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Dept. Of Environmental Protection

MAR 28 2013

Southwest District

March 28, 2013

Mr. John Morris, P.G.
Florida Department of Environmental Protection
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Subject: West Pasco Class I Landfill
WACS Facility No.: 45799
Ground Water Quality Monitoring Plan Evaluation

Dear Mr. Morris:

CDM Smith is pleased to provide two (2) copies of the attached Ground Water Quality Monitoring Plan Evaluation for the West Pasco Class I Landfill to the Florida Department of Environmental Protection (FDEP) for review.

Please let me know if you have any questions or require additional information.

Sincerely,

David Rojas P.G.
CDM Smith, Inc.

Attachment

cc: John Power, Pasco County
Candia Mulhern, Pasco County
Aamod Sonawane, CDM Smith
File



Pasco County Florida

Groundwater Monitoring Plan Evaluation
Semester I 2011 ~ Semester II 2012
West Pasco Class I Landfill

March 2013



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Southwest District

**Groundwater Monitoring Plan Evaluation for
Semester I 2011 ~ Semester II 2012
West Pasco Class I Landfill**

March 2013

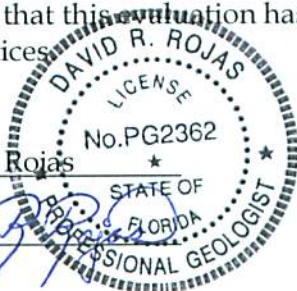


CERTIFICATION

I hereby certify that I have examined the site, and being familiar with the provisions of 62-701, F.A.C., attest that this evaluation has been prepared in accordance with good engineering practices

Engineer: David R. Rojas

Signature: David R. Rojas



Professional Geologist

Registration Number: PG2362

State: Florida

Date: March 28, 2013

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Section 1

Introduction

1.1 Background

The West Pasco Class I Landfill (site) is located at 14230 Hayes Road, Spring Hill, Florida in northwest Pasco County, approximately 2.5 miles north of State Road 52. The property is approximately 800 acres in size. Other facilities on the property that are part of the Pasco County Solid Waste System include the Resource Recovery Facility and the West Pasco Class III Landfill. The site is operated under the Power Plant Siting Act (PPSA), 403.501-518, Florida Statutes (F.S.). **Figure 1-1** is a site plan showing the property boundaries, adjacent roadways, the six disposal cells (Cells A-1, A-2, A-3, A-4, SW-1 and SW-2), and other features.

Solid waste Cells SW-1 and SW-2 are used for the disposal of municipal solid waste (MSW) whenever the MSW cannot be combusted in the resource recovery facility. The filling of Cell SW-1 began in June of 1990 and the filling of Cell SW-2 began in November of 2004. Cell SW-2 is the only cell being filled with MSW at this time.

Ash Cells A-1, A-2, A-3 and A-4 have been used for the disposal of ash produced from the combustion of MSW at the adjacent resource recovery facility. The filling of Ash Cell A-1 occurred from 1990 to December 1996. The filling of Ash Cell A-2 occurred from December 1996 to May 2003. The filling of Ash Cell A-3 occurred from May 2003 to May 2011. Cell A-4 began receiving ash in May 2011 and is currently being used for ash disposal. The ash disposal and solid waste cells at the facility are all constructed with double liner systems.

1.2 Water Quality Monitoring Plan

A revised water quality monitoring plan (WQMP) for the West Pasco County Class I Landfill was prepared by CDM Smith and submitted to the Florida Department of Environmental Protection (FDEP) on December 9, 2008 as part of the documents associated with the application to construct disposal unit A-4. Routine semi-annual groundwater monitoring at the facility was performed in accordance with the revised WQMP. In the WQMP, monitor wells 2MW-1, 4MW-1, 2MW-2, 4MW-2, 2MW-6, 4MW-6, 2MW-15AD, 2MW-27S, 2MW-27D, 4MW-27, and 4MW-27D are designated as background groundwater quality monitoring locations. Wells 4MW-11D, 4MW-12D, 2MW-13D, 4MW-13D, 4MW-14D, 2MW-17S, 2MW-18D, 2MW-19D, 2MW-24S, 2MW-24D, 2MW-25S, 2MW-25D, 2MW-26S, and 2MW-26D are designated as detection wells. Wells 2MW-4, 4MW-4, 2MW-5, and 4MW-5 are designated as compliance wells. Monitor well 2MW-20D, formerly designated as a detection well, was abandoned prior to the construction of disposal unit A-4. Locations of wells are shown on Figure 1-1.

Table 1-1 is a construction summary of all active monitor wells. Groundwater samples are collected by Pasco County personnel in accordance with quality assurance requirements specified in Specific Condition E.1 of the Site Certification. Most inorganic laboratory analyses are performed by Pasco County. Organic compounds and some inorganic analytes are analyzed by a contracted laboratory.

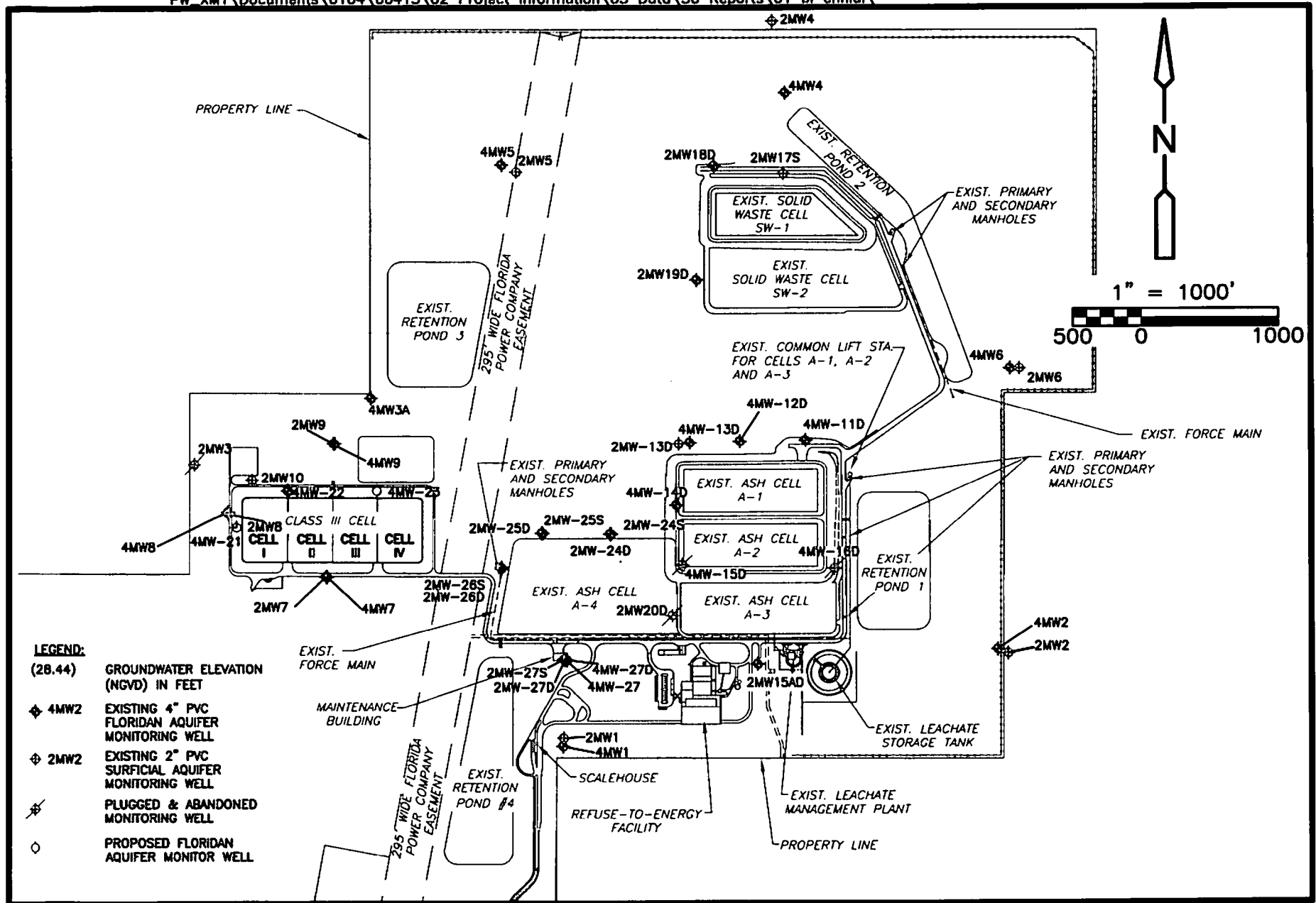


Figure No. 1-1
 Monitor Locations at the
 West Pasco Class I and Class III Landfills

Table 1-1. Construction Summary of Active Monitor Wells West Pasco Class I Landfill

Well I.D.	Well Designation	Location		Ground Elevation (ft NGVD)	Top of Casing (ft NGVD)	Riser Height (ft als)	Screened/Open Hole Section				Total Depth (ft bls)
		Latitude North	Longitude West				Well Type (dia.)	Length	Depth (ft bls)	Elevation (ft NGVD)	
Surficial Aquifer Monitor Wells											
2MW-1	Background	28 22' 05.8"	82 33' 48.1"	46.7	49.95	3.25	Screened (2")	10	8.5 - 18.5	38.2 - 28.2	18.5
2MW-2	Background	28 22' 12.3"	82 33' 11.9"	52.8	56.41	3.61	Screened (2")	5	29.5 - 34.5	23.3 - 18.3	34.5
2MW-4	Compliance	28 22' 57.7"	82 33' 31.4"	51.3	54.77	3.47	Screened (2")	5	10.5 - 15.5	40.8 - 35.8	15.5
2MW-5	Compliance	28 22' 46.7"	82 33' 52.2"	45.3	49.17	3.87	Screened (2")	4	4.0 - 8.0	41.3 - 37.3	8.0
2MW-6	Background	28 22' 32.7"	82 33' 11.1"	53.0	56.11	3.11	Screened (2")	10	20.0 - 30.0	33.0 - 23.0	30.0
2MW-13D	Detection	28 22' 27.2"	82 33' 38.7"	49.1	52.39	3.29	Screened (2")	9.5	7.8 - 17.3	41.3 - 31.8	18.0
2MW-17S	Detection	28 22' 47.8"	82 33' 30.5"	53.8	53.42	-0.38	Screened (2")	15	23.0 - 38.0	30.8 - 15.8	41.0
2MW-24S	Detection	28 22' 21.6"	82 33' 43.4"	47.4	50.37	2.97	Screened (2")	15	11.0 - 26.0	36.4 - 26.4	26.0
2MW-25S	Detection	28 22' 21.7"	82 33' 49.7"	45.3	47.84	2.57	Screened (2")	10	4.5 - 14.5	40.8 - 30.8	14.5
2MW-26S	Detection	28 22' 18.8"	82 33' 52.7"	51.1	54.16	3.06	Screened (2")	10	10.0 - 20.0	41.1 - 31.1	20.0
2MW-27S	Background	28 22' 12.8"	82 33' 47.4"	47.5	50.44	2.94	Screened (2")	10	8.0 - 18.0	39.5 - 29.5	18.0
Floridan Aquifer Monitor Wells											
4MW-1	Background	28 22' 05.5"	82 33' 48.1"	46.5	50.34	3.84	Screened (2")	28	32.0 - 60.0	14.5 - -13.5	60.0
4MW-2	Background	28 22' 12.2"	82 33' 11.9"	53.0	56.11	3.11	Screened (2")	28	42.0 - 70.0	11.0 - -17.0	70.0
4MW-4	Compliance	28 22' 52.5"	82 33' 30.3"	48.1	50.81	2.71	Screened (2")	28	22.0 - 50.0	26.1 - 0.5	50.0
4MW-5	Compliance	28 22' 47.2"	82 33' 53.4"	45.4	49.06	3.66	Screened (2")	32	68.0 - 100.0	-22.6 - -54.6	100.0
4MW-6	Background	28 22' 32.7"	82 33' 11.3"	52.4	55.93	3.53	Screened (2")	27	73.0 - 100.0	-20.6 - -47.6	100.0
4MW-11D	Detection	28 22' 27.5"	82 33' 28.5"	61.9	65.00	3.10	Screened (2")	25	27.0 - 52.0	34.9 - 9.9	52.0
4MW-12D	Detection	28 22' 27.4"	82 33' 33.9"	51.8	55.03	3.23	Screened (2")	25	30.0 - 55.0	21.8 - -3.2	55.0
4MW-13D	Detection	28 22' 27.3"	82 33' 38.1"	51.2	54.04	2.84	Screened (2")	10	26.0 - 36.0	25.2 - 15.2	36.0
4MW-14D	Detection	28 22' 22.8"	82 33' 39.0"	49.0	52.00	3.00	Screened (2")	25	25.0 - 50.0	24.0 - -1.0	50.0
2MW15AD	Background	28 22' 22.6"	82 33' 32.1"	51.9	54.71	2.85	Screened (2")	10	34.0 - 44.0	17.9 - 7.9	44.0
2MW-18D	Detection	28 22' 47.2"	82 33' 36.1"	50.0	52.75	2.75	Screened (2")	15	25.0 - 40.0	25.0 - 10.0	40.0
2MW19D	Detection	28 22' 39.0"	82 33' 37.3"	50.0	52.25	2.23	Screened (2")	10	45.0 - 55.0	5.5 - -5.0	55.0
2MW-24D	Detection	28 22' 21.6"	82 33' 43.4"	47.4	50.55	3.15	Screened (2")	10	34.0 - 44.0	13.4 - 3.4	44.0
2MW-25D	Detection	28 22' 21.7"	82 33' 49.5"	45.2	47.87	2.67	Screened (2")	15	17.0 - 32.0	28.2 - 13.2	32.0
2MW-26D	Detection	28 22' 18.9"	82 33' 52.7"	51.2	54.13	2.93	Screened (2")	10	42.0 - 52.0	9.2 - -0.8	52.0
2MW-27D	Background	28 22' 12.7"	82 33' 47.3"	47.2	50.32	3.12	Screened (2")	15	27.0 - 42.0	20.2 - 5.2	42.0
4MW-27	Background	28 22' 12.8"	82 33' 46.9"	46.8	49.60	2.80	Openhole (4" csg)	10	67.0 - 77.0	-20.2 - -30.2	77.0
4MW27D	Background	28 22' 12.8"	82 33' 47.1"	46.3	49.28	3.01	Openhole (4" csg)	10	146.0 - 156.0	-99.7 - -100.7	156.0

NOTES:

NGVD National Geoc National Geodetic Vertical Datum
 ft als feet above lan feet above land surface
 ft bls feet below lan- feet below land surface
 dia. diameter

There are no surface water monitoring locations designated at the facility. However, in the event that a discharge to surface water from the facility should occur, samples would be collected in accordance with Specific Condition E.8. There were no discharges to surface water from the facility during the 2011 – 2012 monitoring period. Leachate samples were collected semi-annually from each of the locations described in the revised 2008 WQMP.

1.3 Report Contents and Organization

This Water Quality Monitoring Plan Evaluation Report (WQMPER) includes monitoring data from Semester I of 2011 through Semester II of 2012 as specified by Specific Condition E.11 of the Site Certification dated August 13, 2009. As required by Chapter 62-701.510(8)(b), as referenced in the Specific Condition E.11 of the Site Certification, this report includes the following:

- Tabular displays of any data which shows that a monitoring parameter has been detected, and graphical displays of any leachate key indicator parameters detected (such as pH, specific conductance, TDS, TOC, sulfate, chloride, sodium and iron), including hydrographs for all monitor wells;
- Trend analyses of any monitoring parameters consistently detected;
- Comparisons among shallow, middle, and deep zone wells;
- Comparisons between background water quality and the water quality in detection and compliance wells;
- Correlations between related parameters such as total dissolved solids and specific conductance;
- Discussion of erratic and/or poorly correlated data;
- An interpretation of the ground water contour maps, including an evaluation of ground water flow rates; and
- An evaluation of the adequacy of the water quality monitoring frequency and sampling locations based upon site conditions.

The report is divided into four sections. Section 1 includes an overview of the water quality monitoring program for the West Pasco Class I Landfill. Section 2 presents and discusses groundwater level data. Section 3 presents and discusses groundwater quality data, the results of leachate monitoring, and interpretations of the data. Section 4 presents conclusions and recommendations based on the evaluations.

Section 2

Groundwater Level Data

2.1 Groundwater Levels

Water level measurements were collected during the sampling events conducted during the 2011 – 2012 reporting period. These measurements are presented in **Table A-1 (Appendix A)**. Monitor wells 2MW-1, 2MW-4, 2MW-5, 2MW-6, 2MW-13D, 2MW-25S, and 2MW-26S, and are screened in the surficial aquifer but remained dry throughout the monitoring period. The only wells screened in the surficial aquifer in which water was present during at least one of the sampling events were monitor wells 2MW-2, 2MW-17S, 2MW-24S, and 2MW-27S. Groundwater contour maps of the surficial aquifer at the facility during the 2011 – 2012 reporting period are presented in **Appendix A**. Monitor wells 4MW-1, 4MW-2, 4MW-4, 4MW-5, 4MW-6, 4MW-11D, 4MW-12D, 4MW-13D, 4MW-14D, 2MW-15AD, 2MW-18D, 2MW-19D, 2MW-24D, 2MW-25D, 2MW-26D, 2MW-27D, 4MW-27, and 4MW-27D are screened in the Floridan aquifer. Groundwater contour maps of the Floridan aquifer at the facility during the 2011 – 2012 reporting period are in Appendix A.

The direction of the groundwater water movement in the surficial aquifer, where present, was generally from southeast to northwest. The hydraulic gradient for each event was estimated using a three-point solution with groundwater level data from wells 2MW-2, 2MW-17S, and 2MW-24S. The hydraulic gradients for each event were 0.0020 for both 2011 events, 0.0021 for the February 2012 event, and 0.0018 for the August 2012 event. Based on the gradients determined for each monitoring event for this reporting period, the average hydraulic gradient during the monitoring period was 0.0020. The maximum gradient was 0.0021 and the lowest was 0.0018.

The direction of the groundwater water movement in the Floridan aquifer was also generally from southeast to northwest. The hydraulic gradient for each event was estimated using a three-point solution with water level data from wells 4MW-1, 4MW-2, and 2MW-19D. The hydraulic gradients were 0.0022 for the February 2011 event, 0.0025 for the August 2011 event, 0.0021 for the February 2012 event, and 0.0019 for the August 2012 event. Based on the gradients determined for each monitoring event for this reporting period, the average hydraulic gradient for the Floridan aquifer during the monitoring period was 0.0022. The maximum gradient was 0.0025 and the lowest was 0.0019.

The average horizontal seepage velocities in the surficial and Floridan aquifers were estimated using the two-dimensional form of Darcy's Law below:

$$V_s = \frac{K_H i}{n_e}$$

where: V_s = Horizontal seepage velocity (feet/day)

K_H = Horizontal hydraulic conductivity (feet/day)

i = Hydraulic gradient

n_e = Effective porosity

The average hydraulic conductivity of surficial deposits that comprise the surficial aquifer, based on studies in Pasco County conducted by Cherry and others in 1970, was 8.7 feet/day (Fretwell, 1988). Based on these data, and an effective porosity of 30 percent, the calculated average rate of groundwater movement in the surficial aquifer beneath the site is 0.058 foot/day or approximately 1.74 feet/month.

A hydraulic conductivity value of 9.0 feet/day and an effective porosity of 15% (from the March 2008 WQMP prepared by CDM Smith) were used to calculate the horizontal seepage rate for the Floridan aquifer. Based on these data, the calculated average rate of groundwater movement in the surficial aquifer beneath the site is 0.132 foot/day or approximately 3.96 feet/month.

Hydrographs are presented in **Figure A-1** through **A-5** (Appendix A). Evaluations of the hydrographs indicate that groundwater levels were, on average, about five feet higher in August 2012 than in the previous three semesters. The high groundwater levels in August 2012 are attributed to heavy rainfall associated with Tropical Storms Beryl and Debby. The observed seasonal fluctuations before the August 2012 event are minimal.

Section 3

Groundwater and Leachate Quality

3.1 Groundwater Quality

3.1.1 Groundwater Data

Tables B-1 and B-2 (Appendix B) summarize field parameter measurements and detected analytes from groundwater sampling events conducted during the 2011-2012 reporting period. Concentration versus time graphs (**Figures B-1 through B-100**) for all analytes that were detected consistently (three times or more) in samples from individual wells during the 2011-2012 reporting period are also in Appendix B.

3.1.2 Groundwater Quality in Background Wells

Table 3-1 is a summary of concentrations of analytes detected in groundwater samples from background wells in concentrations exceeding Maximum Contaminant Levels (MCLs) or outside the acceptable pH range established in Chapter 62-550, F.A.C. and/or Groundwater Cleanup Target Levels (GCTLs) established in 62-777, F.A.C. Iron, nitrate, total dissolved solids (TDS) and vanadium were the only analytes detected in samples from background wells in concentrations that exceeded MCLs. Of these, only iron, and nitrate were detected in detection or compliance wells in concentrations exceeding MCLs or GCTLs. Values for pH were below the acceptable range in samples from 2MW-2. Average and maximum background concentrations and values for nitrate, iron and pH are shown on Table 3-1.

With the exception of the concentrations of TDS in the samples from 2MW-27D, iron in the only sample from 2MW-27S, and perhaps the concentration of nitrate detected in the sample from 2MW-2 in February 2011, maximum background concentrations that also exceed MCLs or GCTLs in samples from background wells are data that are considered anomalous. Concentrations of TDS in the samples from background well 2MW-27D are likely associated with the documented plume from the Shady Hills Wastewater Treatment Plant. Values for pH were below the acceptable range in samples from 2MW-2.

Groundwater Quality in Surficial Aquifer Background Wells

Average background concentrations of all analytes except iron in the surficial aquifer were below MCLs and GCTLs. Surficial aquifer background well 2MW-27S was dry for all but one of the sampling events during the 2011 – 2012 reporting period. The concentration of iron detected in the sample collected from this well in August 2012 exceeded the Secondary Drinking Water Standard (SDWS) MCL. The average background concentration of iron in the surficial aquifer during the 2011 – 2012 reporting period is 0.936 mg/l.

The concentration of nitrate detected in the sample collected from surficial aquifer background well 2MW-2 in February 2011 exceeded the Primary Drinking Water Standard (PDWS). This high concentration was confirmed in March 2011.

Table 3-1. Background Wells - Parameters Detected in Groundwater Samples at Concentrations exceeding Groundwater Quality Criteria

Well	Aquifer	Parameter	Units	GCTL/MCL	Average Background Concentration	Maximum Background Concentration	DATE OF SAMPLE			
							February 2011	August 2011	February 2012	August 2012
2MW-2	Surficial	Iron	mg/L	0.3	0.963	4.600	0.0499	0.0121	0.0711	0.0832
		Nitrate	mg/L	10	5.95	10.50	10.5 (12.3 on 3/15/11)	7.24	6.89	5.04
		pH	S.U.	6.5 - 8.5	6.08	7.09	6.28	5.30	6.10	5.61
		TDS	mg/L	500	144	438	96	76		52
		Vanadium	mg/L	0.049	0.0071 U	0.0100 U	0.0050 U	0.0050 U	0.010 U	0.0078 U
2MW-27S	Surficial	Iron	mg/L	0.3	0.963	4.600	DRY	DRY	DRY	4.600
		Nitrate	mg/L	10	5.95	10.50	DRY	DRY	DRY	0.10 I
		pH	S.U.	6.5 - 8.5	6.08	7.09	DRY	DRY	DRY	7.09
		TDS	mg/L	500	144	438	DRY	DRY	DRY	438
		Vanadium	mg/L	0.049	0.0071 U	0.0100 U	DRY	DRY	DRY	0.0078 U
4MW-1	Floridan	Iron	mg/L	0.3	0.050	0.326	0.120	0.002 U	0.3260	0.0647
		Nitrate	mg/L	10	0.84	3.09	0.02 U	0.91	0.02 U	1.62
		pH	S.U.	6.5 - 8.5	7.81	8.84	7.67	7.48	7.68	6.88
		TDS	mg/L	500	269	564	278	458	254	564
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0050 U	0.0050 U	0.0078 U	0.0078 U
4MW-2	Floridan	Iron	mg/L	0.3	0.050	0.326	0.002 U	0.002 U	0.0056 I	0.0042 I
		Nitrate	mg/L	10	0.84	3.09	3.09	2.44	2.04	1.16
		pH	S.U.	6.5 - 8.5	7.81	8.84	8.20	8.07	7.88	8.02
		TDS	mg/L	500	269	564	116	128	112	118
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0053 I	0.0052 I	0.0130	0.0078 U
4MW-6	Floridan	Iron	mg/L	0.3	0.050	0.326	0.002 U	0.002 U	0.0058 I	0.0045 I
		Nitrate	mg/L	10	0.84	3.09	1.04	0.96	0.96	0.61
		pH	S.U.	6.5 - 8.5	7.81	8.84	8.08	8.25	7.77	8.35
		TDS	mg/L	500	269	564	94	94	82	86
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0050 U	0.0050 U	0.0100 U	0.0078 U
2MW-15AD	Floridan	Iron	mg/L	0.3	0.050	0.326	0.0419	0.0532	0.0800	0.1580
		Nitrate	mg/L	10	0.84	3.09	0.02 U	1.12	0.02 U	0.28
		pH	S.U.	6.5 - 8.5	7.81	8.84	7.34	7.59	7.71	7.76
		TDS	mg/L	500	269	564	138	186	144	180
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0050 U	0.0050 U	0.0078 U	0.0078 U
2MW-27D	Floridan	Iron	mg/L	0.3	0.050	0.326	0.1010	0.0337	0.0437	0.0642
		Nitrate	mg/L	10	0.84	3.09	0.89	1.08	1.25	1.06
		pH	S.U.	6.5 - 8.5	7.81	8.84	7.13	7.69	7.49	7.83
		TDS	mg/L	500	269	564	510	530	486	506
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0050 U	0.0050 U	0.0085 I	0.0230
4MW-27	Floridan @ -70' bis	Iron	mg/L	0.3	0.050	0.326	0.0028 I	0.0020 U	0.0104	0.0199
		Nitrate	mg/L	10	0.84	3.09	0.50	0.98	0.78	0.50
		pH	S.U.	6.5 - 8.5	7.81	8.84	8.84	7.65	7.55	7.81
		TDS	mg/L	500	269	564	344	534	494	490
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0993	0.0306	0.0270	0.0078 U
4MW-27D	Floridan @ -150' bis	Iron	mg/L	0.3	0.050	0.326	0.0610	0.0675	0.0499	0.0832
		Nitrate	mg/L	10	0.84	3.09	0.02 U	0.02 U	0.02 U	0.07 U
		pH	S.U.	6.5 - 8.5	7.81	8.84	7.83	7.95	7.90	8.29
		TDS	mg/L	500	269	564	156	138	152	146
		Vanadium	mg/L	0.049	0.0124	0.0993	0.0050 U	0.0050 U	0.0120	0.0078 U

Background Well Average and Maximum Concentrations

Aquifer	Parameter	Units	GCTL/MCL	Average	Maximum
All Aquifers	Iron	mg/L	0.3	0.189	#VALUE!
	Nitrate	mg/L	10	1.61	#VALUE!
	pH	S.U.	6.5 - 8.5	7.55	#VALUE!
	TDS	mg/L	500	250	#VALUE!
	Vanadium	mg/L	0.049	0.0116	#VALUE!
Surficial	Iron	mg/L	0.3	0.963	4.600
	Nitrate	mg/L	10	5.95	10.50
	pH	S.U.	6.5 - 8.5	6.08	7.09
	TDS	mg/L	500	144	438
	Vanadium	mg/L	0.049	0.0071 U	0.0100 U
Floridan	Iron	mg/L	0.3	0.050	0.326
	Nitrate	mg/L	10	0.84	3.09
	pH	S.U.	6.5 - 8.5	7.81	8.84
	TDS	mg/L	500	269	564
	Vanadium	mg/L	0.049	0.0124	0.0993

Concentration exceeds the MCL/GCTL

MCL = Maximum Contaminant Level established in Chapter 62-550, F.A.C.

GCTL = Groundwater Cleanup Target Level established in Chapter 62-777, F.A.C.

U = Not detected

I = Detected below the Practical Quantitation Limit

S.U. = Standard Units

Measured values of pH were below 6.5 standard units (S.U.) in all of the samples collected from the surficial aquifer background well 2MW-2 during the 2011 – 2012 reporting period.

Groundwater Quality in Floridan Aquifer Background Wells

A pH value above 8.5 S.U. was measured in one of the samples collected during the 2011-2012 reporting period from Floridan aquifer monitor well 4MW-27. The measured high pH value was one standard unit above the other values measured in this well during the monitoring period and may be anomalous.

Iron was only detected above the SDWS MCL in one groundwater sample from the Floridan aquifer background wells during the 2011 – 2012 reporting period. The concentration of iron detected in one of the four samples collected from Floridan aquifer background well 4MW-1 (0.326 mg/l) exceeded the SDWS MCL.

Concentrations of TDS only exceeded the MCL in samples from three wells (4MW-1, 2MW-27D, and 4MW-27). All three of these wells are Floridan aquifer background wells located south of Ash Cell A-4. The maximum concentration detected during this monitoring period (564 mg/l) is only 64 mg/l above the MCL. The exceedances of the criterion for TDS detected in the samples from these background wells are likely associated with the documented plume from the Shady Hills Wastewater Treatment Plant.

Vanadium was detected at a concentration exceeding the established Groundwater Cleanup Target Level (GCTL) of 0.049 mg/l in one groundwater sample collected during the 2011 - 2012 reporting period. This sample was collected from background well 4MW-27 in February 2011. Although vanadium was also detected in the sample collected from this well in September 2010 at a concentration exceeding the GCTL, the concentration of vanadium detected in the sample collected from the well when it was re-sampled in December 2010 was below the GCTL.

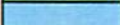
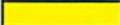
3.1.3 Groundwater Quality in Detection and Compliance Wells

The results of groundwater quality monitoring performed during the 2011 – 2012 reporting period were compared to established criteria including PDWS and SDWS MCLs, GCTLs, and background concentrations. All of the parameters detected at concentration exceeding groundwater quality criteria in groundwater samples collected from detection and compliance wells during the 2011 – 2012 reporting period are presented in **Table 3-2**. Only nitrate, iron, and pH were detected in concentrations or values that exceeded MCLs in detection and/or compliance wells.

The only analyte that was detected in concentrations that exceeded respective PDWS criteria during the 2011-2012 monitoring period was nitrate. Concentrations of nitrate exceeded the MCL in samples collected from monitor well 2MW-17S in August 2011 and February 2012. Concentrations of nitrate also exceeded the MCL in samples collected from well 2MW-17S collected in 2009. However, concentrations of nitrate in samples collected from well 2MW-17S during the 2007-2008 monitoring period, in March and September of 2010, in February 2011, and in August 2012 were below the MCL. Nitrate was also detected in February 2011 in exceedance of the PDWS in the sample from background well 2MW-2, which is upgradient of 2MW-17S.

Table 3-2. Parameters Detected in Detection and Compliance Wells at Concentrations Exceeding Regulatory Criteria

Well	Aquifer	Parameter	Units	GCTL/ MCL	Average Background Concentration	Maximum Background Concentration	DATE OF SAMPLE			
							February 2009	August 2009	March 2010	September 2010
2MW-17S	Surficial	Nitrate	mg/L	10	5.95	10.50	4.63	14.6 (16.1 on 8/29/11)	10.1	0.06 I
2MW-17S	Surficial	pH	SU	6.5 - 8.5	6.08	7.09	6.61	6.32	6.70	6.44
2MW-24S	Surficial	Iron	mg/L	0.3	0.936	4.600	NS	0.522	NS	NS
2MW-18D	Floridan	Iron	mg/L	0.3	0.050	0.326	0.0258	0.0020 U	0.0954	0.4940
2MW-25D	Floridan	Iron	mg/L	0.3	0.050	0.326	0.0719	0.5430	0.5690	0.0616

 Concentration exceeds the MCL/GCTL and maximum background concentration
 Concentration exceeds the MCL/GCTL and the average background concentration
 Concentration exceeds the MCL/GCTL
 MCL = Maximum Contaminant Level established in Chapter 62-550, F.A.C.
 GCTL = Groundwater Cleanup Target Level established in Chapter 62-777, F.A.C.
 U = Not detected
 I = Detected below the Practical Quantitation Limit

Values of pH below the SDWS MCL were only measured in two of the four samples collected from detection well 2MW-17S. However, all of the pH values recorded for 2MW-17S during the reporting period were above the average surficial aquifer background pH value.

Concentrations of iron exceeded the SDWS MCL in samples collected from three detection wells (one surficial aquifer well and two Floridan aquifer wells). The exceedance in the sample from surficial aquifer detection well 2MW-24S was below both the maximum surficial aquifer background concentration of 4.60 mg/l (detected in well 2MW-27S) and the average background concentration detected in the samples from the surficial aquifer of 0.936 mg/l.

Iron was only detected above the SDWS MCL in one of the four samples collected from Floridan aquifer detection well 2MW-18D and two of the four samples collected from Floridan aquifer detection well 2MW-25D during the 2011-2012 monitoring period. These exceedances were all above the maximum background concentration of 0.326 mg/l detected in the Floridan aquifer background well 4MW-1. The concentrations that exceeded the SDWS were nearly or more than an order of magnitude higher than in other samples collected from these wells during this monitoring period.

3.1.4 Trends and Correlations

Figures B-1 through B-100 (Appendix B) are time versus concentration graphs for parameters that were consistently detected in groundwater samples collected during the 2011 – 2012 reporting period.

There are very few trends and correlations that are indicative of potential changes in groundwater quality. In general, groundwater quality remained generally stable during this monitoring period. A general increase in pH in many Floridan aquifer monitor wells correlates with groundwater levels. The seasonal fluctuations of static groundwater levels during the first three sampling events of this monitoring period are minimal. However, groundwater levels were, on average, about five feet higher in August 2012. This increase in static groundwater level correlates with maximum pH values in samples from many of the Floridan aquifer monitor wells during the 2011-2012 monitoring period. Also, the relatively higher static water levels in Floridan Aquifer monitor well 4MW-1 during the second semester periods correlate with relatively higher conductivity readings and TDS, sodium, and chloride concentrations.

There was a general decrease in nitrate in wells with exceedances in nitrate (2MW-2 and 2MW-17S). Nitrate, TDS and specific conductivity decreased over the monitoring period in surficial aquifer well 2MW-2 as the static water level increased. Although the pH in 2MW-2 was below the 6.50 S.U. criterion throughout the monitoring period, it was comparatively lower during the second semester events, which correlates with the relative increases in static water level. In addition to nitrate, TDS and specific conductivity, chloride concentrations also exhibited a decreasing trend with the increase in static water level during the second semester events in shallow aquifer well 2MW-17S.

There is a significant increasing trend in iron concentrations in well 2MW-18D during the last three sampling events of the monitoring period. The increase in iron correlates with slight increases in TDS, chloride, sodium, nickel, pH and specific conductivity in samples this well, but there is no increase in turbidity associated with the increase in iron.

The concentrations of vanadium in well 4MW-27 decreased throughout the monitoring period.

3.2 Leachate Quality

3.2.1 Leachate Data

In accordance with Specific Condition E.9.b of the Site Certification for the facility, leachate sampling and analyses is required to be conducted annually during the monitoring period. Sampling was performed in January 2011, August 2011, March 2012 and August 2012.

Table B-3 (Appendix B) is a summary of field parameters and analytes detected in leachate samples.

3.2.2 Leachate Quality

The leachate quality results of the sampling activities performed during the 2011 – 2012 reporting period were compared to established toxicity characteristic values presented in Table 1 of 40 CFR Part 261.24. None of the analytes in any of the leachate samples exceeded the maximum concentrations for the toxicity characteristic.

Section 4

Conclusions and Recommendations

4.1 Conclusions

The following conclusions are based on evaluation of the data presented in this WQMPER:

- The direction of the groundwater water movement in the surficial aquifer, where present was generally from southeast to northwest. Based on the gradients determined for each monitoring event for this reporting period, the average hydraulic gradient during the monitoring period was 0.0020. The calculated average rate of groundwater movement in the surficial aquifer beneath the site is 0.058 foot/day or approximately 1.74 feet/month.
- The direction of the groundwater water movement in the Floridan aquifer was generally from southeast to northwest. Based on the gradients determined for each monitoring event for this reporting period, the average hydraulic gradient for the Floridan aquifer during the monitoring period was 0.0022. The calculated average rate of groundwater movement in the surficial aquifer beneath the site is 0.132 foot/day or approximately 3.96 feet/month.
- Evaluations of the hydrographs indicate that groundwater levels were, on average, about five feet higher in August 2012 than in the previous three semesters. The high groundwater levels in August 2012 are attributed to heavy rainfall associated with Tropical Storms Beryl and Debby. The seasonal fluctuations before the August 2012 event were minimal.
- Iron, nitrate, TDS and vanadium were the only analytes detected in samples from background wells in concentrations that exceeded MCLs.
- The pH values in samples collected from surficial aquifer background well 2MW-2 were below the acceptable range.
- Iron was detected in concentrations that exceeded the MCL in samples from only one surficial and two Floridan aquifer detection wells.
- Nitrate was detected in concentrations that exceeded the MCL in samples collected during two monitoring events from only one surficial aquifer detection well. Nitrate was also detected in a concentration that exceeded the MCL in a sample from a background surficial aquifer monitor well.
- The pH values in samples from two samples collected from one detection well were below the acceptable range. There are no surface water monitoring locations designated at the facility. However, in the event that a discharge to surface water from the facility should occur, samples would be collected in accordance with Specific Condition E.8. There were no discharges to surface water from the facility during the 2011 – 2012 monitoring period. Leachate samples were collected semi-annually from each of the locations described in the revised 2008 WQMP.

- There are very few trends and correlations that are indicative of potential changes in groundwater quality. In general, groundwater quality remained generally stable during this monitoring period.
- None of the analytes in any of the leachate samples exceeded the maximum concentrations for the toxicity characteristic listed in Table 1 of 40 CFR Part 261.24.
- There is no evidence of a discharge of leachate into the groundwater at the site.
- The groundwater monitoring program is sufficient to detect a release of contaminants into groundwater.

4.2 Recommendations

Monitoring should continue in accordance with the December 2008 WQMP with the exception of leachate monitoring. Leachate monitoring should be discontinued in response to the changes in Chapter 62-701.510, F.A.C.

Appendix A

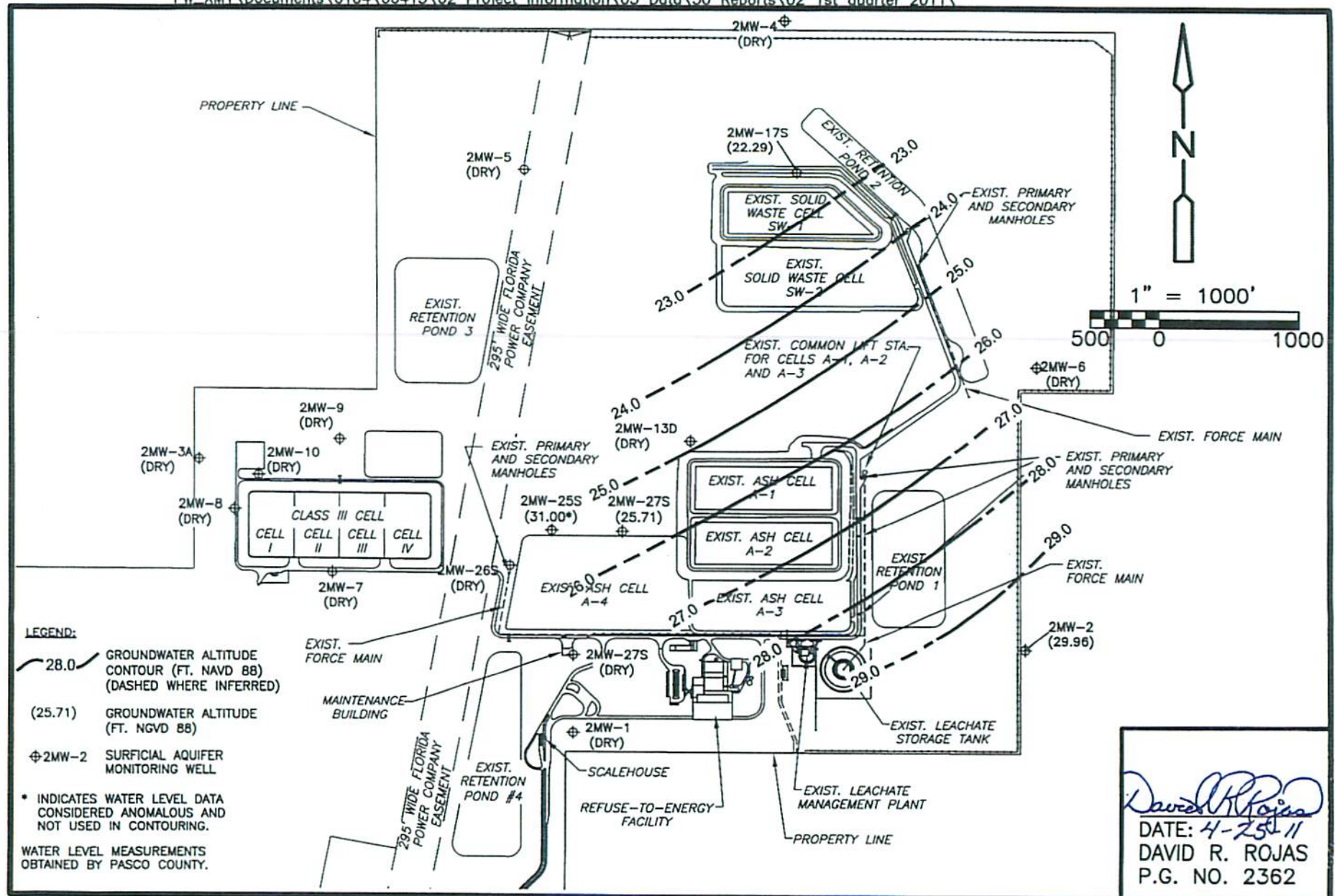
Groundwater Level Elevation Table Groundwater Contour

Table A-1
Water Level Elevations From All Monitor Wells From February 2011 To August 2012

Monitor Well	Water Level Measurements (FT NGVD*)			
	2011		2012	
	2/17/11	8/9/11	2/28/12	8/14/12
2MW-1	DRY	DRY	DRY	DRY
2MW-2	29.96	30.68	30.33	36.64
2MW-4	DRY	DRY	DRY	DRY
2MW-5	DRY	DRY	DRY	DRY
2MW-6	DRY	DRY	DRY	DRY
2MW-13D	DRY	DRY	DRY	DRY
2MW-17S	22.29	23.16	22.33	29.92
2MW-24S	25.71	26.79	25.39	33.37
2MW-25S	31.00	DRY	DRY	33.95
2MW-26S	DRY	DRY	DRY	DRY
2MW-27S	DRY	DRY	DRY	34.81
4MW-1	30.07	31.04	29.74	35.82
4MW-2	29.39	31.19	29.71	36.26
4MW-4	22.36	22.59	22.36	29.96
4MW-5	23.24	24.26	23.17	30.81
4MW-6	26.60	26.62	26.83	33.71
4MW-11D	25.96	27.58	26.00	33.40
4MW-12D	25.52	28.62	25.38	32.58
4MW-13D	25.08	27.66	24.92	32.44
4MW-14D	25.98	27.13	25.82	32.95
2MW-15AD	28.80	30.76	28.60	35.86
2MW-18D	22.25	22.56	22.26	29.80
2MW-19D	23.04	23.49	22.97	30.50
2MW-24D	25.75	26.78	25.49	33.25
2MW-25D	26.11	28.26	25.80	33.49
2MW-26D	26.58	28.29	26.28	33.83
2MW-27D	27.79	31.37	27.57	34.80
4MW-27	27.90	31.45	27.65	34.87
4MW-27D	27.81	31.37	27.58	34.83

Note:

*National Geodetic Vertical Datum of 1929 (NGVD 29)

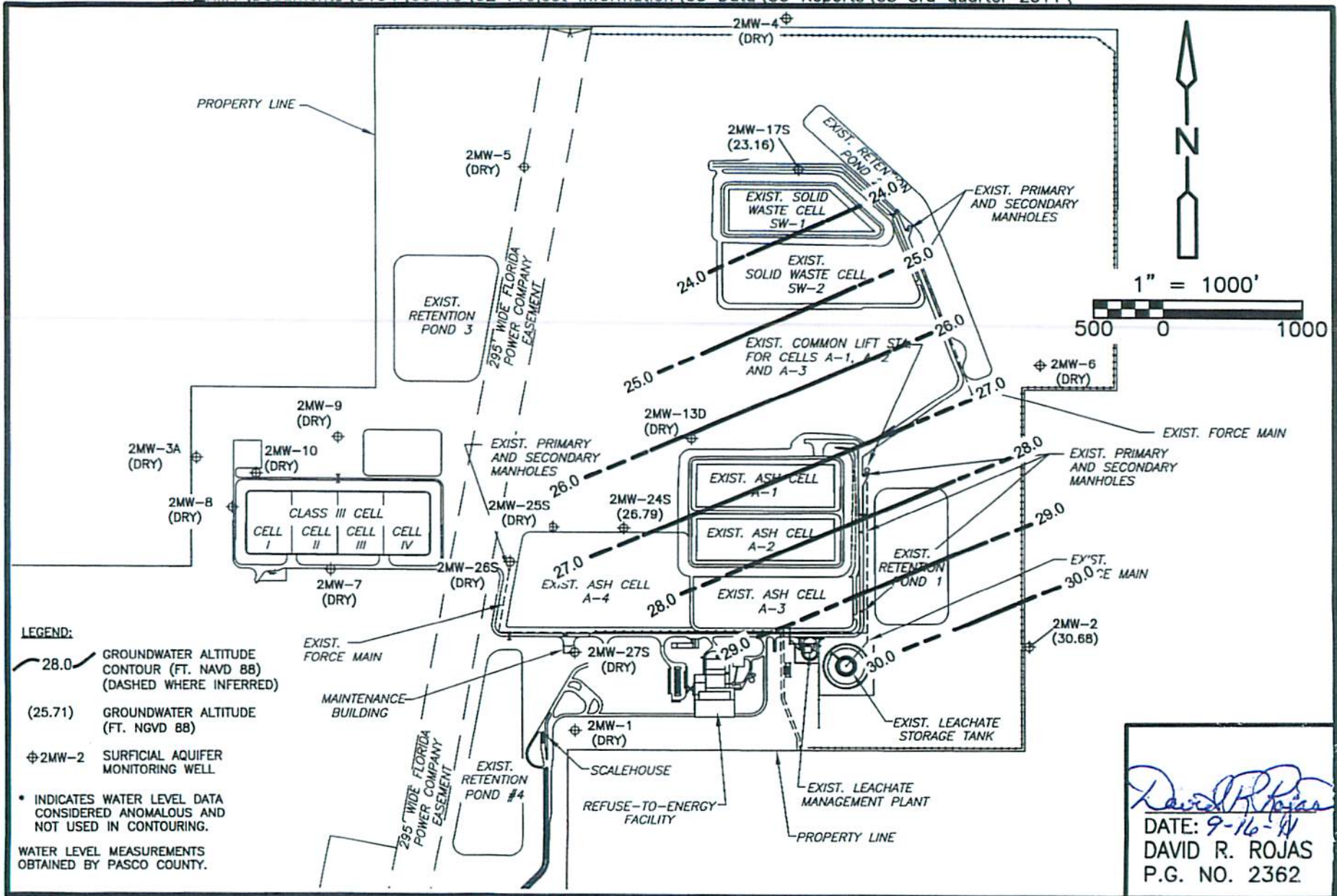


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Surficial Aquifer Groundwater Contour Map - February 17 2011
 First Quarter, 2011
 West Pasco Resource Recovery Facility

David R. Rojas
 DATE: 4-25-11
 DAVID R. ROJAS
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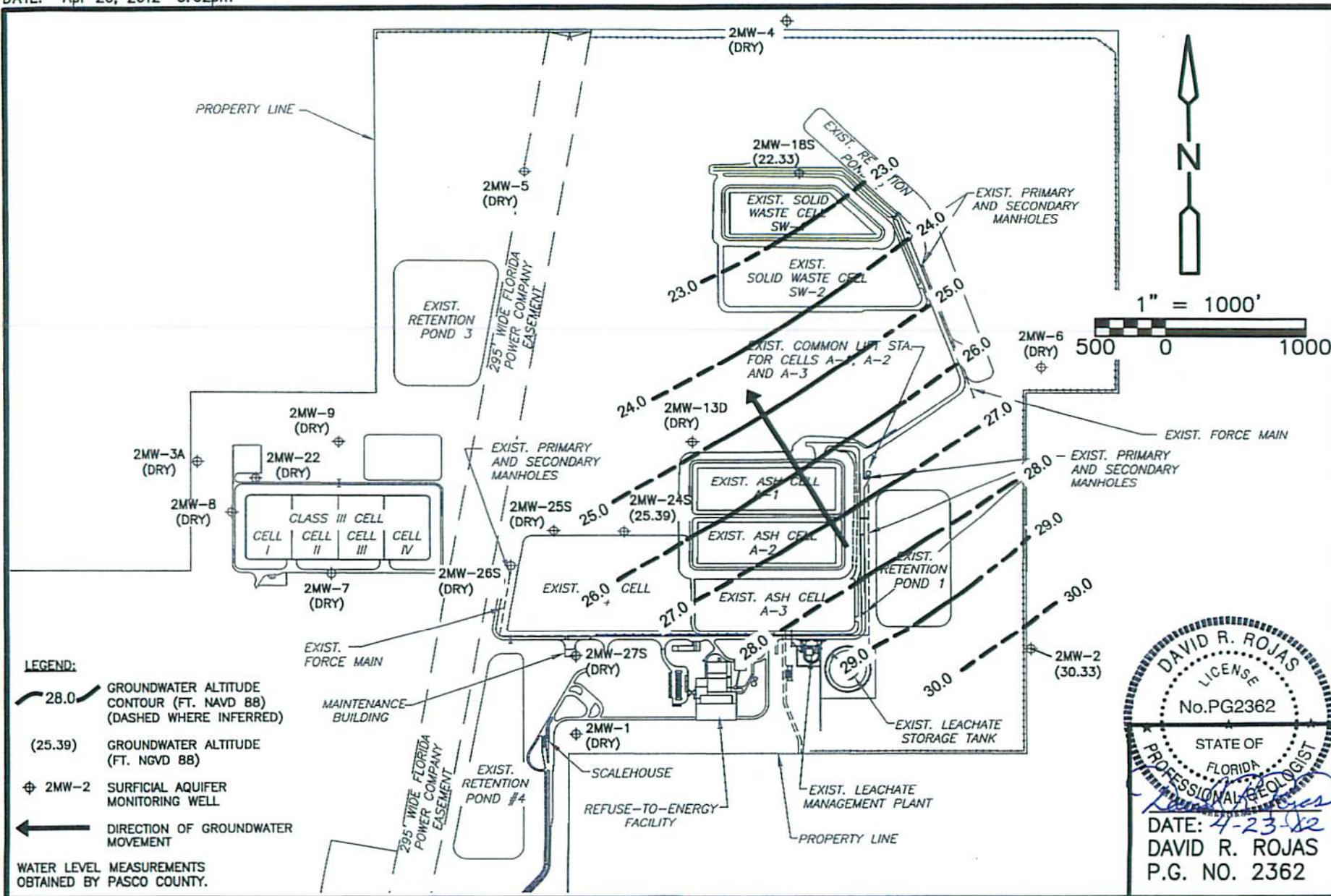
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Surficial Aquifer Groundwater Contour Map - Reference file
 Third Quarter, 2011
 West Pasco Resource Recovery Facility

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DATE: Apr 20, 2012 3:02pm

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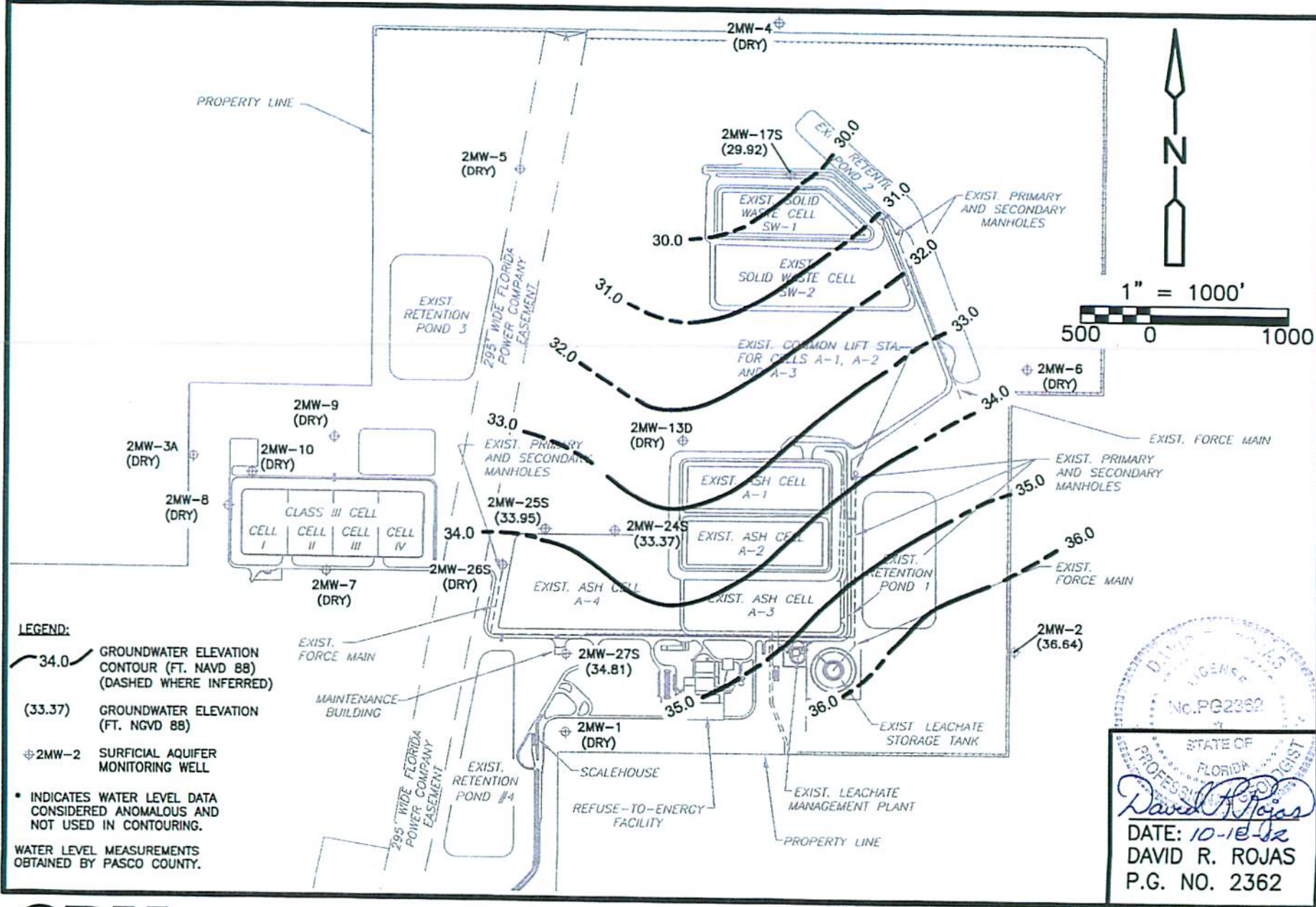


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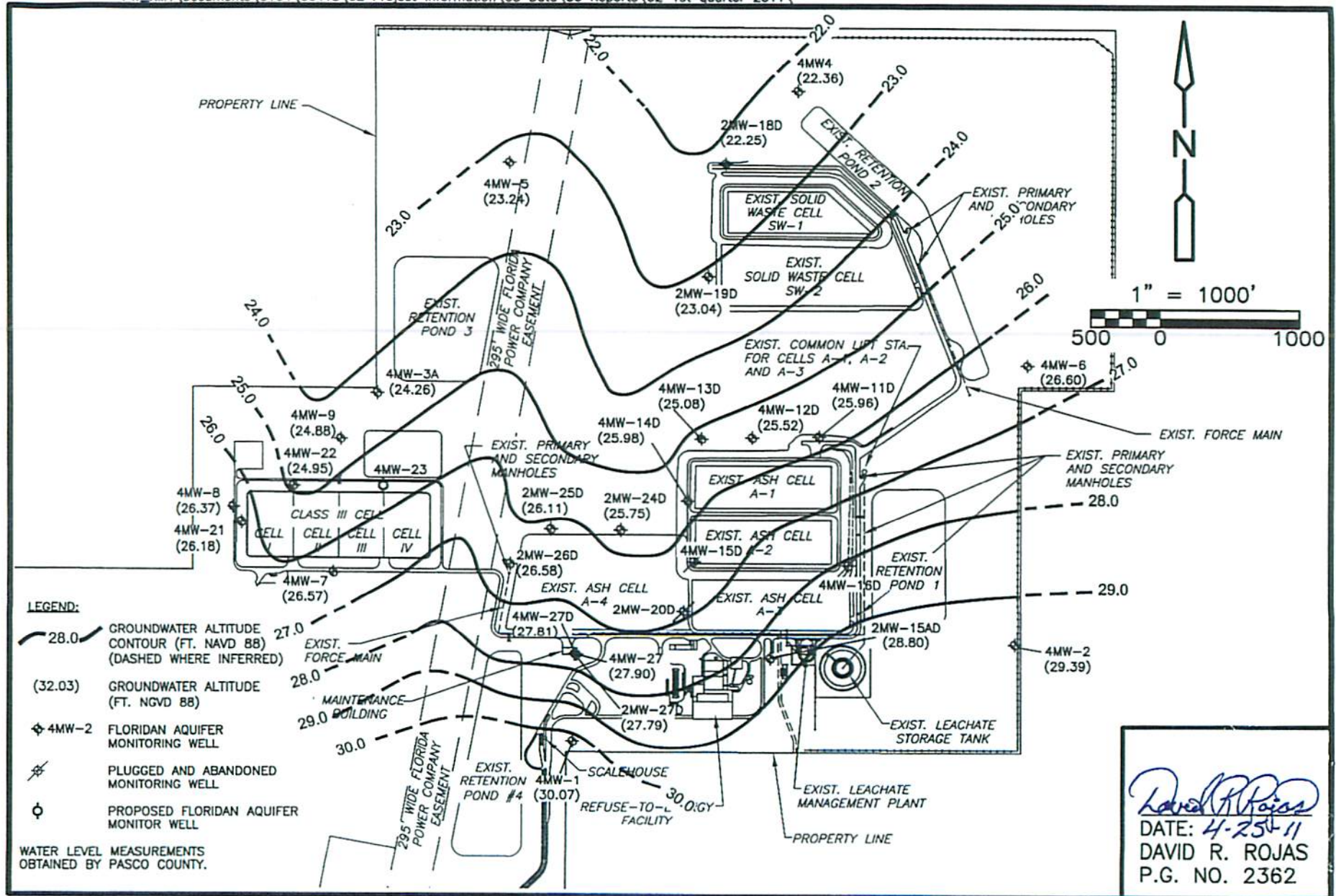
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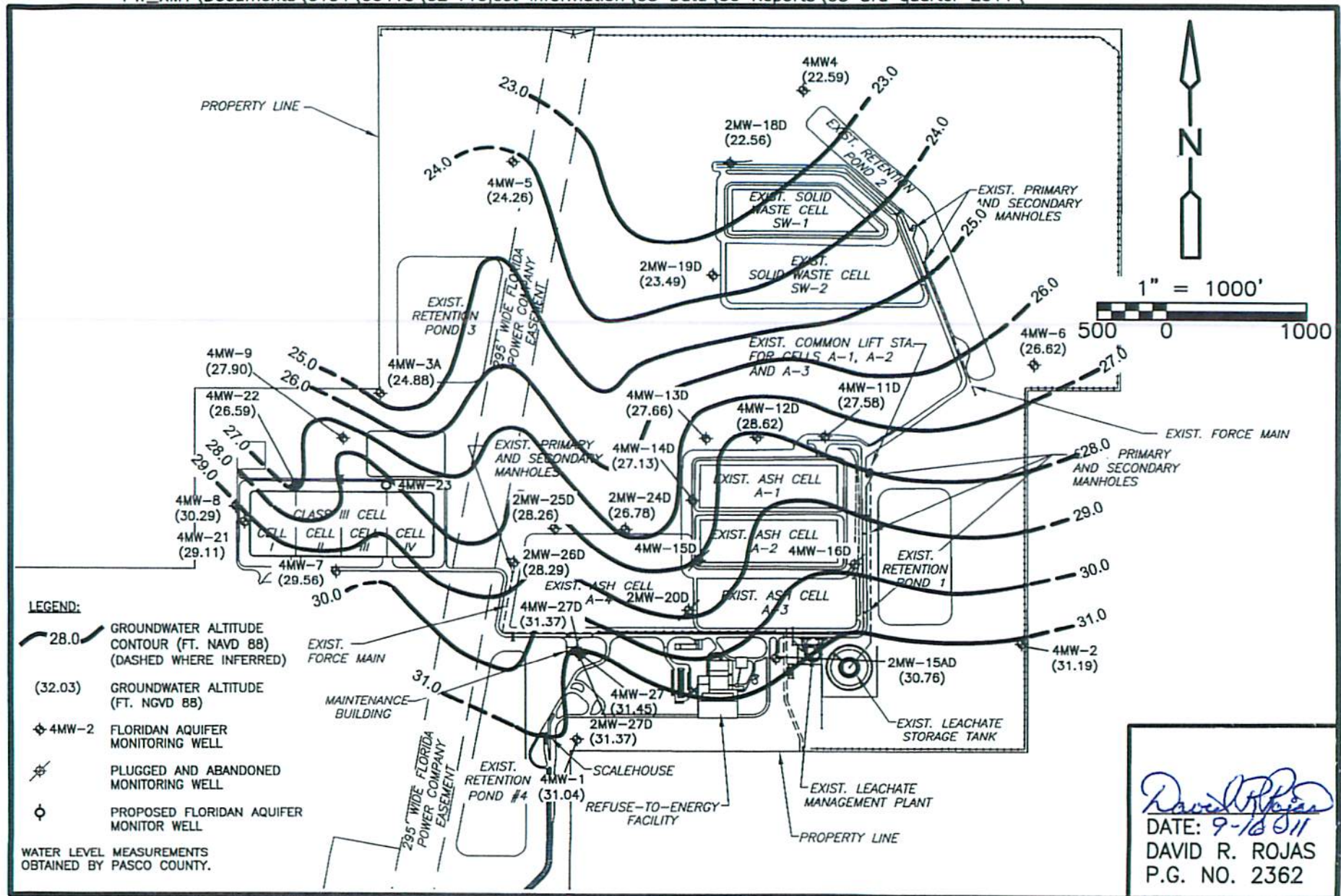
Surficial Aquifer Groundwater Contour Map - February 28, 2012
First Quarter, 2012
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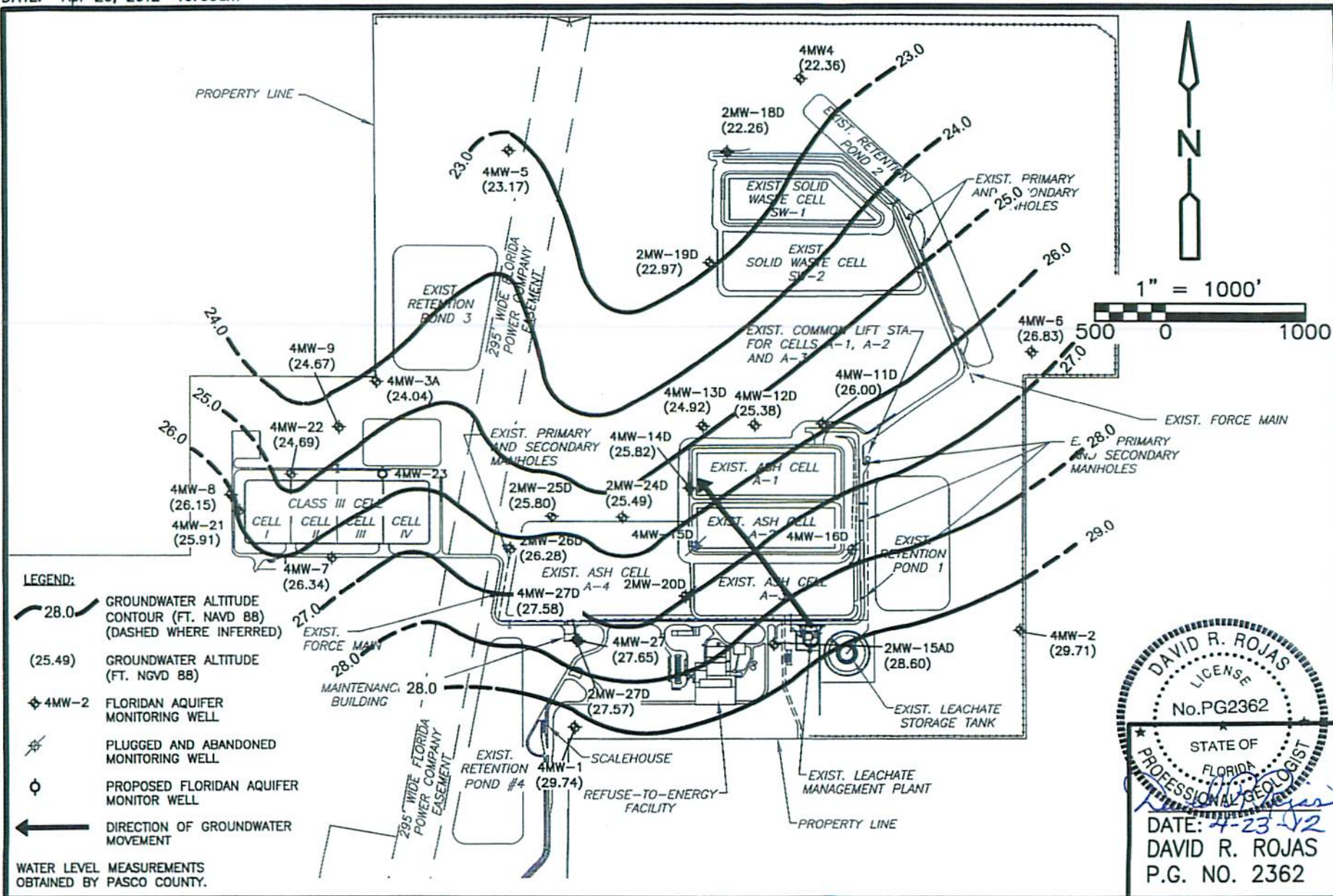
Surficial Aquifer Groundwater Contour Map - August 14, 2012
 Third Quarter, 2012
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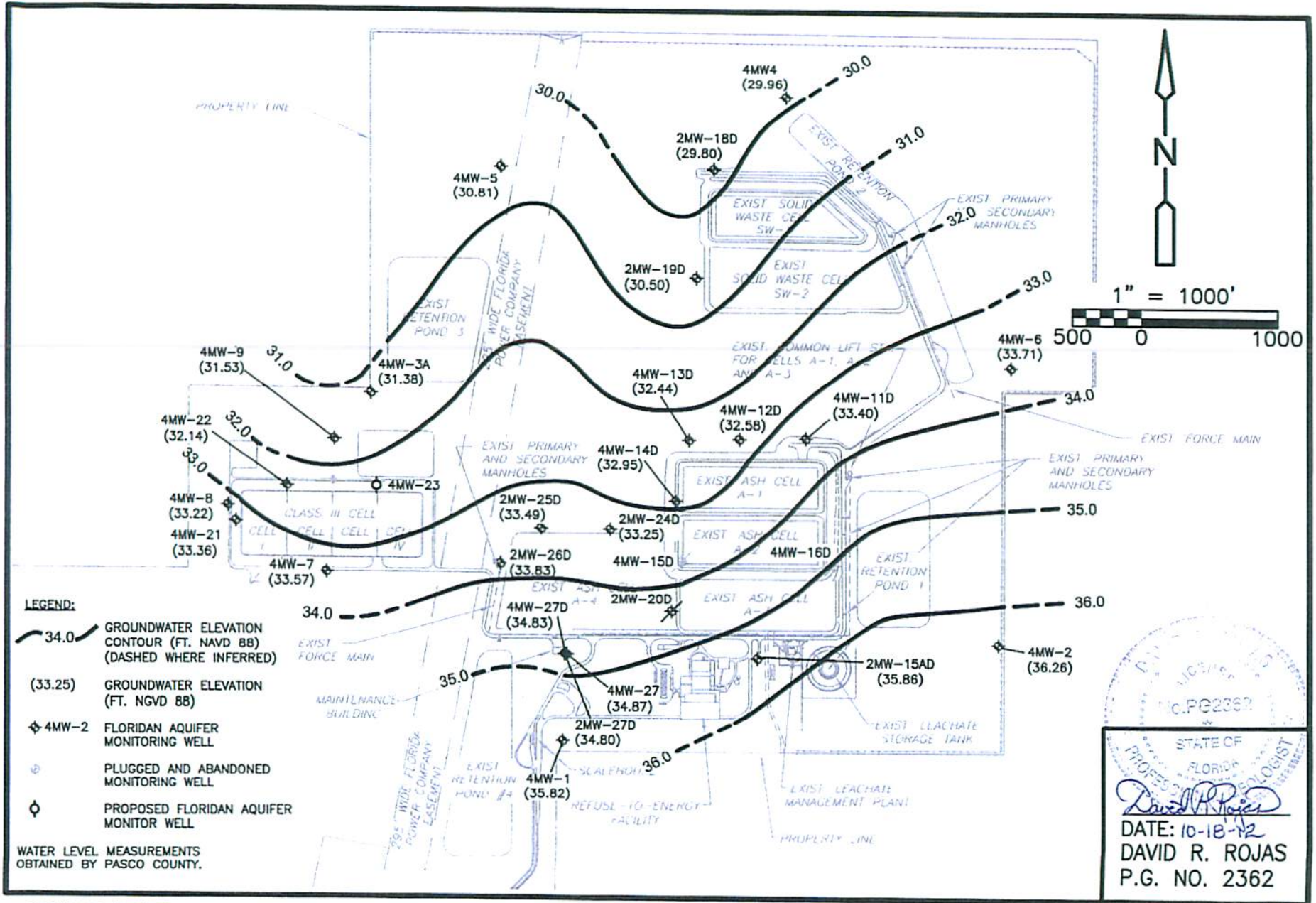
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Floridan Aquifer Groundwater Contour Map - August 14, 2012
 Third Quarter, 2012
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Figure A-1 Hydrograph of Surficial Aquifer Wells

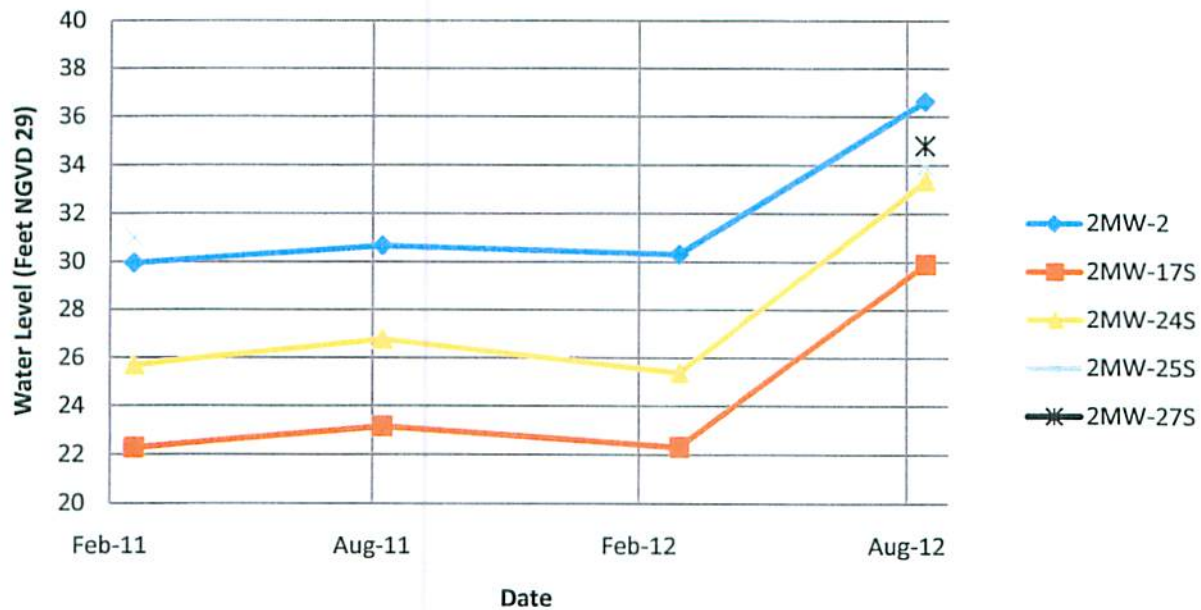
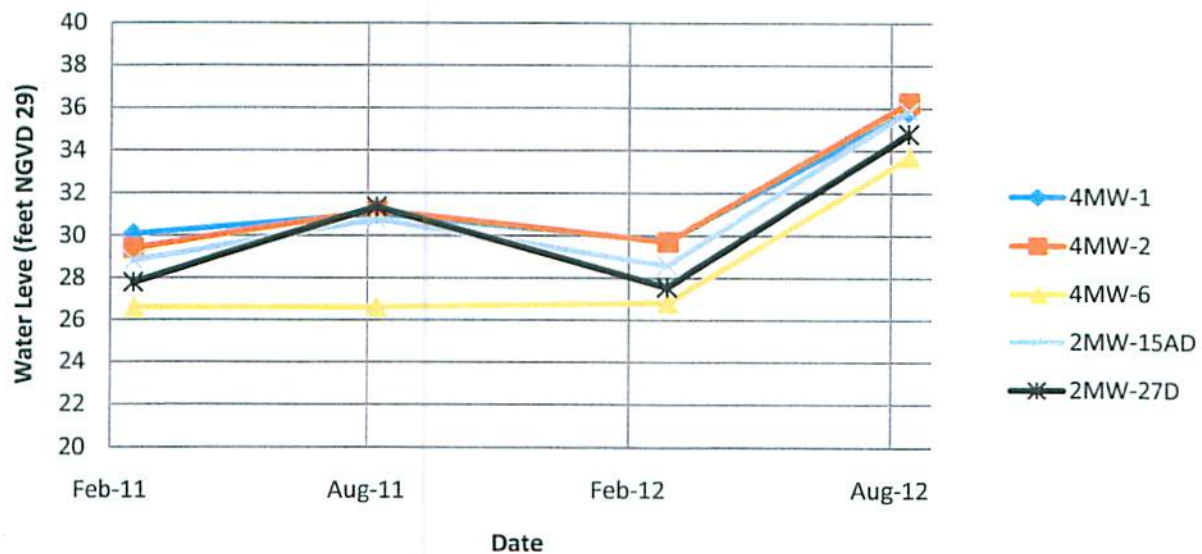


Figure A-2 Hydrographs of Floridan Aquifer Background Wells



(1) The following Surficial Wells were dry during the monitoring period: 2MW-1, 2MW-4, 2MW-5, 2MW-6, 2MW-13D, 2MW-26D

Figure A-3 Hydrographs of Deep Floridan Aquifer Background Wells

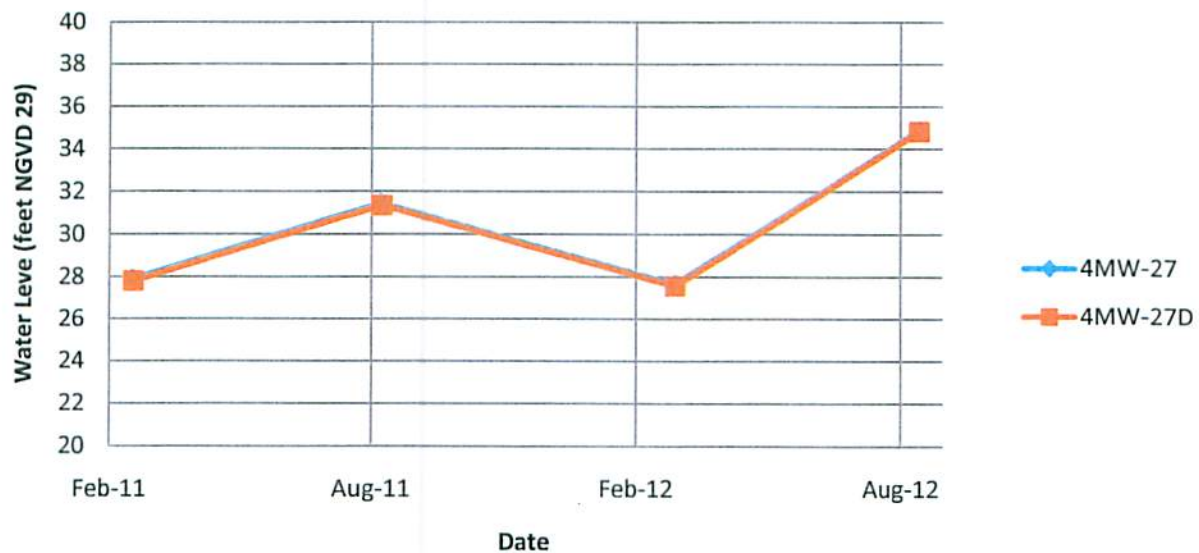
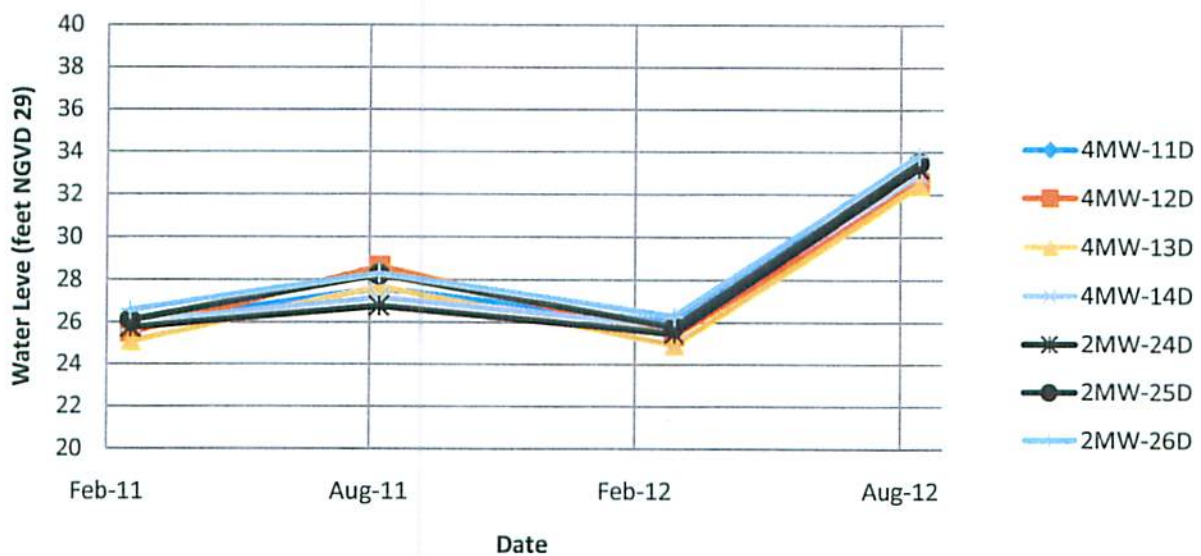
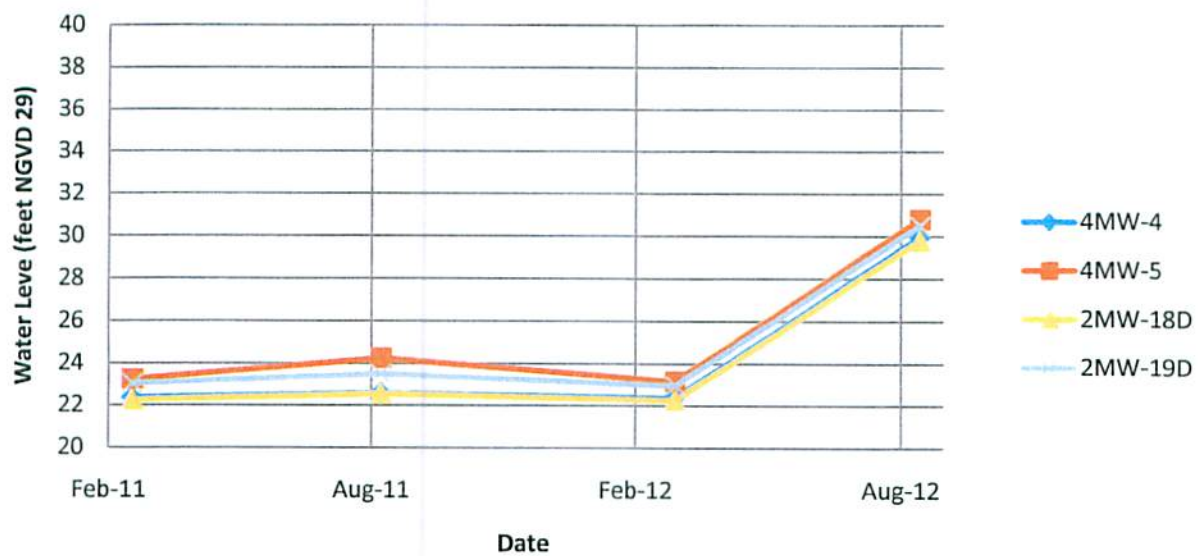


Figure A-4 Hydrographs of Floridan Aquifer Detection Wells in Vicinity of Ash Cells



**Figure A-5 Hydrographs of Floridan Aquifer
Detection Wells in Vicinity of Solid Waste Cells**



Appendix B

Summary of Groundwater and Leachate Quality Results and Parameter vs. Time Graphs for Groundwater Data

Table B-1 Analyte Detections in Surficial Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCTL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
2MW-2	Background	Barium	mg/l	2.00	0.008	0.0588	0.059	0.043
2MW-2	Background	Cadmium	mg/l	0.005			0.00042	0.00028
2MW-2	Background	Chloride	mg/l	250	3.63	2.74	3.40	3.98
2MW-2	Background	Chromium	mg/l	0.1			0.0017	0.00092
2MW-2	Background	Copper	mg/l	1.0	0.0068	0.0029	0.0053	0.0031
2MW-2	Background	Dissolved Oxygen	mg/l		3.47	4.23	3.66	3.13
2MW-2	Background	Iron	mg/l	0.3	0.0499	0.0121	0.0711	0.0832
2MW-2	Background	Lead	mg/l	0.015			0.00041	
2MW-2	Background	Mercury	mg/l	0.002		0.00013		
2MW-2	Background	Nickel	mg/l	0.1			0.00091	
2MW-2	Background	Nitrate (N)	mg/l	10	10.5	7.24	6.89	5.04
2MW-2	Background	pH	SU	6.5 - 8.5	6.28	5.30	6.10	5.61
2MW-2	Background	Residues- Filterable (TDS)	mg/l	500	96	76	60	52
2MW-2	Background	Sodium	mg/l	160	1.92	1.85	1.97	1.96
2MW-2	Background	Specific Conductance	µmhos/cm		96	79	81	74
2MW-2	Background	Temperature	°C		23.00	25.00	25.00	26.00
2MW-2	Background	Turbidity	NTU		0.0	12.4	0.0	4.7
2MW-2	Background	Zinc	mg/l	5			0.0150	0.0051
2MW-175	Detection	Antimony	mg/l	0.006				0.00019
2MW-175	Detection	Barium	mg/l	2.00	0.0115	0.0137	0.0120	0.0081
2MW-175	Detection	Cadmium	mg/l	0.005				0.00037
2MW-175	Detection	Chloride	mg/l	250	12.90	11.90	6.02	3.88
2MW-175	Detection	Chromium	mg/l	0.1			0.0020	0.0011
2MW-175	Detection	Copper	mg/l	1.0				0.00041
2MW-175	Detection	Dissolved Oxygen	mg/l		1.09	3.28	1.47	1.23
2MW-175	Detection	Iron	mg/l	0.3	0.004	0.0729	0.050	0.0455
2MW-175	Detection	Lead	mg/l	0.015				
2MW-175	Detection	Mercury	mg/l	0.002		0.00003	0.00004	
2MW-175	Detection	Nickel	mg/l	0.1			0.0021	0.0015
2MW-175	Detection	Nitrate (N)	mg/l	10	4.63	14.6	10.2	0.06
2MW-175	Detection	pH	SU	6.5 - 8.5	6.61	6.32	6.70	6.44
2MW-175	Detection	Residues- Filterable (TDS)	mg/l	500	180	268	186	132
2MW-175	Detection	Silver	mg/l	0.1			0.0027	
2MW-175	Detection	Sodium	mg/l	160	1.82	3.81	1.98	2.6
2MW-175	Detection	Specific Conductance	µmhos/cm		223	290	231	196
2MW-175	Detection	Temperature	°C		25.75	26.82	25.78	27.01
2MW-175	Detection	Turbidity	NTU		0.0	13.1	0.0	0.0
2MW-175	Detection	Vanadium	mg/l	0.049			0.0120	
2MW-175	Detection	Zinc	mg/l	5				0.0050
2MW-245	Detection	Barium	mg/l	2.00		0.0265		
2MW-245	Detection	Cadmium	mg/l	0.005		0.0007		
2MW-245	Detection	Chloride	mg/l	250		22.0		
2MW-245	Detection	Chromium	mg/l	0.1		0.0037		
2MW-245	Detection	Dissolved Oxygen	mg/l			1.54		
2MW-245	Detection	Iron	mg/l	0.3		0.522		
2MW-245	Detection	Mercury	mg/l	0.002		0.00011		
2MW-245	Detection	Nickel	mg/l	0.1		0.0045		
2MW-245	Detection	Nitrate (N)	mg/l	10		6.17		
2MW-245	Detection	pH	SU	6.5 - 8.5		7.34		
2MW-245	Detection	Residues- Filterable (TDS)	mg/l	500		296		
2MW-245	Detection	Sodium	mg/l	160		10.7		
2MW-245	Detection	Specific Conductance	µmhos/cm			434		
2MW-245	Detection	Temperature	°C			27.66		
2MW-245	Detection	Turbidity	NTU			2.3		
2MW-245	Detection	Vanadium	mg/l	0.049		0.0066		
2MW-275	Detection	2-Butanone	ug/l	4,200				52
2MW-275	Detection	2-Hexanone	ug/l	280				19
2MW-275	Detection	Acetone	ug/l	6,300				17
2MW-275	Detection	Ammonia (N)	mg/l	2.8				0.04
2MW-275	Detection	Arsenic	mg/l	0.01				0.011
2MW-275	Detection	Barium	mg/l	2.00				0.0400
2MW-275	Detection	Beryllium	mg/l	0.004				0.00036
2MW-275	Detection	Chloride	mg/l	250				36.3
2MW-275	Detection	Chromium	mg/l	0.1				0.00083
2MW-275	Detection	Copper	mg/l	1.0				0.00038
2MW-275	Detection	Dissolved Oxygen	mg/l					0.55
2MW-275	Detection	Iron	mg/l	0.3				4.600
2MW-275	Detection	Nickel	mg/l	0.1				0.0066
2MW-275	Detection	Nitrate (N)	mg/l	10				0.10
2MW-275	Detection	pH	SU	6.5 - 8.5				7.09
2MW-275	Detection	Residues- Filterable (TDS)	mg/l	500				438
2MW-275	Detection	Silver	mg/l	0.1				0.0048
2MW-275	Detection	Sodium	mg/l	160				24.3

Table B-1 Analyte Detections in Surficial Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCTL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
2MW-275	Detection	Specific Conductance	µmhos/cm					669
2MW-275	Detection	Temperature	°C					26.75
2MW-275	Detection	Turbidity	NTU					0.0
2MW-275	Detection	Zinc	mg/l	5				0.0036 I

NOTES:

GCTL - Groundwater Cleanup Target level (Chapter 62-777, F.A.C.)

