Environmental Functional Area

Environmental Support and Programmatic Outreach Group

LLNL-AR-411431-17-3

LLNL Experimental Test Site, Site 300 Compliance Monitoring Report for Waste Discharge Requirement (WDR) Order No. R5-2008-0148

Second Semester/Annual Report 2016

Author

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Certification

I certify that the work presented in this report was performed under my supervision. To the best of my knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.

Richard G. Blake 2/13/17

Richard G. Blake — Date
California Professional Geologist
No. 5550
License expires: July 31, 2018

List of Abbreviations and Acronyms

3CMP	samples collected at Site 300 for Compliance Monitoring Program
3EMG	samples collected at Site 300 for the Environmental Support & Programmatic Outreach (ESPO) Group
3GIV	samples collected at Site 300 for site investigations
3VES	three casing volumes purged using an electric submersible pump
BCLABS-BAK	BC Laboratories, Inc. in Bakersfield, CA
BOD	biochemical oxygen demand
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CMP	Compliance Monitoring Program (conducted under CERCLA)
CMR	Compliance Monitoring Report (prepared under CERCLA)
CoC	chain-of-custody form
CVRWQCB	Central Valley Regional Water Quality Control Board
DO	dissolved oxygen
DSWP	sewage percolation pond influent sampling location
DTW	depth to (ground) water
EC	electrical conductivity, or specific conductance (SC)
EFA	Environmental Functional Area
ESWP	sampling location within sewage evaporation pond
GF	Grundfos pump
FRUITGROWL	FGL Environmental Laboratories in Stockton, CA
ft	feet
gal	gallons
gpm	gallons per minute (measurement of flow)
GWE	ground water elevation (above mean sea level)
HSU	hydrostratigraphic unit
ID	identification number
ISWP	sewage evaporation pond influent sampling location
LLNL	Lawrence Livermore National Laboratory
MCL	maximum contaminant level (for drinking water)
mL	Milliliters

List of Abbreviations and Acronyms (Continued)

MPN	most probable number
MRP	monitoring and reporting program
mV	millivolts (measure of oxidation-reduction potential)
NA	not applicable
ND	none detected, or not detected
NO_3	nitrate
NR	analysis not required by Permit at this sampling location
pH	measure of the acidity or alkalinity of a solution
OG	off gassing measured by scale of 1-5, 5 being high amounts of off gassing
OU	Operable Unit under CERCLA
Q	flow rate, or number of well volumes purged (according to context)
Qal	Quaternary Age alluvial deposits
QC	quality control
Qt	Quaternary Age terrace deposits
RHWM	Radioactive and Hazardous Waste Management
SC	specific conductance, or electrical conductivity (same as EC)
SHO	short analytical holding time (such as samples for coliform bacteria analyses)
VOA	samples collected for analysis of volatile organic compounds
WDR	waste discharge requirements (Permit)

Executive Summary

Under authority of the State of California, and required by the Porter-Cologne Water Quality Control Act, the Central Valley Regional Water Quality Control Board (CVRWQCB) issued Order No. R5-2008-0148 for the Experimental Test Site (Site 300), to Lawrence Livermore National Laboratory (LLNL). Monitoring and Reporting Program (MRP) Number R5-2008-0148 was adopted in September 2008, and revised effective December 1, 2009. The revised MRP terms and conditions have been implemented in this report. Under the terms of this MRP, LLNL submits semiannual and annual monitoring reports detailing its Site 300 discharges of domestic and wastewater effluent to the sewage evaporation pond and percolation pond in the General Services Area, and cooling tower blowdown to percolation pits and septic systems, and mechanical equipment discharges to percolation pits located throughout the site.

This second semester/annual report contains all the elements required by Waste Discharge Requirement (WDR) Order R5-2008-0148 for the second semester of 2016 and updates the status of equipment and facilities since the adoption of R5-2008-0148. Proper operating conditions were met for all permitted networks. Compliance certification accompanies this report, as required by the permit.

1. Introduction

Site 300, operated by Lawrence Livermore National Security, LLC, is located in the Altamont Hills approximately 10.5 kilometers (6.5 miles) southwest of downtown Tracy, California. Required monitoring for specific Lawrence Livermore National Laboratory (LLNL) Site 300 monitoring networks is defined in the Monitoring and Reporting Program (MRP) Order Number R5-2008-0148, which was adopted in September 2008, and revised effective December 1, 2009. The revised MRP has been implemented in this report. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements specified in the Waste Discharge Requirements (WDR) Order R5-2008-0148 (CVRWQCB, 2008) permit and in the MRP R5-2008-0148.

This report provides a summary of monitoring in designated networks conducted during the second semester of 2016 under the revised MRP R5-2008-0148 (CVRWQCB, 2008). The report details the monitoring results of the three compliance networks and presents analytical data, field summary sheets, and inspection logs associated with discharges at the networks.

Compliance monitoring networks discussed in the report include:

- Sewage evaporation and percolation ponds wastewater and ground water monitoring (Sections 2.1 through 2.5).
- Cooling tower blowdown discharge monitoring and percolation pit inspections (Sections 3.1 through 3.4).
- Mechanical equipment effluent discharge monitoring and percolation pit inspections (Sections 4.1 through 4.4).
- Permit related summaries and updates.

BC Laboratories, Inc., Alpha Labs, and FGL Environmental Laboratory provided off-site analytical support for the monitoring networks.

This report summarizes the activities associated with these monitoring networks including: tabular summaries or data plots for all data for at least the last five years; ground water elevation contour map with well locations; identification of any data gaps or deficiencies; and a discussion of any changes to the monitoring program.

Figure 1 shows the locations of the wastewater systems permitted under WDR R5-2008-0148, including mechanical equipment percolation pits and the sewage oxidation and percolation ponds (sewage ponds) located in the General Services Area. None of the permitted mechanical equipment percolation pits overflowed during this monitoring period, and no standing water was observed within the Christy boxes. There were no detected impacts to ground water around the sewage ponds. Discharges from cooling towers and mechanical equipment were consistent with historic information provided in the previous Reports of Waste Discharge.

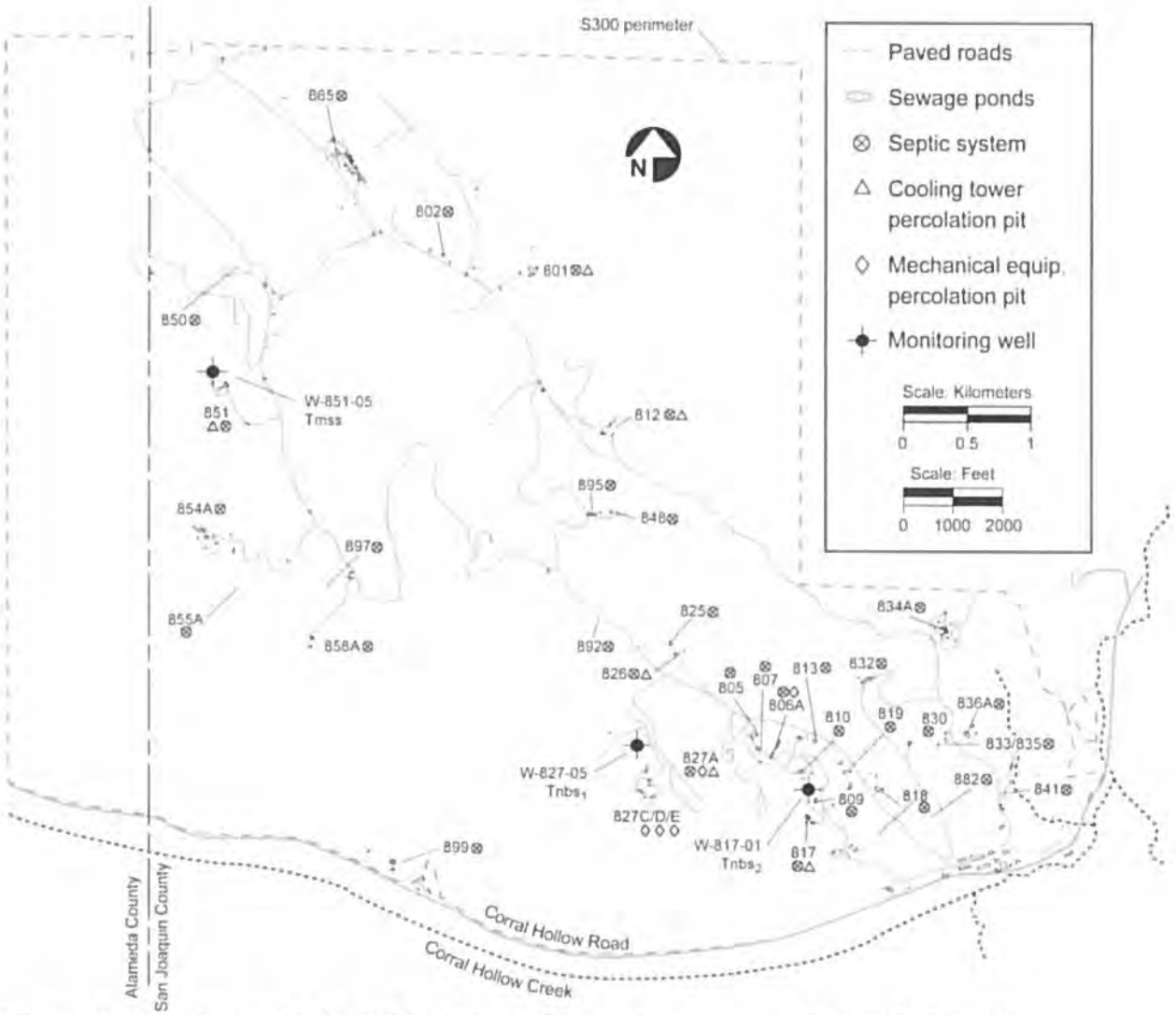

Figure 1. Locations of Site 300 facilities with septic systems and percolation pits.

2. Sewage Evaporation and Percolation Ponds

2.1. Effluent and Pond Compliance Monitoring Program

MRP R5-2008-0148 requires semi-annual and annual samples be collected of wastewater flowing into the sewage evaporation pond (sewage pond) for analysis. Sample collection is by grab sampling from a location west of the sewage pond (see sampling location ISWP in **Appendix A, Figure A-1** showing the Site 300 sewage evaporation and percolation ponds and ground water and wastewater compliance monitoring locations). Location ISWP is a port providing access to a section of pipe through which all waste streams flow before they flow into the sewage pond. The samples are analyzed for specific conductance (SC, or electrical conductivity), pH, and biochemical oxygen demand (BOD).

MRP R5-2008-0148 also requires samples be collected of wastewater within the sewage pond and wastewater discharging into the sewage percolation pond. Semiannual wastewater samples are collected by grab sampling from a dock at the eastern end of the sewage pond (sampling location ESWP) and analyzed for SC, pH, metals, dissolved oxygen (DO), BOD, and total and fecal coliform. Any discharge from the sewage pond to the sewage percolation pond (sampling location DSWP) is grab sampled and analyzed for the same constituents. Permit WDR R5-2008-0148 requires LLNL to operate the sewage pond with adequate freeboard to minimize the frequency of discharges to the sewage percolation pond.

Observations of the sewage pond are made and recorded at least monthly for freeboard, color, odor, and levee condition. **Appendix A** contains several second semester 2016 data sets including; field tracking forms, sewer pond inspection reports, ground water sampling data forms, historical data plots for the sewage evaporation pond and percolation pond network, and ground water well field observation forms for the sewage pond. Inspection reports indicate some animal burrows are observed in the levee from time to time. These burrows continue to be monitored by operations personnel to ensure that the integrity of the levee is not compromised.

Leak detection and monitoring compliance at the sewage evaporation and percolation ponds is accomplished by monitoring the shallow ground water beneath and adjacent to the ponds. Ground water monitoring includes semiannual sampling during the first and second semesters when ground water levels are the highest and lowest and analysis of the collected samples for SC, pH, total and fecal coliform, chloride, nitrate, sulfate, total dissolved solids, sodium, and metals. In addition, ground water elevations are routinely recorded and contoured (**Appendix A, Figure A-2**). A map showing the locations of the monitor wells (**Appendix A, Figure A-1**) with respect to the ponds, and tables of ground water specifications and elevations for the second semester of 2016 for each well are provided (**Appendix A, Tables A-1 and A-2**).

In addition to normal operation of the sewer evaporation pond, discharges to the sewer pond occurred that were associated with the beneficial use of discharged water. These discharges were in preparation for potable water delivery to Site 300 from the San Francisco Public Utility District Hetch-Hetchy water system. The Hetch-Hetchy water is flushed from the line periodically to maintain sanitary conditions in the line. When a discharge to the sewage evaporation pond is scheduled, the chlorinated water in the Hetch-Hetchy line is analyzed for chlorine. When the water reaches a chlorine residual value at or below 1.0 mg/L, which

generally takes one or two weeks, the water is ready to flush. When flushing, a 4-inch hose is used to pump the water from the Hetch-Hetchy line to the sewer evaporation pond. Before the water is flushed, the residual chlorine concentration is adjusted and generally decreases to 1 mg/L or less; pH is also adjusted. During 2016, there were two discharges of evaporation loss makeup water to the sewage pond, which took place on April 13 and December 21. Details of that discharge are shown on **Table 1** below which provides the date the discharge occurred, the volume of water discharged, chlorine residual, and pH of the discharged water. These discharges are consistent with Waste Discharge Requirements Order Number R5-2008-0148 and the revised MRP (November 23, 2009).

Table 1. Summary water system pipeline flushing and pressure testing discharges at Site 300 during 2016.

Discharge Date	Volume Discharged (gallons)	Chlorine Residual (mg/L)	pH (units)	Reuse
4/13/2016	24,000	0.10	8.34	Evaporation makeup water in sewage pond
12/21/2016	12,700	0.5	-	Evaporation makeup water in sewage pond

2.2. Sewage Pond Wastewater Sampling and Analysis

For the sewage pond wastewater sampling and analysis, calibration is performed on DO, SC, and pH meters less than 12 hours before sampling. DO, SC, pH, and temperatures of the samples are measured and written on the field tracking forms (field logs) when the grab samples from ISWP, ESWP, and DSWP are collected. Chain-of-custody (CoC) forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

The samples required under MRP R5-2008-0148 for locations ISWP and ESWP were collected on September 8, 2016. These samples, and all samples collected with results presented in this report, were collected, analyzed, and results entered into the Environmental Functional Area (EFA) database according to a complete set of written protocols documented in the LLNL Environmental Functional Area's Environmental Monitoring Plan (Gallegos, 2012).

2.3. Sewage Pond Wastewater Monitoring Results

Results are summarized here for samples collected during the monitoring period as required under MRP R5-2008-0148. Monitoring data are found in **Appendix A**. Coliform, anion, BOD, DO, and specific conductance data summaries are presented in **Table A-3**. A metal data summary for the locations ESWP and DSWP are found in **Table A-4. Table A-5** provides a duplicate (QA) sampling data summary for the sewage pond's wastewater monitoring network. All results and observations were in compliance with the Permit's discharge specifications. Adequate free board was provided to prevent any over-topping or erosion of the pond embankment. Field tracking forms indicate normal operations and are provided in **Appendix A**,

which also contains the field logs, including field measurements. The CoCs and laboratory analytical results are stored at LLNL and are available upon request.

Additional monitoring and sampling during the last semester included sampling a small discharge from the sewage evaporation pond to the sewage percolation pond. On August 31, 2016, approximately 50-100 gallons of wastewater from the sewage evaporation pond entered the percolation pond. The Water Board was notified on the morning of September 1, 2016 and LLNL personnel proceeded to sample the discharged water. It was determined, a plumber's plug at the outfall pipe failed and the release occurred. The situation was quickly repaired and sample results from the follow-up September 1 sampling event indicated that no unusual constituent levels were detected as compared to routine sampling. This information was shared with the Water Board on October 20, 2016.

2.4. Ground Water Sampling and Analysis

Semiannual sampling of ground water from wells at the sewage evaporation and percolation ponds was performed during the second semester of 2016. Ground water samples were collected and analyzed, and results entered into the EFA database according to written protocol (Goodrich and Lorega, 2012). The monitor wells were purged and sampled during two phases, from August 10 through November 9, 2016, according to prescribed methods assigned to each monitor well. Information regarding the conditions during sampling, as well as field measurements taken at the time of sampling, is found in the ground water sampling data sheets located in **Appendix A**. The collected samples were transferred to an offsite analytical laboratory for physical parameters and analyses listed in **Section 2.1**. Following the initial sampling event, each well was treated with a pre-calculated dose of chlorine and pumped to circulate the chlorine throughout the water column. On the following day, wells were tested for residual chlorine and samples collected to be analyzed for total and fecal coliform bacteria at an offsite analytical laboratory. Wells that tested positive for chlorine were pumped until chlorine was not detected prior to sampling, according to the aforementioned written protocols.

2.5. Ground Water Monitoring Results

All monitored parameters were in compliance with the Permit limits; ground water data are presented in Tables found in **Appendix A**. Anion data are listed in **Table A-6**. Coliform data are found in **Table A-7**. **Table A-8** provides a summary of physical chemistry data and **Table A-9** lists metals data. QA data summaries for the monitoring network are located in **Table A-10**. During the second semester, none of the ground water wells detected fecal coliform above the <1.8 MPN/100mL detection limit, however, well W-35A-04 detected total coliform at 7.8 MPN/100 mL (**Table A-7**). This value is not a concern because fecal coliform was not detected. LLNL will continue to monitor this well.

Appendix A, Figure A-2 contains the ground water elevation contour map for the most shallow ground water zones (Hydrostratigraphic Units [HSUs]) in the sewage evaporation and percolation ponds area. This map reflects ground water elevation levels from July through November, 2016. The sewer pond ground water network map showing concentrations of nitrates is presented in **Appendix A, Figure A-3**. Nitrate data is also shown in **Table A-6**. All the

detailed ground water data CoCs and laboratory analytical results are archived at LLNL and are available upon request.

3. Cooling Tower Network

3.1. Cooling Tower Compliance Monitoring Program

Monitoring required for the cooling tower blowdown is specified in MRP R5-2008-0148. LLNL implemented the cooling tower blowdown monitoring starting the fourth quarter of 2008. Applicable reporting requirements are found in the Standard Provisions and Reporting Requirements of WDR R5-2008-0148 and the MRP.

Cooling towers located at Site 300 will discharge either into percolation pits or into septic systems. Currently, there are six operating cooling towers. The cooling tower locations are identified in **Appendix B, Figure B-1**. The cooling tower located at Building 825 normally discharged to a septic system but was not operational during this last period and therefore no samples were collected. The remaining cooling towers located at Buildings 801, 817, 826, 827, and 851 all discharge to percolation pits and were operational this period. The two original cooling towers located at Building 851 were replaced in the second semester 2009 with a single new cooling tower. The two cooling towers located at Building 827 have blended cooling water and a combined discharge line and therefore only one sample is routinely collected to characterize the discharge of these cooling towers.

MRP R5-2008-0148 requires semi-annual sampling of the cooling tower blowdown. Grab samples are collected from the water circulating in the cooling tower, either at a valve or a drainpipe. The grab samples are collected directly into the containers specified by the laboratory. Samples are analyzed for metals, pH, sodium, SC, sulfate, total alkalinity, total dissolved solids, total hardness, and total phosphorus.

As part of a facility upgrade, the cooling tower at B-826 was replaced with a new cooling tower unit. The workplan and procurement for this upgrade was started in November 2016. The replacement was completed in January 2017 and is currently functional.

3.2. Cooling Tower Blowdown Effluent Sampling and Analysis

Second semester 2016 routine cooling tower blowdown samples were collected October 18, 2016. For the cooling tower blowdown sampling and analysis, calibration is performed on SC and pH meters less than 12 hours before sampling. SC and pH data measured in the field are written down on field tracking forms. CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

3.3. Cooling Tower Blowdown Monitoring Results

All cooling tower sample results are listed in Appendix B along with the Quality Assurance results, field tracking forms, and CoCs. **Table B-1** lists anion data, **Table B-2** lists metals results, and **Table B-3** provides data on the required physical characteristics. QC data from duplicate sampling is provided in **Table B-4**.

Analytical results for cooling tower blowdown samples collected this semester are compared to values shown in WDR Order No. R5-2008-0148, Attachment 16.

- Copper concentrations in samples collected ranged from 12.0 µg/L to 290 µg/L, as compared to the maximum historical effluent concentrations summarized in the WDR Attachment 16 (2,400 µg/L). Cooling tower at Building 851 (290 µg/L) had the most elevated copper value (**Table B-2**) and was higher than the value reported last semester (110 µg/L).
- Molybdenum concentrations in samples collected ranged from 26 µg/L at cooling tower B-817A to 49 µg/L at both B-827A and B-851, as compared to the maximum historical effluent concentrations summarized in Attachment 16 (45 µg/L). Most of the molybdenum values at the cooling towers are like the values seen last semester.
- Zinc concentrations in samples collected ranged from <20 µg/L to 130 µg/L and were much lower than the maximum historical effluent concentrations of data summarized in the WDR Attachment 16 (340 µg/L). The zinc value at the cooling tower at B-827A was130µg/L compared to <20 µg/L zinc concentration reported last semester.

Although some of the concentrations for copper, molybdenum, and zinc are slightly above the range in the appendix (Attachment 16) of the WDR, the discharge concentrations are well below the values calculated using the Designated Level Methodology to impact ground water. LLNL will continue to evaluate future copper, molybdenum, and zinc analytical data.

3.4. Cooling Tower Percolation Pit Monthly Inspections

LLNL implements monthly visual inspections of the cooling tower percolation pits that are located at Buildings 801, 812, 817A, 826, 827A, and 851 (**Appendix B, Figure B-1**), which collect effluent from the cooling towers as specified in MRP R5-2008-0148.

If standing water is present, the MRP requires the inspection frequency to be increased to weekly until standing water is no longer visible. Visual inspections are conducted to verify the percolation pits are working properly and do not have the potential to overflow. Copies of the inspection forms are found in **Appendix B**. Some standing water was observed in the cooling tower Christy Boxes. During some inspections, standing water was observed in the percolation pits at B-801 and B-851. The Site 300 maintenance crew observed the water buildup which may have been due to reduced permeability of the gravel layers in the percolation pits which may have been caused by mineral buildup in the percolation pit gravels. To improve the infiltration of discharge water at the B-801 percolation pit, the percolation pit was removed and replaced. For B-851, repairs were made and operation is normal. No other standing water was observed at other Site 300 cooling tower percolation pits and all demonstrated normal operations.

4. Mechanical Equipment Effluent Monitoring

4.1. Mechanical Equipment Discharge Monitoring Program

Monitoring required for mechanical equipment discharge effluent to percolation pits is specified in the MRP R5-2008-0148. LLNL monitors the mechanical equipment systems located at

Buildings 806A, 827A, 827C, 827D, and 827E. **Appendix C, Figure C-1** provides the locations of those systems.

4.2. Mechanical Equipment Effluent Sampling and Analysis

The results for the mechanical equipment room effluent monitoring are reported in **Appendix C**. Monitoring is performed using composite sampling from Christy boxes that allows an automatic sampler to be placed within the boxes, allowing composite samples to be collected during operations. During this sampling period, samples were taken from the Buildings 806A, 827A, 827C, 827D, and 827E.

For the sampling and analysis of mechanical equipment effluent, CoC forms are filled out appropriately and signed by the sampler for each analytical laboratory to which the samples are transferred; CoC numbers are also written on the field logs, provided in **Appendix C**. Analytical methods used are appropriate EPA-approved Methods (U.S. Environmental Protection Agency, 2005) or Standard Methods (Clesceri et al., 1998).

4.3. Mechanical Equipment Effluent Monitoring Results

Sample analytical results for this monitoring network are presented in **Appendix C**. Results are consistent with data found in Attachments 5 and 6 in the MRP R5-2008-0148. **Table C-1** lists anion data, **Table C-2** lists metals results and **Table C-3** provides data on the required physical characteristics. Data from duplicate sampling is provided in the data tables.

4.4. Mechanical Equipment Percolation Pit Monthly Inspections

MRP R5-2008-0148 requires monthly inspections of the five mechanical equipment percolation pits located at Buildings 806A, 827A, 827C, 827D, and 827E (**Appendix C, Figure C-1**). **Appendix C** contains the mechanical equipment percolation pit inspection checklists. If standing water is visible during the inspection, the inspection frequency for the percolation pit with the standing water is increased to weekly until no standing water is visible. During this period, no standing water was observed during several inspections at any of the mechanical equipment percolation pits and all facilities demonstrated normal operations.

5. Permit Related Summaries and Updates

5.1. Regulatory Correspondence

The following letters, verbal communication, or activities were conducted under the CVRWQCB WDR-R5-2008-0148 permit during the second semester of 2016:

- The Site 300 CVRWQCB fall inspection was conducted during the second semester 2016 at the request of the CVRWQCB staff which was held on November 17, 2016. The inspection was informative and no violations were issued. The Water Board usually requests that an inspection be scheduled during the spring and fall each year.
- Discharge of water from the Hetch-Hetchy water line to the sewer evaporation pond occurred twice during 2016, on April 13 and December 21. This flushing is necessary to keep the water system delivery line clean and to minimize algae growth. An effort

continues to begin the delivery of Hetch-Hetchy water to Site 300, system upgrades and retrofits are ongoing. Site 300 will be testing a carbon filtration system in 2017. If carbon beds are successful, Site 300 will try to secure funding to install the carbon beds at the facilities. LLNL does not expect full delivery of Hetch-Hetchy water to Site 300 until mid-2018 at the earliest.

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Acknowledgments

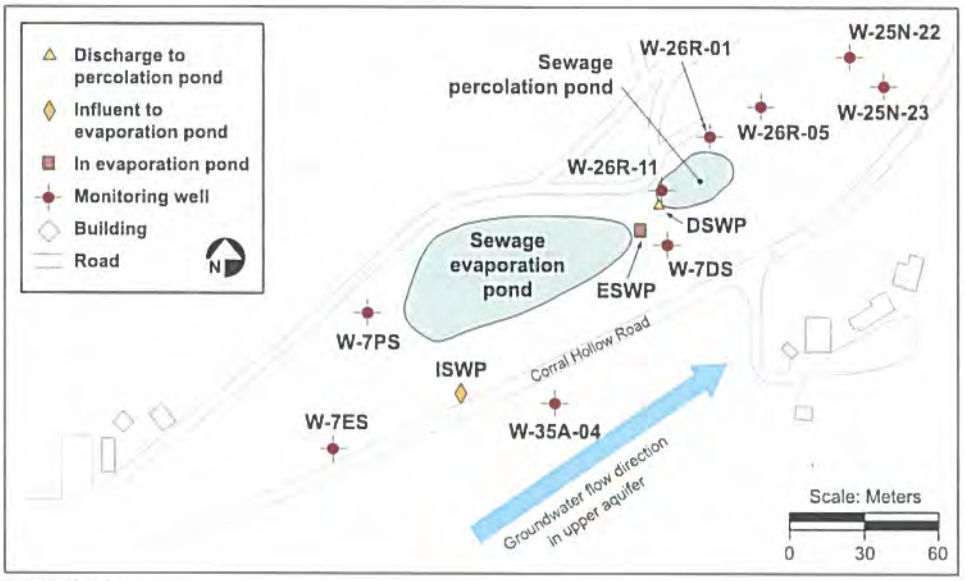
The compliance-monitoring program supporting the permit WDR R5-2008-0148 is large and could not be performed without the dedicated efforts of many people. The completion of this report, and the groundwork laid for future report submissions, would not have been possible without the invaluable and timely technical contributions of Don MacQueen, Ricky Villarreal, Suzie Chamberlain, and Jim Woollett.

Appreciation is due to Environmental Restoration Department (ERD) sampling technologists Eric Walter and Mario Silva, and Bob Williams, Karl Brunckhorst, and Crystal Rosene from the Environmental Functional Area (EFA) for their field sampling support. Data management assistance was performed by Kim Swanson (EFA) and Suzie Chamberlain (ERD). Amy Henke from TID provided graphic arts contributions; Angelina Rivera from EFA provided strong administrative and document preparation assistance. Additional appreciation goes to Dave Rockstead, Zack Reis, Robert Bates, Lee Caldeira, and Pat Gallagher for conducting Site 300 inspections and providing inspection data. EFA appreciates the support of the Site 300 Manager, John Scott, for his support in this effort.

Appendix A

Sewage Evaporation and Percolation Pond Network

- Sewer Pond Figures
- Sewer Pond Tables (well specifications)
- Field Tracking Forms/COC
- Sewer Pond Inspection Reports
- Ground Water Sampling Data Forms
- Historical Data Plots: Sewage Evaporation Pond and Percolation Pond Network (ISWP, ESWP, and Ground Water Wells) – Second Semester – Annual Report Only



ERD-S3R-16-0013

Figure A-1. Sewer pond wastewater and ground water monitoring network.

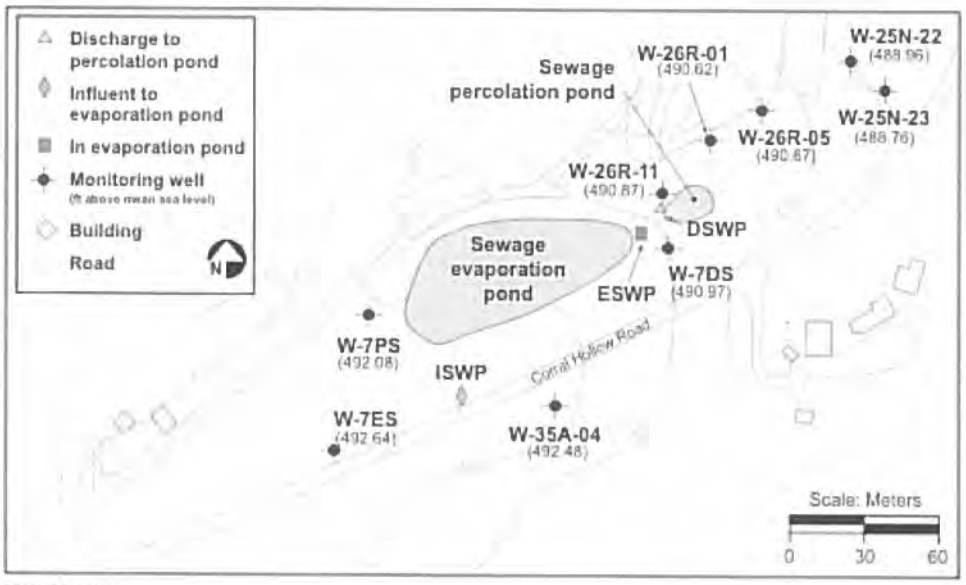
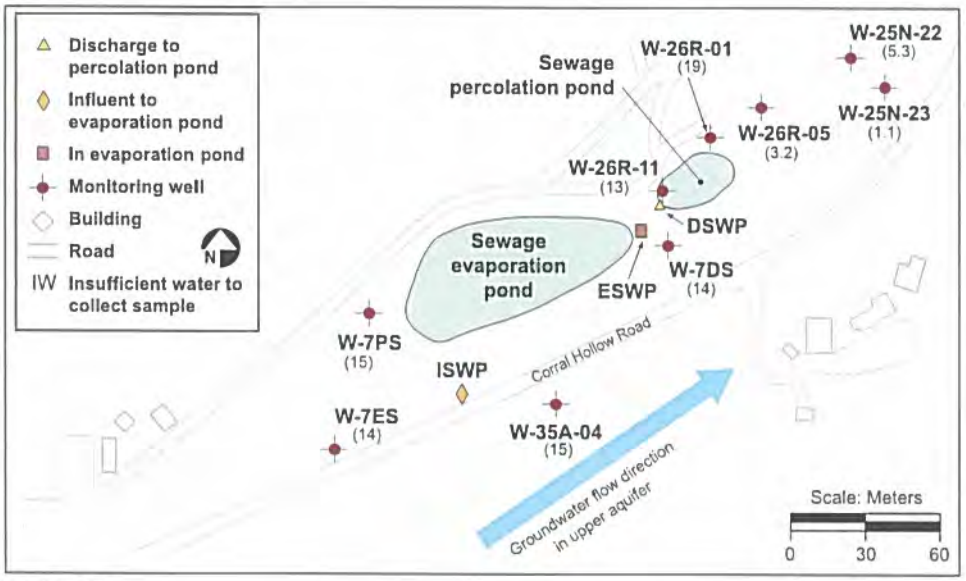
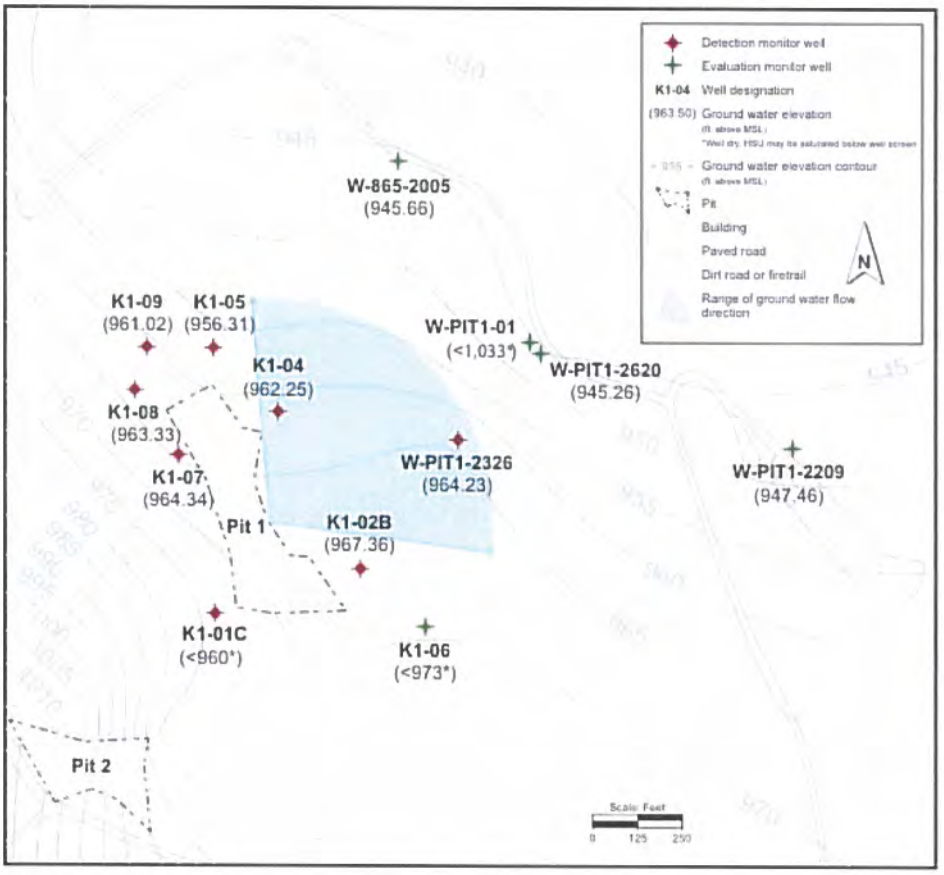


Figure A-2. Site 300 sewer pond wastewater and effluent monitoring network with groundwater elevations (ft-above mean sea level).



ERD-S3R-16-0015

Figure A-3. Site 300 sewer pond wastewater and effluent monitoring network with nitrate concentrations (in mg/L).



ESH-EFA-WQ-17-14454 – BP/RB:ar

Table A-1. Summary of Site 300 sewer pond well specifications.

Well	HSU	Easting	Northing	Ground surface elevation	Measuring point elevation	Screen top elevation	Screen bottom elevation	Bentonite top elevation	Filter pack top elevation	Well bottom elevation
W-7ES	Qal-Tnbs$_l$	1,711,719	414,586	506.41	509.71	491.41	481.41	496.41	495.41	479.61
W-7PS	Qal-Tnbs$_l$	1,711,773	414,782	506.10	508.78	489.60	486.60	494.10	492.10	486.60
W-35A-04	Qal-Tnbs$_l$	1,712,036	414,642	504.07	503.98	485.07	475.07	494.87	486.27	475.07
W-26R-01	Qal-Tnbs$_l$	1,712,267	415,036	506.74	509.71	486.94	481.94	494.24	490.74	476.94
W-26R-11	Qal-Tnbs$_l$	1,712,198	414,961	504.93	507.21	489.13	479.13	493.13	491.13	477.93
W-26R-05	Qal-Tnbs$_l$	1,712,339	415,070	511.31	513.11	491.11	486.11	500.81	498.81	485.81
W-25N-20	Qal-Tnbs$_l$	1,712,371	414,923	502.11	504.94	490.11	475.11	494.61	492.61	474.11
W-7DS	Qal-Tnbs$_l$	1,712,206	414,880	503.30	506.60	487.80	477.80	491.80	489.80	476.30
W-25N-22	Qal-Tnbs$_l$	1,712,486	415,152	510.25	513.06	492.25	482.25	497.25	495.25	481.75
W-25N-23	Qal-Tnbs$_l$	1,712,521	415,109	507.58	510.39	488.58	473.58	495.08	493.08	472.28

Notes:

All measurements are made in feet; elevations are in feet above mean sea level.

HSU = Hydrostratigraphic unit.

Qal-Tnbs$_l$ = Miocene Neroly Formation Lower Blue Sandstone.

Table A-2. Site 300 sewer pond ground water monitoring network 2016 ground water elevation summary.

Well	Date sampled	Pre-sampling measurement	Ground water depth (ft.)	Ground water elevation (ft. above MSL)
W-7ES	Jan 27		17.8	491.9
W-7ES	Feb 22	PS	18.3	491.4
W-7ES	Feb 23	PS	18.3	491.4
W-7ES	May 11	PS	16.9	492.8
W-7ES	May 12	PS	16.9	492.8
W-7ES	May 24		16.4	493.3
W-7ES	Jul 26		15.1	494.7
W-7ES	Aug 15	PS	16.3	493.4
W-7ES	Aug 16	PS	16.3	493.4
W-7ES	Oct 20		17.1	492.6
W-7ES	Nov 7	PS	17.6	492.2
W-7ES	Nov 8	PS	17.6	492.2
W-7PS	Jan 27		17.6	491.2
W-7PS	May 24		16.0	492.8
W-7PS	Jul 26		15.8	493.0
W-7PS	Aug 15	PS	15.1	493.7
W-7PS	Aug 16	PS	15.2	493.6
W-7PS	Oct 20		16.7	492.1
W-35A-04	Feb 22	PS	13.5	490.5
W-35A-04	Feb 23	PS	13.6	490.5
W-35A-04	Feb 29		13.8	490.3
W-35A-04	May 11	PS	12.2	491.8
W-35A-04	May 12	PS	12.2	491.8
W-35A-04	May 31		11.5	492.6
W-35A-04	Jul 21		10.3	493.8
W-35A-04	Aug 15	PS	10.8	493.2
W-35A-04	Aug 16	PS	10.8	493.3
W-35A-04	Oct 19		11.6	492.5
W-35A-04	Nov 8	PS	12.8	491.3
W-35A-04	Nov 9	PS	12.7	491.3
W-25N-23	Jan 27		22.1	488.0
W-25N-23	Feb 16	PS	22.3	487.8
W-25N-23	Feb 17	PS	22.3	487.8
W-25N-23	May 24		20.9	489.2
W-25N-23	Jul 26		19.9	490.2
W-25N-23	Oct 20		21.3	488.8
W-25N-22	Jan 27		24.8	487.9
W-25N-22	Feb 16	PS	24.7	488.1
W-25N-22	Feb 17	PS	24.7	488.1
W-25N-22	May 24		23.7	489.1
W-25N-22	Jul 26		22.7	490.0
W-25N-22	Aug 31	PS	22.8	489.9
W-25N-22	Sep 1	PS	22.8	489.9
W-25N-22	Oct 20		23.8	489.0
W-26R-01	Jan 27		20.3	489.4
W-26R-01	Feb 16	PS	20.2	489.5
W-26R-01	Feb 17	PS	20.2	489.5
W-26R-01	May 9	PS	19.1	490.6
W-26R-01	May 10	PS	19.1	490.6
W-26R-01	May 24		18.5	491.2

Table A-2. Site 300 sewer pond ground water monitoring network 2016 ground water elevation summary.

Well	Date sampled	Pre-sampling measurement	Ground water depth (ft.)	Ground water elevation (ft. above MSL)
W-26R-01	Jul 26		17.3	492.4
W-26R-01	Aug 10	PS	17.4	492.3
W-26R-01	Aug 11	PS	17.4	492.3
W-26R-01	Oct 20		19.1	490.6
W-26R-01	Nov 2	PS	19.4	490.3
W-26R-01	Nov 3	PS	19.4	490.3
W-26R-05	Jan 27		26.3	486.8
W-26R-05	Feb 22	PS	23.5	489.6
W-26R-05	Feb 25	PS	25.8	487.3
W-26R-05	May 9	PS	22.7	490.4
W-26R-05	May 12	PS	26.1	487.0
W-26R-05	May 24		22.4	490.7
W-26R-05	Jul 26		21.0	492.1
W-26R-05	Aug 8	PS	21.1	492.0
W-26R-05	Aug 18	PS	21.4	491.7
W-26R-05	Oct 20		22.4	490.7
W-26R-05	Oct 31	PS	22.7	490.4
W-26R-05	Nov 3	PS	20.7	492.4
W-26R-11	Jan 27		17.8	489.4
W-26R-11	Feb 16	PS	17.7	489.5
W-26R-11	Feb 17	PS	17.7	489.5
W-26R-11	May 9	PS	16.2	491.0
W-26R-11	May 10	PS	16.2	491.0
W-26R-11	May 24		15.7	491.5
W-26R-11	Jul 26		14.5	492.7
W-26R-11	Aug 10	PS	14.7	492.6
W-26R-11	Aug 11	PS	14.7	492.6
W-26R-11	Oct 20		16.3	490.9
W-26R-11	Nov 2	PS	16.7	490.5
W-26R-11	Nov 3	PS	16.7	490.5
W-7DS	Jan 27		16.4	490.2
W-7DS	Feb 22	PS	16.8	489.8
W-7DS	Feb 23	PS	16.8	489.8
W-7DS	May 9	PS	15.6	491.0
W-7DS	May 10	PS	15.6	491.0
W-7DS	May 24		15.0	491.6
W-7DS	Jul 26		13.8	492.8
W-7DS	Aug 15	PS	14.1	492.5
W-7DS	Aug 16	PS	14.1	492.5
W-7DS	Oct 20		15.6	491.0
W-7DS	Nov 2	PS	15.9	490.7
W-7DS	Nov 3	PS	15.9	490.7

Table A-3. Site 300 sewer pond wastewater monitoring network 2016 coliform, anion, and physical characteristic data summary.

Well	Date	pH	Specific Conductance	Biochemical Oxygen Demand	Dissolved Oxygen	Fecal Coliform	Total Coliform	Sodium
3-ESWP-OW	Apr 26	9.7	5700	38	16	350	540	1500
3-ESWP-OW	Sep 1	9.7	6900	38	14	>1600	>1600	1900
3-ISWP-OW	Apr 26	8.8	1900	230	-	-	-	-
3-ISWP-OW	Sep 8	8.5	1800	120	-	-	-	-

Note:
– = Analysis not required.

Table A-4. Site 300 sewer pond wastewater monitoring network 2016 metals data summary.

Analyte	Date	3-ESWP-OW (µg/L)
Aluminum	Apr 26	<100
	Sep 1	<250
Arsenic	Apr 26	4.9
	Sep 1	6.1
Barium	Apr 26	<25
	Sep 1	170
Boron	Apr 26	6400
	Sep 1	8200
Cadmium	Apr 26	<50
	Sep 1	<50
Calcium	Apr 26	7600
	Sep 1	15000
Chromium	Apr 26	<3
	Sep 1	3.2
Hexavalent Chromium	Apr 26	<5
Copper	Sep 1	<1
	Apr 26	31
Iron	Sep 1	8.7
	Apr 26	<200
Lead	Sep 1	<500
	Apr 26	<5
Magnesium	Sep 1	14
	Apr 26	1500
Manganese	Sep 1	<2500
	Apr 26	<60
Mercury	Sep 1	<150
	Apr 26	<0.2
Molybdenum	Sep 1	0.80
	Apr 26	<50
Nickel	Sep 1	<120
	Apr 26	7.1
Potassium	Sep 1	3.7
	Apr 26	67000
Selenium	Sep 1	90000
	Apr 26	10
Silver	Sep 1	11
	Apr 26	<1
Vanadium	Sep 1	<10
	Apr 26	<20
Zinc	Sep 1	<20
	Apr 26	23

Table A-5. Site 300 sewer pond wastewater monitoring network 2016 QA data.

Location	Date	Type	pH Units	Specific Conductance (µmhos/cm)	Biochemical Oxygen Demand (mg/L)	Dissolved Oxygen (mg/L)	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)	Sodium (mg/L)
3-ESWP-OW	Apr 26	Routine	9.7	5700	38	16	350	540	1500
3-ESWP-OW	Apr 26	Duplicate	-	-	35	-	-	-	-
3-ISWP-OW	Sep 8	Routine	8.5	1800	120	-	-	-	-
3-ISWP-OW	Sep 8	Duplicate	-	1800	-	-	-	-	-

Note:
– = Analysis not required.

Table A-6. Site 300 sewer pond ground water monitoring network 2016 anions data summary.

Well	Date	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)
W-7ES	Feb 22	180	170	12	340	0.33
W-7ES	May 11	-	-	12	-	-
W-7ES	Aug 15	200	160	13	350	0.34
W-7ES	Nov 7	-	-	14	-	-
W-7PS	Aug 15	220	150	15	250	0.32
W-35A-04	Feb 22	170	170	12	350	0.38
W-35A-04	May 11	-	-	13	-	-
W-35A-04	Aug 15	190	160	14	350	0.35
W-35A-04	Nov 8	-	-	15	-	-
W-25N-23	Feb 16	140	94	1.1	400	0.36
W-25N-22	Feb 16	150	130	3.3	440	0.38
W-25N-22	Aug 31	160	130	5.3	460	0.33
W-26R-01	Feb 16	190	150	25	240	0.34
W-26R-01	May 9	-	-	22	-	-
W-26R-01	Aug 10	220	140	17	230	0.27
W-26R-01	Nov 2	-	-	19	-	-
W-26R-05	Feb 22	140	93	0.66	200	0.32
W-26R-05	May 9	-	-	1.2	-	-
W-26R-05	Aug 8	180	110	5.5	230	0.29
W-26R-05	Oct 31	-	-	3.2	-	-
W-26R-11	Feb 16	170	140	14	230	0.40
W-26R-11	May 9	-	-	13	-	-
W-26R-11	Aug 10	210	150	14	280	0.31
W-26R-11	Nov 2	-	-	13	-	-
W-7DS	Feb 22	170	160	12	300	0.31
W-7DS	May 9	-	-	12	-	-
W-7DS	Aug 15	190	160	13	340	0.32
W-7DS	Nov 2	-	-	14	-	-

Note:
– = Analysis not required.

Table A-7. Site 300 sewer pond ground water monitoring network 2016 coliform data summary.

Well	Date	Fecal Coliform (MPN/100mL)	Total Coliform (MPN/100mL)
W-7ES	Feb 23	<1.8	<1.8
W-7ES	May 12	<1.8	<1.8
W-7ES	Aug 16	<1.8	<1.8
W-7ES	Nov 8	<1.8	<1.8
W-7PS	Aug 16	<1.8	<1.8
W-35A-04	Feb 23	<1.8	<1.8
W-35A-04	May 12	<1.8	<1.8
W-35A-04	Aug 16	<1.8	<1.8
W-35A-04	Nov 9	<1.8	7.8
W-25N-23	Feb 17	<1.8	<1.8
W-25N-22	Feb 17	<1.8	<1.8
W-25N-22	Sep 1	<1.8	<1.8
W-26R-01	Feb 17	<1.8	<1.8
W-26R-01	May 10	<1.8	<1.8
W-26R-01	Aug 11	<1.8	<1.8
W-26R-01	Nov 3	<1.8	<1.8
W-26R-05	Feb 25	<1.8	<1.8
W-26R-05	May 12	<1.8	<1.8
W-26R-05	Aug 18	<1.8	<1.8
W-26R-05	Nov 3	<1.8	<1.8
W-26R-11	Feb 17	<1.8	<1.8
W-26R-11	May 10	<1.8	<1.8
W-26R-11	Aug 11	<1.8	<1.8
W-26R-11	Nov 3	<1.8	<1.8
W-7DS	Feb 23	<1.8	<1.8
W-7DS	May 10	<1.8	<1.8
W-7DS	Aug 16	<1.8	<1.8
W-7DS	Nov 3	<1.8	<1.8

Table A-8. Site 300 sewer pond ground water monitoring network 2016 physical chemistry data.

Well	Date	pH	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
W-7ES	Feb 22	7.9	1650	280	1100	500	0.16
W-7ES	May 11	7.6	1580	-	-	-	-
W-7ES	Aug 15	8.1	1660	290	1100	530	<1
W-7ES	Nov 7	7.8	1690	-	-	-	-
W-7PS	Aug 15	8.0	1590	340	1100	410	<1
W-35A-04	Feb 22	8.0	1660	270	1100	490	0.20
W-35A-04	May 11	7.6	1640	-	-	-	-
W-35A-04	Aug 15	8.0	1650	280	1100	520	<1
W-35A-04	Nov 8	8.0	1680	-	-	-	-
W-25N-23	Feb 16	7.8	1450	210	1000	430	<1
W-25N-22	Feb 16	7.8	1560	180	1100	450	<1
W-25N-22	Aug 31	7.8	1510	200	1200	500	<1
W-26R-01	Feb 16	7.9	1410	230	900	260	<1
W-26R-01	May 9	7.7	1360	-	-	-	-
W-26R-01	Aug 10	8.0	1400	250	900	290	<1
W-26R-01	Nov 2	7.8	1370	-	-	-	-
W-26R-05	Feb 22	7.9	1090	210	760	220	0.35
W-26R-05	May 9	7.9	1080	-	-	-	-
W-26R-05	Aug 8	8.2	1290	240	820	280	1.3
W-26R-05	Oct 31	7.9	1130	-	-	-	-
W-26R-11	Feb 16	7.9	1380	260	880	320	<1
W-26R-11	May 9	7.7	1360	-	-	-	-
W-26R-11	Aug 10	7.8	1510	290	1000	430	<1
W-26R-11	Nov 2	7.8	1550	-	-	-	-
W-7DS	Feb 22	8.0	1580	280	1000	460	0.18
W-7DS	May 9	7.7	1570	-	-	-	-
W-7DS	Aug 15	8.1	1620	290	1000	520	<1
W-7DS	Nov 2	7.7	1650	-	-	-	-

Note:
- = Analysis not required.

Table A–9. Site 300 sewer pond ground water monitoring network 2016 metals data summary.

Analyte (µg/L)	Month	W-7ES	W-7PS	W-35A-04	W-25N-23	W-25N-22	W-26R-01	W-26R-05	W-26R-11	W-7DS
Aluminum	Feb	<50	-	<50	<50	<50	<50	<50	<50	<50
	Aug	<50	<50	<50	-	<50	<50	<50	<50	<50
Arsenic	Feb	2.9	-	4.3	9.1	7.4	9.5	7.5	4.0	3.3
	Aug	3.0	3.8	4.3	-	10	8.9	8.3	3.1	3.1
	Nov	-	-	5.0	-	-	-	-	-	-
Barium	Feb	48	-	49	29	25	32	28	44	51
	Aug	48	59	45	-	31	31	33	54	48
	Nov	-	-	60	-	-	-	-	-	-
Boron	Feb	2700	-	2900	930	840	1400	870	2000	2500
	Aug	2900	2600	3000	-	990	1600	1000	2500	3000
Cadmium	Feb	<50	-	<50	<50	<50	<50	<50	<50	<50
	Aug	<50	<50	<50	-	<50	<50	<50	<50	<50
	Nov	-	-	<0.5	-	-	-	-	-	-
Calcium	Feb	110000	-	110000	100000	110000	64000	55000	73000	100000
	Aug	120000	95000	120000	-	120000	73000	69000	100000	120000
Chromium	Feb	3.1	-	5.3	<3	<3	<3	5.1	3.6	4.8
	Aug	<1	1.7	1.9	-	<1	<1	2.1	1.8	1.7
	Nov	-	-	1.2	-	-	-	-	-	-
Hexavalent Chromium	Feb	<2	-	<2	<1	<1	<1	2.4	<1	<2
	Aug	<1	<1	1.2	-	<1	<1	1.4	<1	1.1
Copper	Feb	1.6	-	1.6	1.8	1.4	1.5	1.7	<1	3.4
	Aug	3.6	3.1	3.2	-	2.6	2.9	1.8	2.4	7.9
	Nov	-	-	<10	-	-	-	-	-	-
Iron	Feb	<100	-	<100	<100	<100	<100	<100	<100	<100
	Aug	<100	<100	<100	-	<100	<100	<100	<100	<100
Lead	Feb	<5	-	<5	<5	<5	<5	<5	<5	<5
	Aug	<5	<5	<5	-	<5	<5	<5	<5	<5
	Nov	-	-	<2	-	-	-	-	-	-
Magnesium	Feb	52000	-	53000	43000	44000	24000	21000	33000	49000

Table A–9. Site 300 sewer pond ground water monitoring network 2016 metals data summary. (cont.)

	Aug	55000	43000	56000	-	51000	25000	25000	44000	55000
Manganese	Feb	<30	-	<30	<30	150	<30	<30	<30	<30
	Aug	<30	<30	<30	-	<30	<30	<30	<30	<30
Mercury	Feb	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Aug	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
	Nov	-	-	<0.2	-	-	-	-	-	-
Molybdenum	Feb	<25	-	<25	<25	<25	<25	<25	<25	<25
	Aug	<25	<25	<25	-	<25	<25	<25	<25	<25
	Nov	-	-	<25	-	-	-	-	-	-
Nickel	Feb	2.9	-	3.0	<2	17	<2	<2	2.4	3.9
	Aug	2.0	4.2	2.6	-	4.9	<2	<2	21	3.9
	Nov	-	-	<5	-	-	-	-	-	-
Potassium	Feb	5500	-	5300	11000	11000	10000	9100	5500	5600
	Aug	5600	6000	6200	-	12000	11000	11000	6500	6000
	Nov	-	-	7200	-	-	-	-	-	-
Selenium	Feb	9.9	-	8.9	<2	2.8	10	2.2	13	11
	Aug	7.0	16	6.3	-	5.5	7.6	3.9	8.9	6.8
	Nov	-	-	6.3	-	-	-	-	-	-
Silver	Feb	<1	-	<1	<10	<10	<10	<1	<10	<1
	Aug	<10	<10	<10	-	<10	<10	<10	<10	<10
	Nov	-	-	<0.5	-	-	-	-	-	-
Vanadium	Feb	<20	-	<20	<20	<20	<20	<20	<20	<20
	Aug	<20	<20	<20	-	<20	<20	<20	<20	<20
	Nov	-	-	<10	-	-	-	-	-	-
Zinc	Feb	<20	-	<20	<20	<20	<20	<20	<20	<20
	Aug	<20	<20	<20	-	<20	<20	<20	<20	<20

Table A-10. Site 300 sewer pond ground water monitoring network second semester 2016 QA data.

Constituent	Units	W-7ES Nov 7 Routine	W-7ES Nov 7 Duplicate	W-7ES Nov 8 Routine	W-7ES Nov 8 Duplicate	W-26R-11 Nov 2 Routine	W-26R-11 Nov 2 Duplicate	W-26R-11 Nov 3 Routine	W-26R-11 Nov 3 Duplicate
pH	Units	7.8	7.8	-	-	7.8	7.8	-	-
Specific Conductance	µmhos/cm	1690	1680	-	-	1550	1550	-	-
Fecal Coliform	MPN/100mL	-	-	<1.8	<1.8	-	-	<1.8	<1.8
Total Coliform	MPN/100mL	-	-	<1.8	<1.8	-	-	<1.8	<1.8
Nitrate (as NO3)	mg/L	14	14	-	-	13	13	-	-

FIELD TRACKING FORM

INFLUENT TO SITE 300 SEWAGE POND

Lab	Alpha Lab
CoC #	70579
Ship It #	211110

DATE: 9/8/16 **TIME:** 1400

Special Instructions: **Semi-Annual Sampling in 2nd and 4th Quarters (April & Oct)**
Samples should be taken after 1 p.m. during higher flow.
Print collection time on sample bottles.
BOD Hold Time 48hr. Conductivity/pH Hold Time 24hr.

pH meter calibrated	9/8/16
Conductivity meter calibrated	9/8/16
DO meter calibrated	9/8/16

Location	Field Measurements				Comments	Initials	Samples for Lab Analysis
	pH	COND	DO (PPM)	Temp (°C)			Analytical Codes:
3-ISWP-01-OW (Influent to Sewage Pond)	7.56	1450uS	2.79	21.2		KS	**E120.1A & E150.1A** (Conductivity/pH) *(2 X 250-mL poly)* 1
3-WSWP-01-OW *duplicate of* 3-ISWP-01-OW						KS	**SM5210B-A** (BOD) *(1 X 1 Liter poly)* 1

2Q2016 Duplicate **See ESWP Field Tracking Form**
4Q2016 Duplicate **E120.1A**

☑ Copy to Analysts, Rick Blake

Revised 11/14/13

Chain of Custody

DU Temp = 5.8°C

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 70579
Document Control #: 70579
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 39360
PCI Task #: 1.03.02.12.01.01
Email: efa-dmt@llnl.gov
DMT Additional Copies:

Analytical Lab : ALPHAANAL
TAT: 20d
Analytical Lab Log #:
Project/Network: WDRPOND
ShipIt Release #: 211110
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ISWP-01-OW	9/8/16 1400	SW	P	1	WDR	E120.1A	ALL	
3-ISWP-01-OW	9/8/16 1400	SW	P	0	WDR	E150.1A	ALL	
3-ISWP-01-OW	9/8/16 1400	SW	PO	1	WDR	SM5210B-A	ALL	
3-WSWP-01-OW	9/8/16 1400	SW	P	1	WDR	E120.1A	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Rick Brunckhorst	LLNL/EFA	9/9/16	1515	2	ALPHA	9/12/16	1515
2				3			
3				4			
4				5			

FIELD TRACKING FORM
EAST END OF SITE 300 SEWAGE POND

Lab	Alpha	BC
CoC #	70535	70536
Ship It #	210967	210970

DATE: 9/1/16 **TIME:** 09:50

Special Instructions:
Semi-Annual Sampling in 2nd and 4th Quarters (April & Oct)
Samples should be taken after 1 p.m.
Print collection time on sample bottles.
DO/conductivity/pH hold time 24 hr.

pH meter calibrated 9/1/16
Conductivity meter calibrated 9/1/16
DO meter calibrated 9/1/16

Location	Field Measurements					Comments	Initials	Samples for Lab Analysis
	pH	COND	Depth	DO (PPM)	Temp (°C)			Analytical Codes:
3-ESWP-01-OW (East end of Sewage Pond)	9.58	5.39 mS		12.63	21			Alpha LAB E360.1 *DO (1x300mL PET Poly with glass stopper)* 1 E120.1A & E150.1A *Conductivity/pH (2x250-mL poly)* 1 SM9221 *Total, Fecal Coliform (1x125mL sterilized poly) 6hr hold* 1 SM5210B-A *BOD (1x1 Liter poly)* 1
3-WSWP-01-OW *duplicate of* 3-ESWP-01-OW								BC Labs S3METALS (1X500mL Poly) 1

2Q2016 Duplicate SM5210B-A
4Q2016 Duplicate See ISWP Field Tracking Form

* Special Sampling due to Release to DWSP

☑ Copy to Analysts, Rick Blake

Revised 11/14/13

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 70535
Document Control #: 70535
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / rosene1
PCI Project #: 39360
PCI Task #: 1.03.02.12.01.01
Email: efa-dmt@llnl.gov;
DMT Additional Copies:

Analytical Lab : ALPHAANAL
TAT: 5d
Analytical Lab Log #:
Project/Network: SPECIAL
ShipIt Release #: 210916
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	9-1-16 09:50	SW	P	0	WDR	E120.1A	ALL	
3-ESWP-01-OW	9-1-16 09:50	SW	P	1	WDR	E150.1A	ALL	
3-ESWP-01-OW	9-1-16 09:50	SW	PO	1	WDR	SM5210B-A	ALL	
3-ESWP-01-OW	9-1-16 09:50	SW	P	1	WDR	SM9221	ALL	
3-ESWP-01-OW	9-1-16 09:50	SW	G	1	WDR	E360.1	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Neal Blake	LLNL/EFA	9/1/16	1105	2	Alpha	9-1	11:05
2				3			
3				4			
4				5			

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 70536
Document Control #: 70536
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / rosene1
PCI Project #: 393601
PCI Task #: 1.03.02.12.01.013
Email: efa-dmt@llnl.gov;
DMT Additional Copies:

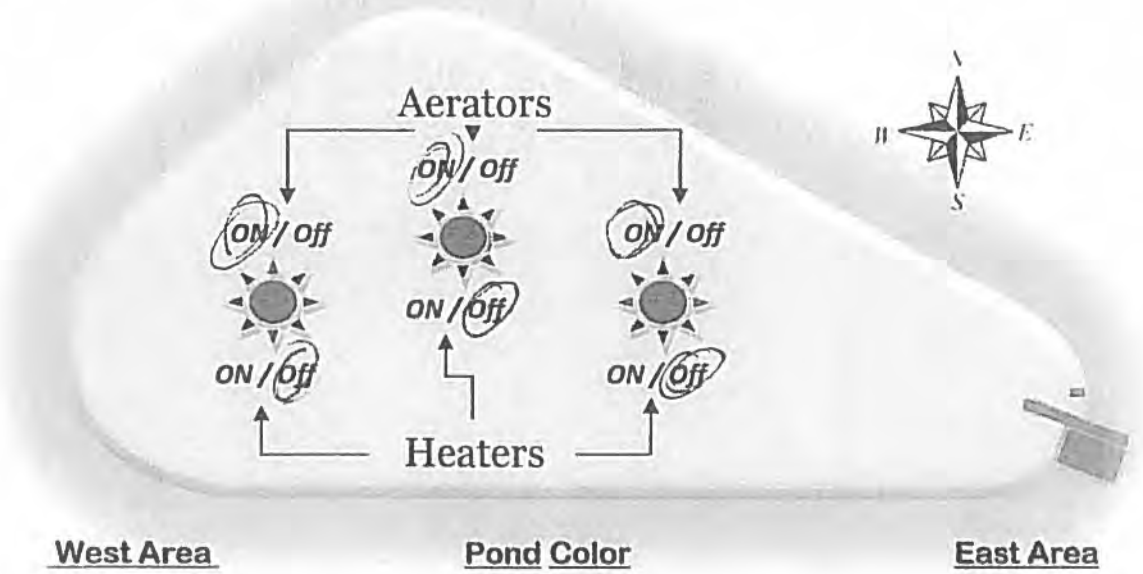
Analytical Lab : BCLABS-BAK
TAT: 5d
Analytical Lab Log #:
Project/Network: SPECIAL
ShipIt Release #: 210170
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-ESWP-01-OW	9-1-16 0950	SW	P	1	WDR	S3METALS	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1	LLNL/EFA	9/1/16	1030	2 Mary Bogan	BC Lab	9-1-16	1630
2				3			
3				4			
4				5			

SITE 300 SEWER POND
INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 25.3 C	Green (X)	Water Temp 24. C
Oxygen 9.41 %	Green Brown (__)	Oxygen 6.5 %
pH 9.3	Brown Green (__)	pH 9.89
Time 10:30	Brown (__)	Time 10.00

Pond Water Level 4"	Air Temp 86	Animal Burrows Small
Water (Meter) Stop —	Wind Direction E to W	Weed Control Needed
Water (Meter) Start —	Erosion Some	Pond Oder None
Water Added —		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (X)

Percolation Pond

Erosion Some

Water Level 1-2"

Weed Control Needed

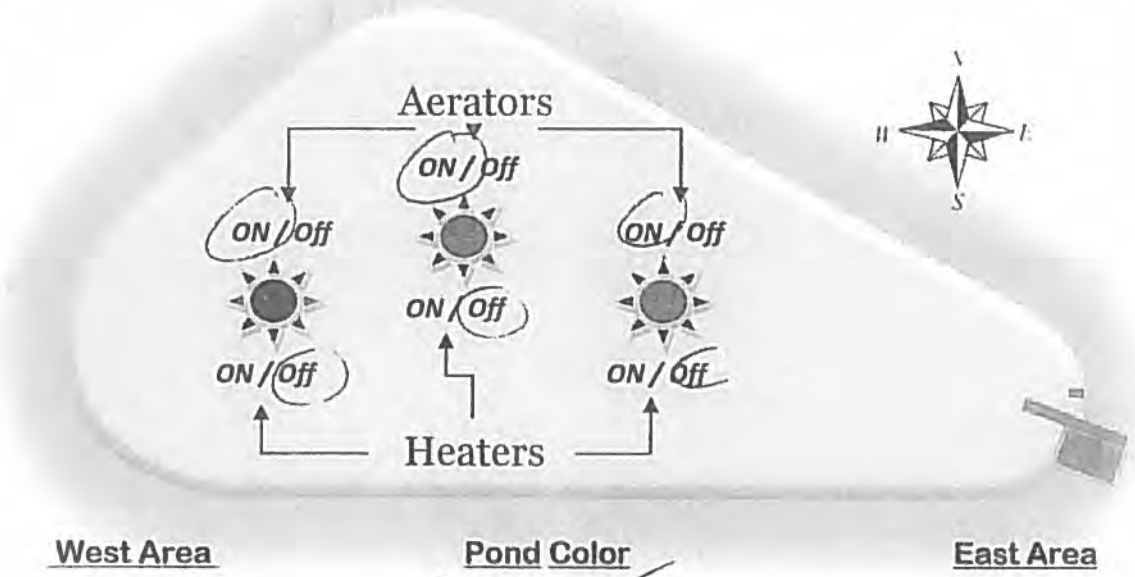
Animal Burrows Some

Inspected By [signature] **Date** 6-30-16

Supervisor Review [signature] **Date** 7-14-16

Comments

SITE 300 SEWER POND
INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 21.3 C	Green (✓)	Water Temp 21.2 C
Oxygen 6.04	Green Brown (__)	Oxygen 8.68
pH 9.79	Brown Green (__)	pH 9.77
Time 09:05	Brown (__)	Time 09:00

Pond Water Level 4±	Air Temp 78.	Animal Burrows Small.
Water (Meter) Stop —	Wind Direction W	Weed Control Needed
Water (Meter) Start —	Erosion Some.	Pond Oder None
Water Added —		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (✓)

Percolation Pond

Erosion Needs work

Water Level 1-2"

Weed Control Need to Cut

Animal Burrows Some

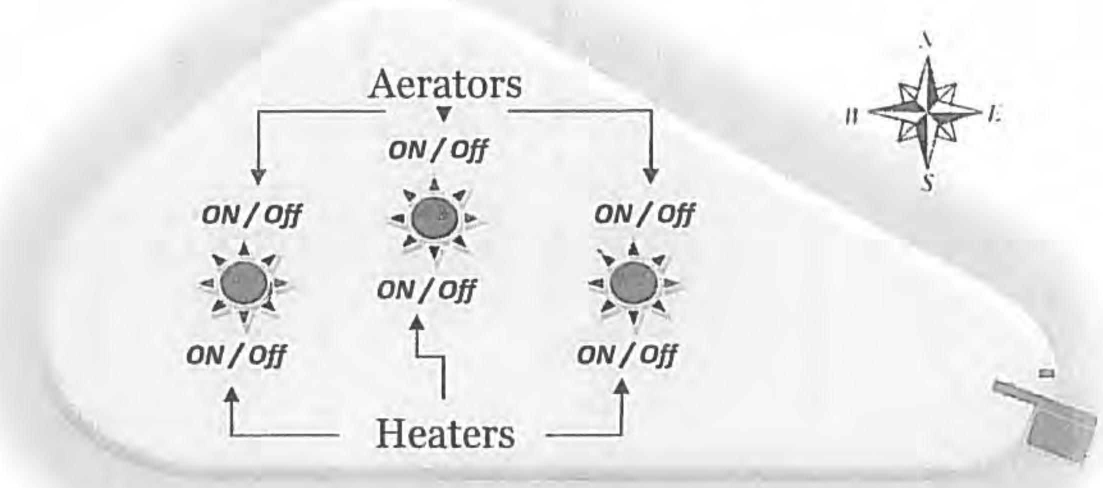
Inspected By [signature] Date 7-21-16

Supervisor Review [signature] Date 7-21-16

Comments Second Aerators for Ponds (3)

SITE 300 SEWER POND

INSPECTION/MONITORING REPORT



pH no Lower Than 7.0 / High 10.0

Low 5.0 High O2 18.00

West Area	Pond Color	East Area
Water Temp 26.1°C	Green (X)	Water Temp 32 °C
Oxygen 12.89	Green Brown (_)	Oxygen 18.95
pH 9.77 Below 10	Brown Green (_)	pH 9.86
Time 13:30	Brown (_)	Time 13:45

Pond Water Level 6"	Air Temp 86°	Animal Burrows Small
Water (Meter) Stop —	Wind Direction W to E	Weed Control None
Water (Meter) Start —	Erosion Some	Pond Oder None
Water Added Ø		

Common Bacterium-Per Drop (_) Activated Sludge (_) Glass Tube Test (_) YSI Meter Test (✓)

Percolation Pond

Erosion None

Water Level 2"

Weed Control None

Animal Burrows small

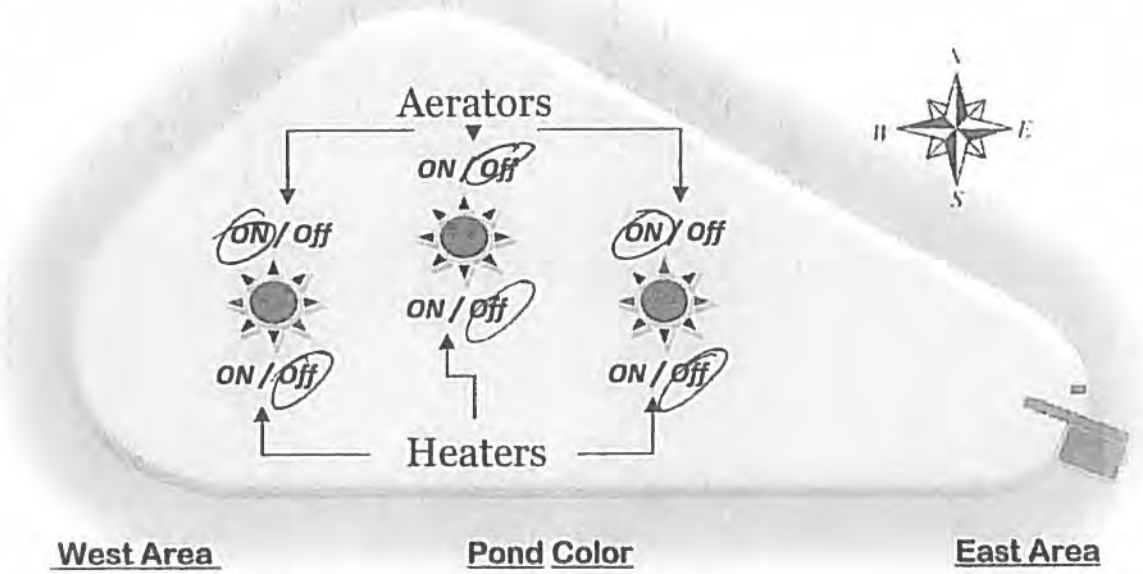
Inspected By [signature] Date 9/7/16

Supervisor Review [signature] Date 5-11-16.

