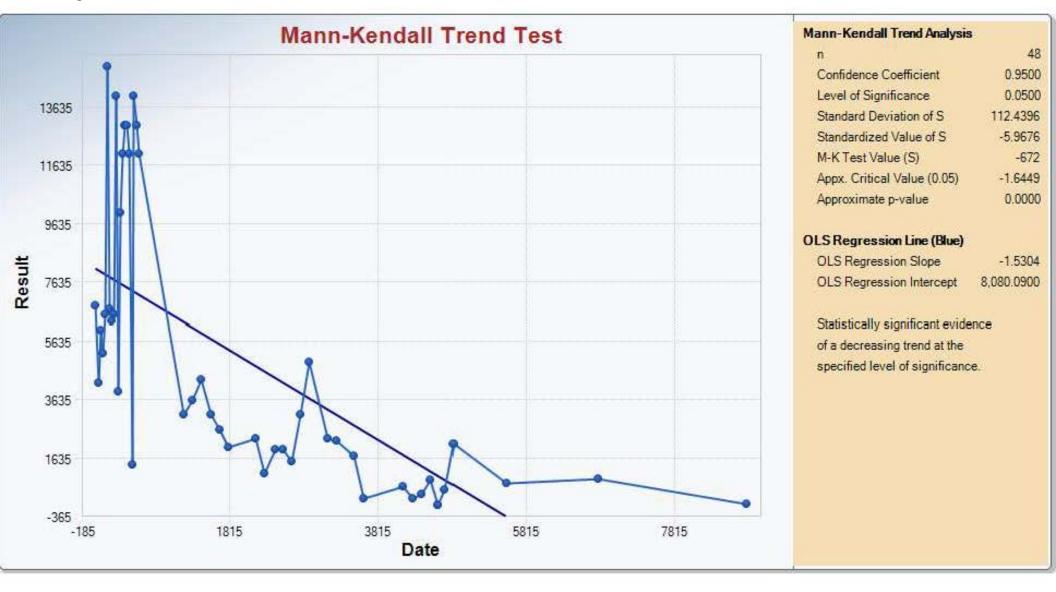
7E6-2



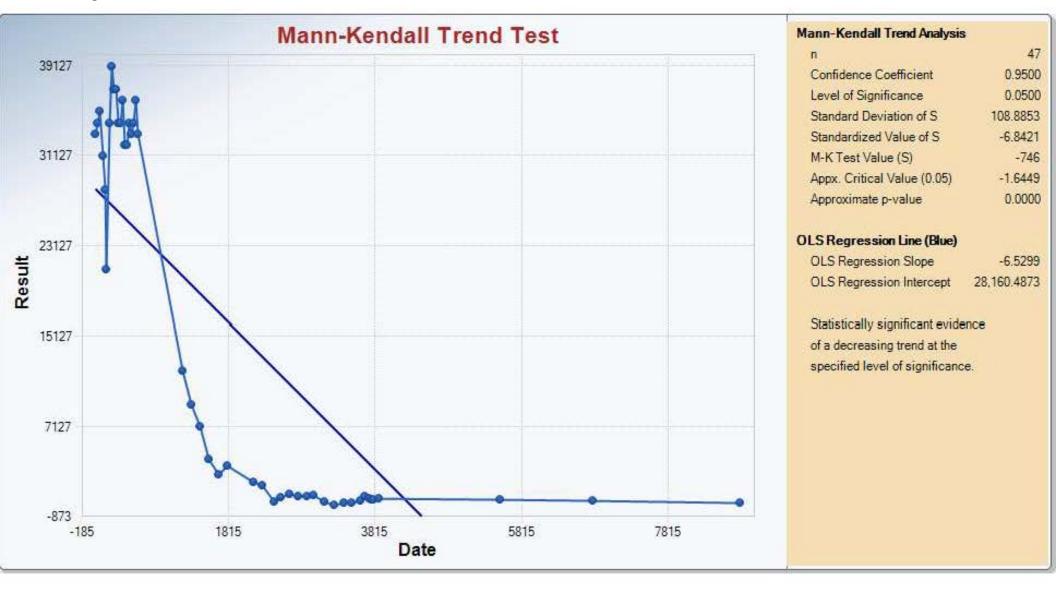
7E7-2



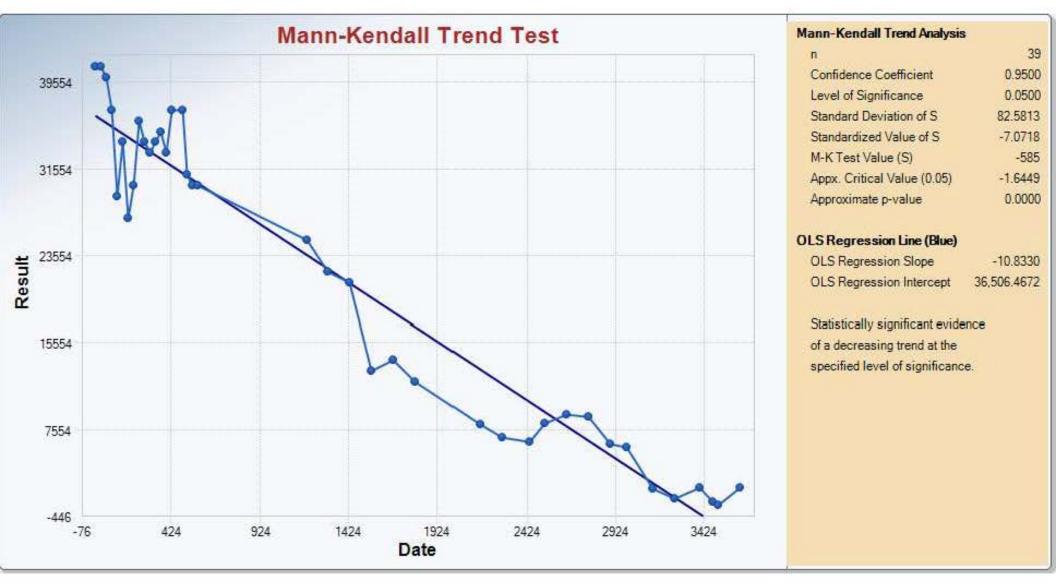
7E9-2



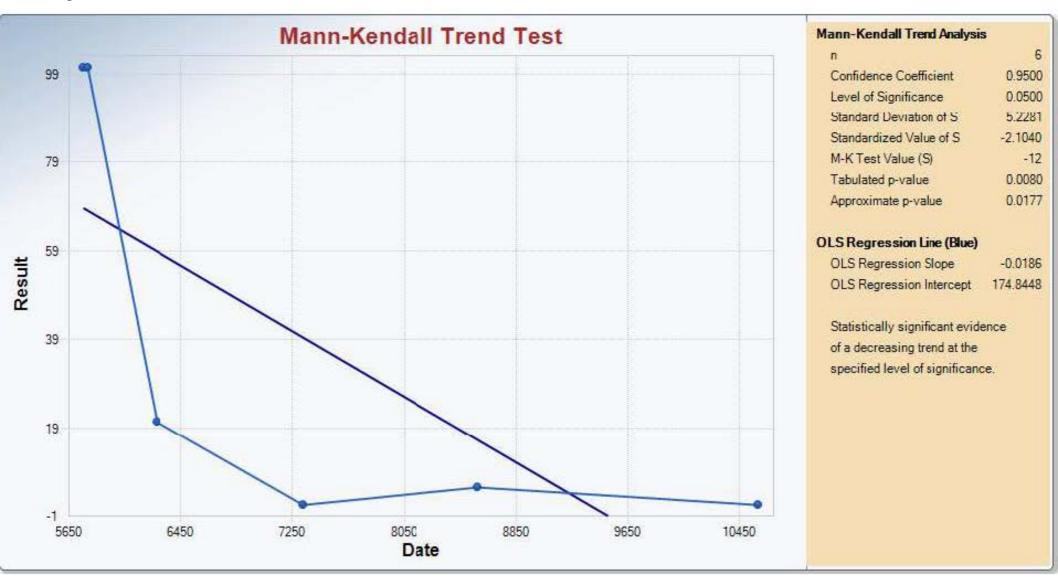
7E13-2R



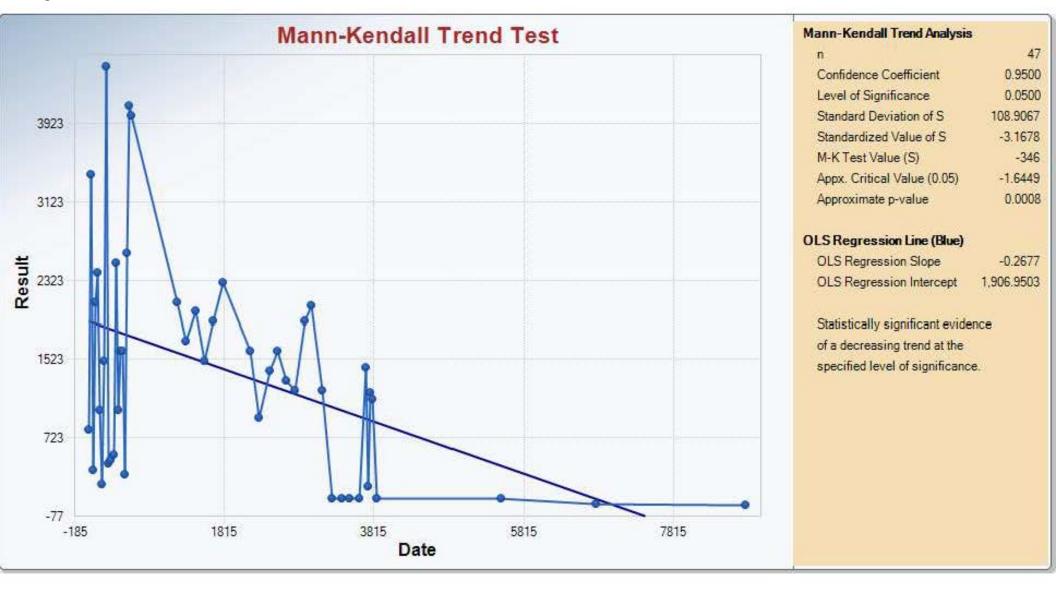
7E21-2



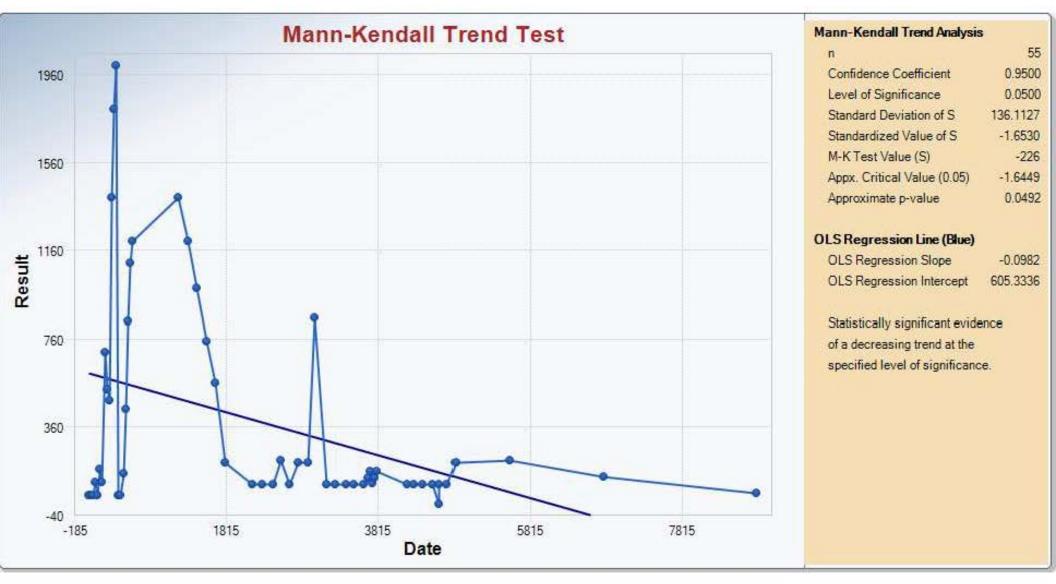
13-2



8F2-2R

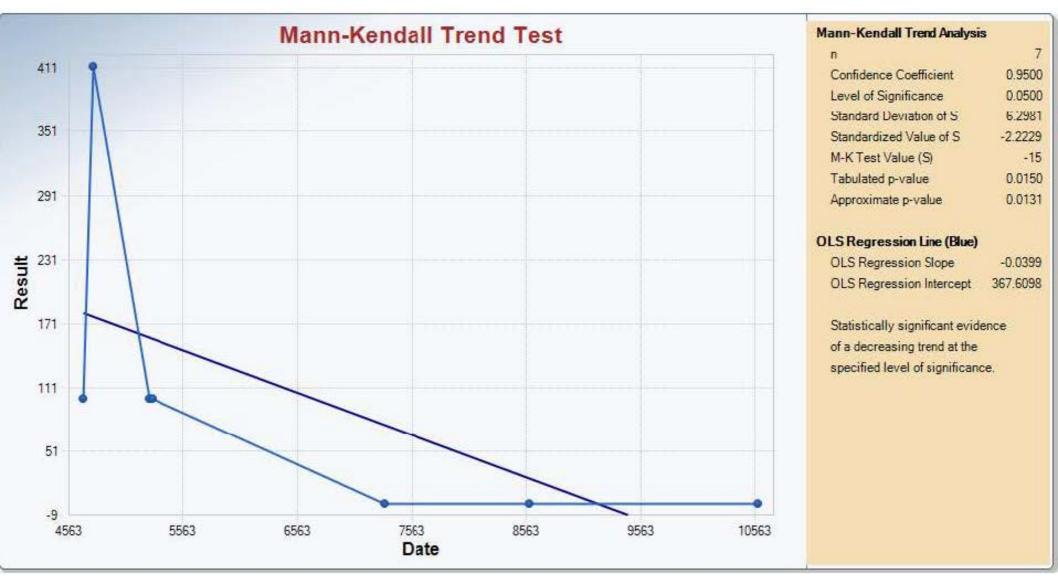


8G3-2

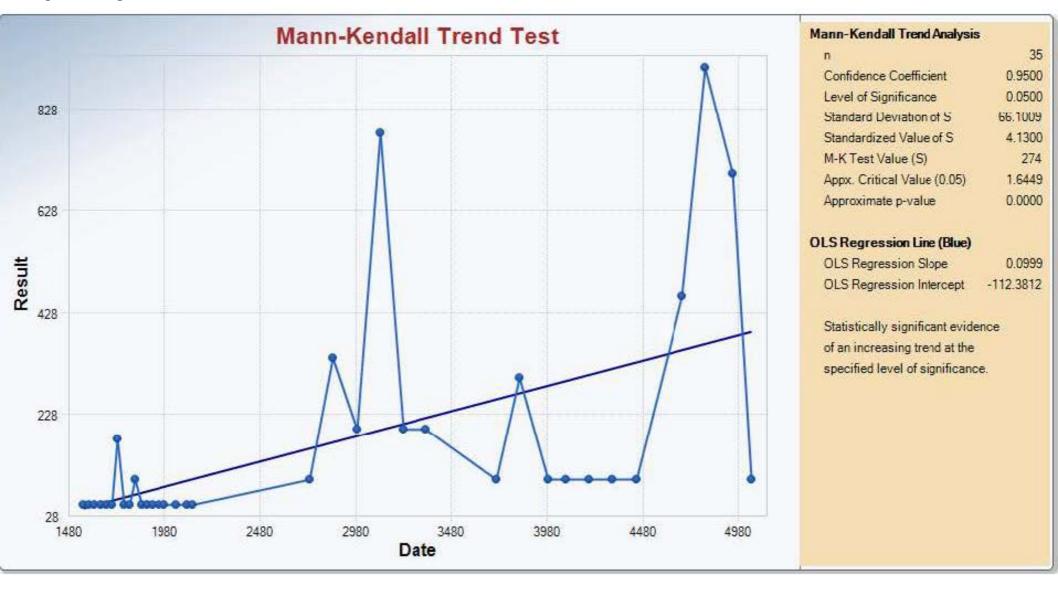


Backup for Figure 6-7

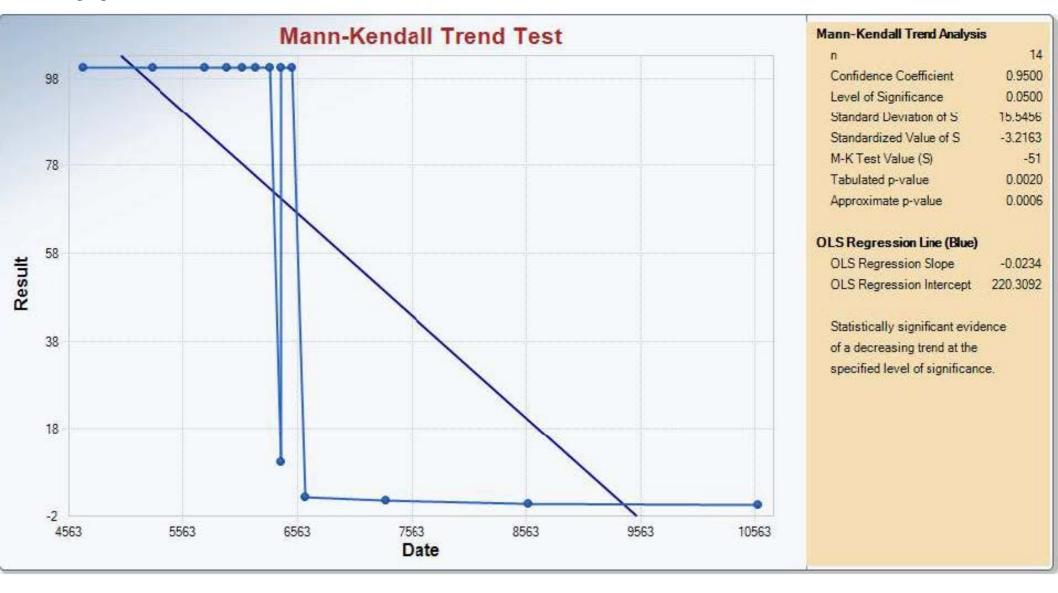
3A1-3R



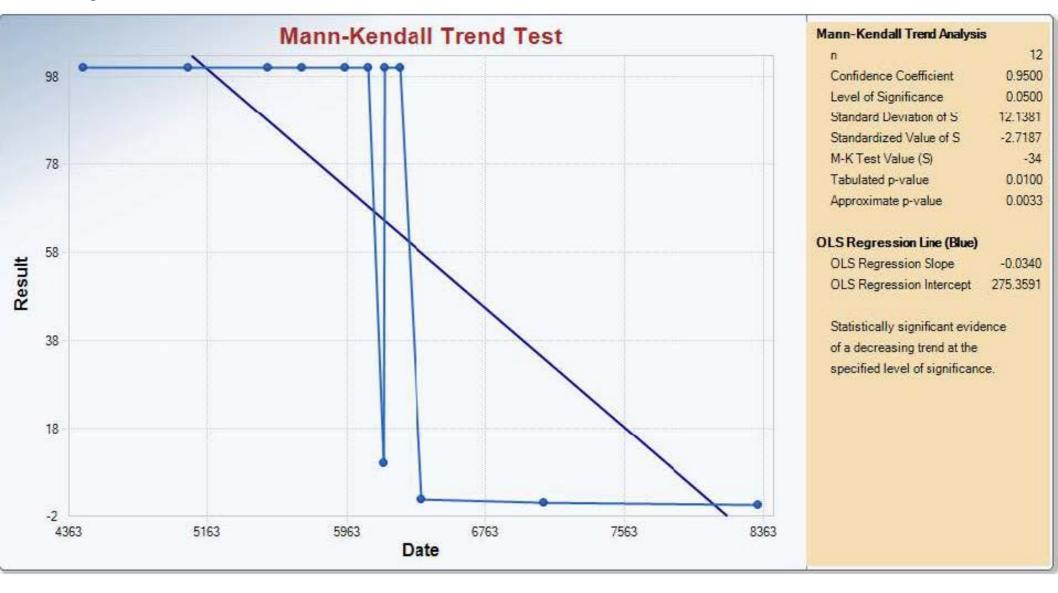
6D11-3



7E5-3