MCL - Maximum Contaminant Target Level (Chapter 62-550, F.A.C.)

mg/l - milligrams per liter

ug/l - micrograms per liter

NTU - nephelometric turbidity units

°C - degrees Centigrade

I - analyte detected below the quantitation limit

SU - Standard Unit

µmhos/cm - micromohs per centimeter

Table B-2 Analyte Detections in Floridan Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
4MW-1	Background	Ammonia (N)	mg/l	2.8	0.13		0.13	
4MW-1	Background	Arsenic	mg/l	0.01			0.0022	
4MW-1	Background	Barium	mg/l	2.00	0.0210	0.0260	0.016	0.028
4MW-1	Background	Chloride	mg/l	250	44.7	94.8	33.7	135
4MW-1	Background	Chloroform	ug/l					0.9
4MW-1	Background	Chromium	mg/l	0.1			0.0011	0.00067
4MW-1	Background	Copper	mg/l	1.0			0.00027	0.00058
4MW-1	Background	Dissolved Oxygen	mg/l		0.22	0.75	0.85	0.80
4MW-1	Background	Iron	mg/l	0.3	0.120		0.3260	0.0647
4MW-1	Background	Mercury	mg/l	0.002		0.00009	0.00007	
4MW-1	Background	Nickel	mg/l	0.1		0.0037	0.0037	0.0099
4MW-1	Background	Nitrate (N)	mg/l	10		0.91		1.62
4MW-1	Background	pH	SU	6.5 - 8.5	7.67	7.48	7.68	6.88
4MW-1	Background	Residues- Filterable (TDS)	mg/l	500	278	458	254	564
4MW-1	Background	Selenium	mg/l	0.05				0.0018
4MW-1	Background	Sodium	mg/l	160	27.3	49.8	20.8	53.6
4MW-1	Background	Specific Conductance	umhos/cm		408	640	394	758
4MW-1	Background	Temperature	°C		23.98	25.59	23.50	25.57
4MW-1	Background	Turbidity	NTU		0.0	0.0	0.0	0.9
4MW-1	Background	Vinyl acetate	ug/l			3.4		
4MW-1	Background	Zinc	mg/l	5			0.0013	0.0016
4MW-2	Background	Ammonia (N)	mg/l	2.8		0.05		
4MW-2	Background	Arsenic	mg/l	0.01			0.0013	
4MW-2	Background	Barium	mg/l	2.00	0.0067	0.0068	0.0070	0.0057
4MW-2	Background	Chloride	mg/l	250	8.24	4.55	5.14	5.72
4MW-2	Background	Chromium	mg/l	0.1			0.0017	0.00085
4MW-2	Background	Copper	mg/l	1.0			0.00041	0.00016
4MW-2	Background	Dissolved Oxygen	mg/l		0.93	1.10	0.87	1.11
4MW-2	Background	Iron	mg/l	0.3			0.0056	0.0042
4MW-2	Background	Mercury	mg/l	0.002		0.00007		
4MW-2	Background	Nickel	mg/l	0.1			0.0015	0.0019
4MW-2	Background	Nitrate (N)	mg/l	10	3.09	2.44	2.04	1.16
4MW-2	Background	pH	SU	6.5 - 8.5	8.20	8.07	7.88	8.02
4MW-2	Background	Residues- Filterable (TDS)	mg/l	500	116	128	112	118
4MW-2	Background	Silver	mg/l	0.1			0.0013	
4MW-2	Background	Sodium	mg/l	160	2.71	2.68	2.56	2.73
4MW-2	Background	Specific Conductance	umhos/cm		166	178	174	176
4MW-2	Background	Temperature	°C		23.66	26.66	23.36	25.25
4MW-2	Background	Turbidity	NTU		0.0	0.0	0.0	1.1
4MW-2	Background	Vanadium	mg/l	0.049	0.0053	0.0052	0.0130	
4MW-2	Background	Zinc	mg/l	5			0.0027	
4MW-4	Compliance	Barium	mg/l	2.00	0.0091	0.0088	0.0093	0.0078
4MW-4	Compliance	Chloride	mg/l	250	41.5	14.8	16.8	18.9
4MW-4	Compliance	Chromium	mg/l	0.1			0.0021	0.0009
4MW-4	Compliance	Copper	mg/l	1.0				0.00048
4MW-4	Compliance	Dissolved Oxygen	mg/l		0.82	1.18	1.15	1.21
4MW-4	Compliance	Iron	mg/l	0.3		0.0068	0.0102	0.0085
4MW-4	Compliance	Mercury	mg/l	0.002	0.00003			
4MW-4	Compliance	Nickel	mg/l	0.1			0.0039	0.0045
4MW-4	Compliance	Nitrate (N)	mg/l	10	0.24	0.25	0.30	0.24
4MW-4	Compliance	pH	SU	6.5 - 8.5	7.66	7.47	7.44	7.61
4MW-4	Compliance	Residues- Filterable (TDS)	mg/l	500	252	264	236	268
4MW-4	Compliance	Sodium	mg/l	160	5.47	5.82	5.17	5.14
4MW-4	Compliance	Specific Conductance	umhos/cm		344	380	375	384
4MW-4	Compliance	Temperature	°C		24.31	24.62	23.72	26.00
4MW-4	Compliance	Turbidity	NTU		0.0	0.0	0.0	0.0
4MW-4	Compliance	Zinc	mg/l	5				0.0011
4MW-5	Compliance	Arsenic	mg/l	0.01			0.0013	
4MW-5	Compliance	Barium	mg/l	2.00	0.0114	0.0109	0.0110	0.0096
4MW-5	Compliance	Chloride	mg/l	250	80.3	69.5	76.2	79.6
4MW-5	Compliance	Chromium	mg/l	0.1			0.0023	0.0014
4MW-5	Compliance	Copper	mg/l	1.0				0.00044
4MW-5	Compliance	Dissolved Oxygen	mg/l		2.15	1.98	1.29	1.73
4MW-5	Compliance	Iron	mg/l	0.3			0.0096	0.0126
4MW-5	Compliance	Mercury	mg/l	0.002	0.00003			
4MW-5	Compliance	Nickel	mg/l	0.1			0.0050	0.0056
4MW-5	Compliance	Nitrate (N)	mg/l	10	0.96	1.06	1.02	0.80
4MW-5	Compliance	pH	SU	6.5 - 8.5	6.94	7.47	7.31	7.59
4MW-5	Compliance	Residues- Filterable (TDS)	mg/l	500	424	394	380	426
4MW-5	Compliance	Selenium	mg/l	0.05			0.0018	0.0013
4MW-5	Compliance	Sodium	mg/l	160	29.0	26.9	24.5	25.1
4MW-5	Compliance	Specific Conductance	umhos/cm		510	516	532	535
4MW-5	Compliance	Temperature	°C		22.68	26.98	24.61	25.75

Table B-2 Analyte Detections in Floridan Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
4MW-5	Compliance	Turbidity	NTU		0.0	0.0	0.0	0.0
4MW-5	Compliance	Zinc	mg/l	5			0.024	
4MW-6	Background	Barium	mg/l	2.00	0.0058		0.0051	0.0038
4MW-6	Background	Chloride	mg/l	250	5.21	3.72	4.40	4.61
4MW-6	Background	Chromium	mg/l	0.1			0.0024	0.0021
4MW-6	Background	Copper	mg/l	1.0		0.0062		0.00055
4MW-6	Background	Dissolved Oxygen	mg/l		2.71	3.31	2.60	3.79
4MW-6	Background	Iron	mg/l	0.3			0.0058	0.0045
4MW-6	Background	Nickel	mg/l	0.1			0.0010	0.0023
4MW-6	Background	Nitrate (N)	mg/l	10	1.04	0.96	0.96	0.61
4MW-6	Background	pH	SU	6.5 - 8.5	8.08	8.25	7.77	8.35
4MW-6	Background	Residues- Filterable (TDS)	mg/l	500	94	94	82	86
4MW-6	Background	Sodium	mg/l	160	2.72	2.95	2.64	2.55
4MW-6	Background	Specific Conductance	µmhos/cm		123	133	129	132
4MW-6	Background	Temperature	°C		24.02	25.27	24.57	26.16
4MW-6	Background	Turbidity	NTU		0.0	0.0	6.8	0.0
4MW-6	Background	Zinc	mg/l	5				0.0150
4MW-11D	Detection	Barium	mg/l	2.00	0.0065	0.0066	0.0065	0.0053
4MW-11D	Detection	Chloride	mg/l	250	11.0	9.15	9.04	11.70
4MW-11D	Detection	Chromium	mg/l	0.1			0.0020	0.00097
4MW-11D	Detection	Dissolved Oxygen	mg/l		3.14	2.00	2.05	1.78
4MW-11D	Detection	Iron	mg/l	0.3	0.0361	0.0184	0.0144	0.0209
4MW-11D	Detection	Mercury	mg/l	0.002	0.00003	0.00008		
4MW-11D	Detection	Nickel	mg/l	0.1			0.0027	0.0027
4MW-11D	Detection	Nitrate (N)	mg/l	10	0.83	1.10	0.83	0.89
4MW-11D	Detection	pH	SU	6.5 - 8.5	7.36	7.52	7.70	7.77
4MW-11D	Detection	Residues- Filterable (TDS)	mg/l	500	180	202	176	188
4MW-11D	Detection	Sodium	mg/l	160	3.86	3.87	3.76	3.97
4MW-11D	Detection	Specific Conductance	µmhos/cm		266	302	278	296
4MW-11D	Detection	Temperature	°C		22.28	25.89	23.98	25.56
4MW-11D	Detection	Turbidity	NTU		4.1	17.5	0.0	3.4
4MW-12D	Detection	Ammonia (N)	mg/l	2.8				0.11
4MW-12D	Detection	Antimony	mg/l	0.006				0.00012
4MW-12D	Detection	Barium	mg/l	2.00	0.0100	0.0101	0.0100	0.0072
4MW-12D	Detection	Chloride	mg/l	250	36.9	8.70	31.9	20.0
4MW-12D	Detection	Chromium	mg/l	0.1			0.0018	0.0008
4MW-12D	Detection	Dissolved Oxygen	mg/l		0.86	0.69	0.58	0.52
4MW-12D	Detection	Iron	mg/l	0.3	0.0067			0.0028
4MW-12D	Detection	Mercury	mg/l	0.002	0.00005	0.00006		
4MW-12D	Detection	Nickel	mg/l	0.1			0.0042	0.0037
4MW-12D	Detection	Nitrate (N)	mg/l	10		0.20		0.36
4MW-12D	Detection	pH	SU	6.5 - 8.5	6.97	7.33	7.37	7.49
4MW-12D	Detection	Residues- Filterable (TDS)	mg/l	500	314	336	302	268
4MW-12D	Detection	Selenium	mg/l	0.05			0.0014	0.0011
4MW-12D	Detection	Sodium	mg/l	160	8.38	8.70	8.22	5.90
4MW-12D	Detection	Specific Conductance	µmhos/cm		429	472	436	411
4MW-12D	Detection	Temperature	°C		23.33	26.61	26.10	26.91
4MW-12D	Detection	Turbidity	NTU		0.0	0.0	0.0	0.0
4MW-13D	Detection	Antimony	mg/l	0.006				0.000091
4MW-13D	Detection	Barium	mg/l	2.00	0.0095	0.0089	0.0100	0.0073
4MW-13D	Detection	Beryllium	mg/l	0.004				0.00027
4MW-13D	Detection	Chloride	mg/l	250	34.9	37.8	36.8	37.6
4MW-13D	Detection	Chromium	mg/l	0.1			0.0018	
4MW-13D	Detection	Dissolved Oxygen	mg/l		1.13	0.76	0.79	0.63
4MW-13D	Detection	Iron	mg/l	0.3	0.0042		0.0125	0.0095
4MW-13D	Detection	Mercury	mg/l	0.002	0.0001	0.00003	0.00008	
4MW-13D	Detection	Nickel	mg/l	0.1			0.0041	0.0025
4MW-13D	Detection	Nitrate (N)	mg/l	10	0.18	0.37	0.09	0.26
4MW-13D	Detection	pH	SU	6.5 - 8.5	7.18	7.51	7.35	7.72
4MW-13D	Detection	Residues- Filterable (TDS)	mg/l	500	280	356	280	304
4MW-13D	Detection	Selenium	mg/l	0.05			0.0013	0.0029
4MW-13D	Detection	Silver	mg/l	0.1			0.0014	0.0056
4MW-13D	Detection	Sodium	mg/l	160	10.6	12.2	10.5	11.8
4MW-13D	Detection	Specific Conductance	µmhos/cm		402	422	424	422
4MW-13D	Detection	Temperature	°C		24.08	26.29	26.11	26.43
4MW-13D	Detection	Turbidity	NTU		0.0	3.7	0.0	1.7
4MW-13D	Detection	Vanadium	mg/l	0.049			0.0120	0.0086
4MW-14D	Detection	Barium	mg/l	2.00	0.0118	0.0109	0.0120	0.0095
4MW-14D	Detection	Carbon disulfide	ug/l	700	2.50			
4MW-14D	Detection	Chloride	mg/l	250	44.8	36.0	41.2	34.6
4MW-14D	Detection	Chromium	mg/l	0.1	0.0046		0.0023	0.0013
4MW-14D	Detection	Copper	mg/l	1.0				0.0002
4MW-14D	Detection	Dissolved Oxygen	mg/l		1.89	1.57	0.98	0.92

Table B-2 Analyte Detections in Floridan Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
4MW-14D	Detection	Iron	mg/l	0.3	0.0273	0.0498	0.0676	0.0628
4MW-14D	Detection	Mercury	mg/l	0.002	0.00004			
4MW-14D	Detection	Nickel	mg/l	0.1	0.0033		0.0044	0.0040
4MW-14D	Detection	Nitrate (N)	mg/l	10	0.61	1.01	0.58	0.74
4MW-14D	Detection	pH	SU	6.5 - 8.5	7.24	7.65	7.40	7.81
4MW-14D	Detection	Residues- Filterable (TDS)	mg/l	500	274	262	254	272
4MW-14D	Detection	Selenium	mg/l	0.05			0.0018	0.0015
4MW-14D	Detection	Silver	mg/l	0.1			0.0013	
4MW-14D	Detection	Sodium	mg/l	160	14.0	14.1	13.5	12.5
4MW-14D	Detection	Specific Conductance	µmhos/cm		379	389	393	394
4MW-14D	Detection	Temperature	°C		24.53	26.71	26.16	26.81
4MW-14D	Detection	Turbidity	NTU		3.4	0.0	1.4	0.0
2MW-15AD	Background	Acetone	ug/l	6,300				4.0
2MW-15AD	Background	Ammonia (N)	mg/l	2.8				0.06
2MW-15AD	Background	Antimony	mg/l	0.006				0.00015
2MW-15AD	Background	Barium	mg/l	2.00	0.0084	0.0141	0.0084	0.0110
2MW-15AD	Background	Chloride	mg/l	250	6.15	9.84	7.19	8.55
2MW-15AD	Background	Chromium	mg/l	0.1			0.0012	0.00089
2MW-15AD	Background	Copper	mg/l	1.0				0.00032
2MW-15AD	Background	Dissolved Oxygen	mg/l		1.12	1.51	1.05	1.09
2MW-15AD	Background	Iron	mg/l	0.3	0.0419	0.0532	0.0800	0.1580
2MW-15AD	Background	Mercury	mg/l	0.002	0.00006	0.00009	0.00004	
2MW-15AD	Background	Nickel	mg/l	0.1			0.0021	0.0023
2MW-15AD	Background	Nitrate (N)	mg/l	10		1.12		0.28
2MW-15AD	Background	pH	SU	6.5 - 8.5	7.34	7.59	7.71	7.76
2MW-15AD	Background	Residues- Filterable (TDS)	mg/l	500	138	186	144	180
2MW-15AD	Background	Sodium	mg/l	160	3.08	4.81	3.76	4.48
2MW-15AD	Background	Specific Conductance	µmhos/cm		210	308	233	288
2MW-15AD	Background	Temperature	°C		24.62	26.32	24.47	27.55
2MW-15AD	Background	Turbidity	NTU		0.0	0.0	0.0	13.2
2MW-15AD	Background	Zinc	mg/l	5			0.00093	0.00730
2MW-18D	Detection	Barium	mg/l	2.00	0.0106	0.0102	0.0100	0.0092
2MW-18D	Detection	Chloride	mg/l	250	34.0	34.1	39.2	41.7
2MW-18D	Detection	Chromium	mg/l	0.1			0.0029	0.0016
2MW-18D	Detection	Copper	mg/l	1.0				0.00086
2MW-18D	Detection	Dissolved Oxygen	mg/l		0.63	1.16	0.97	1.13
2MW-18D	Detection	Iron	mg/l	0.3	0.0258		0.0954	0.4940
2MW-18D	Detection	Lead	mg/l	0.015				0.00059
2MW-18D	Detection	Mercury	mg/l	0.002	0.00003	0.00003		
2MW-18D	Detection	Nickel	mg/l	0.1			0.0042	0.0052
2MW-18D	Detection	Nitrate (N)	mg/l	10	0.71	3.33	0.52	0.69
2MW-18D	Detection	pH	SU	6.5 - 8.5	7.58	7.10	7.34	7.62
2MW-18D	Detection	Residues- Filterable (TDS)	mg/l	500	318	296	302	324
2MW-18D	Detection	Selenium	mg/l	0.05			0.0012	
2MW-18D	Detection	Silver	mg/l	0.1			0.0015	
2MW-18D	Detection	Sodium	mg/l	160	11.7	10.8	11.2	11.4
2MW-18D	Detection	Specific Conductance	µmhos/cm		399	381	432	438
2MW-18D	Detection	Temperature	°C		24.77	25.48	24.65	26.03
2MW-18D	Detection	Turbidity	NTU		0.0	15.0	8.6	8.4
2MW-18D	Detection	Vanadium	mg/l	0.049			0.0140	
2MW-18D	Detection	Zinc	mg/l	5				0.00540
2MW-19D	Detection	Barium	mg/l	2.00	0.0112	0.0104	0.0110	0.0094
2MW-19D	Detection	Cadmium	mg/l	0.005				0.00036
2MW-19D	Detection	Chloride	mg/l	250	27.5	24.2	28.7	18.9
2MW-19D	Detection	Chromium	mg/l	0.1			0.0015	0.00068
2MW-19D	Detection	Copper	mg/l	1.0				0.0011
2MW-19D	Detection	Dissolved Oxygen	mg/l		0.64	1.05	0.50	1.06
2MW-19D	Detection	Iron	mg/l	0.3	0.039	0.002	0.0045	0.1390
2MW-19D	Detection	Lead	mg/l	0.015				0.00035
2MW-19D	Detection	Mercury	mg/l	0.002	0.00008	0.00003		0.00004
2MW-19D	Detection	Nickel	mg/l	0.1			0.0043	0.0051
2MW-19D	Detection	Nitrate (N)	mg/l	10	0.14	0.27	0.10	
2MW-19D	Detection	pH	SU	6.5 - 8.5	7.58	7.49	7.25	7.45
2MW-19D	Detection	Residues- Filterable (TDS)	mg/l	500	322	324	306	282
2MW-19D	Detection	Sodium	mg/l	160	8.56	8.72	8.57	7.03
2MW-19D	Detection	Specific Conductance	µmhos/cm		418	429	446	438
2MW-19D	Detection	Temperature	°C		24.60	25.72	25.29	26.81
2MW-19D	Detection	Turbidity	NTU		0.0	0.0	0.0	1.7
2MW-19D	Detection	Vanadium	mg/l	0.049	0.0053			
2MW-19D	Detection	Zinc	mg/l	5				0.00180
2MW-24D	Detection	Ammonia (N)	mg/l	2.8				0.04
2MW-24D	Detection	Antimony	mg/l	0.006				0.00019
2MW-24D	Detection	Barium	mg/l	2.00	0.0143	0.0153	0.0140	0.0140

Table B-2 Analyte Detections in Floridan Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
2MW-24D	Detection	Chloride	mg/l	250	55.6	63.1	59.6	61.4
2MW-24D	Detection	Chloroform	ug/l				0.3	0.3
2MW-24D	Detection	Chromium	mg/l	0.1			0.0014	0.0010
2MW-24D	Detection	Copper	mg/l	1.0			0.00041	0.00026
2MW-24D	Detection	Dissolved Oxygen	mg/l		1.25	0.80	0.75	0.56
2MW-24D	Detection	Iron	mg/l	0.3	0.0086		0.1110	0.0620
2MW-24D	Detection	Mercury	mg/l	0.002	0.00004	0.00009	0.00006	
2MW-24D	Detection	Nickel	mg/l	0.1			0.0044	0.0039
2MW-24D	Detection	Nitrate (N)	mg/l	10	1.05	1.43	1.33	1.12
2MW-24D	Detection	pH	SU	6.5 - 8.5	7.31	7.66	7.55	7.75
2MW-24D	Detection	Residues- Filterable (TDS)	mg/l	500	304	334	338	352
2MW-24D	Detection	Selenium	mg/l	0.05			0.0016	0.0016
2MW-24D	Detection	Sodium	mg/l	160	21.6	24.6	24.5	24.1
2MW-24D	Detection	Specific Conductance	umhos/cm		416	459	473	493
2MW-24D	Detection	Temperature	°C		22.63	27.06	24.62	28.93
2MW-24D	Detection	Turbidity	NTU		0.0	0.0	2.0	4.3
2MW-24D	Detection	Zinc	mg/l	5			0.0013	0.00240
2MW-25D	Detection	Ammonia (N)	mg/l	2.8		0.38		0.04
2MW-25D	Detection	Antimony	mg/l	0.006				0.00014
2MW-25D	Detection	Arsenic	mg/l	0.01			0.0034	
2MW-25D	Detection	Barium	mg/l	2.00	0.0307	0.0336	0.0270	0.0240
2MW-25D	Detection	Cadmium	mg/l	0.005			0.00032	
2MW-25D	Detection	Chloride	mg/l	250	107	40.6	106	64.9
2MW-25D	Detection	Chromium	mg/l	0.1			0.0010	0.00076
2MW-25D	Detection	Copper	mg/l	1.0			0.00063	0.00064
2MW-25D	Detection	Dissolved Oxygen	mg/l		0.91	1.02	0.38	0.74
2MW-25D	Detection	Iron	mg/l	0.3	0.0719	0.543	0.569	0.0616
2MW-25D	Detection	Mercury	mg/l	0.002	0.00004	0.00010	0.00008	
2MW-25D	Detection	Nickel	mg/l	0.1	0.0034	0.0040	0.0072	0.0060
2MW-25D	Detection	Nitrate (N)	mg/l	10	0.61	0.04	0.95	
2MW-25D	Detection	pH	SU	6.5 - 8.5	6.96	7.25	7.21	7.44
2MW-25D	Detection	Residues- Filterable (TDS)	mg/l	500	480	394	490	434
2MW-25D	Detection	Selenium	mg/l	0.05			0.0023	0.0015
2MW-25D	Detection	Sodium	mg/l	160	45.3	24.2	45.6	30.5
2MW-25D	Detection	Specific Conductance	umhos/cm		663	596	691	615
2MW-25D	Detection	Temperature	°C		24.38	27.33	25.27	29.10
2MW-25D	Detection	Turbidity	NTU		0.0	0.0	6.9	4.3
2MW-25D	Detection	Zinc	mg/l	5			0.0017	0.0034
2MW-26D	Detection	Arsenic	mg/l	0.01			0.00095	
2MW-26D	Detection	Barium	mg/l	2.00	0.0156	0.0197	0.0180	0.0170
2MW-26D	Detection	Chloride	mg/l	250	71.8	78.7	77.5	9.55
2MW-26D	Detection	Chromium	mg/l	0.1			0.0017	
2MW-26D	Detection	Copper	mg/l	1.0			0.00061	0.00030
2MW-26D	Detection	Dissolved Oxygen	mg/l		1.46	1.39	0.65	0.86
2MW-26D	Detection	Iron	mg/l	0.3	0.0183	0.0092	0.2240	0.0427
2MW-26D	Detection	Mercury	mg/l	0.002	0.00005	0.00009		
2MW-26D	Detection	Nickel	mg/l	0.1			0.0056	0.0041
2MW-26D	Detection	Nitrate (N)	mg/l	10	0.77	1.29	0.74	
2MW-26D	Detection	pH	SU	6.5 - 8.5	7.09	7.37	7.45	7.66
2MW-26D	Detection	Residues- Filterable (TDS)	mg/l	500	376	412	386	372
2MW-26D	Detection	Selenium	mg/l	0.05			0.0018	0.0019
2MW-26D	Detection	Sodium	mg/l	160	32.4	32.8	31.2	29.7
2MW-26D	Detection	Specific Conductance	umhos/cm		498	551	555	534
2MW-26D	Detection	Temperature	°C		24.73	26.45	24.65	27.05
2MW-26D	Detection	Turbidity	NTU		0.0	0.0	3.5	0.0
2MW-26D	Detection	Vanadium	mg/l	0.049	0.0071			
2MW-26D	Detection	Zinc	mg/l	5			0.0028	0.0018
2MW-27D	Background	Acetone	ug/l	6,300	8.3			
2MW-27D	Background	Antimony	mg/l	0.006			0.000930	0.000082
2MW-27D	Background	Arsenic	mg/l	0.01			0.0015	
2MW-27D	Background	Barium	mg/l	2.00	0.0418	0.0350	0.0300	0.0210
2MW-27D	Background	Beryllium	mg/l	0.004			0.00032	0.000220
2MW-27D	Background	Chloride	mg/l	250	125	127	138	5.08
2MW-27D	Background	Chloroform	ug/l			0.74		
2MW-27D	Background	Chromium	mg/l	0.1			0.0018	0.00090
2MW-27D	Background	Copper	mg/l	1.0			0.00039	0.00058
2MW-27D	Background	Dissolved Oxygen	mg/l		1.24	0.57	0.51	0.33
2MW-27D	Background	Iron	mg/l	0.3	0.1010	0.0337	0.0437	0.0642
2MW-27D	Background	Mercury	mg/l	0.002	0.00003	0.00009		
2MW-27D	Background	Nickel	mg/l	0.1	0.0037	0.0038	0.0069	0.0068
2MW-27D	Background	Nitrate (N)	mg/l	10	0.89	1.08	1.25	1.06
2MW-27D	Background	pH	SU	6.5 - 8.5	7.13	7.69	7.49	7.83
2MW-27D	Background	Residues- Filterable (TDS)	mg/l	500	510	530	486	506

Table B-2 Analyte Detections in Floridan Aquifer Monitor Wells for West Pasco Class I Landfill from 2011 to 2012

Well No.	Well Designation	Parameter	Units	GCTL/MCL	Feb-11	Aug-11	Feb-12	Aug-12
2MW-27D	Background	Selenium	mg/l	0.05				0.0010 I
2MW-27D	Background	Silver	mg/l	0.1				0.0027 I
2MW-27D	Background	Sodium	mg/l	160	54.5	58.9	55.4	56.2
2MW-27D	Background	Specific Conductance	umhos/cm		681	690	709	691
2MW-27D	Background	Temperature	°C		24.05	26.32	23.46	26.56
2MW-27D	Background	Turbidity	NTU		4.2	0.0	0.0	0.0
2MW-27D	Background	Vanadium	mg/l	0.049			0.0085 I	0.0230
2MW-27D	Background	Zinc	mg/l	5			0.0025 I	0.0017 I
4MW-27	Background	Acetone	ug/l	6,300	1,330		8.8	
4MW-27	Background	Ammonia (N)	mg/l	2.8	0.06 I		0.04 I	
4MW-27	Background	Antimony	mg/l	0.006			0.0012	0.000095 I
4MW-27	Background	Arsenic	mg/l	0.01			0.0012 I	
4MW-27	Background	Barium	mg/l	2.00	0.0238	0.0266	0.0260	0.0089
4MW-27	Background	Beryllium	mg/l	0.004				0.000380 I
4MW-27	Background	Carbon disulfide	ug/l	700				0.2 I
4MW-27	Background	Chloride	mg/l	250	126	154	136	124
4MW-27	Background	Chromium	mg/l	0.1			0.0016 I	0.00083 I
4MW-27	Background	Copper	mg/l	1.0	0.0026 I		0.00048 I	
4MW-27	Background	Dissolved Oxygen	mg/l		0.27	0.68	0.40	0.33
4MW-27	Background	Iron	mg/l	0.3	0.0028 I		0.0104	0.0199
4MW-27	Background	Mercury	mg/l	0.002	0.00005 I	0.00009 I		
4MW-27	Background	Nickel	mg/l	0.1	0.0072	0.0038 I	0.0066	0.0019 I
4MW-27	Background	Nitrate (N)	mg/l	10	0.50	0.98	0.78	0.50
4MW-27	Background	pH	SU	6.5 - 8.5	8.84	7.65	7.55	7.81
4MW-27	Background	Residues- Filterable (TDS)	mg/l	500	344	534	494	490
4MW-27	Background	Silver	mg/l	0.1				0.0060 I
4MW-27	Background	Sodium	mg/l	160	67.6	61.6	53.4	54.3
4MW-27	Background	Specific Conductance	umhos/cm		453	704	691	675
4MW-27	Background	Temperature	°C		24.92	26.01	23.55	25.52
4MW-27	Background	Turbidity	NTU		0.0	0.0	0.0	0.0
4MW-27	Background	Vanadium	mg/l	0.049	0.0993	0.0306	0.0270	
4MW-27	Background	Zinc	mg/l	5			0.0042 I	0.0063
4MW-27D	Background	Acetone	ug/l	6,300	6.3 I			
4MW-27D	Background	Ammonia (N)	mg/l	2.8	0.26 I	0.26	0.25	0.27
4MW-27D	Background	Antimony	mg/l	0.006			0.0012	0.00014 I
4MW-27D	Background	Barium	mg/l	2.00	0.0109	0.0113	0.0100	0.0270
4MW-27D	Background	Beryllium	mg/l	0.004			0.00048 I	0.000170 I
4MW-27D	Background	Chloride	mg/l	250	12.8	4.84	5.25	4.98
4MW-27D	Background	Chloroform	ug/l					0.2 I
4MW-27D	Background	Chromium	mg/l	0.1			0.0015 I	0.00096 I
4MW-27D	Background	Copper	mg/l	1.0				0.00051
4MW-27D	Background	Dissolved Oxygen	mg/l		0.65	0.62	0.71	0.44
4MW-27D	Background	Iron	mg/l	0.3	0.0610	0.0675	0.0499	0.0832
4MW-27D	Background	Mercury	mg/l	0.002		0.00009 I		
4MW-27D	Background	Nickel	mg/l	0.1			0.0017 I	0.0068
4MW-27D	Background	pH	SU	6.5 - 8.5	7.83	7.95	7.90	8.29
4MW-27D	Background	Residues- Filterable (TDS)	mg/l	500	156	138	152	146
4MW-27D	Background	Silver	mg/l	0.1				0.0037 I
4MW-27D	Background	Sodium	mg/l	160	2.96	3.20	3.92	3.52
4MW-27D	Background	Specific Conductance	umhos/cm		216	236	232	233
4MW-27D	Background	Temperature	°C		24.11	25.37	22.94	25.77
4MW-27D	Background	Thallium	mg/l	0.002				0.00044 I
4MW-27D	Background	Turbidity	NTU		0.0	0.0	0.0	0.0
4MW-27D	Background	Vanadium	mg/l	0.049			0.0120	
4MW-27D	Background	Zinc	mg/l	5			0.0027 I	0.0024 I

NOTES:

GCTL - Groundwater Cleanup Target level (Chapter 62-777, F.A.C.)

MCL - Maximum Contaminant Target Level (Chapter 62-550, F.A.C.)

mg/l - milligrams per liter

ug/L - micrograms per liter

NTU - nephelometric turbidity units

°C - degrees Centigrade

I - analyte detected below the quantitation limit

SU - Standard Unit

umhos/cm - micromhos per centimeter

Surficial Aquifer Background Wells

2 MW - 2

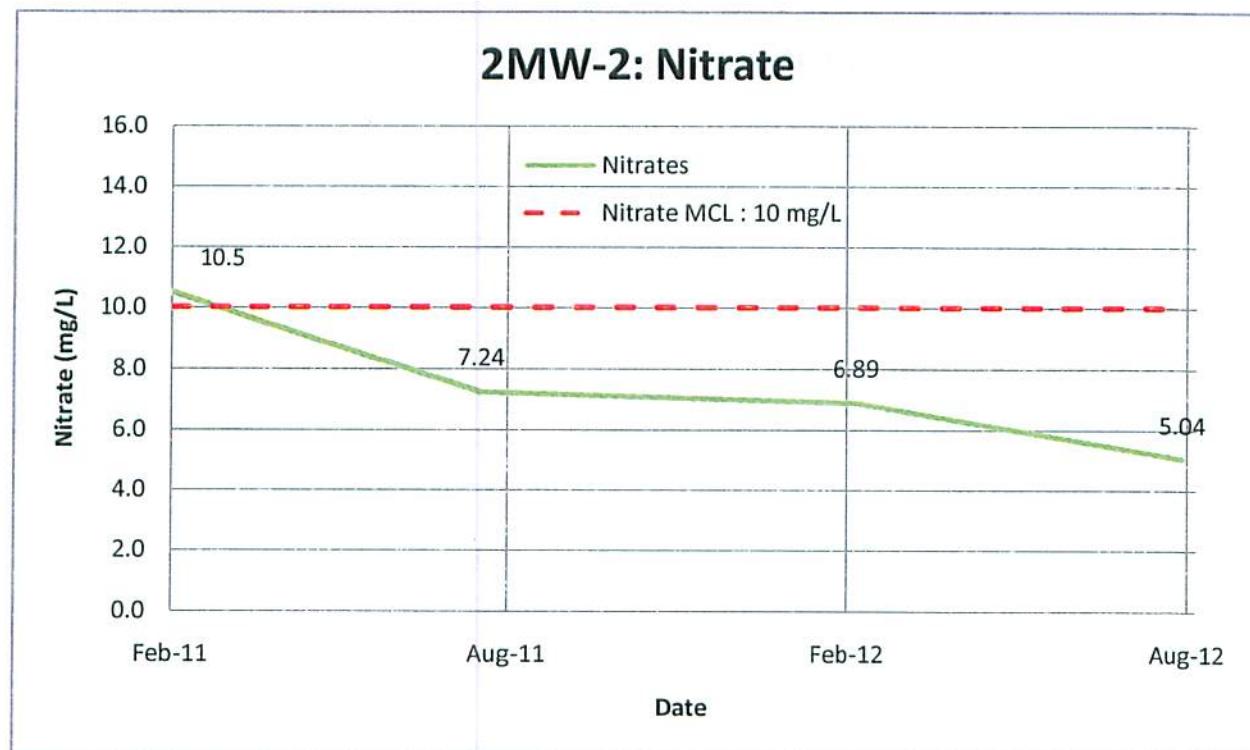
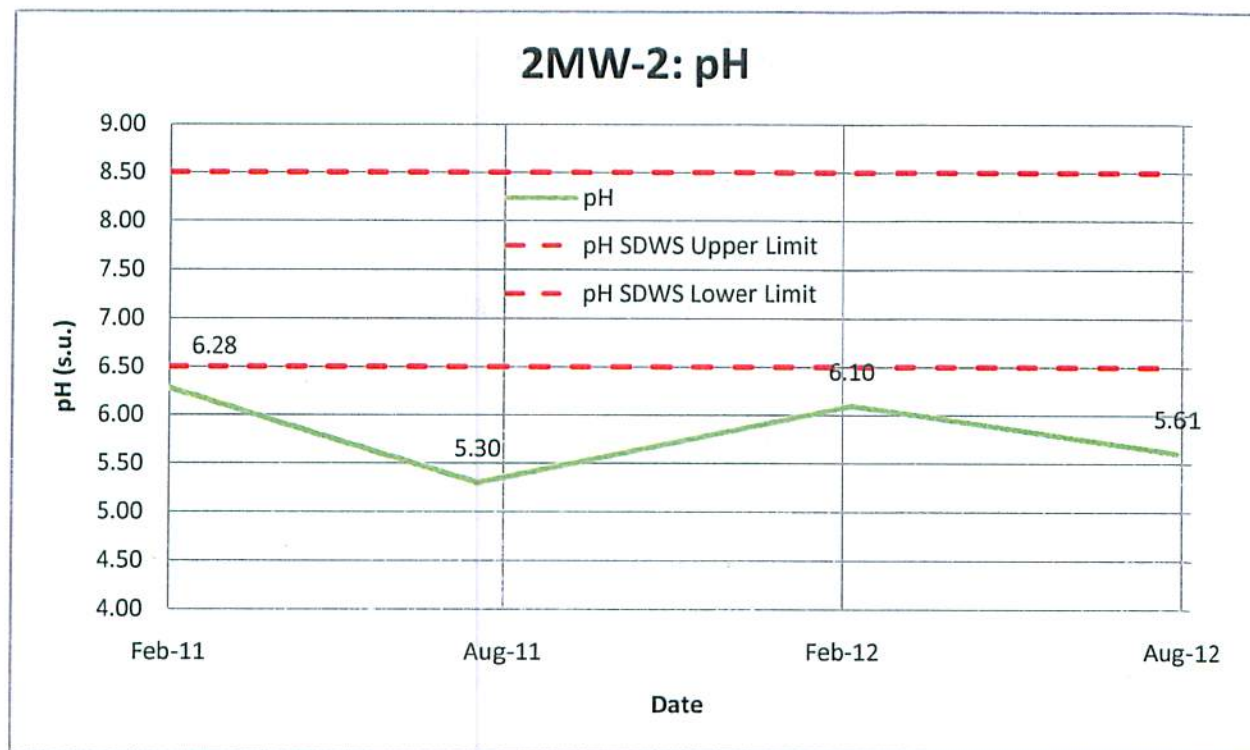


Figure B-1 pH and Nitrate Trends for 2MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

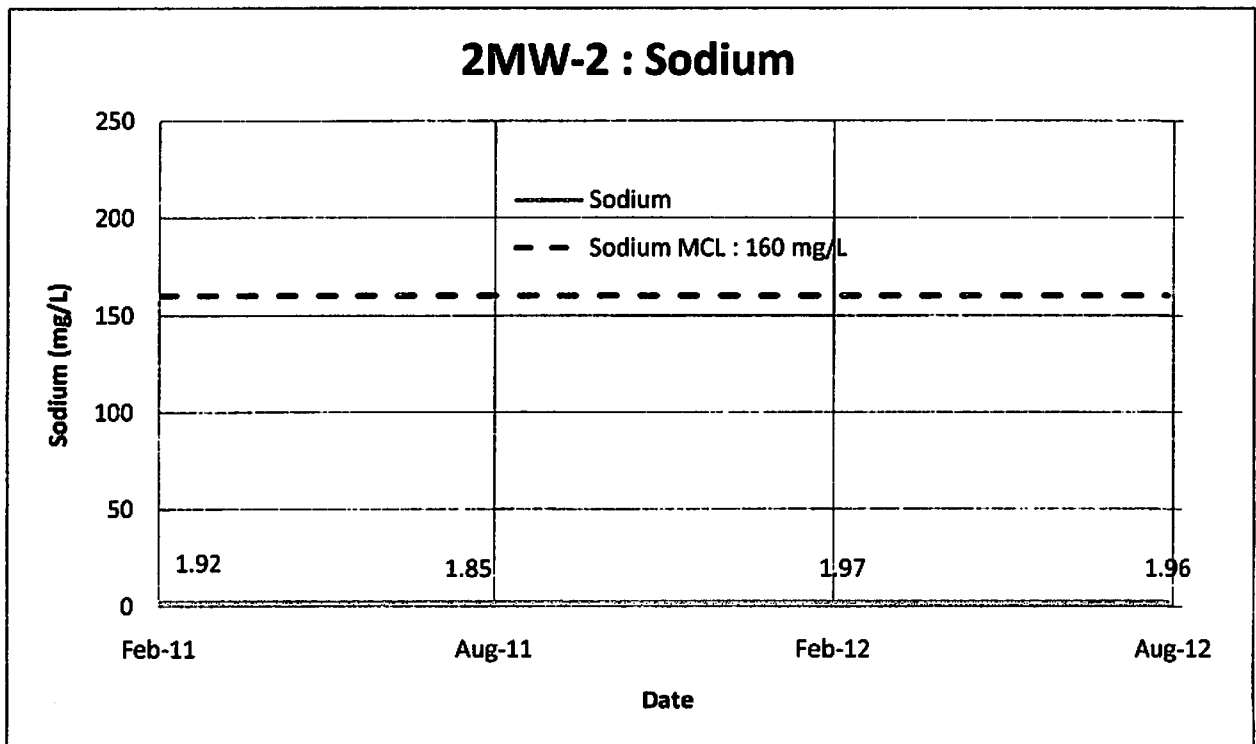
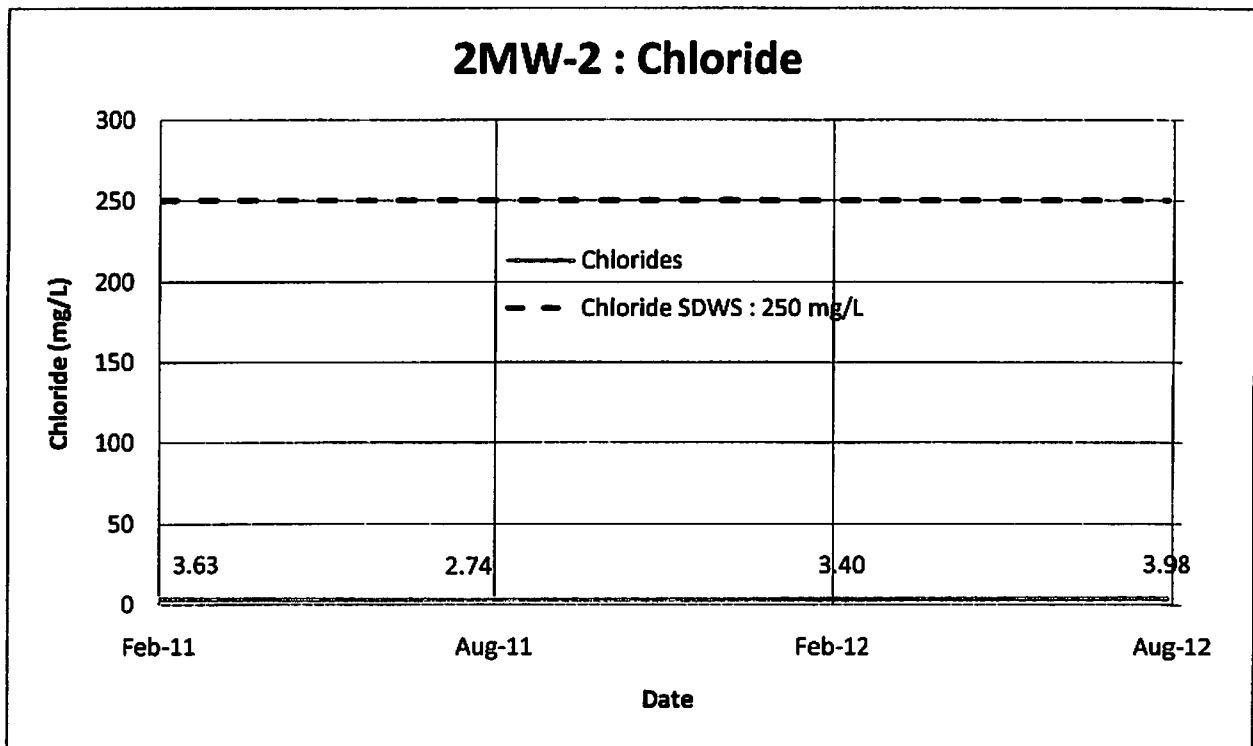


Figure B-2 Chloride and Sodium Trends for 2MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

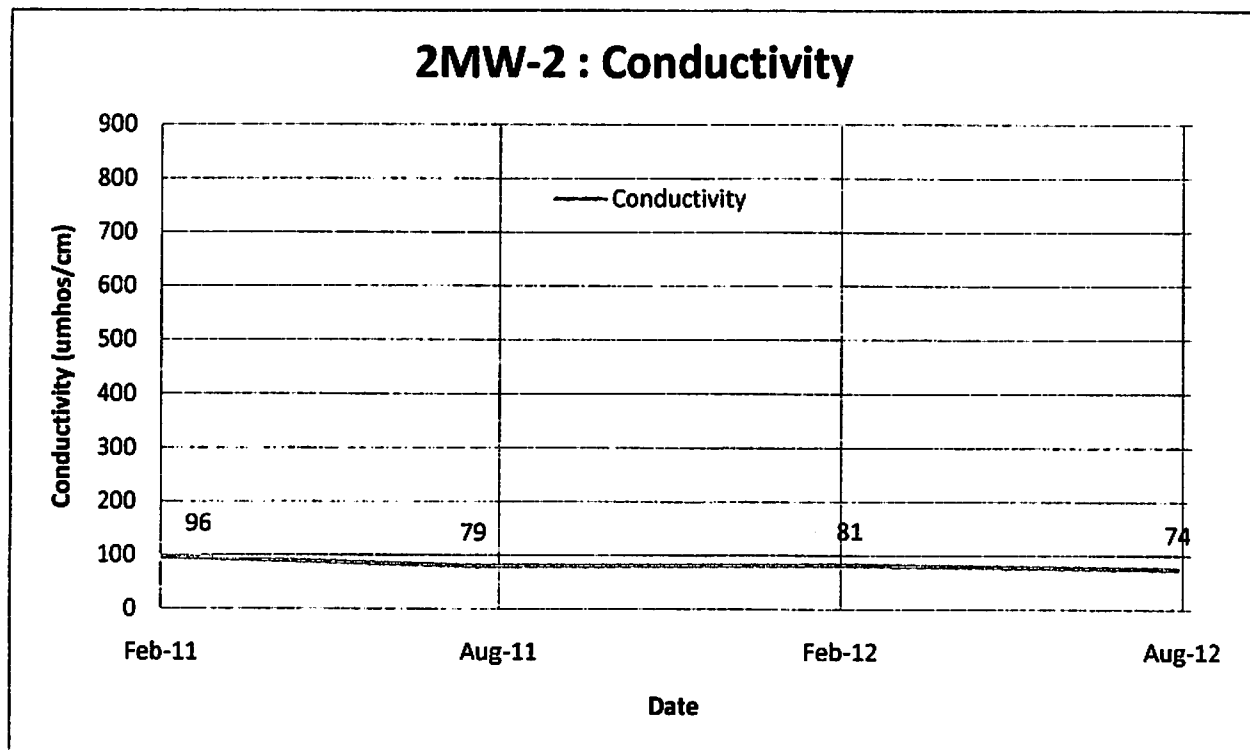
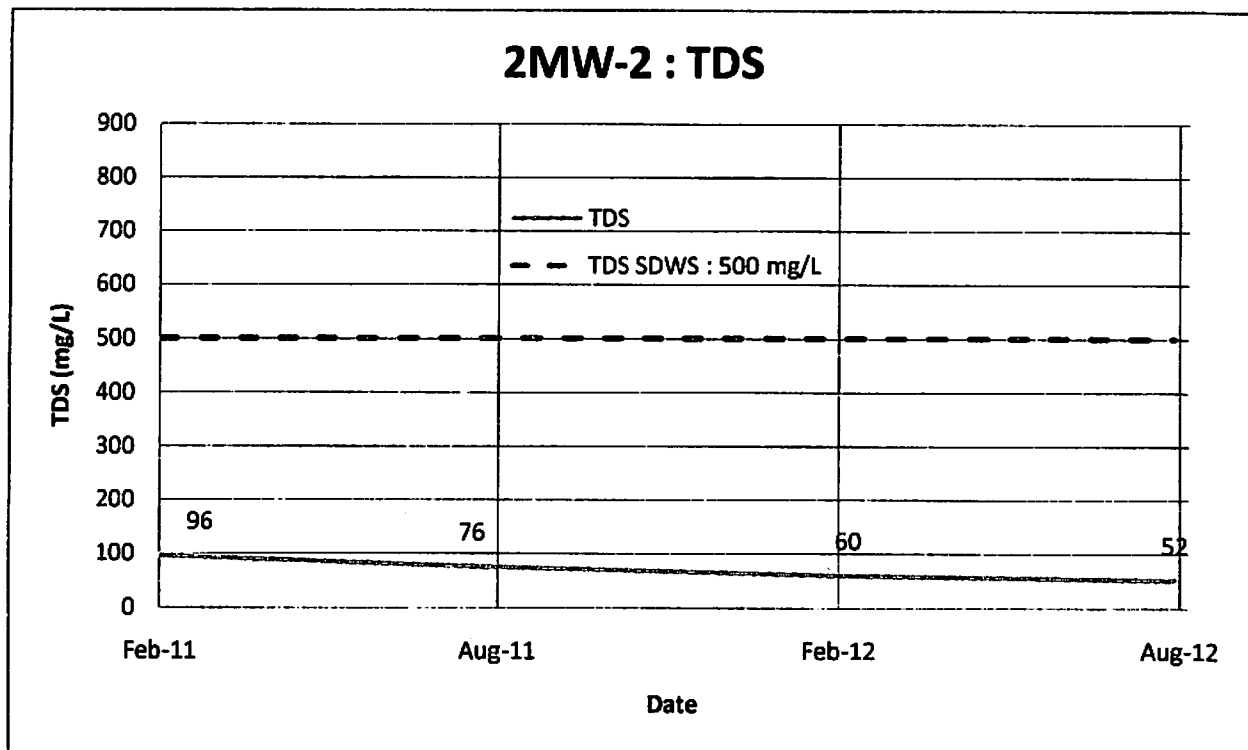


Figure B-3 TDS and Conductivity Trends for 2MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

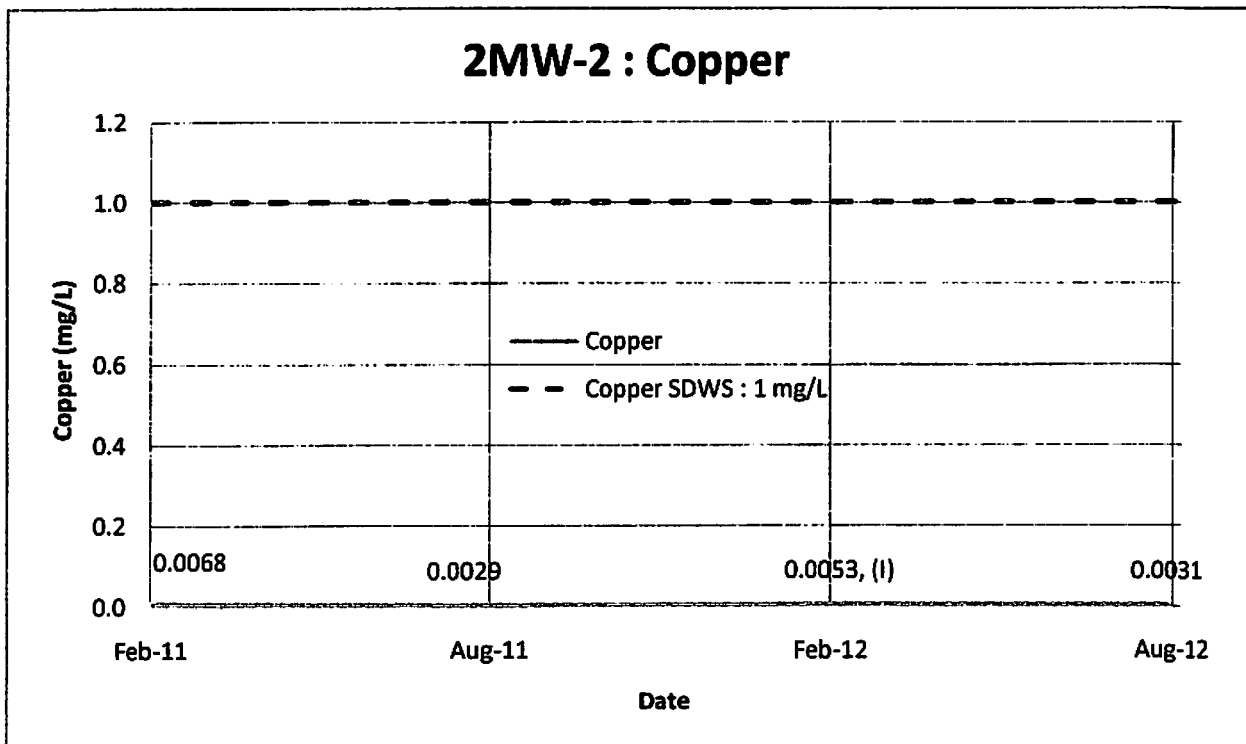
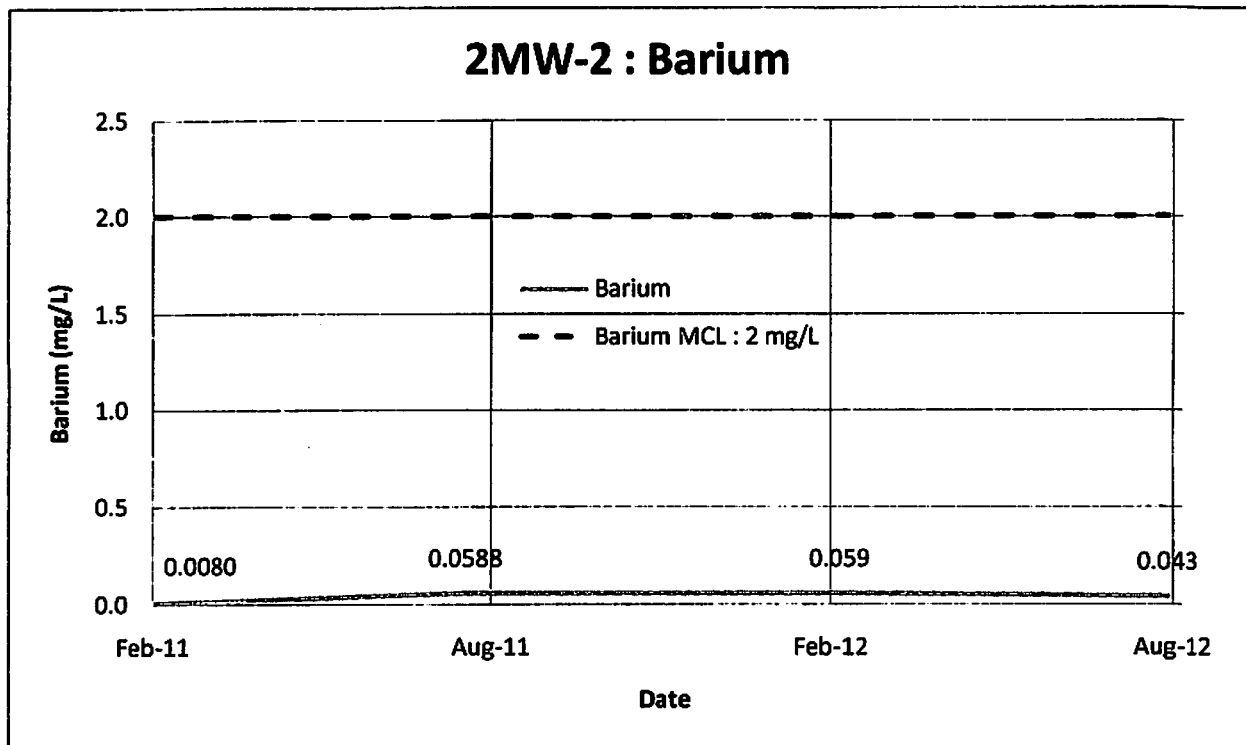


Figure B-4 Barium and Copper Trends for 2MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(I) Analyte detected below quantitation limit

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

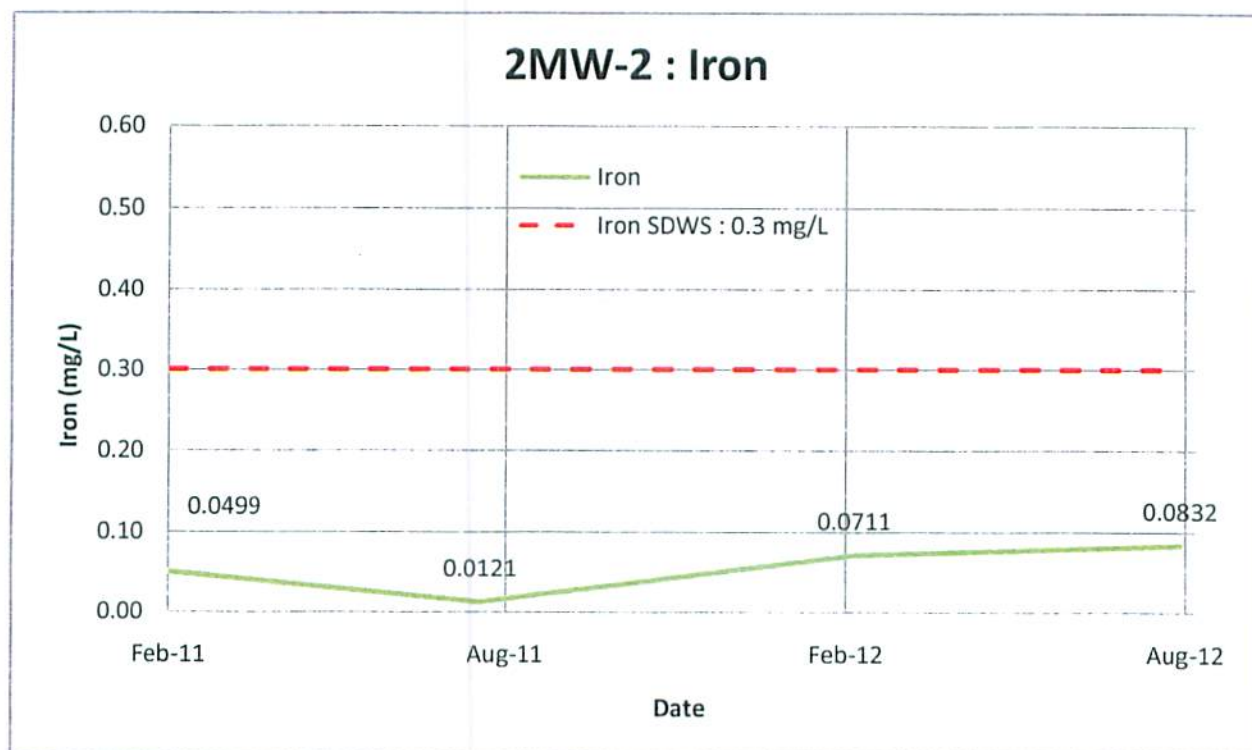
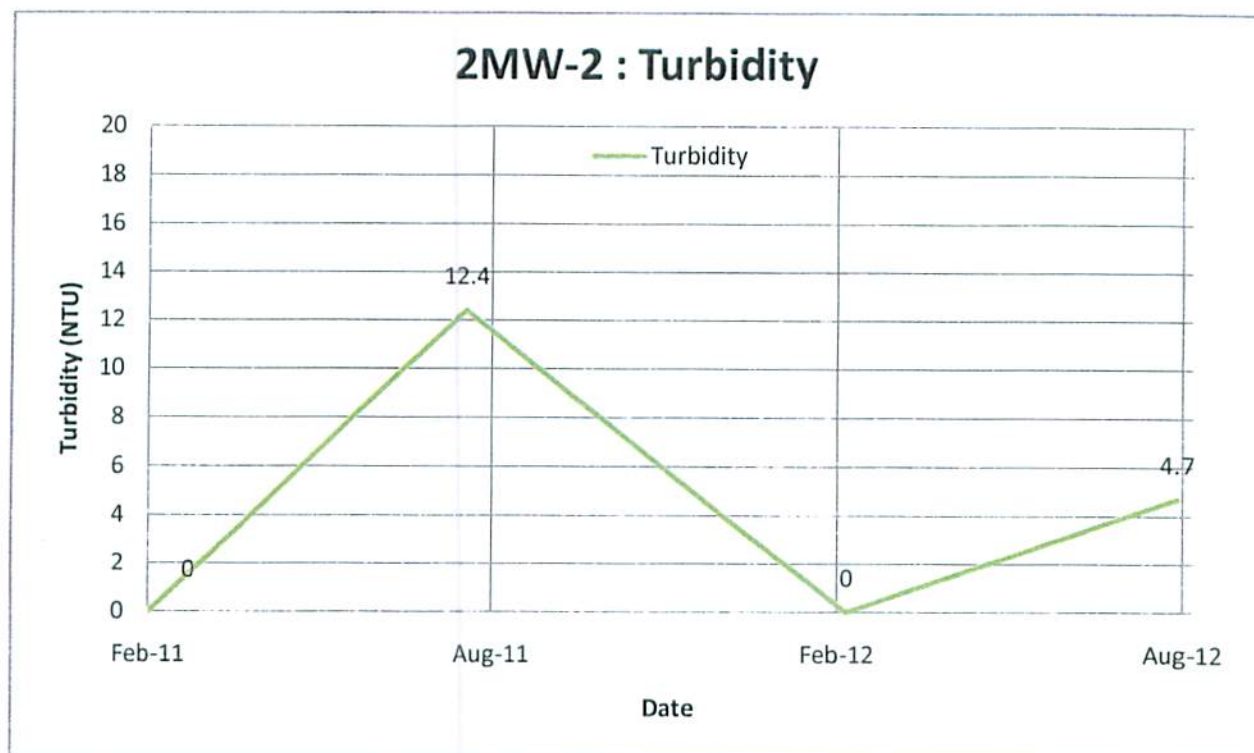


Figure B-5 Turbidity and Iron Trends for 2MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

Surficial Aquifer Detection Well

2MW - 17S

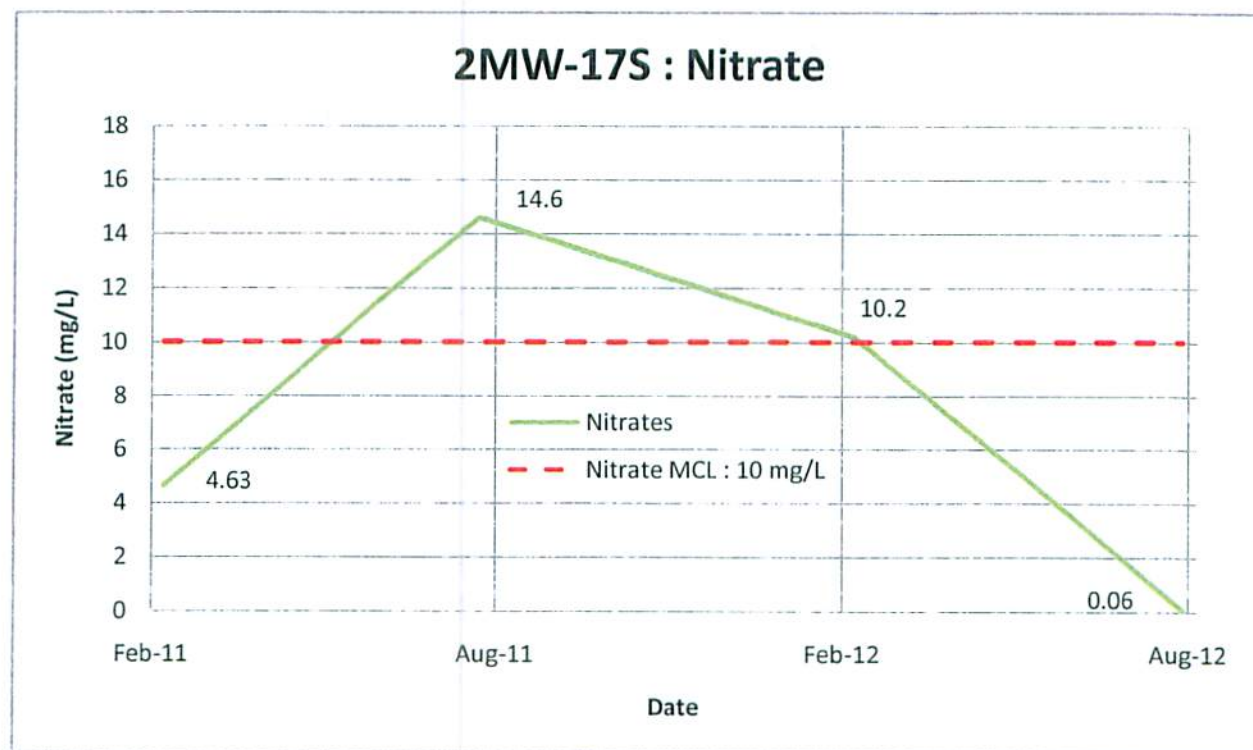
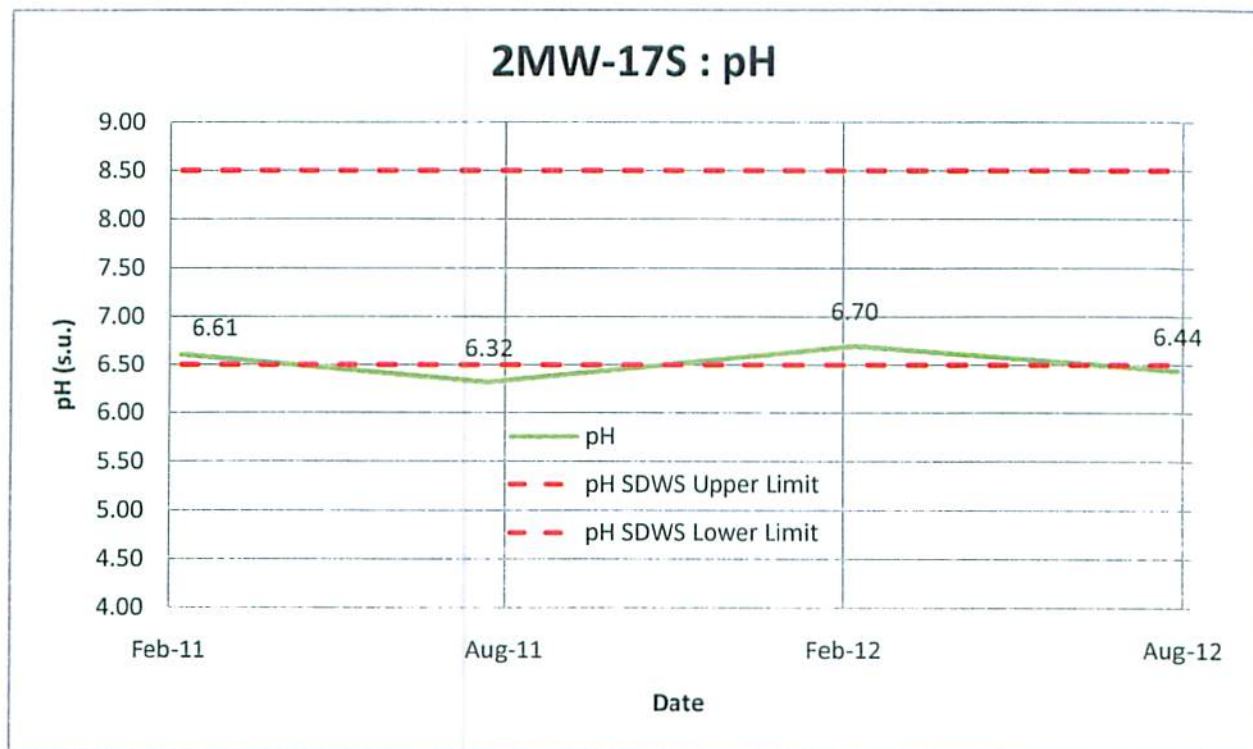


Figure B-6 pH and Nitrate Trends for 2MW-17S

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

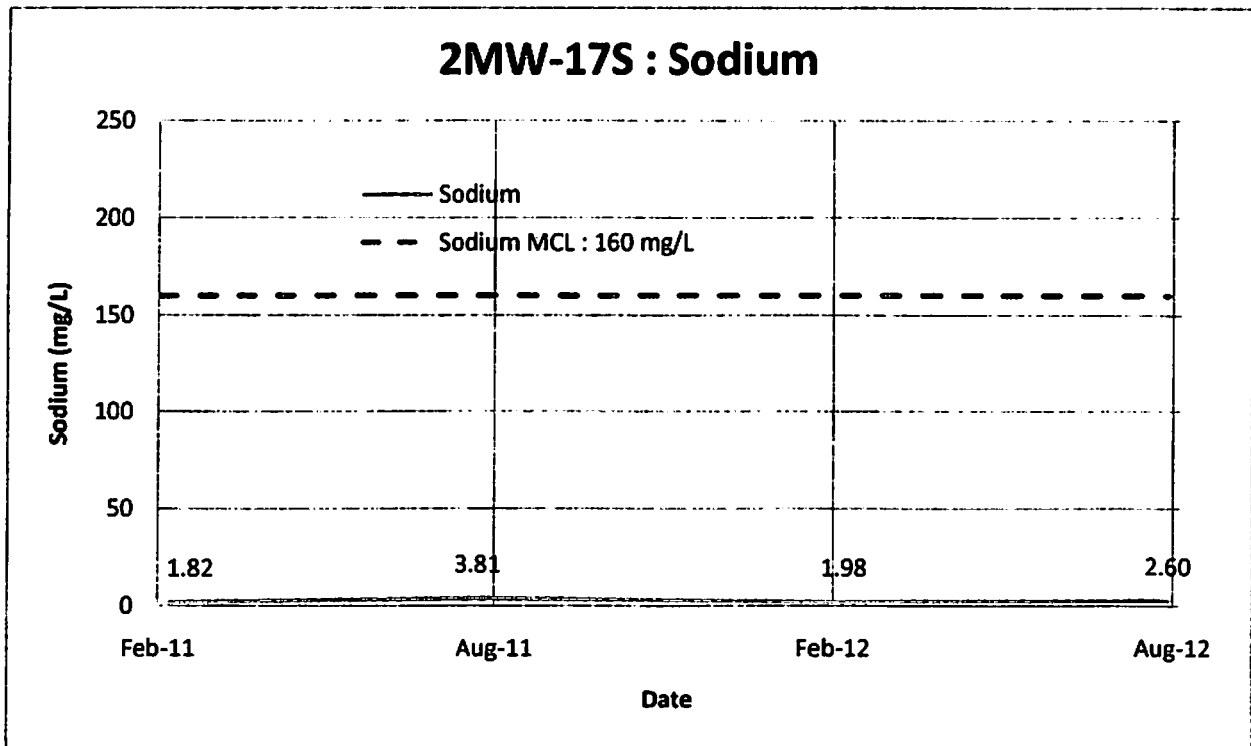
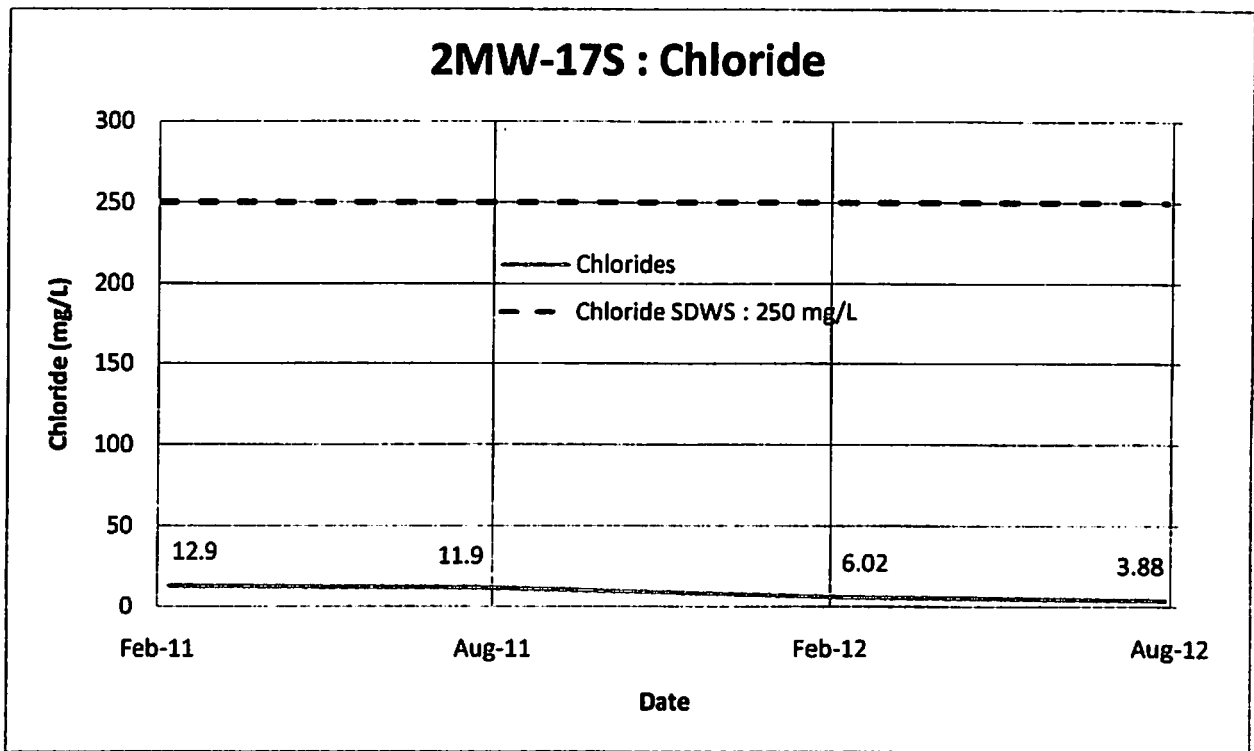


Figure B-7 Chloride and Sodium Trends for 2MW-17S

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

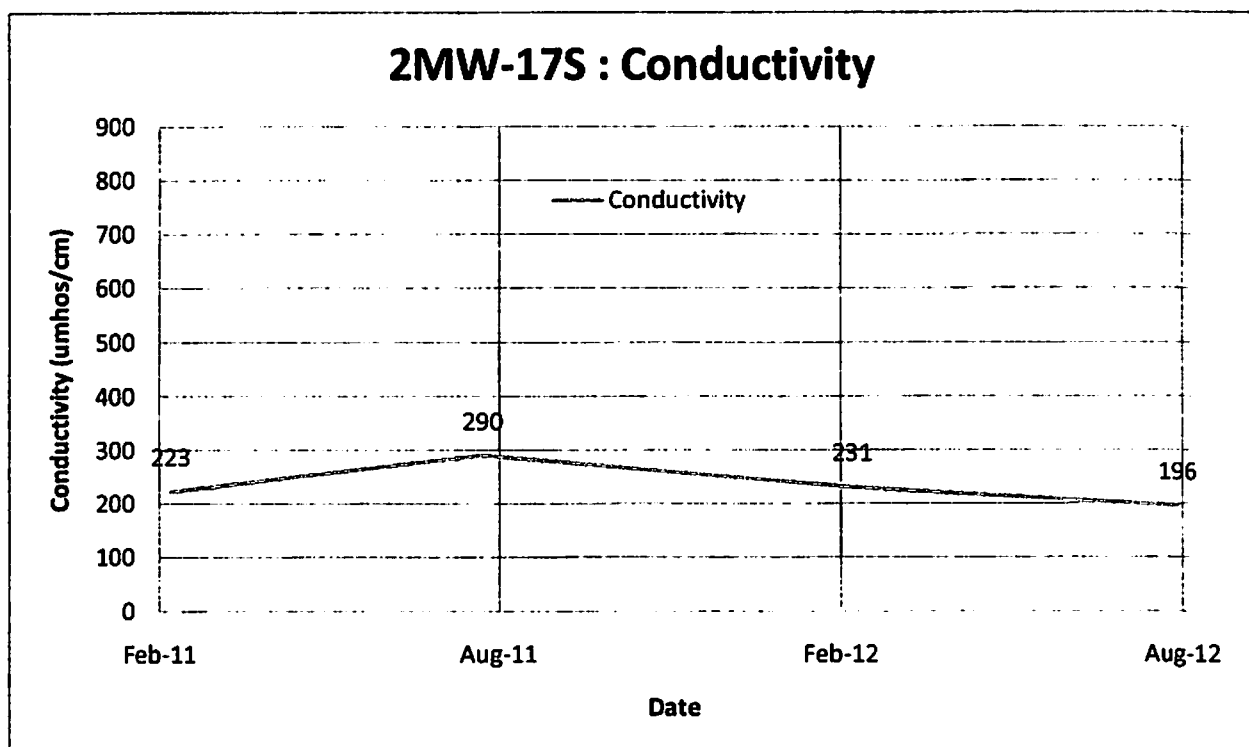
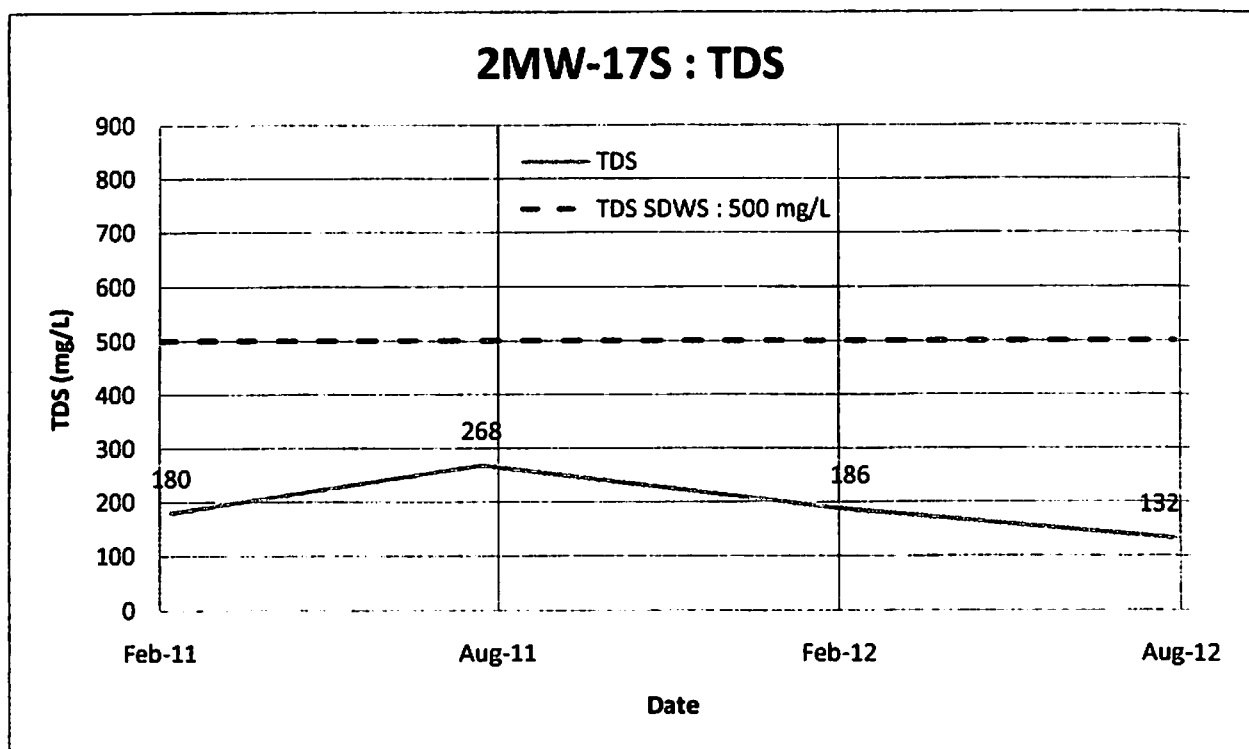