Comments

#2 AERATOR OOS Possible Bad Motor

SITE 300 SEWER POND
INSPECTION/MONITORING REPORT



West Area	Pond Color	East Area
Water Temp 19.5	Green (X)	Water Temp 19.5
Oxygen 8.25	Green Brown (__)	Oxygen 5.26
pH 9.85	Brown Green (__)	pH 9.82
Time 9:15 AM	Brown (__)	Time 8:45 AM

Pond Water Level 4"	Air Temp 70°	Animal Burrows Some
Water (Meter) Stop —	Wind Direction None	Weed Control OK
Water (Meter) Start —	Erosion Some	Pond Oder None
Water Added —		

Common Bacterium-Per Drop (__) Activated Sludge (__) Glass Tube Test (__) YSI Meter Test (__)

Percolation Pond

Erosion Some

Water Level _____

Weed Control OK

Animal Burrows Small

Inspected By [signature] **Date** 8/18/16

Supervisor Review JJ Miller **Date** 8/18/16

Comments Unable to reach Callahan

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 23.5

Dissolved Oxygen 5.03

PH 9.71

Time 11:40

West Area

Water Temperature 25.2

Dissolved Oxygen 15.93

PH 9.69

Time 12:00

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 5" Air Temp 79° Wind Direction E to W Water Added ~~0~~

Note Any Animal Burrows, Erosion and Weeds Some weeds, Some erosion

Water Added ~~0~~ Meter- Current 40 Previous —

Overflow Percolation Pond

Water Level ~~0~~ Overall Condition Good

Note Any Animal Burrows, Erosion and Weeds Some weeds, Some erosion

Heaters On

1. off 2. off 3. off

Aerators On

1. on 2. off 3. on

Inspected By Rockstead / Reis Date 8-25-16

Operator Review JJ Mills Date 9-1-16

Comments #2 Aerator motor failed

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 27.4

Dissolved Oxygen 15.3

PH 9.76

Time 14:30

West Area

Water Temperature 24.4

Dissolved Oxygen 12.82

PH 9.69

Time 14:40

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 5" Air Temp 88 Wind Direction W to E Water Added 0

Note Any Animal Burrows, Erosion and Weeds Some Weeds

~~Water Added~~ _____ Meter- Current 180 Previous 180

Overflow Percolation Pond

Water Level 0 Overall Condition Good

Note Any Animal Burrows, Erosion and Weeds Some erosion & weeds

Heaters On

1. ~~Off~~ 2. Off 3. Off

Aerators On

1. On 2. Off 3. On

Inspected By RockSteed & Reis Date 9/1/16

Operator Review JJ Miller Date 9/1/16

Comments Installed gate valve to Overflow Pond

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 20.9

Dissolved Oxygen 3.77

PH 9.71

Time 9:00

West Area

Water Temperature 21.4

Dissolved Oxygen 3.99

PH 9.67

Time 9:25

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 Green Green/Brown Brown/Green Brown

Water Level 3.5 Air Temp 77° Wind Direction E to W Weather Conditions Clear/Light Wind

Note Any Animal Burrows, Erosion and Weeds Some weeds

Water Added 0 Meter- Current 150 Previous 180

Odor None Insects ~~None~~ Some Visible Solids ~~None~~ Some on west side Scum / Algae Some on west side

Aerators On

1. on 2. off 3. on

Heaters On

1. off 2. off 3. off

Overflow Basin

Water Level 0 Overall Condition Fair

Note Any Animal Burrows, Erosion and Weeds Some weeds and erosion

Inspected By Reis / Rockafead Date 9/11/16

Operator Review JJ Mills Date 9/12/16

Comments #2 aerator needs to be replaced

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 18.6

Dissolved Oxygen 3.25

PH 9.62

Time 0800

West Area

Water Temperature 19.3

Dissolved Oxygen 3.84

PH 9.78

Time 0838

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Dark Green) Green/Brown Brown/Green Brown

Water Level 3.5 Air Temp 70° Wind Direction None Weather Conditions Clear / Sunny

Note Any Animal Burrows, Erosion and Weeds No animal burrows & weeds are dead

Water Added _____ Meter- Current _____ Previous _____

Odor None Insects None Visible Solids None Scum / Algae _____

Aerators On ✓

1. ✓ 2. X 3. ✓

Heaters On

1. X 2. X 3. X

Overflow Basin

Water Level 0 Overall Condition Dry & Clear

Note Any Animal Burrows, Erosion and Weeds None, weeds are dead only 1 head to be pulled.

Inspected By _____ Date 9/16/16

Operator Review _____ Date 9/21/16

Comments _____

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 22.6

Dissolved Oxygen 11.02

PH 9.58

Time 13:50

West Area

Water Temperature 26.1

Dissolved Oxygen 15.82

PH 9.67

Time 14:20

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 4 Air Temp 93 Wind Direction NE@8 Weather Conditions Clear & warm

Note Any Animal Burrows, Erosion and Weeds Some weeds

Water Added ~~0~~ Meter- Current — Previous —

Odor — Insects — Visible Solids none Scum / Algae Slite on western

Aerators On

1. X 2. off 3. X

Heaters On

1. off 2. off 3. off

Overflow Basin

Water Level ~~0~~ Overall Condition Good

Note Any Animal Burrows, Erosion and Weeds Some erosion & weeds

Inspected By Reis / Rockstead Date 9-26-16

Operator Review A G Mella Date 9-26-16

Comments

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 15.6

Dissolved Oxygen 3.80

PH 9.60

Time 8:00

West Area

Water Temperature 16.5

Dissolved Oxygen 4.03

PH 9.59

Time 8:25

DO Target 5 to 18

PH Target 7 to 10

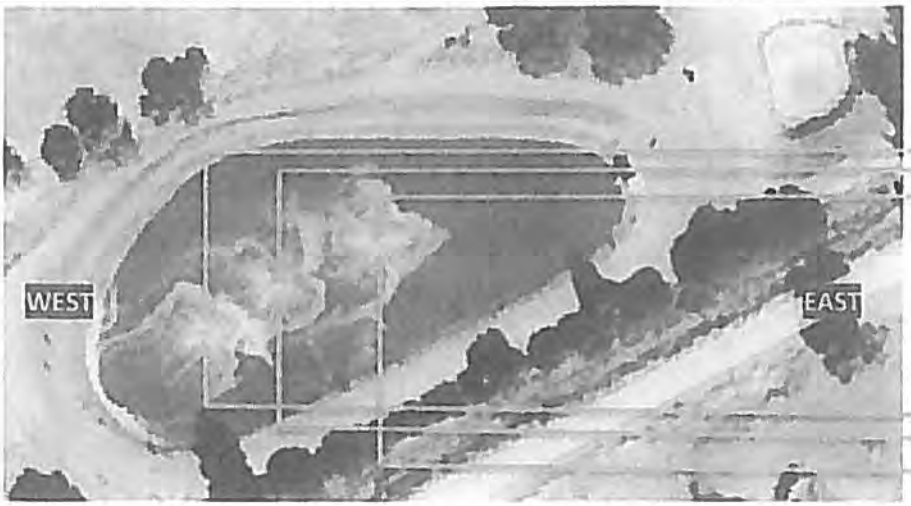
Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 8" Air Temp 71° Wind Direction None Weather Conditions Fair-Clear

Note Any Animal Burrows, Erosion and Weeds Weeds

Water Added 0 Meter- Current — Previous

Odor none Insects none Visible Solids Some Scum / Algae Some



Aerators On

1. on 2. off 3. on

Heaters On

1. off 2. off 3. off

Overflow Basin

Water Level 0 Overall Condition Fair

Note Any Animal Burrows, Erosion and Weeds Some

Inspected By Reis / Rockstead Date 10-9-16

Operator Review [signature] Date 10-9-16

Comments

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 16.2

Dissolved Oxygen 4.06

PH 9.53

Time 09:45

West Area

Water Temperature 16.7

Dissolved Oxygen 4.25

PH 9.51

Time 09:20

DO Target 5 to 18

PH Target 7 to 10

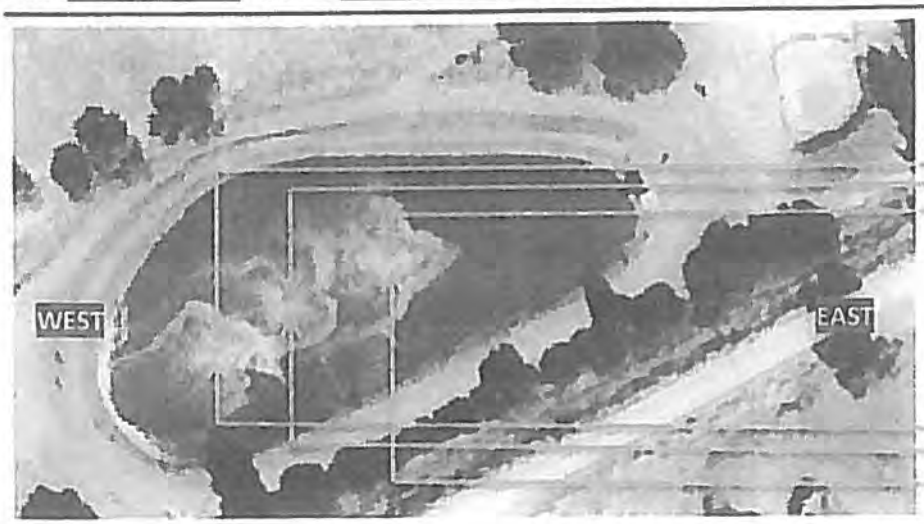
Pond Color-Circle 1 **Green** Green/Brown Brown/Green Brown

Water Level 3 Air Temp 65 Wind Direction N to S Weather Conditions Clear

Note Any Animal Burrows, Erosion and Weeds Some

Water Added 0 Meter- Current — Previous —

Odor None Insects Small Visible Solids None Scum / Algae None



Aerators On - ✓

1. ✓ 2. X 3. ✓

Heaters On

1. off 2. off 3. off

Overflow Basin

Water Level 0 Overall Condition Clear

Note Any Animal Burrows, Erosion and Weeds Some

Inspected By [signature] Date 10-20-16

Operator Review [signature] Date 10-20-16

Comments

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 11.9 C

Dissolved Oxygen 5.24

PH 9.4

Time 10:28 AM

West Area

Water Temperature 13.0 C

Dissolved Oxygen 4.11

PH 9.5

Time 10:34 AM

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 3.5 Air Temp 68 Wind Direction NW Weather Conditions Clear 68°

Note Any Animal Burrows, Erosion and Weeds None At this time

Water Added — Meter- Current — Previous —

Odor None Insects None Visible Solids None Scum / Algae None

Aerators On

1. X 2. ____ 3. X

Heaters On

1. Off 2. off 3. off

Overflow Basin

Water Level None Overall Condition Clear

Note Any Animal Burrows, Erosion and Weeds Some

Inspected By Zach Reed Date 11/18/16

Operator Review [signature] Date 11/18/16

Comments

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 10.6 C

Dissolved Oxygen 3.75

PH 9.29

Time

West Area

Water Temperature ~~10~~ 10.1 C

Dissolved Oxygen 2.08

PH 9.27

Time

DO Target 5 to 18

PH Target 7 to 10

Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 4" Air Temp 59° Wind Direction W to E Weather Conditions clear

Note Any Animal Burrows, Erosion and Weeds None

Water Added Ø Meter- Current Ø Previous Ø

Odor None Insects None Visible Solids None Scum / Algae None

Aerators On

1. Y 2. Y 3. Y

Heaters On

1. N/A 2. 3.

Overflow Basin

Water Level Ø Overall Condition Good

Note Any Animal Burrows, Erosion and Weeds N/A

Inspected By Date 12/6/16

Operator Review (CPO) Date 12/6/16

Comments Clear and wet, pond looks good.

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 13.2

Dissolved Oxygen 3.28

PH 9.18

Time 15:25

West Area

Water Temperature 12.8

Dissolved Oxygen 2.71

PH 9.22

Time 15:35

DO Target 5 to 18

PH Target 7 to 10

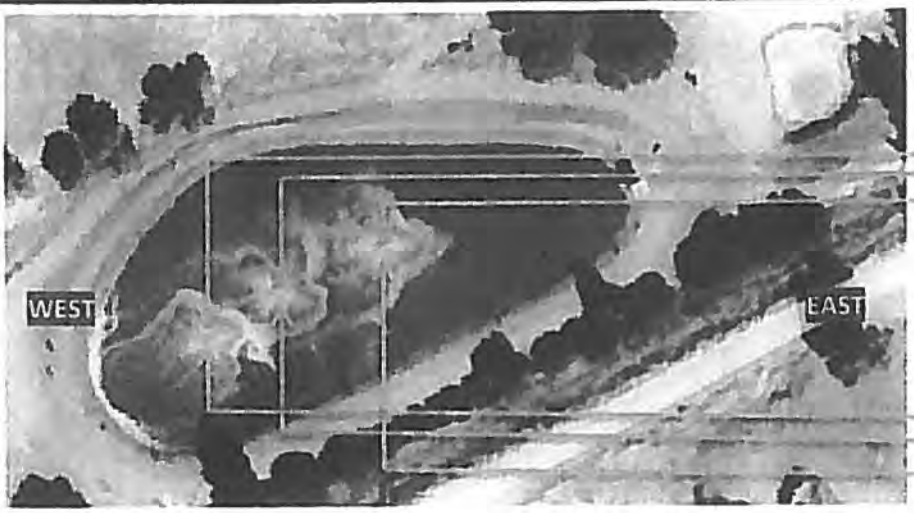
Pond Color-Circle 1 (Green) Green/Brown Brown/Green Brown

Water Level 5" Air Temp 60° Wind Direction None Weather Conditions Overcast

Note Any Animal Burrows, Erosion and Weeds Some

Water Added 12,700gal Meter- Current ——— Previous ———

Odor Slight Insects none Visible Solids Some Scum / Algae None



Aerators On

1. ✓ 2. ____ 3. ✓

~~Heaters On~~

1. ____ 2. ____ 3. ____

Overflow Basin

Water Level 1/2"

Overall Condition Good

Note Any Animal Burrows, Erosion and Weeds Some

Inspected By DR Date 12/15/16

Operator Review [signature] Date 12/15/16

Comments Water added from HH Flush

LLNL Site 300 Sewer / Waste Water Evaporation Pond

Weekly Inspection / Monitoring Report

East Area

Water Temperature 49.5

Dissolved Oxygen ~~—~~

PH 9.65

Time 14:20

West Area

Water Temperature 49°

Dissolved Oxygen ~~47~~

PH 8.37

Time 14:35

DO Target 5 to 18

PH Target 7 to 10

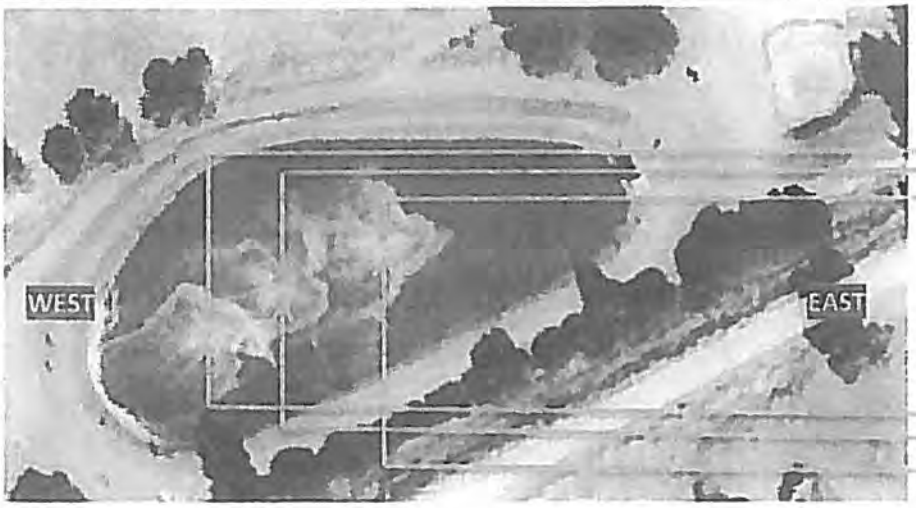
Pond Color-Circle 1 Green (Green/Brown) Brown/Green Brown

Water Level 5" Air Temp 51 Wind Direction E to W Weather Conditions Clear

Note Any Animal Burrows, Erosion and Weeds Some

Water Added 0 Meter- Current ~~—~~ Previous ~~—~~

Odor None Insects None Visible Solids None Scum / Algae None



Aerators On

1. ✓ 2. ✓ 3. ✓

~~Heaters On~~

~~1. 2. 3.~~

Overflow Basin

Water Level 1/8" Overall Condition Fair

Note Any Animal Burrows, Erosion and Weeds Some

Inspected By DR Date 12/21/16

Operator Review [signature] Date 12/21/16

Comments

All Ground Water Sampling Data

Target Sample Date: 07-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 07-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32074

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 11.17 (0.3 x 3)

DEPTH TO WATER(ft-bmp): 16.28 on 16-AUG-16 17.56 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.52 12.54 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1059 INITIAL FLOW RATE (Q=GPM): 2.0 @

TIME PUMP OFF: 1124 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	47 mV	OG	DTW
1104		10.3	1	7.45	21.9	1736	~~[illegible]~~	1	17.59
1109		20.6	2	7.41	22.2	1731	32	1	17.71
1114		30.9	3	7.45	22.3	1734	33	1	17.75
1116				7.44	22.2	1731	31	1	
1120				7.42	22.3	1730	31	1	

METER	SERIAL #	CALIBRATED
pH :	621740	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3CMP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 33.51 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 1340

SAMPLE ID (VERIFY): W-7ES / 3VES TIME COLLECTED: 1124

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-7ES	E300.0:NO3	1	250 ml P	
BB	CGSAFB	E300.0:NO3	1	250 ml P	
BB	W-75Y	E300.0:NO3	1	250 ml P	
BB	W-7ES	E624MOD	3	40 mL V	
BB	W-75Y	E624MOD	3	40 mL V	
BB	CGSAFB	E624MOD	3	40 mL V	
BB	CGSAFB	SM2510B	1	250 ml P	
BB	W-7ES	SM2510B	1	250 ml P	
BB	W-75Y	SM2510B	1	250 ml P	
BB	W-7ES	SM4500PH	1	250 ml P	
BB	W-75Y	SM4500PH	1	250 ml P	
BB	CGSAFB	SM4500PH	1	250 ml P	
~~AA~~	~~CGSAPB~~	~~SM9221~~	1	~~250 ml~~ P	
~~AA~~	~~W-75Y~~	SM9221	1	~~250 ml~~ P	
~~AA~~	~~W-7ES~~	SM9221	1	250 ml P	

Added 20 oz of CL

All Ground Water Sampling Data

Target Sample Date: 08-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 08-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32074-5

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 11.17

DEPTH TO WATER(ft-bmp): 16.28 on 16-AUG-16 17.56 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.52 17.54 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1100 INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: 1127 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1105		10.3	1	7.42	21.8	1731	512	1	17.60
1110		20.6	2	7.40	22.0	1725	481	1	17.70
1115		30.9	3	7.43	22.2	1730	322	1	17.77
1118				7.41	22.2	1727	270	1	
1123				7.40	22.1	1725	195	1	

METER SERIAL # CALIBRATED

pH : 6217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 33.51 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 1215

SAMPLE ID (VERIFY): W-7ES / 3VES TIME COLLECTED: 1127

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-7ES~~	~~E300.0+NO3~~	1	~~250 ml P~~	
~~BB~~	~~CGSAFB~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-75Y~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-7ES~~	~~E624MOD~~	3	~~40 mL V~~	
~~BB~~	~~W-75Y~~	~~E624MOD~~	3	40 mL V	
~~BB~~	~~CGSAFB~~	~~E624MOD~~	3	40 mL V	
~~BB~~	~~CGSAFB~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-7ES~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-75Y~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-7ES~~	~~SM4500PH~~	1	~~250 ml P~~	
~~BB~~	~~W-75Y~~	~~SM4500PH~~	1	~~250 ml P~~	
~~BB~~	~~CGSAFB~~	~~SM4500PH~~	1	~~250 ml P~~	
AA	CGSAFB	SM9221	1	250 ml P	
AA	W-75Y	SM9221	1	250 ml P	
AA	W-7ES	SM9221	1	250 ml P	

Evacuated all GL from well

All Ground Water Sampling Data

Target Sample Date: 15-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 15-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 11.10 11.4+30= 34.24

DEPTH TO WATER(ft-bmp): 16.37 on 24-MAY-16 16.28 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.43 13.82 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 0935 INITIAL FLOW RATE (Q=GPM): 2.5

TIME PUMP OFF: 1004 MEASURED BY: (FLOW METER) GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0940		11.4	1	7.98	24.1	1648	33	1	16.5
0945		22.8	2	7.93	23.8	1651	35	1	16.5
0950		34.2	3	7.92	23.8	1650	33	1	16.6
0952				7.90	23.7	1648	31	1	
0958				7.90	23.8	1648	32	1	

METER SERIAL # CALIBRATED

pH : 627417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 33.29 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75Y QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 0930

SAMPLE ID (VERIFY): W-7ES / 30ES TIME COLLECTED: 1004

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-75Y	S3ANIONS	1	250 ml P	
BB	W-7ES	S3ANIONS	1	250 ml P	
BB	CGSAFB	S3ANIONS	1	250 ml P	
BB	W-75Y	S3METALS	1	500ml P	
BB	W-7ES	S3METALS	1	500ml P	
BB	CGSAFB	S3METALS	1	500ml P	
BB	CGSAFB	S3METALS:FILTER	0	O	
BB	W-75Y	S3METALS:FILTER	0	O	
BB	W-7ES	S3METALS:FILTER	0	O	
BB	W-75Y	S3WETCHEM	2	500ml P	
BB	W-7ES	S3WETCHEM	2	500ml P	
BB	CGSAFB	S3WETCHEM	2	500ml P	
~~BB~~	~~W-7ES~~	~~SM9221~~	~~1~~	~~250 ml P~~	} No samples
~~BB~~	~~W-75Y~~	~~SM9221~~	~~1~~	~~250 ml P~~	
~~BB~~	~~CGSAFB~~	~~SM9221~~	~~1~~	~~250 ml P~~	

Added 02 of CL

All Ground Water Sampling Data

Target Sample Date: 16-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7ES AREA INFO: S300/GSA/CGSA

DATE: 16-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32038

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: NO3-11

SCREENED INTERVAL (ft-bmp): 18.30 - 28.30 PUMP INTAKE DEPTH: 26.30

CASING DEPTH(installed/sounded)(ft-bmp): 26.80 / 30.10 on 21-JAN-87 CASING VOL (Gal/Time): 11.10 11.4 x 3 = 34.2 Gal

DEPTH TO WATER(ft-bmp): 16.37 on 24-MAY-16 16.28 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.43 13.82 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1010 INITIAL FLOW RATE (Q=GPM): 2.5 Q

TIME PUMP OFF: 1037 MEASURED BY (FLOW METER/) GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1015		11.4	1	7.94	23.7	1702	549	1	16.06
1020		22.8	2	7.92	23.7	1655	508	1	16.08
~~1025~~ 1025		34.2	3	7.92	23.6	1648	436	1	16.09
1030				7.91	23.6	1652	382	1	
1032				7.90	23.7	1650	227	1	

METER SERIAL # CALIBRATED

pH : G217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 33.29 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: CGSAFB W-75Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 1400

SAMPLE ID (VERIFY): W-7ES / 3VES TIME COLLECTED: 1037

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-75Y~~	~~S3ANIONS~~	1	~~250 ml P~~	
~~BB~~	~~W-7ES~~	S3ANIONS	1	~~250 ml P~~	
~~BB~~	~~CGSAFB~~	~~S3ANIONS~~	1	~~250 ml P~~	
~~BB~~	~~W-75Y~~	~~S3METALS~~	1	~~500ml P~~	
~~BB~~	~~W-7ES~~	~~S3METALS~~	1	~~500ml P~~	
~~BB~~	~~CGSAFB~~	~~S3METALS~~	1	~~500ml P~~	
~~BB~~	~~CGSAFB~~	S3METALS:FILTER	0	~~0~~	
~~BB~~	~~W-75Y~~	S3METALS:FILTER	0	~~0~~	
~~BB~~	~~W-7ES~~	S3METALS:FILTER	0	~~0~~	
~~BB~~	~~W-75Y~~	S3WETCHEM	2	~~500ml P~~	
~~BB~~	~~W-7ES~~	S3WETCHEM	2	~~500ml P~~	
~~BB~~	~~CGSAFB~~	~~S3WETCHEM~~	2	~~500ml P~~	
AA	W-7ES	SM9221	1	250 ml P	
AA	W-75Y	SM9221	1	250 ml P	
AA	CGSAFB	SM9221	1	250 ml P	

Evacuated all CL from well

All Ground Water Sampling Data

Target Sample Date: 15-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7PS AREA INFO: S300/GSA/CGSA

DATE: 15-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: TCE-3/NO3-17

SCREENED INTERVAL (ft-bmp): 19.48 - 22.48 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 19.50 / 22.48 on 12-APR-94 CASING VOL (Gal/Time): 5.09 6.0 x 30 = 186

DEPTH TO WATER(ft-bmp): 16.02 on 24-MAY-16 15.12 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 6.16 7.36 CASING DIAMETER/TCASING HT(in): 4.5 / 2.68

TIME PUMP ON: 1027 INITIAL FLOW RATE (Q=GPM): .75 Q

TIME PUMP OFF: 1103 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1035		6	1	8.21	23.8	1604	-111	1	15.40
1043		12	2	7.31	25.2	1597	-114	1	15.43
1051		18	3	7.84	25.8	1598	-108	1	15.50
1053	.75			7.80	25.9	1593	-112	1	
1055	.75			7.81	25.9	1597	-115	1	

METER SERIAL # CALIBRATED

pH : 6217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: HCl

PURGE VOL/EXCESS H2O DEST: 15.27 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: QC LAB(S): QC SAMPLE TIME:

SAMPLE ID (VERIFY): W-7PS/3VES TIME COLLECTED: 1103

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-7PS	E245.1	1	1 L P	
BB	W-7PS	S3ANIONS	1	250 ml P	
BB	W-7PS	S3METALS	1	500ml P	
BB	W-7PS	S3METALS:FILTER	0	O	
BB	W-7PS	S3WETCHEM	2	500ml P	
~~AA~~	~~W-7PS~~	~~SM9221~~	1	~~250 ml P~~	

Shut down purge flow in order to take samples

Added 02 of CL

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 23.7900009 gal.
Revision: 10/28/2015

All Ground Water Sampling Data

Target Sample Date: 16-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7PS AREA INFO: S300/GSA/CGSA

DATE: 16-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32038

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: TCE-3/NO3-17

SCREENED INTERVAL (ft-bmp): 19.48 - 22.48 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 19.50 / 22.48 on 12-APR-94 CASING VOL (Gal/Time): 5.09 6.0 x 5cv = 18 gal

DEPTH TO WATER(ft-bmp): 16.02 on 24-MAY-16 15.18 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 6.16 7.3 CASING DIAMETER/TCASING HT(in): 4.5 / 2.68

TIME PUMP ON: 1108 INITIAL FLOW RATE (Q=GPM): .5Q

TIME PUMP OFF: 1158 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1120		6	1	7.93	23.9	1610	418	1	15.44
1132		12	2	7.82	25.3	1602	333	1	15.49
1147	.39	18	3	7.80	25.4	1600	297	1	15.53
1151	.34			7.79	25.7	1589	232	1	
1156				7.77	26.0	1585	192		

METER SERIAL # CALIBRATED

pH : YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT:

PURGE VOL/EXCESS H2O DEST: 15.27 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7PS / 3VES TIME COLLECTED: 1158

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-7PS~~	~~E245.1~~	~~1~~	~~1 L P~~	
~~BB~~	~~W-7PS~~	~~G3ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-7PS~~	~~G3METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-7PS~~	~~G3METALS;FILTER~~	~~0~~	~~0~~	
~~BB~~	~~W-7PS~~	~~G3WETCHEM~~	~~2~~	~~500ml P~~	
AA	W-7PS	SM9221	1	250 ml P	

Evacuated all GC from well

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 23.7900009 gal.
Revision: 10/28/2015

All Ground Water Sampling Data

Target Sample Date: 07-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-7PS AREA INFO: S300/GSA/CGSA

DATE: 07-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32074

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: TCE-3/NO3-17

SCREENED INTERVAL (ft-bmp): 19.48 - 22.48 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 19.50 / 22.48 on 12-APR-94 CASING VOL (Gal/Time): 5.78 3.7 x 3 = 11.1 Gal

DEPTH TO WATER(ft-bmp): 15.18 on 16-AUG-16 17.91 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 7.00 4.57 CASING DIAMETER/TCASING HT(in): 4.5 / 2.68

TIME PUMP ON: 1149 INITIAL FLOW RATE (Q=GPM): .5 Q

TIME PUMP OFF: MEASURED BY: (FLOW METER)/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
		~~3.7~~	X						

METER SERIAL # CALIBRATED

pH : 6217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3CMP

SAMPLE PRESERVATION/AMT of REAGENT:

PURGE VOL/EXCESS H2O DEST: 17.35 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7PS / 3x5 TIME COLLECTED:

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-7PS	E300.0:NO3	1	250 ml P	
TS	W-7PS	E624MOD	3	40 mL V	
BB	W-7PS	SM2510B	1	250 ml P	
BB	W-7PS	SM4500PH	1	250 ml P	
AA	W-7PS	SM9221	1	250 ml P	

Insuff H2O to collect sample. Probe sounds at 17.91, and probe hits top of pump @ 18.3'. Turned pump on and only 1.2 Gal flowed before drying out.

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 23.7900009 gal.
Revision: 10/28/2015

All Ground Water Sampling Data

Target Sample Date: 15-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 15-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 14.47 14.7 X2 = 44.1

DEPTH TO WATER(ft-bmp): 11.49 on 31-MAY-16 10.82 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 17.51 17.75 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1319 INITIAL FLOW RATE (Q=GPM): 3.0

TIME PUMP OFF: 1344 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1324		14.7	1	8.02	22.9	1667	-5	1	12.62
1329		29.4	2	8.01	22.9	1670	12	1	13.12
1334		44.1	3	8.01	22.8	1673	18	1	13.89
1336				7.99	22.8	1673	22	1	
1338				7.99	22.8	1671	23	1	

METER SERIAL # CALIBRATED

pH : 6217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT:

PURGE VOL/EXCESS H2O DEST: 43.40 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W35A-04/3VES TIME COLLECTED: 1344

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-35A-04	S3ANIONS	1	250 ml P	
BB	W-35A-04	S3METALS	1	500ml P	
BB	W-35A-04	S3METALS:FILTER	0	O	
BB	W-35A-04	S3WETCHEM	2	500ml P	
~~AA~~	~~W-35A-04~~	~~SM9221~~	~~1~~	~~250 ml~~ P	No Sample

AA Added on of CL

All Ground Water Sampling Data

Target Sample Date: 16-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 16-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037 38

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 14.47 14.743 = 44.1

DEPTH TO WATER(ft-bmp): 11.49 on 31-MAY-16 1080 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 17.51 17.77 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1402 INITIAL FLOW RATE (Q=GPM): 3.0Q

TIME PUMP OFF: 1425 MEASURED BY: (FLOW METER) GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1407		14.7	1	8.12	22.8	1677	632	1	12.65
1412		29.4	2	8.07	22.8	1673	521	1	13.40
1417		44.1	3	8.06	22.8	1673	488	1	14.02
1419				8.06	22.7	1670	412	1	
1421				8.04	22.7	1671	302	1	

METER SERIAL # CALIBRATED

pH : 6247417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 43.40 / None

TF LOCATION: Collect

QC SAMPLE ID: ~ QC LAB(S): ~ QC SAMPLE TIME: ~

SAMPLE ID (VERIFY): W-35A-04/3VES TIME COLLECTED: 1425

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-35A-04~~	~~S3ANIONS~~	1	~~250 ml P~~	
BB	~~W-35A-04~~	~~S3METALS~~	1	~~500ml P~~	
~~BB~~	~~W-35A-04~~	~~S3METALS:FILTER~~	0	~~0~~	
~~BB~~	~~W-35A-04~~	~~S3WETCHEM~~	2	~~500ml P~~	
AA	W-35A-04	SM9221	1	250 ml P	

Evacuated all GL from Well

Revision: 10/28/2015

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All Ground Water Sampling Data

Target Sample Date: 08-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 08-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32075

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 15.04 15.0x3v = 39

DEPTH TO WATER(ft-bmp): 10.80 on 16-AUG-16 12.78 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 18.20 15.79 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 0852 INITIAL FLOW RATE (Q=GPM): 2.0

TIME PUMP OFF: 0924 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0859		13	1	8.08	20.4	1748	149	1	12.91
0905		26	2	7.69	20.9	1743	104	1	12.96
0912		39	3	7.66	21.0	1721	110	1	13.00
0914				7.64	21.2	1729	112	1	
0916				7.61	21.2	1733	110	1	

METER SERIAL # CALIBRATED

pH : G217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 45.11 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-35A-04/ 3VES TIME COLLECTED: 0924

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
GE	W-35A-04	AS:FILTER	0	O	
GE	W-35A-04	AS:UISO	2	1L P	
BB	W-35A-04	E200.7:FILTER	0	O	
BB	W-35A-04	E200.7:K	1	500 mL P	
BB	W-35A-04	E300.0:NO3	1	250 ml P	
BB	W-35A-04	E300.0:PERC	1	250 ml P	1/3-1/2 headspace, & agitate
BB	W-35A-04	E524.2MOD	6	40 mL V	
TS	W-35A-04	E624MOD	3-9	40 mL V	
BB	W-35A-04	E8330:R+B	3	1L G	
GE	W-35A-04	E900	1	1L P	
GE	W-35A-04	E900:FILTER	0	O	
GE	W-35A-04	E906	1	250 ml GA	
BB	W-35A-04	SM2510B	1	250 ml P	
BB	W-35A-04	SM4500PH	1	250 ml P	
AA	W-35A-04	SM9221	1	250 ml P	
BB	W-35A-04	WGMGMET3	1	1L P	
BB	W-35A-04	WGMGMET3:FILTER	0	O	

All Ground Water Sampling Data

Target Sample Date: 09-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-35A-04 AREA INFO: S300/GSA/CGSA

DATE: 09-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32075

PURGE METHOD/SAMPLE METHOD: Grunfos / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 19.30 - 29.30 PUMP INTAKE DEPTH: 26.28

CASING DEPTH(installed/sounded)(ft-bmp): 29.00 / 28.57 on 14-DEC-09 CASING VOL (Gal/Time): 15.04

DEPTH TO WATER(ft-bmp): 10.80 on 16-AUG-16 17.74 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 18.20 15.83 CASING DIAMETER/TCASING HT(in): 4.5 / 0.00

TIME PUMP ON: 1024 INITIAL FLOW RATE (Q=GPM): 2.0

TIME PUMP OFF: 1115 MEASURED BY (FLOW METER) GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1031		13	1	8.00	20.5	1740	727	1	12.90
1038		26	2	8.01	20.6	1743	671	1	12.98
1045		39	3	7.72	20.8	1740	521	1	13.06
1055				7.70	20.8	1737	482	1	
1105				7.68	20.8	1734	301	1	
1110				7.66	20.9	1734	265	1	

METER SERIAL # CALIBRATED

pH : G717417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3CMP 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 45.11 / None

TF LOCATION: Collect

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-35A-04 / 3025 TIME COLLECTED: 1115

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
GE	~~W-35A-04~~	~~AG:FILTER~~	0	~~O~~	
GE	~~W-35A-04~~	~~AG:UISO~~	2	~~1L P~~	
BB	~~W-35A-04~~	~~E200.7:FILTER~~	0	~~O~~	
BB	W-35A-04	E200.7:K	1	~~500 mL~~ P	
BB	~~W-35A-04~~	E300.0:NO3	1	~~250 ml~~ P	
BB	W-35A-04	E300.0:PERC	1	~~250 ml~~ P	1/3-1/2 headspace, & agitate
BB	~~W-35A-04~~	~~E524.2MOD~~	6	~~40 mL~~ V	
TS	W-35A-04	~~E624~~MOD	3	~~40 mL~~ V	
BB	~~W-35A-04~~	E833U:R+H	3	~~1L G~~	
GE	~~W-35A-04~~	~~E900~~	1	~~1L P~~	
GE	W-35A-04	E900:FILTER	0	O	
GE	~~W-35A-04~~	~~E906~~	1	~~250 ml GA~~	
BB	~~W-35A-04~~	~~SM2510B~~	1	~~250 ml~~ P	
BB	~~W-35A-04~~	~~SM4500PH~~	1	~~250 ml P~~	
AA	W-35A-04	SM9221	1	250 ml P	
BB	~~W-35A-04~~	~~WGMGMET3~~	1	~~1L P~~	
BB	~~W-35A-04~~	~~WGMGMET3:FILTER~~	0	~~O~~	

Evacuated all CL from well

All Ground Water Sampling Data

Target Sample Date: 10-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-26R-01 AREA INFO: S300/GSA/EGSA

DATE: 10-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32035

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 11.55 0.4x5.0 = 31.26

DEPTH TO WATER(ft-bmp): 18.49 on 24-MAY-16 17.37 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.98 12.63 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 1020 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1058 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1030		10.4	1	7.95	20.2	1369	83	1	18,44
1040		20.8	2	7.85	22.1	1395	85	1	19,69
1050		31.2	3	7.83	22.1	1392	86	1	20,32
1052				7.82	22.0	1394	88	1	
1054				7.82	22.0	1390	89	1	

METER	SERIAL #	CALIBRATED
pH :	621747	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 34.65 / TF-834

TF LOCATION: 834

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-01/3VES TIME COLLECTED: 1058

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-26R-01	S3ANIONS	1	250 ml P	
BB	W-26R-01	S3METALS	1	500ml P	
BB	W-26R-01	S3METALS:FILTER	0	O	
BB	W-26R-01	S3WETCHEM	2	500ml P	
~~AA~~	~~W-26R-01~~	~~SM9221~~	~~1~~	~~250 ml P~~	

Added 02 of CL

All Ground Water Sampling Data

Target Sample Date: 11-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-26R-01 AREA INFO: SJ00/GSA/EGSA

DATE: 11-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32035 6

PURGE METHOD/SAMPLE METHOD: GP / JVES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 11.55

DEPTH TO WATER(ft-bmp): 18.49 on 24-MAY-16 17.37 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.98 12.63 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 1044 INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: 1127 MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1054		10.4	1	7.83	20.4	1357	712	1	18.49
1104		20.8	2	7.82	20.9	1363	689	1	19.75
1114		31.2	3	7.82	21.0	1359	543	1	20.44
1116				7.81	21.0	1362	477	1	
1118				7.81	20.9	1362	422	1	
1123				7.80	21.1	1365	361		

METER SERIAL # CALIBRATED

pH : 6717417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 34.65 / TF-834

TF LOCATION: 834

QC SAMPLE ID: - QC LAB(S): - QC SAMPLE TIME: -

SAMPLE ID (VERIFY): W-26R-01 / 3023 TIME COLLECTED: 1127

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-26R-01~~	~~SJANIONS~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-01~~	~~SJMETALS~~	1	~~500ml P~~	
~~BB~~	~~W-26R-01~~	~~SJMETALS;FILTER~~	0	~~D~~	
~~BB~~	~~W-26R-01~~	~~SJWETCHEM~~	2	~~500ml P~~	
AA	W-26R-01	SM9221	1	250 ml P	

No Sample

Evacuated all CC

All Ground Water Sampling Data

Target Sample Date: 02-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-01 AREA INFO: 5300/GSA/EGSA

DATE: 02-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32072

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 12.48 8.8 x 3.0 = 26.4

DEPTH TO WATER(ft-bmp): 17.37 on 11-AUG-16 19.38 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.10 10.62 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 0918 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 0953 MEASURED BY: (FLOW METER) / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0927		8.8	1	7.79	21.1	1398	143	1	21.40
0935		17.6	2	7.76	21.8	1396	136	1	21.50
0944		26.4	3	7.76	21.9	1388	137	1	21.62
0946				7.76	21.9	1382	135	1	
0948								1	

METER SERIAL # CALIBRATED

pH : 6717417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: HN

PURGE VOL/EXCESS H2O DEST: 37.43 / TF-834

TF LOCATION: 834

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-01 / 3VES TIME COLLECTED: 0953

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-26R-01	E300.0:NO3	1	250 ml P	
BB	W-26R-01	SM2510B	1	250 ml P	
BB	W-26R-01	SM4500PH	1	250 ml P	
~~AA~~	~~W-26R-01~~	~~SM9221~~	1	~~250 ml P~~	

Added 02 of CL

All Ground Water Sampling Data

Target Sample Date: 03-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-01 AREA INFO: S300/GSA/EGSA

DATE: 03-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32072

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: *TCE-15/NO3-40

SCREENED INTERVAL (ft-bmp): 22.72 - 27.72 PUMP INTAKE DEPTH: 29.00

CASING DEPTH(installed/sounded)(ft-bmp): 29.80 / 30.00 on 16-NOV-88 CASING VOL (Gal/Time): 12.48 8.8×3=26.4

DEPTH TO WATER(ft-bmp): 17.37 on 11-AUG-16 19.38 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.10 10.62 CASING DIAMETER/TCASING HT(in): 4.5 / 2.67

TIME PUMP ON: 0855 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 0940 MEASURED BY (FLOW METER)/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0904		8.8	1	7.69	20.3	1431	757	1	21.42
0913		17.6	2	7.68	20.7	1414	720	1	21.49
0922		26.4	3	7.65	20.8	1410	640	1	21.65
0924				7.63	20.9	1413	480	1	
0930				7.60	20.9	1410	327	1	
0936				7.61	20.9	1411	318		

METER SERIAL # CALIBRATED

pH : 621417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 37.43 / TF-834

TF LOCATION: 834

QC SAMPLE ID: - QC LAB(S): - QC SAMPLE TIME: -

SAMPLE ID (VERIFY): W-26R-01/3VES TIME COLLECTED: 0940

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-26R-01~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	W-26R-01	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	W-26R-01	~~SM4500PH~~	1	~~250 ml P~~	
AA	W-26R-01	SM9221	1	250 ml P	

Evacuated all CL from well

All Ground Water Sampling Data

Target Sample Date: 10-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 10-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32035

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 10.98 17.1 x 3 = 36.3

DEPTH TO WATER(ft-bmp): 15.69 on 24-MAY-16 14.65 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.29 14.63 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1126 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1217 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1138		12.1	1	7.76	22.1	1536	83	1	14.68
1150		24.2	2	7.73	22.1	1533	33	1	14.72
1202		36.3	3	7.74	22.1	1529	29	1	14.77
1204				7.74	22.0	1527	30	1	
1206				7.72	22.0	1530	31	1	

METER	SERIAL #	CALIBRATED
pH :	6217417	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 32.94 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: - QC LAB(S): - QC SAMPLE TIME: -

SAMPLE ID (VERIFY): W-26R-11 | 3VES TIME COLLECTED: 1212

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-26R-11	S3ANIONS	1	250 ml P	
BB	W-26R-11	S3METALS	1	500ml P	
BB	W-26R-11	S3METALS:FILTER	0	0	
BB	W-26R-11	S3WETCHEM	2	500ml P	
~~AA~~	~~W-26R-11~~	~~SM9221~~	~~1~~	~~250 ml P~~	

Added 02 of CL

All Ground Water Sampling Data

Target Sample Date: 11-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 11-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32036-6

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 10.98

DEPTH TO WATER(ft-bmp): 15.69 on 24-MAY-16 14.65 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 13.29 14.63 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1205 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1253 MEASURED BY: (FLOW METER) GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1217		16.1	1	7.72	22.2	1544	579	1	14.69
1229		24.2	2	7.71	22.2	1522	553	1	14.83
1241		36.3	3	7.71	22.1	1518	477	1	14.87
1246				7.72	22.1	1514	420	1	
1251				7.73	22.1	1521	366	1	

METER SERIAL # CALIBRATED

pH : 62A417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/ADT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 32.94 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-11 / 3VES TIME COLLECTED: 1253

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-26R-11~~	~~S3ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-26R-11~~	~~S3METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-26R-11~~	~~S3METALSFILTER~~	~~0~~	~~0~~	
~~BB~~	~~W-26R-11~~	~~S3WETCHEM~~	~~2~~	~~500ml P~~	
AA	W-26R-11	SM9221	1	250 ml P	

Evaluated all CC

All Ground Water Sampling Data

Target Sample Date: 02-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 02-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32072

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 11.84 /0.434 = 27.2

DEPTH TO WATER(ft-bmp): 14.65 on 11-AUG-16 16.69 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 14.33 12.59 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1019 INITIAL FLOW RATE (Q=GPM): 1.0

TIME PUMP OFF: 1119 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1030		10.4	1	7.73	22.3	1594	138	1	16.70
1041		20.8	2	7.70	22.3	1599	128	1	16.72
1052		31.2	3	7.73	22.1	1591	118	1	16.72
1054									
1056									

METER SERIAL # CALIBRATED

pH : G717417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3GIV 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: AP

PURGE VOL/EXCESS H2O DEST: 35.52 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: W-26R-49Y EGSAFB QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1152

SAMPLE ID (VERIFY): W-26R-11 / 3VES TIME COLLECTED: 1119

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	EGSAFB	E300.0:NO3	1	250 ml P	
BB	W-26R-49Y	E300.0:NO3	1	250 ml P	
BB	W-26R-11	E300.0:NO3	1	250 ml P	
BB	W-26R-49Y	E624MOD	3	40 mL V	
BB	EGSAFB	E624MOD	3	40 mL V	
BB	W-26R-11	E624MOD	3	40 mL V	
BB	W-26R-49Y	SM2510B	1	250 ml P	
BB	W-26R-11	SM2510B	1	250 ml P	
BB	EGSAFB	SM2510B	1	250 ml P	
BB	W-26R-49Y	SM4500PH	1	250 ml P	
BB	EGSAFB	SM4500PH	1	250 ml P	
BB	W-26R-11	SM4500PH	1	250 ml P	
AA	EGSAFB	SM9221	1	250 ml P	
AA	W-26R-11	SM9221	1	250 ml P	
AA	W-26R-49Y	SM9221	1	250 ml P	

All Ground Water Sampling Data

Target Sample Date: 03-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-11 AREA INFO: S300/GSA/EGSA

DATE: 03-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32072

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: TCE-1.6/NO3-14

SCREENED INTERVAL (ft-bmp): 18.08 - 28.08 PUMP INTAKE DEPTH: 31.08

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 29.28 on 17-MAR-92 CASING VOL (Gal/Time): 11.84 10.4x3=31.2 Gal

DEPTH TO WATER(ft-bmp): 14.65 on 11-AUG-16 16.70 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 14.33 12.58 CASING DIAMETER/TCASING HT(in): 4.5 / 1.98

TIME PUMP ON: 1000 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: 1044 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1010		10.4	1	7.69	22.2	1595	731	1	16.72
1020		20.8	2	7.71	22.3	1598	725	1	16.74
1030		31.2	3	7.71	22.3	1595	424	1	16.75
1035				7.72	22.4	1599	421		
1040				7.72	22.3	1618	370		
1045				7.71	22.3	1610	224		

METER SERIAL # CALIBRATED

pH : G217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3GIV 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 35.52 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: EGSAFB W-26R-49Y QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 1115

SAMPLE ID (VERIFY): W-26R-11 / 3VES TIME COLLECTED: 1044

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~EGSAFB~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-49Y~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-11~~	~~E300.0+NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-49Y~~	~~B624MOD~~	3	~~40 mL V~~	
~~BB~~	~~EGSAFB~~	~~B624MOD~~	3	~~40 mL V~~	
~~BB~~	~~W-26R-11~~	~~B624MOD~~	3	~~40 mL V~~	
~~BB~~	~~W-26R-49Y~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-11~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~EGSAFB~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-49Y~~	~~SM4500PH~~	1	~~250 ml P~~	
~~BB~~	~~EGSAFB~~	~~SM4500PH~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-11~~	~~SM4500PH~~	1	~~250 ml P~~	
AA	EGSAFB	SM9221	1	250 ml P	
AA	W-26R-11	SM9221	1	250 ml P	
AA	W-26R-49Y	SM9221	1	250 ml P	

NO analytes

Evacuated all cl from well

All Ground Water Sampling Data

Target Sample Date: 31-OCT-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-05 AREA INFO: S300/GSA/EGSA

DATE: 31-Oct-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32070

PURGE METHOD/SAMPLE METHOD: PB / 90BA CONTAMINANT PRESENT: TCE-3.3/NO3-53

SCREENED INTERVAL (ft-bmp): 22.05 - 27.05 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 25.50 / 26.68 on 10-FEB-91 CASING VOL (Gal/Time): 4.65 3.3 x 50% = 2.97 Gal

DEPTH TO WATER(ft-bmp): 21.37 on 18-AUG-16 22.68 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 5.63 4.00 CASING DIAMETER/TCASING HT(in): 4.5 / 1.50

TIME PUMP ON: — INITIAL FLOW RATE (Q=GPM): —

TIME PUMP OFF: — MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1341		3.00	90%	8.05	18.7	1182	134	1	25.12

METER SERIAL # CALIBRATED

pH : 6217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 4.19 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): GA-26R-05 / 90BA TIME COLLECTED: 1347

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-26R-05	E300.0:NO3	1	250 ml P	
BB	W-26R-05	SM2510B	1	250 ml P	
BB	W-26R-05	SM4500PH	1	250 ml P	
~~AA~~	~~W-26R-05~~	~~SM9221~~	~~1~~	~~250 ml P~~	

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 10 gal.
Revision: 10/28/2015

All Ground Water Sampling Data

Target Sample Date: 03-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-26R-05 AREA INFO: S300/GSA/EGSA

DATE: 03-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32070

PURGE METHOD/SAMPLE METHOD: PB / 90BA CONTAMINANT PRESENT: TCE-3.3/NO3-53

SCREENED INTERVAL (ft-bmp): 22.05 - 27.05 INTAKE DEPTH: 0.00

CASING DEPTH(installed/sounded)(ft-bmp): 25.50 / 26.68 on 10-FEB-91 CASING VOL (Gal/Time): 4.65 4.9 ~~5.25~~ x 90% = ~~2.9~~ 4.4

DEPTH TO WATER(ft-bmp): 21.37 on 18-AUG-16 20.74 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 5.63 5.94 CASING DIAMETER/TCASING HT(in): 4.5 / 1.50

TIME PUMP ON: — INITIAL FLOW RATE (Q=GPM): -

TIME PUMP OFF: — MEASURED BY: FLOW METER/ GRAD CYL (circled) / BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1255		4.4 ~~2.9~~ Gal	90%	7.67	16.2	1187	154	1	22.72

METER SERIAL # CALIBRATED
pH : 6717417 YES/NO
SC : YES/NO
mV : YES/NO
H2O: YES/NO

SAMPLER/EMPLOYER: silva90
PROJECT: 3EMG
SAMPLE PRESERVATION/AMT of REAGENT: n/A
PURGE VOL/EXCESS H2O DEST: 4.19 / S300-DRUM
TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-26R-05 / 90BA TIME COLLECTED: 1300

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-26R-05~~	~~E300.0:NO3~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-05~~	~~SM2510B~~	1	~~250 ml P~~	
~~BB~~	~~W-26R-05~~	~~SM4500PH~~	1	~~250 ml P~~	
AA	W-26R-05	SM9221	1	250 ml P	

Evacuated all CL from Well after Purging for the week

NOTE:
Purge rate/time: N/A since est_sus_flow = 0
Purge Volume: 10 gal.
Revision: 10/28/2015

All Ground Water Sampling Data

Target Sample Date: 15-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 15-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 12.39 13.4 x 3 = 40.2 Gal

DEPTH TO WATER(ft-bmp): 15.00 on 24-MAY-16 14.11 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.00 16.19 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1127 INITIAL FLOW RATE (Q=GPM): 3.0 Q

TIME PUMP OFF: 1150 MEASURED BY: FLOW METER / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1131		13.4	1	7.89	20.7	1658	12	1	14.12
1135		26.8	2	7.97	20.8	1631	14	1	14.15
1139		40.2	3	7.84	20.6	1597	18	1	14.18
1141				7.81	20.5	1588	19	1	
1143				7.80	20.5	1592	22	1	

METER SERIAL # CALIBRATED

pH : 617417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 37.18 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: W-26R-42Y EGSAFB QC LAB(S): BCLABS-BAK, ALPHAANAL QC SAMPLE TIME: 1225

SAMPLE ID (VERIFY): W-7DS / 3V45 TIME COLLECTED: 1150

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-7DS	S3ANIONS	1	250 ml P	
BB	EGSAFB	S3ANIONS	1	250 ml P	
BB	W-26R-42Y	S3ANIONS	1	250 ml P	
BB	EGSAFB	S3METALS	1	500ml P	
BB	W-7DS	S3METALS	1	500ml P	
BB	W-26R-42Y	S3METALS	1	500ml P	
BB	W-26R-42Y	S3METALS:FILTER	0	O	
BB	EGSAFB	S3METALS:FILTER	0	O	
BB	W-7DS	S3METALS:FILTER	0	O	
BB	W-7DS	S3WETCHEM	2	500ml P	
BB	EGSAFB	S3WETCHEM	2	500ml P	
BB	W-26R-42Y	S3WETCHEM	2	500ml P	
~~AA~~	~~W-7DS~~	~~SM9221~~	~~1~~	~~250 ml P~~	NO Samples
~~AA~~	~~EGSAFB~~	~~SM9221~~	~~1~~	~~250 ml P~~	
~~AA~~	~~W-26R-42Y~~	~~SM9221~~	~~1~~	~~250 ml P~~	

All Ground Water Sampling Data

Target Sample Date: 16-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 16-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32037~~8~~

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 12.39 13.4x3= 40.2 gal

DEPTH TO WATER(ft-bmp): 15.00 on 24-MAY-16 14.11 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.00 16.19 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1219 INITIAL FLOW RATE (Q=GPM): 3.0

TIME PUMP OFF: 1240 MEASURED BY: (FLOW METER) / GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1223		13.4	1	7.88	20.6	1677	488	1	14.19
1227		26.8	2	7.85	20.5	1670	421	1	14.22
1231		40.2	3	7.85	20.5	1668	401	1	14.23
1233				7.82	20.5	1666	377	1	
1235				7.80	20.4	1660	310	1	

METER SERIAL # CALIBRATED

pH : G113417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 37.18 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: EGSAFB W-26R-42Y QC LAB(S): ALPHAANAL, BCLABS-BAK QC SAMPLE TIME: 1310

SAMPLE ID (VERIFY): W-7DS/305 TIME COLLECTED: 1240

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-7DS~~	~~S3ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~EGSAFB~~	~~S3ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-26R-42Y~~	~~S3ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~EGSAFB~~	~~S3METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-7DS~~	~~S3METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-26R-42Y~~	~~S3METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-26R-42Y~~	~~S3METALS:FILTER~~	~~0~~	~~0~~	
~~BB~~	~~EGSAFB~~	~~S3METALS:FILTER~~	~~0~~	~~0~~	
~~BB~~	~~W-7DS~~	~~S3METALS:FILTER~~	~~0~~	~~0~~	
~~BB~~	~~W-7DS~~	~~S3WETCHEM~~	~~2~~	~~500ml P~~	
~~BB~~	~~EGSAFB~~	~~S3WETCHEM~~	~~2~~	~~500ml P~~	
~~BB~~	~~W-26R-42Y~~	~~S3WETCHEM~~	~~2~~	~~500ml P~~	
AA	W-7DS	SM9221	1	250 ml P	
AA	EGSAFB	SM9221	1	250 ml P	
AA	W-26R-42Y	SM9221	1	250 ml P	

Evacuated all CC from well

All Ground Water Sampling Data

Target Sample Date: 02-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-7DS AREA INFO: 5300/GSA/EGSA

DATE: 02-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32072

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 13.13 11.9 x 3 = 35.7

DEPTH TO WATER(ft-bmp): 14.11 on 16-AUG-16 15.92 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.89 14.38 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1400 INITIAL FLOW RATE (Q=GPM): 3.0 Q