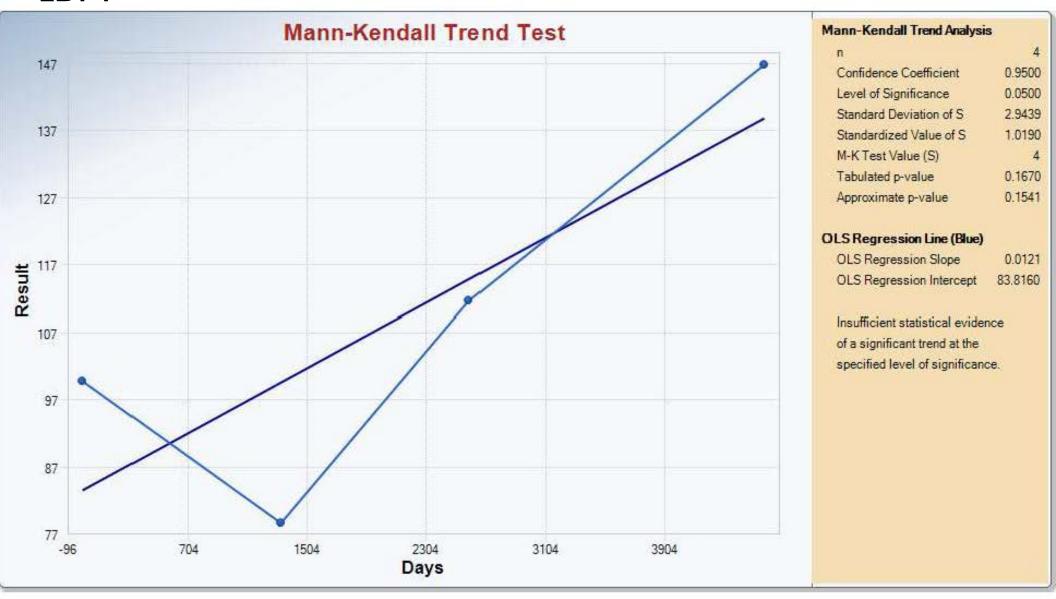


712-3

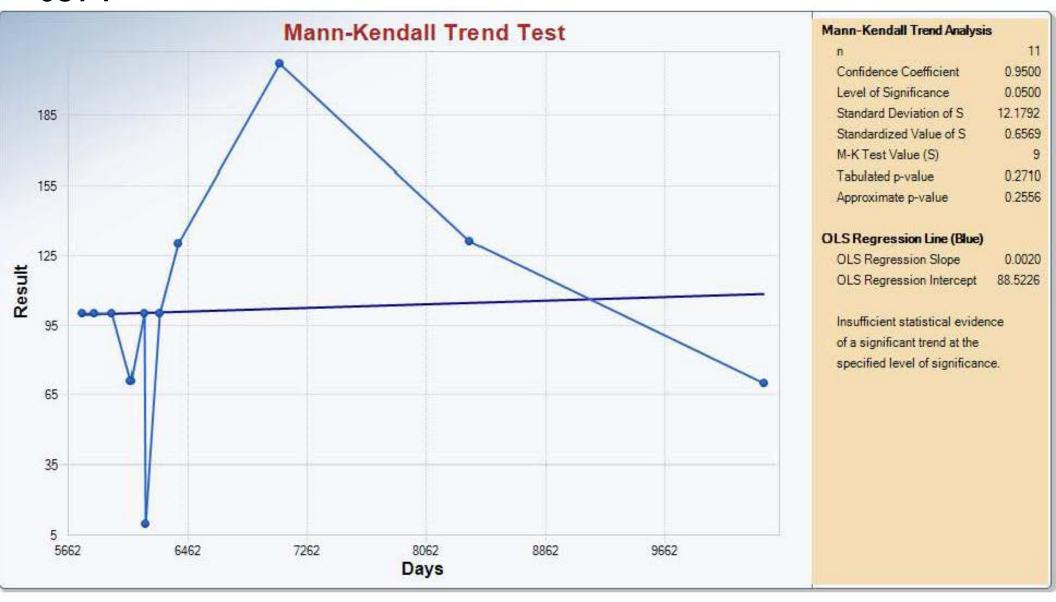


Backup for Figure 6-9

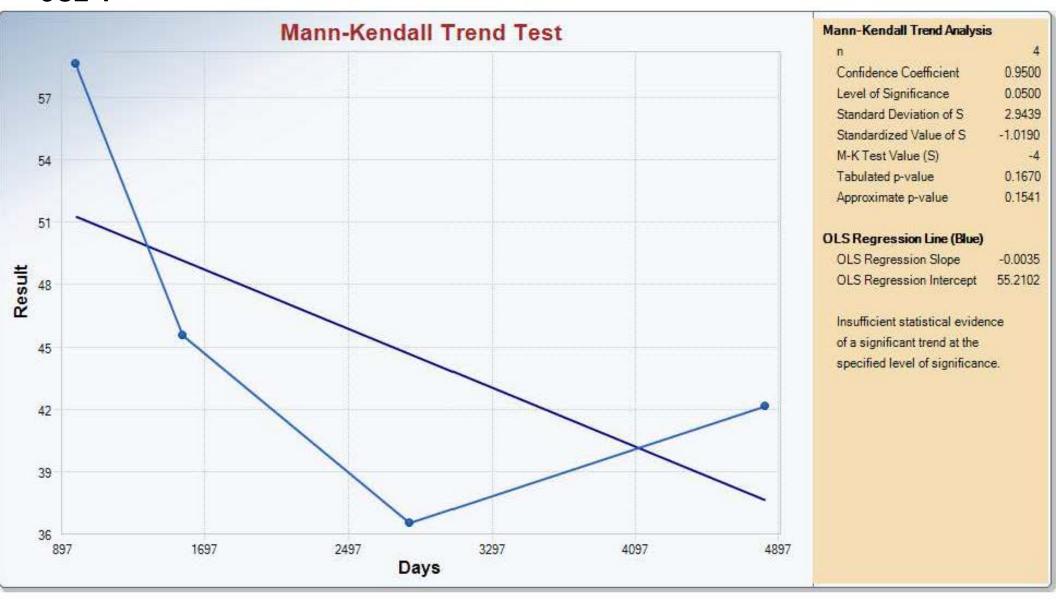
2B1-1



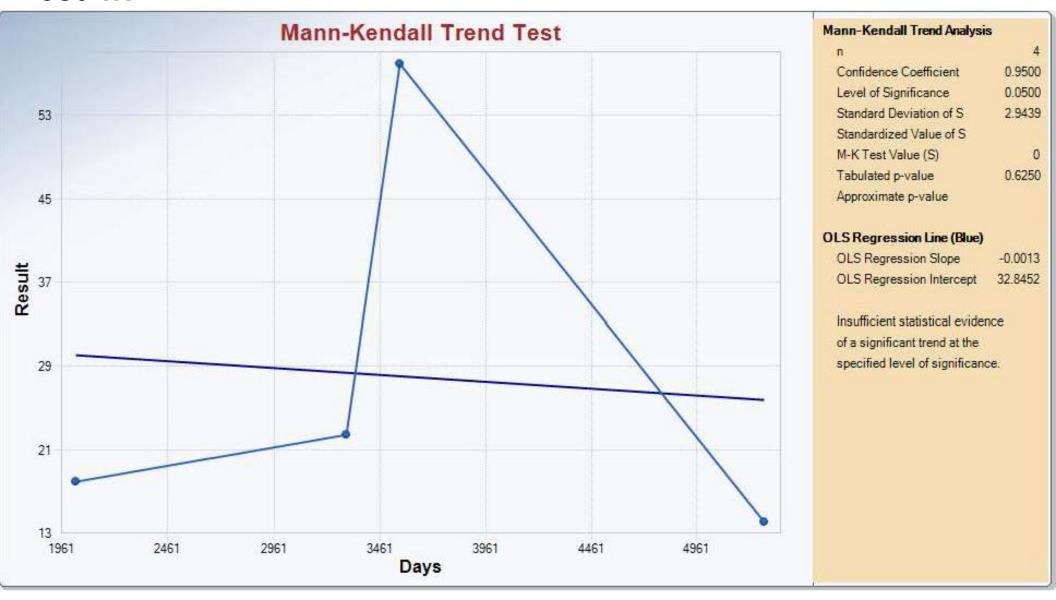
3C1-1



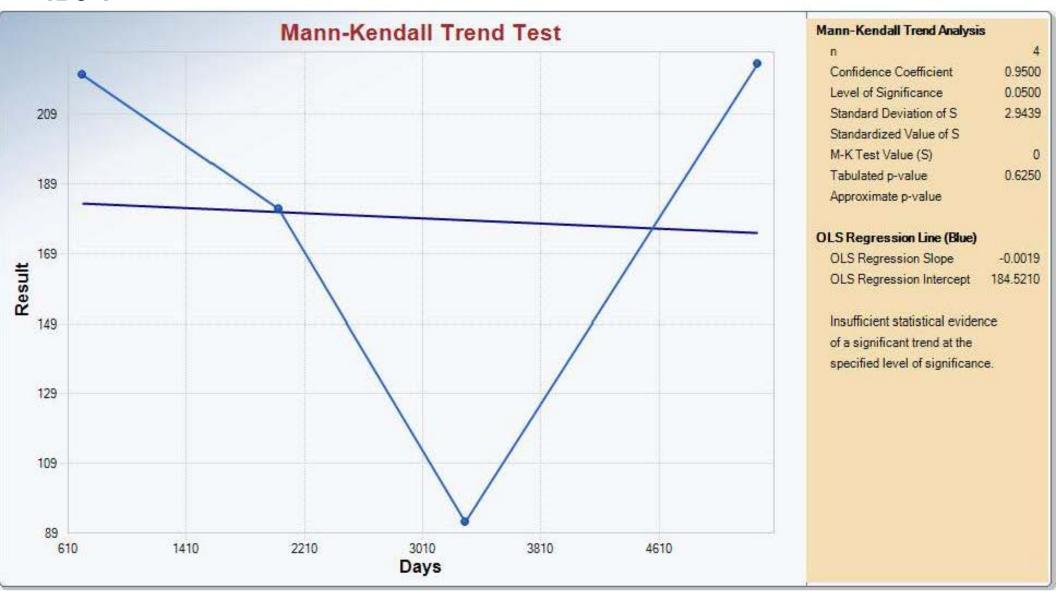
3C2-1



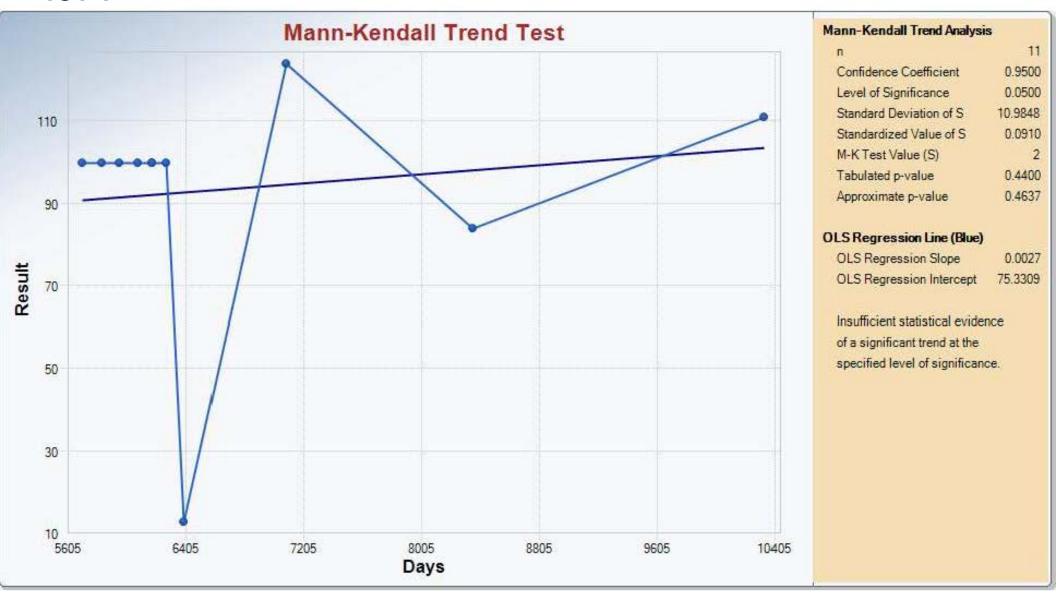
3C6-1R



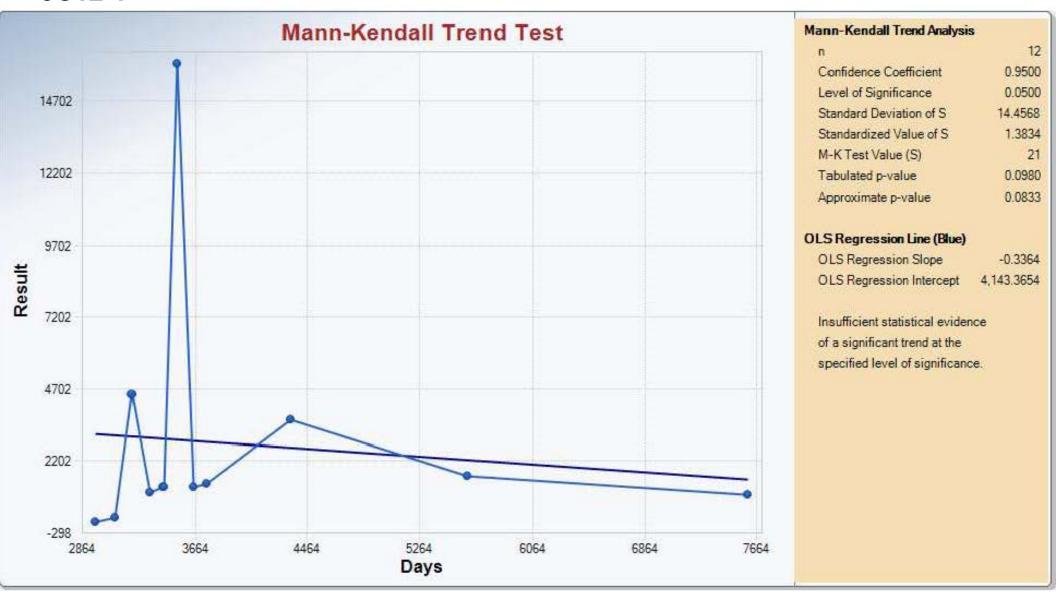
4B3-1



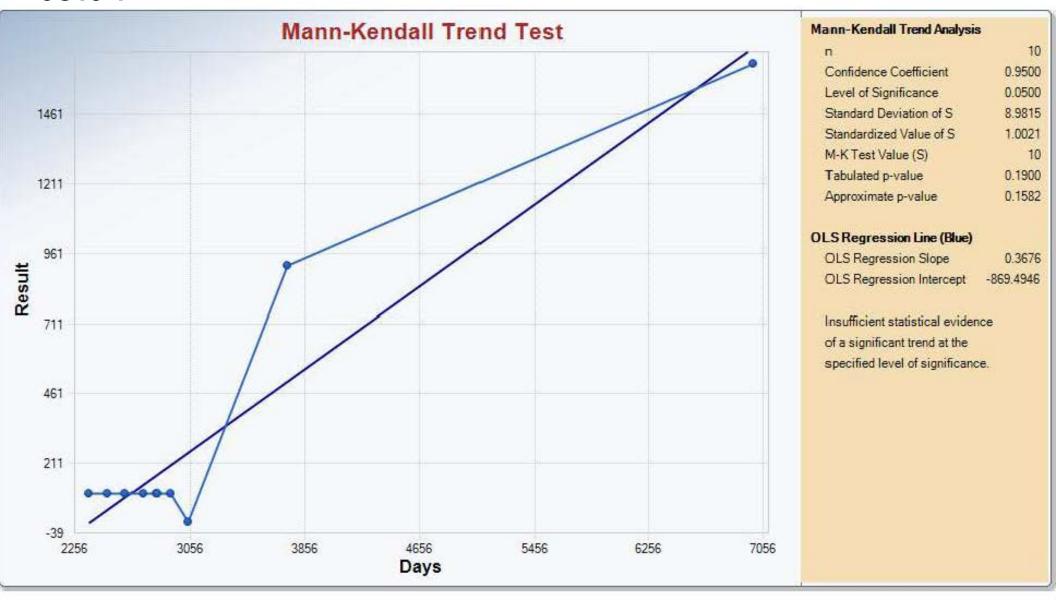
4C1-1



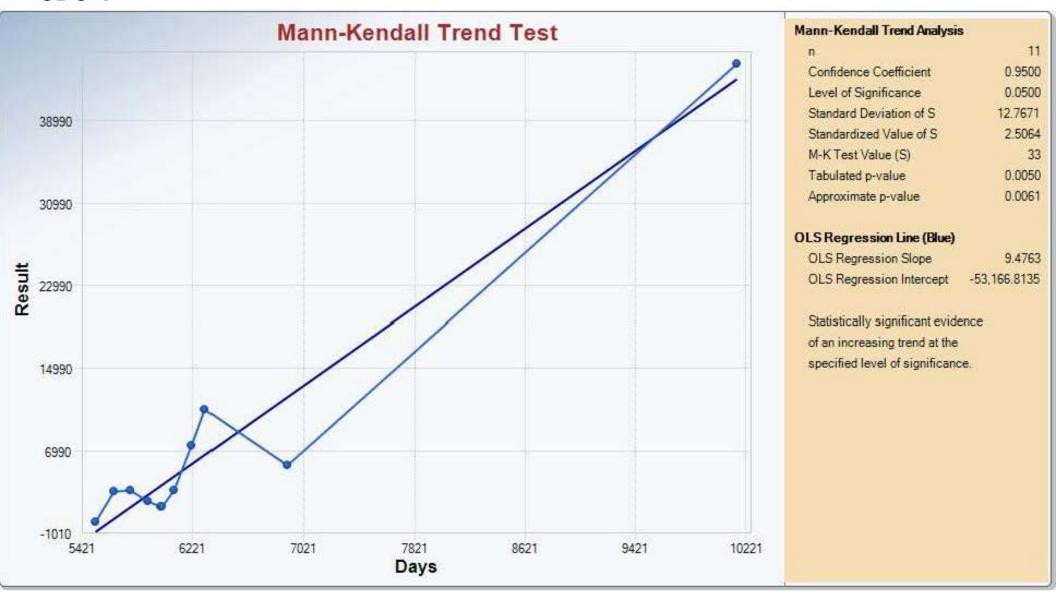
5C12-1



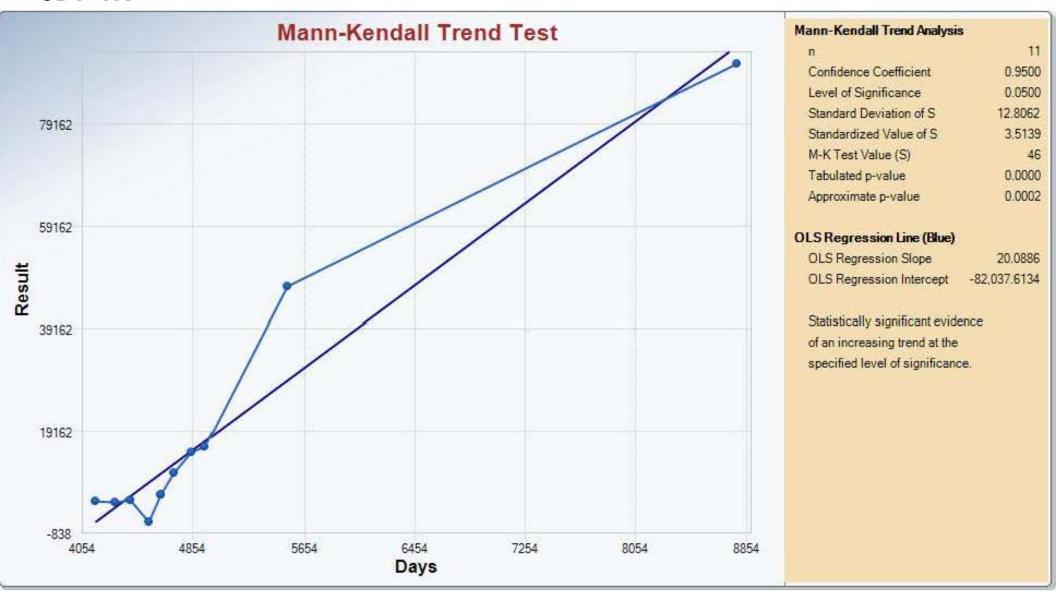
5C13-1



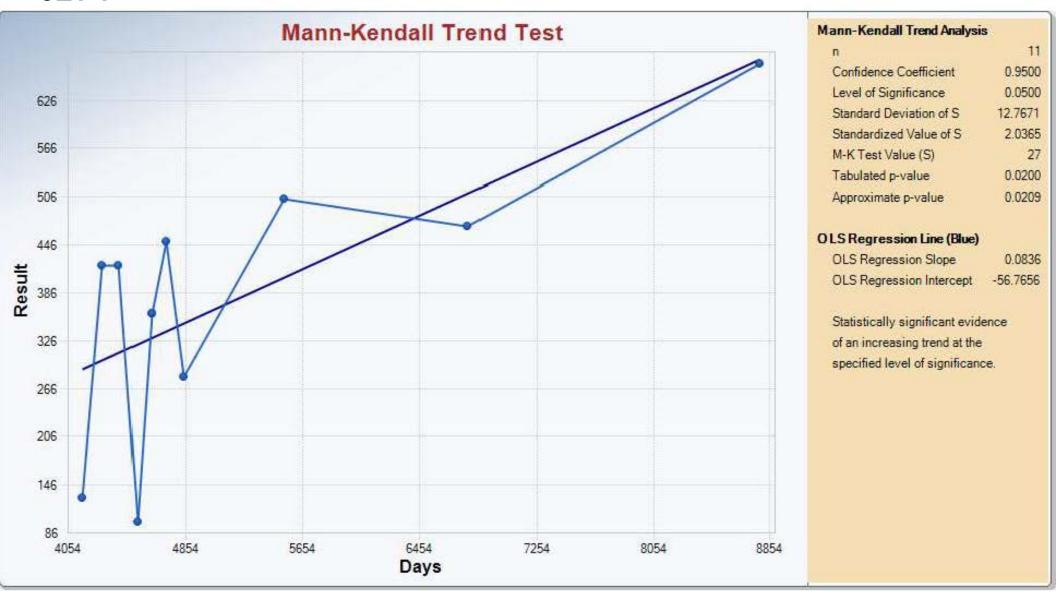
5D5-1