Figure B-8 TDS and Conductivity Trends for 2MW-17S

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

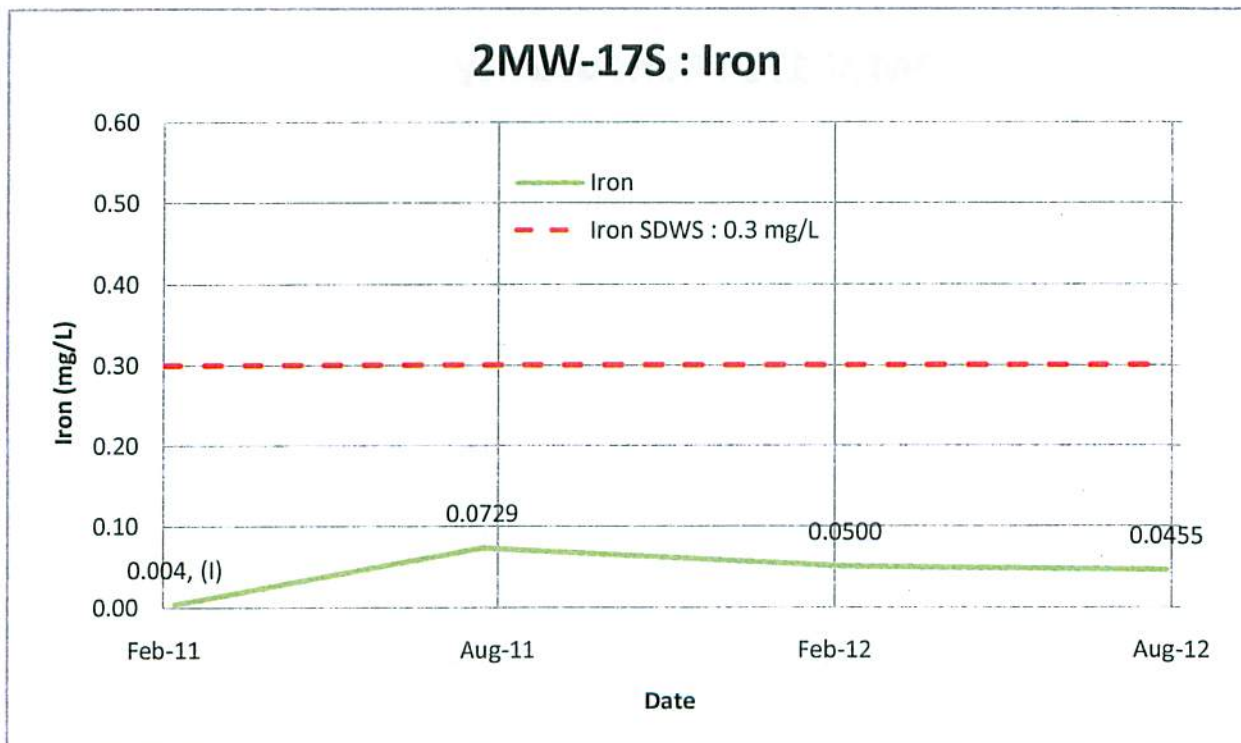
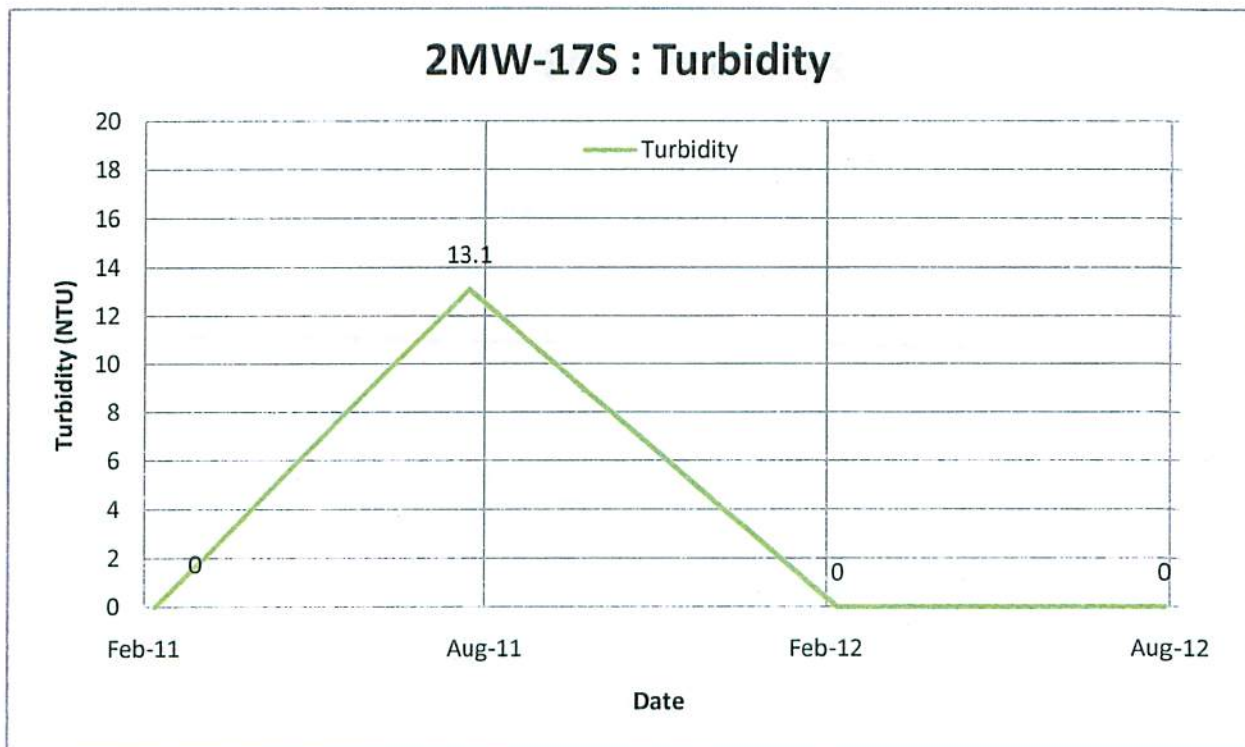


Figure B-9 Turbidity and Iron Trends for 2MW-17S

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

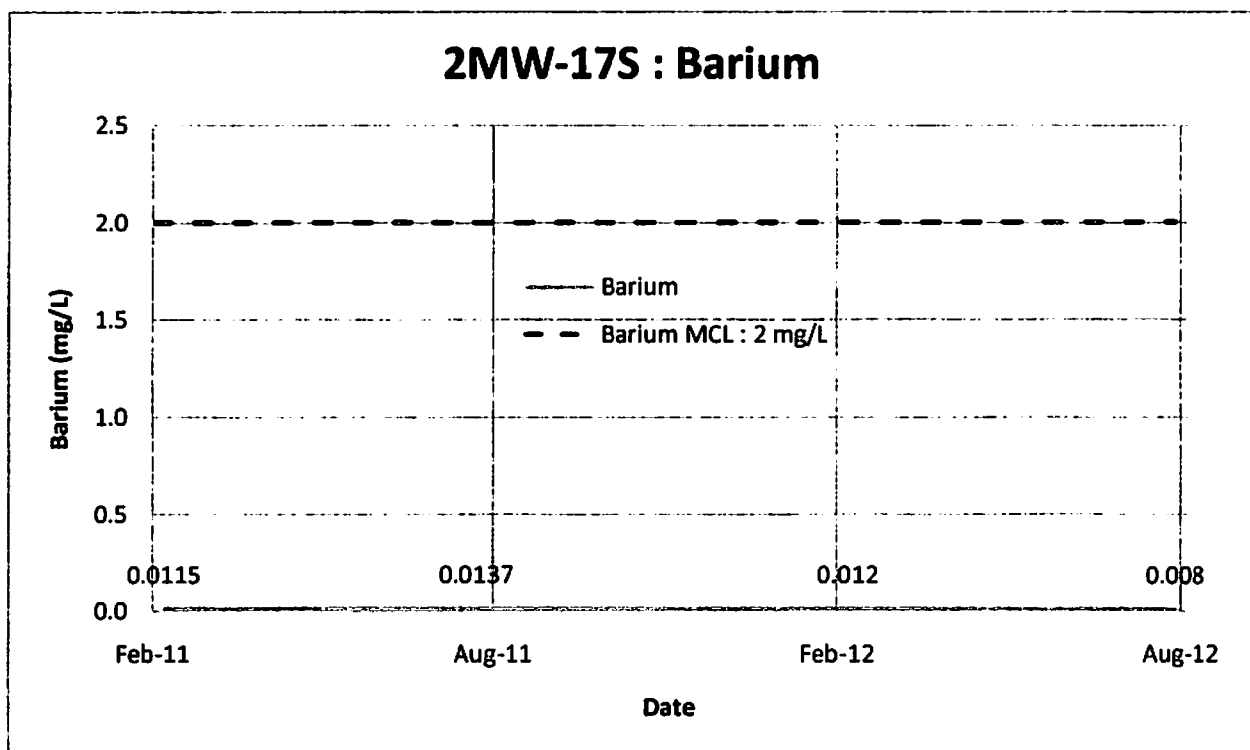
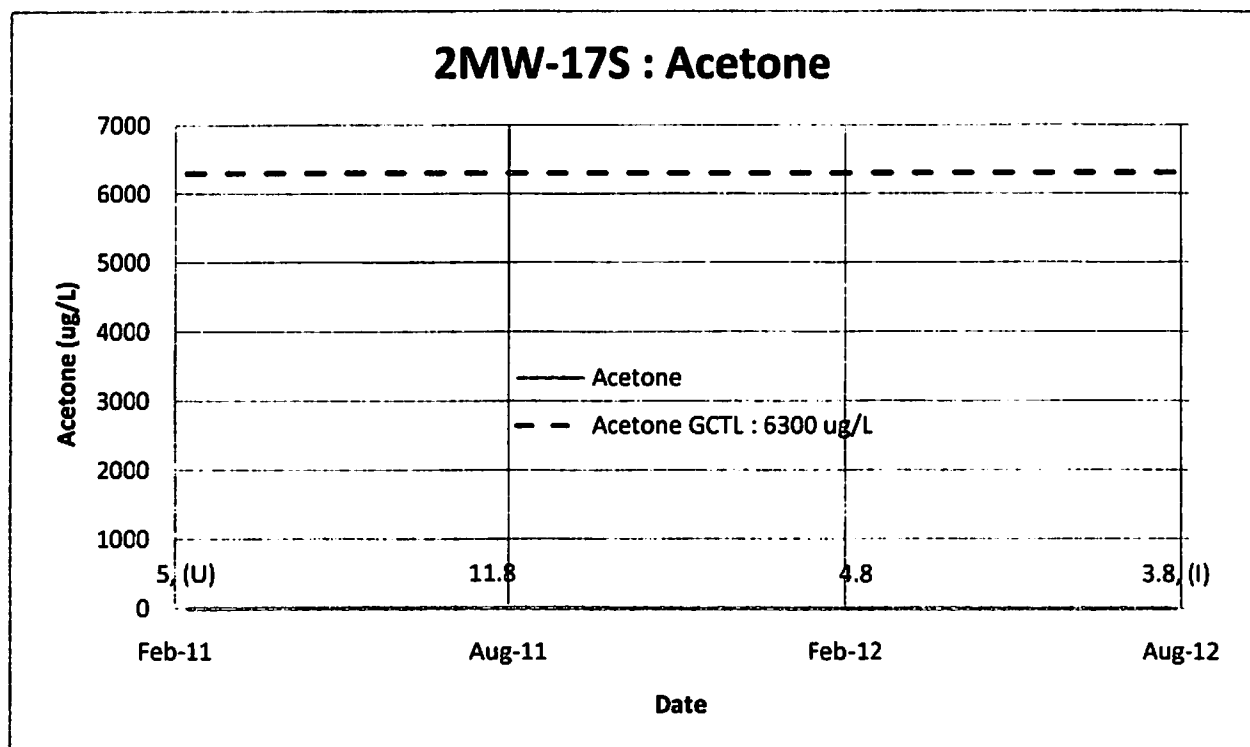


Figure B-10 Acetone and Barium Trends for 2MW-17S

GCTL - Groundwater Cleanup Target Level per 62-777 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

Floridan Aquifer Background Wells

4MW - 1

4MW - 2

4 MW - 6

2 MW - 15 AD

2 MW - 27 D

4 MW - 27

4 MW - 27 D

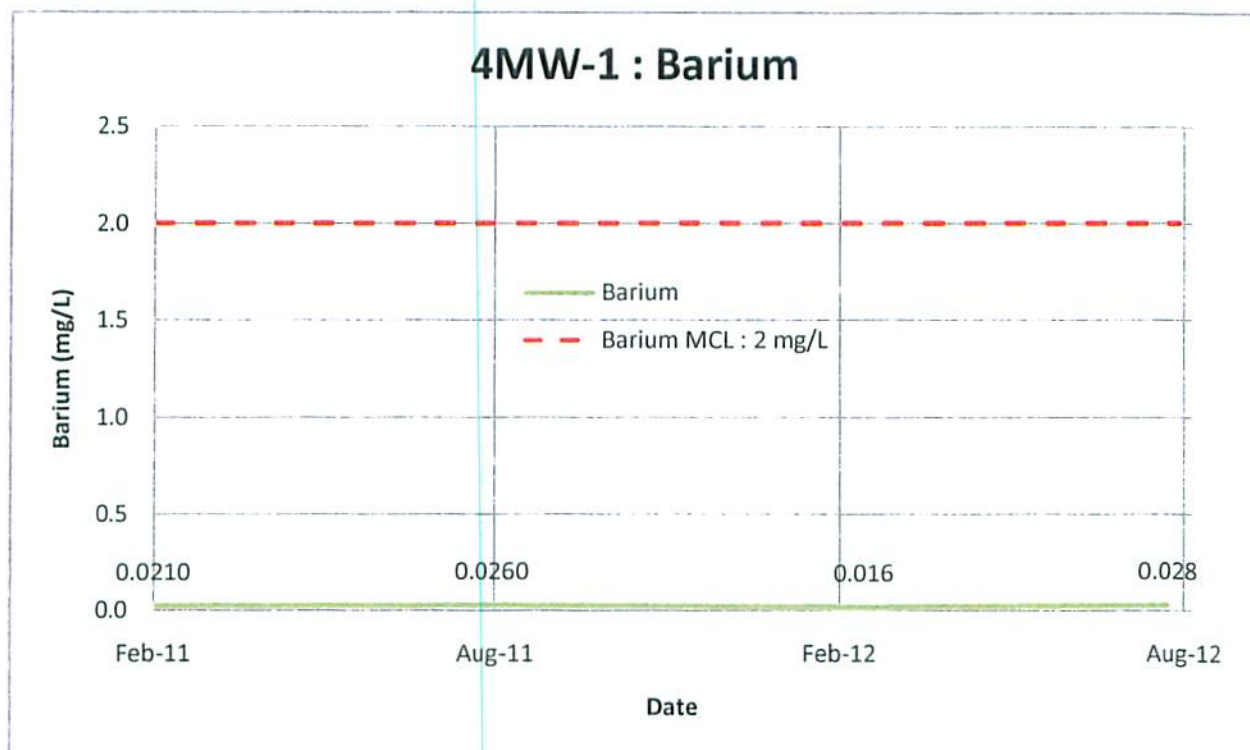
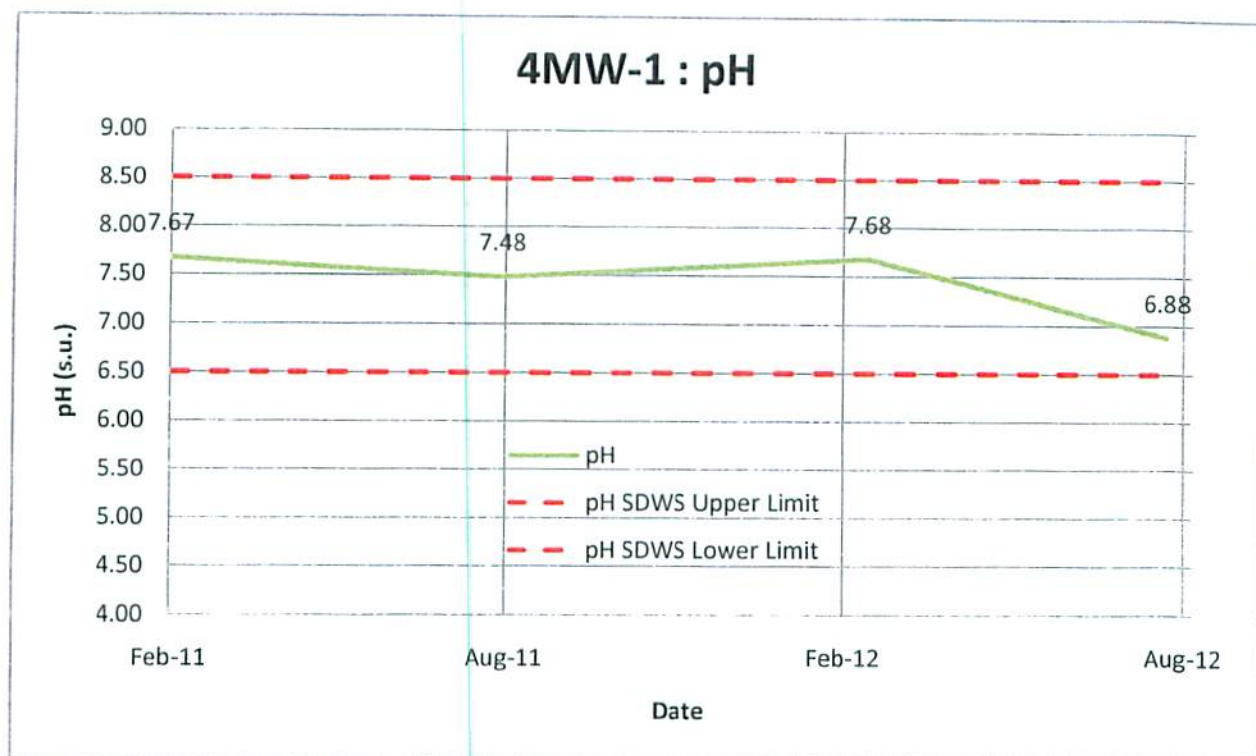


Figure B-11 pH and Barium Trends for 4MW-1

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

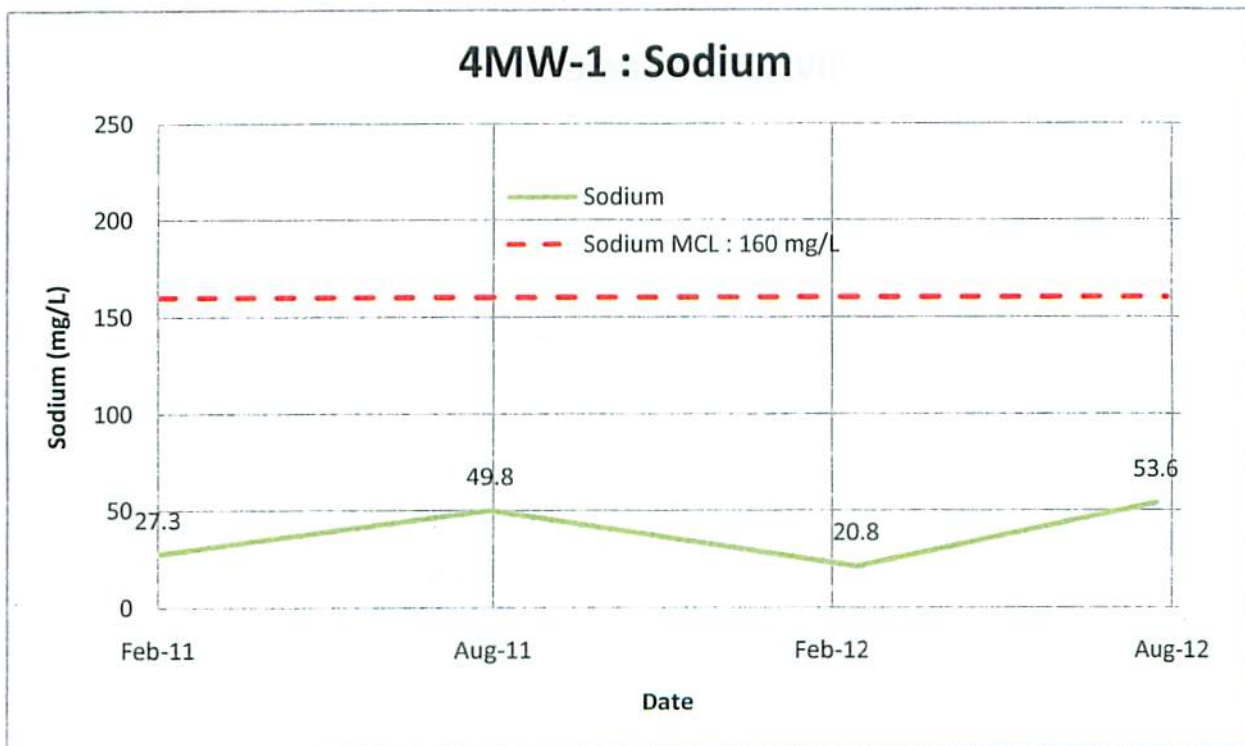
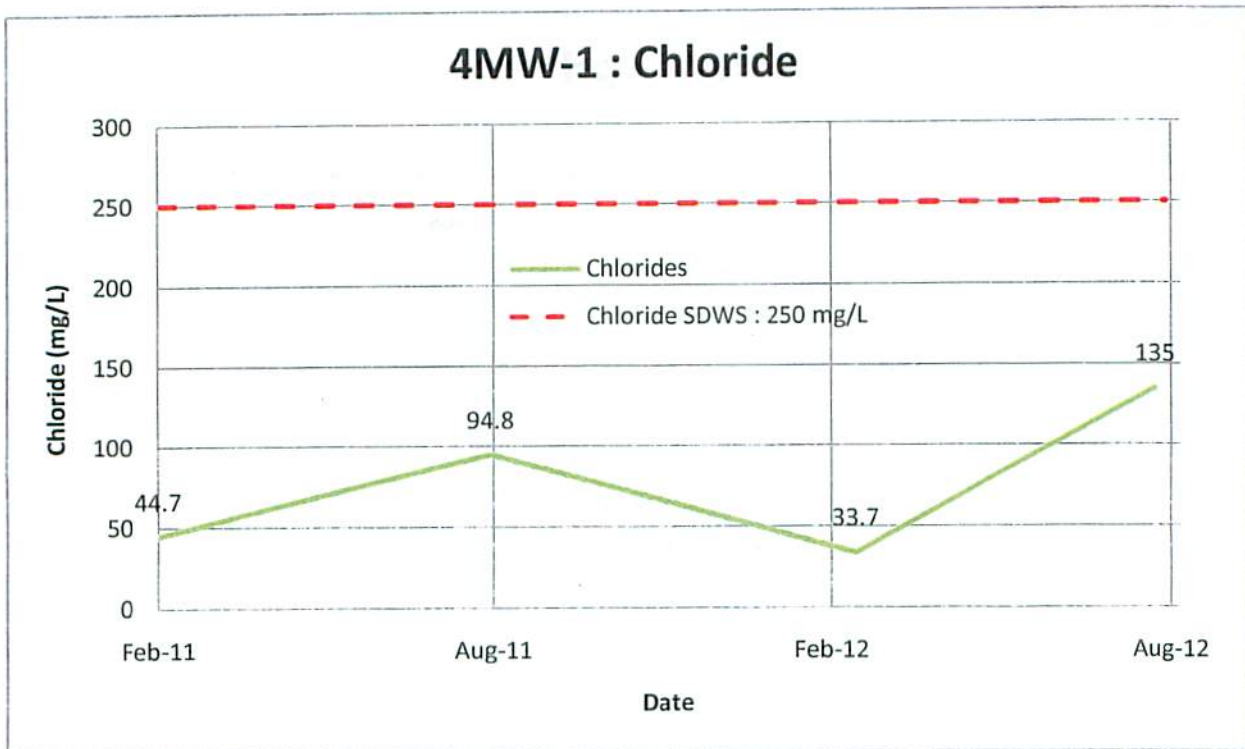


Figure B-12 Chloride and Sodium Trends for 4MW-1

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

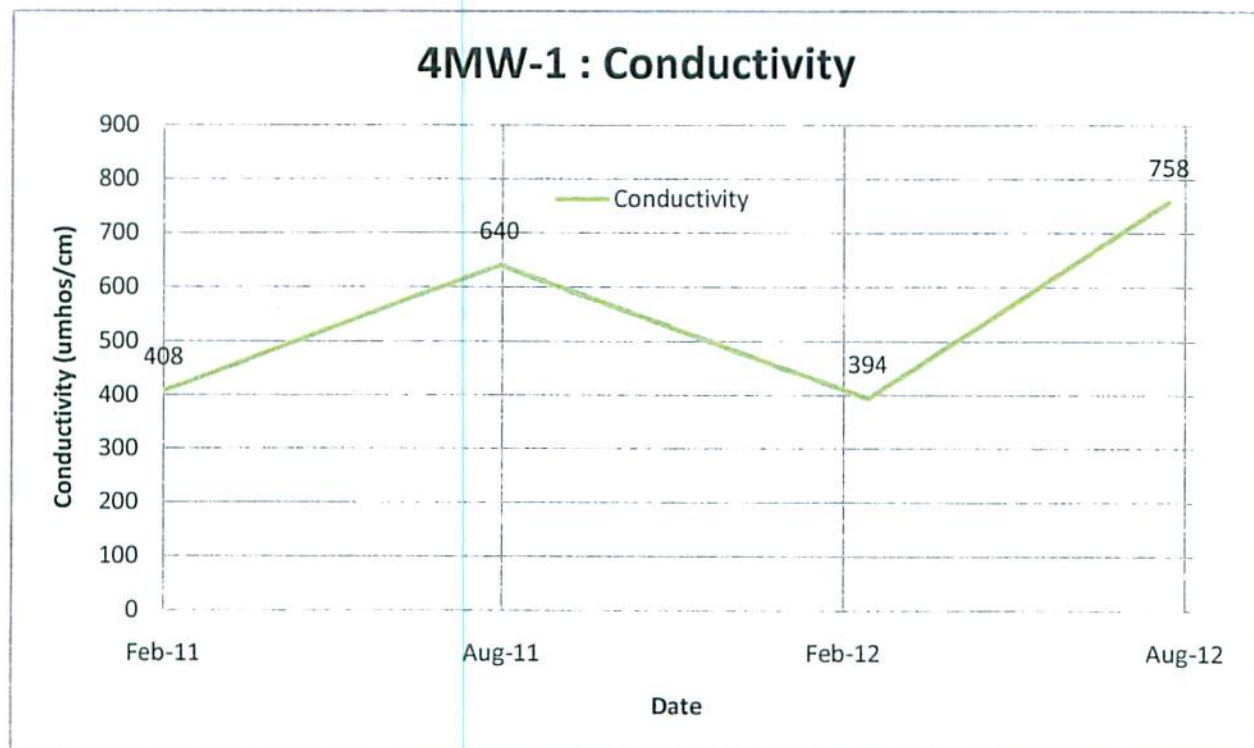
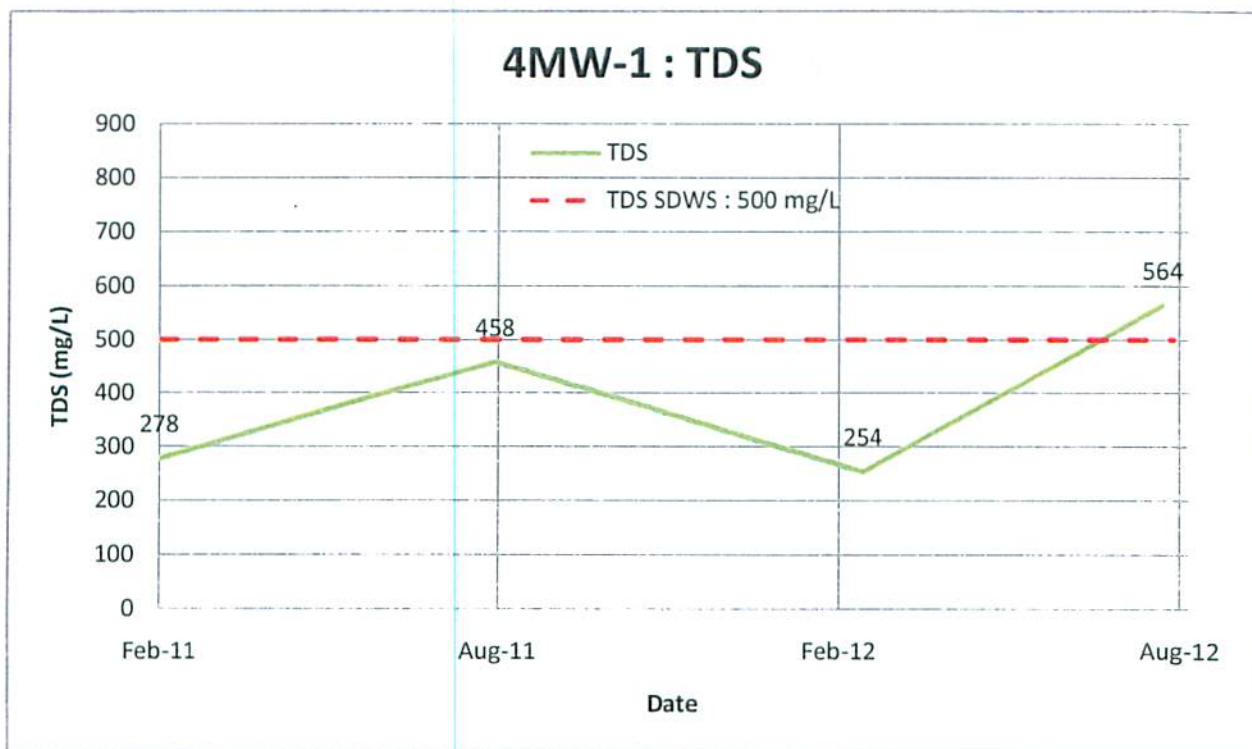


Figure B-13 TDS and Conductivity Trends for 4MW-1

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

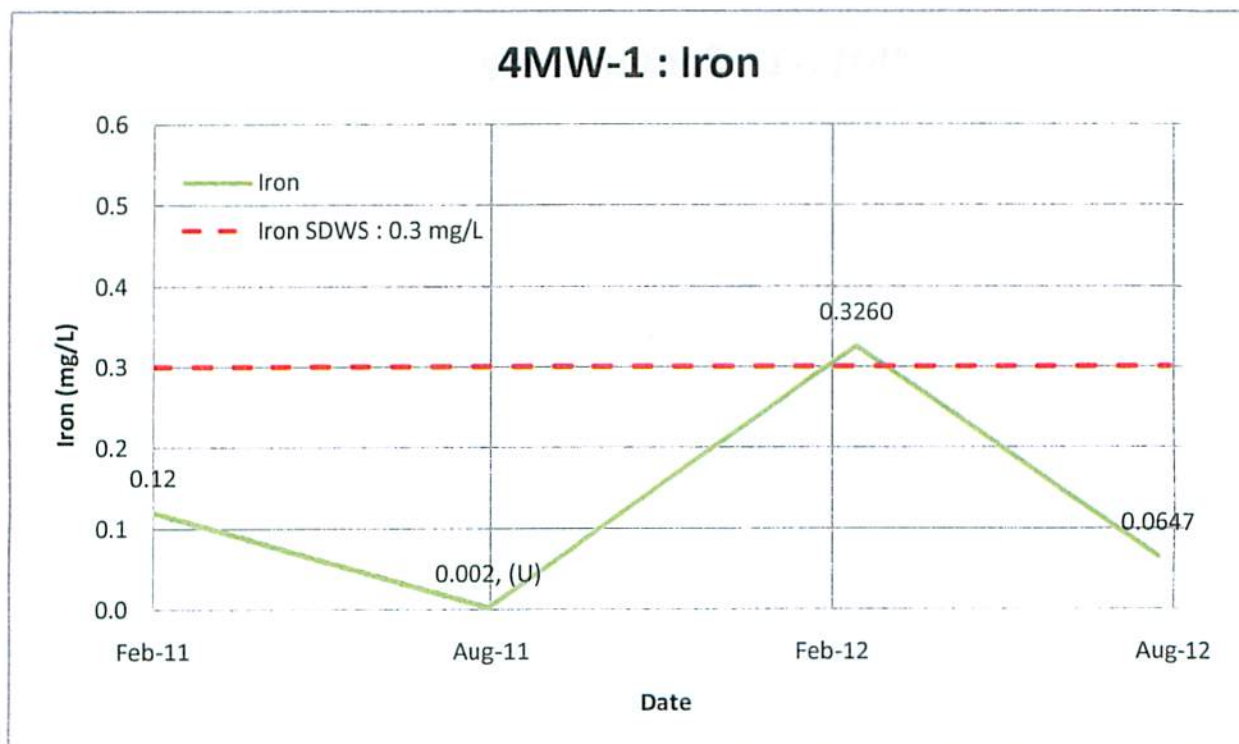
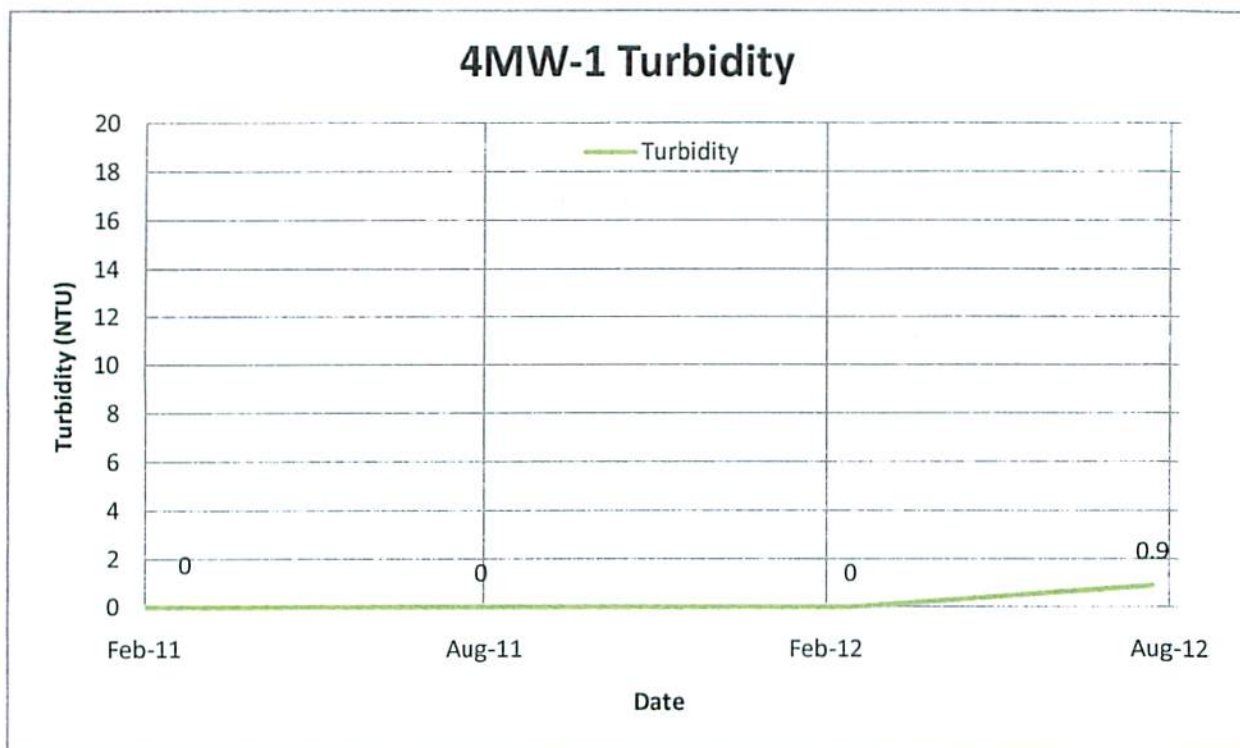


Figure B-14 Turbidity and Iron Trends for 4MW-1

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

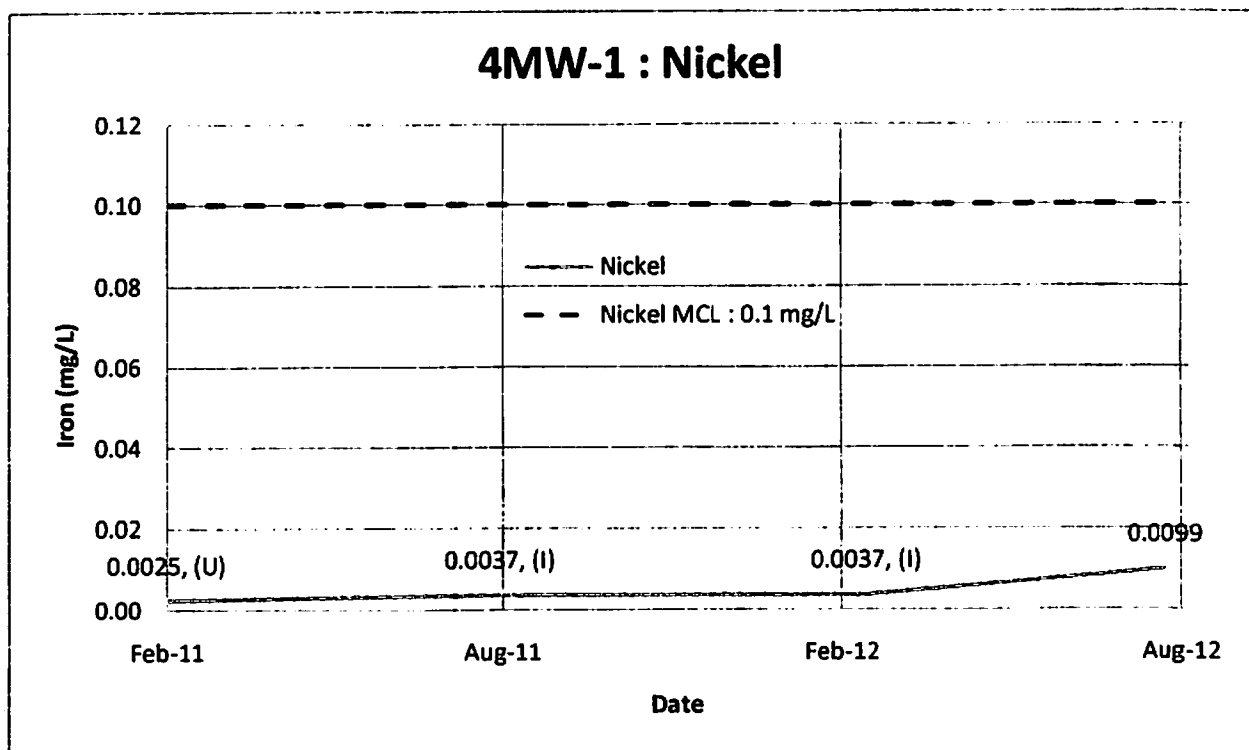


Figure B-15 Nickel Trend for 4MW-1

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

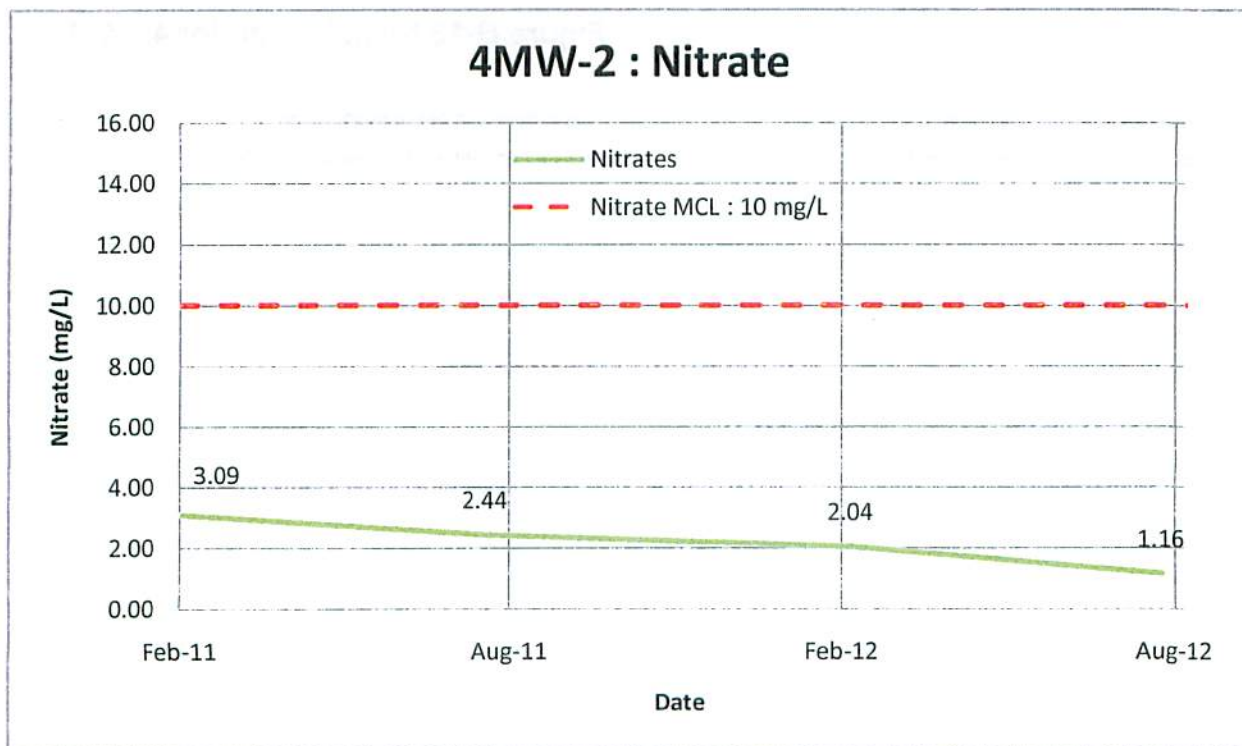
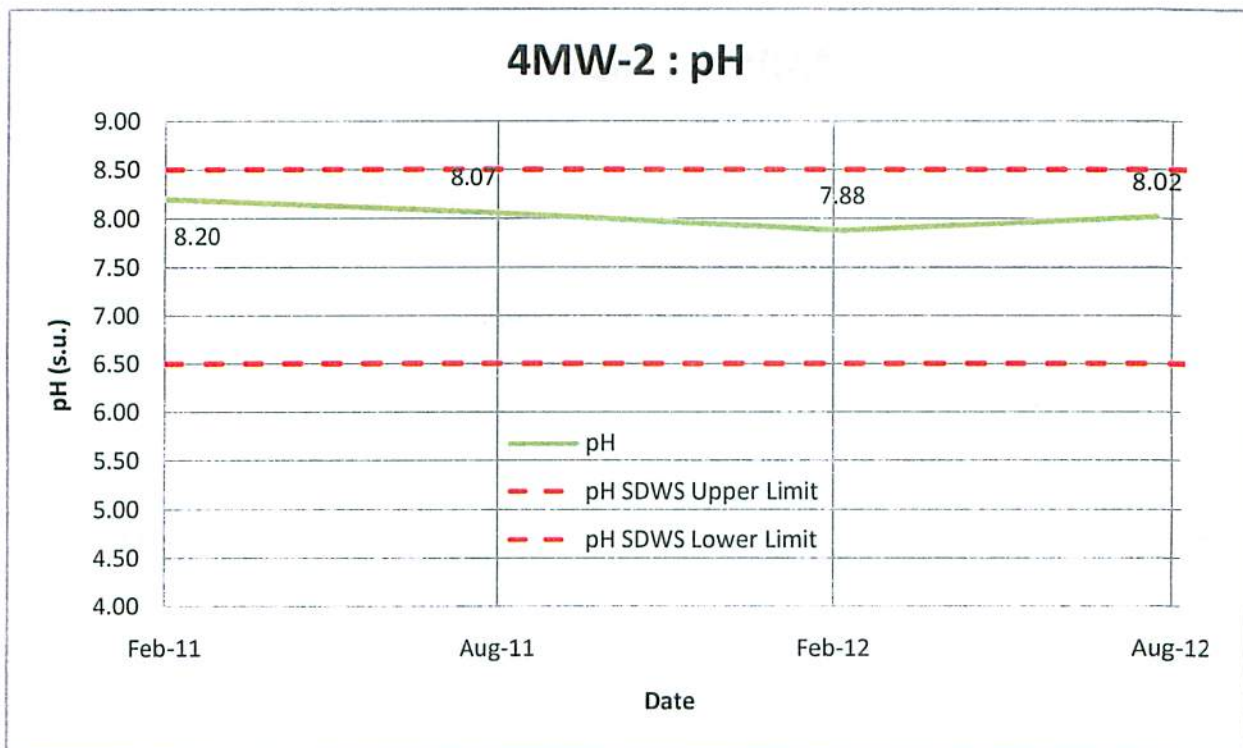


Figure B-16 pH and Nitrate Trends for 4MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

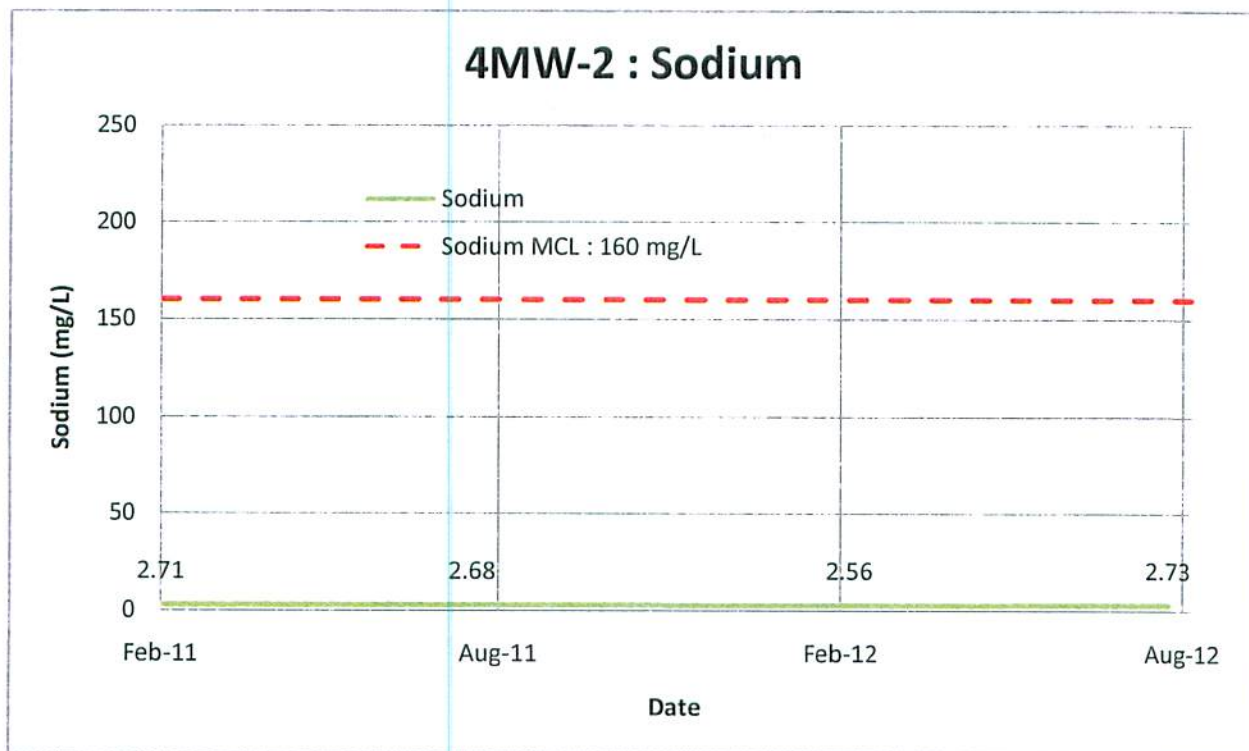
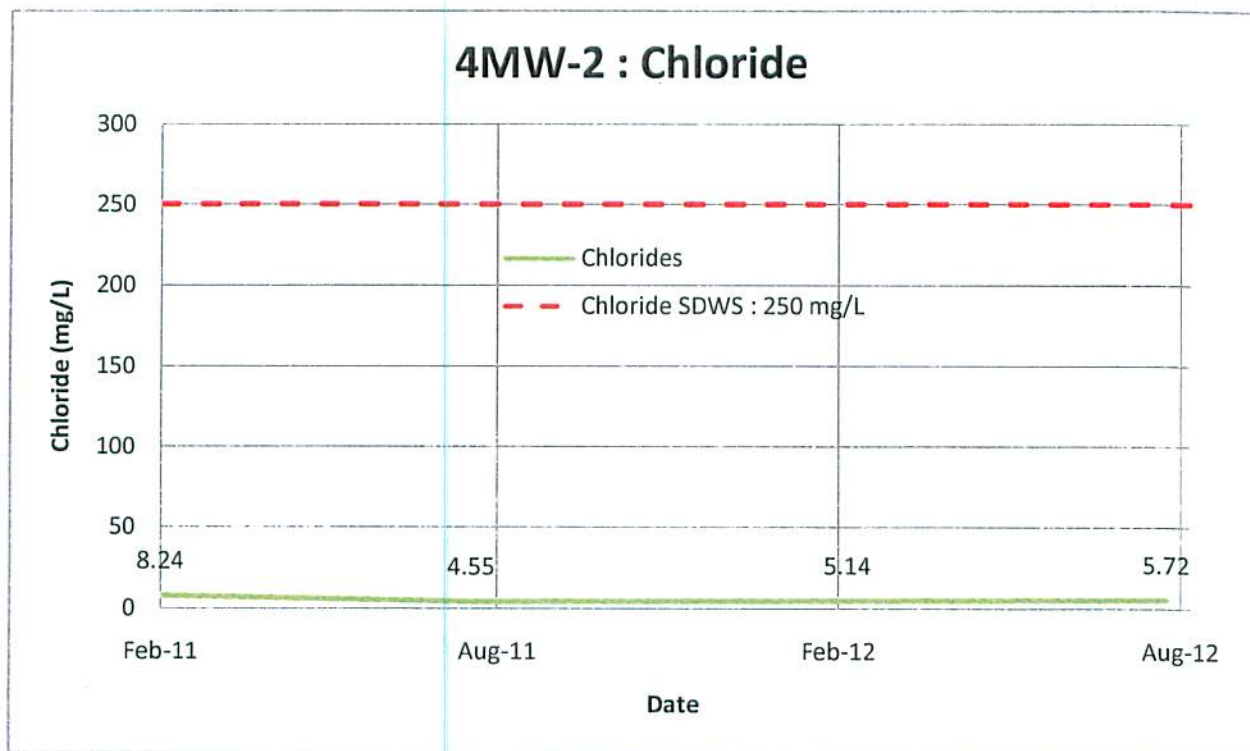


Figure B-17 Chloride and Sodium Trends for 4MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

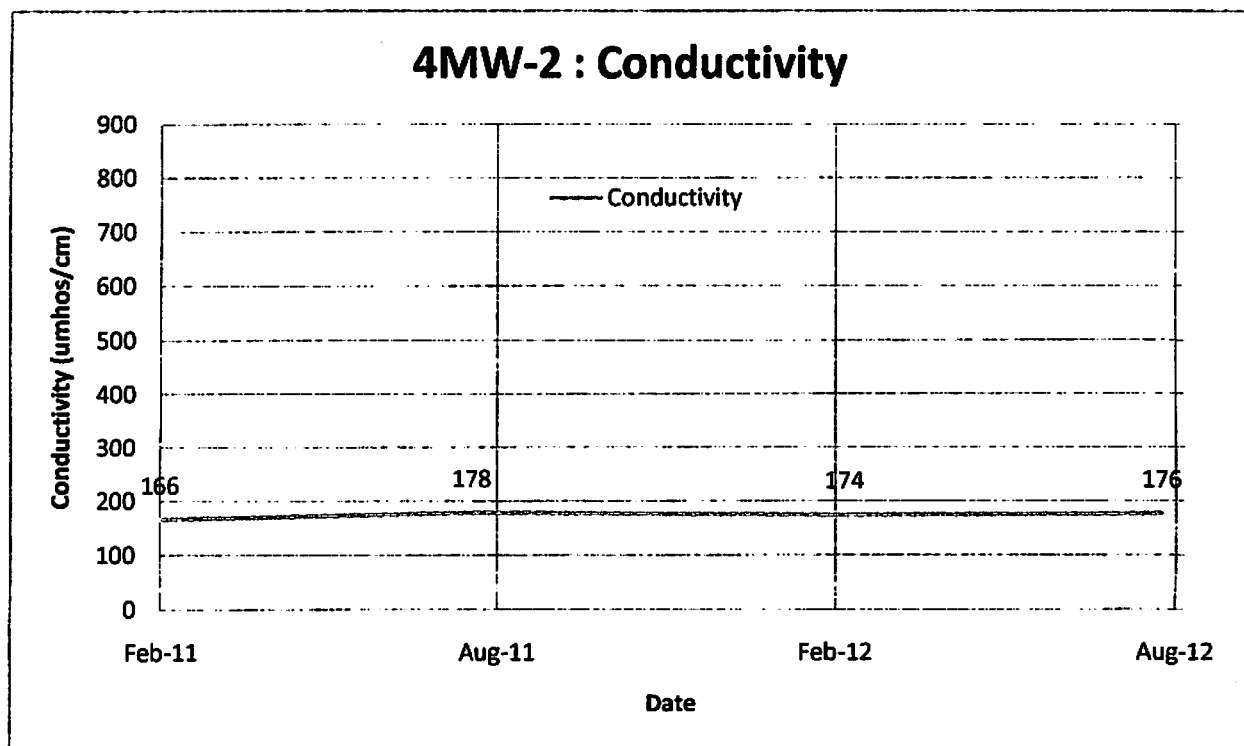
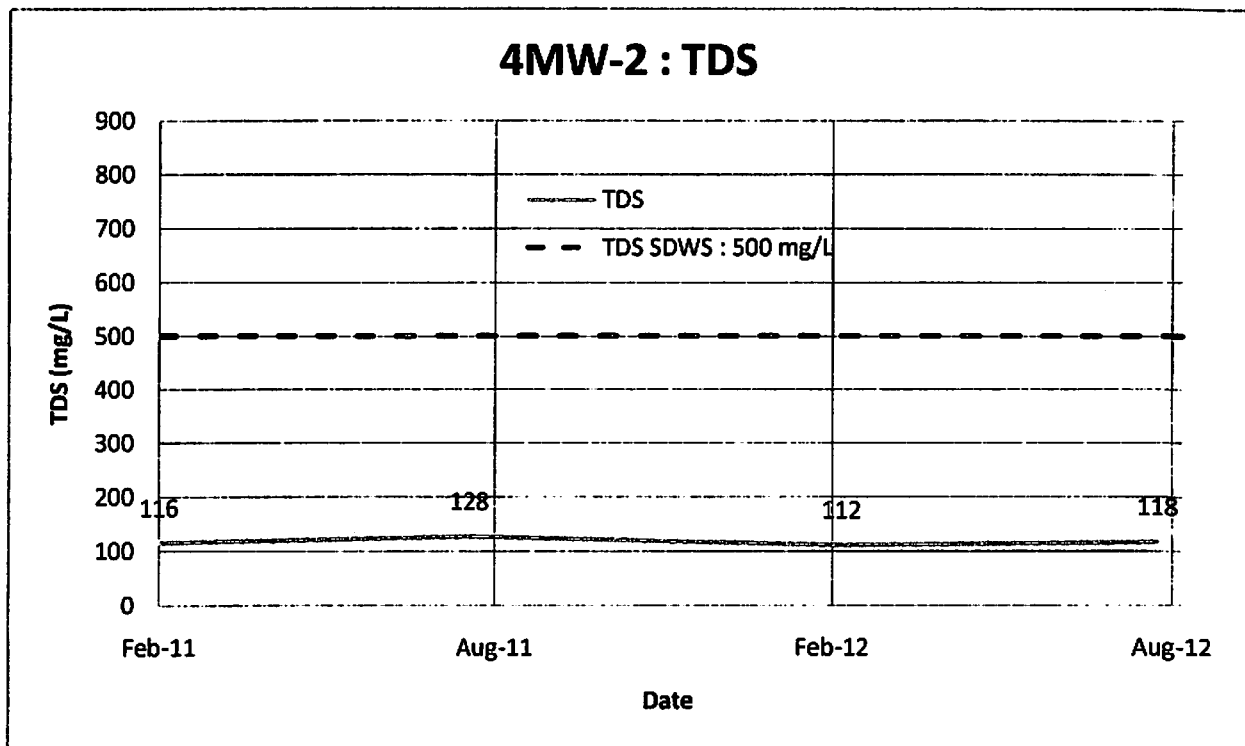


Figure B-18 TDS and Conductivity Trends for 4MW-2

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

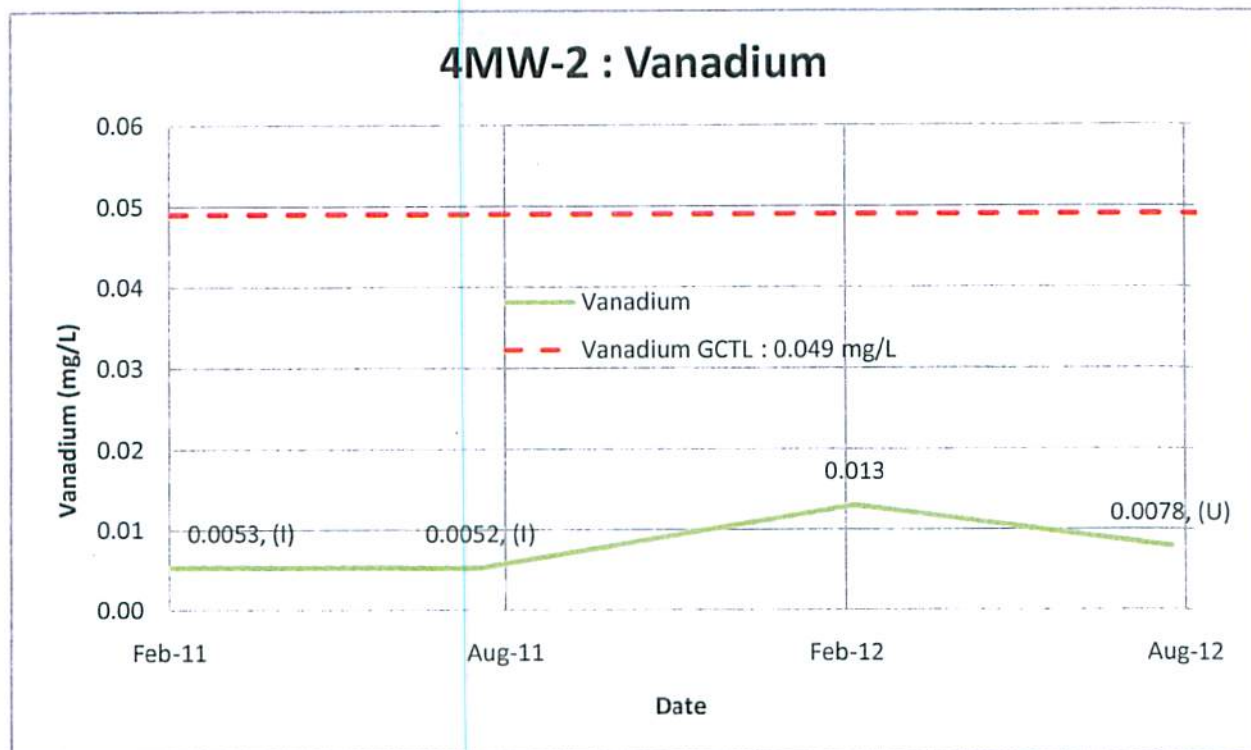
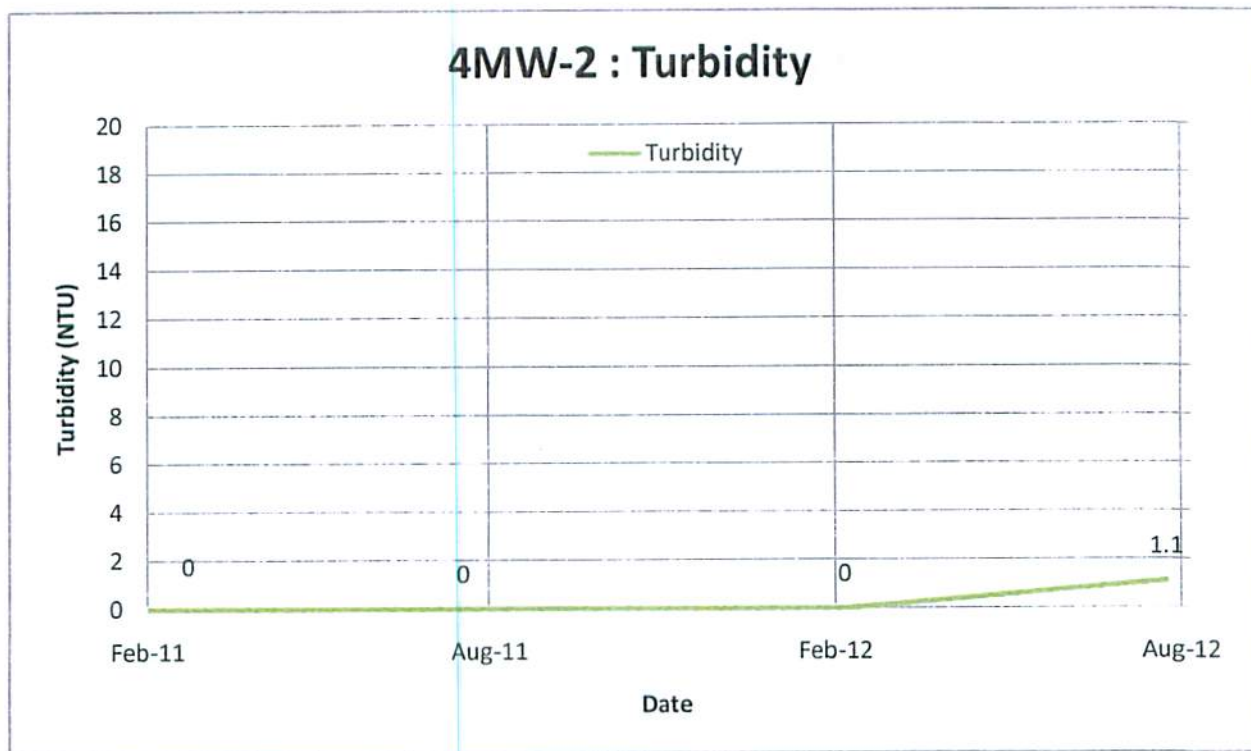


Figure B-19 Turbidity and Vanadium Trends for 4MW-2

GCTL - Groundwater Cleanup Target Level per 62-777 F.A.C
Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit
(U) Analyte concentration below method detection limit

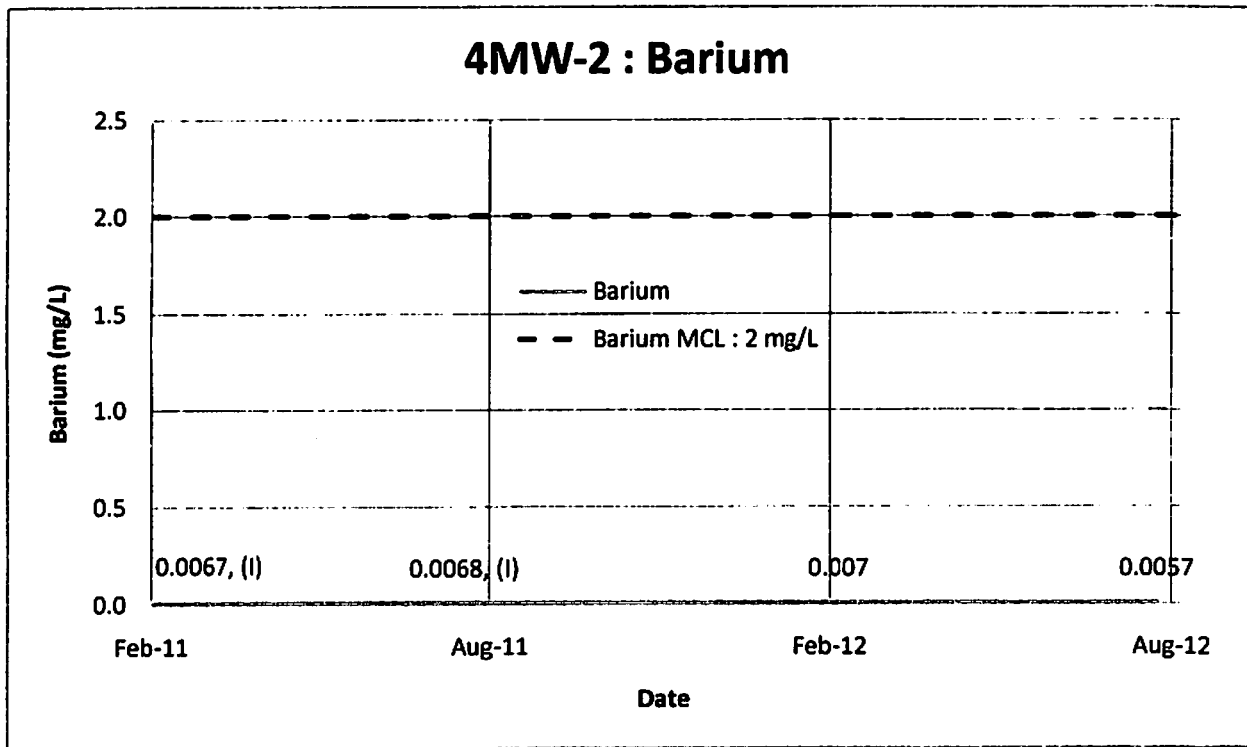


Figure B-20 Barium Trend for 4MW-2

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

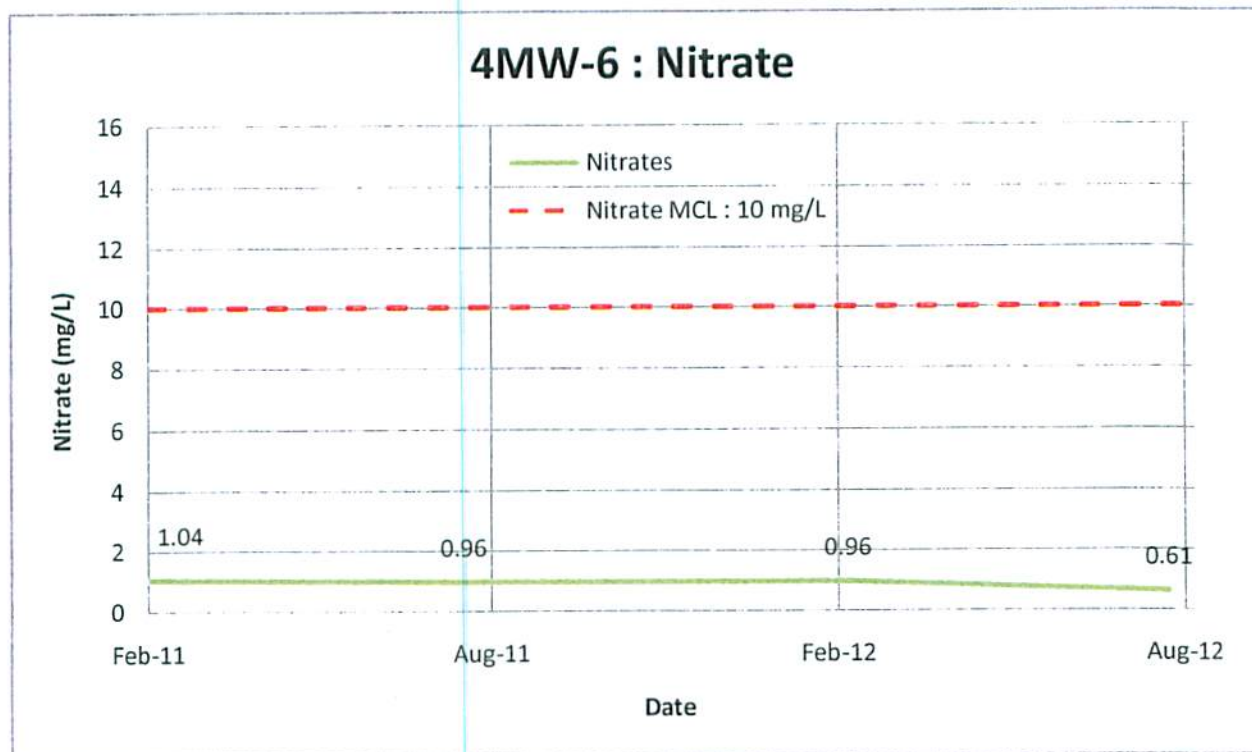
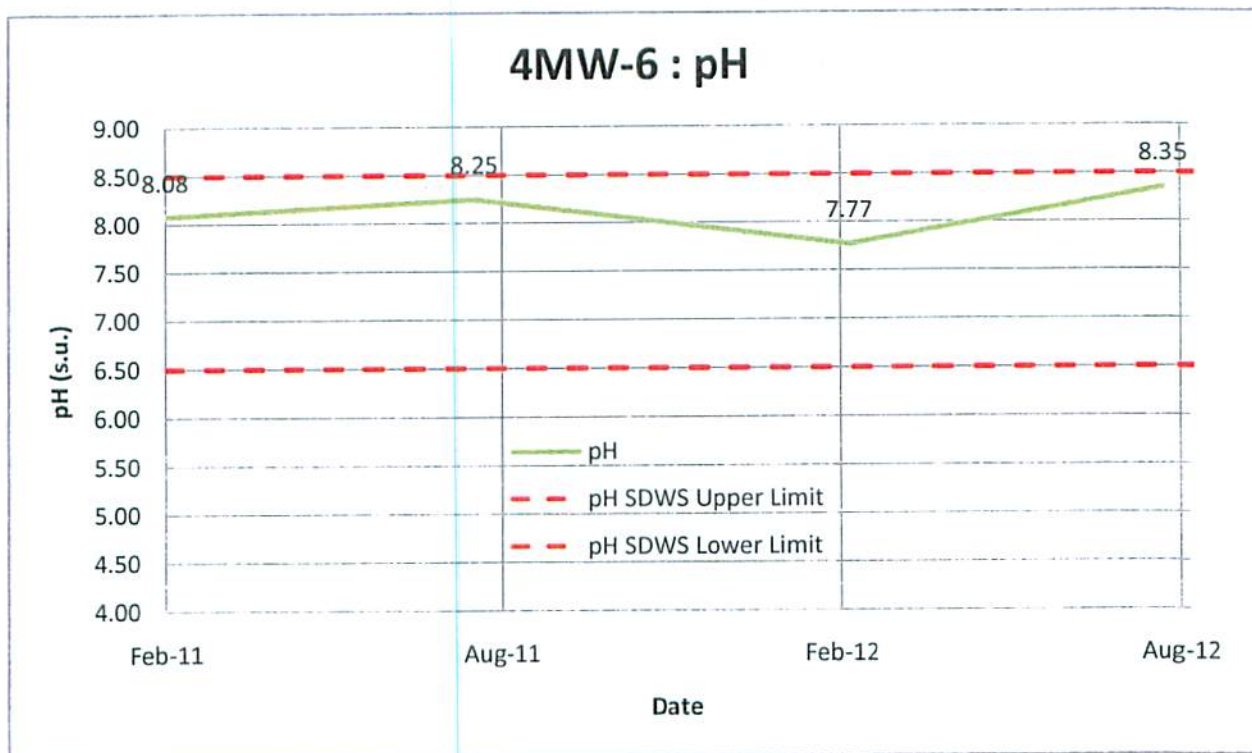


Figure B-21 pH and Nitrate Trends for 4MW-6

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

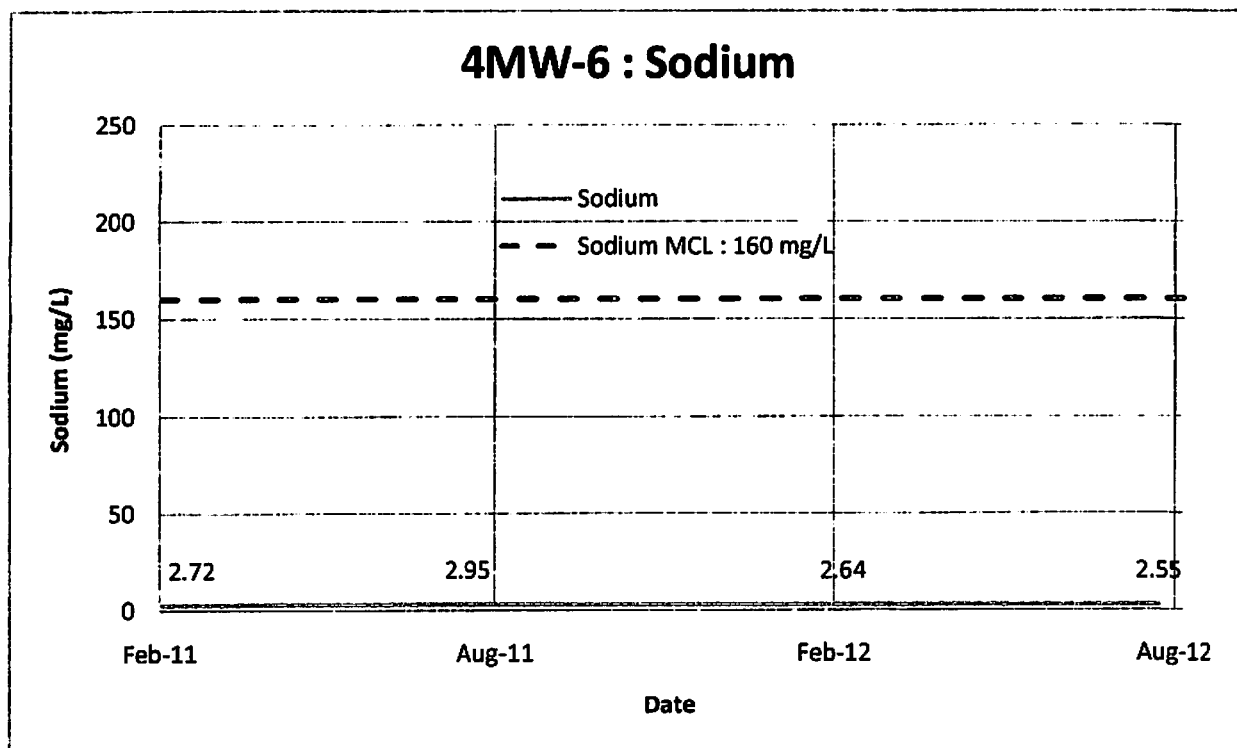
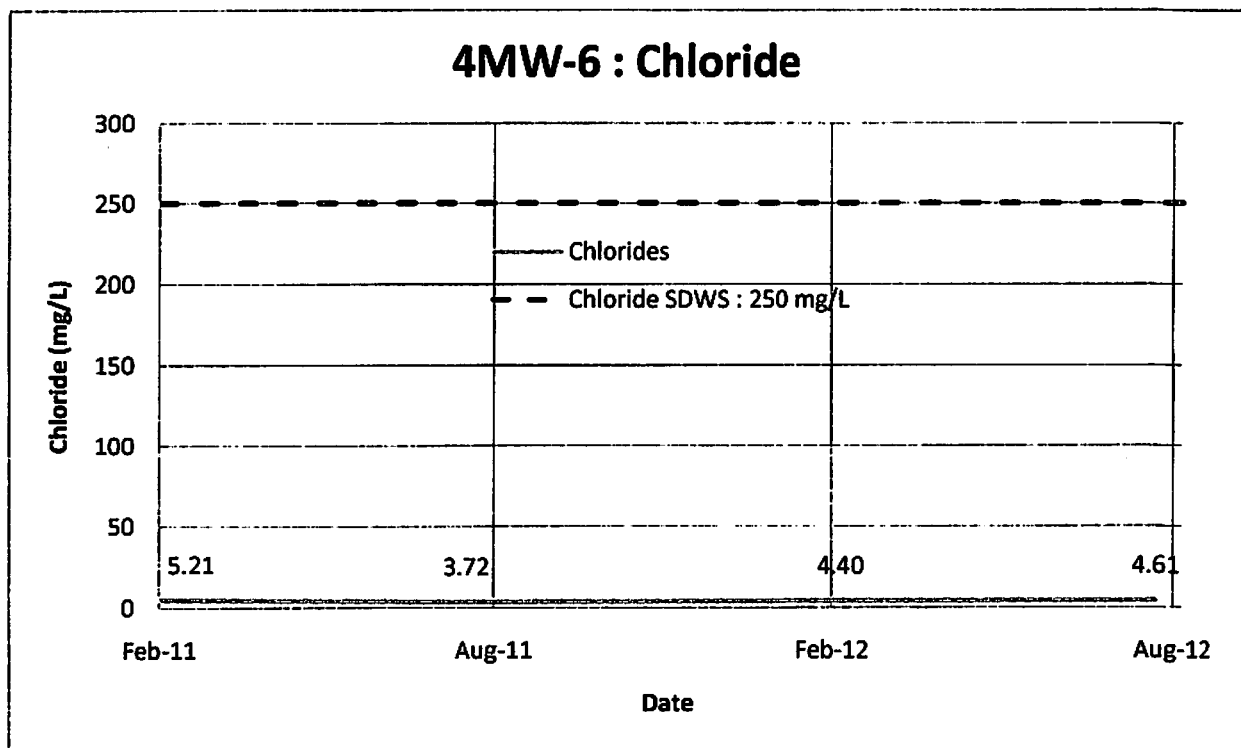


Figure B-22 Chloride and Sodium Trends for 4MW-6

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

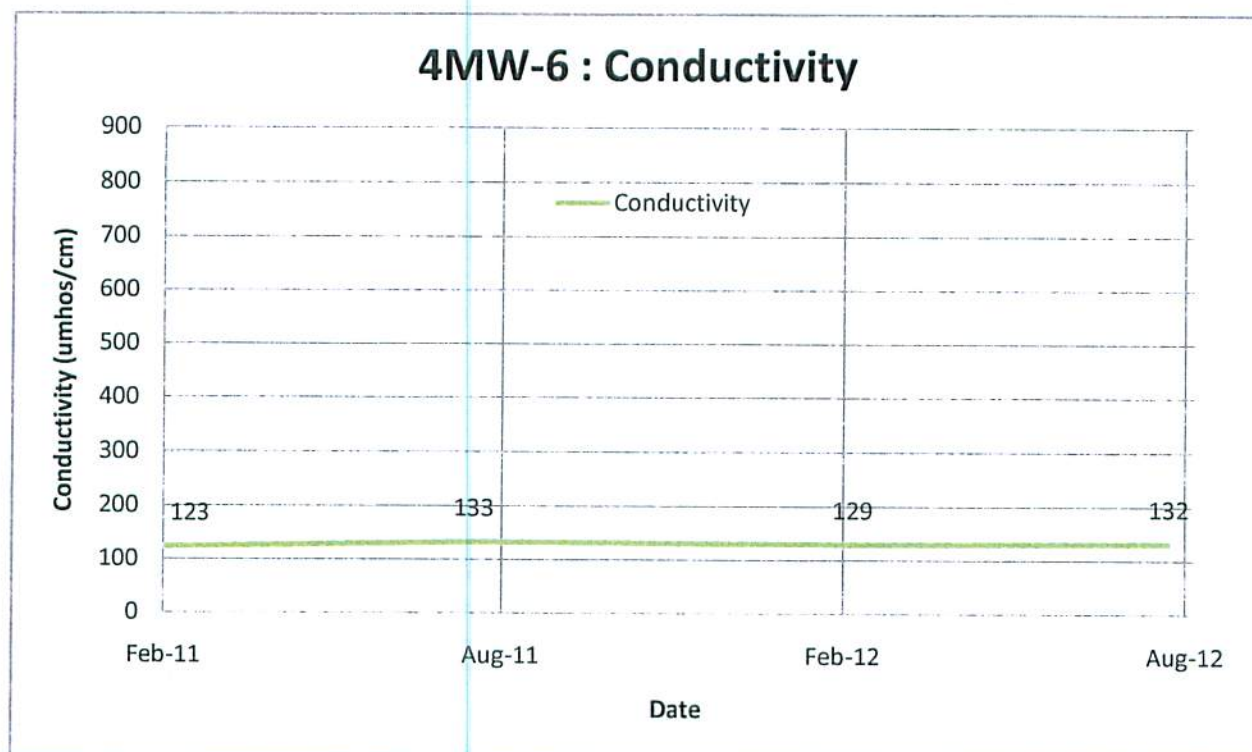
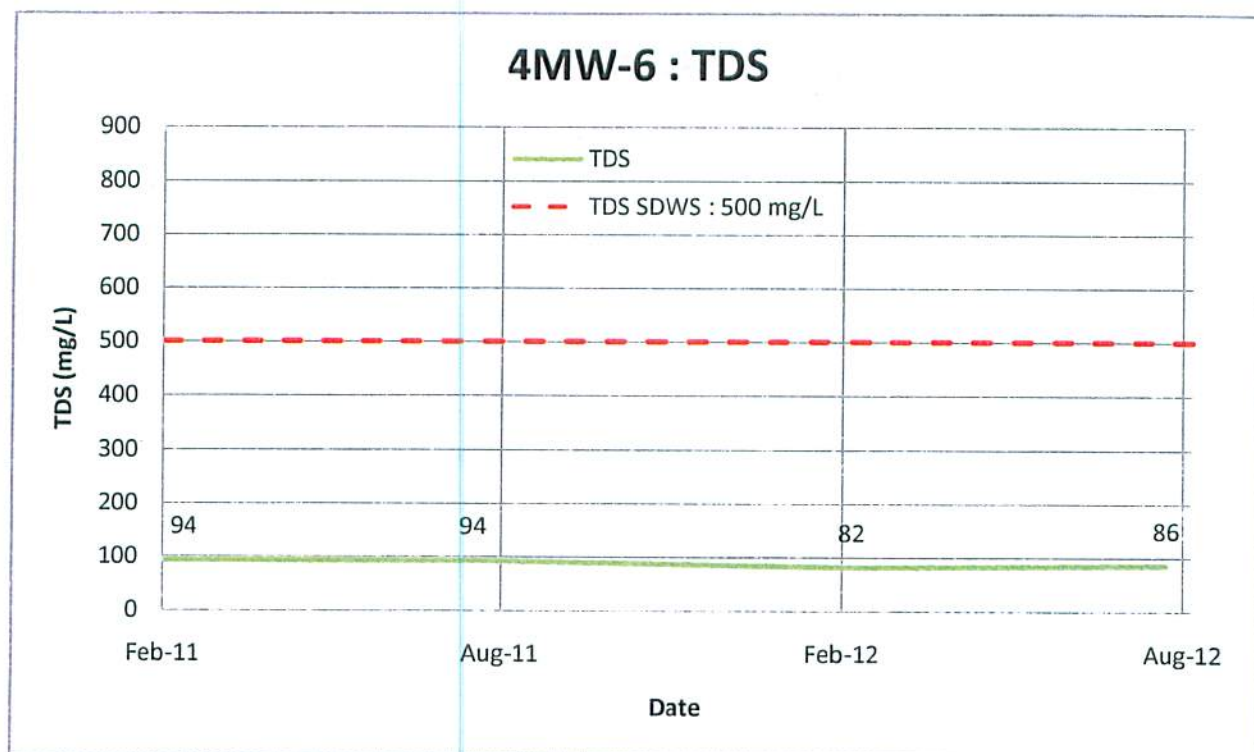