TIME PUMP OFF: 1423 MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1404		~~5~~ 12	1	7.64	21.4	1697	115	1	16.01
1408		24	2	7.53	21.5	1693	99	1	16.03
1412		36	3	7.51	21.5	1695	98	1	16.04
1416				7.50	21.4	1689	95	1	
1418				7.50	21.5	1688	91	1	

METER SERIAL # CALIBRATED

pH : 621417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3CMP

SAMPLE PRESERVATION/AMT of REAGENT: N4

PURGE VOL/EXCESS H2O DEST: 39.38 / 5300-DRUM

TF LOCATION: 5300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7DS / 3VES TIME COLLECTED: 1423

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-7DS	E300.0:NO3	1	250 ml P	
BB	W-7DS	E624MOD	3	40 mL V	
BB	W-7DS	SM2510B	1	250 ml P	
BB	W-7DS	SM4500PH	1	250 ml P	
AA	W-7DS	SM9221	1	250 ml P	

All Ground Water Sampling Data

Target Sample Date: 03-NOV-2016 Month: Norm Qtr: 4 Norm Year: 2016

WELL ID: W-7DS AREA INFO: S300/GSA/EGSA

DATE: 03-Nov-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32073

PURGE METHOD/SAMPLE METHOD: GP / 3VES CONTAMINANT PRESENT: ND

SCREENED INTERVAL (ft-bmp): 18.80 - 28.80 PUMP INTAKE DEPTH: 27.80

CASING DEPTH(installed/sounded)(ft-bmp): 27.00 / 30.30 on 14-JAN-87 CASING VOL (Gal/Time): 13.13

DEPTH TO WATER(ft-bmp): 14.11 on 16-AUG-16 15.94 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 15.89 CASING DIAMETER/TCASING HT(in): 4.5 / 3.00

TIME PUMP ON: 1102 INITIAL FLOW RATE (Q=GPM): 3.0 Q

TIME PUMP OFF: 1122 MEASURED BY: (FLOW METER)/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1106		12	1	7.63	21.3	1685	412	1	16.03
1110		24	2	7.60	21.2	1680	377	1	16.03
1114		36	3	7.59	21.2	1677	321	1	16.05
1116				7.59	21.3	1679	287	1	
1118				7.55	21.2	1681	224	1	

METER SERIAL # CALIBRATED

pH : G217417 YES/NO

SC : YES/NO

mV : YES/NO

H2O: YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3EMG 3CMP

SAMPLE PRESERVATION/AMT of REAGENT: N4

PURGE VOL/EXCESS H2O DEST: 39.38 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-7DS / 3VES TIME COLLECTED: 1122

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-7DS~~	~~E300.0:NO3~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-7DS~~	~~E624MOD~~	~~3~~	~~40 mL V~~	
~~BB~~	~~W-7DS~~	~~SM2510B~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-7DS~~	~~SM4500PH~~	~~1~~	~~250 ml P~~	
AA	W-7DS	SM9221	1	250 ml P	

Evacuated all CC

All Ground Water Sampling Data

Target Sample Date: 31-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-25N-22 AREA INFO: S300/GSA/EGSA

DATE: 31-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32046

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VES CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 6.85 8x3cu=24G

DEPTH TO WATER(ft-bmp): 22.71 on 26-JUL-16 22.84 VOLUME FACTOR: 0.826

WATER IN CASING (ft): 8.29 9.66 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 0934 INITIAL FLOW RATE (Q=GPM): .70 Q

TIME PUMP OFF: MEASURED BY: FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
0946		8	1	6.09	22.1	1605	160	1	24.33
0958		16	2	7.41	22.4	1583	71	1	24.72
1010		24	3	7.40	22.5	1587	74	1	25.10
1012				7.43	22.6	1591	70	1	
1014				7.44	22.5	1588	70		

METER	SERIAL #	CALIBRATED
pH :	G217417	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: NA

PURGE VOL/EXCESS H2O DEST: 20-55 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: — QC LAB(S): — QC SAMPLE TIME: —

SAMPLE ID (VERIFY): W-25N-22 / 3VES TIME COLLECTED: 1020

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-25N-22	S3ANIONS	1	250 ml P	
BB	W-25N-22	S3METALS	1	500ml P	
BB	W-25N-22	S3METALS:FILTER	0	O	
BB	W-25N-22	S3WETCHEM	2	500ml P	
~~AA~~	~~W-25N-22~~	~~SM9221~~	1	~~250 ml P~~	

Added 02 of CL

All Ground Water Sampling Data

Target Sample Date: 01-SEP-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-25N-22 AREA INFO: S300/GSA/EGSA

DATE: 01-Sep-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32046

PURGE METHOD/SAMPLE METHOD: Grundfos / 3VES CONTAMINANT PRESENT: TCE-1.2

SCREENED INTERVAL (ft-bmp): 20.80 - 30.80 PUMP INTAKE DEPTH: 31.05

CASING DEPTH(installed/sounded)(ft-bmp): 28.50 / 32.50 on 09-JAN-12 CASING VOL (Gal/Time): 6.85

DEPTH TO WATER(ft-bmp): 22.71 on 26-JUL-16 22.84 VOLUME FACTOR: 0.826 8x3CV=24g

WATER IN CASING (ft): 8.29 9.66 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: 0952 INITIAL FLOW RATE (Q=GPM): 1.0 Q

TIME PUMP OFF: MEASURED BY (FLOW METER)/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW
1003		8	1	7.72	22.3	1622	731	1	22.81
1012		16	2	7.58	22.3	1577	575	1	22.89
1020		24	3	7.52	22.0	1586	499	1	22.93
1043				7.58	21.9	1628	313		

METER	SERIAL #	CALIBRATED
pH :	6217417	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 20.55 / S300-DRUM

TF LOCATION: S300

QC SAMPLE ID: / QC LAB(S): / QC SAMPLE TIME: /

SAMPLE ID (VERIFY): W-25N-22/3VES TIME COLLECTED: 1046

LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
~~BB~~	~~W-25N-22~~	~~83ANIONS~~	~~1~~	~~250 ml P~~	
~~BB~~	~~W-25N-22~~	~~83METALS~~	~~1~~	~~500ml P~~	
~~BB~~	~~W-25N-22~~	~~83METALS-FILTER~~	~~0~~	~~0~~	
~~BB~~	~~W-25N-22~~	~~83WETCHEM~~	~~2~~	500ml P	
AA	W-25N-22	SM9221	1	250 ml P	

All Ground Water Sampling Data

Target Sample Date: 31-AUG-2016 Month: Norm Qtr: 3 Norm Year: 2016

WELL ID: W-25N-23 AREA INFO: S300/GSA/EGSA

DATE: 31-Aug-2016 LOG BOOK (DOCUMENT CONTROL) #: AA32046

PURGE METHOD/SAMPLE METHOD: GF / 3VES CONTAMINANT PRESENT: *TCE-6.0

SCREENED INTERVAL (ft-bmp): 21.80 - 36.80 PUMP INTAKE DEPTH: 35.70

CASING DEPTH(installed/sounded)(ft-bmp): 35.30 / 37.15 on 09-JAN-12 CASING VOL (Gal/Time): 14.81

DEPTH TO WATER(ft-bmp): 19.87 on 26-JUL-16 20.70 VOLUME FACTOR: 0.826 14 3CV = 42

WATER IN CASING (ft): 17.93 16.95 CASING DIAMETER/TCASING HT(in): 4.5 / 2.50

TIME PUMP ON: INITIAL FLOW RATE (Q=GPM):

TIME PUMP OFF: MEASURED BY:FLOW METER/ GRAD CYL./ BUCKET/ OTHER

TIME	Q	GAL PURGED	VOLUMES	pH	TEMP C	SC	mV	OG	DTW

METER	SERIAL #	CALIBRATED
pH :	62.17417	YES/NO
SC :		YES/NO
mV :		YES/NO
H2O:		YES/NO

SAMPLER/EMPLOYER: silva90

PROJECT: 3MRP

SAMPLE PRESERVATION/AMT of REAGENT: N/A

PURGE VOL/EXCESS H2O DEST: 44.44 / S300-DRUM

TF LOCATION: S300

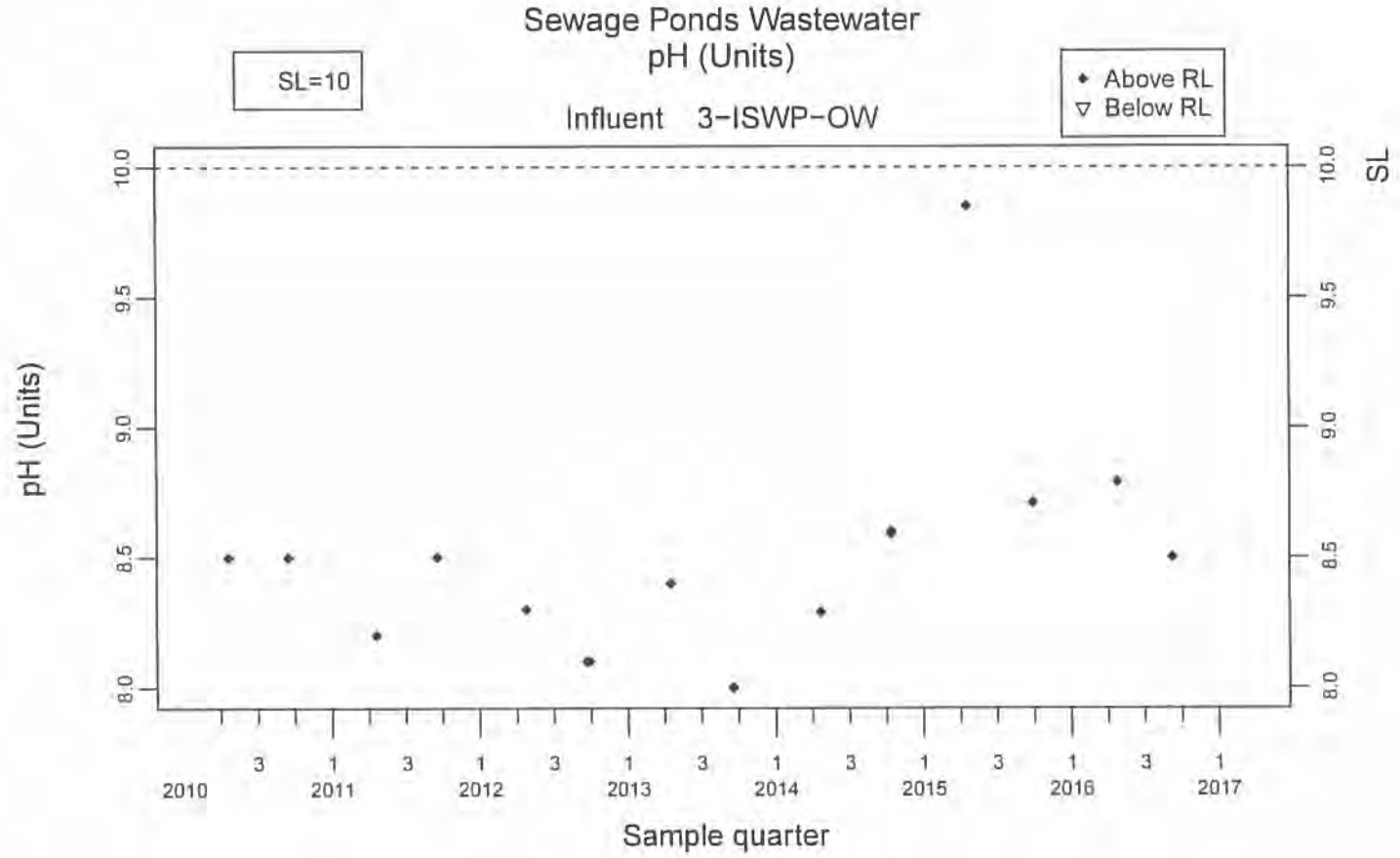
QC SAMPLE ID: / QC LAB(S): / QC SAMPLE TIME: /

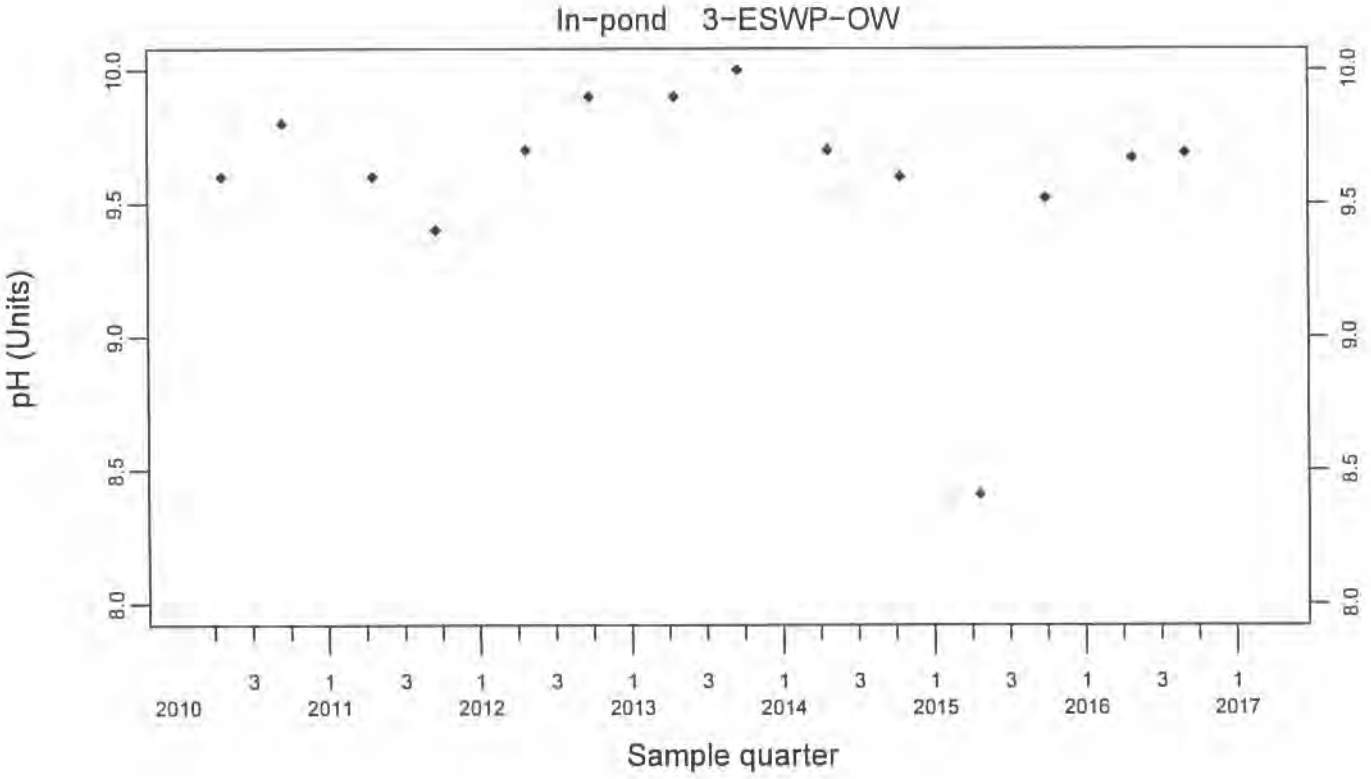
SAMPLE ID (VERIFY): TIME COLLECTED:

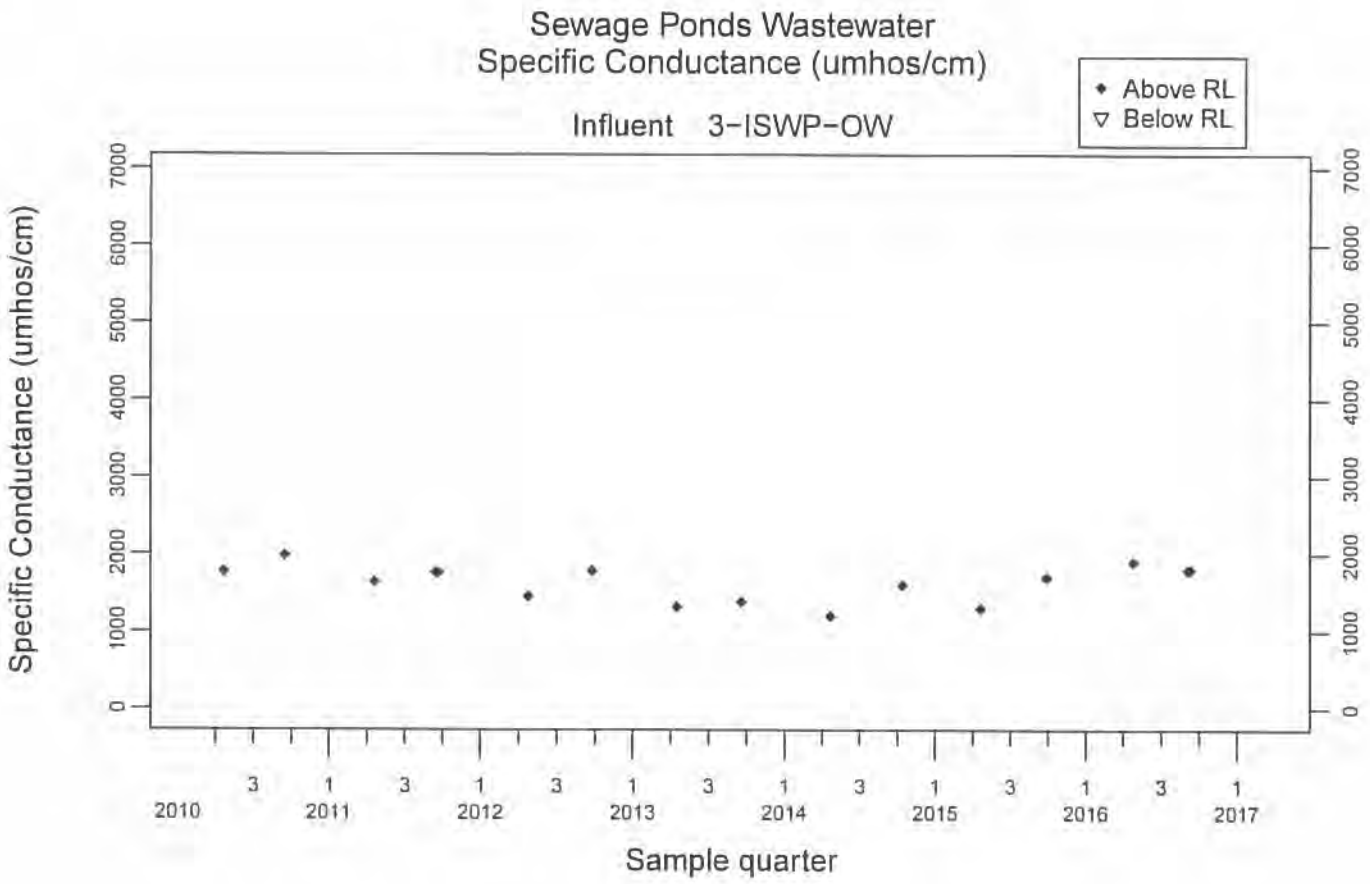
LAB	LAB_LOC_NAME	REQUESTED ANALYSIS	#	TYPE	SAMPLER_REMARKS
BB	W-25N-23	S3ANIONS	1	250 ml P	
BB	W-25N-23	S3METALS	1	500ml P	
BB	W-25N-23	S3METALS:FILTER	0	O	
BB	W-25N-23	S3WETCHEM	2	500ml P	
~~AA~~	~~W-25N-23~~	~~SM9221~~	1	~~250 ml P~~	

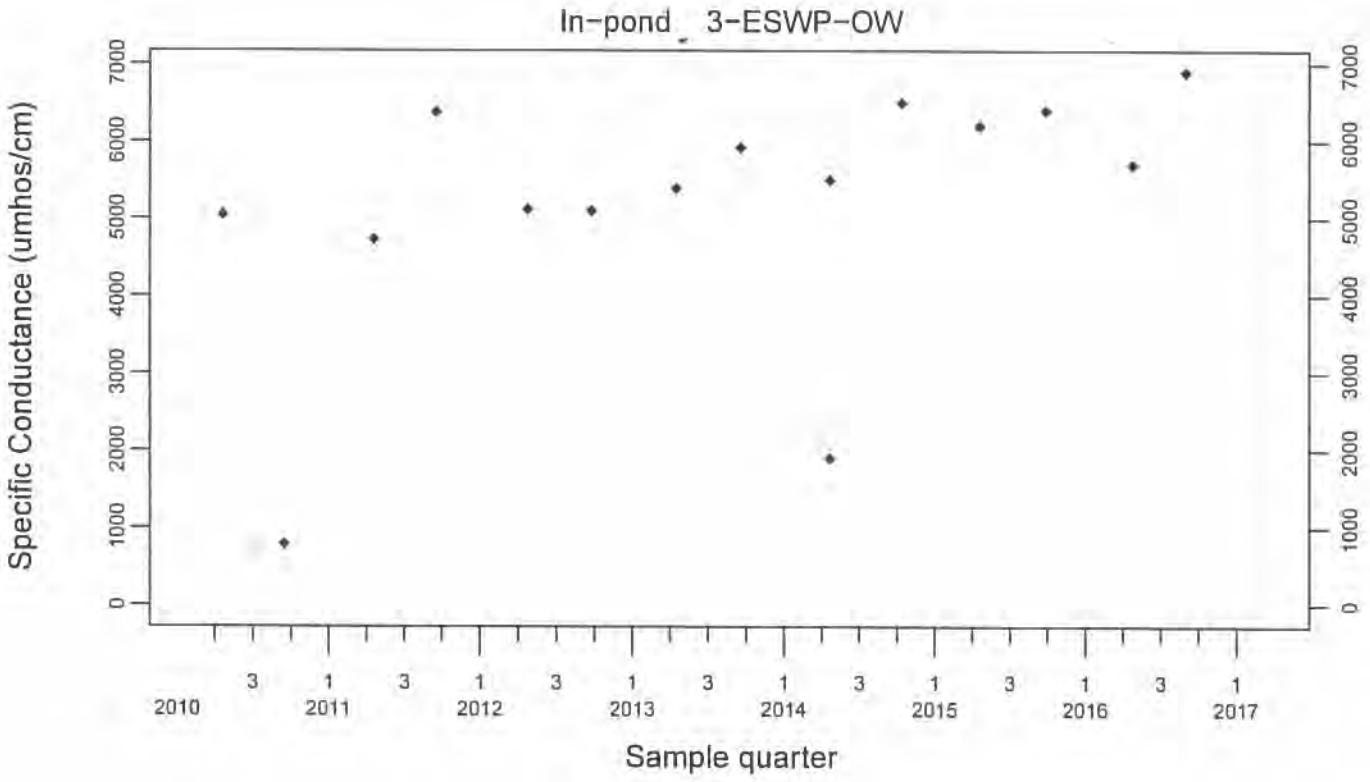
Inoperable pump no Sample

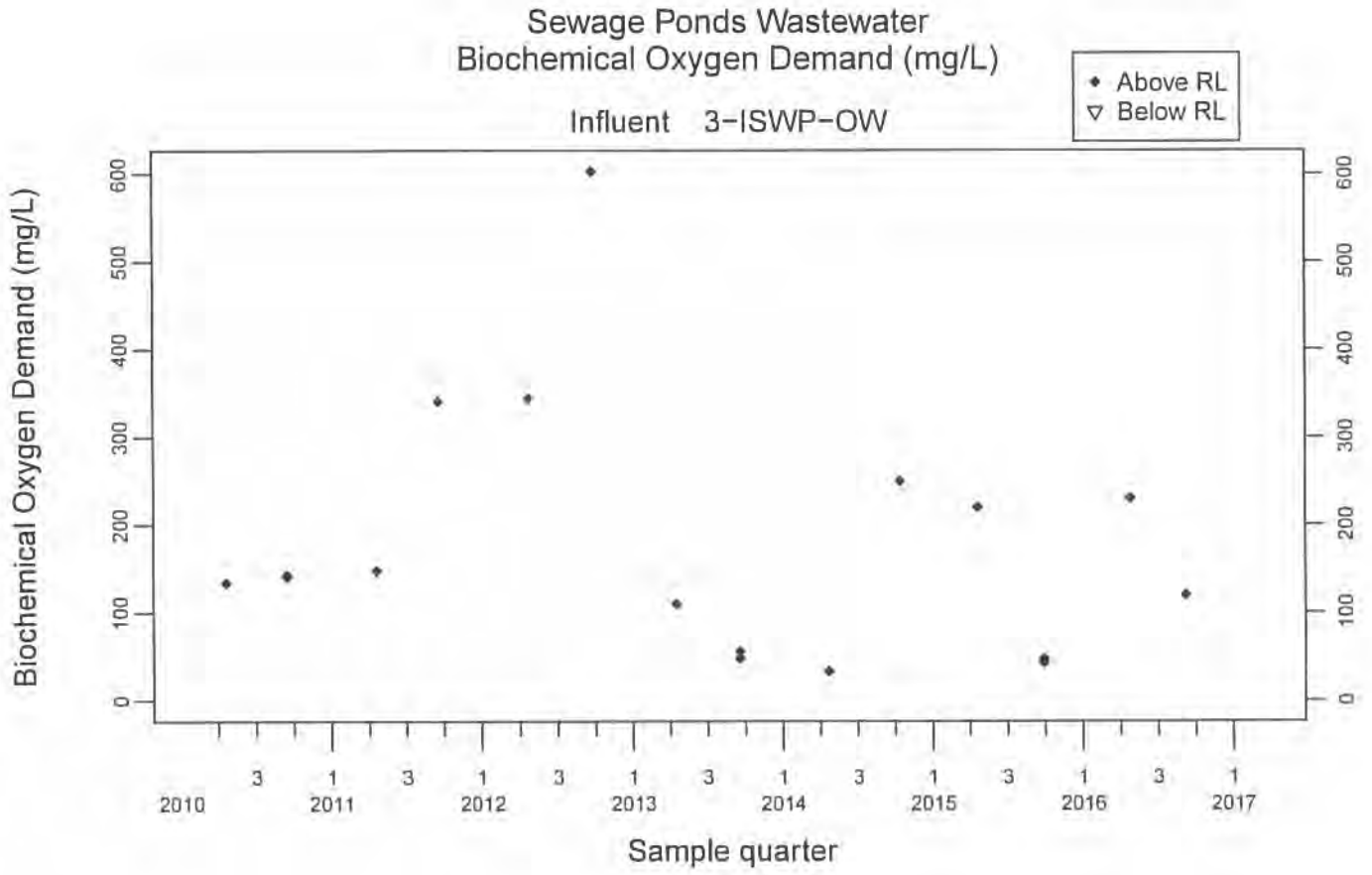
Stove Pipe Needs replacing Lid is bent

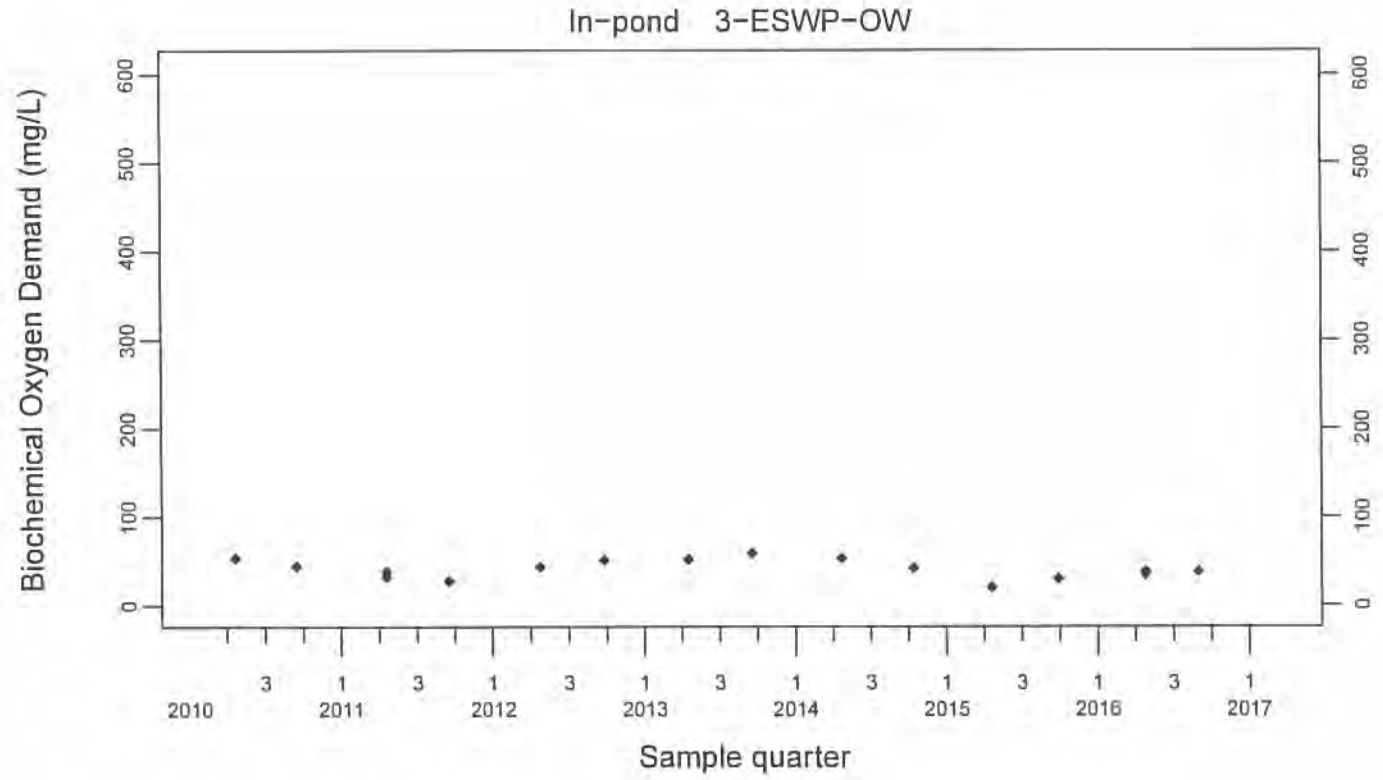

Sewage Ponds Wastewater
pH (Units)
SL=10
Above RL
Below RL
Influent 3-ISWP-OW
pH (Units)
SL
10.0
9.5
9.0
8.5
8.0
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

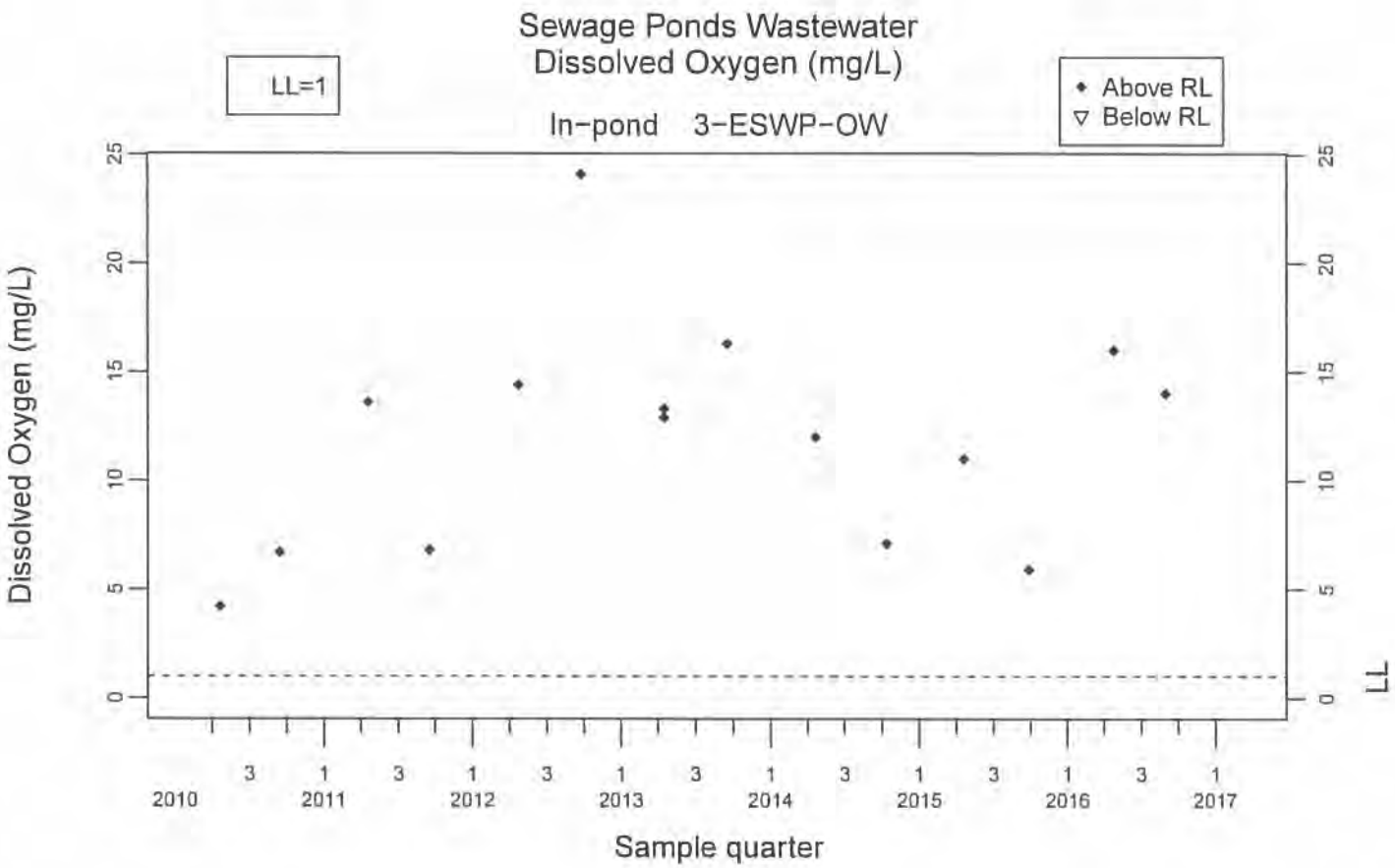

In-pond 3-ESWP-OW
pH (Units)
10.0
9.5
9.0
8.5
8.0
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

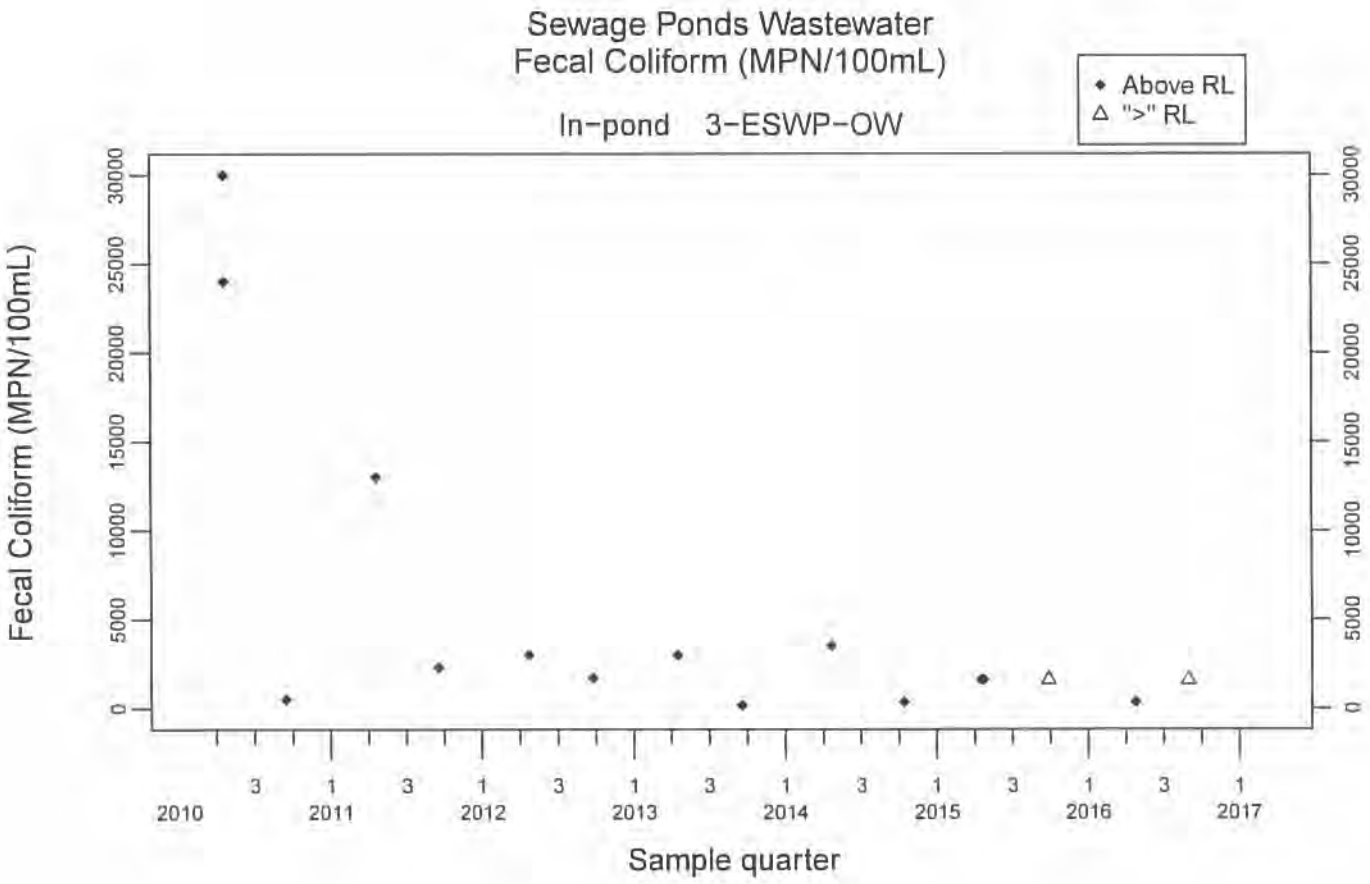

Sewage Ponds Wastewater
Specific Conductance (umhos/cm)
Above RL
Below RL
Influent 3-ISWP-OW
Specific Conductance (umhos/cm)
0
1000
2000
3000
4000
5000
6000
7000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

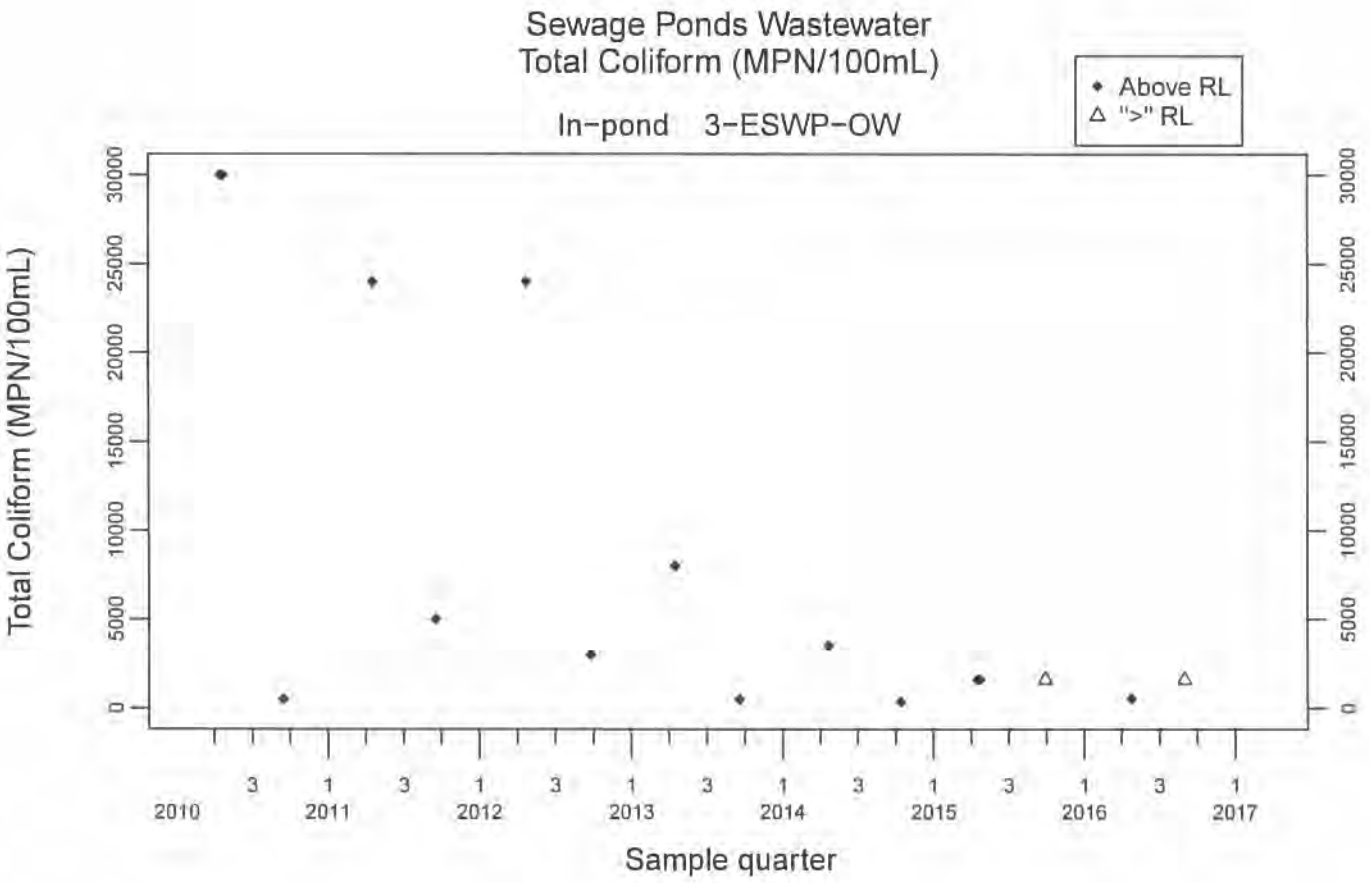

In-pond 3-ESWP-OW
Specific Conductance (umhos/cm)
0
1000
2000
3000
4000
5000
6000
7000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

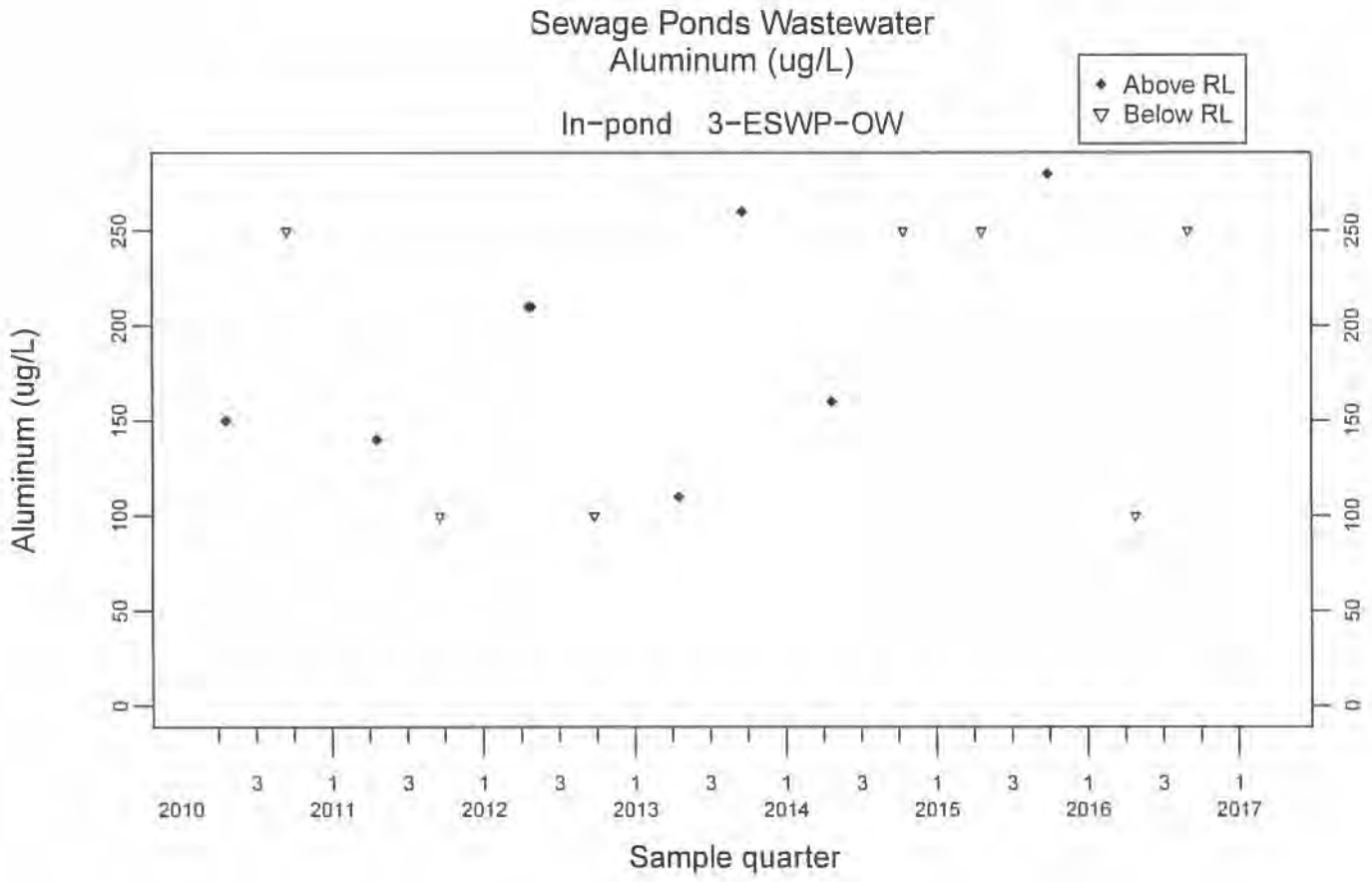

Sewage Ponds Wastewater
Biochemical Oxygen Demand (mg/L)
Influent 3-ISWP-OW
Above RL
Below RL
Biochemical Oxygen Demand (mg/L)
0
100
200
300
400
500
600
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

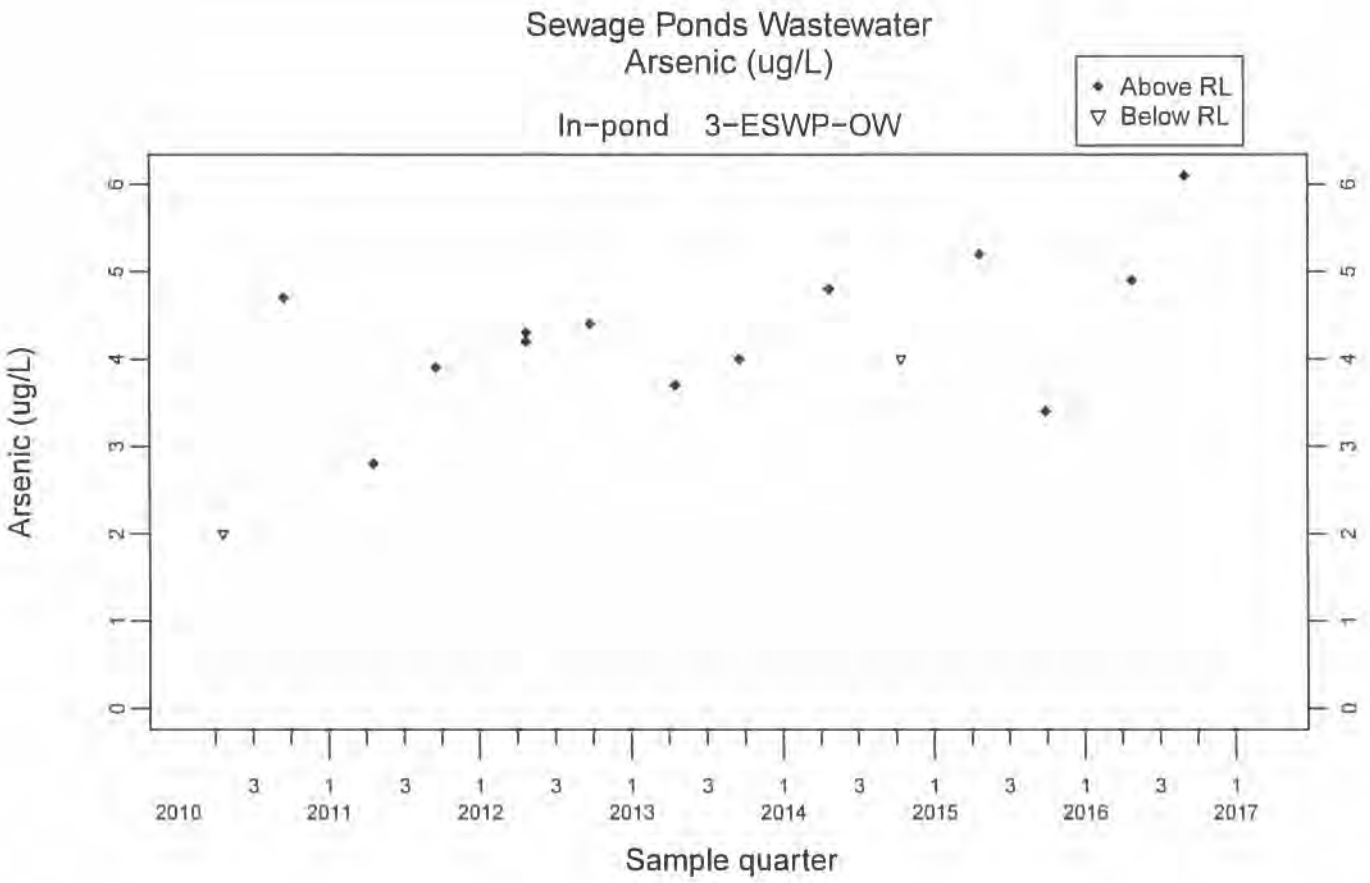

In-pond 3-ESWP-OW
Biochemical Oxygen Demand (mg/L)
0
100
200
300
400
500
600
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

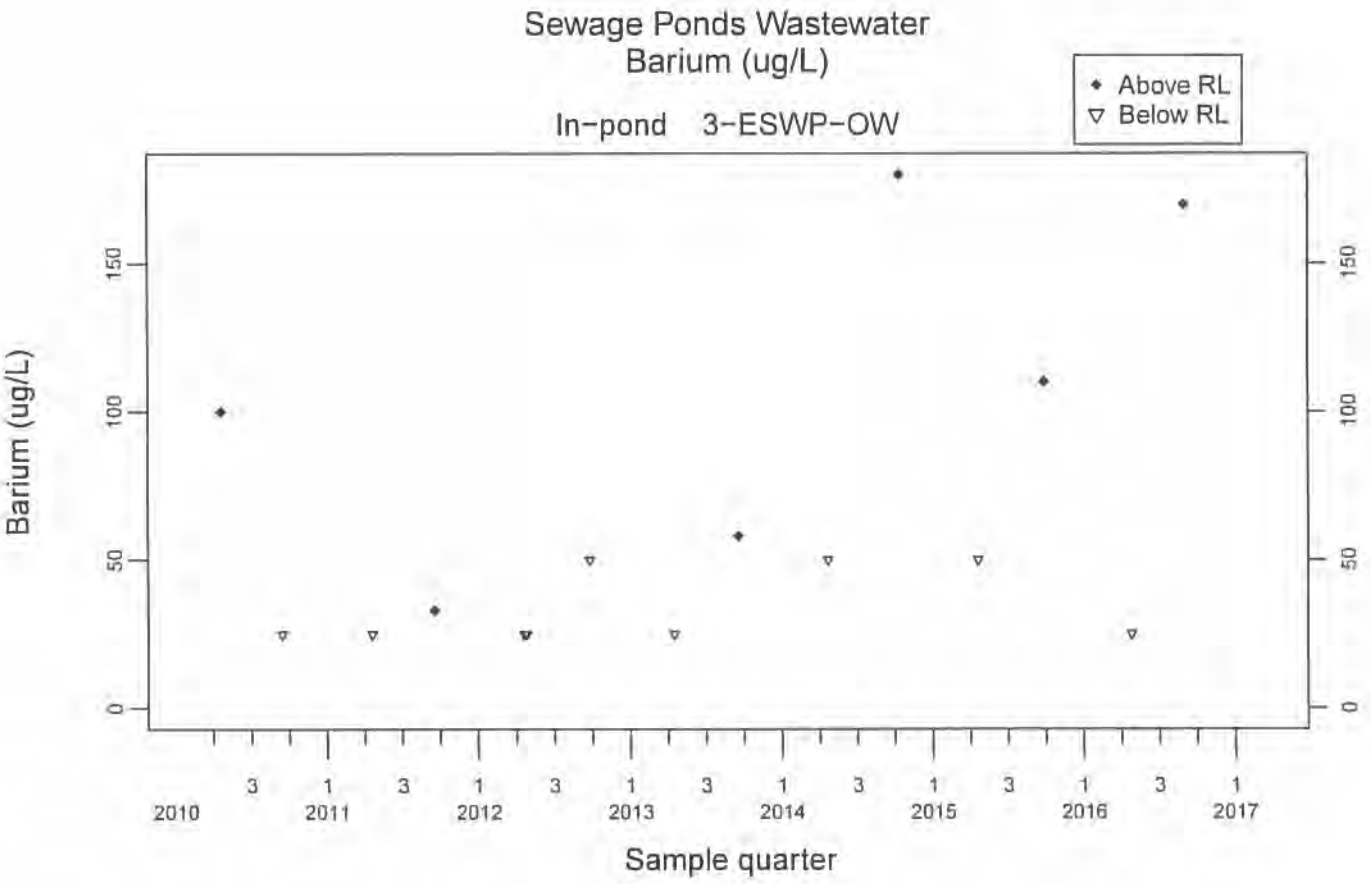

Sewage Ponds Wastewater
Dissolved Oxygen (mg/L)
In-pond 3-ESWP-OW
LL=1
Above RL
Below RL
Dissolved Oxygen (mg/L)
LL
0
5
10
15
20
25
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

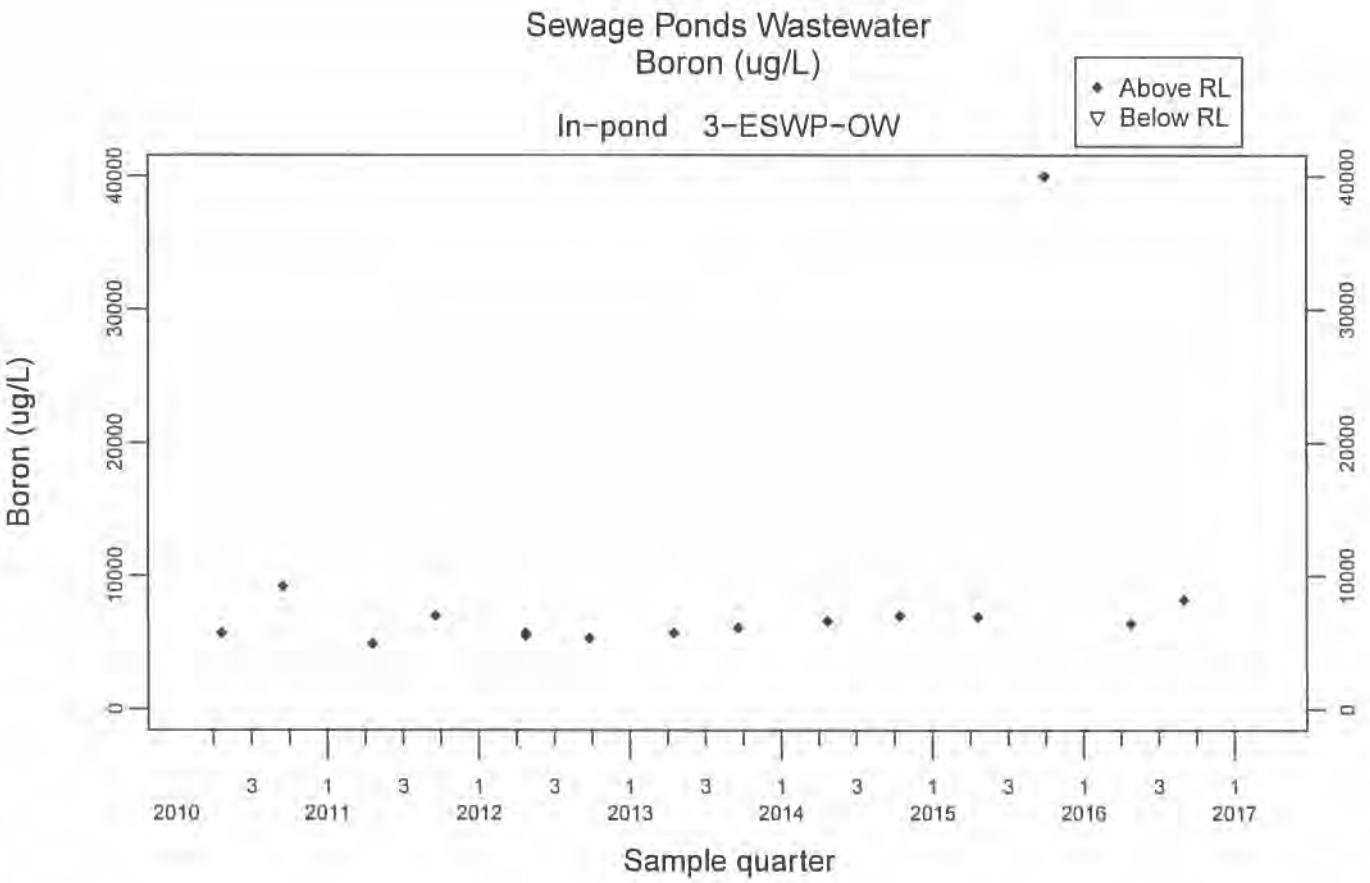

Sewage Ponds Wastewater
Fecal Coliform (MPN/100mL)
In-pond 3-ESWP-OW
Above RL
"<" RL
Fecal Coliform (MPN/100mL)
0
5000
10000
15000
20000
25000
30000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

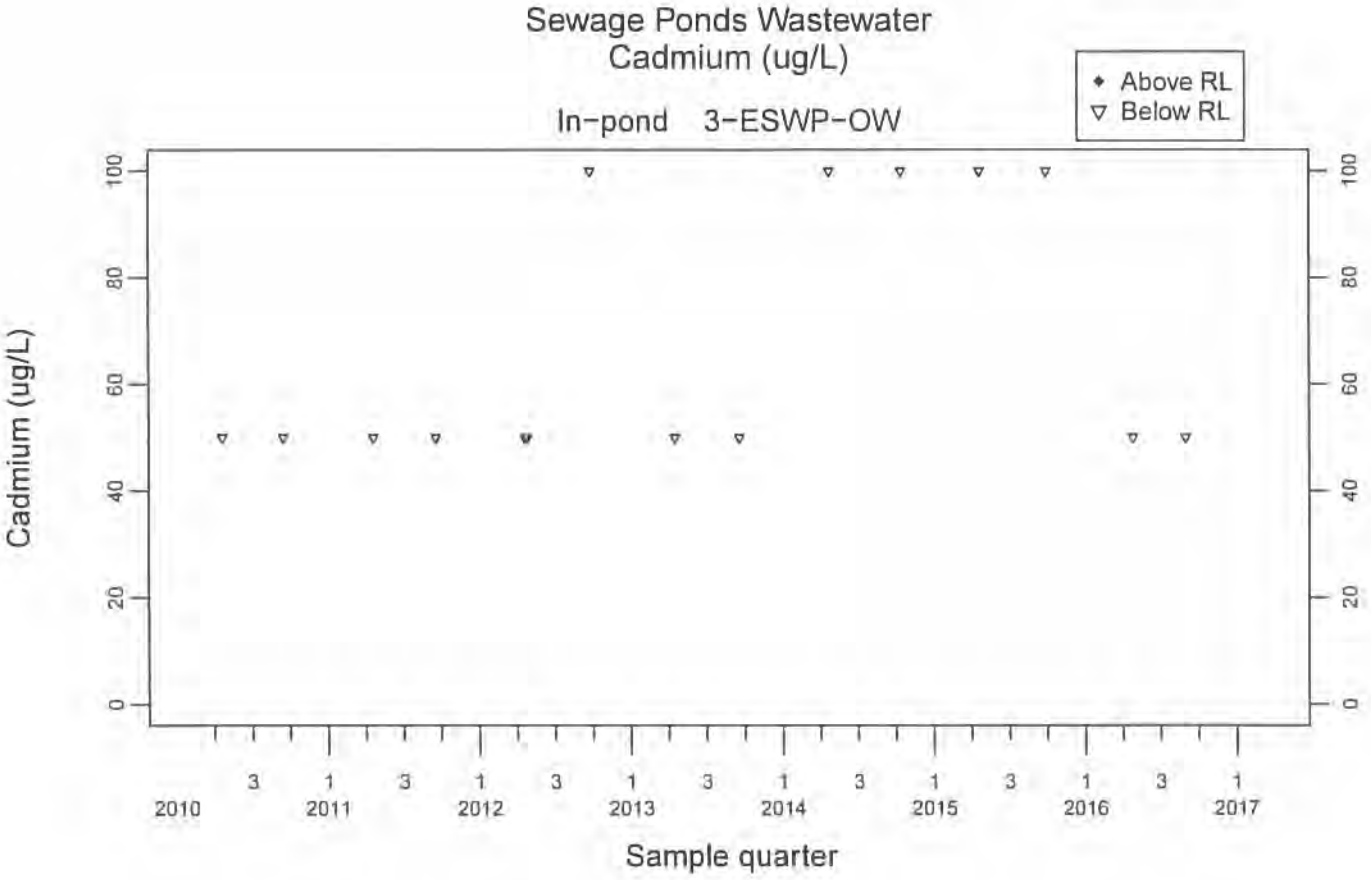

Sewage Ponds Wastewater
Total Coliform (MPN/100mL)
In-pond 3-ESWP-OW
Above RL
"<" RL
Total Coliform (MPN/100mL)
0
5000
10000
15000
20000
25000
30000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

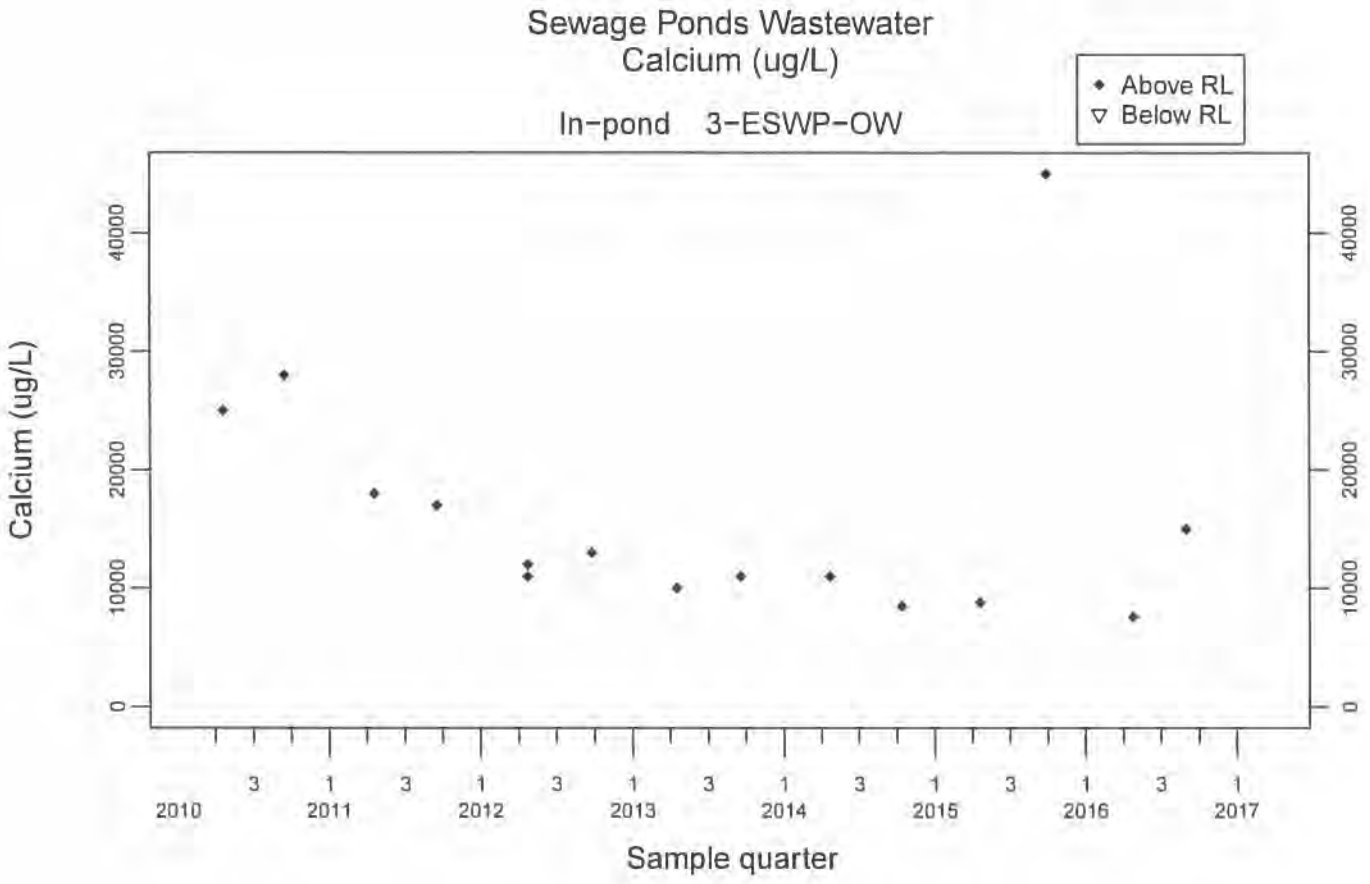

Sewage Ponds Wastewater
Aluminum (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Aluminum (ug/L)
0
50
100
150
200
250
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