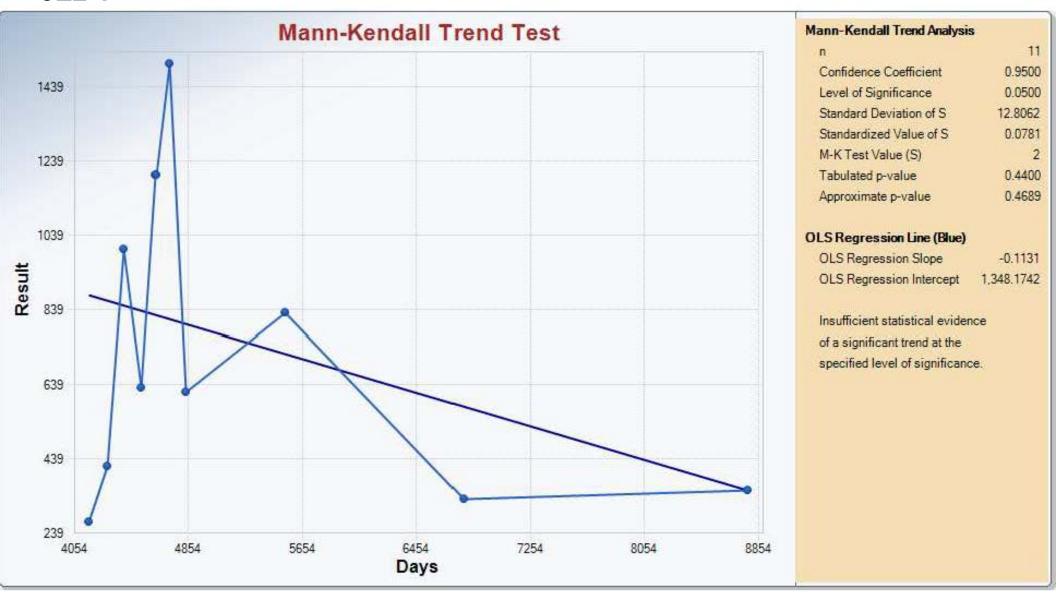
5D7-1R



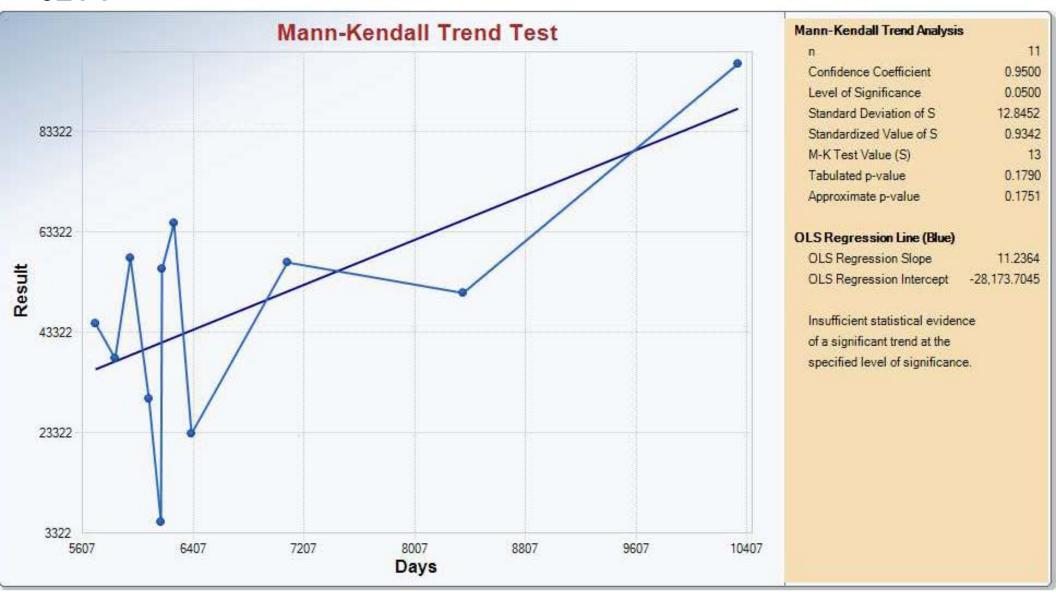
5E1-1



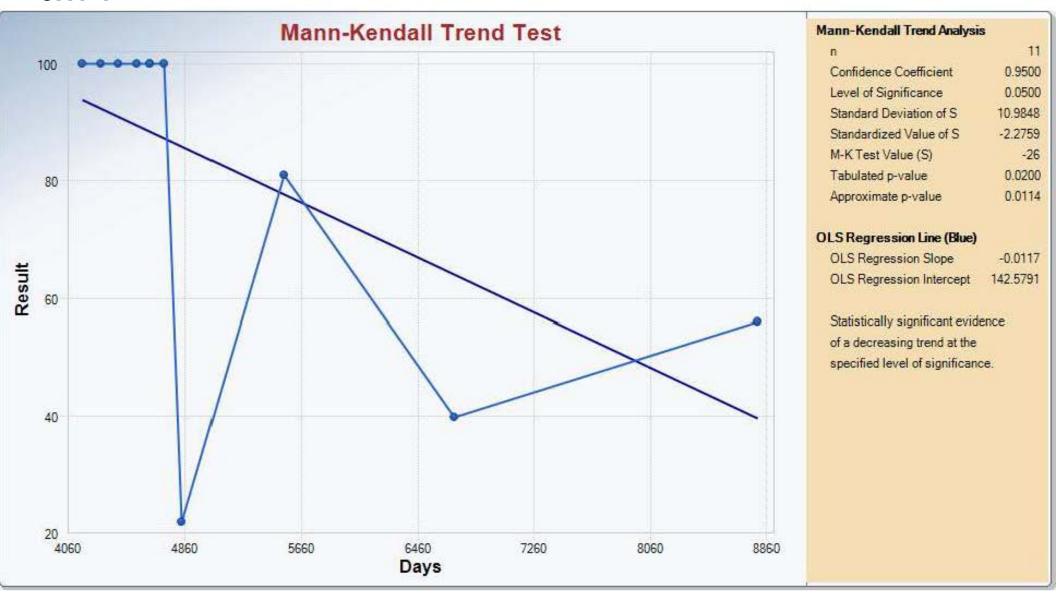
5E2-1



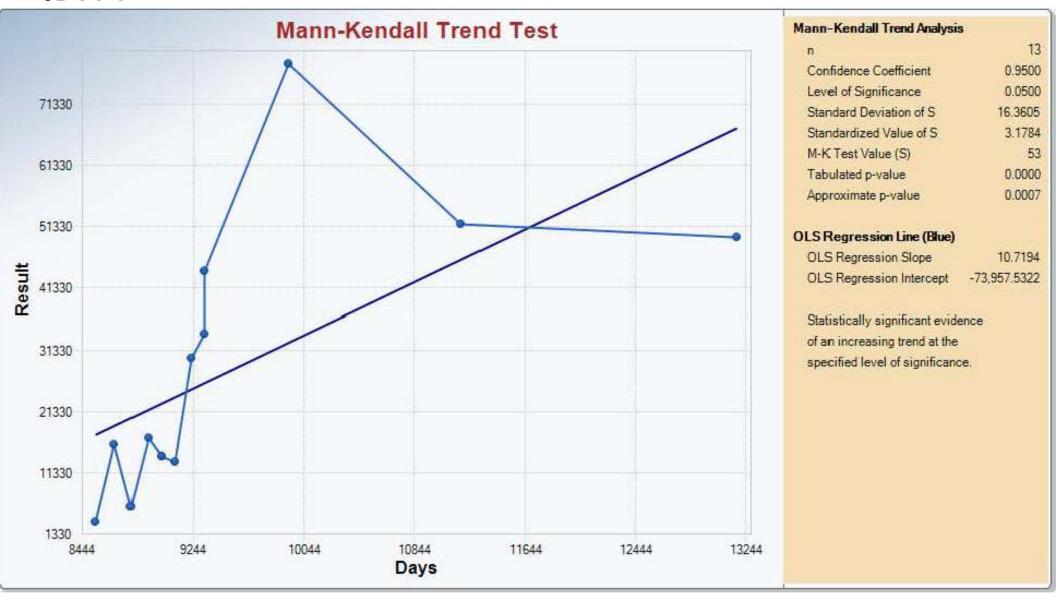
5E4-1



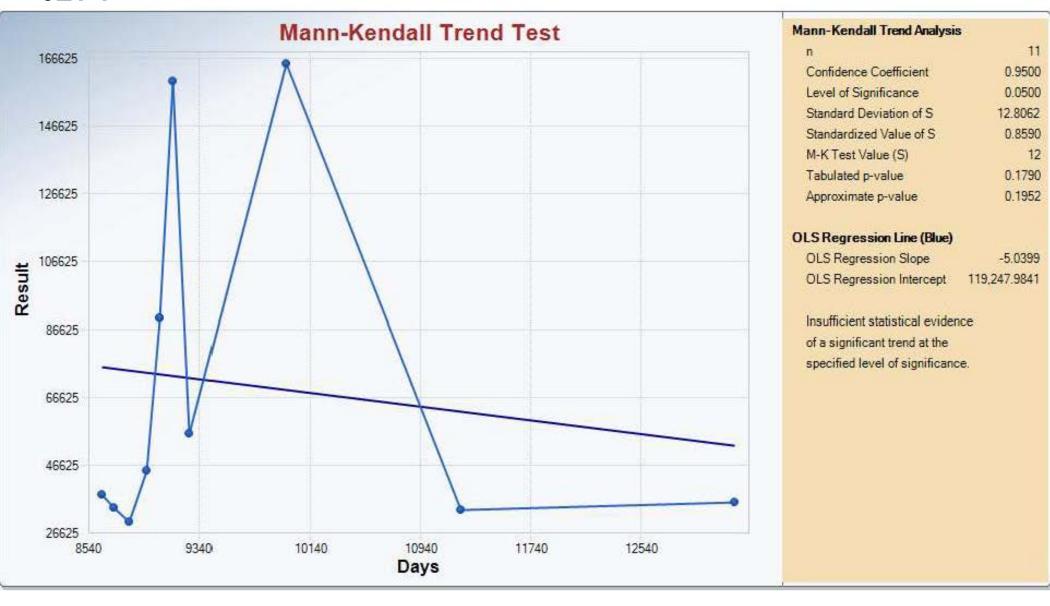
5H1-1



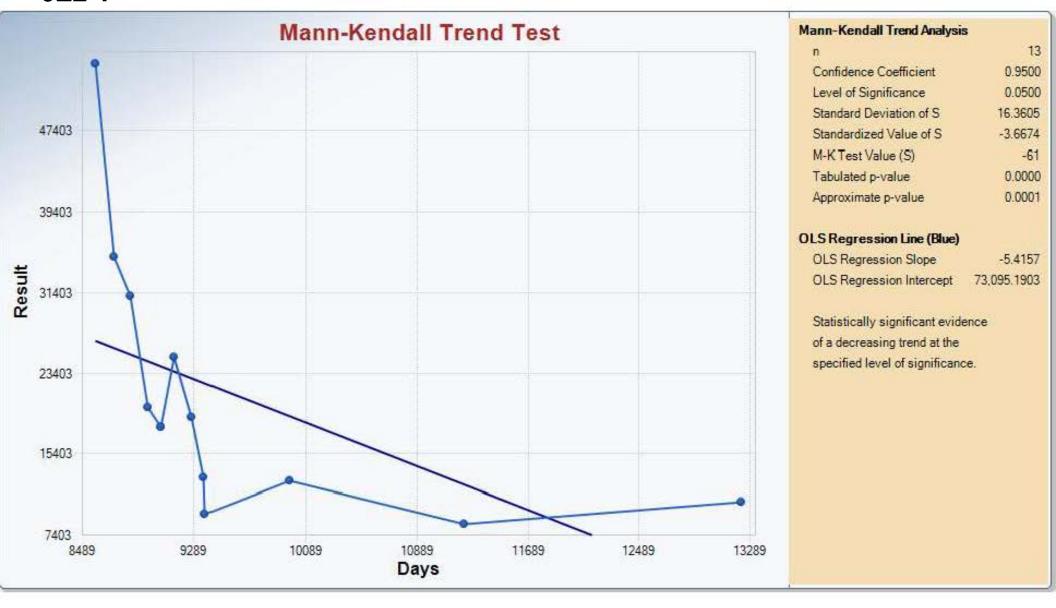
6D14-1



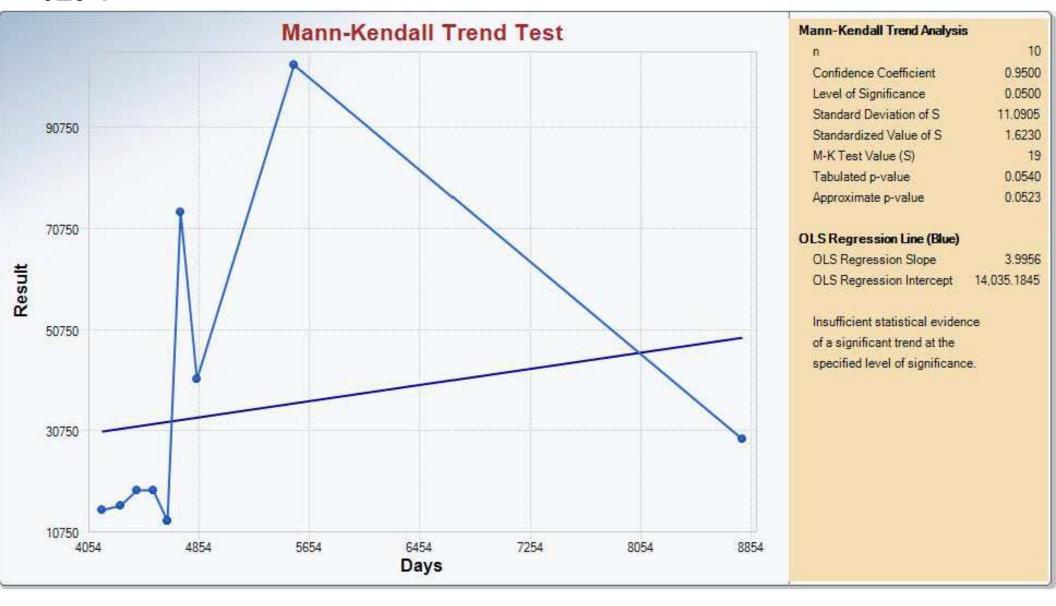
6E1-1



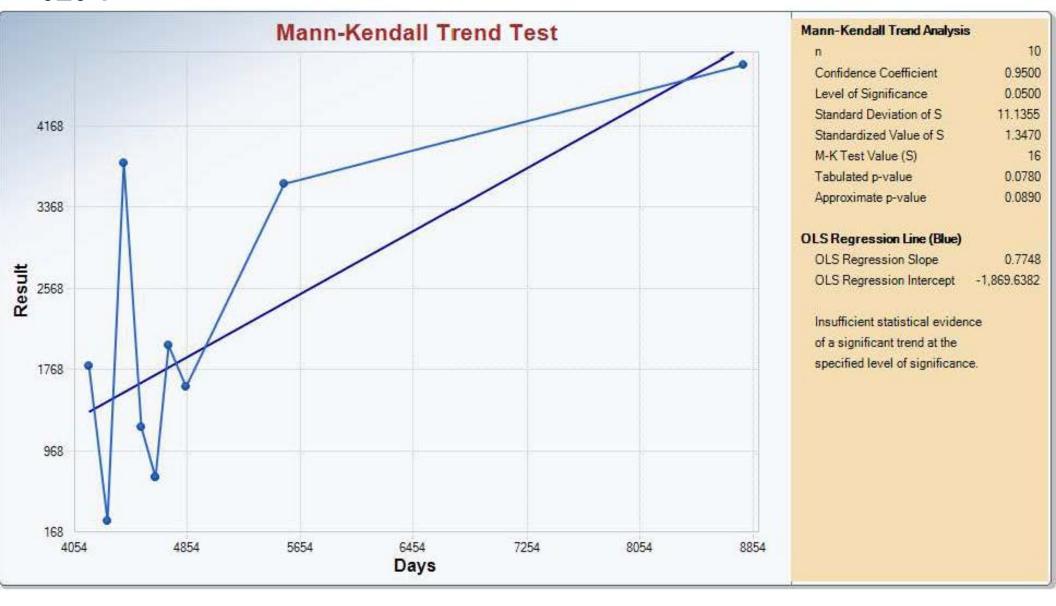
6E2-1



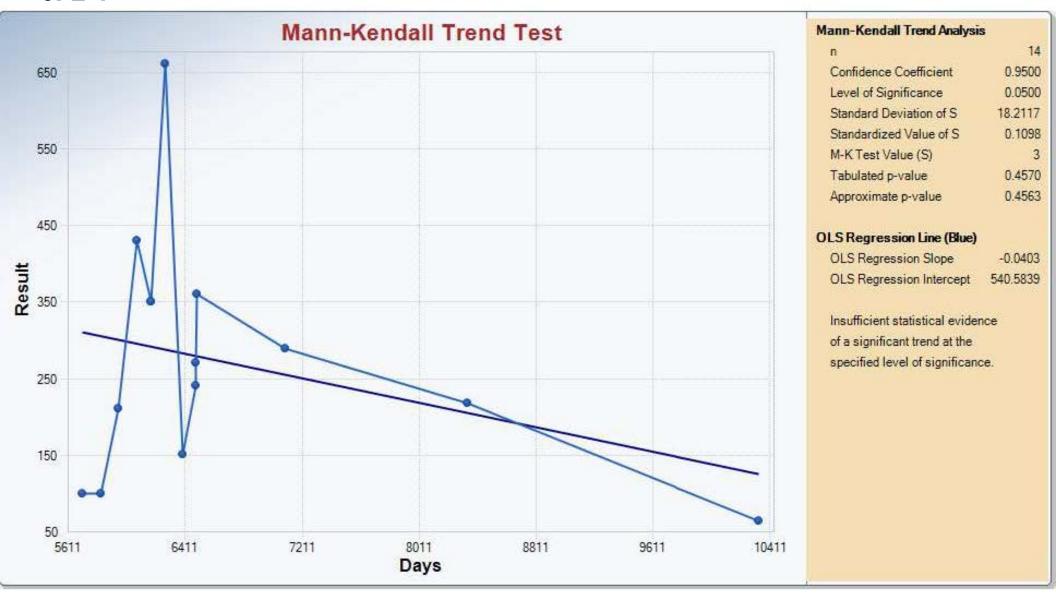
6E5-1



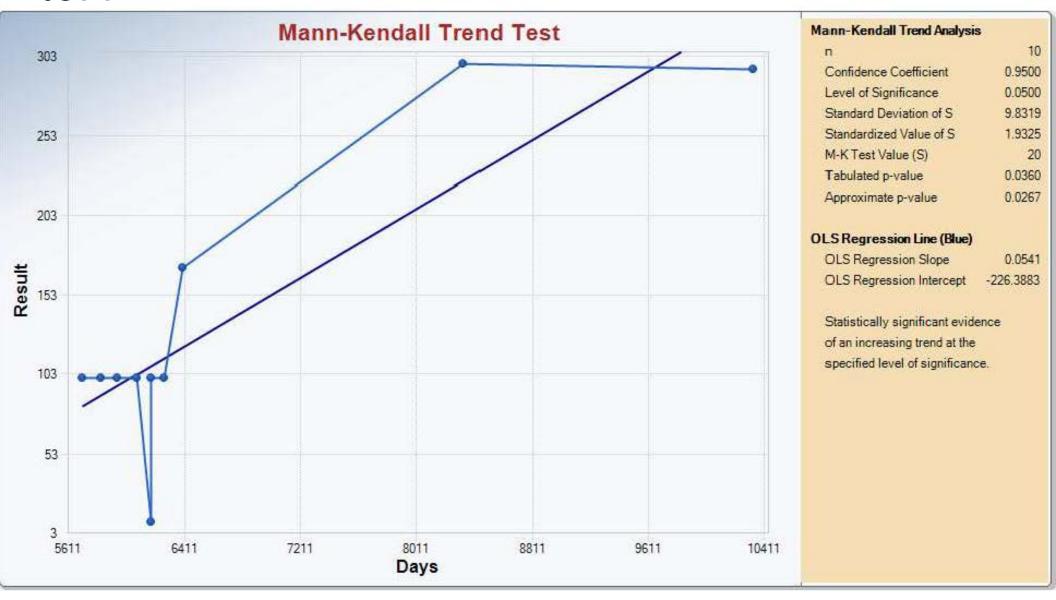
6E6-1



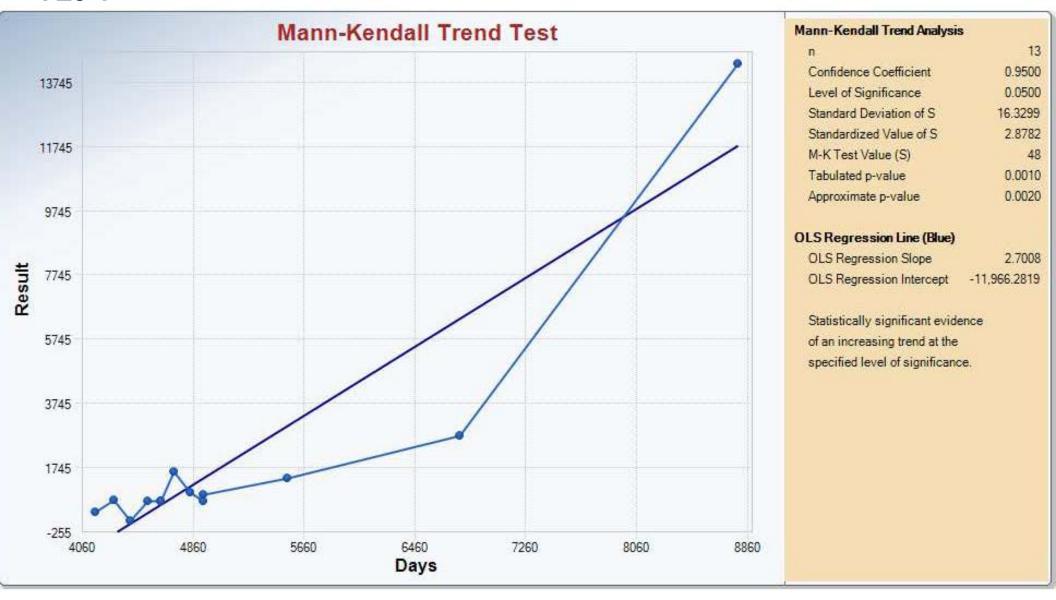
6F2-1



