ANNUAL GROUNDWATER MONITORING REPORT

CALENDAR YEAR 2015

DANSKAMMER POINT GENERATING STATION SOLID WASTE MANAGEMENT FACILITY

Prepared for

Danskammer Energy, LLC
Newburgh, New York

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Project DANSK 01.15.01

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Dynegy Northeast Generation, Inc. formerly operated the Danskammer Generating Station located in Newburgh, New York. The Danskammer Generating Station has been offline since October 2012 after sustaining damage during Hurricane Sandy. Prior to October 2012 coal combustion wastes generated by the coal-fired generating units were transported off site for beneficial reuse, or alternatively placed within the on-site Solid Waste Management Facility (SWMF) Phase III cell. The Danskammer Generating Station was sold in November 2013 to Danskammer Energy, LLC with the intent of repowering the facility.

The SWMF consists of three ash disposal cells with a leachate and runoff control system directed to two sedimentation basins. The Phase I cell was constructed in 1987 utilizing a single liner system. Closure and capping of the Phase I cell was completed during 1993 in accordance with the requirements set forth in 6 NYCRR Part 360. The Phase II cell was constructed in early 1992 utilizing a double composite-liner system with primary and secondary leachate collection systems. The Phase II cell is no longer active for ash placement, and has been partially closed. Construction of the Phase III cell began in April 2005 and was completed in February 2006. The Phase III expansion also utilizes a double composite-liner system with primary and secondary leachate collection systems. The Phase III cell is presently the only active SWMF cell.

The monitoring program, as set forth in the Environmental Monitoring Plan (EMP) prepared in March 2005, addresses both the requirements of 6 NYCRR Part 360 and special monitoring conditions No 35 and No 36 detailed in the SWMF Permit to Operate. The EMP was updated as part of the 2005 Renewal Application for a Permit to Operate[1] the facility, and incorporates procedures for monitoring the three monofill cells (Phase I, Phase II, and Phase III). A Permit to Operate renewal application was submitted to NYSDEC in April 2010 and has been administratively renewed pending final approval.

The purpose of this report is to characterize SWMF groundwater quality in the perched/deep overburden and bedrock units during the fourth quarter of 2015 and present annualized results for 2015 in accordance with the requirements of the EMP. The key findings are summarized below:

Groundwater Quality

Based on the evaluation of the SWMF groundwater data collected during 2015, no significant impact on groundwater quality as a result of operation of the SWMF was detected. The data evaluation included the comparison of groundwater analytical results with site-specific operational trigger values (OTVs) and statistical trigger values (STVs) presented in the SWMF-EMP, as well as NYSDEC Groundwater Quality Standards and Guidance Values.

The results of the overburden intrawell analysis and the bedrock interwell analysis, as detailed in the 2005 EMP, have demonstrated that the groundwater quality within the perched/deep overburden and bedrock water bearing units exhibits stability and that the OTV exceedances are not specific to the leachate indicator parameters. The evaluations performed on the data collected during Quarter 4, 2015 continue to indicate no impact to groundwater quality attributable to operation of the SWMF.

[1] The renewed operating permit became effective on October 3, 2005, and remains in effect until October 2010. The revised (March 2005) EMP outlined a plan to abandon certain contingency wells and historically dry wells and consolidate the SWMF monitoring program.

Leachate Quality

The results of the water quality monitoring program continue to demonstrate that during 2015, the secondary leachate collection system has not been impacted by the primary leachate collection system (PLCS). No coal indicator parameters were reported in the secondary leachate collection system at or near the detection limits typically reported in the PLCS sample.

1 INTRODUCTION

1.1 Purpose of Report

This report summarizes analytical results from the groundwater monitoring program at Danskammer Energy, LLC's (Danskammer) SWMF for the fourth quarter of program year 2015 and presents annualized groundwater quality results and trends for 2015.

The SWMF monitoring program is a modification of the Part 360 routine and baseline parameter lists developed to monitor water quality for constituents of concern associated with coal ash at Danskammer. The fourth quarter 2015 groundwater samples were analyzed for routine parameters specified in the EMP. With this report the water quality monitoring schedule (Table 4 of the EMP) is complete through fourth quarter 2014 per the March 2005 EMP. The EMP provides a protocol for comparing SWMF groundwater quality data to specific operational trigger values for each monitored constituent.

Consistent with the EMP (Sec. 3.1.1 Evaluation Methodology), water quality trigger values for the SWMF were established by parameter for overburden intrawell comparison and upgradient bedrock-derived interwell comparison. A "significant increase" from existing water quality has occurred if: 1) the groundwater quality for any parameter exceeds the existing water quality for that parameter by three standard deviations referred herein as "Statistical Trigger Value" or "STV"; or 2) the groundwater quality exceeds the existing water quality referred to herein as the "Operational Trigger Value" or "OTV" and exceeds the New York State Groundwater Quality Standard (Part 701, 702, or 703). Trigger values were developed for both the overburden and the bedrock water bearing units at the SWMF as follows.

Overburden Monitoring Wells

Overburden monitoring well parameter analysis (perched and deep) is evaluated using intrawell comparison methods based on observed well–specific values over time. This evaluation establishes a rolling STV for each individual overburden monitoring well.

Existing water quality or OTV is calculated as the arithmetic mean of five prior years of data on an individual monitoring well basis, assuring that the data are normal and uniform. STV is defined as three standard deviations above the average existing water quality of each parameter at each well. This methodology establishes a STV, the exceedance of which would initiate implementation of the contingency water quality monitoring plan if the owner/operator determines there was a significant increase relative to existing water quality.

This published methodology incorporates intrawell analysis as the statistical approach, which is fundamentally different from interwell analysis. While interwell analysis compares compliance wells to background upgradient water quality, the intrawell analysis compares each compliance well against a background composed of its own historic data. The intrawell analysis does not require that the hydrogeologic conditions be contiguous and uniform throughout the site and that all wells are screened in the same interval. This is because the intrawell analysis monitors trends over time at a given well instead of changes among wells.

Bedrock Monitoring Wells

Bedrock monitoring wells are evaluated via interwell comparison relative to a database developed using three standard deviations from the mean from upgradient monitoring wells DW-1R, DW-8R, and DW-9R for three prior years to yield the STV for the bedrock unit.

As set forth in the SWMF's permit to operate, analytical data for boron, sulfur, sulfate and total dissolved solids (TDS) are presented in the Annual Report as charts of time versus concentration from all of the monitoring wells sampled during the year to demonstrate changes or trends in concentrations.

The contingency program pursuant to Part 360-2.11(c)(5)(iii) provides guidance when a constituent is identified above the STV levels. In such circumstances, trilinear diagrams may be prepared for both groundwater and leachate collection system samples to illustrate the relative concentrations of the major cations (calcium, magnesium, and sodium+potassium) and the major anions (sulfate, chloride, and carbonate+bicarbonate).

1.2 Monitoring Network

Eighteen (18) monitoring wells (three perched overburden wells, six deep overburden wells and nine bedrock wells) comprise the groundwater monitoring network at the Danskammer SWMF. The network includes wells screened in both the perched and deep overburden units, and in the underlying bedrock as summarized on Figure 1-1 – SWMF Groundwater Monitoring Plan and in Table 1-1 – Monitoring Status. The following summarizes the groundwater monitoring network relative to the screened unit location, and vertical and horizontal position of each well to the SWMF with 2005 designations.

Perched Overburden Monitoring Wells

- DW – 3P Downgradient - Southeast
- DW – 4P Downgradient - South
- DW – 7P Crossgradient - West

Deep Overburden Monitoring Wells

- DW – 2D Downgradient - Southeast
- DW – 3D Downgradient - Southeast
- DW – 4D Downgradient - South
- DW – 5D Downgradient - South
- DW – 6D Downgradient - South
- DW – 7D Crossgradient - Southwest

Bedrock Monitoring Wells

- DW – 1R Crossgradient - East
- DW – 2R Downgradient - Southeast
- DW – 3R Downgradient - Southeast
- DW – 4R Downgradient - South
- DW – 5R Downgradient - South
- DW – 6R Downgradient - South

- DW – 7R Crossgradient - Southwest
- DW – 8R Upgradient - Northwest
- DW – 9R Upgradient - North

Leachate generation is monitored and periodically collected at eight (8) locations around the SWMF, as depicted on Figure 2-1 – SWMF Leachate and Water Monitoring Plan. Monitoring points associated with the facility's leachate collection system include:

Phase I Components

- The Phase I Groundwater Interceptor Drain (P1-GID) is monitored daily for flow;
- The Phase I Underdrain (P1-UD) is monitored daily for flow; and
- The Phase I Cell has a Part 360 cap which is monitored to confirm that runoff is directed to the concrete perimeter collection trench.

Phase II Components

- The Phase II Primary Leachate Collection System (P2-PLCS), which collects the Phase II leachate is monitored daily for flow;
- The Phase II Secondary Leachate Collection System (P2-SLCS-E and P2-SLCS-W) is monitored daily for flow; and
- The Phase II Subgrade Stabilization System (P2-SSS) is monitored daily for flow.

Phase III Components

- The Phase III expansion is designed to monitor leachate in the same manner as the Phase II Cell, through a primary and secondary leachate collection and conveyance system (P3-PLCS and P3-SLCS, respectively); and
- The Phase III liner overlays a portion of the Phase I and Phase II Cells. Phase III leachate is diverted to the existing sediment basins for treatment and ultimate discharge through Danskammer SPDES Outfall No. 019.

1.3 Fourth Quarter Monitoring Status

Table 1-1 summarizes groundwater elevations (as field measured) for all monitored SWMF locations and their associated sampling status during the fourth quarter of 2015. Nine of the SWMF groundwater monitoring wells were sampled as part of the quarterly event. Samples for the fourth quarter monitoring period were obtained in December 2015 from the groundwater monitoring wells at the SWMF containing sufficient volume for water sampling.

Based on a review of field conditions observed during the December 2015 sampling event, nine of the SWMF monitoring wells were either dry or contained an insufficient water volume to allow for the collection of ground water samples; this group of consistently dry monitoring wells includes:

- Perched Overburden Monitoring Wells: DW-4P, and DW-7P.
- Deep Overburden Monitoring Wells: DW-2D, DW-3D, DW-4D, and DW-5D.
- Bedrock Monitoring Wells: DW-1R, DW-2R and DW-8R.

1.4 Tables

1-1 Monitoring Status

Table 1-1
MONITORING STATUS
DECEMBER 2015
DANSKAMMER ENERGY, LLC.
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Sample ID	Screened Interval	Sampling Status	Water Level Elevation (ft-amsl)
DW-3P	P	SAMPLED	100.07
DW-4P	P	DRY	NA
DW-7P	P	DRY	NA
DW-2D	P	DRY	NA
DW-3D	D	DRY	NA
DW-4D	D	DRY	NA
DW-5D	D	DRY	NA
DW-6D	D	SAMPLED	62.63
DW-7D	D	SAMPLED	55.60
DW-1R	R	DRY	NA
DW-2R	R	DRY	NA
DW-3R	R	SAMPLED	35.50
DW-4R	R	SAMPLED	33.96
DW-5R	R	SAMPLED	38.44
DW-6R	R	SAMPLED	53.95
DW-7R	R	SAMPLED	67.75
DW-8R	R	DRY	NA
DW-9R	R	SAMPLED	151.55
PLCS	--------	NA	NA
SLCS-E	--------	NA	NA
SLCS-W	--------	NA	NA
P3-PLCS	--------	NA	NA
PI-SB	--------	NA	NA
PII-SB	--------	NA	NA
SSS	--------	NA	NA
GID	--------	NA	NA
P1-UD	--------	NA	NA

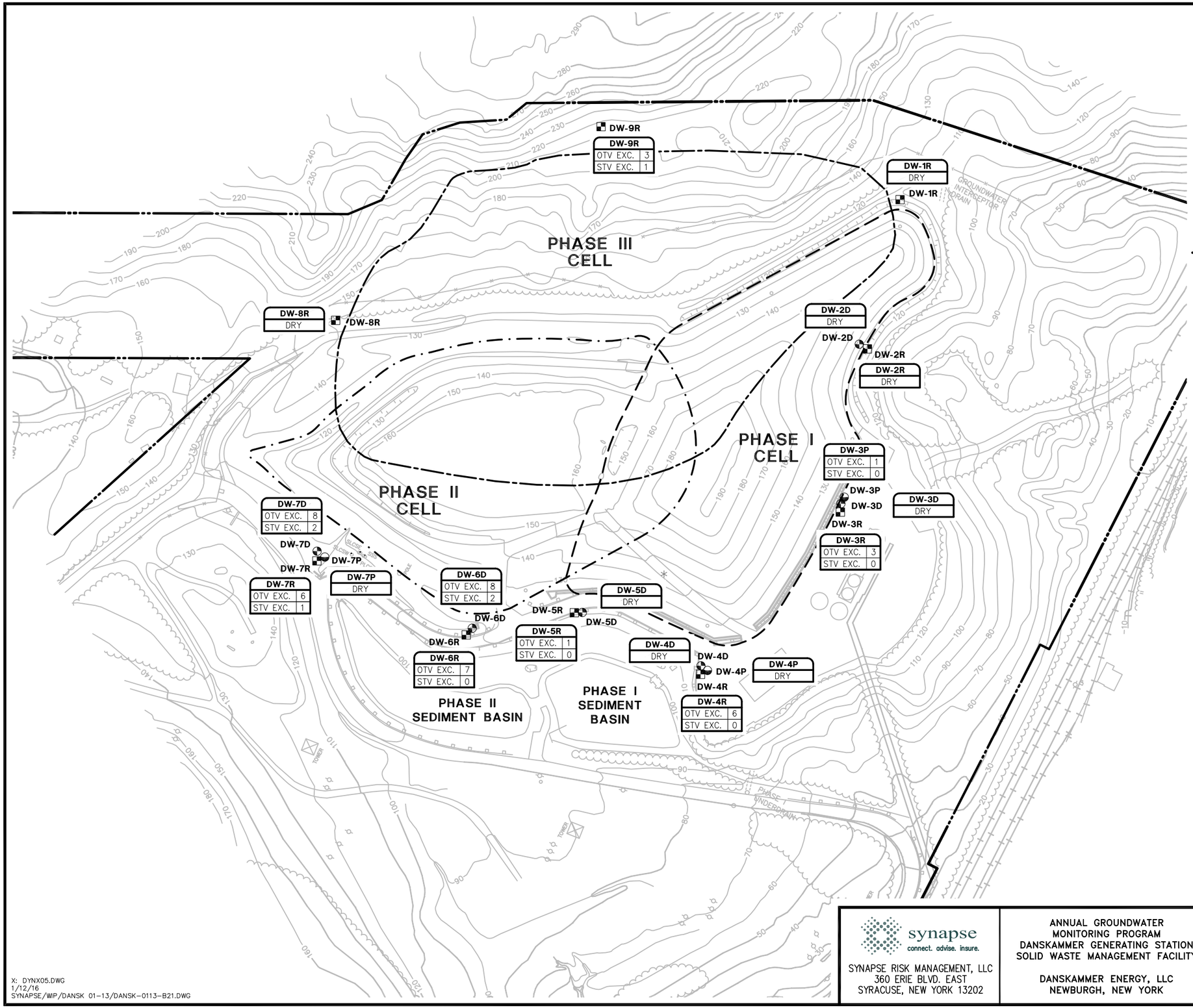
NOTES:

PLCS - Primary Leachate Collection System
SLCS-E - Secondary Leachate Collection System, East
SLCS-W - Secondary Leachate Collection System, West
PI-SB - Phase I Sedimentation Basin
PII-SB - Phase II Sedimentation Basin
SSS - Subgrade Stabilization System
GID - Groundwater Interceptor Drain
PI-UD - Phase I Under Drain
P3-PLCS - Phase III Primary Leachate Collection System
NA - not applicable
ND - Data not collected/unavailable
ft-amsl - feet above mean sea level

* = Denotes upgradient well
* * = Insufficient sample volume
P = Perched Overburden Well
D = Deep Overburden Well
R = Bedrock Well

1.5 Figures

1-1 SWMF Groundwater Monitoring Plan



LEGEND:

- TOPOGRAPHIC CONTOUR
- ACCESS ROADWAY
- DRAINAGE CHANNEL
- GUIDERAIL
- FENCE
- PROPERTY BOUNDARY
- CULVERT
- STRUCTURES/TANKS
- POWER POLE
- DW-3P — PERCHED OVERBURDEN MONITORING WELL
- DW-3D — DEEP OVERBURDEN MONITORING WELL
- DW-3R — BEDROCK MONITORING WELL

4TH QUARTER 2015 SAMPLE EVENT RESULTS (DEC. 2015):

DW-7D	
OTV EXC.	7
STV EXC.	2

WELL ID
OPERATIONAL TRIGGER VALUE EXCEEDANCES
STATISTICAL TRIGGER VALUE EXCEEDANCES

DW-7P
DRY

WELL ID
INSUFFICIENT GROUNDWATER TO ALLOW FOR SAMPLE COLLECTION

NOTES:

1. BASE MAP MODIFIED FROM ELECTRONIC FILE BY SHAW EMCON/OWT, INC. DRAWING ENTITLED "GROUNDWATER MONITORING SYSTEM", 2003.
2. WELL LOCATIONS HAVE BEEN MOVED SLIGHTLY FOR CLARITY.

0 200' 400'
GRAPHIC SCALE

X: DYNX05.DWG
1/12/16
SYNAPSE/WIP/DANSK 01-13/DANSK-0113-B21.DWG

synapse
connect. advise. insure.

SYNAPSE RISK MANAGEMENT, LLC
360 ERIE BLVD. EAST
SYRACUSE, NEW YORK 13202

ANNUAL GROUNDWATER MONITORING PROGRAM
DANSKAMMER GENERATING STATION
SOLID WASTE MANAGEMENT FACILITY

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

SWMF GROUNDWATER MONITORING PLAN

PROJECT NO.: DANSK 01.15.01
DATE: JANUARY 2016
FIGURE NO.: 1-1

2 ANALYTICAL RESULTS

Laboratory analytical results from the overburden and bedrock groundwater monitoring wells for the fourth quarter 2015 are presented in Table 2-1 – Overburden Groundwater Quality Data and Table 2-2 – Bedrock Groundwater Quality Data, respectively. Analyses were performed for SWMF "routine" parameters as outlined in Table 4 of the EMP.

In addition to the laboratory analytical results, Tables 2-1 and 2-2 present the OTVs and STVs referenced in the EMP as well as the NYSDEC ambient water quality standards and guidance values. Exceedances of the OTV are identified on the water quality tables, as are STV exceedances.

2.1 Overburden Water Quality

A total of three overburden wells were sampled at the SWMF during the fourth quarter of 2015. Laboratory analytical results for groundwater samples collected from the overburden wells are presented in Table 2-1.

Overburden groundwater analytes reported at concentrations exceeding the OTVs and STVs are summarized as follows:

OTV Exceedances

Monitoring Well DW-3P

- Hardness

Monitoring Well DW-6D

- Calcium, magnesium, chloride, hardness, sodium, sulfate sulfur and TDS.

Monitoring Well DW-7D

- Calcium, magnesium, alkalinity, chloride, hardness, sodium, TDS and carbonate.

STV Exceedances

Monitoring Well DW-6D

- Chloride and sulfate.

Monitoring Well DW-7D

- Chloride and carbonate.

In general, OTVs reported during the fourth quarter 2015 were less than the STV calculated values based on the intrawell comparisons. The OTV exceedances observed during the fourth quarter 2015 for the above referenced monitoring wells are further discussed in Section 3 – Groundwater Quality Summary Fourth Quarter. There were four STV exceedances during the fourth quarter sampling event. Chloride was detected at 93.9 mg/L and sulfate was detected at 121 mg/L, at monitoring well DW-6D, exceeding the STV values of 65 mg/L and 117 mg/L, respectively for the intrawell location. Additionally, chloride was detected at 168 mg/L and carbonate was detected at 27 mg/L at monitoring well DW-7D, exceeding the STV values of 96 mg/L and 9 mg/L, respectively for the intrawell location. The STV exceedances in DW-6D and DW-7D are likely attributable to the elevated TDS and hardness levels measured in these samples.

2.2 Bedrock Water Quality

A total of six bedrock monitoring wells were sampled at the SWMF during the fourth quarter of 2015. Laboratory analytical data from the bedrock wells are presented in Table 2-2. The fourth quarter 2015 results indicated that a number of monitoring wells screened in the bedrock exhibited analyte concentrations above the OTV. Historically, exceedances of the NYSDEC groundwater standards detected at the SWMF have been reported in both upgradient and downgradient wells, suggesting that elevated levels of these analytes may reflect local background groundwater quality. The analyte concentrations exceeding the OTVs and STVs in downgradient bedrock wells during the fourth quarter 2015 sampling event include the following monitoring wells:

OTV Exceedances

Monitoring Well DW-3R

- Boron, selenium and sulfate.

Monitoring Well DW-4R

- Boron, selenium, chloride, sulfate, sulfur and TDS.

Monitoring Well DW-5R

- Carbonate.

Monitoring Well DW-6R

- Boron, iron, chloride, hardness, sodium, sulfate and TDS.

Monitoring Well DW-7R

- Selenium, chloride, hardness, sulfate, TDS and carbonate.

STV Exceedances

Monitoring Well DW-7R

- Carbonate.

Monitoring Well DW-9R

- Carbonate.

In general, the OTV values reported during the fourth quarter 2015 were less than the STV calculated values based on the upgradient groundwater derived interwell data. The OTV exceedances observed during the fourth quarter 2015 for the above referenced monitoring wells are further discussed in Section 3 – Groundwater Quality Summary Fourth Quarter. There were two STV exceedance from sample collected from bedrock monitoring wells during the fourth quarter sampling event. Carbonate was detected at 20 mg/L at DW-7R, which exceeded the STV value of 9 mg/L. Carbonate was detected at 13 mg/L at DW-9R, which exceeded the STV value of 9 mg/L.

2.3 Quality Assurance/Quality Control

Quality Assurance/Quality Control (QA/QC) samples analyzed for the 2015 fourth quarter groundwater sampling event included field and method blanks, and a blind duplicate sample (DUP) collected from monitoring well DW-7D. No occurrences of laboratory contamination or problems with sample handling were identified in the laboratory narratives. A comparison of the analytical results and duplicate samples indicates that the data are within the expected range of reproducibility.

2.4 Summary of 2015 Results

Overburden Groundwater Quality

The analytical results from groundwater samples collected during 2015 demonstrated certain OTV and STV exceedances from three overburden intrawell locations (DW-3P, DW-6D and DW-7D). The OTV and STV exceedances identified at the overburden intrawell well locations during 2015 demonstrated occasions of statistically significant concentrations by Part 360 definition. The statistically significant OTV and STV exceedances identified during 2015 were evaluated and compared to the indicator parameters present in the primary leachate and results of subsequent monitoring events to determine potential impact from the SMWF leachate. Based on results of each quarterly evaluation, it was determined that the OTV and STV exceedances were not elevated in comparison to the SMWF leachate or subsequent monitoring events and likely attributable to field sampling procedures and seasonal variation. No contingency monitoring was conducted in 2015. The analytical results for first quarter 2015 through third quarter 2015 are provided in Appendix B – Quarterly Water Quality Data.

Bedrock Groundwater Quality

The analytical results from groundwater samples collected during 2015 demonstrated certain OTV and STV exceedances from two bedrock interwell locations (DW-7R and DW-9R). The OTV and STV exceedances identified at the bedrock interwell well locations during 2015 demonstrated occasions of statistically significant concentrations by Part 360 definition. The statistically significant OTV and STV exceedances identified during 2015 were evaluated and compared to the indicator parameters present in the primary leachate and results of subsequent monitoring events to determine potential impact from the SMWF leachate. Based on results of each quarterly evaluation it was determined that the OTV and STV exceedances were not elevated in comparison to the SMWF leachate or subsequent monitoring events and likely attributable to field sampling procedures and seasonal variation. No contingency monitoring was conducted in 2015. The analytical results for first quarter 2015 through third quarter 2015 are provided in Appendix B – Quarterly Water Quality Data.

Leachate

Analytical data from the P2-PLCS system in 2014 were consistent with historical observations and concentrations in the SWMF leachate of sulfate ranging from 1490 to 1740 mg/l, TDS at 2860 to 3030 mg/l, boron ranging from 16.8 to 33.3 mg/l, and selenium ranging from 1.11 to 1.29 mg/l. With the exception of TDS, the metals detected in the P2-PLCS (sulfate, boron and selenium) are not typically present in the upgradient or downgradient monitoring wells, and provide a good indicator of coal ash impact on leachate quality.

The phase one sediment basin P1-SB and the phase two sediment basin P2-SB were sampled in June and December 2014. The analytical results from the second and fourth quarters of 2014 indicated the presence of boron, chloride, selenium and sodium at elevated concentrations for the P1-SB and PS-SB locations. No flow was observed in both the Phase 2 and Phase 3 of the secondary leachate collection system, suggesting that the SMWF liner system is functioning as designed.

2.5 Tables

2-1 Overburden Groundwater Quality Data – December 2015
2-2 Bedrock Groundwater Quality Data – December 2015

TABLE 2-1
OVERBURDEN GROUNDWATER QUALITY DATA
DECEMBER 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

ROUTINE

Monitoring Well ID		**DW-3P**			**DW-6D**			**DW-7D**		
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**12/15/2015**	**Operational**	**STV**	**12/14/2015**	**Operational**	**STV**	**12/15/2015**
Aluminum	-	0.683	1.86	<0.100	0.94	6.5	<0.100	0.33	1.1	<0.100
Arsenic	0.025	0.004	0.01	<0.005	0.01	0.01	<0.005	0.01	0.01	<0.005
Boron	1	0.240	0.63	<0.050	0.21	0.52	0.209	0.12	0.48	0.062
Calcium	-	74	184	43.6	128	159	**132**	111	135	**112**
Iron	0.3	0.901	2.85	<0.05	0.73	2.71	<0.050	0.44	1.29	<0.050
Magnesium	35	29	41	31.8	24	27	**24.4**	54	66	**57.2**
Manganese	0.3	0.153	0.55	<0.020	0.86	2.98	<0.020	0.06	0.24	<0.020
Potassium	-	3	7	0.611	1.41	4.71	0.721	1.32	3.13	0.809
Selenium		0.016	0.05	0.009	0.006	0.02	<0.005	0.01	0.04	<0.005
Alkalinity	-	279	454	243	336	448	280	401	521	**420**
Bromide	-	1	1	<2	1	1	<2	1	1	<2
Chloride	250	7	30	2.39	21	65	**93.9**	64	96	**168**
Hardness	-	348	462	**354**	414	494	**431**	503	611	**516**
Sodium	20	7	13	2.05	8	12	**11**	25	42	**32.2**
Sulfate	250	59	183	38	81	117	**121**	67	98	57.2
Sulfur	-	30	70	12.7	31	42	**40.4**	28	56	19.1
Total Dissolved Solids	500	396	593	250	522	700	**540**	612	951	**670**
Carbonate	-	3	9	<1	3	9	<1	3	9	**27**
Bicarbonate	-	287	477	243	344	462	280	415	533	393
Conductivity	-	1403	1403	627	1403	1403	942	1403	1403	1360
Turbidity	5	35	95	<1	12	36	<1	18	68	<1

Notes:
1. Operational = Existing Water Quality, the mean of prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. Overburden monitoring wells to be accessed utilizing Intrawell comparison.
5. Bolded cells indicate that the concentration is above the Operational Trigger Value.
6. Shaded cells indicate that the concentration is above the Statistical Trigger Value.
7. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
8. NA = Not Available, due to limited data from dry monitoring wells, or incomplete historical data.
* - Exceedance of OTV & GWQS.

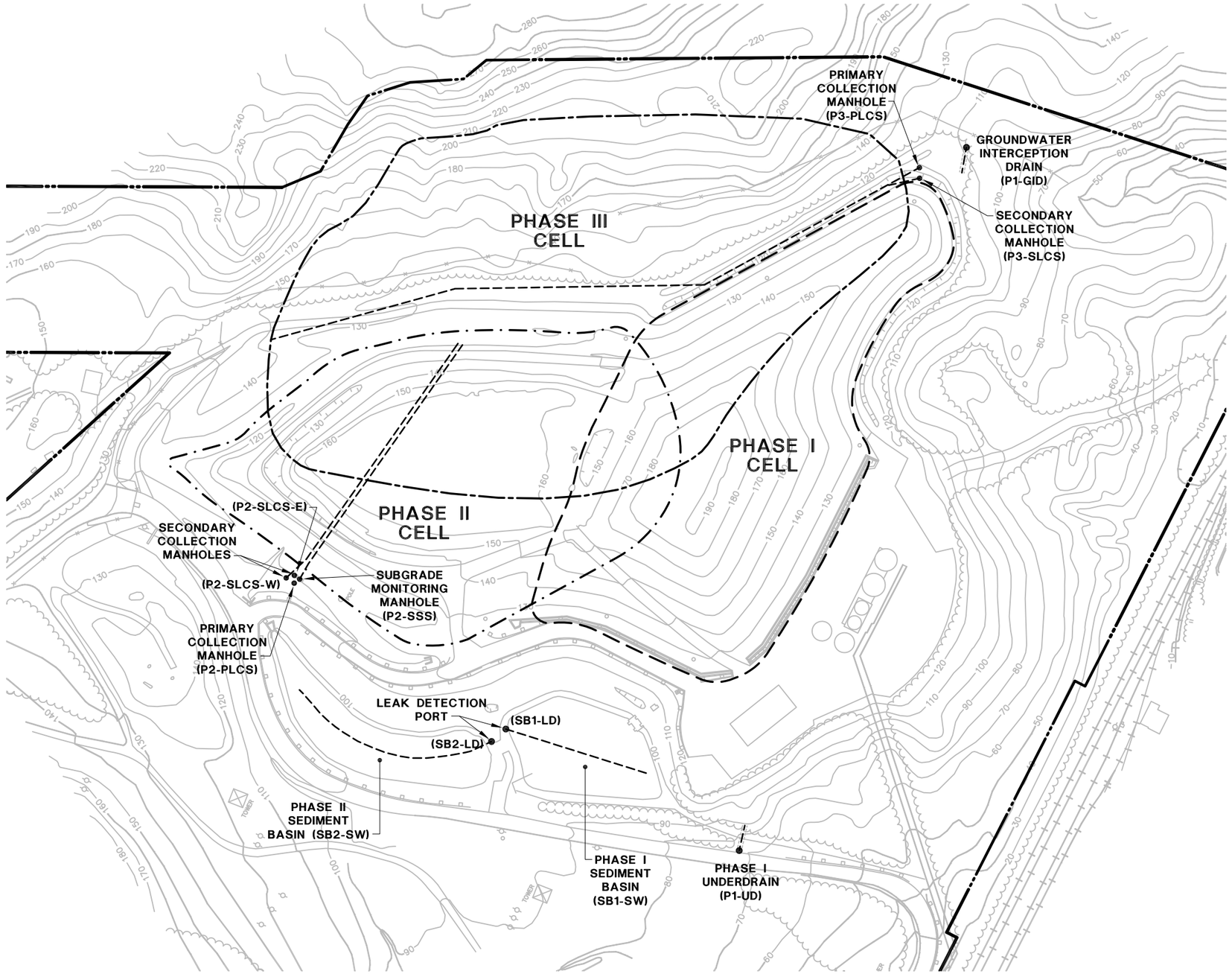
TABLE 2-2
BEDROCK GROUNDWATER QUALITY DATA
DECEMBER 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Monitoring Well ID				**DW-3R**	**DW-4R**	**DW-5R**	**DW-6R**	**DW-7R**	**DW-9R**
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**12/16/2015**	**12/15/2015**	**12/15/2015**	**12/14/2015**	**12/15/2015**	**12/15/2015**
Aluminum	-	0.39	1.5	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Arsenic	0.025	0.01	0.2	<0.005	<0.005	<0.005	<0.005	0.007	**0.026**
Boron	1	0.050	1.05	**0.756**	**0.602**	<0.050	**0.337**	<0.050	<0.050
Calcium	-	227	250	45.8	104	58.2	149	116	64.4
Iron	0.3	0.95	3.6	<0.050	<0.050	0.191	**1.22**	<0.050	0.758
Magnesium	35	53	69	16.4	42.5	35.3	47.3	44.5	41
Manganese	0.3	0.03	0.11	<0.020	<0.020	<0.020	0.025	<0.020	**0.047**
Potassium	-	1.6	9	1.25	0.88	1.06	0.794	0.646	1.01
Selenium		0.004	0.009	**0.028**	**0.008**	<0.005	<0.005	**0.005**	<0.005
Alkalinity	-	402	604	223	337	290	400	380	347
Bromide	-	1	1	<2	<2	<2	<2	<2	<2
Chloride	250	25	136	3.57	**29.8**	3.72	**57.8**	**35.6**	2.47
Hardness	-	449	830	182	435	291	**567**	**473**	330
Sodium	20	18	75	5.29	14.2	2.52	**19.4**	14.5	0.875
Sulfate	250	72	214	**98.6**	**157**	36.8	**130**	**96.4**	34.8
Sulfur	-	50	89	32.9	**52.4**	12.3	43.4	32.2	11.6
Total Dissolved Solids	500	500	668	360	**570**	260	**610**	**520**	350
Carbonate	-	3	9	<1	<1	**7**	<1	**20**	**13**
Bicarbonate	-	406	612	223	337	283	400	360	333
Conductivity	-	1995	1400	576	985	613	1046	958	696
Turbidity	5	15	65	<1	<1	<1	<1	<1	<1
BASELINE									

Notes:
1. Operational = Existing Water Quality, the mean of the prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. NA = Not Available, due to limited data from dry monitoring wells, insufficient water volume to allow sample collection, or incomplete historical data.
5. Bedrock monitoring wells to be accessed utilizing Intrawell comparison.
6. Bolded cells indicate that the concentration is above the Operational Trigger Value.
7. Shaded cells indicate that the concentration is above the STV.

2.6 Figures

2-1 SWMF Leachate and Surface Water Monitoring Plan



LEGEND:

- 70 — TOPOGRAPHIC CONTOUR
- ACCESS ROADWAY
- DRAINAGE CHANNEL
- GUIDERAIL
- FENCE
- PROPERTY BOUNDARY
- CULVERT
- STRUCTURES/TANKS
- POWER POLE

NOTES:

1. BASE MAP MODIFIED FROM ELECTRONIC FILE BY SHAW EMCON/OWT, INC. DRAWING ENTITLED "GROUNDWATER MONITORING SYSTEM", 2003.

0 200' 400'

GRAPHIC SCALE

X: DYNX05.DWG
1/12/16
SYNAPSE/WIP/DANSK 01-13/DANSK-0113-B01.DWG

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SYNAPSE RISK MANAGEMENT, LLC
360 ERIE BLVD. EAST
SYRACUSE, NEW YORK 13202

ANNUAL GROUNDWATER MONITORING PROGRAM
DANSKAMMER GENERATING STATION
SOLID WASTE MANAGEMENT FACILITY

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

SWMF
LEACHATE AND SURFACE WATER MONITORING PLAN

PROJECT NO.: DANSK 01.15.01
DATE: JANUARY 2016
FIGURE NO.: 2-1

3 GROUND WATER QUALITY SUMMARY FOURTH QUARTER

Perched/Deep Overburden Unit

Monitoring Well	December 2015 Intrawell Groundwater Quality Observations
DW-3P	DW-3P exhibited one OTV exceedance (hardness). No STV exceedances were observed at this intrawell location during the fourth quarter 2015.
DW-6D	DW-6D exhibited eight exceedances of the OTVs for this intrawell location (calcium, magnesium, chloride, hardness, sodium, TDS, sulfur and sulfate). Two STV exceedances were identified at this location. Chloride was detected at a concentration of 67.5 mg/L, exceeding the STV of 65 mg/L. Sodium was detected at a concentration of 16.7 mg/L, exceeding the STV of 12 mg/L.
DW-7D	DW-7D exhibited seven OTV exceedances (calcium, magnesium, alkalinity, chloride, hardness, sodium, TDS and carbonate). One STV exceedances were identified at this intrawell location. Carbonate was detected at a concentration of 27 mg/L, exceeding the STV of 9 mg/L.

Bedrock Unit

Monitoring Well	December 2015 Interwell Groundwater Quality Observations
DW-1R	DW-1R had insufficient groundwater to allow for sample collection.
DW-3R	DW-3R exhibited three OTV exceedances (boron, selenium and sulfate) and no STV exceedances.
DW-4R	DW-4R exhibited six OTV exceedances (boron, selenium, chloride, hardness, sulfate, sulfur and TDS) and no STV exceedances.
DW-5R	DW-5R exhibited no OTV exceedances, and no STV exceedances.
DW-6R	DW-6R exhibited seven OTV exceedances (boron, iron, alkalinity, chloride, hardness, sodium, sulfate, sulfur and TDS) and no STV exceedances.
DW-7R	DW-7R exhibited six OTV exceedances (selenium, chloride, hardness, sulfate, TDS and carbonate) and one STV exceedance (carbonate).
DW-8R	DW-8R had insufficient groundwater to allow for sample collection.
DW-9R	DW-9R exhibited three OTV exceedances (arsenic, manganese and carbonate), and one STV exceedance (carbonate).

A summary of the OTV exceedances observed during the fourth quarter 2015, and the wells in which they occurred, is provided in Table 3-1 – Summary of Operational Trigger Value Exceedances.

3.1 Tables

3-1 Summary of Operational Trigger Value Exceedances – December 2015

TABLE 3-1
SUMMARY OF OPERATIONAL TRIGGER VALUE EXCEEDANCES
DECEMBER 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Parameters	Turbidity	Alkalinity	Chloride	Sulfate	TDS	Aluminum	Arsenic	Boron	Calcium	Iron	Magnesium	Manganese	Potassium	Sulfur	Selenium	Sodium	Hardness	Carbonate	Bromide
DW-3P																	X		
DW-6D			X	X	X				X		X			X		X	X		
DW-7D		X	X	X	X				X		X					X	X	X	
DW-3R								X							X				
DW-4R		X	X	X	X			X		X	X			X	X				
DW-5R																		X	
DW-6R		X	X	X	X			X		X						X	X		
DW-7R			X	X	X										X	X	X		X
DW-8R																			
DW-9R																			

Notes:
X - Operational Trigger Value Exceedance

4 TREND ANALYSIS

As set forth in the SWMF Permit to Operate and the 2005 EMP, time trends of concentration versus time, for boron, sulfate, sulfur and TDS have been prepared for the SWMF monitoring wells. Those trends are described below and presented in Appendix C.

Perched/Deep Overburden Monitoring Wells

Concentration versus time charts for the five overburden monitoring wells (DW-3P, DW-3D, DW-5D, DW-6D, and DW-7D) have been prepared for leachate indicator parameters sulfur, sulfate, TDS, aluminum, calcium, iron, manganese and boron. The following trend observations are provided for each intrawell location:

Monitoring Well	Constituent	Trend Observation
DW-3P	Sulfur	Sulfur is generally stable with fluctuations below and above the OTV.
	Sulfate	Sulfate is generally stable with fluctuations below and above the OTV.
	TDS	TDS is considered stable with most concentrations below the OTV in 2015.
	Boron	No apparent trend is associated with boron. Boron was mostly above the OTV in 2015.
	Aluminum	Aluminum is considered stable with concentrations below the OTV.
	Calcium	Calcium appears to have a seasonal fluctuation with the highest concentrations observed in the third quarter 2015. Calcium is considered stable with concentrations below the STV.
	Iron	Iron is considered stable with concentrations below the OTV.
	Manganese	Manganese is considered stable with concentrations below the OTV.
DW-6D	Sulfur	Sulfur concentrations were elevated in 201 and was above the STV during the third quarter.
	Sulfate	Sulfate concentrations were elevated in 2015 and above the STV during third quarter.
	TDS	TDS concentrations were elevated 2015, however below the STV during all four quarters.
	Boron	No apparent trend is associated with boron. Boron was below the STV in all four quarters of 2015.
	Aluminum	Aluminum is considered stable with concentrations below the OTV.
	Calcium	Calcium is considered stable with concentrations below the STV in all four quarters of 2015.
	Iron	Iron is considered stable and with concentrations below the OTV since January 2009.
	Manganese	Manganese is considered stable with concentrations below the OTV since November 2006.

Monitoring Well	Constituent	2015 Trend Observation
DW-7D	Sulfur	Sulfur is considered stable with concentrations below the OTV since November 2005.
	Sulfate	Sulfate concentrations appear to be declining and are below the OTV.
	TDS	TDS is considered stable with concentrations below the OTV in the first quarter of 2014 but above the OTV in the second, third and fourth quarters.
	Boron	Boron is considered stable with concentrations below the OTV since January 2002.
	Aluminum	Aluminum is considered stable with concentrations below the OTV during all four quarters.
	Calcium	Calcium is considered stable but concentrations exceeded the STV in all the second quarter of 2015.
	Iron	Iron is considered stable with concentrations below the OTV since January 2007.
	Manganese	Manganese is considered stable with concentrations below the method detection limit.

Bedrock Monitoring Wells

Concentration versus time charts for the seven bedrock monitoring wells (DW-3R, DW-4R, DW-5R, DW-6R, DW-7R, DW-8R, and DW-9R) have been prepared for leachate indicator parameters sulfur, sulfate, TDS, aluminum, calcium, iron, manganese and boron. The following trend observations are provided for each interwell location:

Monitoring Well	Constituent	2015 Trend Observation
DW-3R	Sulfur	Sulfur is considered stable with concentrations below the OTV since January 2001.
	Sulfate	Sulfate is considered stable with concentrations below the OTV since January 2001.
	TDS	TDS is considered stable with concentrations below the OTV since January 2008.
	Boron	Boron is considered stable with concentrations below the method detection limit since July 2003.
	Aluminum	Aluminum is considered stable with concentrations below the OTV.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2001.
	Iron	Iron is considered stable with concentrations below the OTV.

Monitoring Well	Constituent	2015 Trend Observation
DW-4R	Sulfur	Sulfur is considered stable with concentrations below the OTV since July 2007, with the exception of the first, third and fourth quarters of 2013.
	Sulfate	Sulfate is considered stable with concentrations below the STV since January 2000.
	TDS	TDS demonstrates a seasonal trend with the highest concentration observed in the third and fourth quarter. TDS is considered stable, with concentrations below the STV since April 2006, with the exception of fourth quarter 2013.
	Boron	Boron is considered stable with concentrations below the STV since January 2000.
	Aluminum	Aluminum is considered stable with concentrations below the OTV.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron is considered stable with concentrations below the OTV since an exceedance in April 2009.
DW-5R	Sulfur	Sulfur is considered stable with concentrations below the OTV since January 2000, with the exception of June 2012.
	Sulfate	Sulfate is considered stable with concentrations below the OTV since January 2000.
	TDS	TDS is considered stable with concentrations below the OTV since October 2005.
	Boron	Boron is considered stable with concentrations below the method detection limit since April 2008.
	Aluminum	Aluminum is considered stable with concentrations below the OTV throughout 2015.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron is considered stable with concentrations remaining below the OTV since July 2008 with the exception of a slight exceedance in December 2013.
DW-6R	Sulfur	Sulfur is considered stable with concentrations below the OTV since January 2002.
	Sulfate	Sulfate is considered stable with concentrations below the STV.
	TDS	TDS is considered stable with concentrations generally below the STV.
	Boron	Boron has demonstrated a downward trend since January 2005 with concentrations remaining below the STV since April 2003.
	Aluminum	Aluminum is considered stable with concentrations remaining below the OTV during 2015. The only OTV exceedances occurred in April 2008 and December 2011.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron is considered stable with concentrations below the OTV since November 2000.

Monitoring Well	Constituent	2015 Trend Observation
DW-7R	Sulfur	Sulfur is considered stable with concentrations below the OTV.
	Sulfate	Sulfate is considered stable with concentrations below the OTV during 2015.
	TDS	TDS appears to show a seasonal trend with the highest concentrations in the first quarter. TDS is considered stable with concentrations above the OTV and below the STV during 2013
	Boron	Boron is considered stable with concentrations at or below the OTV.
	Aluminum	Aluminum is considered stable with concentrations below the OTV. The only STV exceedance occurred in April 2007 with concentrations remaining below the OTV during 2015.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron is considered stable with concentrations below the OTV. The only STV exceedance occurred in July 2007 with concentrations remaining below the OTV during 2015.
DW-8R	Sulfur	Sulfur is considered stable with concentrations below the OTV since January 2000.
	Sulfate	Sulfate is considered stable with concentrations below the OTV since January 2009.
	TDS	TDS is considered stable with concentrations below the OTV since April 2008.
	Boron	Boron is considered stable with concentrations at or below the OTV since January 2000, with the exception of one exceedance in January 2007.
	Aluminum	Aluminum is considered stable with concentrations below the STV and slightly above the OTV. Concentrations were below the OTV in 2015.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron is considered stable with concentrations remaining below the OTV since August 2009.
DW-9R	Sulfur	Sulfur is considered stable with concentrations below the OTV since January 2000.
	Sulfate	Sulfate is considered stable with concentrations below the OTV since July 2002.
	TDS	TDS is considered stable with concentrations below the OTV since August 2009.
	Boron	No apparent trend is associated with boron. Boron was below the method detection limit in 2015.
	Aluminum	Aluminum is considered stable with concentrations fluctuating above and below the OTV. Concentrations in 2015 were below the OTV.
	Calcium	Calcium is considered stable with concentrations below the OTV since January 2000.
	Iron	Iron in considered stable with concentrations that fluctuate around the OTV.

5 WATER LEVEL EVALUATION

Groundwater elevations were measured from eighteen SWMF monitoring wells during the quarterly sampling events conducted during 2015 and are summarized on Table 5-1. The groundwater elevations have been plotted versus time from the prior nine years (2003 through 2015) provided in Appendix D.

Perched/Deep Overburden

Groundwater elevations versus time charts for five overburden monitoring wells (DW-3P, DW-3D, DW-5D, DW-6D, and DW-7D) have been prepared for the prior nine years. Review of the groundwater elevation data indicated that the perched/deep groundwater bearing unit has generally declined since the construction of the Phase II cell. This general lowering of the groundwater levels in the perched/deep unit is likely the result of the Phase II cell and the groundwater interceptor trench limiting groundwater recharge to the perched/deep units. The groundwater interceptor trench was constructed for the sole purpose of limiting recharge to the perched unit from the upgradient surface flow and continues to function as designed. The following trend summarizes the overburden groundwater elevations measured at each overburden monitoring well location:

Monitoring Well	2015 Overburden Groundwater Elevation Summary
DW-3P	Measurable groundwater during the March through December 2015 sampling events.
DW-4P	This monitoring well remained dry during March through December 2015 sampling events.
DW-7P	This monitoring well remained dry during March through December 2015 sampling events.
Dw-2D	This monitoring well remained dry during March through December 2015 sampling events.
DW-3D	This monitoring well remained dry during March through December 2015 sampling events.
DW-4D	This monitoring well remained dry during March through December 2015 sampling events.
DW-5D	This monitoring well remained dry during March through December 2015 sampling events.
DW-6D	Measurable groundwater during the March through December 2015 sampling events.
DW-7D	Measurable groundwater during the March through December 2015 sampling events.

Bedrock

Groundwater elevations versus time charts for seven bedrock monitoring wells (DW-3R, DW-4R, DW-5R, DW-6R, DW-7R, DW-8R, and DW-9R) have been prepared for the prior nine years. Groundwater elevation data for the previous nine years indicated that the bedrock water levels are generally consistent from quarter to quarter with the exception of DW-1R. However, during January through September 2015 sampling events, groundwater elevations at DW-1R returned to elevations similar those observed from January 2003 to October 2006. DW-1R was re-installed June 2006 following the construction of the Phase III cell. The diminished

groundwater at this bedrock location may be attributed to the construction of the Phase III cell; this monitoring well may be installed to a greater depth. DW-2R has consistently remained dry since January 2003; this well continues to fulfill its Part 360 regulatory requirements even with the dry observations.

Monitoring Well	2015 Bedrock Groundwater Elevation Summary
DW-1R	Measurable groundwater during the March through September 2015 sampling events.
DW-2R	This bedrock groundwater monitoring well remained dry during March through December 2015 sampling events.
DW-3R	Measurable groundwater during the March through December 2015 sampling events.
DW-4R	Measurable groundwater during the March through December 2015 sampling events.
DW-5R	Measurable groundwater during the March through December 2015 sampling events.
DW-6R	Measurable groundwater during the March through December 2015 sampling events.
DW-7R	Measurable groundwater during the March through December 2015 sampling events.
DW-8R	Measurable groundwater during the March and June 2015 sampling events.
DW-9R	Measurable groundwater during the March through December 2015 sampling events.

5.1 Tables

5-1 2015 Groundwater Elevation Data

Table 5-1
2015 GROUNDWATER ELEVATION DATA
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Quarter 1 through Quarter 4			March-15		June-15		September-15		December-15	
Sample ID	**TOC**	**Total Well Depth**	**Depth to Water**	**Water Level Elevation (ft-amsl)**	**Depth to Water**	**Water Level Elevation (ft-amsl)**	**Depth to Water**	**Water Level Elevation (ft-amsl)**	**Depth to Water**	**Water Level Elevation (ft-amsl)**
DW-3P	122.20	28.70	22.00	100.20	22.25	99.95	22.40	99.80	22.50	99.70
DW-4P	123.41	27.73	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-7P	105.70	20.40	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-2D	123.60	38.22	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-3D	122.53	90.30	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-4D	123.51	67.94	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-5D	122.78	67.67	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-6D	116.50	70.00	56.20	60.30	55.60	60.90	56.80	59.70	54.6	61.90
DW-7D	104.97	62.33	49.35	55.62	48.61	56.36	48.20	56.77	48.25	56.72
DW-1R	119.58	48.32	35.40	84.18	34.50	85.08	33.90	85.68	36.25	NA
DW-2R	123.52	75.00	DRY	NA	DRY	NA	DRY	NA	DRY	NA
DW-3R	122.41	126.00	88.60	33.81	87.50	34.91	87.55	34.86	88.6	33.81
DW-4R	123.76	107.64	88.60	35.16	88.62	35.14	88.50	35.26	89.2	34.56
DW-5R	122.94	159.84	82.50	40.44	82.90	40.04	83.20	39.74	84.20	38.74
DW-6R	119.58	125.00	75.21	44.37	74.60	44.98	76.30	43.28	67.5	52.08
DW-7R	105.17	89.89	36.00	69.17	36.50	68.67	43.50	61.67	37.6	67.57
DW-8R	135.41	41.90	29.50	105.91	29.80	105.61	31.40	104.01	DRY	NA
DW-9R	215.38	108.00	65.30	150.08	66.50	148.88	65.20	146.98	65.25	150.13

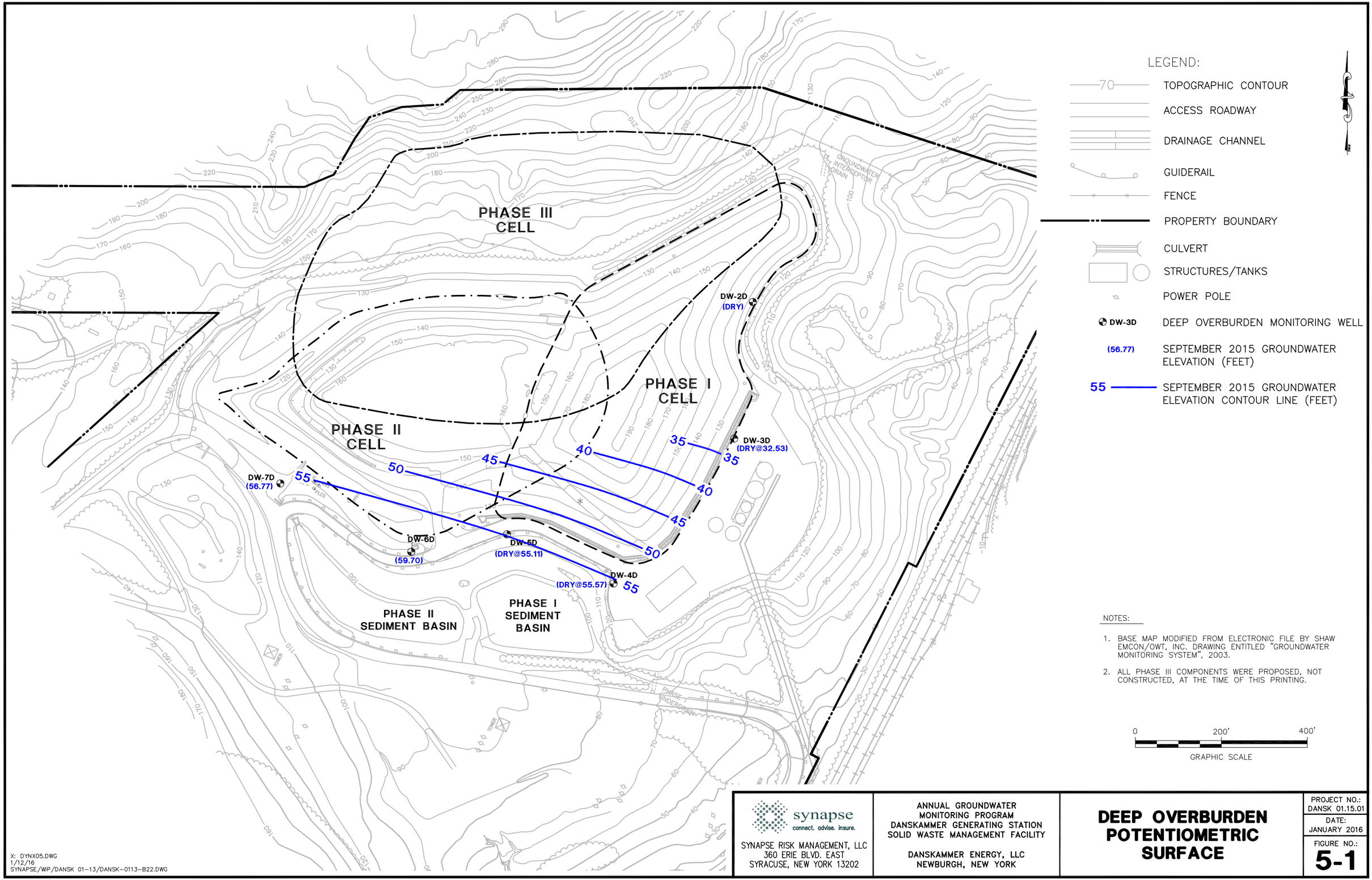
NOTES:

* = Denotes upgradient well
R = Bedrock Well
S = Perched Overburden Well
D = Deep Overburden Well
NA - not applicable
ft-amsl - feet above mean sea level
TOC = Top of Outer Casing

5.2 Figures

5-1 Deep Overburden Potentiometric Surface

5-2 Bedrock Potentiometric Surface



X: DYNX05.DWG
1/12/16
SYNAPSE/WIP/DANSK 01-13/DANSK-0113-B22.DWG

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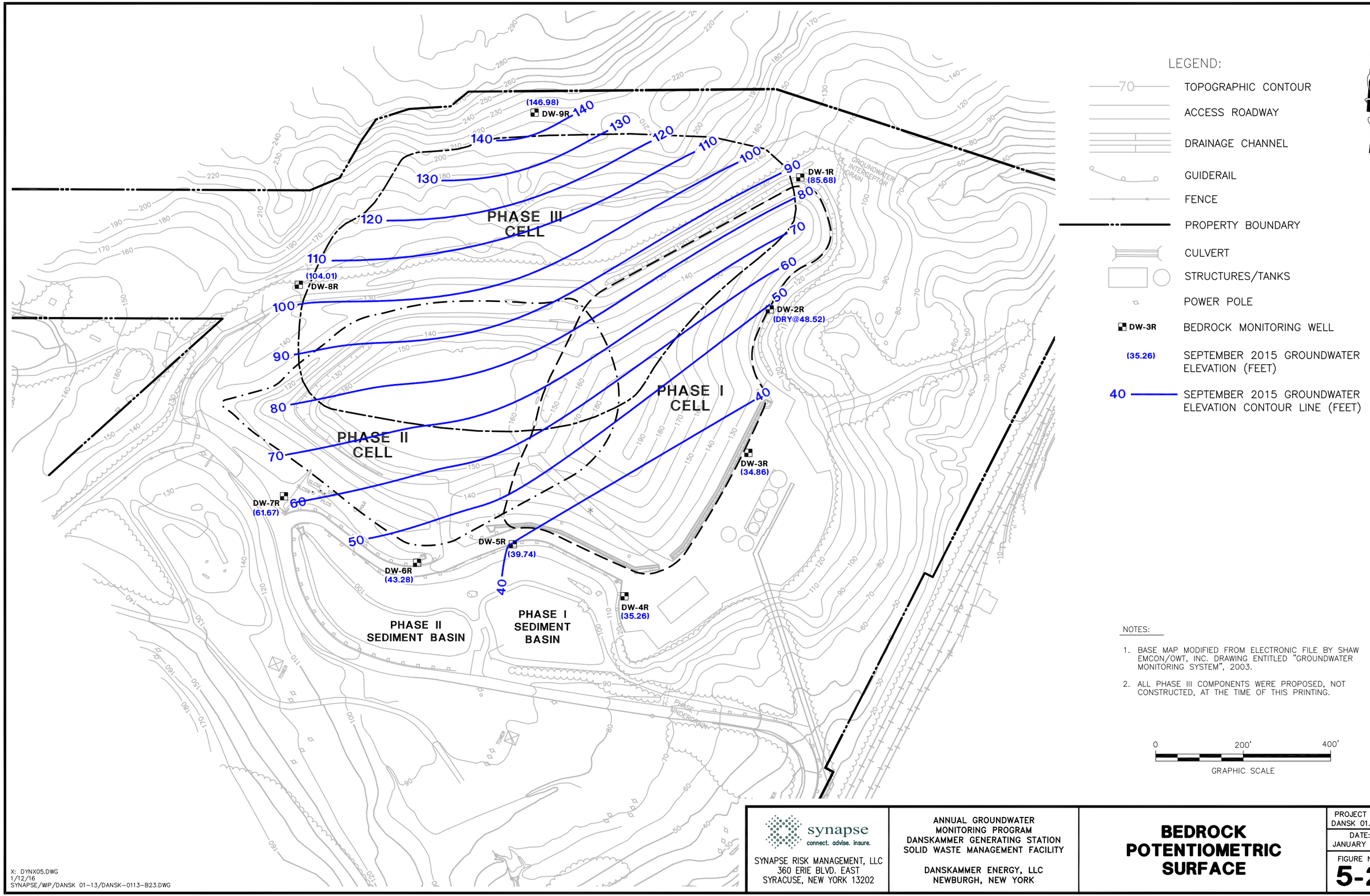
SYNAPSE RISK MANAGEMENT, LLC
360 ERIE BLVD. EAST
SYRACUSE, NEW YORK 13202

ANNUAL GROUNDWATER MONITORING PROGRAM
DANSKAMMER GENERATING STATION
SOLID WASTE MANAGEMENT FACILITY

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

DEEP OVERBURDEN POTENTIOMETRIC SURFACE

PROJECT NO.: DANSK 01.15.01
DATE: JANUARY 2016
FIGURE NO.: 5-1



NOTES:

1. BASE MAP MODIFIED FROM ELECTRONIC FILE BY SHAW EMCON/OWT, INC. DRAWING ENTITLED "GROUNDWATER MONITORING SYSTEM", 2003.
2. ALL PHASE III COMPONENTS WERE PROPOSED, NOT CONSTRUCTED, AT THE TIME OF THIS PRINTING.