Figure B-23 TDS and Conductivity Trends for 4MW-6

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

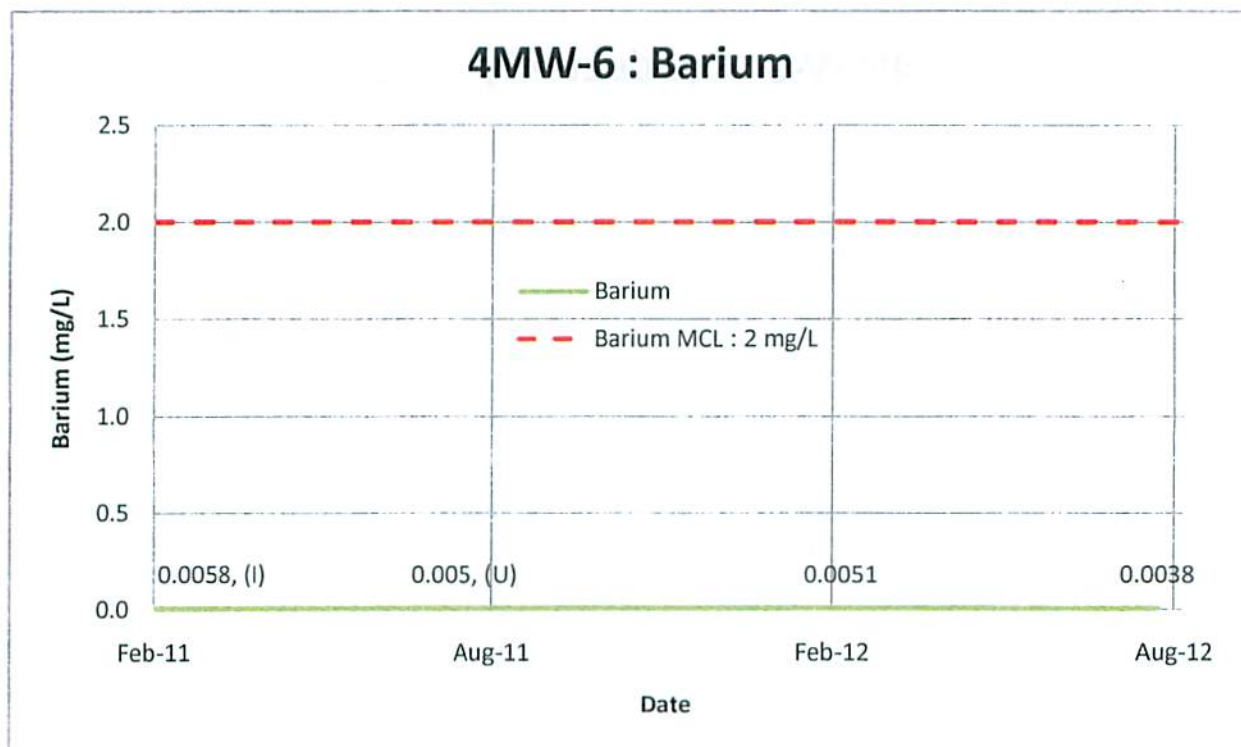
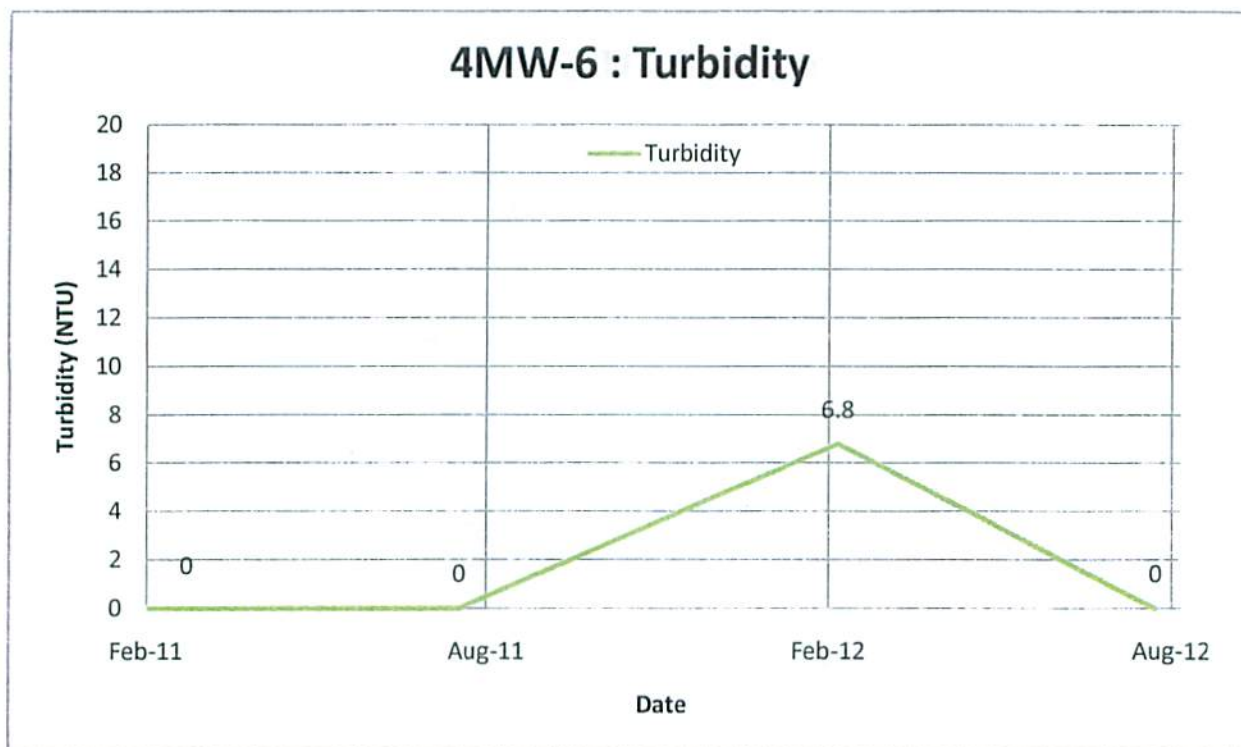


Figure B-24 Turbidity and Barium Trends for 4MW-6

MCL - Maximum Contaminant Level per 62-550 F.A.C
Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit
(U) Analyte concentration below method detection limit

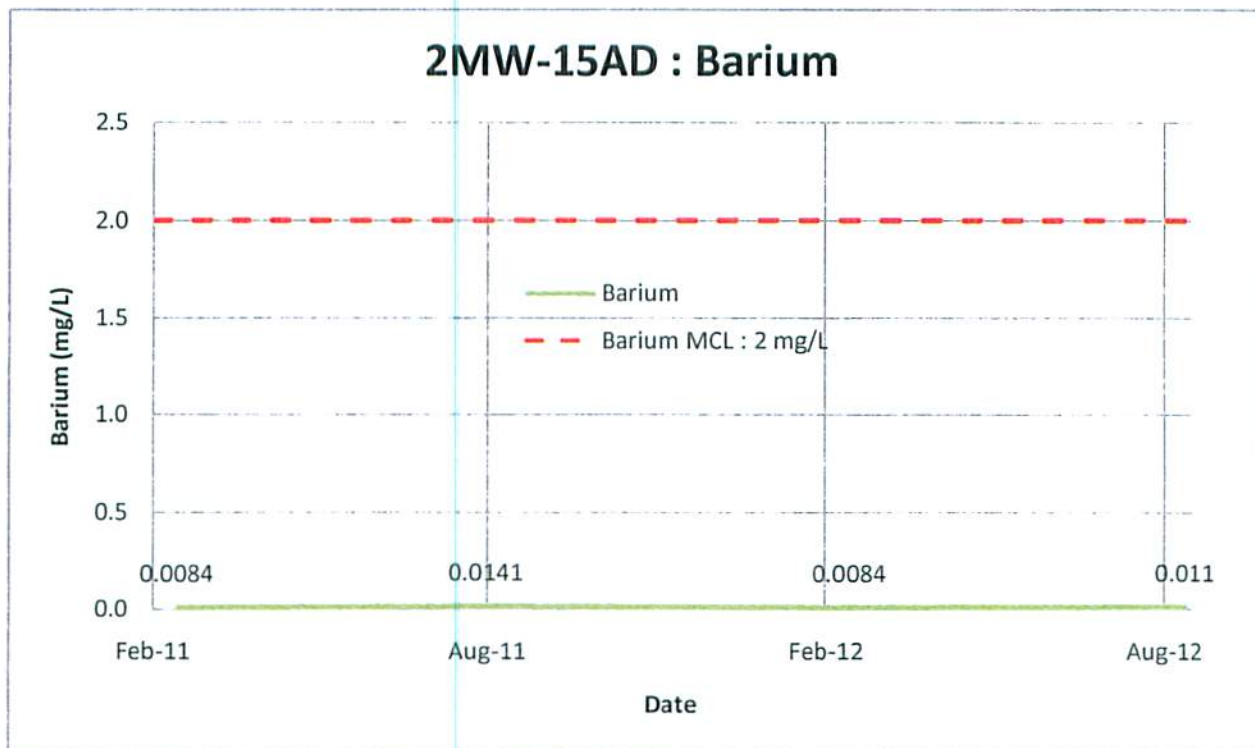
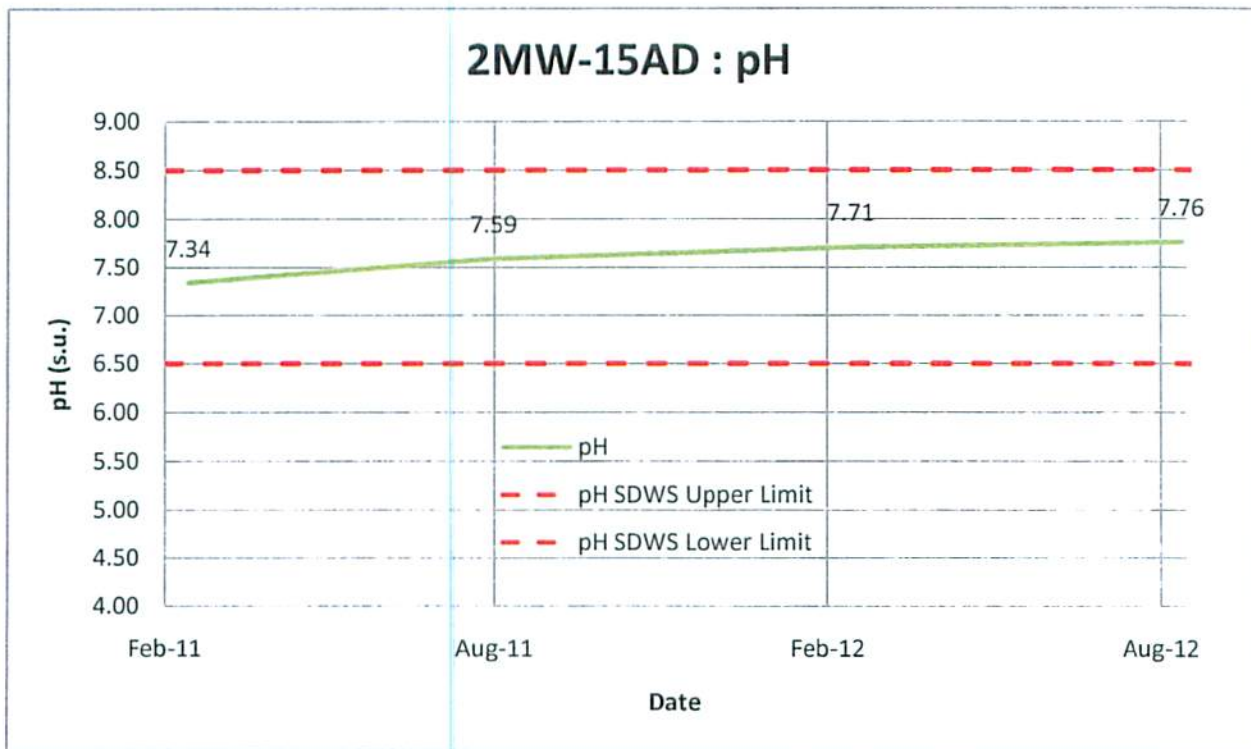


Figure B-25 pH and Barium Trends for 2MW-15AD

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

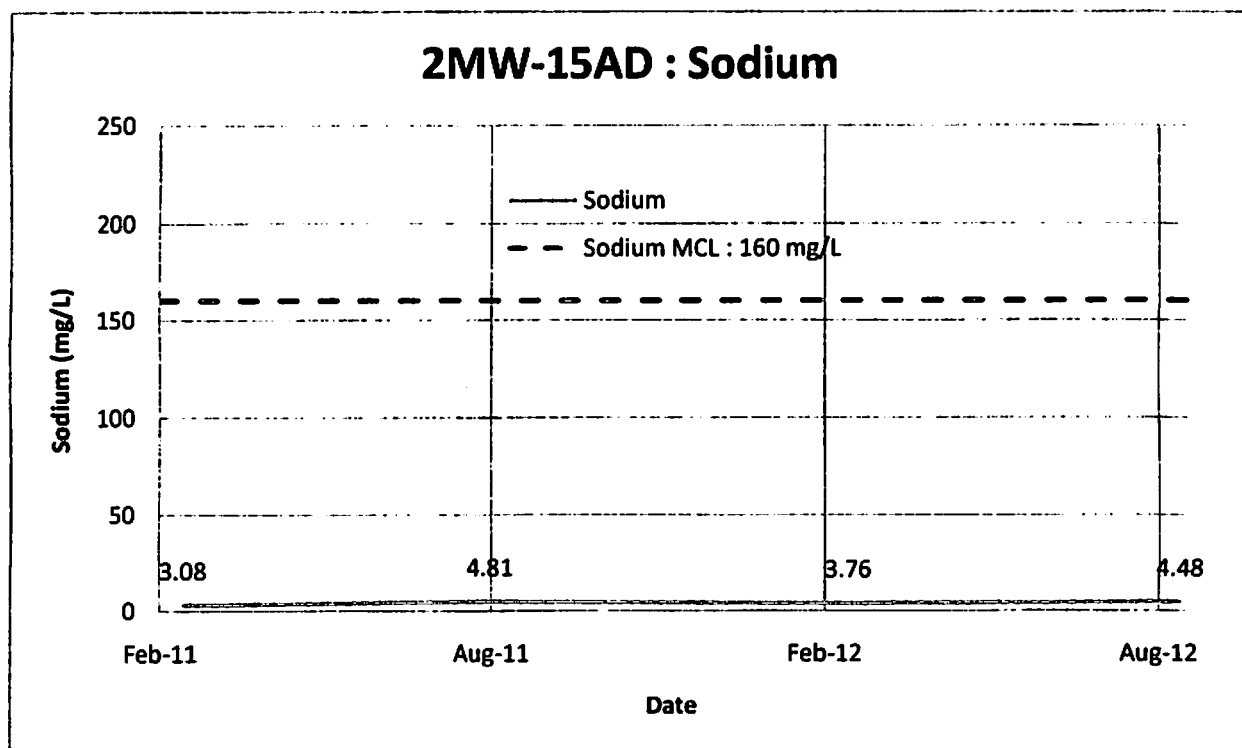
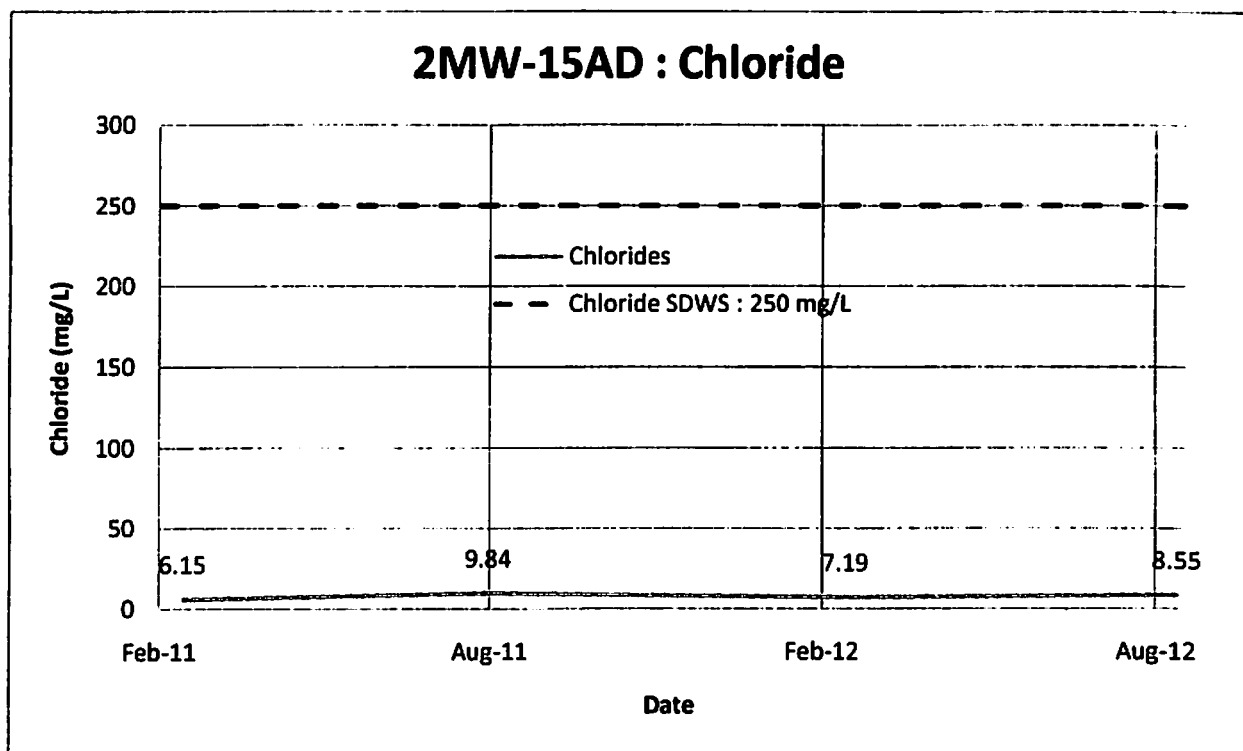


Figure B-26 Chloride and Sodium Trends for 2MW-15AD

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

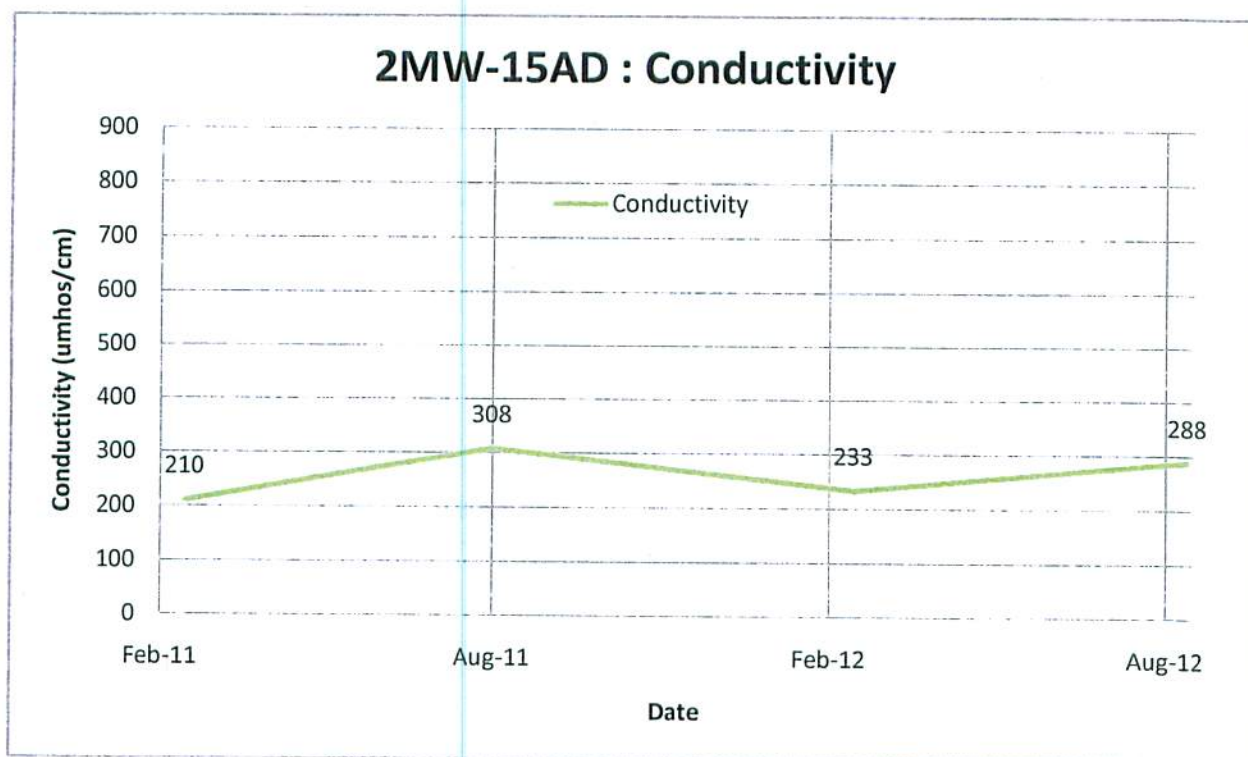
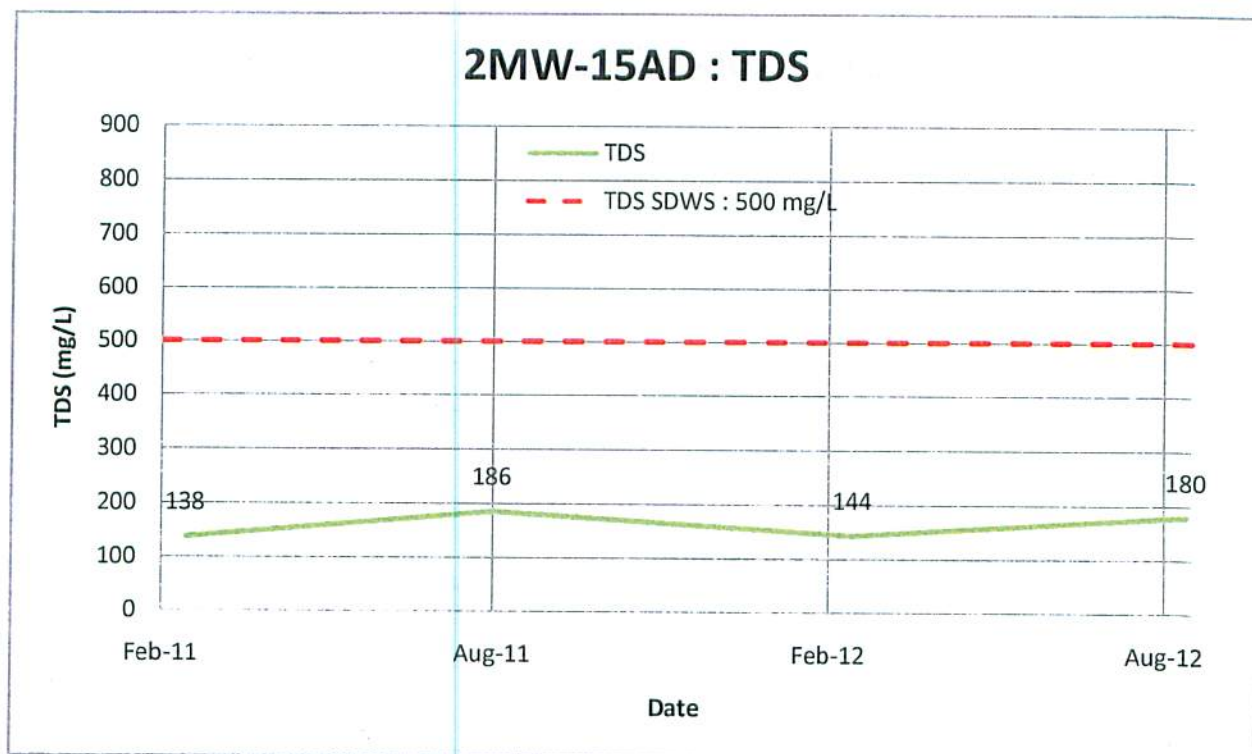


Figure B-27 TDS and Conductivity Trends for 2MW-15AD

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

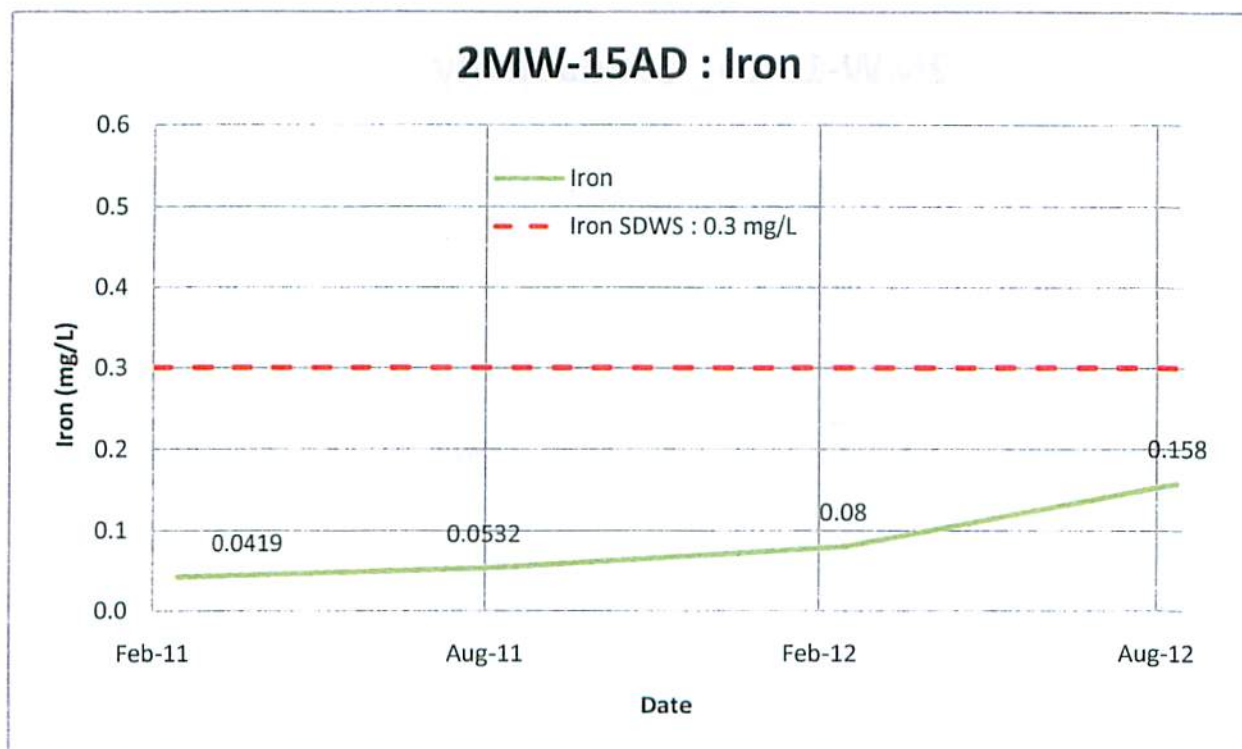
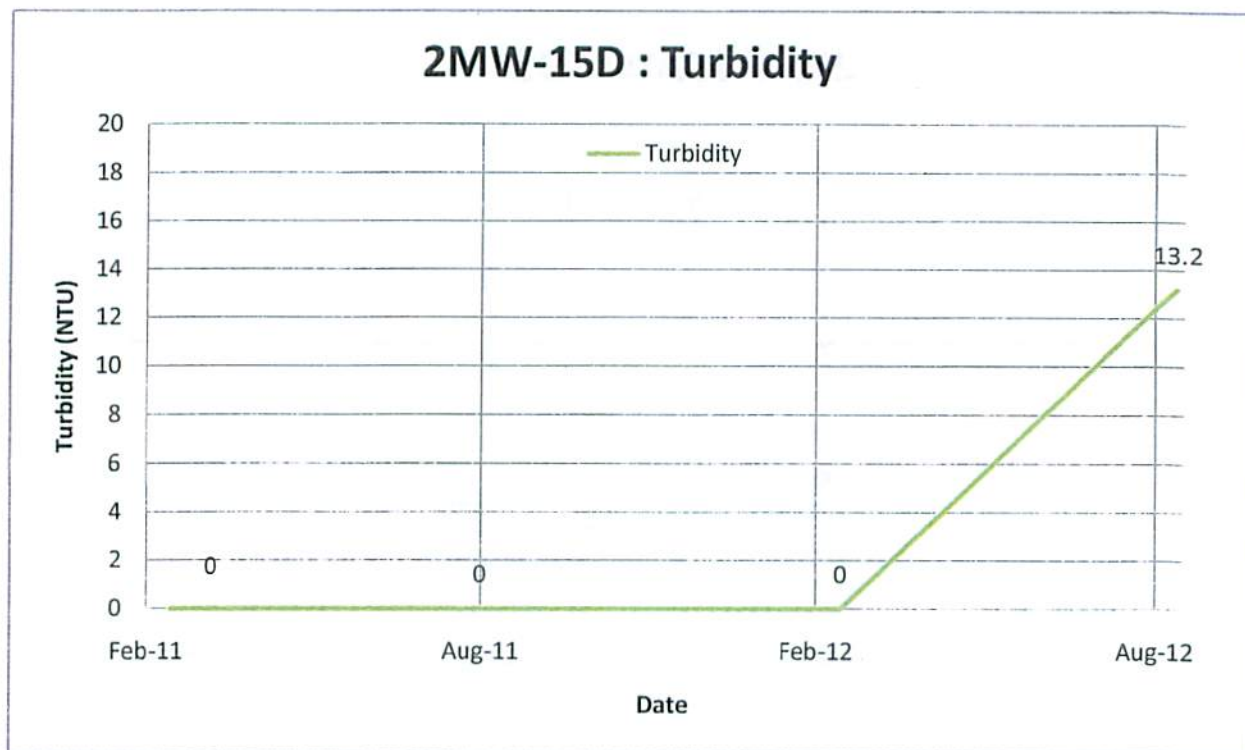


Figure B-28 Turbidity and Iron Trends for 2MW-15AD

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

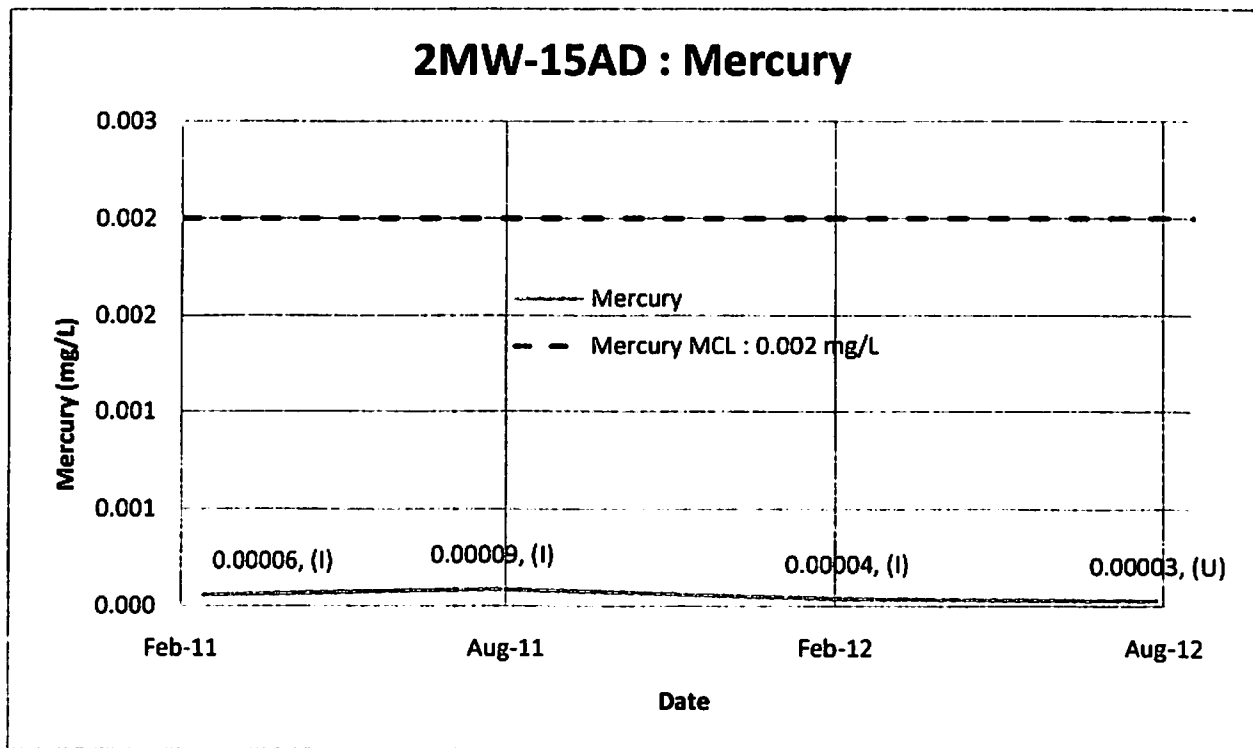


Figure B-29 Mercury Trend for 2MW-15AD

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

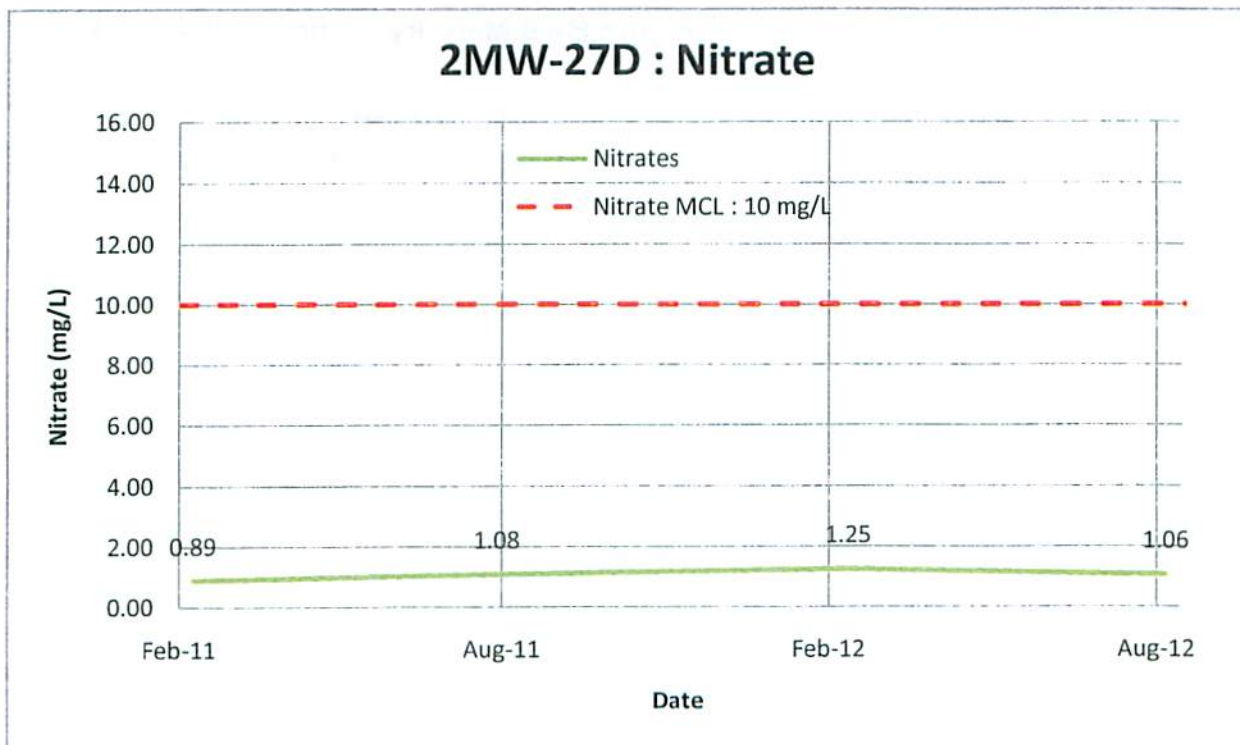
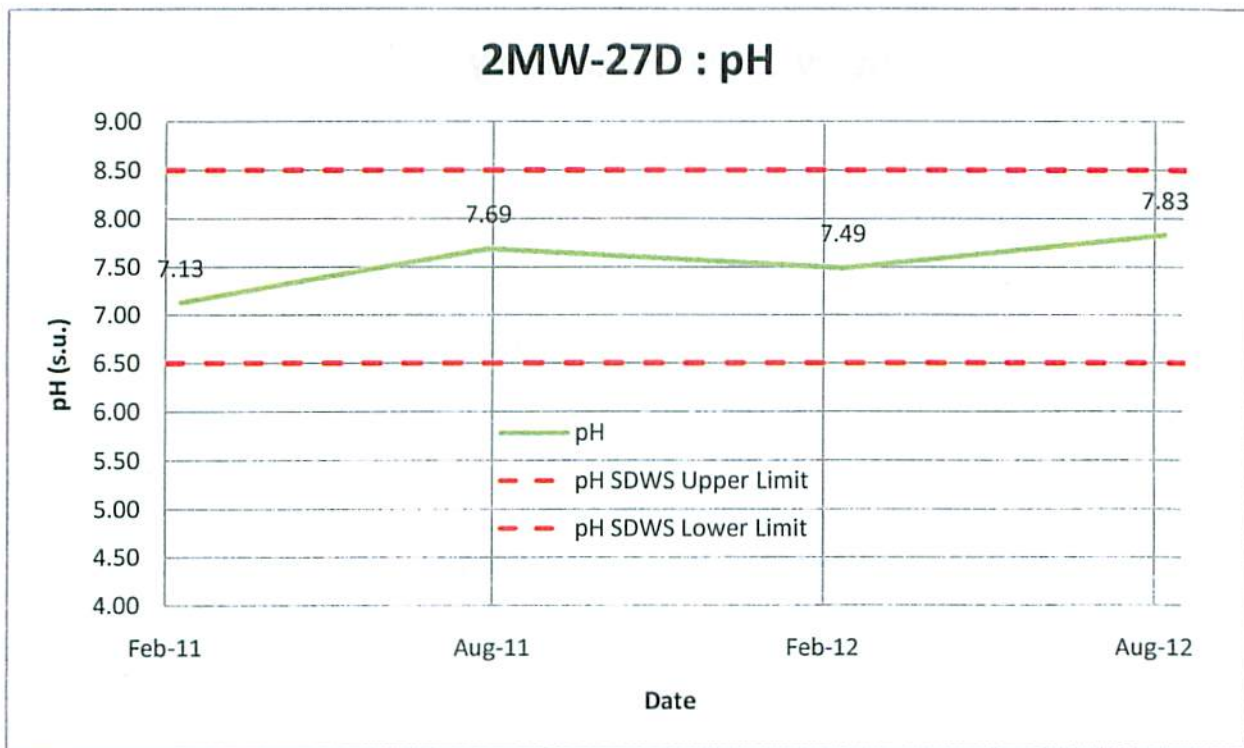


Figure B-30 pH and Nitrate Trends for 2MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

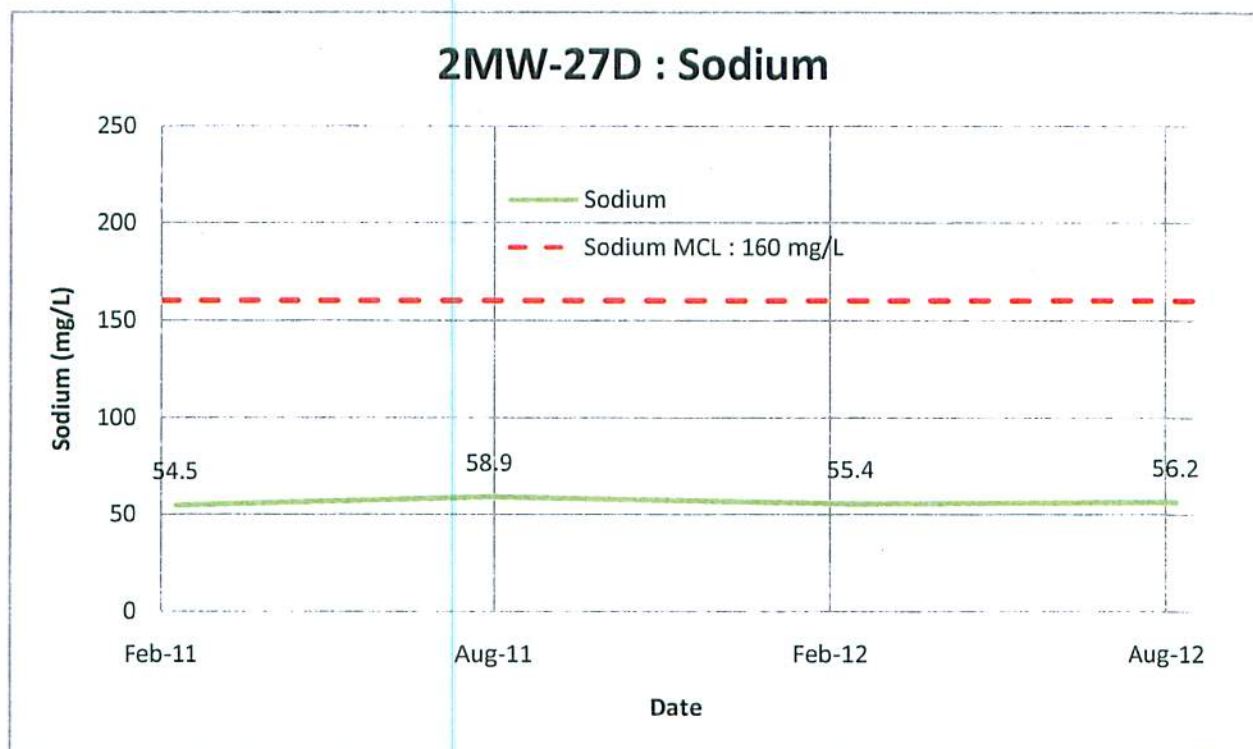
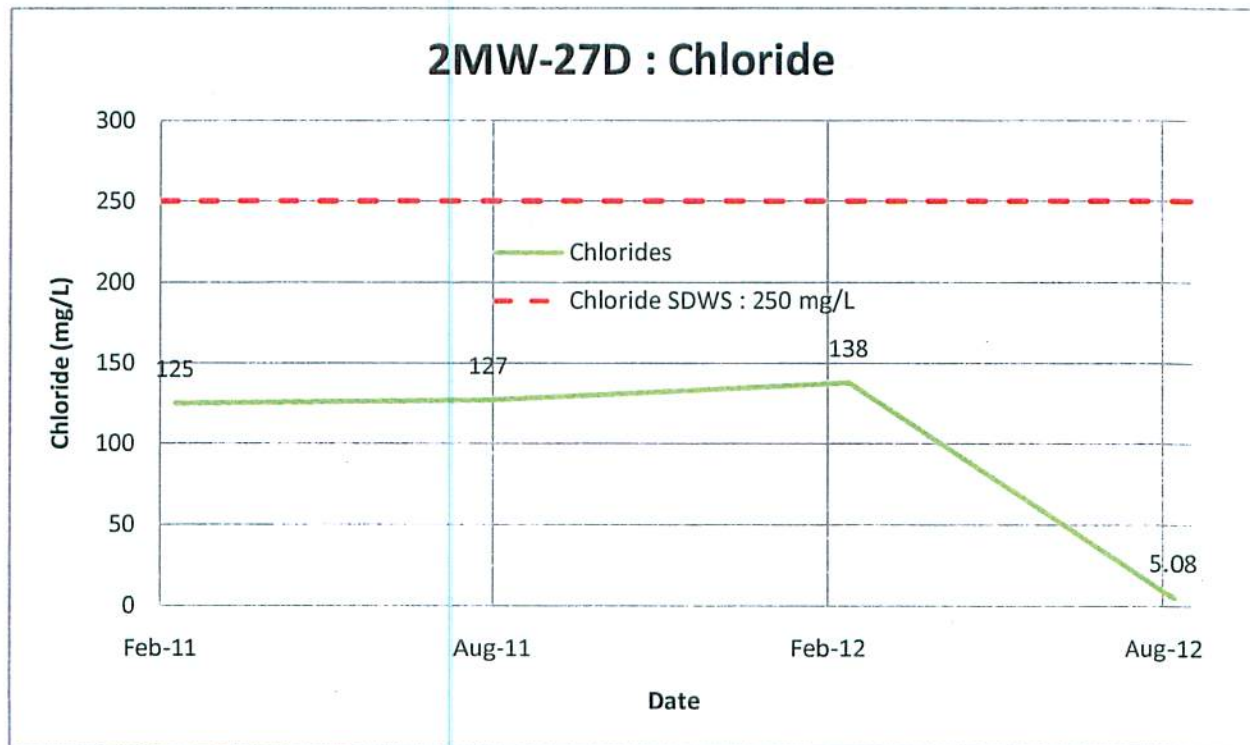


Figure B-31 Chloride and Sodium Trends for 2MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

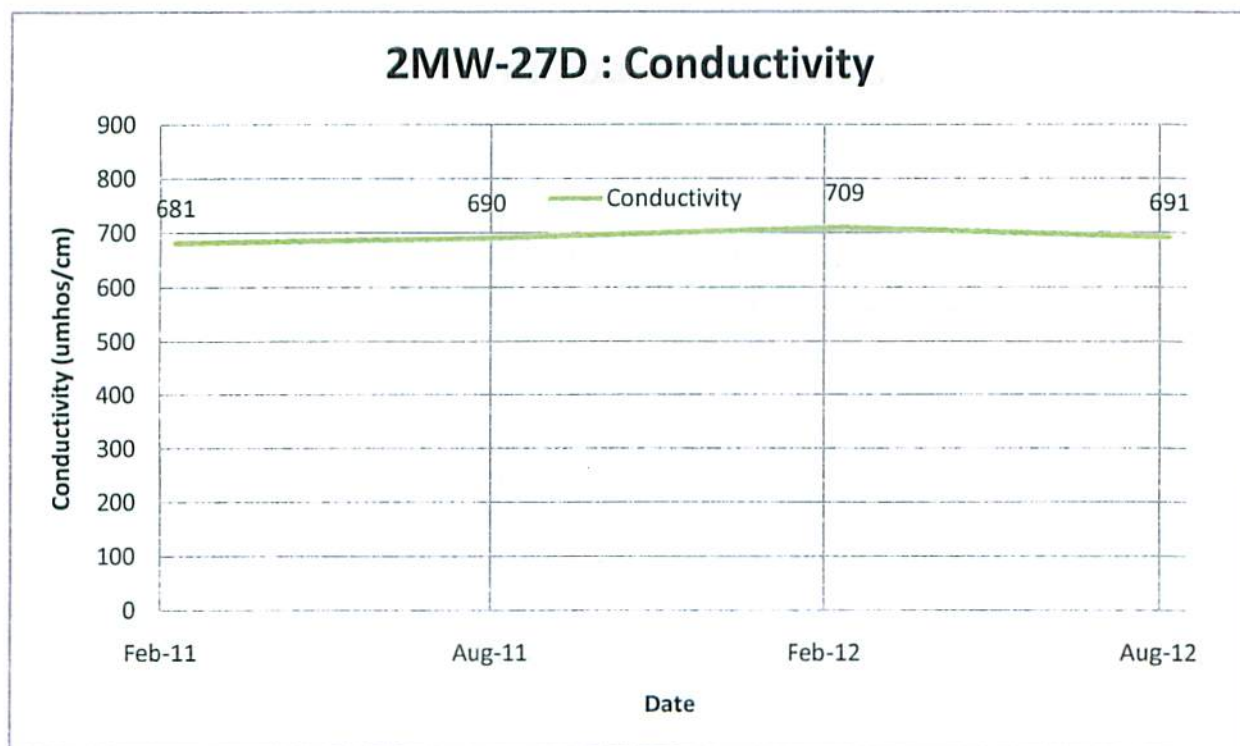
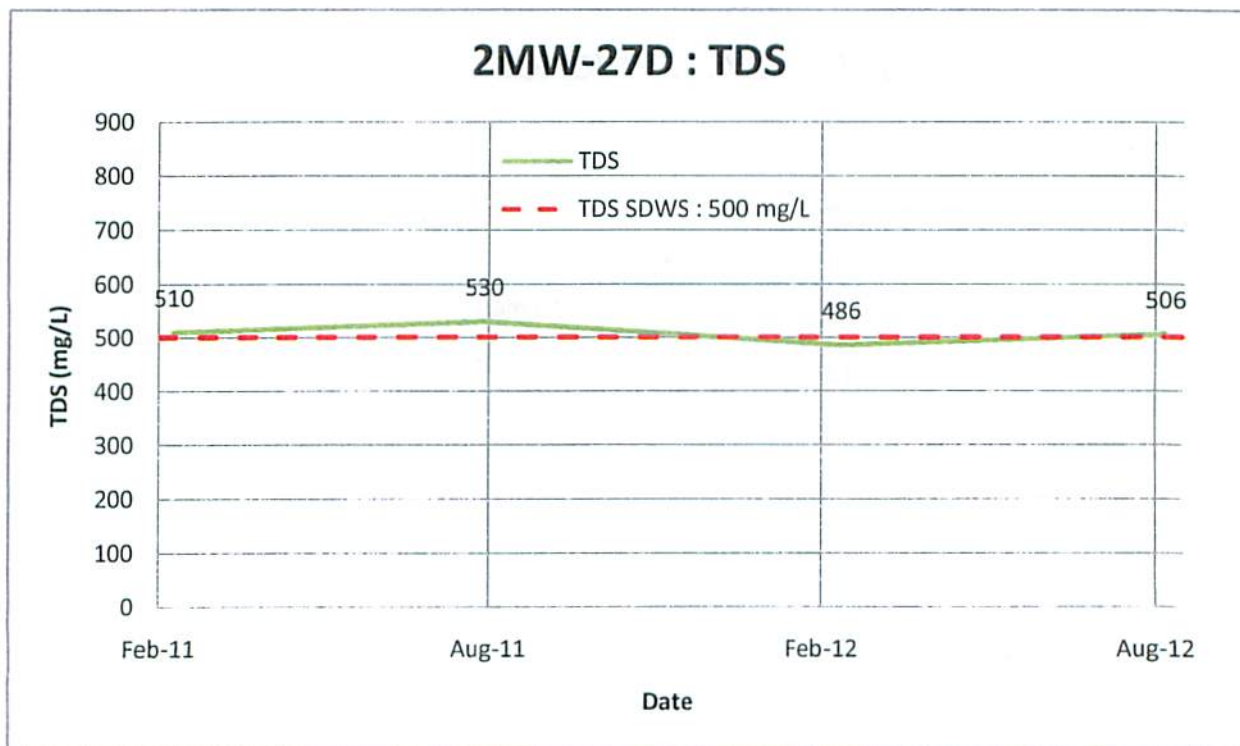
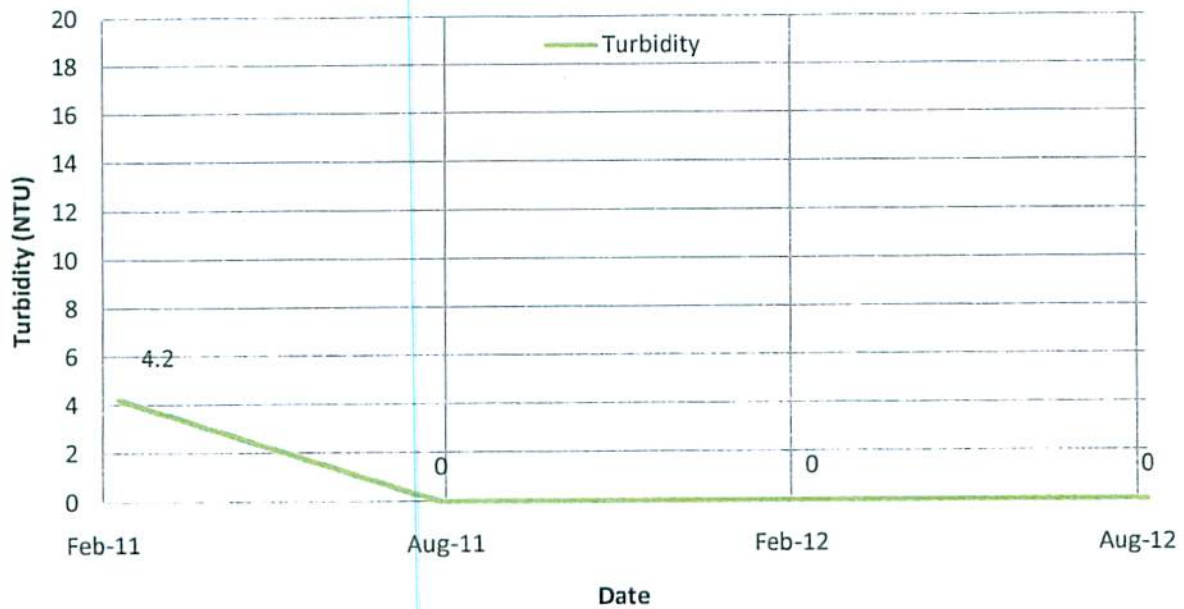


Figure B-32 TDS and Conductivity Trends for 2MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

2MW-27D : Turbidity



2MW-27D : Iron

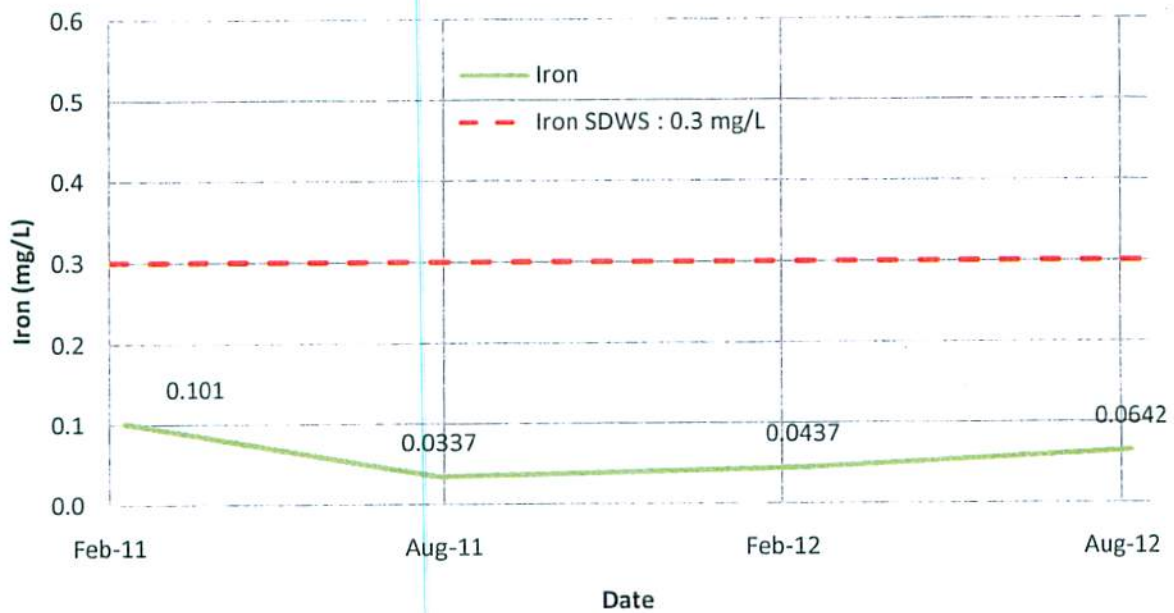


Figure B-33 Turbidity and Iron Trends for 2MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

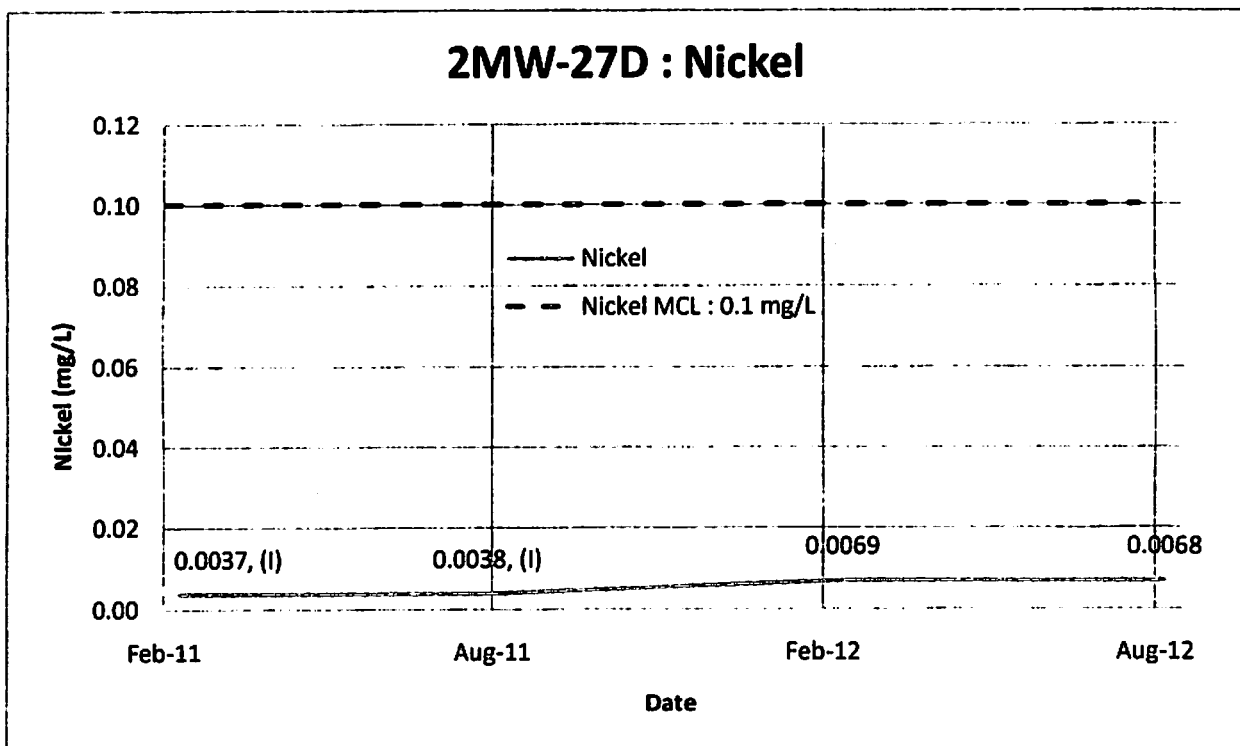
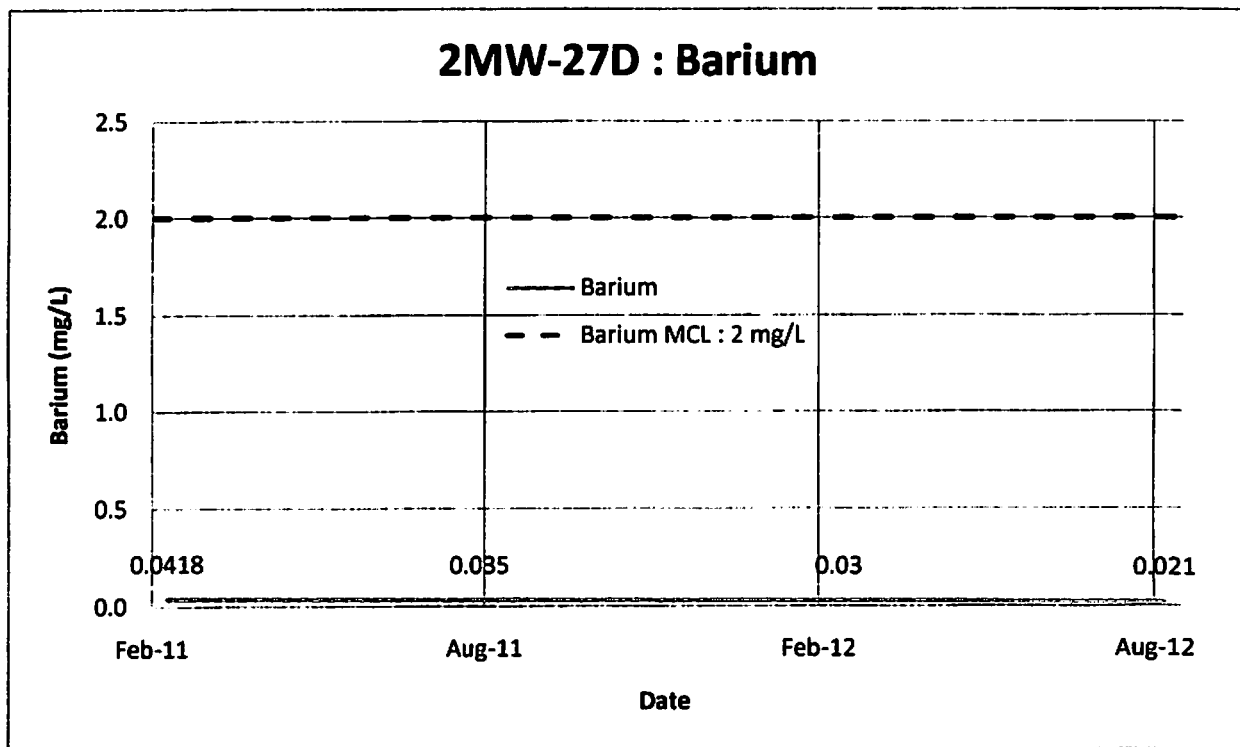


Figure B-34 Barium and Nickel Trends for 2MW-27D

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

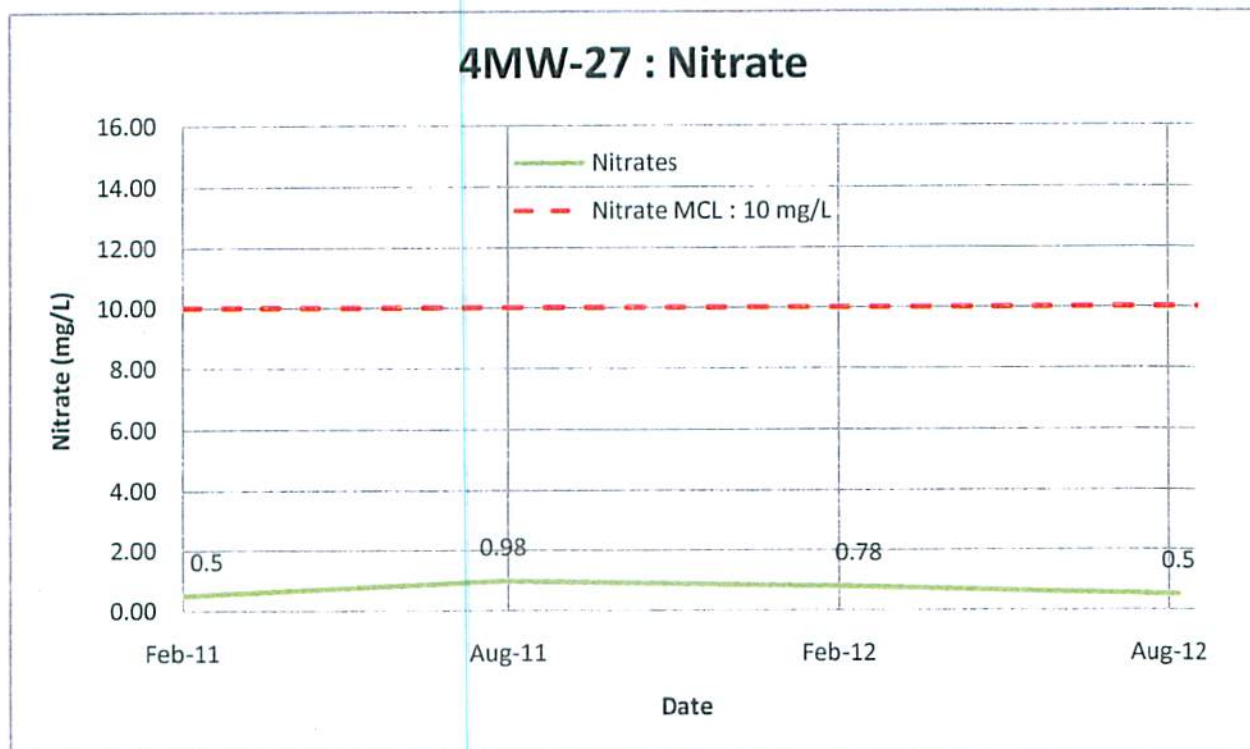
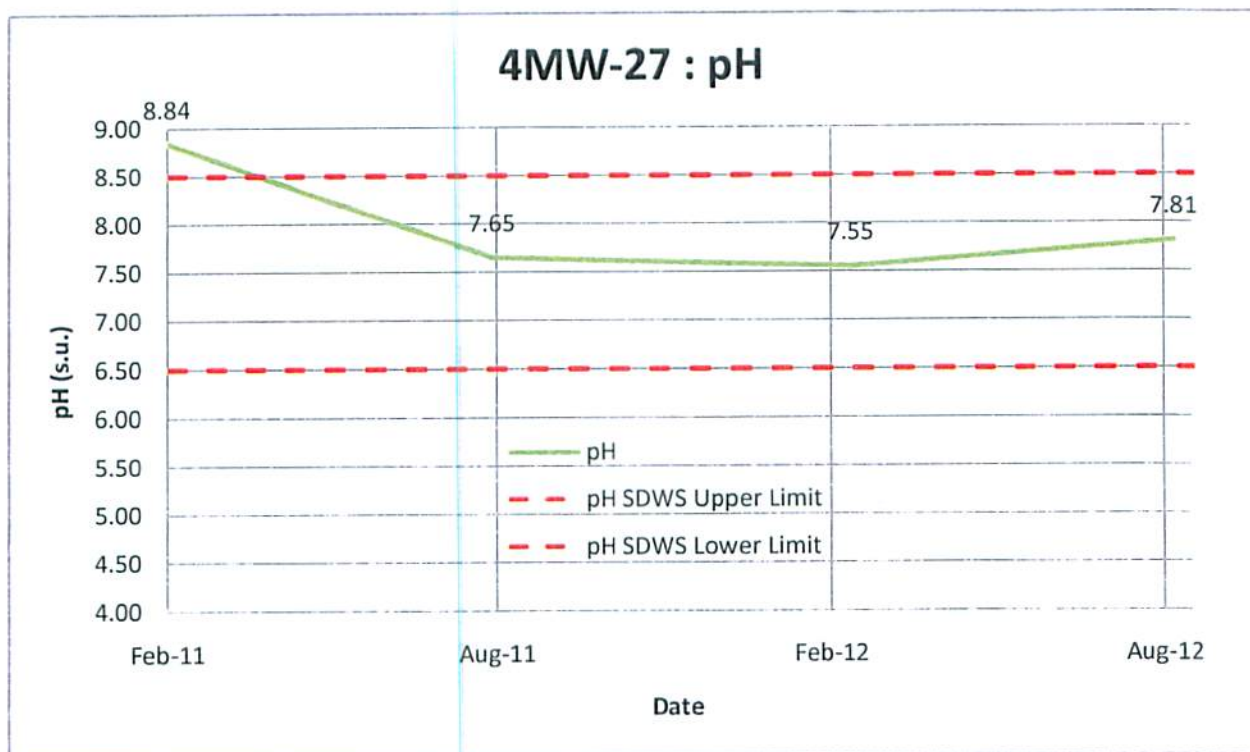


Figure B-35 pH and Nitrate Trends for 4MW-27

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

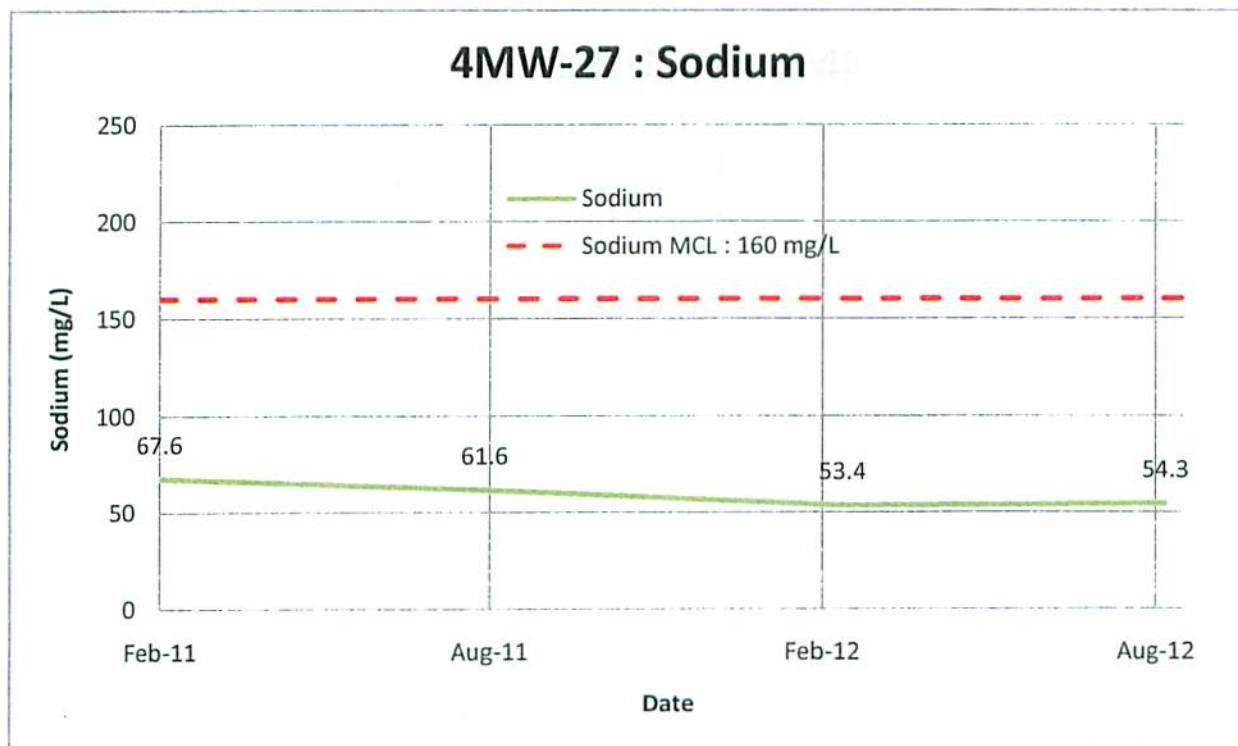
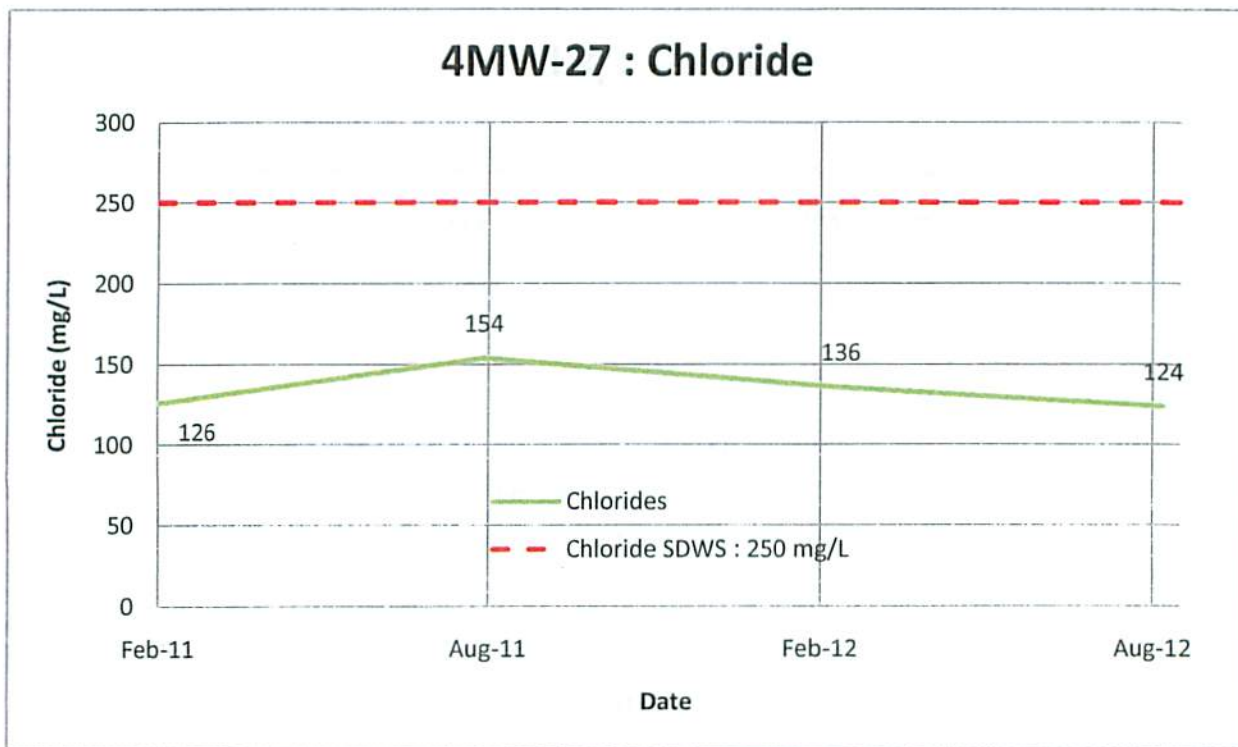


Figure B-36 Chloride and Sodium Trends for 4MW-27

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

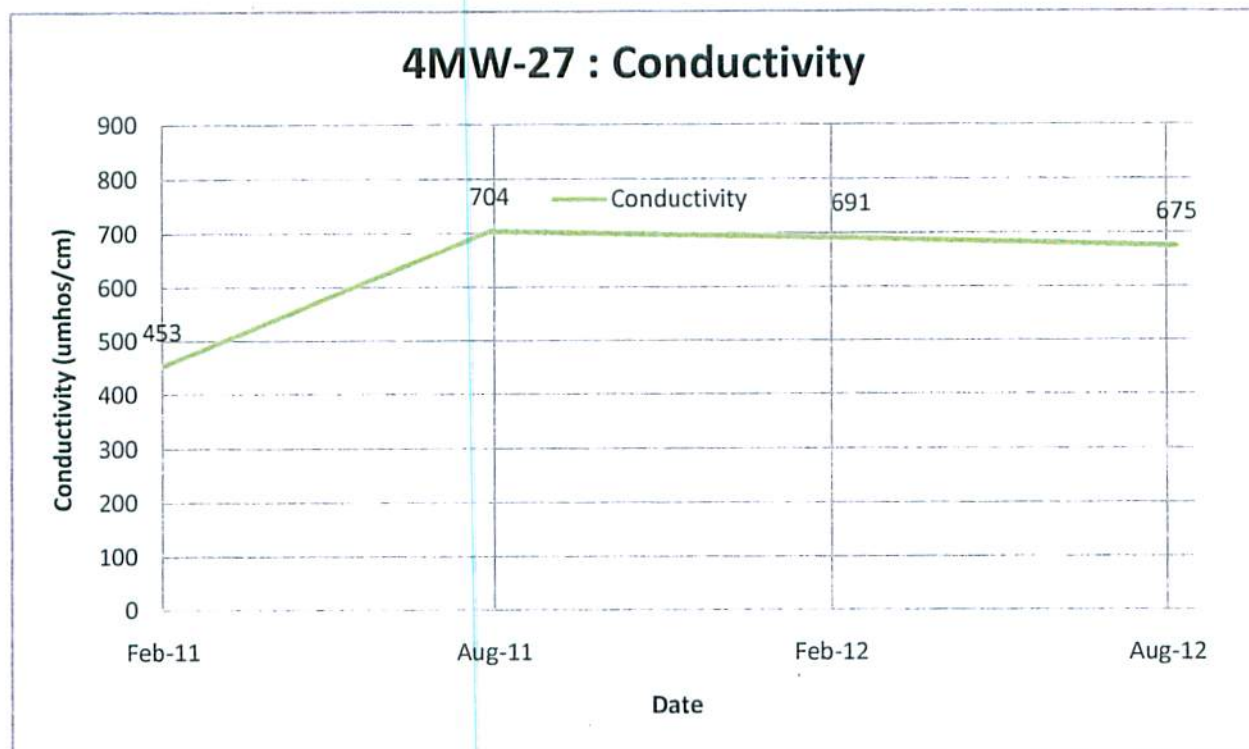
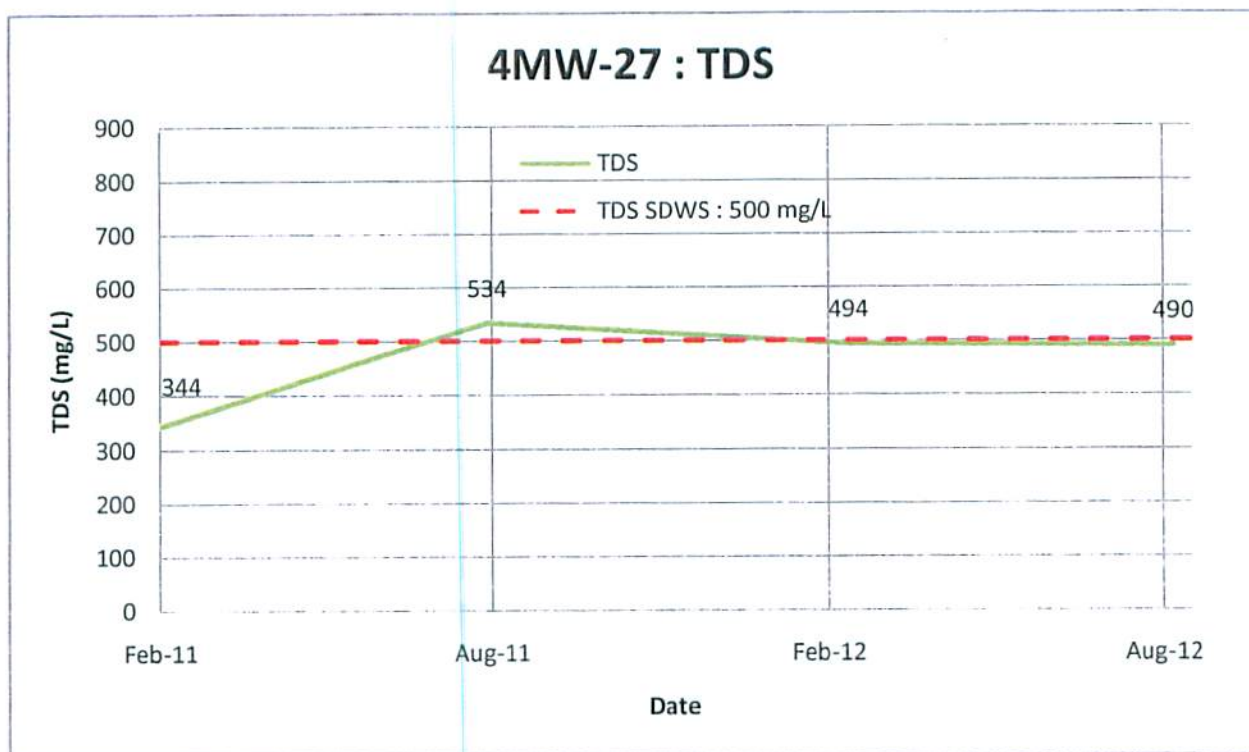


Figure B-37 TDS and Conductivity Trends for 4MW-27

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

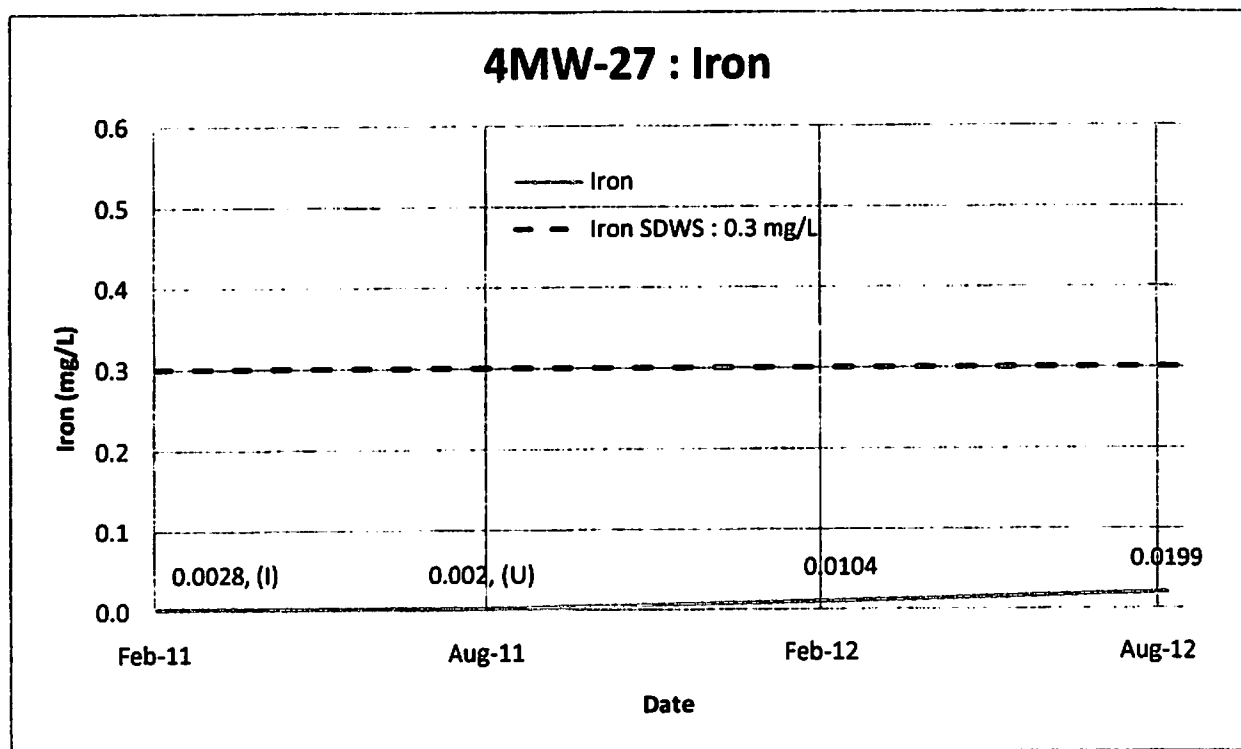
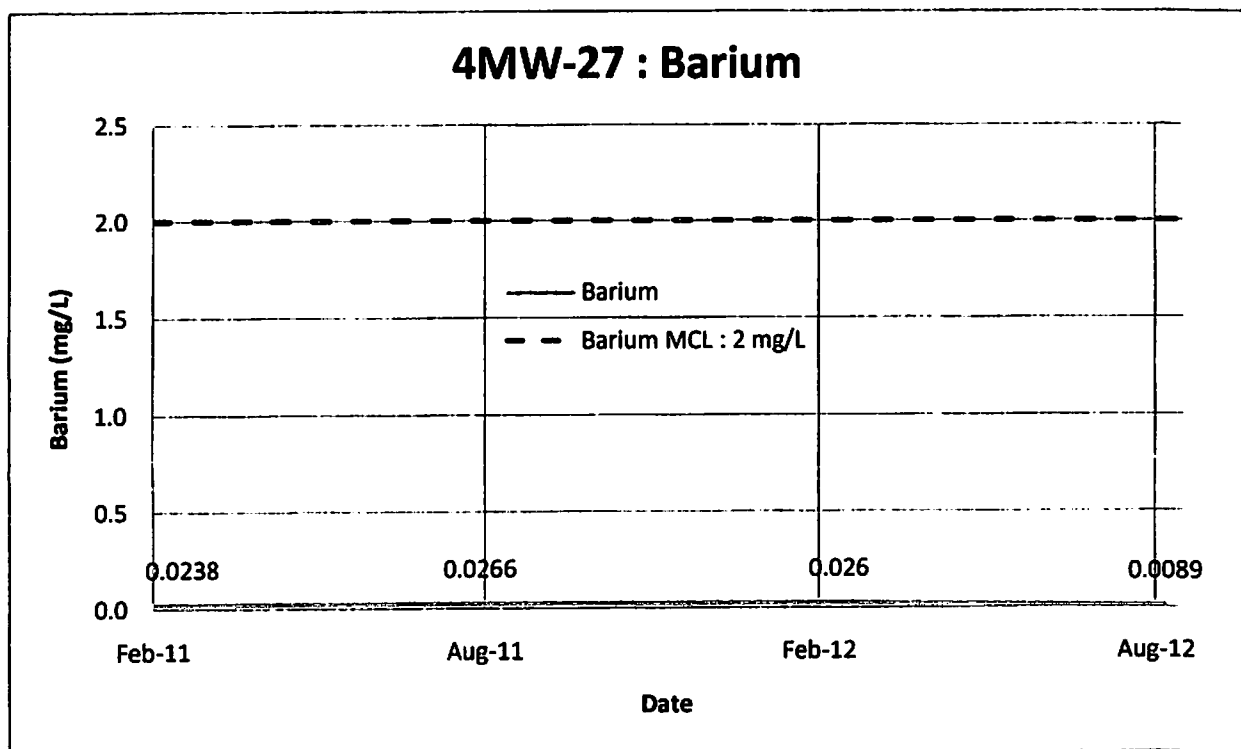