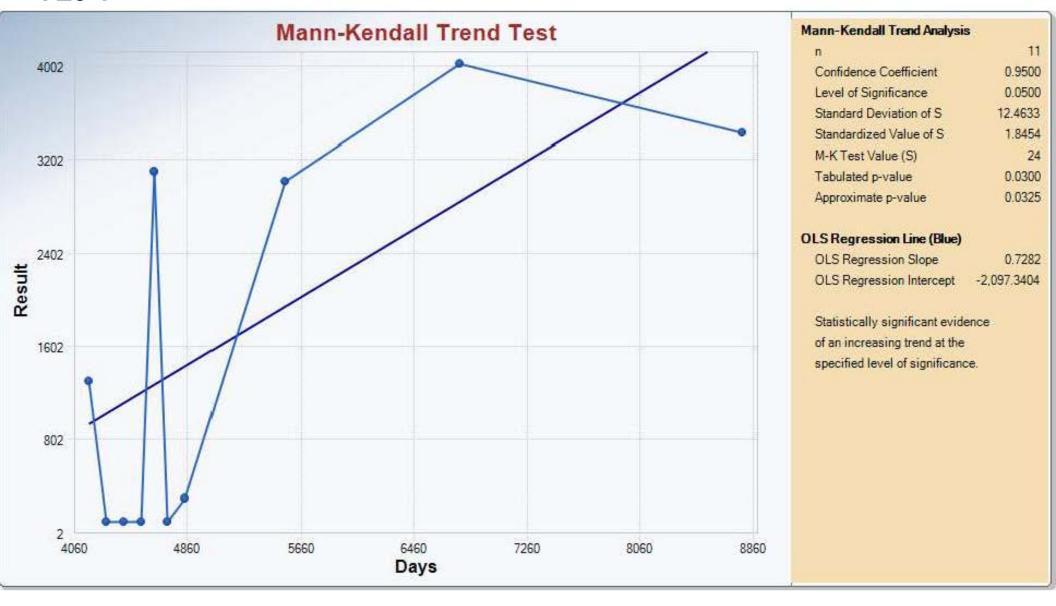
6G1-1



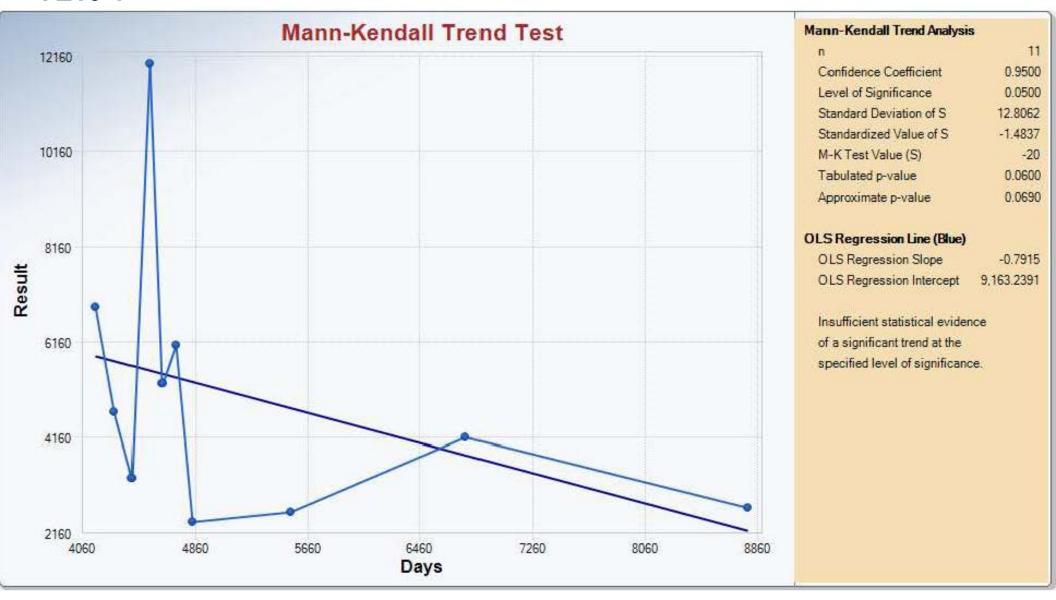
7E3-1



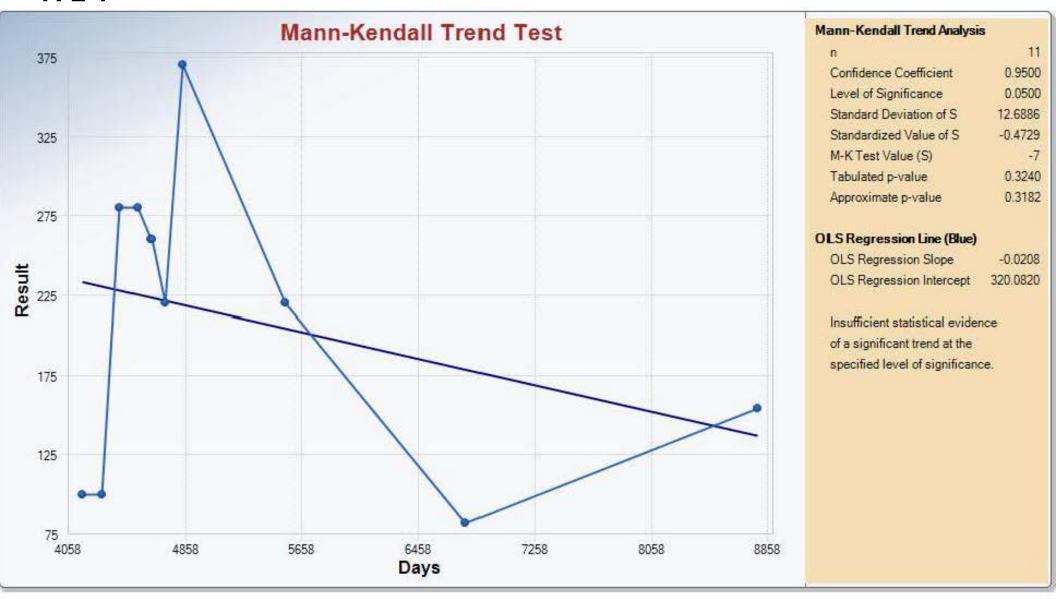
7E8-1



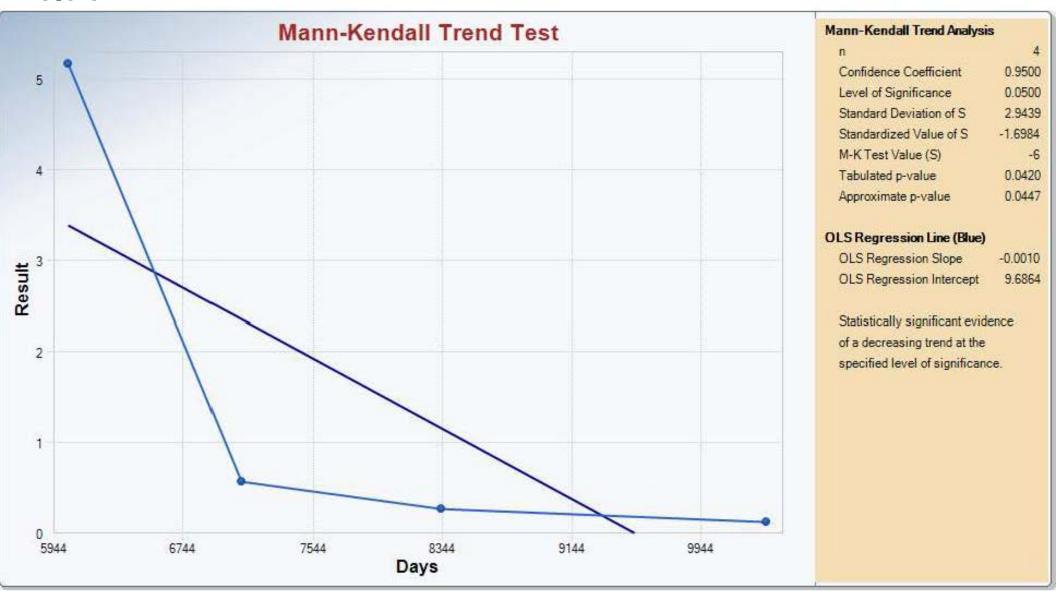
7E10-1



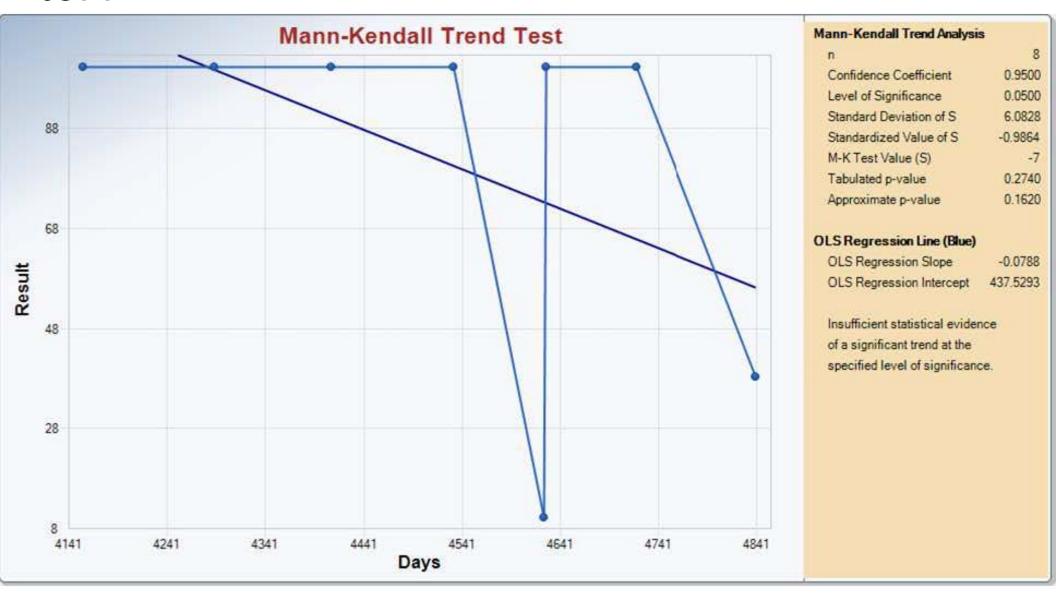
7F2-1



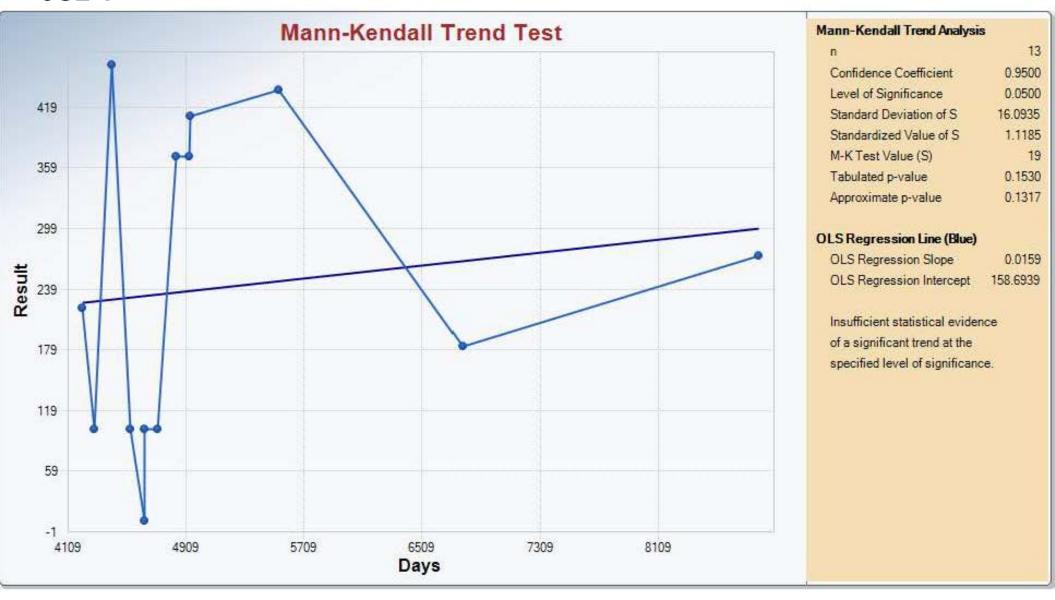
7I1-1



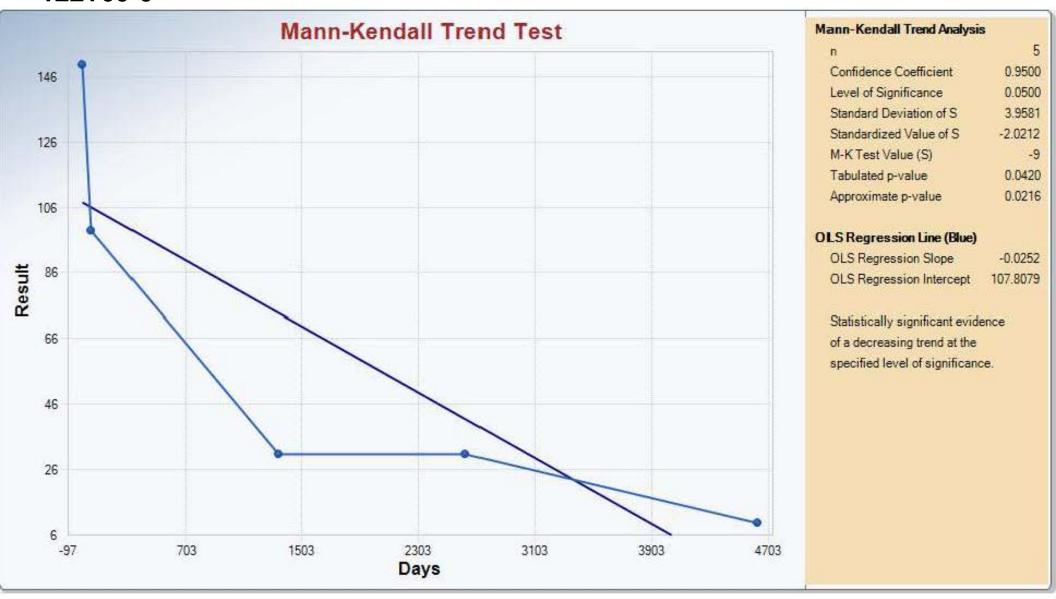
8G1-1



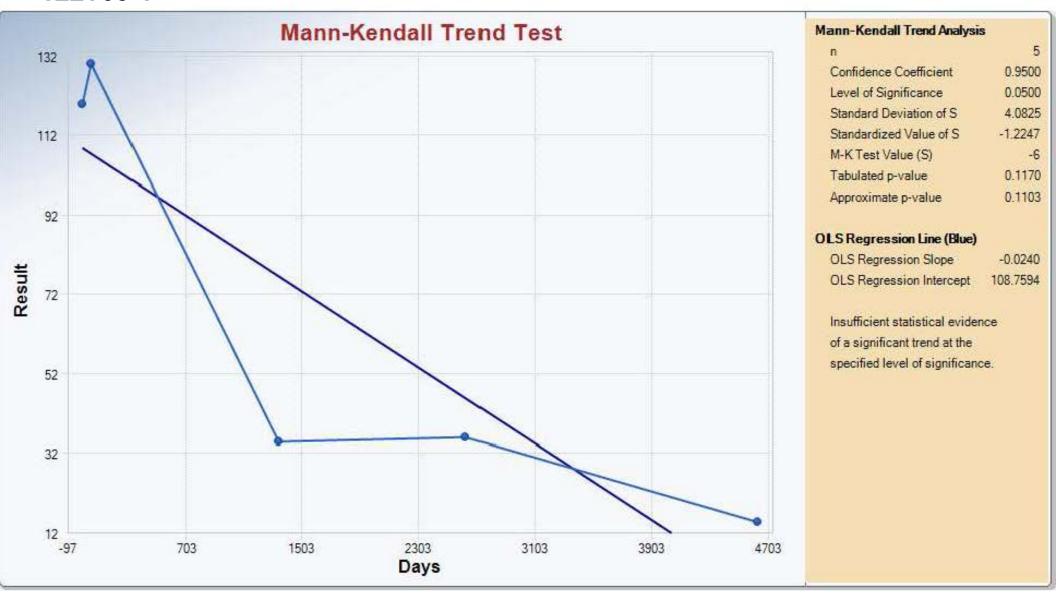
8G2-1

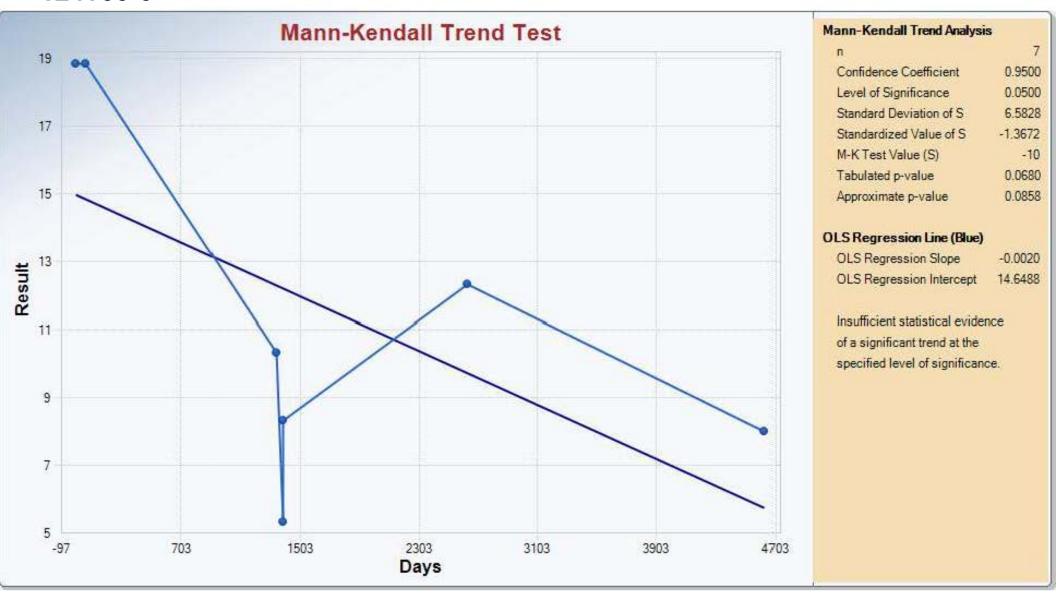


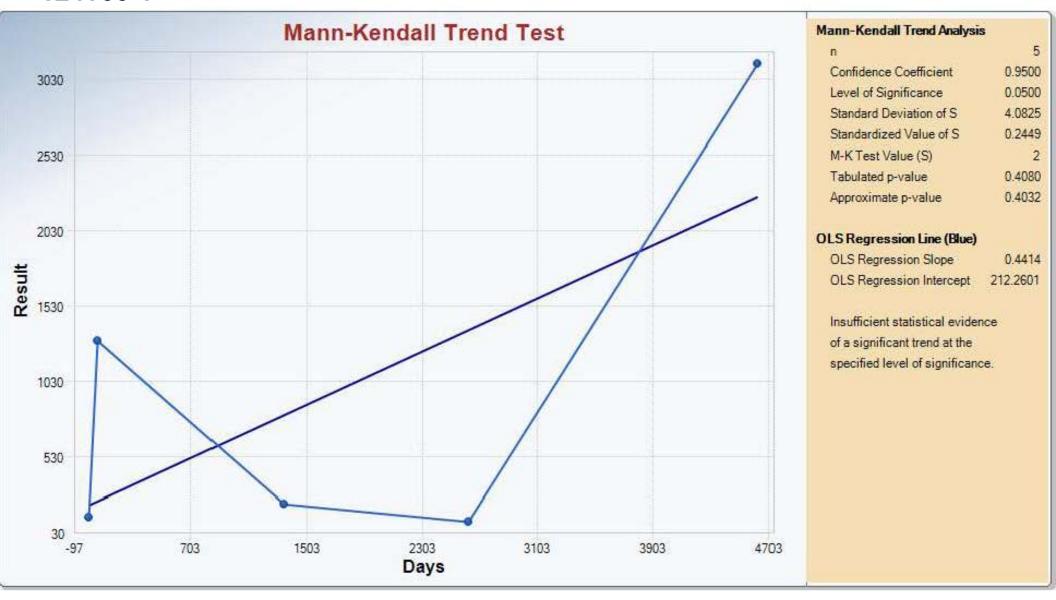
122+60-0



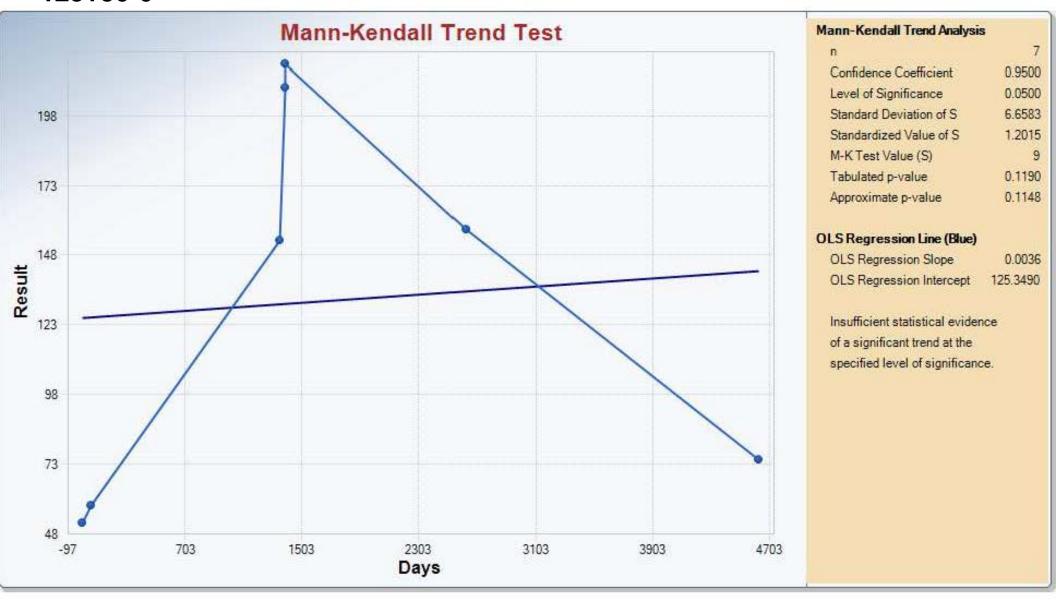
122+60-1