X: DYNX05.DWG
1/12/16
SYNAPSE/WIP/DANSK 01-13/DANSK-0113-B23.DWG

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SYRACUSE, NEW YORK 13202

ANNUAL GROUNDWATER MONITORING PROGRAM
DANSKAMMER GENERATING STATION
SOLID WASTE MANAGEMENT FACILITY

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

BEDROCK POTENTIOMETRIC SURFACE

PROJECT NO.: DANSK 01.15.01
DATE: JANUARY 2016
FIGURE NO.: 5-2

6 CONCLUSIONS

Groundwater Quality

Based on the evaluation of the SWMF groundwater data collected during 2015, no significant impact on groundwater quality as a result of operation of the SWMF was identified. The data evaluation included the comparison of groundwater analytical results with site-specific OTVs and STVs presented in the SWMF-EMP, as well as NYSDEC Groundwater Quality Standards and Guidance Values.

The results of the overburden intrawell analysis and the interwell analysis as detailed in the 2005 EMP, have demonstrated that the groundwater quality within the perched/deep overburden and bedrock water bearing units are stable and that the OTV exceedances are not specific to the leachate indicator parameters.

The evaluations performed on the data collected during fourth quarter 2015 continue to indicate no impact to groundwater quality attributable to operation of the SWMF.

Leachate Quality

The results of the water quality monitoring program continue to demonstrate that during 2015, the secondary leachate collection system has not been impacted by the PLCS. No coal indicator parameters were reported in the secondary leachate collection system at or near the detection limits typically reported in the PLCS sample.

7 REFERENCES

New York State Department of Environmental Conservation, Division of Solid Waste. 6 NYCRR Part 360.

Synapse Risk Management, LLC. March 2005. Environmental Monitoring Plan, Danskammer Point Solid Waste Management Facility.

APPENDIX A
LABORATORY ANALYSIS & FIELD DATA REPORTS QUARTER 4

2015 ANNUAL REPORT

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

JANUARY 2016

Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

January 04, 2016

Roger Creighton
Synapse Rick Management, LLC
360 Erie Blvd East
Syracuse, NY 13202

TEL: (315) 475-3700
FAX: (315) 475-3780

Work Order No: 151216056

RE: Quarterly GW
SWMF-Danskammer-Quarterly Routines

Dear Roger Creighton:

Adirondack Environmental Services, Inc received 13 samples on 12/16/2015 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709

Tara Daniels
Laboratory Manager

Adirondack Environmental Services, Inc — CASE NARRATIVE

CLIENT:	Synapse Rick Management, LLC	**Date:**	*04-Jan-16*
Project:	Quarterly GW		
Lab Order:	151216056		

The sampling was performed in accordance with the AES field sampling procedures and/or the client specified sampling procedures. Sample containers were supplied by Adirondack Environmental Services.

Qualifiers:

	C - Details are above in Case Narrative
ND - Not Detected at reporting limit	S - LCS Spike recovery outside acceptable limits(+ is over - is under)
J - Analyte detected below quantitation limit	R - Duplication outside acceptable limits
B - Analyte detected in Blank	T - Tentatively Identified Compound-Estimated
X - Exceeds maximum contamination limit	E -Above quantitation range-Estimated
H - Hold time exceeded	M - Matrix Spike outside acceptable limits(+ is over - is under)

Note : All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-3R
Work Order:	151216056	**Collection Date:**	12/16/2015 9:35:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***576***	1.0		umhos/cm		12/16/2015 9:35:00 AM
Dissolved Oxygen	***3.83***	0.10		mg/L		12/16/2015 9:35:00 AM
eH	***42.4***			mV		12/16/2015 9:35:00 AM
pH	***7.2***			S.U.		12/16/2015 9:35:00 AM
Temperature	***11***			deg C		12/16/2015 9:35:00 AM
Turbidity	***< 1***	1.0		NTU		12/16/2015 9:35:00 AM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***182***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 5:49:14 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 5:49:14 PM
Boron	***0.756***	0.050		mg/L	1	12/22/2015 5:49:14 PM
Calcium	***45.8***	0.050		mg/L	1	12/22/2015 5:49:14 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 5:49:14 PM
Magnesium	***16.4***	0.050		mg/L	1	12/22/2015 5:49:14 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 5:49:14 PM
Potassium	***1.25***	0.050		mg/L	1	12/22/2015 5:49:14 PM
Selenium	***0.028***	0.005		mg/L	1	12/22/2015 5:49:14 PM
Sodium	***5.29***	0.050		mg/L	1	12/22/2015 5:49:14 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***3.57***	2.00		mg/L	2	12/30/2015 5:43:22 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 5:43:22 PM
Sulfate	***98.6***	4.00		mg/L	2	12/30/2015 5:43:22 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***223***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***< 1.0***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***223***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***32.9***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-3R
Work Order:	151216056	**Collection Date:**	12/16/2015 9:35:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-001
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***360***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-3P
Work Order:	151216056	**Collection Date:**	12/15/2015 11:15:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***627***	1.0		umhos/cm		12/15/2015 11:15:00 AM
Dissolved Oxygen	***5.36***	0.10		mg/L		12/15/2015 11:15:00 AM
eH	***134.6***			mV		12/15/2015 11:15:00 AM
pH	***6.3***			S.U.		12/15/2015 11:15:00 AM
Temperature	***14***			deg C		12/15/2015 11:15:00 AM
Turbidity	***< 1***	1.0		NTU		12/15/2015 11:15:00 AM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***354***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 5:58:53 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 5:58:53 PM
Boron	***< 0.050***	0.050		mg/L	1	12/22/2015 5:58:53 PM
Calcium	***43.6***	0.050		mg/L	1	12/22/2015 5:58:53 PM
Iron	***0.179***	0.050		mg/L	1	12/22/2015 5:58:53 PM
Magnesium	***31.8***	0.050		mg/L	1	12/22/2015 5:58:53 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 5:58:53 PM
Potassium	***0.611***	0.050		mg/L	1	12/22/2015 5:58:53 PM
Selenium	***0.009***	0.005		mg/L	1	12/22/2015 5:58:53 PM
Sodium	***2.05***	0.050		mg/L	1	12/22/2015 5:58:53 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***2.39***	2.00		mg/L	2	12/30/2015 5:58:28 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 5:58:28 PM
Sulfate	***38.0***	4.00		mg/L	2	12/30/2015 5:58:28 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***243***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***< 1.0***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***243***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***12.7***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-3P
Work Order:	151216056	**Collection Date:**	12/15/2015 11:15:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-002
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***250***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-4R
Work Order:	151216056	**Collection Date:**	12/15/2015 10:35:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***985***	1.0		umhos/cm		12/15/2015 10:35:00 AM
Dissolved Oxygen	***2.60***	0.10		mg/L		12/15/2015 10:35:00 AM
eH	***96.6***			mV		12/15/2015 10:35:00 AM
pH	***6.9***			S.U.		12/15/2015 10:35:00 AM
Temperature	***13***			deg C		12/15/2015 10:35:00 AM
Turbidity	***< 1***	1.0		NTU		12/15/2015 10:35:00 AM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***435***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 6:18:14 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 6:18:14 PM
Boron	***0.602***	0.050		mg/L	1	12/22/2015 6:18:14 PM
Calcium	***104***	0.050		mg/L	1	12/22/2015 6:18:14 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 6:18:14 PM
Magnesium	***42.5***	0.050		mg/L	1	12/22/2015 6:18:14 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 6:18:14 PM
Potassium	***0.880***	0.050		mg/L	1	12/22/2015 6:18:14 PM
Selenium	***0.008***	0.005		mg/L	1	12/22/2015 6:18:14 PM
Sodium	***14.2***	0.050		mg/L	1	12/22/2015 6:18:14 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***29.8***	2.00		mg/L	2	12/30/2015 6:13:34 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 6:13:34 PM
Sulfate	***157***	4.00		mg/L	2	12/30/2015 6:13:34 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***337***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***< 1.0***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***337***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***52.4***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-4R
Work Order:	151216056	**Collection Date:**	12/15/2015 10:35:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-003
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***570***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-5R
Work Order:	151216056	**Collection Date:**	12/15/2015 9:45:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***613***	1.0		umhos/cm		12/15/2015 9:45:00 AM
Dissolved Oxygen	***0.84***	0.10		mg/L		12/15/2015 9:45:00 AM
eH	***- 19.1***			mV		12/15/2015 9:45:00 AM
pH	***7.1***			S.U.		12/15/2015 9:45:00 AM
Temperature	***13***			deg C		12/15/2015 9:45:00 AM
Turbidity	***< 1***	1.0		NTU		12/15/2015 9:45:00 AM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***291***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 6:27:50 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 6:27:50 PM
Boron	***< 0.050***	0.050		mg/L	1	12/22/2015 6:27:50 PM
Calcium	***58.2***	0.050		mg/L	1	12/22/2015 6:27:50 PM
Iron	***0.191***	0.050		mg/L	1	12/22/2015 6:27:50 PM
Magnesium	***35.3***	0.050		mg/L	1	12/22/2015 6:27:50 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 6:27:50 PM
Potassium	***1.06***	0.050		mg/L	1	12/22/2015 6:27:50 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 6:27:50 PM
Sodium	***2.52***	0.050		mg/L	1	12/22/2015 6:27:50 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***3.72***	2.00		mg/L	2	12/30/2015 6:28:40 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 6:28:40 PM
Sulfate	***36.8***	4.00		mg/L	2	12/30/2015 6:28:40 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***283***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***7***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***290***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***12.3***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-5R
Work Order:	151216056	**Collection Date:**	12/15/2015 9:45:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-004
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***260***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-6R
Work Order:	151216056	**Collection Date:**	12/14/2015 2:15:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***1046***	1.0		umhos/cm		12/14/2015 2:15:00 PM
Dissolved Oxygen	***0.61***	0.10		mg/L		12/14/2015 2:15:00 PM
eH	***- 51.2***			mV		12/14/2015 2:15:00 PM
pH	***6.8***			S.U.		12/14/2015 2:15:00 PM
Temperature	***13***			deg C		12/14/2015 2:15:00 PM
Turbidity	***< 1***	1.0		NTU		12/14/2015 2:15:00 PM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***567***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 6:37:24 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 6:37:24 PM
Boron	***0.337***	0.050		mg/L	1	12/22/2015 6:37:24 PM
Calcium	***149***	0.500		mg/L	10	12/22/2015 6:42:17 PM
Iron	***1.22***	0.050		mg/L	1	12/22/2015 6:37:24 PM
Magnesium	***47.3***	0.050		mg/L	1	12/22/2015 6:37:24 PM
Manganese	***0.025***	0.020		mg/L	1	12/22/2015 6:37:24 PM
Potassium	***0.794***	0.050		mg/L	1	12/22/2015 6:37:24 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 6:37:24 PM
Sodium	***19.4***	0.050		mg/L	1	12/22/2015 6:37:24 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***57.8***	2.00		mg/L	2	12/30/2015 6:43:45 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 6:43:45 PM
Sulfate	***130***	4.00		mg/L	2	12/30/2015 6:43:45 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***400***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***< 1.0***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***400***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***43.4***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-6R
Work Order:	151216056	**Collection Date:**	12/14/2015 2:15:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-005
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***610***	5		mg/L	1	12/17/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-6D
Work Order:	151216056	**Collection Date:**	12/14/2015 1:50:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***942***	1.0		umhos/cm		12/14/2015 1:50:00 PM
Dissolved Oxygen	***5.21***	0.10		mg/L		12/14/2015 1:50:00 PM
eH	***125.0***			mV		12/14/2015 1:50:00 PM
pH	***6.9***			S.U.		12/14/2015 1:50:00 PM
Temperature	***13***			deg C		12/14/2015 1:50:00 PM
Turbidity	***< 1***	1.0		NTU		12/14/2015 1:50:00 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: SW3010A - 12/17/2015)						
Total Hardness (As CaCO3)	***431***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4						Analyst: **SM**
(Prep: SW3010A - 12/17/2015)						
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 6:47:04 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 6:47:04 PM
Boron	***0.209***	0.050		mg/L	1	12/22/2015 6:47:04 PM
Calcium	***132***	0.500		mg/L	10	12/22/2015 6:51:58 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 6:47:04 PM
Magnesium	***24.4***	0.050		mg/L	1	12/22/2015 6:47:04 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 6:47:04 PM
Potassium	***0.721***	0.050		mg/L	1	12/22/2015 6:47:04 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 6:47:04 PM
Sodium	***11.0***	0.050		mg/L	1	12/22/2015 6:47:04 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***93.9***	2.00		mg/L	2	12/30/2015 6:58:51 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 6:58:51 PM
Sulfate	***121***	4.00		mg/L	2	12/30/2015 6:58:51 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***280***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***< 1.0***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***280***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***40.4***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-6D
Work Order:	151216056	**Collection Date:**	12/14/2015 1:50:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-006
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***540***	5		mg/L	1	12/17/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7R
Work Order:	151216056	**Collection Date:**	12/15/2015 3:00:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***958***	1.0		umhos/cm		12/15/2015 3:00:00 PM
Dissolved Oxygen	***4.29***	0.10		mg/L		12/15/2015 3:00:00 PM
eH	***112.6***			mV		12/15/2015 3:00:00 PM
pH	***6.8***			S.U.		12/15/2015 3:00:00 PM
Temperature	***12***			deg C		12/15/2015 3:00:00 PM
Turbidity	***< 1***	1.0		NTU		12/15/2015 3:00:00 PM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***473***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 6:56:47 PM
Arsenic	***0.007***	0.005		mg/L	1	12/22/2015 6:56:47 PM
Boron	***< 0.050***	0.050		mg/L	1	12/22/2015 6:56:47 PM
Calcium	***116***	0.500		mg/L	10	12/22/2015 7:01:34 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 6:56:47 PM
Magnesium	***44.5***	0.050		mg/L	1	12/22/2015 6:56:47 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 6:56:47 PM
Potassium	***0.646***	0.050		mg/L	1	12/22/2015 6:56:47 PM
Selenium	***0.005***	0.005		mg/L	1	12/22/2015 6:56:47 PM
Sodium	***14.5***	0.050		mg/L	1	12/22/2015 6:56:47 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***35.6***	2.00		mg/L	2	12/30/2015 7:13:56 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 7:13:56 PM
Sulfate	***96.4***	4.00		mg/L	2	12/30/2015 7:13:56 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***360***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***20***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***380***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***32.2***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7R
Work Order:	151216056	**Collection Date:**	12/15/2015 3:00:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-007
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***520***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7D
Work Order:	151216056	**Collection Date:**	12/15/2015 3:10:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***1360***	1.0		umhos/cm		12/15/2015 3:10:00 PM
Dissolved Oxygen	***5.83***	0.10		mg/L		12/15/2015 3:10:00 PM
eH	***121.9***			mV		12/15/2015 3:10:00 PM
pH	***6.7***			S.U.		12/15/2015 3:10:00 PM
Temperature	***72***			deg C		12/15/2015 3:10:00 PM
Turbidity	***< 1***	1.0		NTU		12/15/2015 3:10:00 PM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***516***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 7:16:12 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 7:16:12 PM
Boron	***0.062***	0.050		mg/L	1	12/22/2015 7:16:12 PM
Calcium	***112***	0.050		mg/L	1	12/22/2015 7:16:12 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 7:16:12 PM
Magnesium	***57.2***	0.050		mg/L	1	12/22/2015 7:16:12 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 7:16:12 PM
Potassium	***0.809***	0.050		mg/L	1	12/22/2015 7:16:12 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 7:16:12 PM
Sodium	***32.2***	0.050		mg/L	1	12/22/2015 7:16:12 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***168***	2.00		mg/L	2	12/30/2015 8:14:57 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 8:14:57 PM
Sulfate	***57.2***	4.00		mg/L	2	12/30/2015 8:14:57 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***393***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***27***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***420***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***19.1***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7D
Work Order:	151216056	**Collection Date:**	12/15/2015 3:10:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-008
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***670***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7D dup
Work Order:	151216056	**Collection Date:**	12/15/2015 3:10:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***1360***	1.0		umhos/cm		12/15/2015 3:10:00 PM
Dissolved Oxygen	***5.83***	0.10		mg/L		12/15/2015 3:10:00 PM
eH	***121.9***			mV		12/15/2015 3:10:00 PM
pH	***6.7***			S.U.		12/15/2015 3:10:00 PM
Temperature	***12***			deg C		12/15/2015 3:10:00 PM
Turbidity	***< 1***	1.0		NTU		12/15/2015 3:10:00 PM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***554***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 7:25:50 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 7:25:50 PM
Boron	***0.060***	0.050		mg/L	1	12/22/2015 7:25:50 PM
Calcium	***130***	0.500		mg/L	10	12/22/2015 7:30:36 PM
Iron	***< 0.050***	0.050		mg/L	1	12/22/2015 7:25:50 PM
Magnesium	***55.7***	0.050		mg/L	1	12/22/2015 7:25:50 PM
Manganese	***< 0.020***	0.020		mg/L	1	12/22/2015 7:25:50 PM
Potassium	***0.857***	0.050		mg/L	1	12/22/2015 7:25:50 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 7:25:50 PM
Sodium	***31.8***	0.050		mg/L	1	12/22/2015 7:25:50 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***167***	2.00		mg/L	2	12/30/2015 8:30:09 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 8:30:09 PM
Sulfate	***55.7***	4.00		mg/L	2	12/30/2015 8:30:09 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***390***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***40***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***430***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***18.6***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-7D dup
Work Order:	151216056	**Collection Date:**	12/15/2015 3:10:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-009
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***695***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-9R
Work Order:	151216056	**Collection Date:**	12/15/2015 1:20:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Conductivity	***696***	1.0		umhos/cm		12/15/2015 1:20:00 PM
Dissolved Oxygen	***0.86***	0.10		mg/L		12/15/2015 1:20:00 PM
eH	***42.3***			mV		12/15/2015 1:20:00 PM
pH	***6.9***			S.U.		12/15/2015 1:20:00 PM
Temperature	***13***			deg C		12/15/2015 1:20:00 PM
Turbidity	***< 1***	1.0		NTU		12/15/2015 1:20:00 PM
HARDNESS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Total Hardness (As CaCO3)	***330***	5		mg/L CaCO3	1	12/22/2015
ICP METALS - EPA 200.7 REV 4.4 **(Prep: SW3010A - 12/17/2015)**						Analyst: **SM**
Aluminum	***< 0.100***	0.100		mg/L	1	12/22/2015 7:35:24 PM
Arsenic	***< 0.005***	0.005		mg/L	1	12/22/2015 7:35:24 PM
Boron	***< 0.050***	0.050		mg/L	1	12/22/2015 7:35:24 PM
Calcium	***64.4***	0.050		mg/L	1	12/22/2015 7:35:24 PM
Iron	***0.758***	0.050		mg/L	1	12/22/2015 7:35:24 PM
Magnesium	***41.0***	0.050		mg/L	1	12/22/2015 7:35:24 PM
Manganese	***0.047***	0.020		mg/L	1	12/22/2015 7:35:24 PM
Potassium	***1.01***	0.050		mg/L	1	12/22/2015 7:35:24 PM
Selenium	***< 0.005***	0.005		mg/L	1	12/22/2015 7:35:24 PM
Sodium	***0.872***	0.050		mg/L	1	12/22/2015 7:35:24 PM
ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1						Analyst: **CS**
Chloride	***2.47***	2.00		mg/L	2	12/30/2015 8:45:15 PM
Bromide	***< 2.00***	2.00		mg/L	2	12/30/2015 8:45:15 PM
Sulfate	***34.8***	4.00		mg/L	2	12/30/2015 8:45:15 PM
ALKALINITY - SM 2320B-97,-11						Analyst: **AS**
Alkalinity, Bicarbonate (As CaCO3)	***333***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Carbonate (As CaCO3)	***13***	1.0		mg/L CaCO3	1	12/29/2015
Alkalinity, Total (As CaCO3)	***347***	1.0		mg/L CaCO3	1	12/29/2015
SULFUR IN WATER CALCULATION						Analyst: **CMH**
Sulfur	***11.6***	0.6		mg/L	1	12/31/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-9R
Work Order:	151216056	**Collection Date:**	12/15/2015 1:20:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-010
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
TOTAL DISSOLVED SOLIDS - SM 2540C-97,-11						Analyst: **CS**
TDS (Residue, Filterable)	***350***	5		mg/L	1	12/18/2015

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-1R
Work Order:	151216056	**Collection Date:**	12/14/2015 1:00:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-011
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	***Dry***			NA		12/14/2015 1:00:00 PM

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-4P
Work Order:	151216056	**Collection Date:**	12/15/2015 10:00:00 AM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-012
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	***Dry***			NA		12/15/2015 10:00:00 AM

Adirondack Environmental Services, Inc

Date: *04-Jan-16*

CLIENT:	Synapse Rick Management, LLC	**Client Sample ID:**	DW-8R
Work Order:	151216056	**Collection Date:**	12/14/2015 2:35:00 PM
Reference:	Quarterly GW / SWMF-Danskammer-Quarte	**Lab Sample ID:**	151216056-013
PO#:		**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
FIELD-PH, RES CL2, AND TEMP ARE NOT ELAP CERTIFIABLE						Analyst: **FLD**
Observation	***Dry***			NA		12/14/2015 2:35:00 PM

Adirondack Environmental Services Inc
314 North Pearl Street
Albany, New York 12207
518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 15121605C0

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Synapse	Address:		
Send Report to:	Project Name (Location): SWMF-Danskammer-Quarterly Routines	Samplers Name: Travis Minerley	
Client Phone No:	PO #:	Samplers Signature:	
Client Fax No:			

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
001	DW-3R	12/16/15	9:35	A (P)	GW		G	3	Routine Parameters
				A P					Al,As,B,Ca,Fe,Mg,Mn,K,
				A P					Se,Na,Hardness,Sulfur,
									Bromide,Chloride,Sulfate,
									Carbonate/Bicarbonate,
									Alkalinity,TDS
				P					Field: pH, Temp, sCond, DO,
									Turbidity, eH
002	DW-3P	12/15/15	1115	A (P)	GW		G	3	"
003	DW-4R	12/15/15	1035	A (P)	GW		G	3	"
				P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other: _____

Special Instructions/Remarks:

Turnaround Time Requested:
☐ 1 Day ☐ 3 Day ☐ Normal
☐ 2 -Day ☐ 5 Day

	Date	Time		Date	Time
Relinquished by: (Signature)	12/16/15	1:45	Received by: (Signature)		
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:**	Date	Time
			[illegible]	12/16	2:39pm

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

Adirondack Environmental Services Inc.®
314 North Pearl Street
Albany, New York 12207
518-434-4546 ♦ Fax: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#: 15121605G

EXPERIENCE IS THE SOLUTION

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: Synapse	Address:	
Send Report to:	Project Name (Location): SWMF-Danskammer-Quarterly Routines	Samplers Name: Travis Mineeley
Client Phone No:	PO #:	Samplers Signature:
Client Fax No:		

AES Sample ID	Client Sample ID:	Date Sampled	Time A=am P=pm		Sample Type Matrix	C	G	# of Cont's	Analysis
004	DW-5R	12/15/15	945	(A) P	GW		G	3	"
005	DW-6R	12/14/15	2:15	A (P)	GW		G	3	"
006	DW-6D	12/14/15	1:50	A (P)	GW		G	3	"
007	DW-7R	12/15/15	3:00	A (P)	GW		G	3	"
008	DW-7D	12/15/15	3:10	A (P)	GW		G	3	"
009	DW-7D dup	12/15/15	3:10	A (P)	GW		G	3	"
010	DW-9R	12/15/15	1:20	A (P)	GW		G	3	"
				P					
011	DW-1R	12/14/15	1:00	A (P)	GW		G	0	Observation Only
012	DW-4P	12/15/15	1000	(A) P	GW		G	0	Observation Only
013	DW-8R	12/14/15	2:35	A (P)	GW		G	0	Observation Only
				A P					

Shipment Arrived Via:
FedEx UPS Client (AES) Other:_____

Special Instructions/Remarks:

Page 2of 2

Turnaround Time Requested:
☐ 1 Day ☐ 3 Day ☐ Normal
☐ 2 -Day ☐ 5 Day

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	12/16/15	1:45			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	**Received for Laboratory by:** Cynthia Gannon	Date 12/16/15	Time 2:39pm

Sample Temperature
Ambient (Chilled)
Chilling Process begun
Notes: 4°C

Properly Preserved
(Y) N
Notes:

Received Within Holding Times
(Y) N
Notes:

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TERMS, CONDITIONS & LIMITATIONS

All service rendered by the **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.,** nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed or irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

(d) In no event shall **Adirondack Environmental Services, Inc.,** its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.

(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

(g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-3P
Project No.	DANSK 01.13.01	Sample ID:	DW-3P
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 35 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	4"
Depth to Water (ft):	21.8
Total Depth (ft):	
Well Volume (gal):	

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
11:05	20	5	10	310	22	6.8	14	620	6.2	131	2	
11:09	20	5	10	310	22.5	6.4	13	621	5.4	132	2	
11:13	20	5	10	310	22.6	6.3	14	627	5.3	134.6	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				y	y	y	y	y	y	y	N	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	11:15	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-6D
Project No.	DANSK 01.13.01	Sample ID:	DW-6D
Date:	12/14/2015	Sampler:	Mike Wisley
Weather:	Sunny, 40 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	4"
Depth to Water (ft):	55.25
Total Depth (ft):	70
Well Volume (gal):	9.6

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
13:29	40	5	10	350	59.2	7	12	941	6	59.2	2	
13:38	40	5	10	350	59.2	6.7	12	940	5.8	59.5	2	
13:43	40	5	10	350	59.2	6.9	13	942	5.2	75.4	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	13:50	

Comments: Routine Parameters

Synapse Risk Management, LLC

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-7D
Project No.	DANSK 01.13.01	Sample ID:	DW-7D
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 30 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	4"
Depth to Water (ft):	47.22
Total Depth (ft):	62.33
Well Volume (gal):	9.8

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
14:35	35	5	10	315	49.25	6.8	12	1311	7	119	5	
14:47	35	5	10	315	49.29	6.9	12	1320	6	120	2	
14:52	35	5	10	315	49.25	6.7	12	1360	5.8	121.9	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	1.5

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	15:10	

Comments: Routine Parameters

Synapse Risk Management, LLC

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-3R
Project No.	DANSK 01.13.01	Sample ID:	DW-3R
Date:	12/16/2015	Sampler:	Mike Wisley
Weather:	Sunny, 30 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	2"
Depth to Water (ft):	88.6
Total Depth (ft):	127.5
Well Volume (gal):	25.3

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
8:50	35	5	10	225	91.5	7.1	10	564	3.2	41.6	4	
9:00	35	5	10	225	91.5	7.1	11	566	5	42	2	
9:16	35	5	10	225	91.5	7.2	11	576	5.9	42.4	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	9:25	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-4R
Project No.	DANSK 01.13.01	Sample ID:	DW-4R
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 35F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	2"
Depth to Water (ft):	89.2
Total Depth (ft):	107.6
Well Volume (gal):	3.0

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
10:08	35	5	10	310	92	7.2	12	982	4	93.5	2	
10:17	35	5	10	310	92.5	6.9	13	984	3	94	2	
10:28	35	5	10	310	92.5	6.9	13	985	2.6	96.6	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	1.5

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	10:35	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-5R
Project No.	DANSK 01.13.01	Sample ID:	DW-5R
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 35 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	2"
Depth to Water (ft):	84.2
Total Depth (ft):	159.84
Well Volume (gal):	49.2

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
9:19	35	5	10	325	84.1	7	12	609	1.3	-5	2	
9:23	35	5	10	325	85.3	7.3	12	611	1	-15	2	
9:36	35	5	10	325	85.3	7.1	13	613	0.84	-19.1	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	1.5

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	9:45	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-6R
Project No.	DANSK 01.13.01	Sample ID:	DW-6R
Date:	12/14/2015	Sampler:	
Weather:	Sunny, 40 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	4"
Depth to Water (ft):	67.5
Total Depth (ft):	121.4
Well Volume (gal):	35.0

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
13:40	35	5	10	275	70	6.9	12	1038	6	-39.6	3	
13:44	35	5	10	275	71	6.9	13	1041	1.2	-41.8	2	
13:58	35	5	10	275	72	6.8	13	1046	0.61	-51.2	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	Y	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	14:15	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-7R
Project No.	DANSK 01.13.01	Sample ID:	DW-7R
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 40 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	2"
Depth to Water (ft):	37.6
Total Depth (ft):	89.89
Well Volume (gal):	8.5

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
14:35	35	5	10	285	42.5	6.5	13	951	6.2	110.5	7	
14:42	35	5	10	285	42.5	6.7	12	952	5	111	4	
14:56	35	5	10	285	42.5	6.8	12	958	4.29	112.6	4	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	Y	N	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	15:00	

Comments: Routine Parameters

LOW FLOW GROUNDWATER SAMPLING FIELD FORM

Site:	Danskammer SWMF	Well ID:	DW-9R
Project No.	DANSK 01.13.01	Sample ID:	DW-9R
Date:	12/15/2015	Sampler:	Mike Wisley
Weather:	Sunny, 35 F	Signature:	

Well Condition Observations	
Protective Casing:	Good
Lock:	Yes
Label:	Yes
Surface Seal:	Good
PVC Well Casing:	Good

Well Volume Calculations	
Well Diameter (in):	4"
Depth to Water (ft):	65.3
Total Depth (ft):	108
Well Volume (gal):	7.0

TIME	PUMP SETTING (feet of H_2O)	DISCHARGE TIME (seconds)	REFILL TIME (seconds)	FLOW RATE (ml/min)	DEPTH TO WATER (feet)	pH (SU)	TEMP (°C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	ORP (mv)	TURBIDITY (NTU)	PURGE VOLUME (liters)
1:02	35	5	10	350	68.2	6.9	12	989	2.5	40.5	2	
1:08	35	5	10	350	68.5	7.1	13	691	1	41	2	
1:12	35	5	10	350	68.7	6.9	13	696	0.86	42.3	<1	
Stabilization Criteria				100-400 ml/min	Drawdown <0.3'	± 0.1 units	3%	3%	10%	± 10 mv	10% (>1 NTU)	Total Purge
Stabilization Achieved (Y/N)				Y	Y	Y	Y	Y	Y	N	N	

Sampling/Purge Equipment	
Water Level Meter:	Solinst Model 101
pH/S.C./Dissolved Oxygen/ORP/Turbidity:	Horbia Model
Pump:	QED Bladder Pump Model
Intake Depth (feet below PVC):	
Tubing:	QED Bonded Poly Sample Tubing

Laboratory Analyses/Containers			
Container	Preservative	#	Analysis
8-OZ P	HNO3	1	Metals/Hardness
4-OZ P/G	None	1	Alk/Bicard/Card
32-OZ P	None	1	Br, Cl, SO4, TDS, SU, Turbidity

Sample Collection Time	Start	End
	1:20	

Comments: Routine Parameters

APPENDIX B
QUARTERLY WATER QUALITY DATA

2015 ANNUAL REPORT

DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

JANUARY 2016

TABLE 2-1
OVERBURDEN GROUNDWATER QUALITY DATA
MARCH 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Monitoring Well ID		**DW-3P**			**DW-6D**			**DW-7D**		
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**3/31/2015**	**Operational**	**STV**	**3/30/2015**	**Operational**	**STV**	**3/31/2015**
Aluminum	-	0.683	1.86	<0.100	0.94	6.5	<0.100	0.33	0.81	<0.100
Arsenic	0.025	0.004	0.01	**0.009**	0.01	0.01	**0.011**	0.01	0.01	0.01
Boron	1	0.240	0.66	**0.336**	0.21	0.51	0.195	0.12	0.48	<0.050
Calcium	-	74	184	**103**	128	159	**142**	111	135	**116**
Iron	0.3	0.901	2.85	<0.050	0.73	2.71	<0.050	0.44	1.29	<0.050
Magnesium	35	29	41	20.7	24	27	**25.2**	54	66	52.5
Manganese	0.3	0.153	0.55	<0.020	0.86	2.98	<0.020	0.06	0.24	<0.020
Potassium	-	3	7	2.9	1.41	4.71	1.04	1.32	3.13	1.08
Selenium		0.016	0.05	**0.073**	0.006	0.02	<0.005	0.01	0.04	<0.005
Alkalinity	-	279	454	240	336	448	280	401	521	115
Bromide	-	1	1	<2	1	1	<2	1	1	<2
Chloride	250	7	30	4.67	21	32	**79.3**	64	96	**101**
Hardness	-	348	508	343	414	494	**459**	503	611	**505**
Sodium	20	7	24	**12.4**	8	12	**14**	25	42	**36.7**
Sulfate	250	59	240	**119**	81	117	**116**	67	98	54.2
Sulfur	-	30	70	**39.7**	31	42	**38.7**	28	56	18.1
Total Dissolved Solids	500	396	593	**440**	522	700	**570**	612	951	**660**
Carbonate	-	3	9	<1	3	9	**10**	3	9	<1
Bicarbonate	-	287	477	240	344	462	270	415	533	115
Conductivity	-	1403	1403	718	1403	1403	1025	1403	1403	975
Turbidity	5	35	95	2	12	36	5	18	68	2

Notes:
1. Operational = Existing Water Quality, the mean of prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. Overburden monitoring wells to be accessed utilizing Intrawell comparison.
5. Bolded cells indicate that the concentration is above the Operational Trigger Value.
6. Shaded cells indicate that the concentration is above the Statistical Trigger Value.
7. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
8. NA = Not Available, due to limited data from dry monitoring wells, or incomplete historical data.
* - Exceedance of OTV & GWQS.

TABLE 2-3
LEACHATE COLLECTION SYSTEM DATA
MARCH 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

BASELINE

Location	P2-PLCS	P2-SLCS-E	P2-SLCS-W	P3-PLCS	P3-SLCS	P1-GID	P1-SB	P2-SB	P2-SSS	PI-UD
Alkalinity	435	NS	NS	200	NS	275	110	100	NS	215
Bicarbonate	435	NS	NS	200	NS	275	110	100	NS	215
Bromide	3.93	NS	NS	2.65	NS	<2	<2	<2	NS	<5
Carbonate	<5	NS	NS	<5	NS	<5	<5	<5	NS	<1
Chloride	20	NS	NS	11	NS	39.3	49.5	23.1	NS	51.9
Cyanide, Total	<0.01	NS	NS	<0.01	NS	<0.01	NS	NS	NS	<0.01
Color	5	NS	NS	<5	NS	<5	NS	NS	NS	5
Hexavalent Chromium	<0.02	NS	NS	<0.02	NS	<0.02	NS	NS	NS	<0.02
Sulfate	1450	NS	NS	703	NS	355	507	22.3	NS	164
Sulfide	<0.1	NS	NS	<0.1	NS	<0.1	NS	NS	NS	<0.10
Sulfur	484	NS	NS	235	NS	118.0	169	7.4	NS	54.7
Total Dissolved Solids	2840	NS	NS	1280	NS	790	860	45	NS	490
Hardness	2138	NS	NS	953	NS	578	274	66	NS	373
Turbidity	4	NS	NS	6	NS	2	4	29	NS	4
Aluminum	<0.100	NS	NS	<0.100	NS	<0.100	<0.100	<0.100	NS	<0.100
Antimony	<0.060	NS	NS	<0.060	NS	<0.060	NS	NS	NS	<0.060
Arsenic	0.018	NS	NS	0.027	NS	0.008	0.007	0.005	NS	0.01
Barium	0.023	NS	NS	0.037	NS	0.026	NS	NS	NS	0.032
Beryllium	<0.005	NS	NS	<0.005	NS	<0.005	NS	NS	NS	<0.005
Boron	23.4	NS	NS	15.2	NS	4.22	<0.050	0.272	NS	0.893
Cadmium	<0.005	NS	NS	<0.005	NS	<0.005	NS	NS	NS	<0.005
Calcium	657	NS	NS	302	NS	187	NS	NS	NS	106
Chromium	<0.005	NS	NS	0.007	NS	<0.005	NS	NS	NS	0.006
Cobalt	<0.050	NS	NS	<0.050	NS	<0.050	NS	NS	NS	<0.050
Copper	<0.005	NS	NS	<0.005	NS	<0.005	NS	NS	NS	<0.005
Iron	0.056	NS	NS	<0.050	NS	<0.050	1.28	<0.050	NS	<0.050
Lead	<0.005	NS	NS	<0.005	NS	<0.005	NS	NS	NS	<0.005
Magnesium	121	NS	NS	48.6	NS	27.1	33.7	3.3	NS	26.2
Manganese	0.569	NS	NS	<0.020	NS	<0.020	0.071	0.021	NS	<0.020
Mercury	<0.0002	NS	NS	<0.0002	NS	<0.0002	NS	NS	NS	<0.0002
Nickel	<0.020	NS	NS	<0.020	NS	<0.020	NS	NS	NS	<0.020
Potassium	67.9	NS	NS	38.4	NS	5.71	1.29	1.75	NS	2.6
Selenium	1.56	NS	NS	1.04	NS	0.015	<0.005	0.041	NS	0.066
Silver	<0.010	NS	NS	<0.010	NS	<0.010	NS	NS	NS	<0.010
Sodium	92.6	NS	NS	81.8	NS	38.3	1.77	105	NS	35.9
Thallium	<0.010	NS	NS	<0.010	NS	<0.010	NS	NS	NS	<0.010
Vanadium	0.042	NS	NS	<0.020	NS	<0.020	NS	NS	NS	<0.020
Zinc	<0.010	NS	NS	<0.010	NS	<0.010	NS	NS	NS	0.013
Conductivity	3440	NS	NS	1852	NS	1336	1441	273	NS	844
Ph	6.9	NS	NS	7.8	NS	7.6	7.7	29	NS	7.3

Notes:
1. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
2. NS = No sample collected due to insufficient or no flow condition.

TABLE 2-1
OVERBURDEN GROUNDWATER QUALITY DATA
JUNE 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Monitoring Well ID		**DW-3P**			**DW-6D**			**DW-7D**		
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**6/29/2015**	**Operational**	**STV**	**6/29/2015**	**Operational**	**STV**	**6/30/2015**
Aluminum	-	0.683	1.86	<0.100	0.94	6.5	<0.100	0.33	0.81	<0.100
Arsenic	0.025	0.004	0.01	<0.005	0.01	0.01	<0.005	0.01	0.01	<0.005
Boron	1	0.240	0.66	**0.814**	0.21	0.51	0.151	0.12	0.48	<0.050
Calcium	-	74	184	**107**	128	159	120	111	135	**151**
Iron	0.3	0.901	2.85	<0.050	0.73	2.71	<0.050	0.44	1.29	<0.050
Magnesium	35	29	41	12.9	24	27	24	54	66	47.3
Manganese	0.3	0.153	0.55	<0.020	0.86	2.98	<0.020	0.06	0.24	<0.020
Potassium	-	3	7	2.12	1.41	4.71	0.86	1.32	3.13	0.94
Selenium		0.016	0.05	<0.005	0.006	0.02	<0.005	0.01	0.04	<0.005
Alkalinity	-	279	454	230	336	448	240	401	521	393
Bromide	-	1	1	<2	1	1	<2	1	1	<2
Chloride	250	7	30	2.12	21	32	**83.2**	64	96	**117**
Hardness	-	348	508	321	414	494	399	503	611	**572**
Sodium	20	7	24	**12.3**	8	12	**14.2**	25	42	**45.5**
Sulfate	250	59	240	**62.6**	81	117	**113**	67	98	**67.9**
Sulfur	-	30	70	20.9	31	42	**37.7**	28	56	22.7
Total Dissolved Solids	500	396	593	315	522	700	**550**	612	951	**640**
Carbonate	-	3	9	<10	3	9	<10	3	9	**13**
Bicarbonate	-	287	477	230	344	462	240	415	533	380
Conductivity	-	1403	1403	560	1403	1403	938	1403	1403	1171
Turbidity	5	35	95	8	12	36	6	18	68	1

Notes:
1. Operational = Existing Water Quality, the mean of prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. Overburden monitoring wells to be accessed utilizing Intrawell comparison.
5. Bolded cells indicate that the concentration is above the Operational Trigger Value.
6. Shaded cells indicate that the concentration is above the Statistical Trigger Value.
7. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
8. NA = Not Available, due to limited data from dry monitoring wells, or incomplete historical data.
* - Exceedance of OTV & GWQS.

TABLE 2-2
BEDROCK GROUNDWATER QUALITY DATA
JUNE 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Monitoring Well ID				**DW-1R**	**DW-3R**	**DW-4R**	**DW-5R**	**DW-6R**	**DW-7R**	**DW-8R**	**DW-9R**
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**6/30/2015**	**6/29/2015**	**6/29/2015**	**6/29/2015**	**6/29/2015**	**6/29/2015**	**6/302015**	**6/30/2015**
Aluminum	-	0.39	1.5	0.141	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Arsenic	0.025	0.01	0.02	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005
Boron	1	0.050	1.05	<0.050	<0.050	**0.457**	<0.050	**0.278**	<0.050	<0.050	<0.050
Calcium	-	227	250	135	63.9	107	78	137	122	97.3	98.3
Iron	0.3	0.95	3.6	0.167	<0.050	<0.050	0.506	0.707	<0.050	0.061	0.318
Magnesium	35	53	69	**74.3**	29.9	42.9	34.6	45.4	42.4	36.4	42
Manganese	0.3	0.03	0.11	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.058
Potassium	-	1.6	9	1.56	0.749	0.94	1.12	1.05	0.807	0.529	1.1
Selenium		0.004	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alkalinity	-	402	604	320	250	313	300	400	367	360	367
Bromide	-	1	1	<2	<2	<2	<2	<2	<2	<2	<2
Chloride	250	25	136	3	2.41	**36.5**	5.67	**60.6**	**61.5**	4.15	2.68
Hardness	-	449	830	**643**	283	442	337	**529**	**480**	393	419
Sodium	20	18	75	11.7	2.43	17.3	3.02	**27**	**31.2**	4.23	1.16
Sulfate	250	72	214	**158**	39.5	**141**	40.6	**107**	**81.5**	25.6	38.9
Sulfur	-	50	89	**52.7**	13.2	47.1	13.6	35.7	27.2	8.5	13
Total Dissolved Solids	500	500	668	**555**	270	**570**	315	**635**	**550**	375	380
Carbonate	-	3	9	<10	<10	<6.6	<10	<10	**27**	<7	<7
Bicarbonate	-	406	612	320	250	313	300	400	367	360	367
Conductivity	-	1995	1400	904	515	934	610	1087	1010	711	748
Turbidity	5	15	65	**25**	7	2	4	5	1	9	3

Notes:
1. Operational = Existing Water Quality, the mean of the prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. NA = Not Available, due to limited data from dry monitoring wells, insufficient water volume to allow sample collection, or incomplete historical data.
5. Bedrock monitoring wells to be accessed utilizing Intrawell comparison.
6. Bolded cells indicate that the concentration is above the Operational Trigger Value.
7. Shaded cells indicate that the concentration is above the STV.
* - Exceedance of OTV & GWQS.

TABLE 2-1
OVERBURDEN GROUNDWATER QUALITY DATA
SEPTEMBER 2015
DYNEGY DANSKAMMER, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

ROUTINE

Monitoring Well ID		**DW-3P**			**DW-6D**			**DW-7D**		
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**9/22/2015**	**Operational**	**STV**	**9/23/2015**	**Operational**	**STV**	**9/23/2015**
Aluminum	-	0.683	1.86	<0.100	0.94	1.39	<0.100	0.33	0.81	<0.100
Arsenic	0.025	0.004	0.01	<0.005	0	0.01	<0.005	0.01	0.01	<0.005
Boron	1	0.240	0.63	**0.909**	0.21	0.51	0.204	0.12	0.48	<0.050
Calcium	-	74	184	**89.3**	128	159	**141**	111	135	**121**
Iron	0.3	0.901	2.85	<0.005	0.73	2.71	0.075	0.44	1.19	0.066
Magnesium	35	29	41	16.5	24	27	**28.6**	54	66	**58.9**
Manganese	0.3	0.153	0.55	<0.020	0.86	2.98	0.021	0.06	0.24	<0.020
Potassium	-	3	7	2.23	1.41	4.71	0.929	1.32	3.13	1.11
Selenium		0.016	0.05	**0.033**	0	0.02	<0.005	0.01	0.04	<0.005
Alkalinity	-	279	454	220	336	448	293	401	521	**413**
Bromide	-	1	1	<2	1	1	<2	1	1	<2
Chloride	250	7	30	3.78	21	32	**95.1**	64	96	**126**
Hardness	-	348	462	291	414	494	**462**	503	611	**544**
Sodium	20	7	13	**9.19**	8	13	**20.5**	25	42	**36.3**
Sulfate	250	59	183	**105**	81	117	**126**	67	98	**68.6**
Sulfur	-	30	70	**35**	31	42	**42.1**	28	56	22.9
Total Dissolved Solids	500	396	593	325	522	700	**550**	612	951	**640**
Carbonate	-	3	9	**13**	3	9	**27**	3	9	**40**
Bicarbonate	-	287	477	207	344	462	266	415	533	373
Conductivity	-	1403	1403	609	1403	1403	936	1403	1403	1223
Turbidity	5	35	95	<1	12	36	<1	18	68	<1

BASELINE

Monitoring Well ID		**DW-3P**			**DW-6D**			**DW-7D**		
Baseline Parameters	**NYSDEC Standard**	**Operational**	**STV**	**9/22/2015**	**Operational**	**STV**	**9/23/2015**	**Operational**	**STV**	**9/23/2015**
Antimony	0.003	0.006	0.01	<0.060	0.022	0.09	<0.060	0.03	0.115	<0.060
Barium	1	0.035	0.052	0.03	0.033	0.06	0.033	0.03	0.036	0.033
Beryllium	1	0.002	0.01	<0.005	0.002	0.01	<0.005	0.01	0.058	<0.005
Cadmium	0.003	0.003	0.01	<0.005	0.003	0.01	<0.005	0.01	0.01	<0.005
Chromium	0.05	0.003	0.01	<0.005	0.053	0.11	<0.005	0.01	0.01	<0.005
Hexavalent Chromium	0.05	0.014	0.03	<0.02	0.013	0.03	<0.02	0.01	0.03	<0.02
Cobolt	-	0.021	0.101	<0.050	0.029	0.09	<0.050	0.02	0.101	<0.050
Copper	0.2	0.005	0.008	<0.005	0.004	0.01	<0.005	0.005	0.008	<0.005
Lead	0.025	0.005	0.008	<0.005	0.007	0.02	<0.005	0.003	0.009	<0.005
Mercury	0.002	0.002	0.002	<0.0002	0.002	0.002	<0.0002	0.002	0.002	<0.0002
Nickel	-	0.009	0.039	<0.020	0.011	0.04	<0.020	0.04	0.01	<0.020
Silver	0.05	0.006	0.018	<0.010	0.006	0.02	<0.010	0.01	0.017	<0.010
Thallium	0.004	0.006	0.018	<0.010	0.006	0.02	<0.010	0.01	0.018	**0.016**
Vanadium	-	0.009	0.039	<0.020	0.013	0.03	<0.020	0.01	0.039	<0.020
Zinc	0.3	0.009	0.2	<0.010	0.008	0.2	<0.010	0.01	0.2	<0.010
Color	15	20	66	<5	11	31	<5	16	60	<5
Sulfide	0.05	0.082	0.203	<0.10	0.082	0.2	<0.10	0.08	0.203	<0.10
Cyanide	0.1	0.01	0.01	<0.01	0.01	0.01	<0.01	0.01	0.01	<0.01

Notes:

1. Operational = Existing Water Quality, the mean of the prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. Overburden monitoring wells to be accessed utilizing Intrawell comparison.
5. Bolded cells indicate that the concentration is above the Operational Trigger Value.
6. Shaded cells indicate that the concentration is above the Statistical Trigger Value.
7. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
8. NA = Not Available, due to limited data from dry monitoring wells, or incomplete historical data.

TABLE 2-2
BEDROCK GROUNDWATER QUALITY DATA
SEPTEMBER 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Monitoring Well ID				**DW-3R**	**DW-4R**	**DW-5R**	**DW-6R**	**DW-7R**	**DW-9R**
Routine Parameters	**NYSDEC Standard**	**Operational**	**STV**	**9/22/2015**	**9/23/2015**	**9/23/2015**	**9/23/2015**	**9/23/2015**	**9/22/2015**
Aluminum	-	0.39	1.5	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Arsenic	0.025	0.01	0.2	<0.005	<0.005	<0.005	<0.005	<0.005	0.012
Boron	1	0.050	1.05	<0.050	**0.542**	<0.050	**0.301**	<0.050	<0.050
Calcium	-	227	250	51.8	114	62.3	127	105	75.9
Iron	0.3	0.95	3.6	0.229	0.128	0.118	**2.39**	<0.050	0.146
Magnesium	35	53	69	33.2	47.7	37.9	**54.3**	48.6	42.9
Manganese	0.3	0.03	0.11	<0.020	<0.020	<0.020	**0.03**	<0.020	0.113
Potassium	-	1.6	9	0.788	0.997	1.14	1.16	0.938	1.29
Selenium		0.004	0.009	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Alkalinity	-	402	604	253	347	293	420	387	353
Bromide	-	1	1	<2	<2	<2	<2	<2	<2
Chloride	250	25	136	2.69	**32.9**	4.67	**59.4**	**38.9**	2.72
Hardness	-	449	830	266	**482**	312	**541**	**462**	366
Sodium	20	18	75	9.19	17.2	3.13	**25.1**	**20.5**	1.26
Sulfate	250	72	214	38.5	**153**	38.9	**130**	**95.2**	37.5
Sulfur	-	50	89	12.9	**51.1**	13	43.4	31.8	12.5
Total Dissolved Solids	500	500	668	250	**585**	315	**695**	**540**	355
Carbonate	-	3	9	**13**	<4	**67**	**27**	**40**	**17**
Bicarbonate	-	406	612	240	347	226	393	347	336
Conductivity	-	1995	1400	538	993	626	1159	936	731
Turbidity	5	15	65	<1	<1	<1	<1	<1	<1

BASELINE

Monitoring Well ID				**DW-3R**	**DW-4R**	**DW-5R**	**DW-6R**	**DW-7R**	**DW-9R**
Baseline Parameters	**NYSDEC Standard**	**Operational**	**STV**	**9/22/2015**	**9/23/2015**	**9/23/2015**	**9/23/2015**	**9/23/2015**	**9/22/2015**
Antimony	0.003	0.028	0.118	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Barium	1	0.13	0.515	0.03	0.073	0.108	0.066	0.053	0.037
Beryllium	1	0.003	1.48	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cadmium	0.003	0.002	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chromium	0.05	0.001	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexavalent Chromium	0.05	0.006	0.032	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cobalt	-	0.027	0.106	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Copper	0.2	0.003	0.014	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead	0.025	0.003	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury	0.002	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Nickel	-	0.01	0.044	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Silver	0.05	0.003	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Thallium	0.004	0.004	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Vanadium	-	0.01	0.041	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Zinc	0.3	0.009	0.139	<0.010	<0.010	<0.010	<0.010	**0.025**	<0.010
Color	15	10	53	<5	<5	<5	<5	<5	<5
Sulfide	0.05	0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Cyanide	0.1	0.046	0.17	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Notes:
1. Operational = Existing Water Quality, the mean of the prior five years (2000-2004) of analytical data, where available.
2. STV = Statistical Trigger Values: Calculated value of three standard deviations above the average analytical value.
3. NYSDEC Standard = Groundwater Quality Standards per NYCRR Part 703.
4. NA = Not Available, due to limited data from dry monitoring wells, insufficient water volume to allow sample collection, or incomplete historical data.
5. Bedrock monitoring wells to be accessed utilizing Intrawell comparison.
6. Bolded cells indicate that the concentration is above the Operational Trigger Value.
7. Shaded cells indicate that the concentration is above the STV.