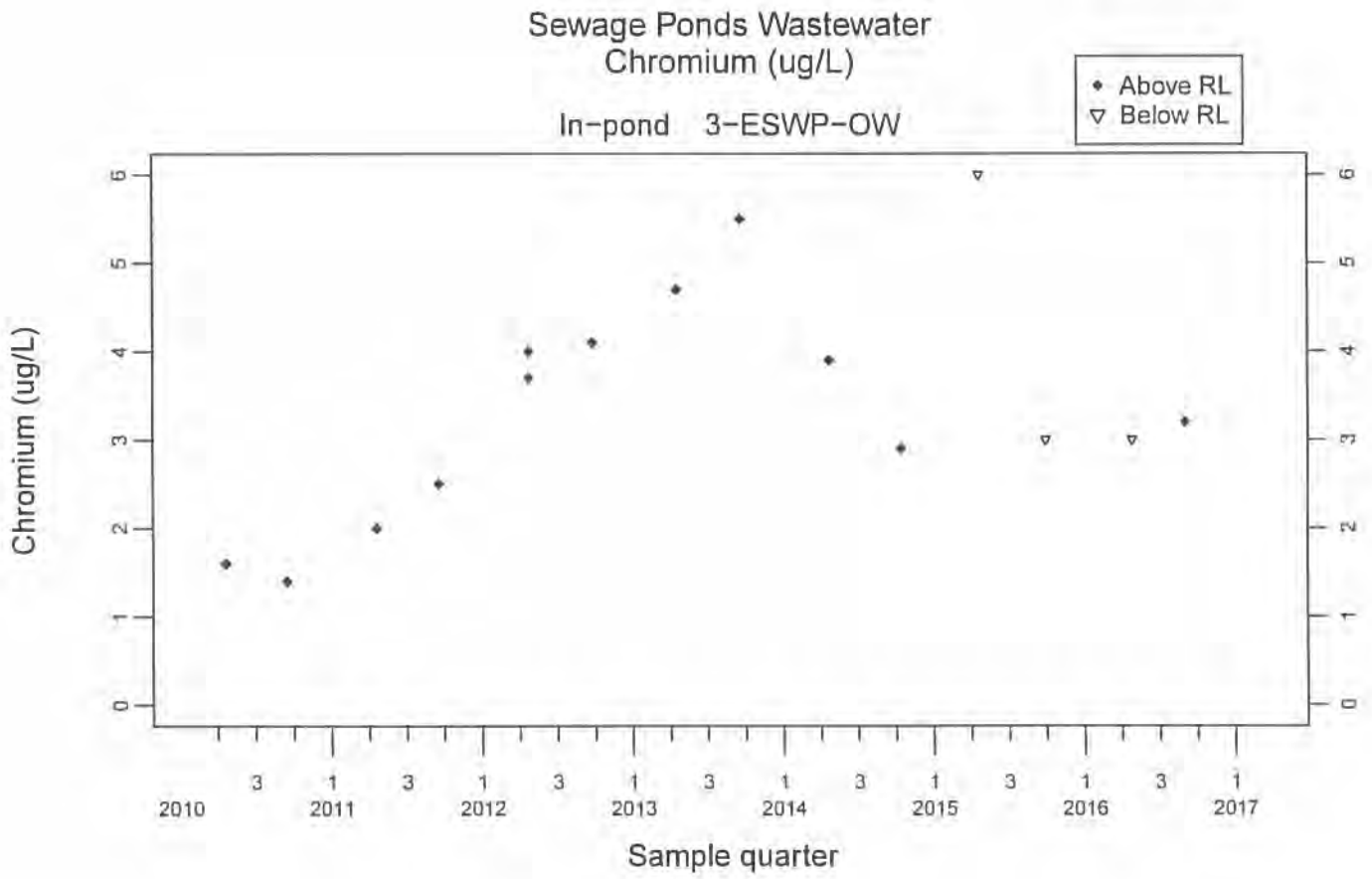

Sewage Ponds Wastewater
Arsenic (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Arsenic (ug/L)
0
1
2
3
4
5
6
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

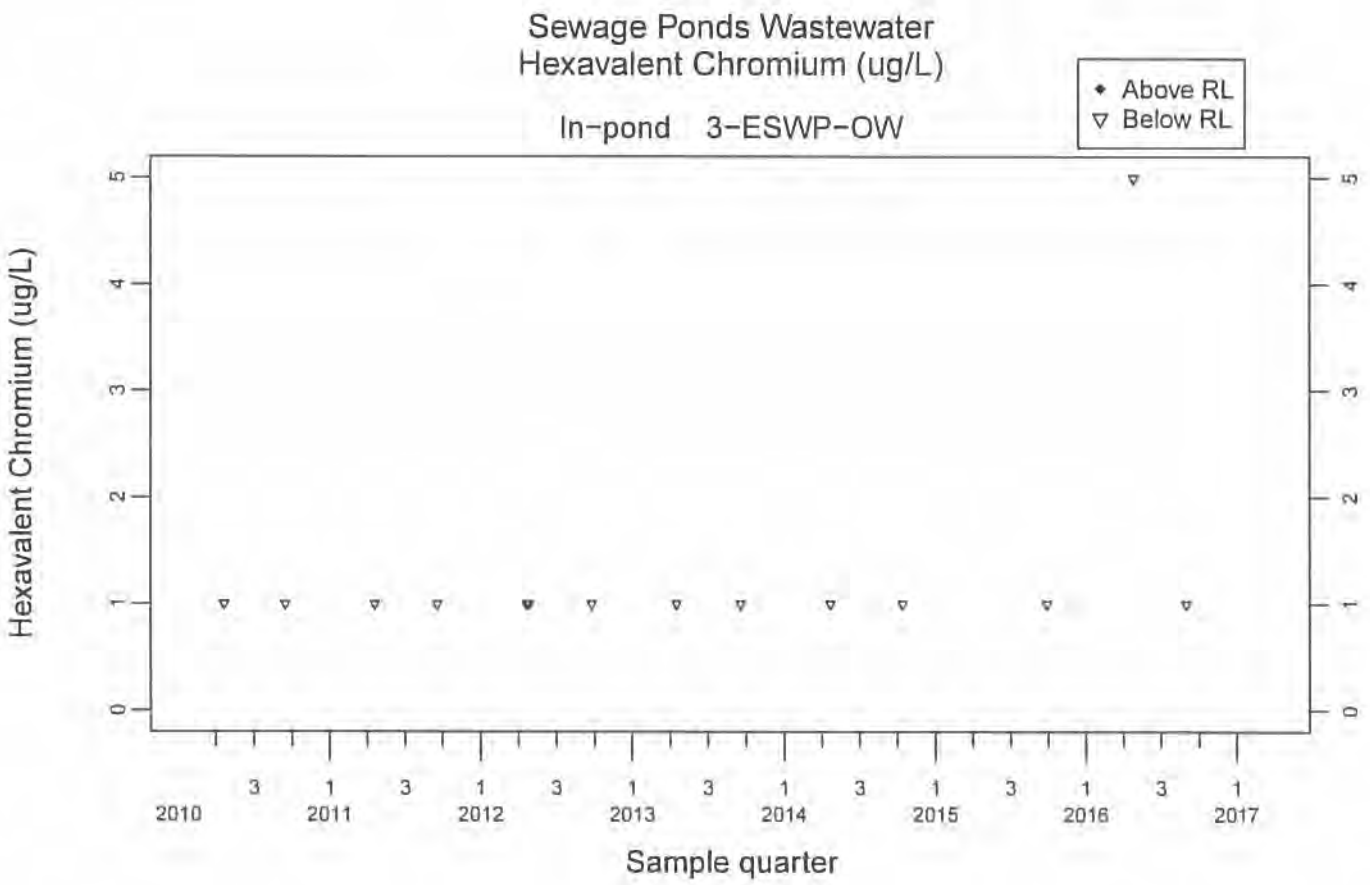

Sewage Ponds Wastewater
Barium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Barium (ug/L)
0
50
100
150
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

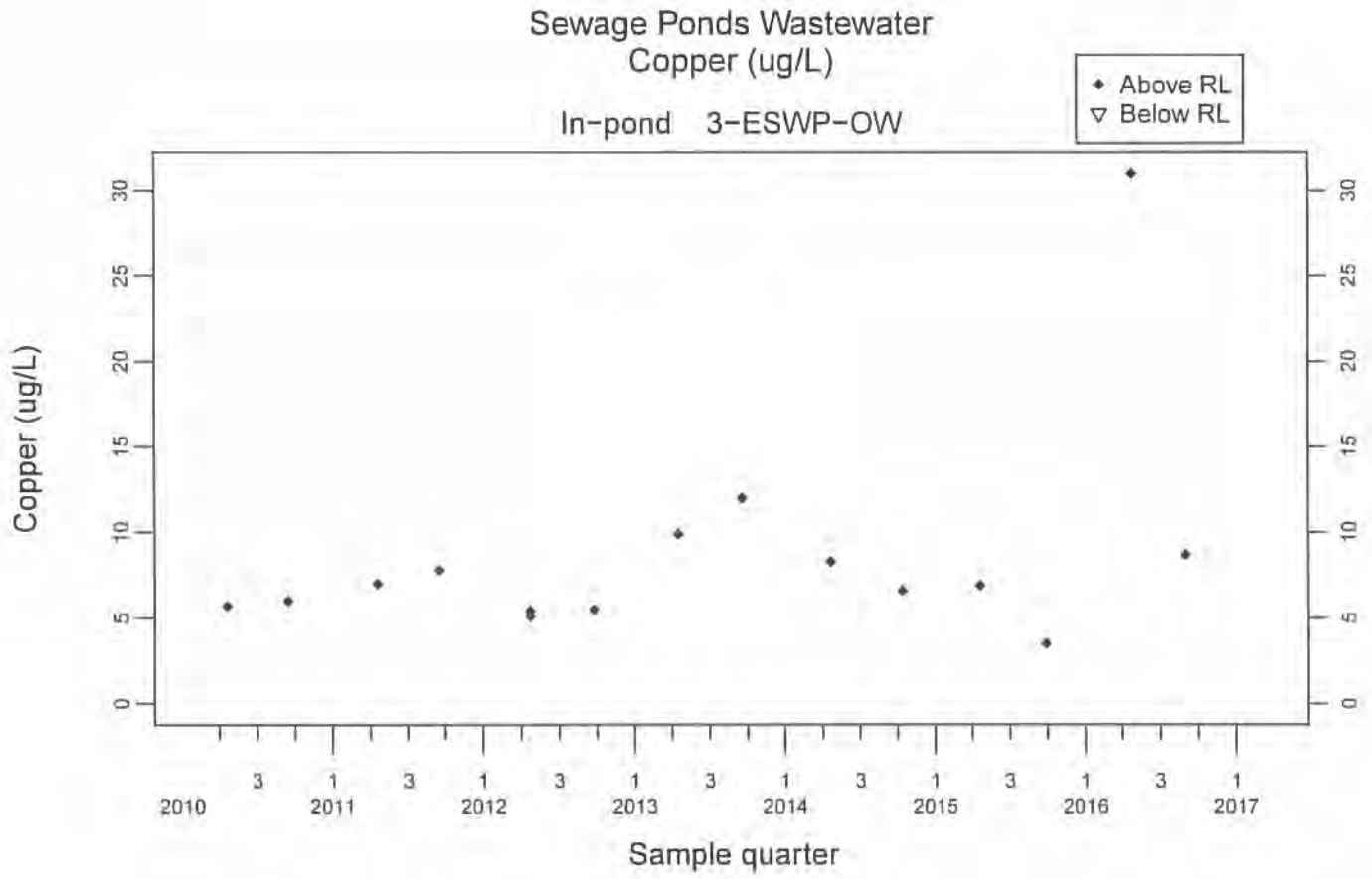

Sewage Ponds Wastewater
Boron (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Boron (ug/L)
0
10000
20000
30000
40000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

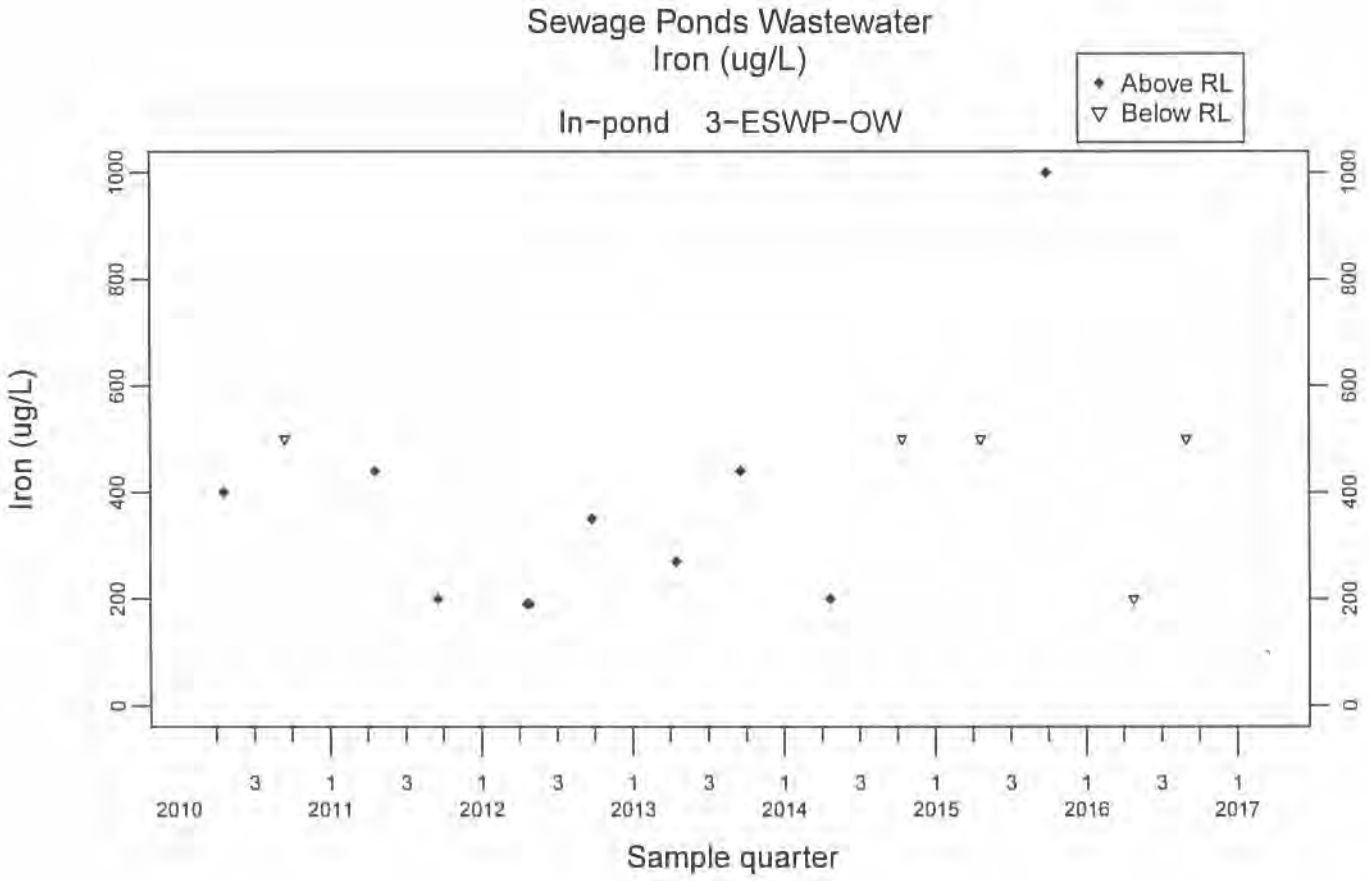

Sewage Ponds Wastewater
Cadmium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Cadmium (ug/L)
0
20
40
60
80
100
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

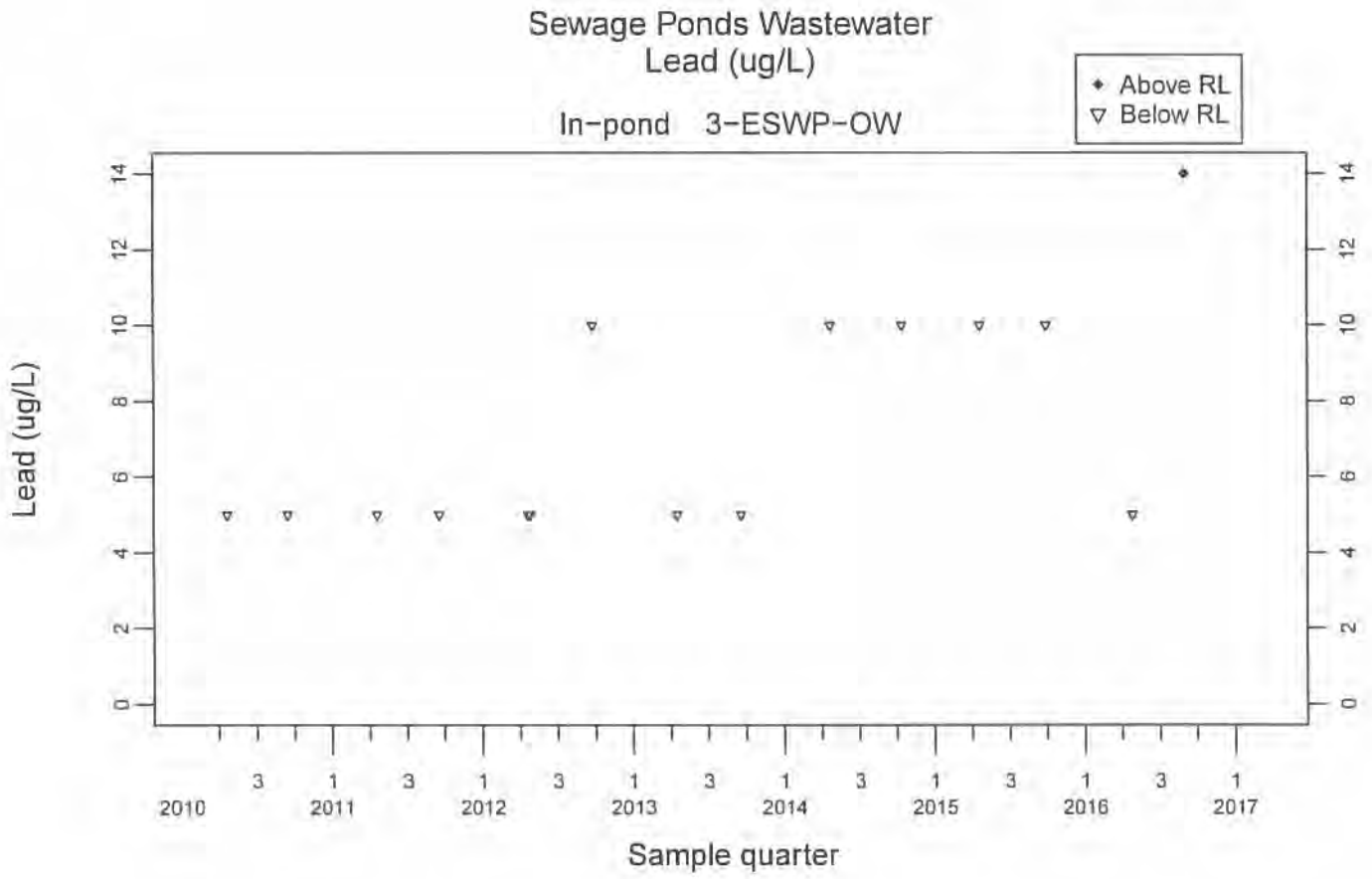

Sewage Ponds Wastewater
Calcium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Calcium (ug/L)
0
10000
20000
30000
40000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

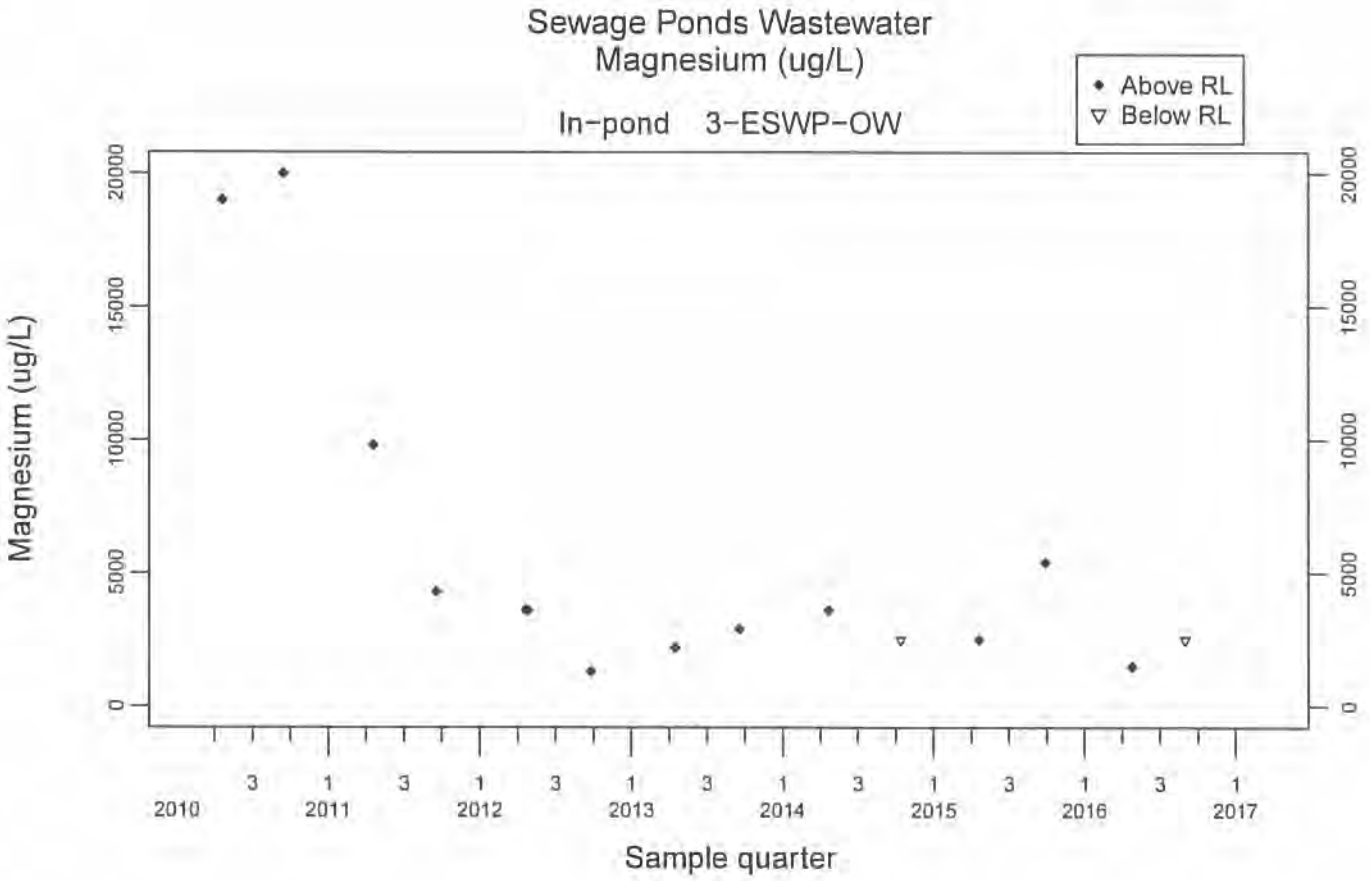

Sewage Ponds Wastewater
Chromium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Chromium (ug/L)
0
1
2
3
4
5
6
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

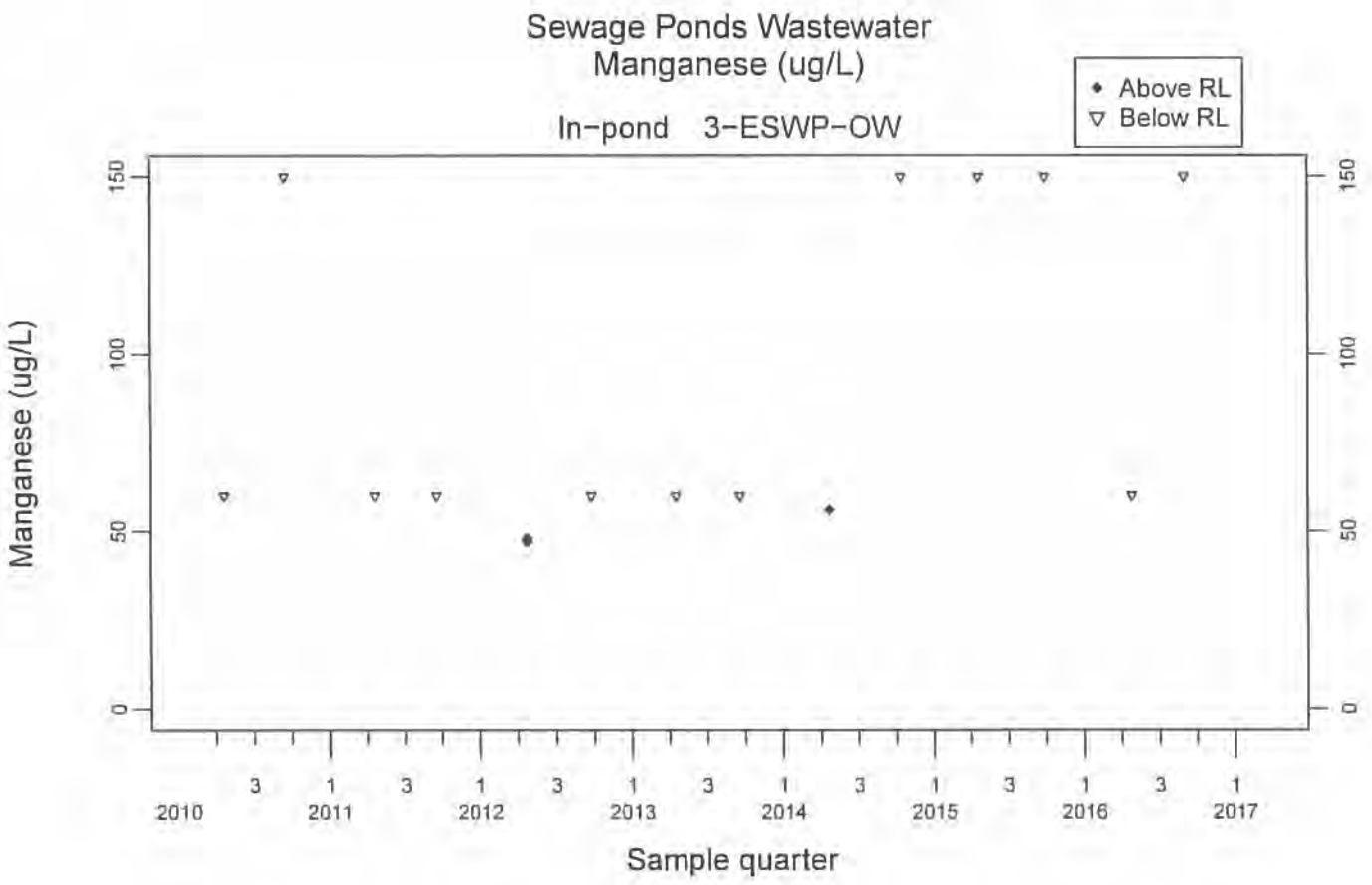

Sewage Ponds Wastewater
Hexavalent Chromium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Hexavalent Chromium (ug/L)
0
1
2
3
4
5
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

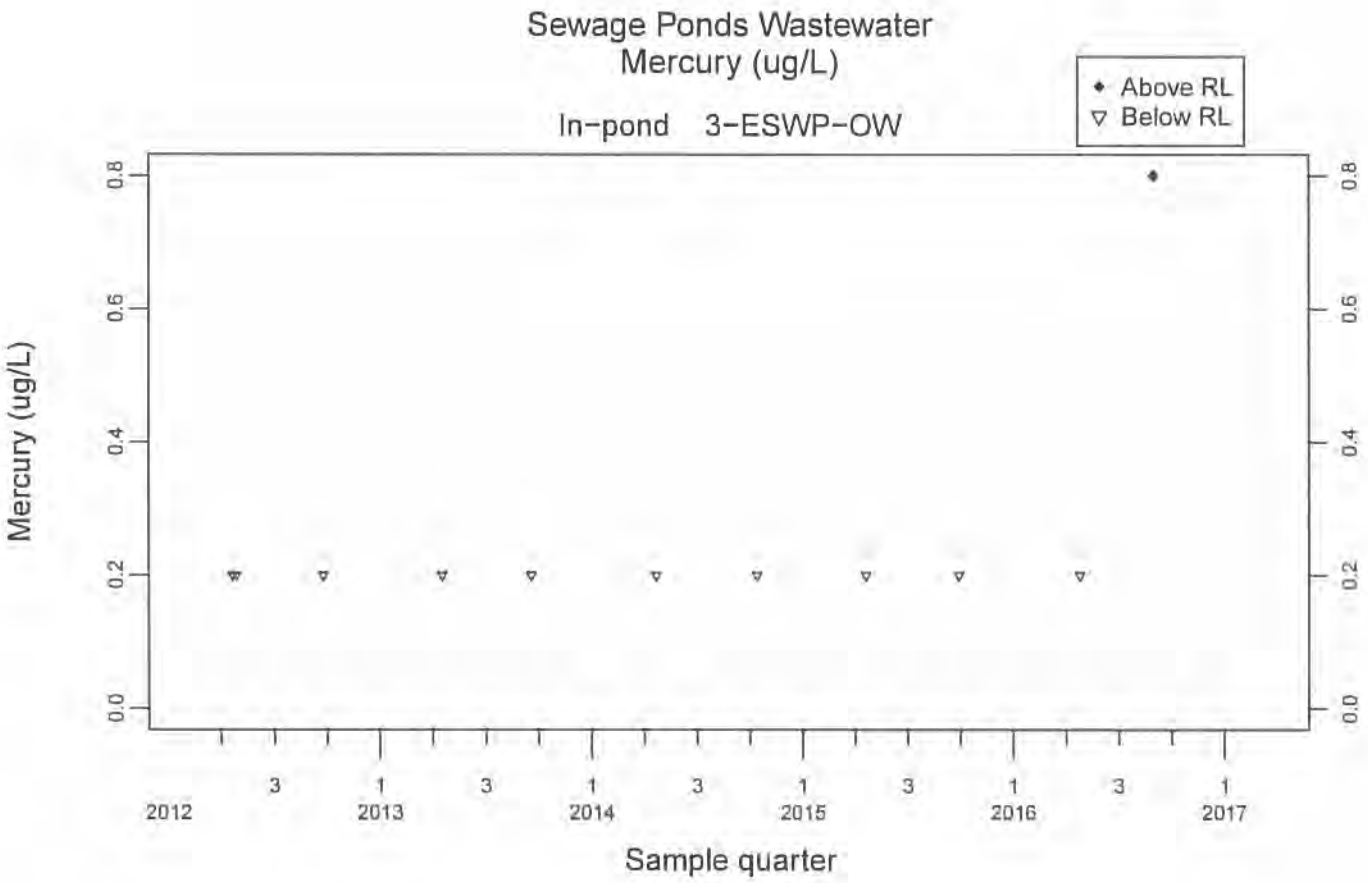

Sewage Ponds Wastewater
Copper (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Copper (ug/L)
0
5
10
15
20
25
30
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

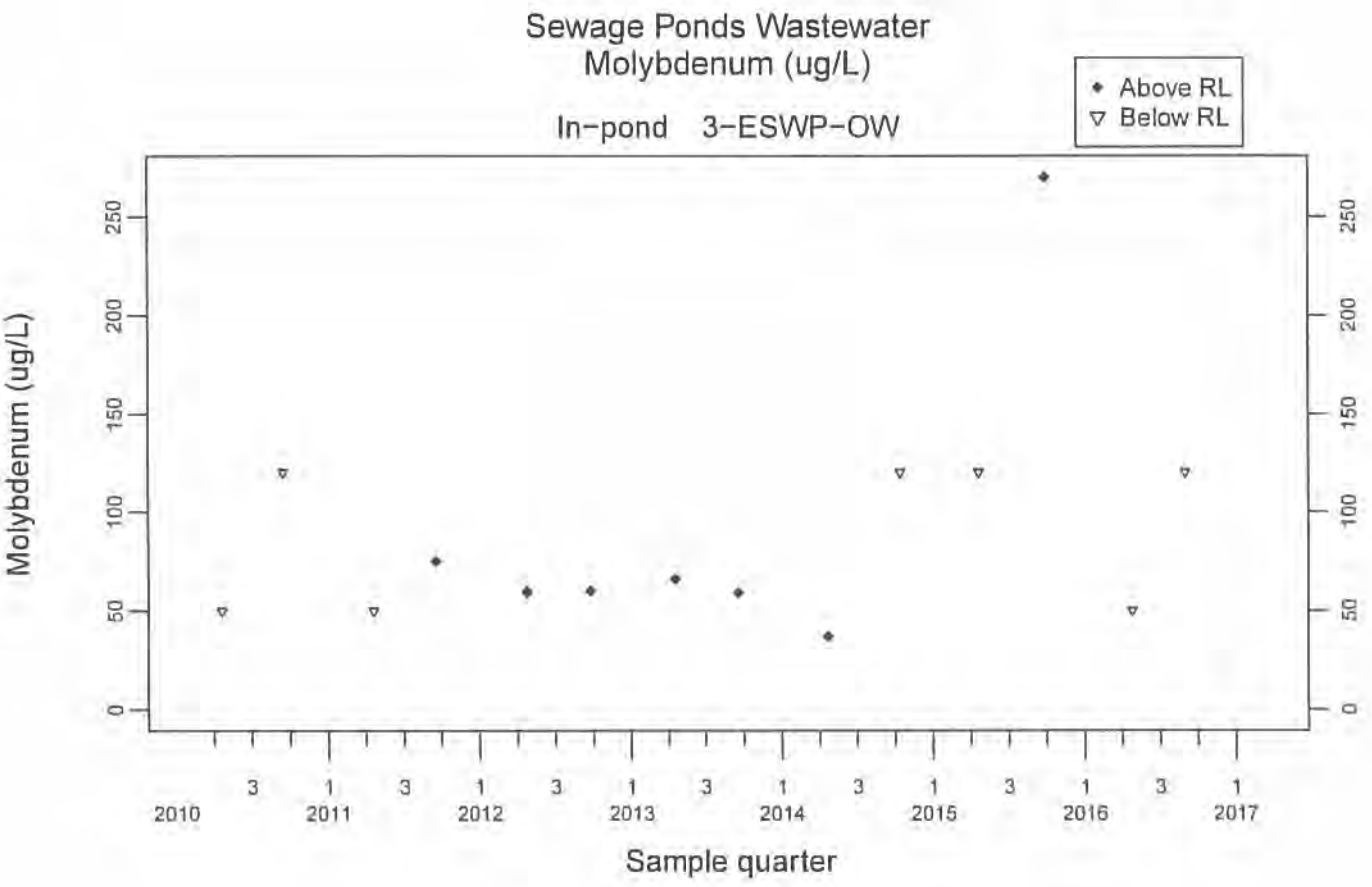

Sewage Ponds Wastewater
Iron (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Iron (ug/L)
0
200
400
600
800
1000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

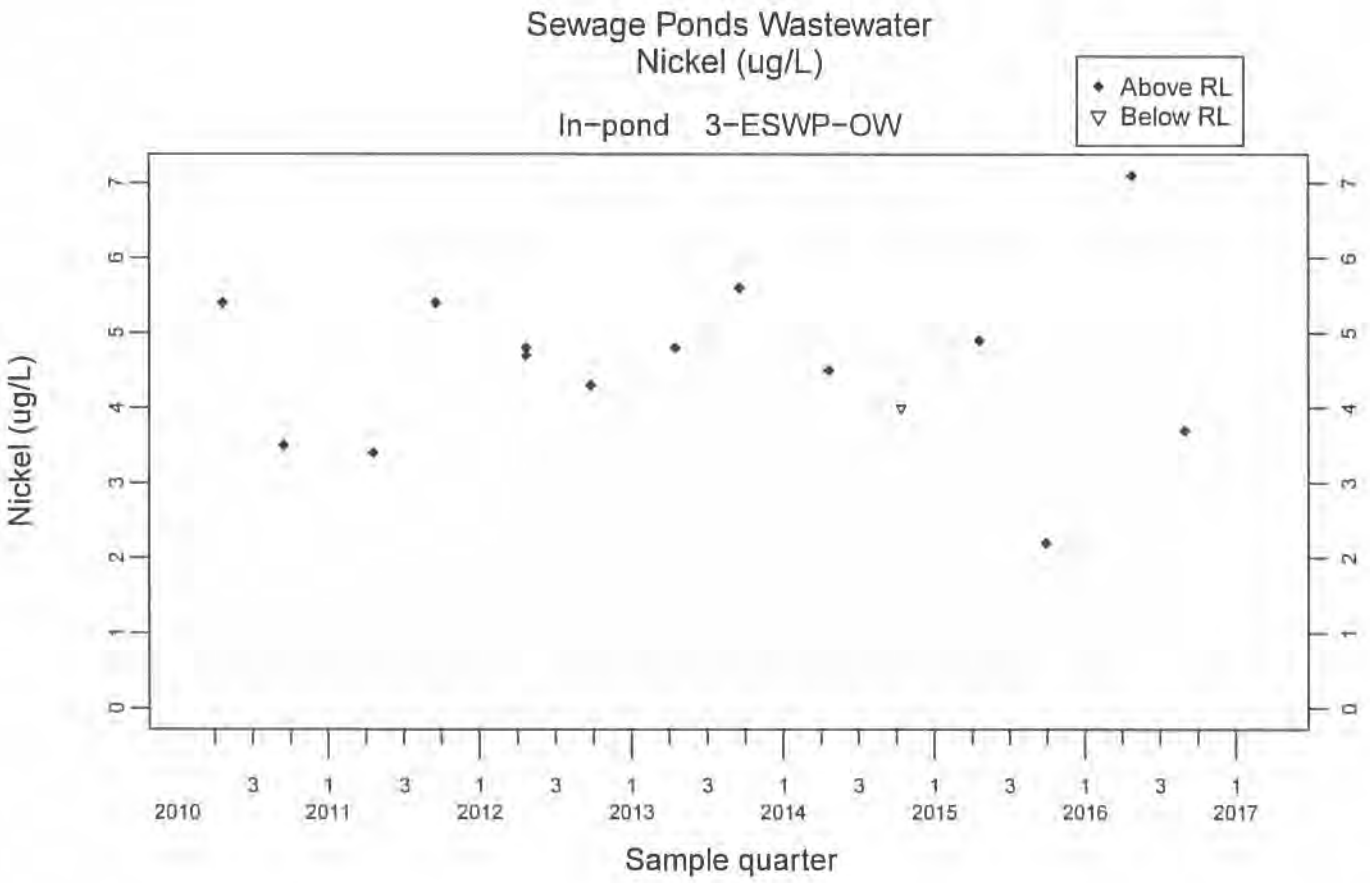

Sewage Ponds Wastewater
Lead (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Lead (ug/L)
0
2
4
6
8
10
12
14
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

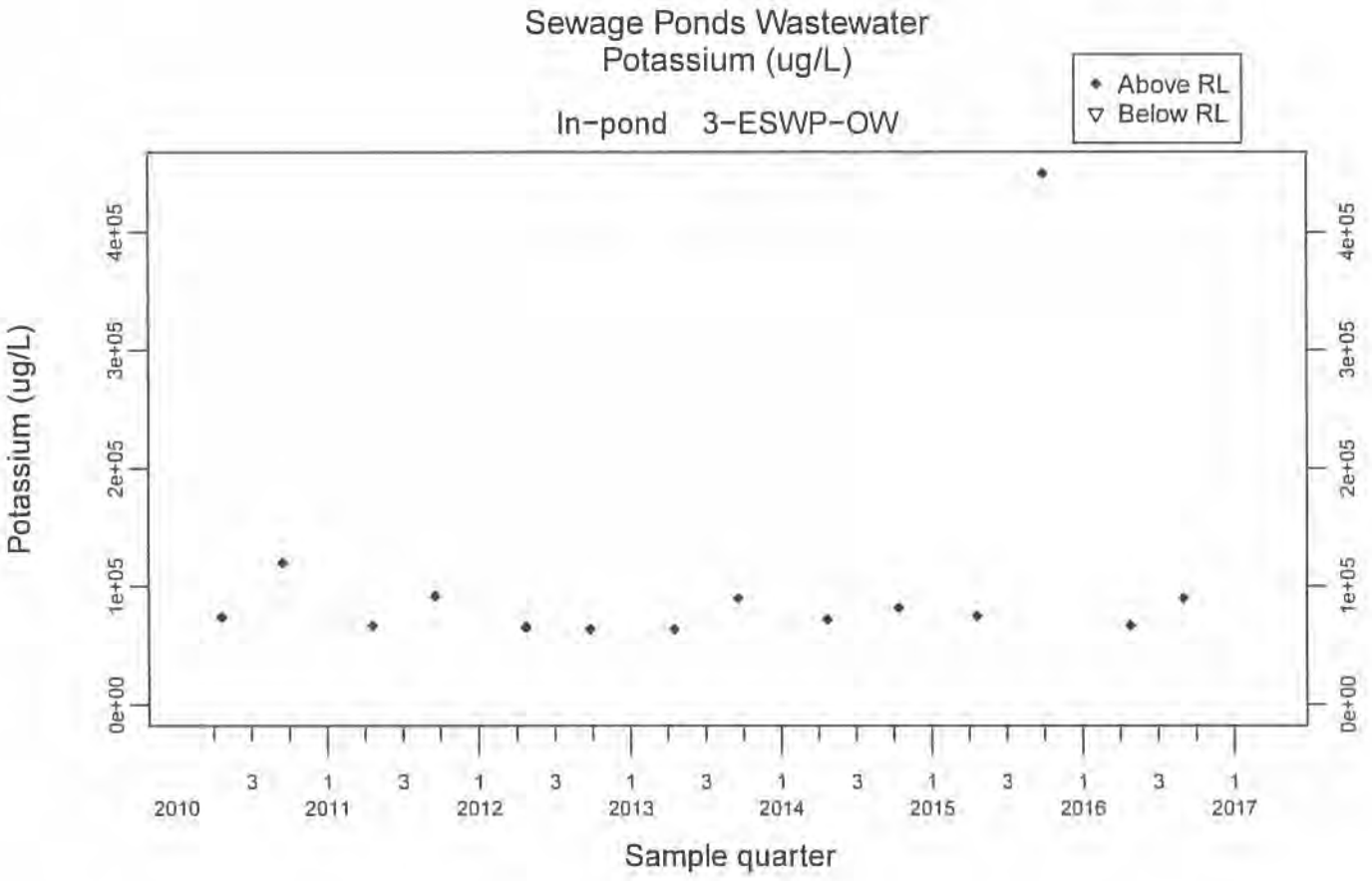

Sewage Ponds Wastewater
Magnesium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Magnesium (ug/L)
0
5000
10000
15000
20000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

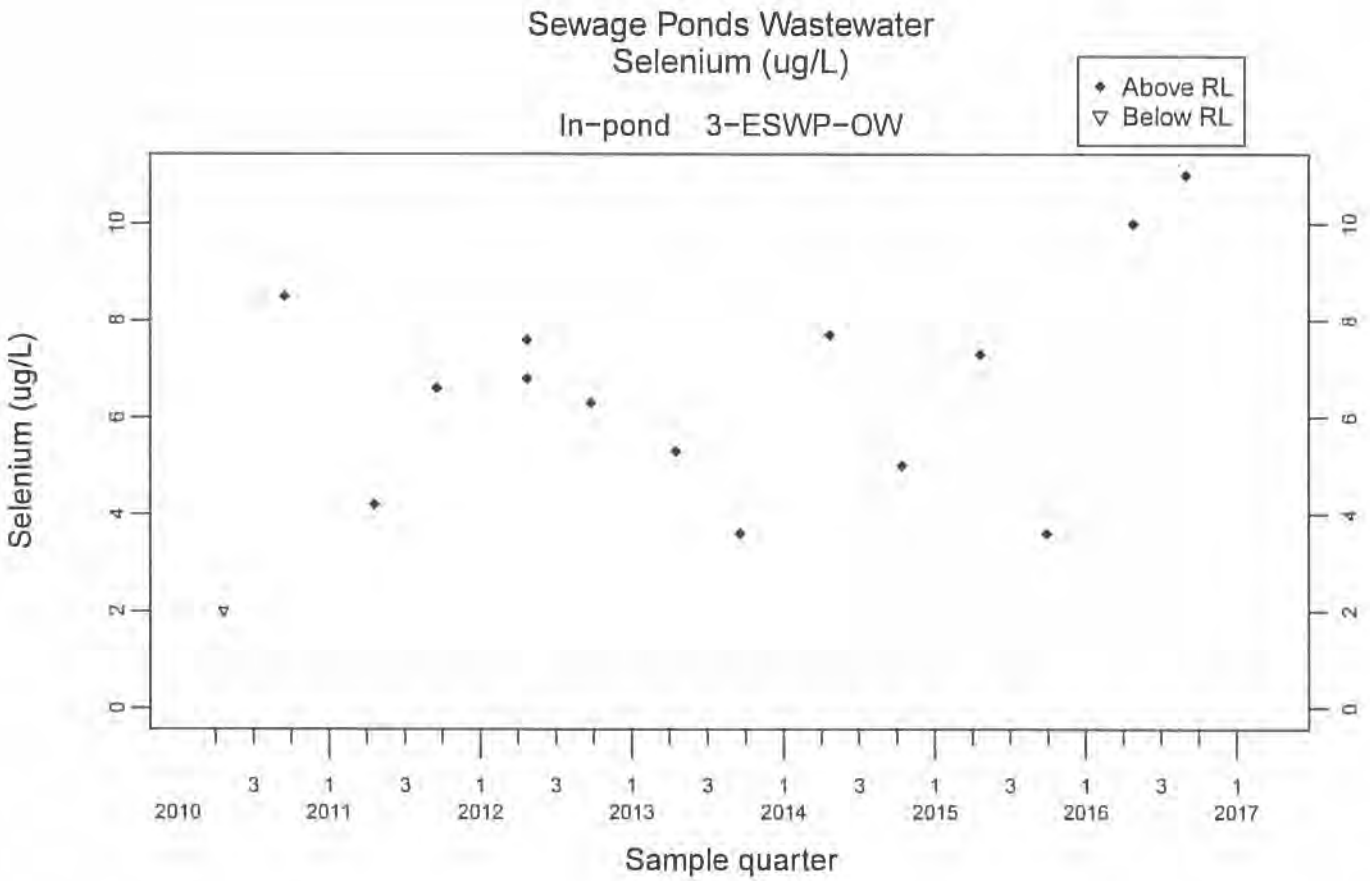

Sewage Ponds Wastewater
Manganese (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Manganese (ug/L)
0
50
100
150
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

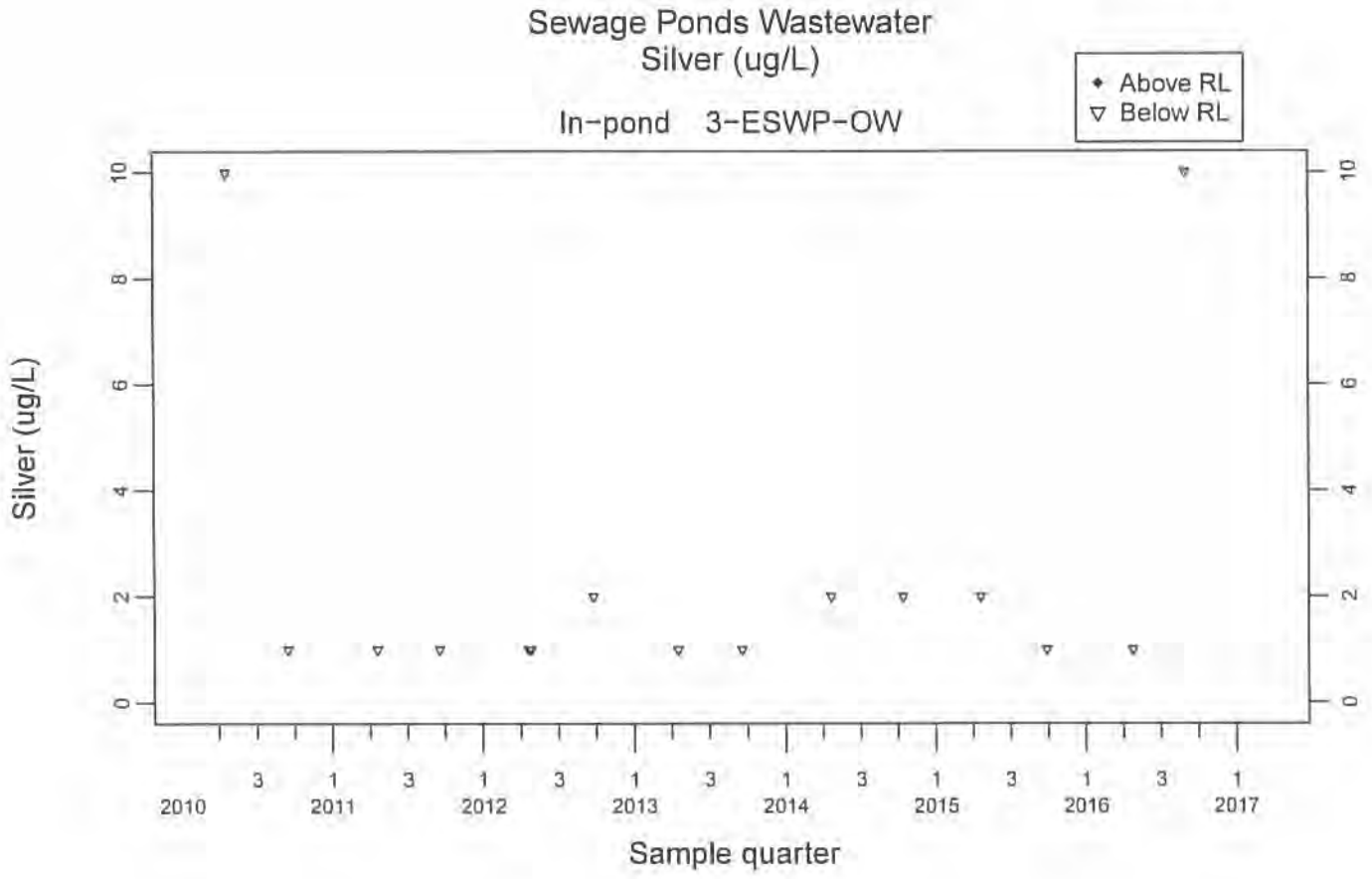

Sewage Ponds Wastewater
Mercury (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Mercury (ug/L)
0.0
0.2
0.4
0.6
0.8
3
1
2012
2013
2014
2015
2016
2017
Sample quarter

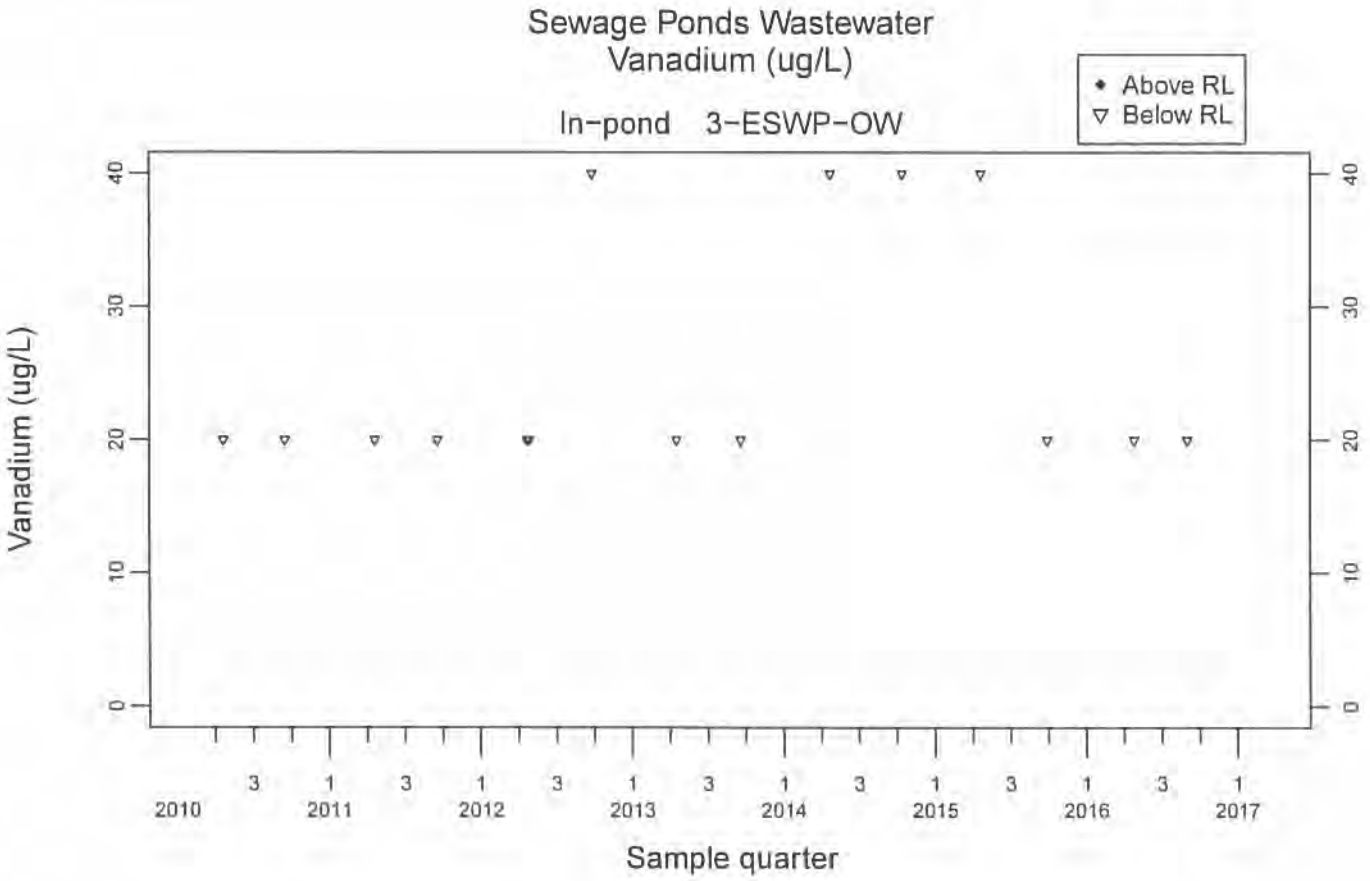

Sewage Ponds Wastewater
Molybdenum (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Molybdenum (ug/L)
0
50
100
150
200
250
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

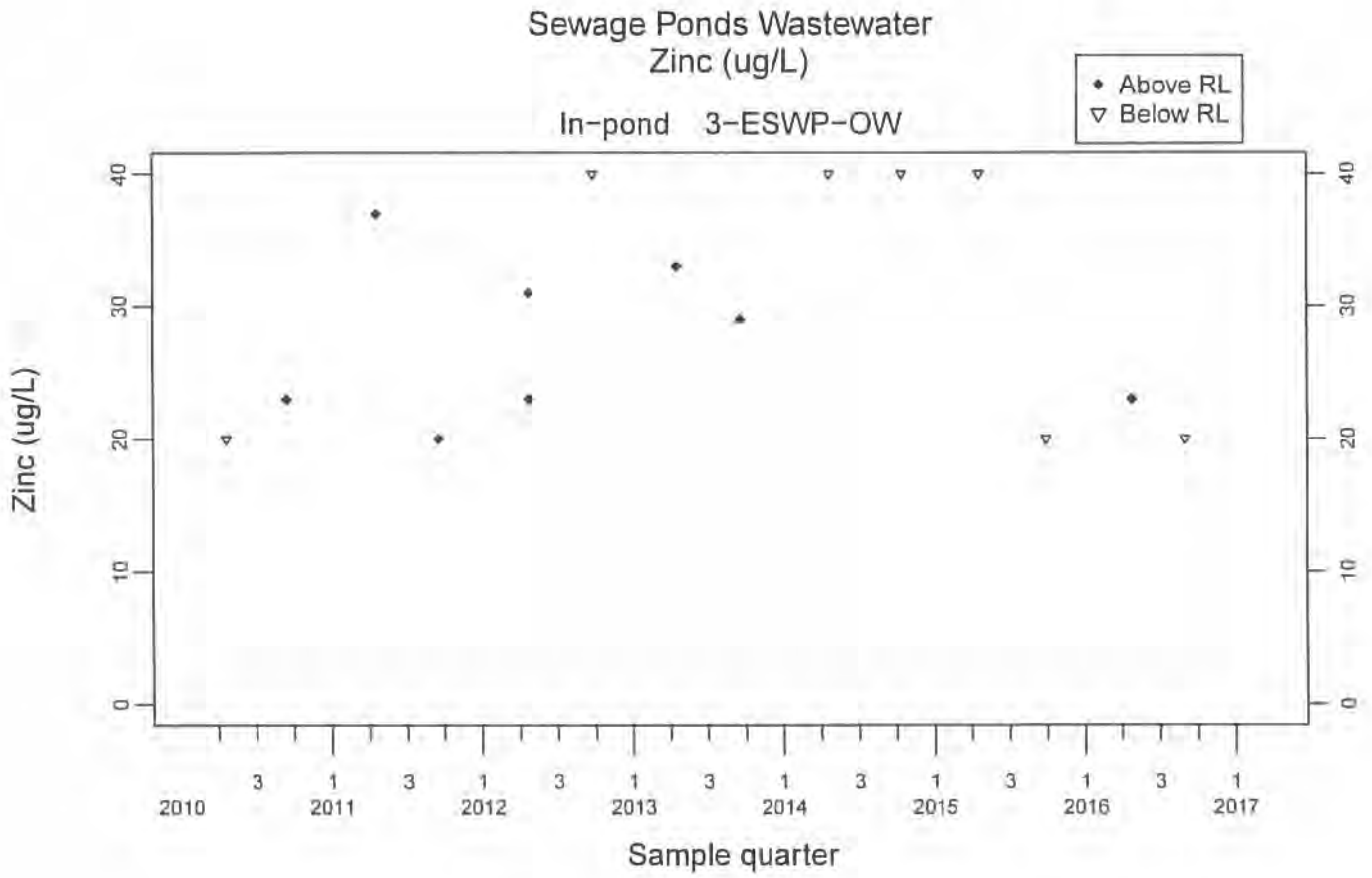

Sewage Ponds Wastewater
Nickel (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Nickel (ug/L)
0
1
2
3
4
5
6
7
3
1
3
1
3
1
3
1
3
1
3
1
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

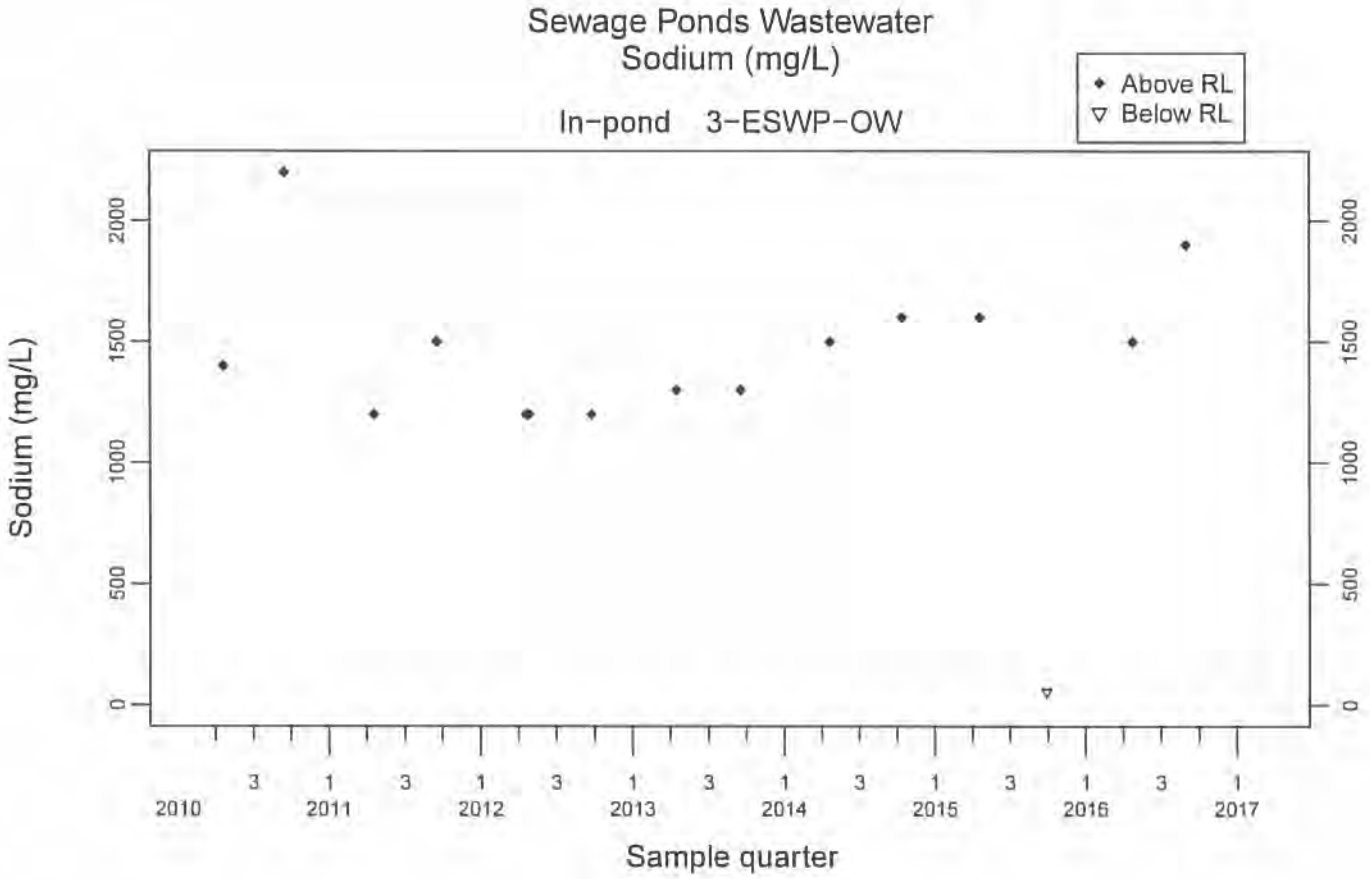

Sewage Ponds Wastewater
Potassium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Potassium (ug/L)
0e+00
1e+05
2e+05
3e+05
4e+05
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter