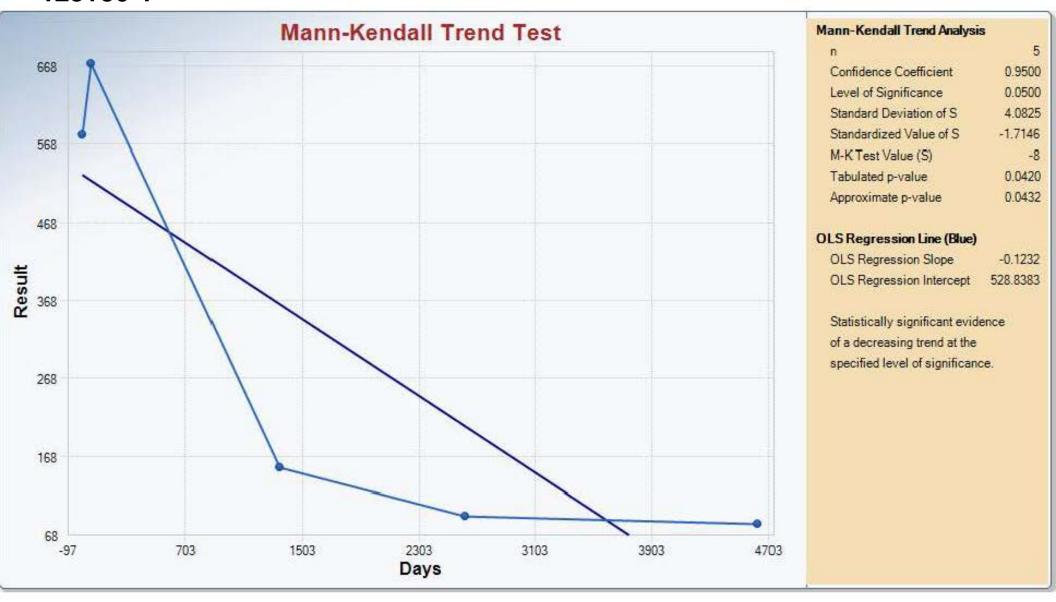




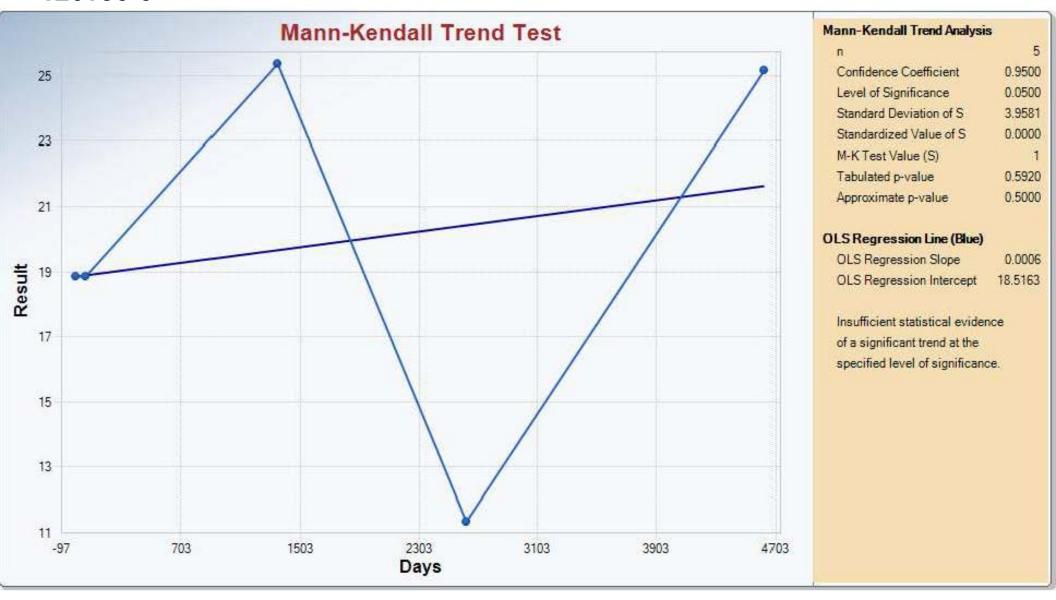
125+50-0



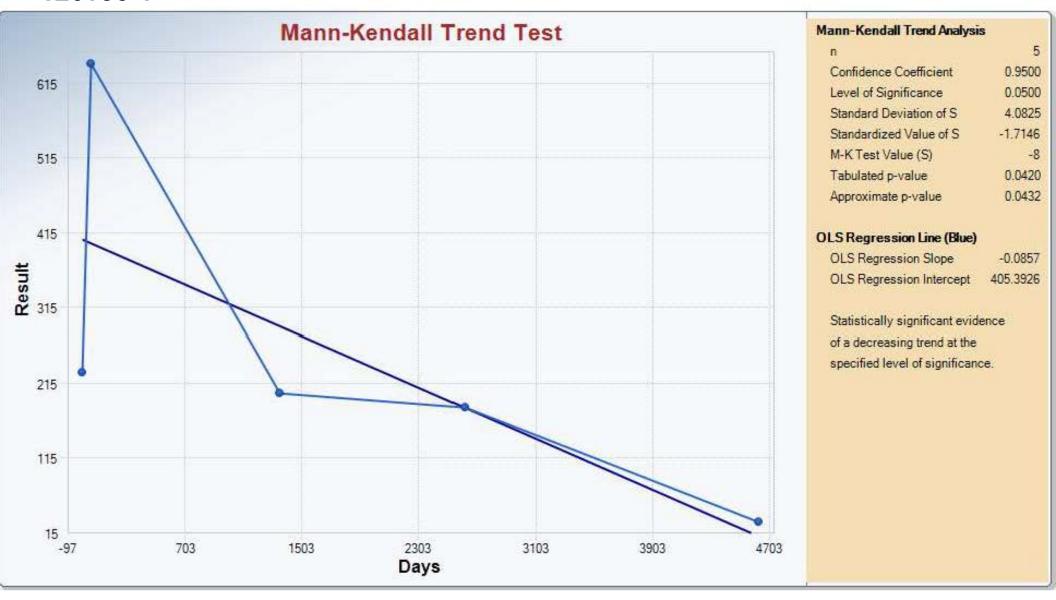
125+50-1



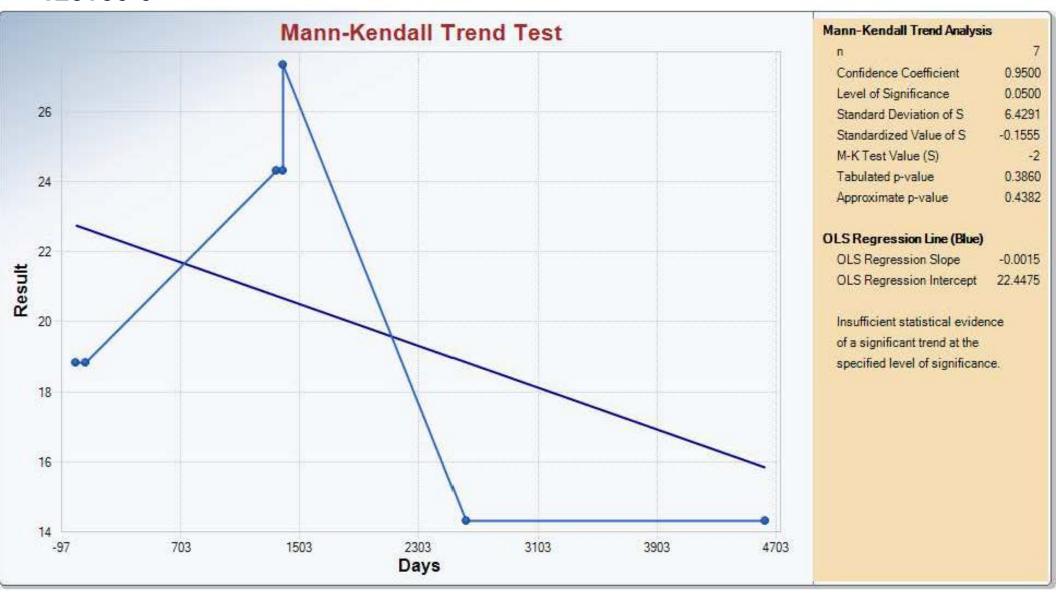
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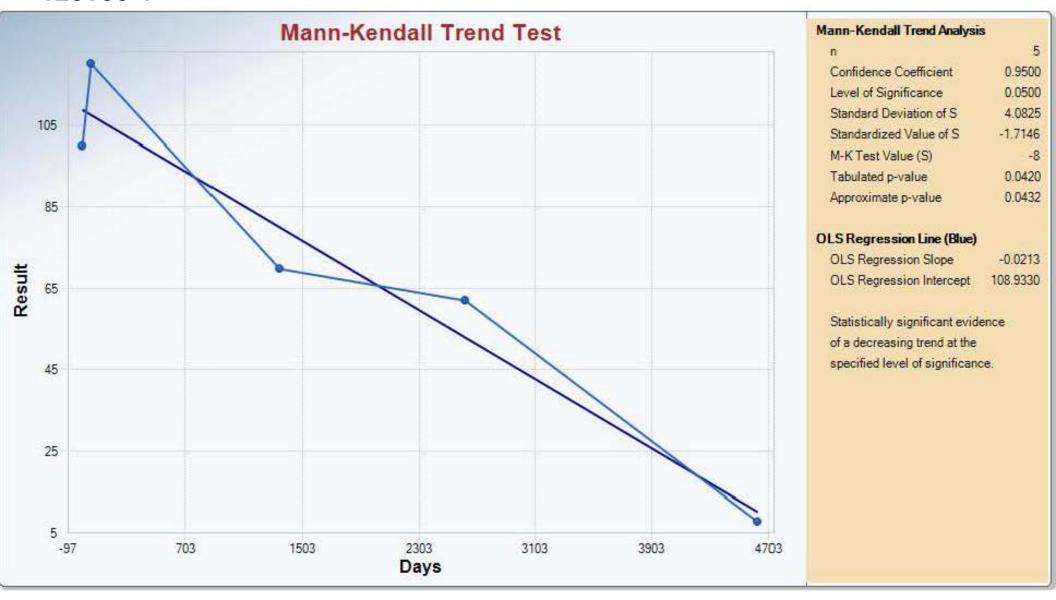
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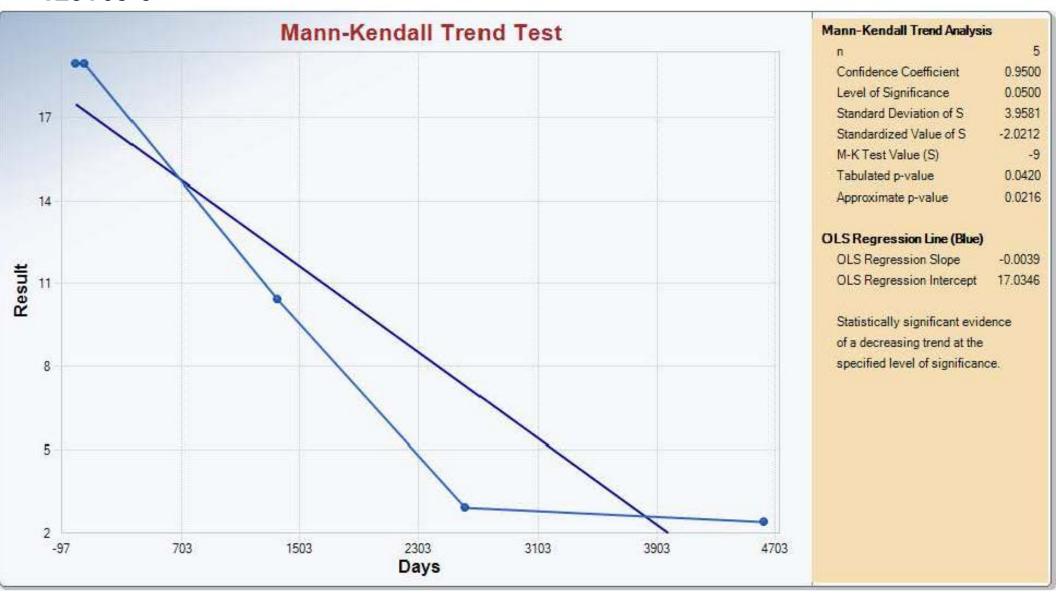
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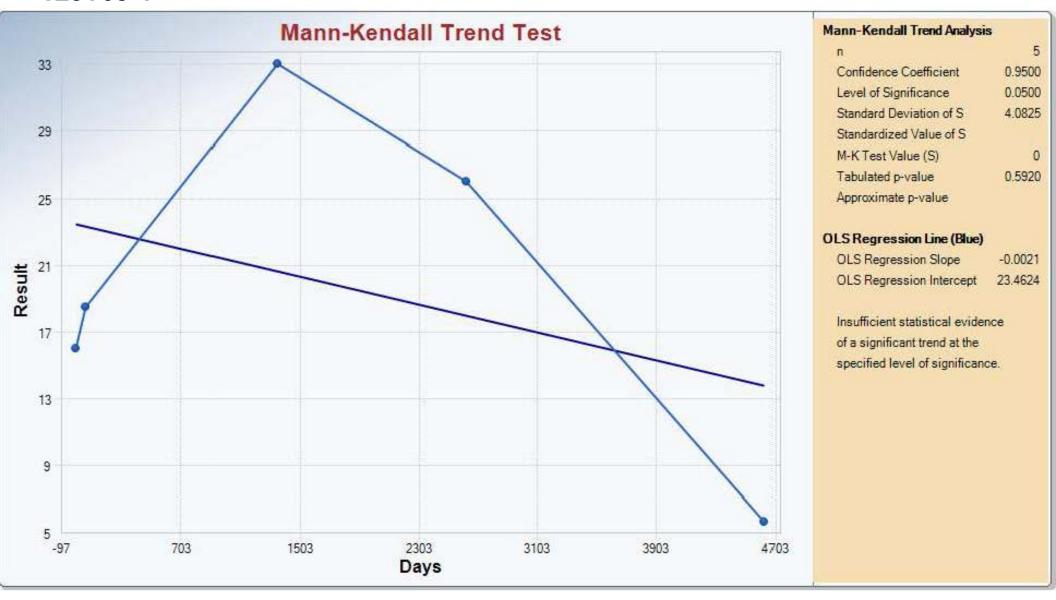
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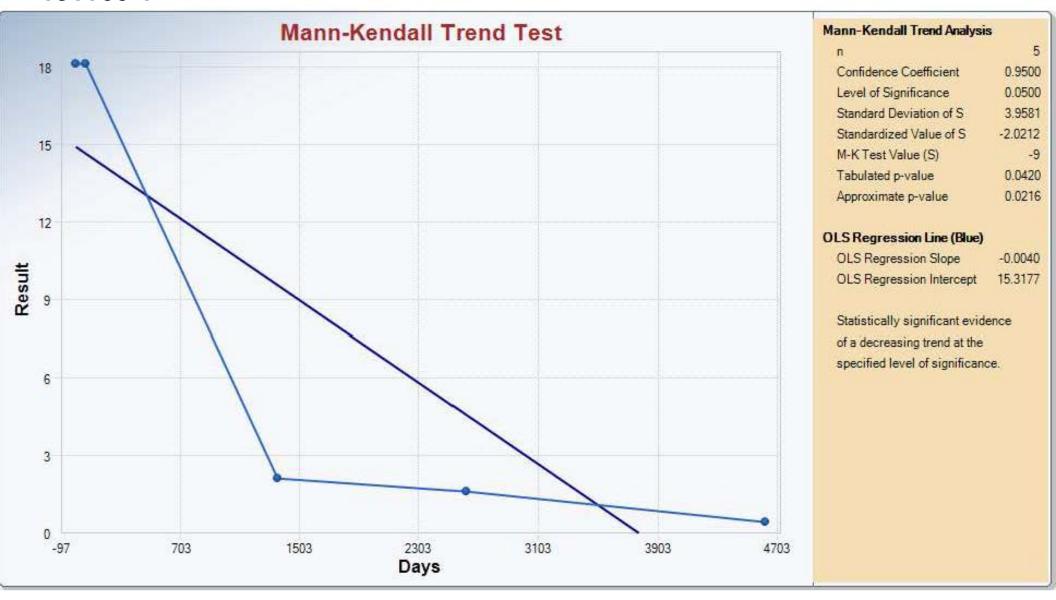