TABLE 2-3
LEACHATE COLLECTION SYSTEM DATA
SEPTEMBER 2015
DANSKAMMER ENERGY, LLC
DANSKAMMER SOLID WASTE MANAGEMENT FACILITY

Leachate ID	P2-PLCS	P2-SLCS-E	P2-SLCS-W	P3-PLCS	P3-SLCS	P2-SSS	SB1-SW	SB2-SW	PI-GID	PI-UD
Parameters	**Baseline**	**Baseline**	**Baseline**	**Baseline**	**Baseline**	**Baseline**	**Routine**	**Routine**	**Baseline**	**Baseline**
Alkalinity	427	NS	NS	167	NS	NS	68	87	NS	307
Bicarbonate	427	NS	NS	167	NS	NS	68	87	NS	294
Bromide	5.63	NS	NS	7	NS	NS	2.36	3.27	NS	<2
Carbonate	<1	NS	NS	<4	NS	NS	<4	<4	NS	13
Chloride	24.9	NS	NS	22.6	NS	NS	43.4	43.8	NS	109
Cyanide, Total	<0.005	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Color	<5	NS	NS	<5	NS	NS	NA	NA	NS	8
Hexavalent Chromium	<0.02	NS	NS	<0.02	NS	NS	NA	NA	NS	<0.02
Sulfate	1970	NS	NS	1750	NS	NS	1000	1340	NS	492
Sulfide	<0.10	NS	NS	<0.10	NS	NS	NA	NA	NS	<0.10
Sulfur	658	NS	NS	584	NS	NS	334	447	NS	164
Total Dissolved Solids	3120	NS	NS	2460	NS	NS	1420	1950	NS	1070
Hardness	1985	NS	NS	1516	NS	NS	924	1271	NS	718
Turbidity	32	NS	NS	14	NS	NS	<1	<1	NS	11
Aluminum	<0.100	NS	NS	<0.001	NS	NS	<0.100	<0.100	NS	<0.100
Antimony	<0.060	NS	NS	<0.060	NS	NS	NA	NA	NS	<0.060
Arsenic	0.02	NS	NS	0.033	NS	NS	0.011	0.012	NS	<0.005
Barium	0.025	NS	NS	0.036	NS	NS	NA	NA	NS	0.055
Beryllium	<0.005	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Boron	26.7	NS	NS	25.3	NS	NS	8.79	14	NS	2.69
Cadmium	<0.005	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Calcium	569	NS	NS	472	NS	NS	273	357	NS	191
Chromium	<0.005	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Cobalt	<0.050	NS	NS	<0.050	NS	NS	NA	NA	NS	<0.050
Copper	0.007	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Iron	<0.050	NS	NS	<0.050	NS	NS	<0.050	<0.050	NS	<0.050
Lead	<0.005	NS	NS	<0.005	NS	NS	NA	NA	NS	<0.005
Magnesium	137	NS	NS	82.3	NS	NS	58.6	92.5	NS	58.4
Manganese	0.387	NS	NS	<0.020	NS	NS	<0.020	0.045	NS	<0.020
Mercury	<0.0002	NS	NS	<0.0002	NS	NS	NA	NA	NS	<0.0002
Nickel	<0.020	NS	NS	<0.020	NS	NS	NA	NA	NS	<0.020
Potassium	75.2	NS	NS	65.3	NS	NS	23.3	40.2	NS	0.075
Selenium	1.17	NS	NS	0.467	NS	NS	0.067	0.279	NS	0.077
Silver	<0.010	NS	NS	<0.010	NS	NS	NA	NA	NS	<0.010
Sodium	94.2	NS	NS	117	NS	NS	45.6	56.7	NS	53.8
Thallium	<0.010	NS	NS	<0.010	NS	NS	NA	NA	NS	<0.010
Vanadium	0.038	NS	NS	<0.020	NS	NS	NA	NA	NS	<0.020
Zinc	<0.010	NS	NS	<0.010	NS	NS	NA	NA	NS	<0.010
Conductivity	3460	NS	NS	2795	NS	NS	1782	2267	NS	1648
Ph	6.8	NS	NS	7.7	NS	NS	7.9	7.9	NS	8

Notes:
1. Concentrations reported in milligrams per liter (mg/L), approximately equivalent to parts per million.
2. NS = No sample collected due to insufficient or no flow condition.
3. NA = Not analyzed.

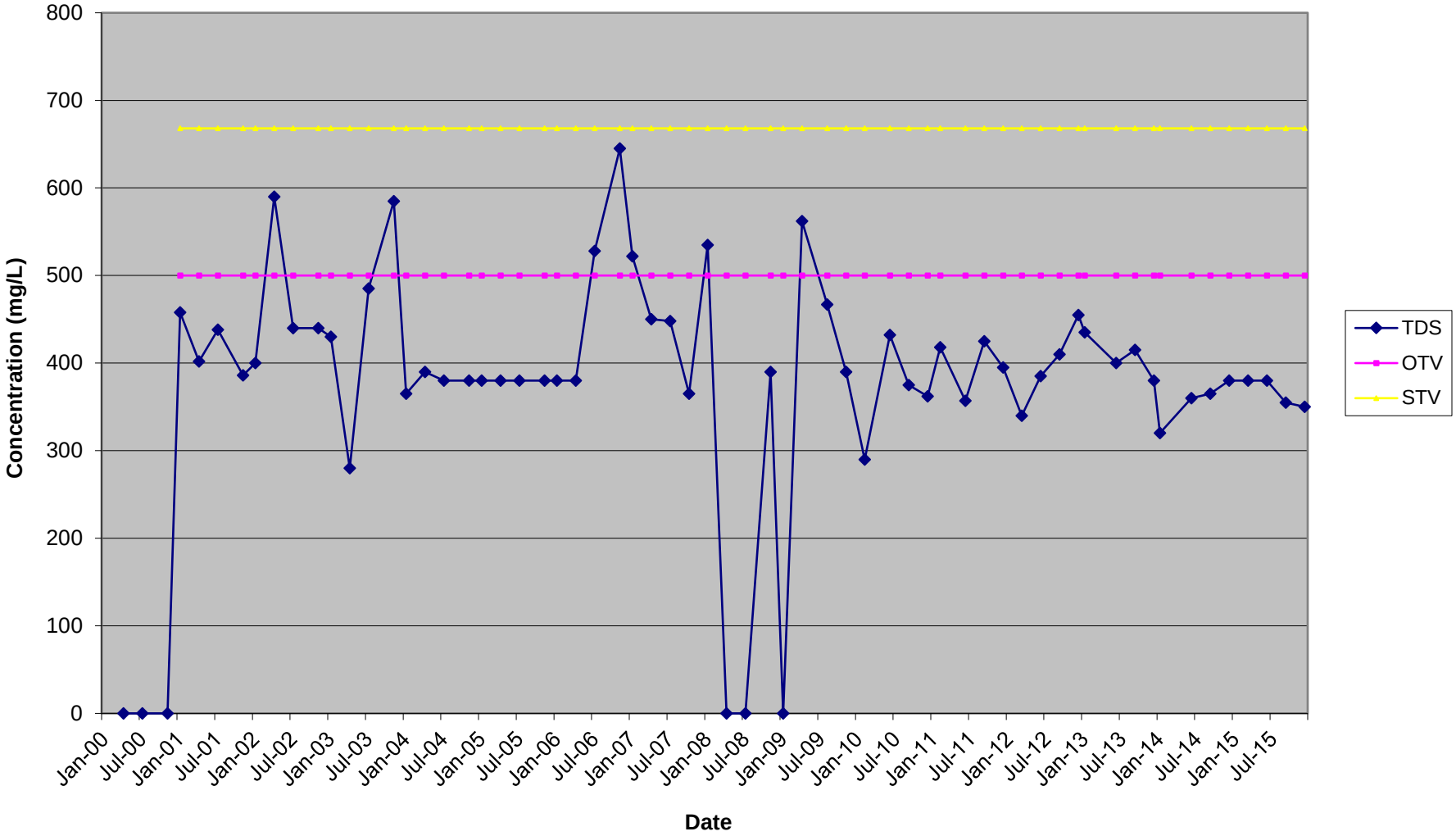
APPENDIX C
INDICATOR PARAMETER TIME TREND PLOTS

2015 ANNUAL REPORT

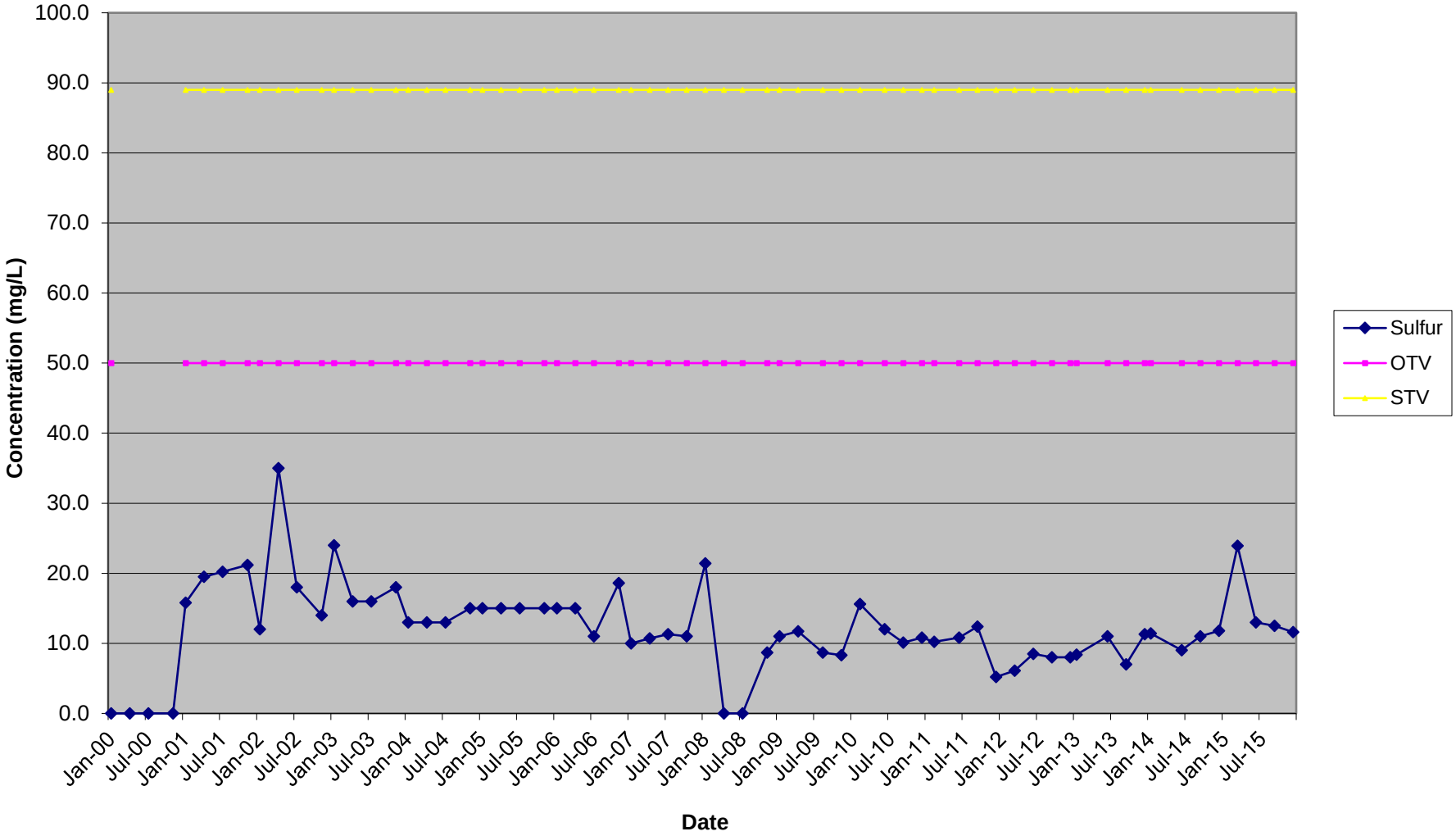
DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

JANUARY 2016

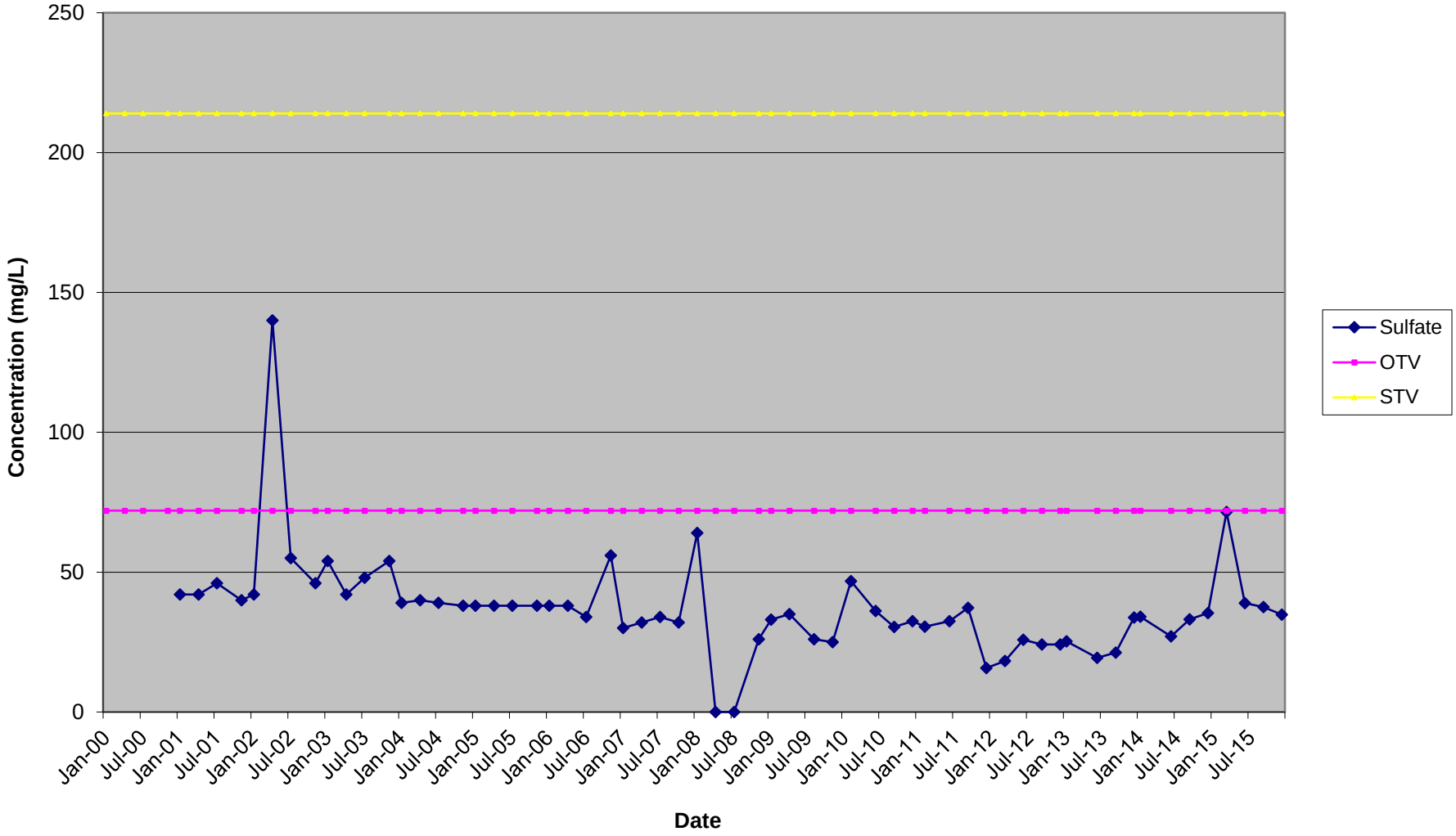
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DW-9R



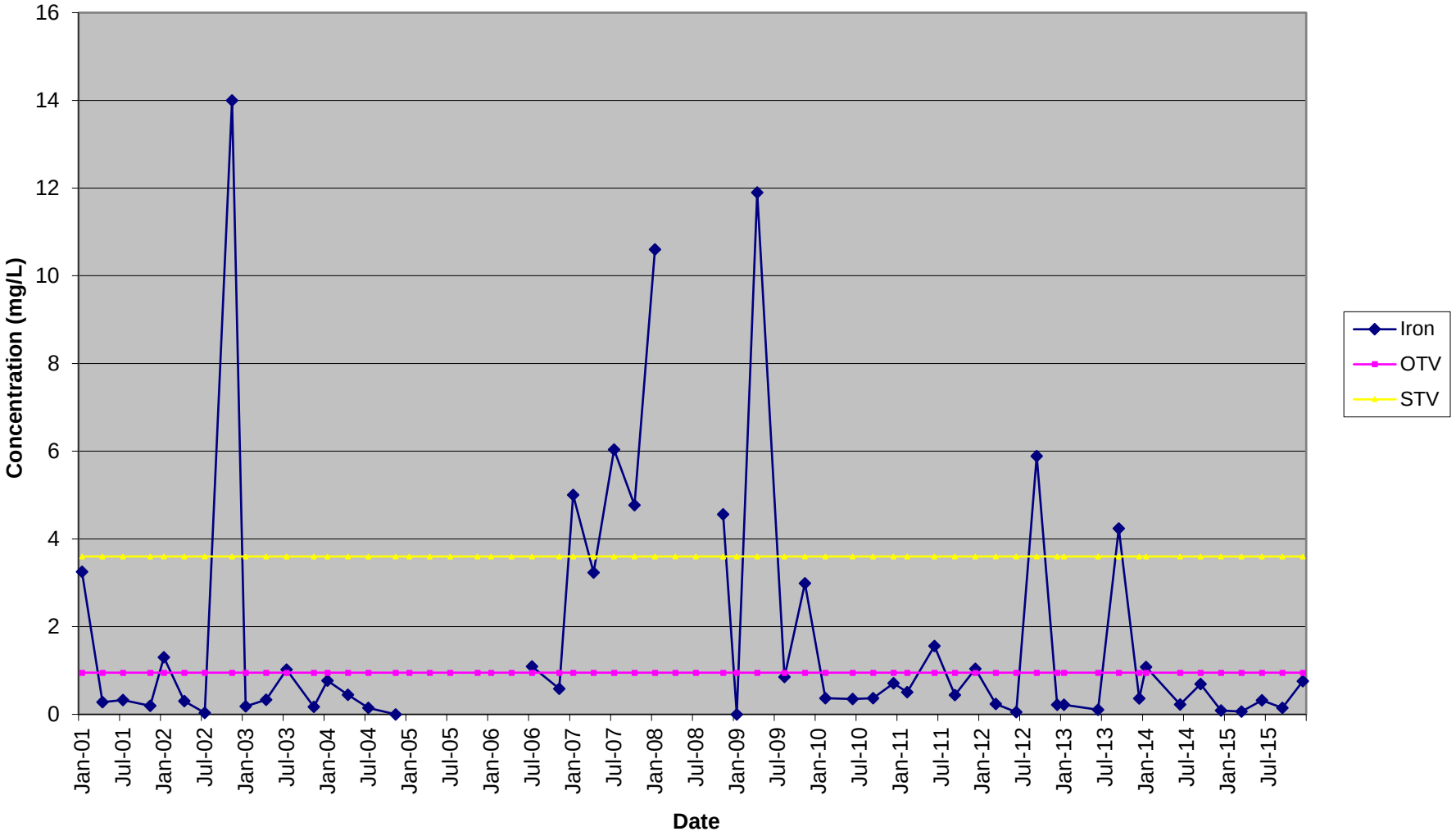
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DW-9R



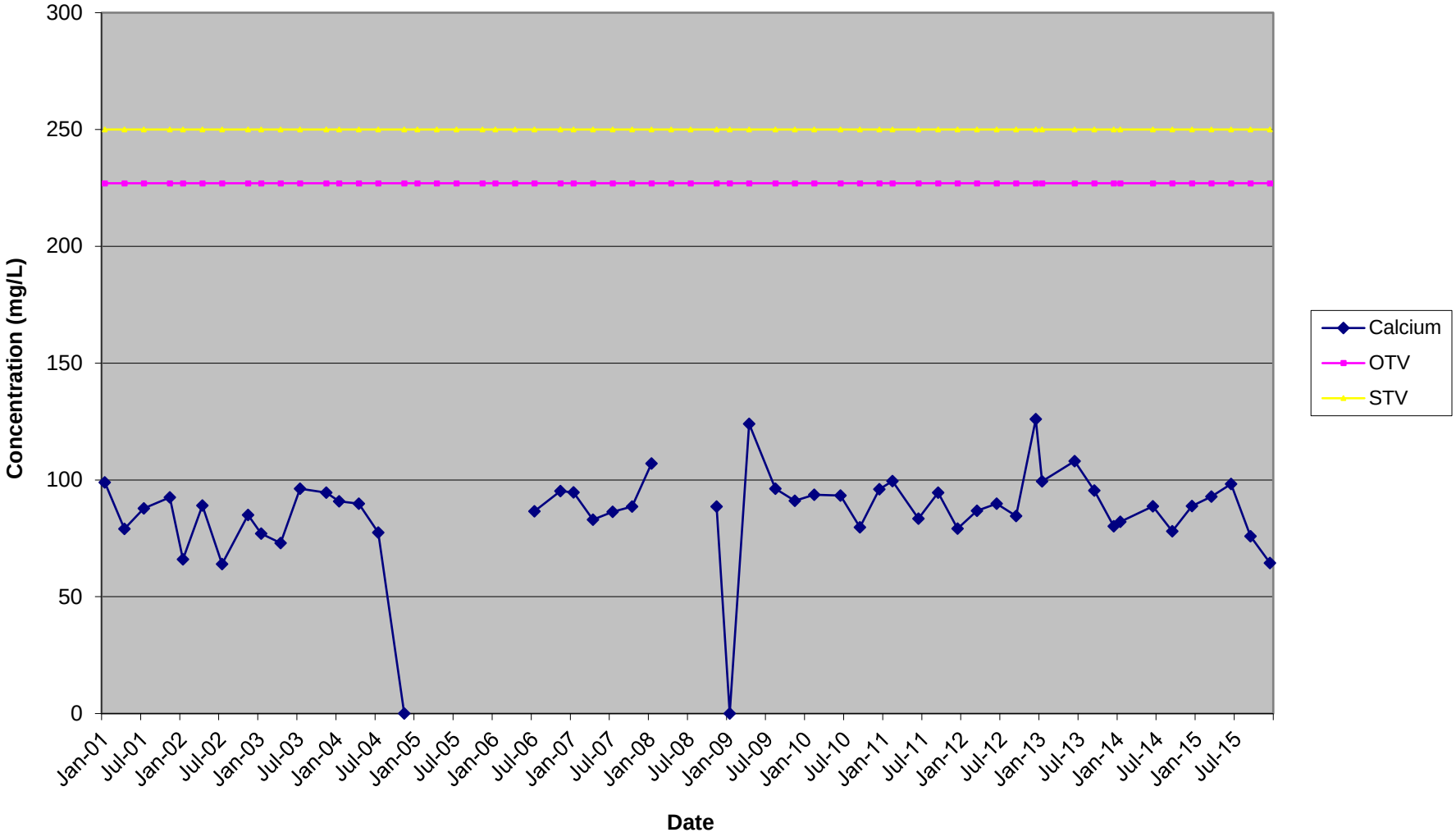
Indicator Parameter Time Trends
DW-9R



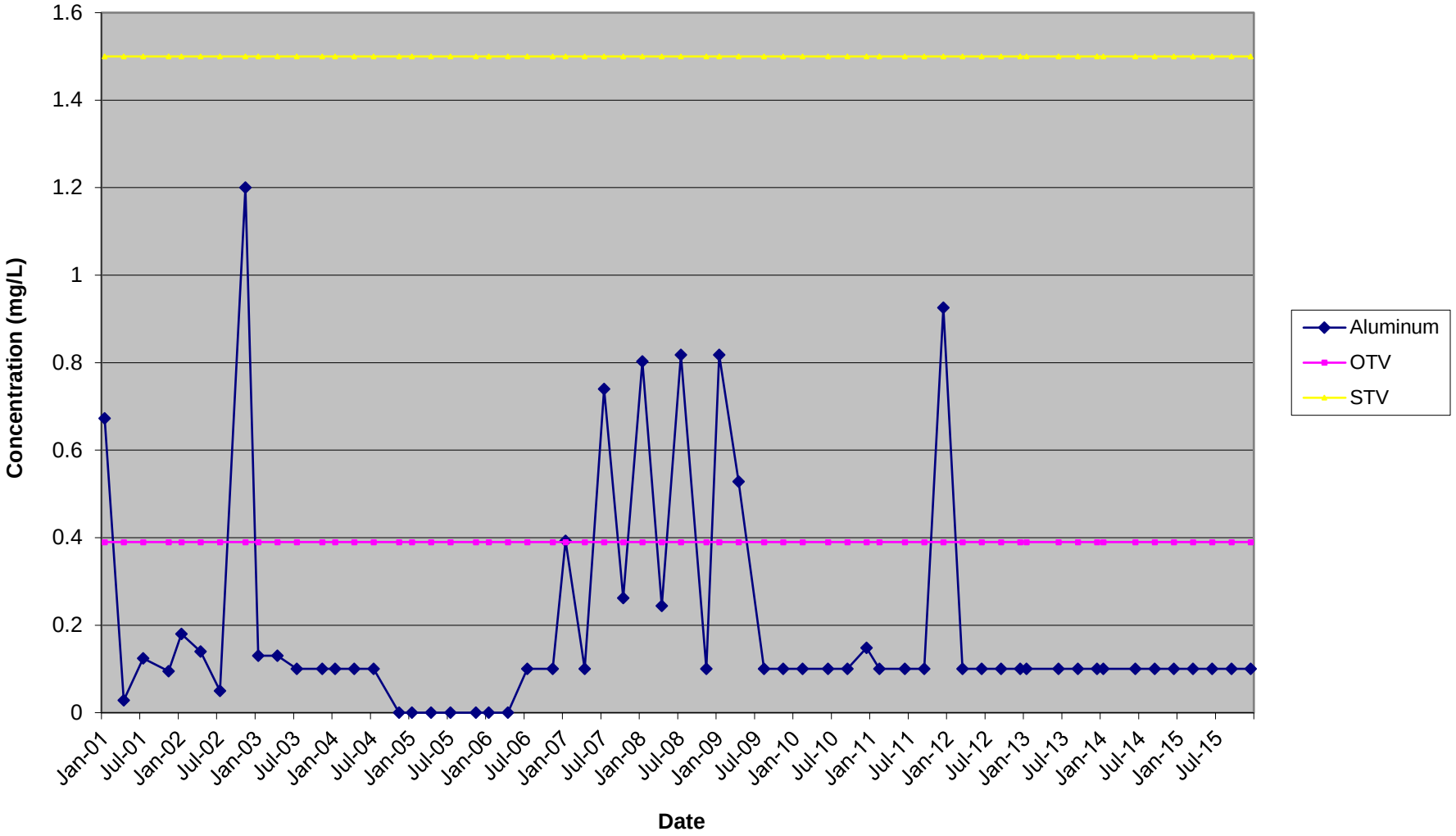
Indicator Parameter Time Trends
DW-9R



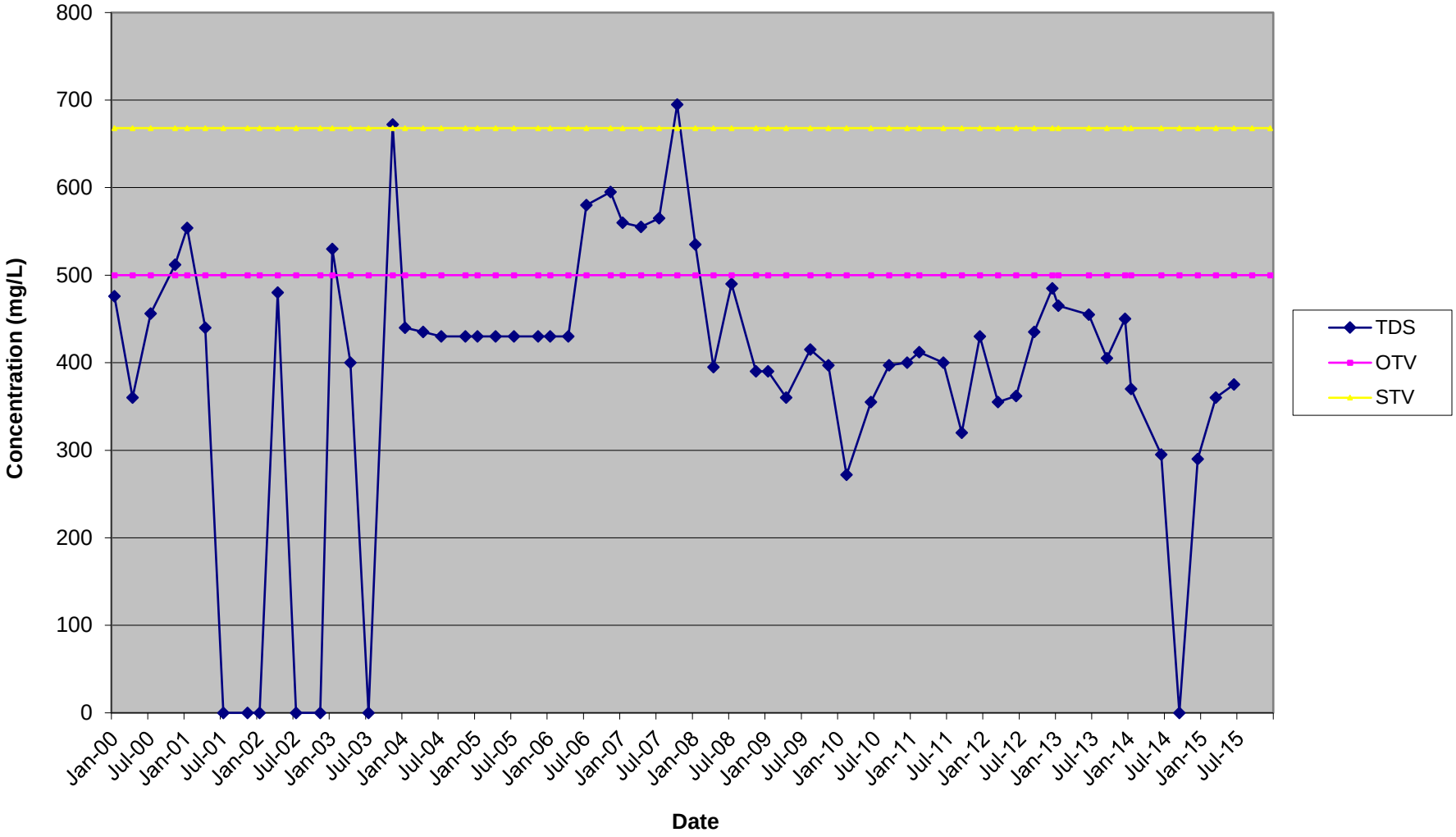
Indicator Parameter Time Trends
DW-9R



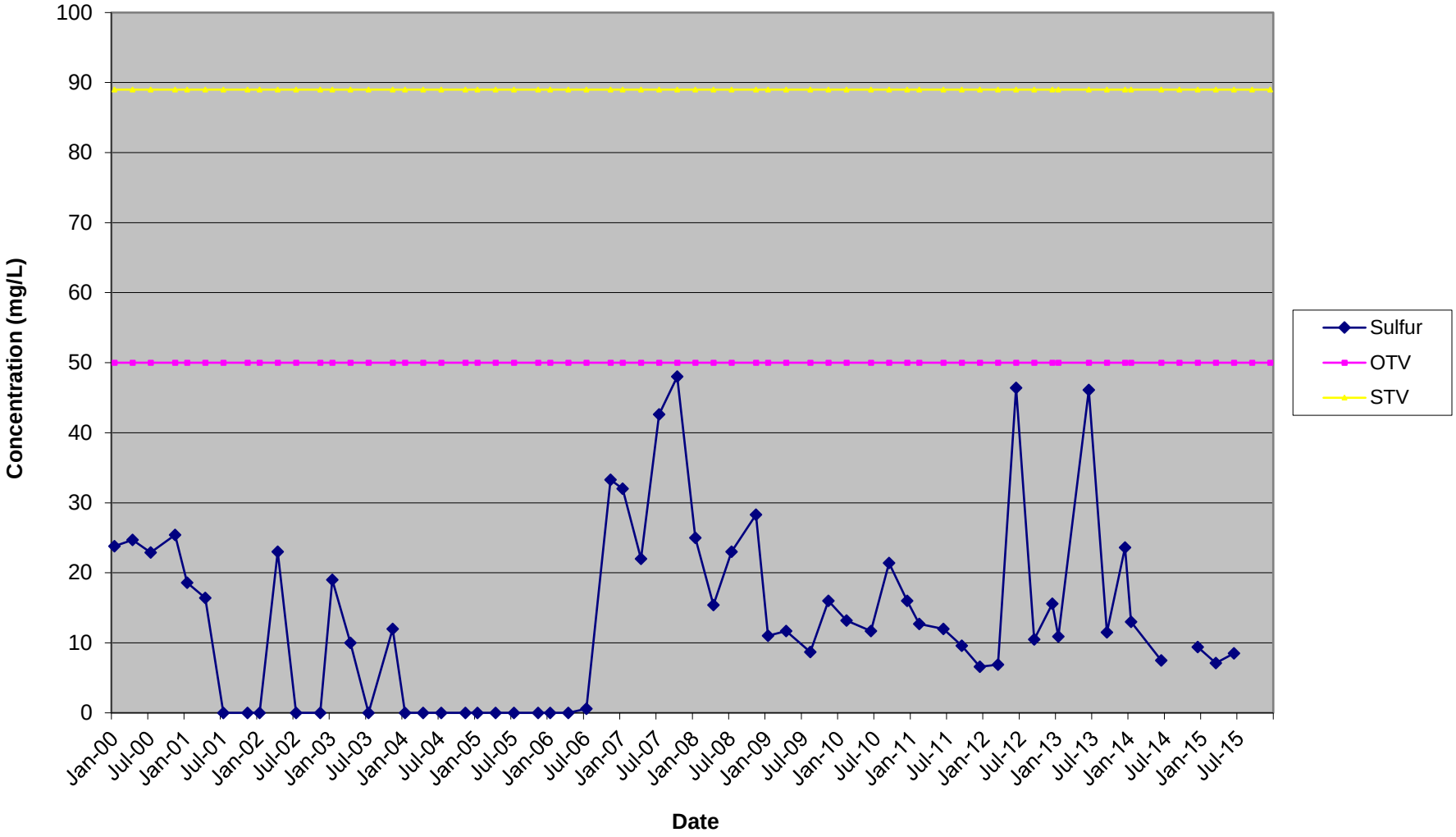
Indicator Parameter Time Trends
DW-9R



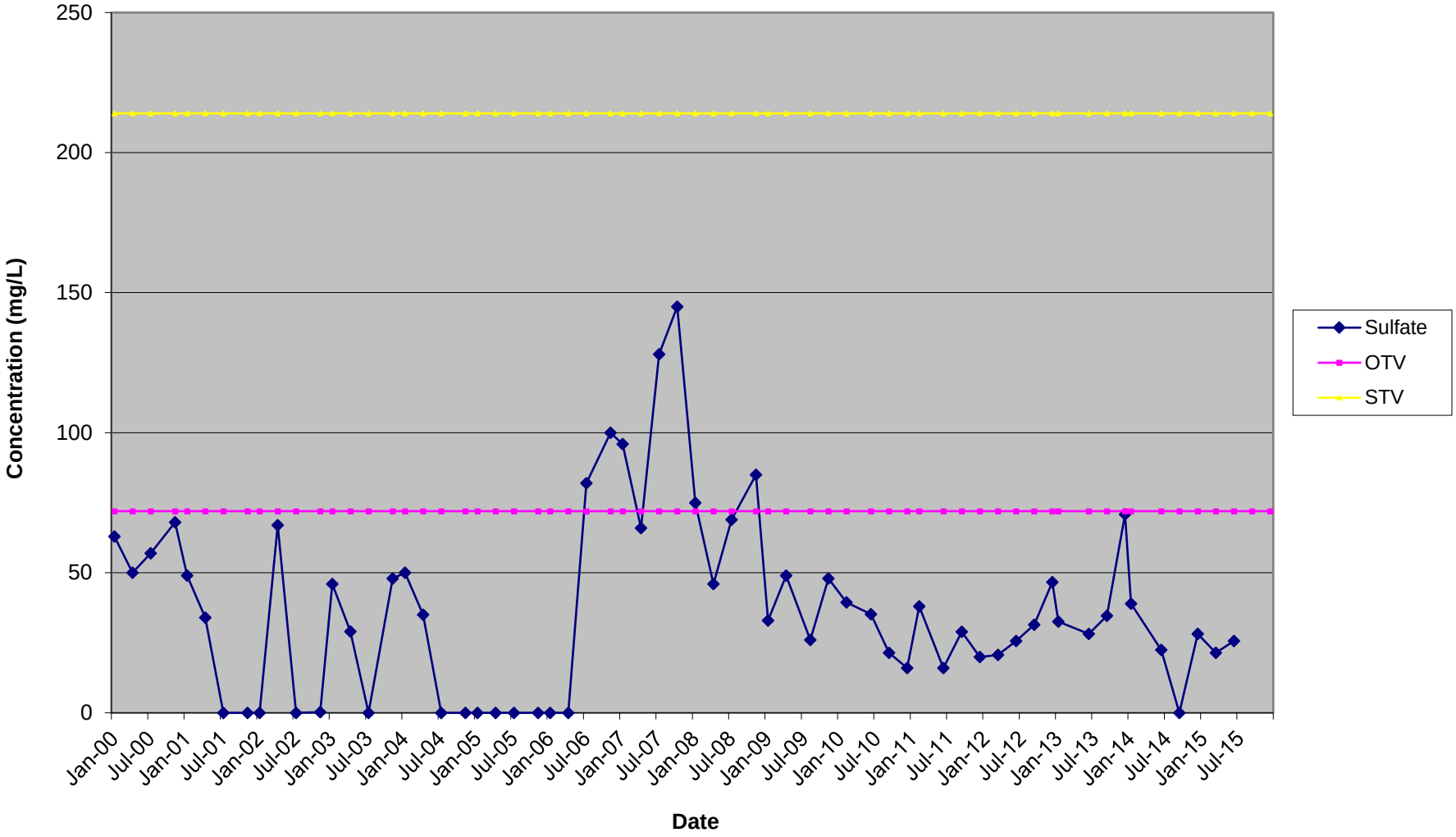
Indicator Parameter Time Trends
DW-8R



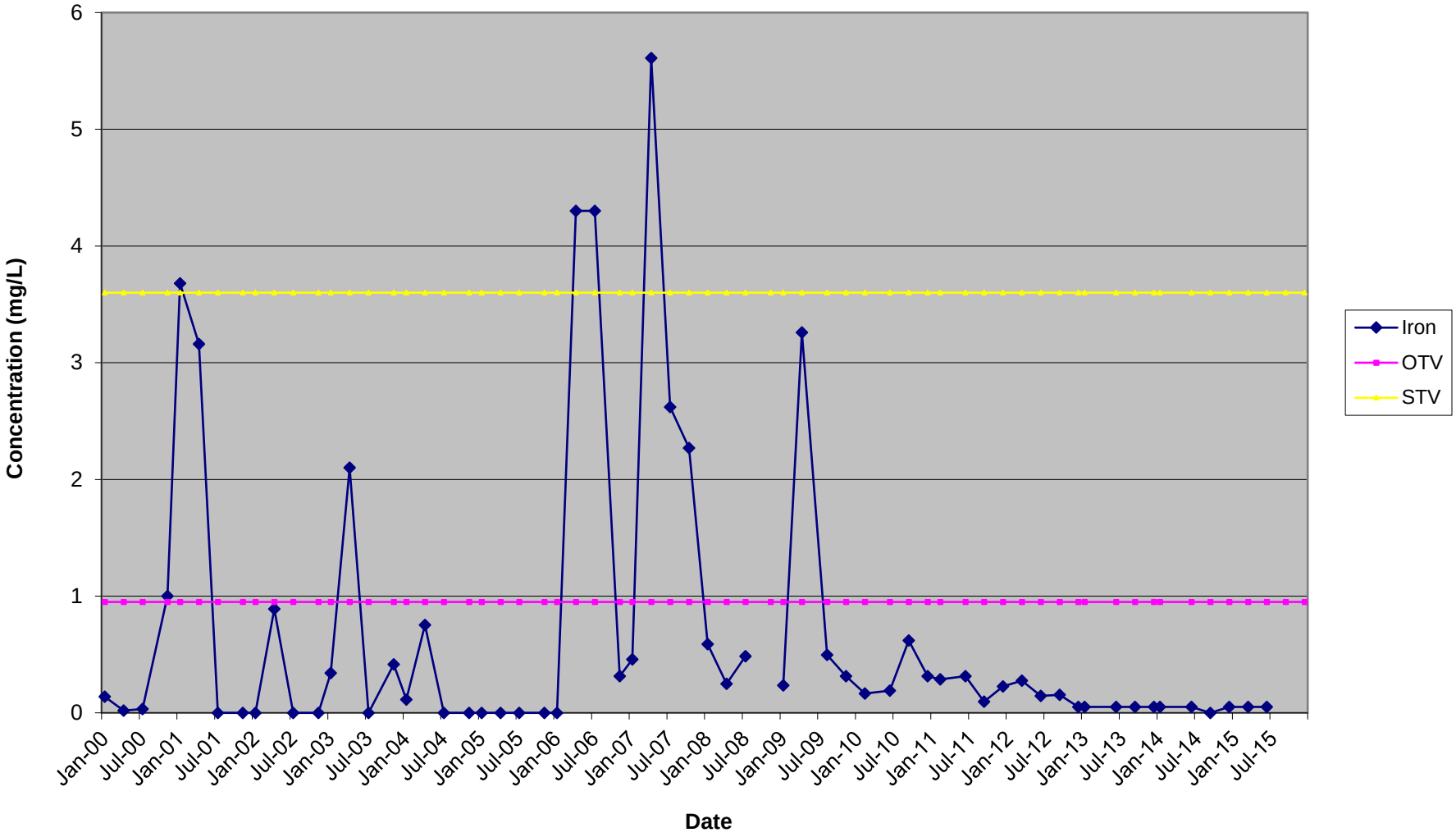
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DW-8R



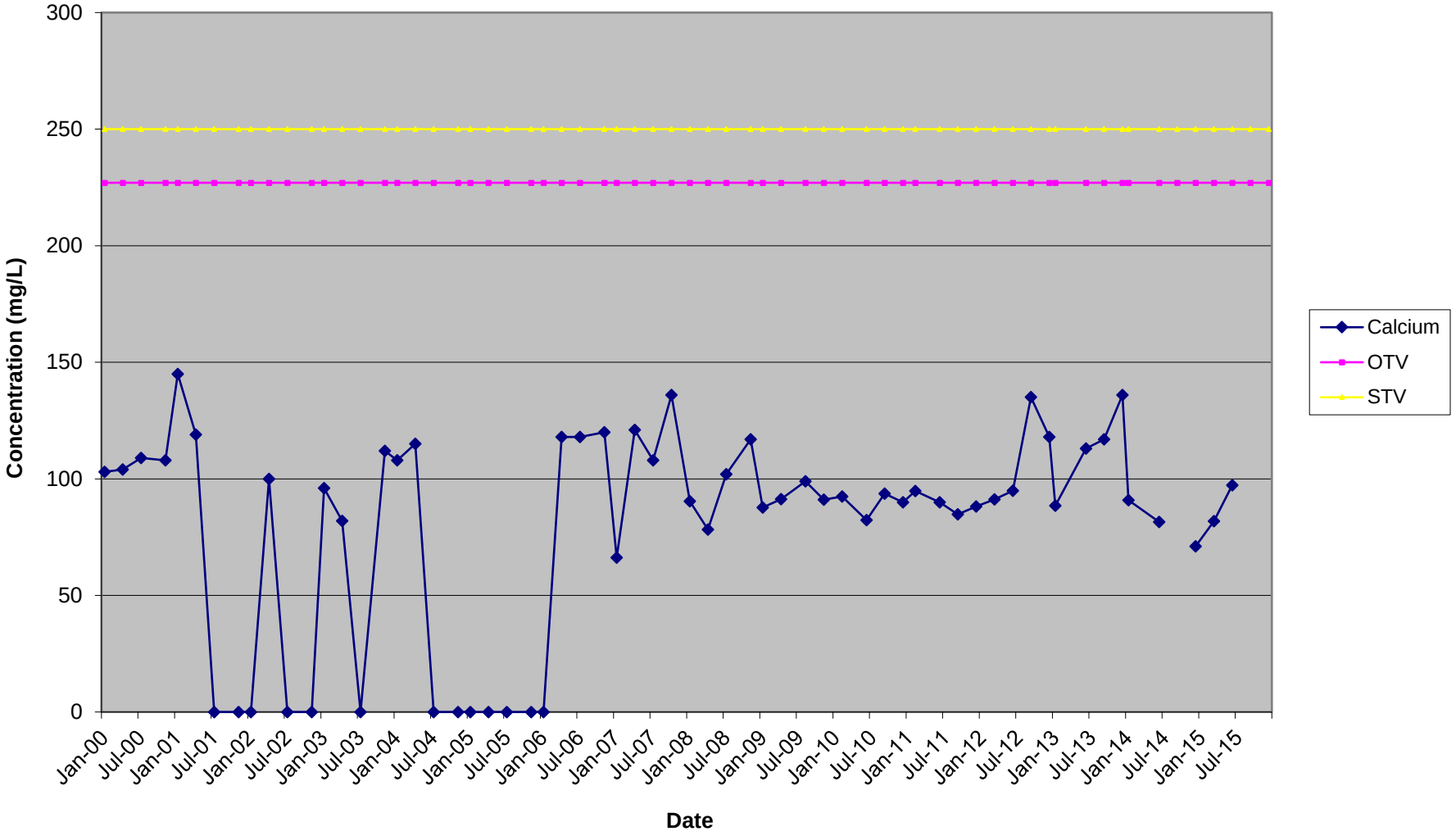
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DW-8R



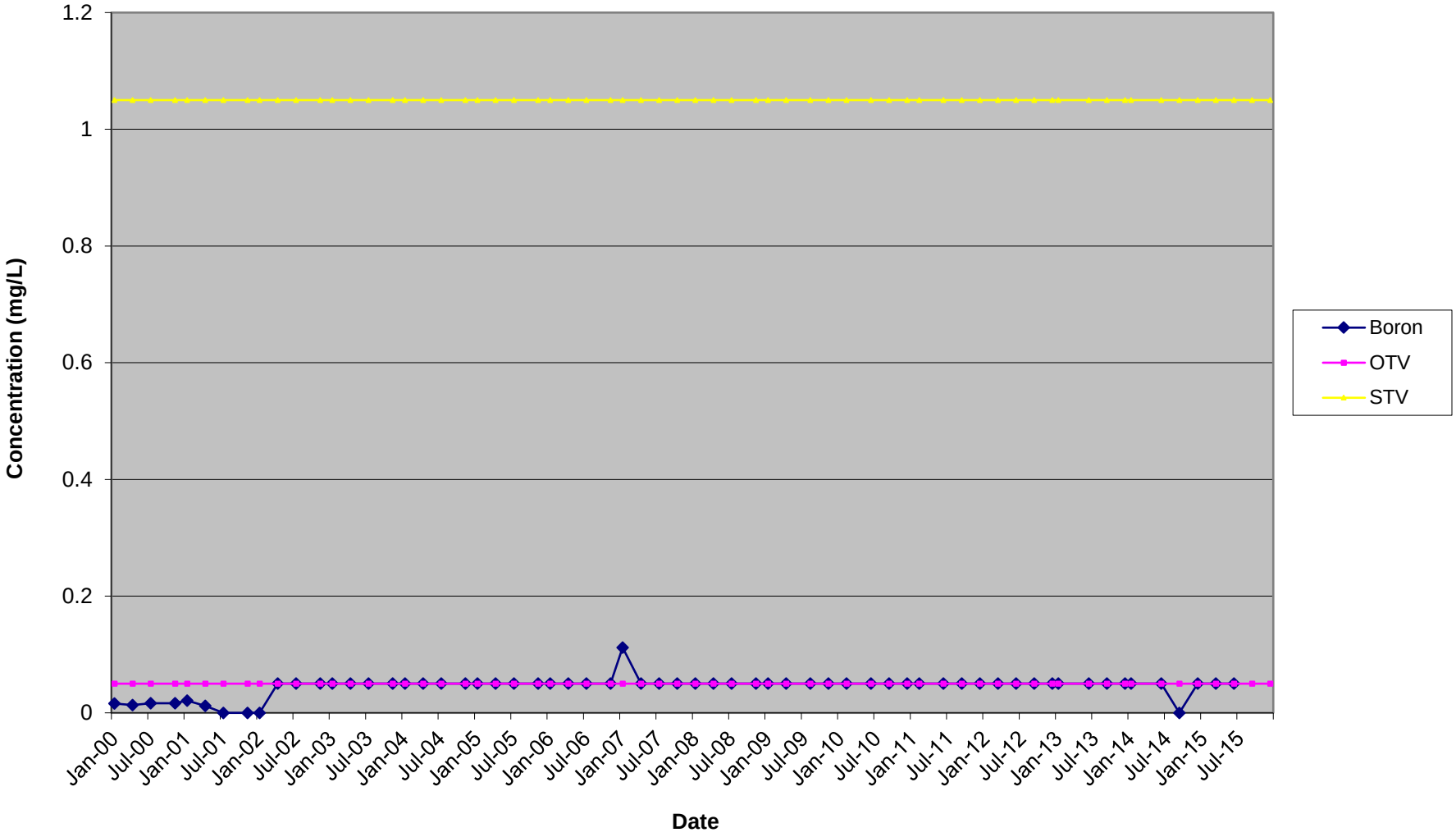
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DW-8R



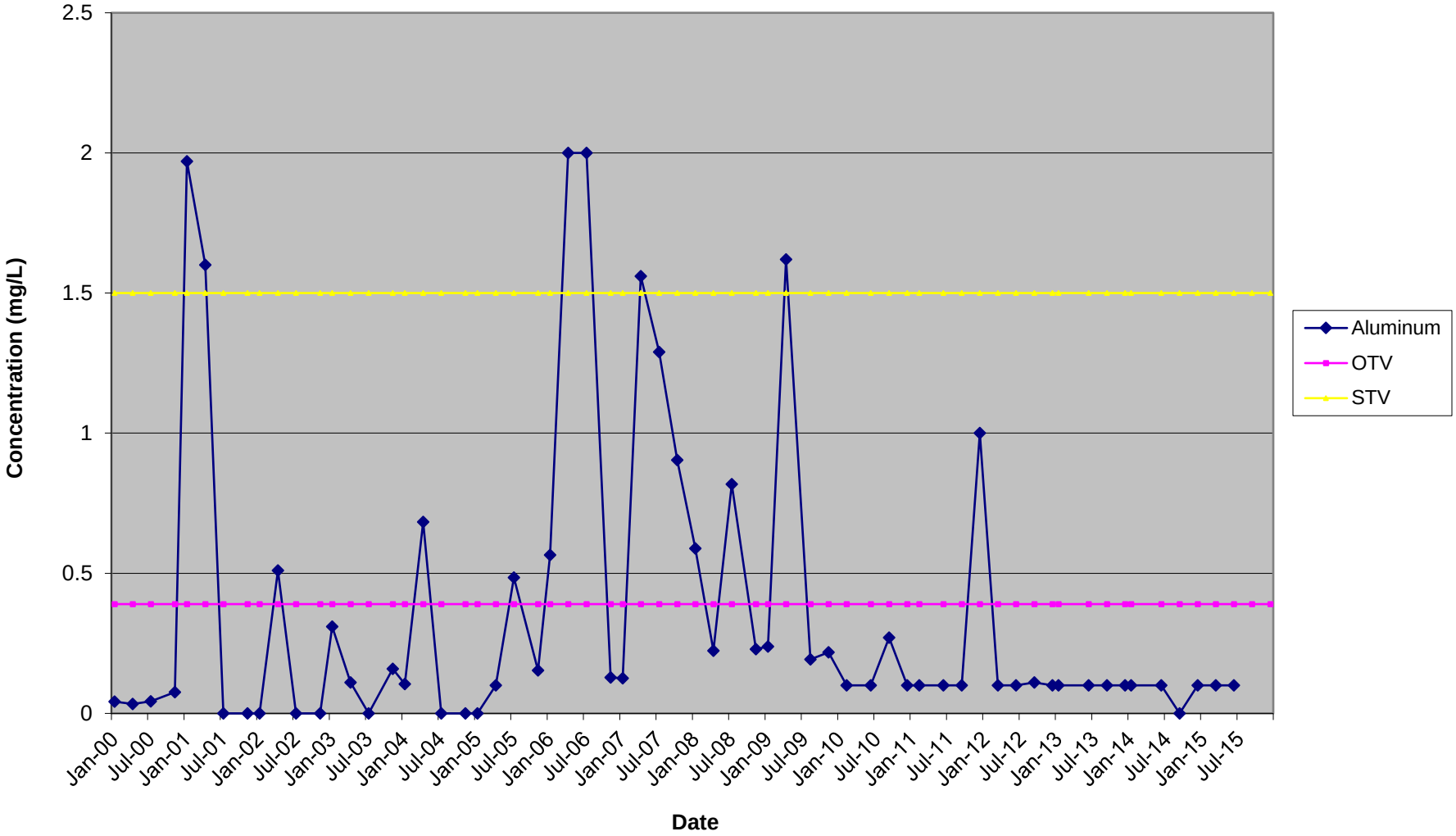
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DW-8R