Figure B-38 Barium and Iron Trends for 4MW-27

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

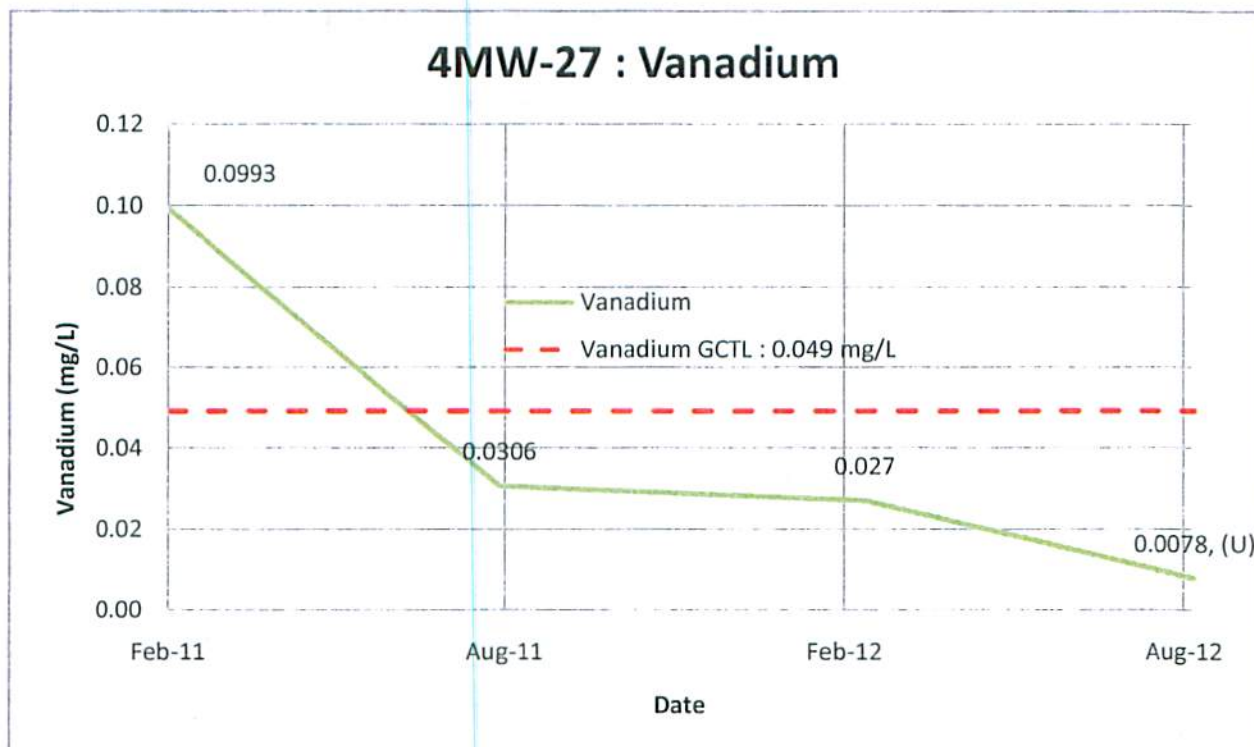
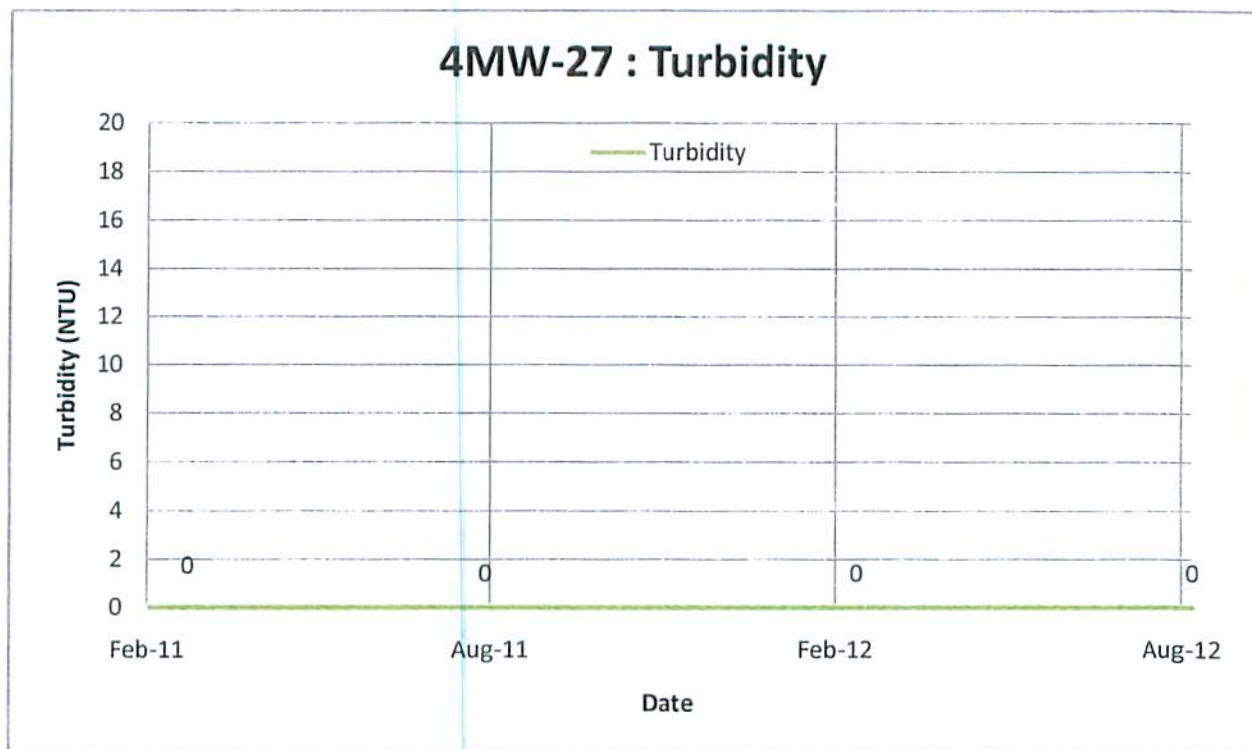


Figure B-39 Turbidity and Vanadium Trends for 4MW-27

GCTL - Groundwater Cleanup Target Level per 62-777 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

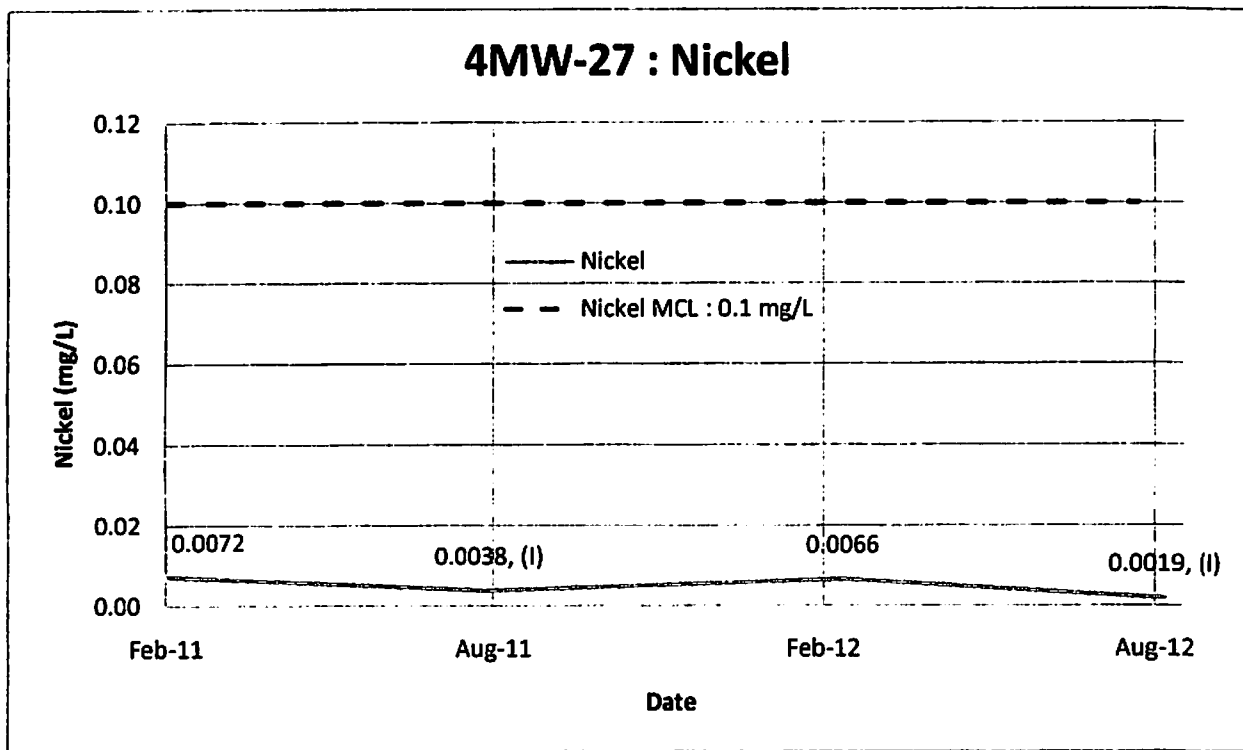


Figure B-40 Nickel Trend for 4MW-27

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

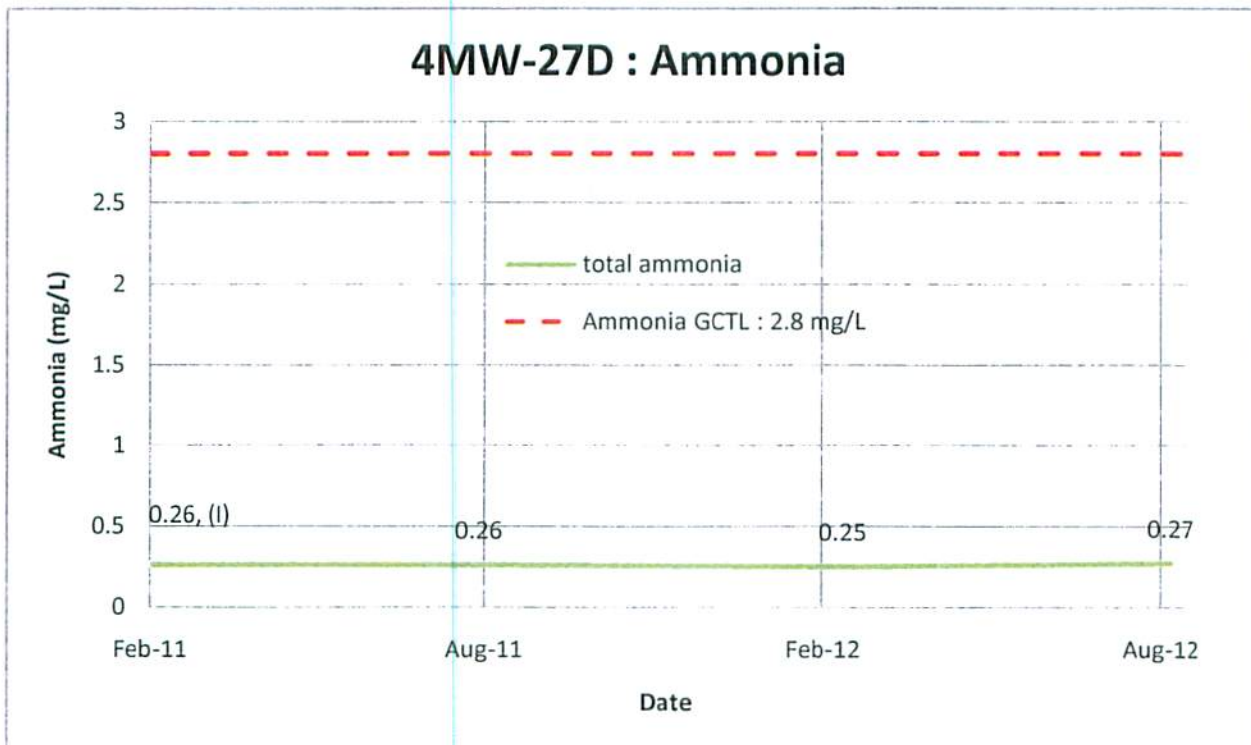
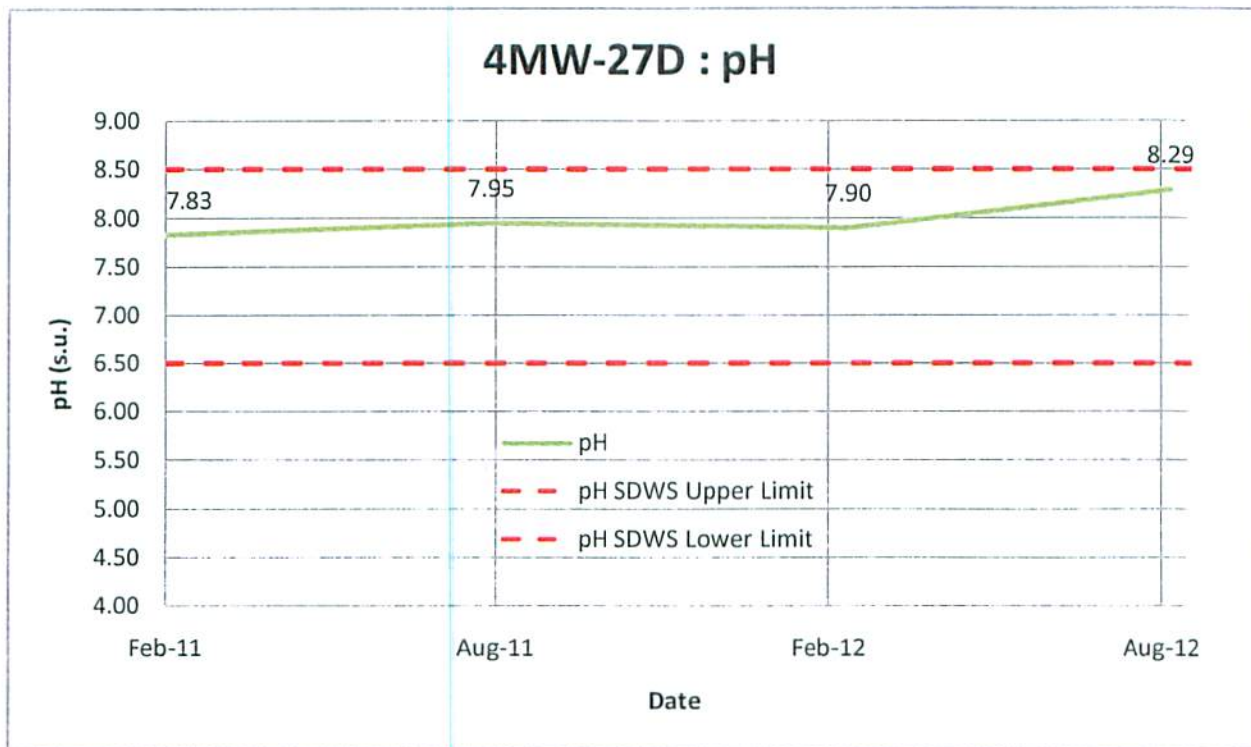


Figure B-41 pH and Ammonia Trends for 4MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(I) Analyte detected below quantitation limit

GCTL - Groundwater Cleanup Target Level per 62-777 F.A.C

Based on data provided by Pasco County Lab

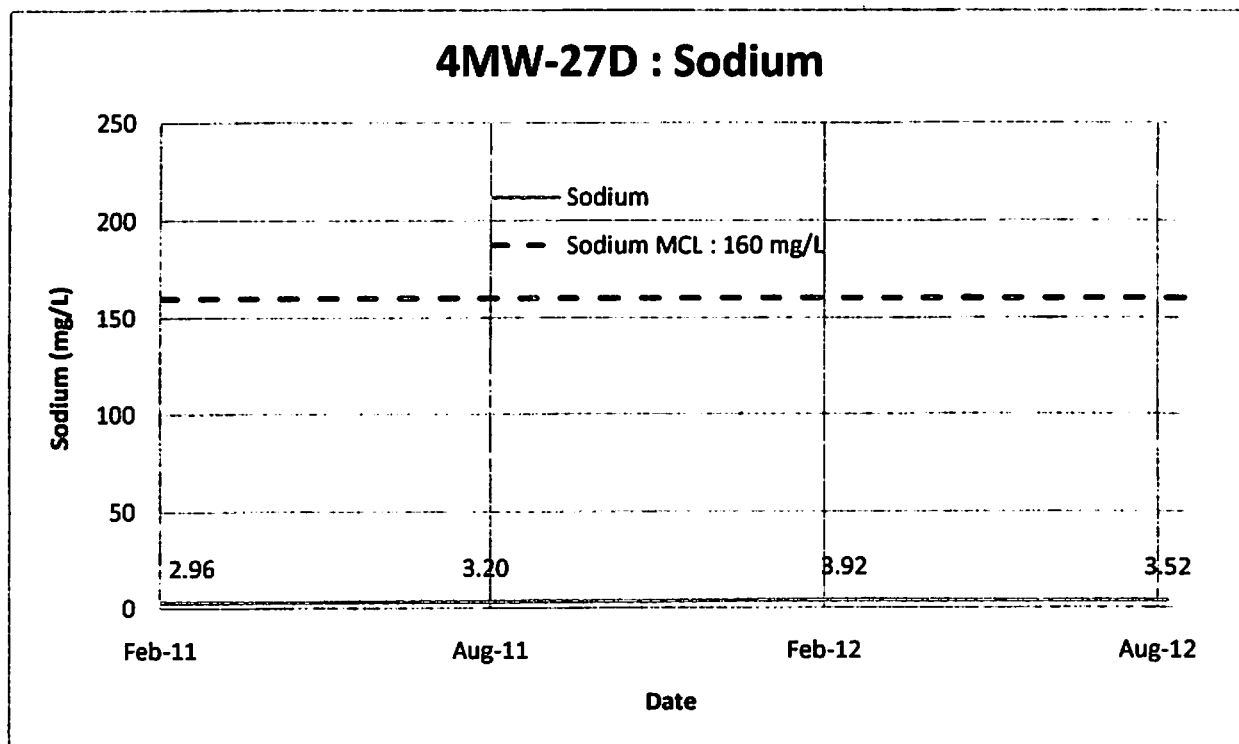
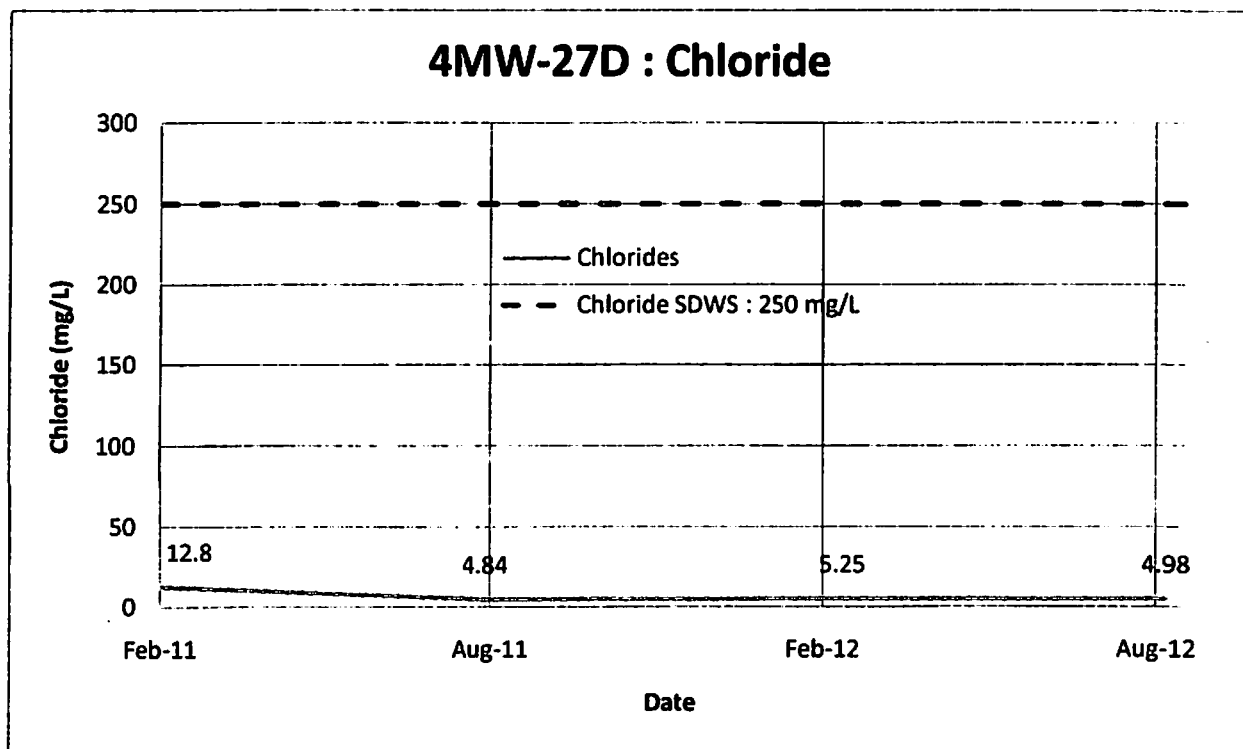


Figure B-42 Chloride and Sodium Trends for 4MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

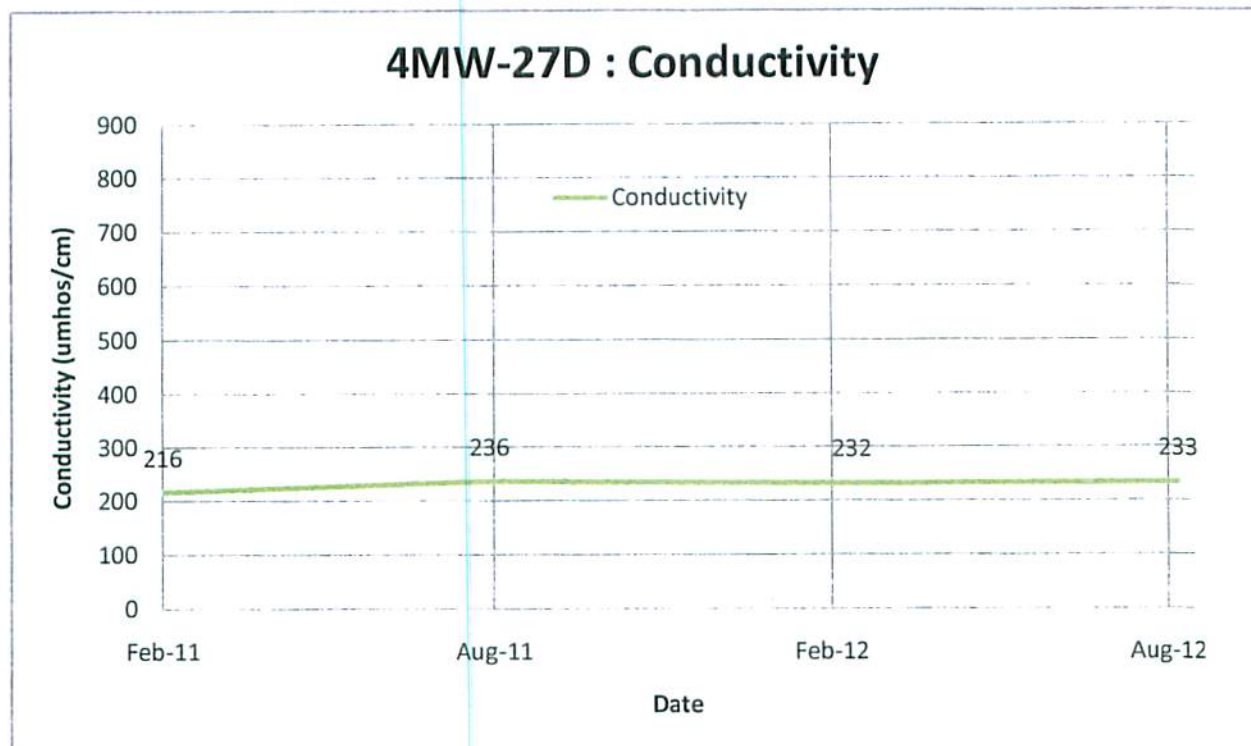
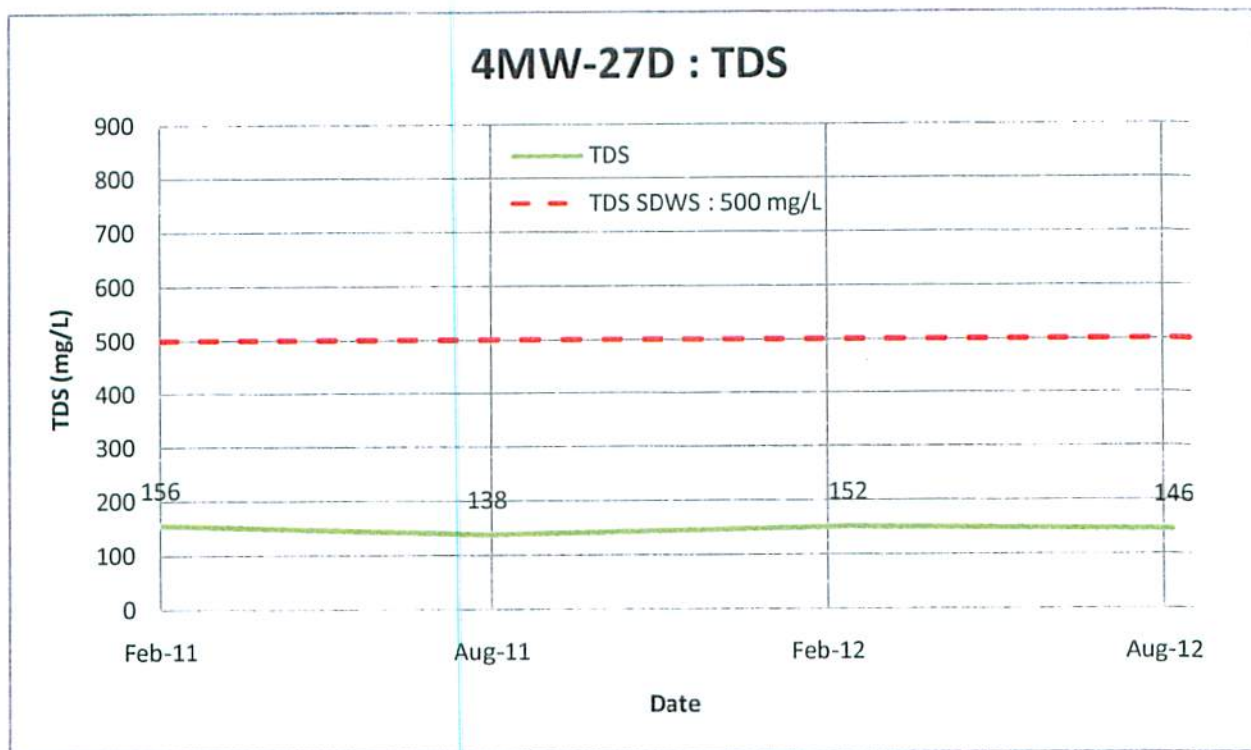


Figure B-43 TDS and Conductivity Trends for 4MW-27D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

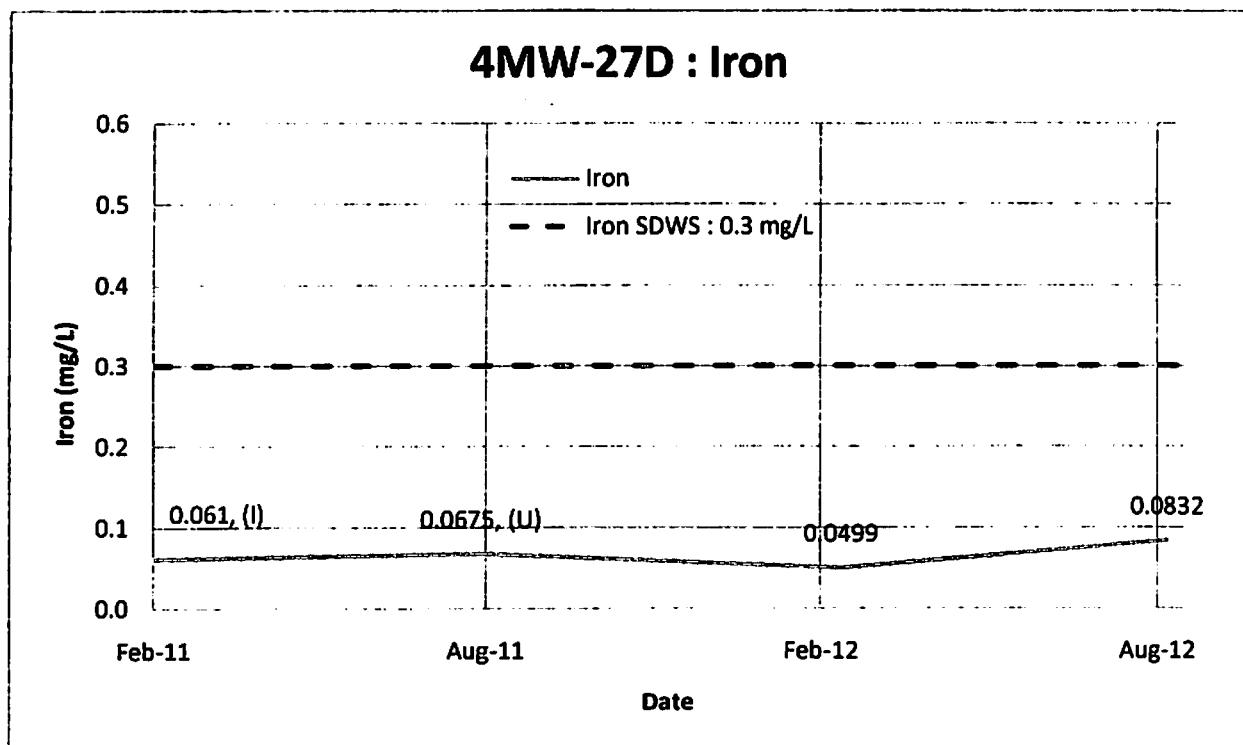
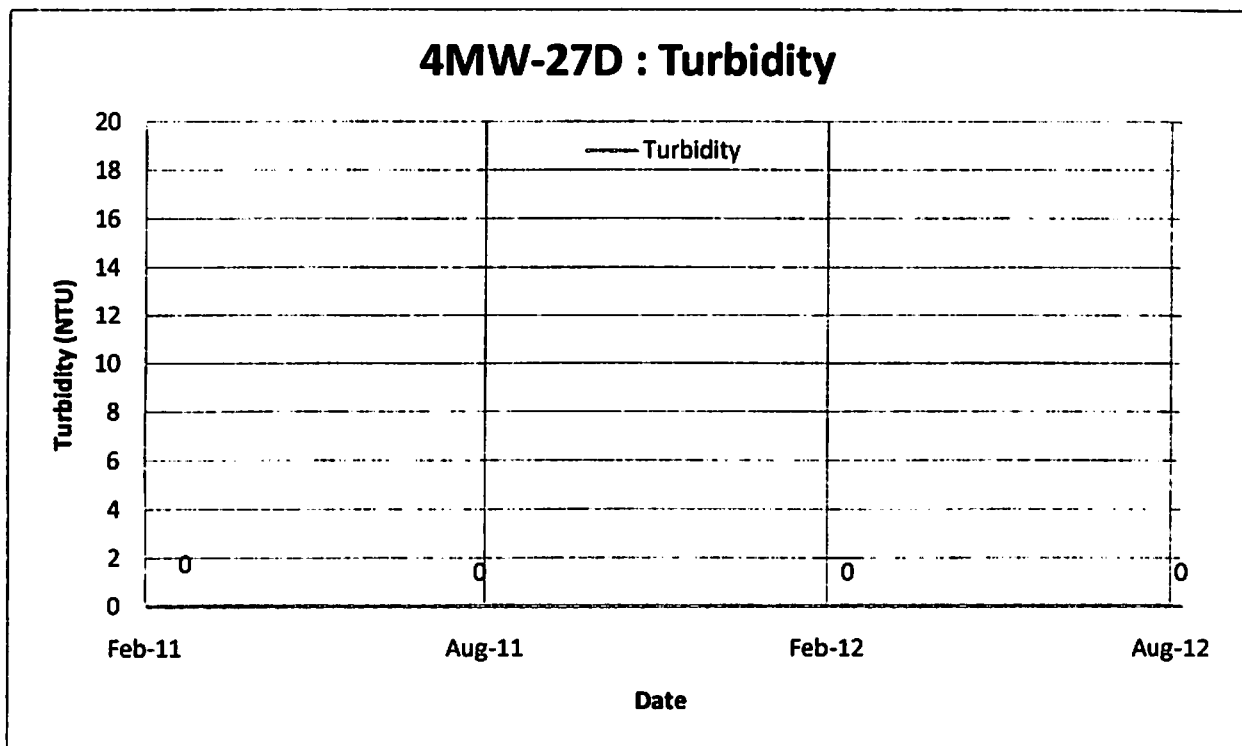


Figure B-44 Turbidity and Iron Trends for 4MW-27D

MCL - Maximum Contaminant Level per 62-550 F.A.C

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

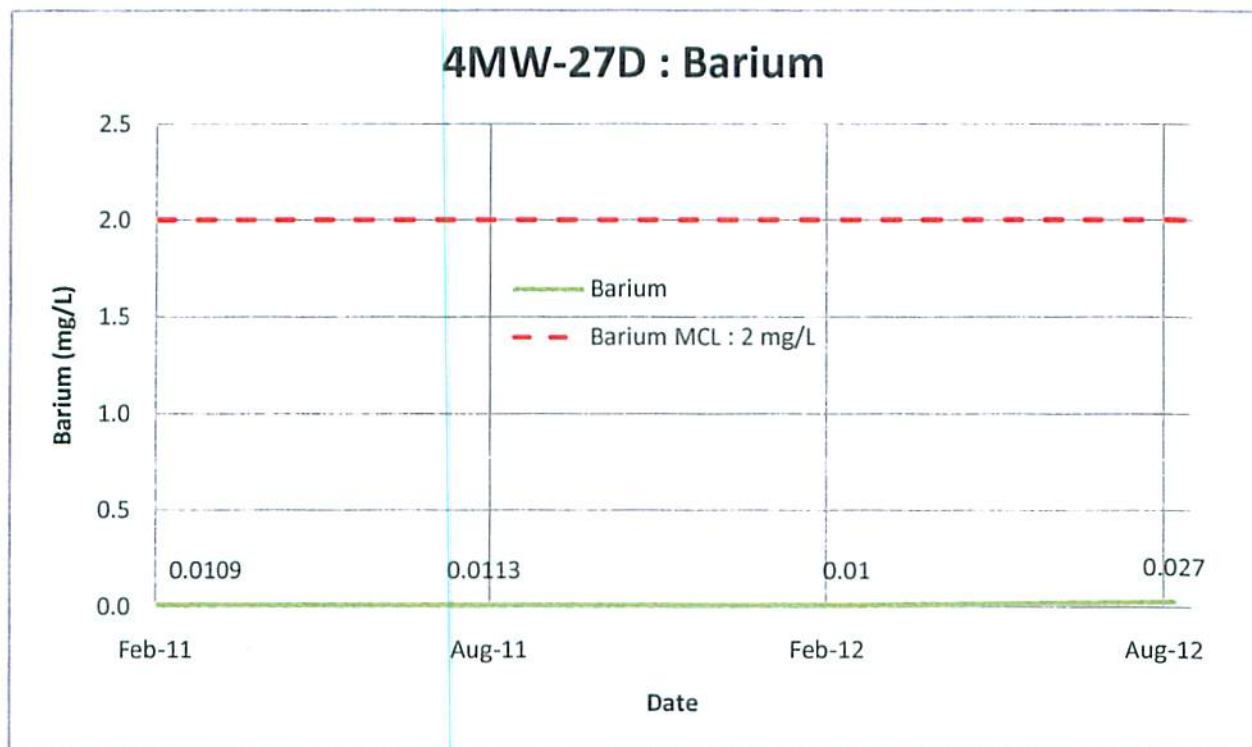


Figure B-45 BariumTrend for 4MW-27D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

Floridan Aquifer Detection/Compliance Wells

4 MW - 4

4 MW - 5

4 MW - 11 D

4 MW - 12 D

4 MW - 13 D

4 MW - 14 D

2 MW - 18 D

2 MW - 19 D

2 MW - 24 D

2 MW - 25 D

2 MW - 26 D

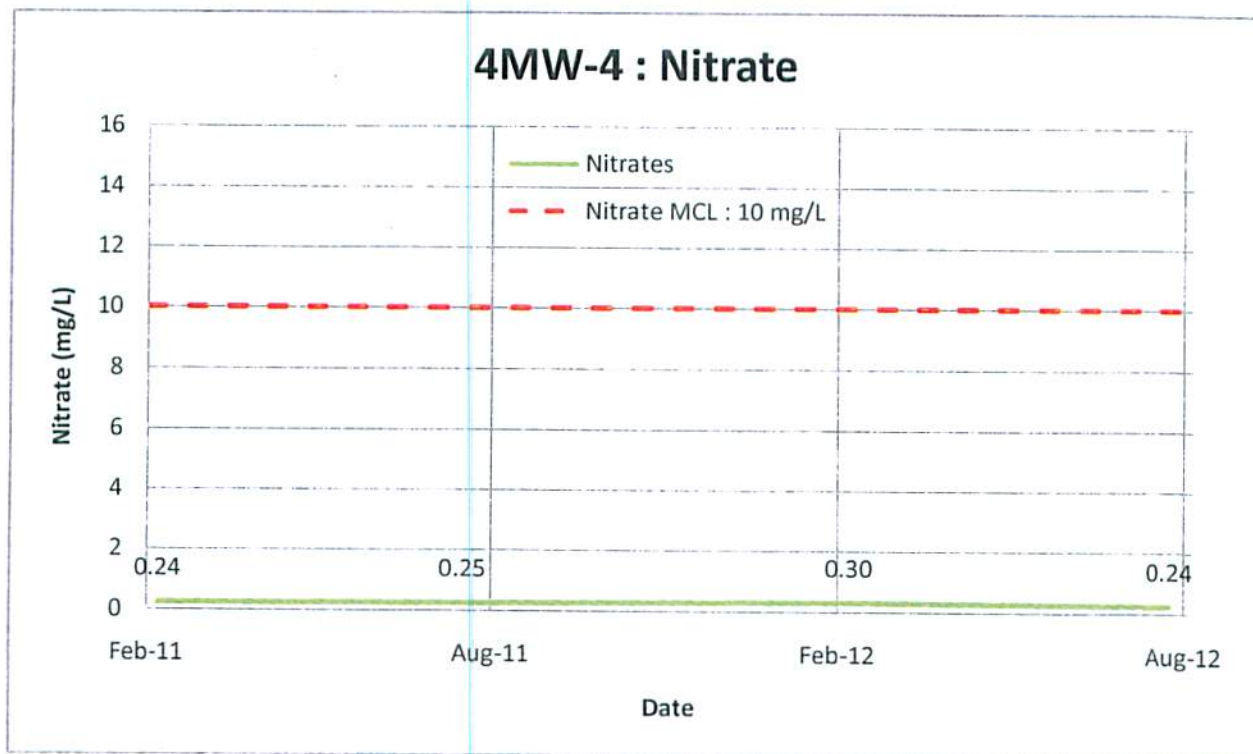
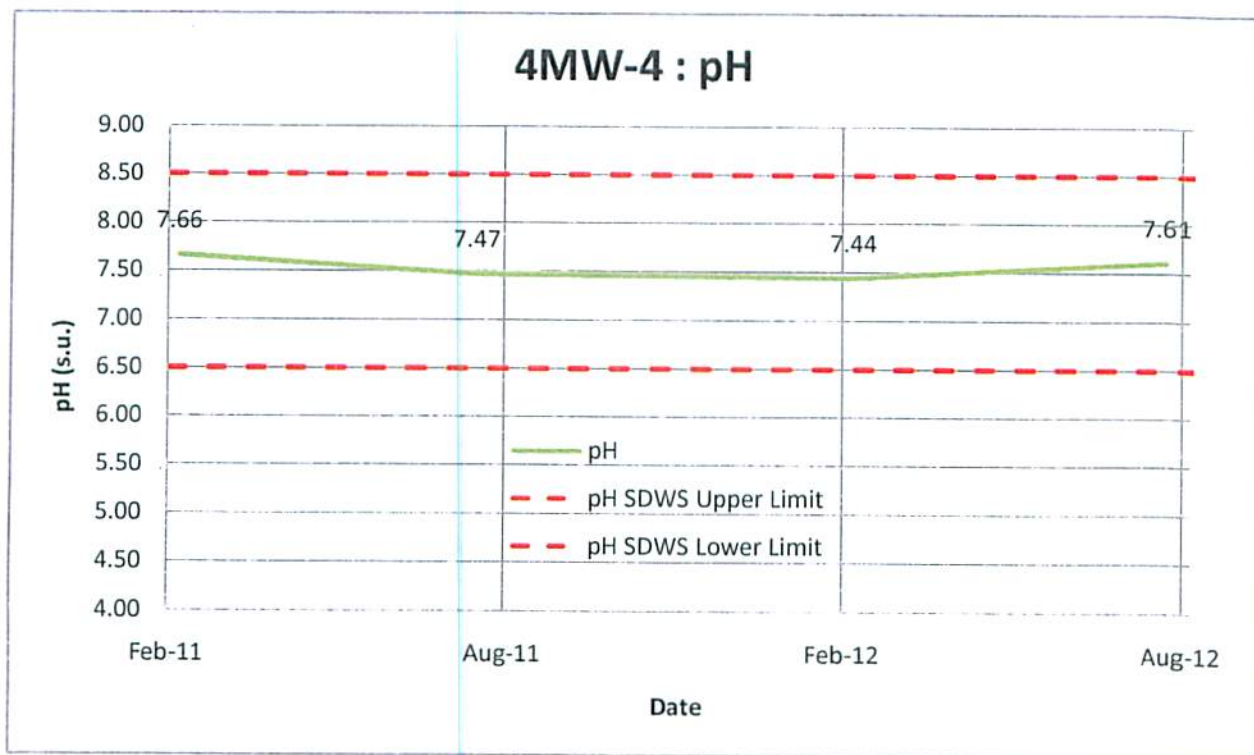


Figure B-46 pH and Nitrate Trends for 4MW-4

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

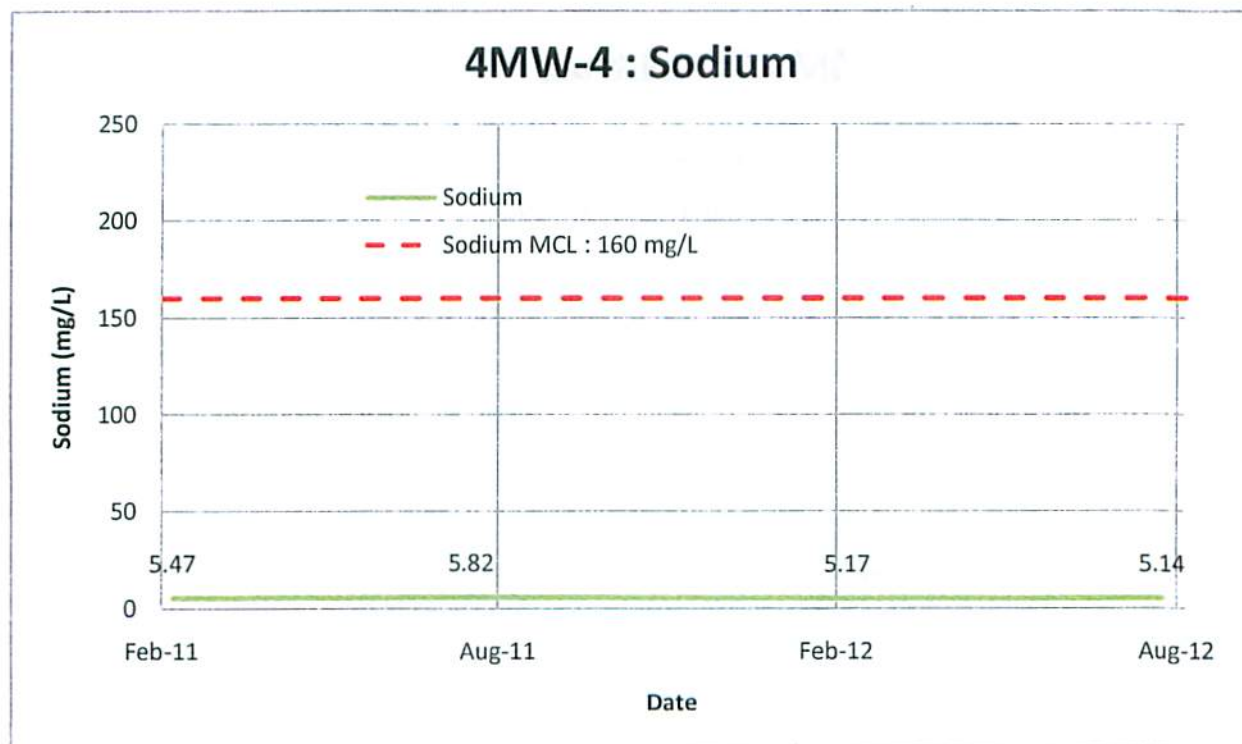
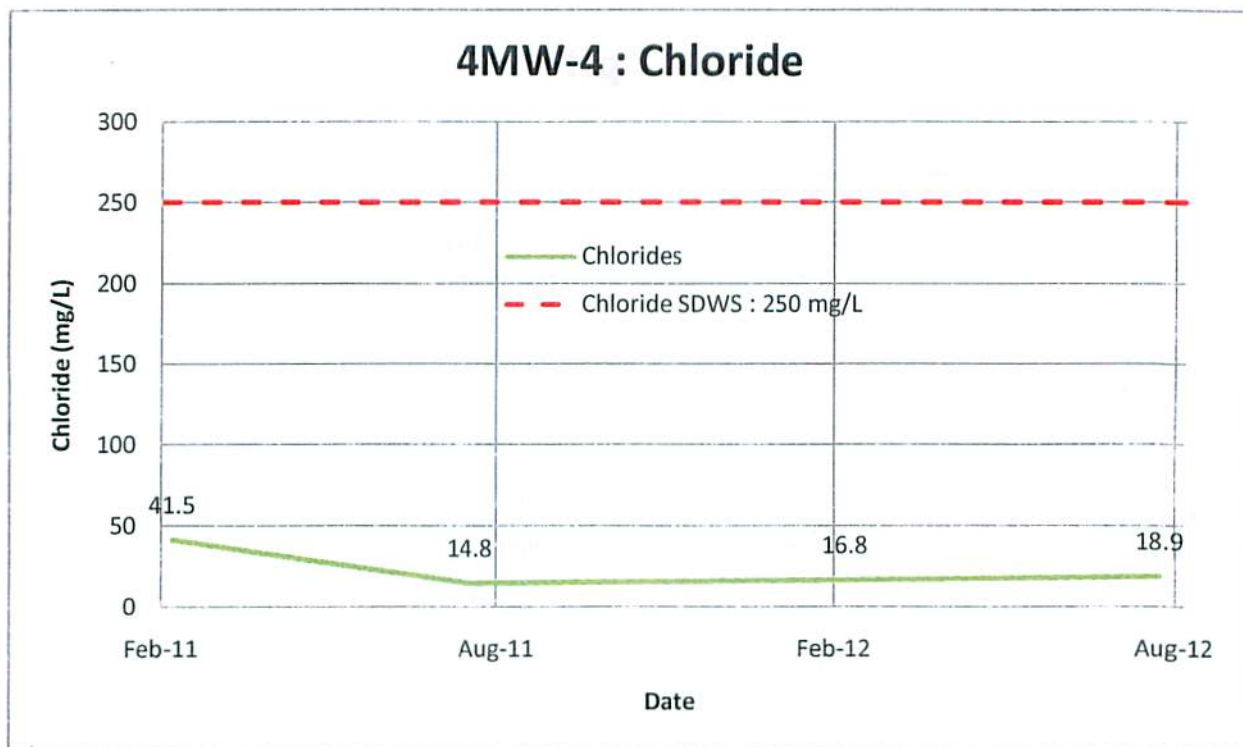


Figure B-47 Chloride and Sodium Trends for 4MW-4

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

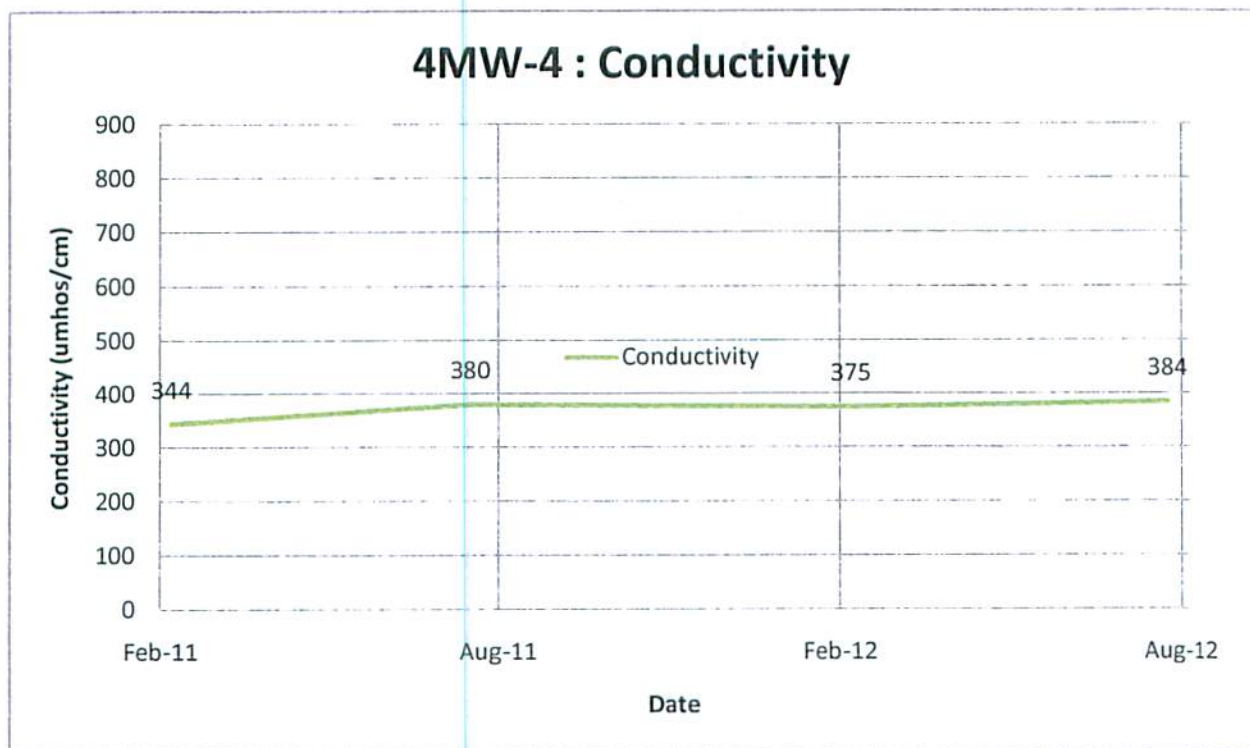
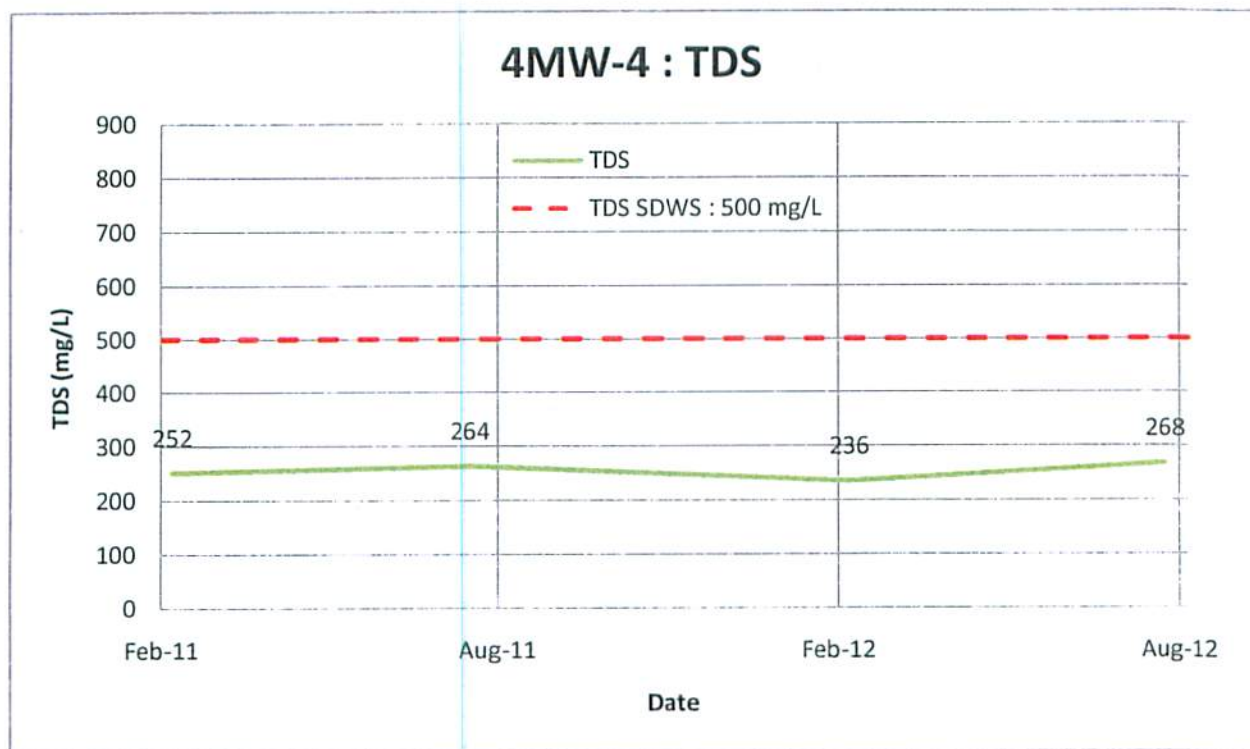


Figure B-48 TDS and Conductivity Trends for 4MW-4

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

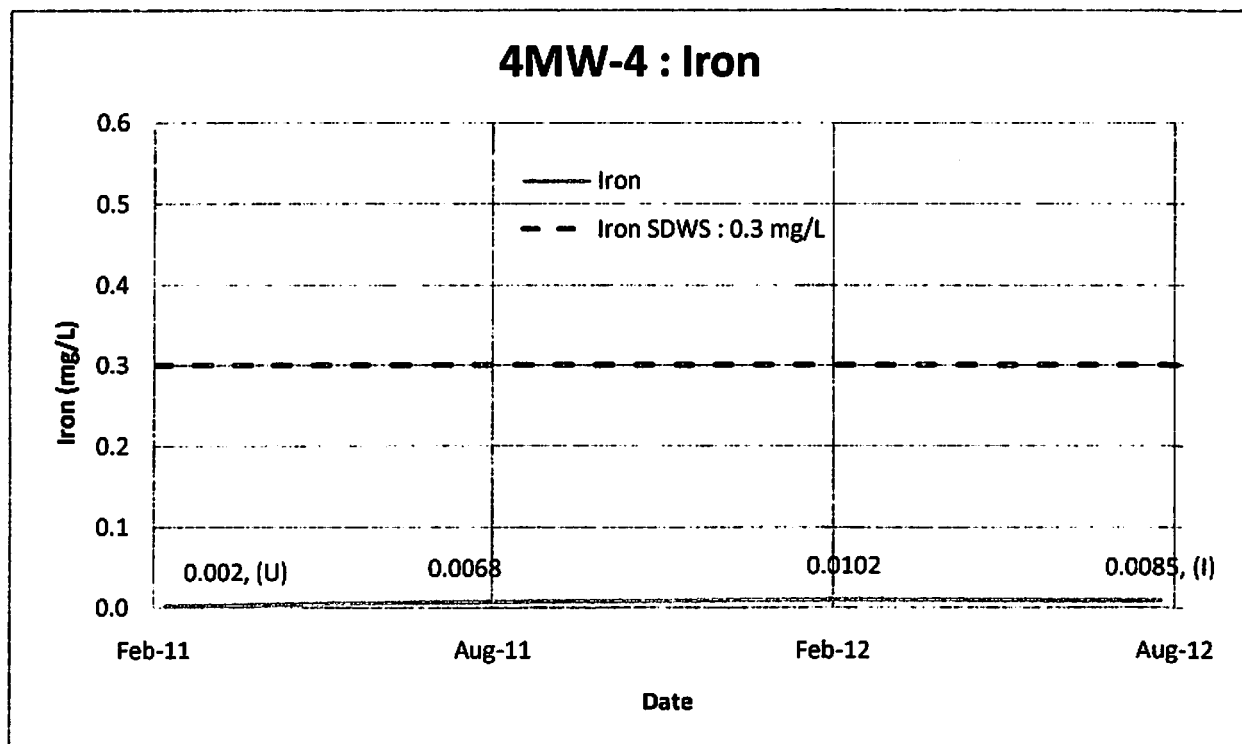
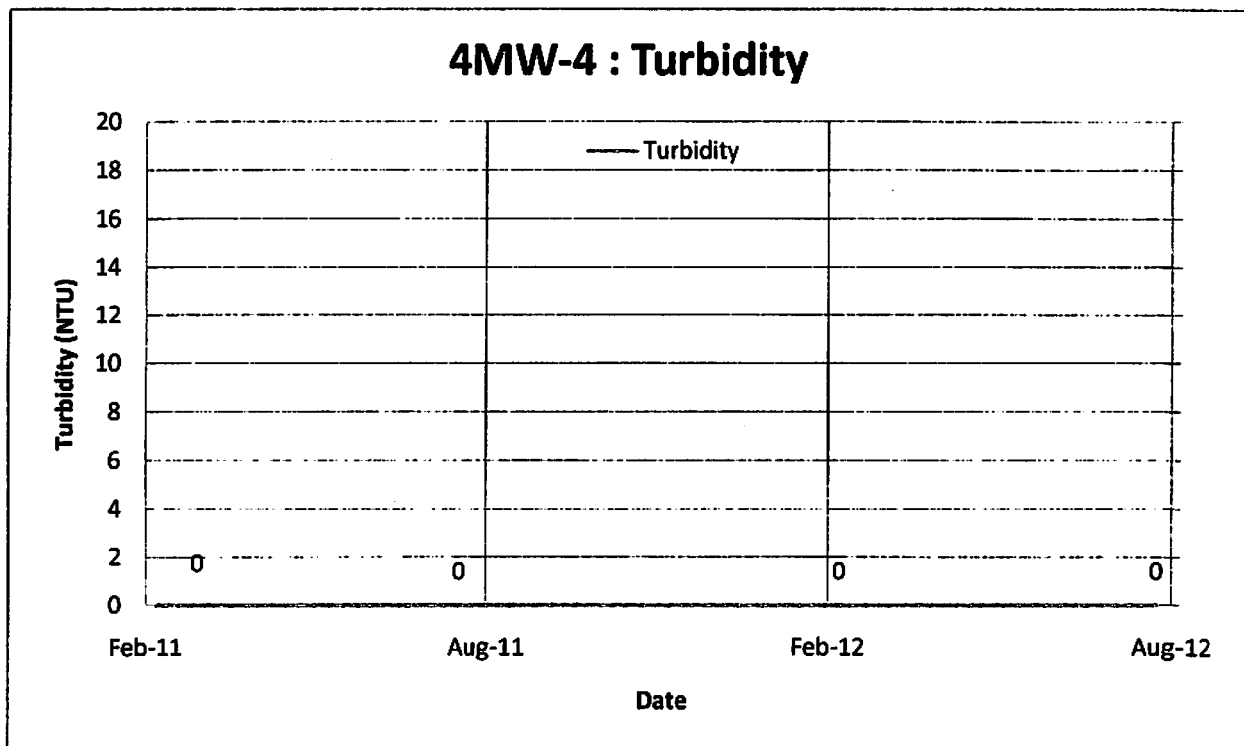


Figure B-49 Turbidity and Iron Trends for 4MW-4

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C
Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit
(U) Analyte concentration below method detection limit

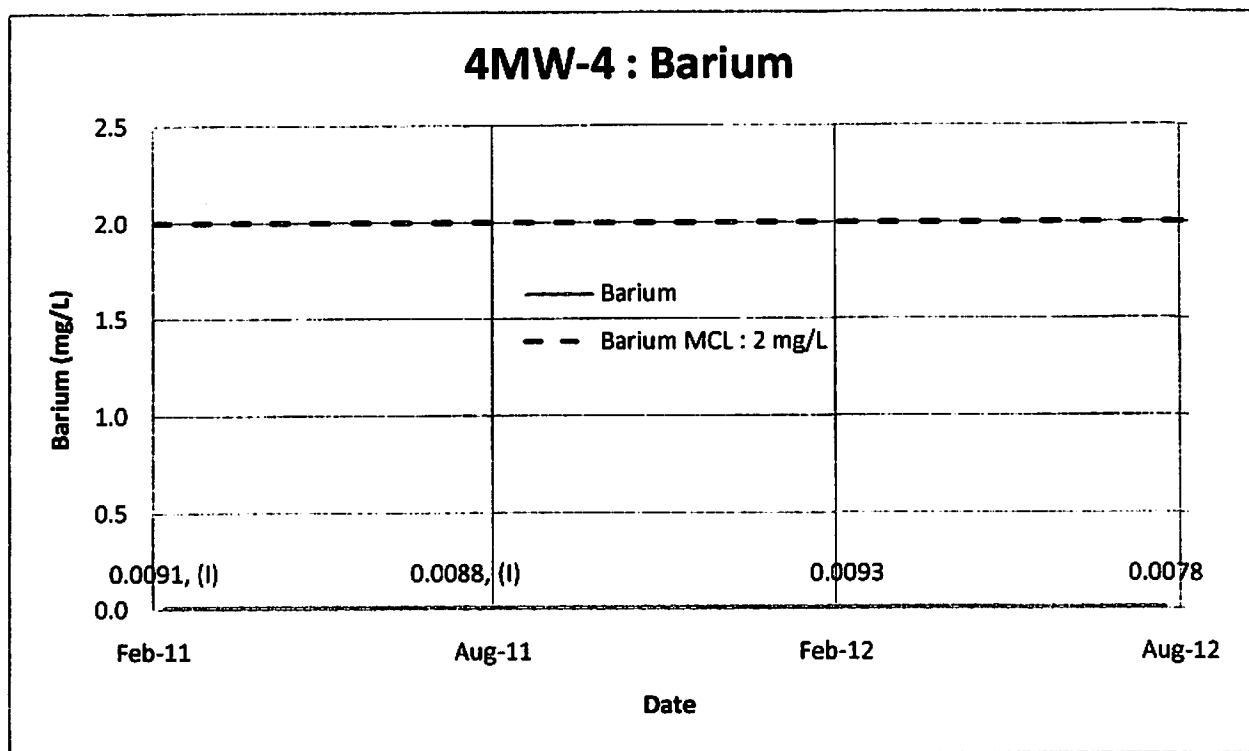


Figure B-50 Barium Trend for 4MW-4

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

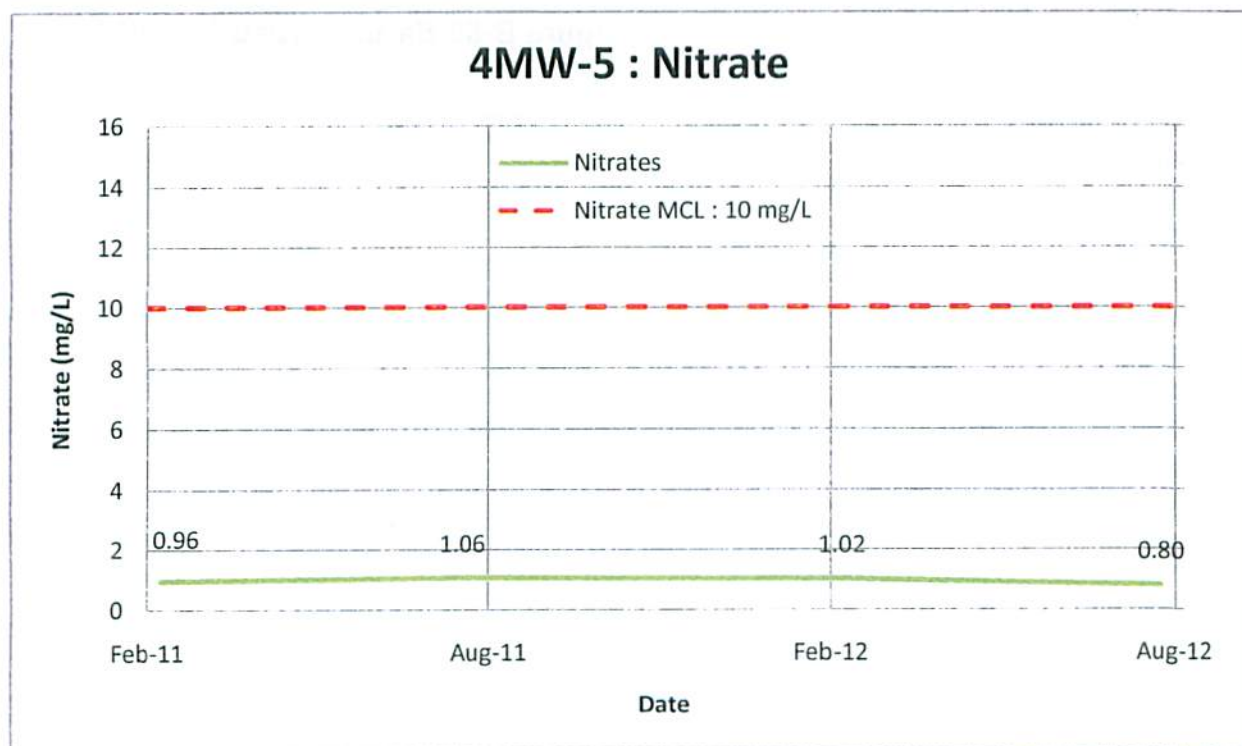
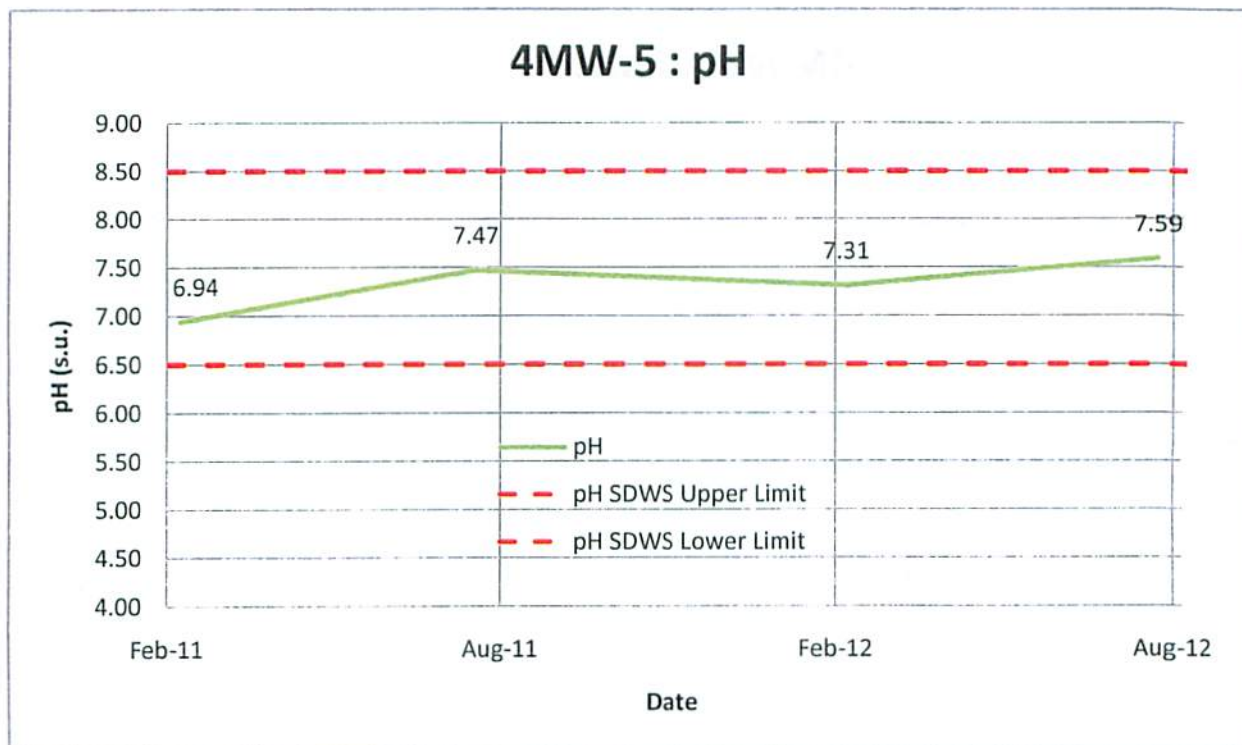


Figure B-51 pH and Nitrate Trends for 4MW-5

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

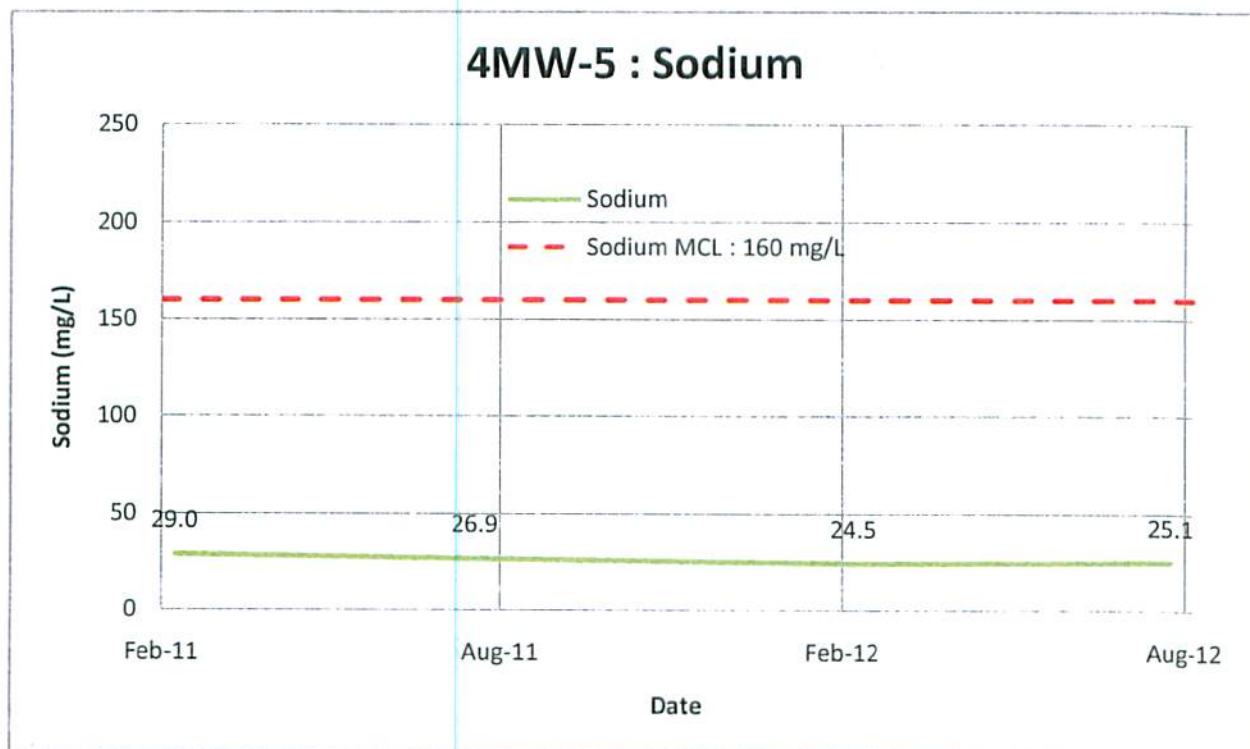
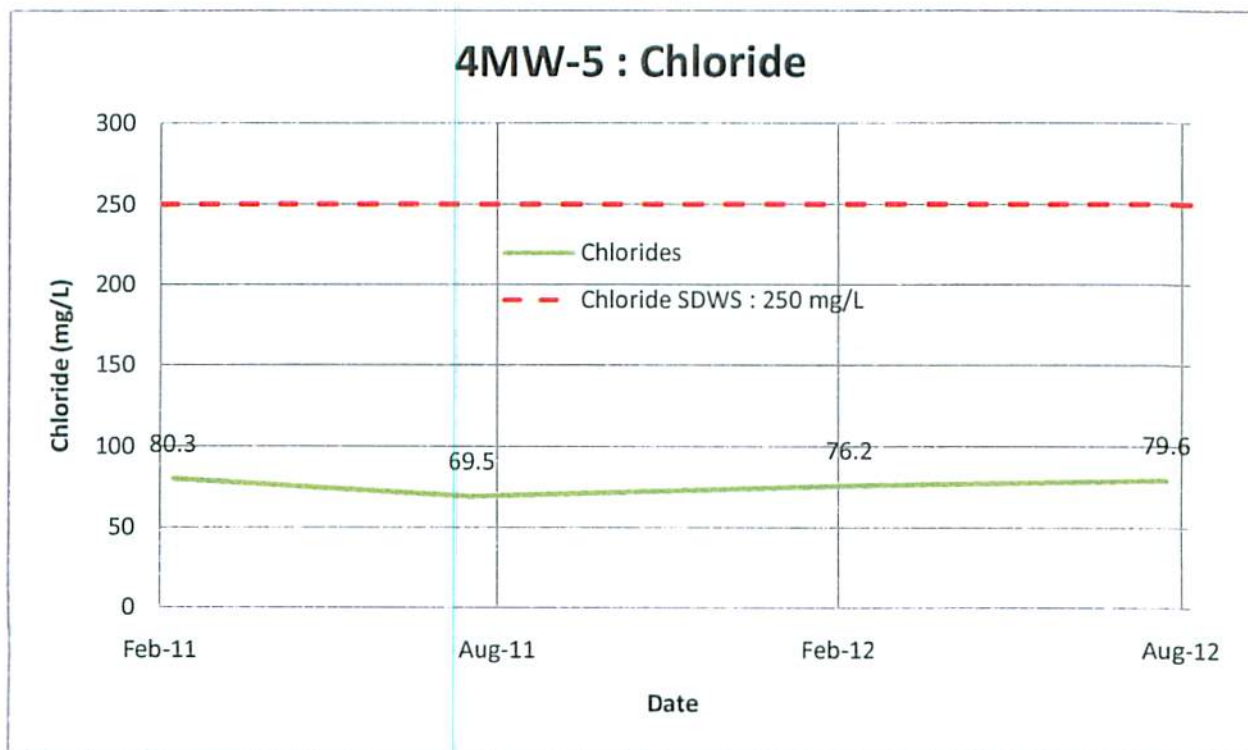


Figure B-52 Chloride and Sodium Trends for 4MW-5

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

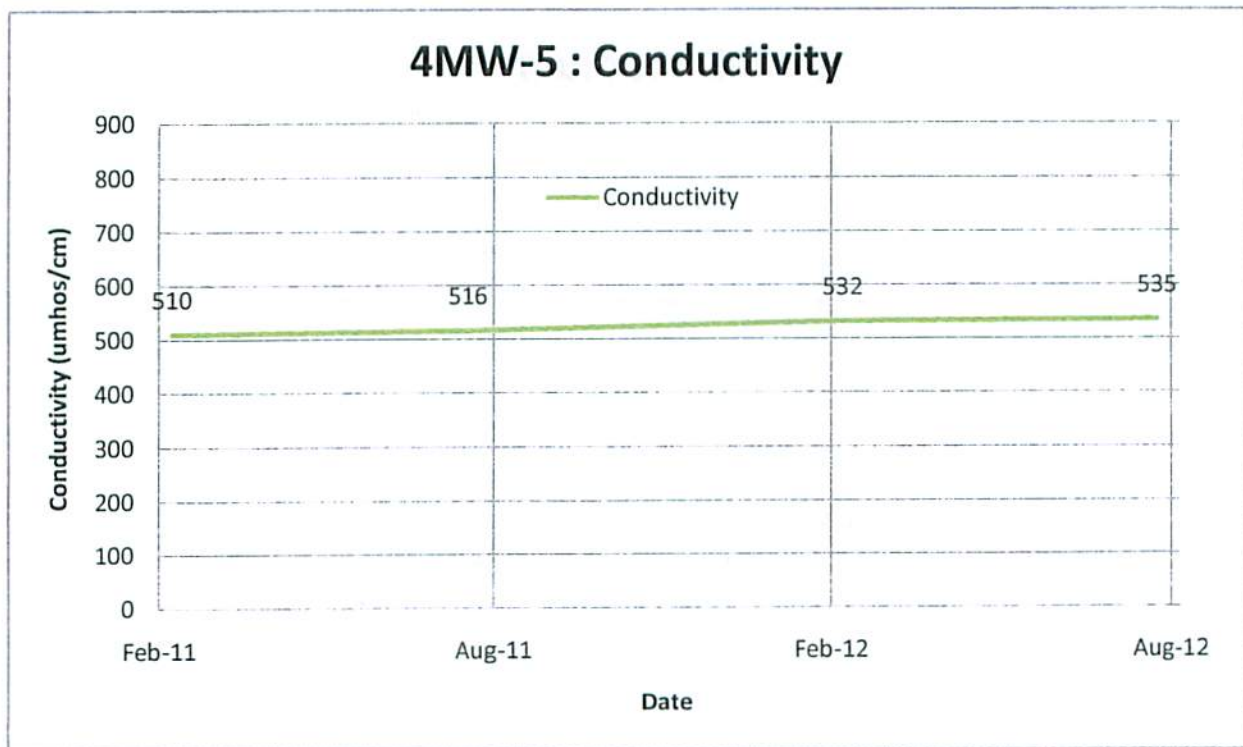
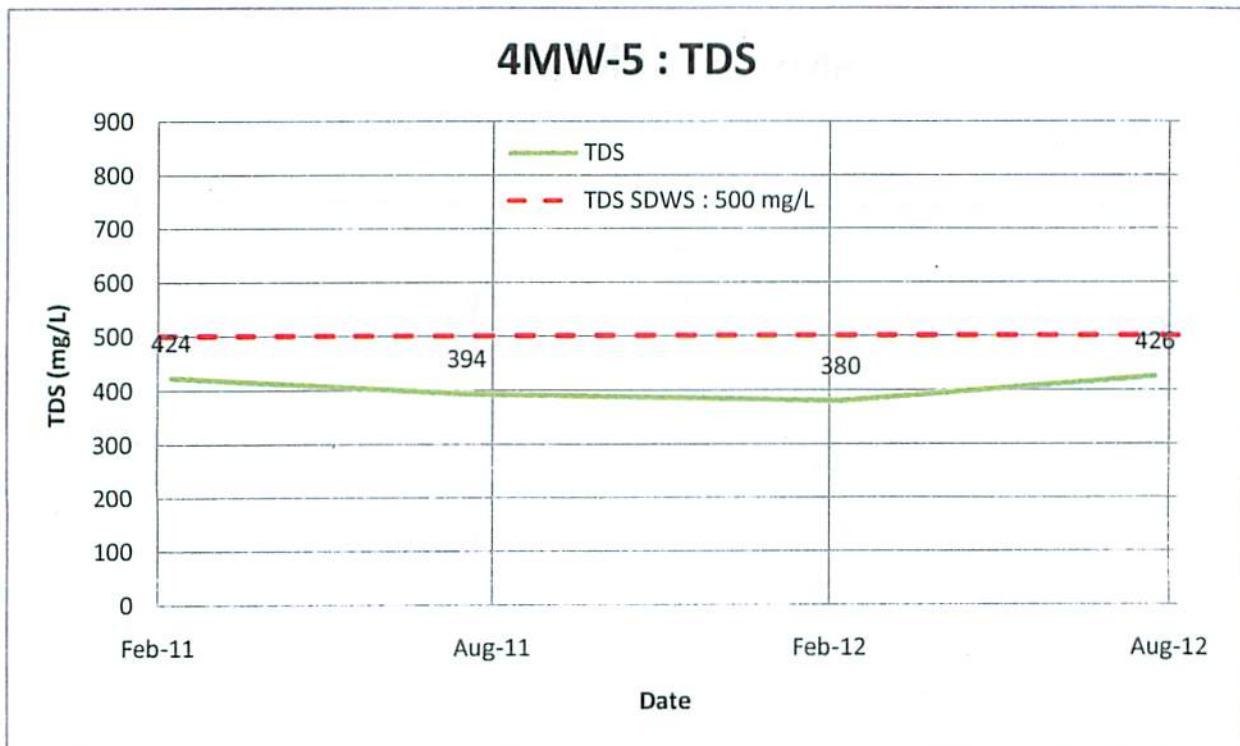


Figure B-53 TDS and Conductivity Trends for 4MW-5

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

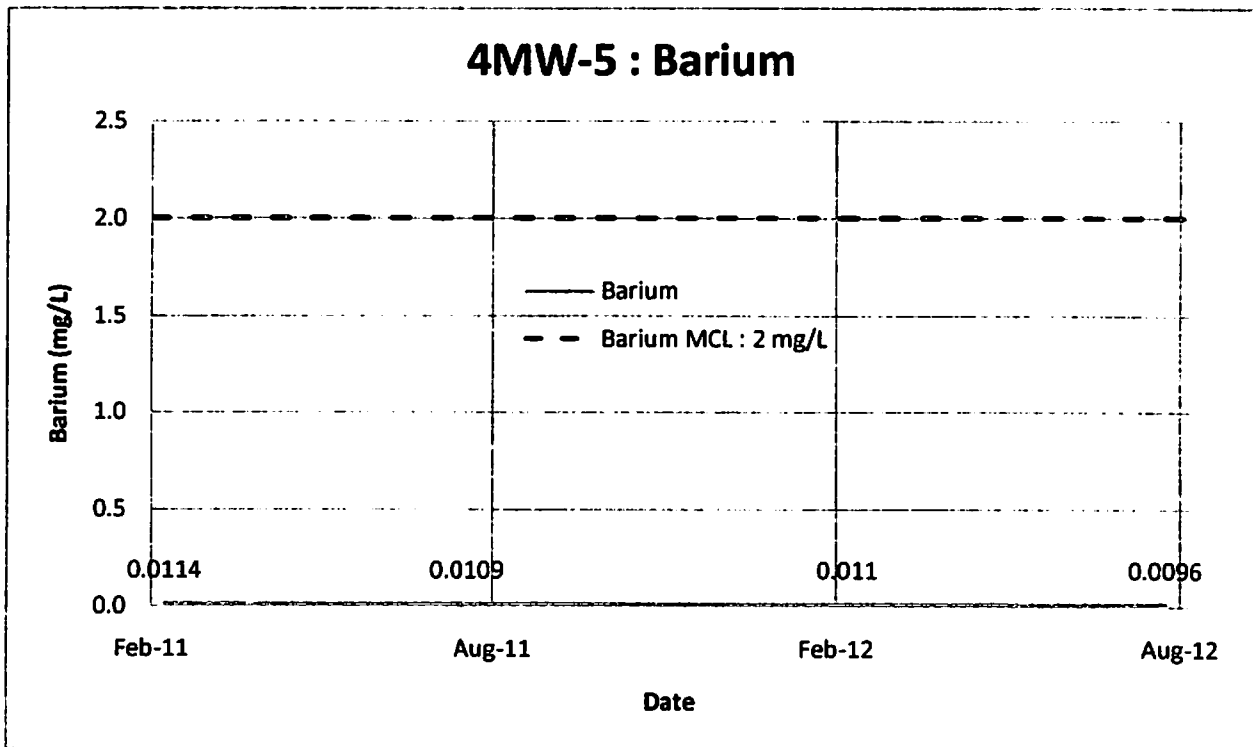
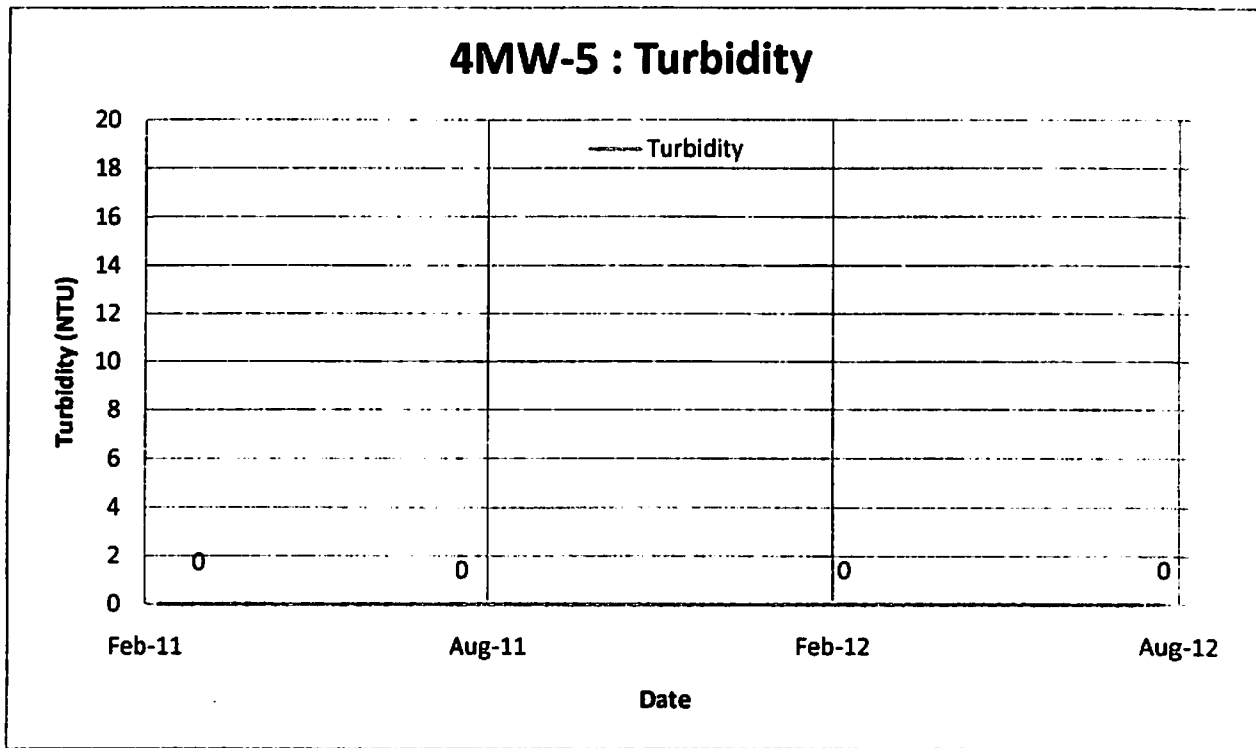