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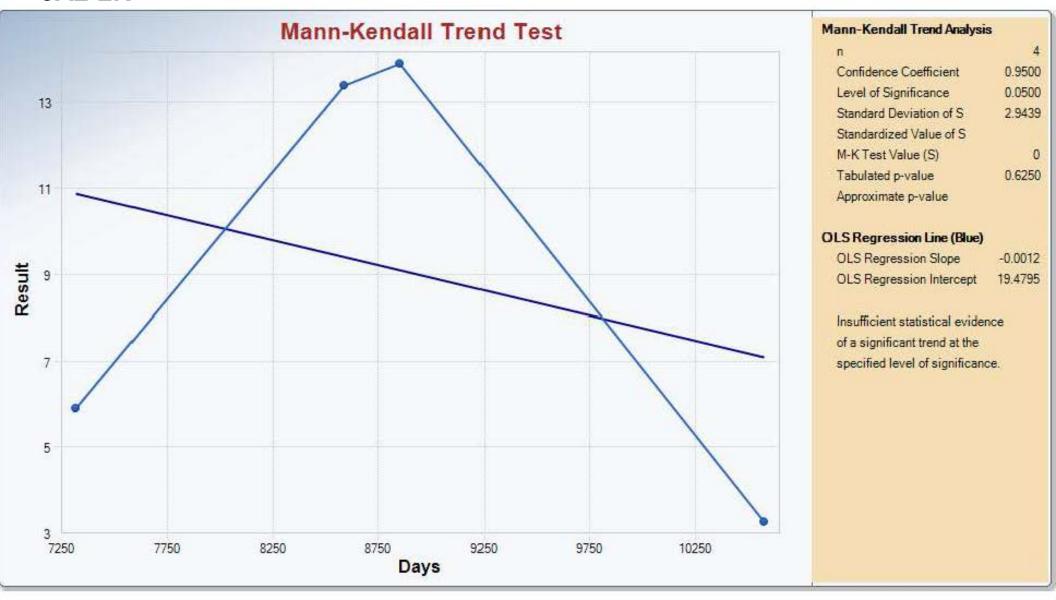
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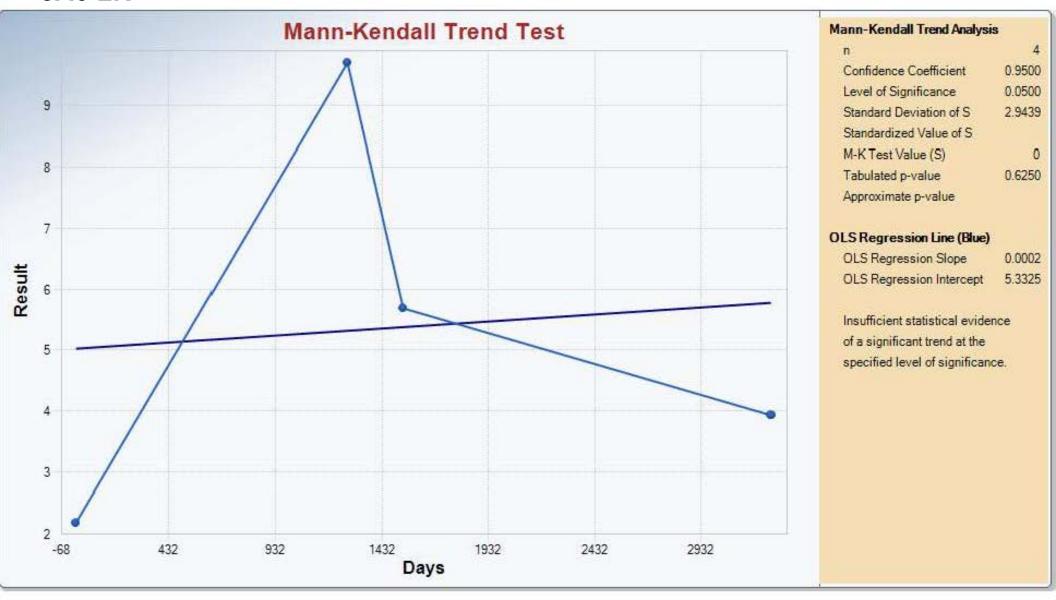