Sewage Ponds Wastewater
Selenium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Selenium (ug/L)
0
2
4
6
8
10
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

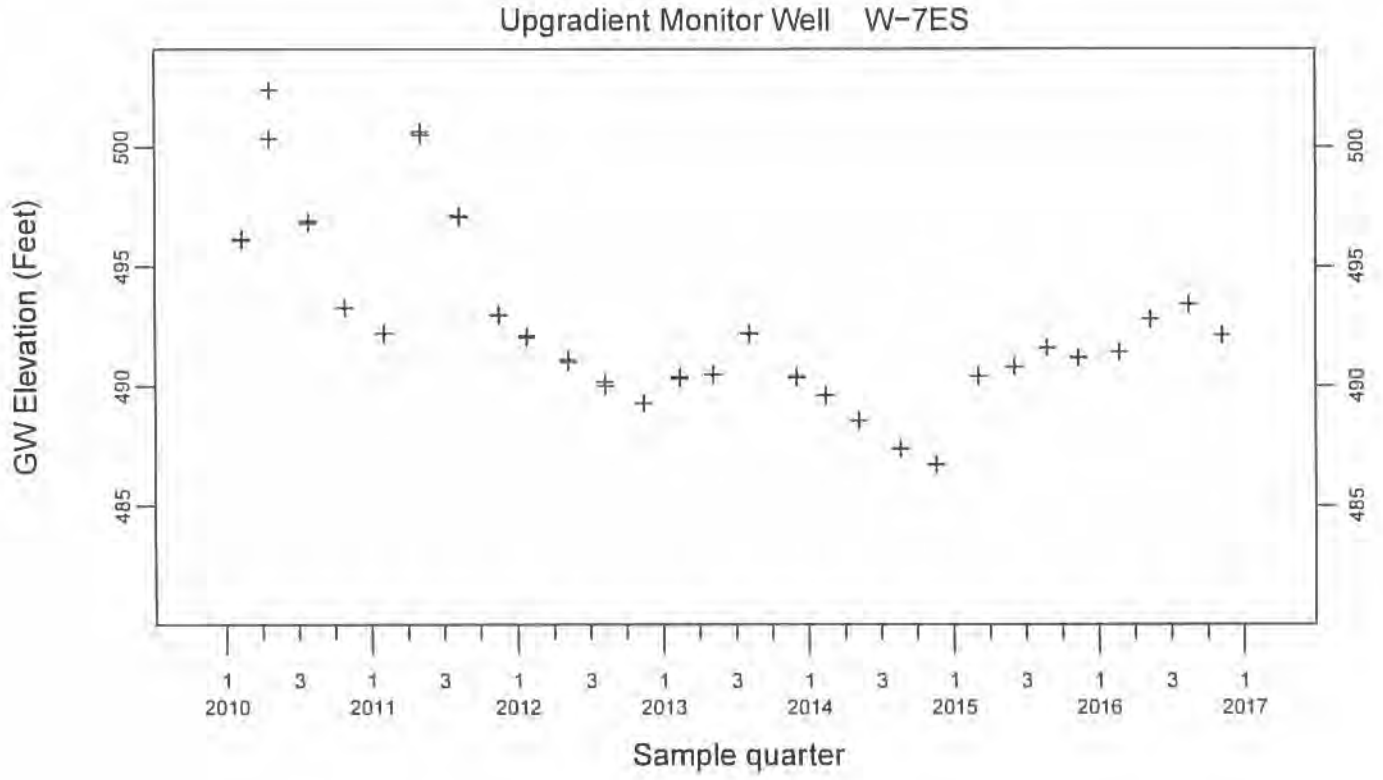

Sewage Ponds Wastewater
Silver (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Silver (ug/L)
0
2
4
6
8
10
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

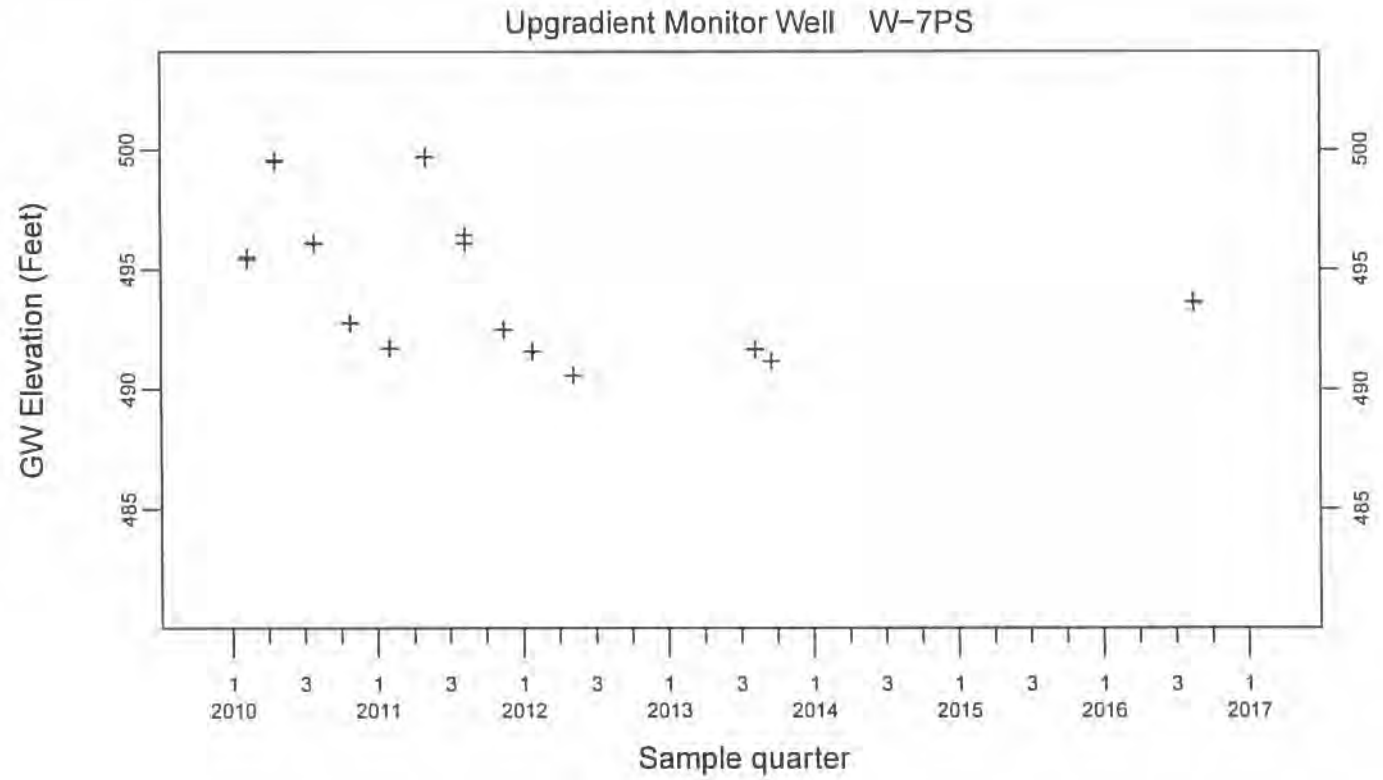

Sewage Ponds Wastewater
Vanadium (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Vanadium (ug/L)
0
10
20
30
40
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter


Sewage Ponds Wastewater
Zinc (ug/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Zinc (ug/L)
0
10
20
30
40
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

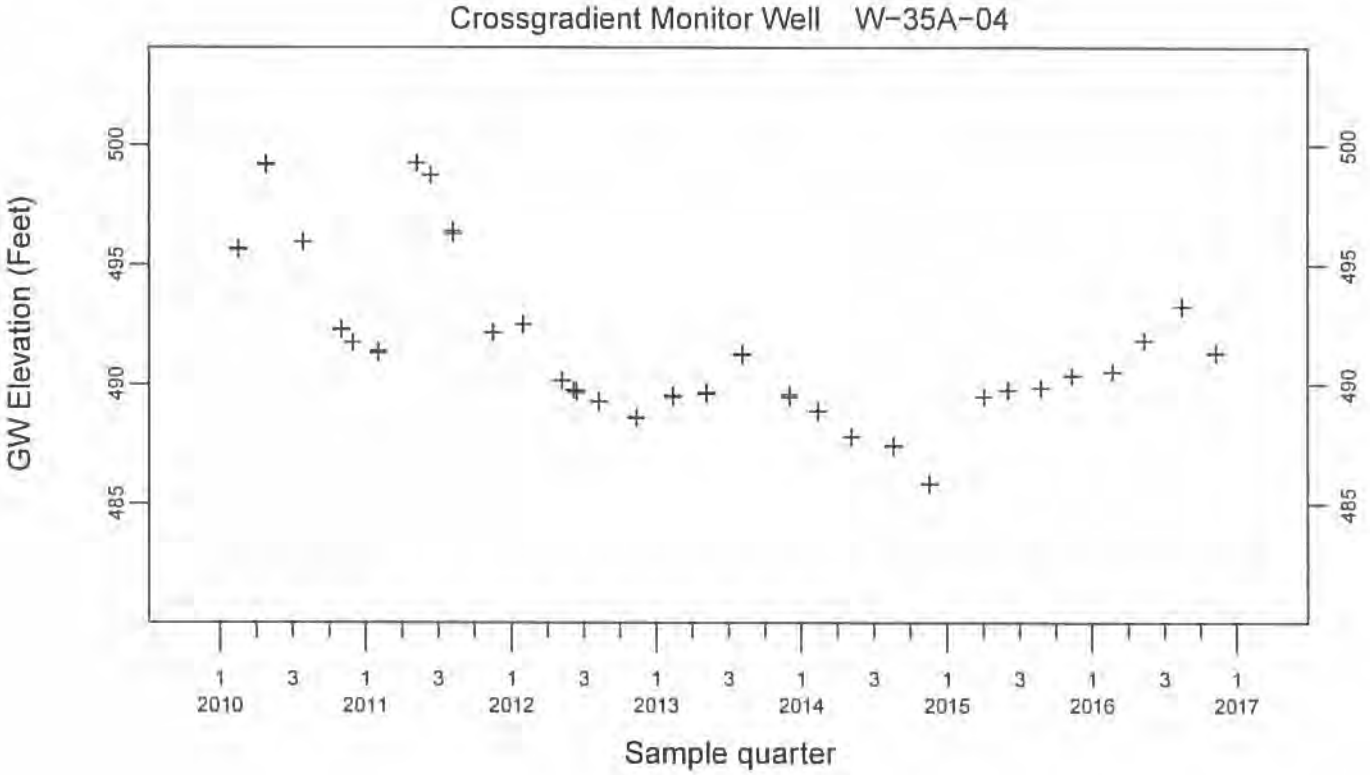

Sewage Ponds Wastewater
Sodium (mg/L)
In-pond 3-ESWP-OW
Above RL
Below RL
Sodium (mg/L)
0
500
1000
1500
2000
3
1
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

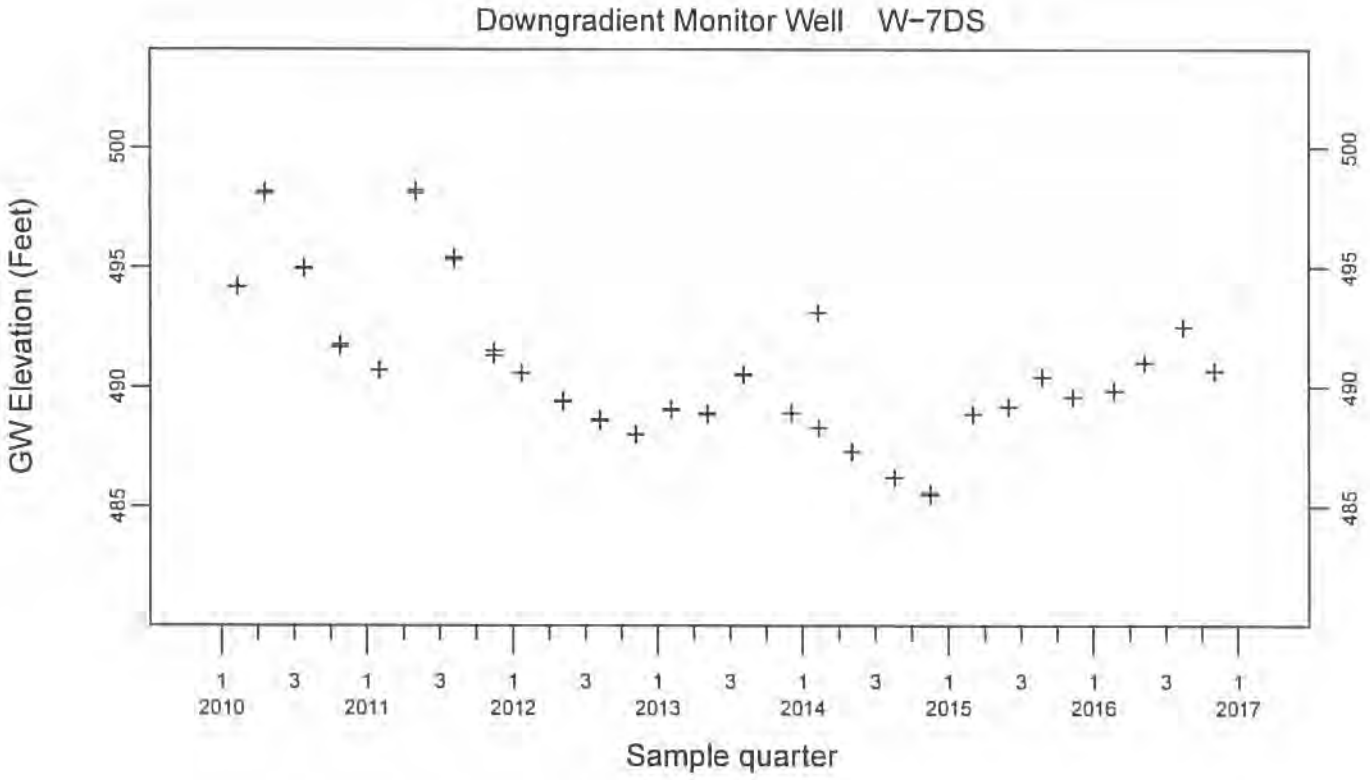
Sewage Ponds Ground Water
GW Elevation (Feet)



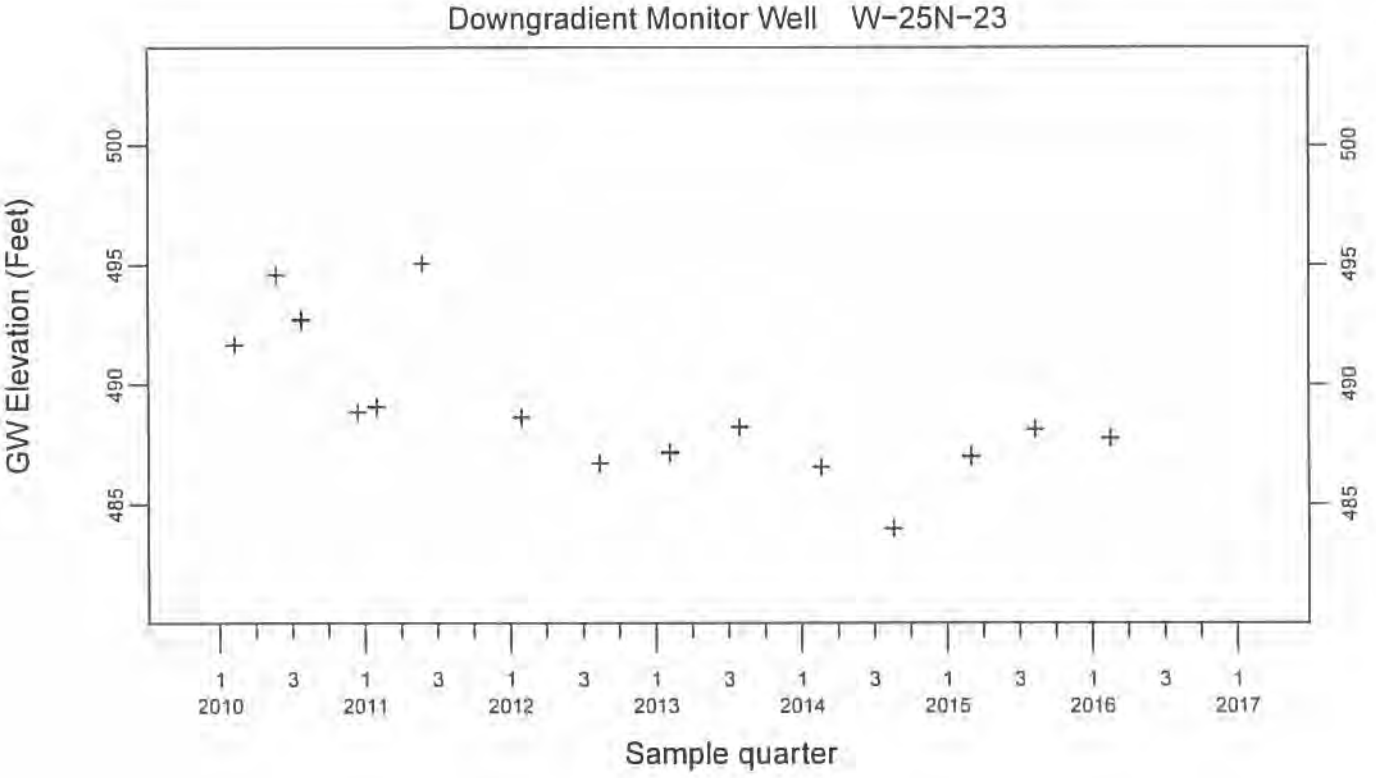


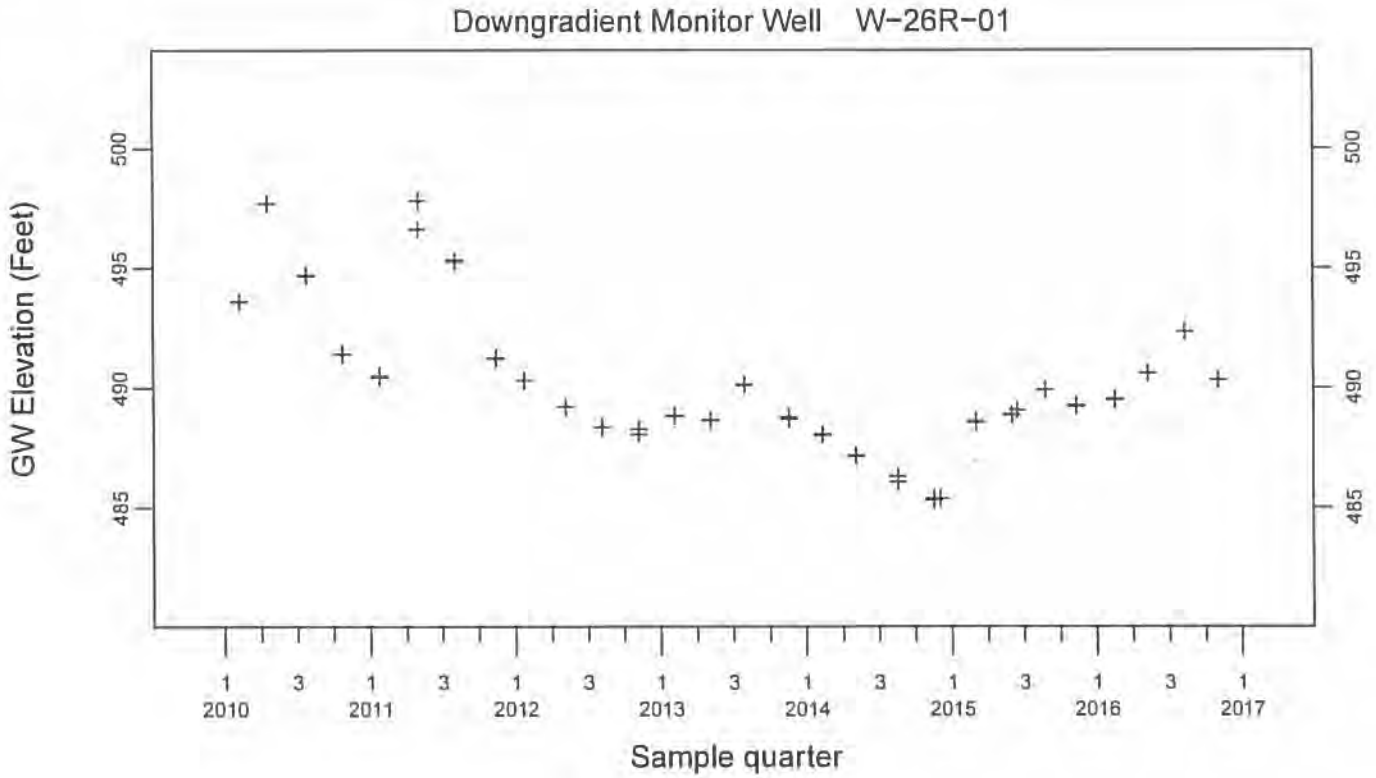
Sewage Ponds Ground Water
GW Elevation (Feet)



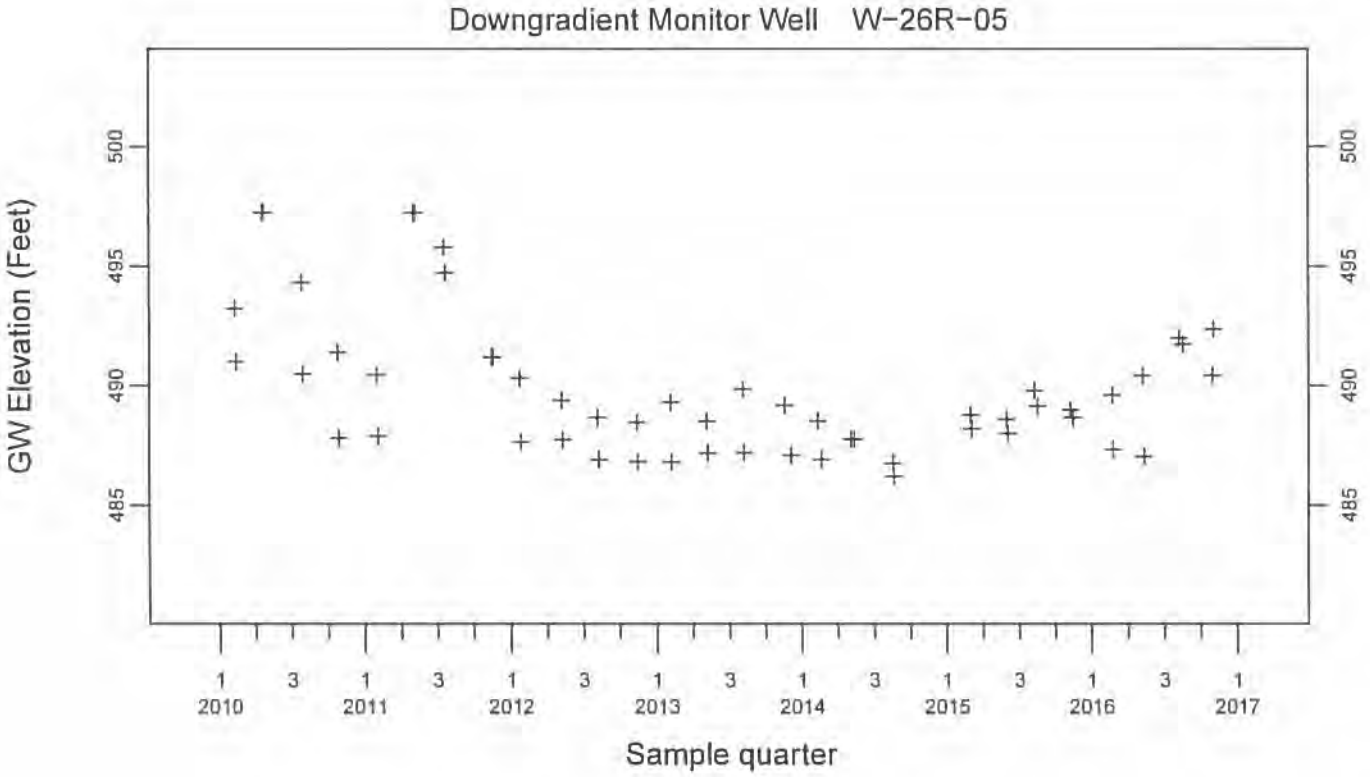


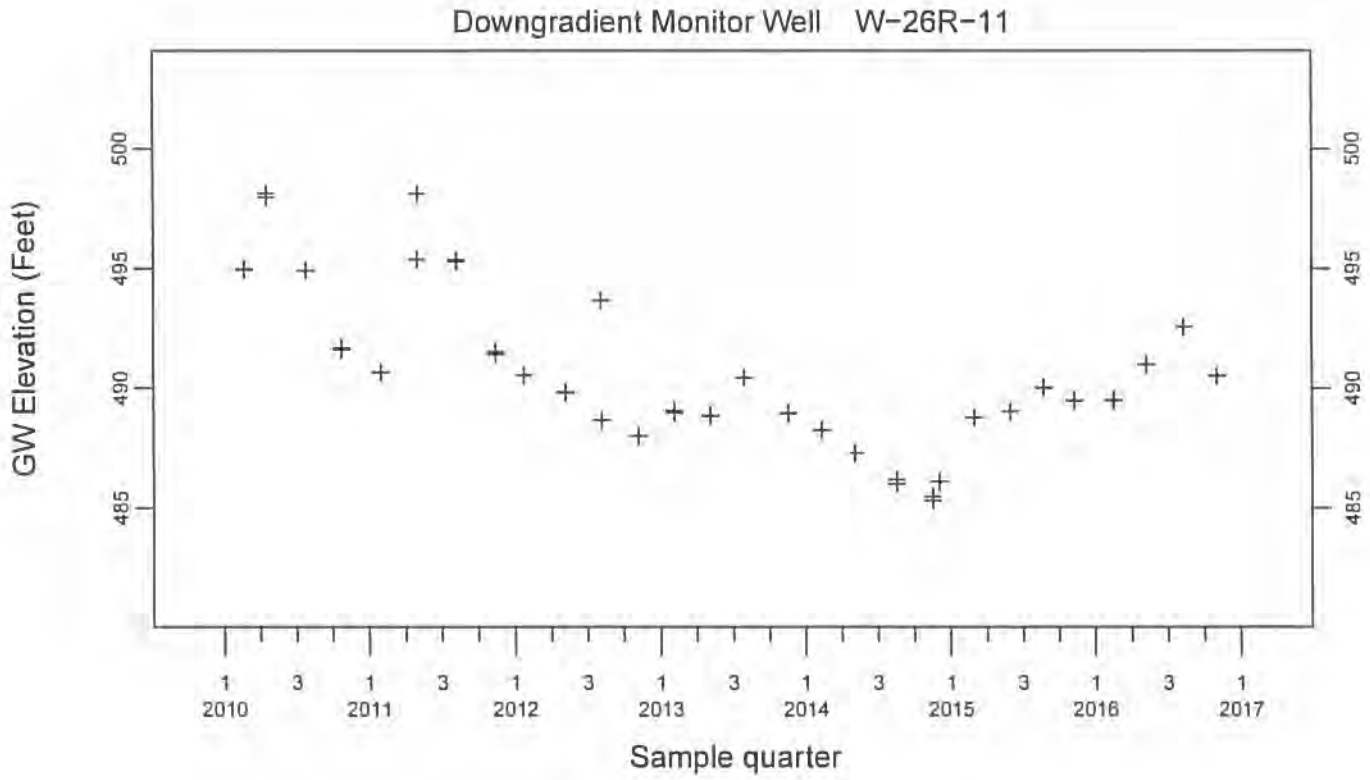
Sewage Ponds Ground Water
GW Elevation (Feet)

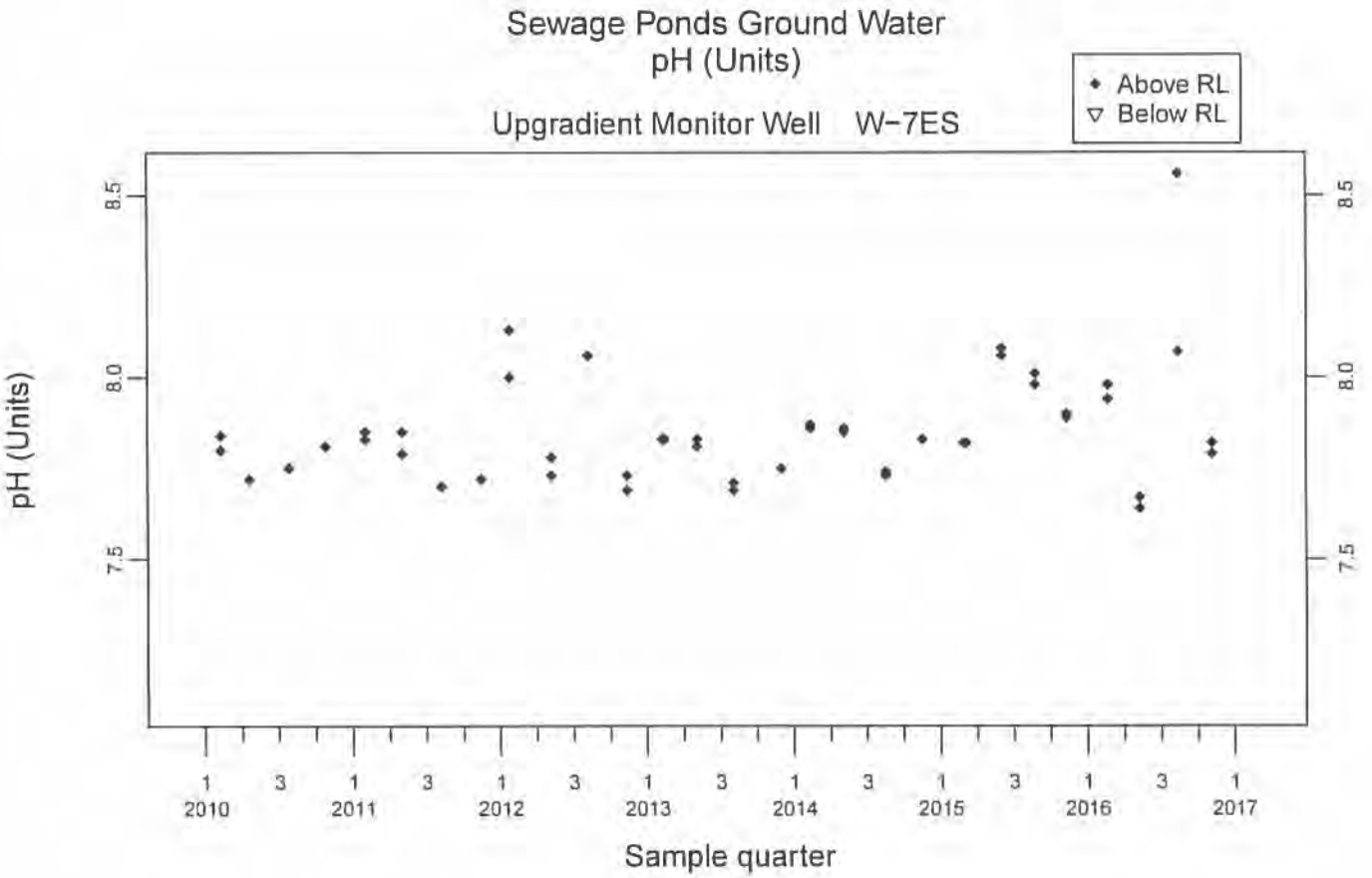


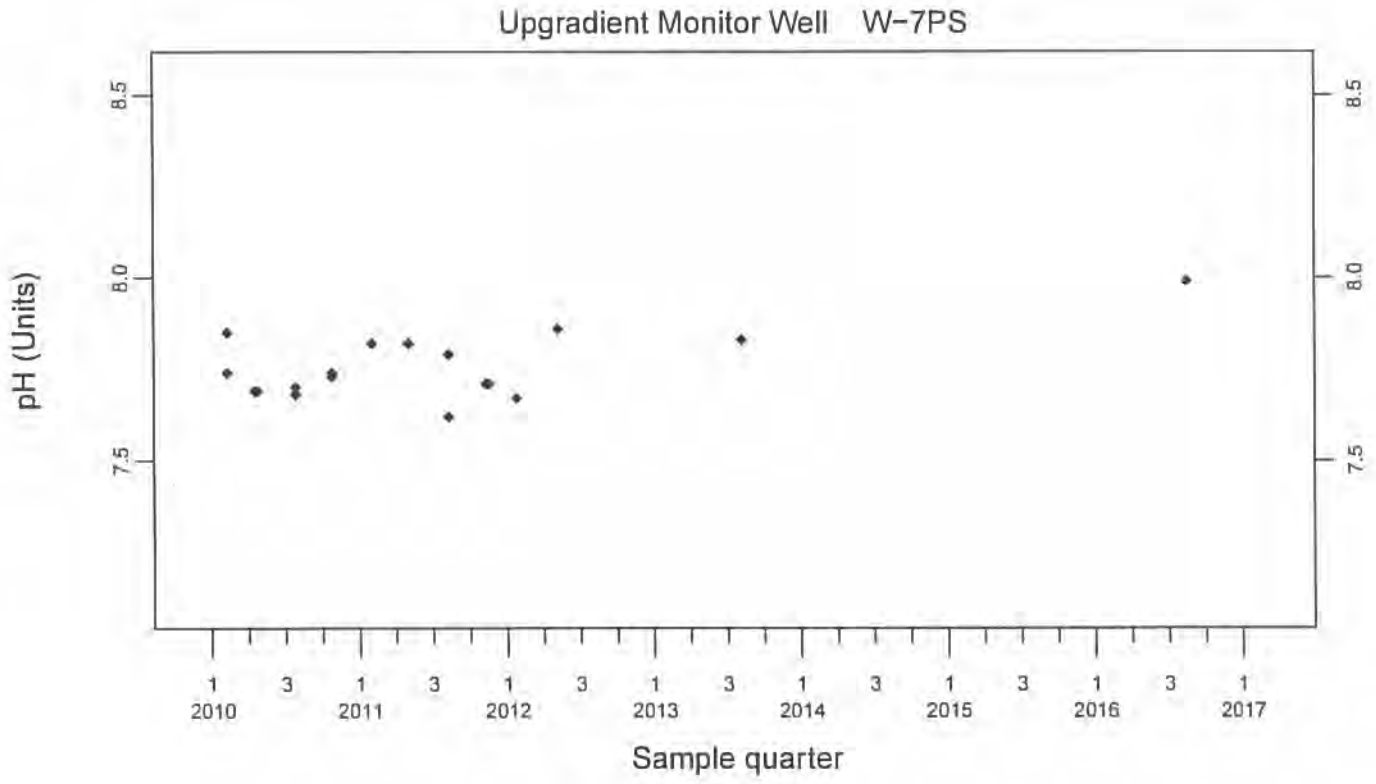


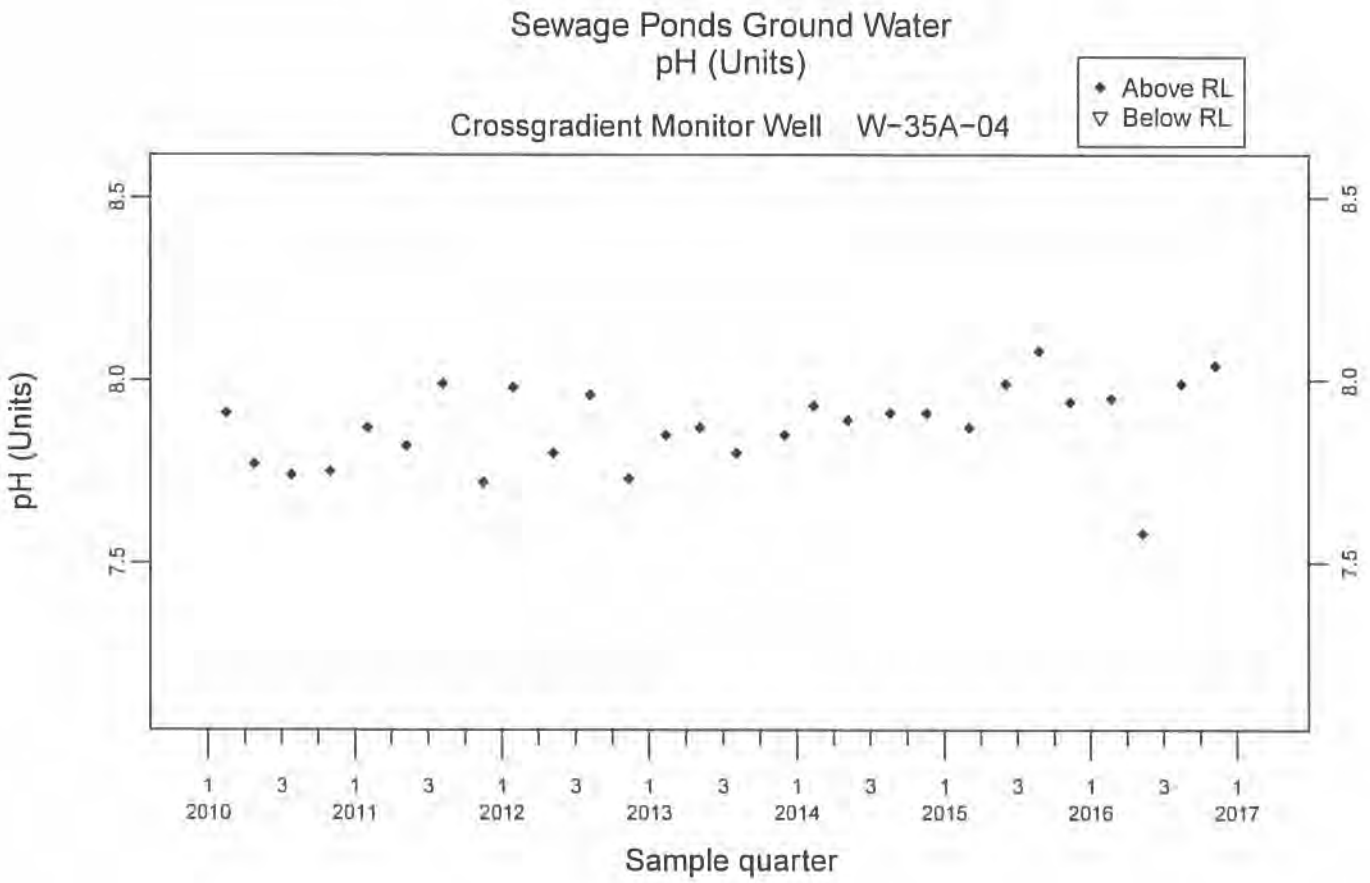
Sewage Ponds Ground Water
GW Elevation (Feet)

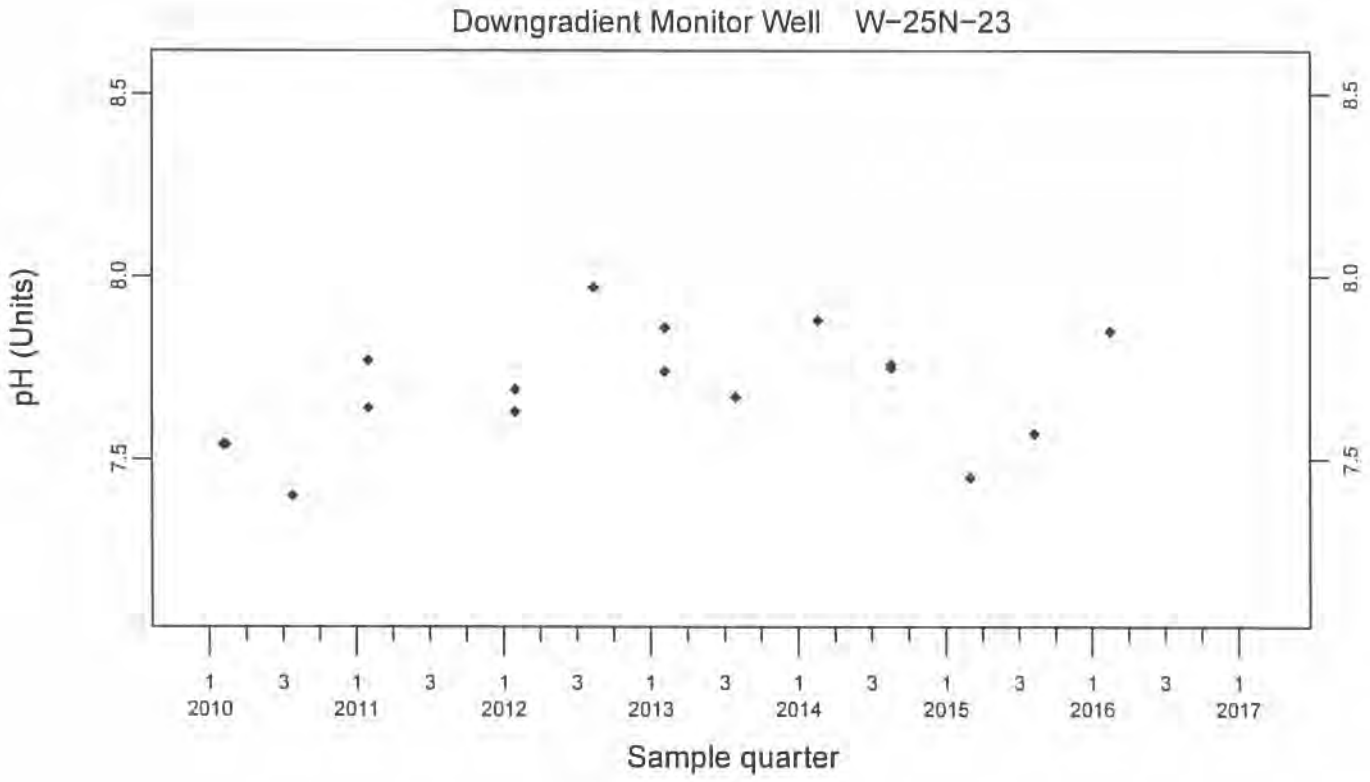


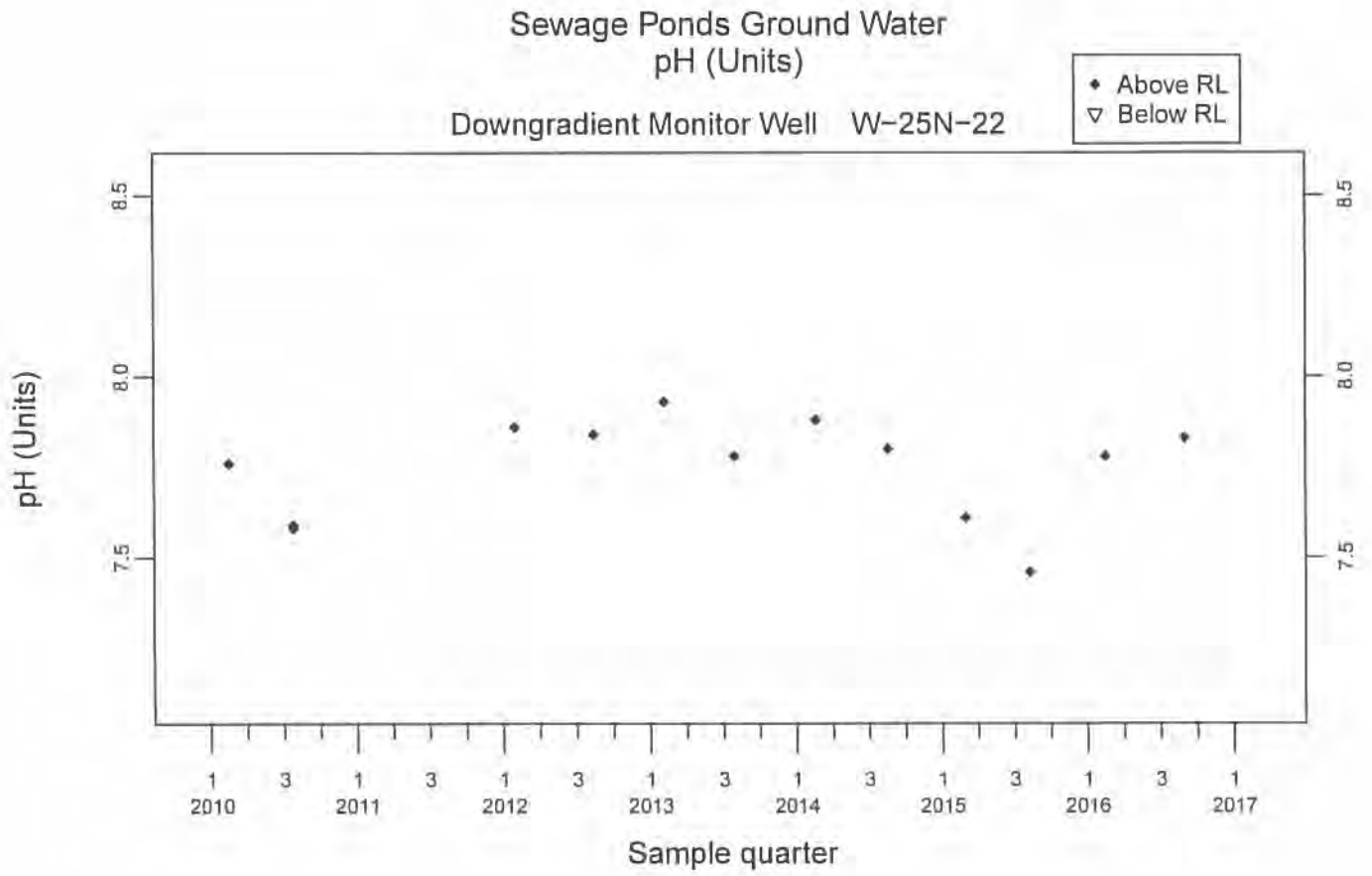


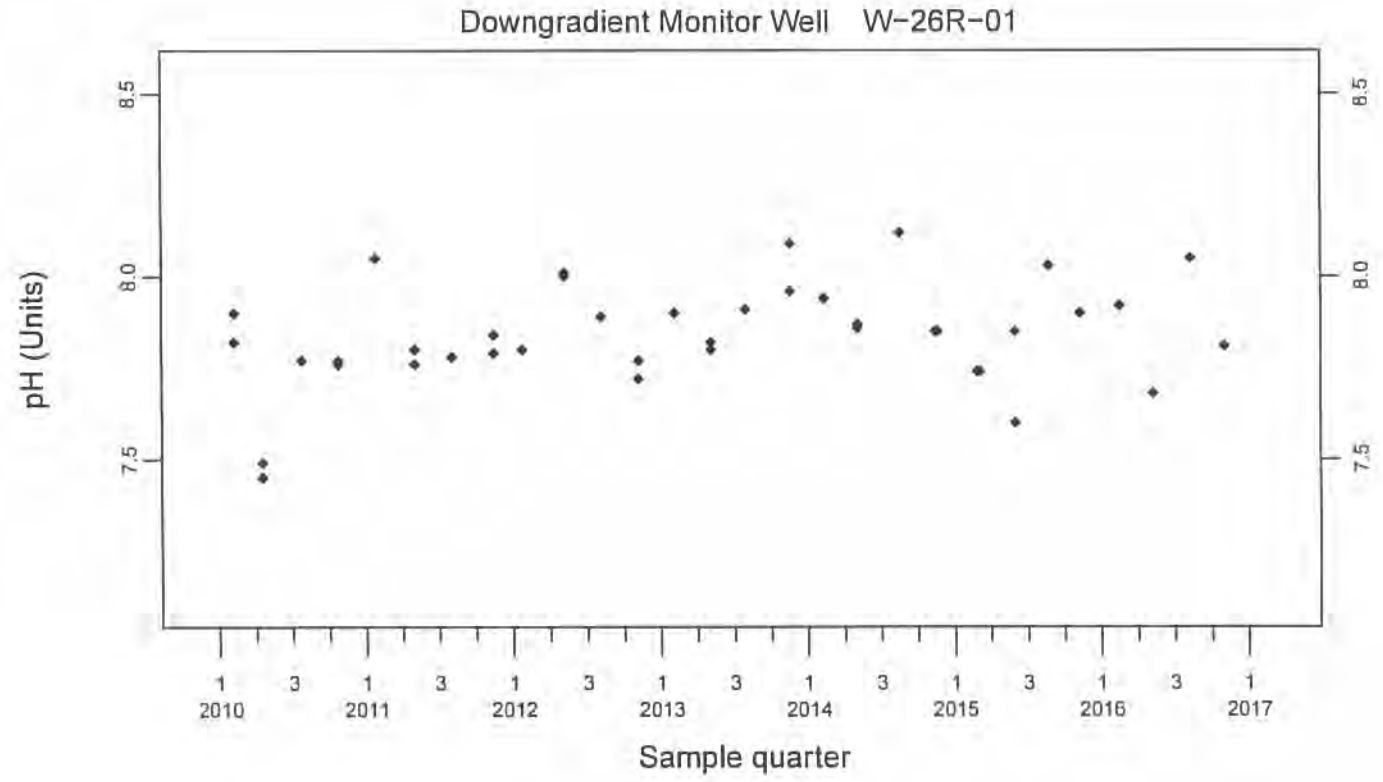

Sewage Ponds Ground Water
pH (Units)
Upgradient Monitor Well W-7ES
Above RL
Below RL
pH (Units)
8.5
8.0
7.5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

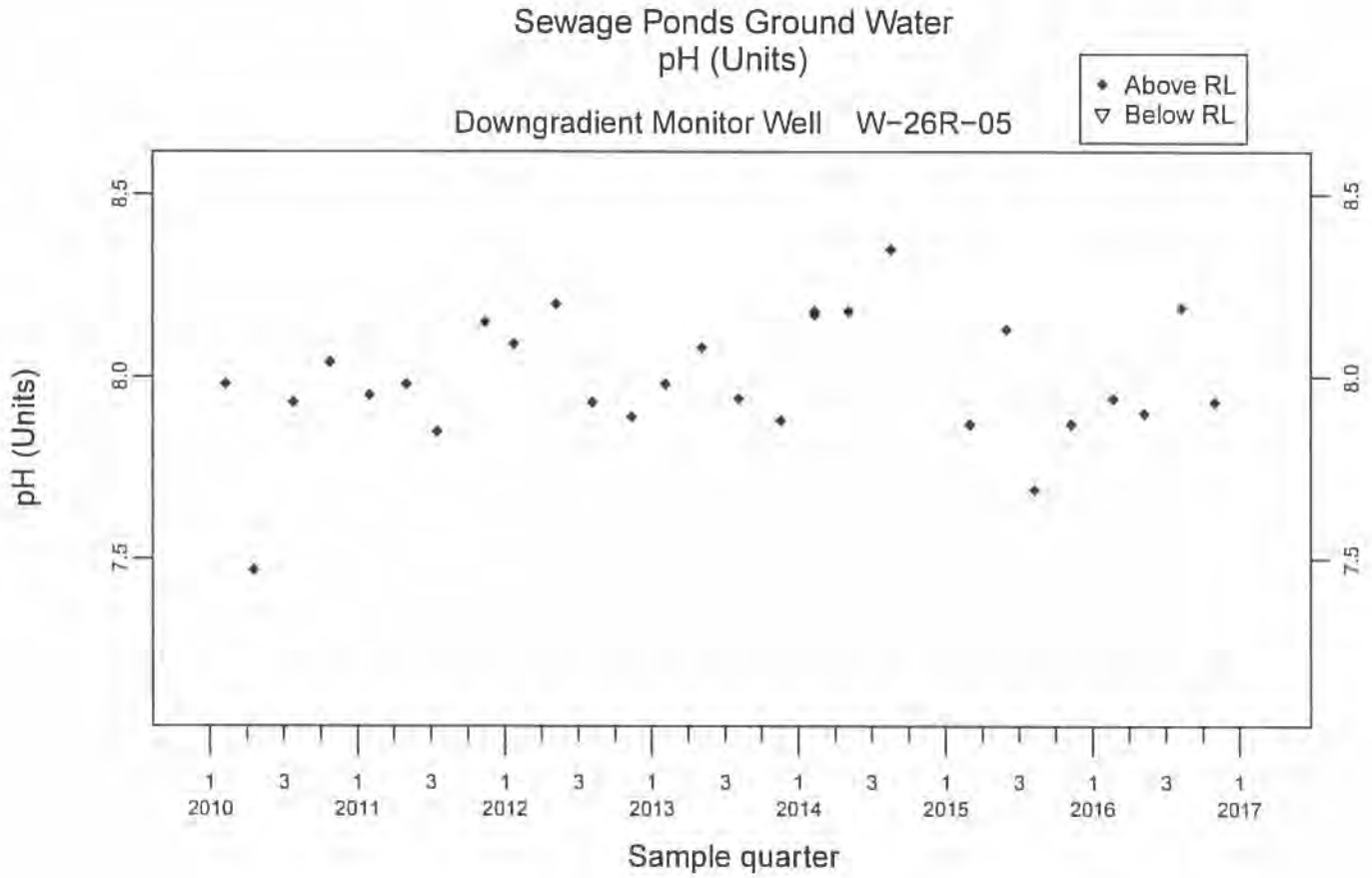

Upgradient Monitor Well W-7PS
pH (Units)
8.5
8.0
7.5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

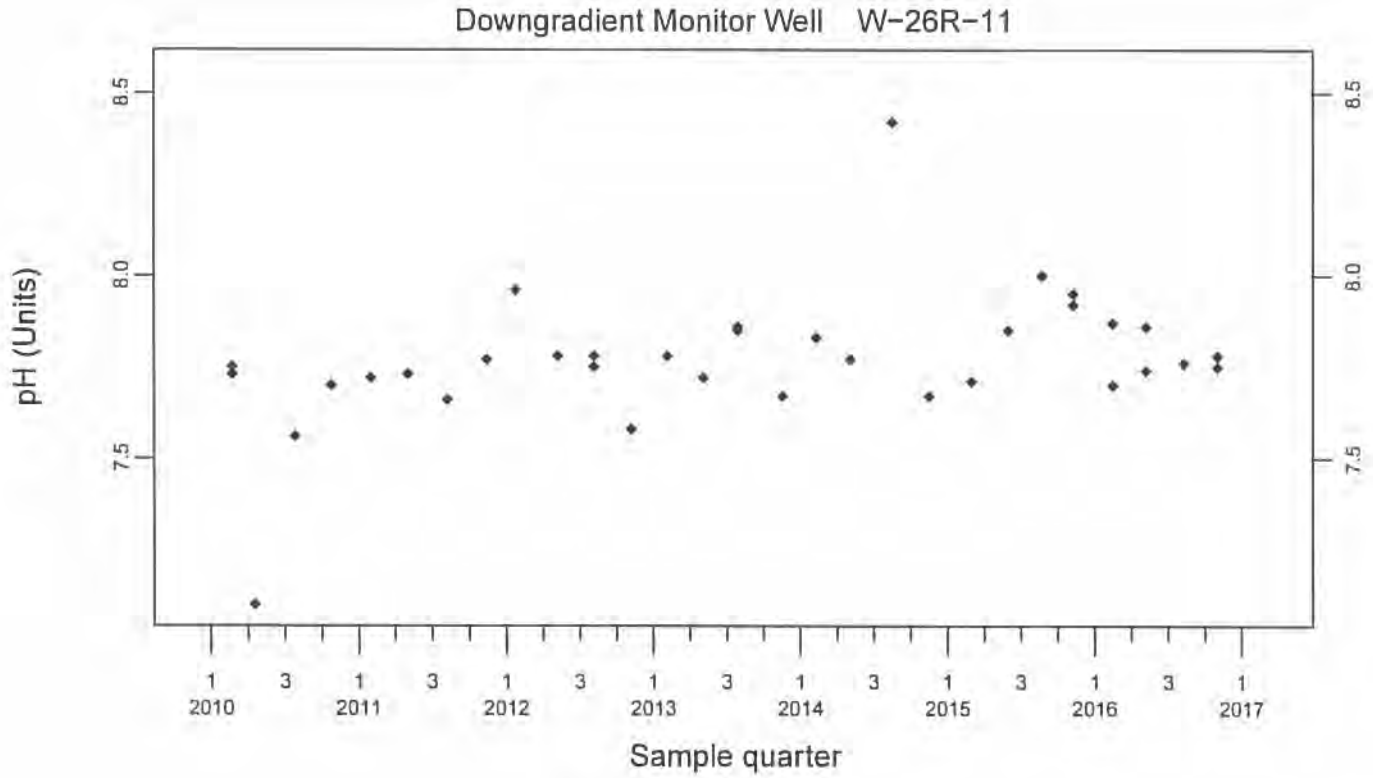

Sewage Ponds Ground Water
pH (Units)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
pH (Units)
8.5
8.0
7.5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

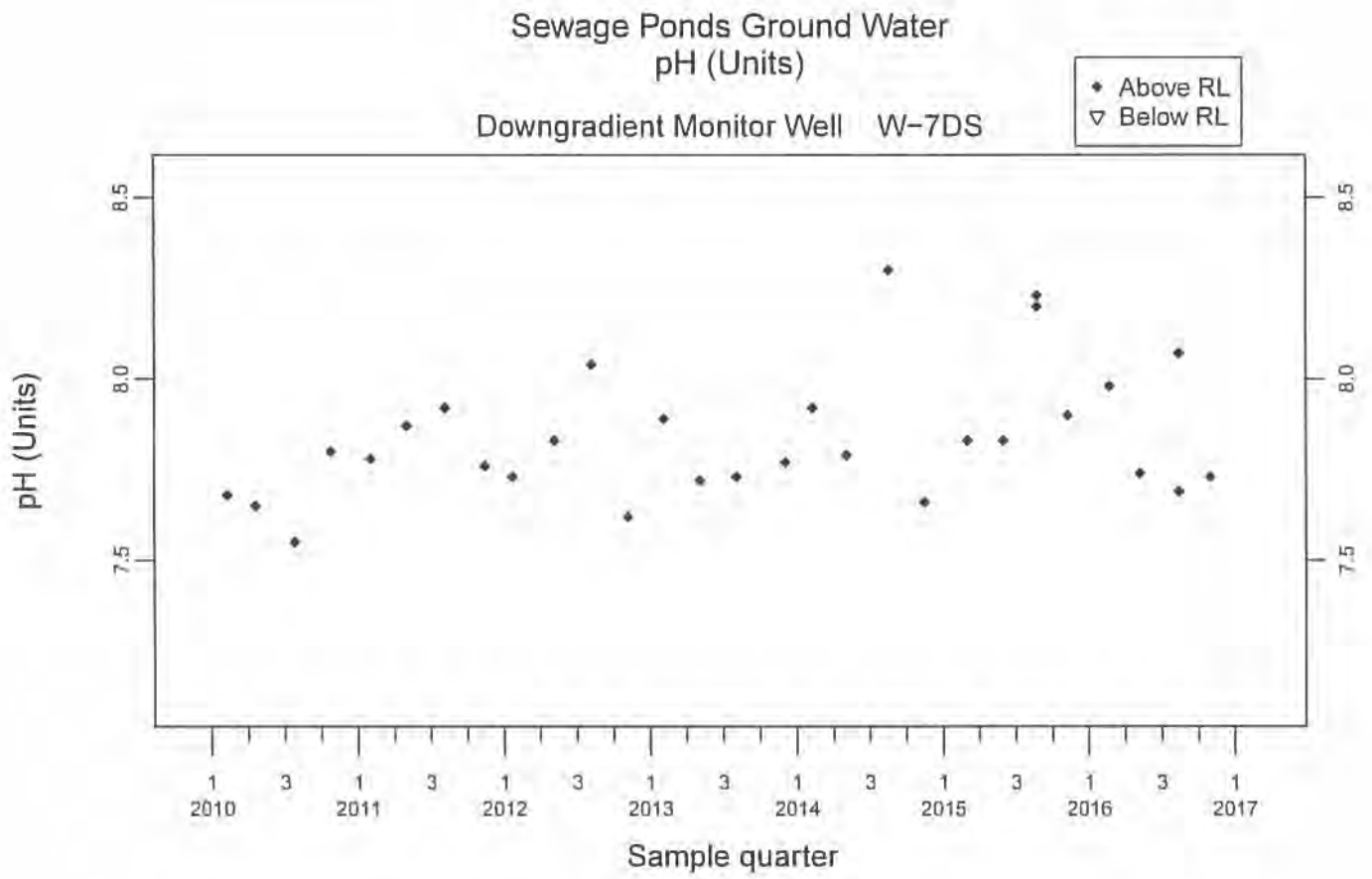

Downgradient Monitor Well W-25N-23
pH (Units)
8.5
8.0
7.5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

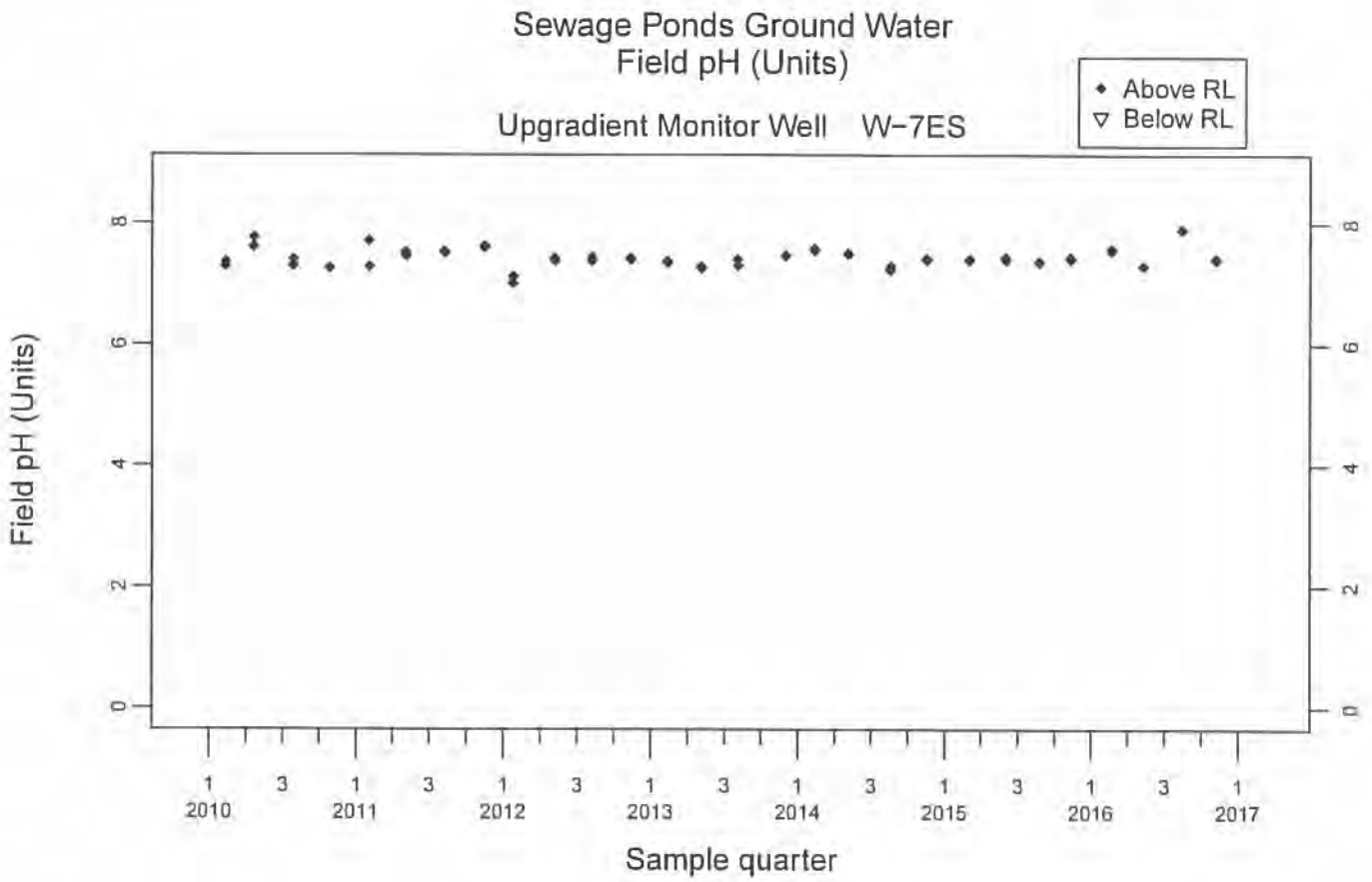

Sewage Ponds Ground Water
pH (Units)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
pH (Units)
8.5
8.0
7.5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