Figure B-54 Turbidity and Barium Trends for 4MW-5

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

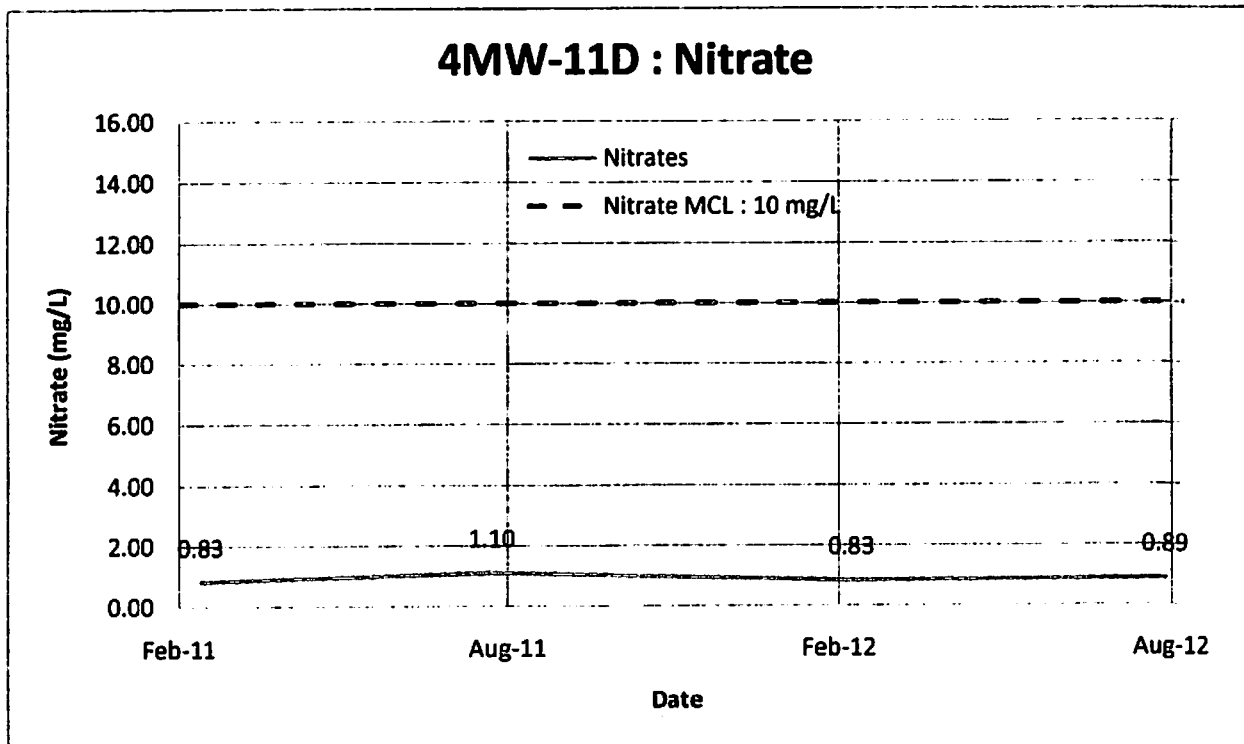
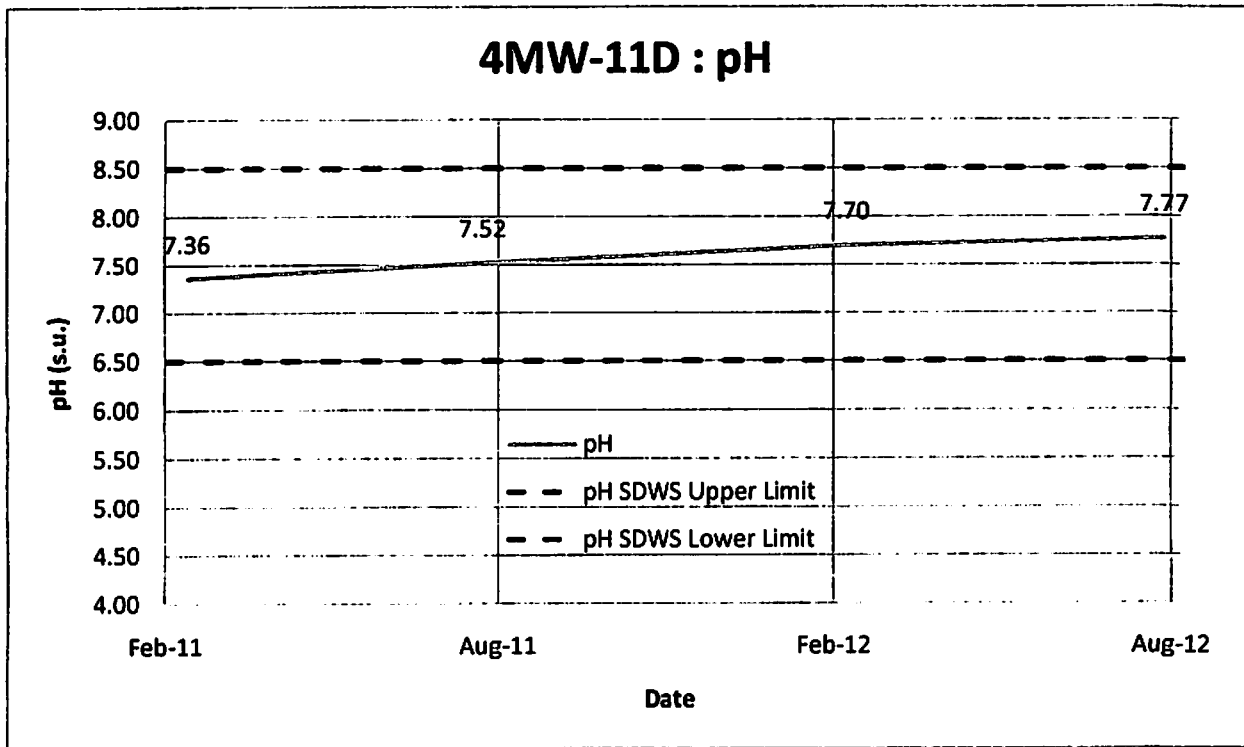


Figure B-55 pH and Nitrate Trends for 4MW-11D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

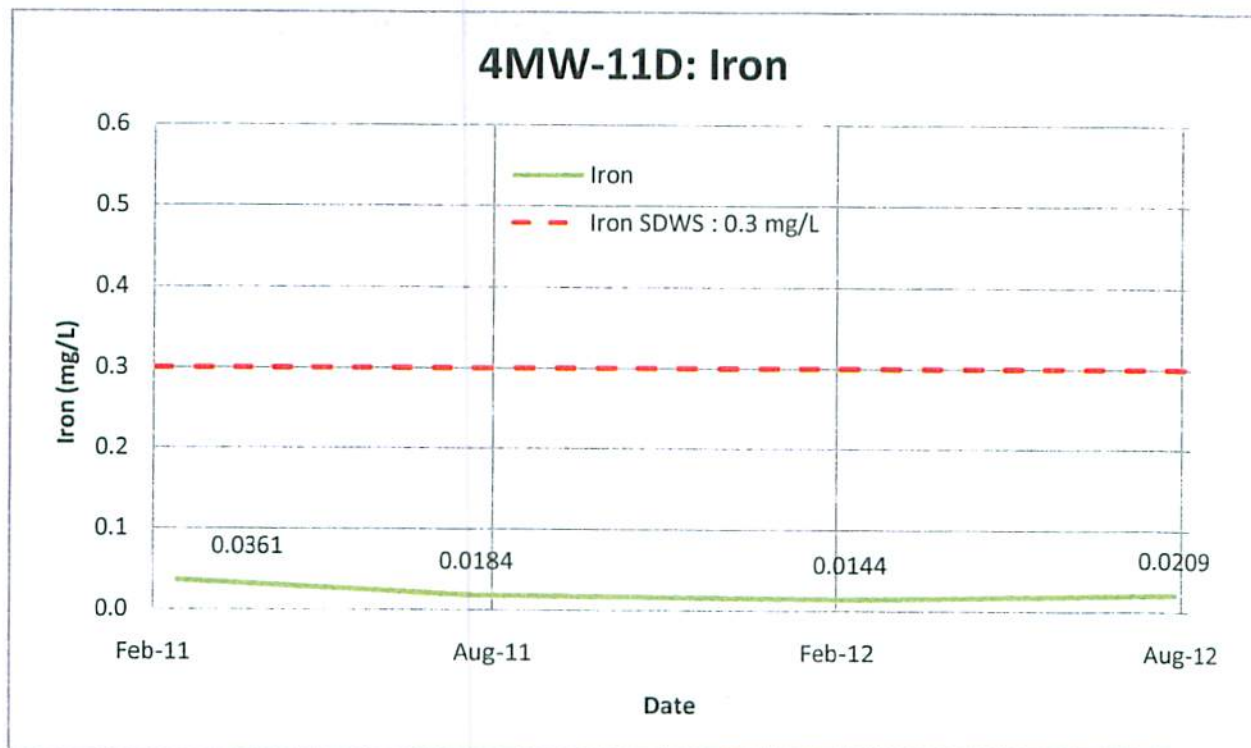
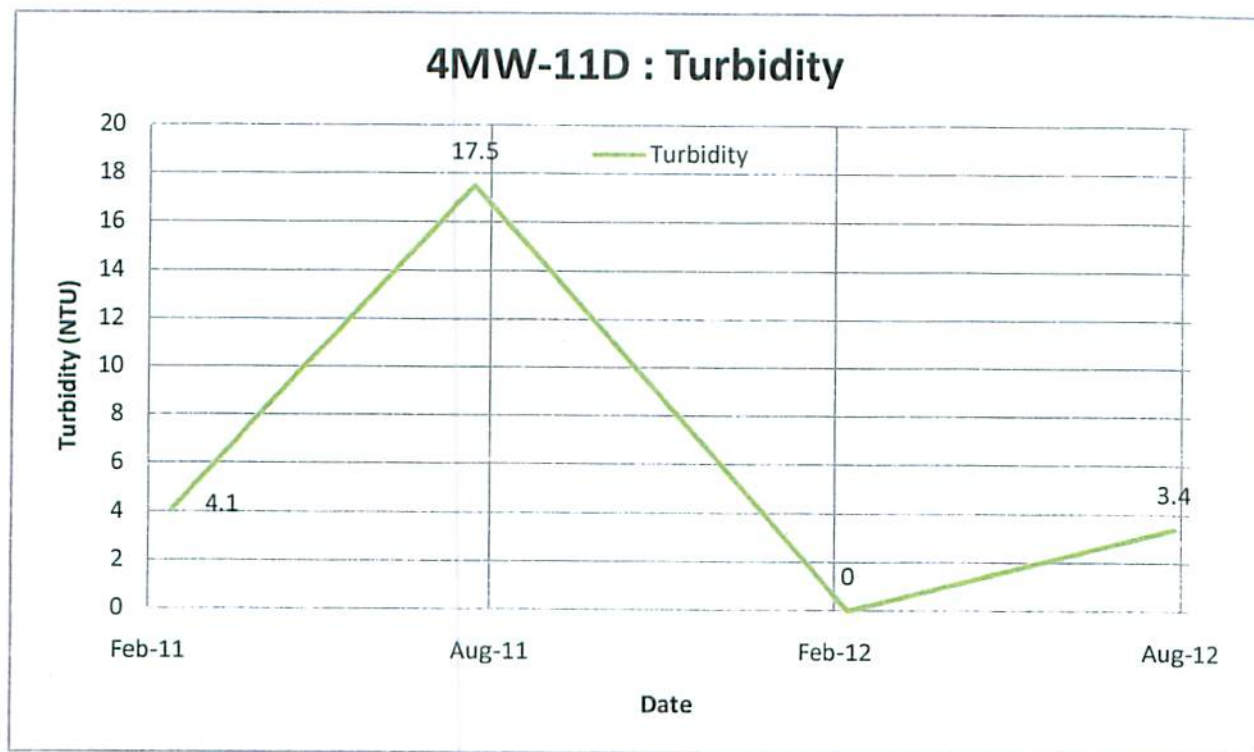


Figure B-58 Turbidity and Iron Trends for 4MW-11D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

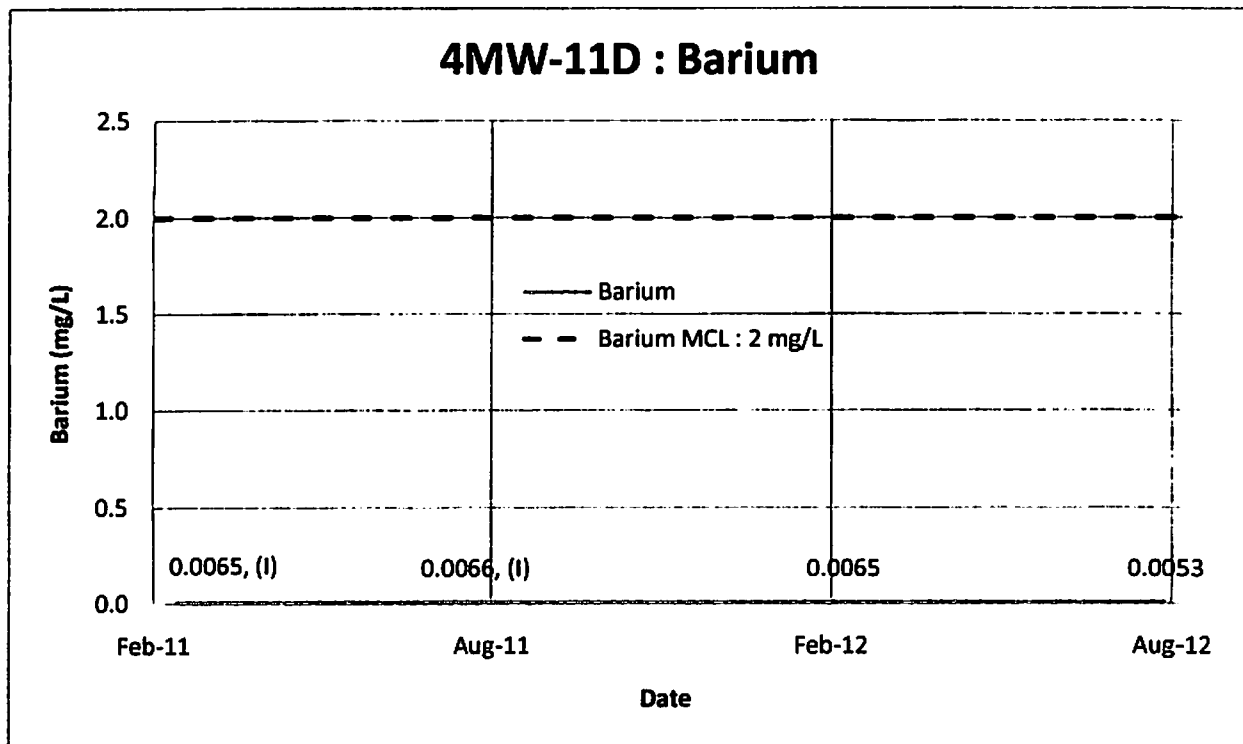


Figure B-59 Barium Trend for 4MW-11D

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

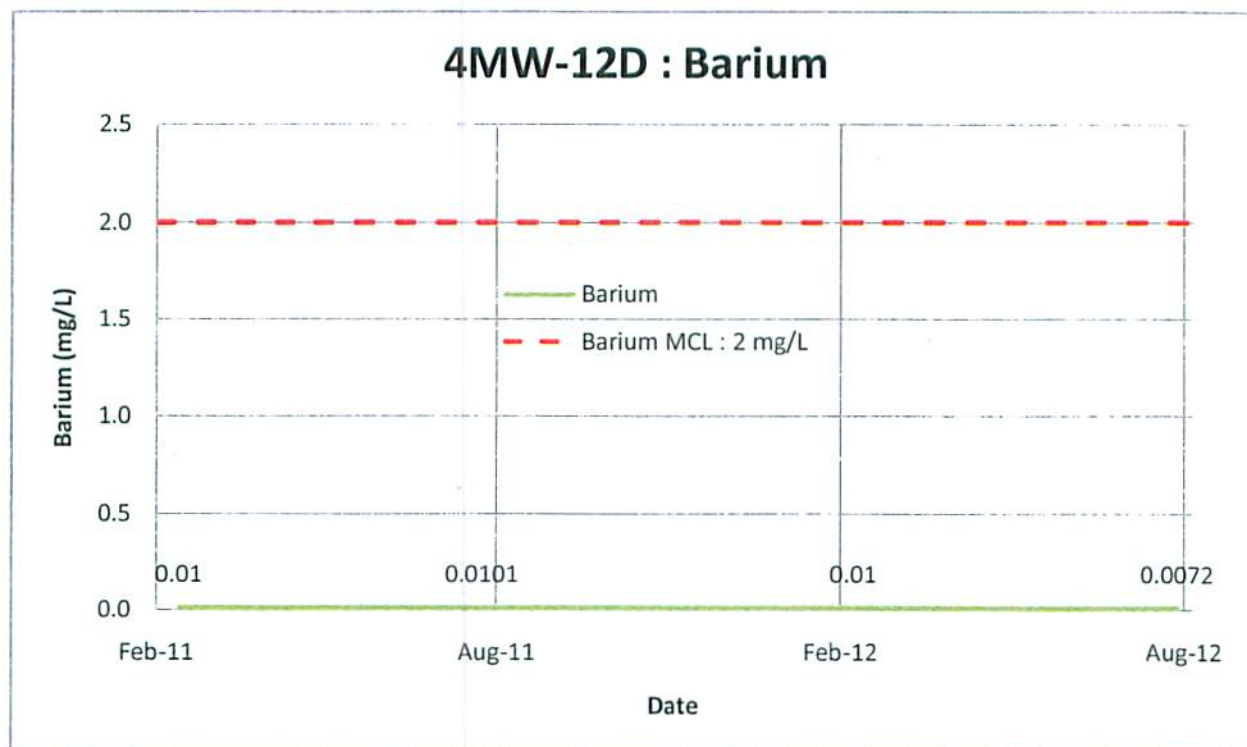
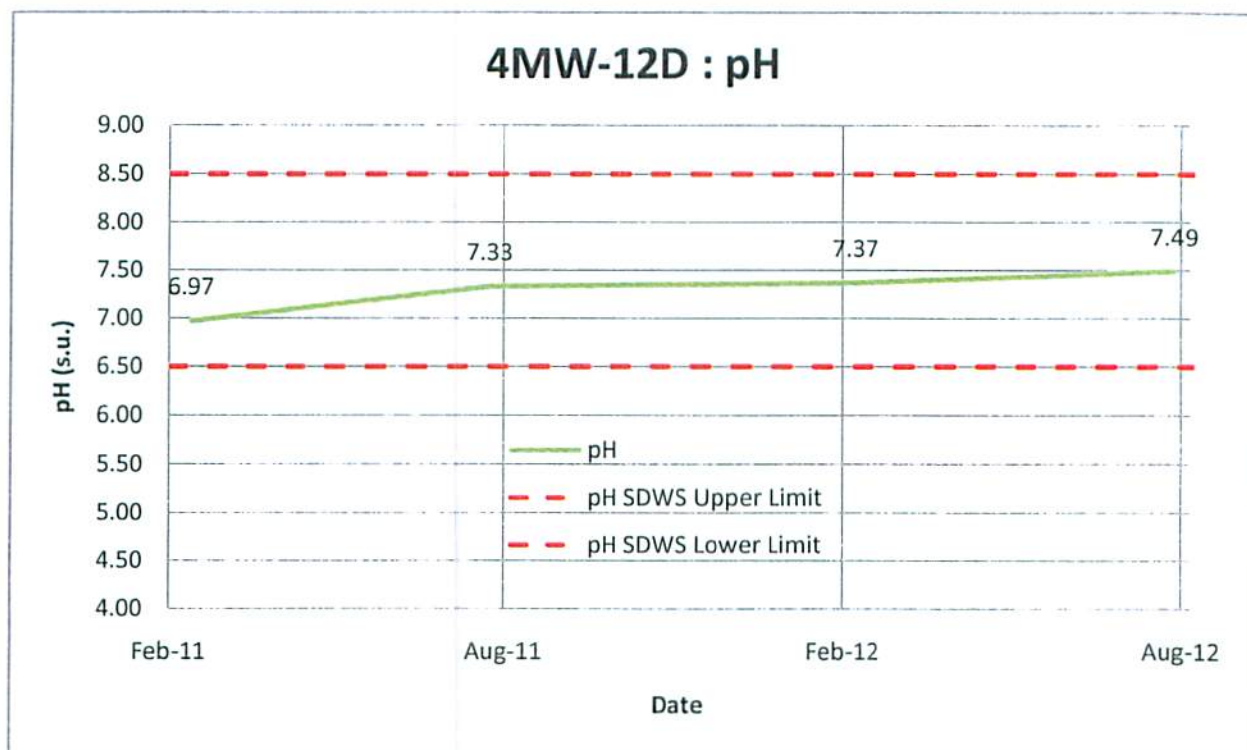


Figure B-60 pH and Barium Trends for 4MW-12D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

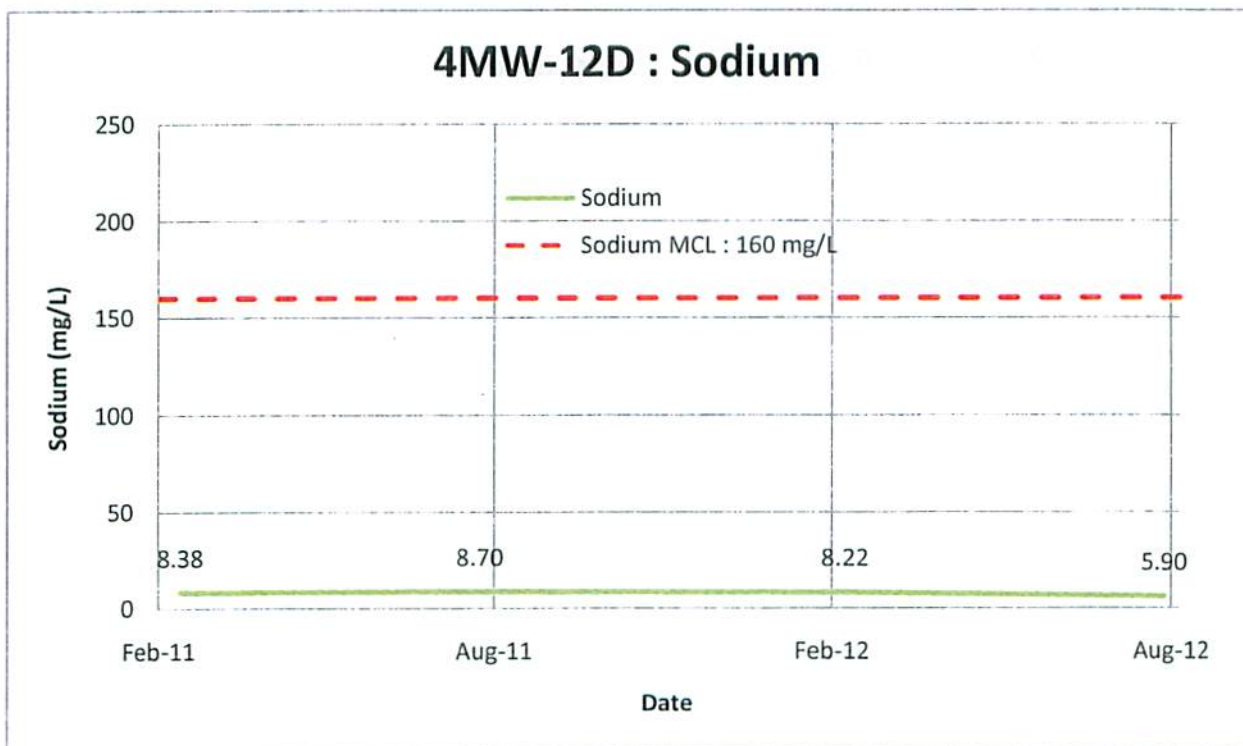
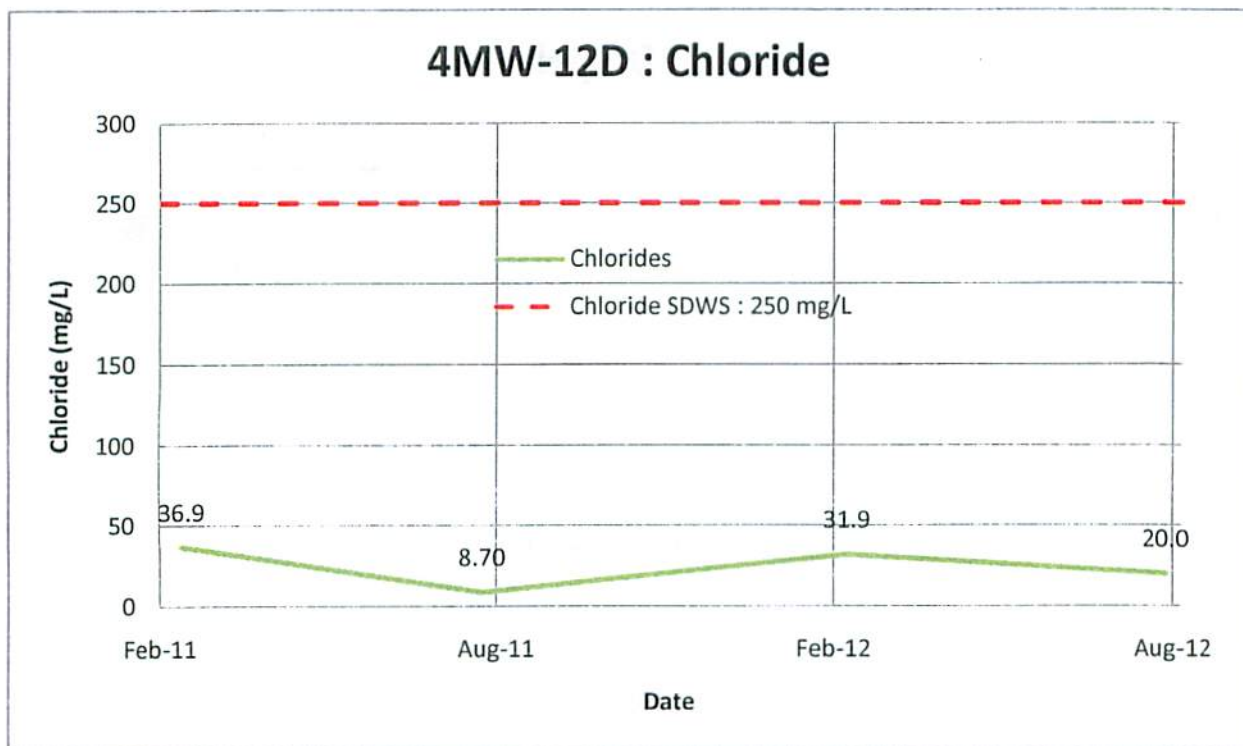


Figure B-61 Chloride and Sodium Trends for 4MW-12D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

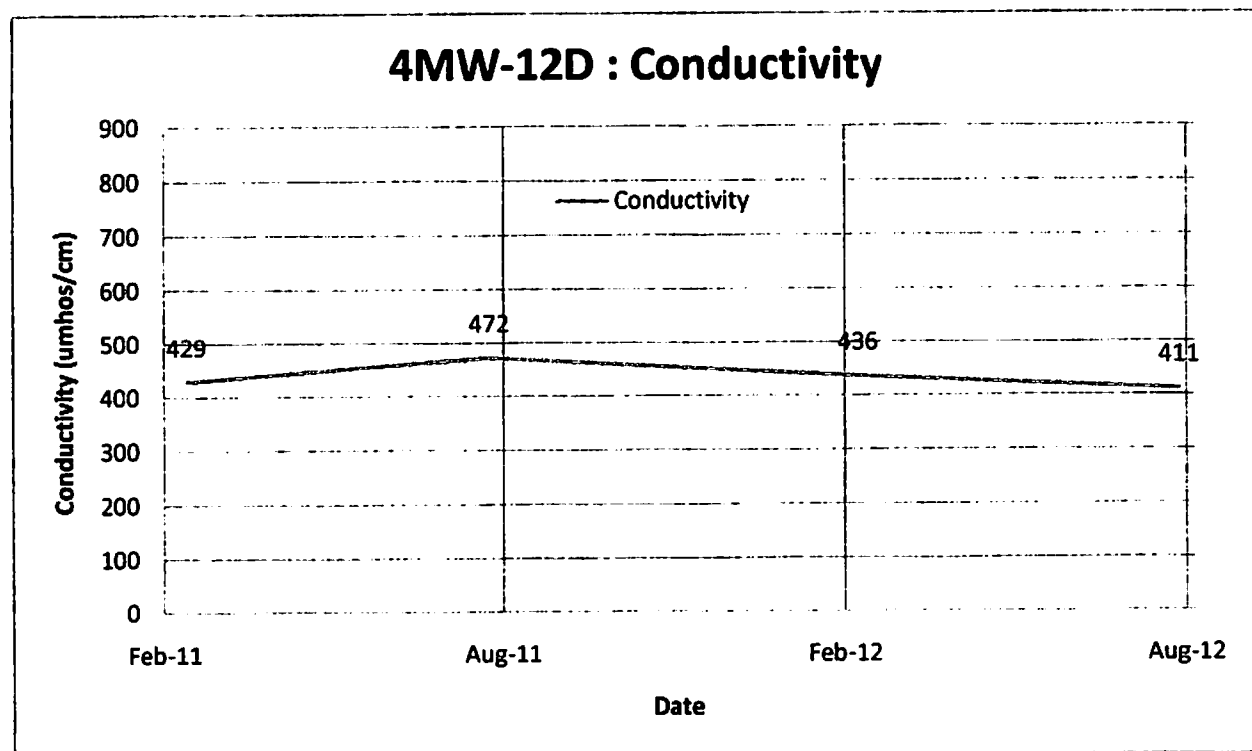
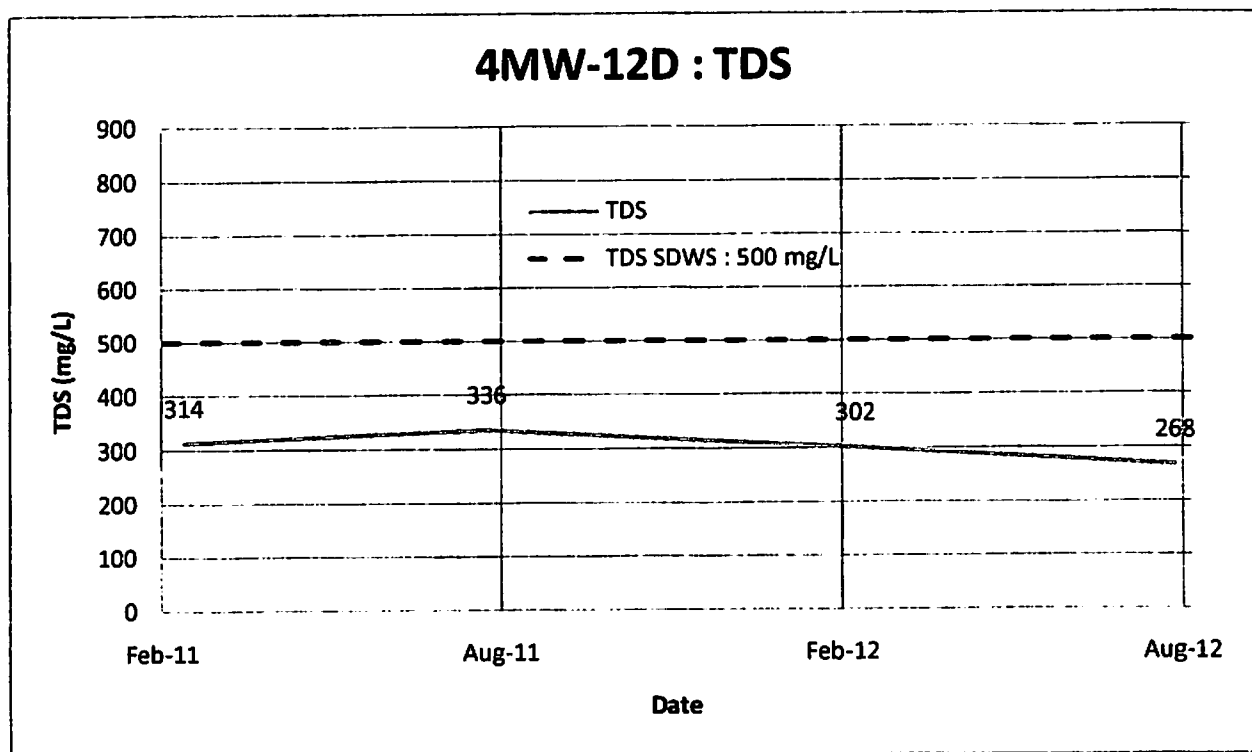


Figure B-62 TDS and Conductivity Trends for 4MW-12D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

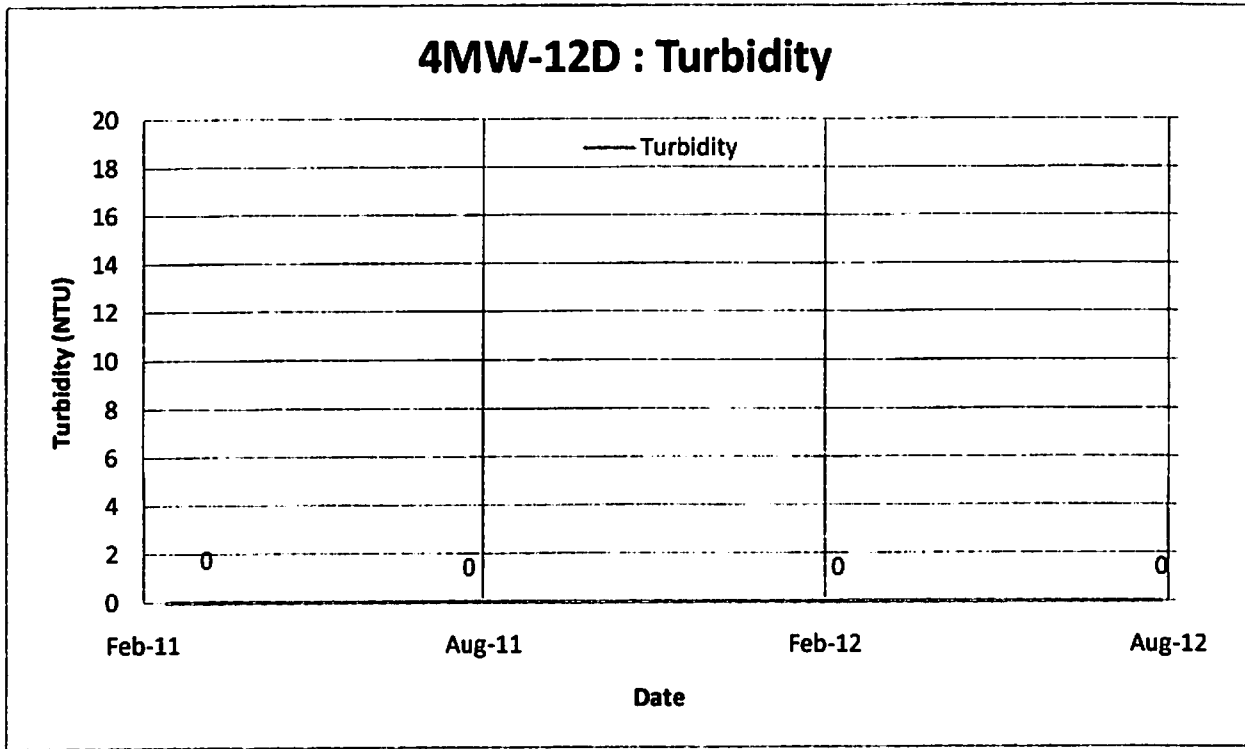


Figure B-63 Turbidity Trend for 4MW-12D

Based on data provided by Pasco County Lab

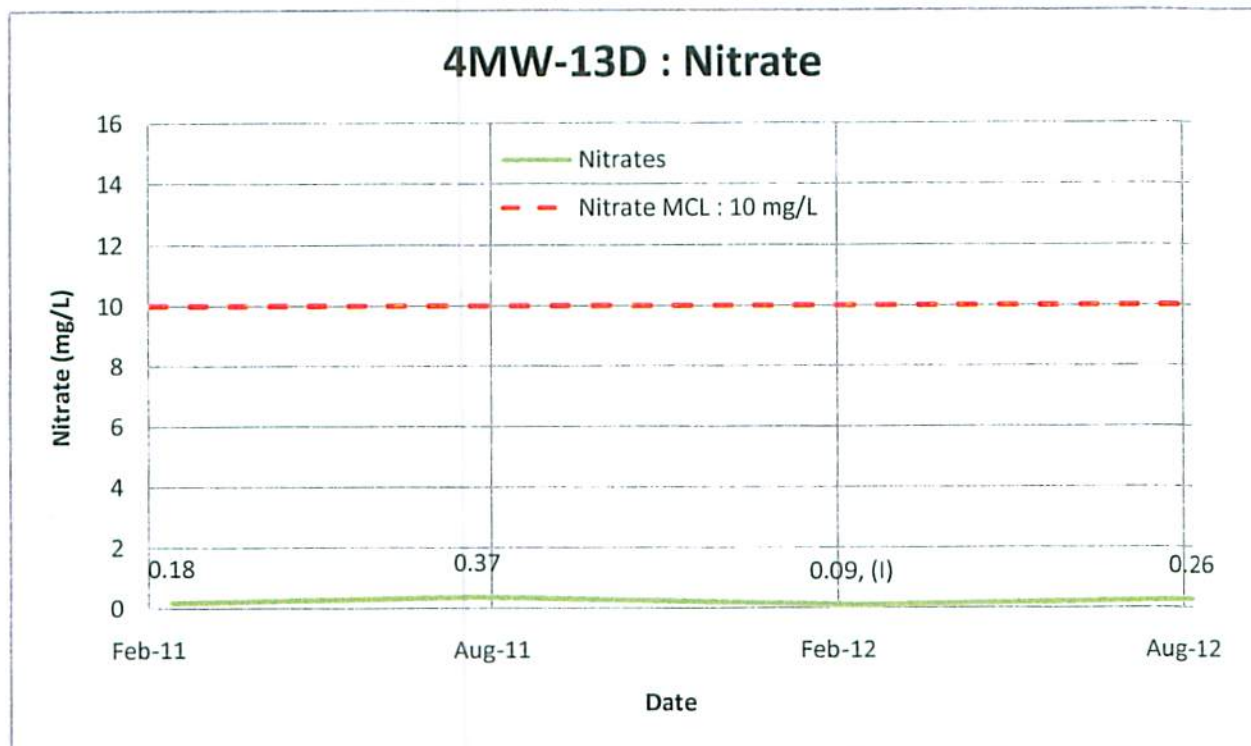
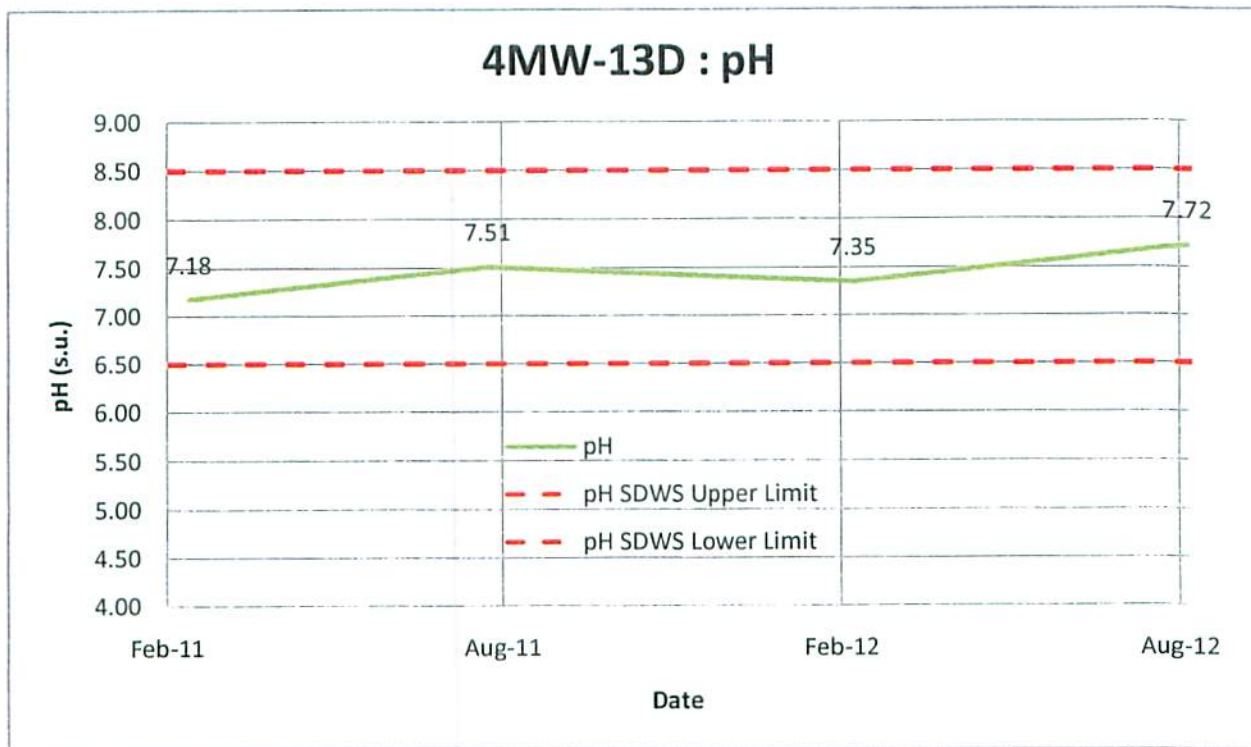


Figure B-64 pH and Nitrate Trends for 4MW-13D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(I) Analyte detected below quantitation limit

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

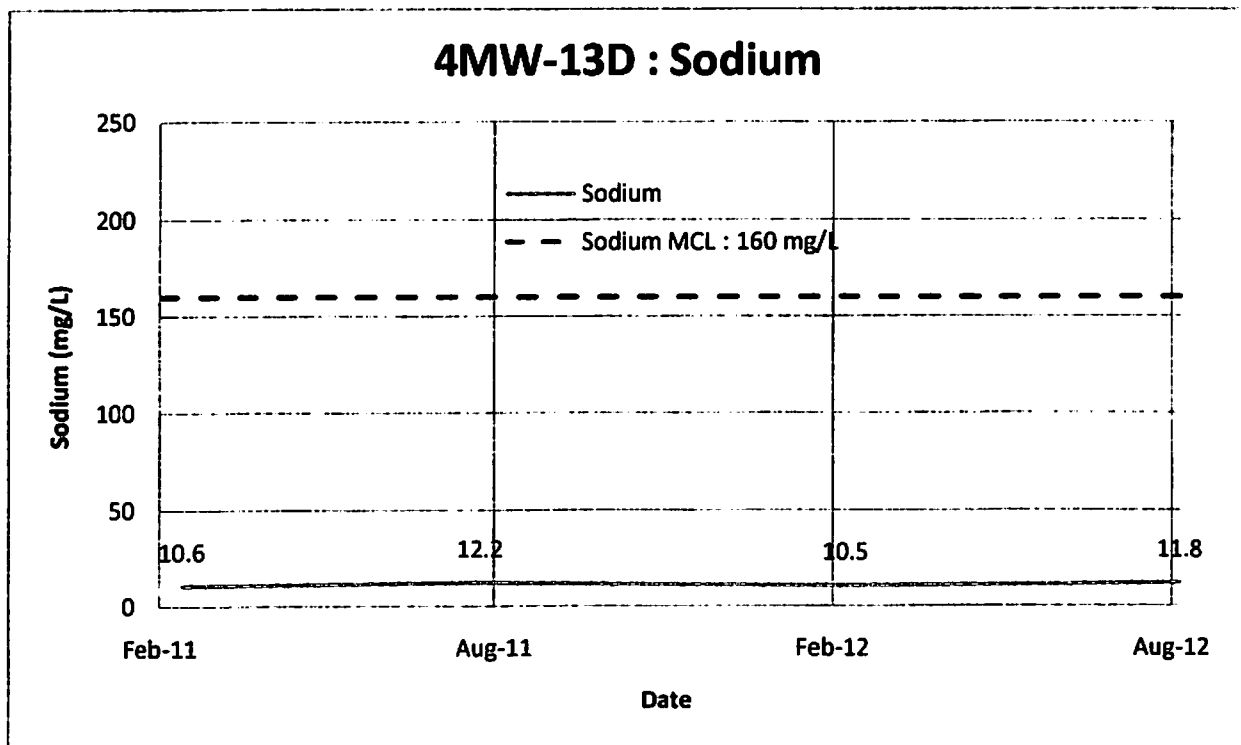
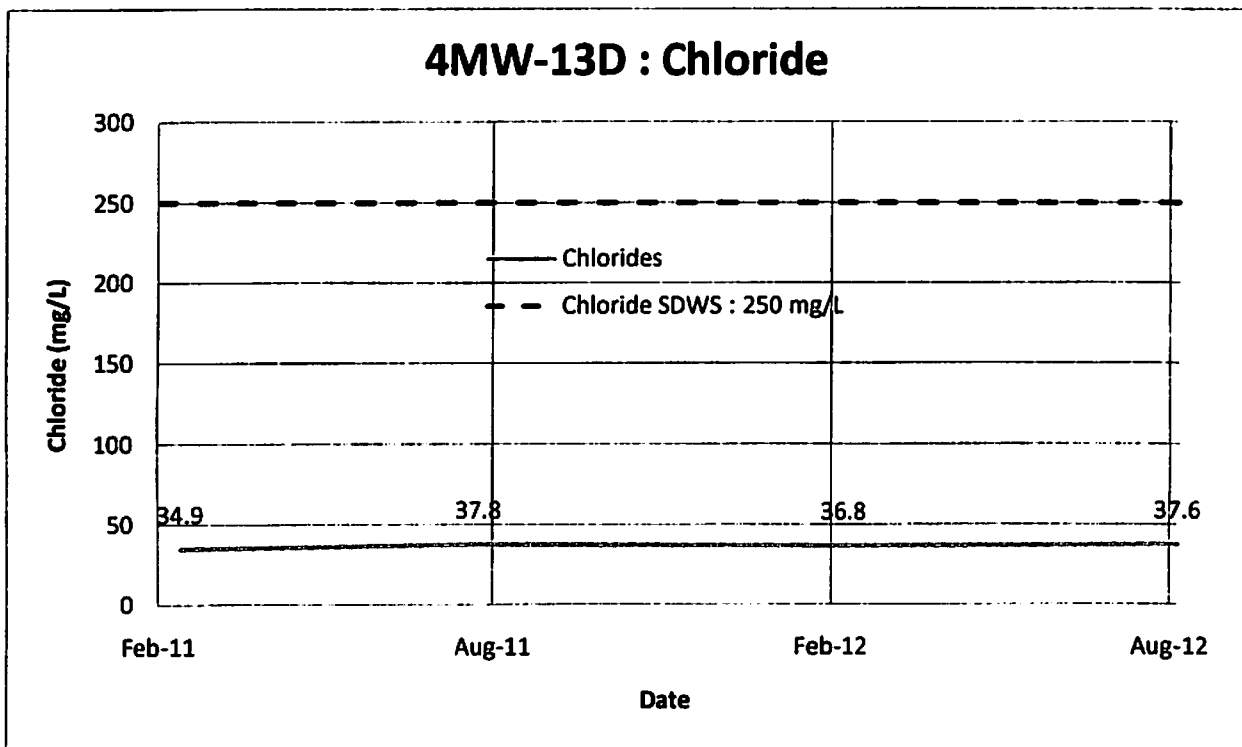


Figure B-65 Chloride and Sodium Trends for 4MW-13D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

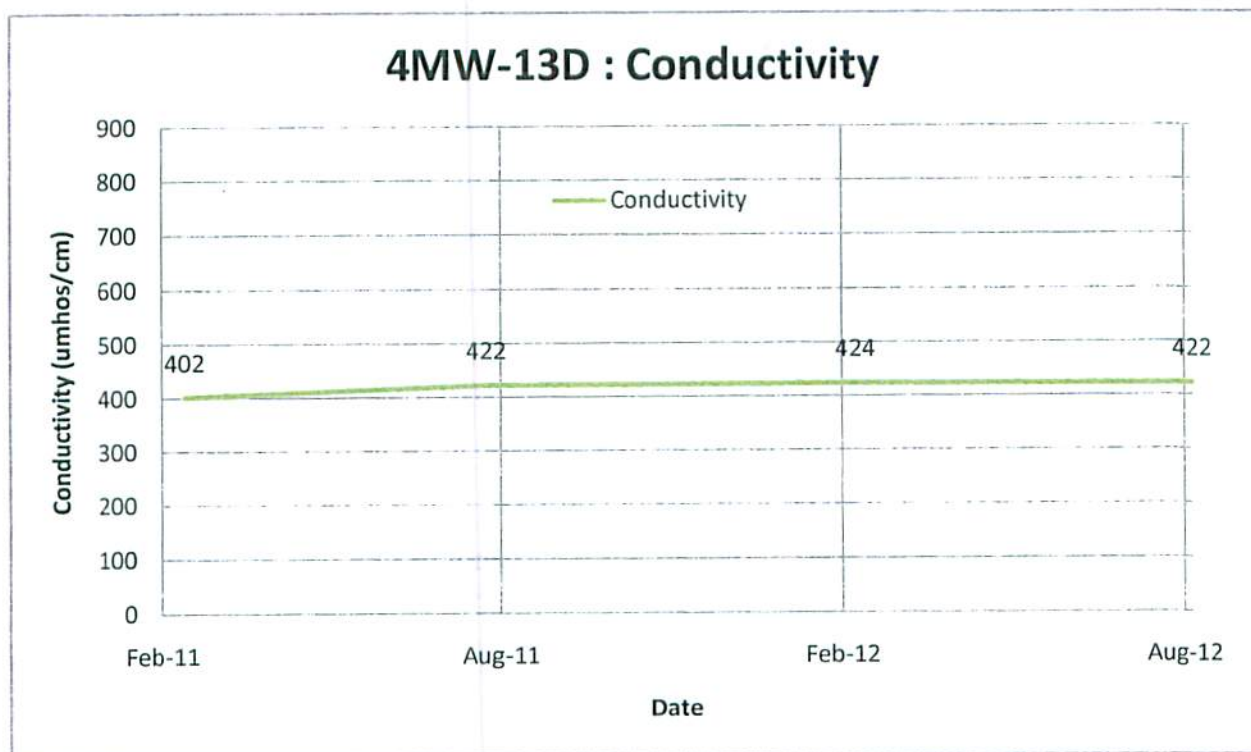
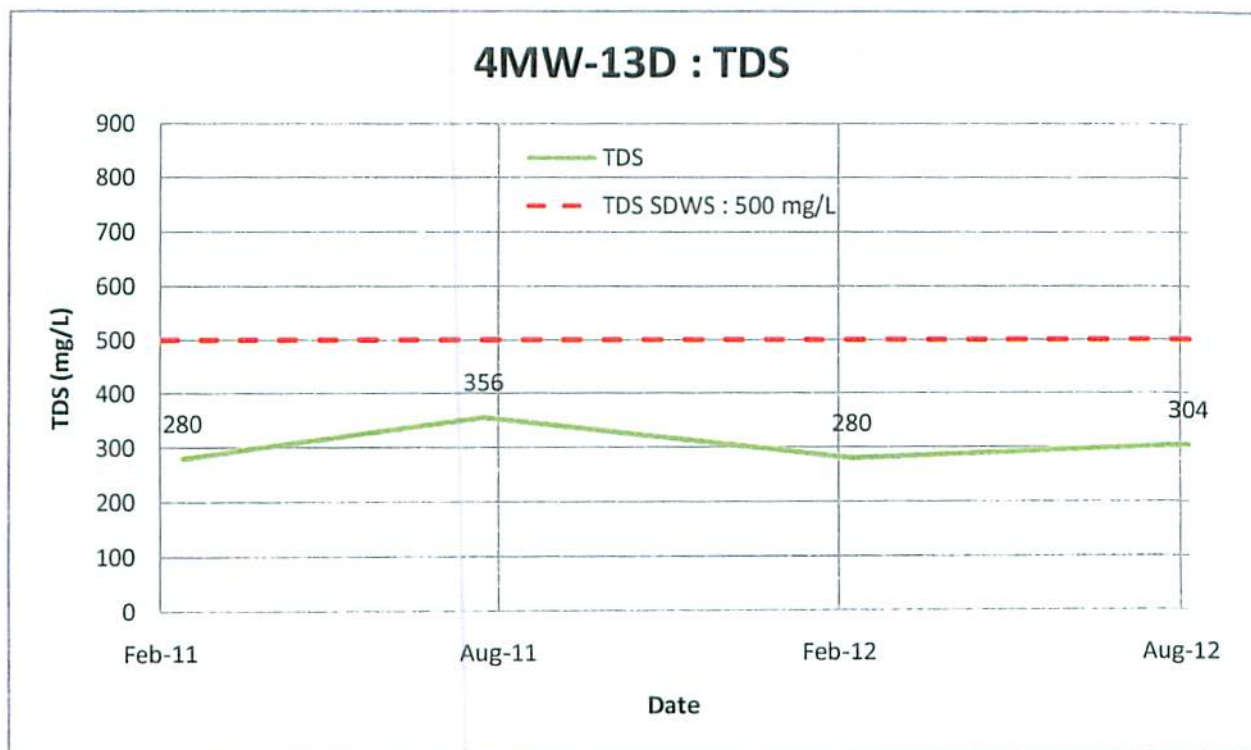


Figure B-66 TDS and Conductivity Trends for 4MW-13D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

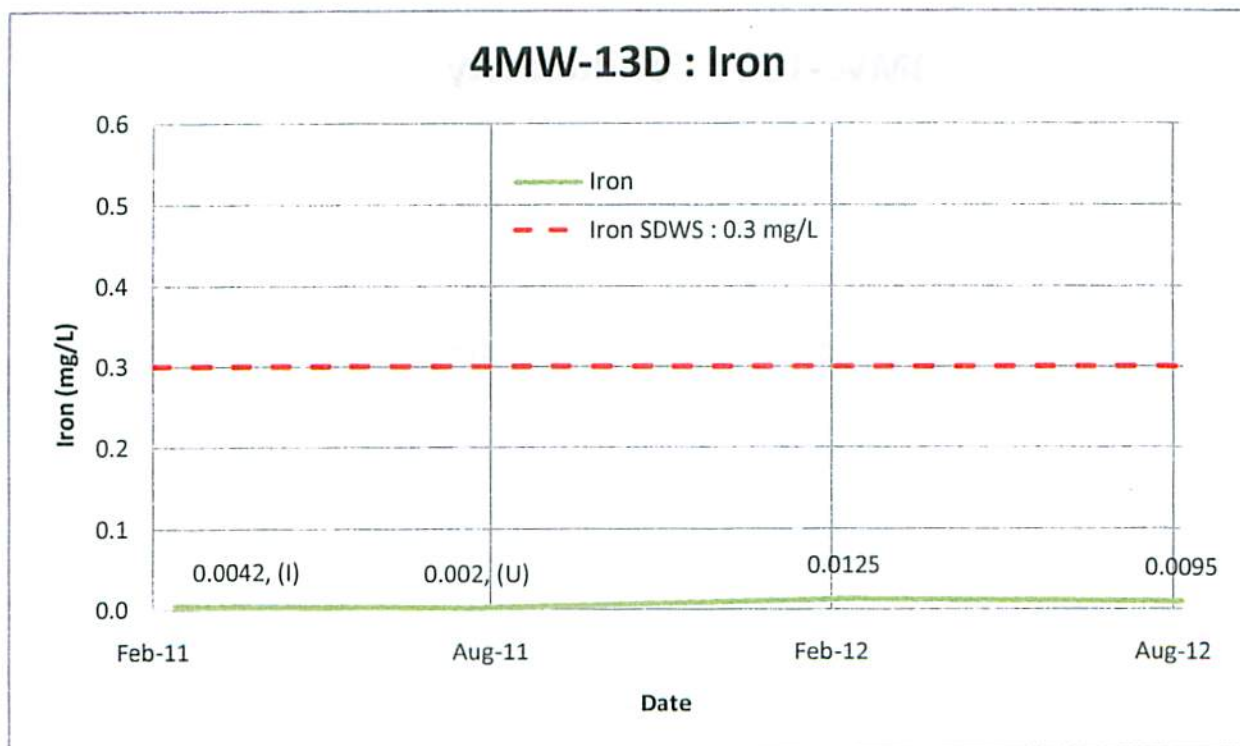
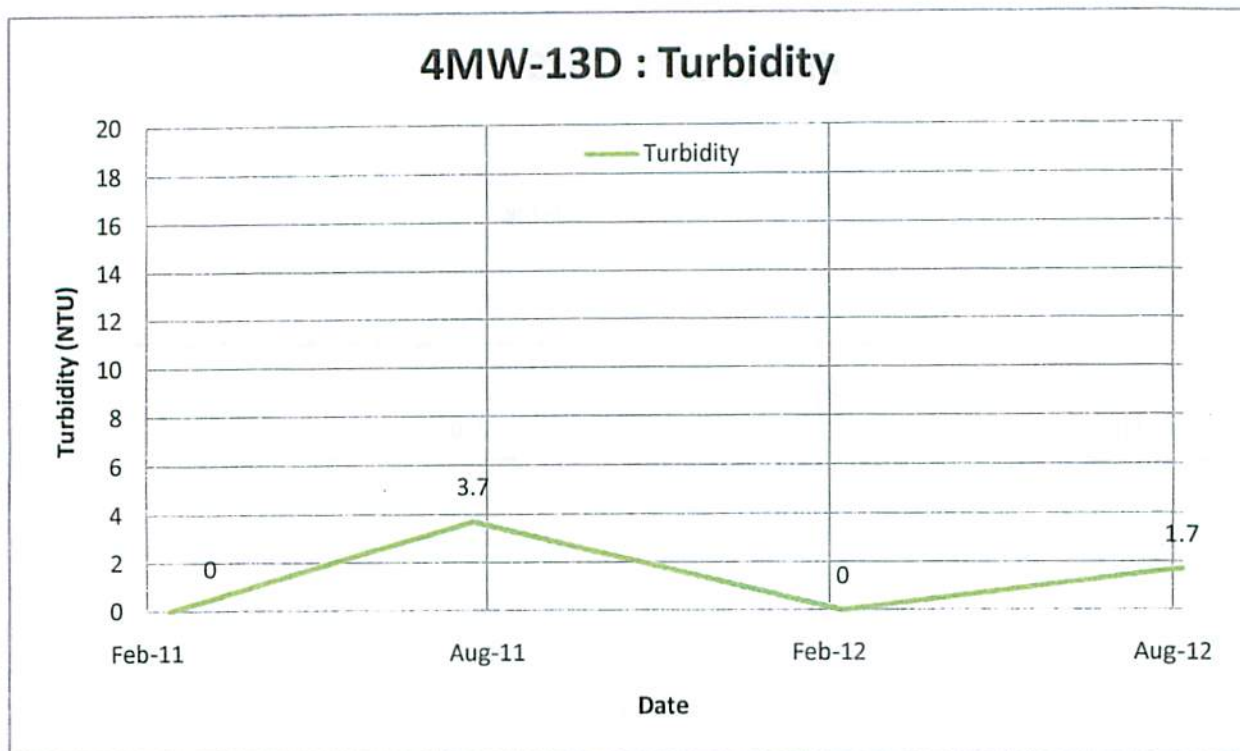


Figure B-67 Turbidity and Iron Trends for 4MW-13D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C.
Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit
(U) Analyte concentration below method detection limit

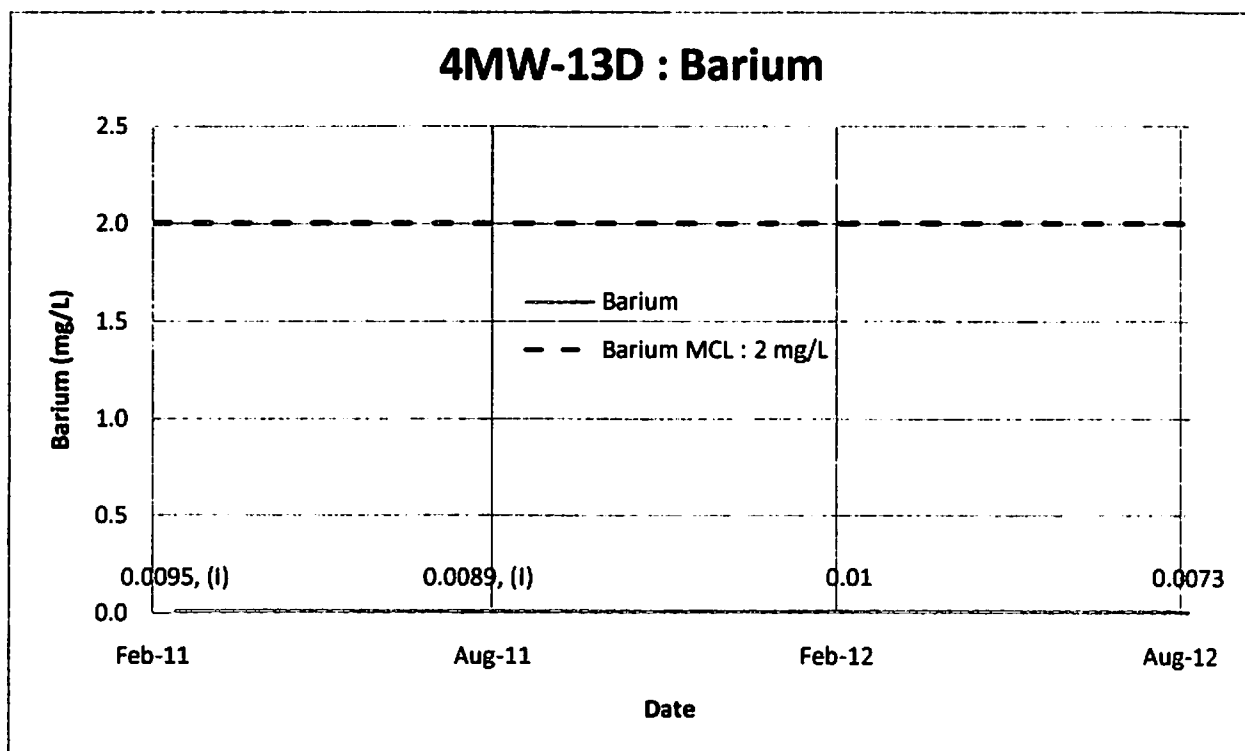
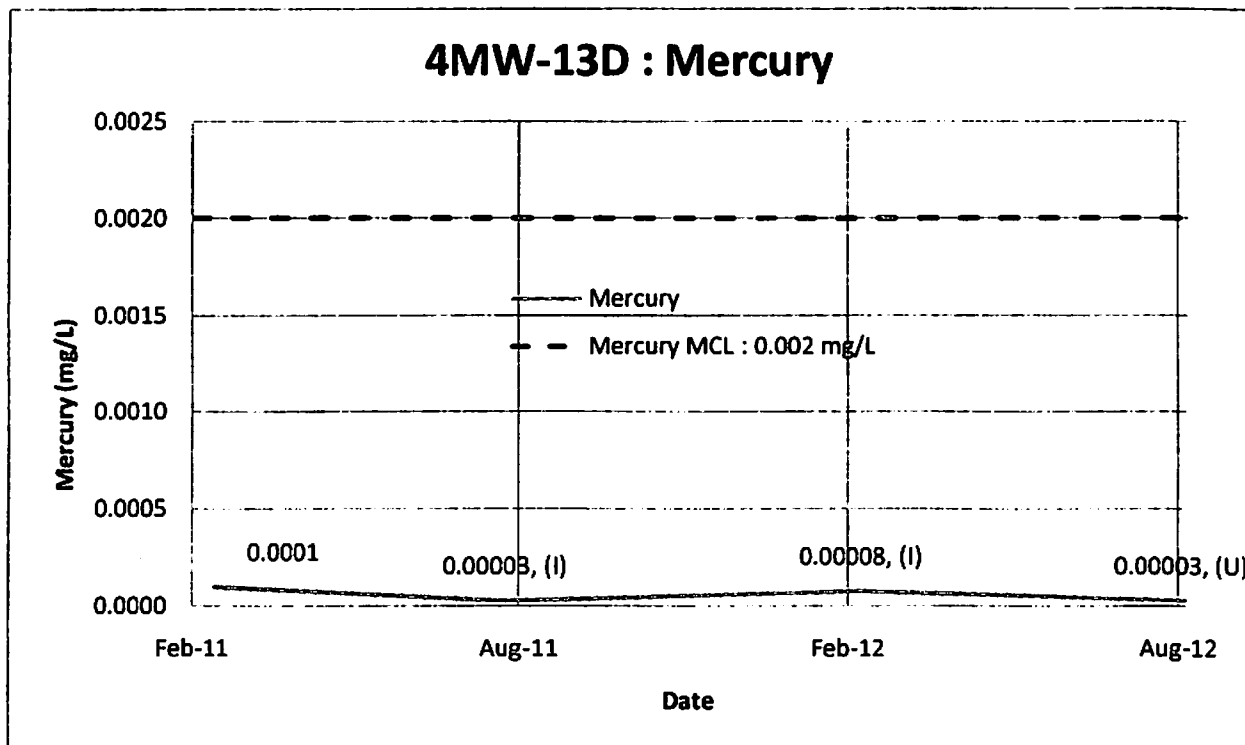


Figure B-68 Mercury and Barium Trend for 4MW-13D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

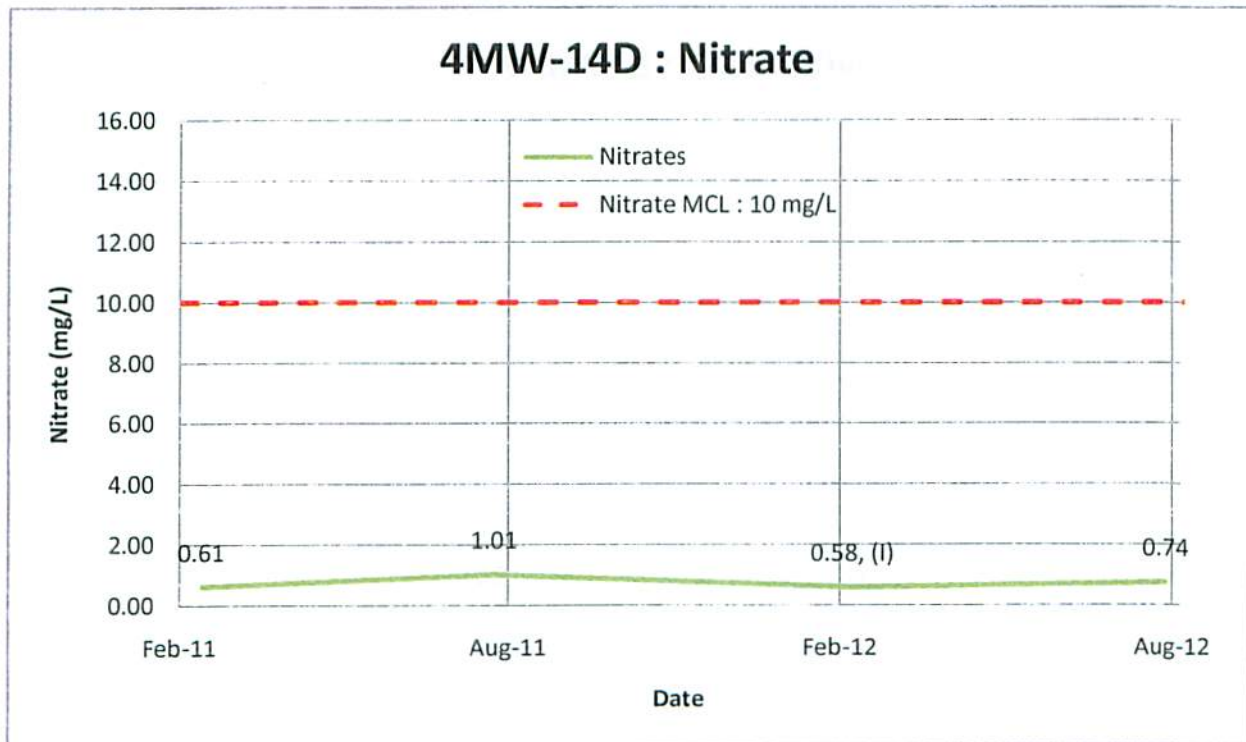
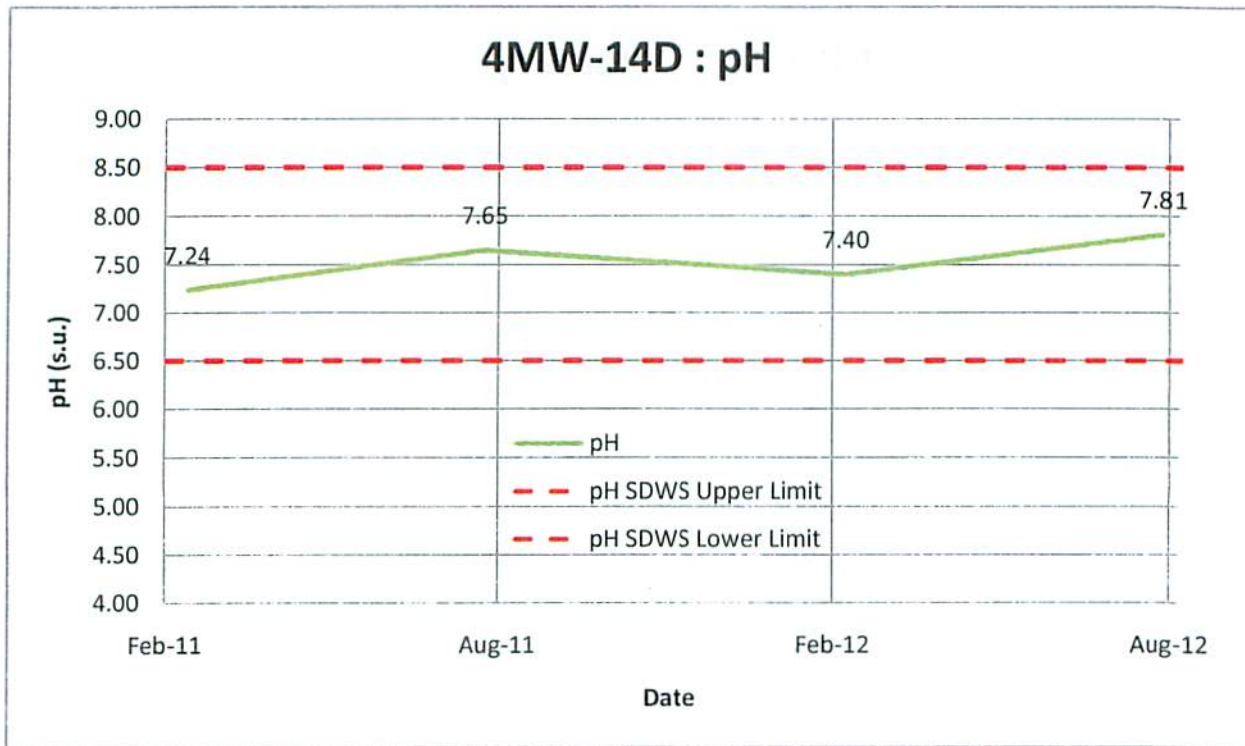


Figure B-69 pH and Nitrate Trends for 4MW-14D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

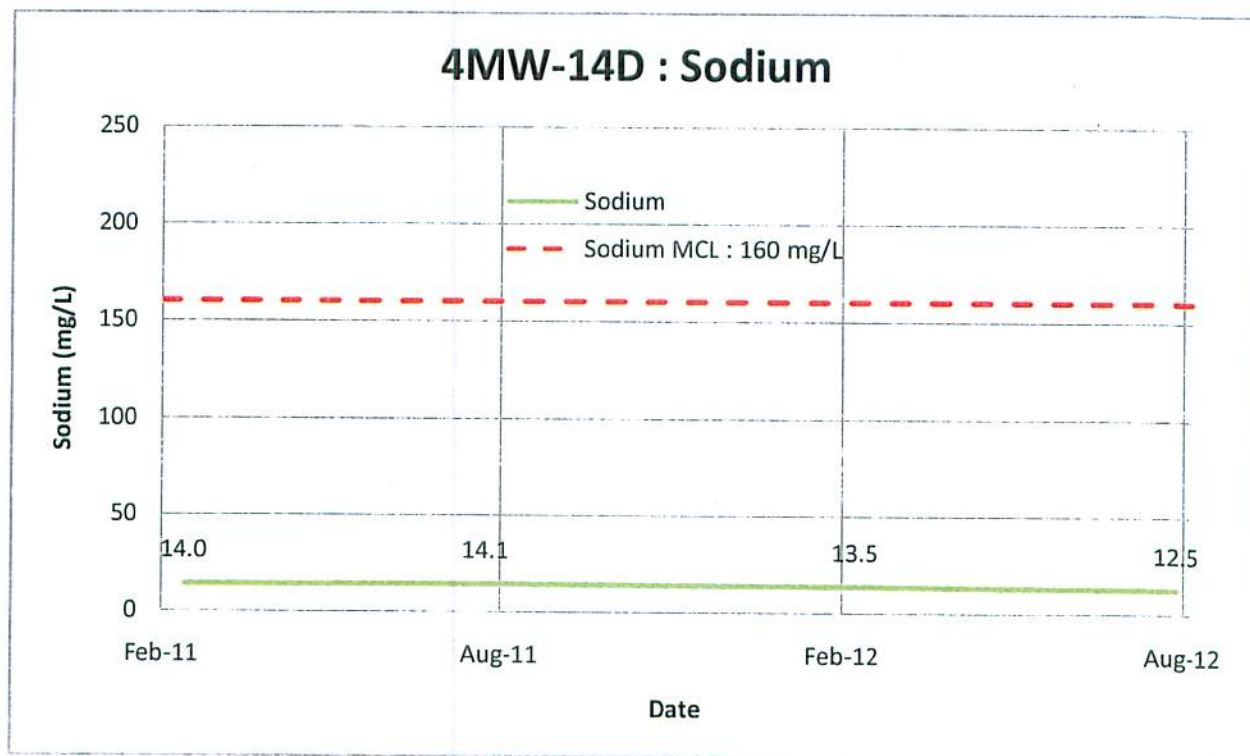
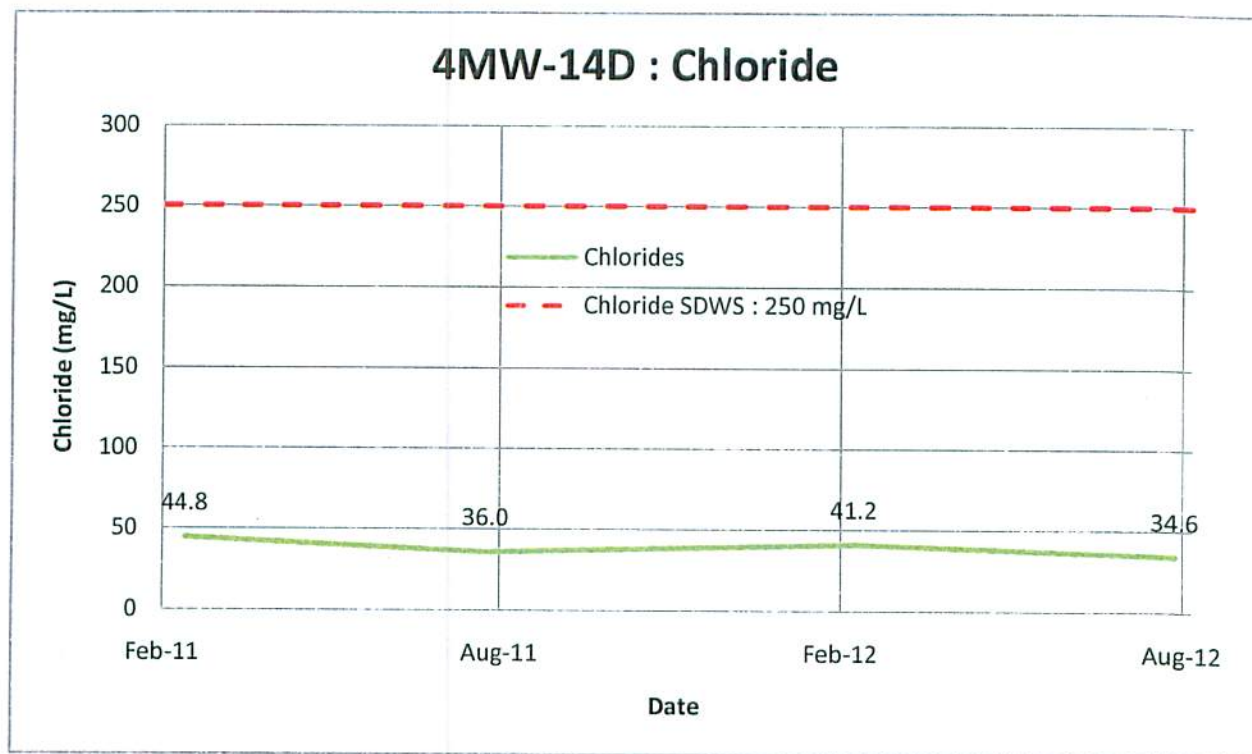


Figure B-70 Chloride and Sodium Trends for 4MW-14D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

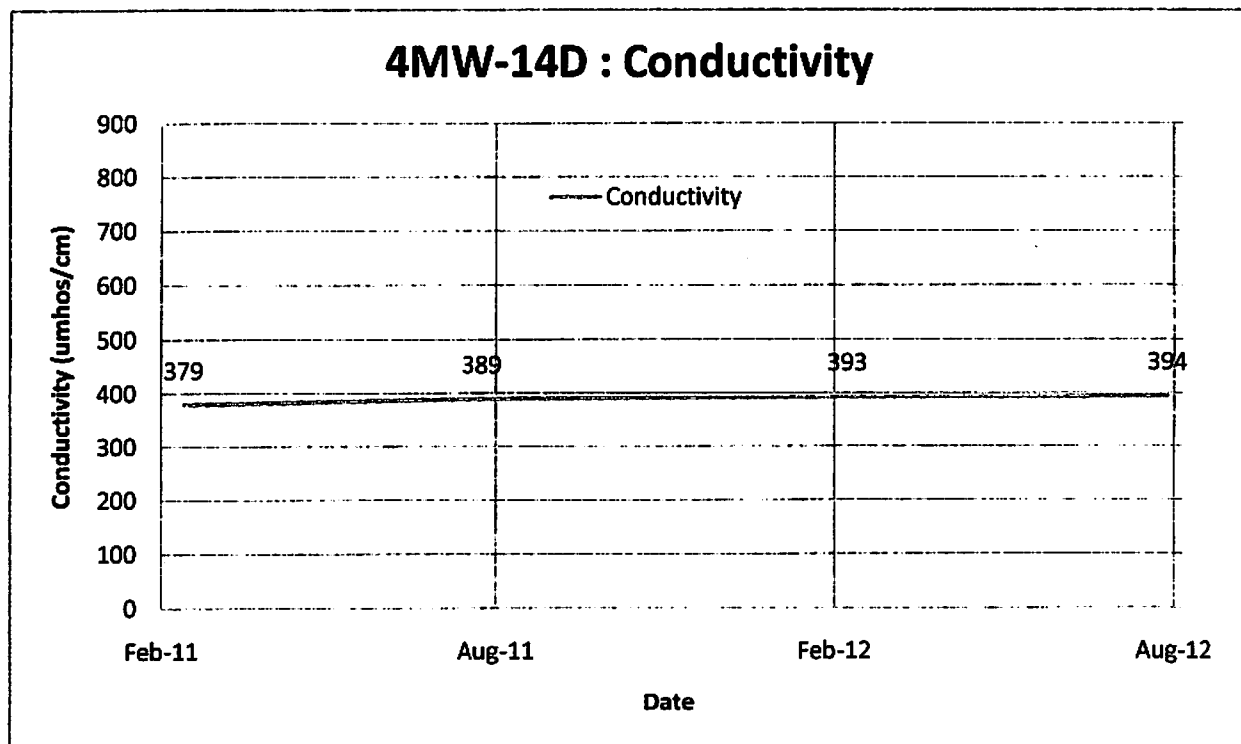
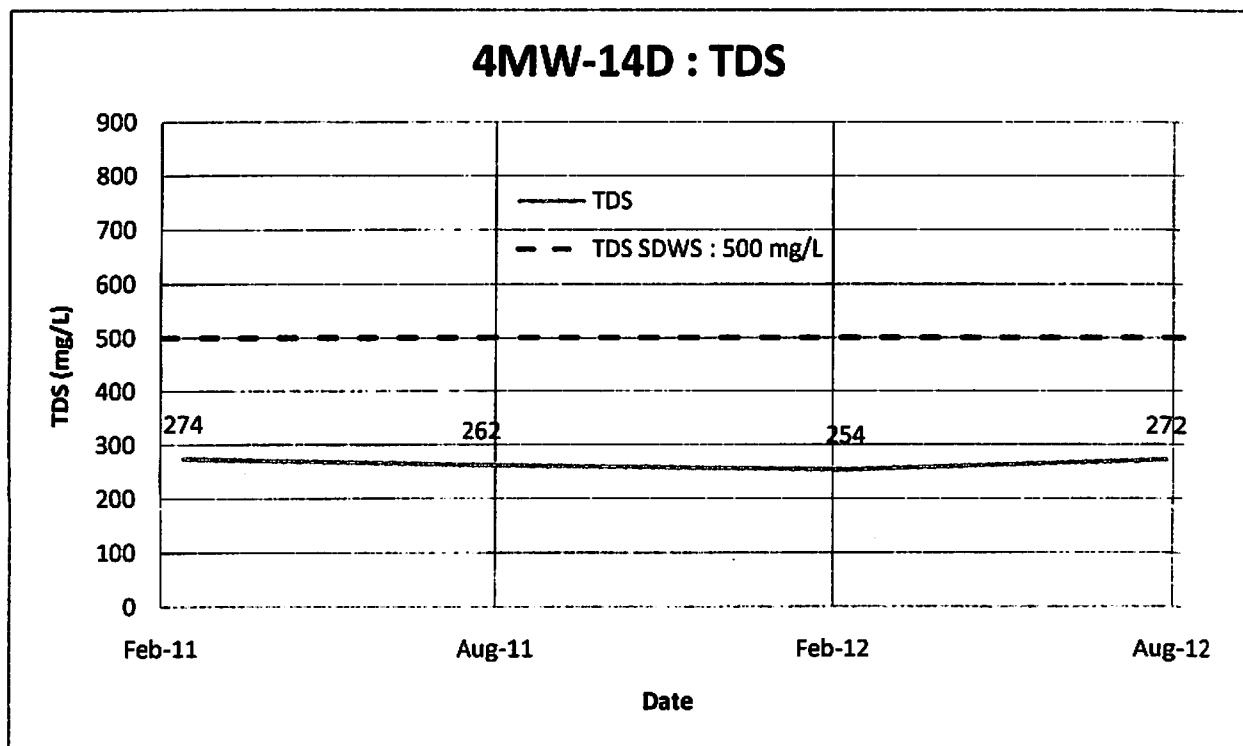