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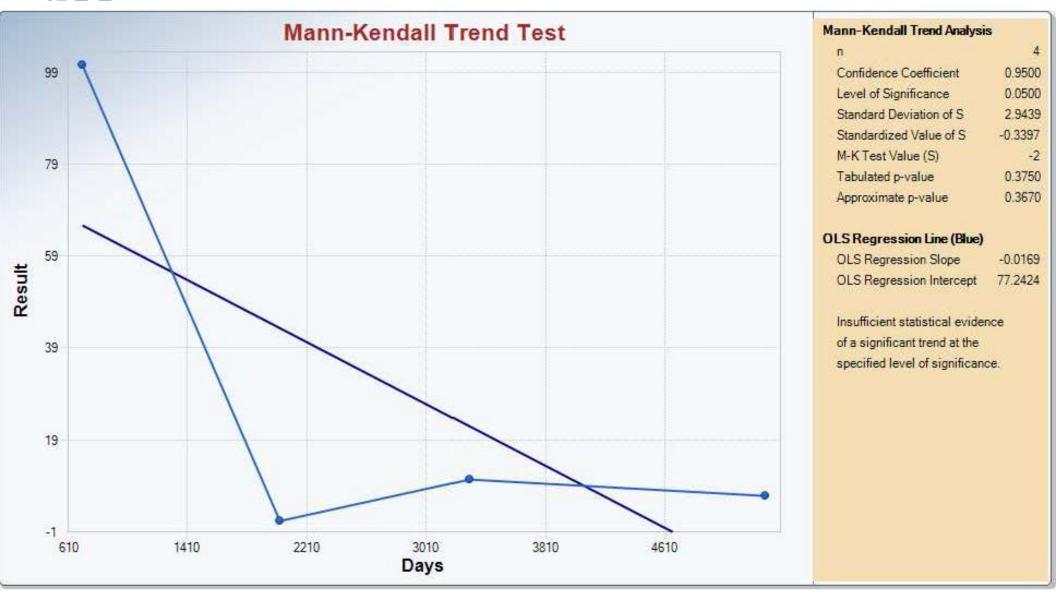
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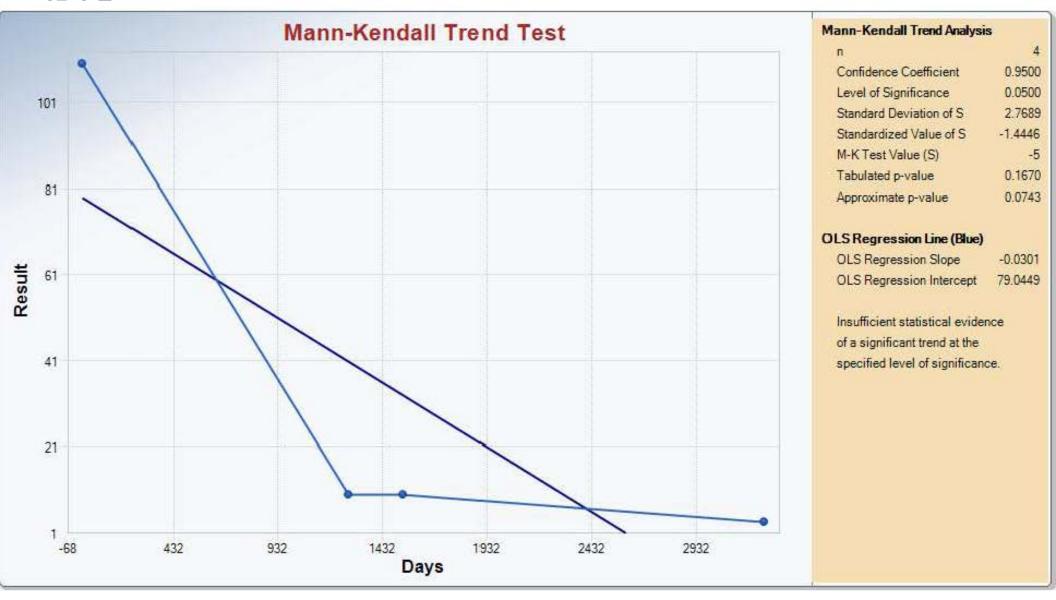
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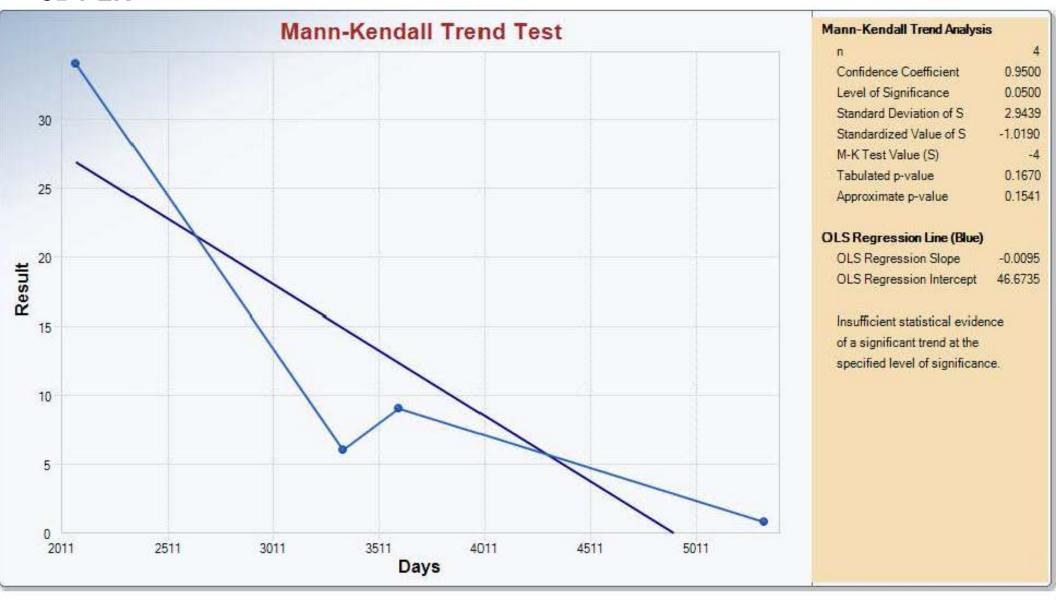
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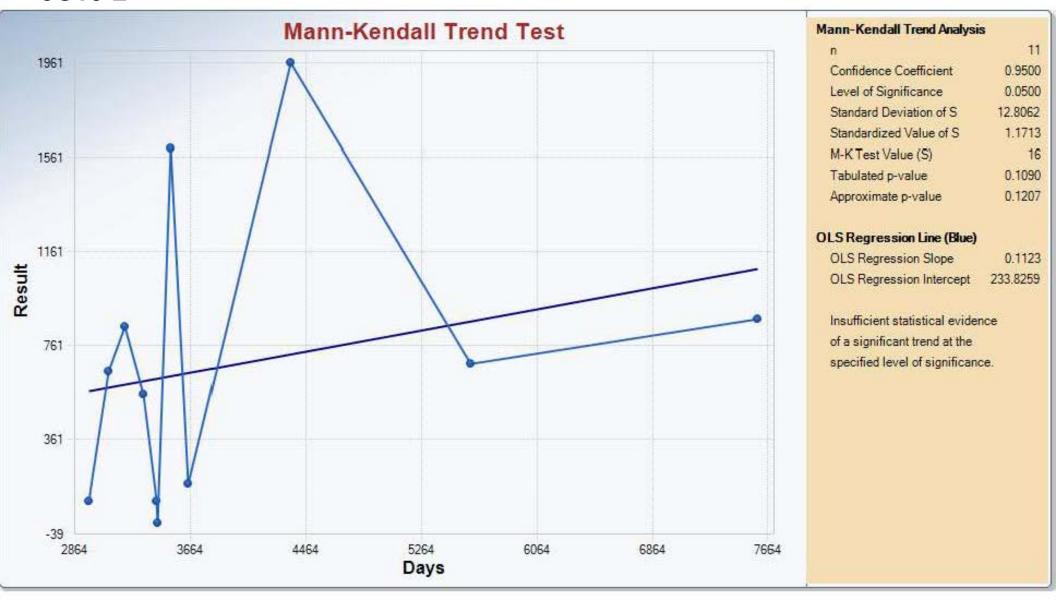
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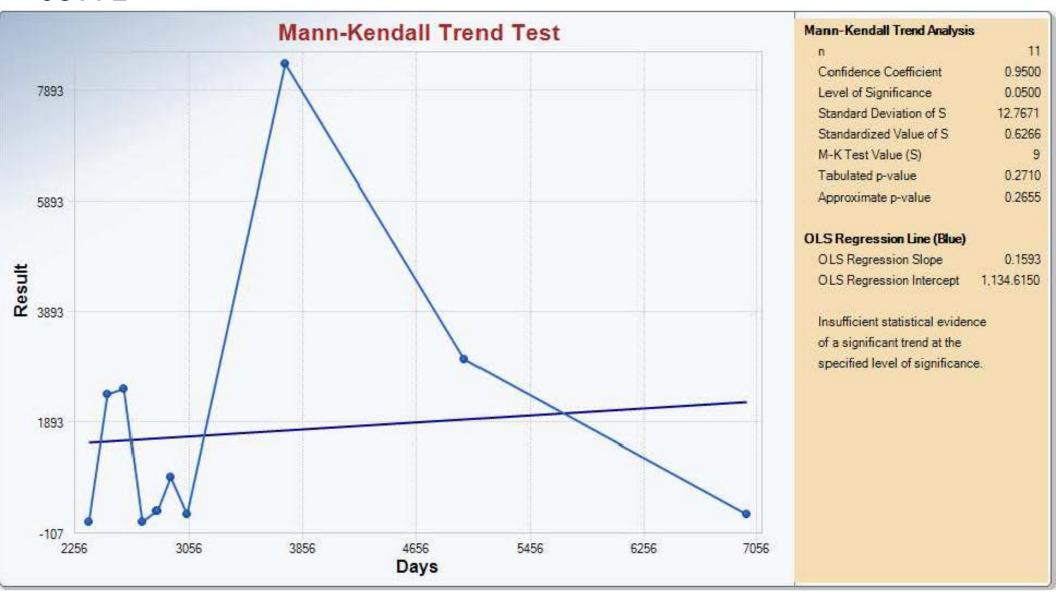
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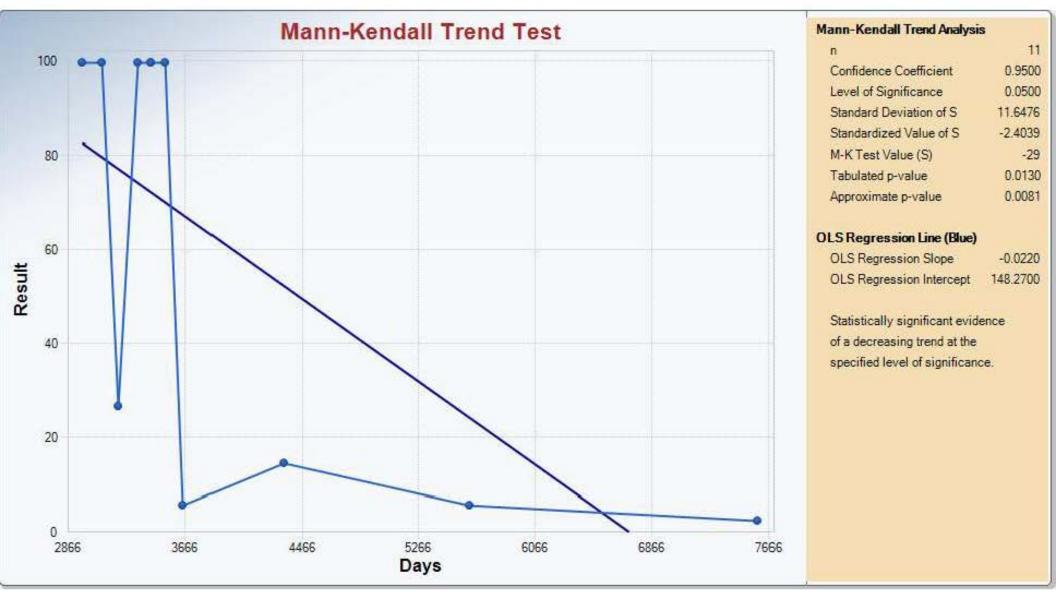
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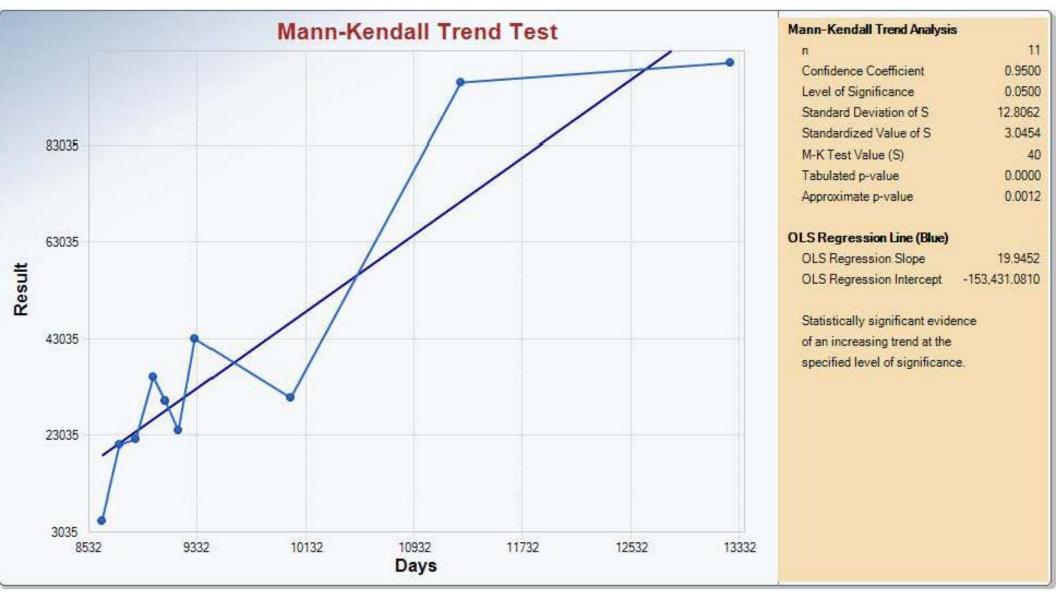
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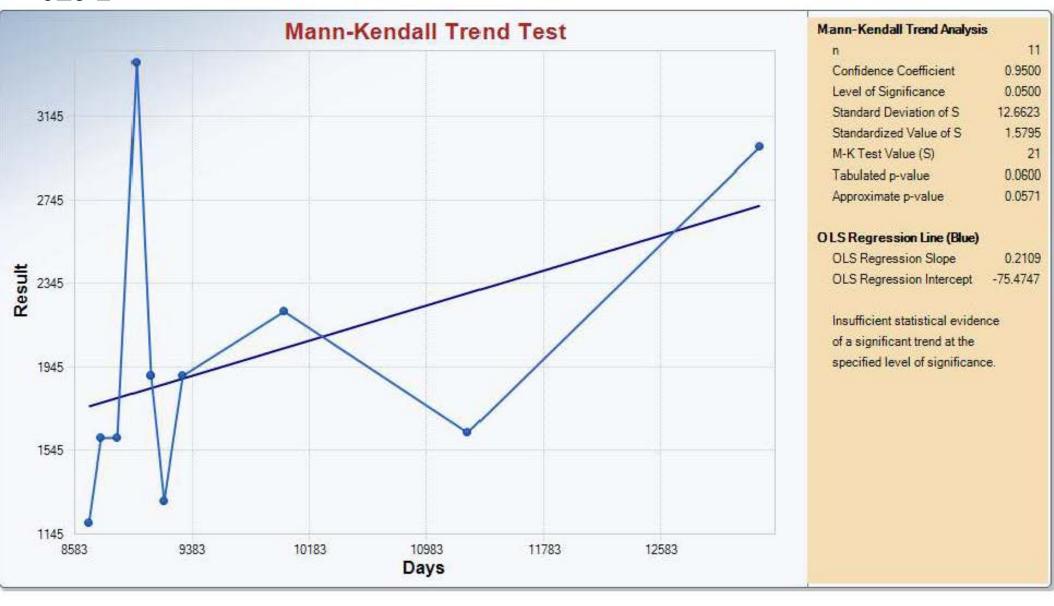
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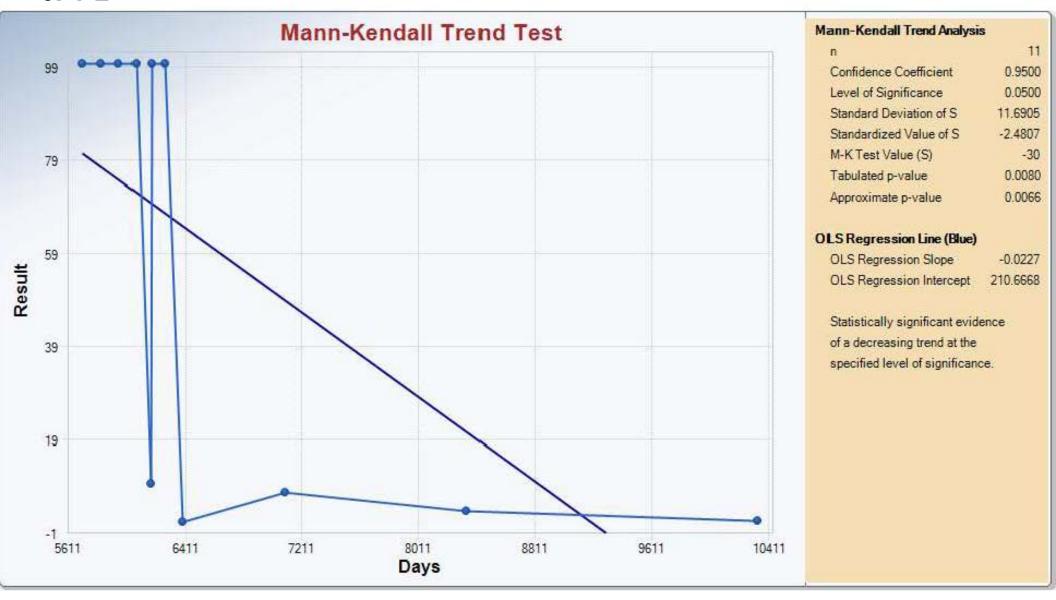
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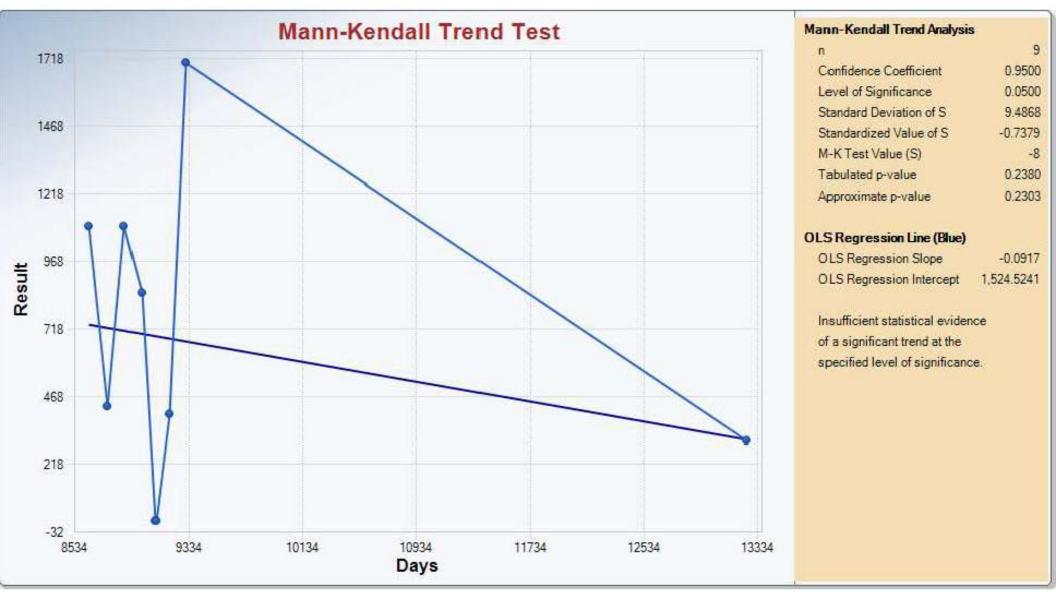
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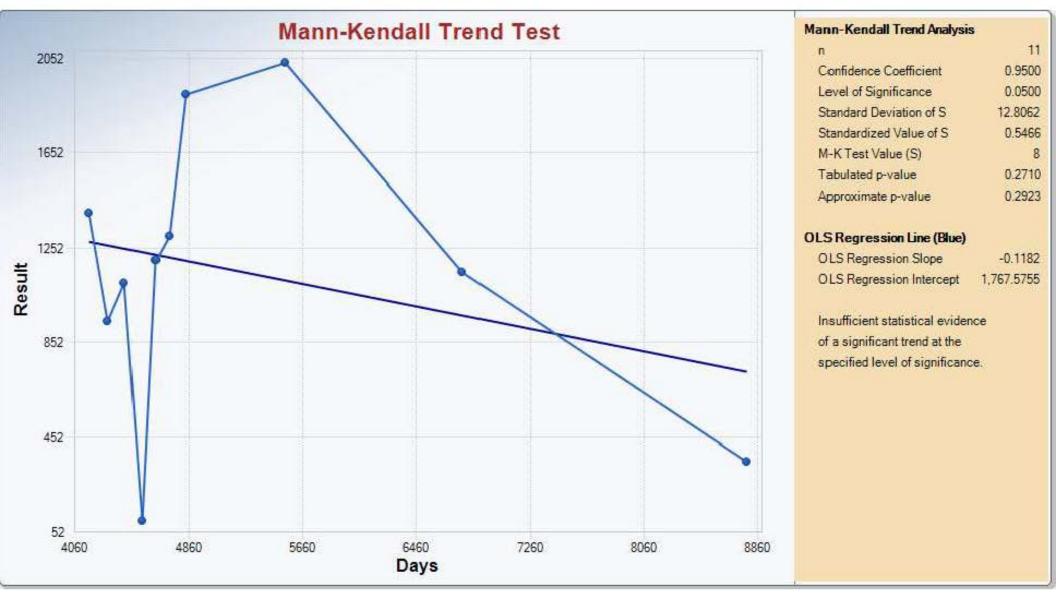
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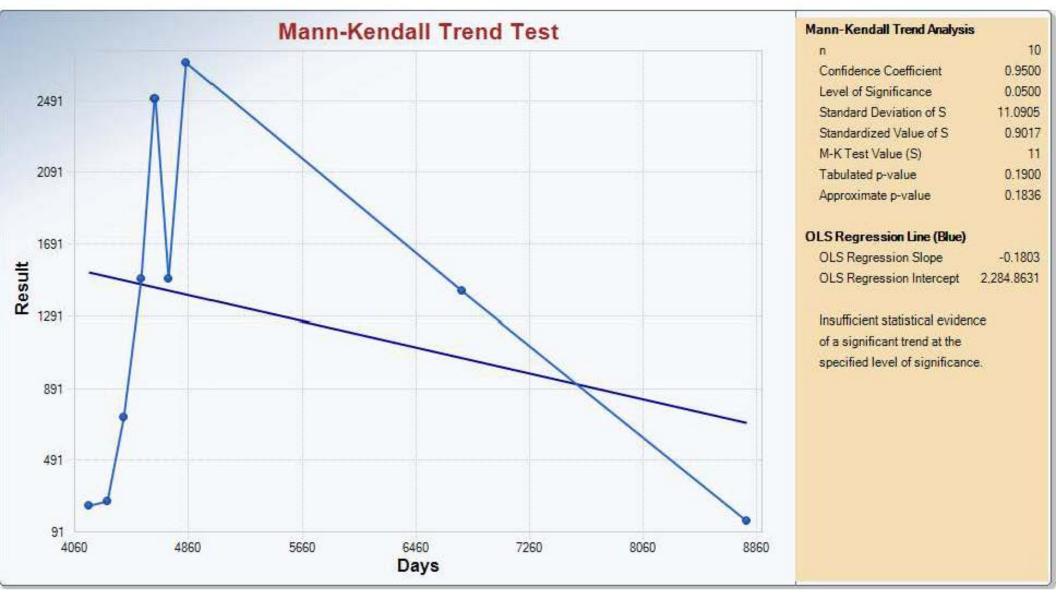
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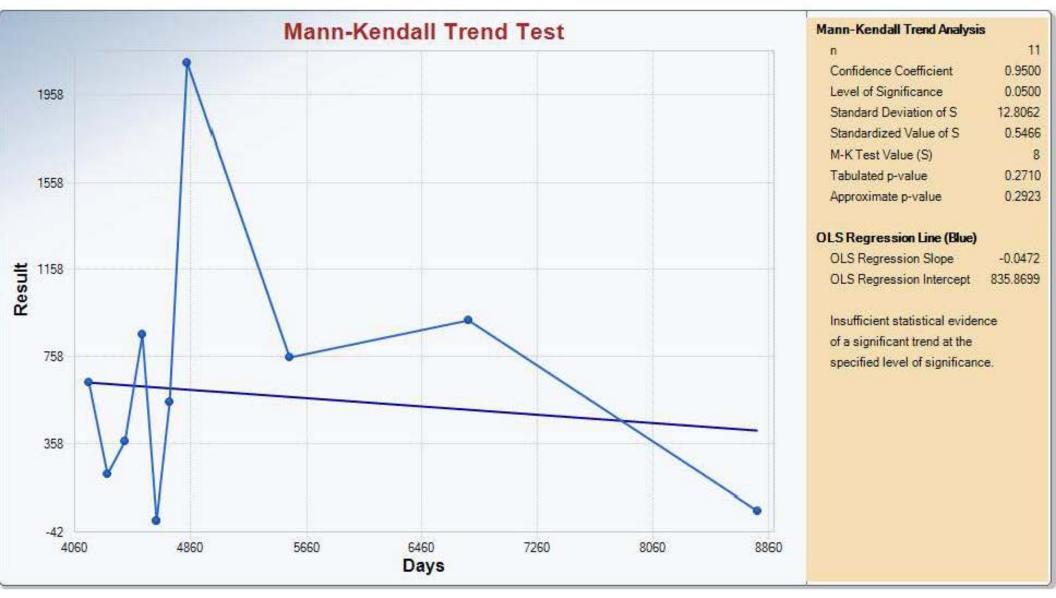
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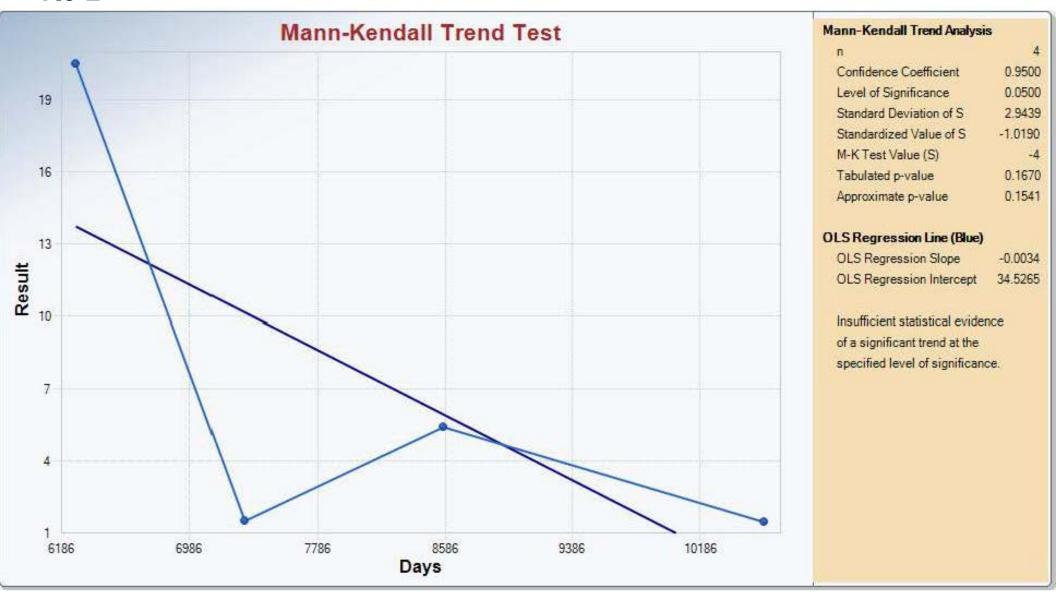
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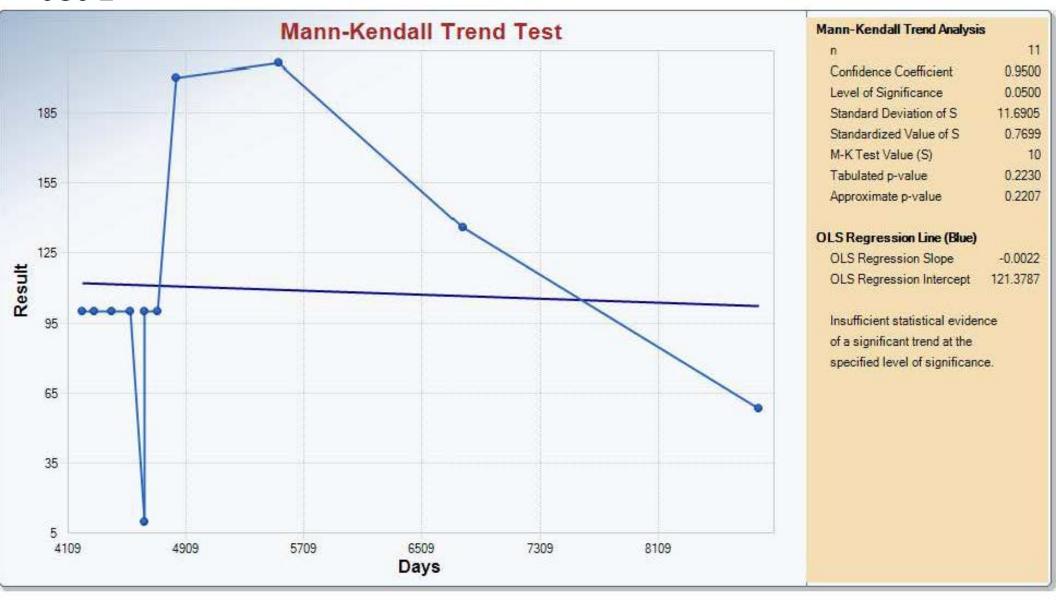
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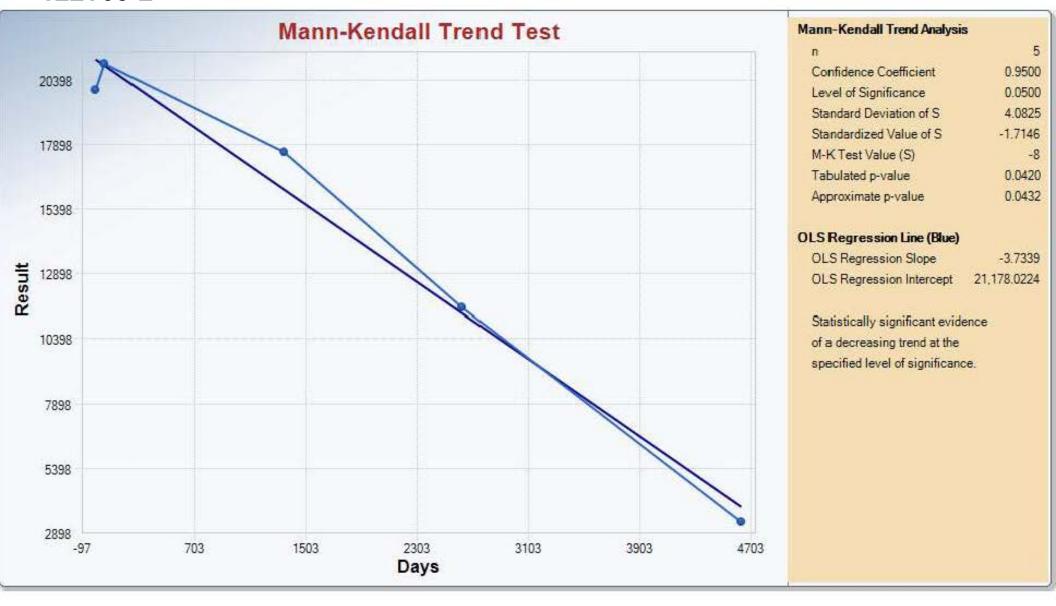
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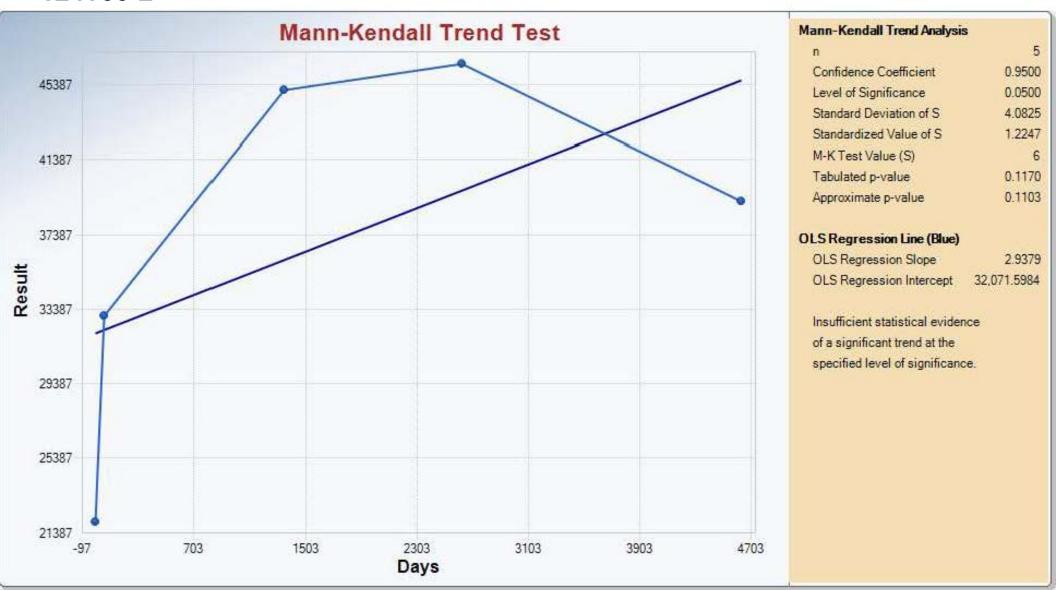


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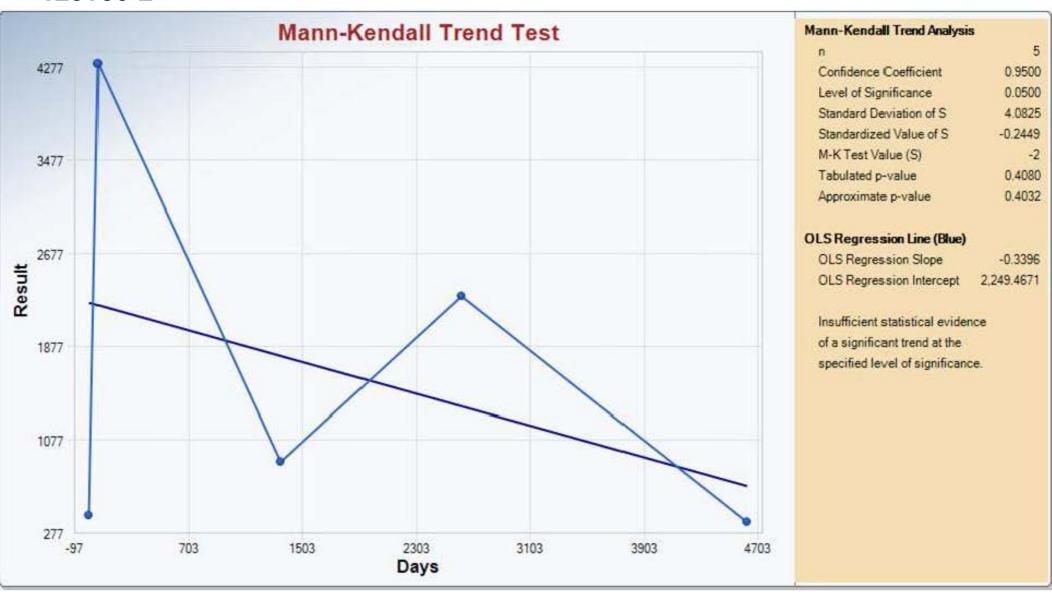