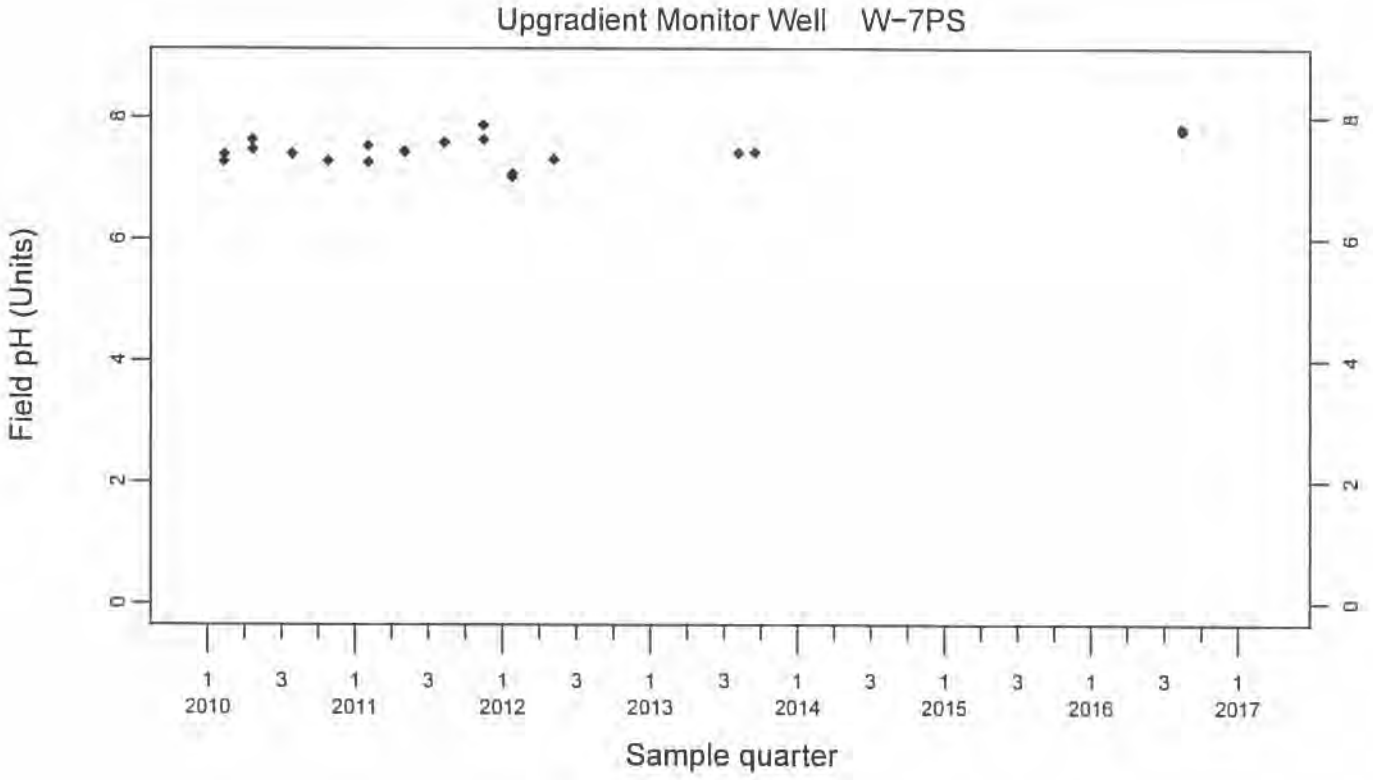

Downgradient Monitor Well W-26R-01
pH (Units)
8.5
8.0
7.5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

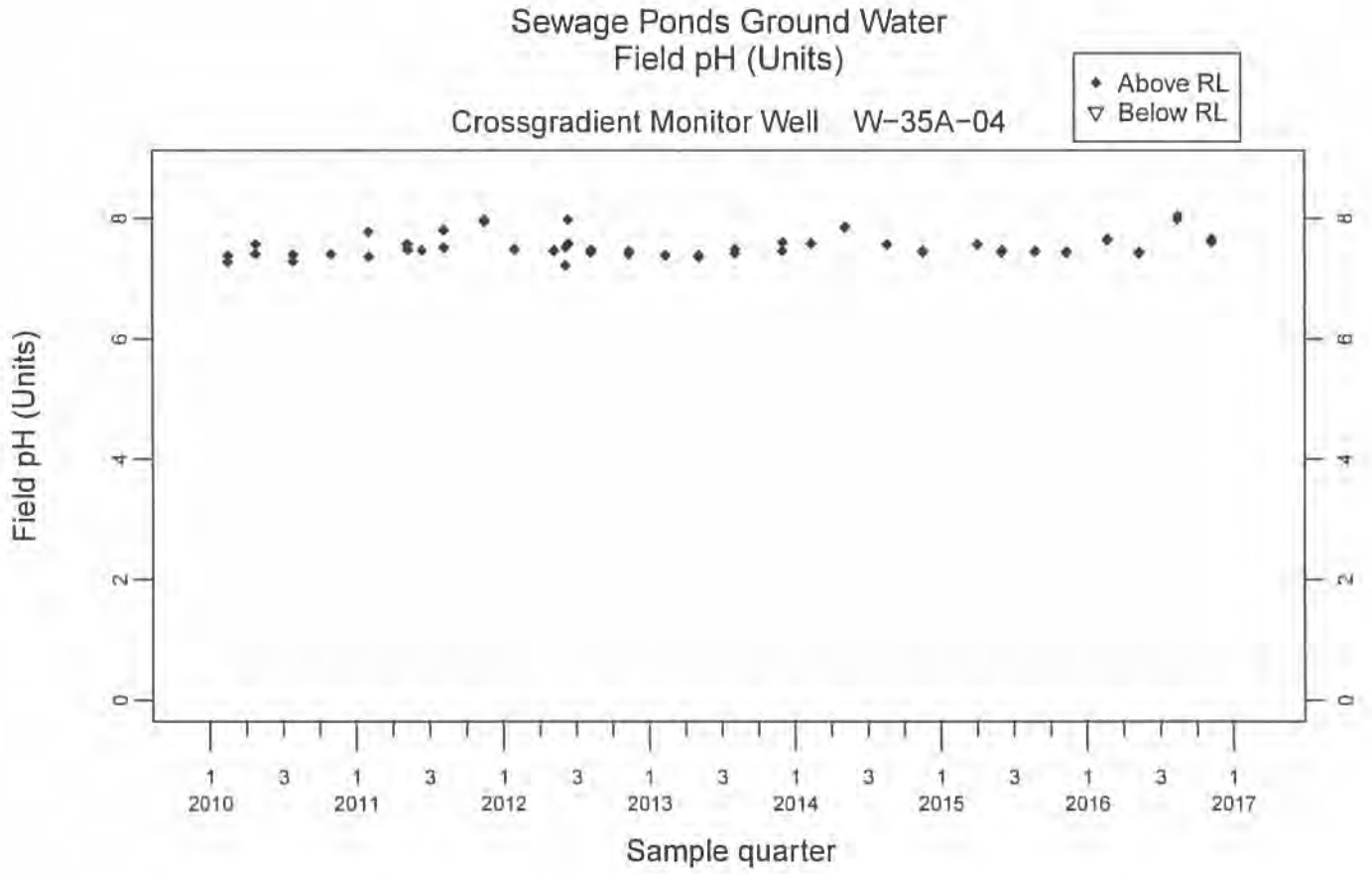

Sewage Ponds Ground Water
pH (Units)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
pH (Units)
8.5
8.0
7.5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

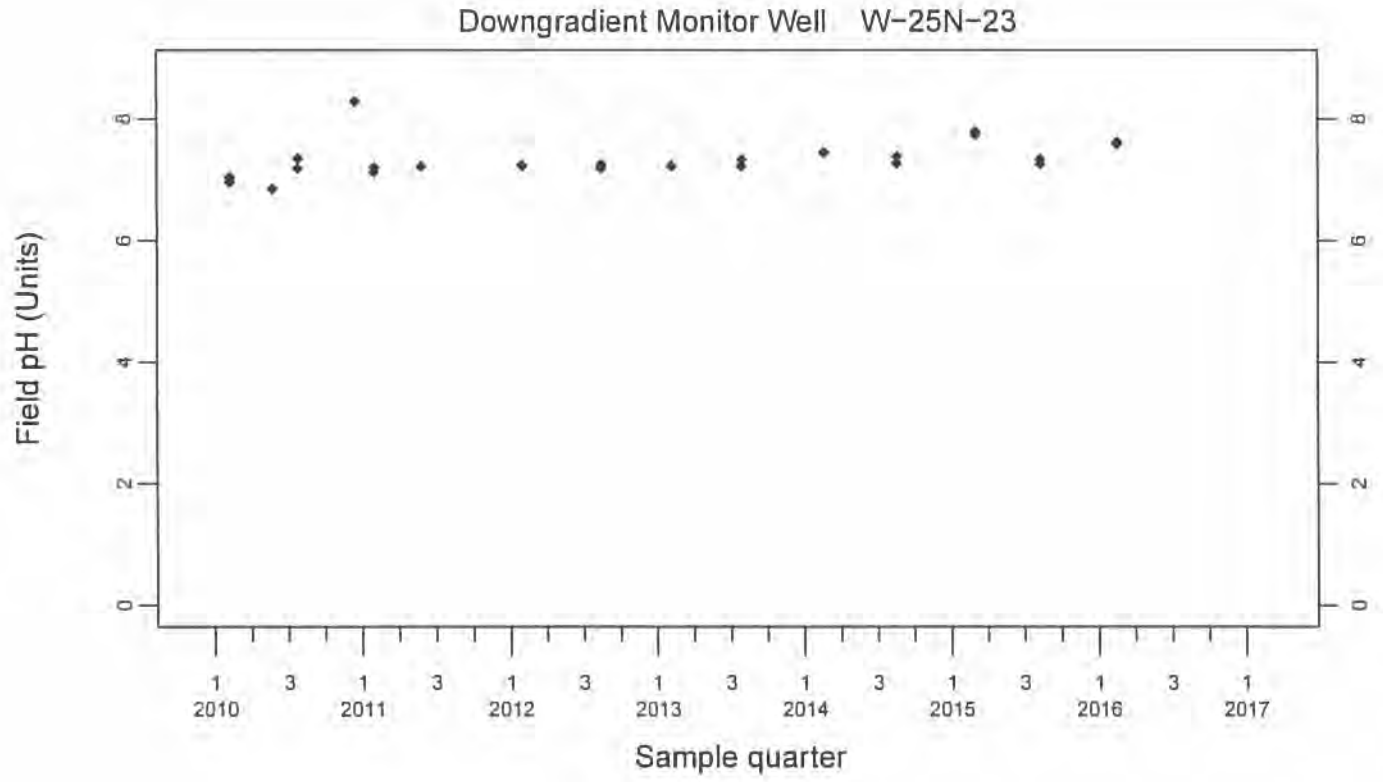

Downgradient Monitor Well W-26R-11
pH (Units)
8.5
8.0
7.5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

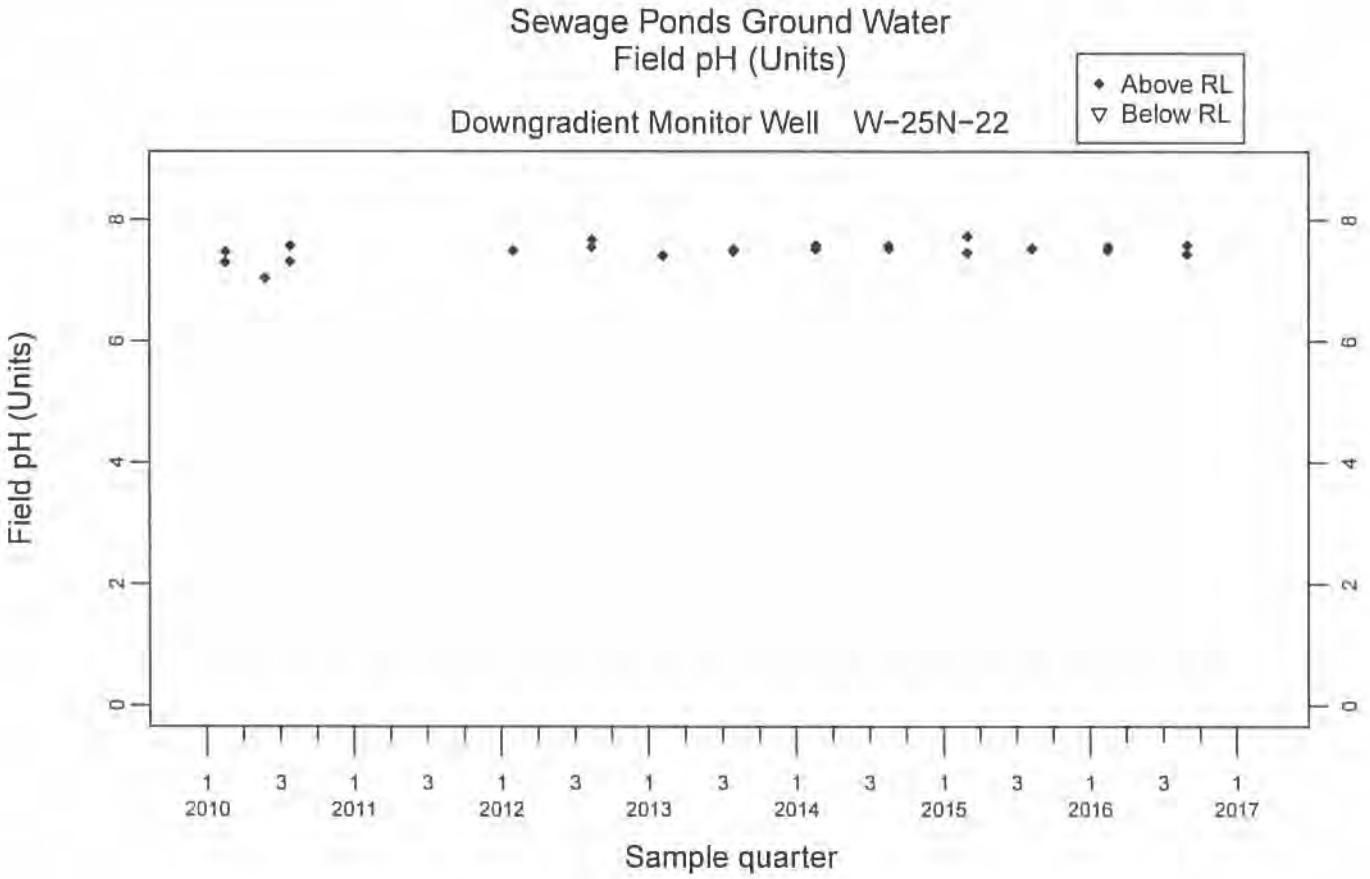

Sewage Ponds Ground Water
pH (Units)
Downgradient Monitor Well W-7DS
Above RL
Below RL
pH (Units)
8.5
8.0
7.5
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

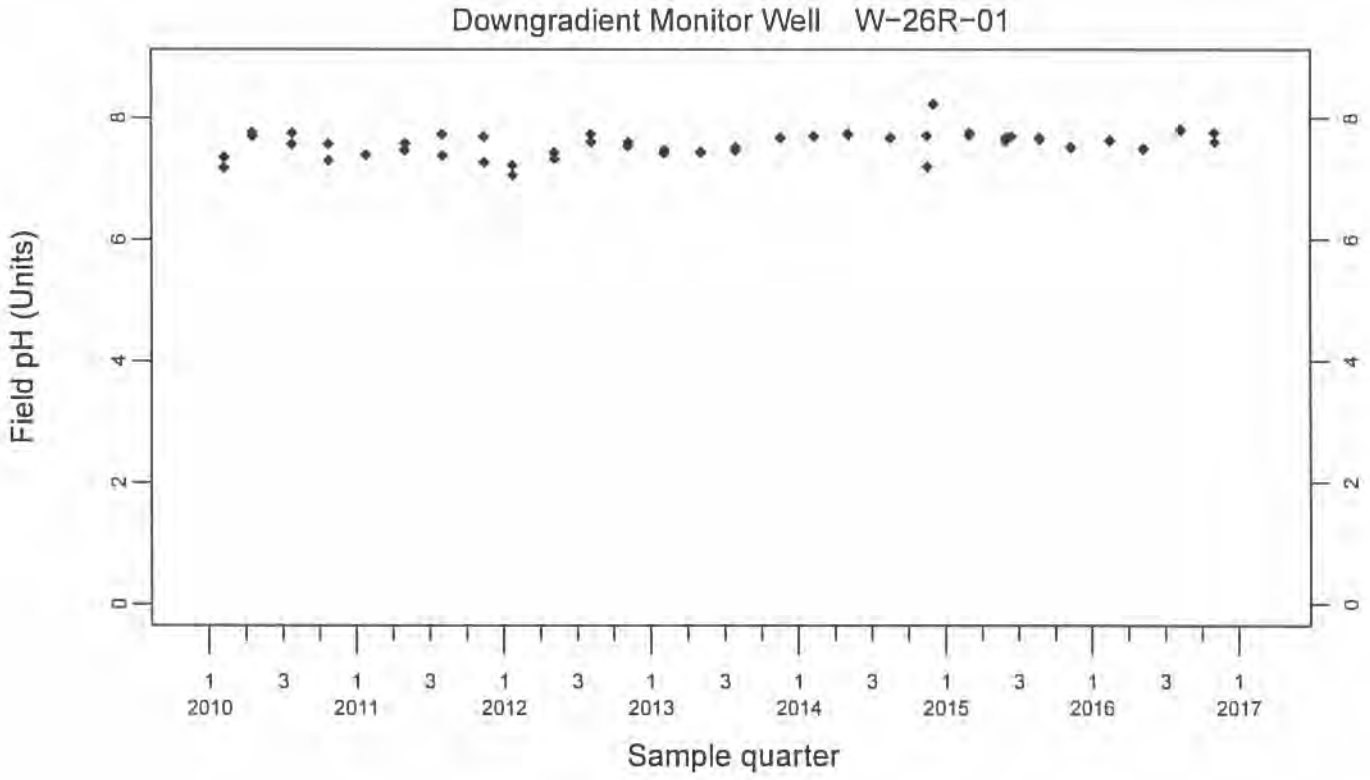

Sewage Ponds Ground Water
Field pH (Units)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

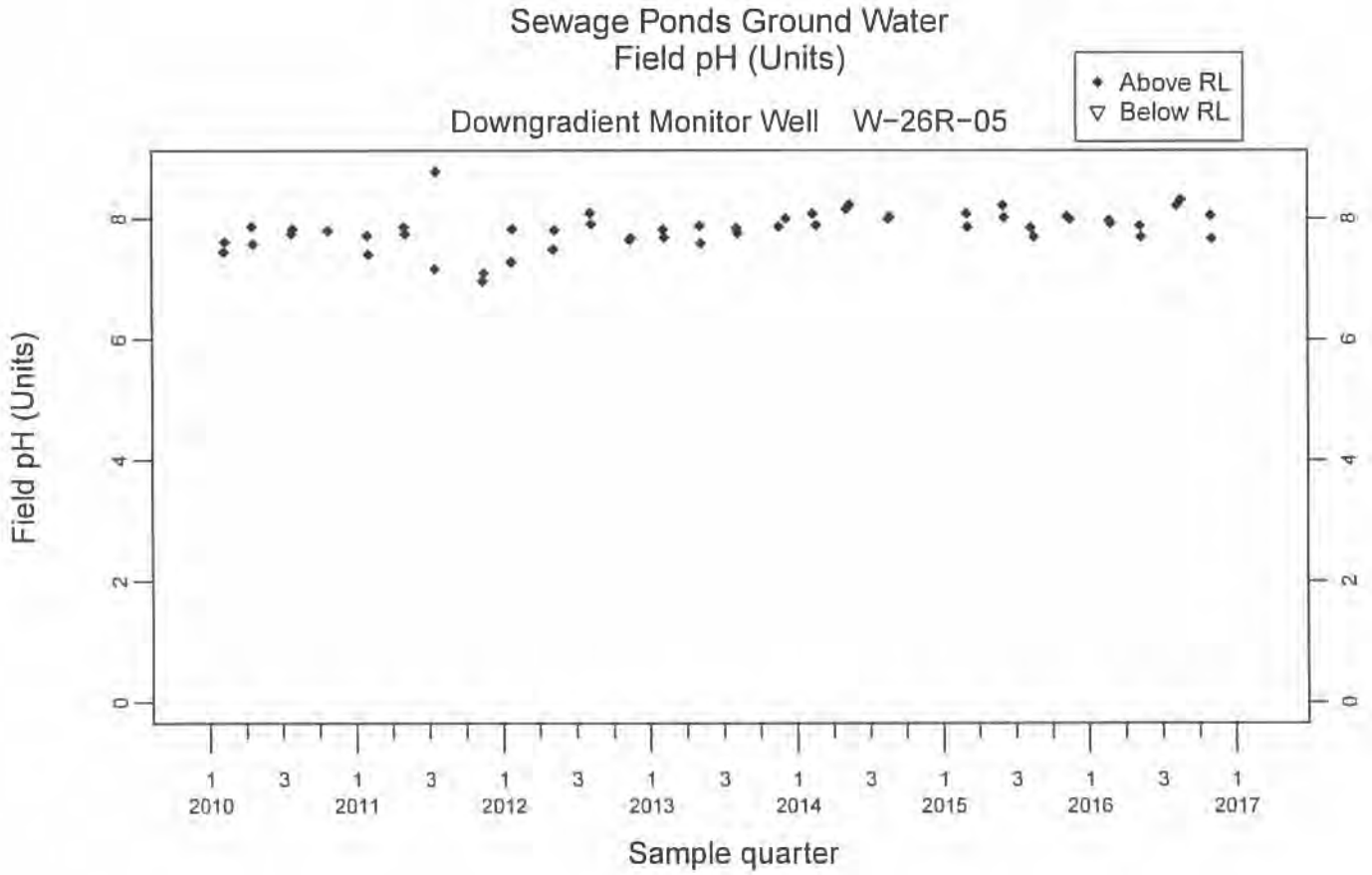

Upgradient Monitor Well W-7PS
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

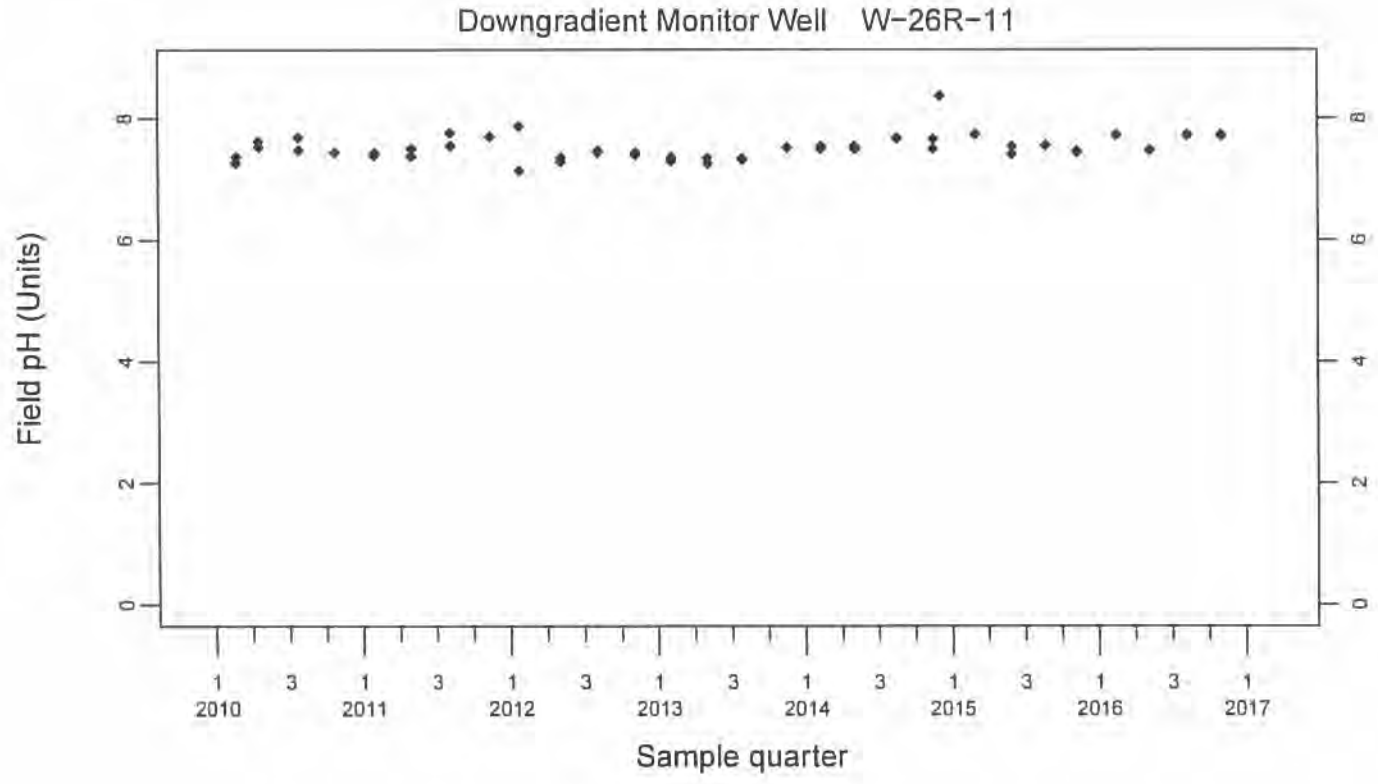

Sewage Ponds Ground Water
Field pH (Units)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

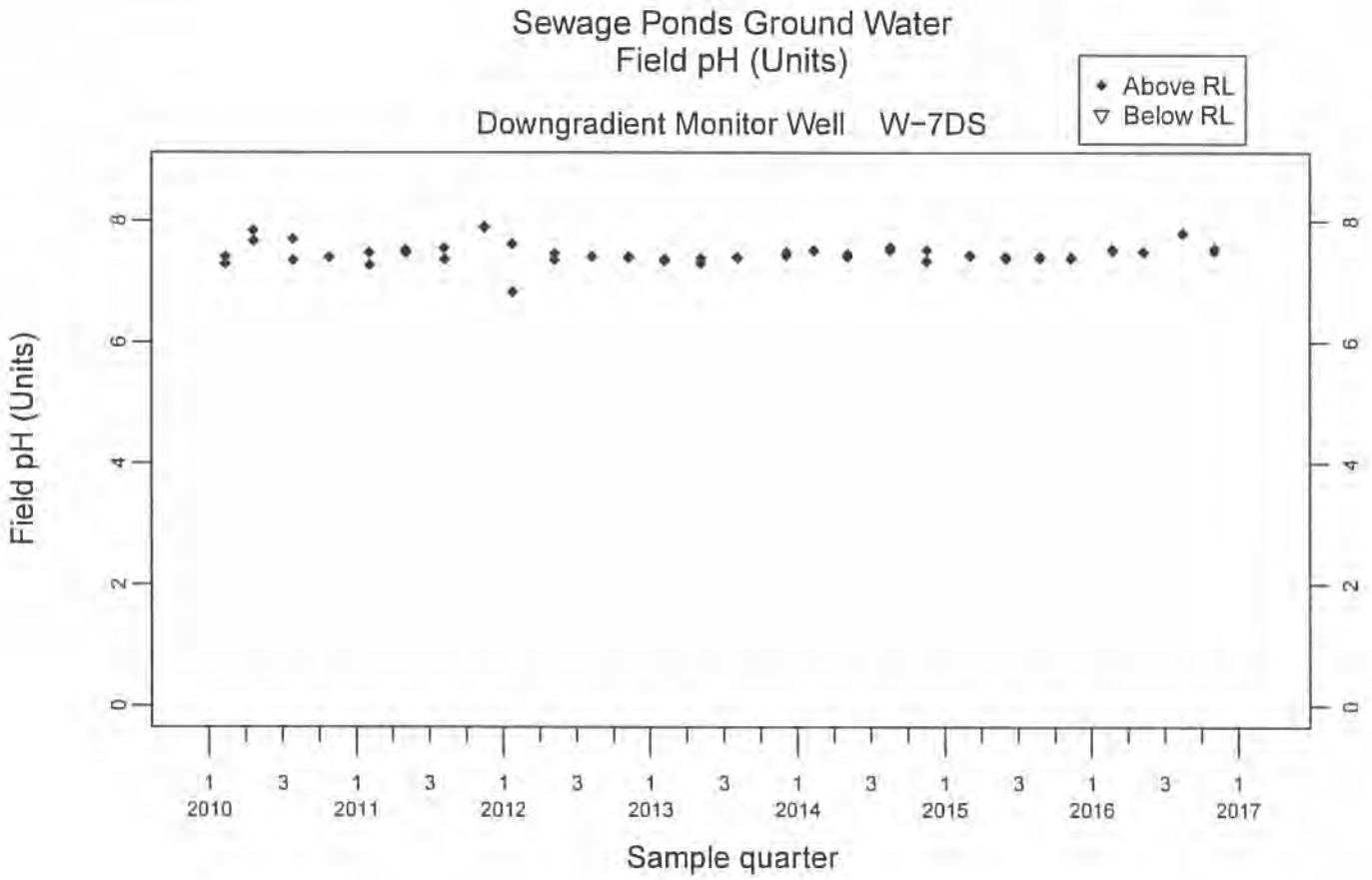

Downgradient Monitor Well W-25N-23
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

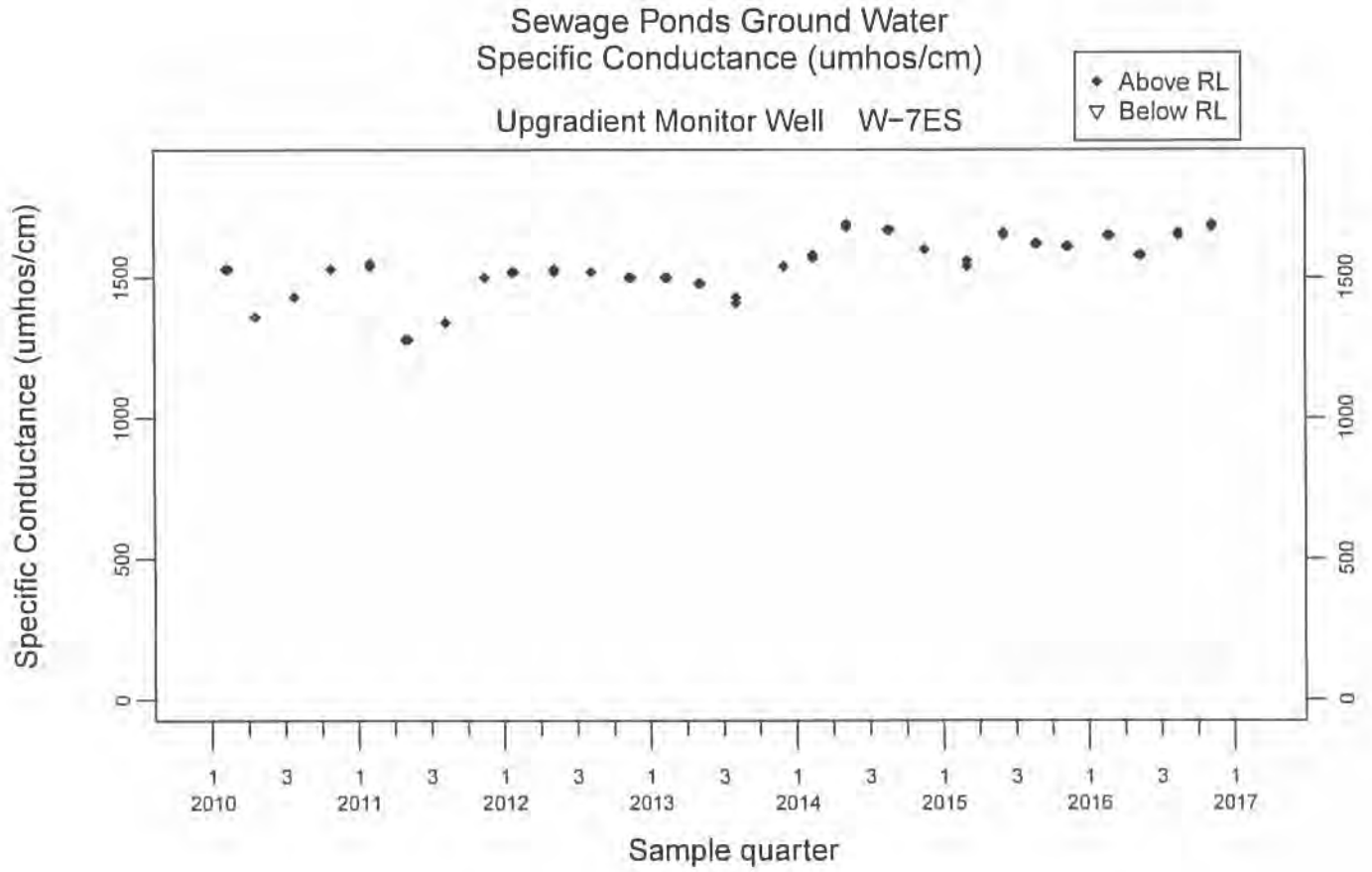

Sewage Ponds Ground Water
Field pH (Units)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

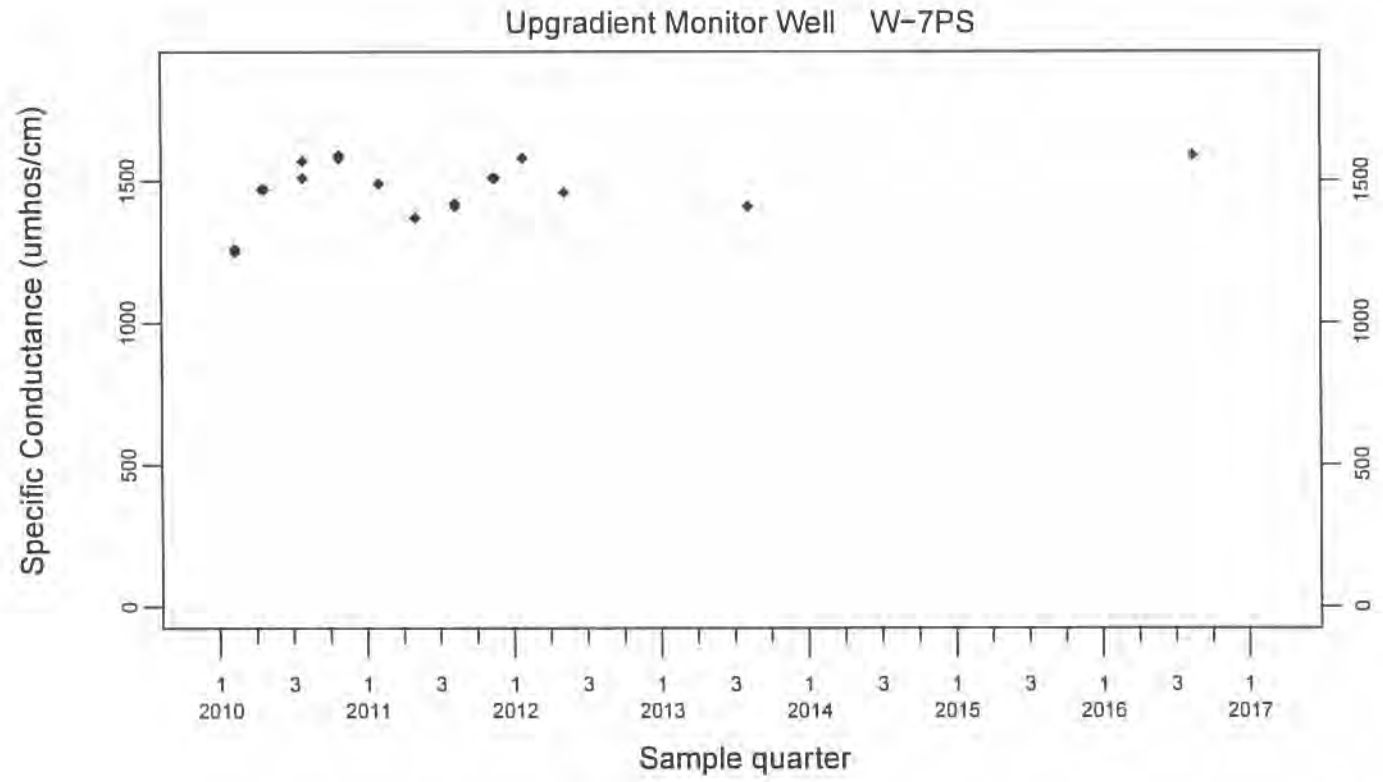

Downgradient Monitor Well W-26R-01
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

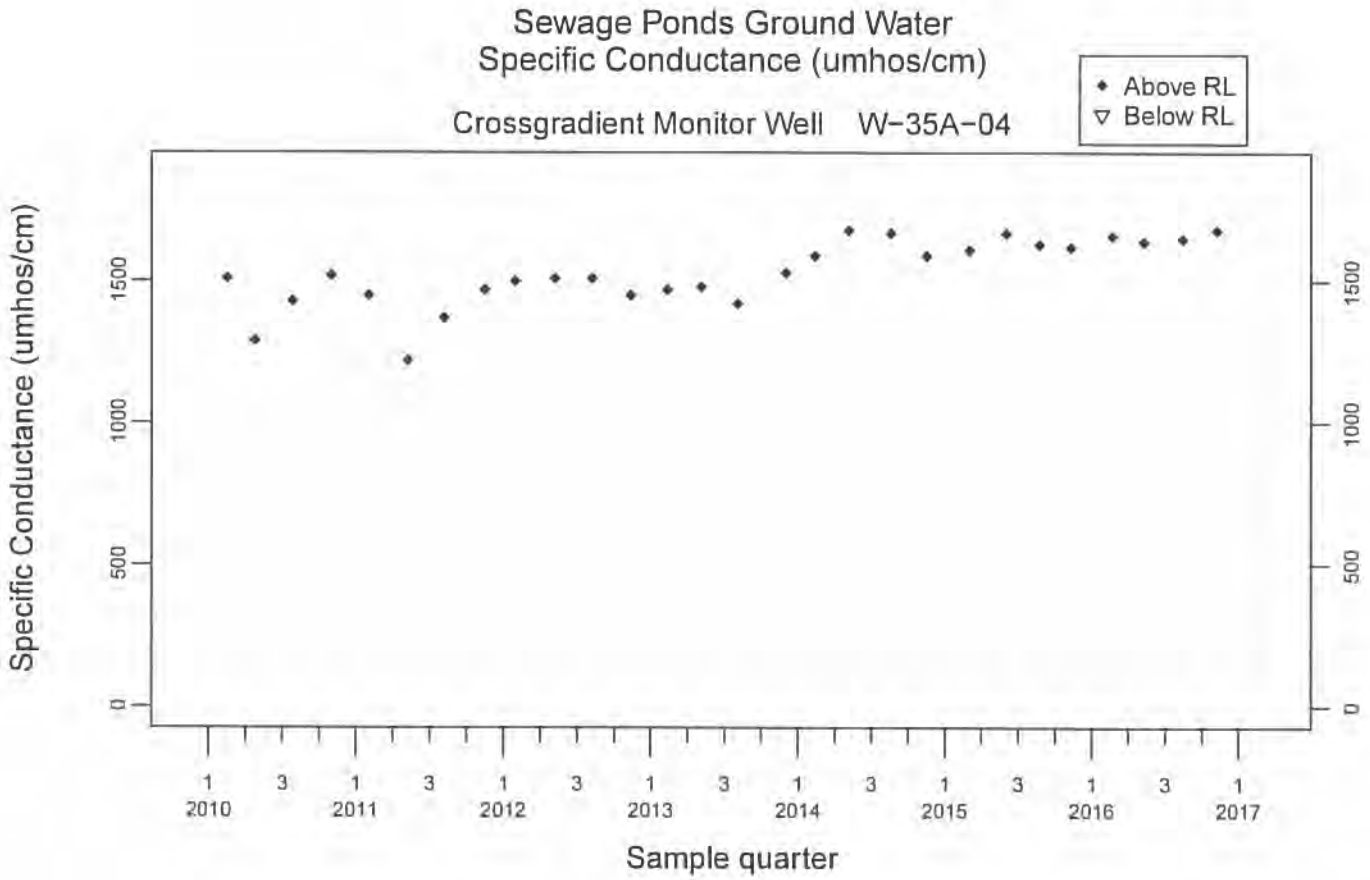

Sewage Ponds Ground Water
Field pH (Units)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

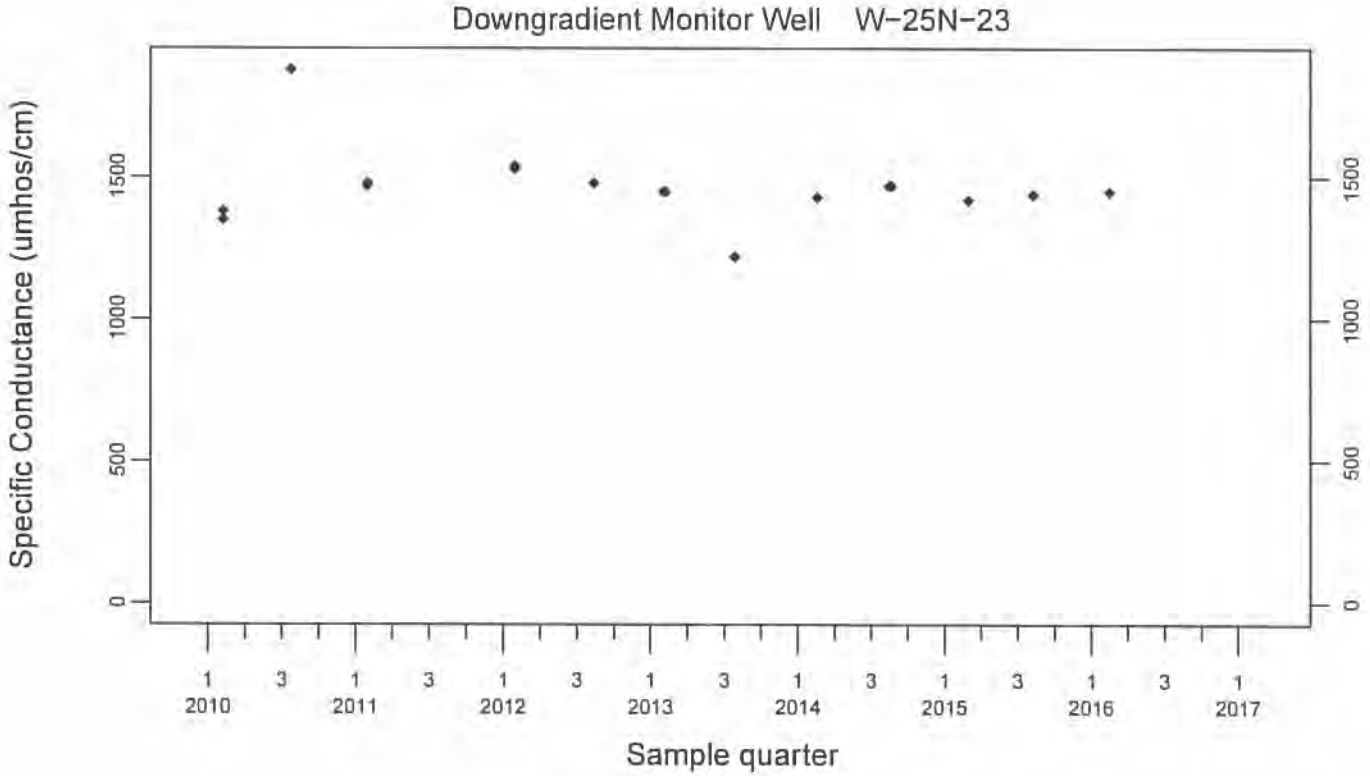

Downgradient Monitor Well W-26R-11
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

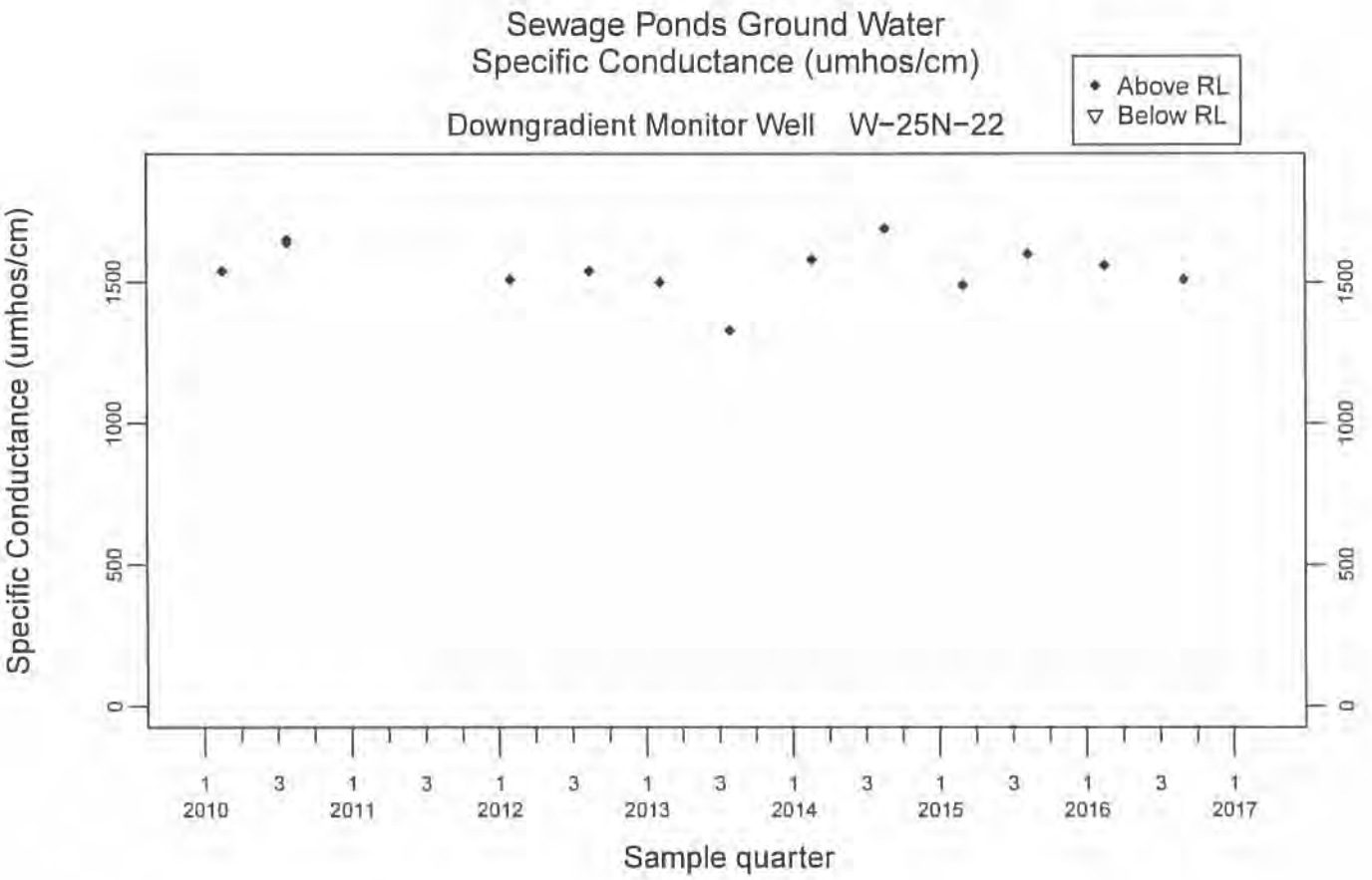

Sewage Ponds Ground Water
Field pH (Units)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Field pH (Units)
0
2
4
6
8
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

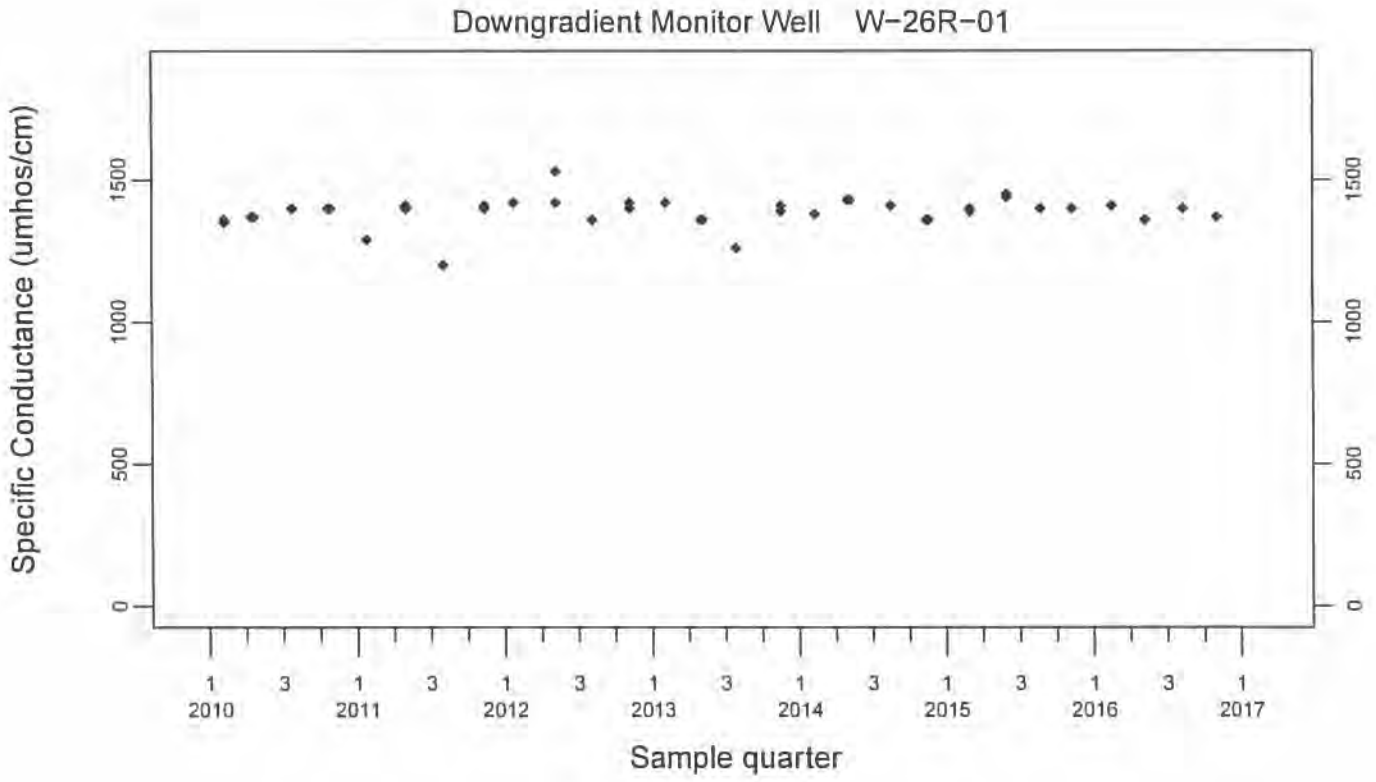

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

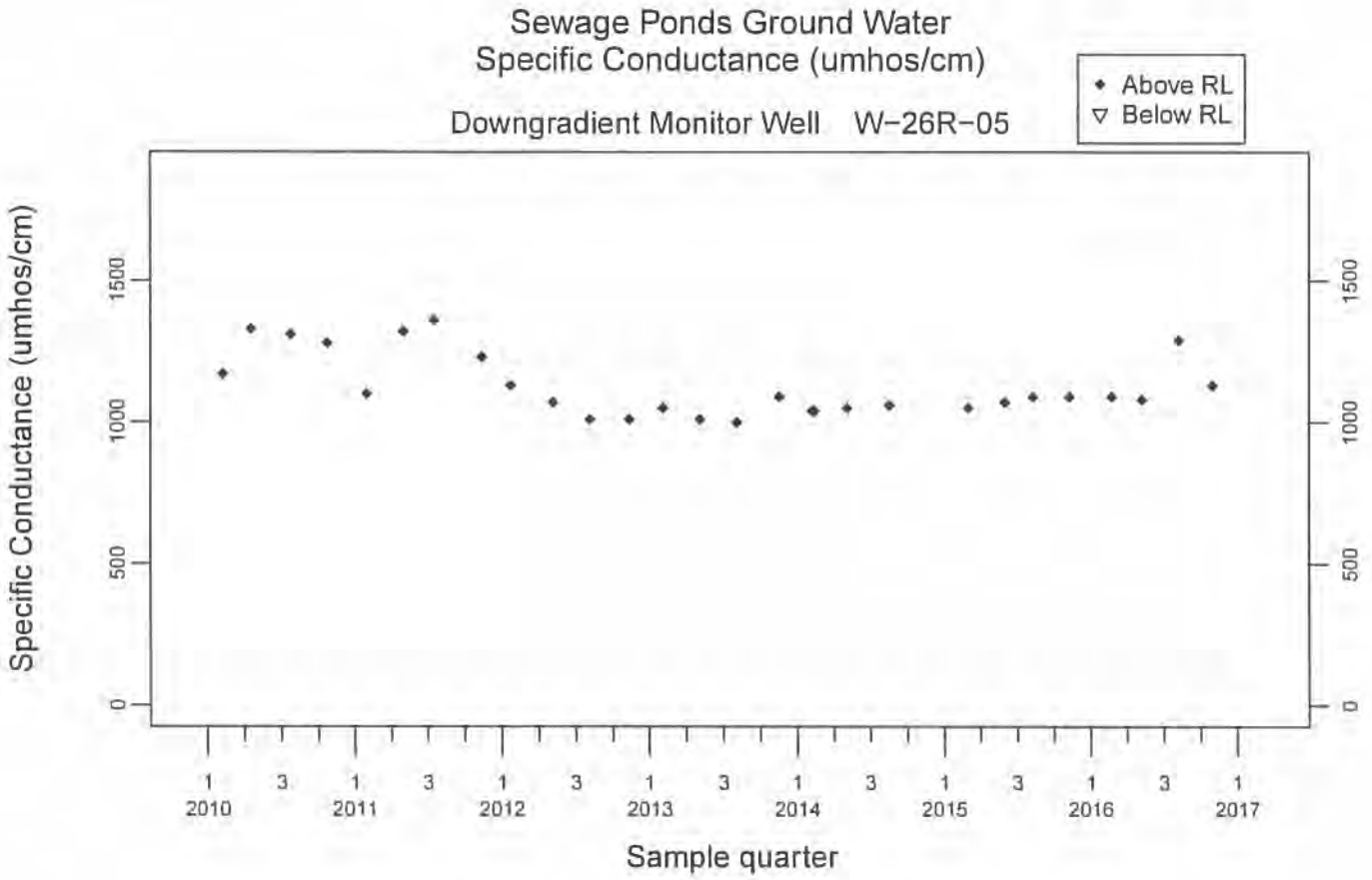

Upgradient Monitor Well W-7PS
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

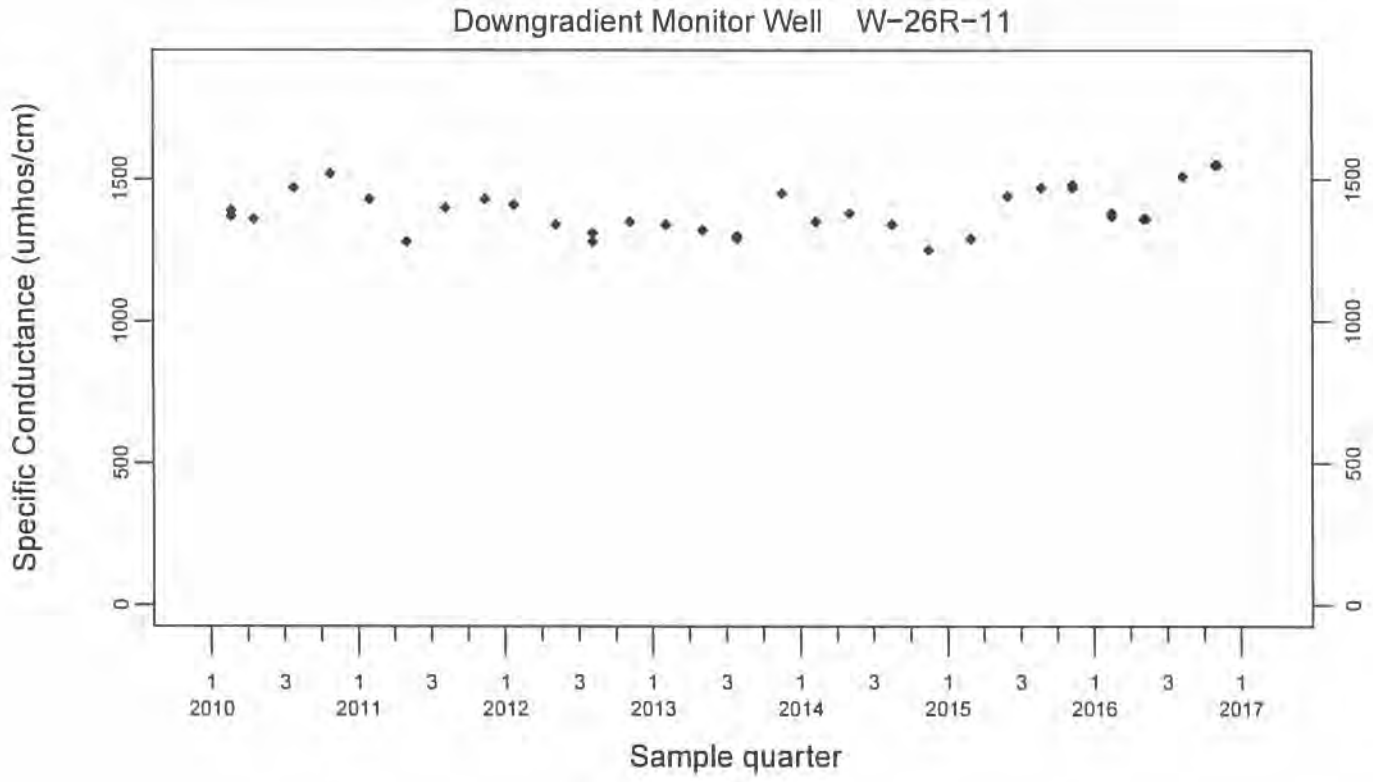

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

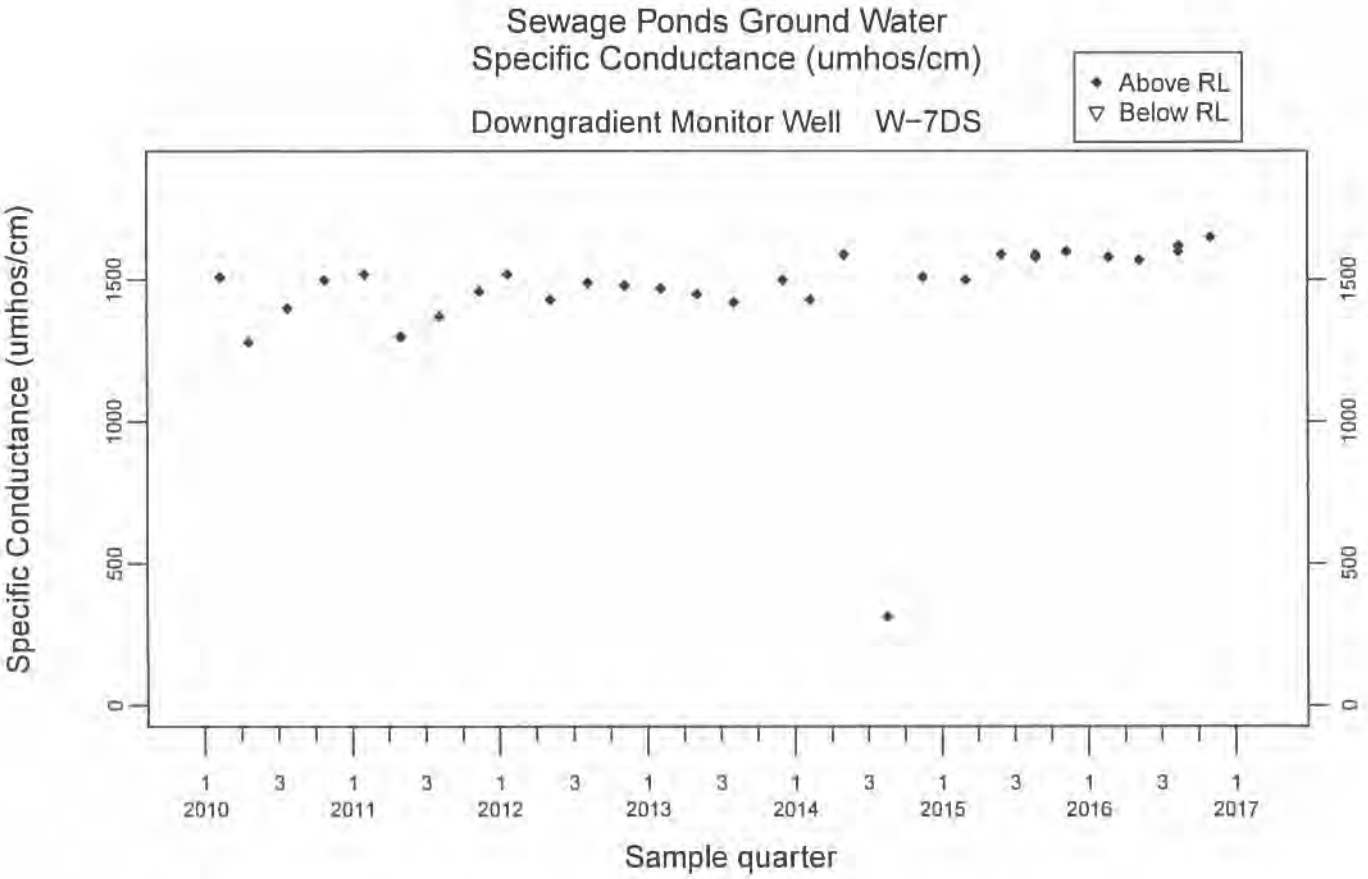

Downgradient Monitor Well W-25N-23
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