Figure B-71 TDS and Conductivity Trends for 4MW-14D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

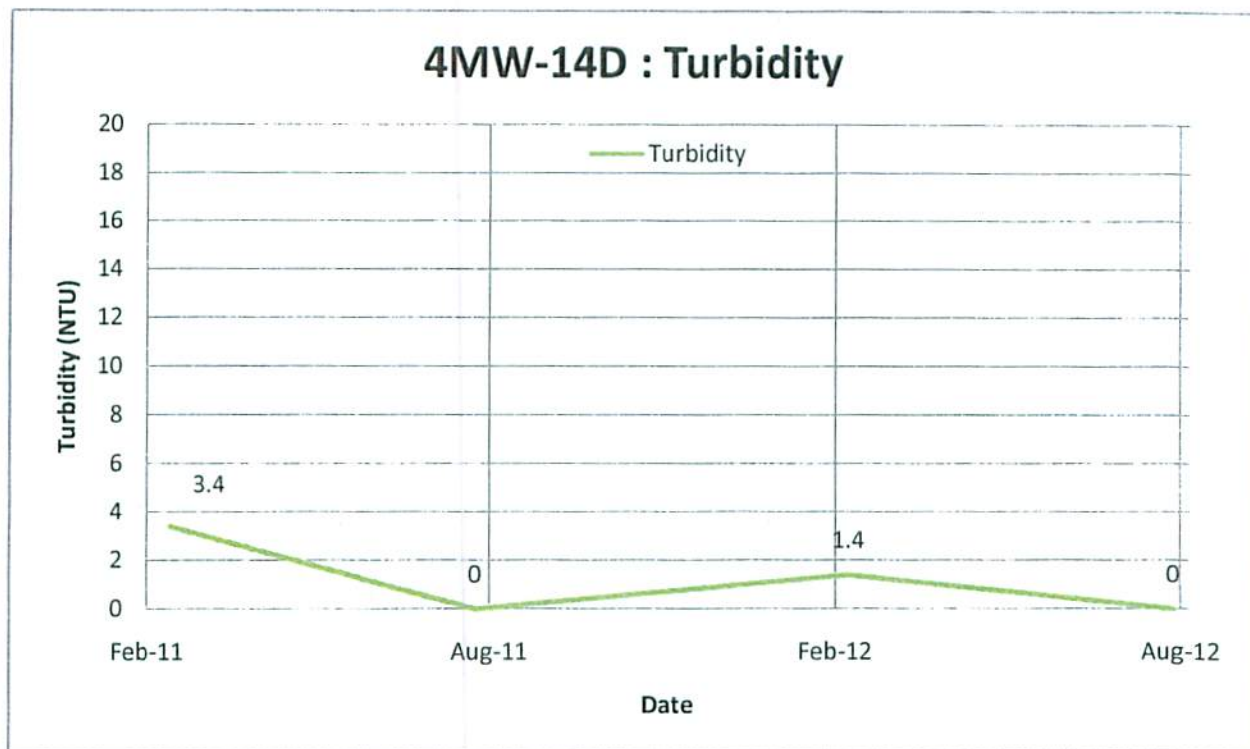


Figure B-72 Barium and Chromium Trends for 4MW-14D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

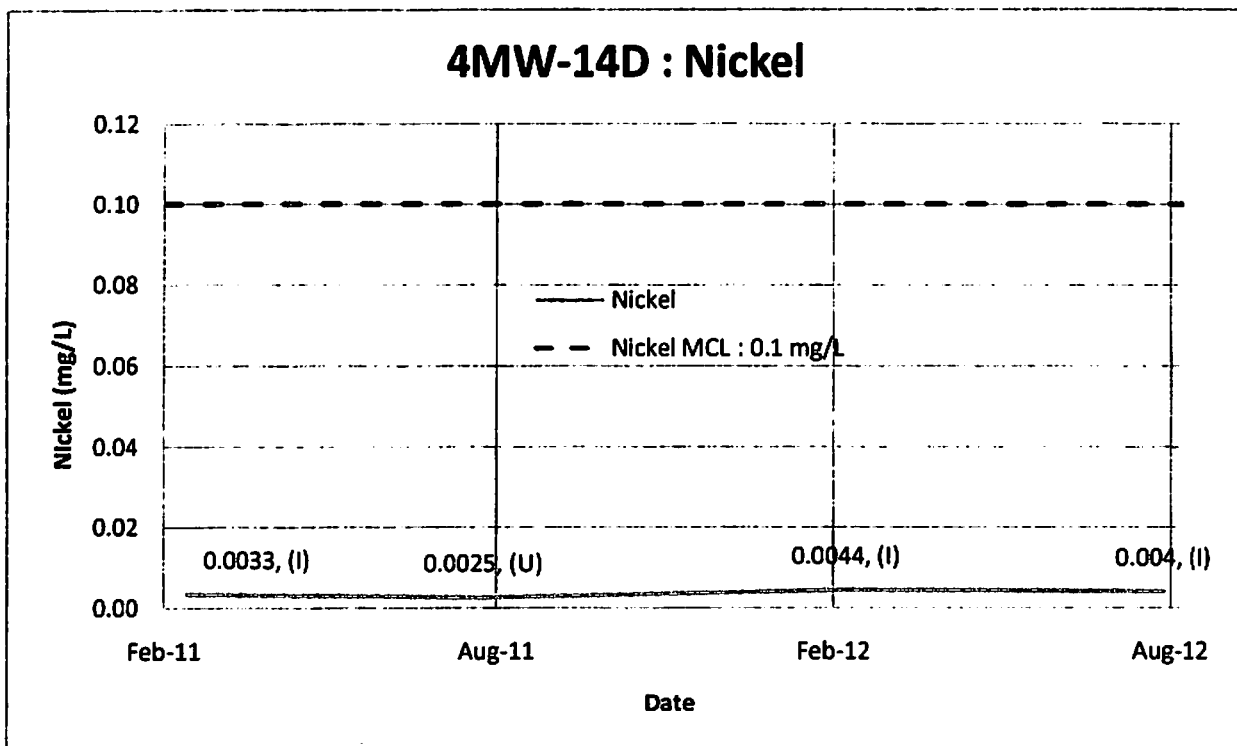
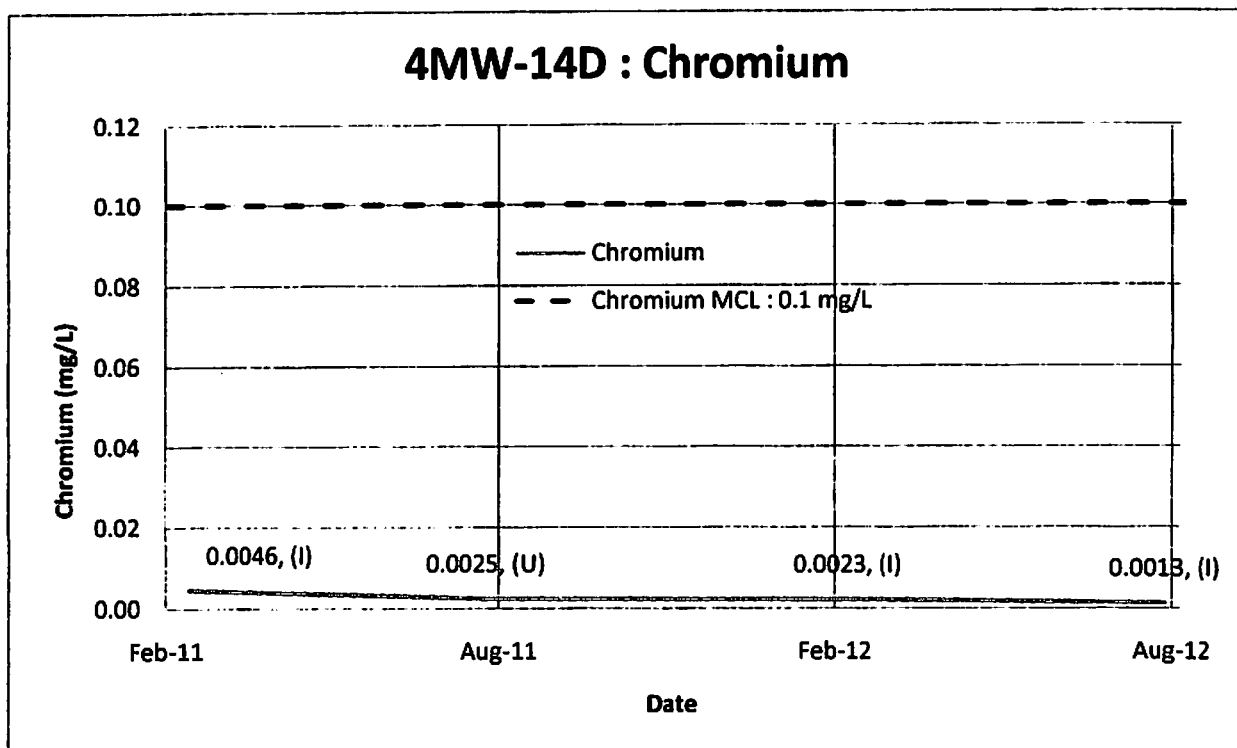


Figure B-73 Chromium and Nickel Trends for 4MW-14D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

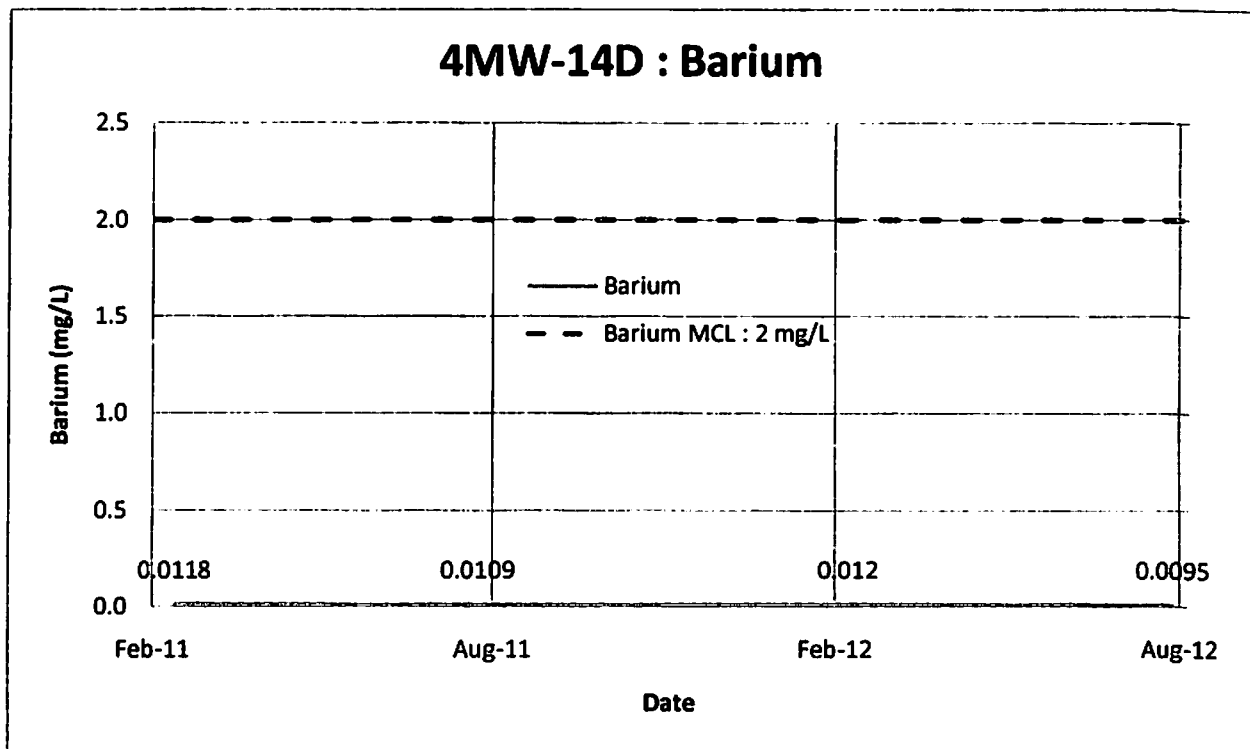


Figure B-74 Barium Trend for 4MW-14D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

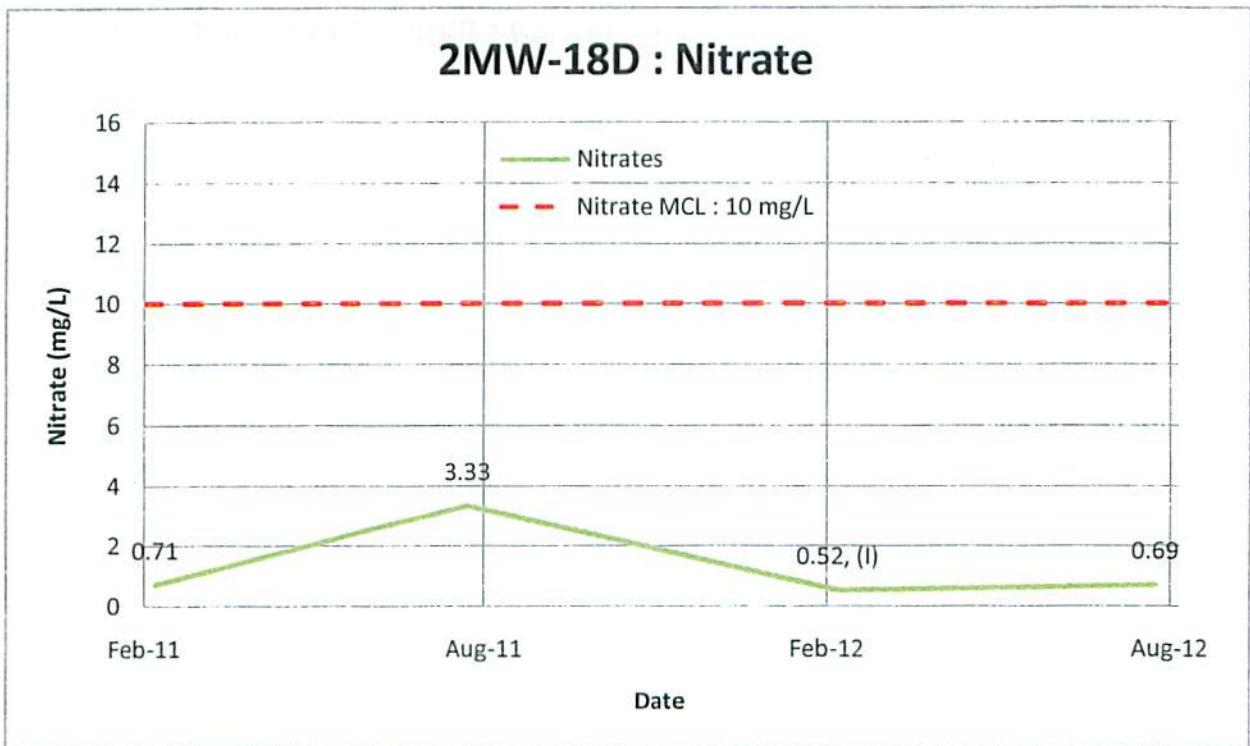
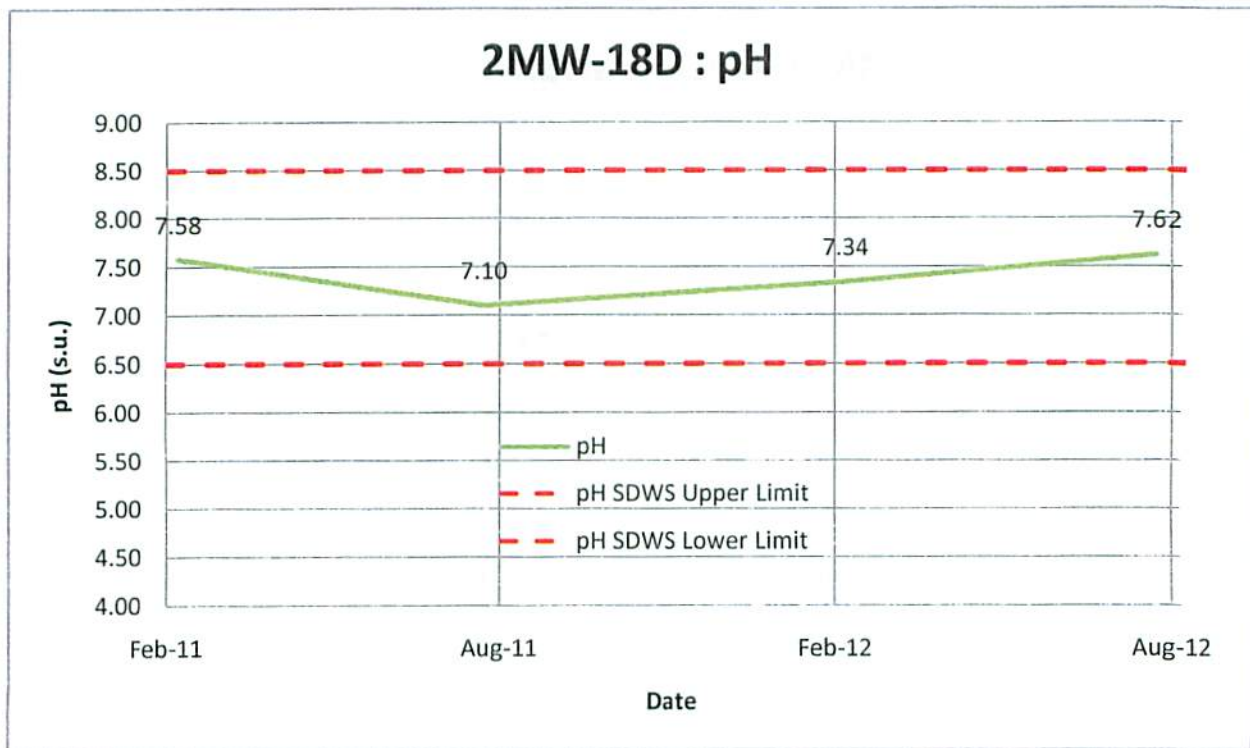


Figure B-75 pH and Nitrate Trends for 2MW-18D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

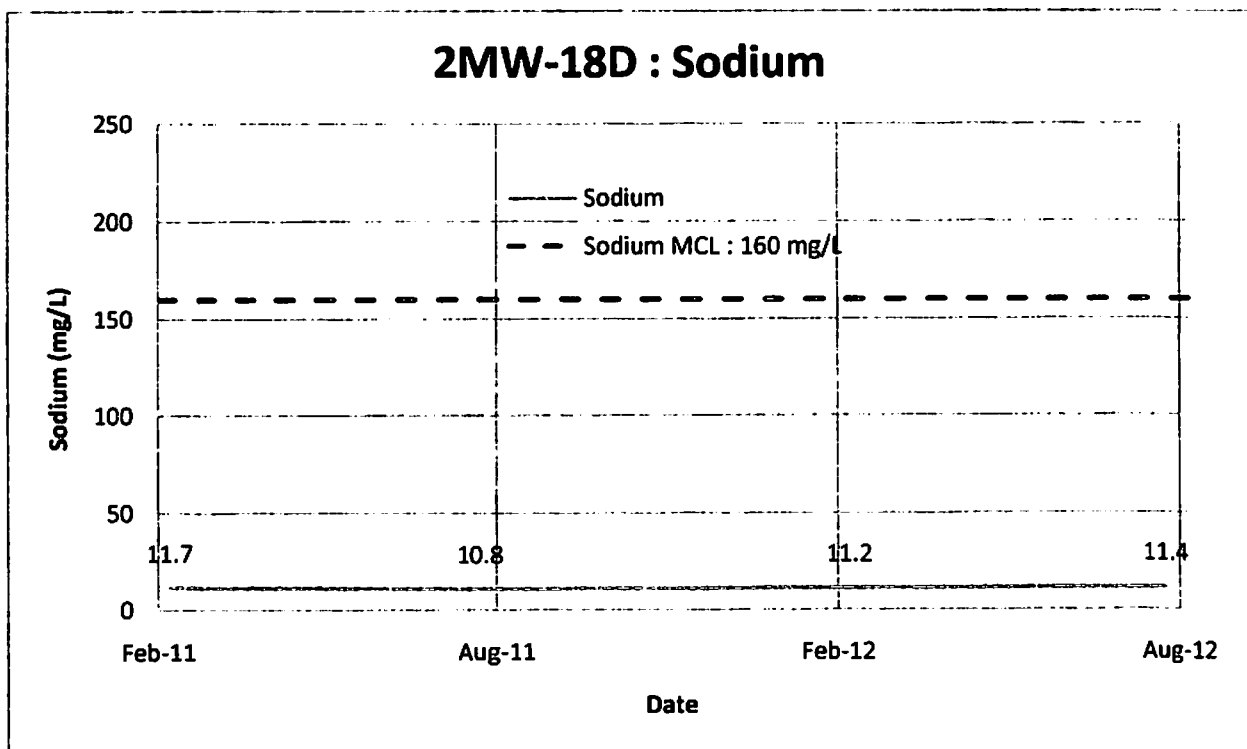
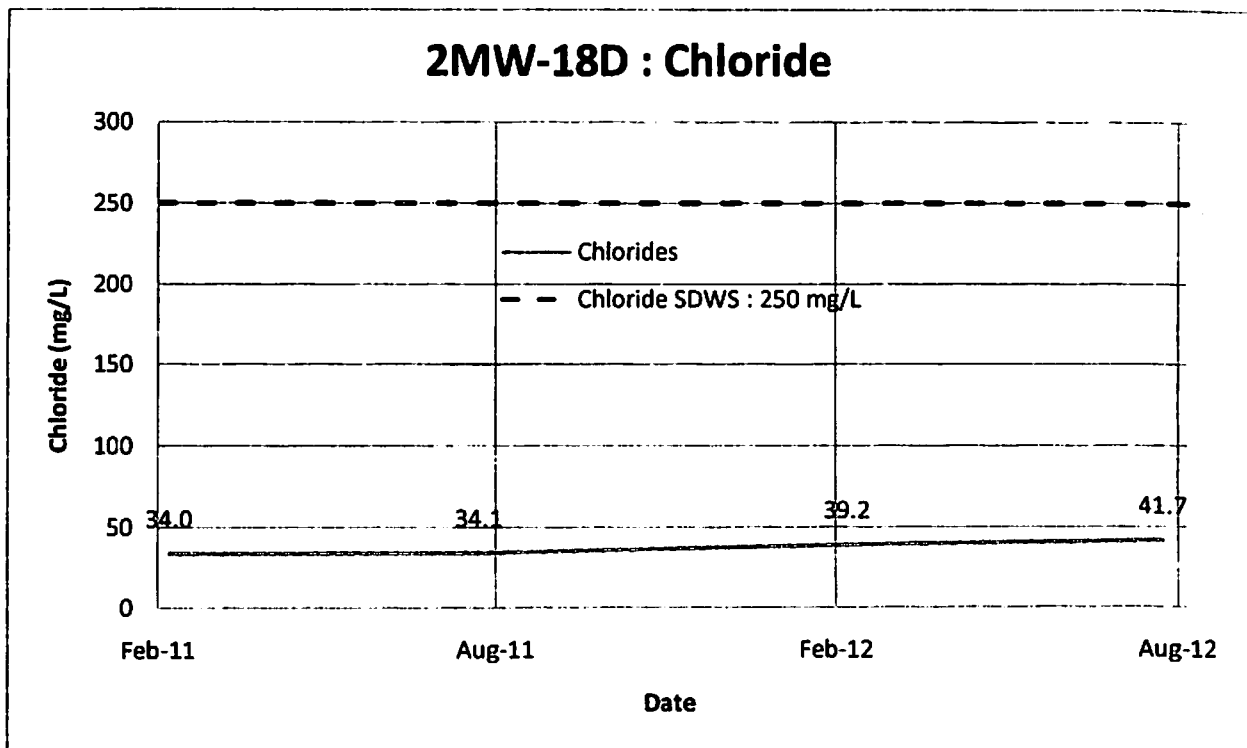


Figure B-76 Chloride and Sodium Trends for 2MW-18D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

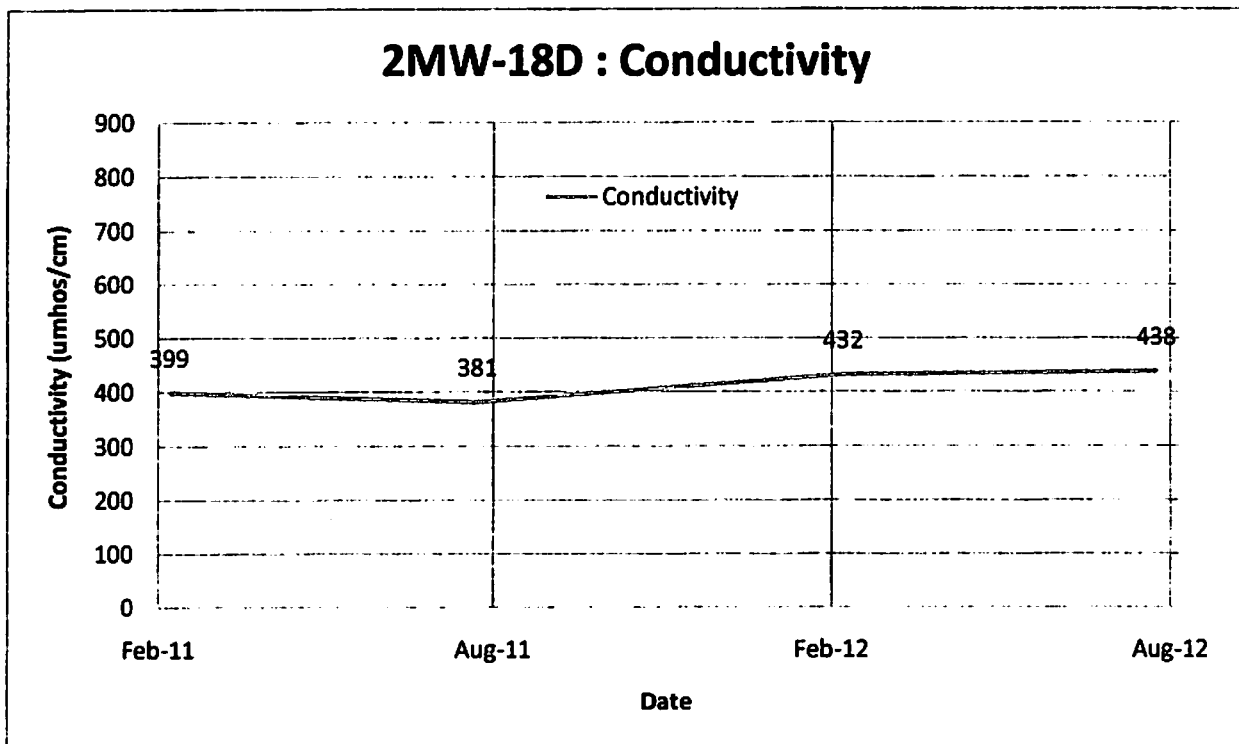
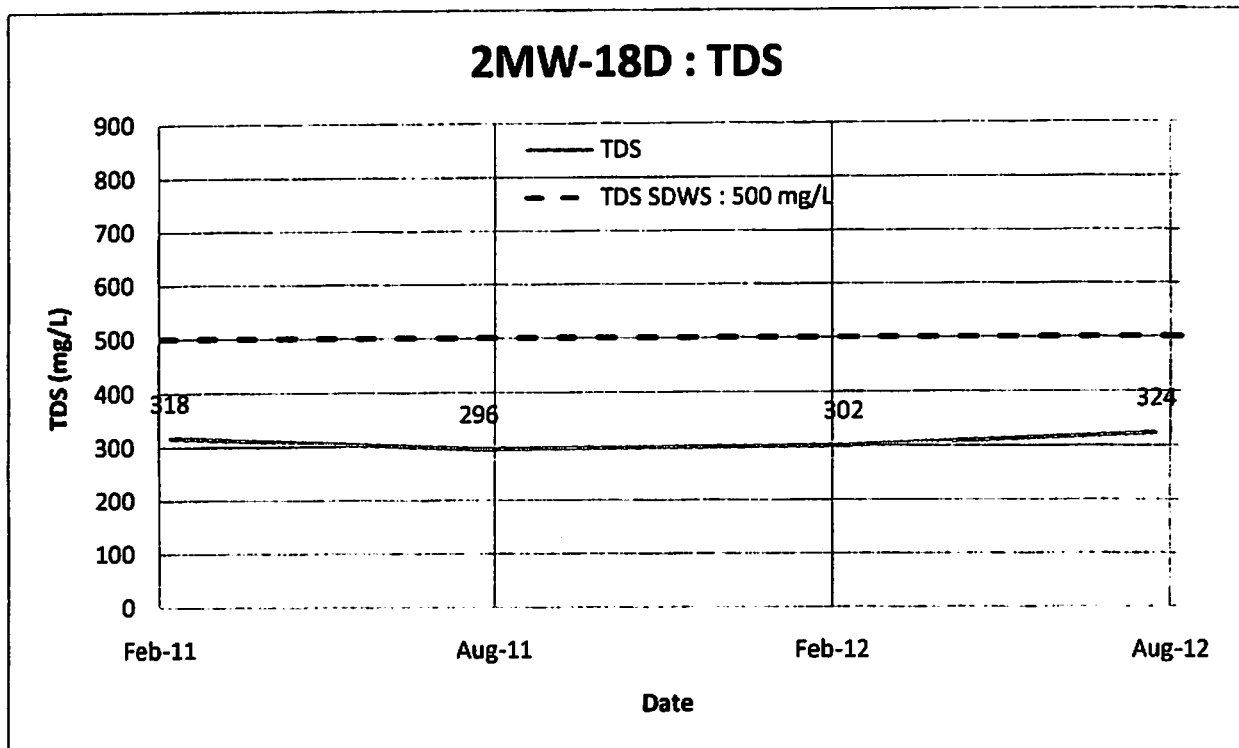


Figure B-77 TDS and Conductivity Trends for 2MW-18D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

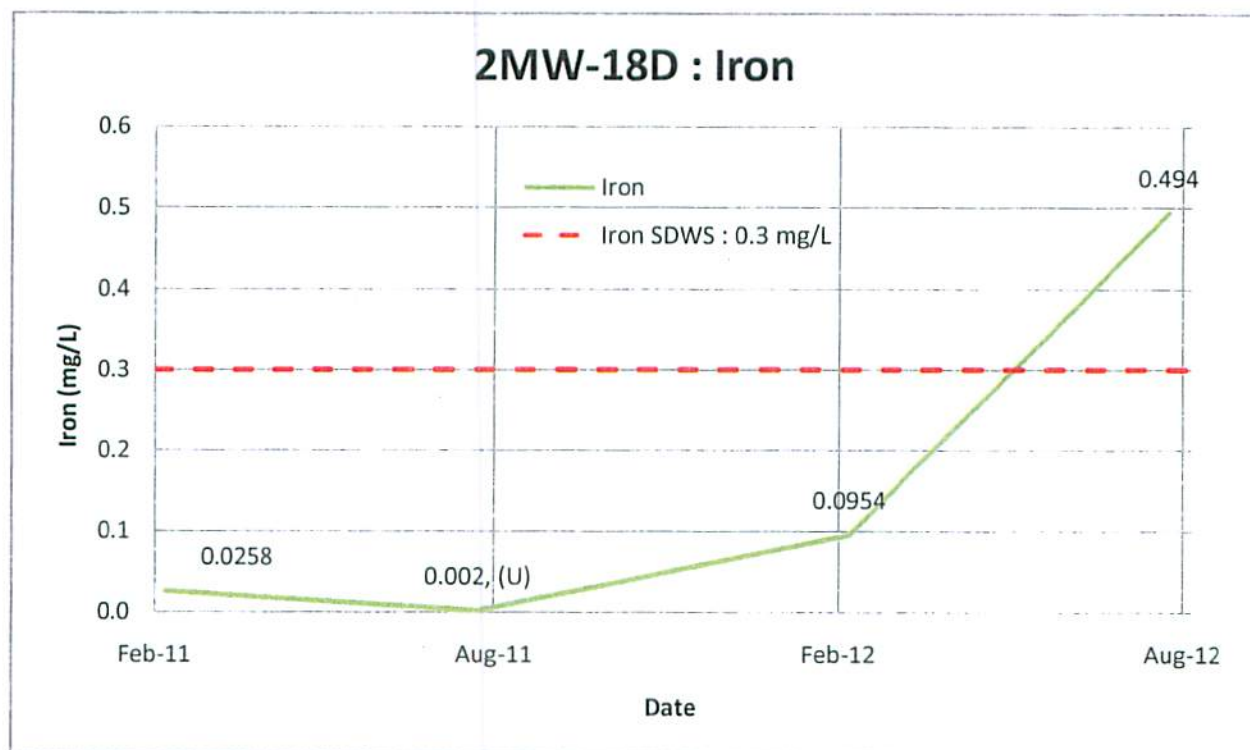
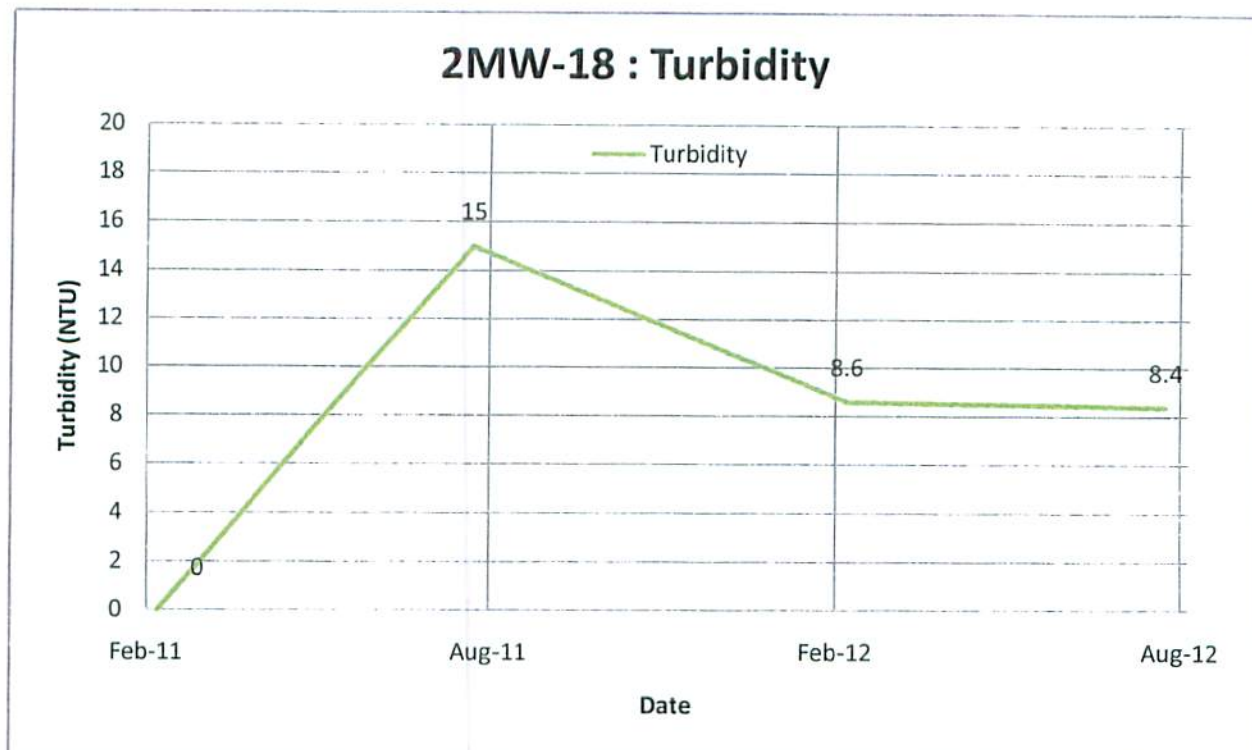


Figure B-78 Turbidity and Iron Trends for 2MW-18D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

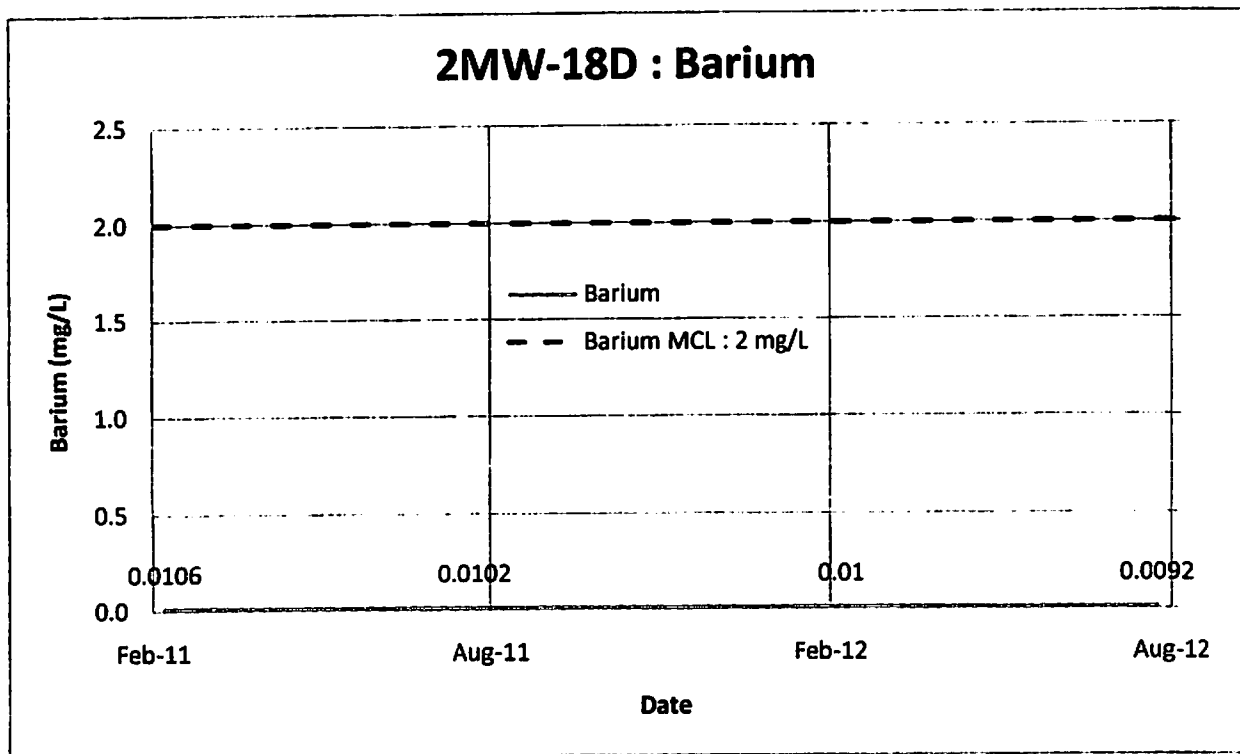


Figure B-79 Barium Trend for 2MW-18D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

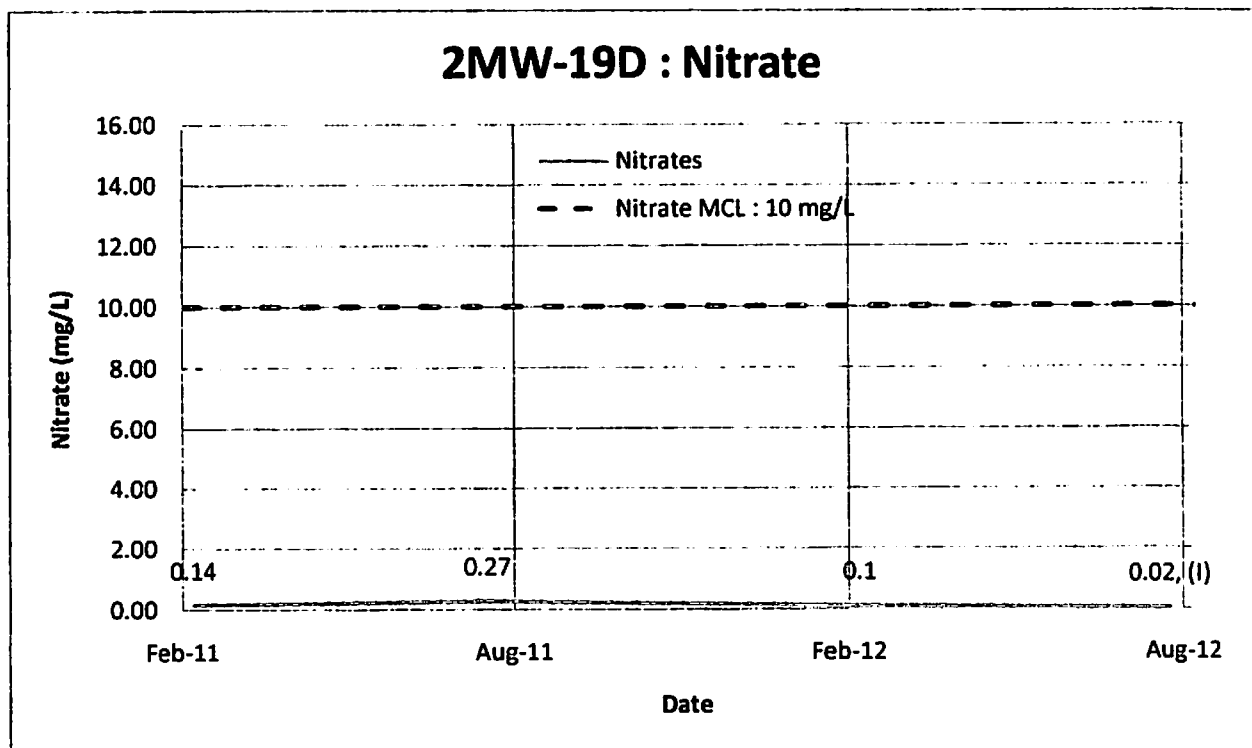
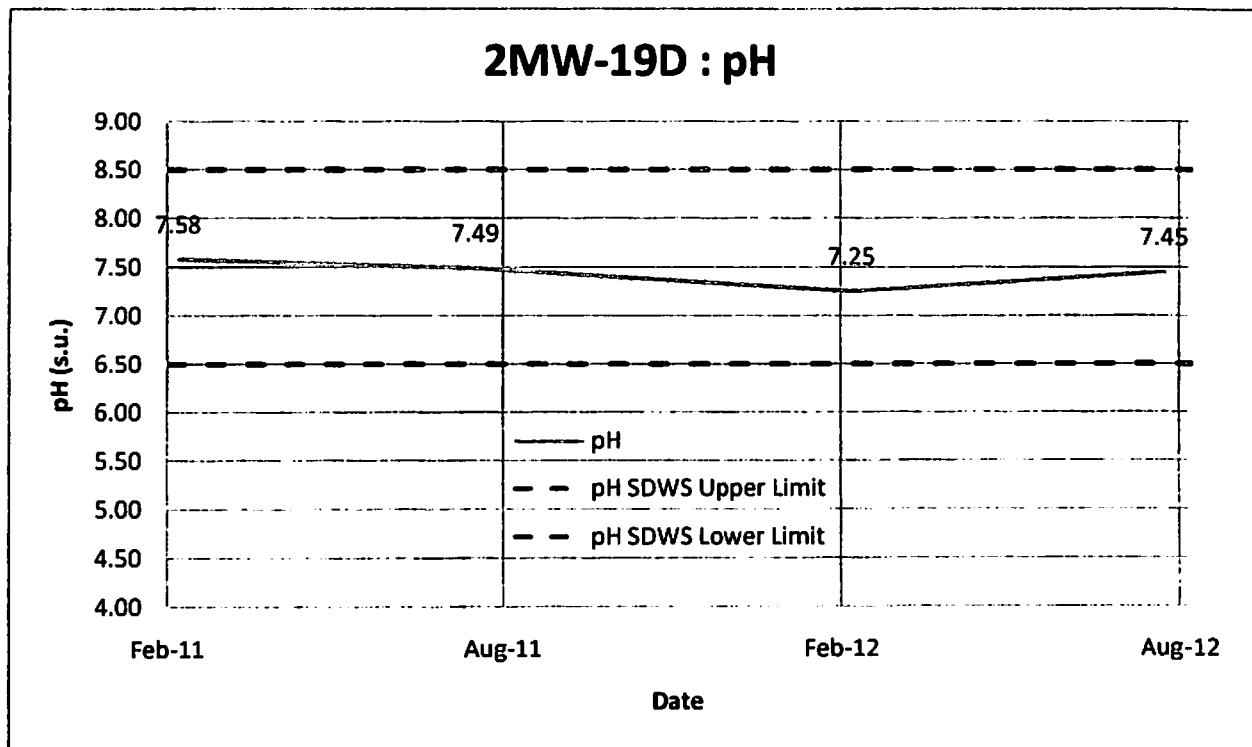


Figure B-80 pH and Nitrate Trends for 2MW-19D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

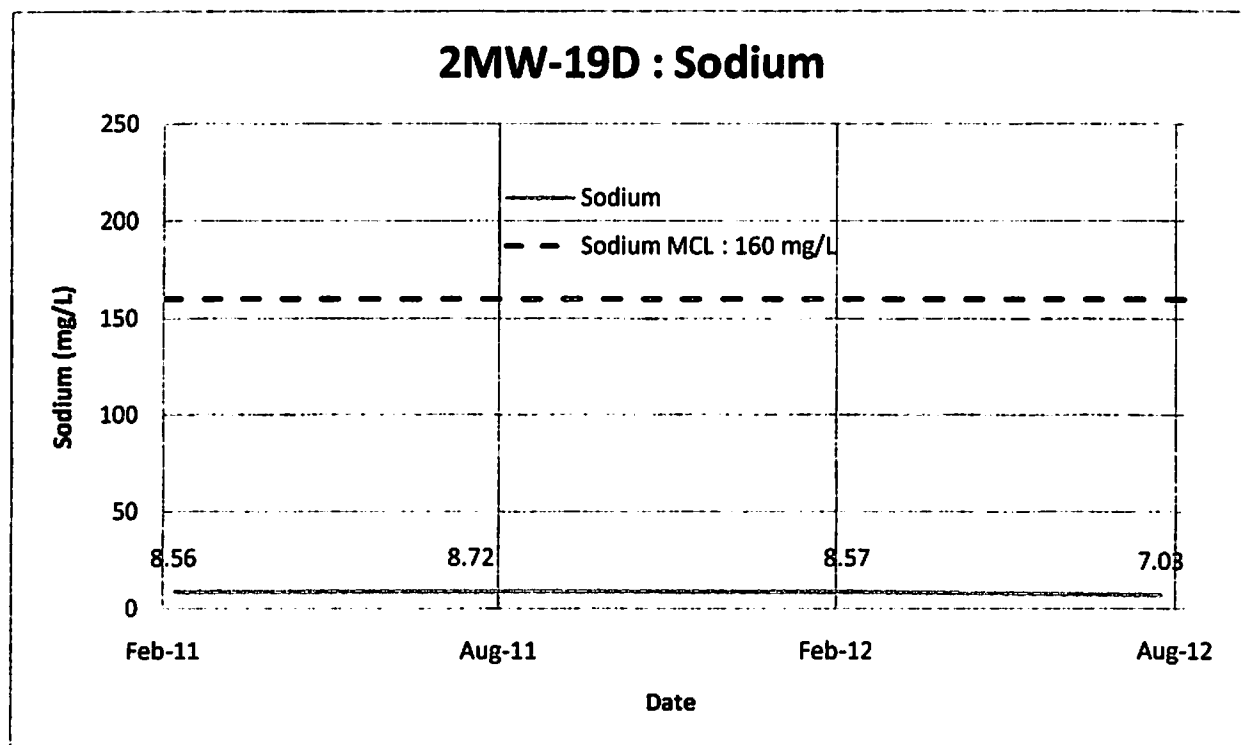
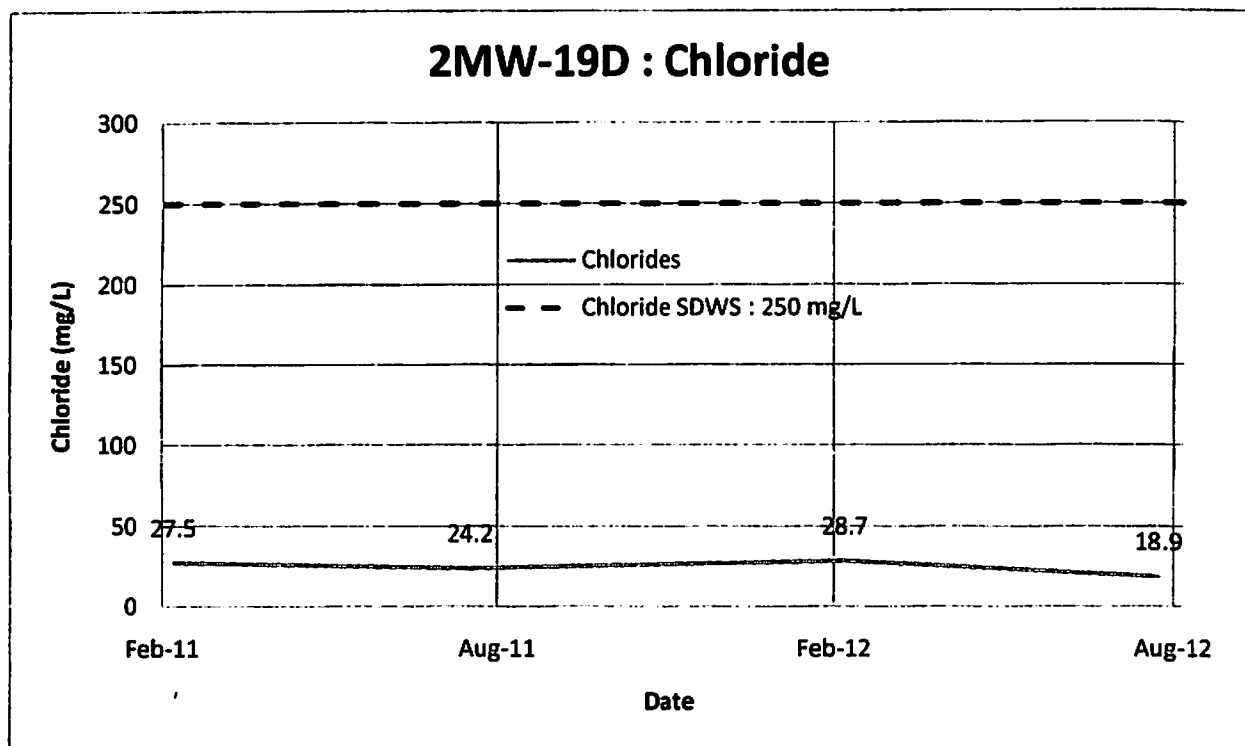


Figure B-81 Chloride and Sodium Trends for 2MW-19D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

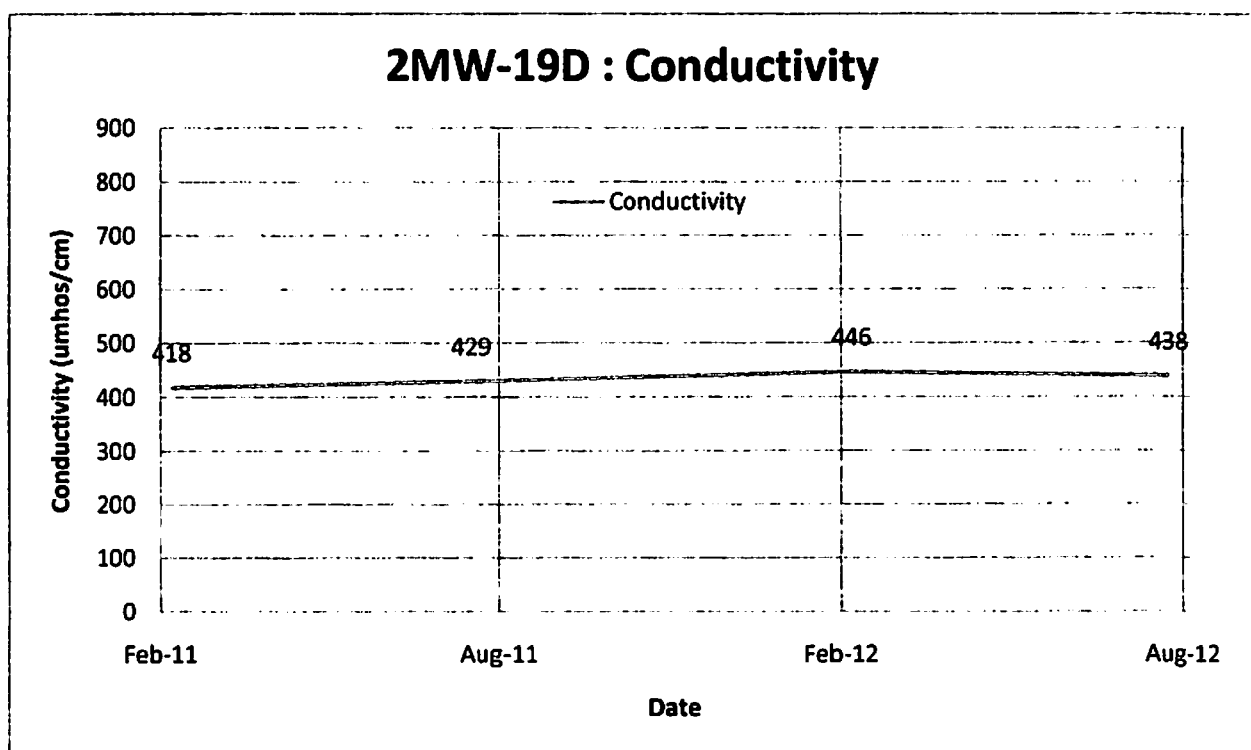
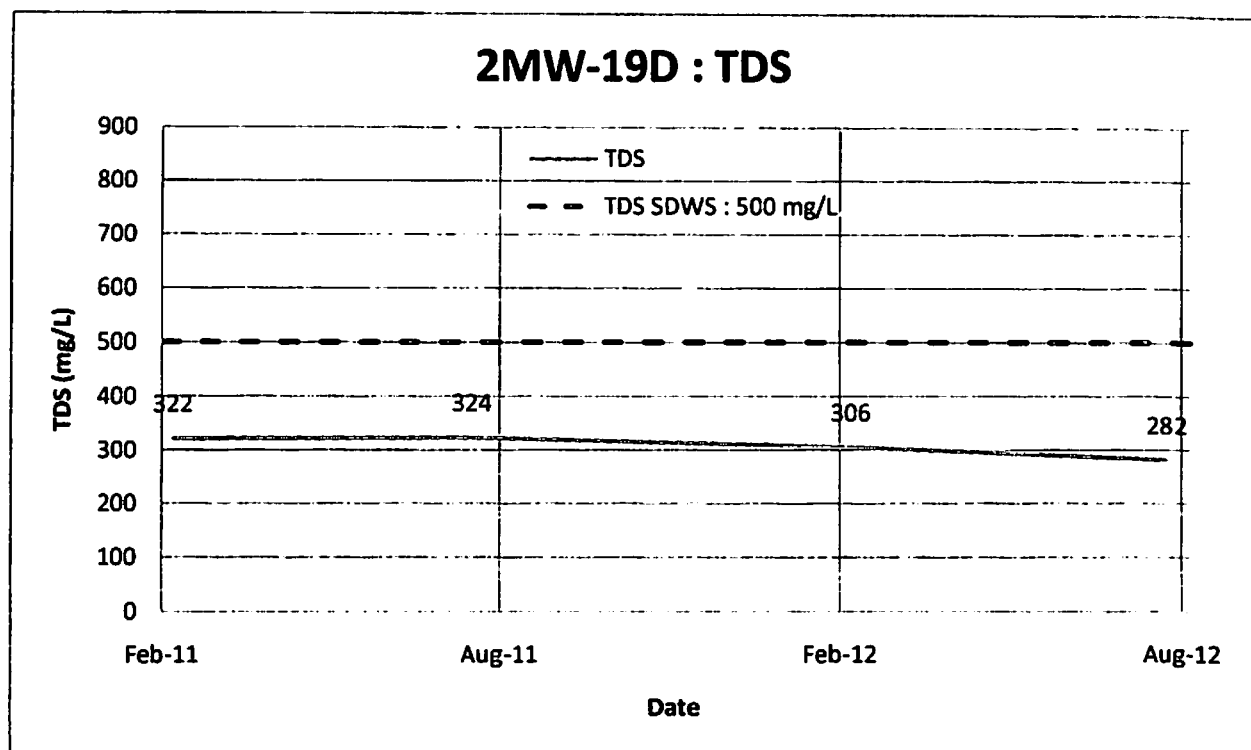


Figure B-82 TDS and Conductivity Trends for 2MW-19D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

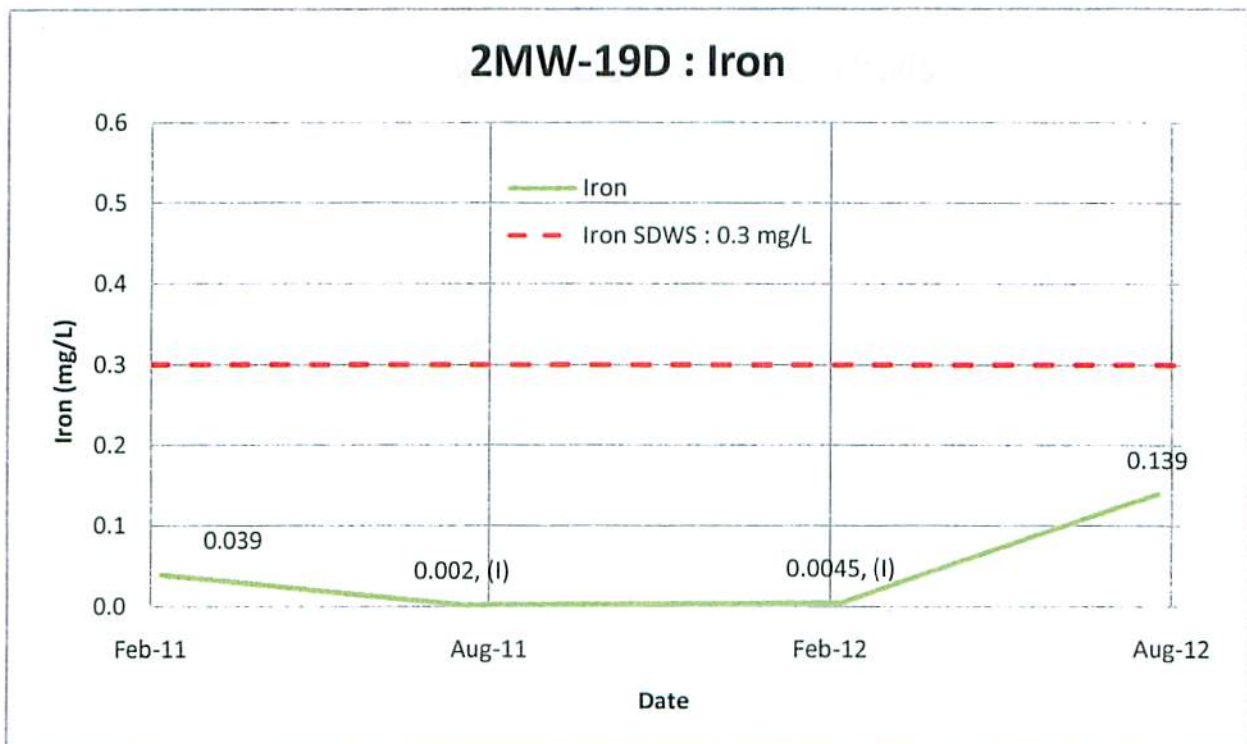
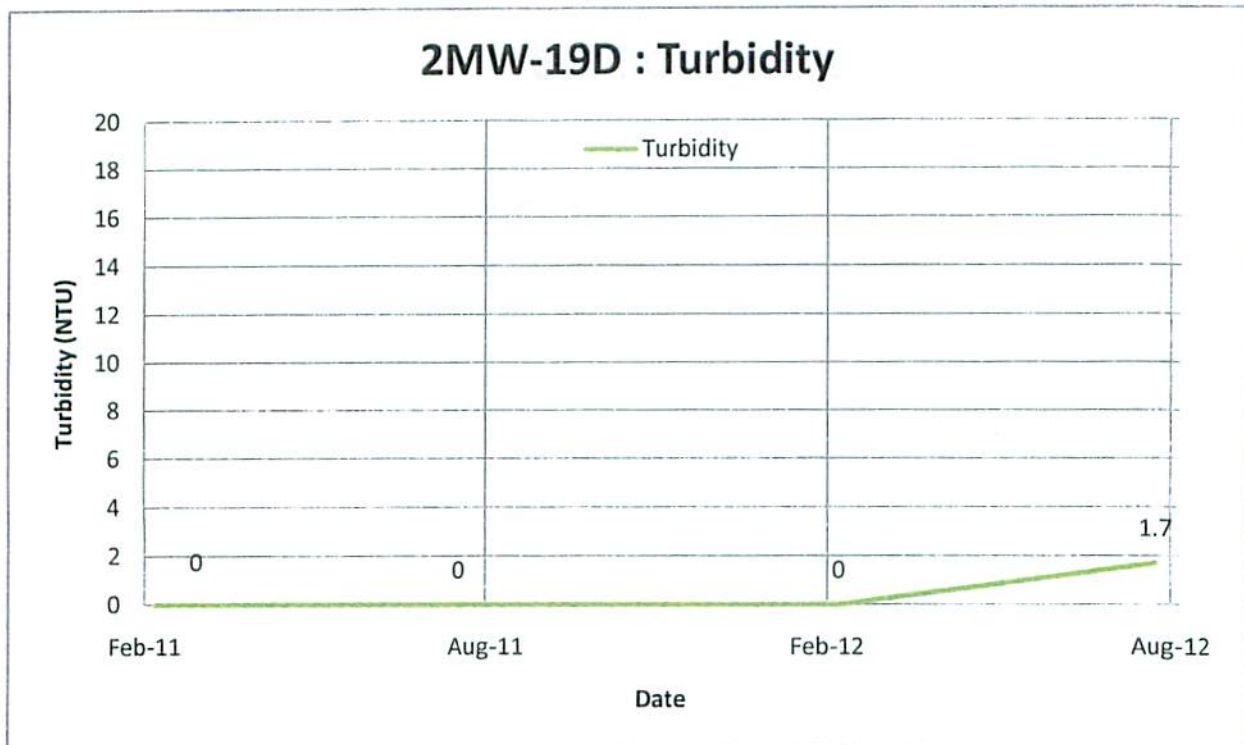


Figure B-83 Turbidity and Iron Trends for 2MW-19D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

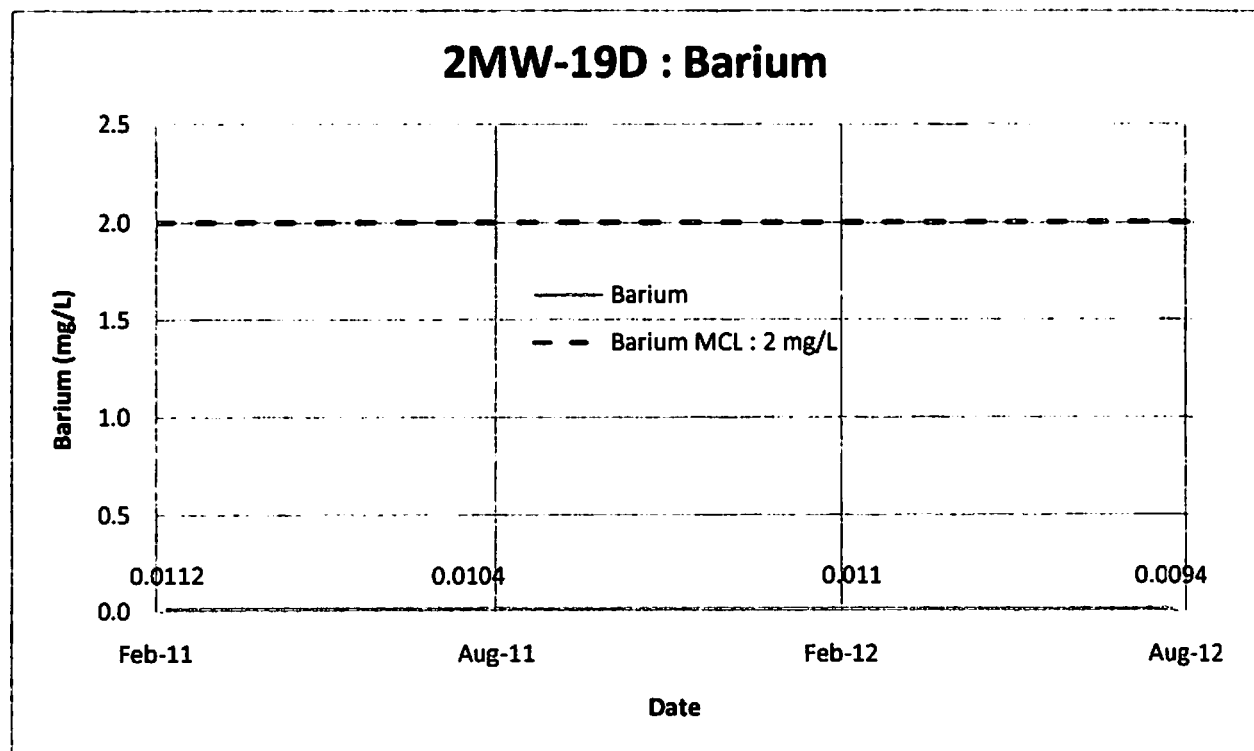
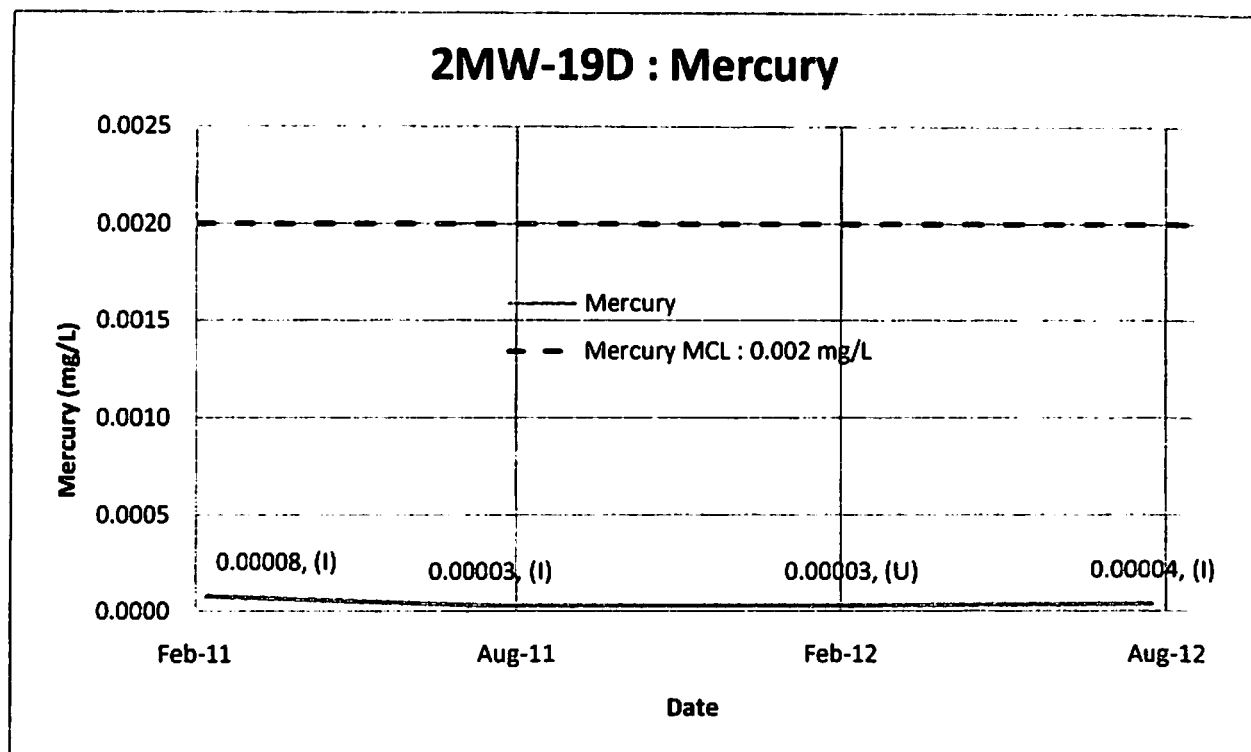


Figure B-84 Mercury and Barium Trends for 2MW-19D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

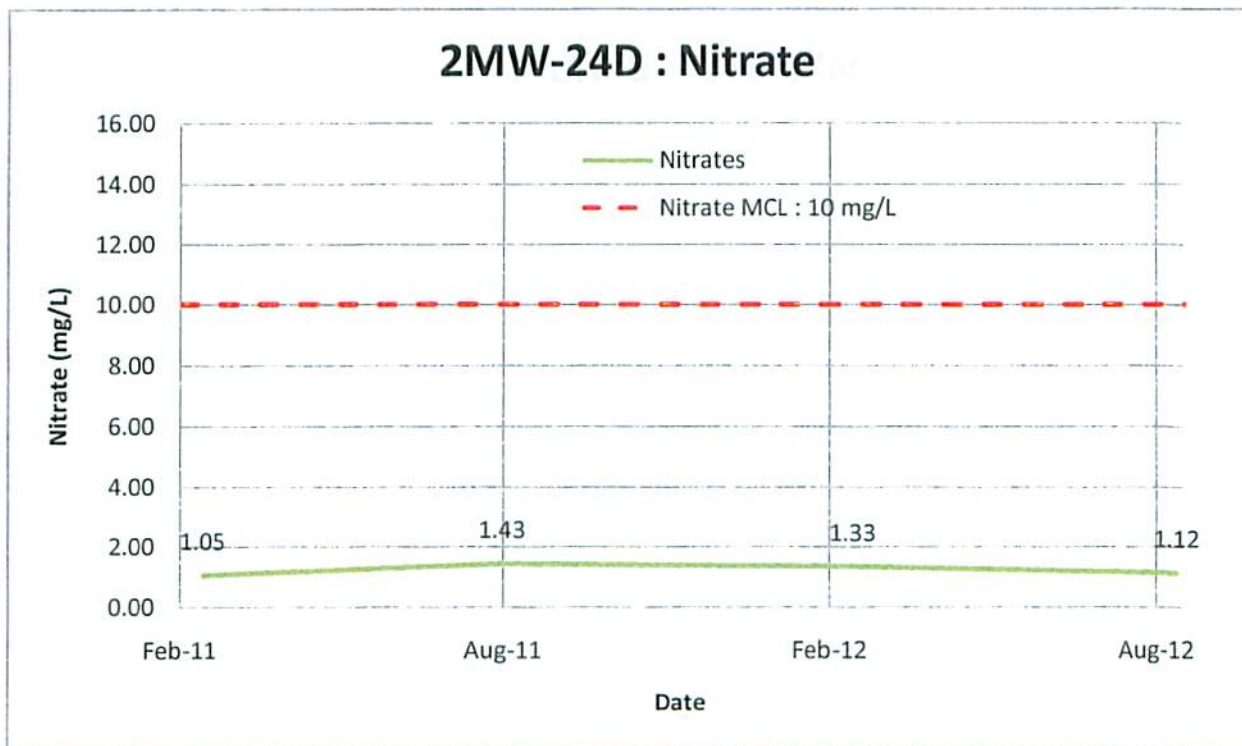
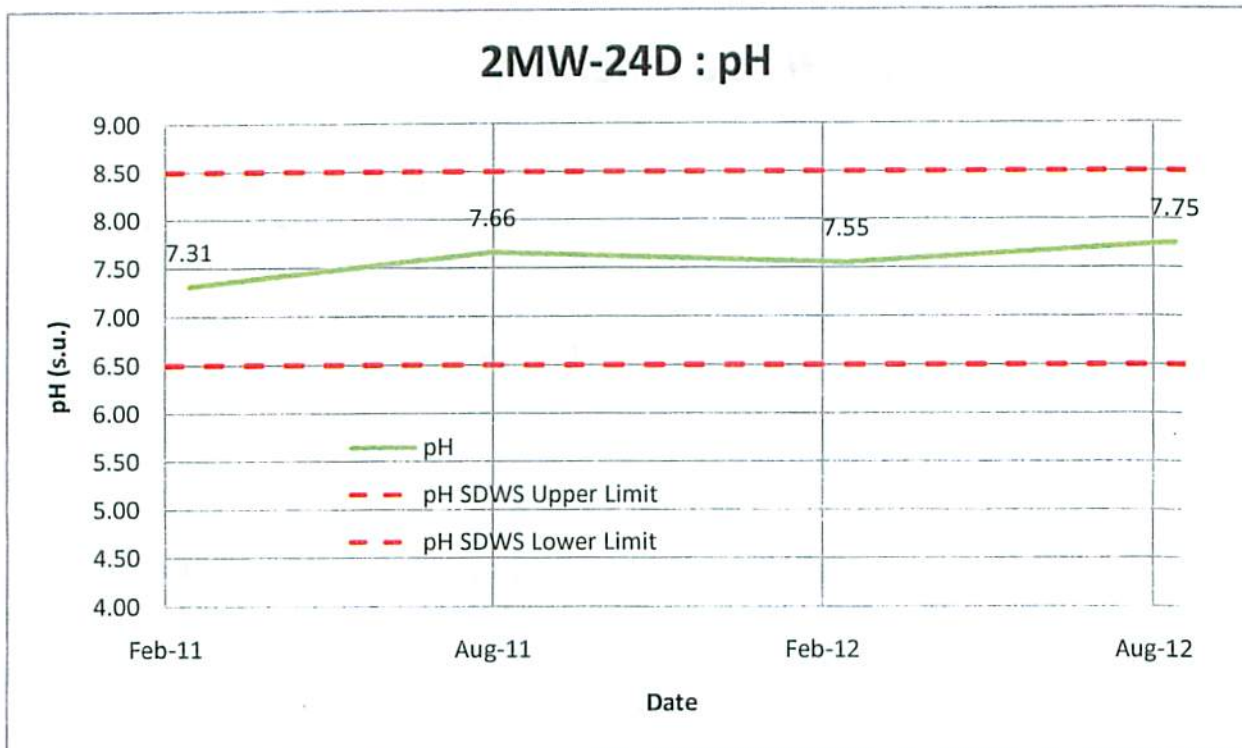


Figure B-85 pH and Nitrate Trends for 2MW-24D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

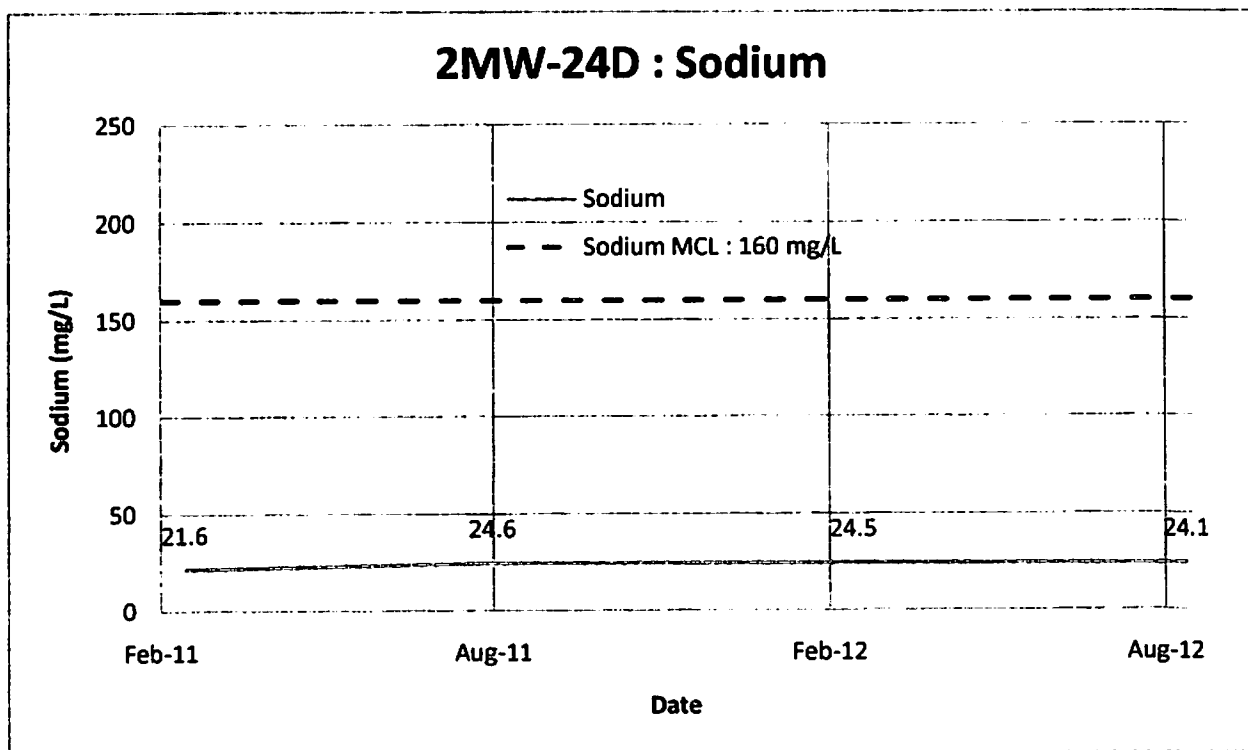
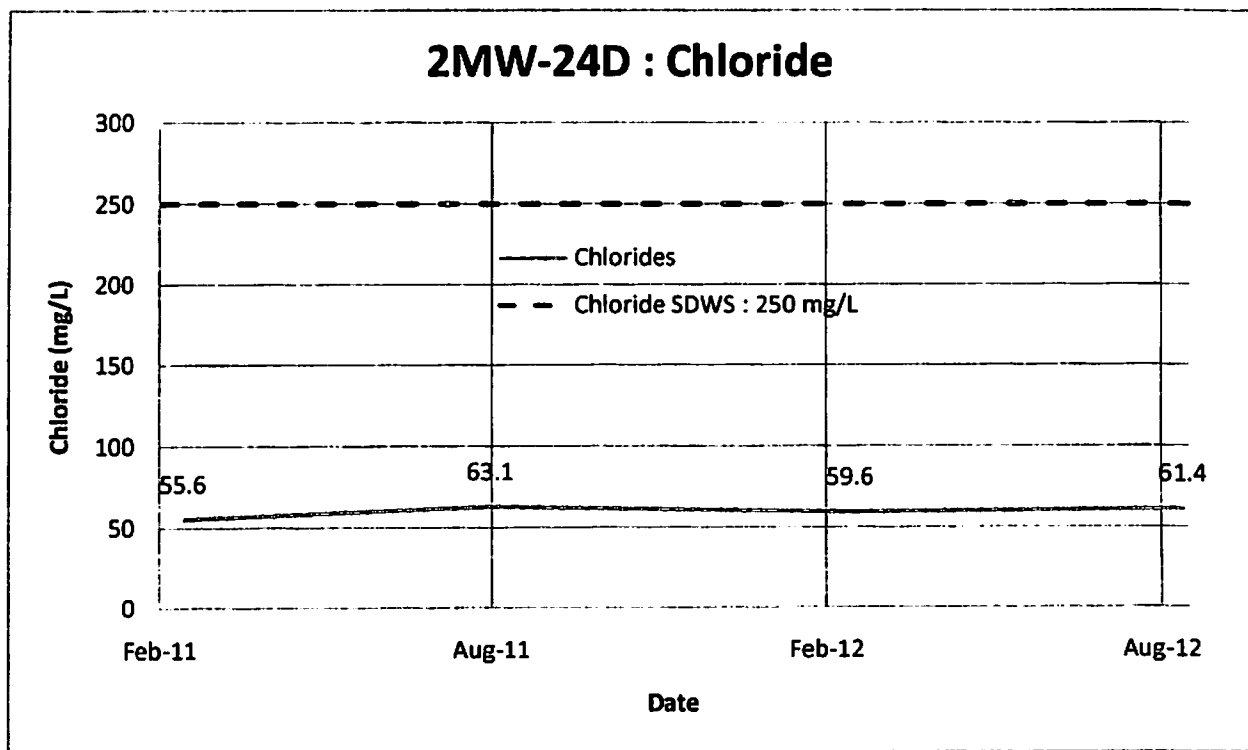


Figure B-86 Chloride and Sodium Trends for 2MW-24D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