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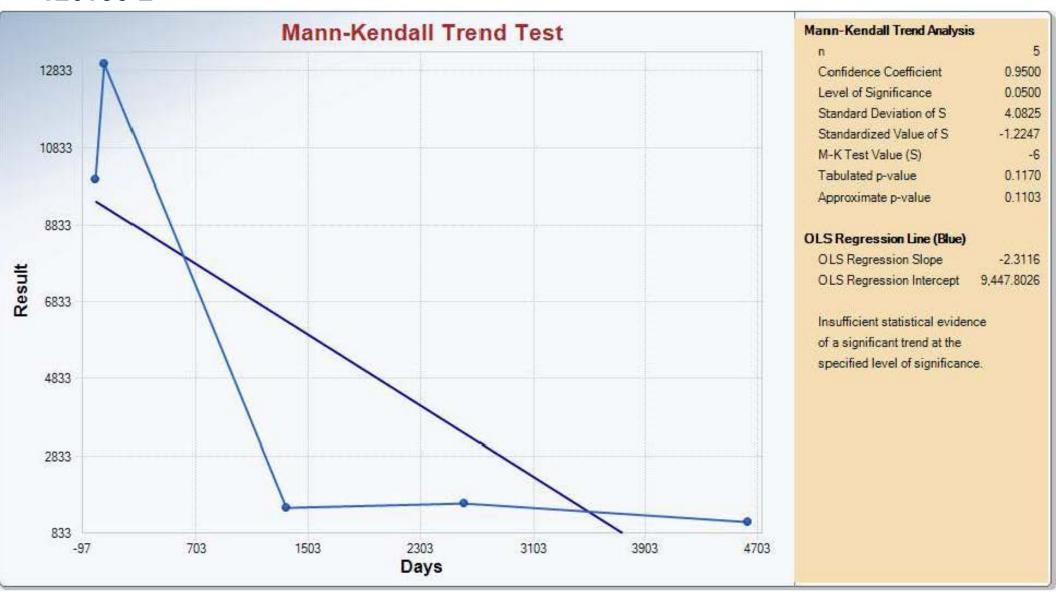




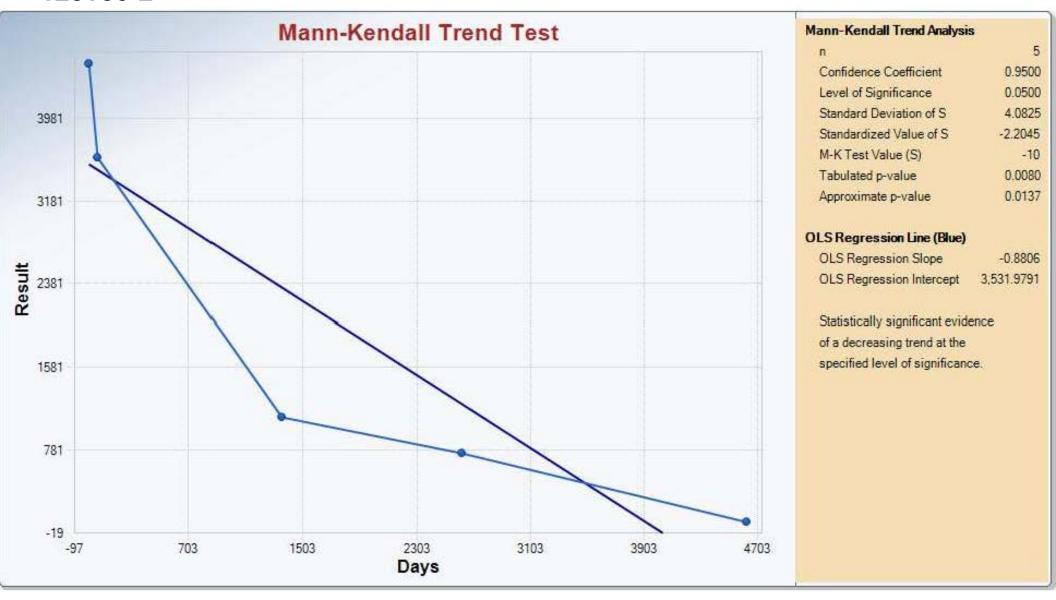
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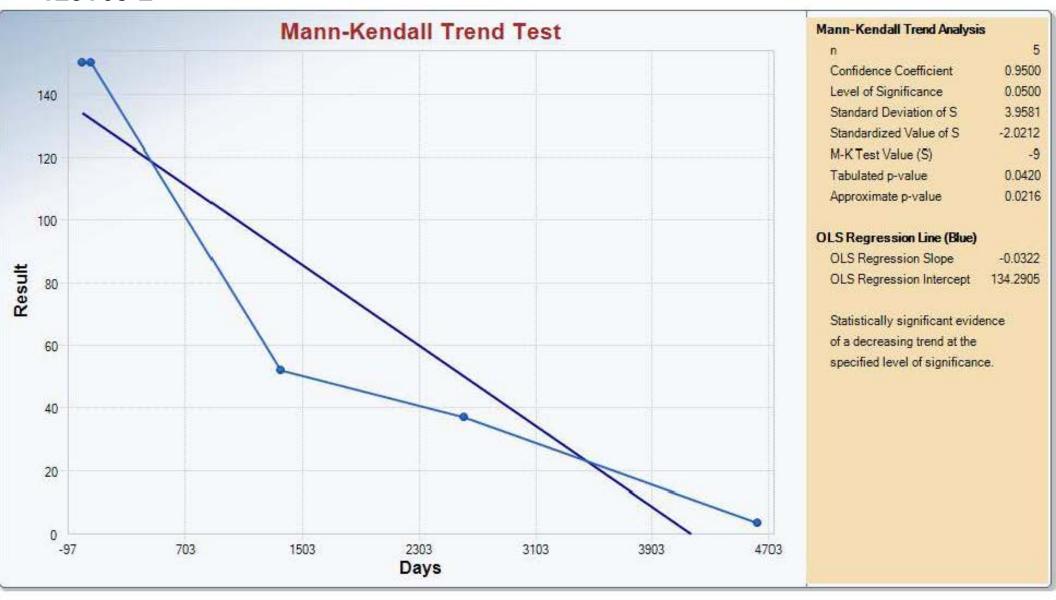
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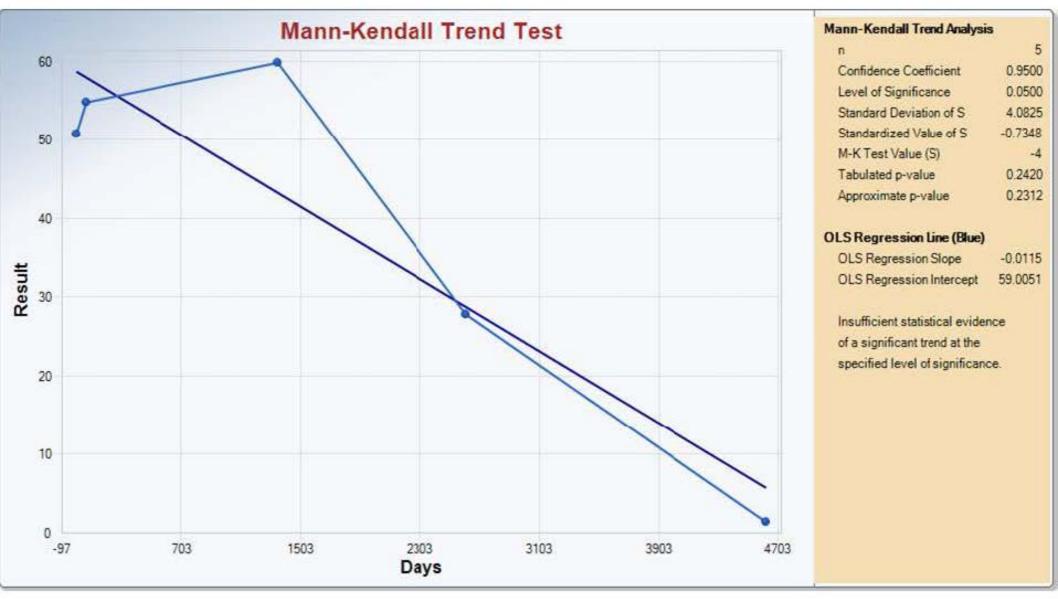
128+30-2



129+65-2



131+00-2



Appendix J

MEMORANDUM

To: PIONEER Technologies Corporation

5205 Corporate Ctr. Ct. SE, Ste. A

Olympia, WA 98503-5901

Attn: Troy Bussey Jr., P.E.

From: Joel Massmann, Ph.D., P.E.

Date: May 23, 2018

Subject: Former Arkema Manufacturing Site

Estimates of cut-off wall hydraulic conductivity

from continuous water level data

A. Overview

This memorandum summarizes estimates of equivalent hydraulic conductivity for the sheet pile wall on the Former Arkema Manufacturing Site in Tacoma, WA. The estimates are derived using continuous water level data collected in the vicinity of the sheet pile wall during 1990 and 2004. The equivalent hydraulic conductivity values describe the resistance to groundwater flow due to the sheet pile wall. These hydraulic conductivity values will be incorporated into a revised groundwater flow model currently under development.

The sheet pile wall is an important component of the groundwater flow system and has significant impacts on contaminant transport at the site. As part of our ongoing work in updating the 2004 three-dimensional groundwater flow model, we are both evaluating new data collected during recent field efforts and re-evaluating pre-existing data that had been collected during previous field efforts. This memorandum describes a re-evaluation of previously-collected continuous water level data using analytical methods not used in earlier studies.

Estimates of equivalent hydraulic conductivity have been developed using two general approaches. The first approach, which uses data collected in 1990, compares tidal fluctuations measured in a common set of wells before and after the sheet pile wall was

installed. The second approach, which uses data collected in 2004, compares tidal fluctuations measured on the water-ward and land-ward sides of the wall.

The estimated wall hydraulic conductivity based on the evaluations described below is approximately $8x10^{-4}$ ft/day ($2.8x10^{-7}$ cm/s). The previous modeling work (PGG, 2004) had assumed an effectively impermeable wall with a hydraulic conductivity of $1x10^{-20}$ ft/day. The estimated horizontal leakage through the sheet pile wall derived using the current three-dimensional groundwater flow model with the updated hydraulic conductivity value is approximately 1.8 gallons per minute for the intermediate aquifer and 1.4 gallons per minute for the shallow aquifer. These estimates do not include vertical flow along the wall or flow around the edges of the wall.

B. Using Tidal Fluctuations to Estimate Hydraulic Properties

Groundwater elevations in wells adjacent to tidal boundaries mimic tidal fluctuations. The amplitudes of the water levels in wells are dampened relative to the amplitude of the tides and there is a time lag between when peak tide levels occur and when peak levels occur in wells. The degree of dampening and the magnitude of the time lags can be used to estimate hydraulic diffusivity of the aquifer (e.g., Ferris, 1951; Erskine, 1991). The hydraulic diffusivity can in turn be used to estimate aquifer hydraulic conductivity.

The installation of the sheet pile wall increases the degree of dampening and the time lag observed in monitoring wells located on the land-ward side of the wall. These changes can be used to calculate the change in hydraulic diffusivity that results from the wall. The effective hydraulic conductivity of the sheet pile wall can then calculated from the change in hydraulic diffusivity.

C. Estimates based on 1990 water levels

Continuous water level data collected before and after installation of the sheet pile wall are described in ICF Technology (1991). The pre-wall data were collected between September 17-19, 1990 and the post-wall data were collected between November 14-16, 1990. The wells used from the 1990 study are listed in Table 1 and are shown on Figure 1.

¹ Hydraulic diffusivity is defined as the ratio of the hydraulic conductivity, K, to the specific storage, S_s. The equations used to estimate hydraulic diffusivity from time lag and dampening ratio data are described in Ferris (1951). The details of this analysis are beyond the scope of this memorandum but can be provided upon request.

Well	Newer name	Pre-wall data?	Post-wall data?	Aquifer	
I-15S	5C4-2	Yes	No	Intermediate	
K-32S	6D2-2	Yes	Yes	Intermediate	
I-13S	6D7-2	Yes	Yes	Intermediate	
K-11S	6D10-2	Yes	Yes	Intermediate	
K-33S	7D1-2	Yes	Yes	Intermediate	

Table 1. Wells used from the 1990 water level study

Table 2 below summarizes data and calculations used to estimate the pre-wall hydraulic conductivity of the intermediate aquifer near the Hylebos Waterway.² The estimates were calculated using the data collected between September 17 and 19, 1990. The estimated hydraulic conductivity assuming a specific storage value of 1×10^{-4} ft⁻¹ ranges from 1 ft/day to 46 ft/day, with a median value of 41 ft/day.³ This value is within the range of values reported in previous studies (e.g., Boateng and Massmann, 1999; PGG, 2004).

Table 2 also lists the soil type reported for screened areas of the wells, based on the well logs. All well screens are located in poorly-graded sands, except for well I-13S, which is screened in an area with interbedded sand and clay. The reason for the relatively low hydraulic conductivity at well K-32S is not apparent based on information included in the well log.

Table 3 below summarizes data and calculations used to estimate the post-wall hydraulic conductivity. These estimates were calculated using the data collected between November 14 and 16, 1990. The estimated hydraulic conductivity assuming a specific storage value of $1x10^{-4}$ ft⁻¹ ranges from 0.32 to 1.65 ft/day, with a median value of 0.77 ft/day.

Table 3 also lists the reduction in hydraulic conductivity that resulted from the sheet pile wall. The wall hydraulic conductivity was calculated from these reductions based on the assumption that the hydraulic conductivity of the native materials was not affected by wall installation.⁴ The calculated wall hydraulic conductivity ranges from $2x10^{-4}$ ft/day to $9x10^{-4}$ ft/day, with a median value of $4.2x10^{-4}$ ft/day.

² The water level data were used in the ICF study to qualitatively evaluate the effectiveness of the sheet pile wall. The data were not used to quantitatively estimate the hydraulic conductivity of the wall. The values listed in Table 2 are from the current analysis.

³ A specific storage value of 1x10⁻⁴ ft⁻¹ is within the range of typical values and is equal to the median specific storage calculated using a hydraulic conductivity of 40 ft/day, as outlined in Table 2.

⁴ The thickness of the wall was assigned a value of 315 mils or 0.026 feet.

D. Estimates based on 2004 water levels

Continuous water level data were collected between January 16 and February 18, 2004 as part of the Bank Focused Feasibility Study (PGG, 2004).⁵ These data were collected from pairs of wells located on the water-ward and land-ward sides of the sheet pile wall. The wells from the 2004 study are listed in Table 4 and their locations are shown on Figure 1.

Table 4 below summarizes data and calculations used to estimate the hydraulic conductivity of the wall. The reduction in hydraulic diffusivity (K/S_s) resulting from the wall is calculated by comparing values derived using data from the water-ward side of the wall with values derived using data from the land-ward side of the wall. It is assumed that the wall has a negligible effect on specific storage so that the reduction in hydraulic diffusivity is equal to the reduction in hydraulic conductivity. The average hydraulic conductivity with the wall in place is calculated with the following expression:

$$K = (1-\% \text{ Reduction})*40 \text{ ft/day}$$

The value of 40 ft/day is the estimated hydraulic conductivity of the native materials prior to wall installation, as described in the previous section. The wall hydraulic conductivity was calculated from these average hydraulic conductivity values using a wall thickness of 315 mills or 0.026 feet. The results are listed in Table 4. The calculated wall hydraulic conductivity ranges from $9x10^{-5}$ ft/day to $2x10^{-3}$ ft/day, with a median value of $1.2x10^{-3}$ ft/day.

E. Comparison of values from 1990 and 2004 water levels

The wall hydraulic conductivity values calculated using the 1990 and 2004 water level data are reasonably consistent, with the median value from the 2004 data approximately three times larger than the median value from the 1990 data. This difference is within the uncertainty bounds of the analysis and cannot be reliably used to infer changes in wall conductivity over time.

F. Preliminary estimates of horizontal leakage through the sheet pile wall

The amount of horizontal flow through the sheet pile wall calculated using the current three-dimensional groundwater flow model is approximately 1.8 gallons per minute for the intermediate aquifer and 1.4 gallons per minute for the shallow aquifer. These estimates were derived assuming a wall thickness of 0.026 feet and a wall hydraulic conductivity of $8x10^{-4}$ ft/day ($2.8x10^{-7}$ cm/s).⁶ These estimates do not include vertical flow along the wall or flow around the edges of the wall. It should be noted that the groundwater model is currently under development and is subject to revision.

⁵ PGG did not use the continuous water level data to estimate hydraulic conductivity values for the wall or the aquifer materials.

 $^{^6}$ The value of 8×10^{-4} ft/day is the average of the median values listed in Tables 3 and 4.

References

Boateng K. and J. Massmann, 1999. Data Collection, Data Analysis, and Groundwater Modeling Activities Related to the Northwest End of the Barrier Wall, Prepared for Elf Atochem North America, October 1999.

Erskine AD (1991). The effect of tidal fluctuation on a coastal aquifer in the UK. Ground Water 29(4):556–562.

Ferris JG (1951). Cyclic fluctuations of water level as a basis for determining aquifer transmissibility. Int Assoc Sci Hydrol Publ 33:148–155.

ICF Technology, Inc., (1991). Results of the ERA Barrier Monitoring Program at the Atochem North America Tacoma Facility, Prepared for Atochem North America, February, 1991. 150 pp.

PGG (2004). Bank Remediation Focused Feasibility Study, Atofina Chemicals, Inc., Prepared for Atofina Chemicals, Inc., March 22, 2004.

Table 2. Estimates of shoreline hydraulic conductivity using 1990 pre-wall tidal fluctuations.

	I-15S	K-32S	I-13S	K-11S	K-33S	Median
Time lag (mins)	15	160	50	25	10	
Dampening ratio	0.787	0.359	0.754	0.864	0.772	
Average K/Ss (ft2/day)	4.18E+05	1.05E+04	1.17E+05	4.58E+05	4.13E+05	
Ss from K=40 ft/day (1/ft)	9.88E-05	3.92E-03	3.52E-04	9.00E-05	1.00E-04	1.00E-04
K from Ss=1.0E-4 ft-1 (ft/d)	42	1	12	46	41	41
Soil type from boring log ¹	SP	SP	CH-SP	SP	SP	SP

¹Based on Unified Soil Classification System. SP=Poorly-graded sand. CH=Inorganic clays.

Table 3. Estimates of shoreline hydraulic conductivity using 1990 post-wall tidal fluctuations.

	K-32S	I-13S	K-11S	K-33S	Median
Distance from water (ft)	50	50	50	50	
Time lag (mins)	265	140	125	75	
Dampening ratio	0.121	0.192	0.196	0.300	
Average K/Ss (ft2/day)	3.20E+03	7.41E+03	8.09E+03	1.65E+04	
Ss from K=0.77 ft/day (1/ft)	2.42E-04	1.05E-04	9.58E-05	4.69E-05	1.00E-04
K from Ss=1.0E-4 ft-1 (ft/d)	0.32	0.74	0.81	1.65	0.77
K from pre-wall data (ft/d)	1	12	46	41	
% Reduction in K	69.6%	93.7%	98.2%	96.0%	
Wall K (ft/d) ¹	2.39E-04	4.11E-04	4.28E-04	8.95E-04	4.20E-04
Wall K (cm/s)	8.45E-08	1.45E-07	1.51E-07	3.16E-07	1.48E-07

¹ Assumes wall thickness of 0.315 inches or 0.026 feet

Table 4. Estimates of wall hydraulic conductivity using 2004 tidal fluctuation data.

	6D2-2	SW1-2	SW9-2	SW5-2	SW8-2	SW7-2	7D1-2	SW4-2	Median
Transect Group	A	A	С	C	D	D	Е	Е	
Wall Position	Inside	Outside	Inside	Outside	Inside	Outside	Inside	Outside	
Distance from water (ft)	27.26	19.29	37.77	20.08	35.07	14.63	29.6	14.81	
Time lag (mins)	1530	75	1380	45	1395	10	1560	60	
Average K/S _s (ft2/d)	496	9,779	681	21,102	559	188,177	213	5,318	
% Reduction in K	94.93%		96.78%		99.70%		96.00%		
Average K with the wall ¹	2.03		1.29		0.12		1.60		
Wall K (ft/d) ²	2.04E-03		9.18E-04		8.83E-05		1.46E-03		1.19E-03
Wall K (cm/s)	7.19E-07		3.24E-07		3.11E-08		5.16E-07		4.20E-07

¹Based on assumed intermediate aquifer conductivity of 40 ft/day.

²Assumes wall thickness of 0.315 inches or 0.026 feet



Figure 1. Locations of wells.