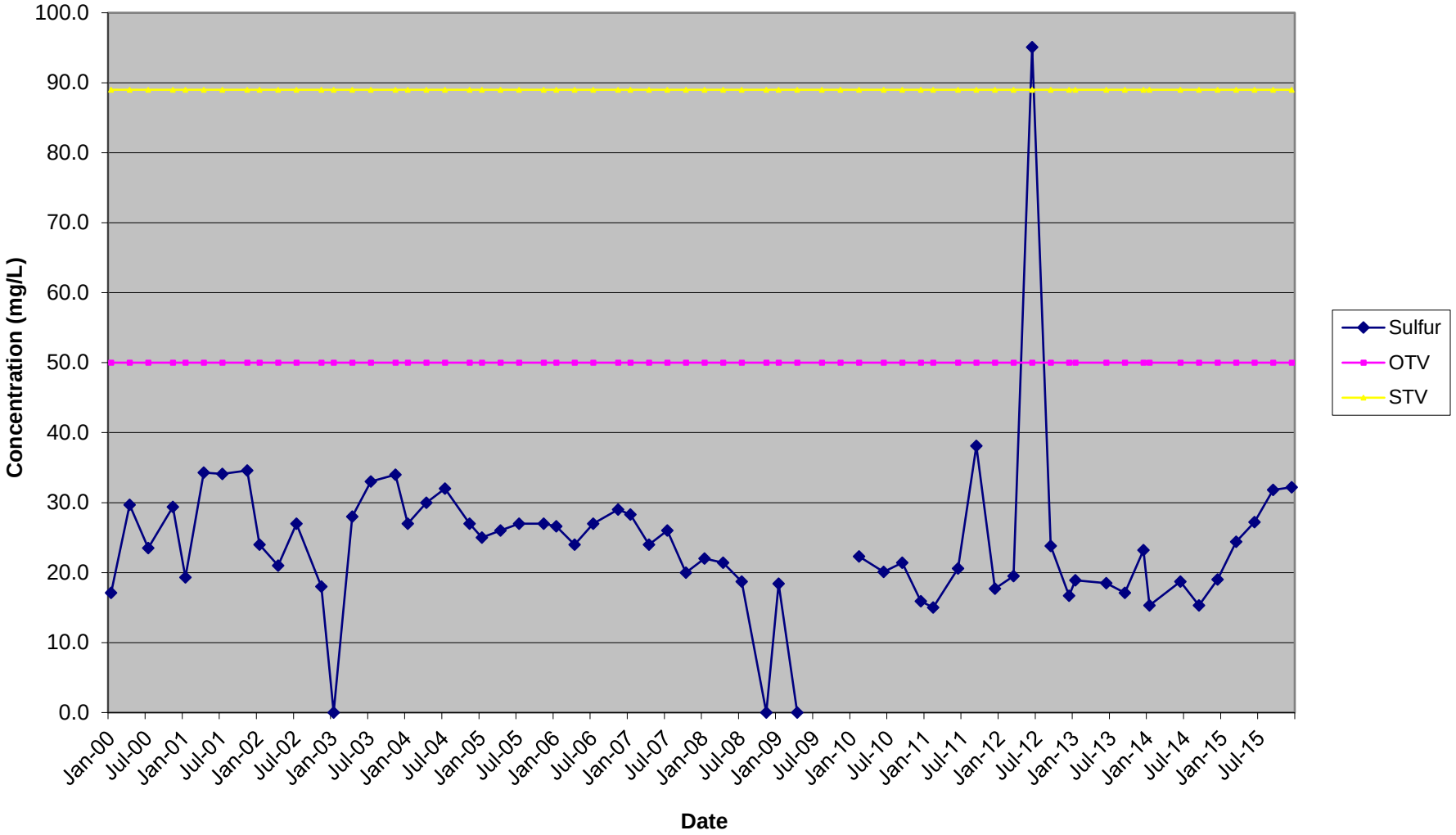
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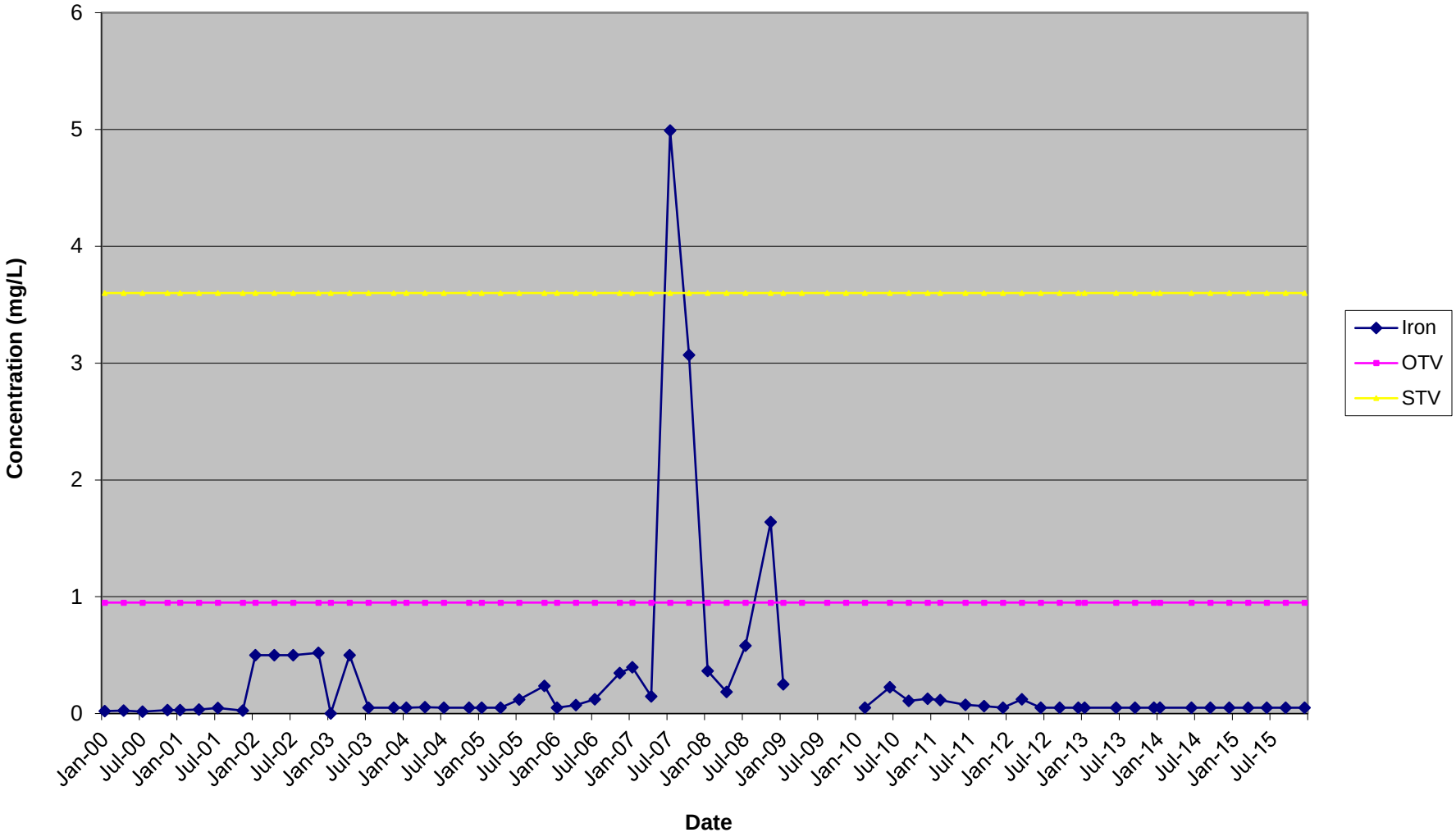
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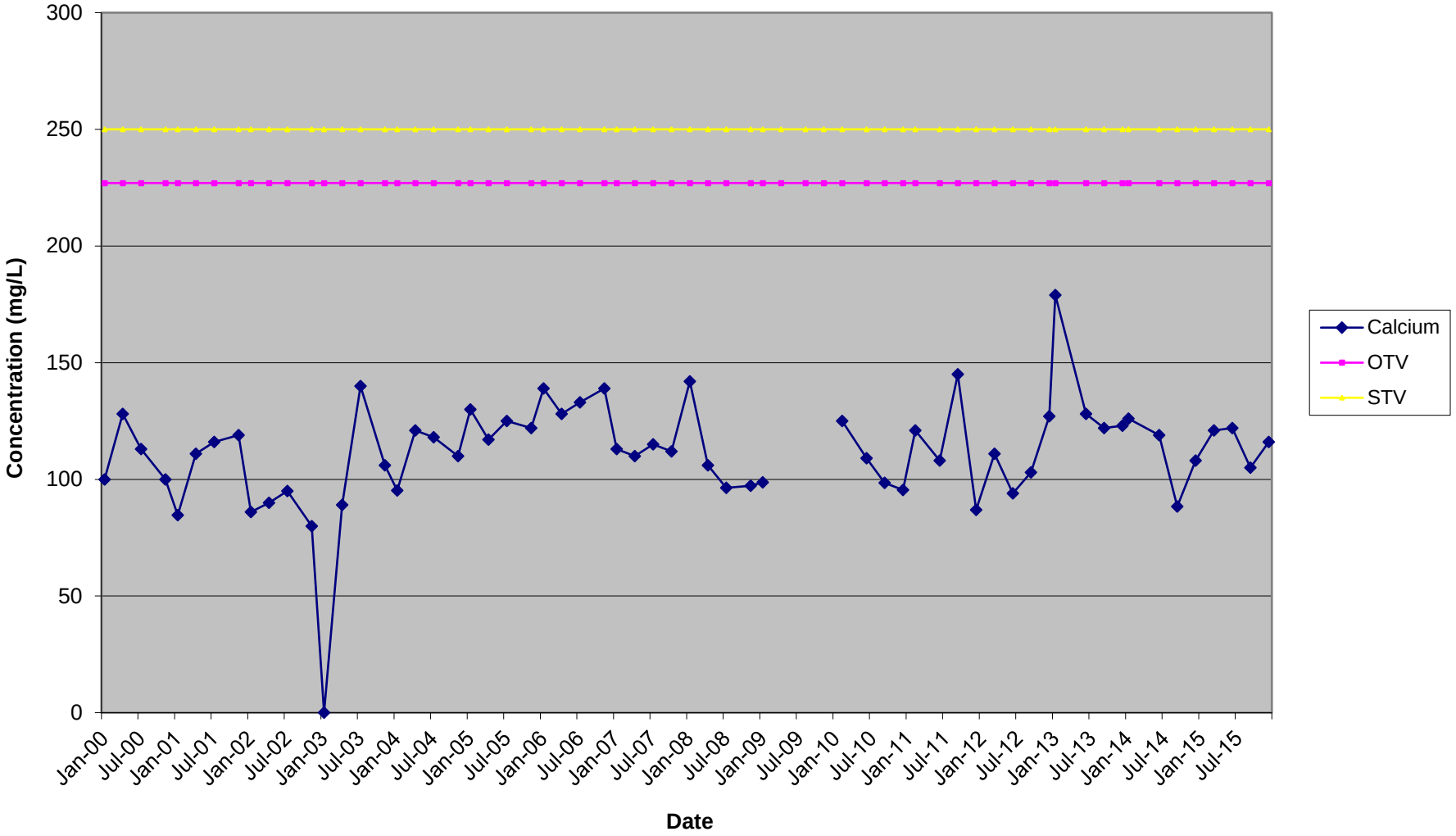
Indicator Parameter Time Trends
DW-7R



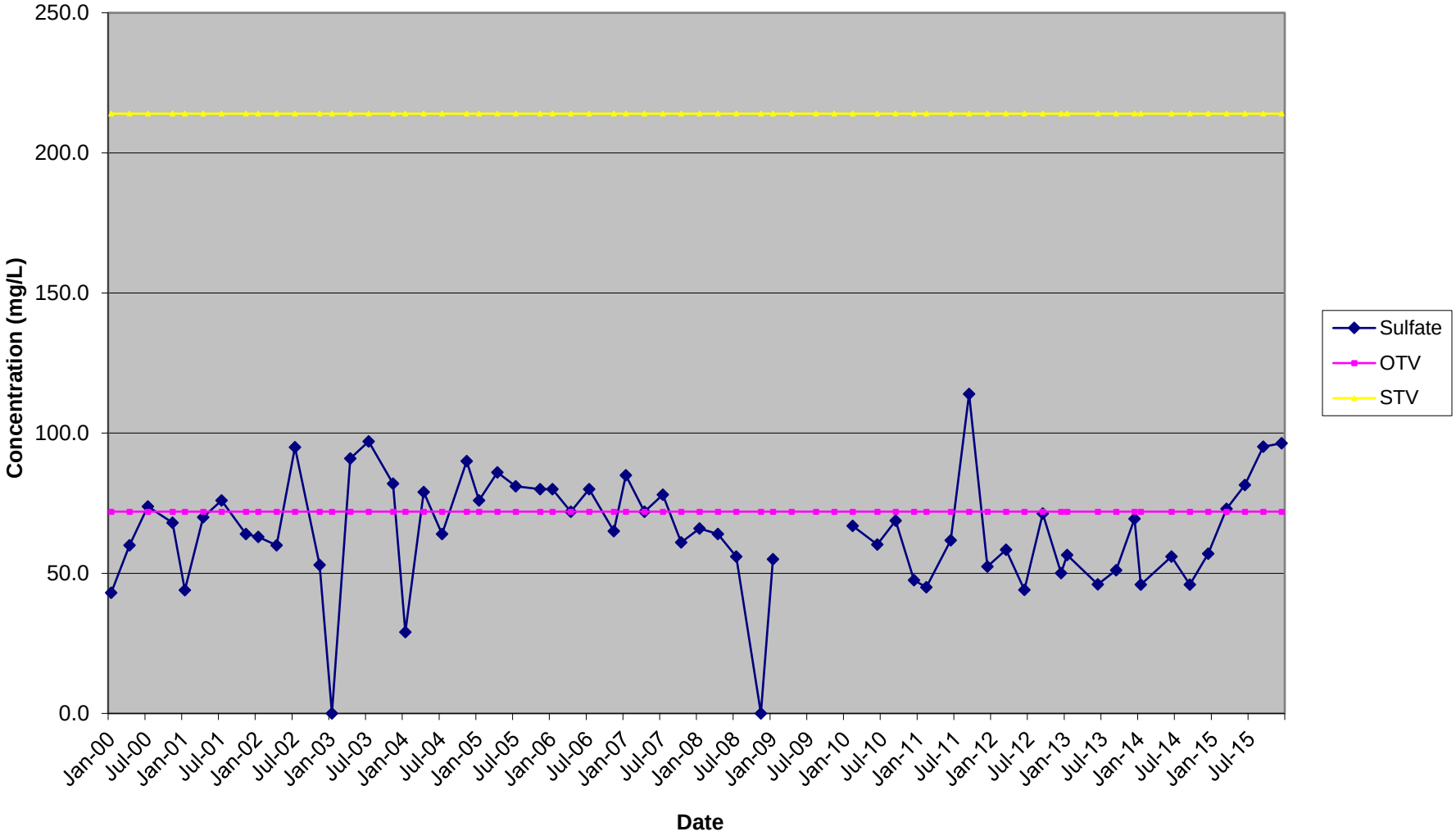
Indicator Parameter Time Trend Plots
DW-7R



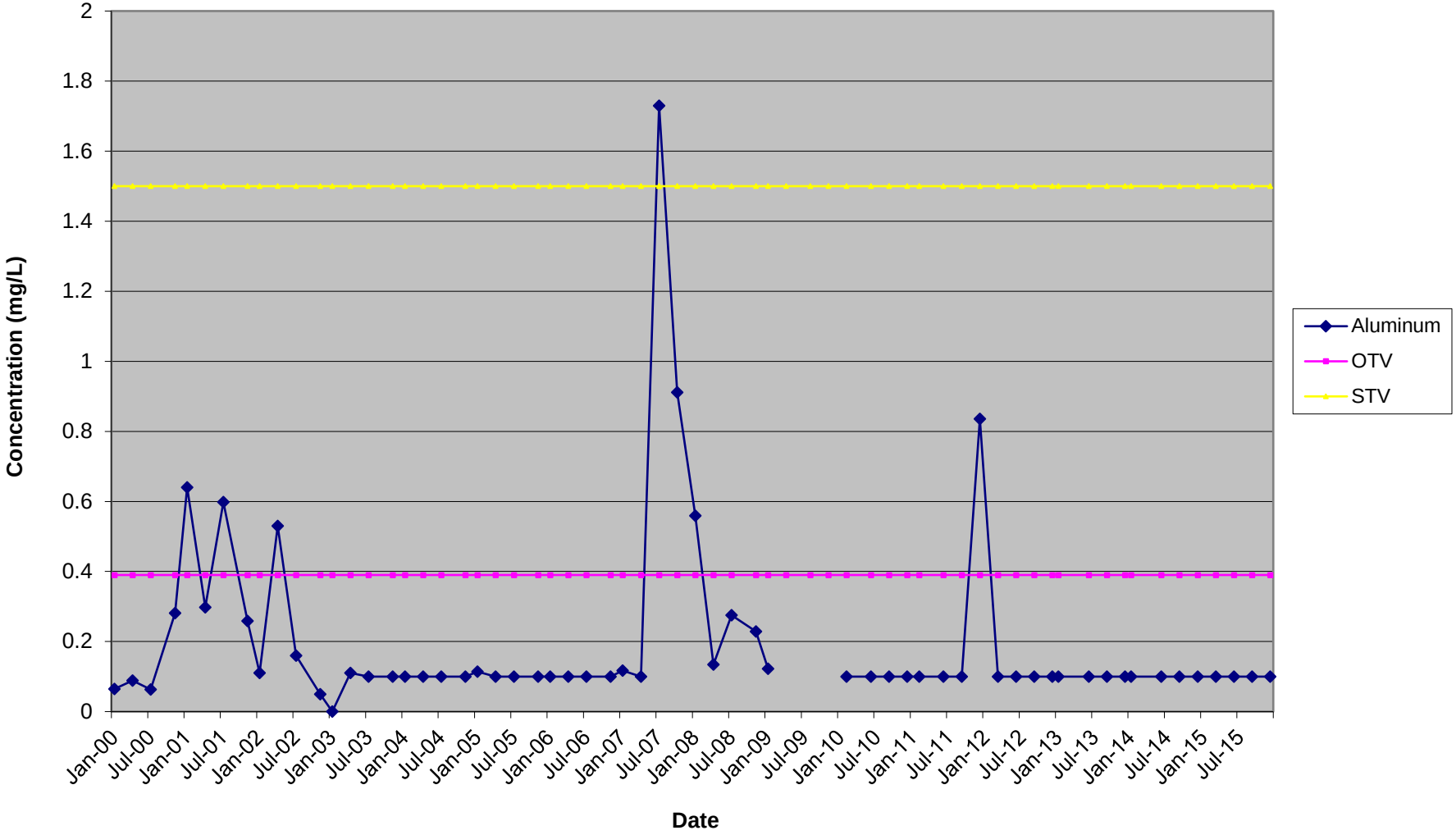
Indicator Parameter Time Trend Plots
DW-7R



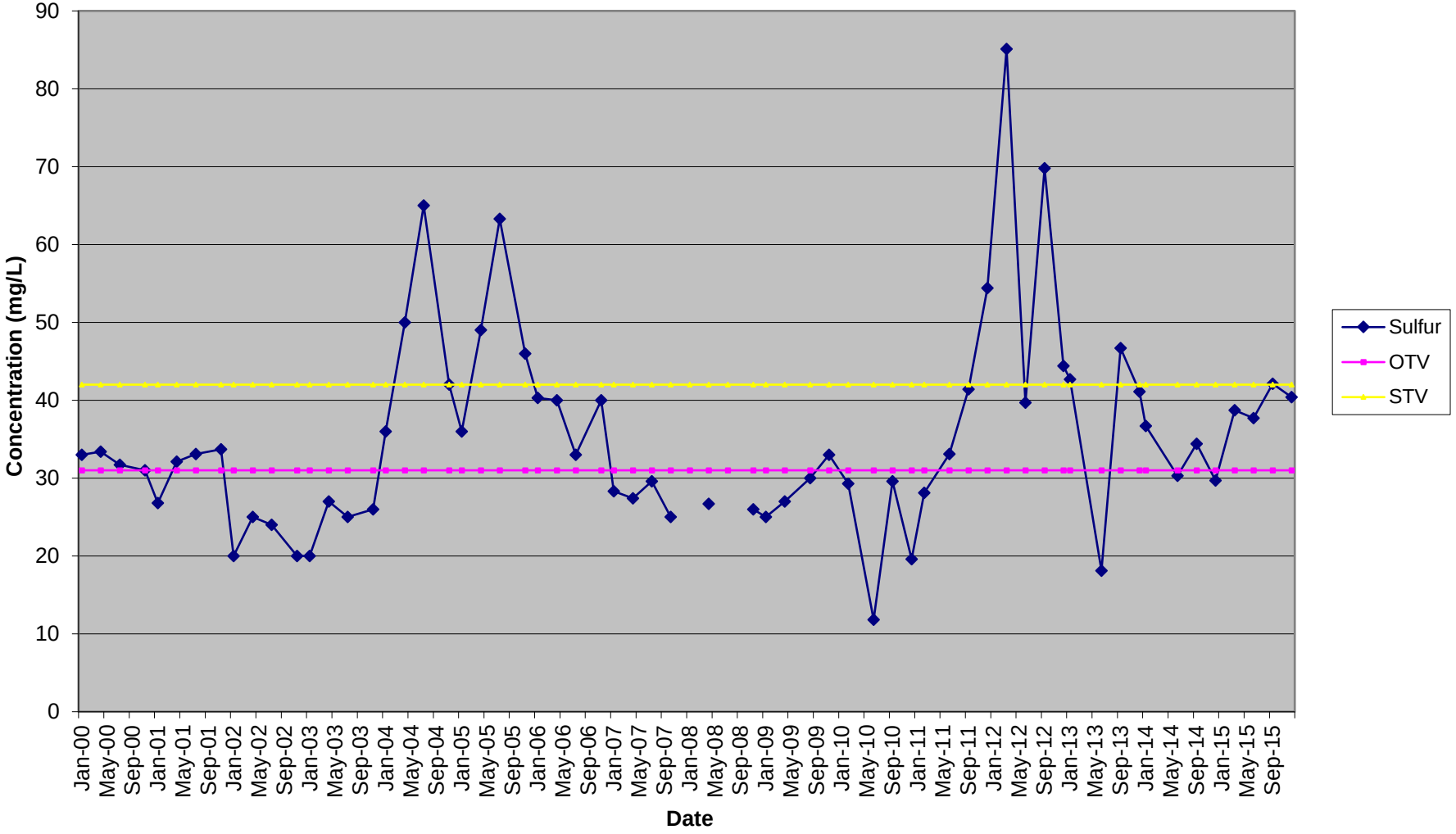
Indicator Parameter Time Trends
DW-7R



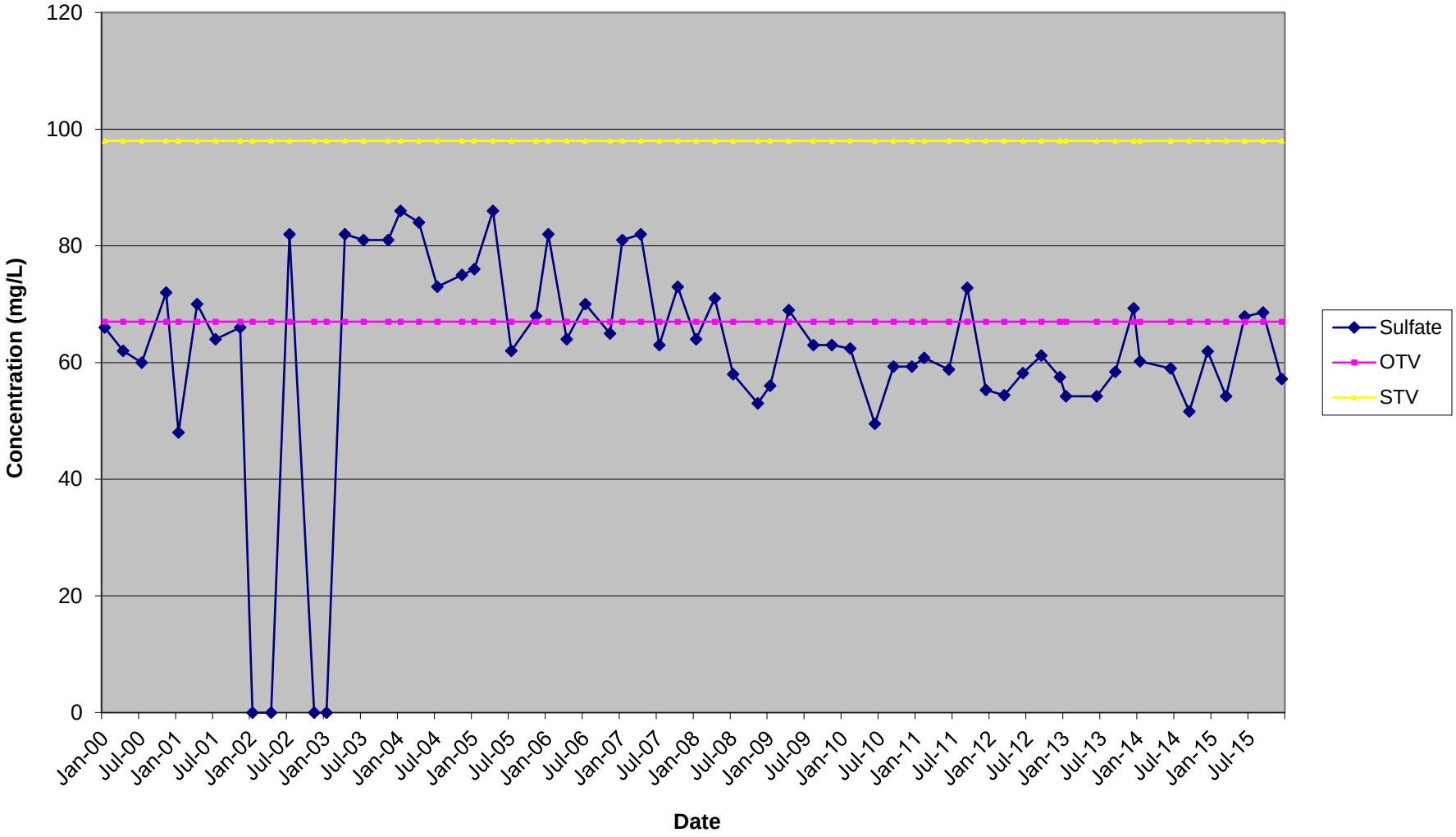
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DW-7R



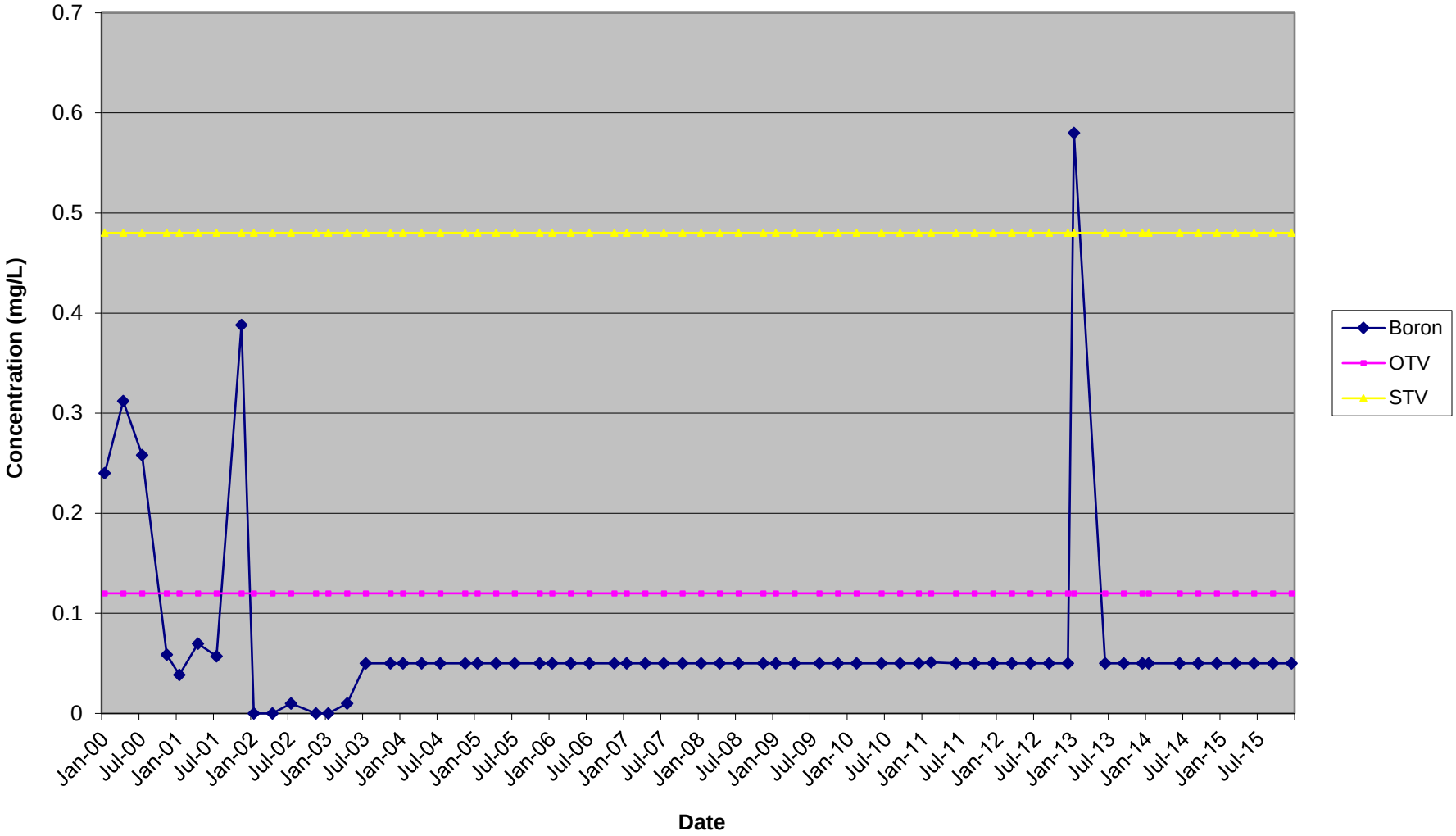
Indicator Parameter Time Trends
DW-6D



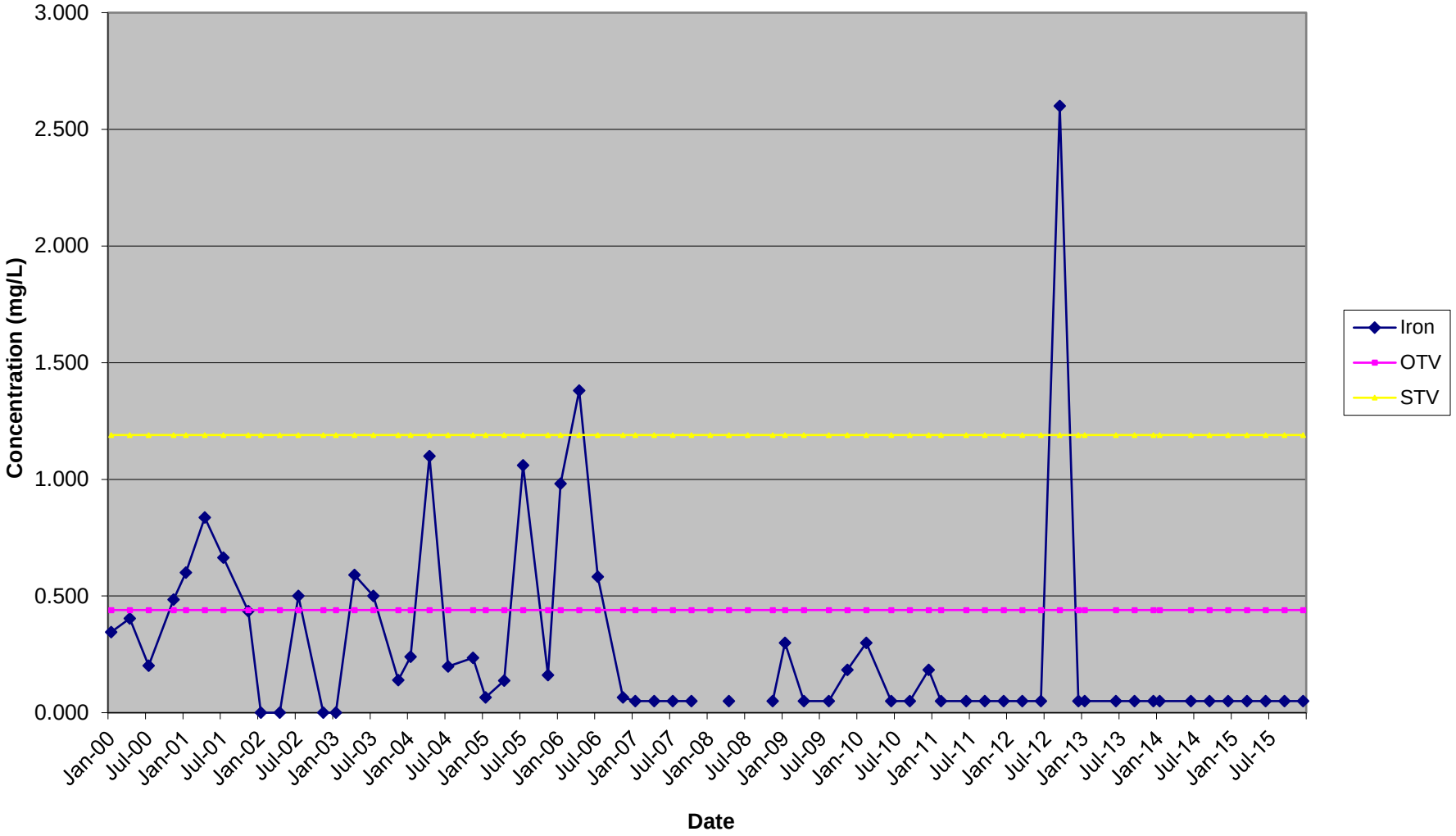
Indicator Parameter Time Trends
DW-7D



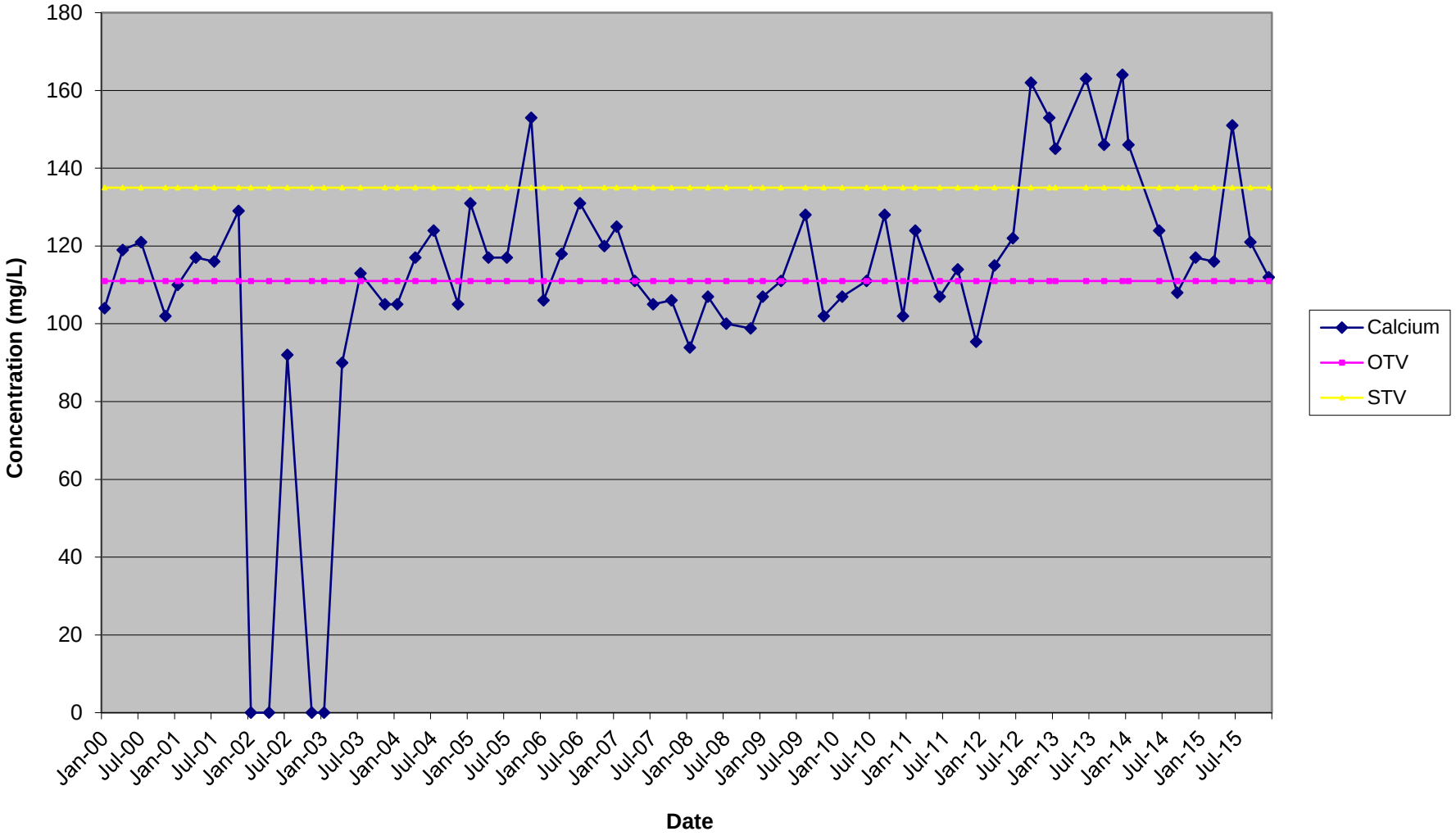
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DW-7D



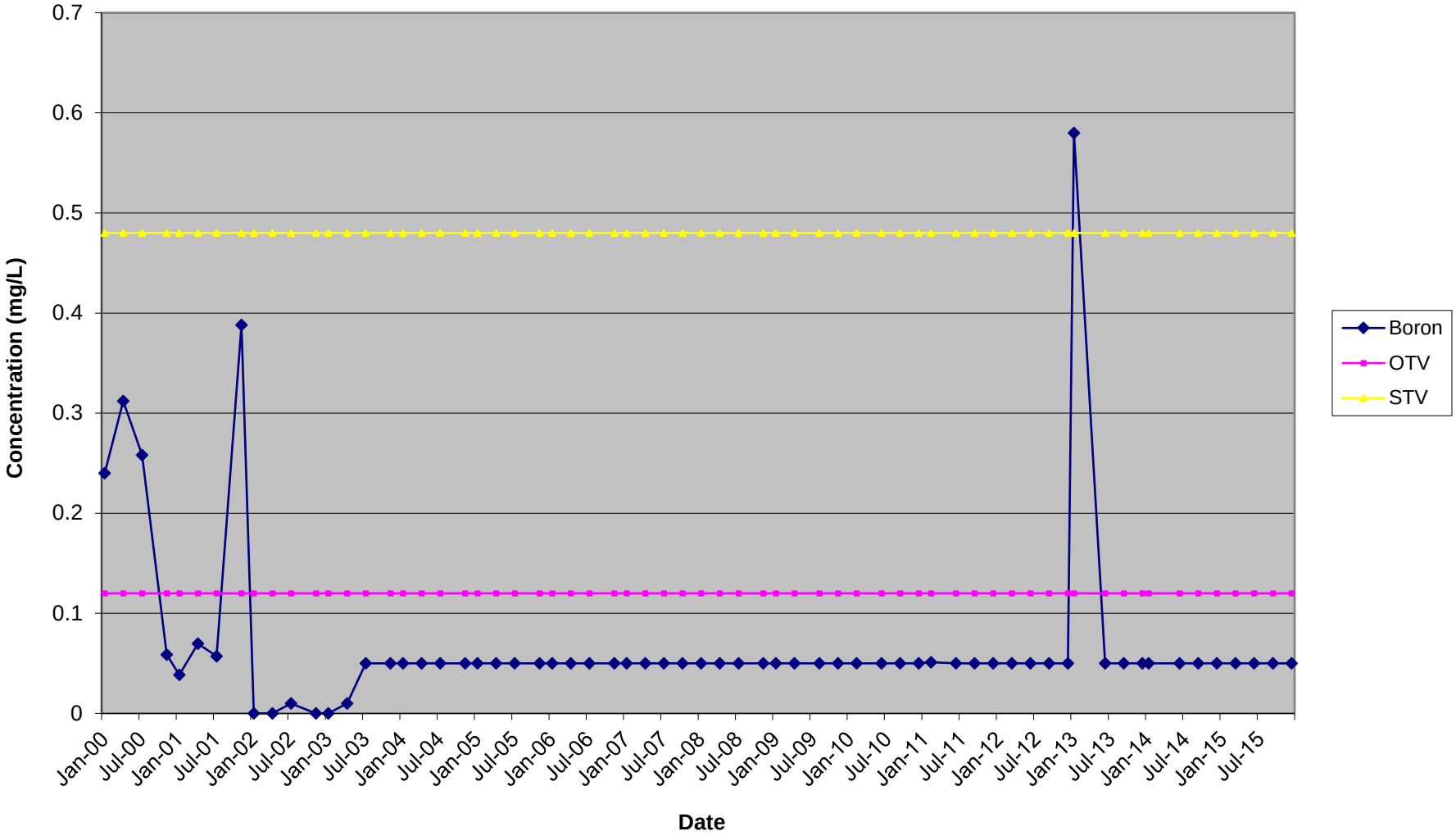
Indicator Parameter Time Trends
DW-7D



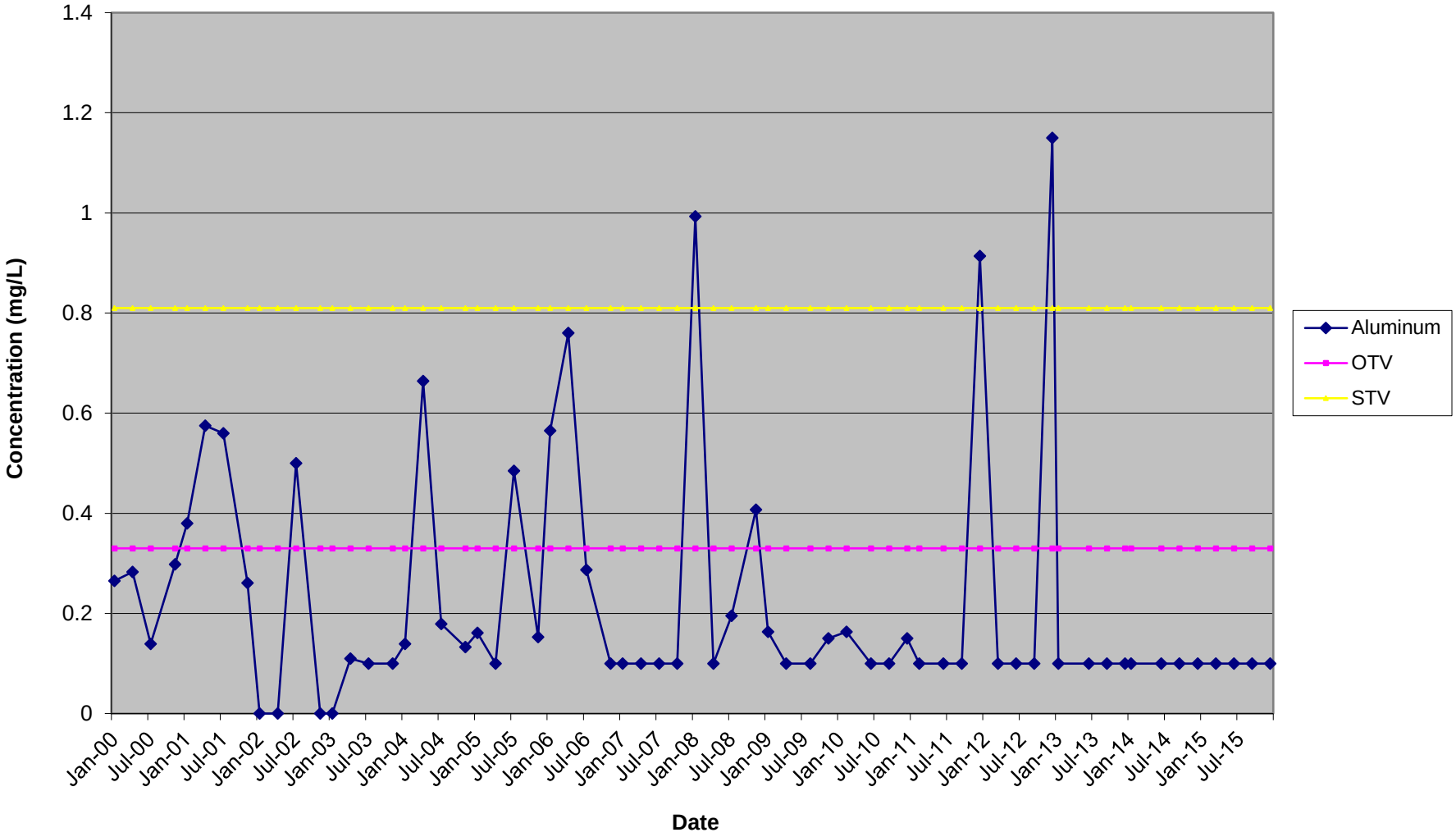
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DW-7D



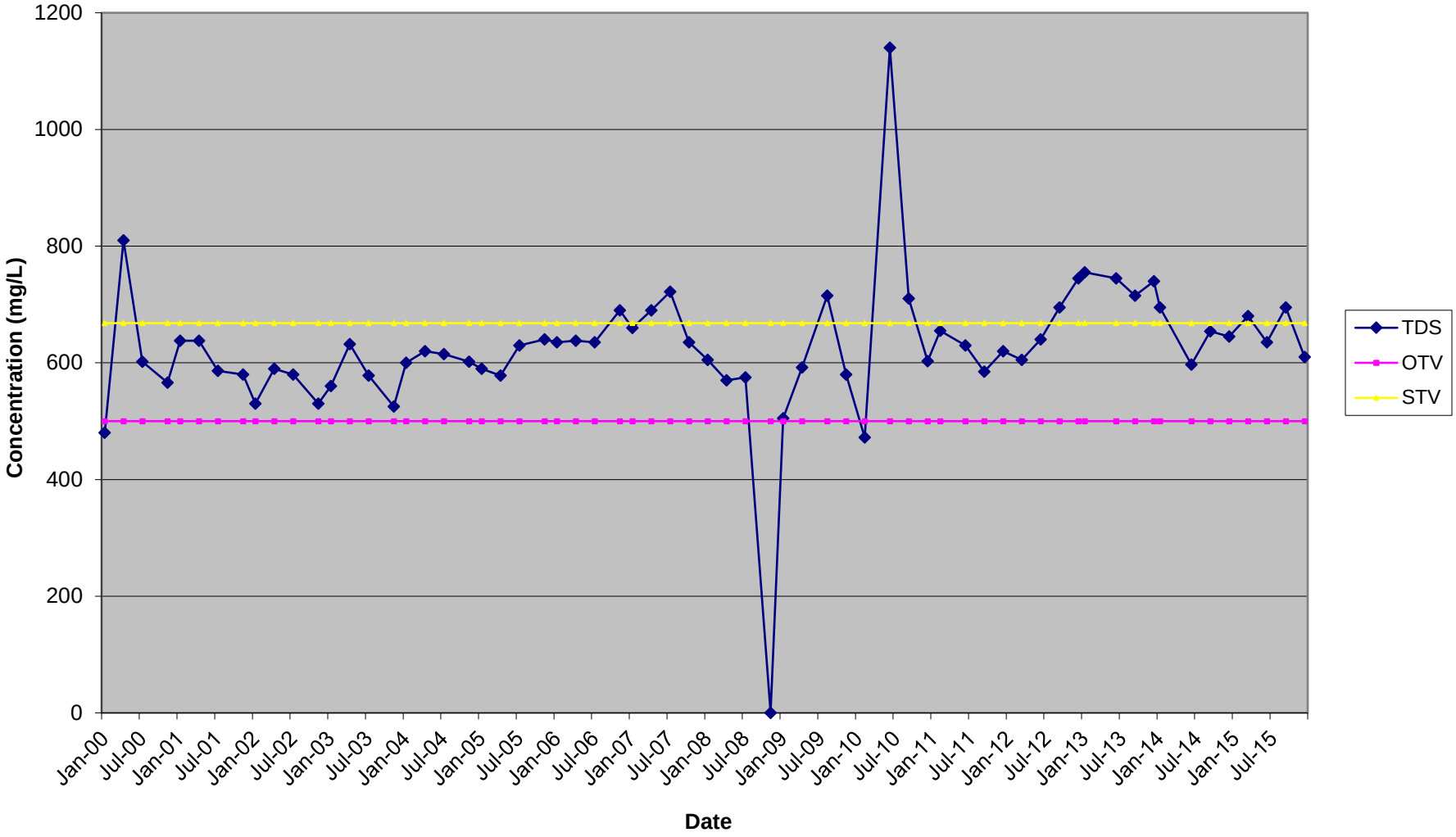
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DW-7D



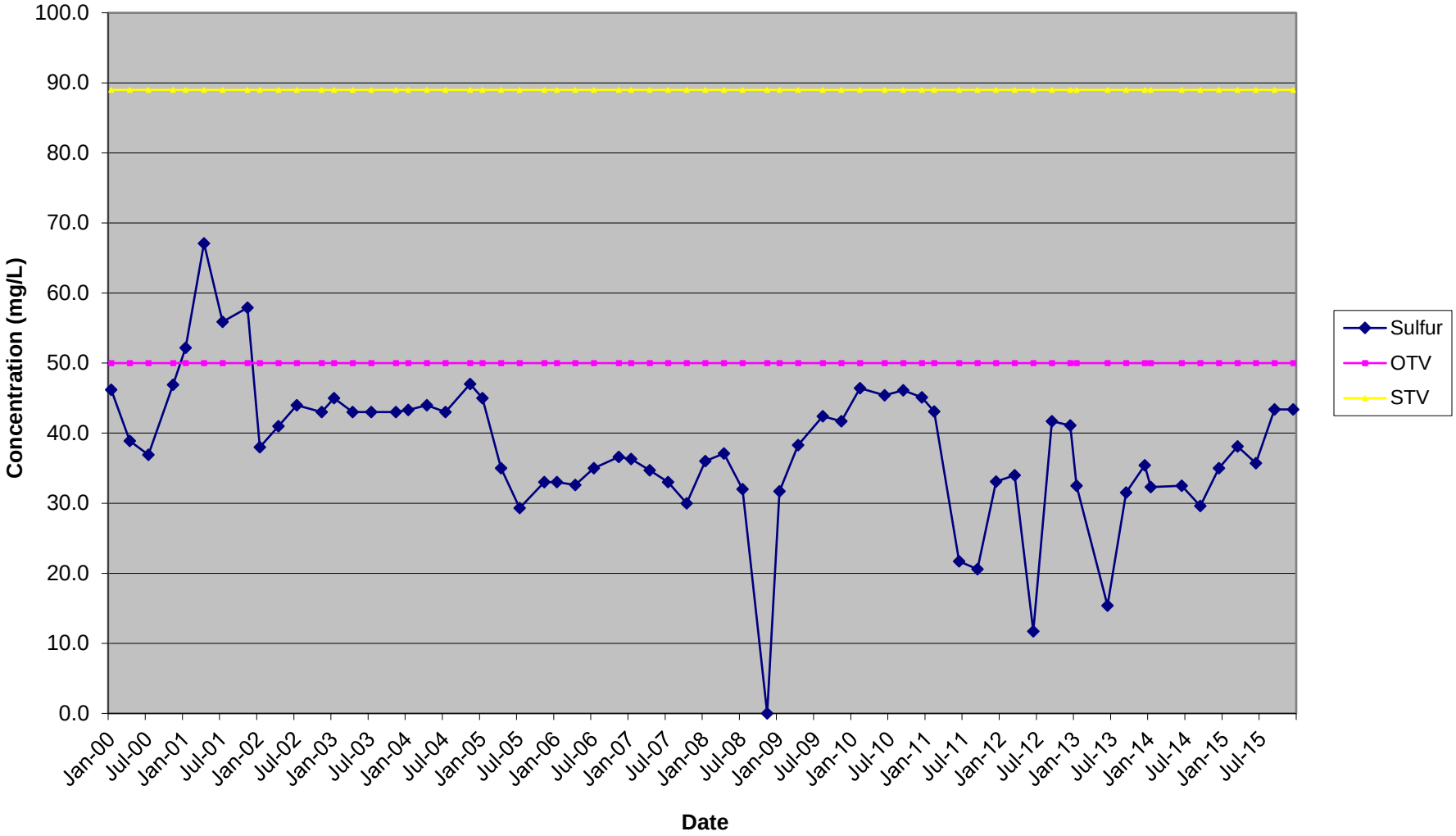
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DW-7D