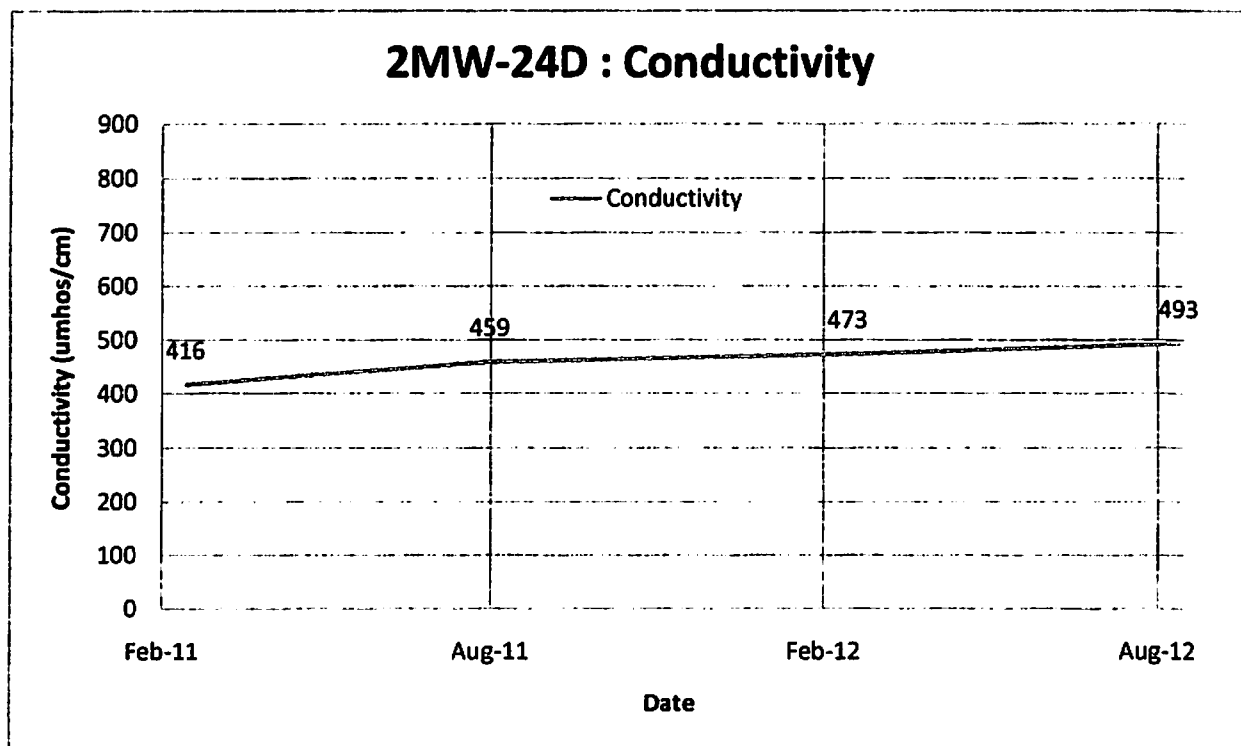
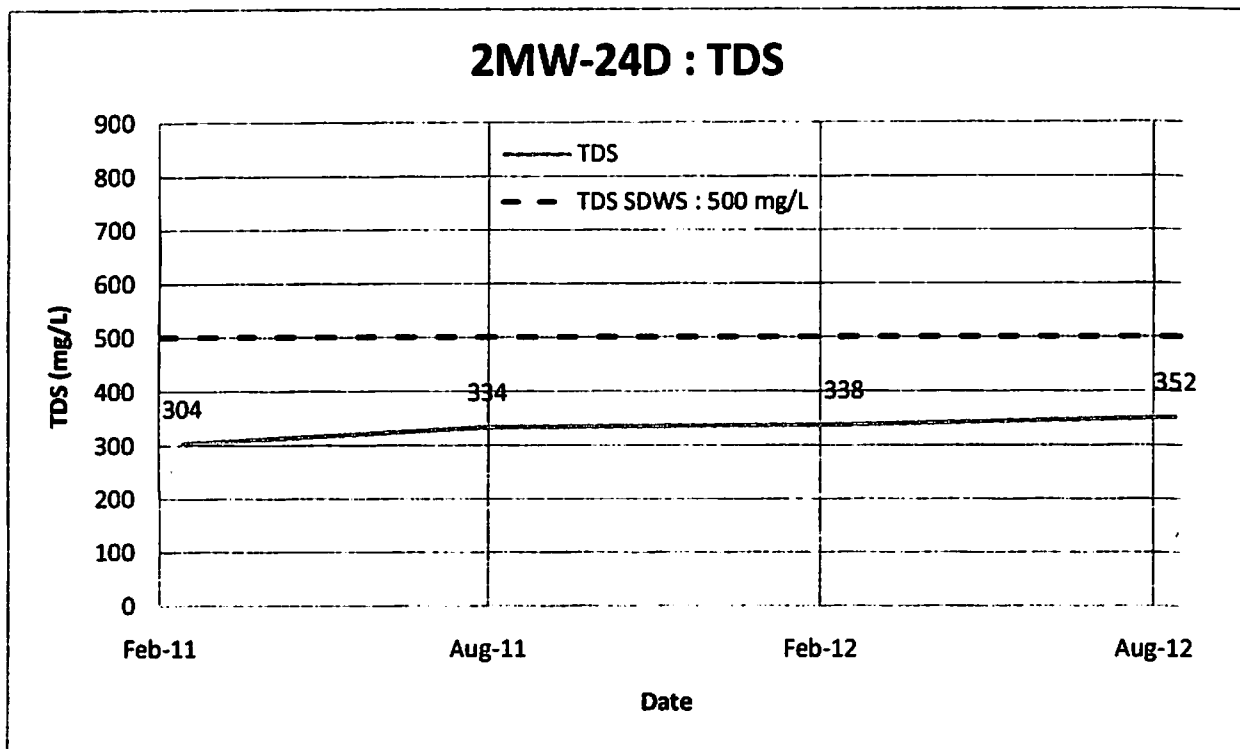


Figure B-87 TDS and Conductivity Trends for 2MW-24D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

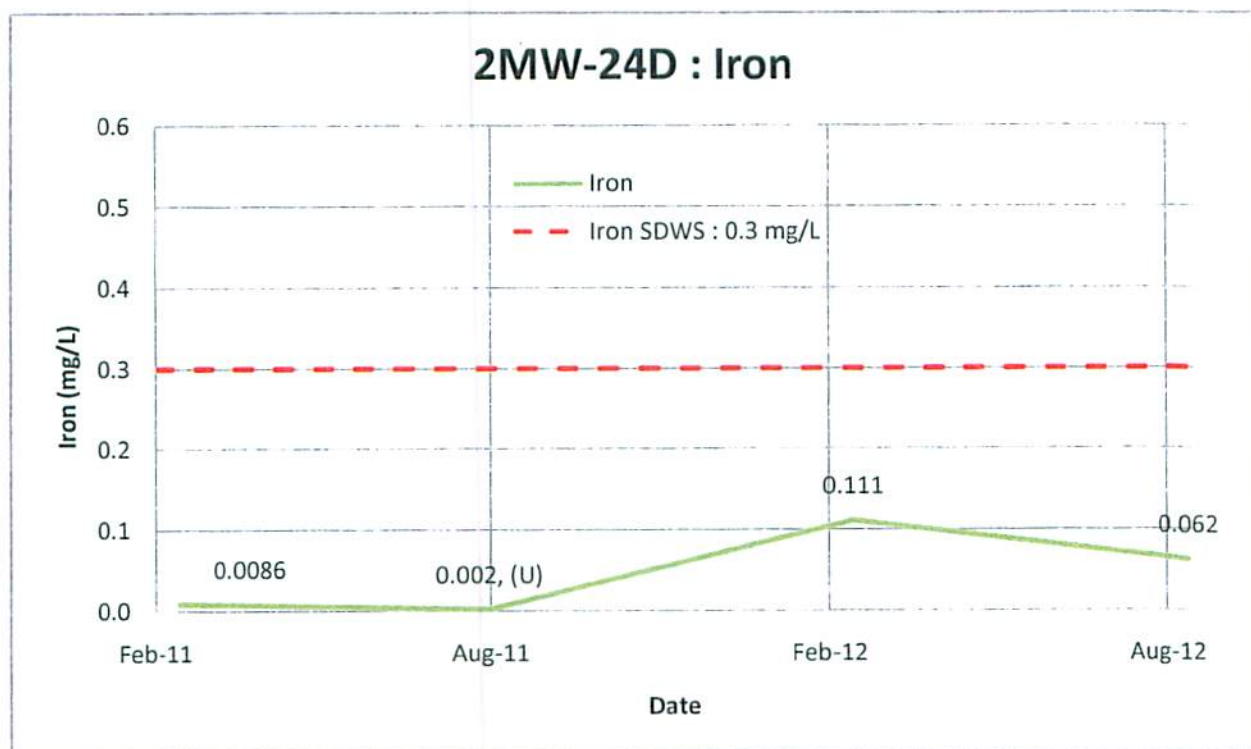
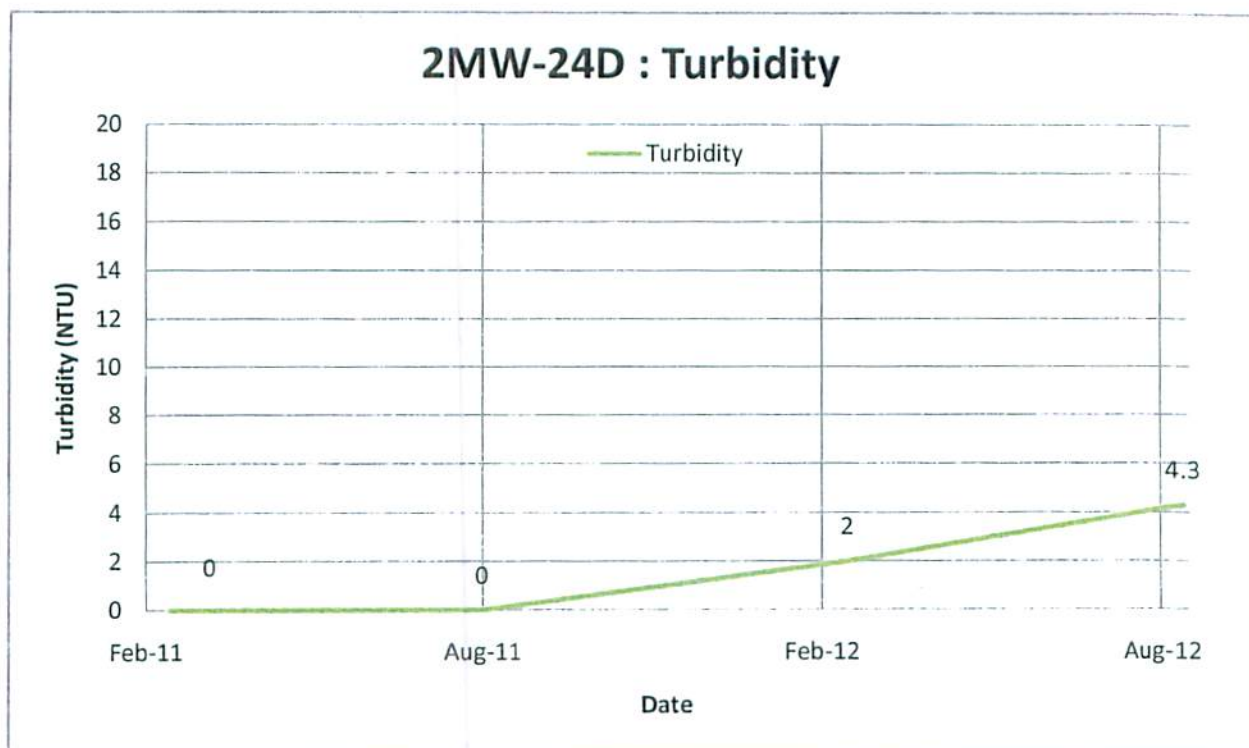


Figure B-88 Turbidity and Iron Trends for 2MW-24D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

Based on data provided by Pasco County Lab

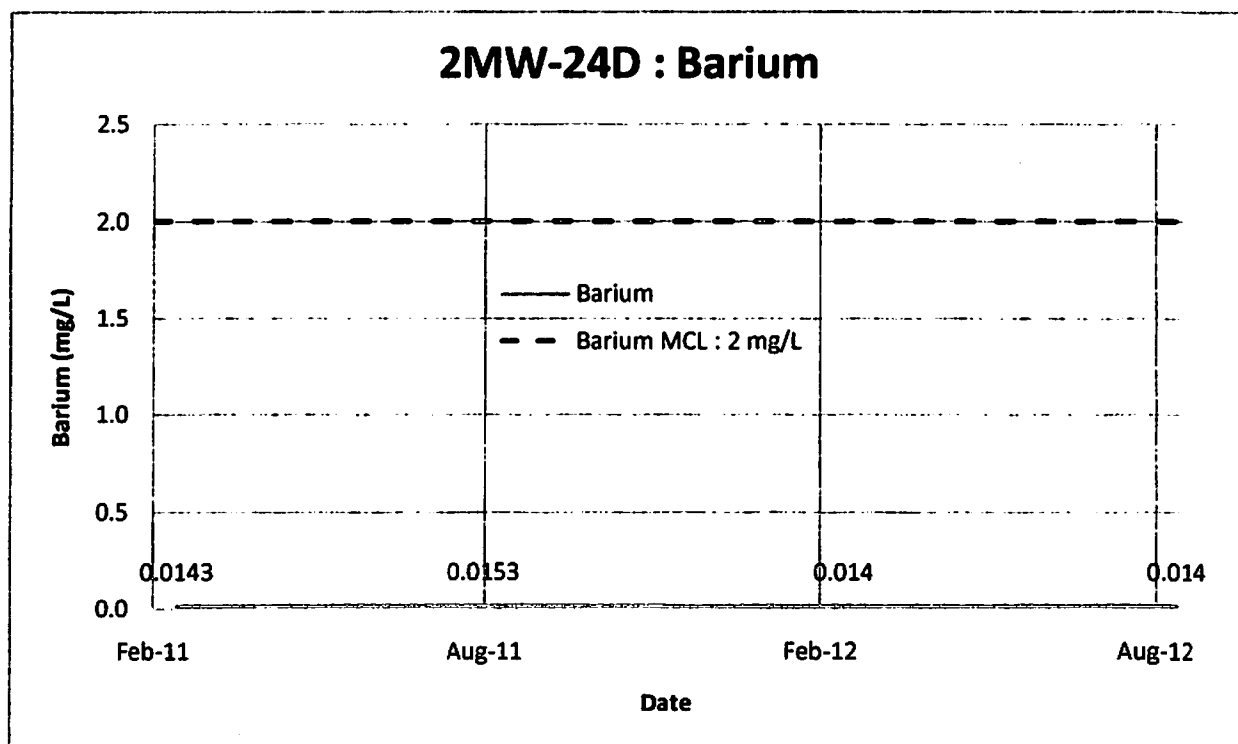
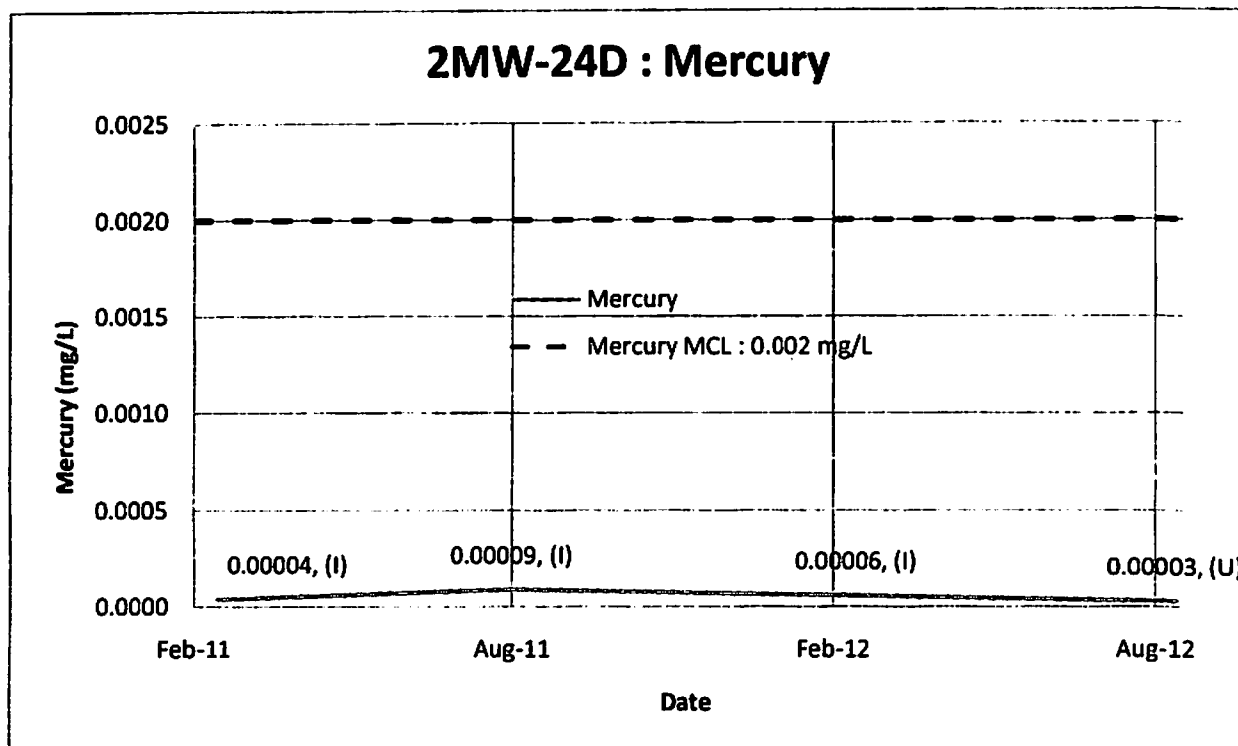


Figure B-89 Mercury and Barium Trends for 2MW-24D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

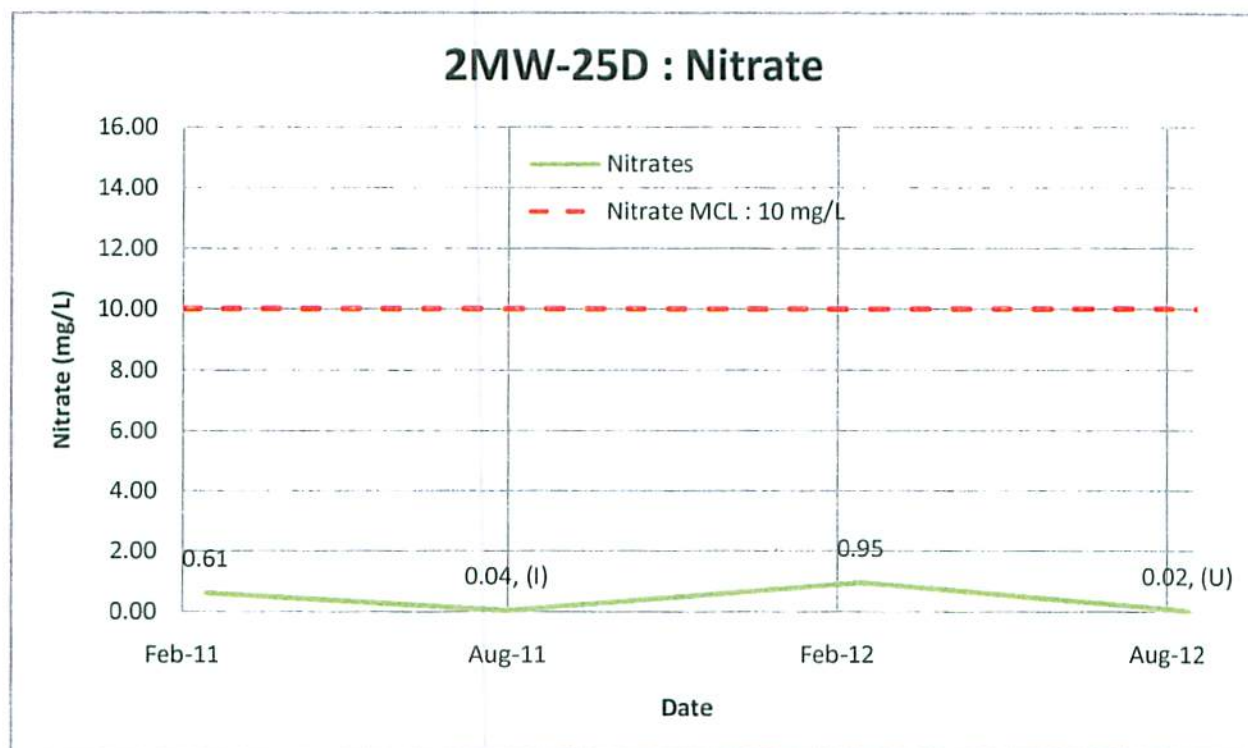
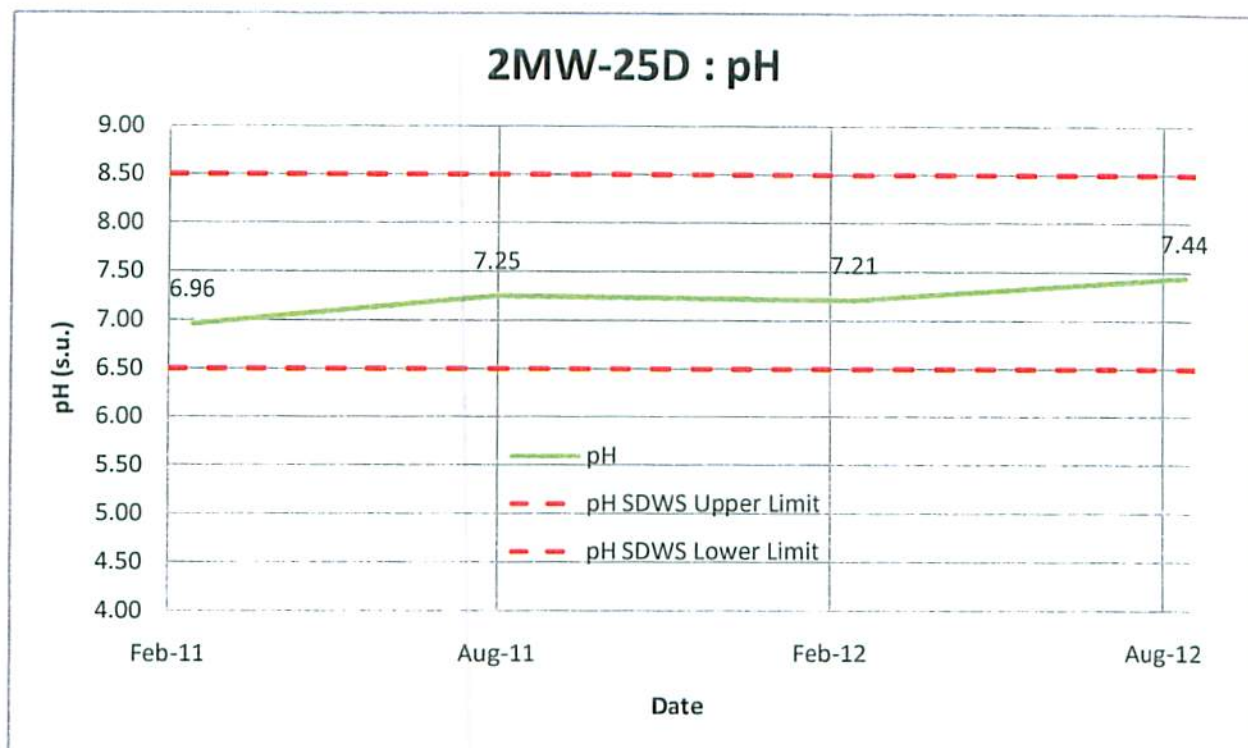


Figure B-90 pH and Nitrate Trends for 2MW-25D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

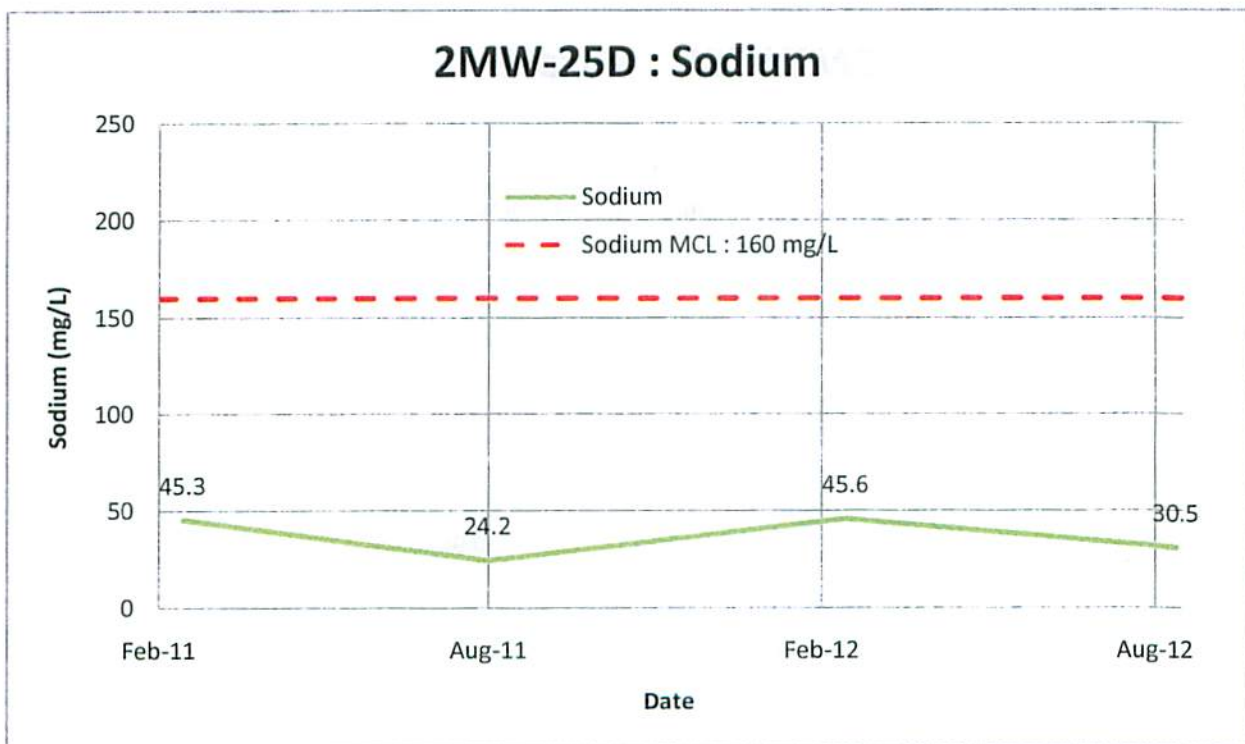
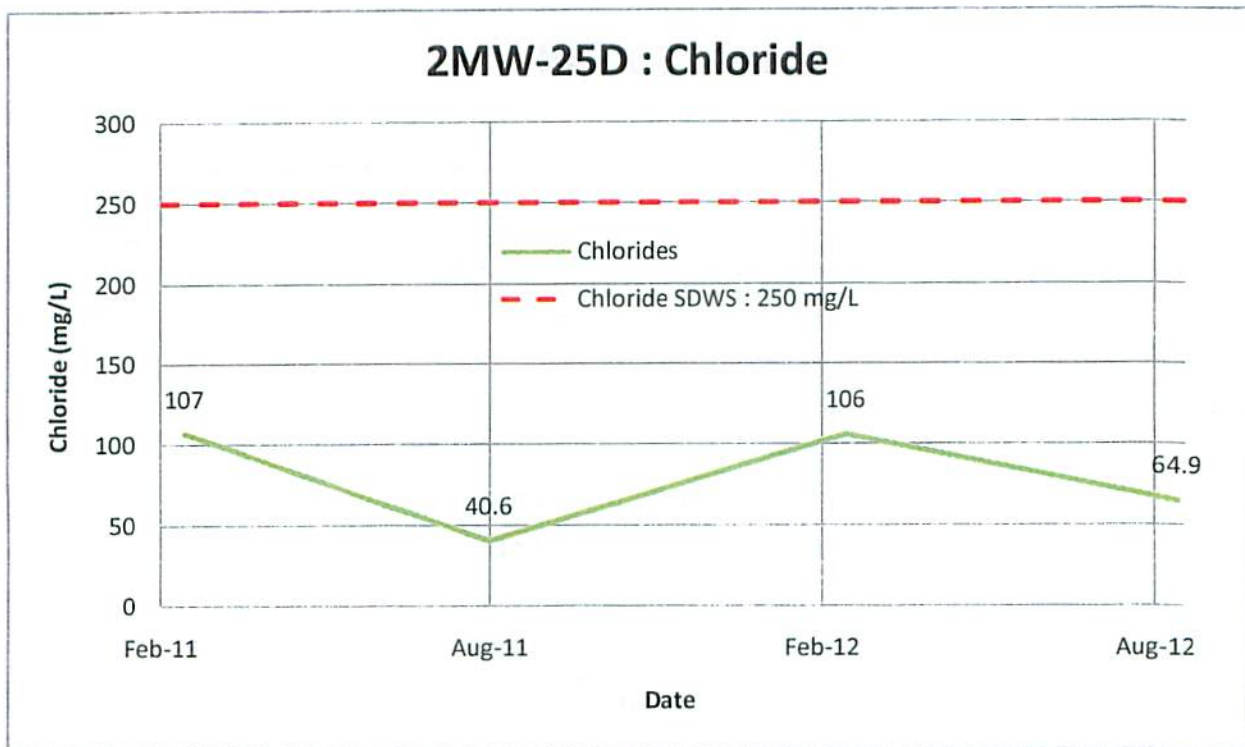


Figure B-91 Chloride and Sodium Trends for 2MW-25D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

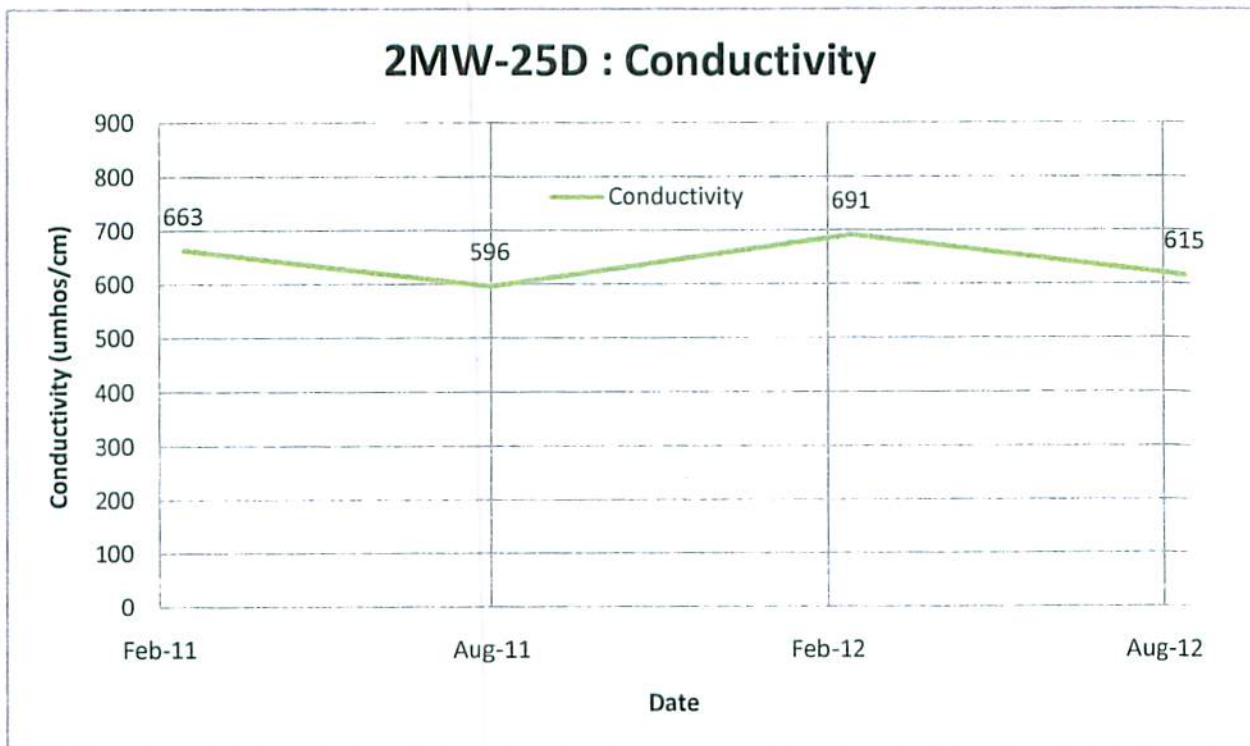
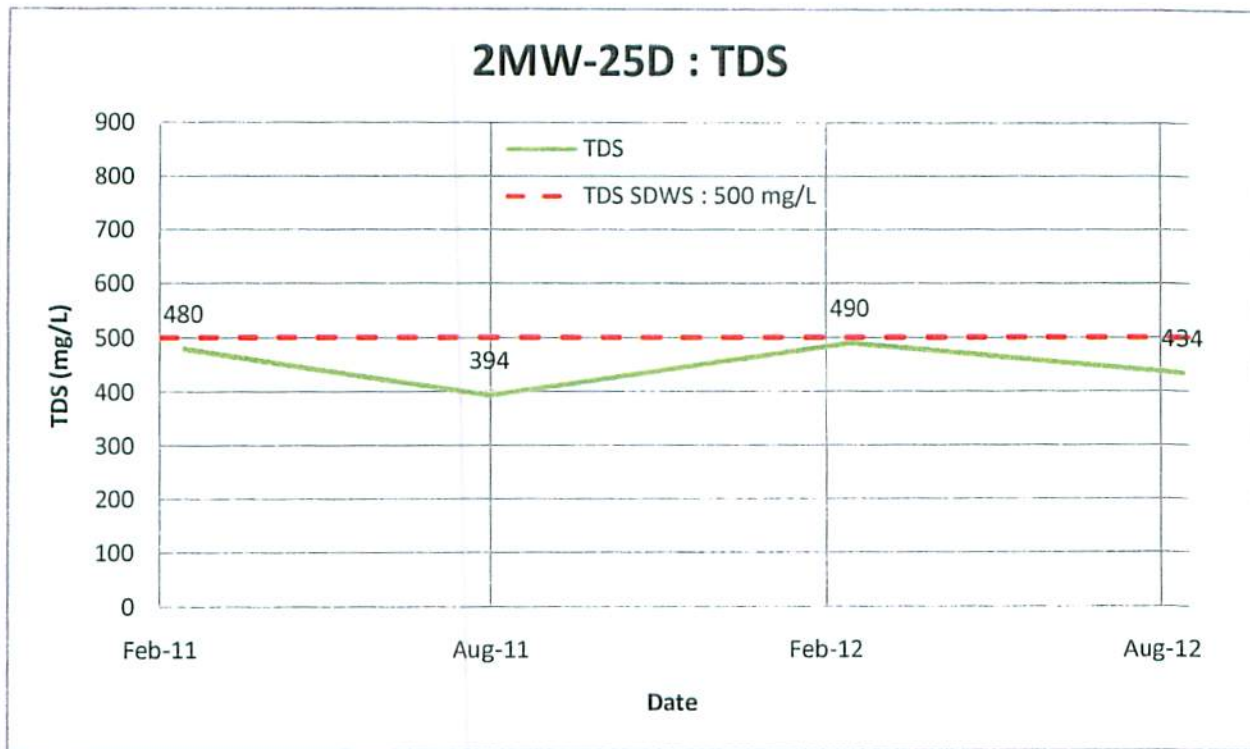


Figure B-92 TDS and Conductivity Trends for 2MW-25D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

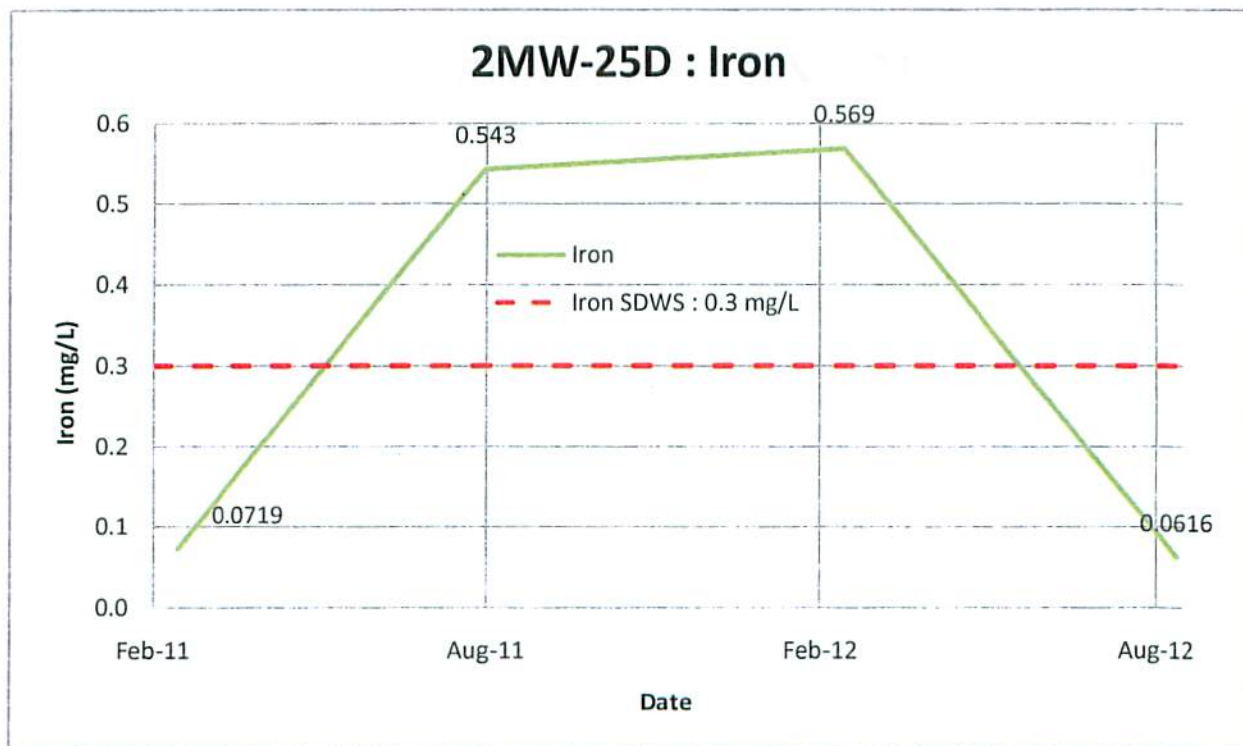
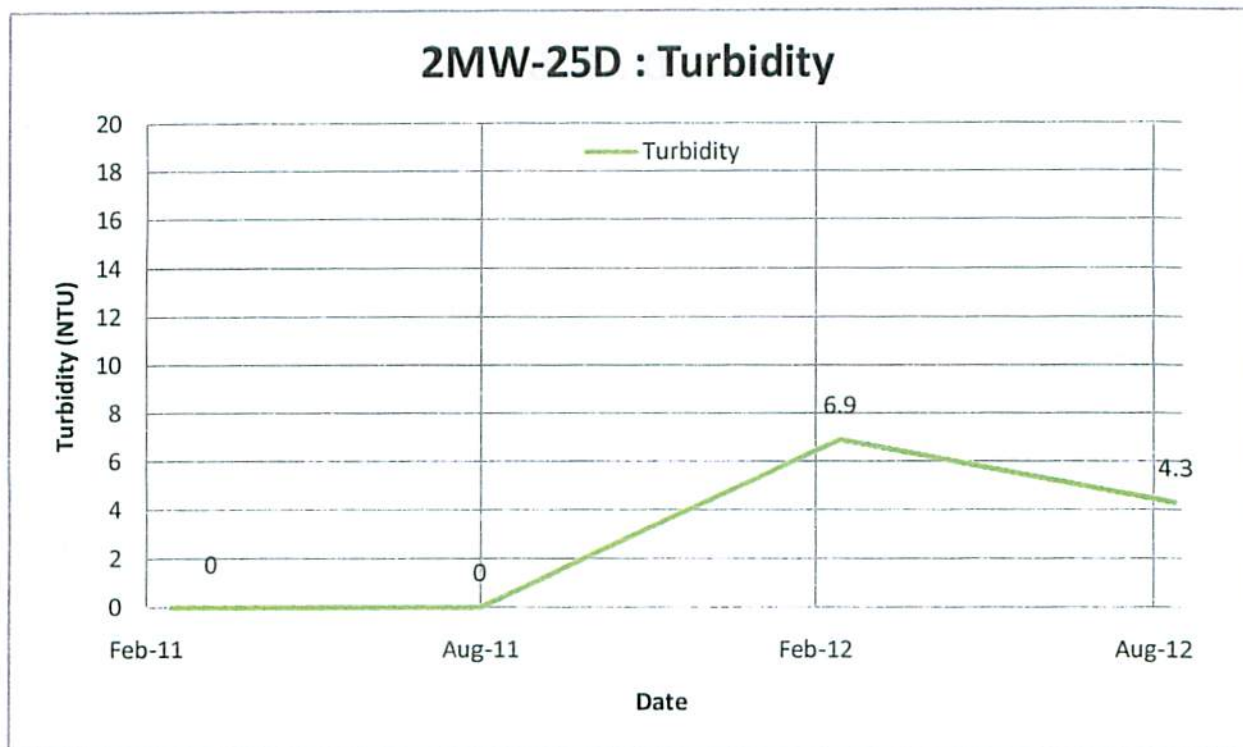


Figure B-93 Turbidity and Iron Trends for 2MW-25D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

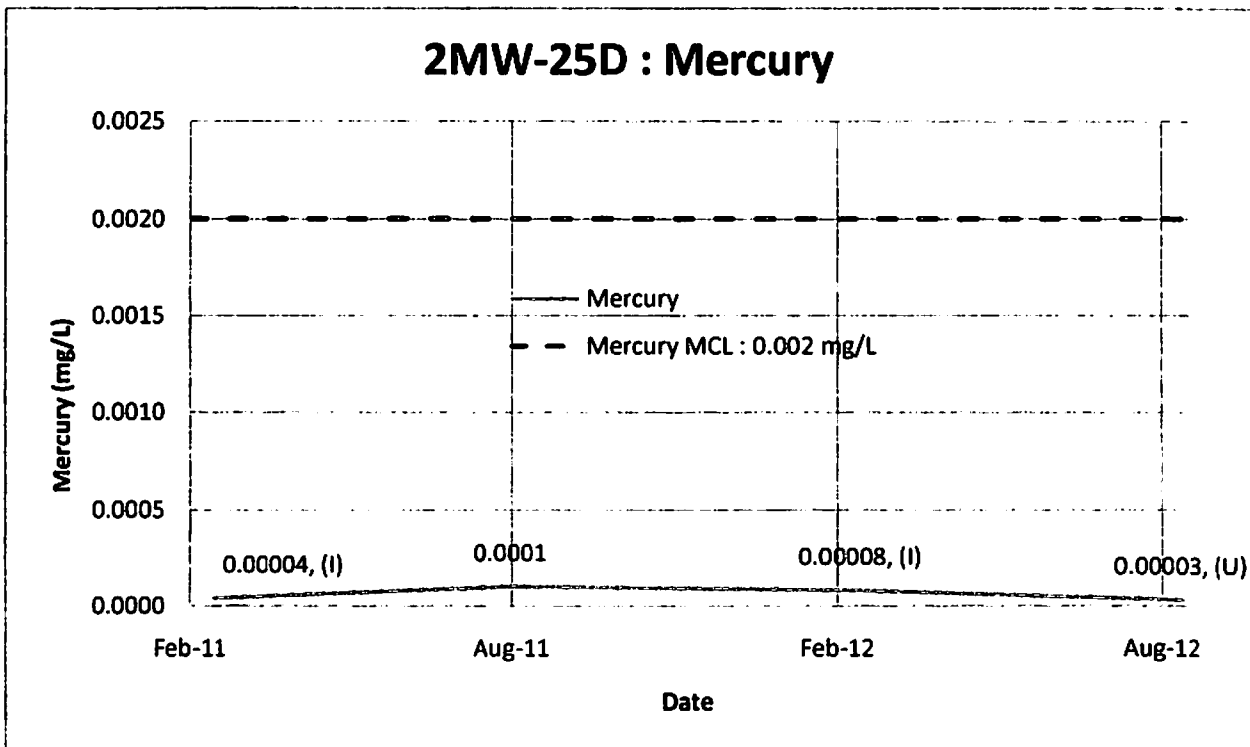
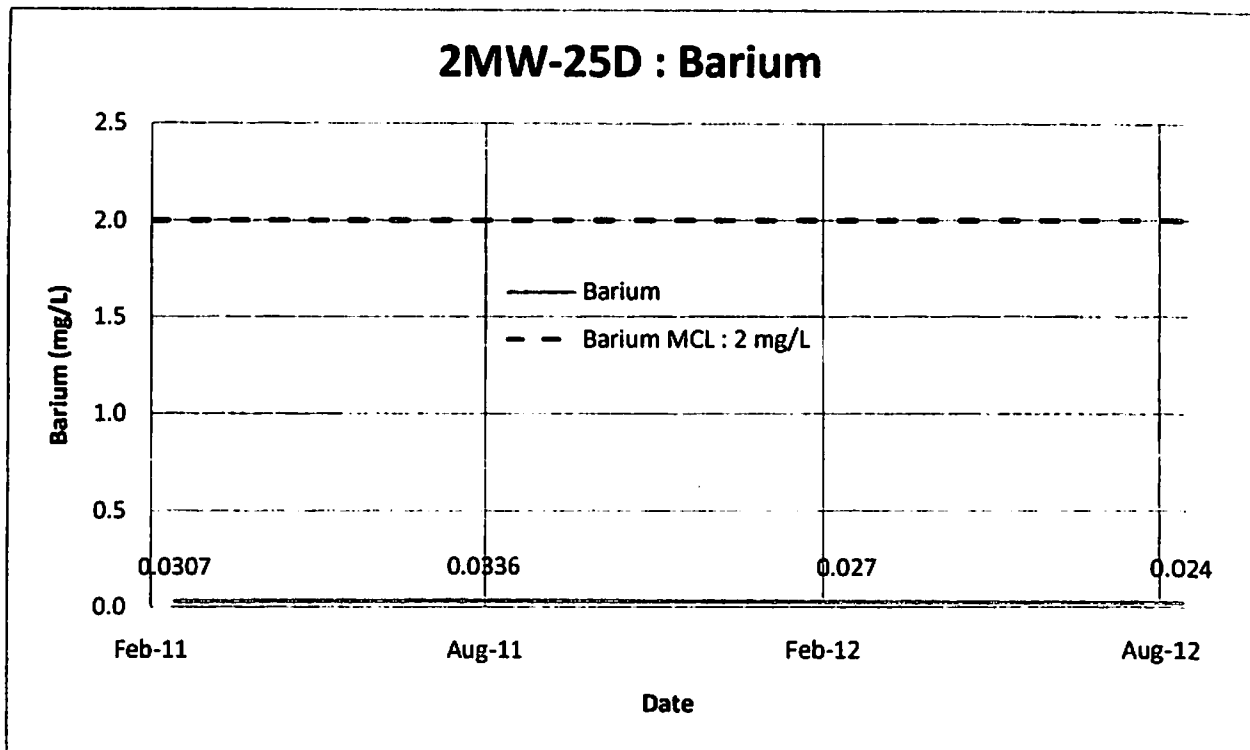


Figure B-94 Barium and Mercury Trends for 2MW-25D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

(I) Analyte detected below quantitation limit

(U) Analyte concentration below method detection limit

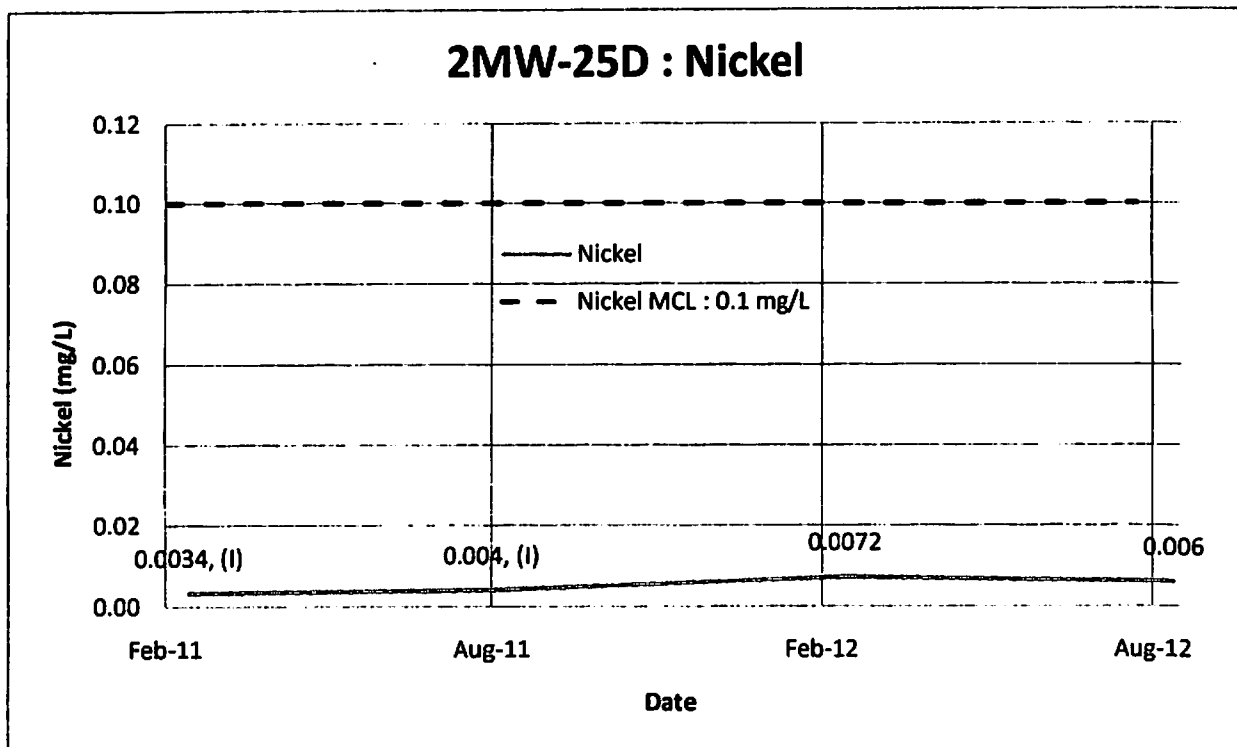


Figure B-95 Nickel Trend for 2MW-25D

MCL - Maximum Contaminant Level per 62-550 F.A.C

(I) Analyte detected below quantitation limit

Based on data provided by Pasco County Lab

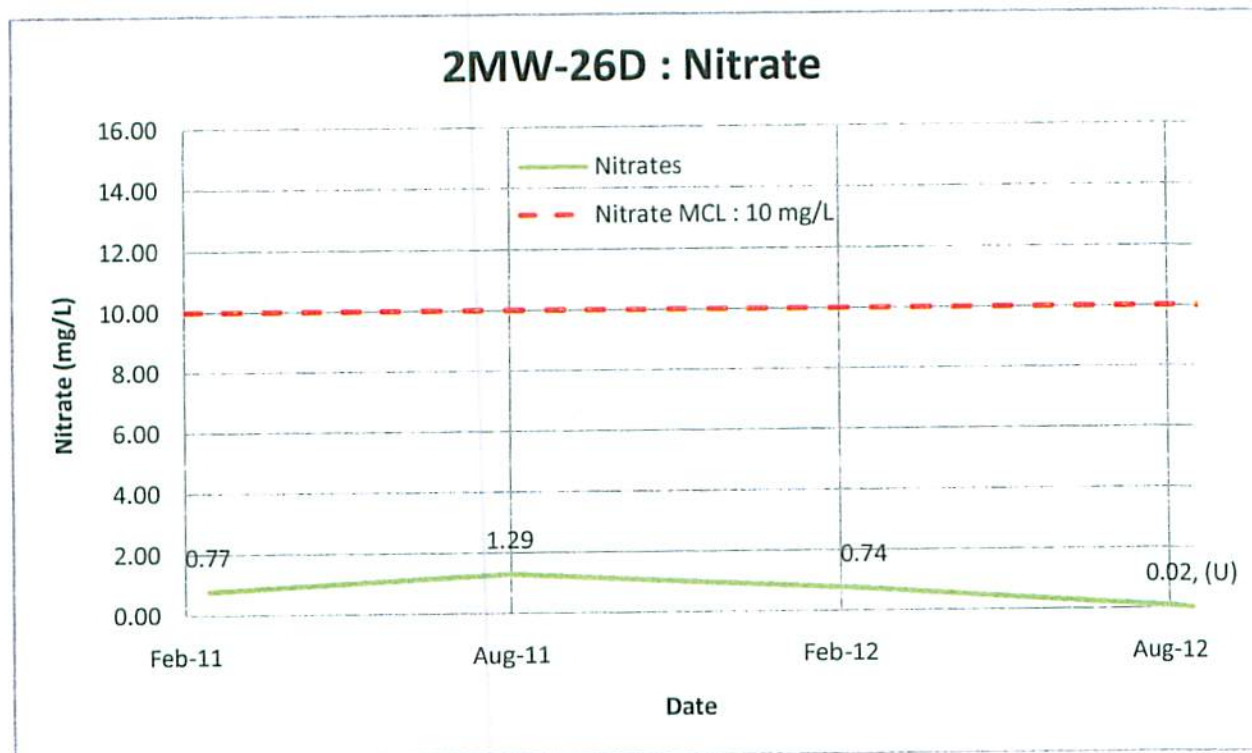
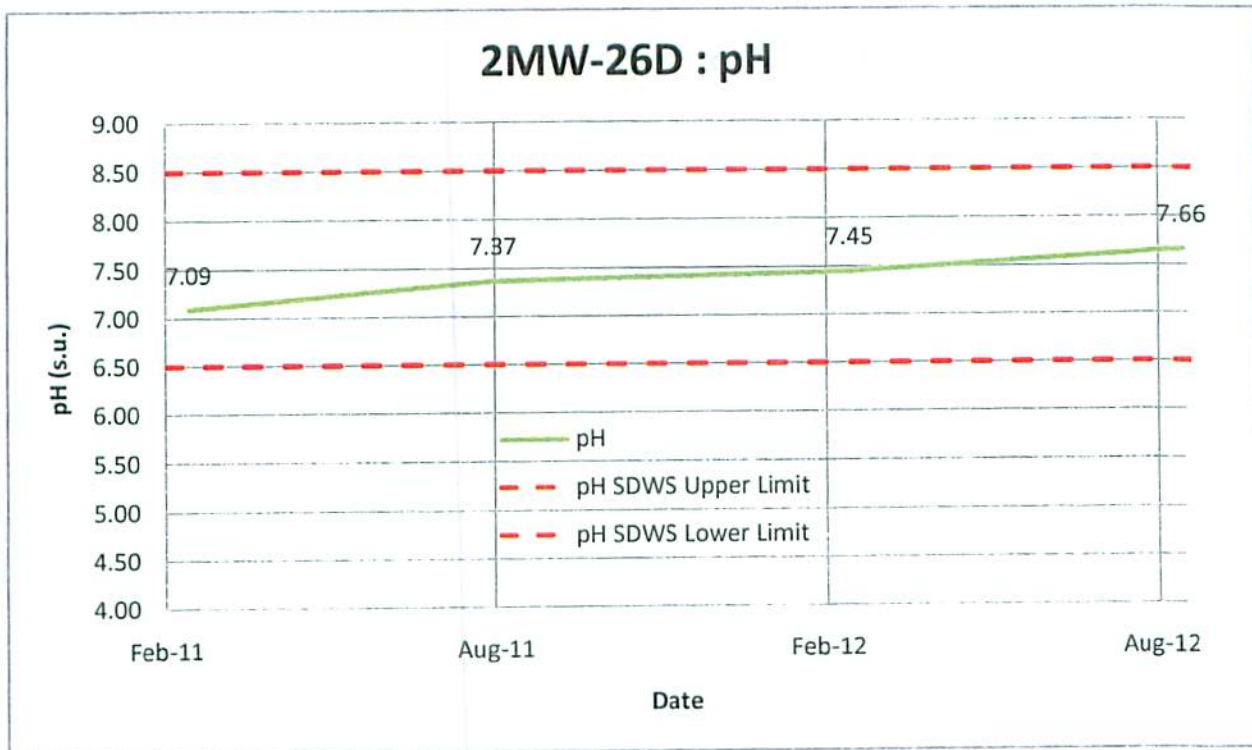


Figure B-96 pH and Nitrate Trends for 2MW-26D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

(U) Analyte concentration below method detection limit

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

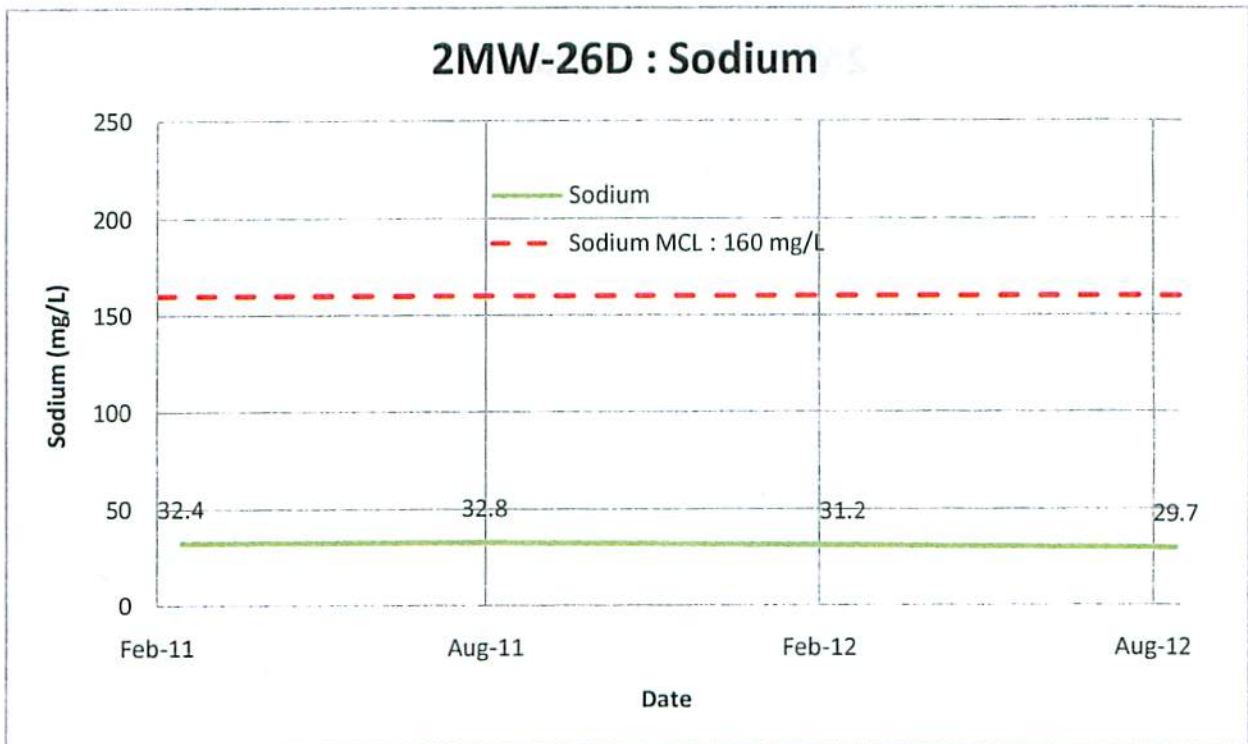
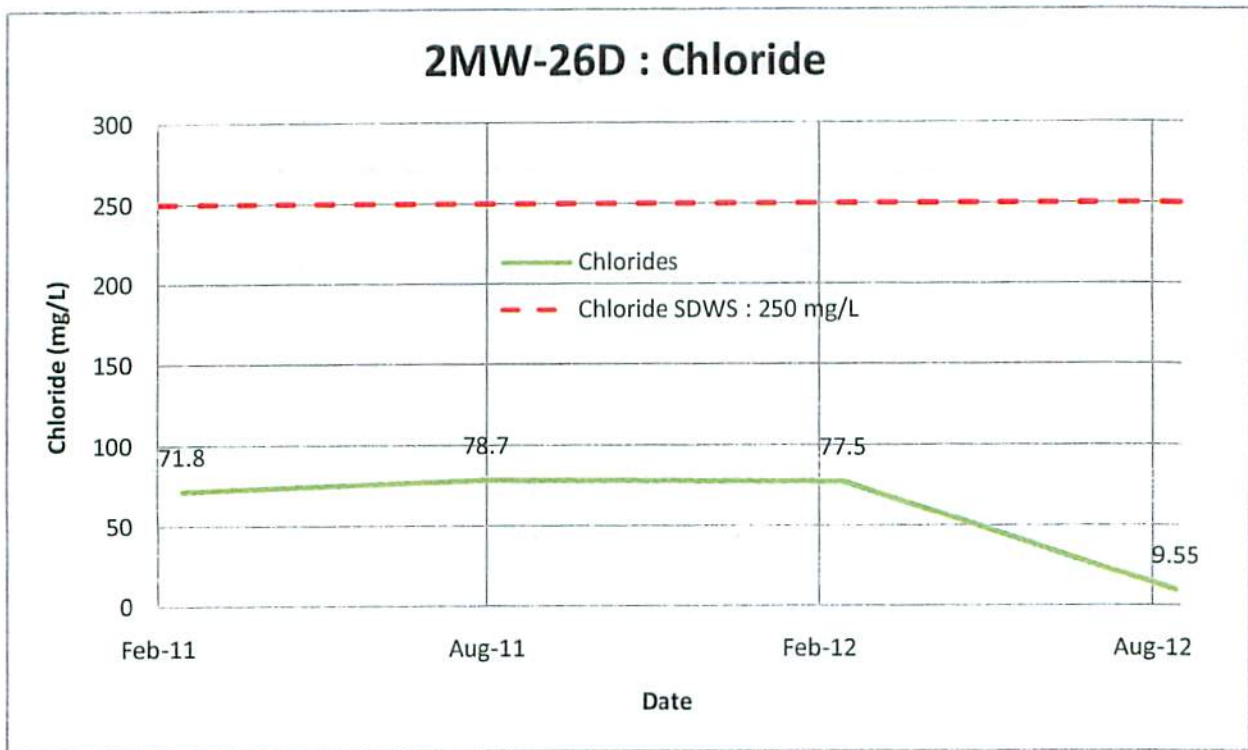


Figure B-97 Chloride and Sodium Trends for 2MW-26D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

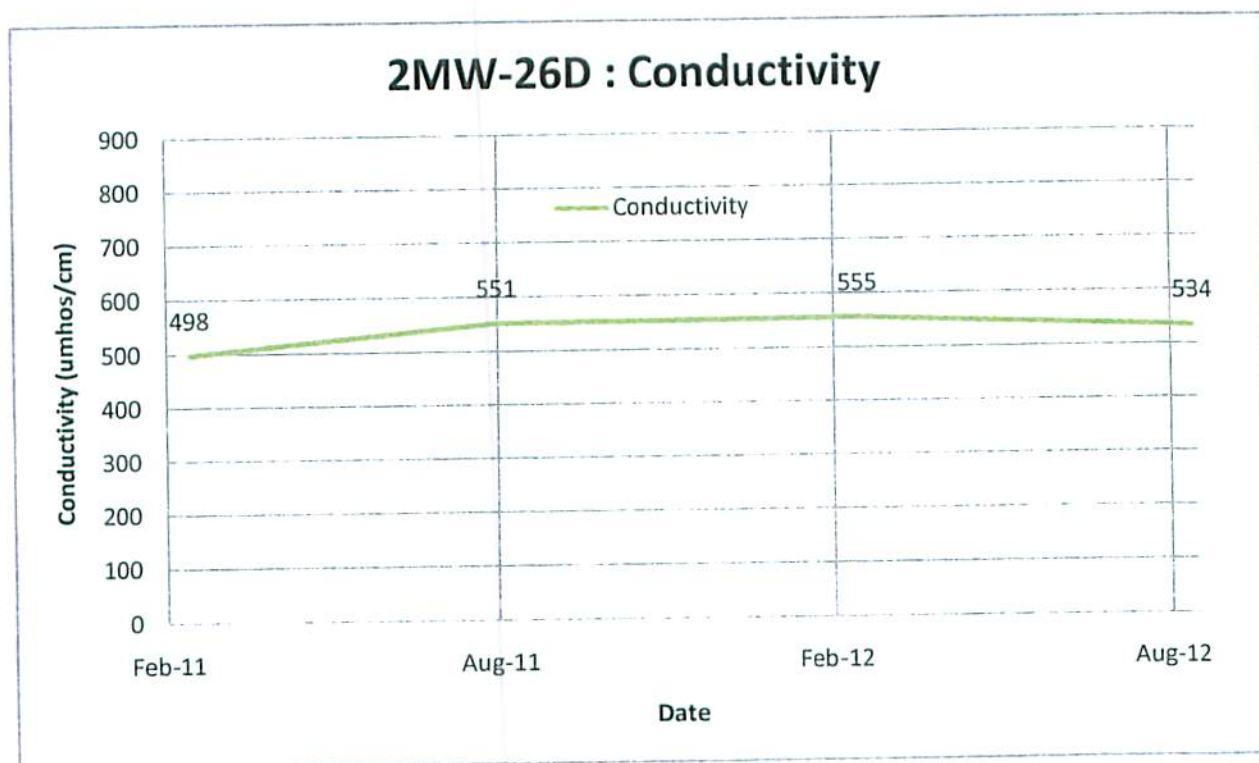
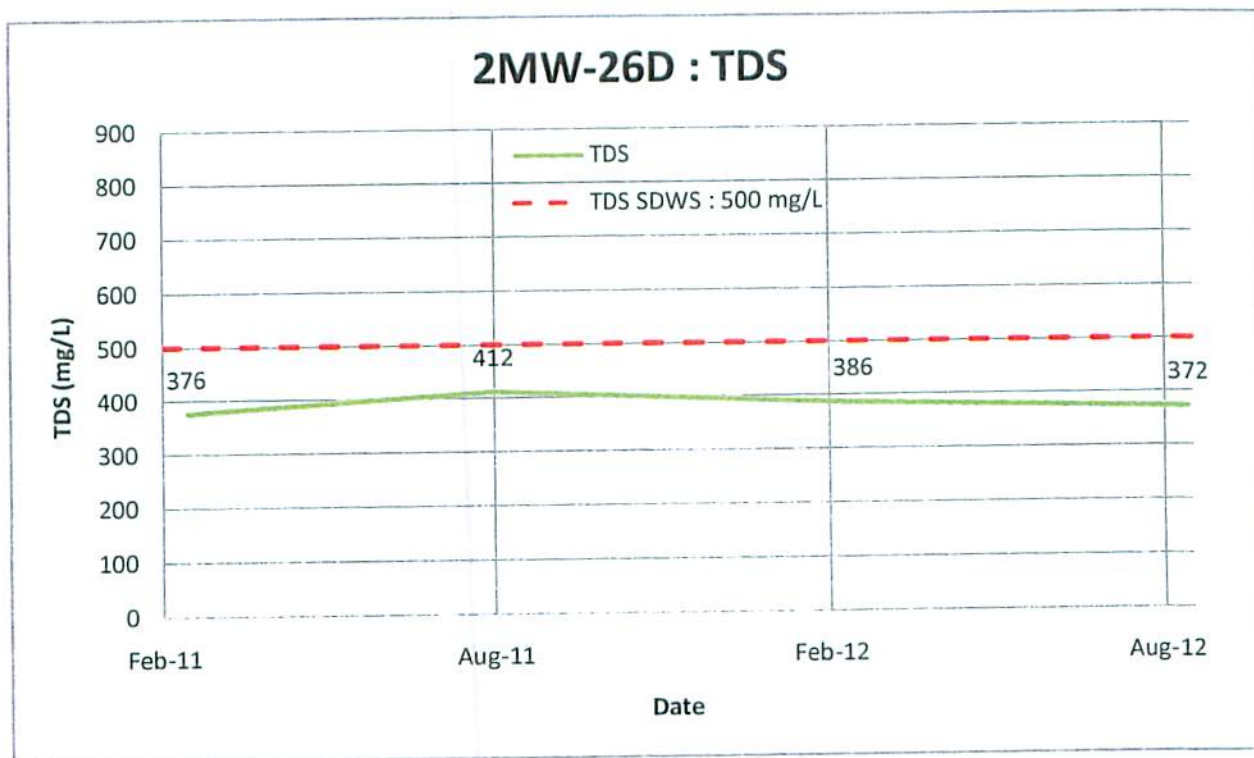


Figure B-98 TDS and Conductivity Trends for 2MW-26D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

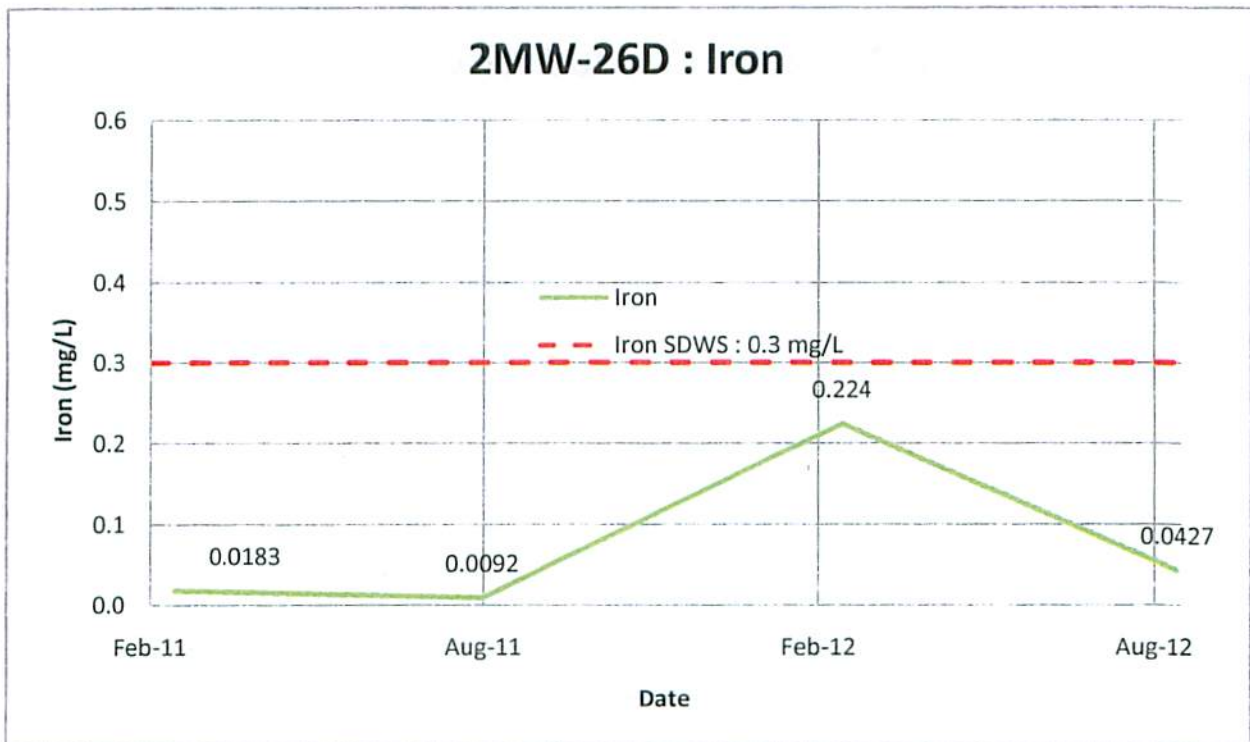
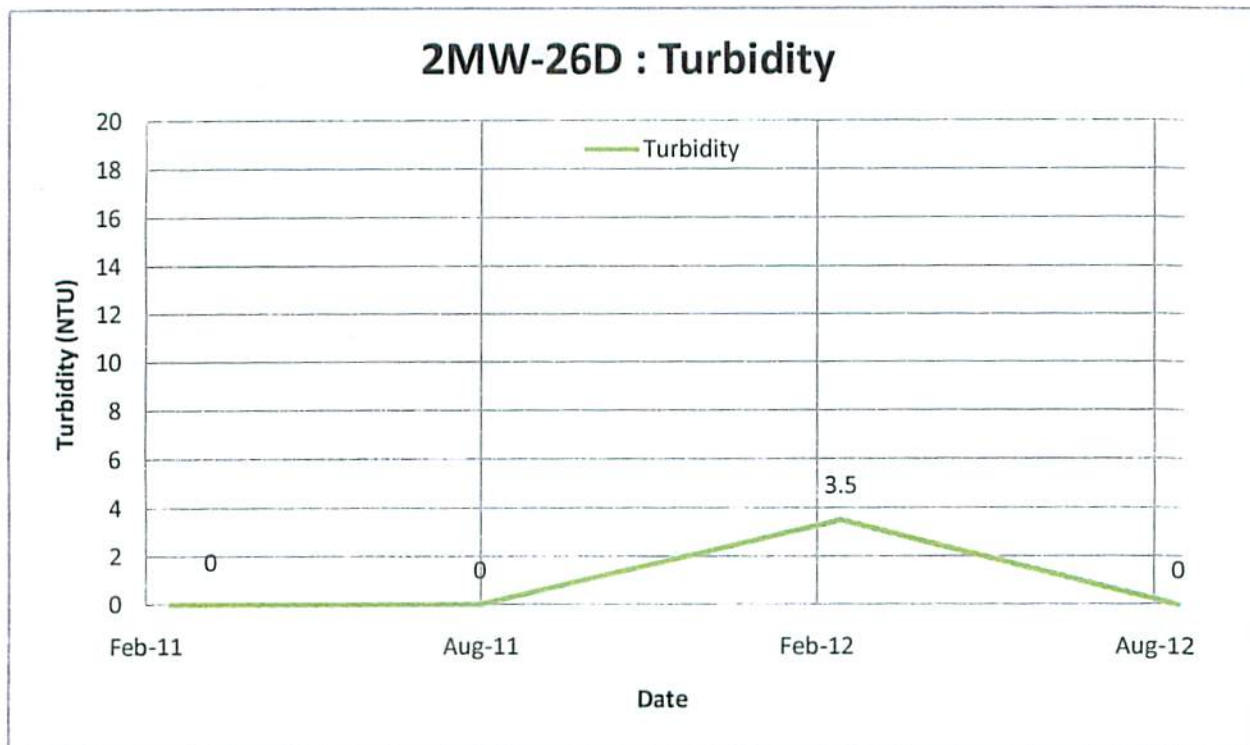


Figure B-99 Turbidity and Iron Trends for 2MW-26D

SDWS - Secondary Drinking Water Standards per 62-550 F.A.C

Based on data provided by Pasco County Lab

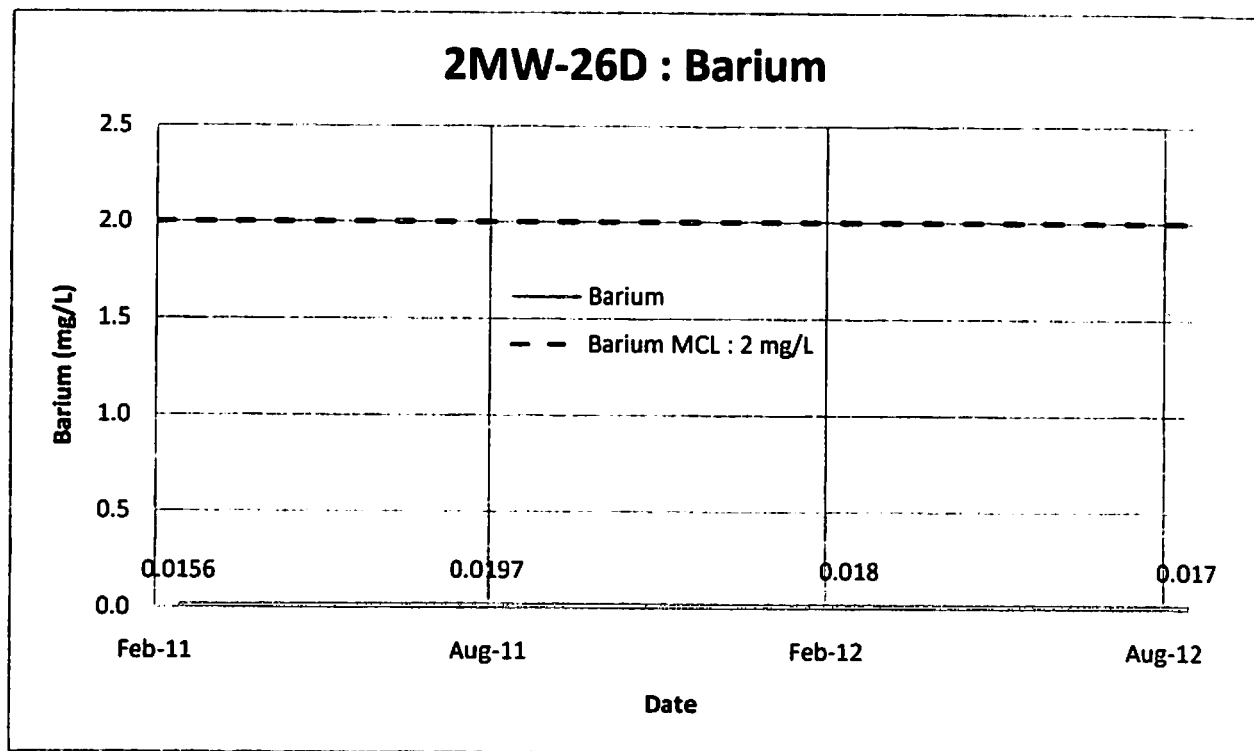


Figure B-100 Barium Trend for 2MW-26D

MCL - Maximum Contaminant Level per 62-550 F.A.C

Based on data provided by Pasco County Lab

Table B-3
Summary of Field Parameters and Detected Analytes : 2011-2012 : Leachate

Test Site ID #: 4051C00030

Parameter	Units	Toxicity Characteristic Criterion	2011								2012							
			1/24/11				8/2/11				3/14/12				8/13/12			
			Tank A-1 Primary	Tank A-1 Secondary	Tank SW-1 Primary	Tank SW-1 Secondary	Tank A-1 Primary	Tank A-1 Secondary	Tank SW-1 Primary	Tank SW-1 Secondary	Tank A-1 Primary	Tank A-1 Secondary	Tank SW-1 Primary	Tank SW-1 Secondary	Tank A-1 Primary	Tank A-1 Secondary	Tank SW-1 Primary	Tank SW-1 Secondary
Conductivity	umhos/cm		1700	7160	5970	2520	3560	5610	5530	2450	6630	6640	6520	2650	3310	6400	4220	3200
pH	s.u.		7.06	6.98	7.96	7.14	7.45	7.85	7.26	7.74	7.61	7.59	7.79	7.58	7.59	7.59	7.25	7.70
Temperature	°C		24.52	19.18	19.64	18.23	28.48	29.09	27.24	28.81	24.76	23.99	23.93	23.10	28.47	29.00	28.66	29.40
Dissolved Oxygen	mg/l		6.11	6.28	2.88	2.73	4.12	4.42	2.36	1.76	3.59	4.54	1.6	0.97	2.46	3.11	1.60	0.72
Turbidity	NTU		0.0	3.1	31.9	54.1	6.5	4.8	43.2	43.4	0.0	22.5	19.0	68.0				
Bicarbonate	mg/l		54.4	123	2640	2100	64.8	144	2548	884	57.4	137	2870	920				
Total Ammonia	mg/l		0.04	0.13	433	260	0.04	0.04	495	159	0.04	0.04	561	144	0.04	0.04	305	165
Chlorides	mg/l		1161	2561	614	702	919	1946	1055	293	2471	370	628	370	868	2193	366	460
Sulfide	mg/l										1.20	0.10	4.20	0.40	0.51	0.10	1.30	0.71
Total Phenols	mg/l										0.098	0.110	0.110	0.110	0.005	0.059	0.240	0.110
Cyanide, Total	mg/l																0.0054	0.0054
Nitrate	mg/l		4.15	1.12	0.71	1.47	3.92	1.07	0.44	2.20	4.53	1.60	0.02	1.17	2.47	1.20	0.02	0.87
TDS	mg/l		3446	5730	3014	1330	2618	3768	2716	1190	3784	4042	3142	1272	2542	4212	1974	1564
Color	PCU		Clear	Cloudy	Orange	Orange	Clear	Clear	Amber	Yellow	Clear	Clear	Orange	Amber	Clear	Clear	Orange	Orange
Antimony	mg/l	5.0	0.0380	0.0017	0.00067	0.00050	0.0304	0.0040	0.00058	0.00097	0.2100	0.1900	0.13000	0.13000	0.0340	0.0047	0.00051	0.00022
Arsenic	mg/l	5.0	0.0050	0.0050	0.0069	0.0050	0.0050	0.0050	0.0083	0.0080	0.0034	0.0015	0.0087	0.0037	0.0120	0.0180	0.0087	0.0081
Barium	mg/l	100	0.1270	0.1760	0.0464	0.0306	0.0978	0.0129	0.0596	0.0441	0.1900	0.1300	0.0490	0.0250	0.0830	0.1300	0.0530	0.0250
Beryllium	mg/l		0.0005	0.0005	0.0005	0.0005	0.0050	0.0005	0.0005	0.0005	0.00029	0.00013	0.000096	0.00018	0.000096	0.000096	0.000096	0.000096
Cadmium	mg/l	1.0	0.0029	0.0005	0.0005	0.0005	0.0017	0.0005	0.0005	0.0005	0.0010	0.0010	0.0010	0.0010	0.0014	0.00027	0.00027	0.0003
Chromium	mg/l	5.0	0.0025	0.0025	0.0146	0.0030	0.0025	0.0025	0.0129	0.0086	0.0040	0.0040	0.0094	0.0040	0.00070	0.00068	0.0094	0.0041
Cobalt	mg/l		0.0050	0.0050	0.0208	0.0050	0.0050	0.0050	0.0171	0.0050	0.0100	0.0100	0.0200	0.0100	0.0100	0.0100	0.0120	0.0100
Copper	mg/l		0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0027	0.003	0.0057	0.003	0.003	0.0025	0.0020	0.00083	0.00052
Iron	mg/l		0.0102	0.113	2.920	3.680	0.0135	0.0090	3.840	16.00	0.0348	0.031	2.830	2.310	0.0265	0.0080	9.750	3.500
Lead	mg/l	5.0	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0860	0.0820	0.0410	0.0470	0.0003	0.00025	0.00025	0.00025
Mercury	mg/l	0.2	0.00002	0.00002	0.00002	0.00002	0.00019	0.00004	0.00003	0.00004	0.0001	0.0001	0.0001	0.0001	0.00003	0.00003	0.00003	0.00003
Nickel	mg/l		0.0025	0.0025	0.0572	0.0080	0.0025	0.0025	0.0491	0.0090	0.0012	0.0012	0.0570	0.0012	0.0160	0.0310	0.0370	0.0180
Selenium	mg/l	1.0	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.2500	0.2200	0.1300	0.1500	0.0360	0.0700	0.0120	0.0200
Silver	mg/l	5.0	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0011	0.0011	0.0011	0.0011	0.000069	0.000069	0.000069	0.000069
Sodium	mg/l		412	648	818	236	329	444	519	202	660	562	364	214	294	516	354	253
Thallium	mg/l		0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0050	0.0050	0.0050	0.0050	0.00024	0.00024	0.00024	0.00024
Tin	mg/l		0.0250	0.0250	0.0250	0.0250	0.0250	0.0250	0.0250	0.0250	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000
Vanadium	mg/l		0.0050	0.0050	0.0057	0.0050	0.0050	0.0050	0.0050	0.0050	0.0200	0.0100	0.0120	0.0091	0.0110	0.0110	0.0078	0.0078
Zinc	mg/l		0.0100	0.0100	0.0100	0.0100	0.0112	0.0232	0.0100	0.0121	0.0030	0.0030	0.0030	0.0030	0.0061	0.0063	0.0033	0.0021
Acetone	ug/l		50.0	50.0	50.0	82.6	50.0	50.0	41.6	8.4	2.0	2.0	13.0	17.0	2.9	2.0	31.0	15.0
Acetophenone	ug/l		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.5	0.4	0.3
Anthracene	ug/l		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.005	0.005	0.005	0.005	0.005	0.005	0.037	0.033
Benzene	ug/l	500	0.5	0.5	0.5	0.5	0.5	0.5	2.6	0.5	0.1	0.1	0.8	0.1	0.1	0.1	2.3	0.6
Bis(2-ethylhexyl)phthalate (DEHP)	ug/l		0.77	1.3	0.77	0.77	0.77	1.3	0.77	0.77	6.0	6.0	6.0	1.00	14.0	5.0	13.0	9.0
Carbon disulfide	ug/l		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2
Carbon Tetrachloride	ug/l	500	0.5	0.5	0.5	0.5	0.5	0.5	1.80	1.60	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Chlorobenzene	ug/l	100,000	0.5	0.5	0.5	0.5	0.5	0.5	3.00	1.70	0.1	0.1	0.4	0.1	0.1	0.1	1.90	0.1
Chloroethane	ug/l		0.5	0.5	0.5	0.5	0.5	0.5	0.51	0.50	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Dibromochloromethane	ug/l		0.26	0.26	0.26	0.26	0.26	0.26	0.79	0.54	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
1,2-Dibromo-3-chloropropane	mg/l		0.000005	0.0000048	0.0001	0.044	0.000047	0.000048	0.000048	0.000049	0.000058	0.000058	0.000009	0.000056	0.000057	0.000056	0.000057	0.000058
1,2-Dichlorobenzene	ug/l		0.5	0.5	0.5	0.5	0.5	0.5	0.76	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1,4-Dichlorobenzene	ug/l	7,500	0.5	0.5	0.5	0.5	0.5	0.5	2.9	0.5	0.2	0.2	1.5	1.5	0.2	0.2	1.7	1.5
1,2-Dichloroethane	ug/l	500	0.5	0.5	0.5	0.5	0.5	0.5	1.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
1,1-Dichloroethane	ug/l		0.5	0.5	0.5	0.5	0.5	0.5	3.3	2.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
1,1-Dichloroethylene	ug/l	700	0.5	0.5	0.5	0.5	0.5	0.5	0.75	0.73	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
cis-1,2-Dichloroethene	ug/l		0.5	0.5	0.5	0.5	0.5	0.5	1.5	0.58	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
cis-1,3-Dichloropropene	ug/l		0.25	0.25	0.25	0.25	0.25	0.25	0.30	0.33	0.2	0.2						