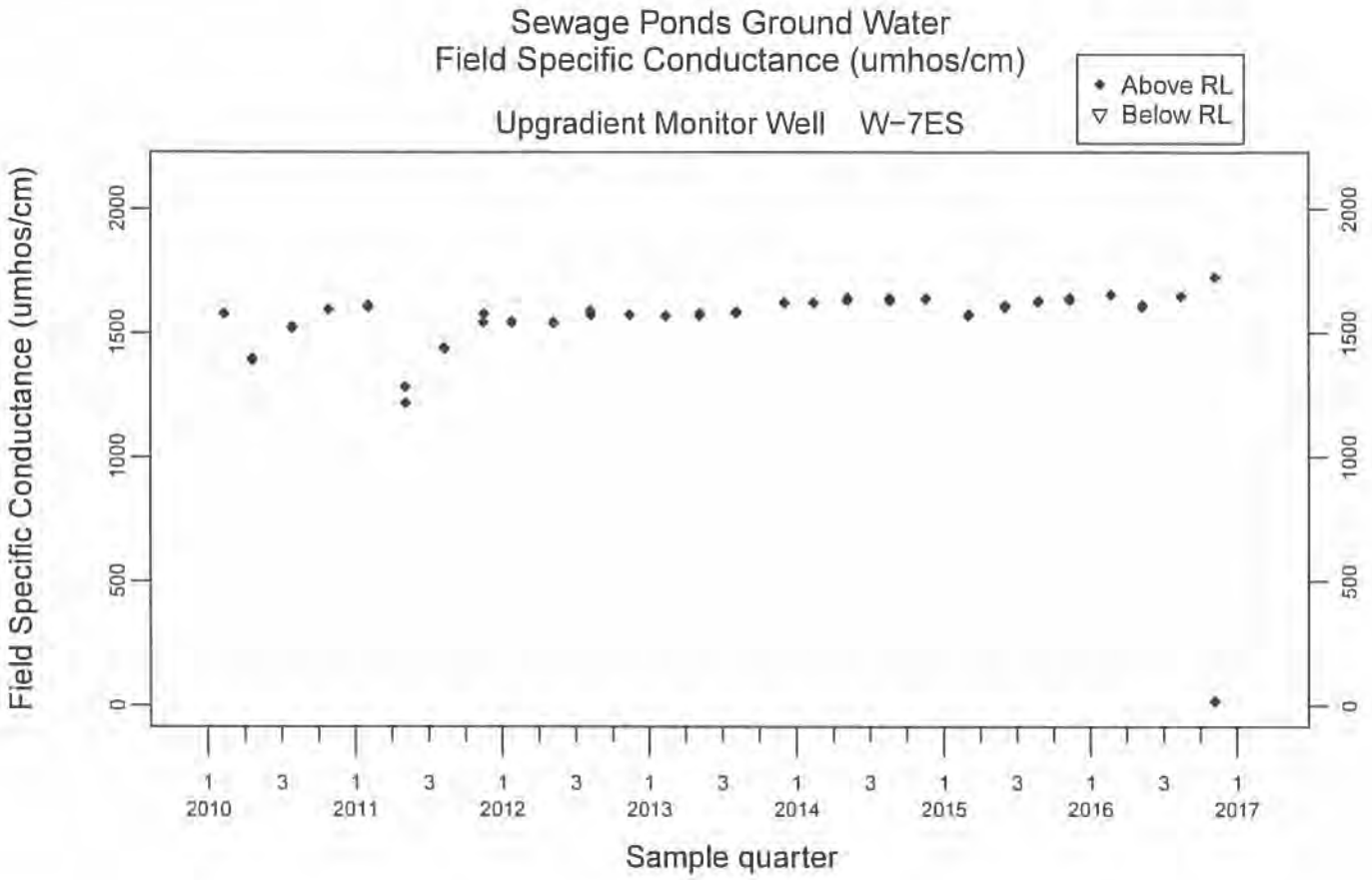

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

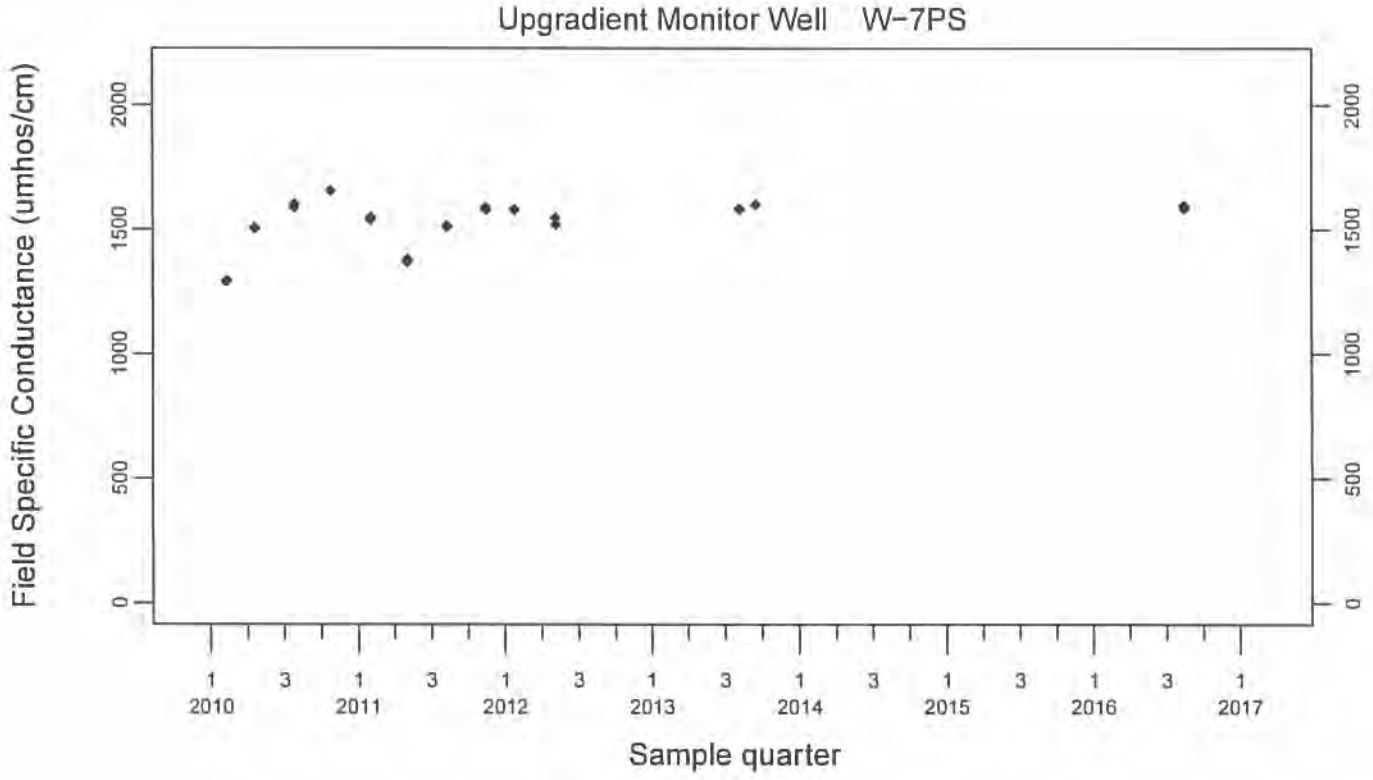

Downgradient Monitor Well W-26R-01
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

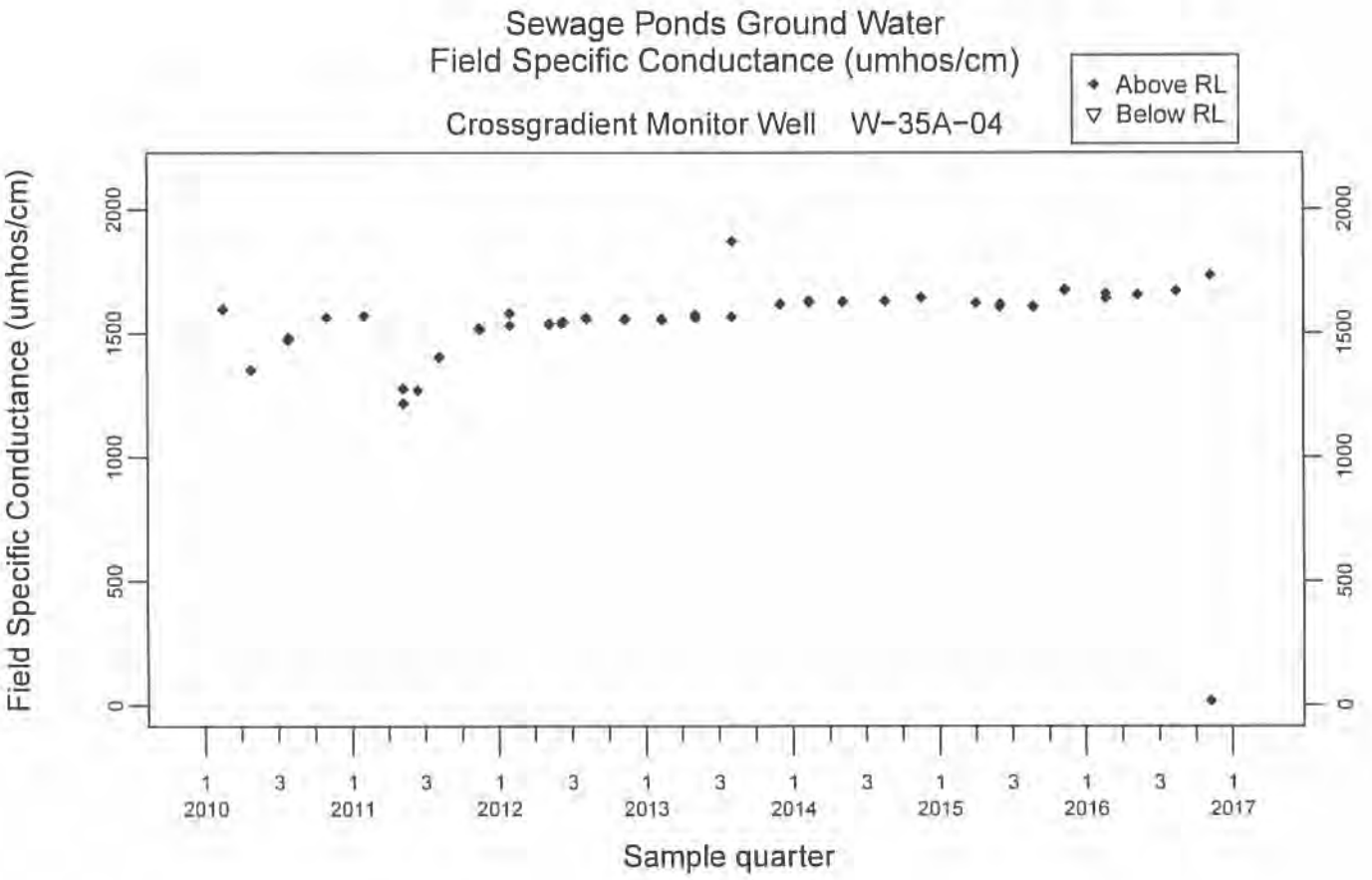

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Downgradient Monitor Well W-26R-05
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

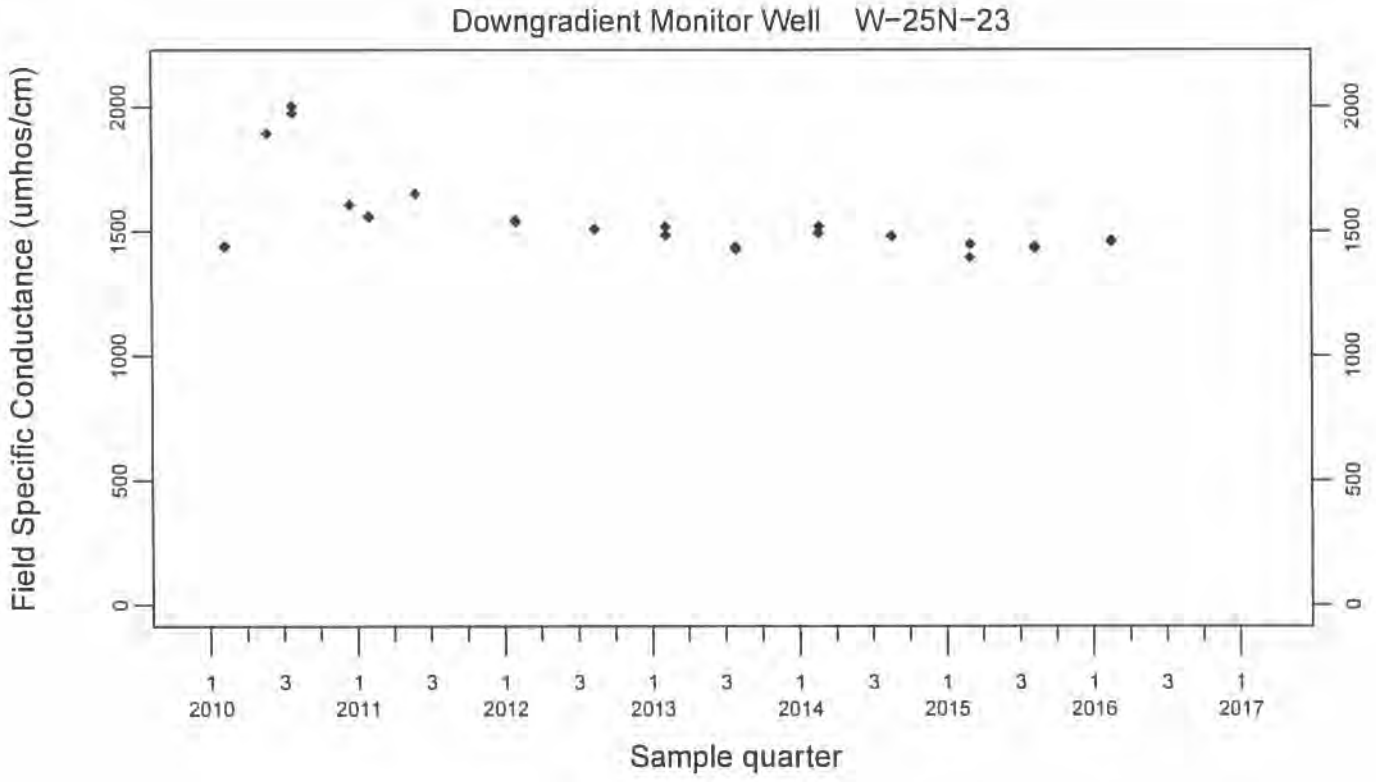

Downgradient Monitor Well W-26R-11
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

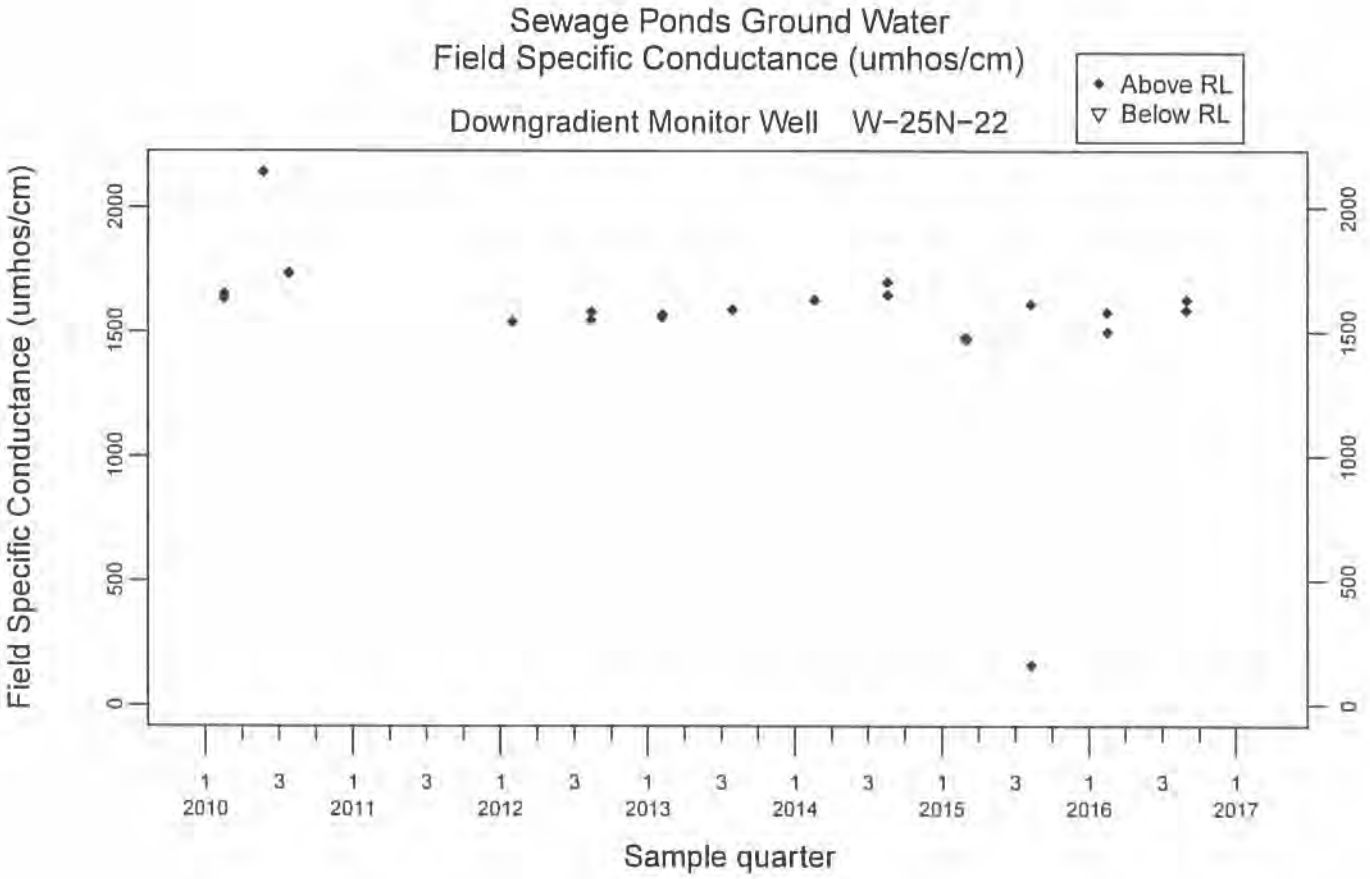

Sewage Ponds Ground Water
Specific Conductance (umhos/cm)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Specific Conductance (umhos/cm)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

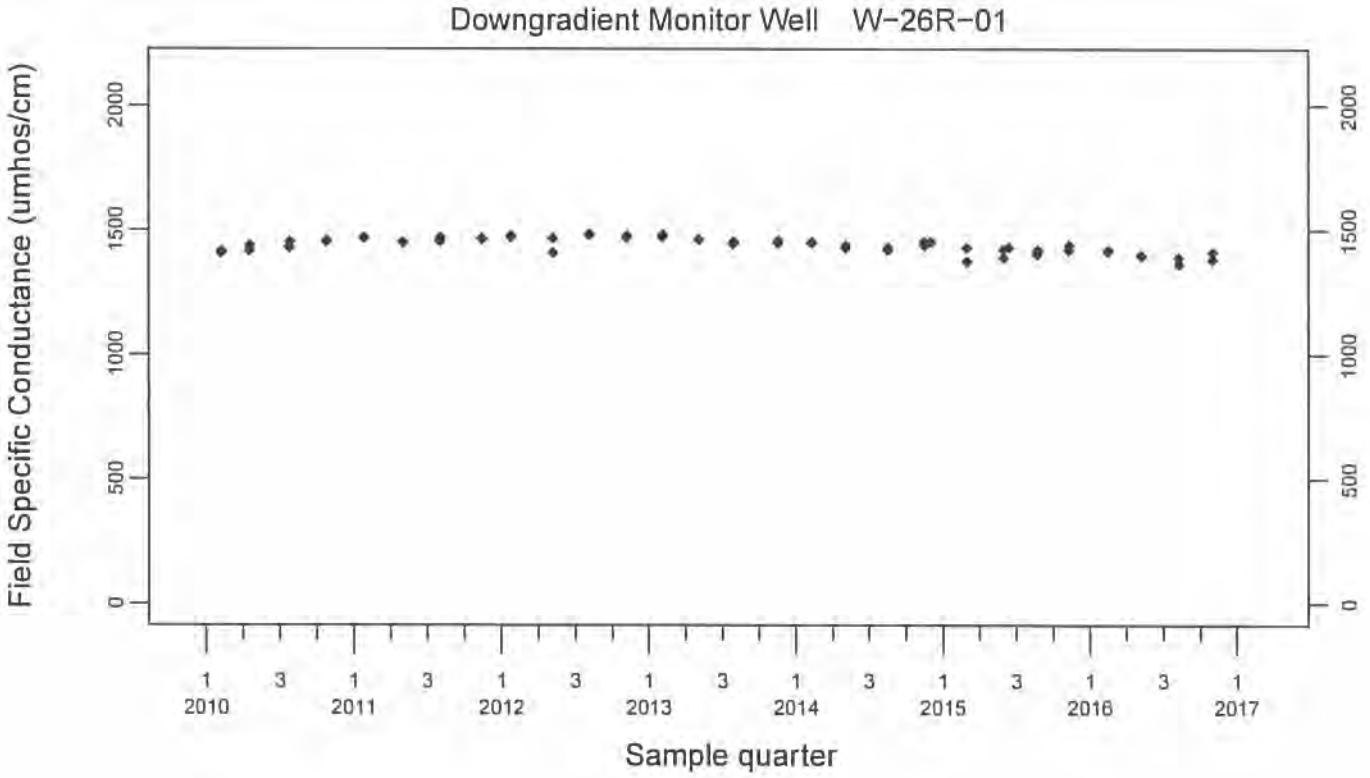

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

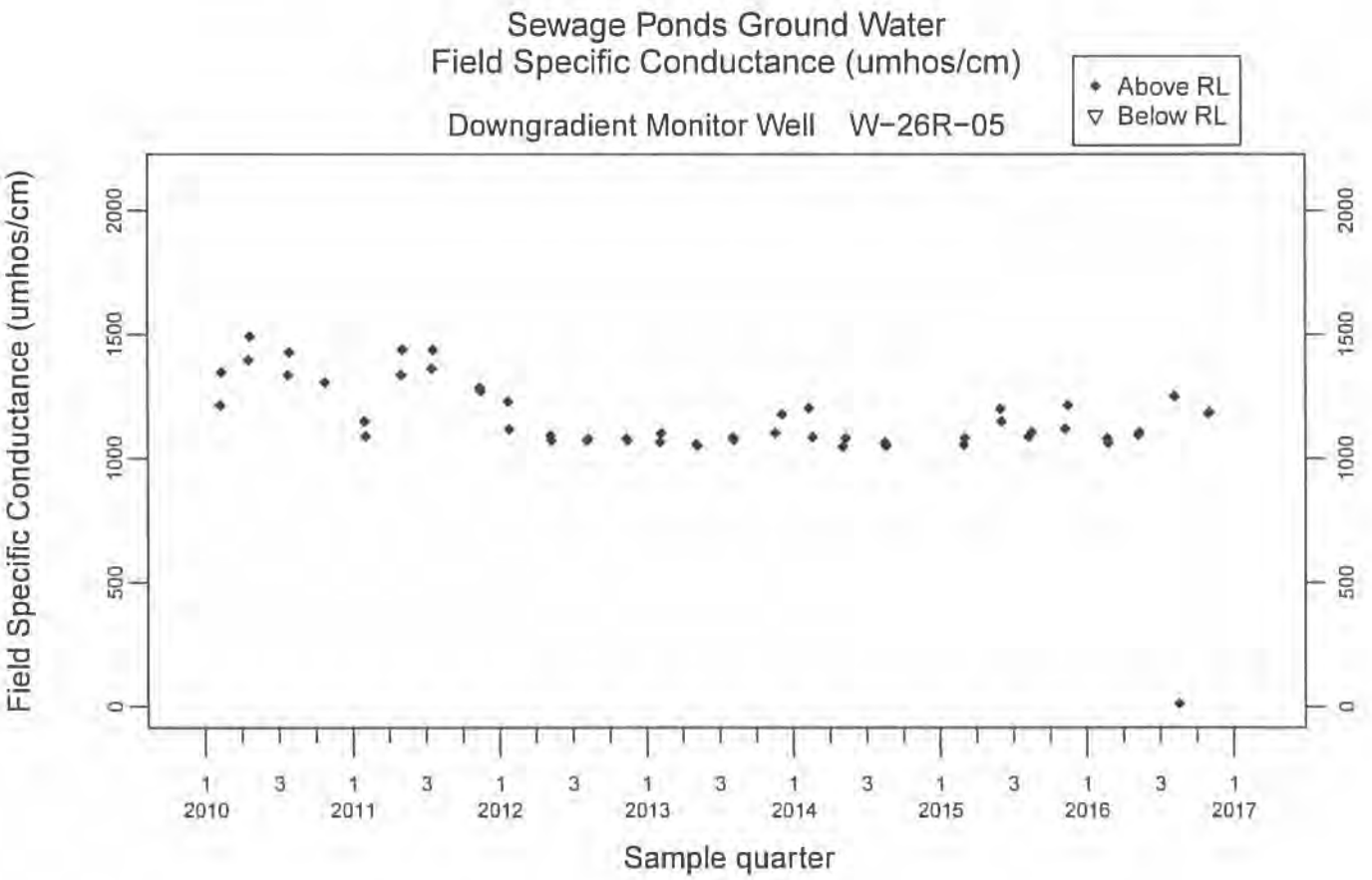

Upgradient Monitor Well W-7PS
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

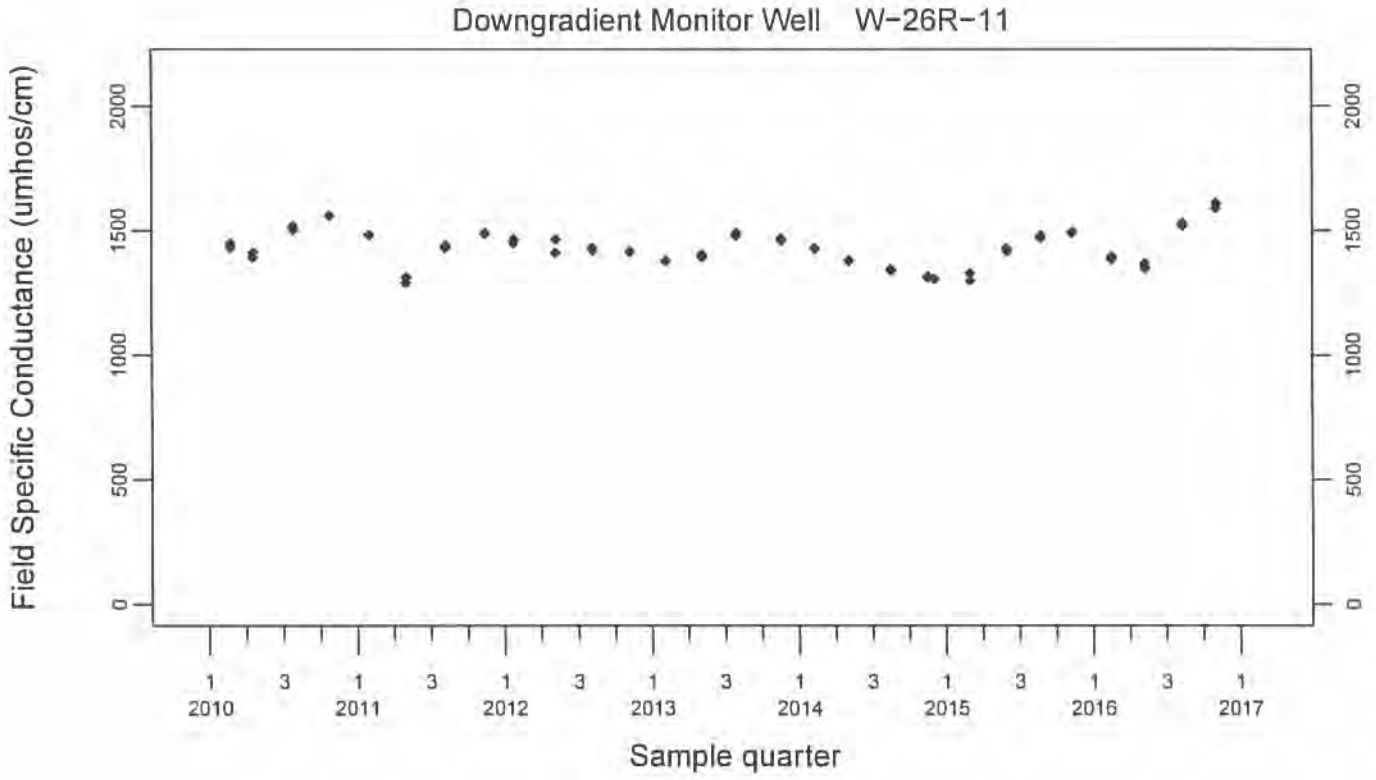

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

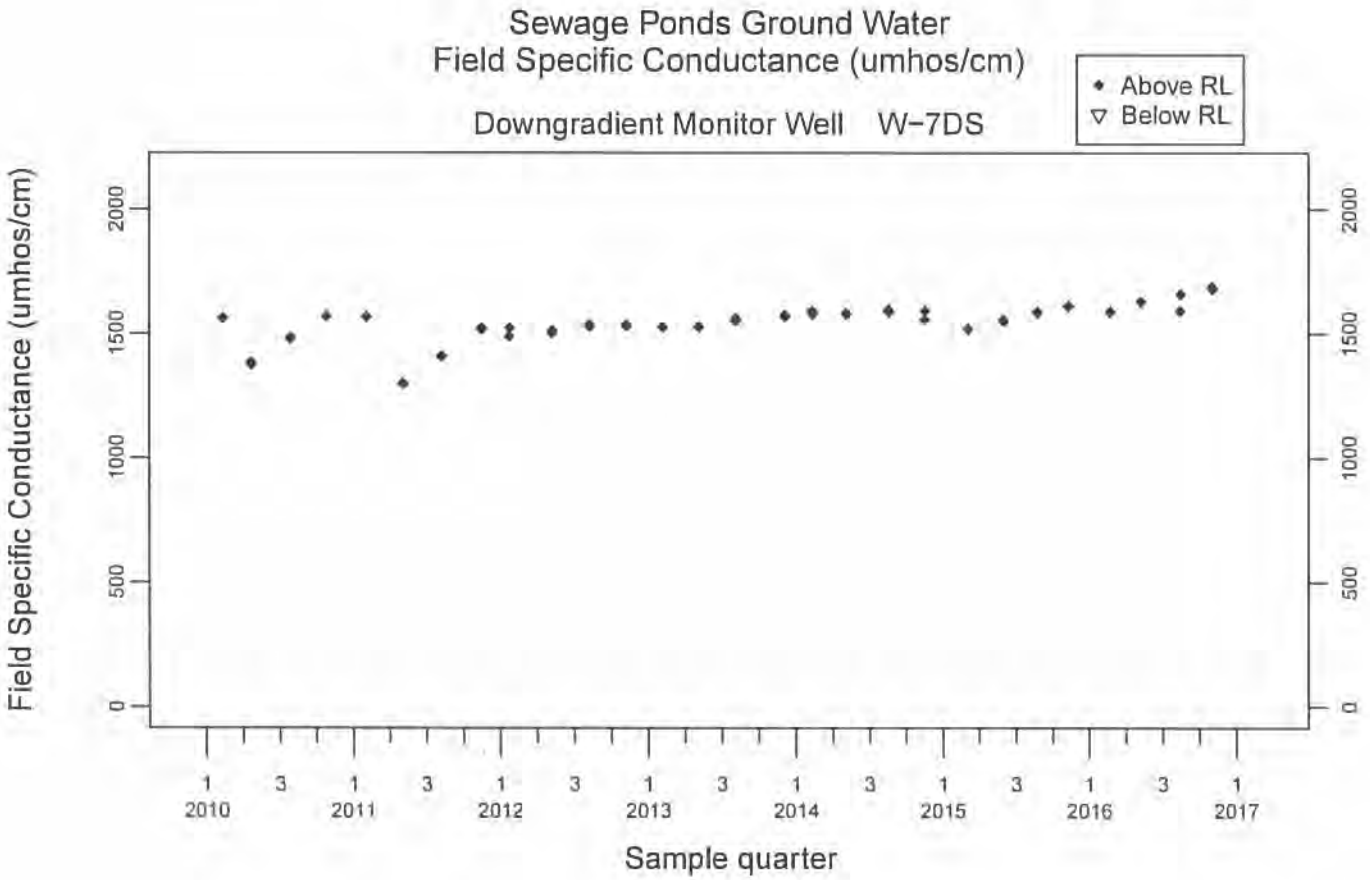

Downgradient Monitor Well W-25N-23
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

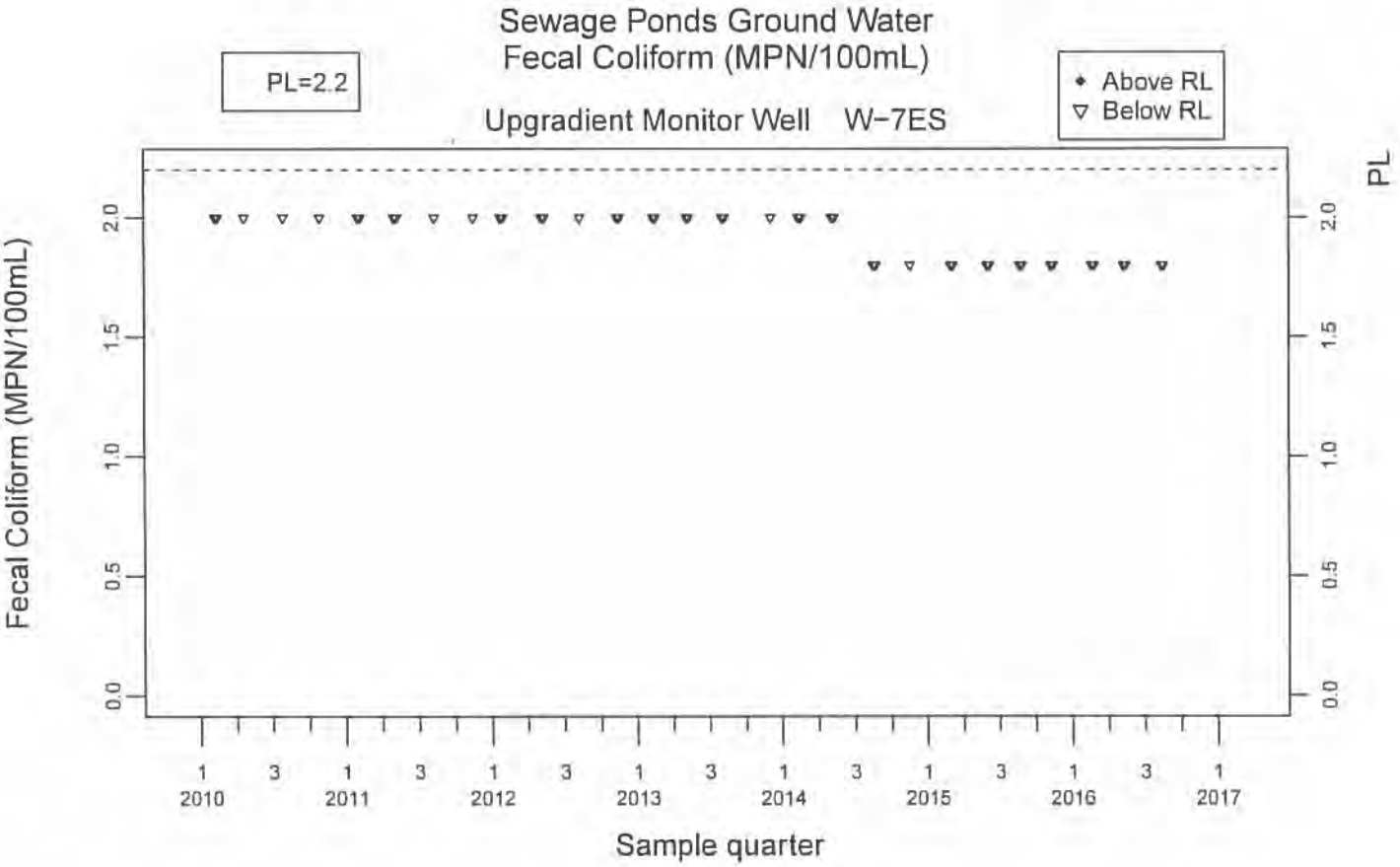

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

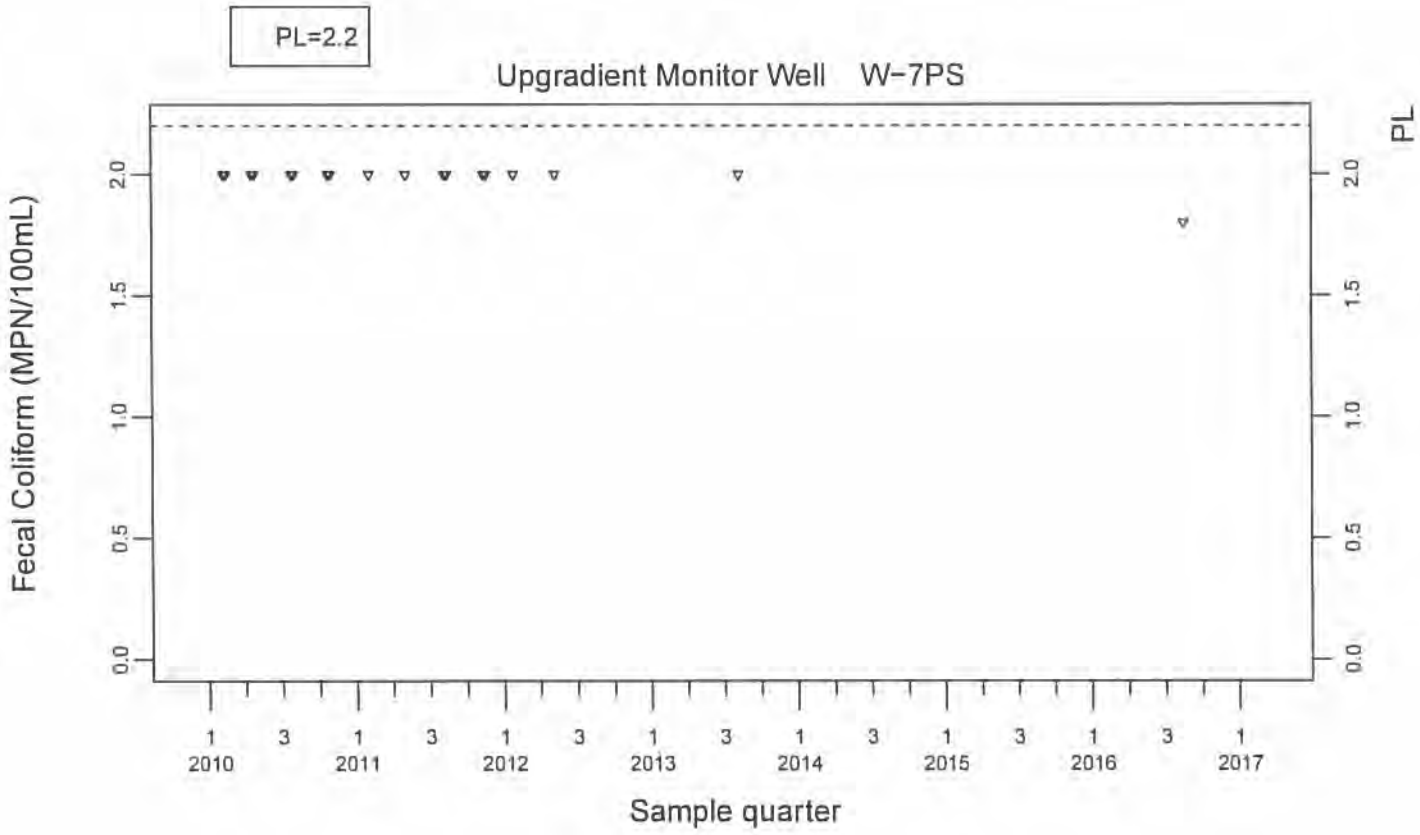

Downgradient Monitor Well W-26R-01
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

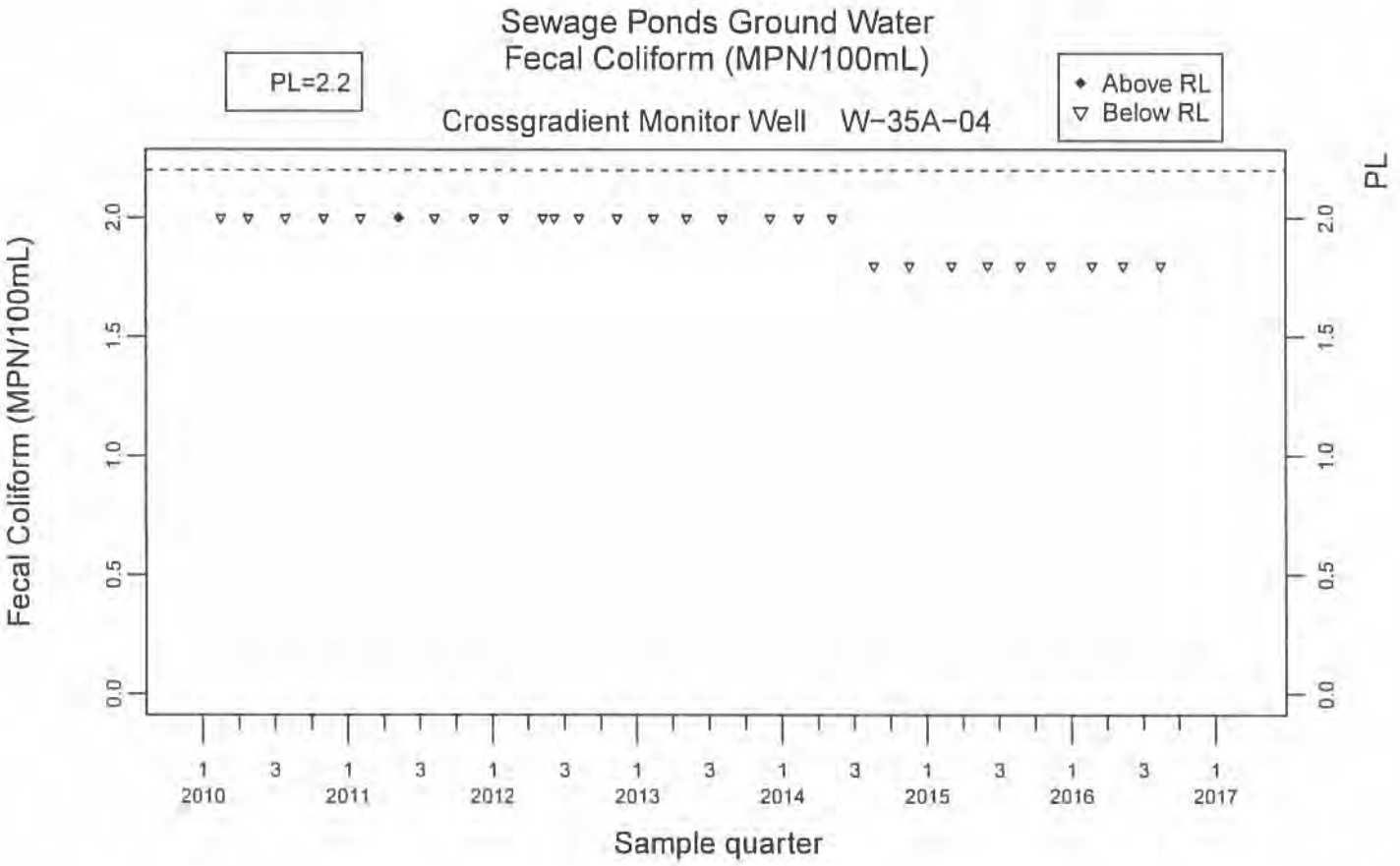

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W-26R-05
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

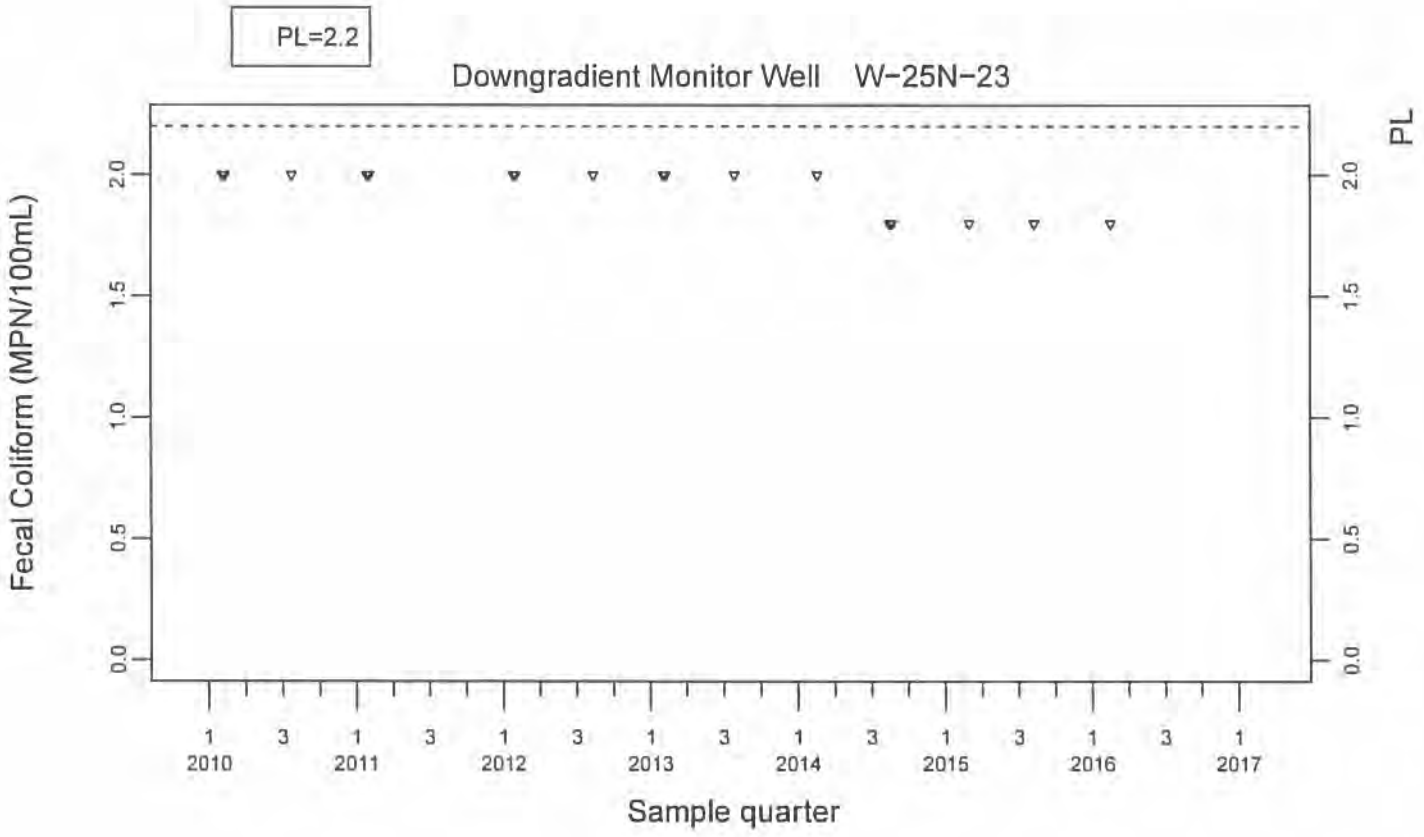

Downgradient Monitor Well W-26R-11
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

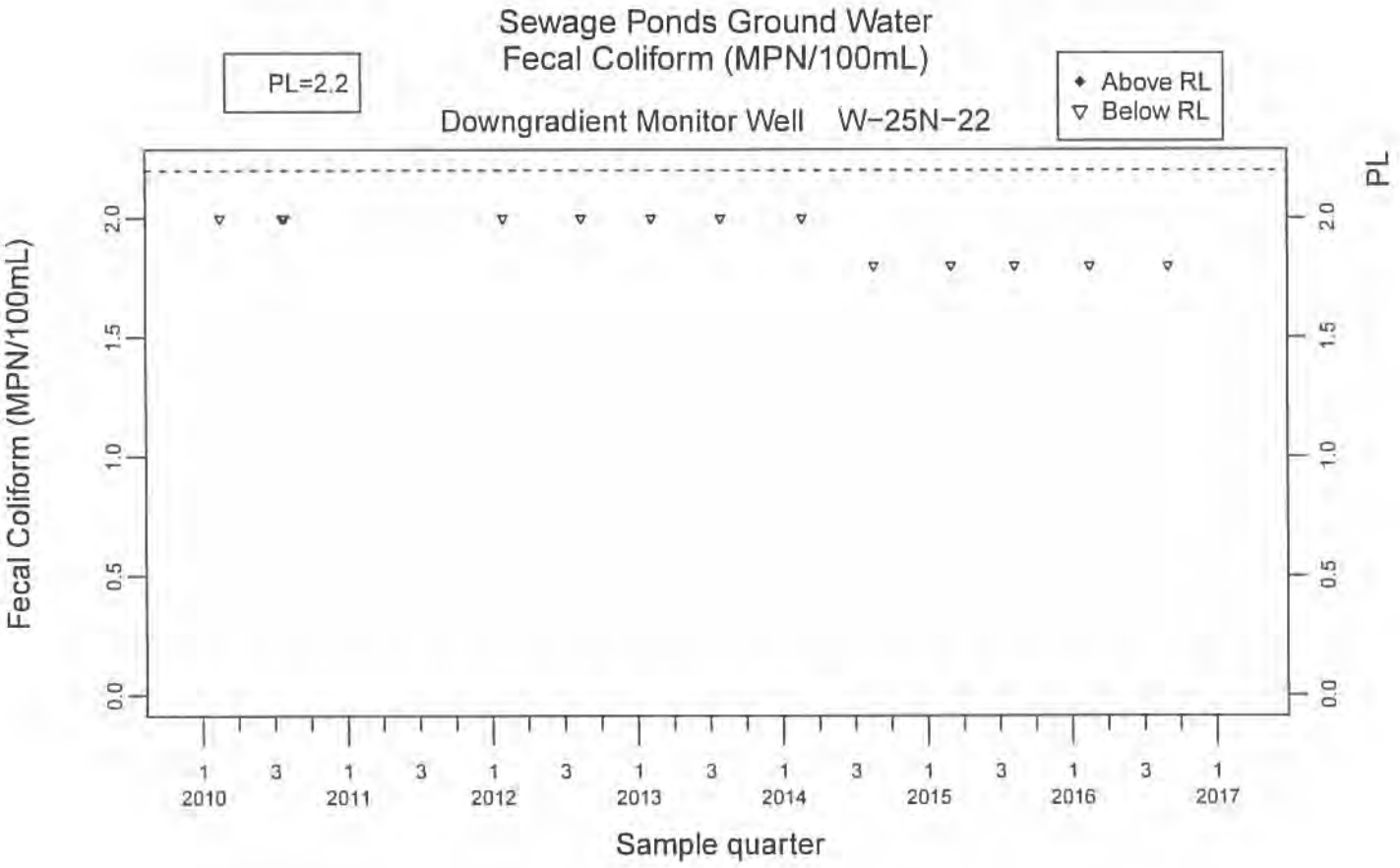

Sewage Ponds Ground Water
Field Specific Conductance (umhos/cm)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Field Specific Conductance (umhos/cm)
0
500
1000
1500
2000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

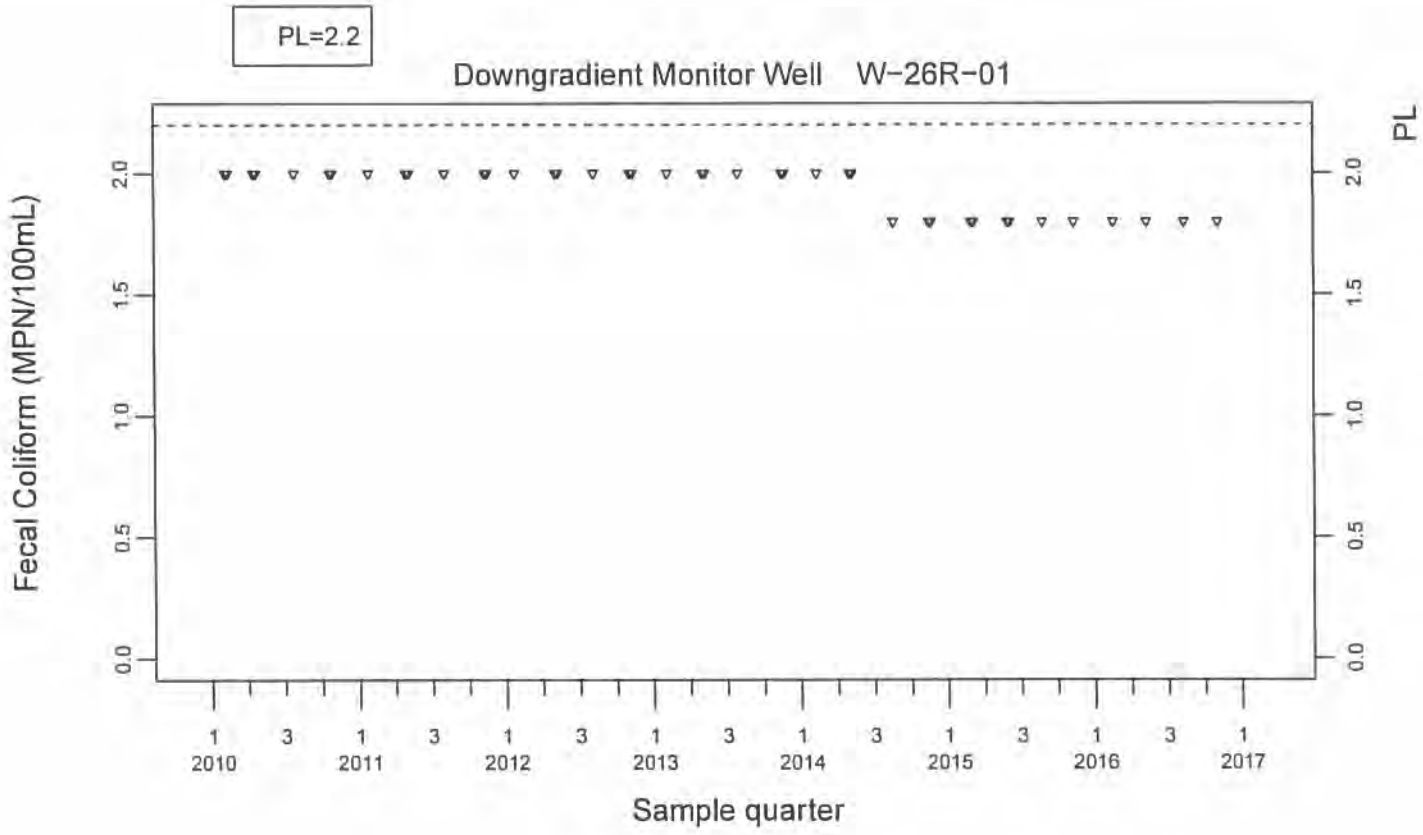

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Upgradient Monitor Well W-7ES
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

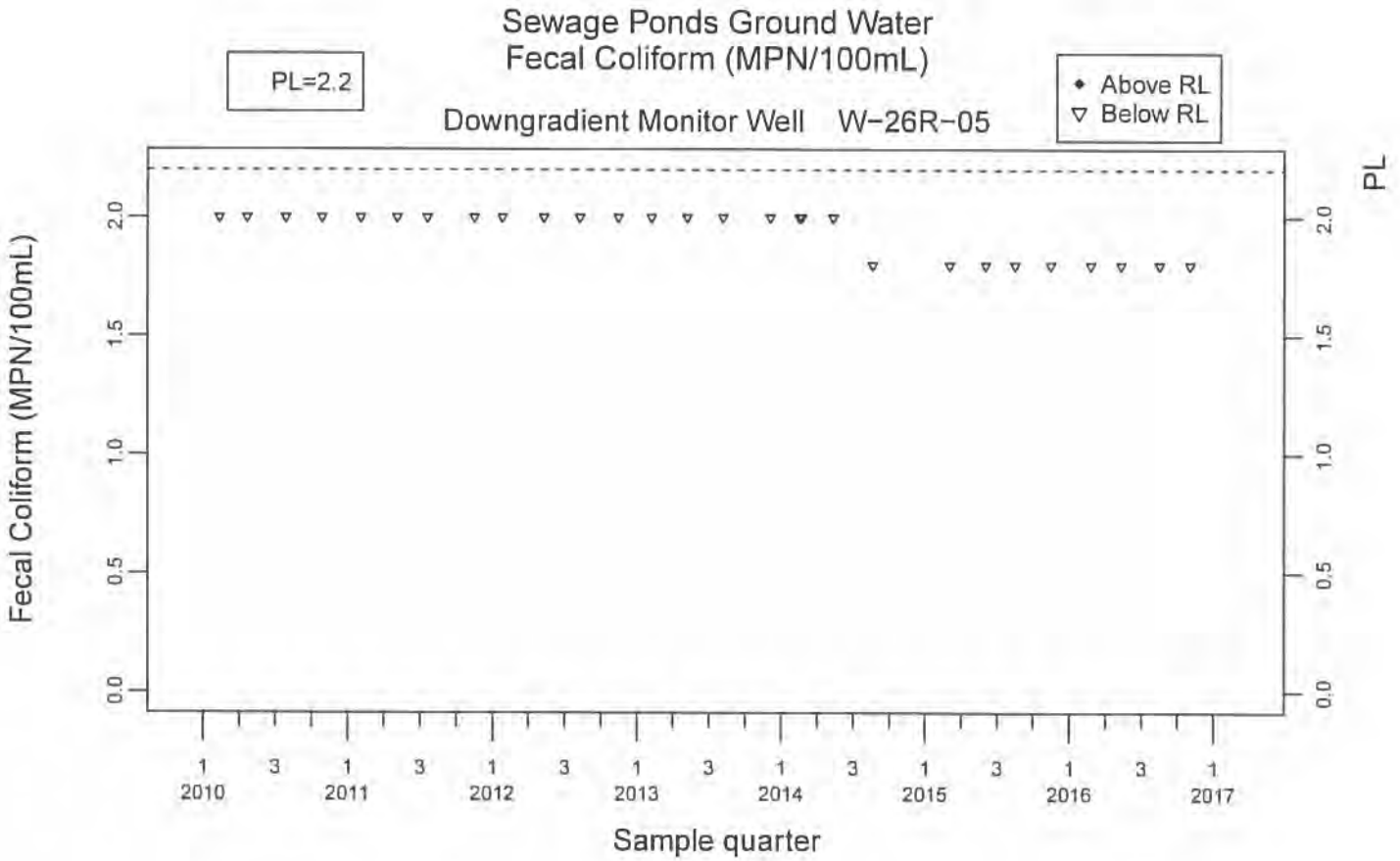

PL=2.2
Upgradient Monitor Well W-7PS
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

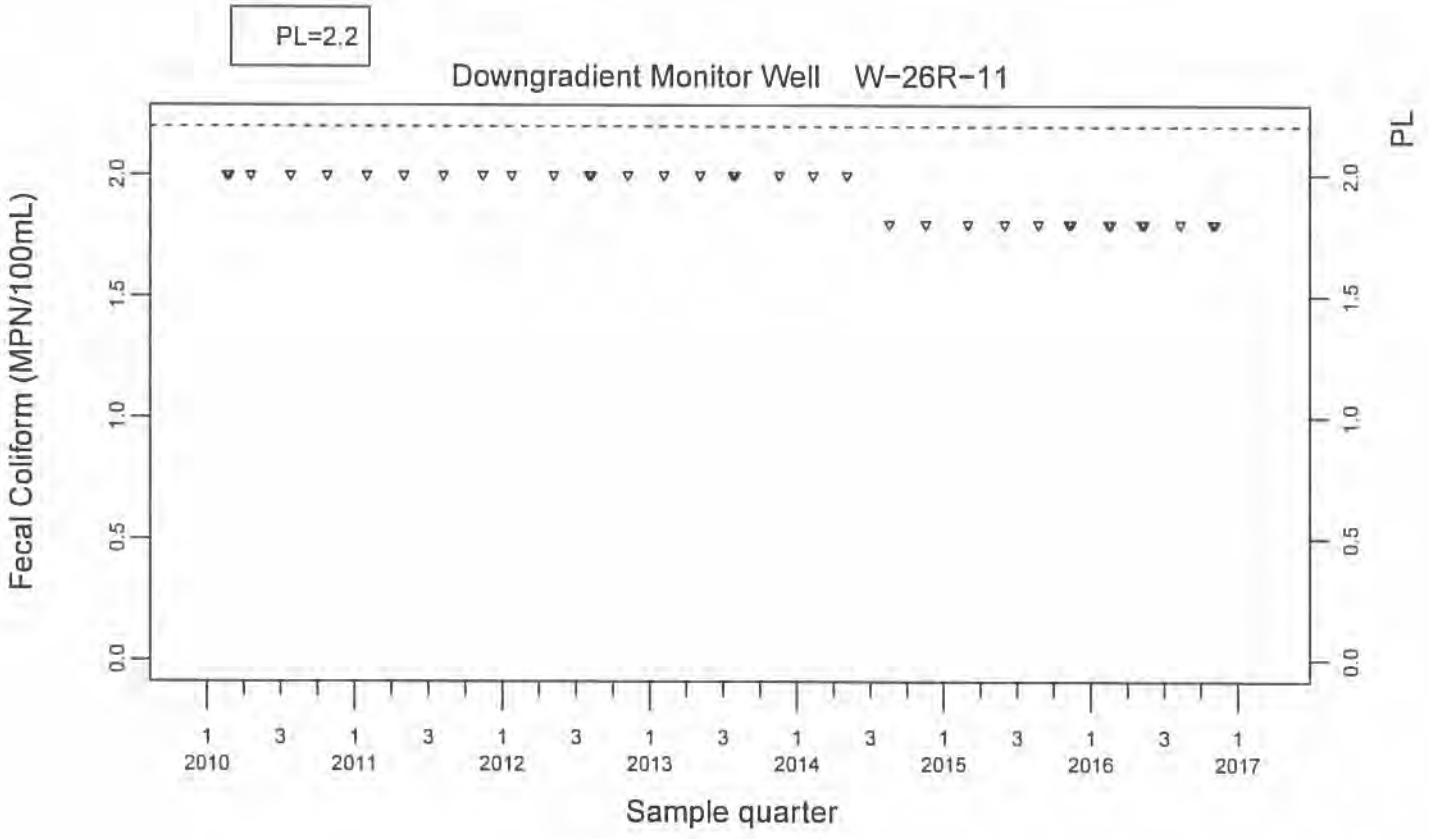

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

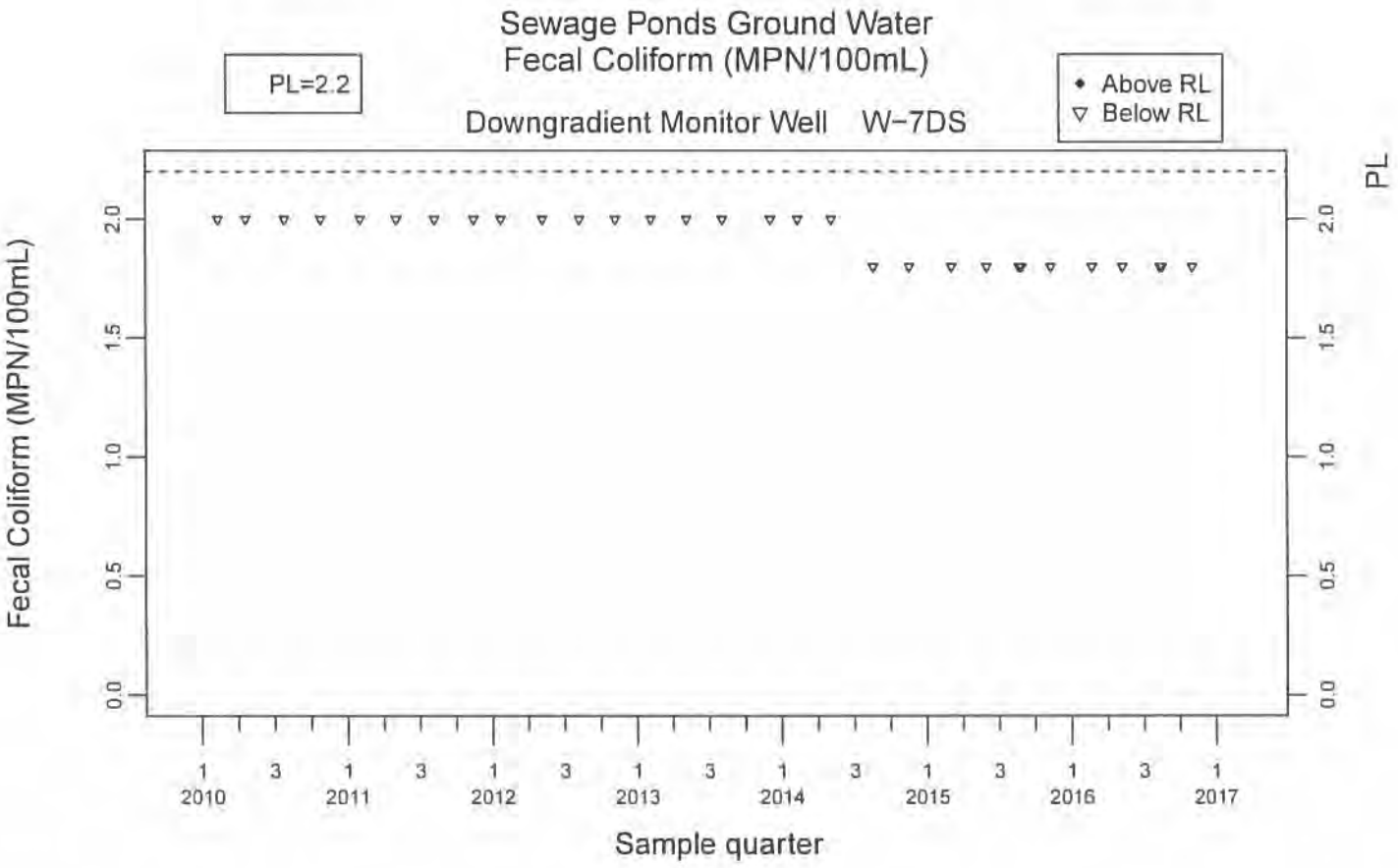

PL=2.2
Downgradient Monitor Well W-25N-23
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