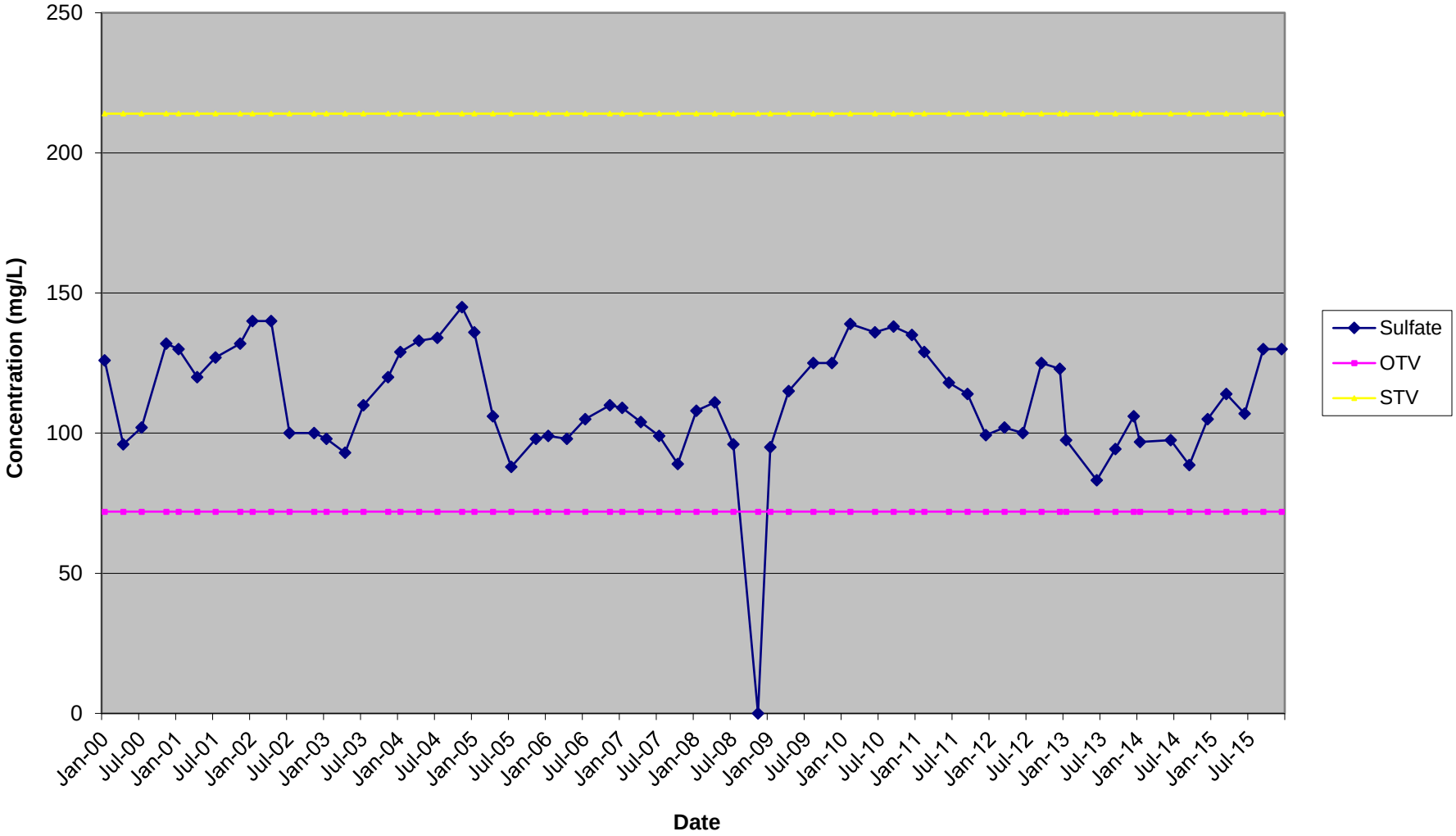
Indicator Parameter Time Trends
DW-6R



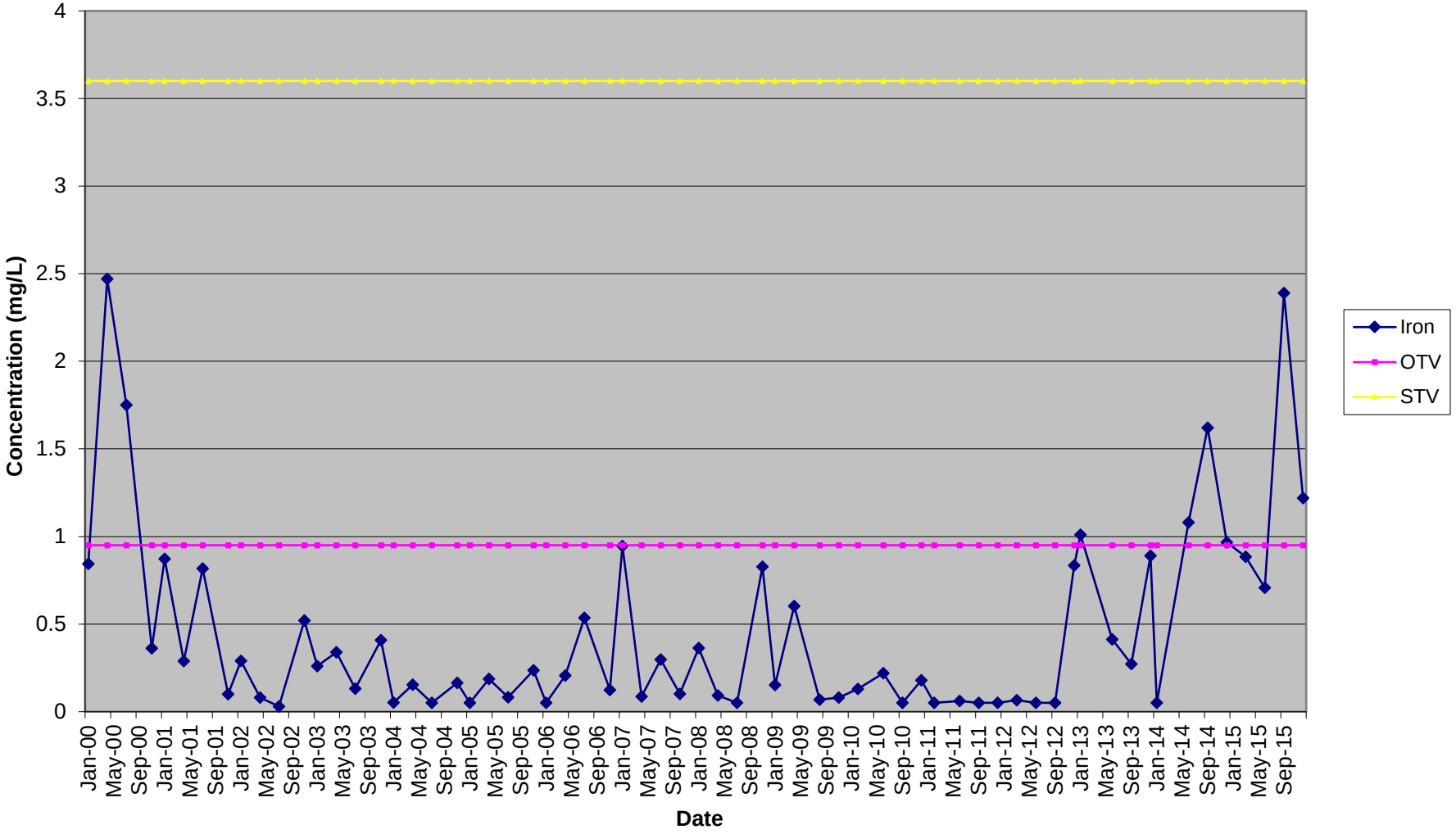
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DW-6R



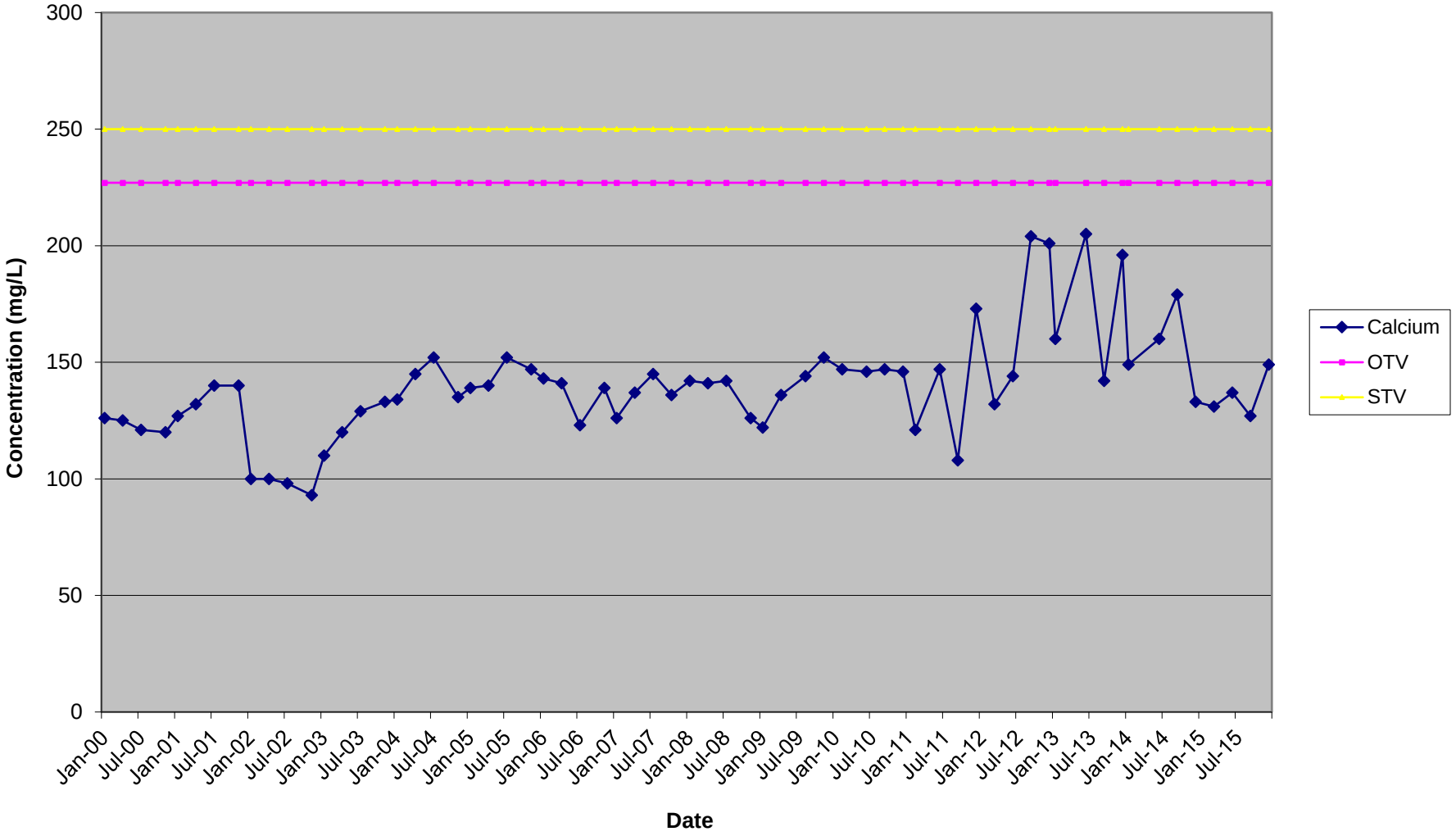
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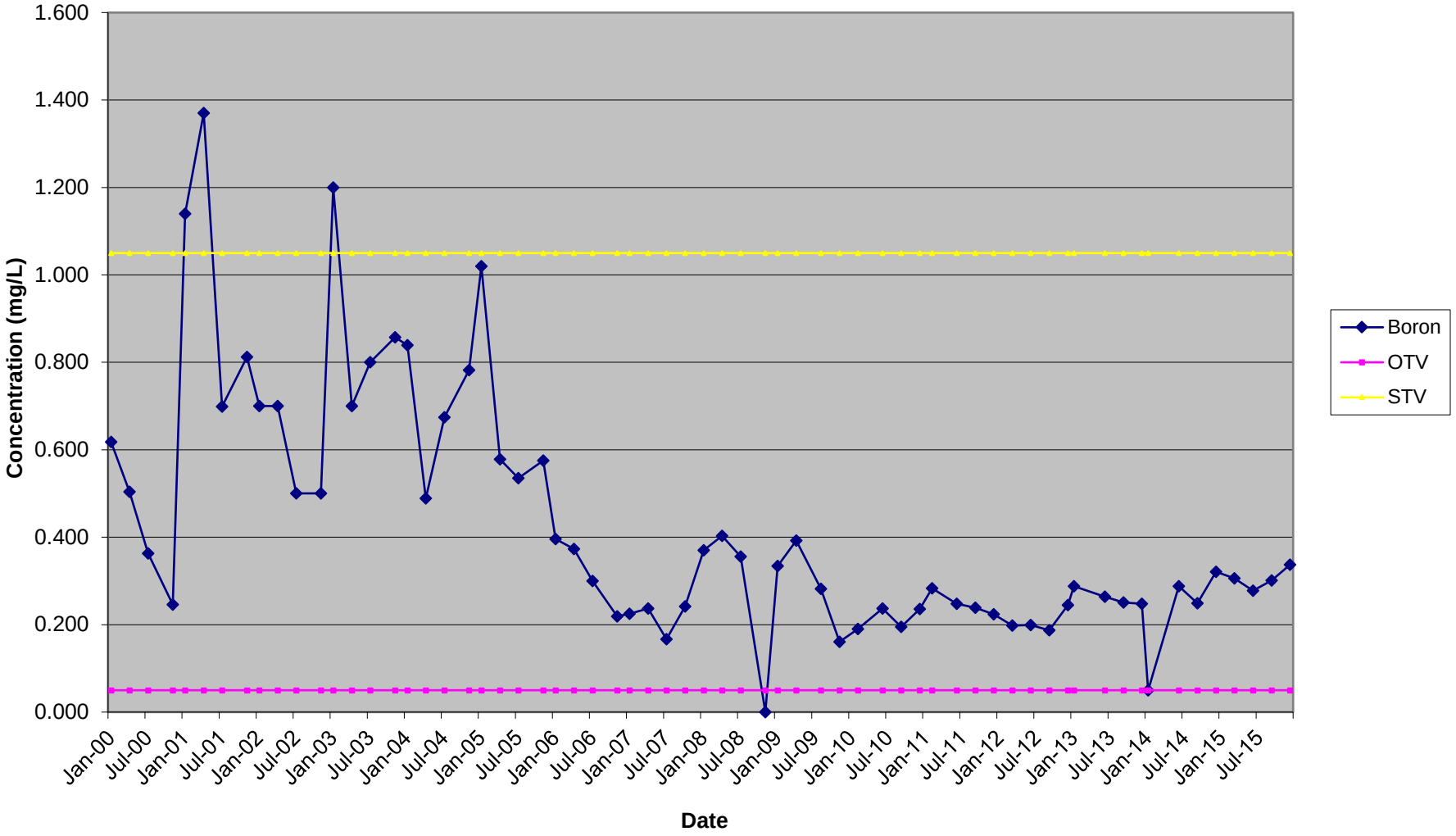
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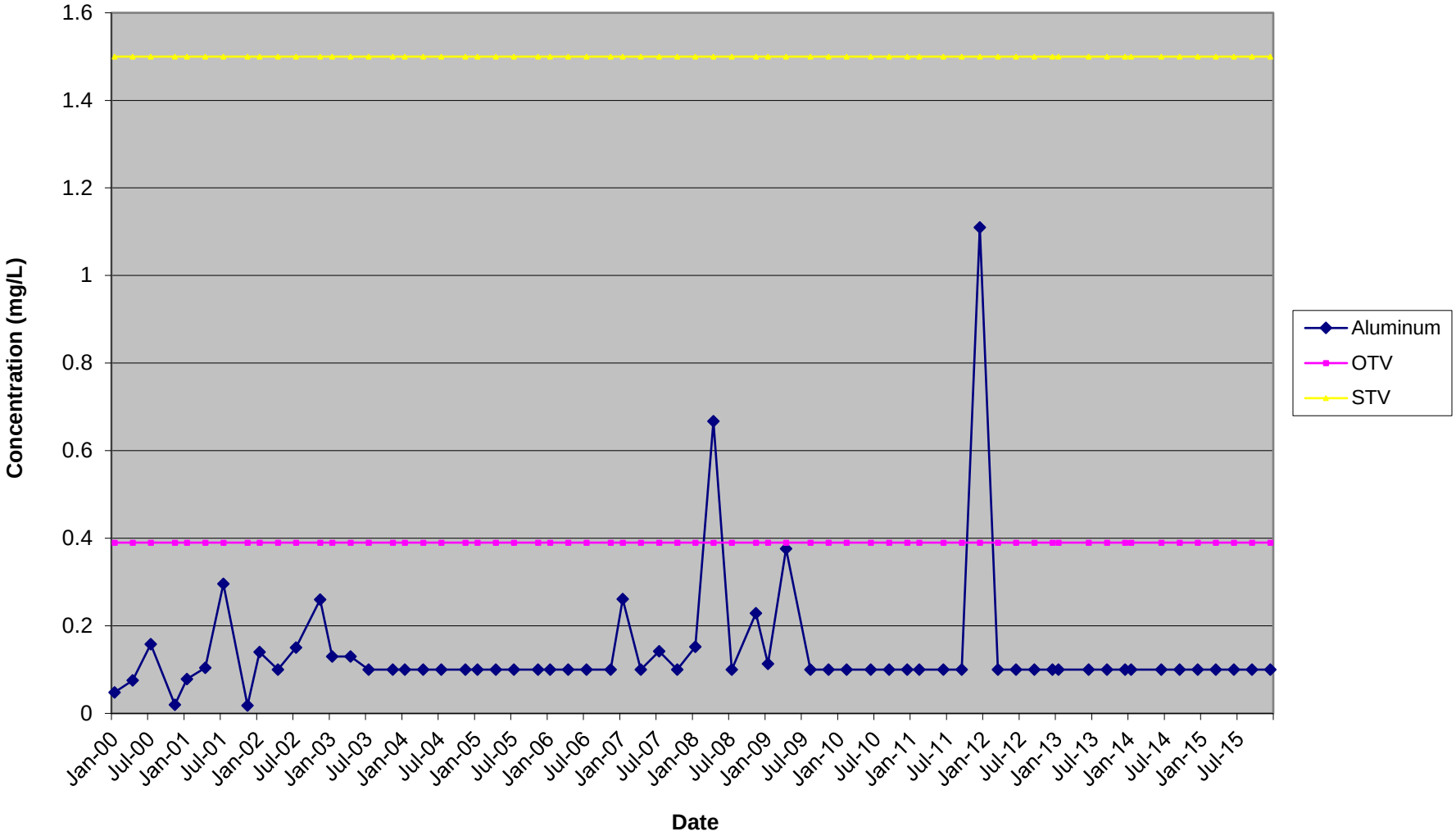
Indicator Parameter Time Trends
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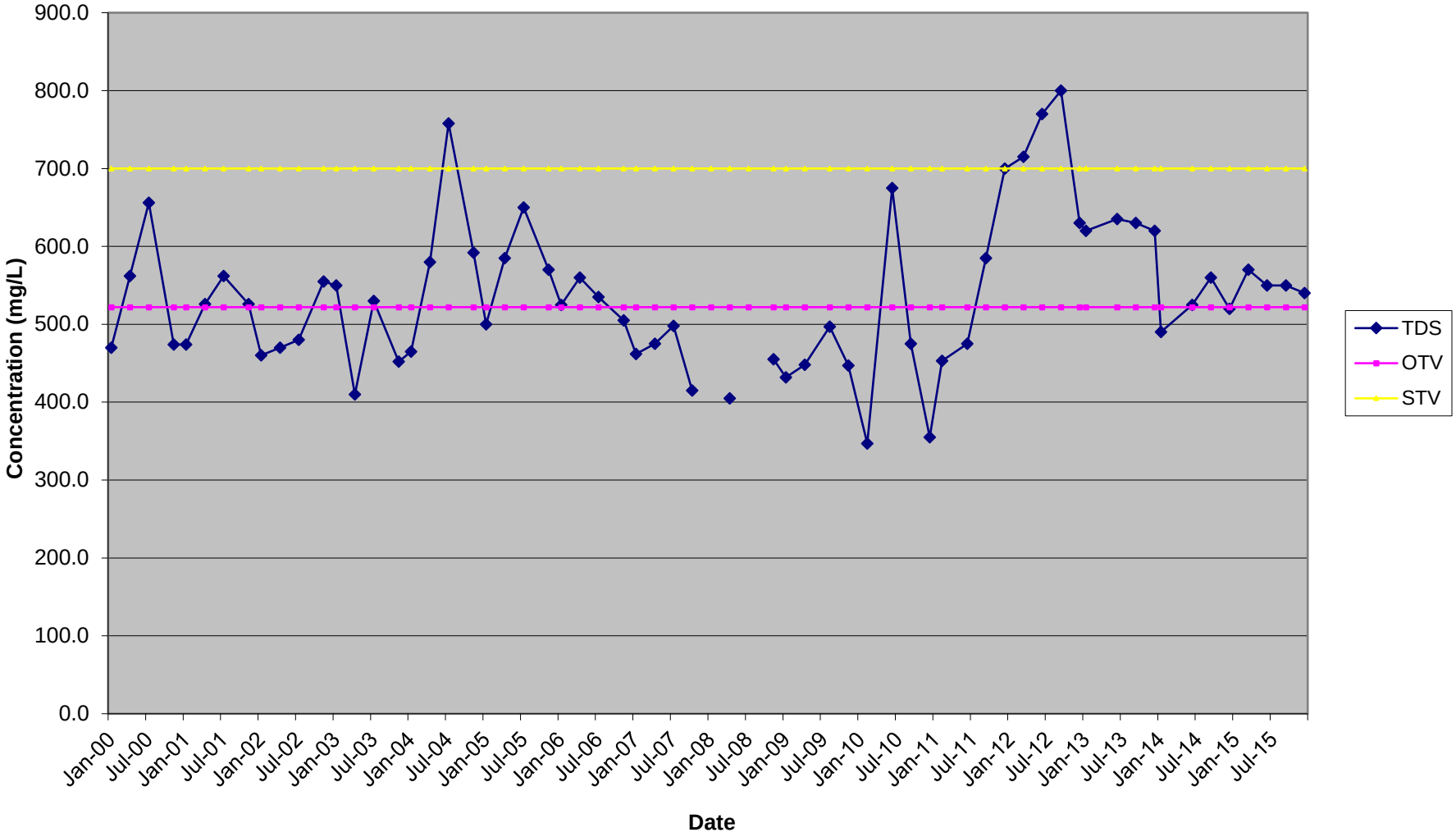
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DW-6R



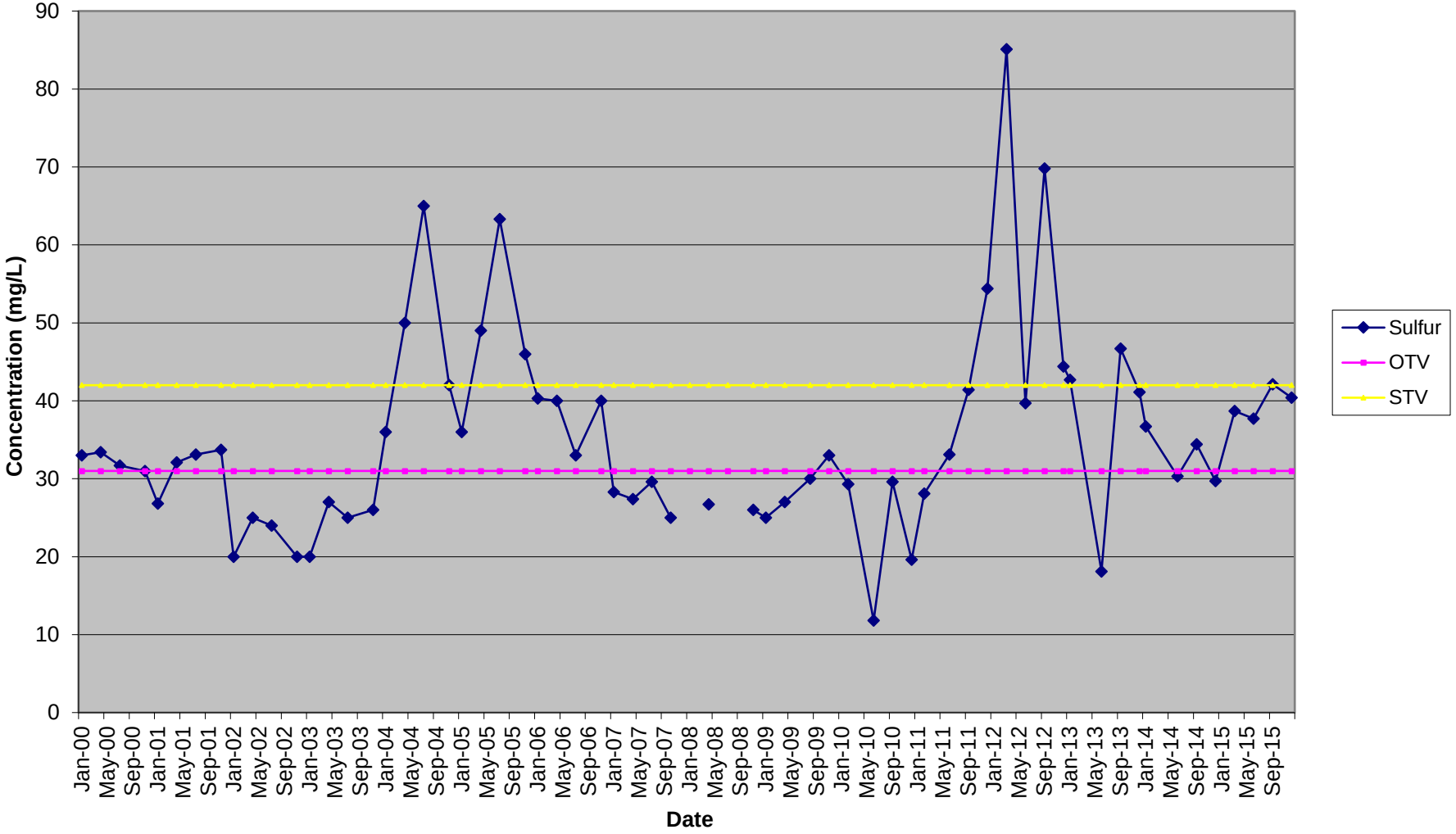
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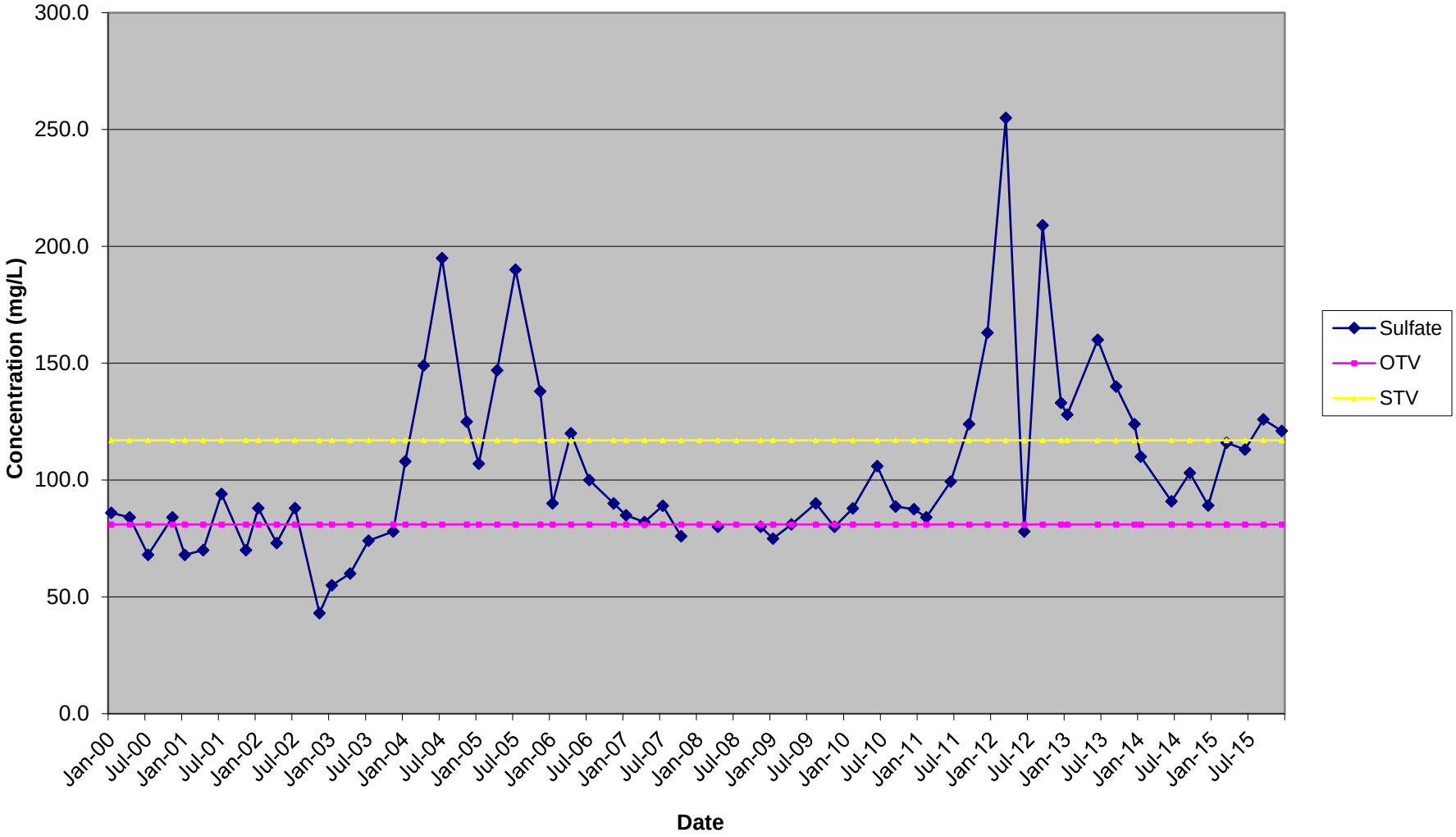
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DW-6D



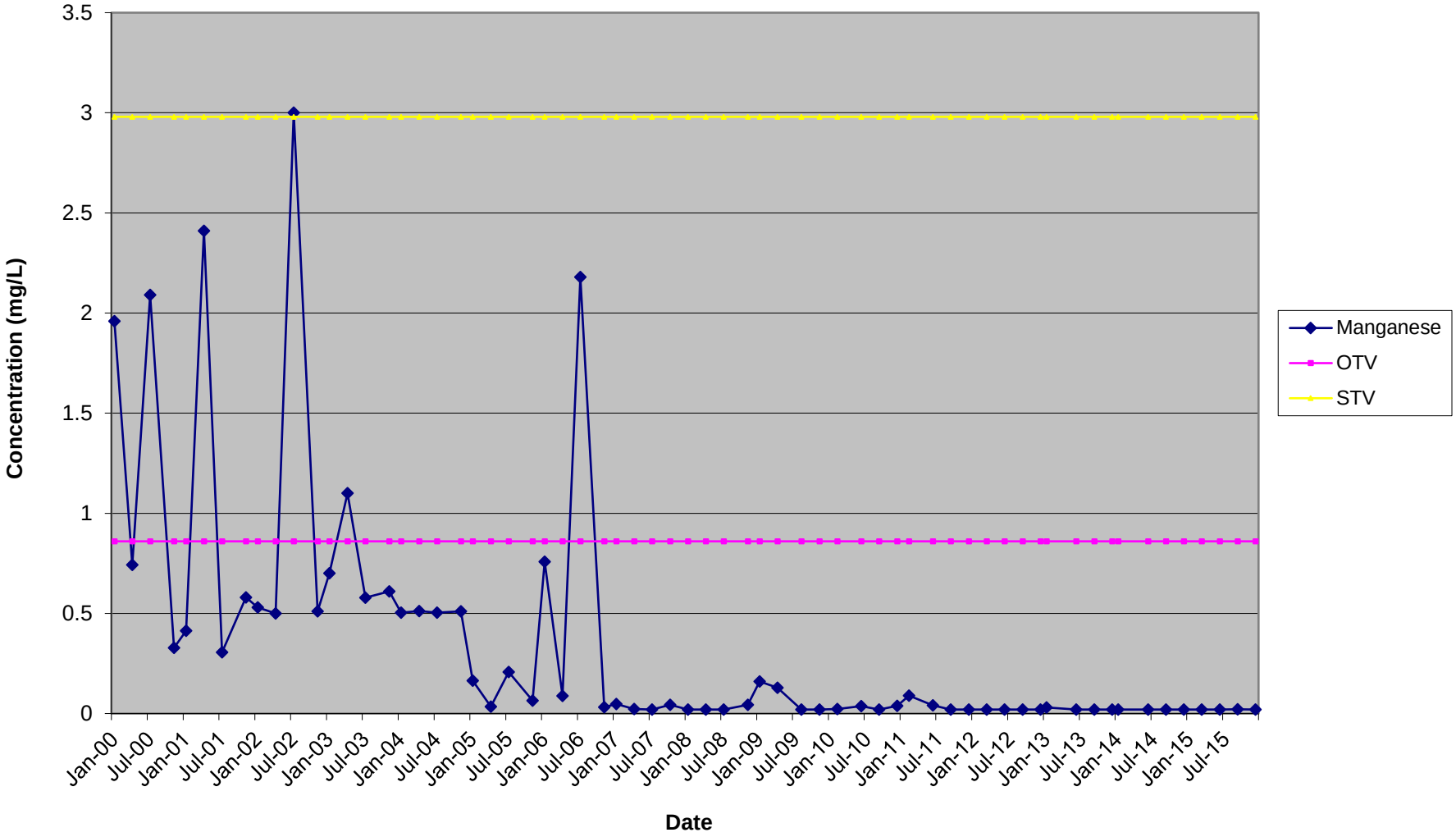
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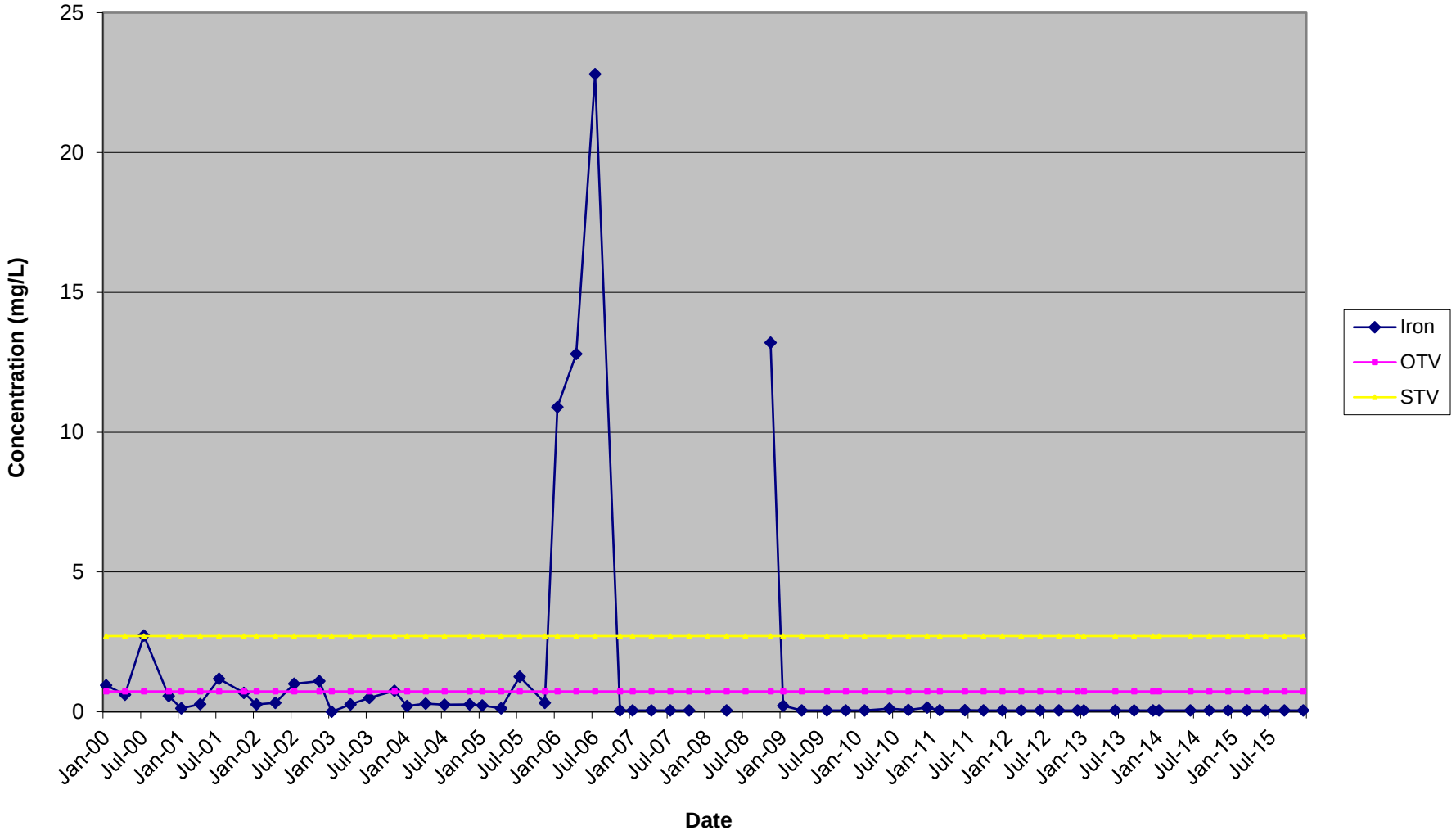
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DW-6D



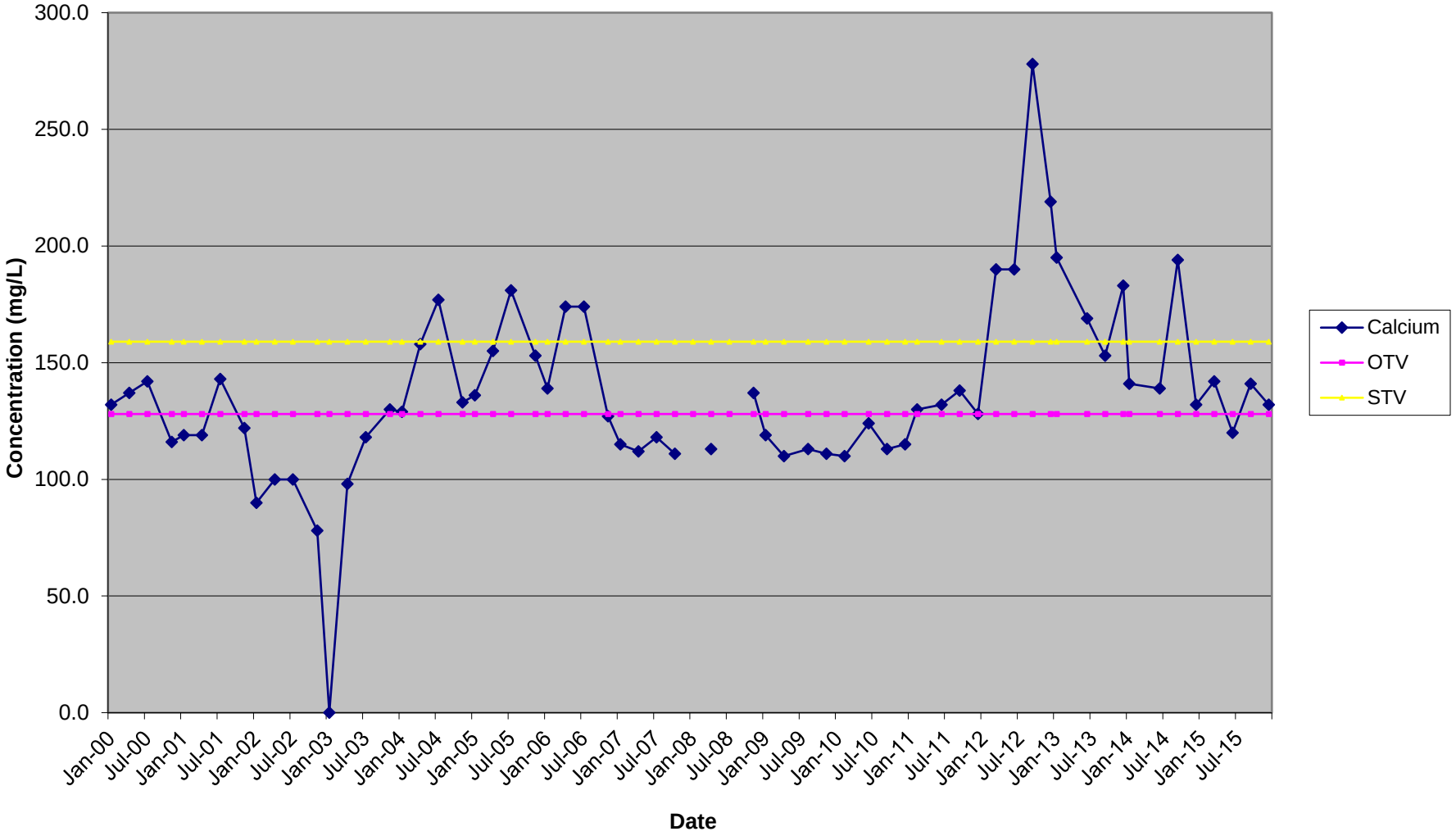
Indicator Parameter Time Trends
DW-6D



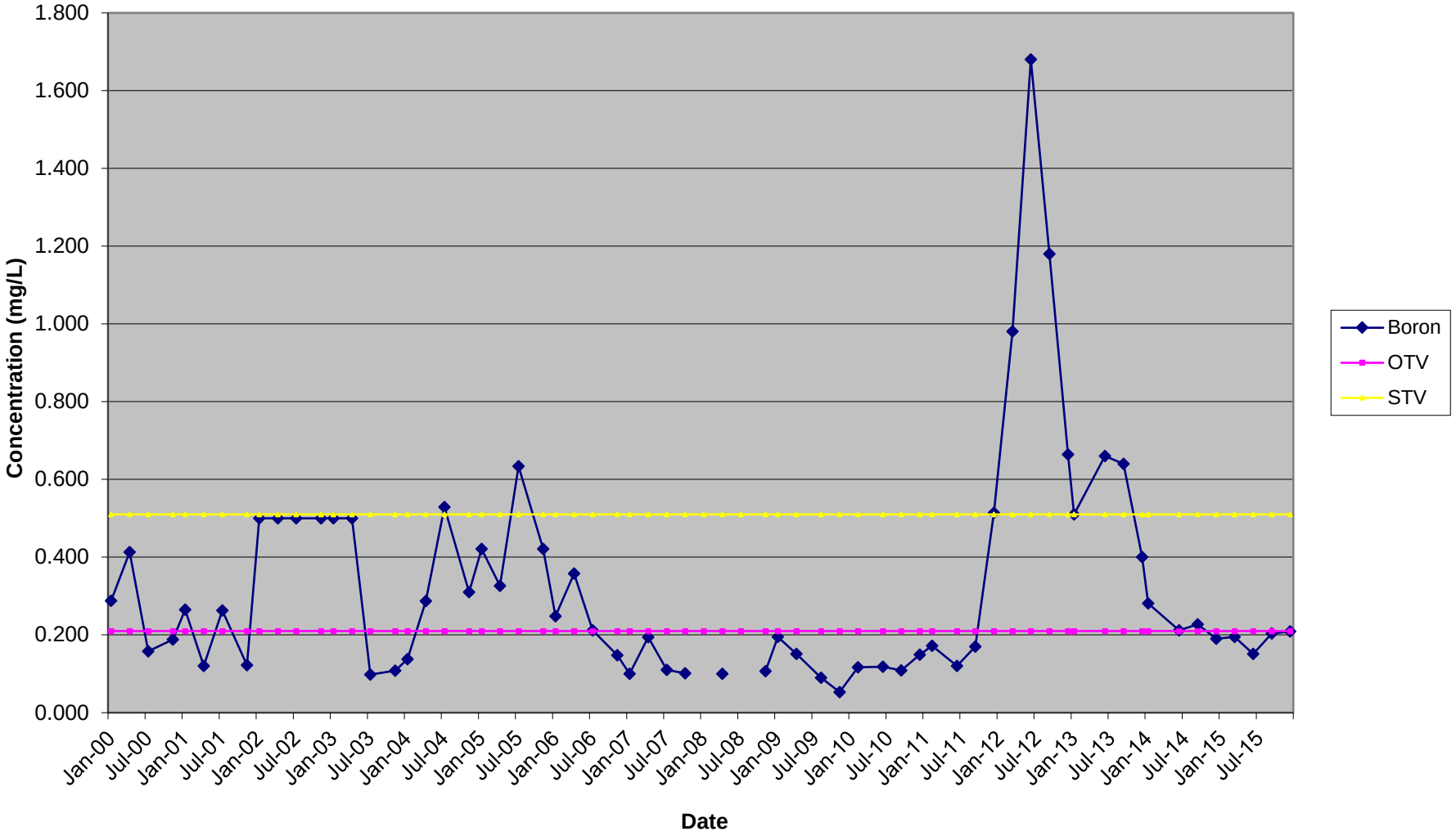
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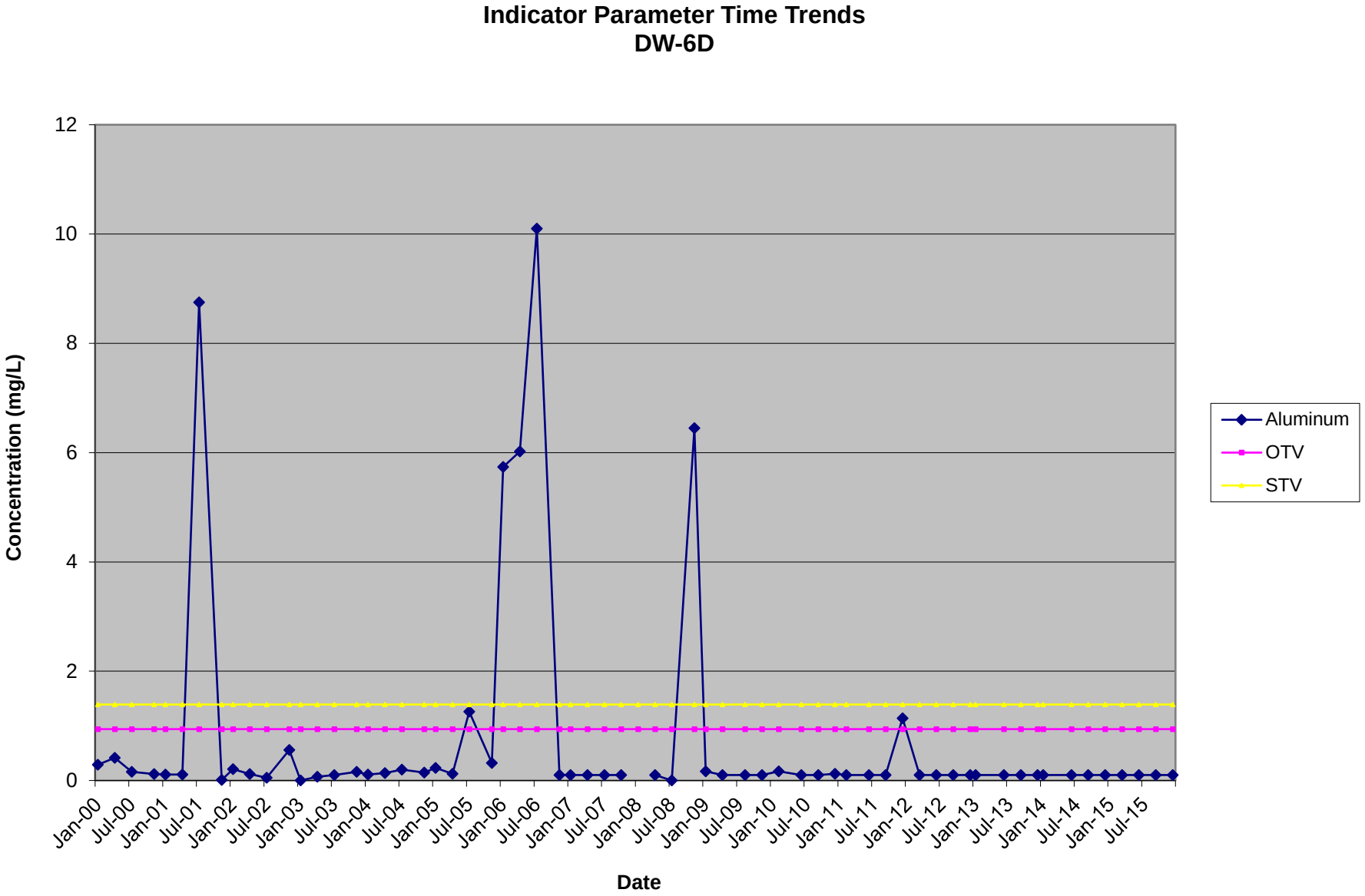


Indicator Parameter Time Trends
DW-6D

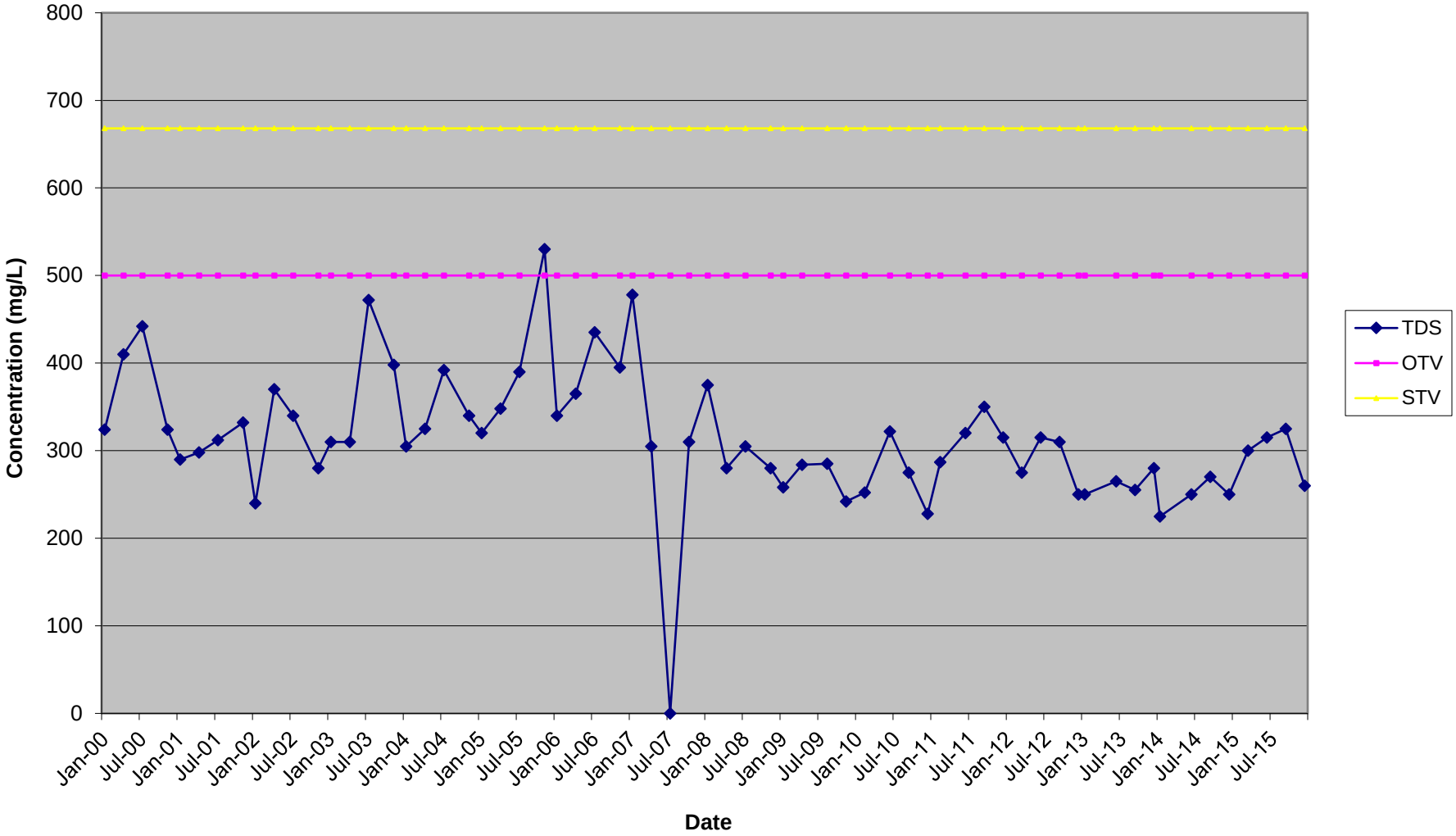


Indicator Parameter Time Trends
DW-6D

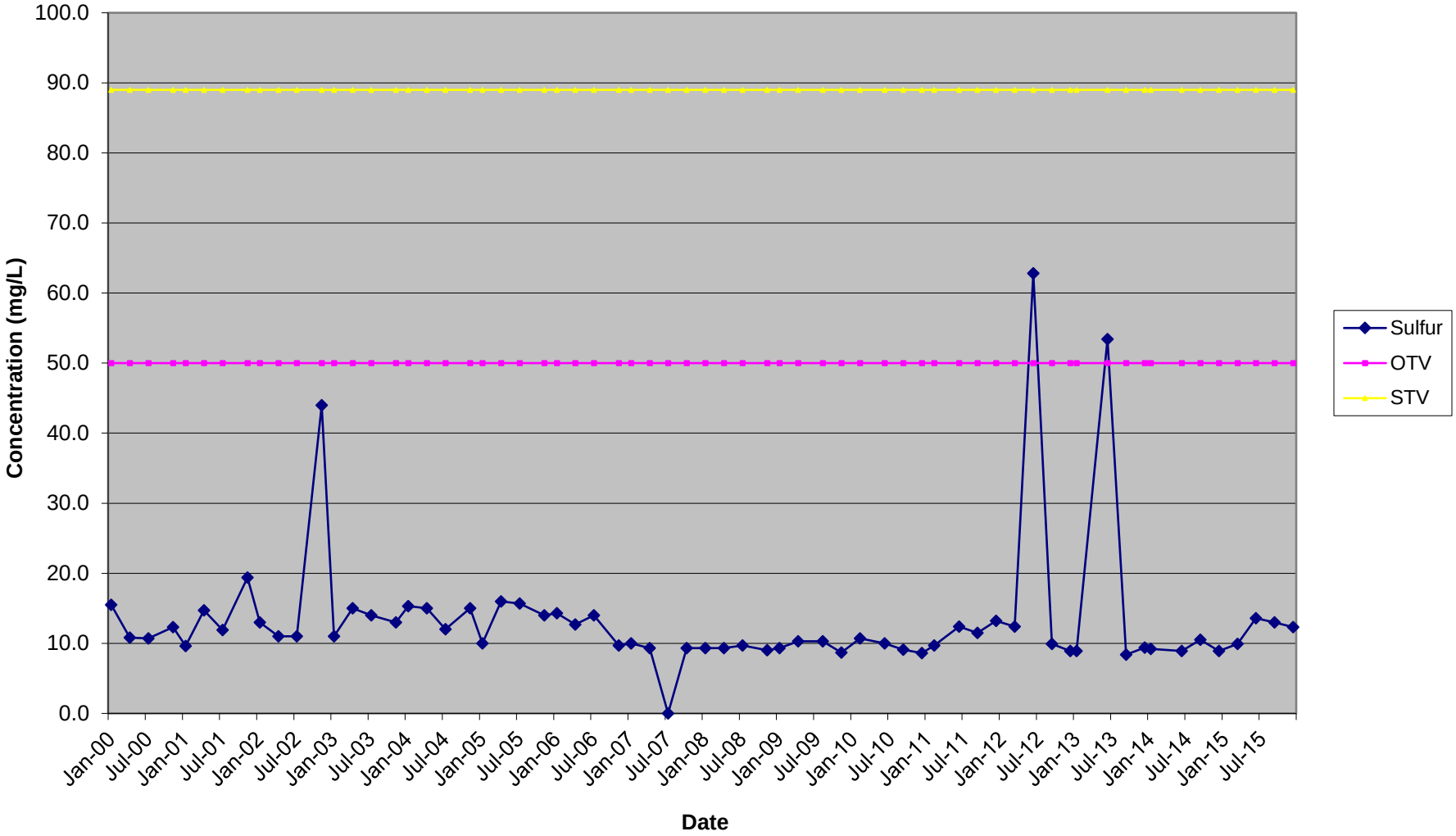



Indicator Parameter Time Trends
DW-6D
Concentration (mg/L)
12
10
8
6
4
2
0
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
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Jul-15
Date
Aluminum
OTV
STV

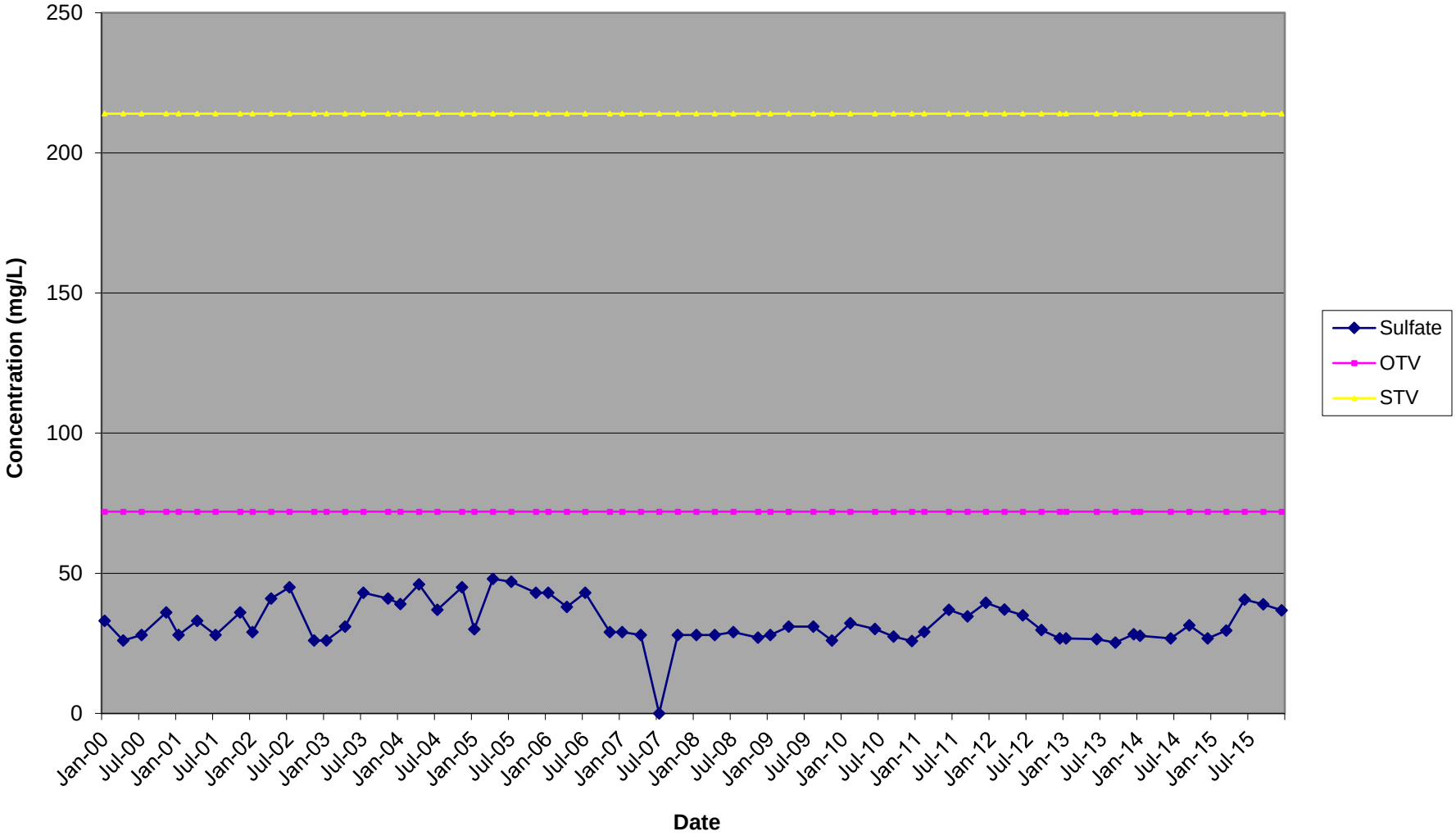
Indicator Parameter Time Trends
DW-5R



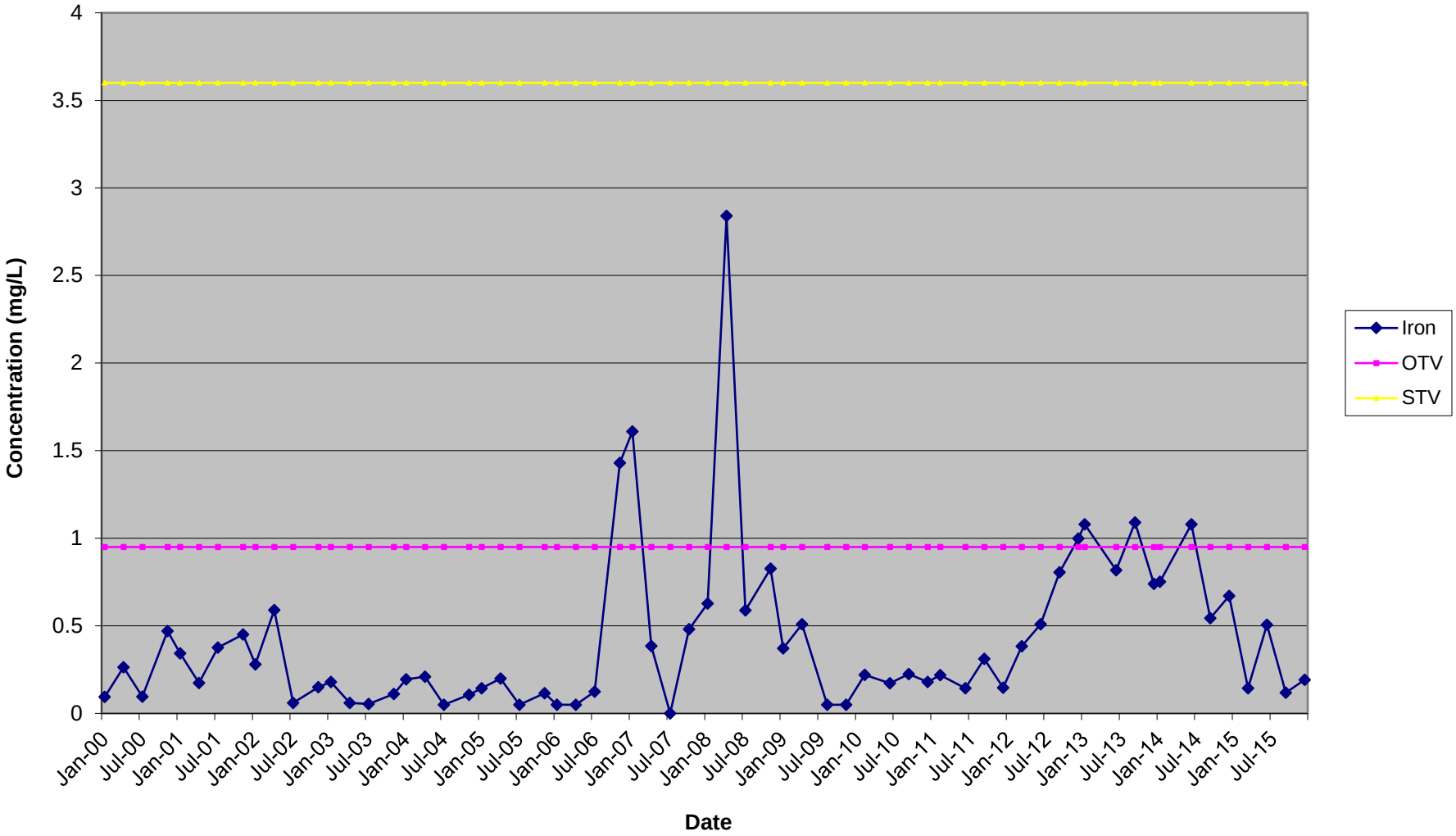
Indicator Parameter Time Trends
DW-5R



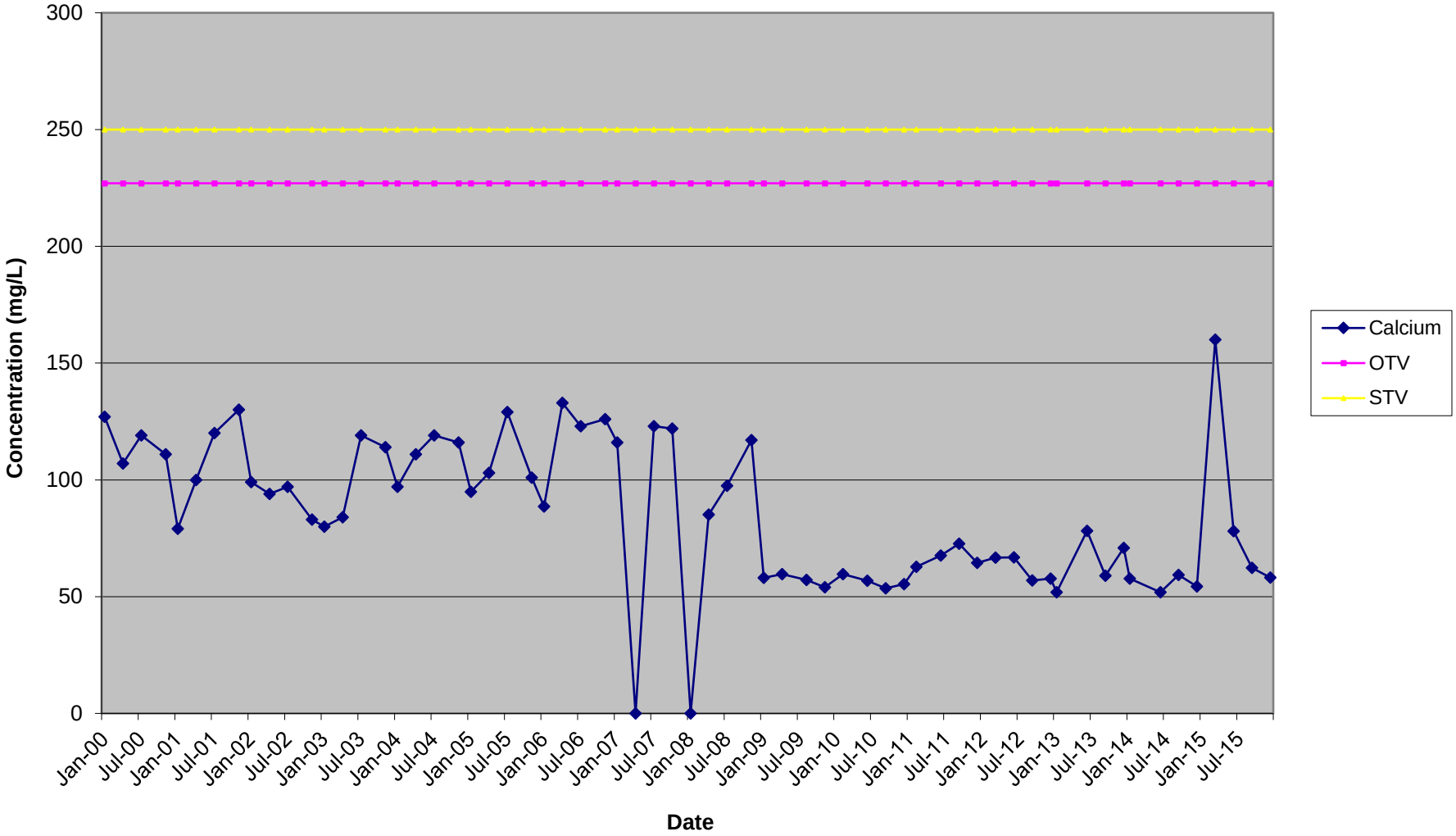
Indicator Parameter Time Trends
DW-5R



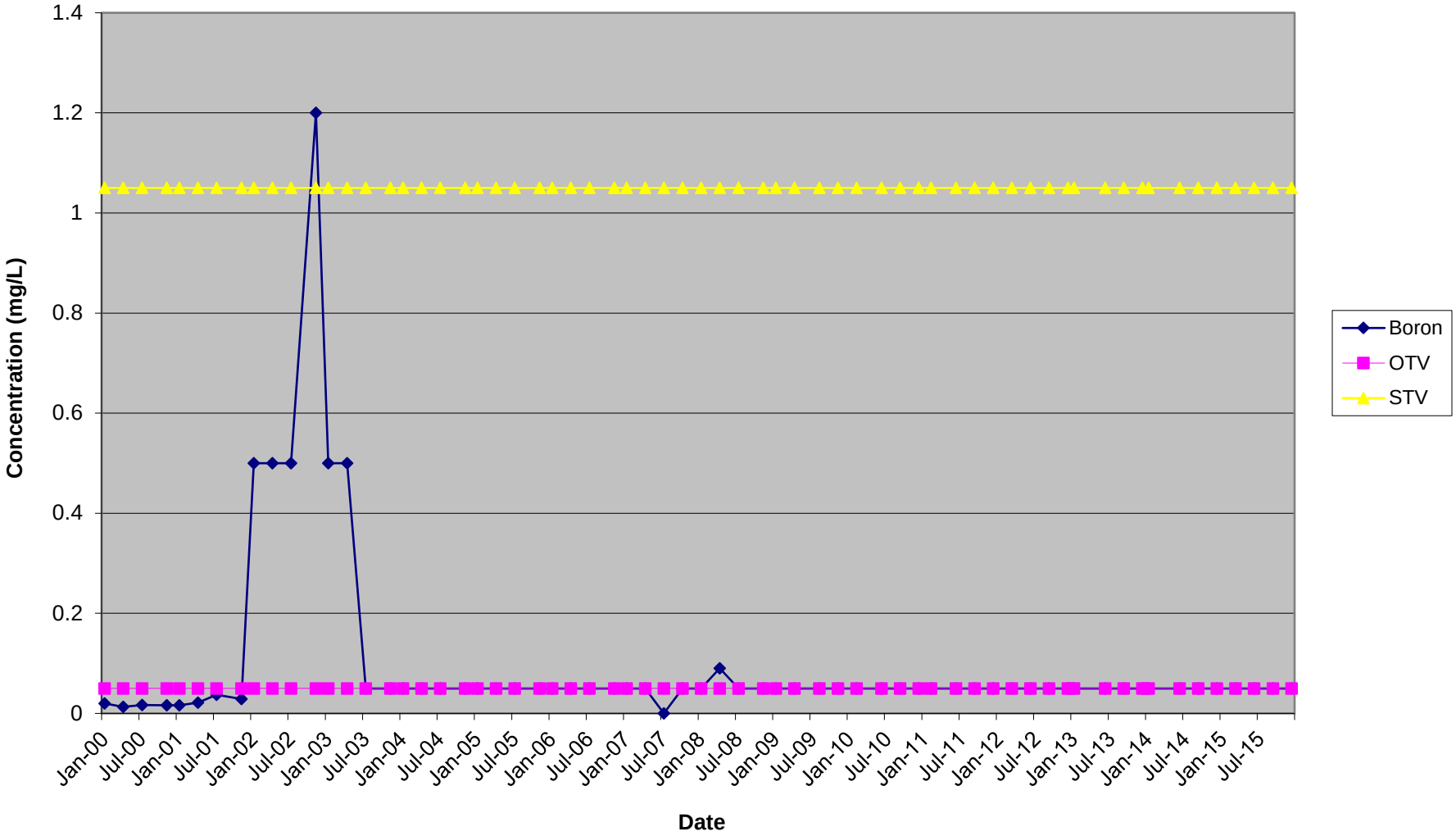
Indicator Parameter Time Trends
DW-5R

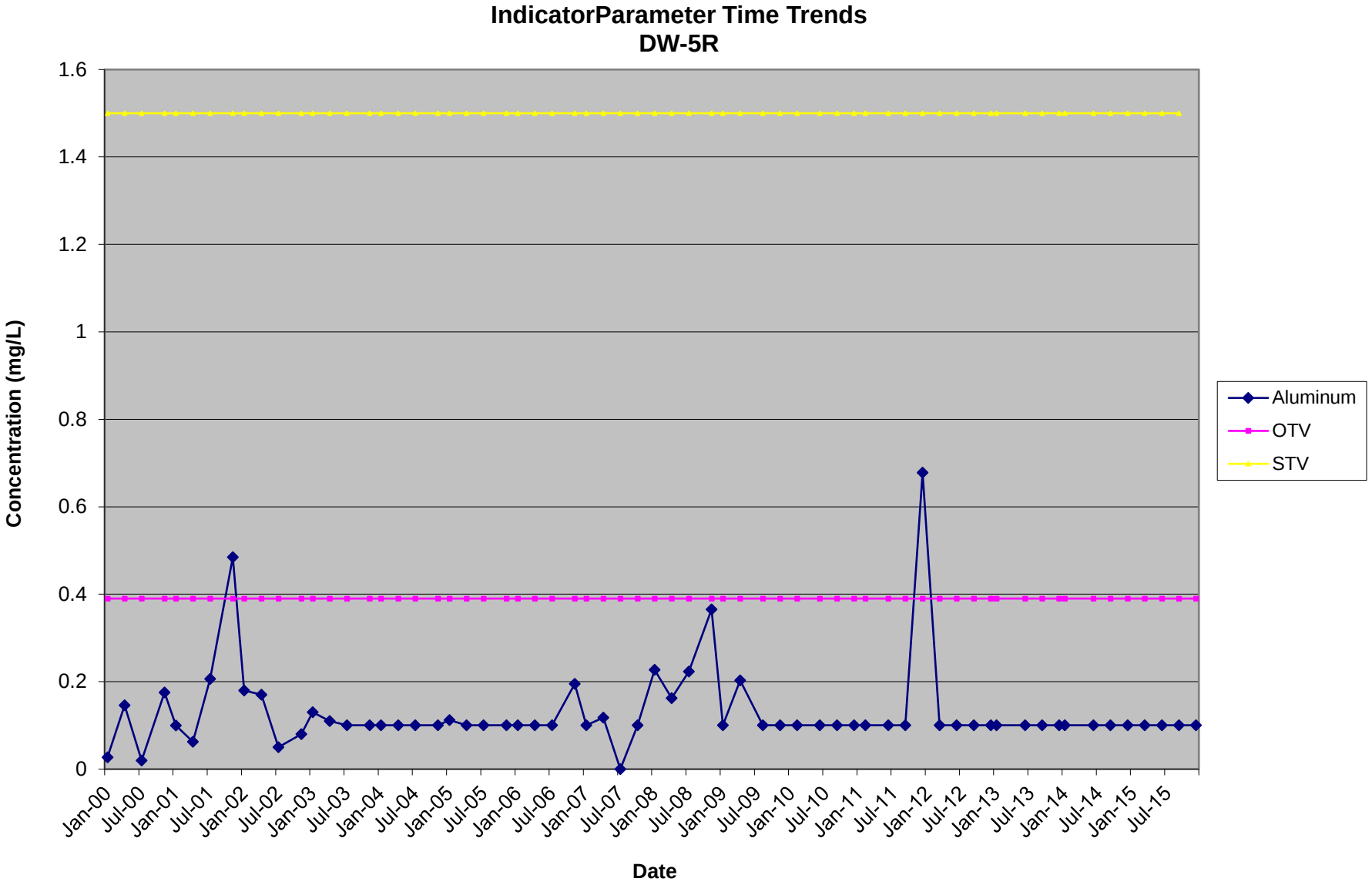


Indicator Parameter Time Trends
DW-5R

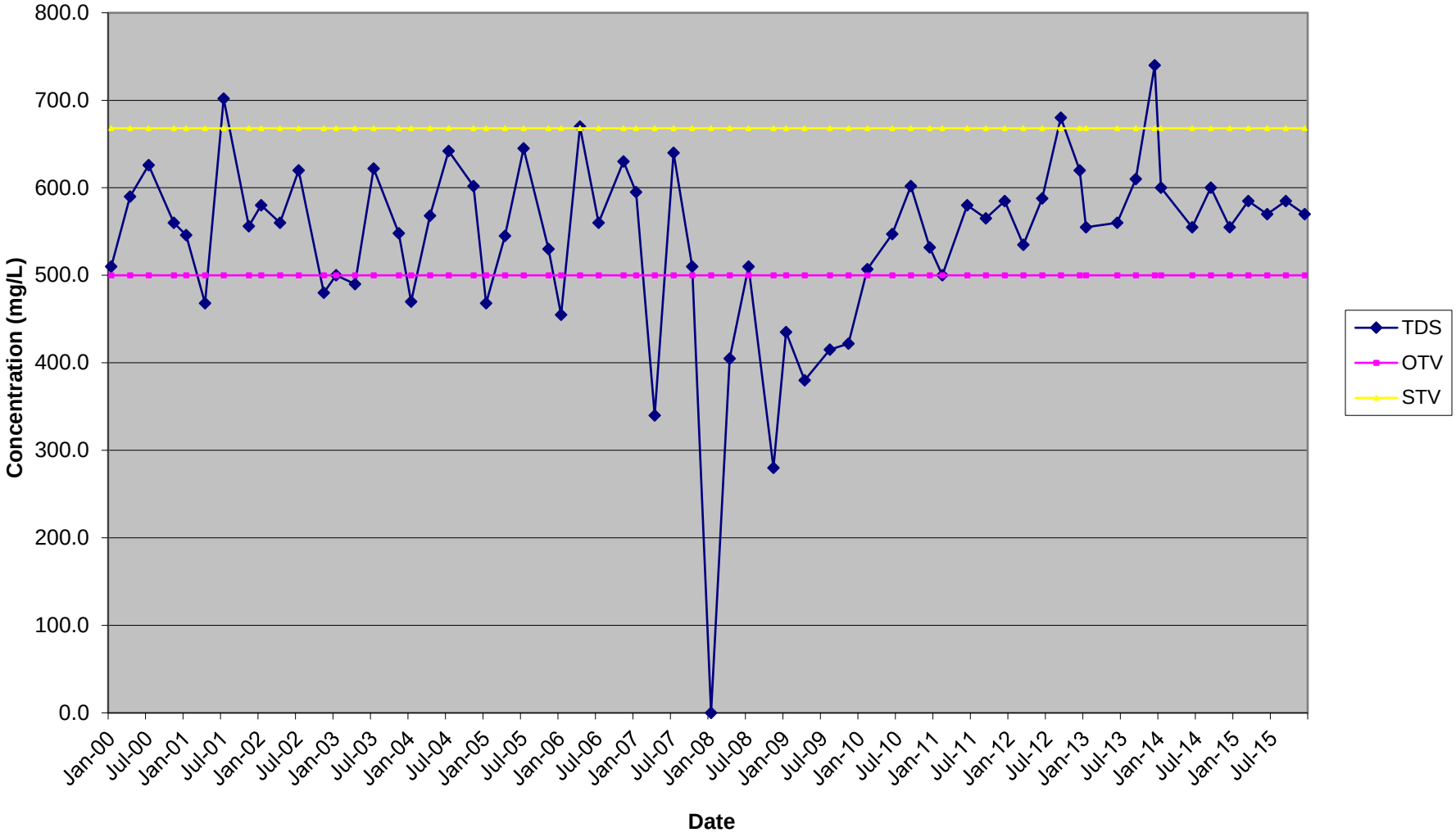


Indicator Parameter Time Trends
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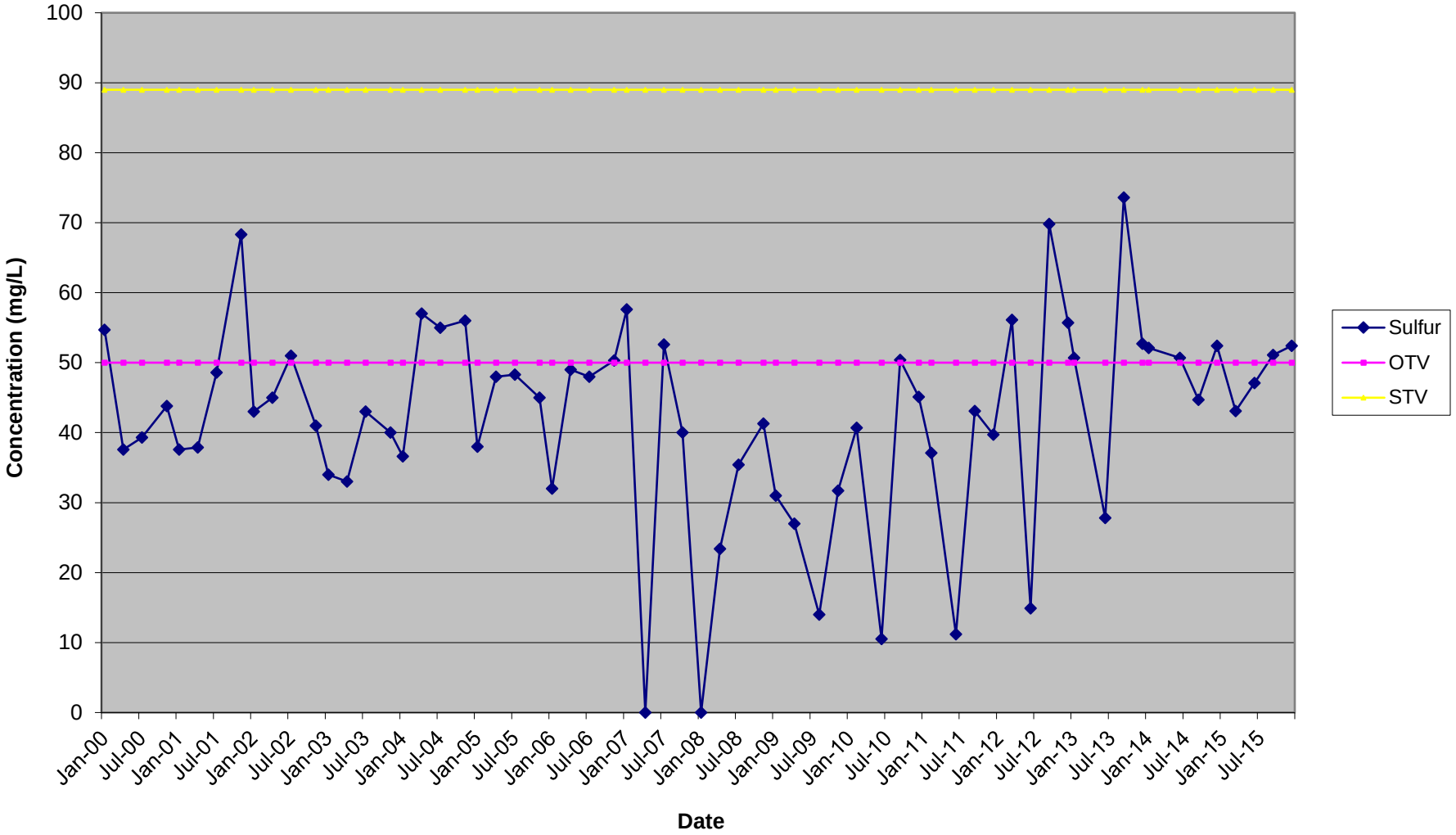


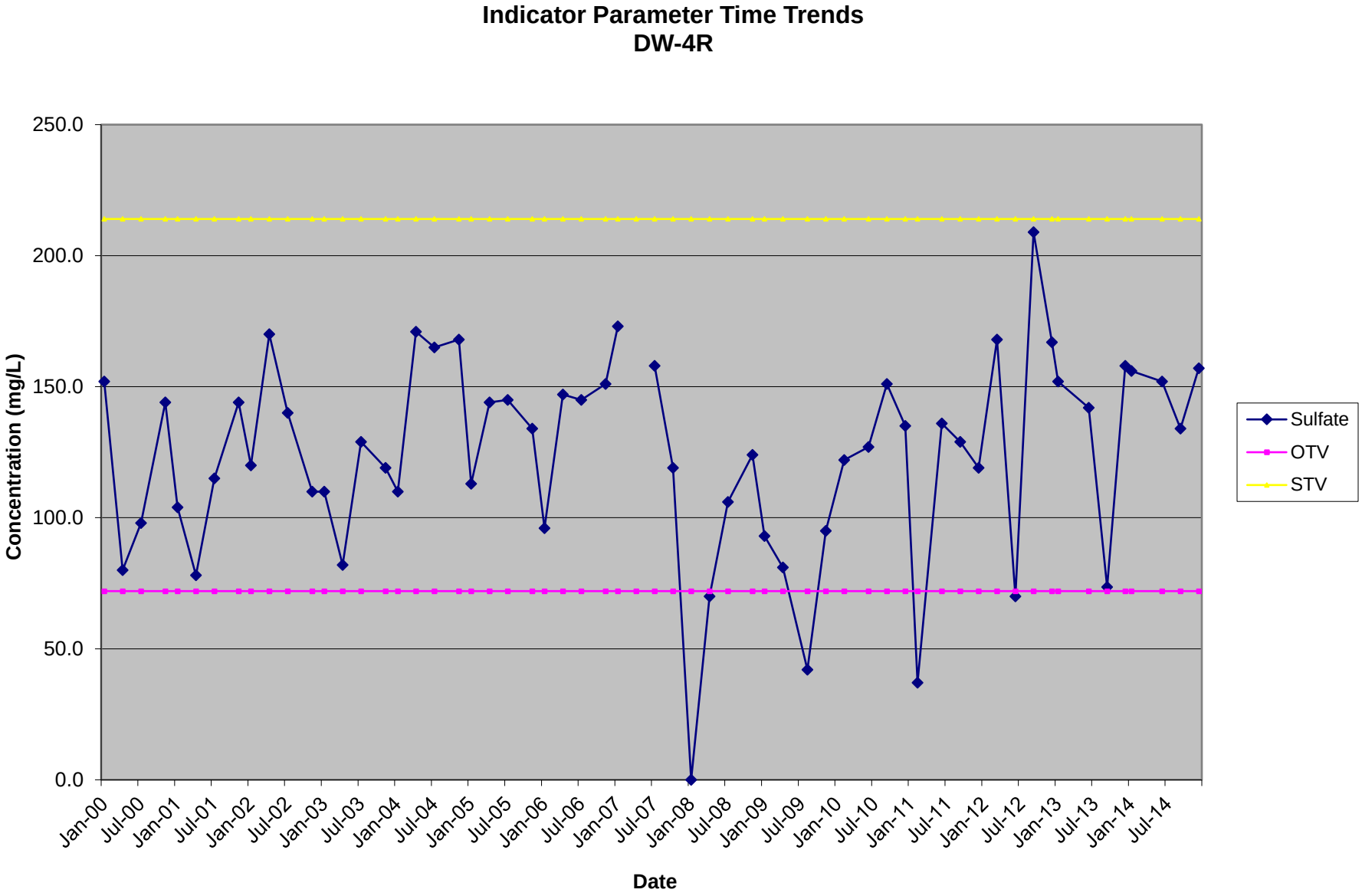

IndicatorParameter Time Trends
DW-5R
Concentration (mg/L)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Date
Aluminum
OTV
STV

Indicator Parameter Time Trends
DW-4R

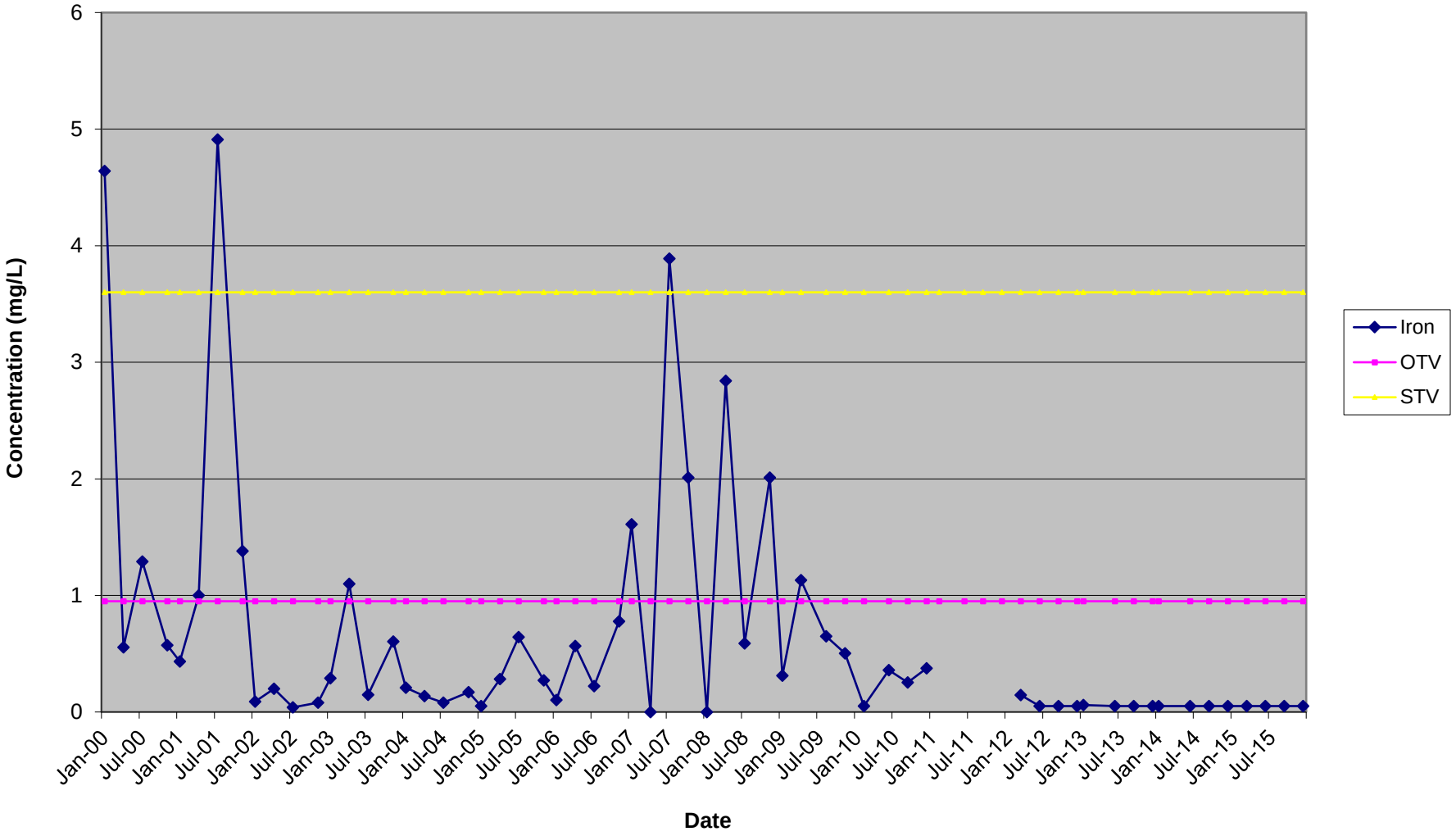


Indicator Parameter Time Trends
DW-4R

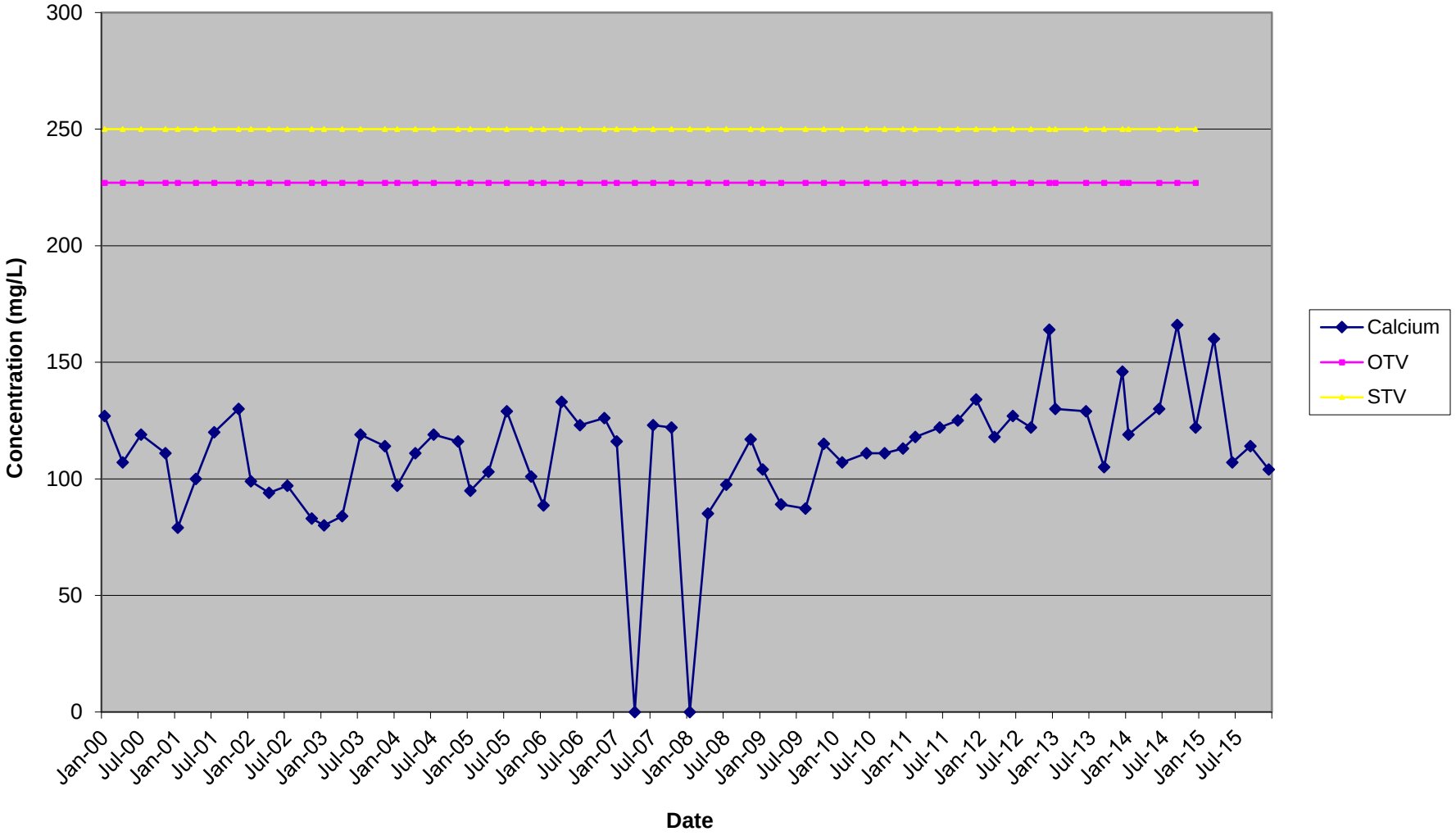



Indicator Parameter Time Trends
DW-4R
Concentration (mg/L)
250.0
200.0
150.0
100.0
50.0
0.0
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
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Jan-14
Jul-14
Date
Sulfate
OTV
STV

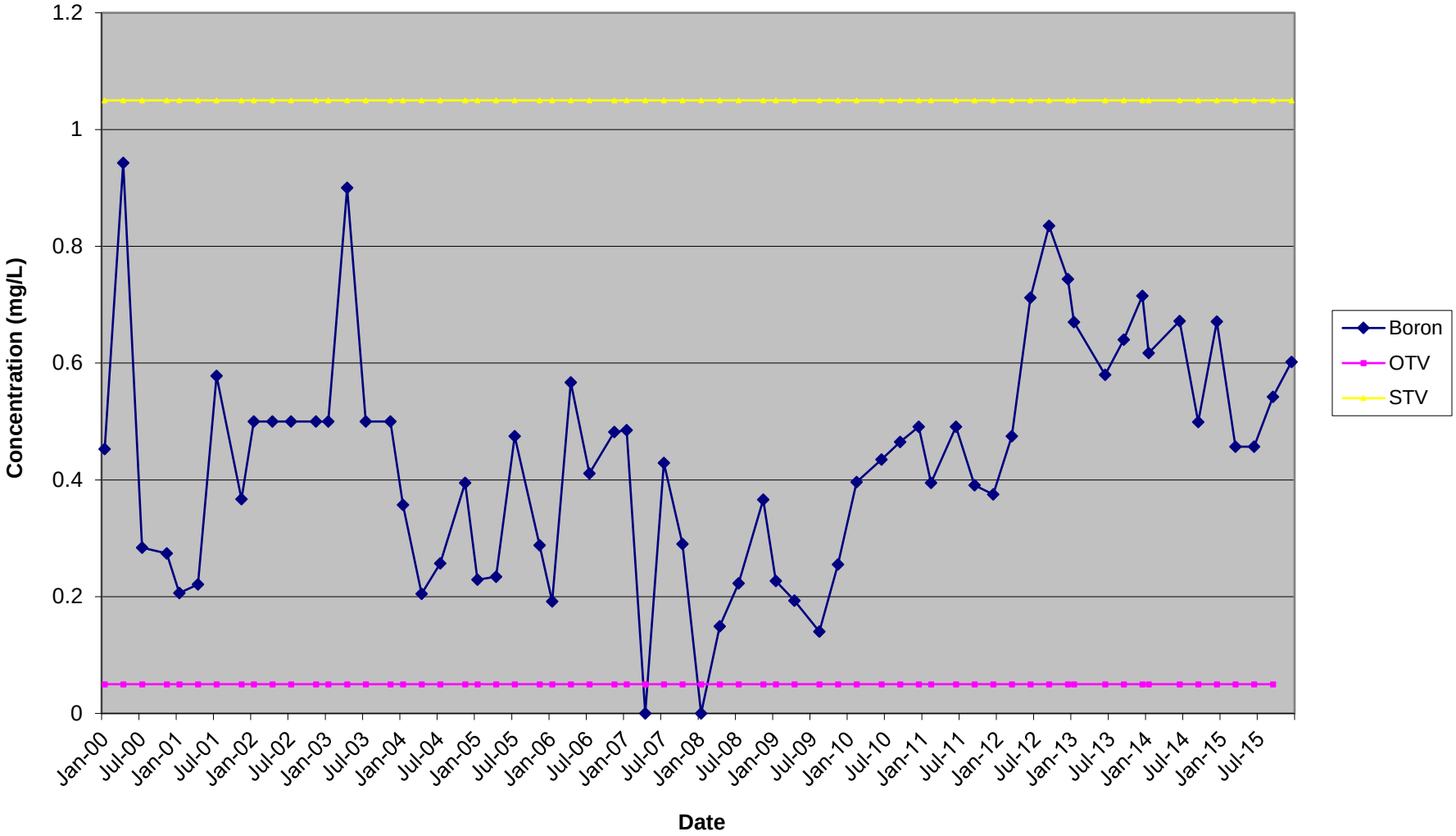
Indicator Parameter Time Trends
DW-4R



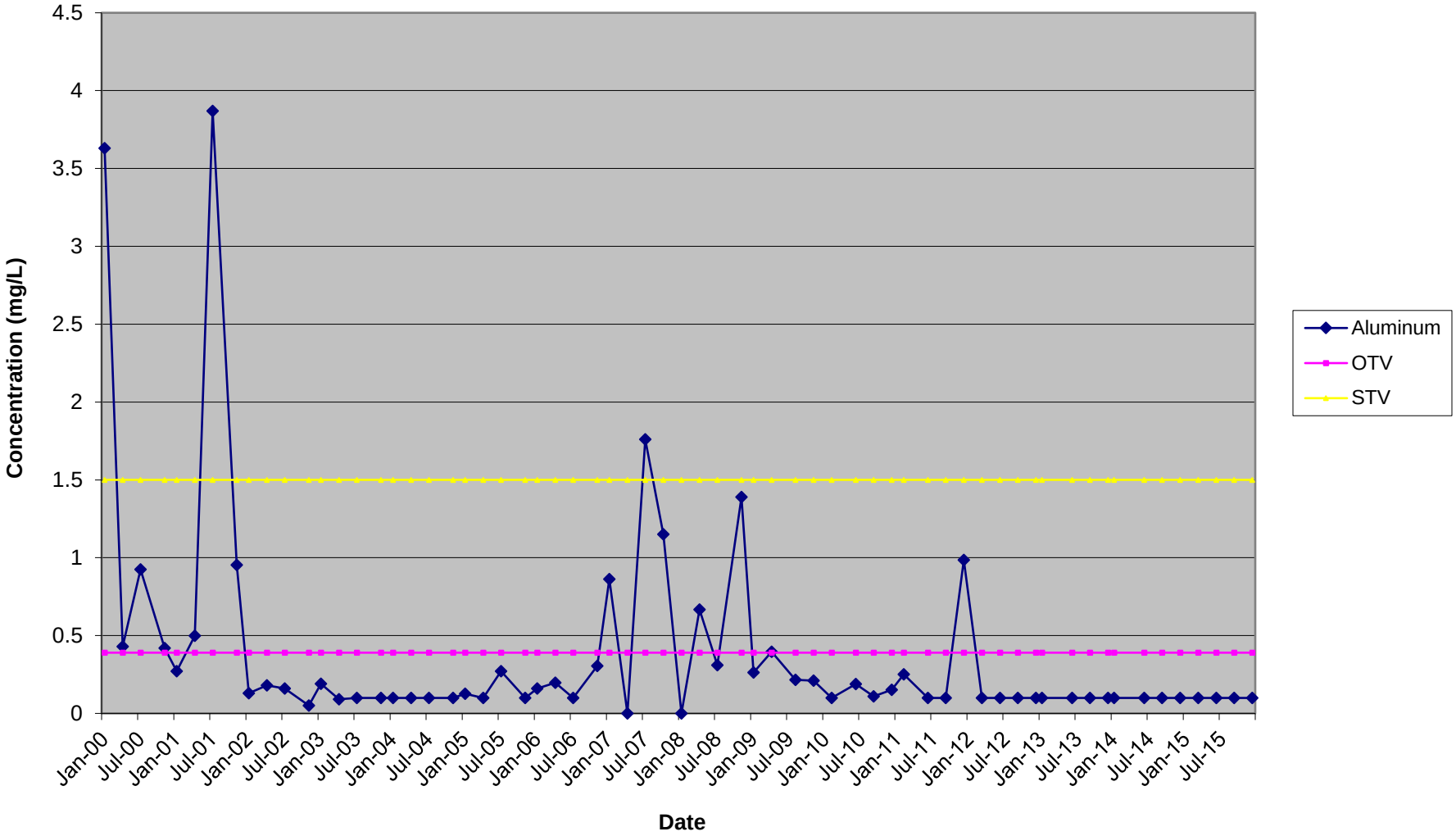
Indicator Parameter Time Trends
DW-4R



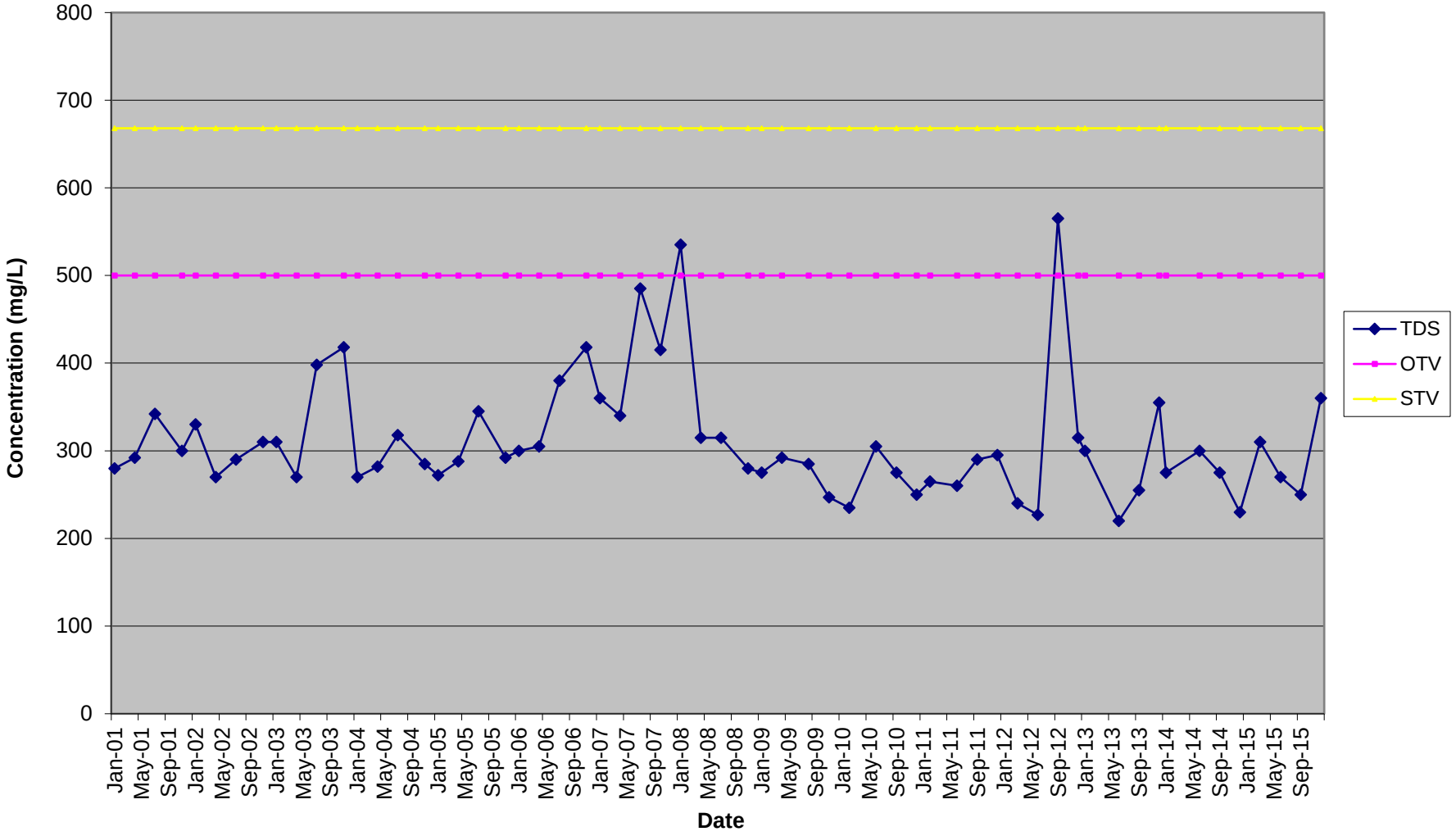
Indicator Parameter Time Trends
DW-4R



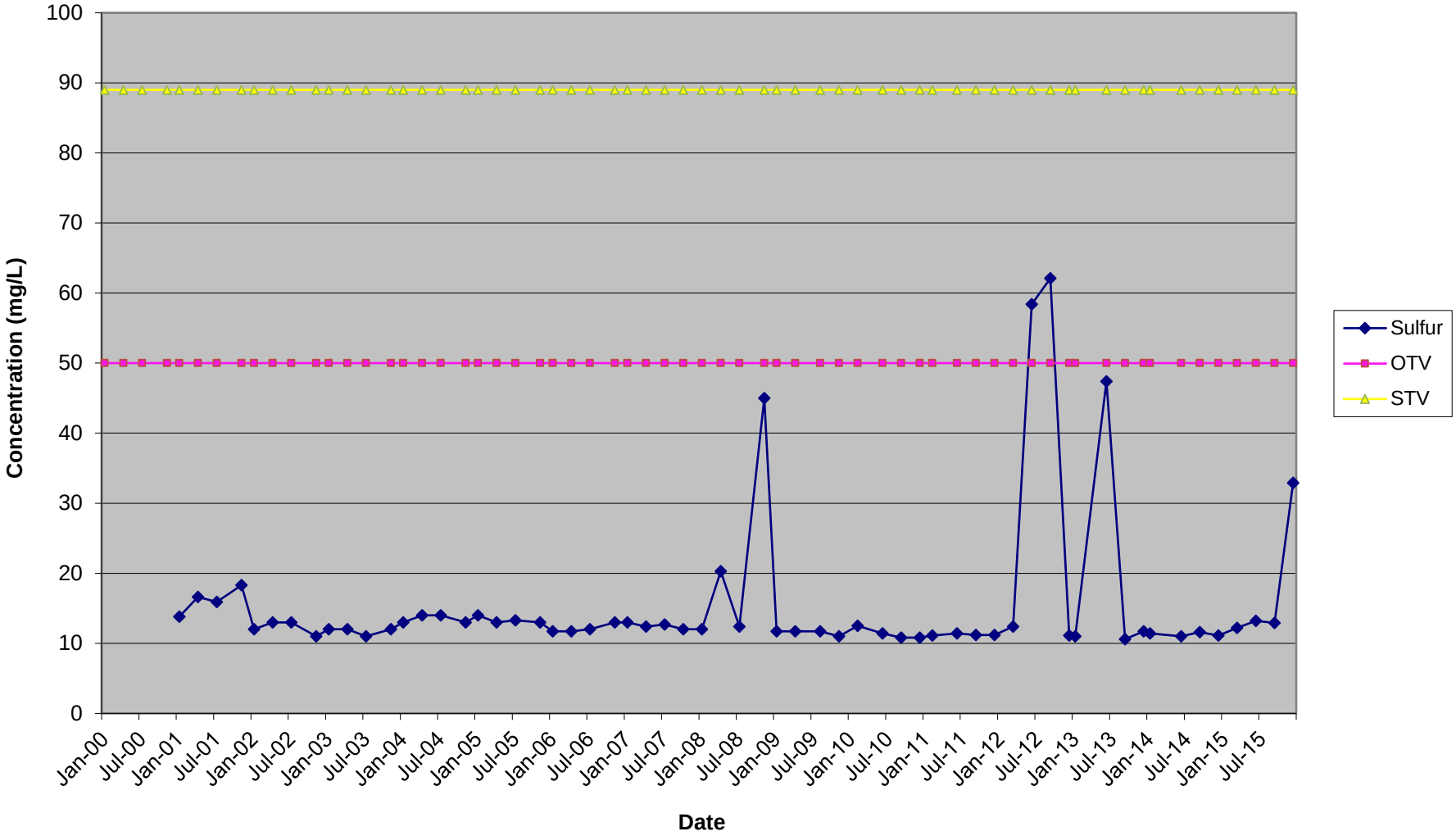
Indicator Parameter Time Trends
DW-4R



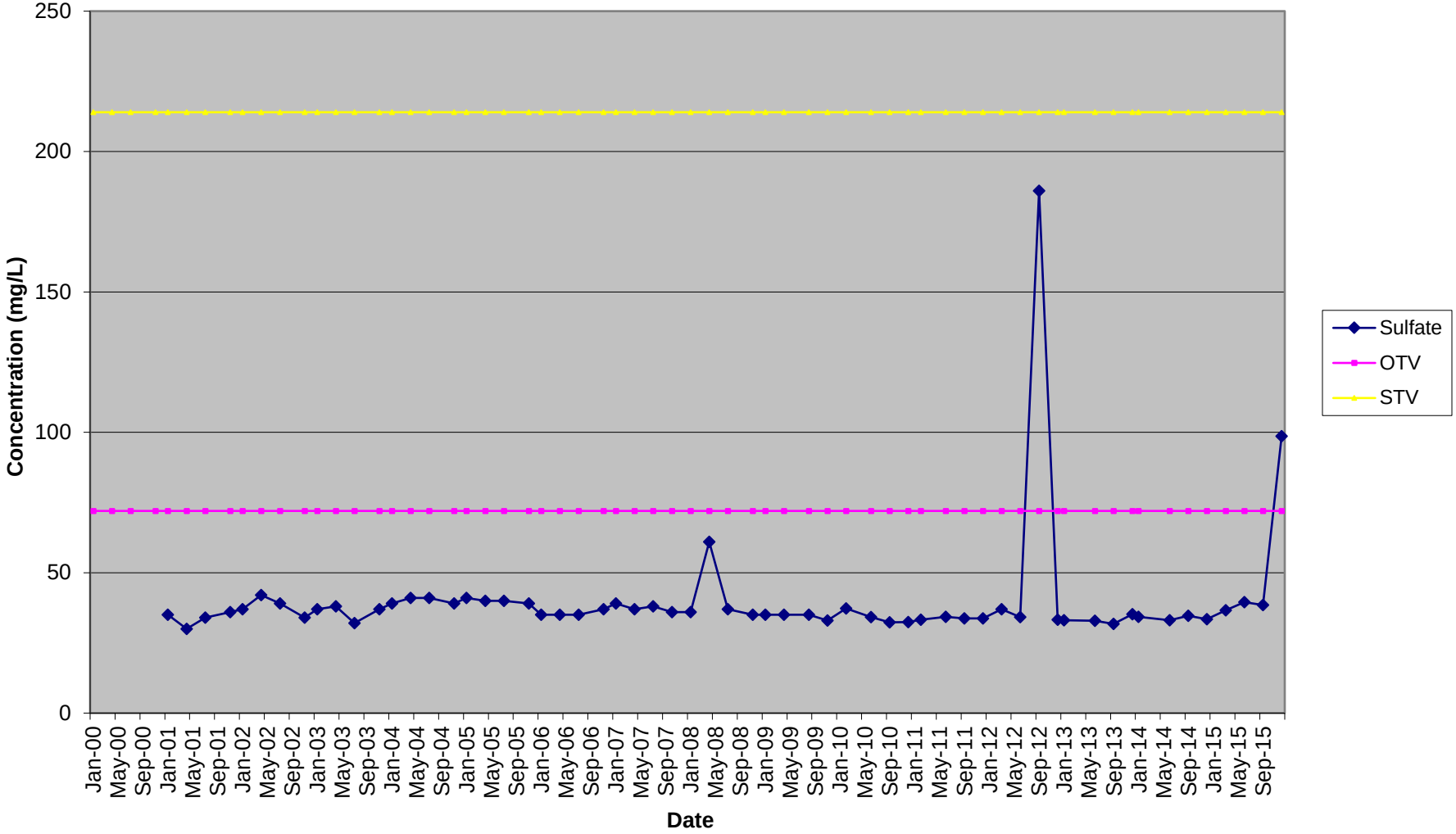
Indicator Parameter Time Trends
DW-3R



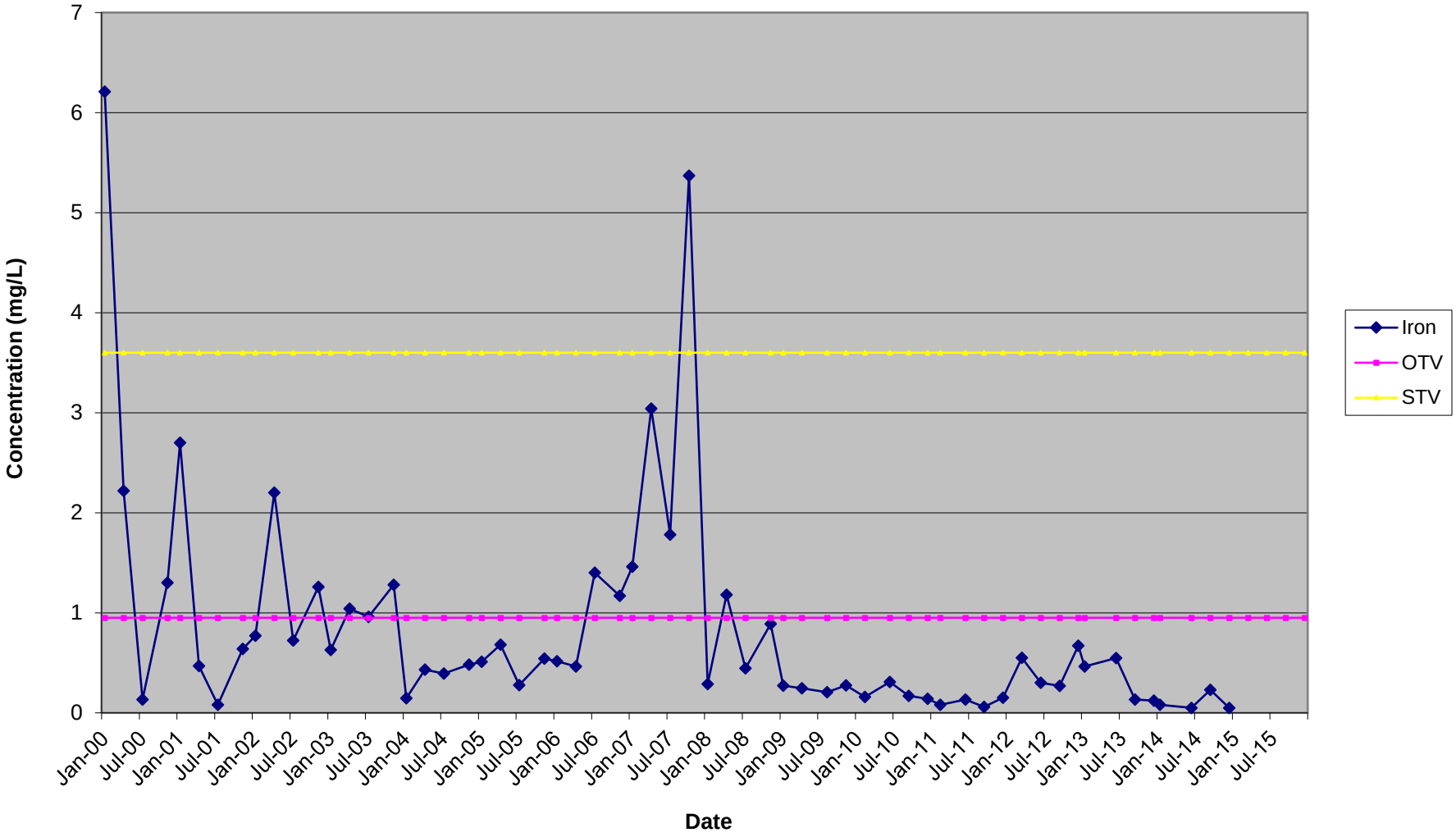
Indicator Parameter Time Trends
DW-3R



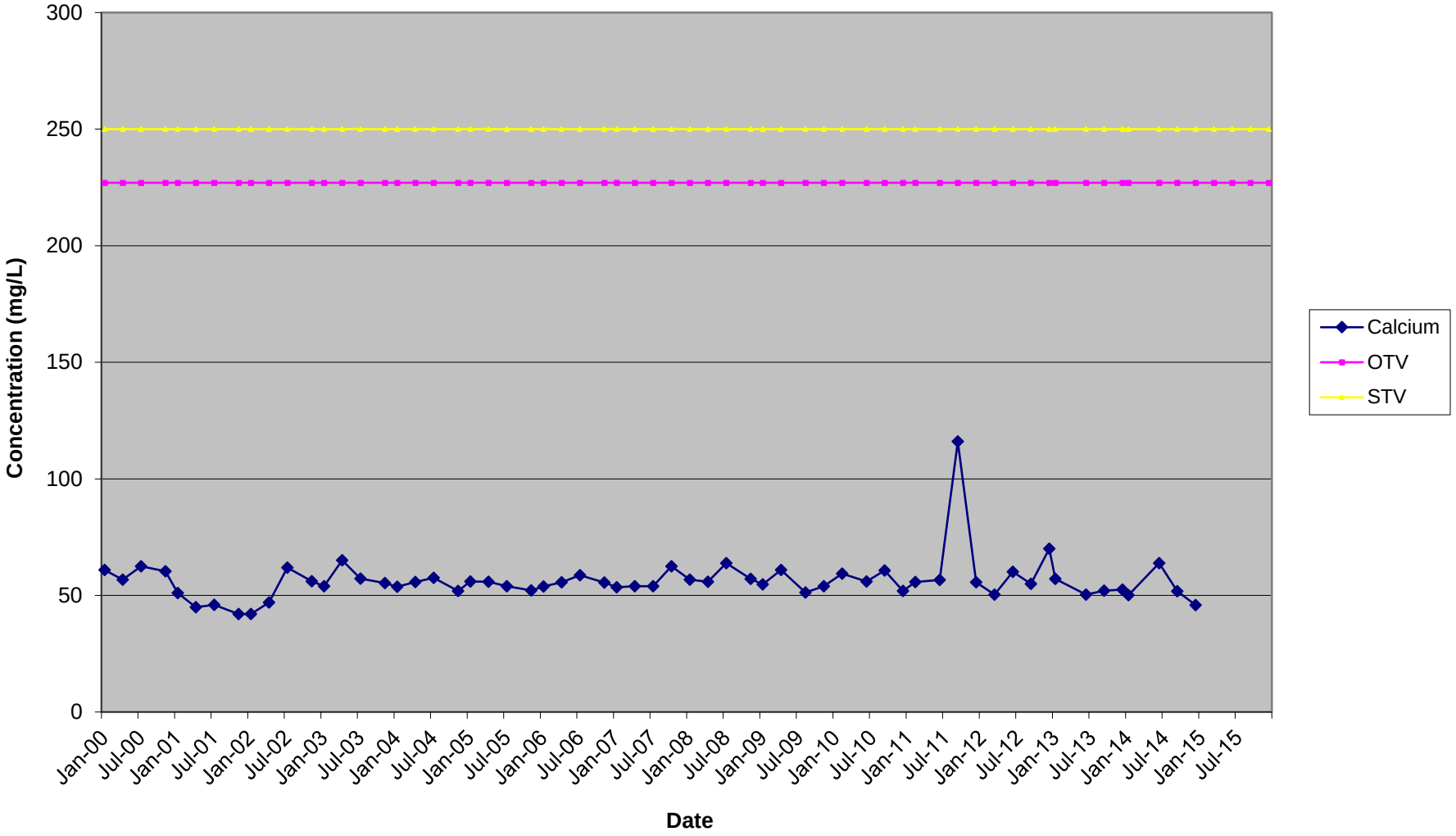
Indicator Parameter Time Trends
DW-3R



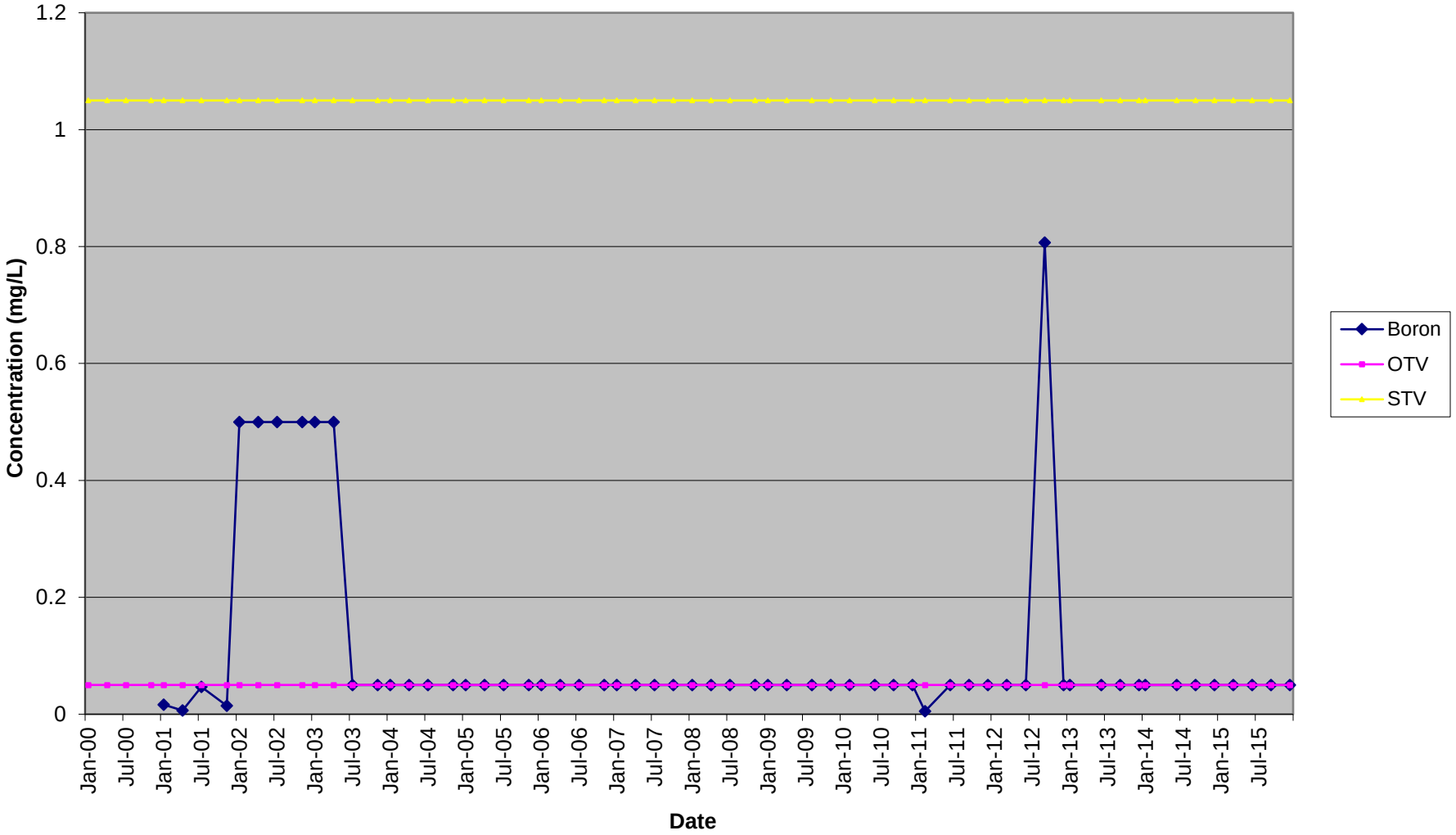
Indicator Parameter Time Trends
DW-3R



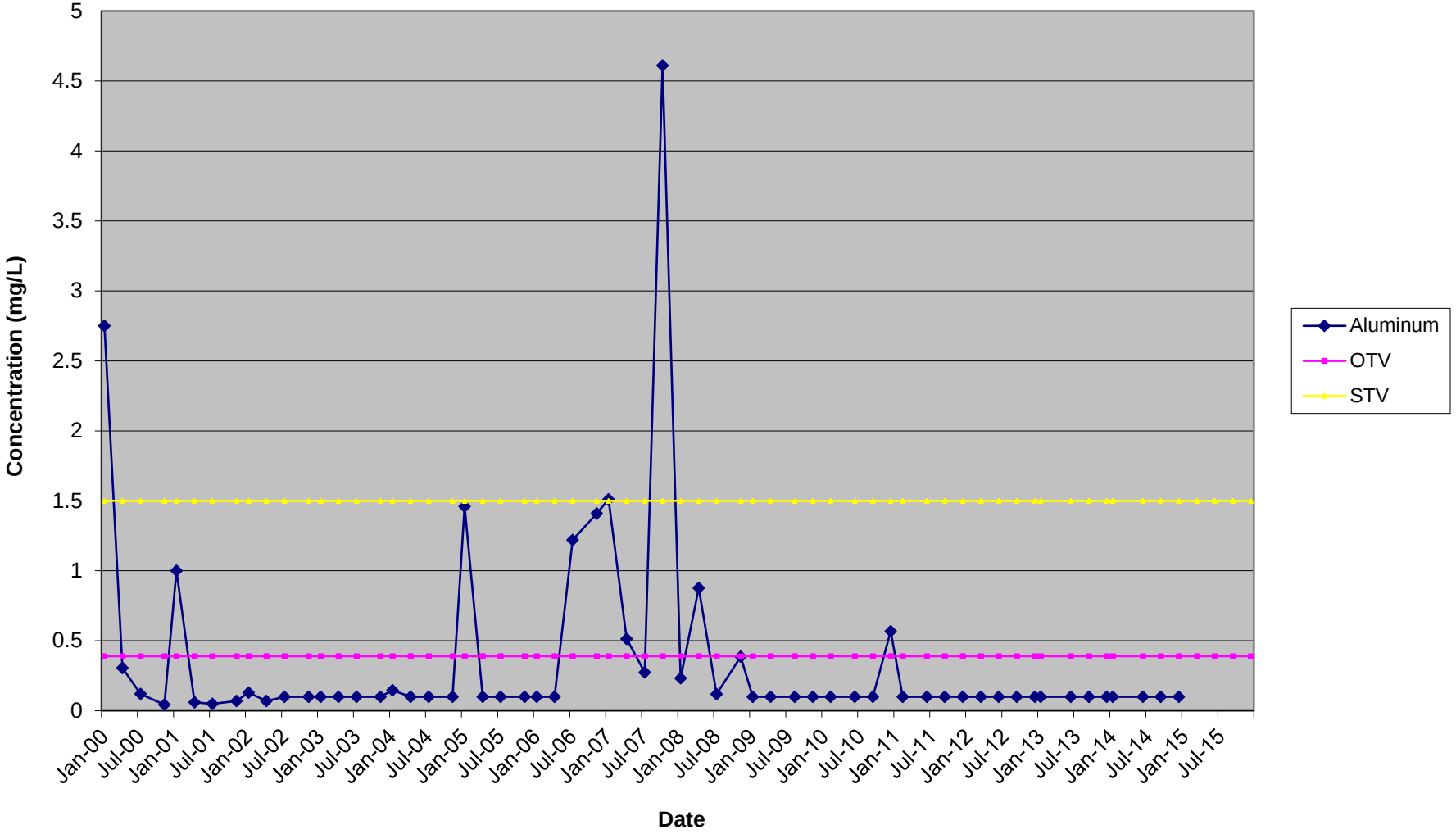
Indicator Parameter Time Trend
DW-3R



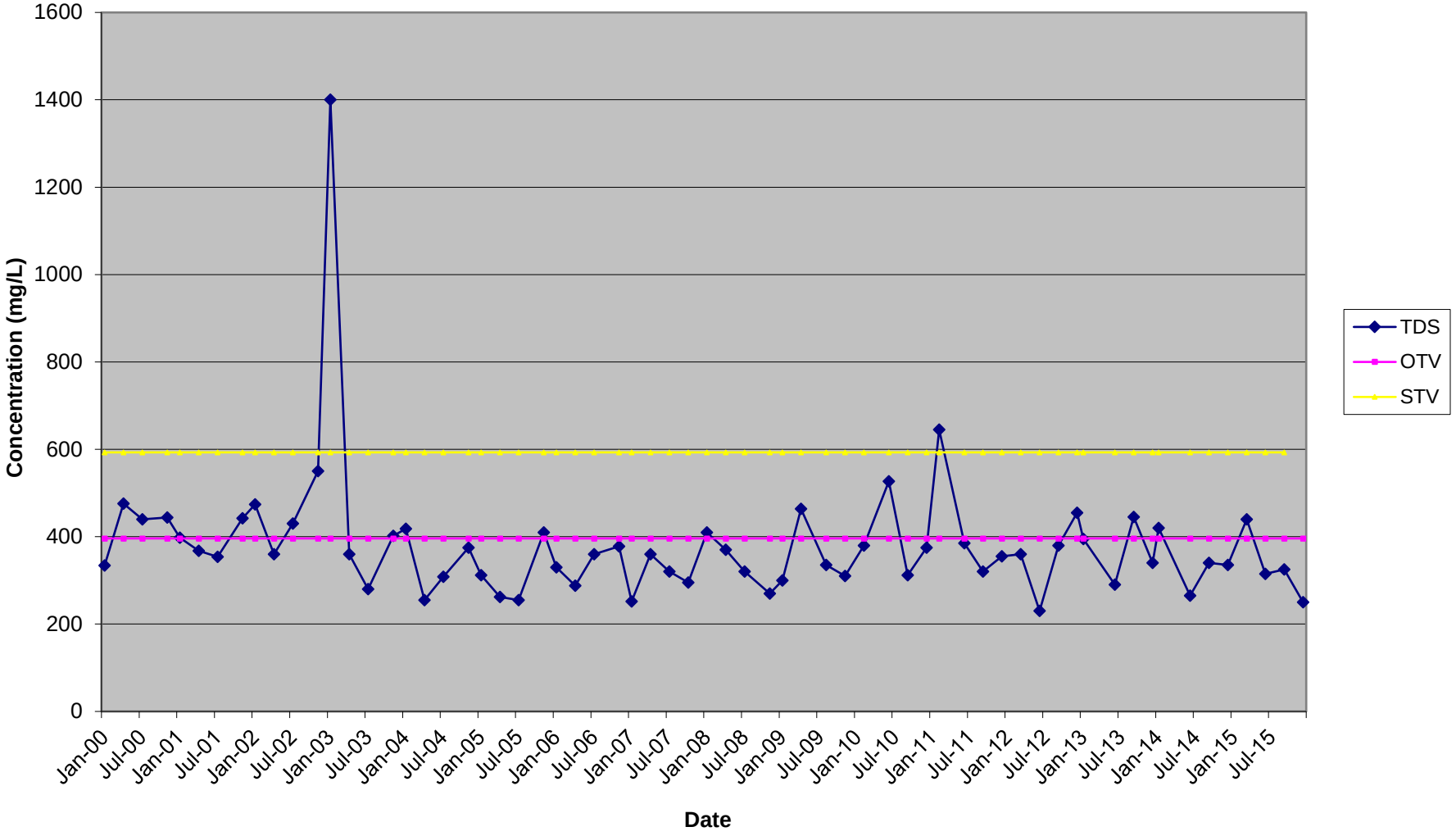
Indicator Parameter Time Trends
DW-3R

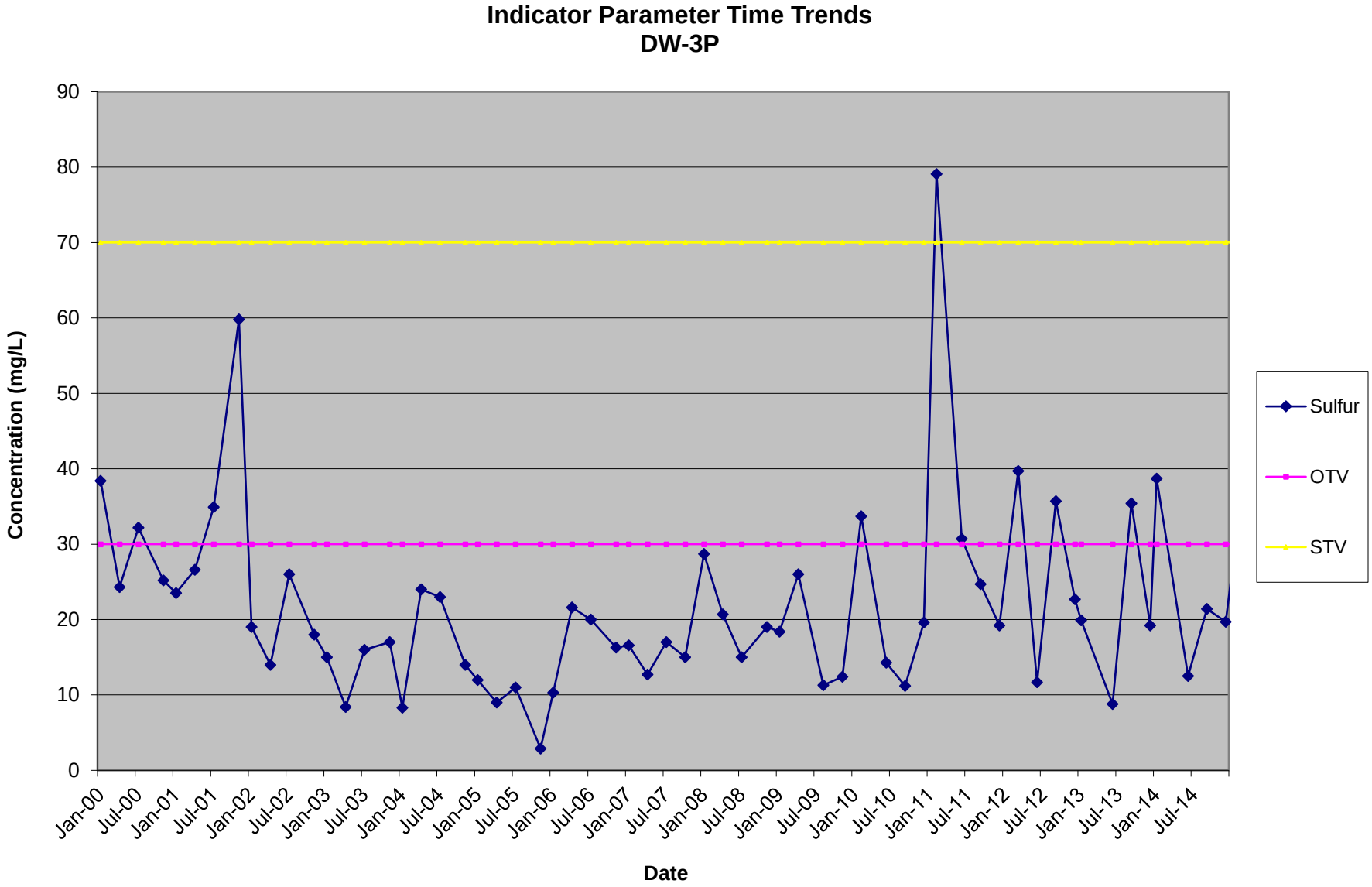


Indicator Parameter Time Trends
DW-3R

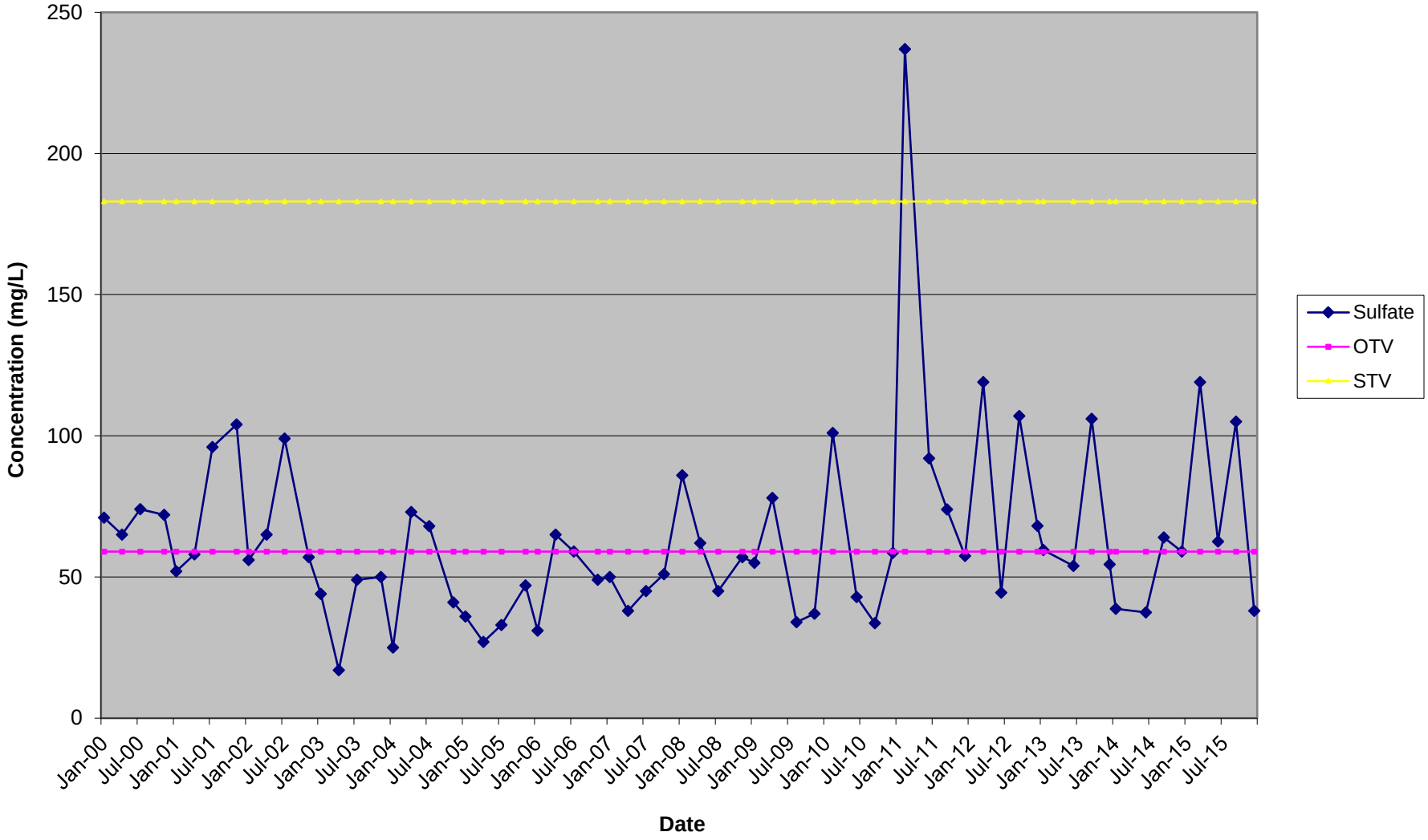


Indicator Parameter Time Trends
DW-3P

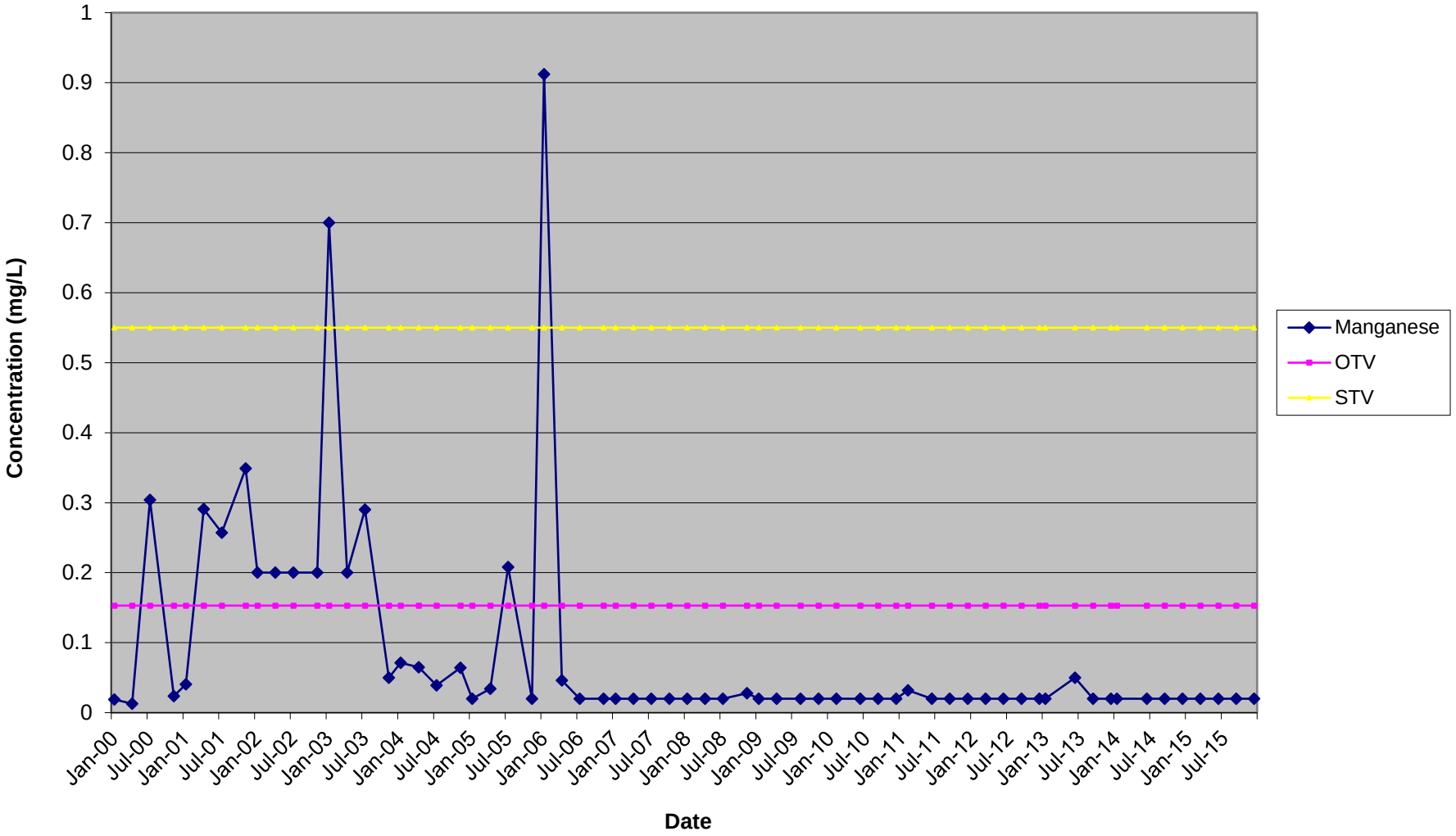



Indicator Parameter Time Trends
DW-3P
Concentration (mg/L)
90
80
70
60
50
40
30
20
10
0
Jan-00
Jul-00
Jan-01
Jul-01
Jan-02
Jul-02
Jan-03
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
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Jul-11
Jan-12
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Jan-13
Jul-13
Jan-14
Jul-14
Date
Sulfur
OTV
STV

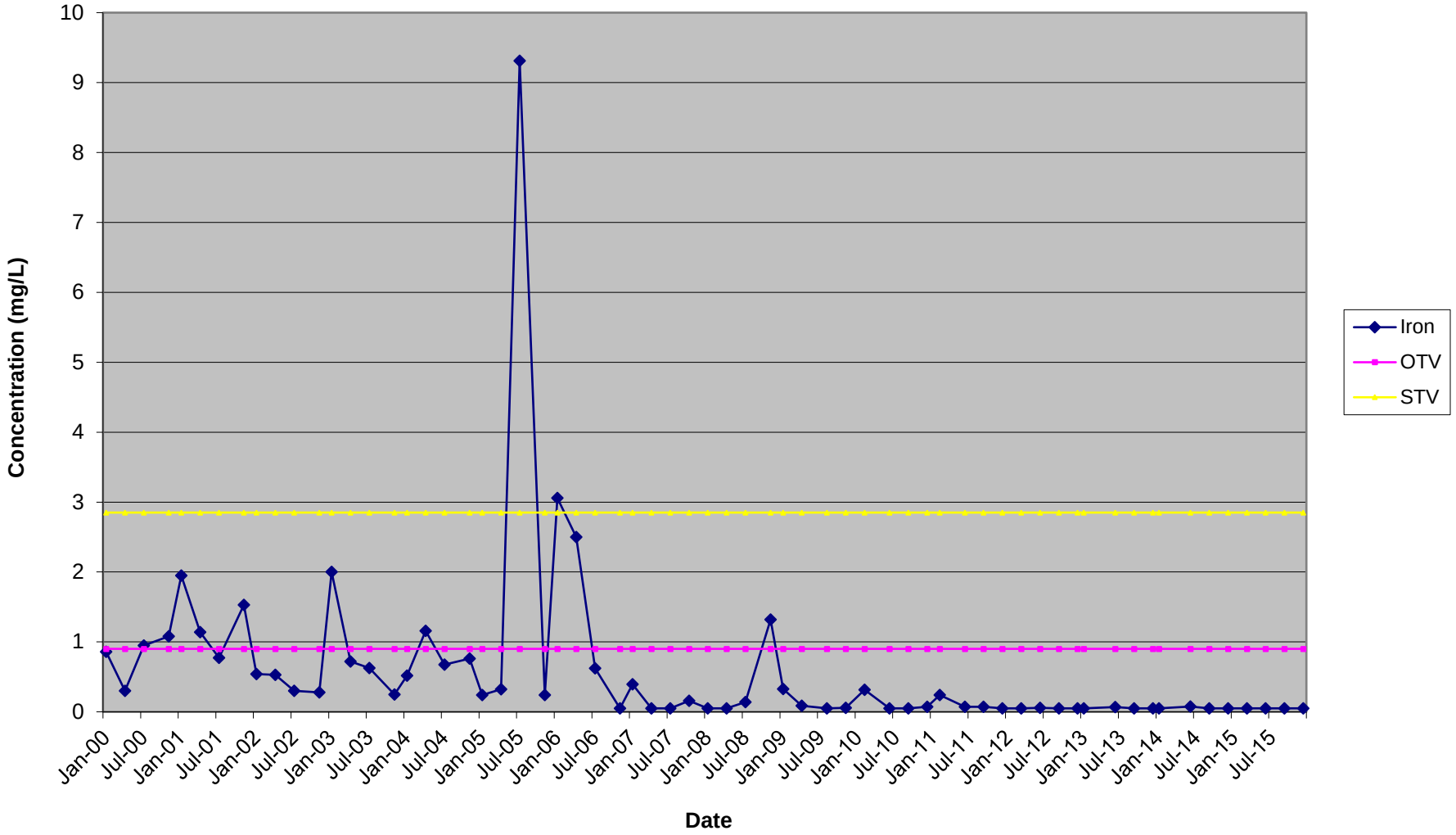
Indicator Parameter Time Trends
DW-3P



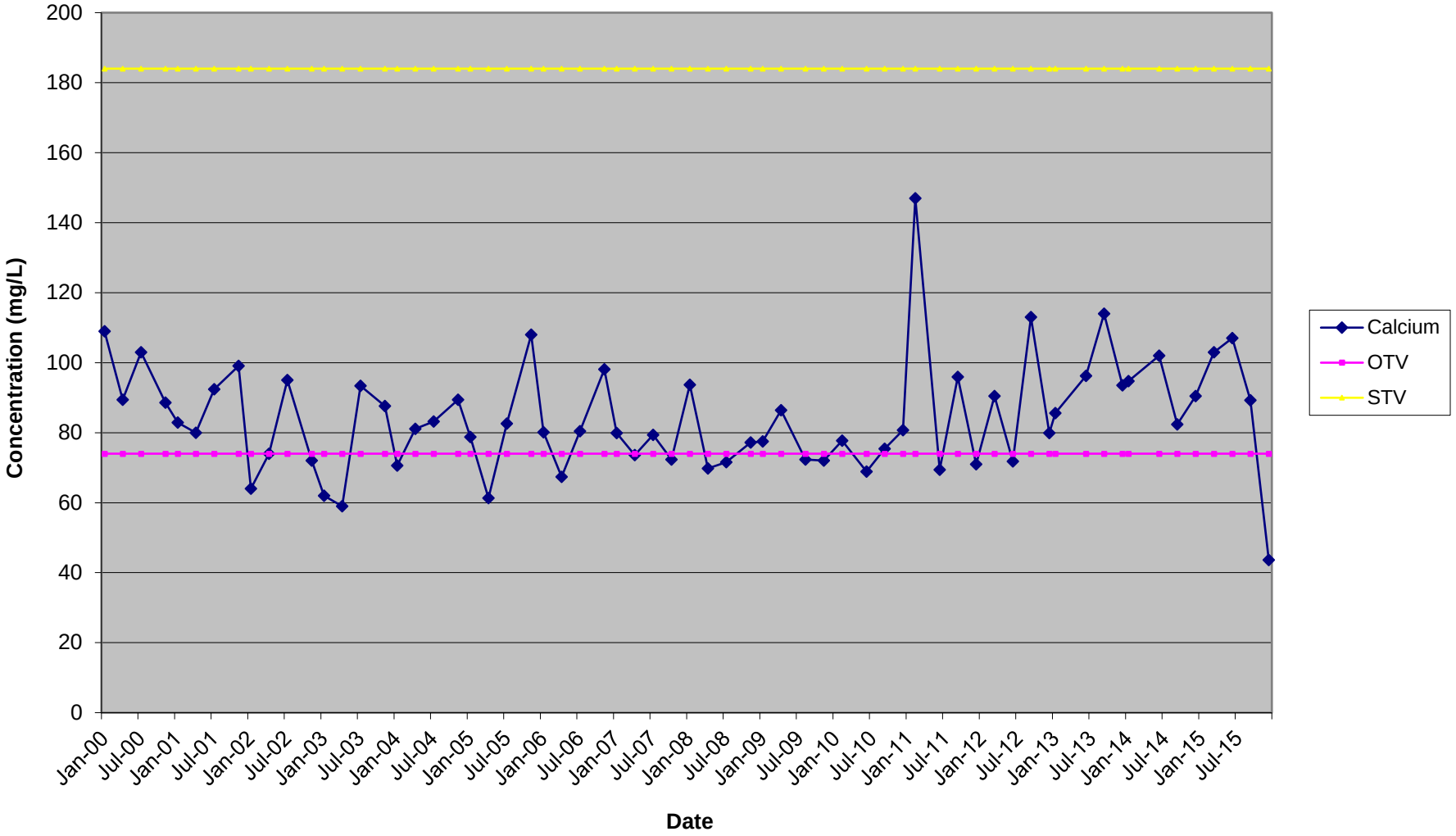
Indicator Parameter Time Trends
DW-3P



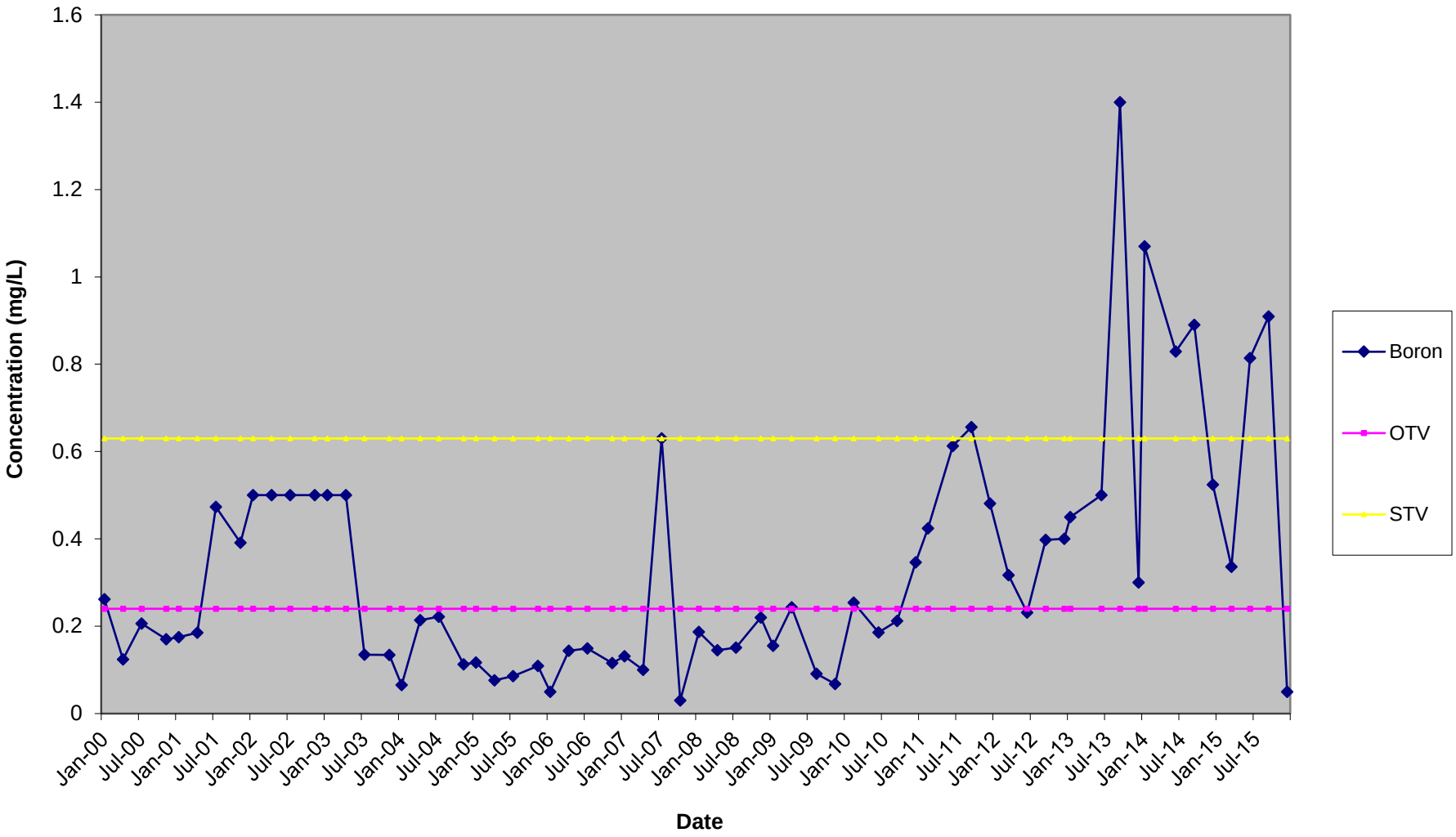
Indicator Parameter Time Trends
DW-3P



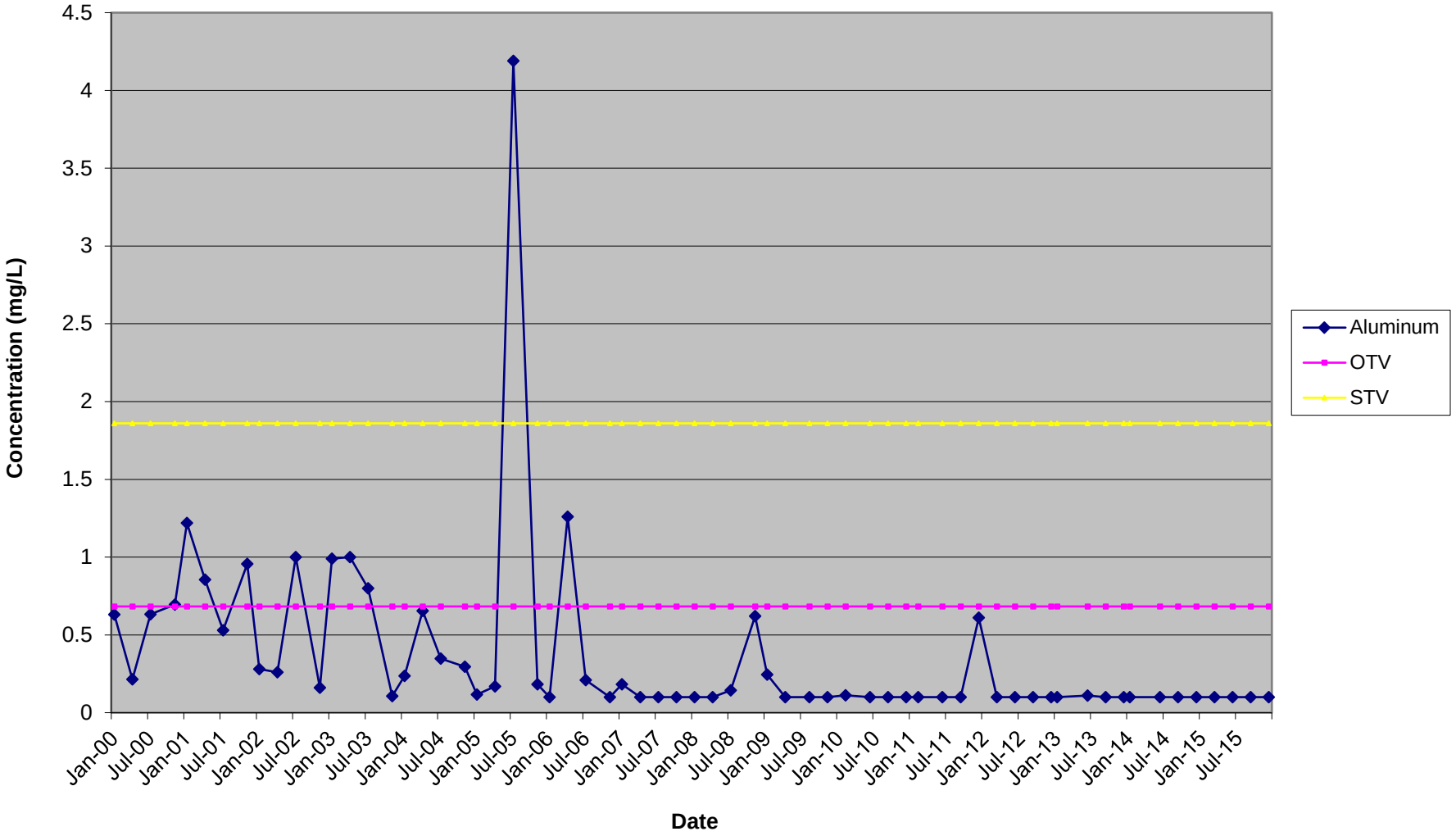
Indicator Parameter Time Trends
DW-3P



Indicator Parameter Time Trends
DW-3P



Indicator Parameter Time Trends
DW-3P



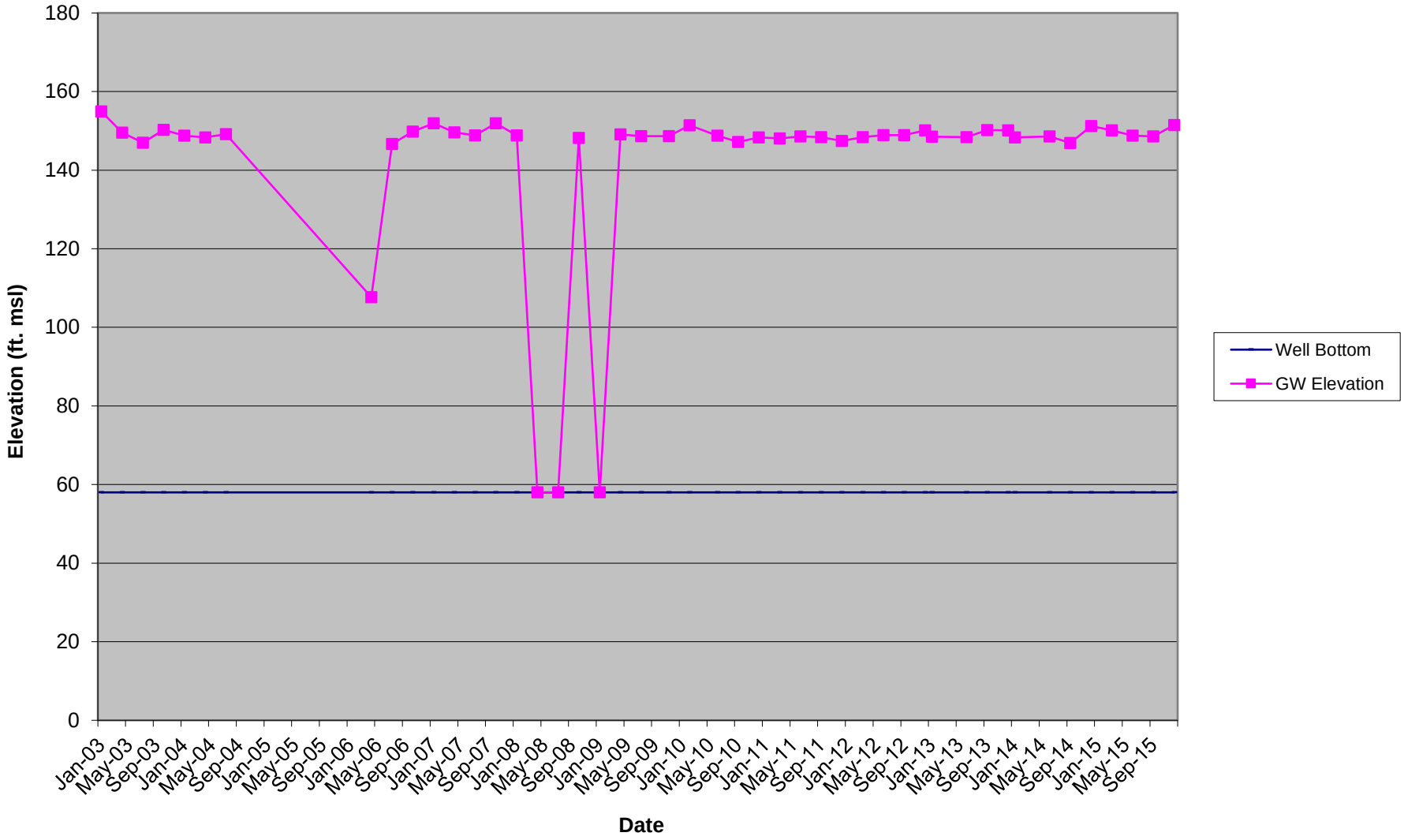
APPENDIX D
GROUNDWATER ELEVATION TIME TREND PLOTS

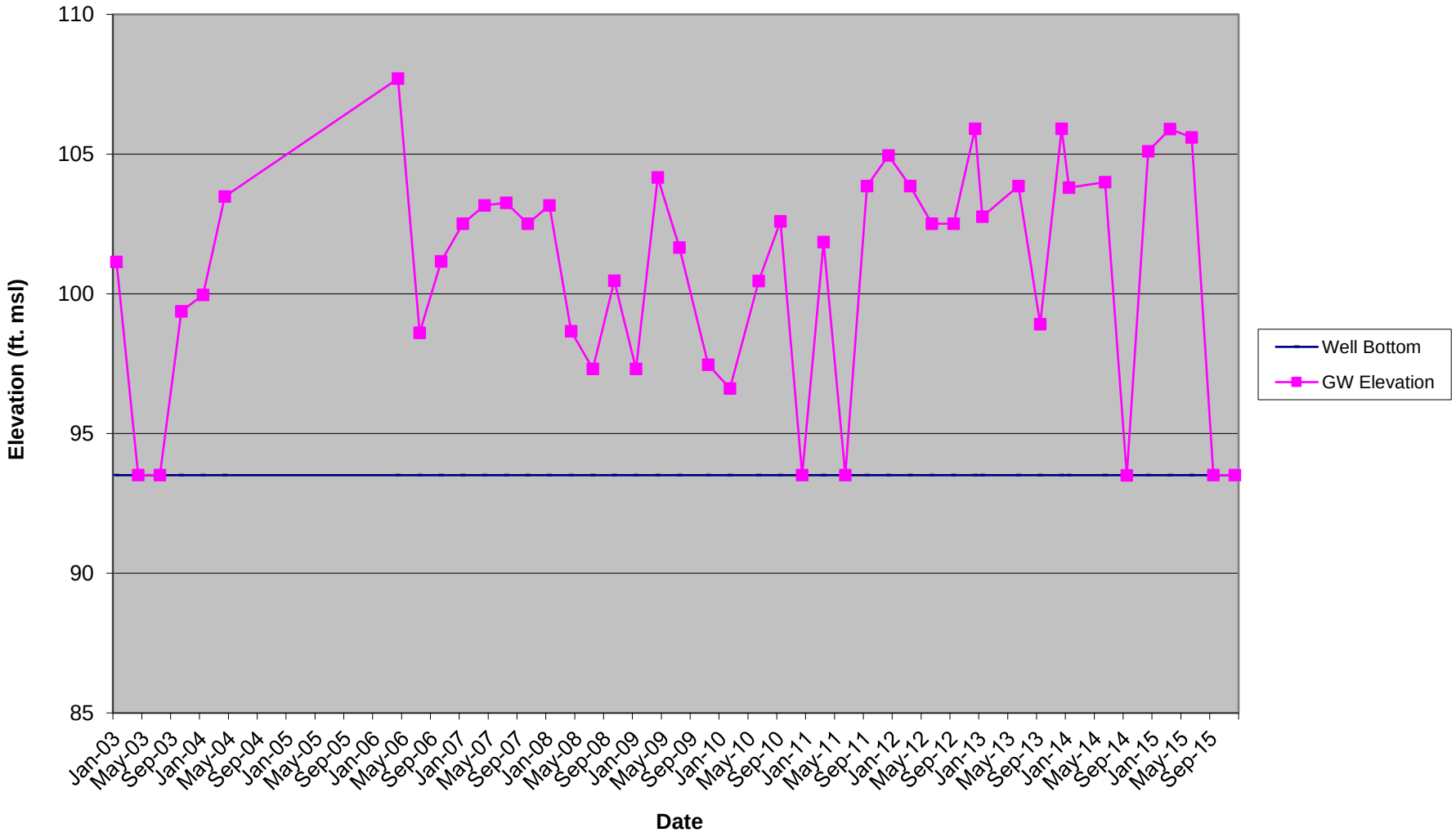
2015 ANNUAL REPORT

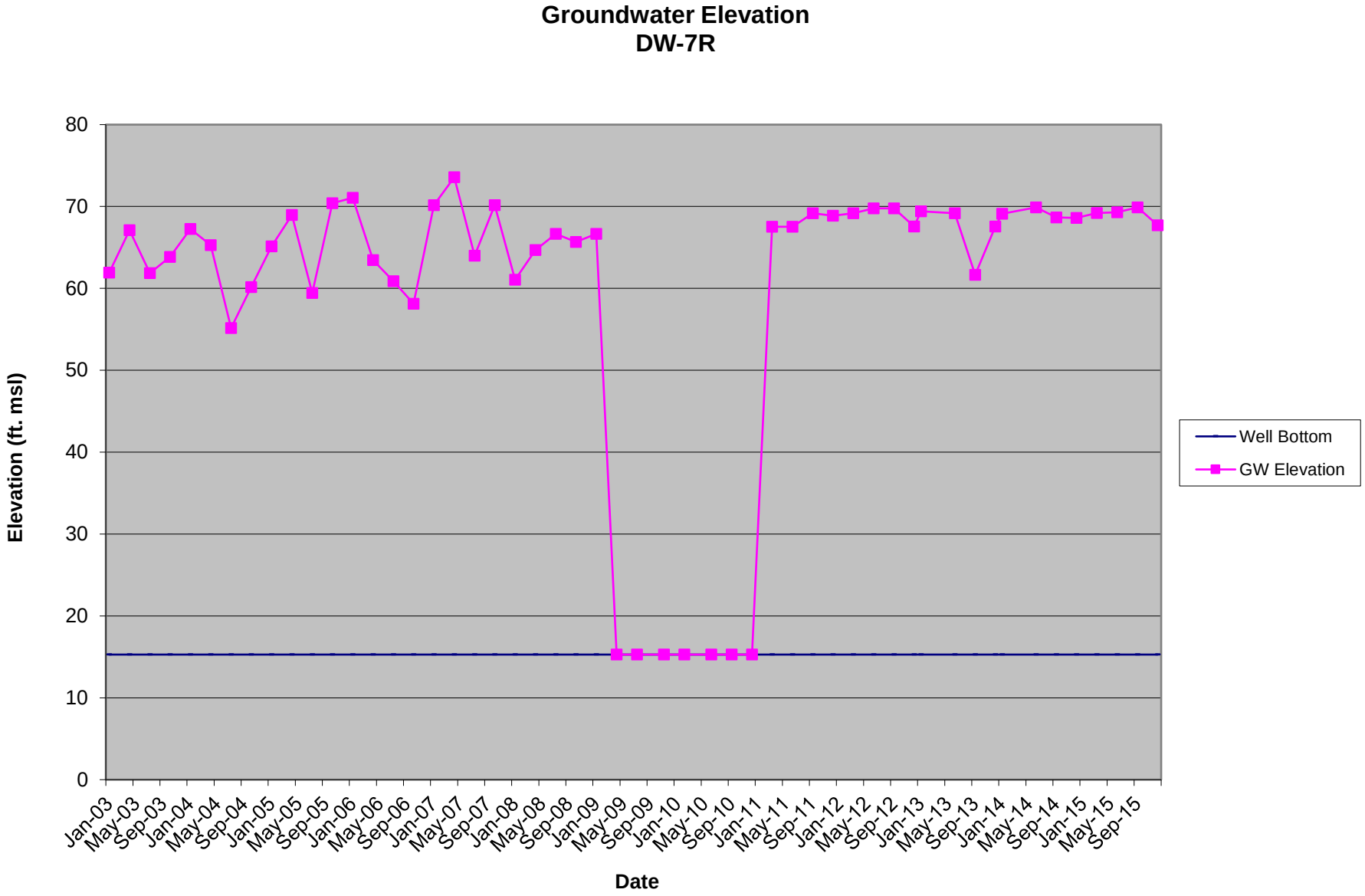
DANSKAMMER ENERGY, LLC
NEWBURGH, NEW YORK

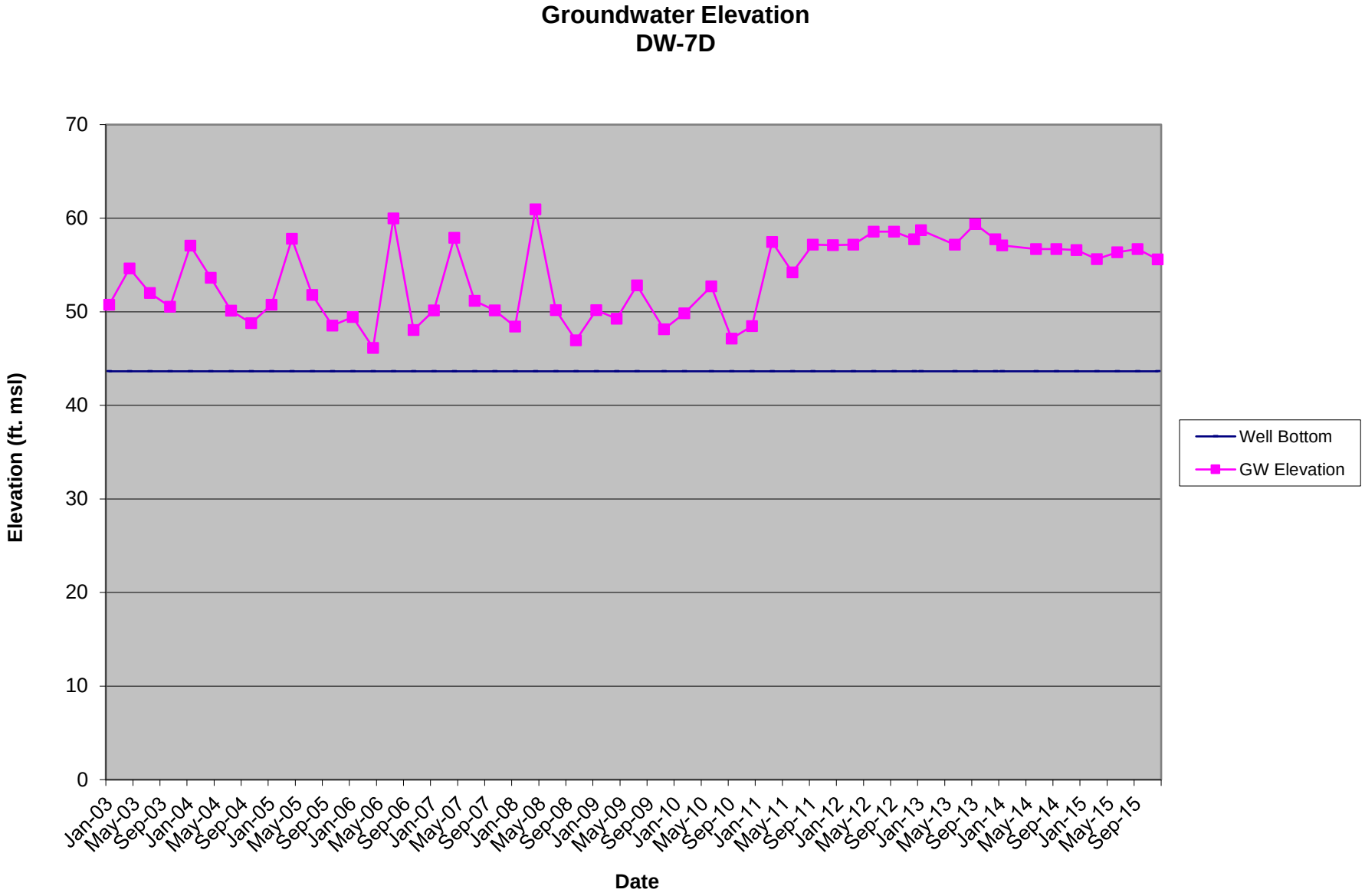
JANUARY 2016

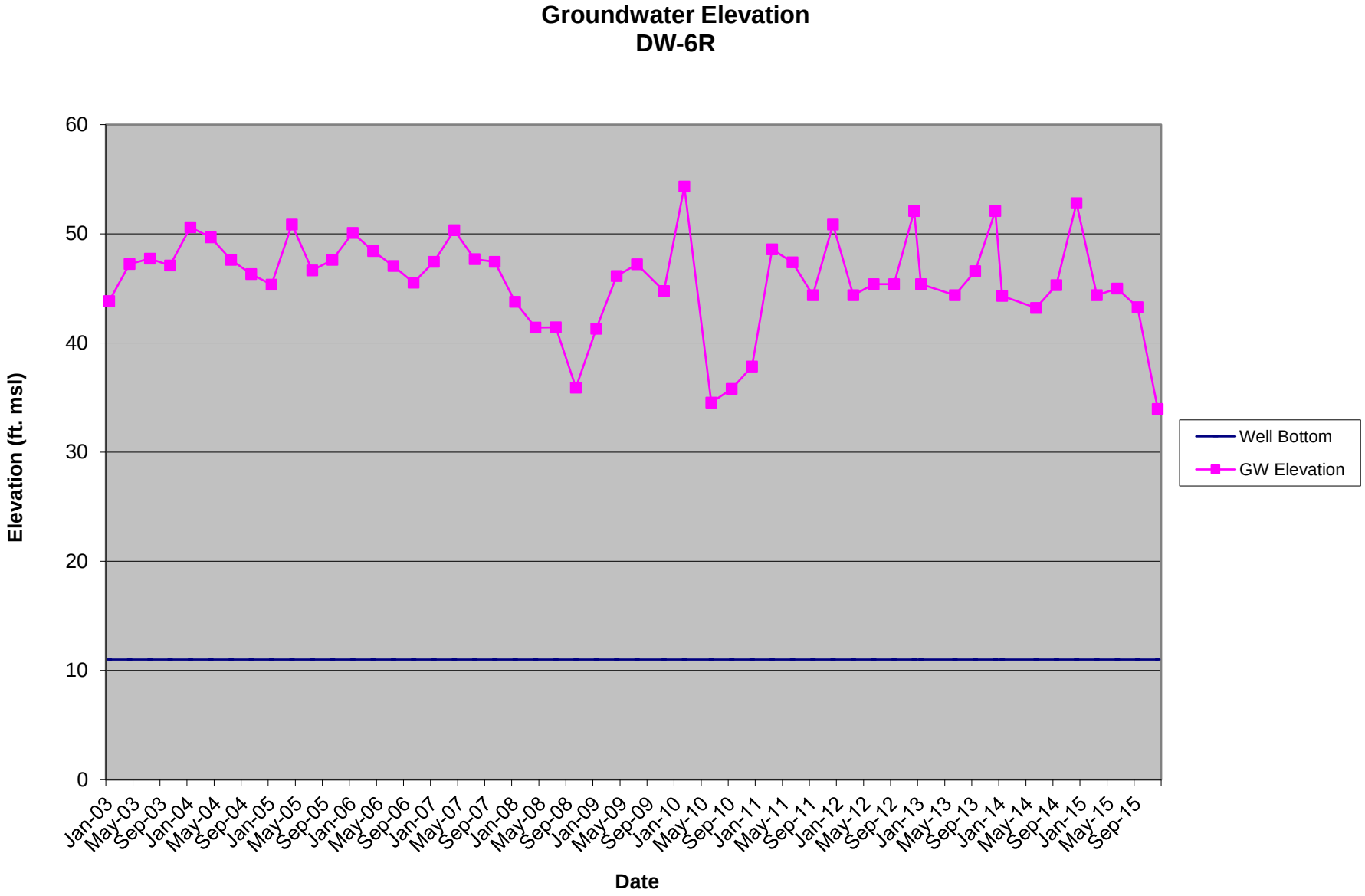
Groundwater Elevation DW-9R

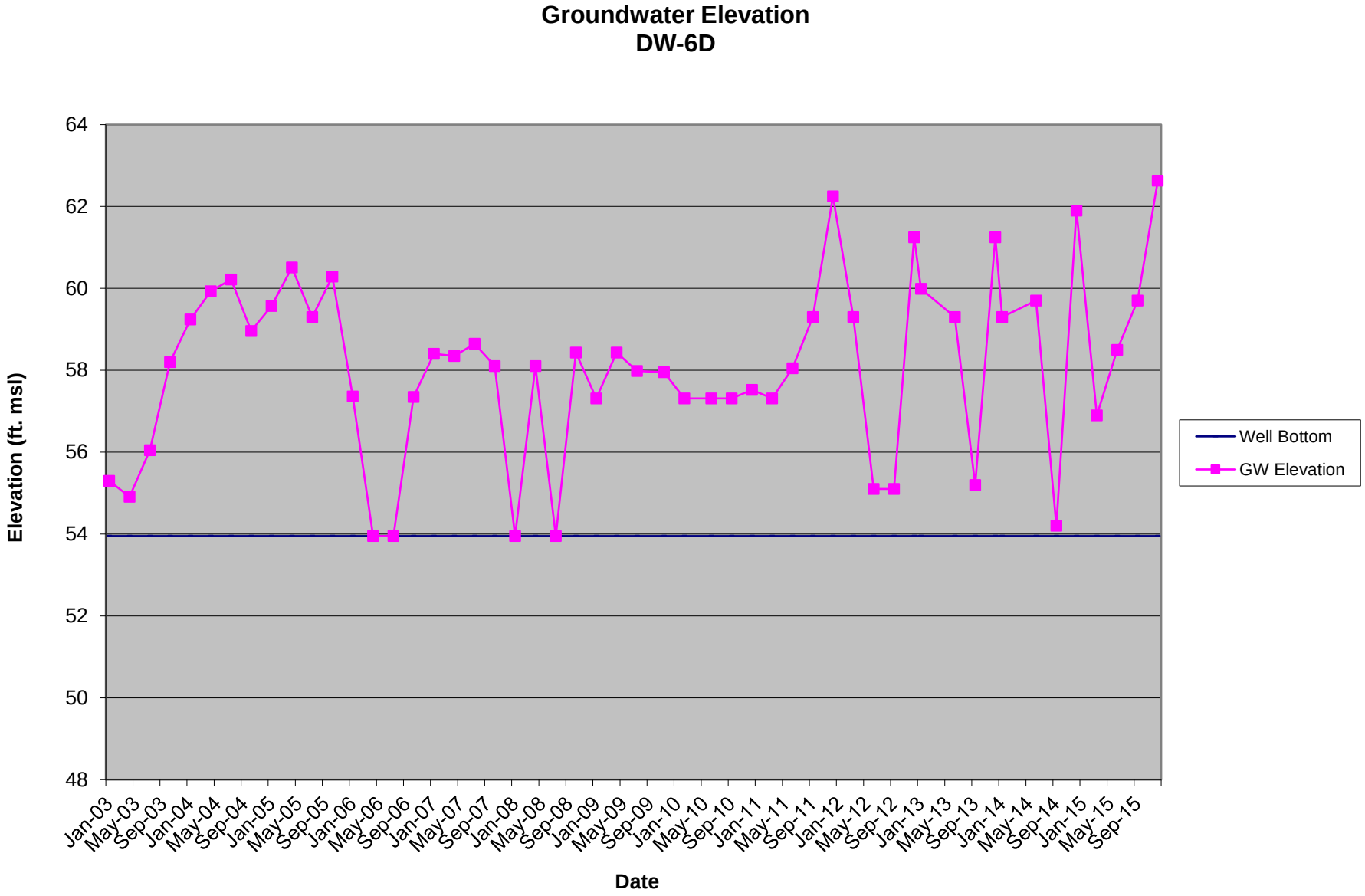


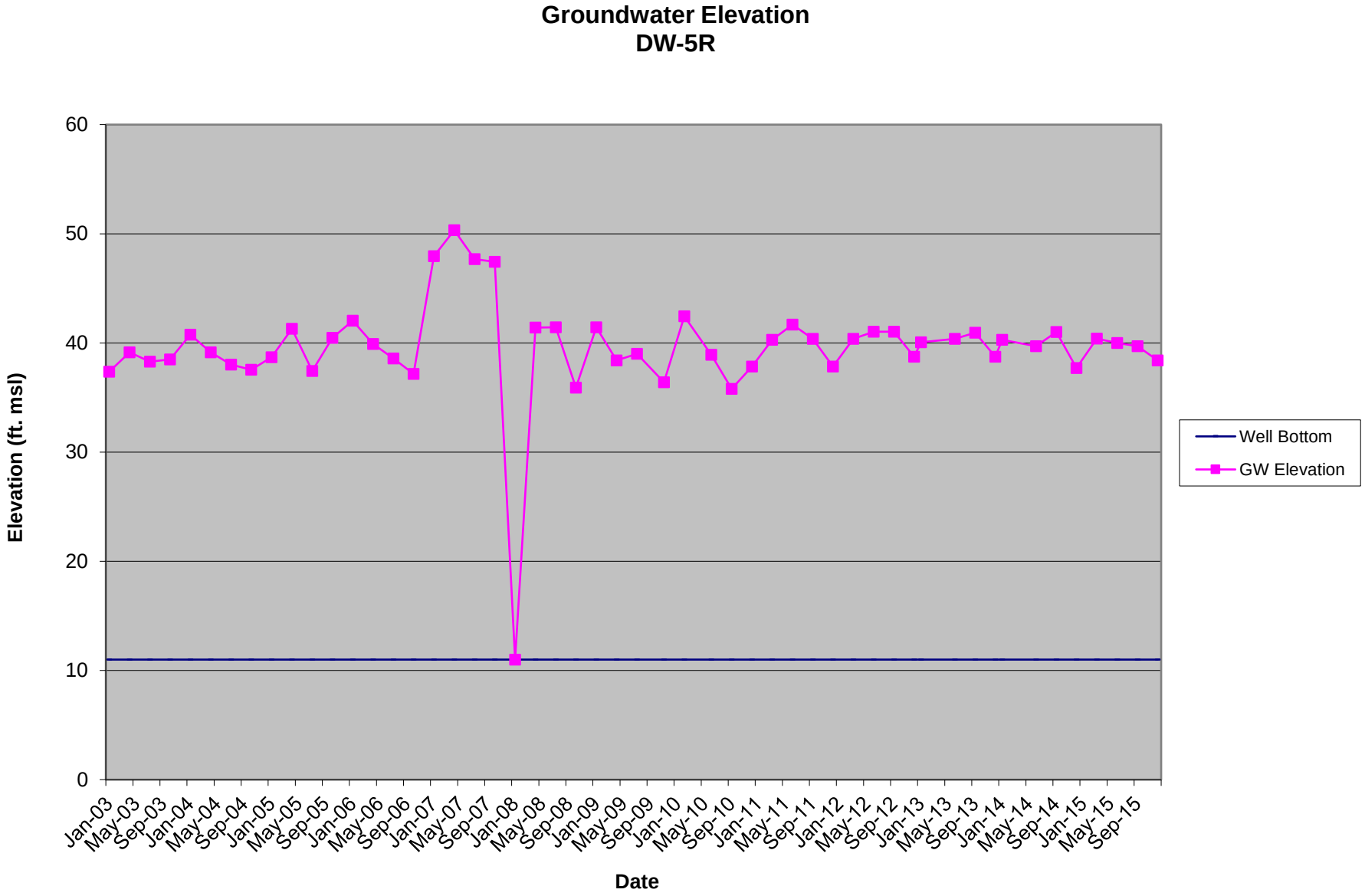

Groundwater Elevation
DW-8R
Elevation (ft. msl)
110
105
100
95
90
85
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

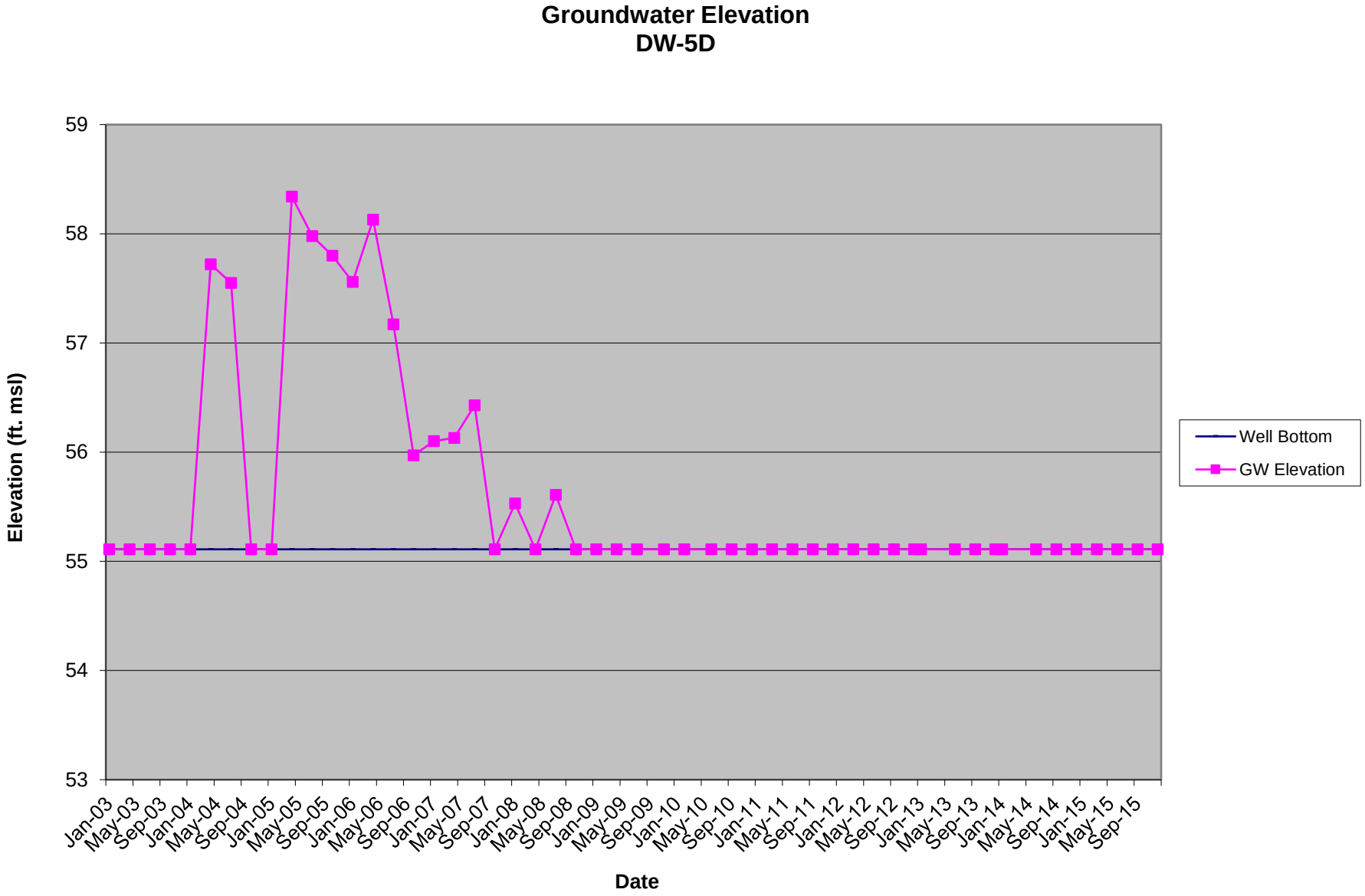

Groundwater Elevation
DW-7R
Elevation (ft. msl)
80
70
60
50
40
30
20
10
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

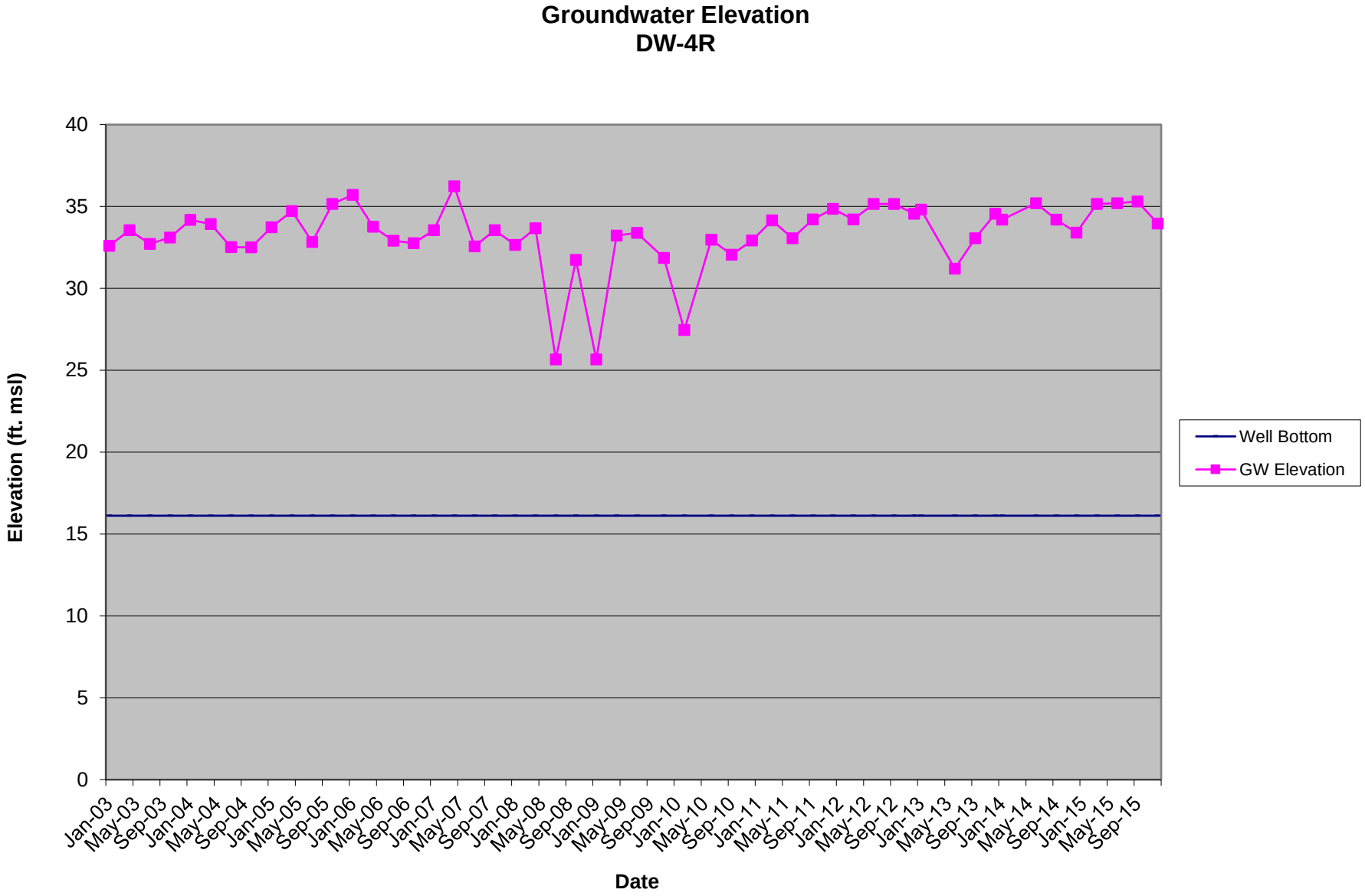

Groundwater Elevation
DW-7D
Elevation (ft. msl)
70
60
50
40
30
20
10
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

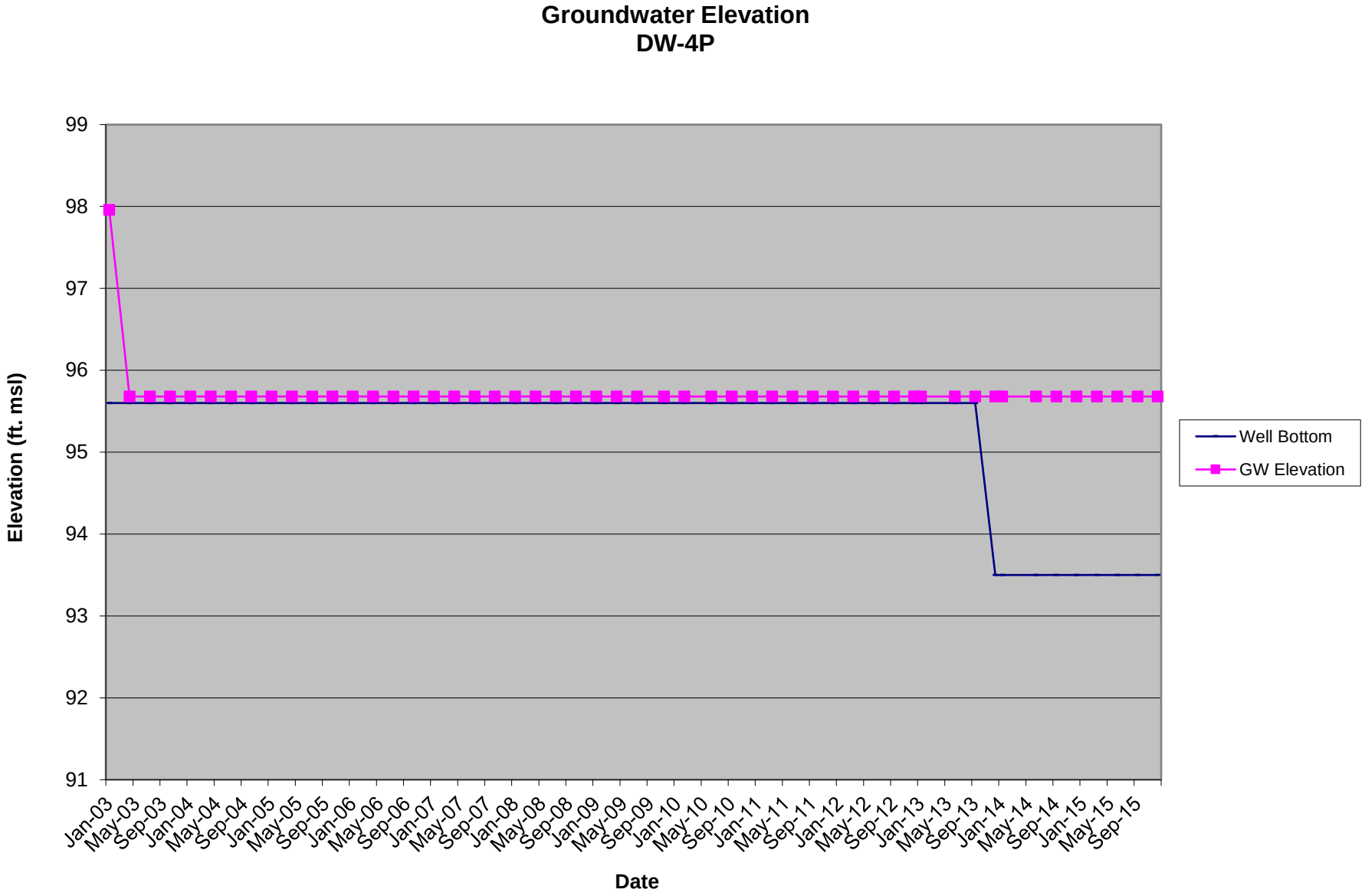

Groundwater Elevation
DW-6R
Elevation (ft. msl)
60
50
40
30
20
10
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

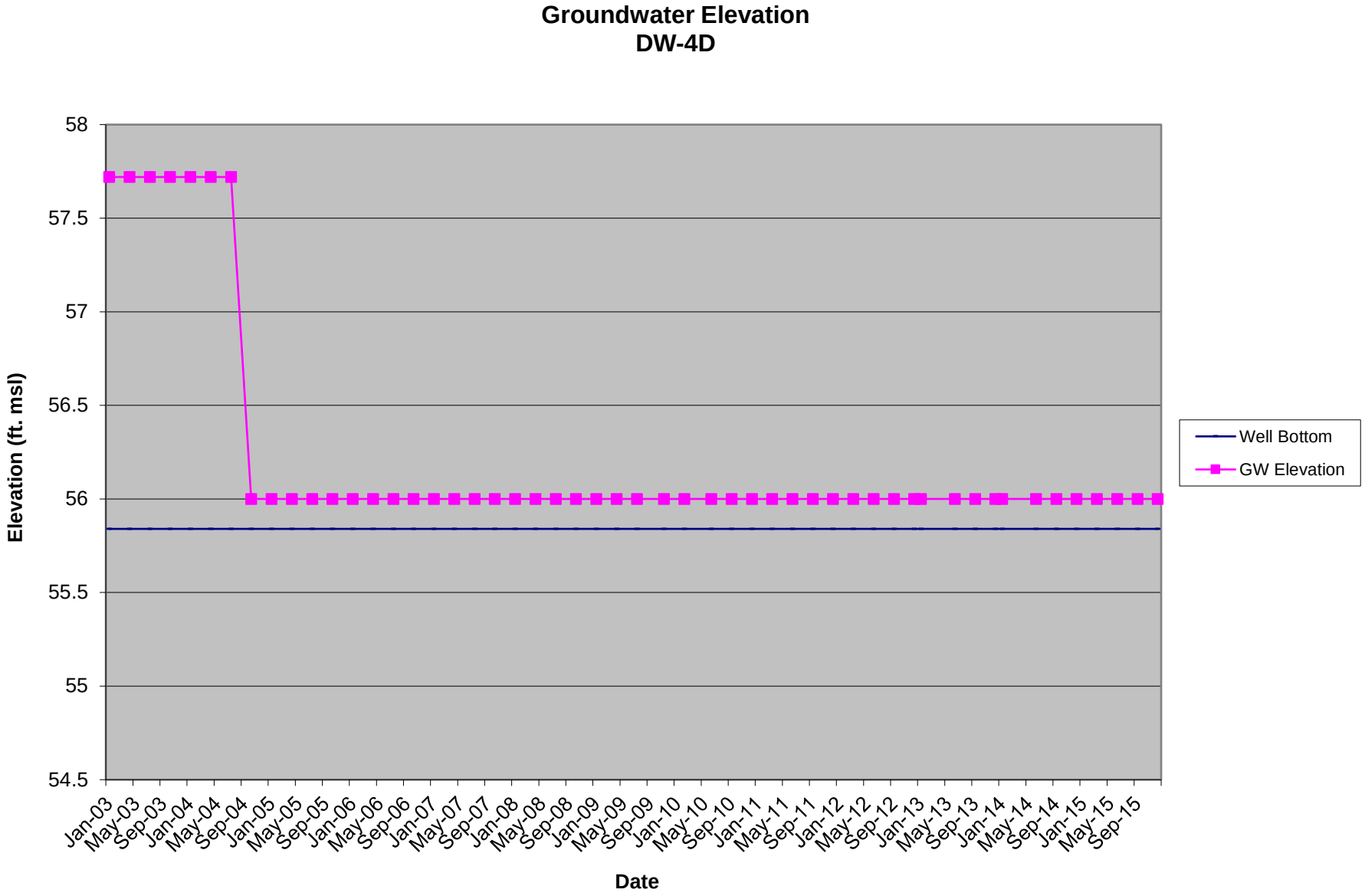

Groundwater Elevation
DW-6D
Elevation (ft. msl)
64
62
60
58
56
54
52
50
48
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

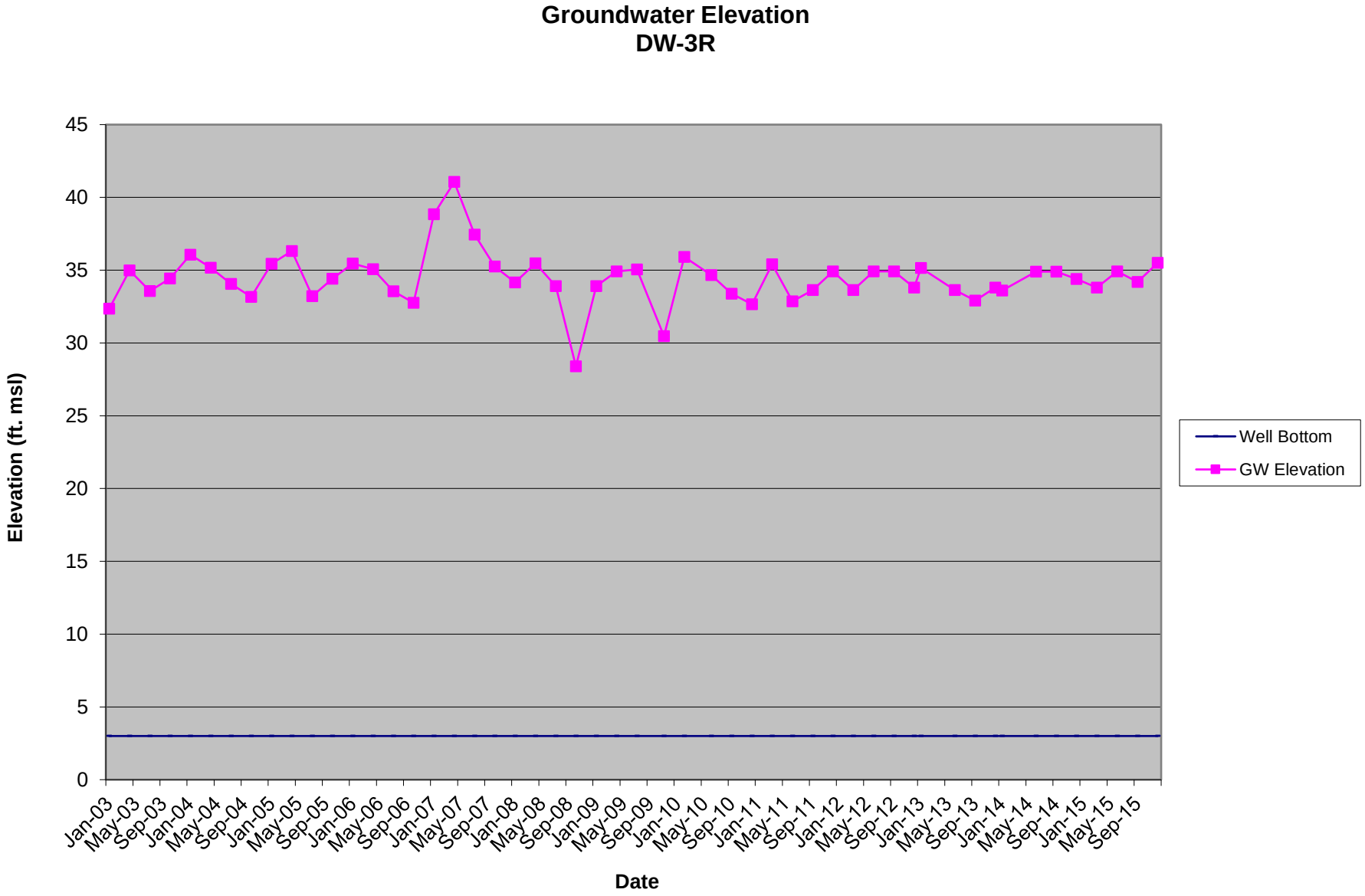

Groundwater Elevation
DW-5R
Elevation (ft. msl)
60
50
40
30
20
10
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

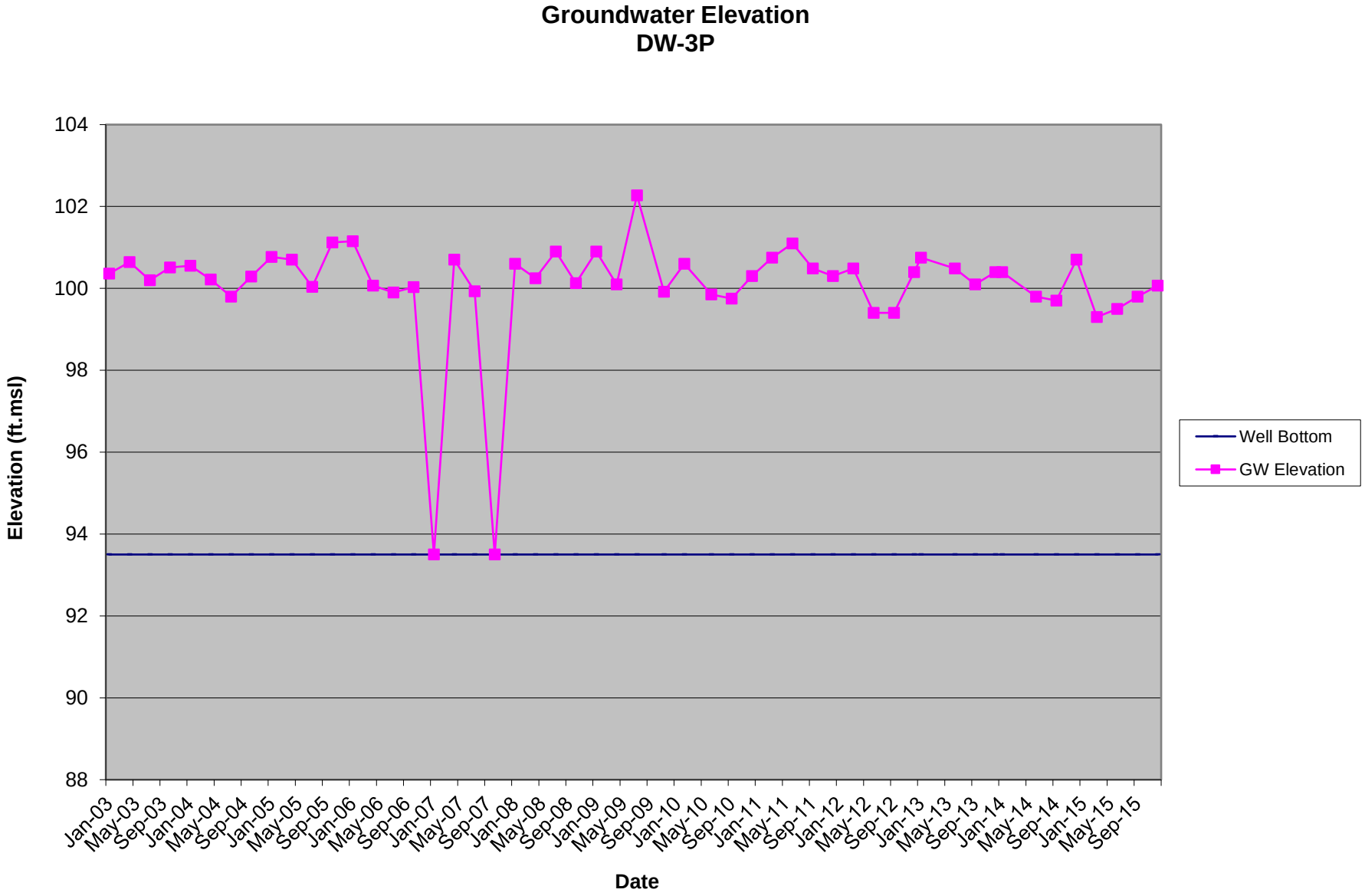

Groundwater Elevation
DW-5D
Elevation (ft. msl)
59
58
57
56
55
54
53
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

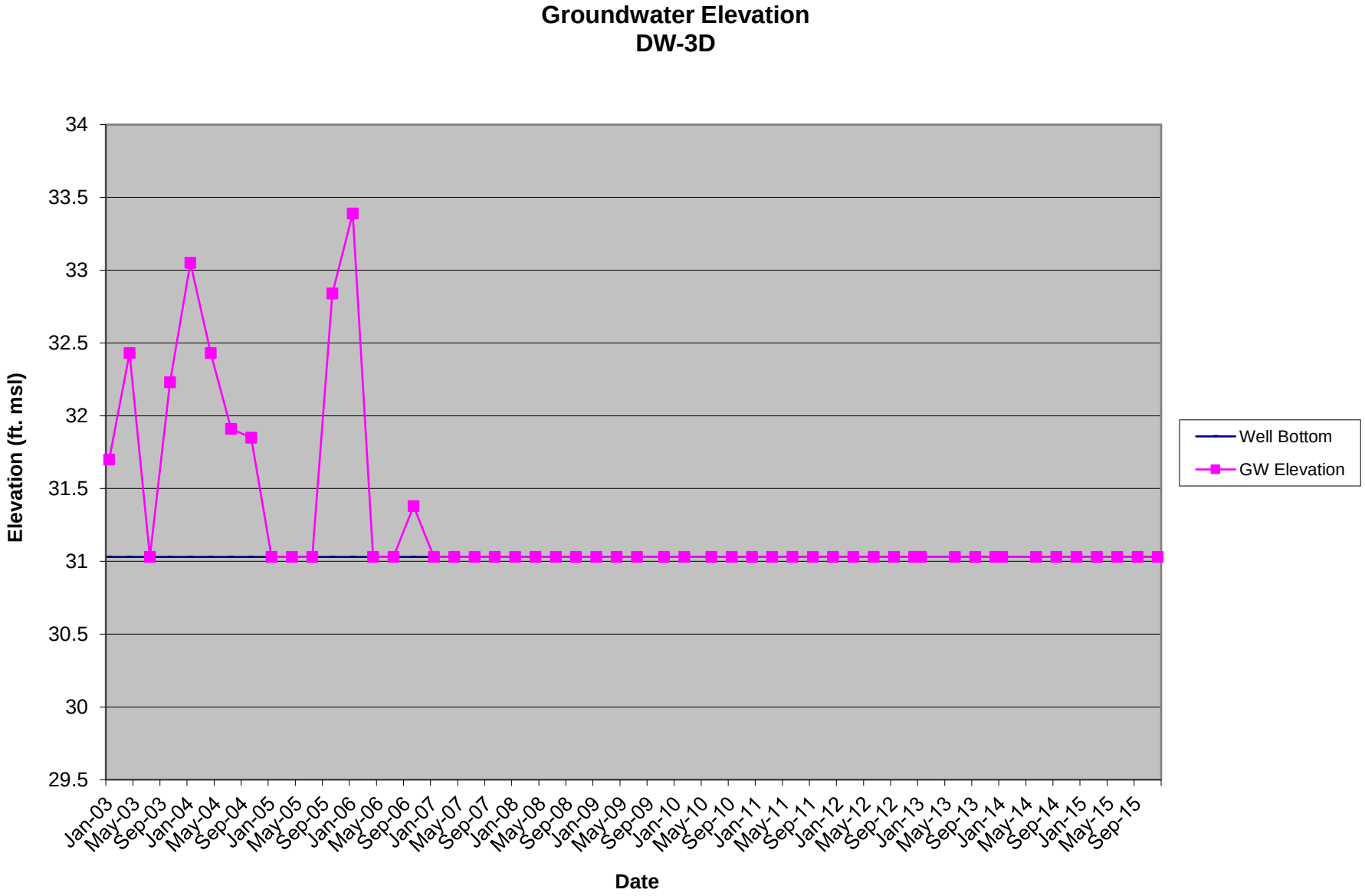

Groundwater Elevation
DW-4R
Elevation (ft. msl)
40
35
30
25
20
15
10
5
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation

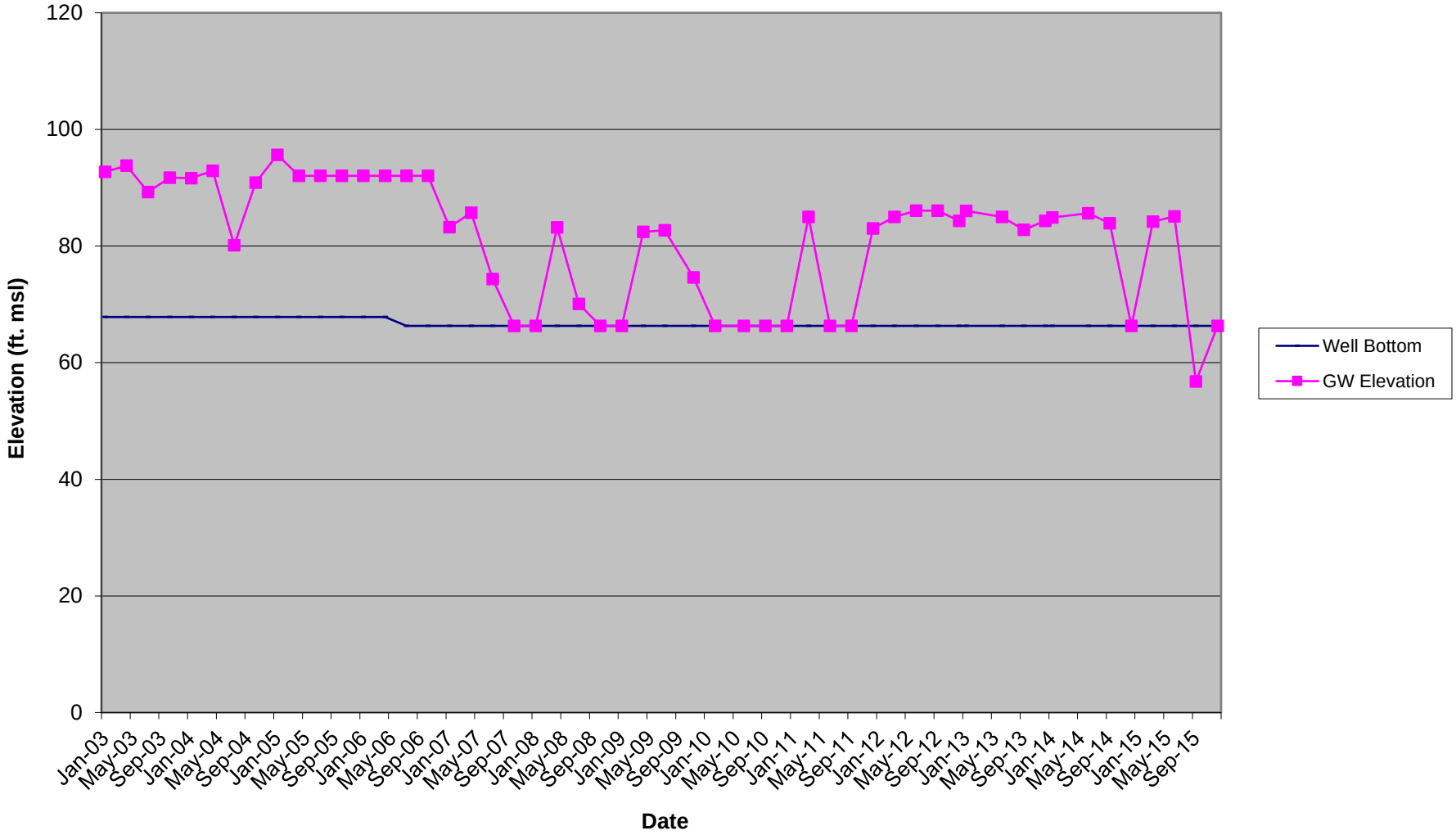

Groundwater Elevation
DW-4P
Elevation (ft. msl)
99
98
97
96
95
94
93
92
91
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation


Groundwater Elevation
DW-4D
Elevation (ft. msl)
58
57.5
57
56.5
56
55.5
55
54.5
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation


Groundwater Elevation
DW-3R
Elevation (ft. msl)
45
40
35
30
25
20
15
10
5
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation


Groundwater Elevation
DW-3P
Elevation (ft.msl)
104
102
100
98
96
94
92
90
88
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation


Groundwater Elevation
DW-3D
Elevation (ft. msl)
34
33.5
33
32.5
32
31.5
31
30.5
30
29.5
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation


Groundwater Elevation
DW-1R
Elevation (ft. msl)
120
100
80
60
40
20
0
Jan-03
May-03
Sep-03
Jan-04
May-04
Sep-04
Jan-05
May-05
Sep-05
Jan-06
May-06
Sep-06
Jan-07
May-07
Sep-07
Jan-08
May-08
Sep-08
Jan-09
May-09
Sep-09
Jan-10
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Date
Well Bottom
GW Elevation