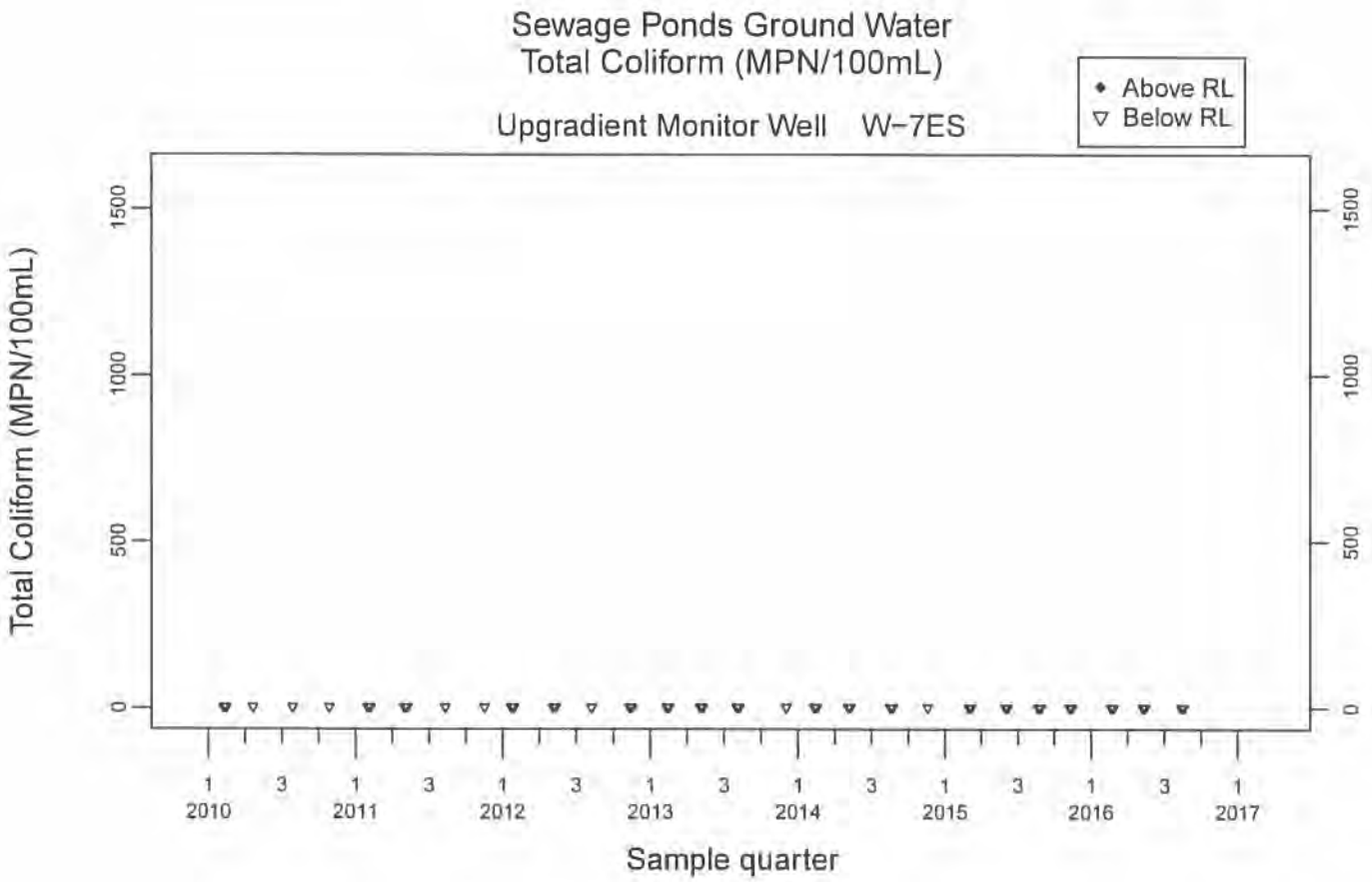

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

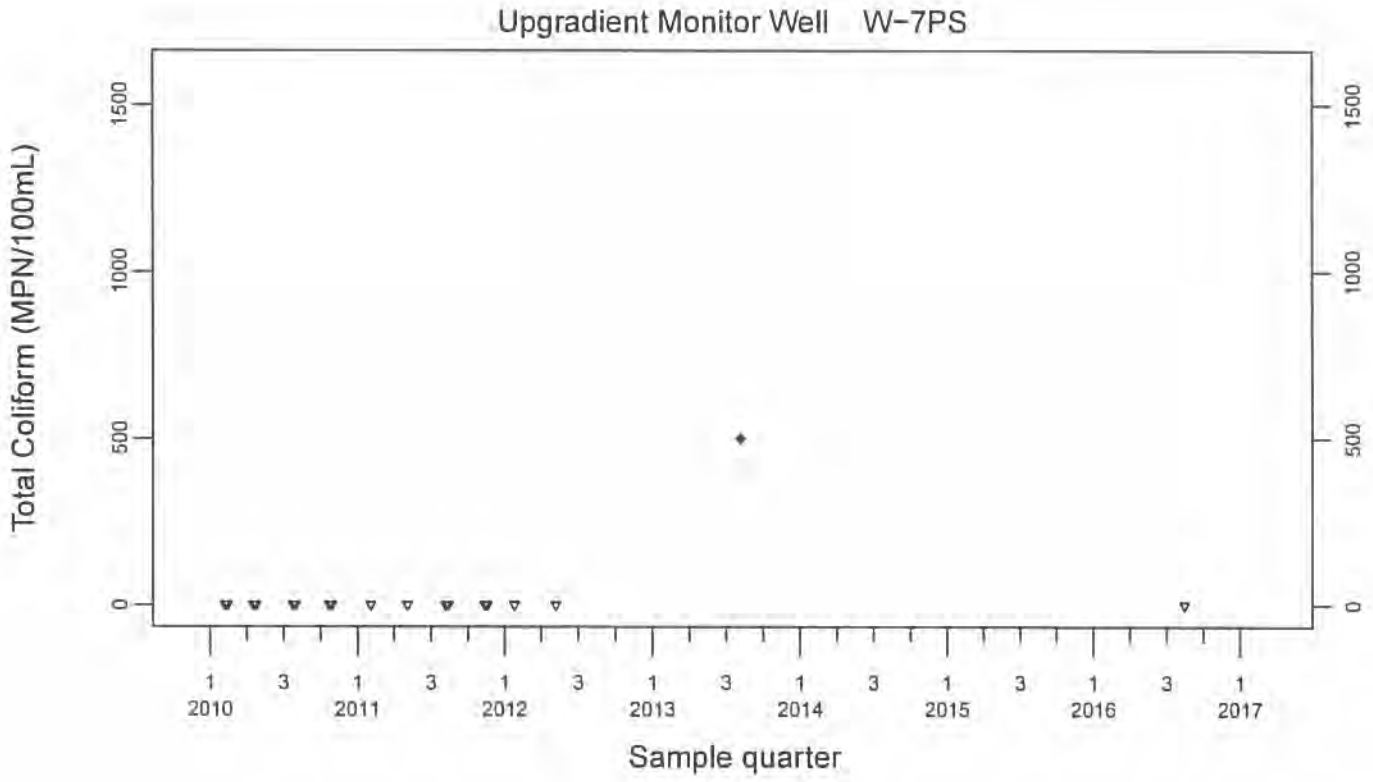

PL=2.2
Downgradient Monitor Well W-26R-01
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

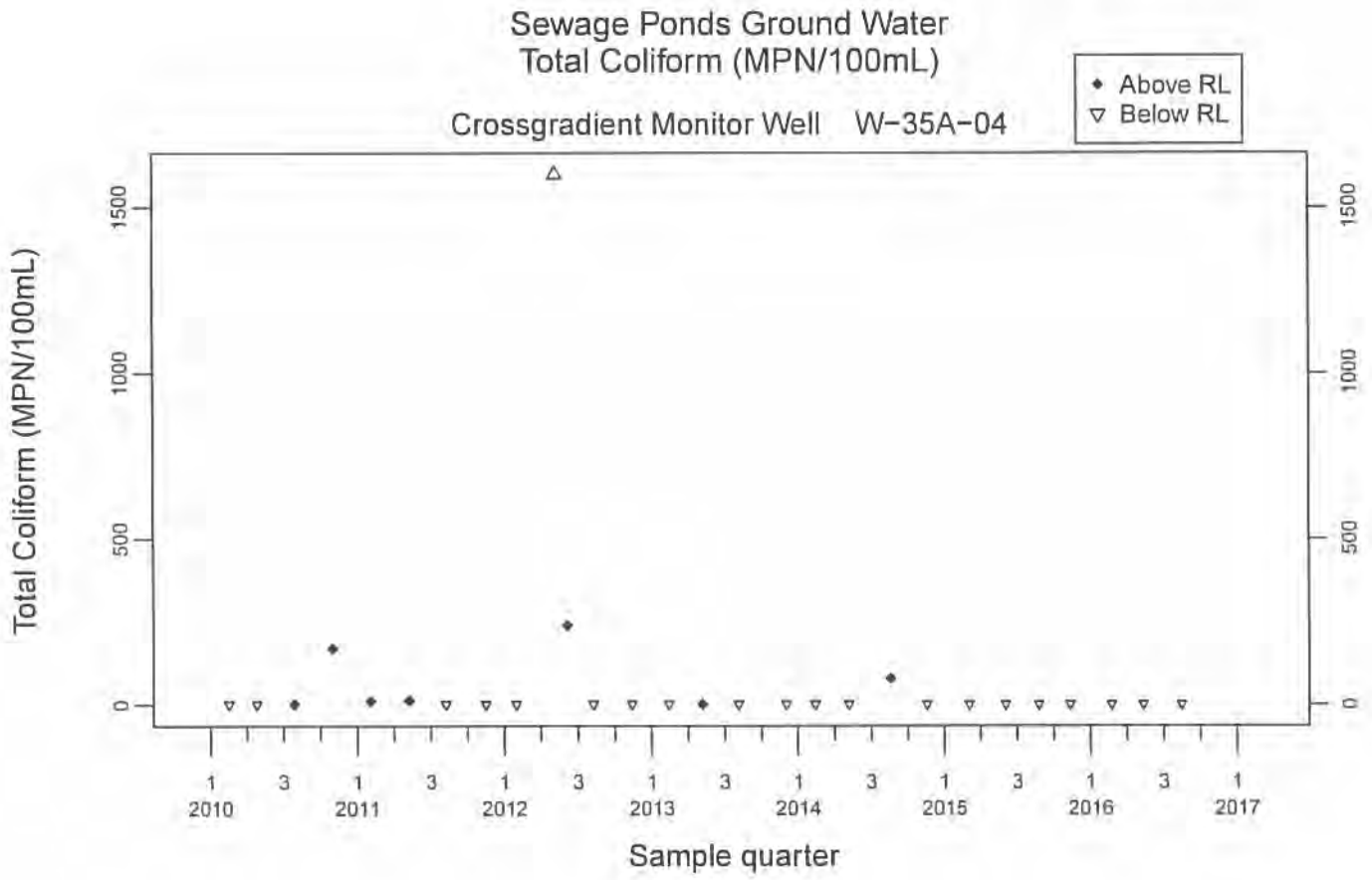

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
PL=2.2
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

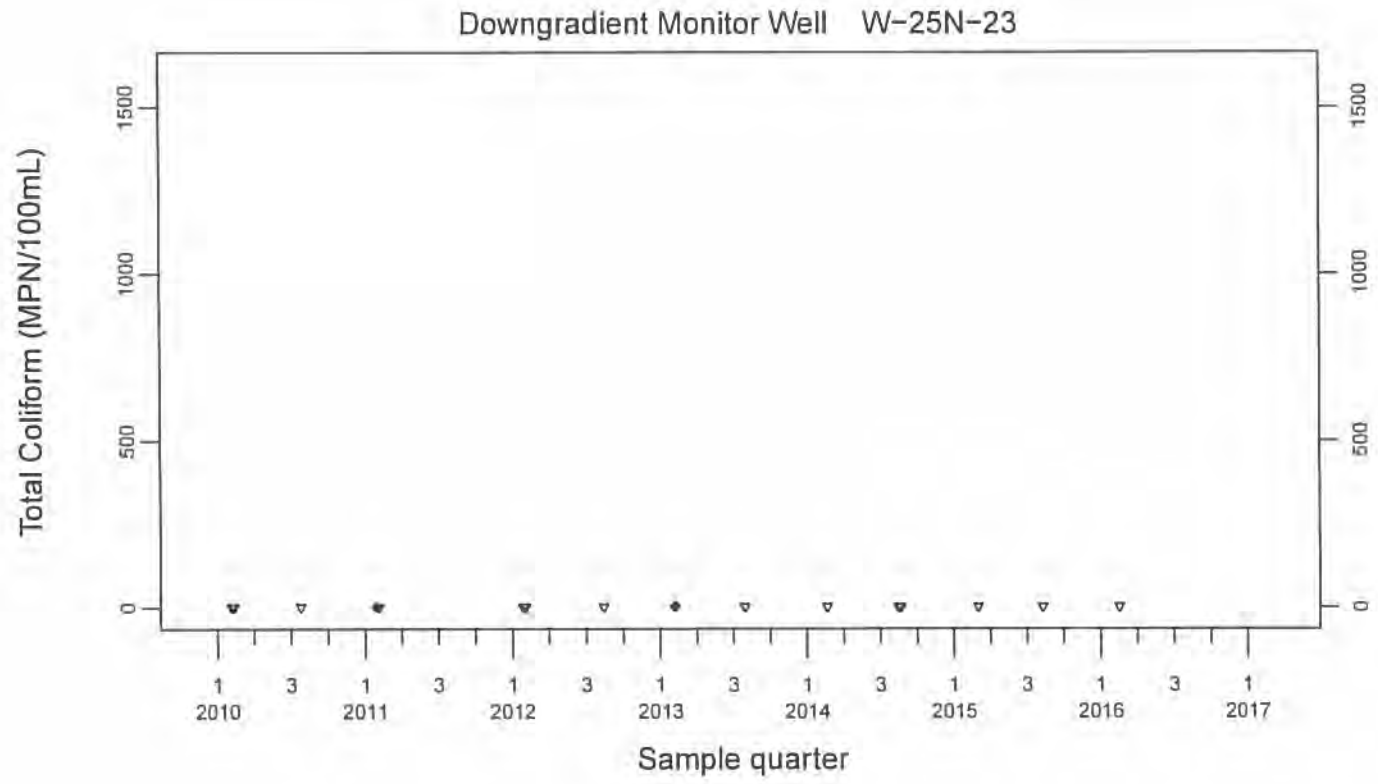

PL=2.2
Downgradient Monitor Well W-26R-11
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

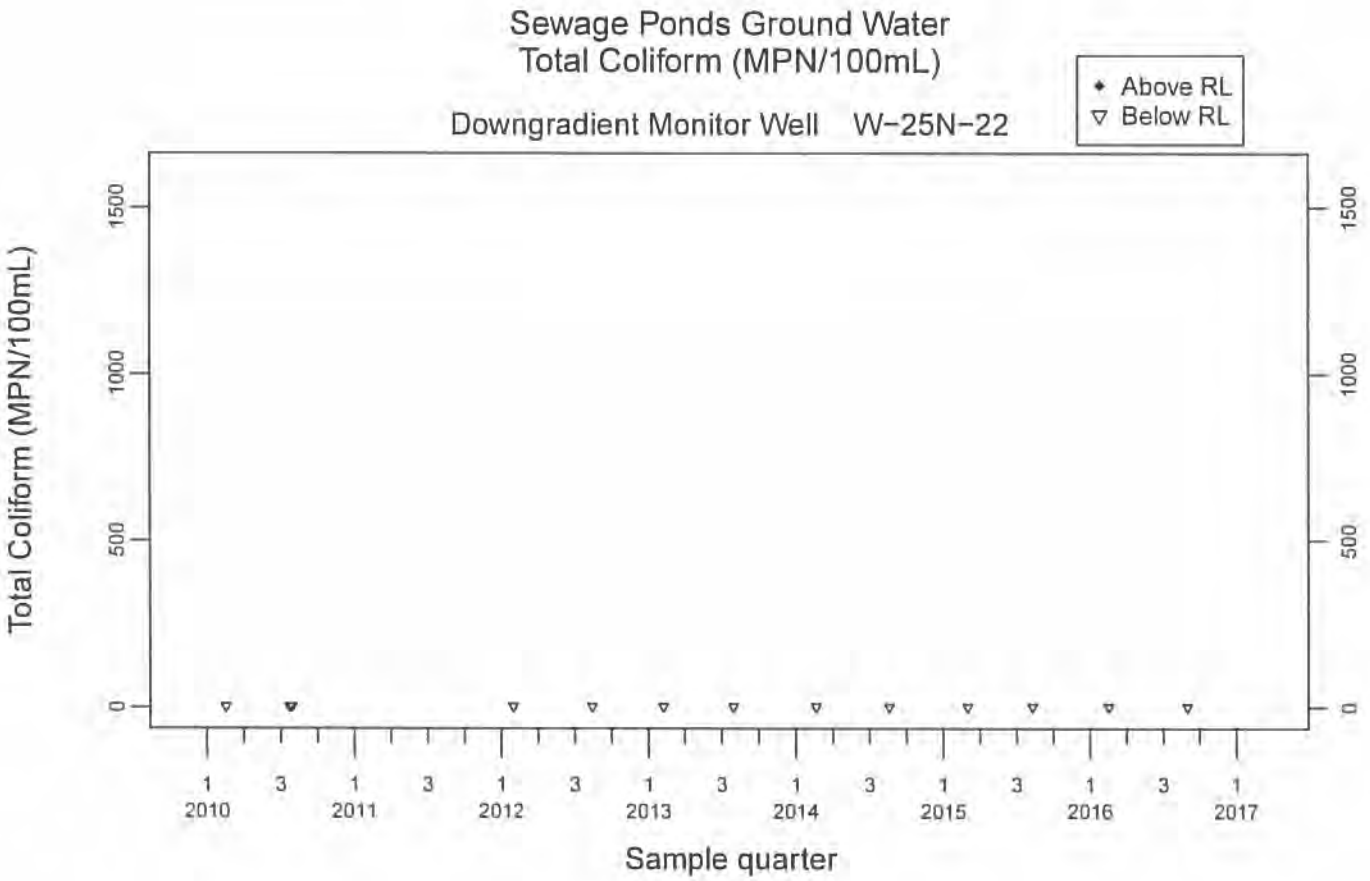

Sewage Ponds Ground Water
Fecal Coliform (MPN/100mL)
Downgradient Monitor Well W-7DS
PL=2.2
Above RL
Below RL
Fecal Coliform (MPN/100mL)
PL
0.0
0.5
1.0
1.5
2.0
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

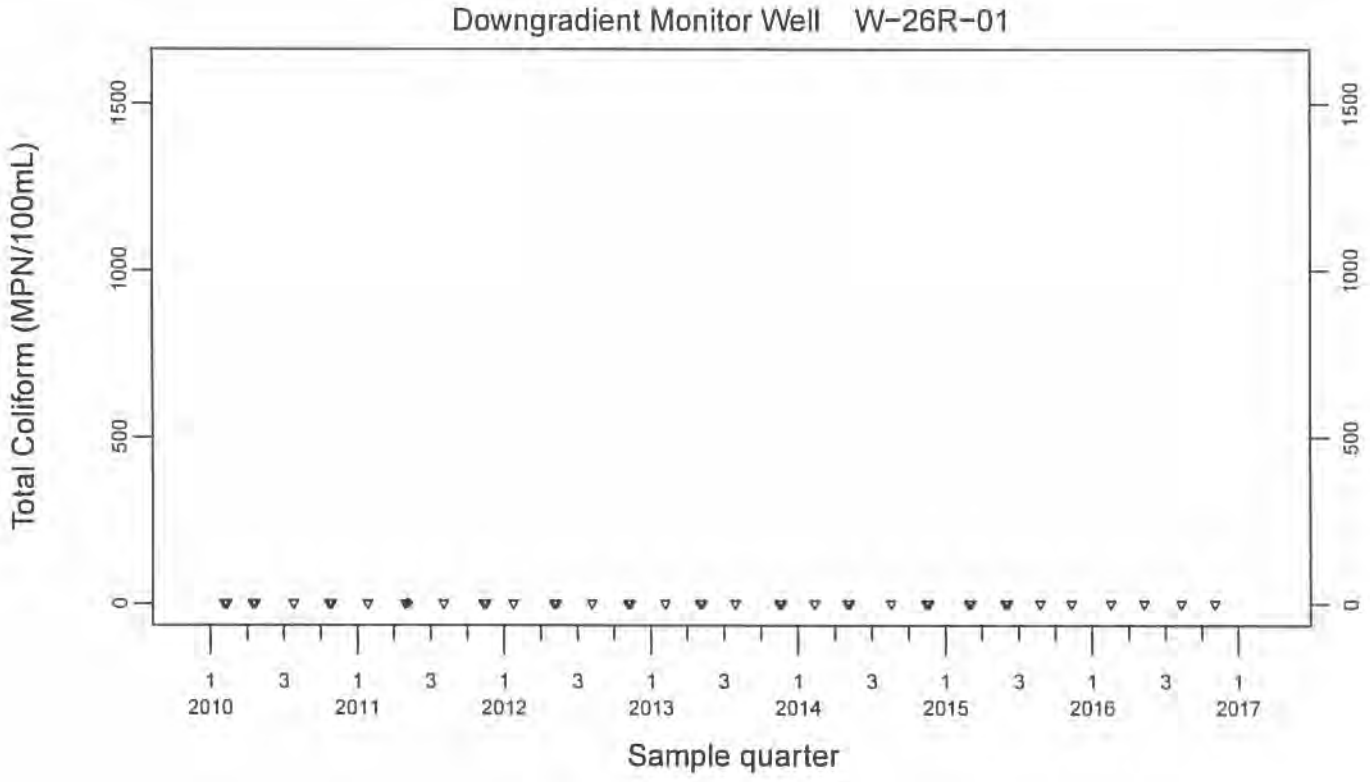

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Upgradient Monitor Well W-7PS
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

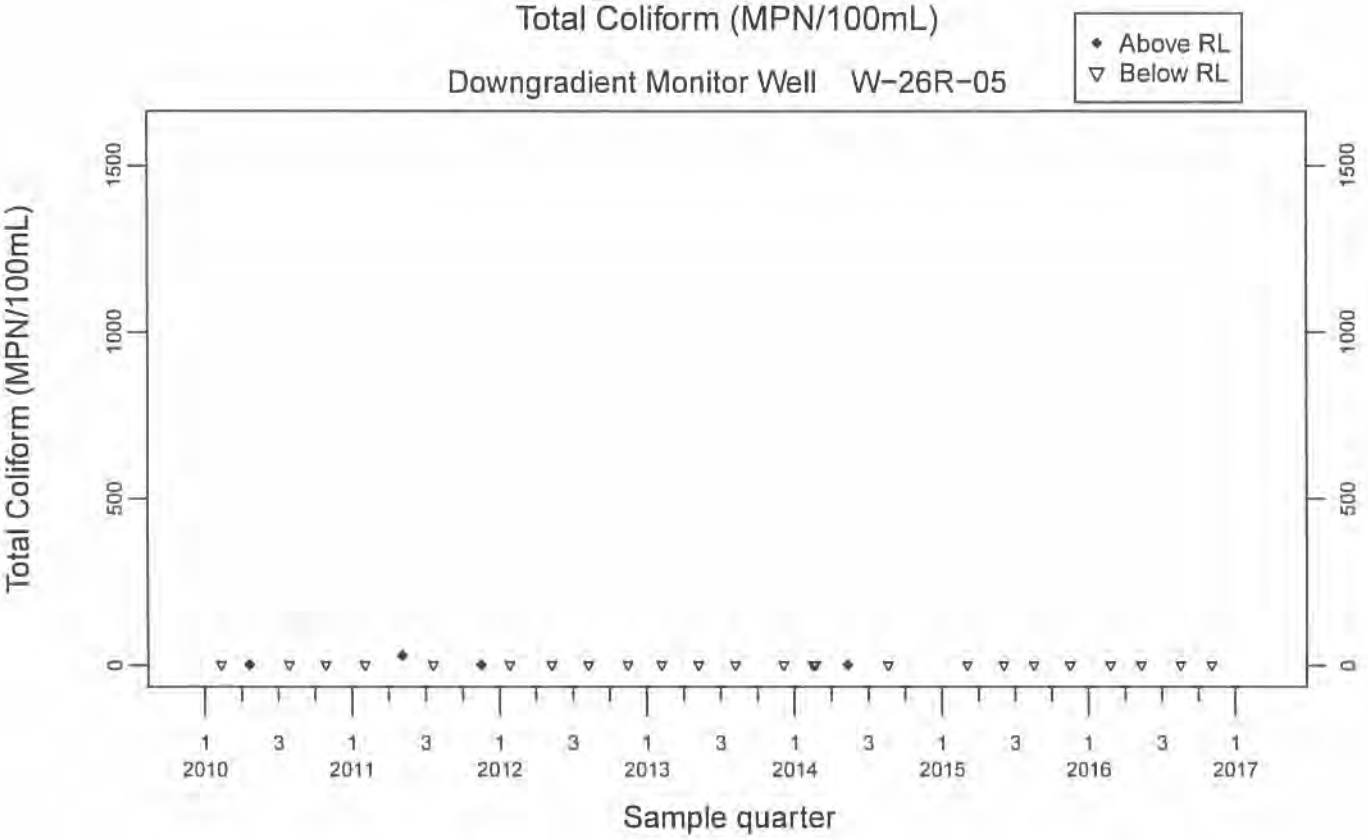

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

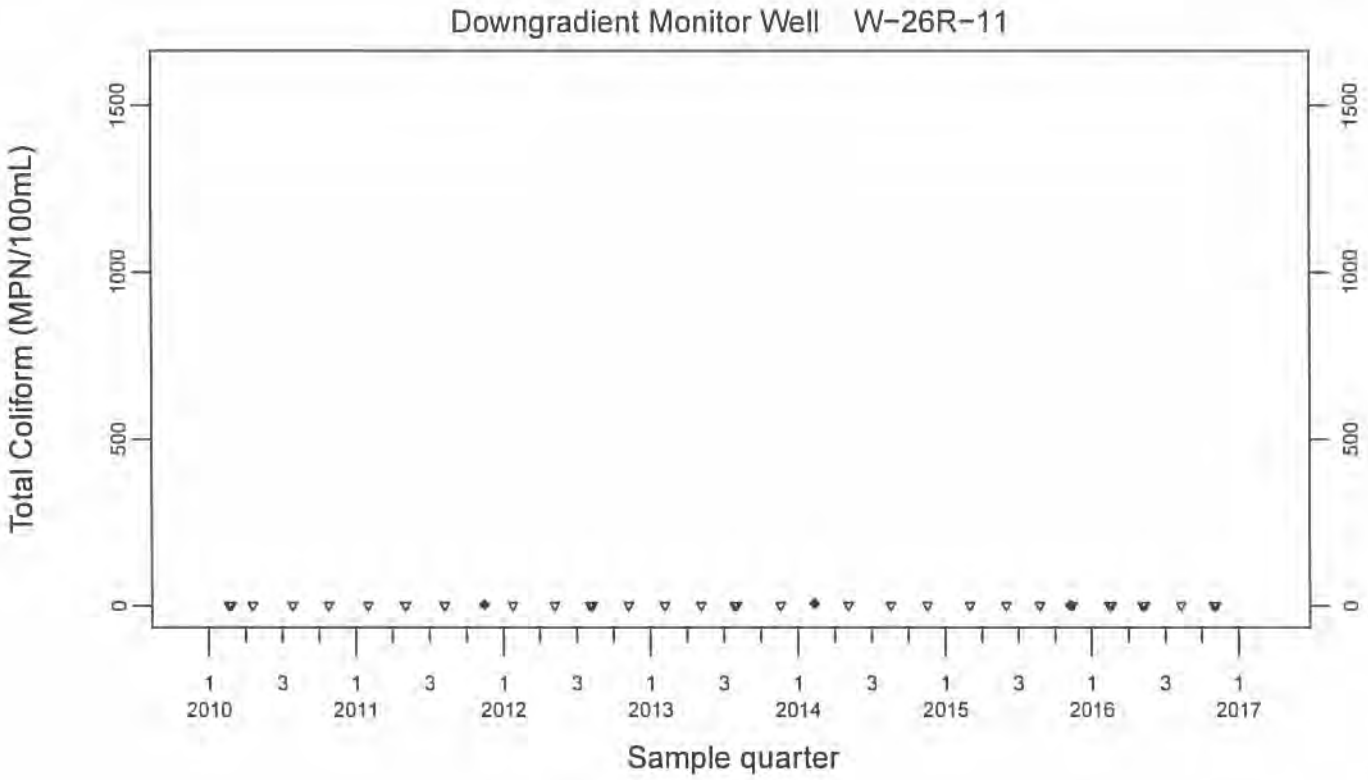

Downgradient Monitor Well W-25N-23
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

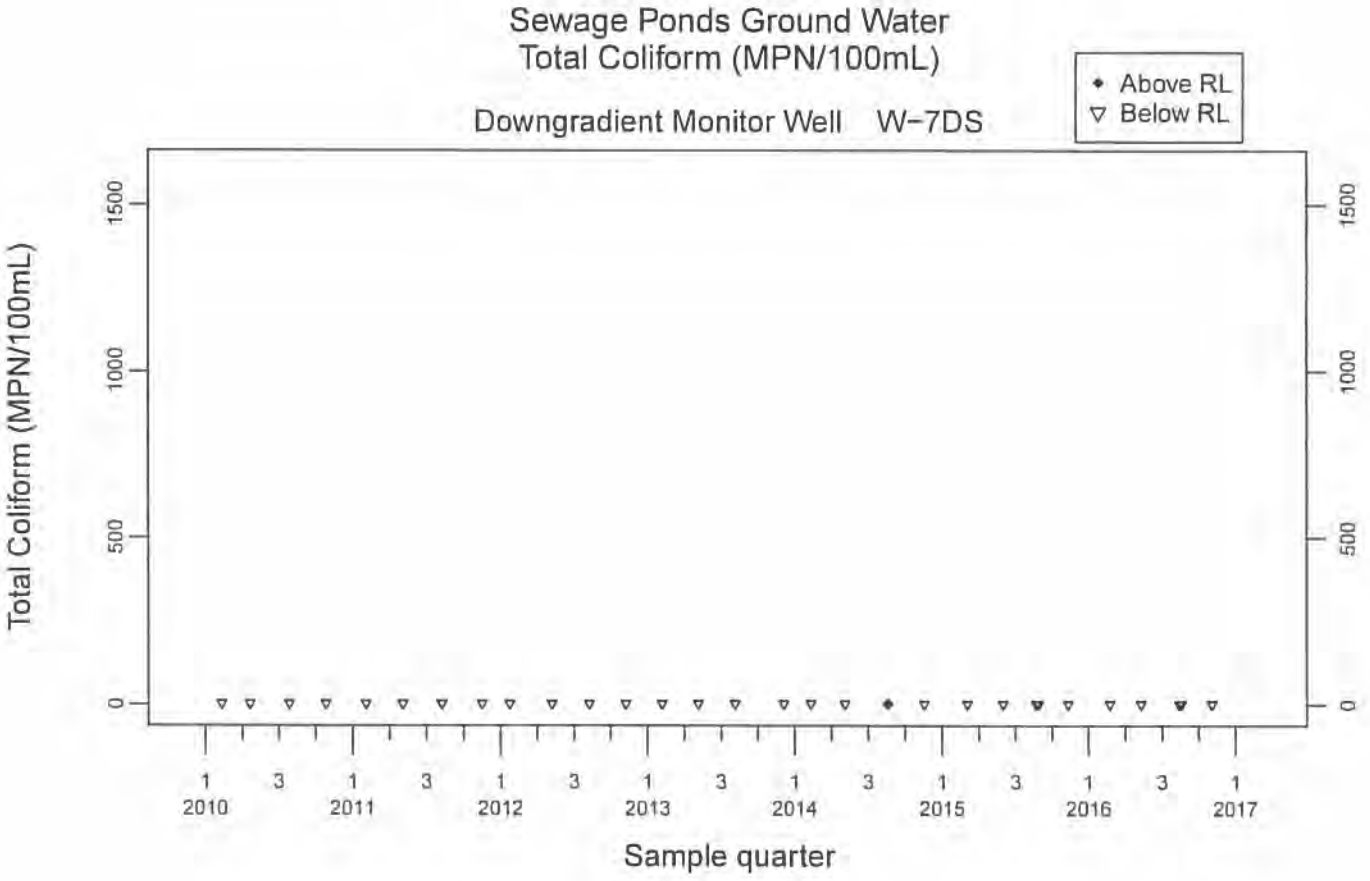

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

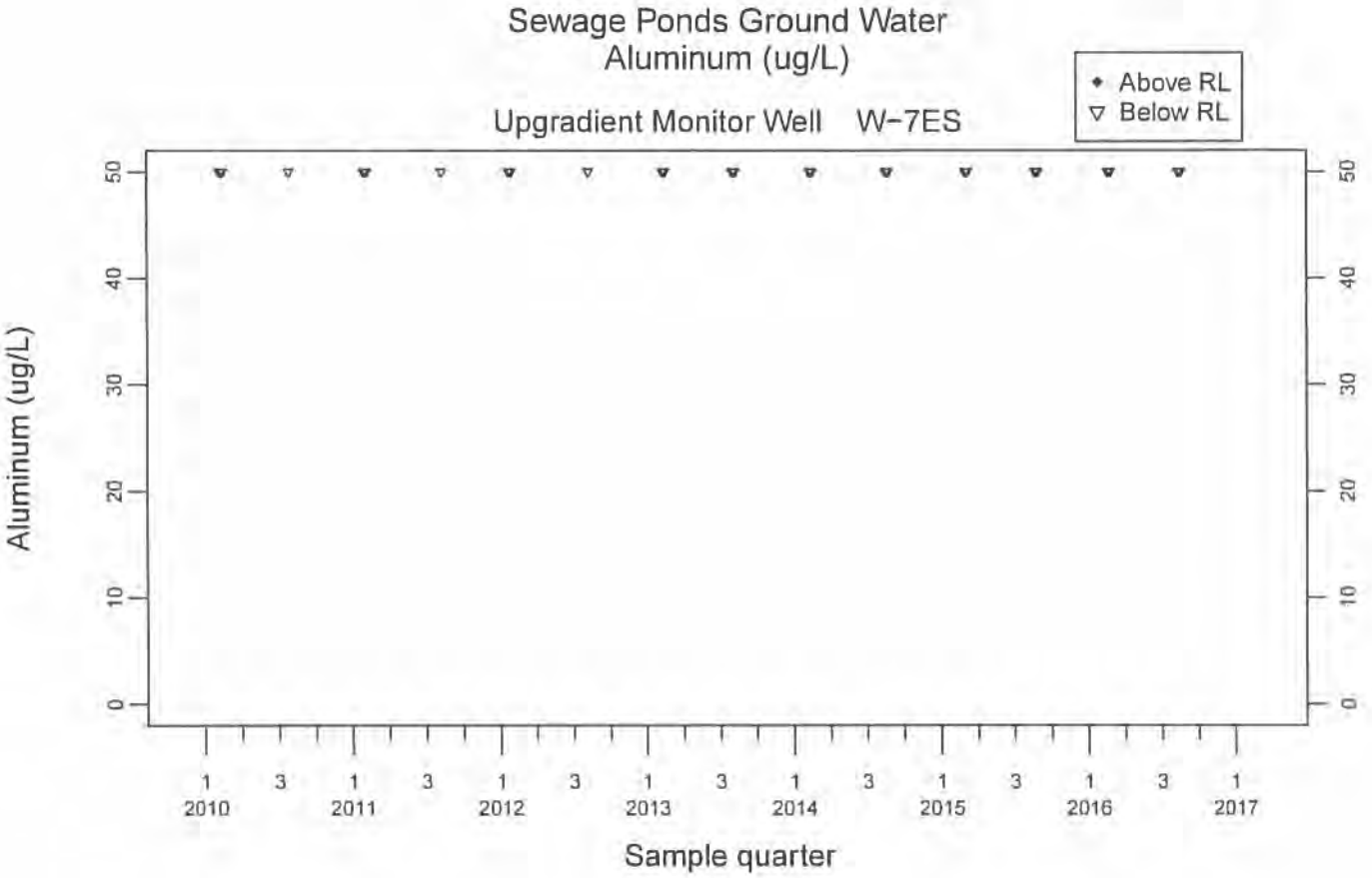

Downgradient Monitor Well W-26R-01
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

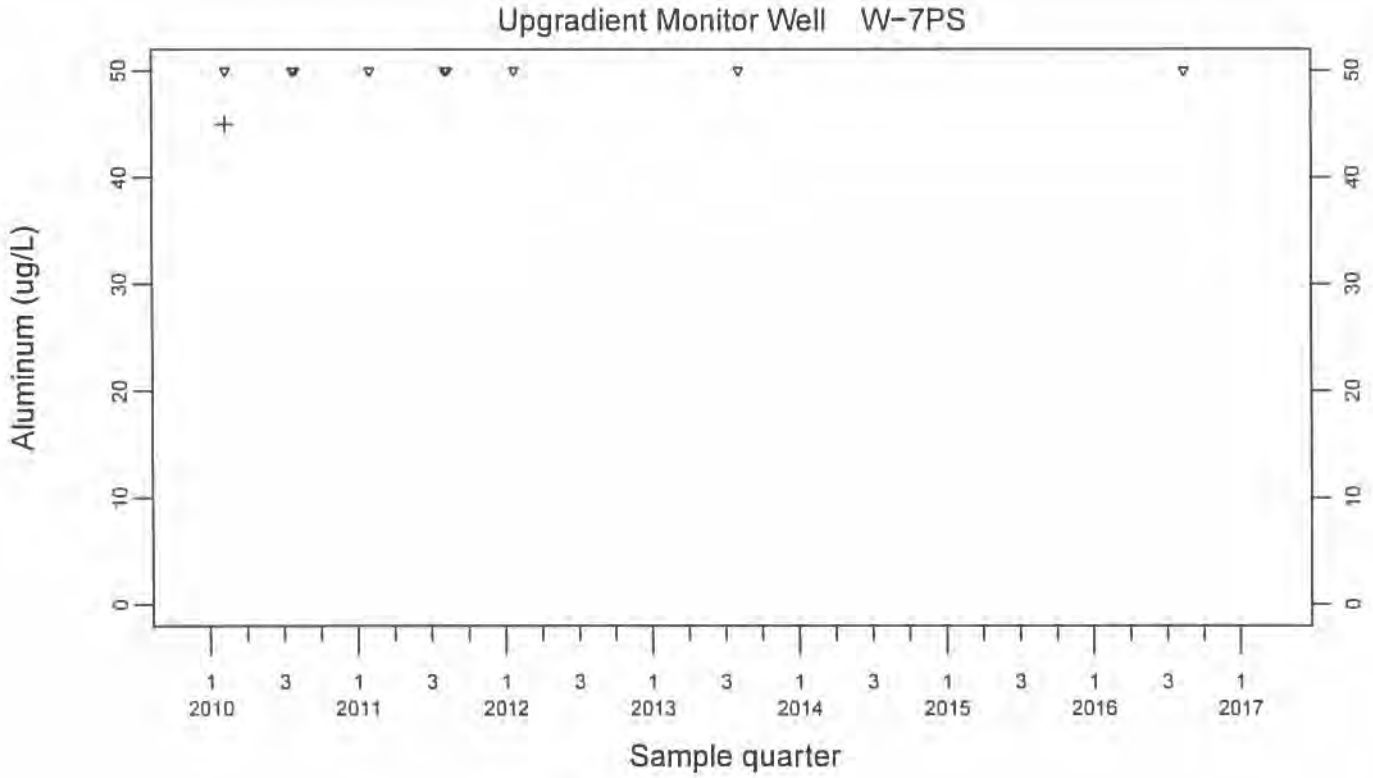
Sewage Ponds Ground Water
Total Coliform (MPN/100mL)

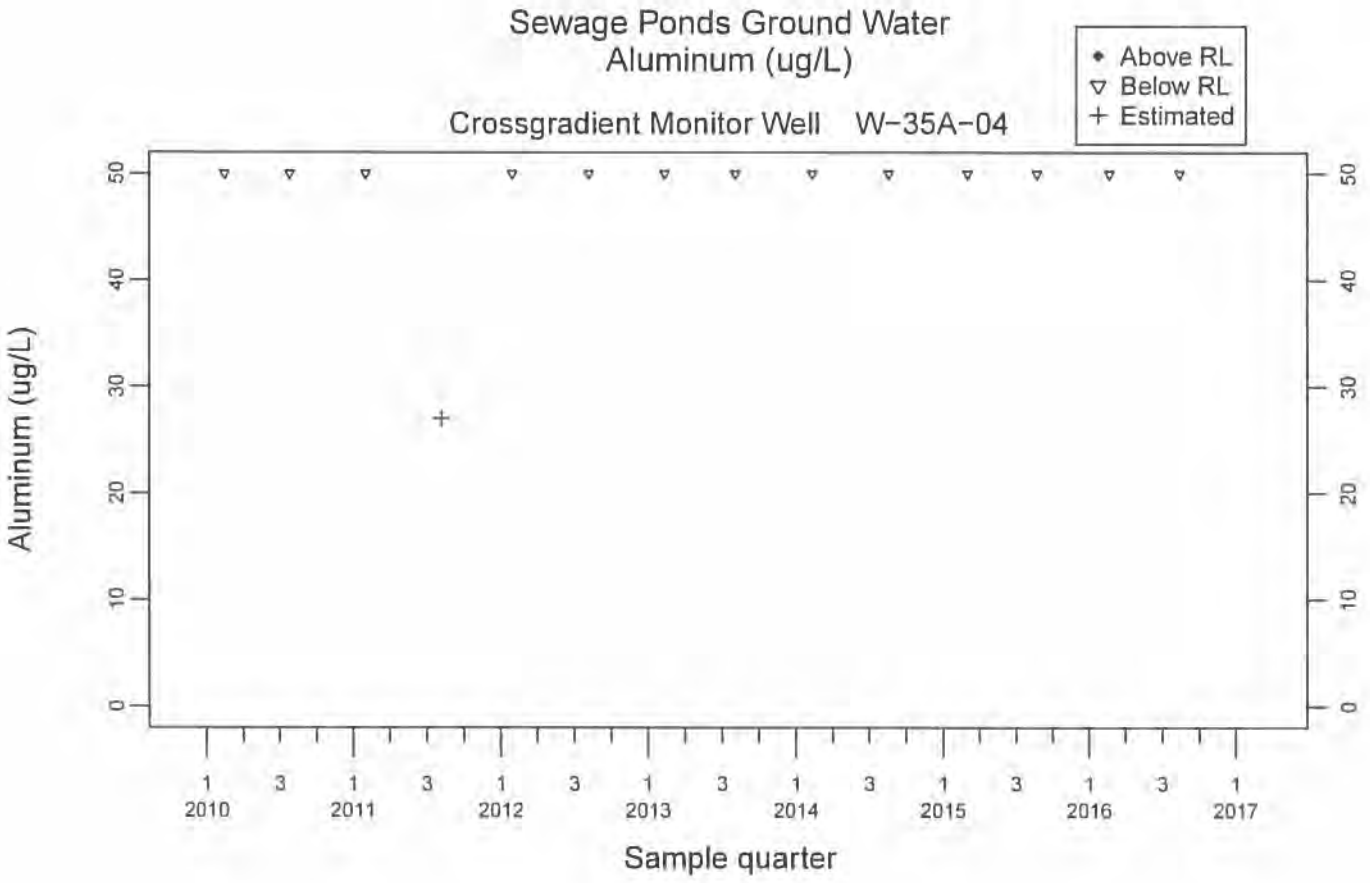


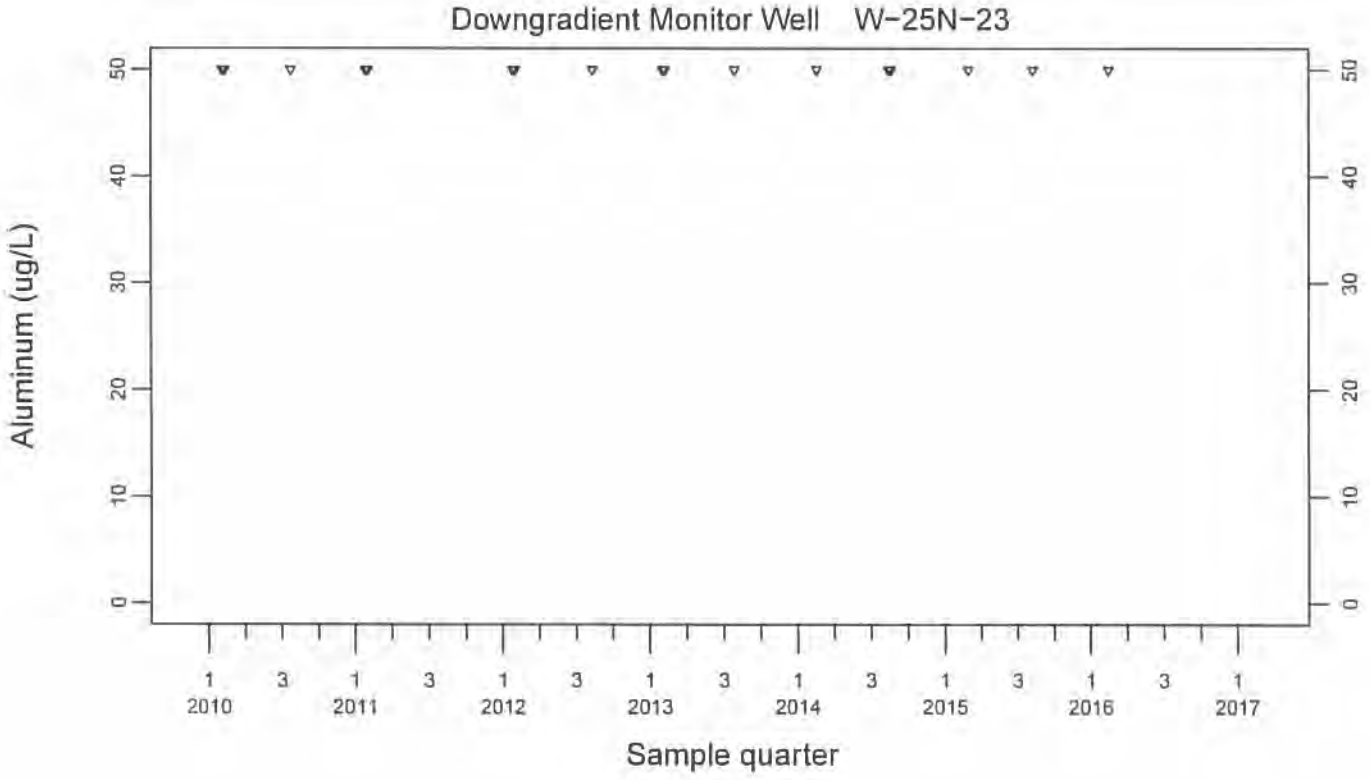


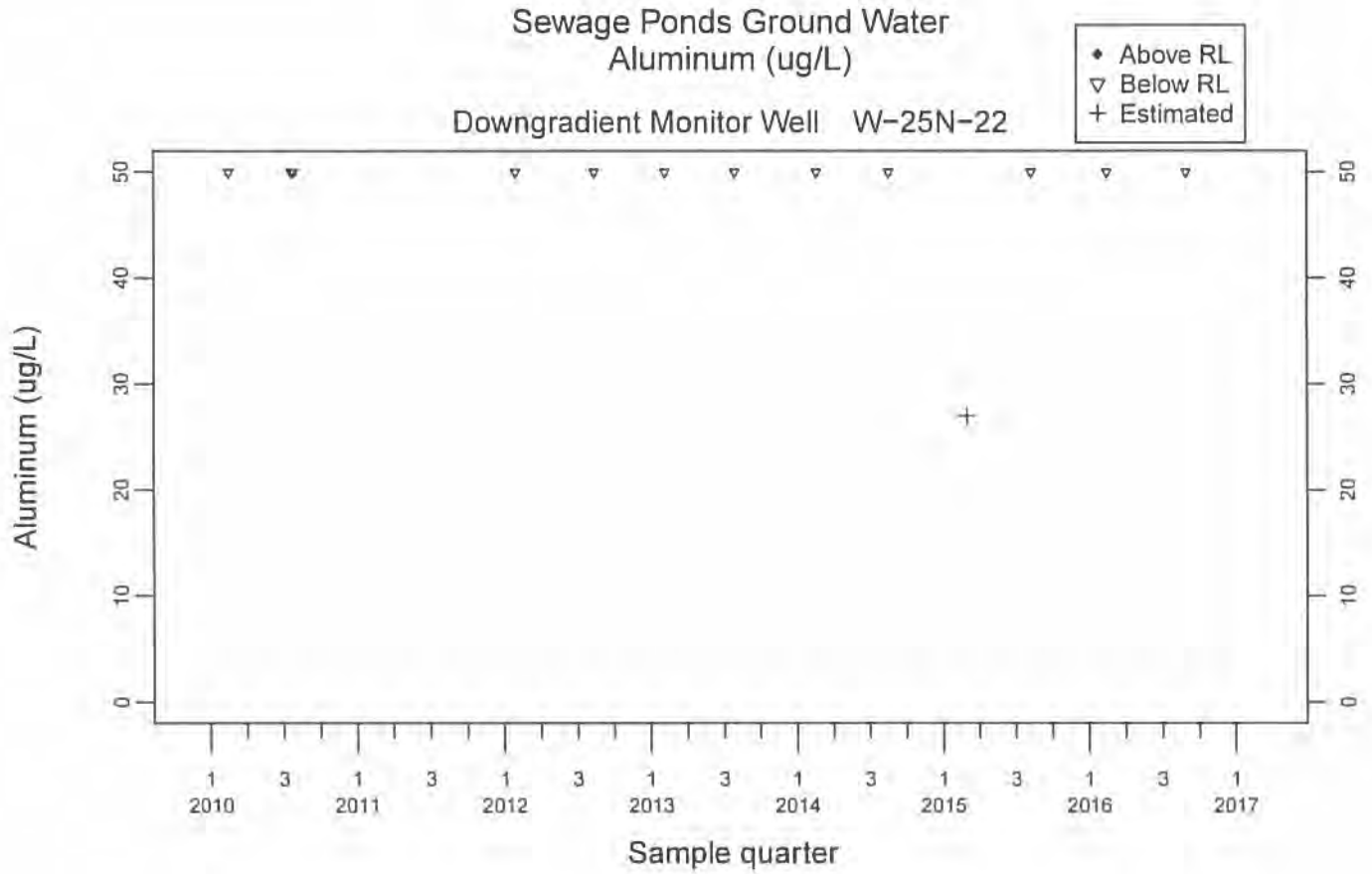

Sewage Ponds Ground Water
Total Coliform (MPN/100mL)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Total Coliform (MPN/100mL)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

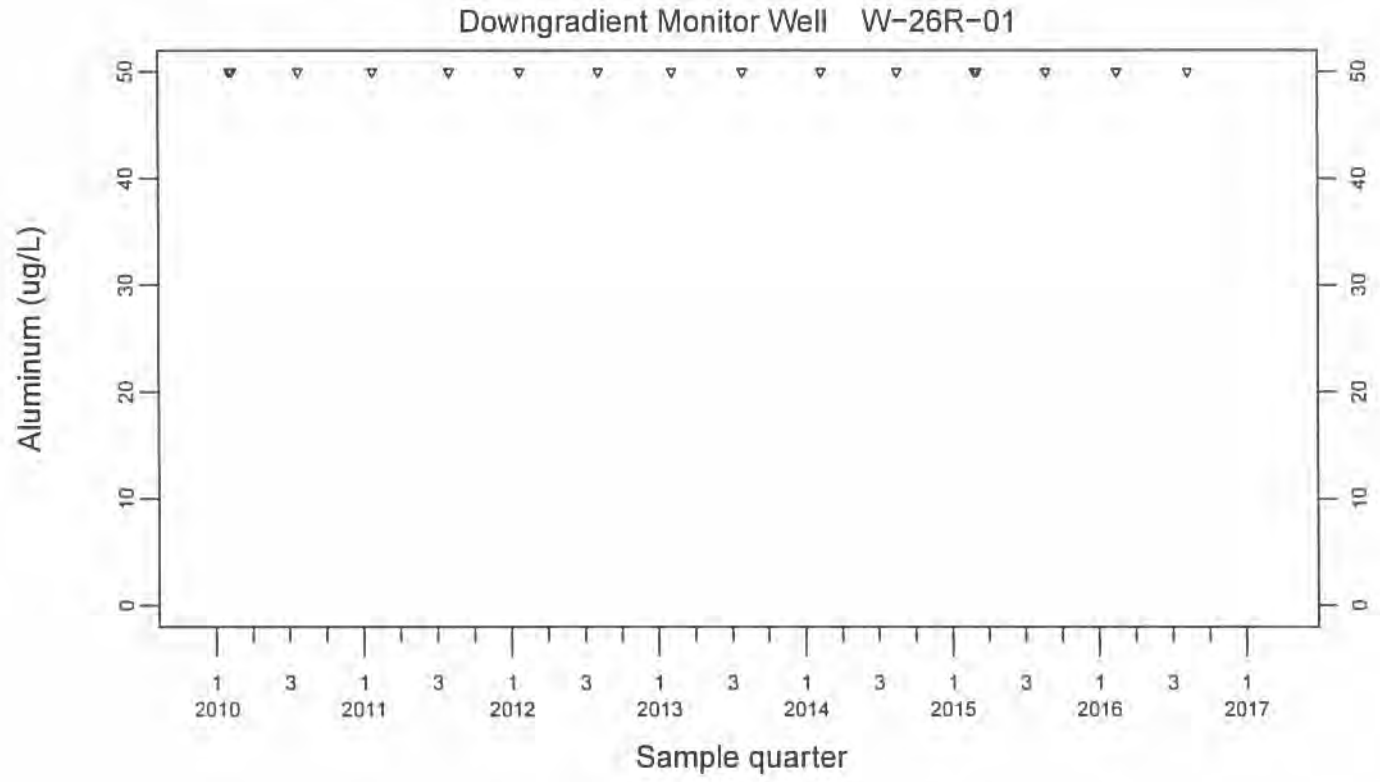

Sewage Ponds Ground Water
Aluminum (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

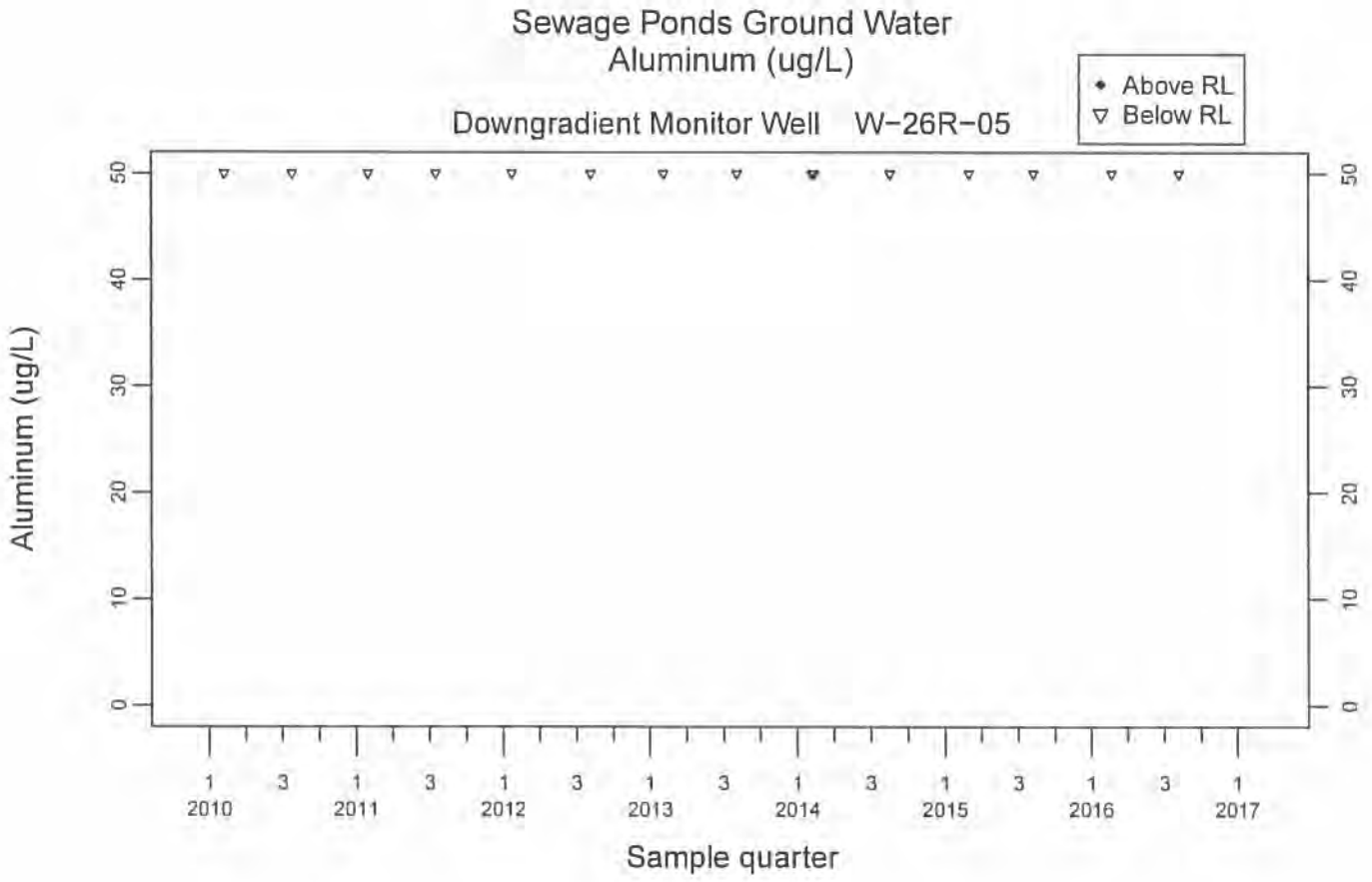

Upgradient Monitor Well W-7PS
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

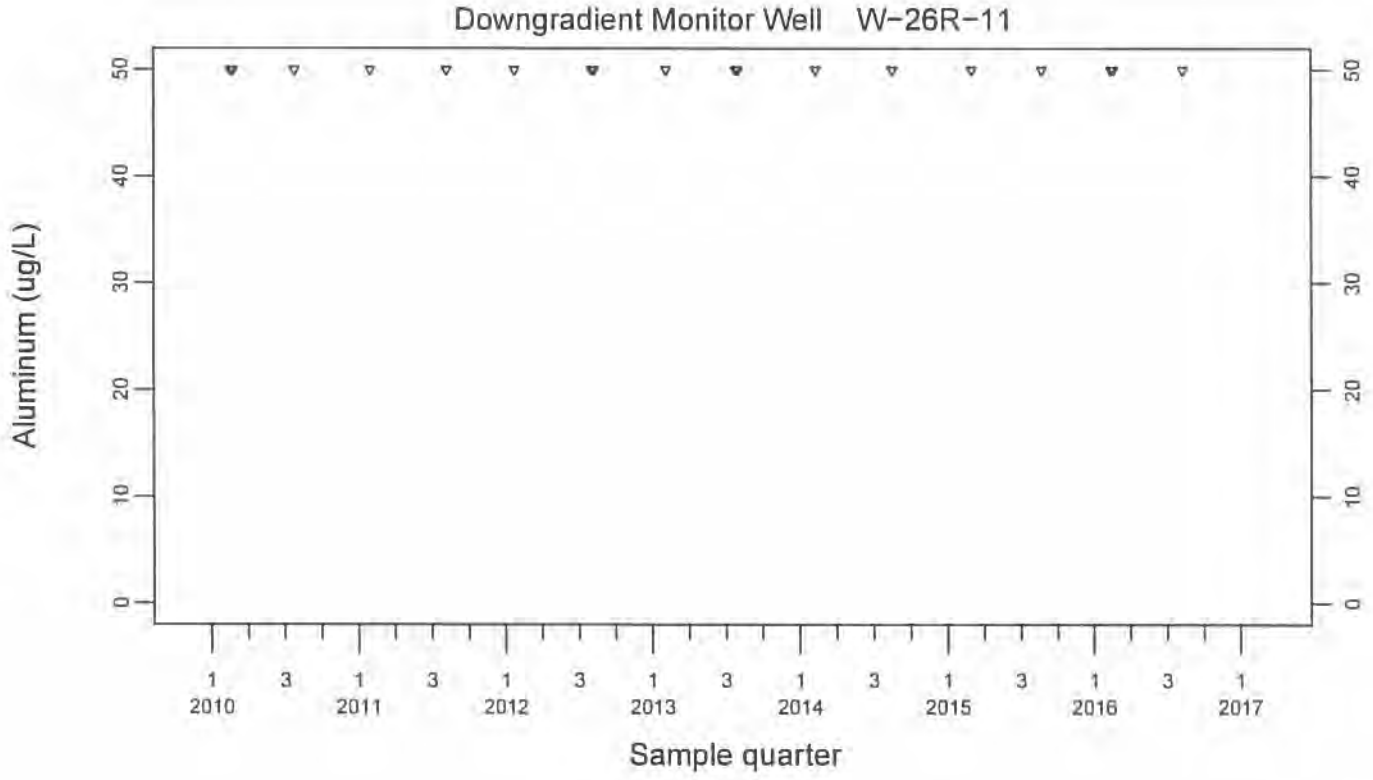

Sewage Ponds Ground Water
Aluminum (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

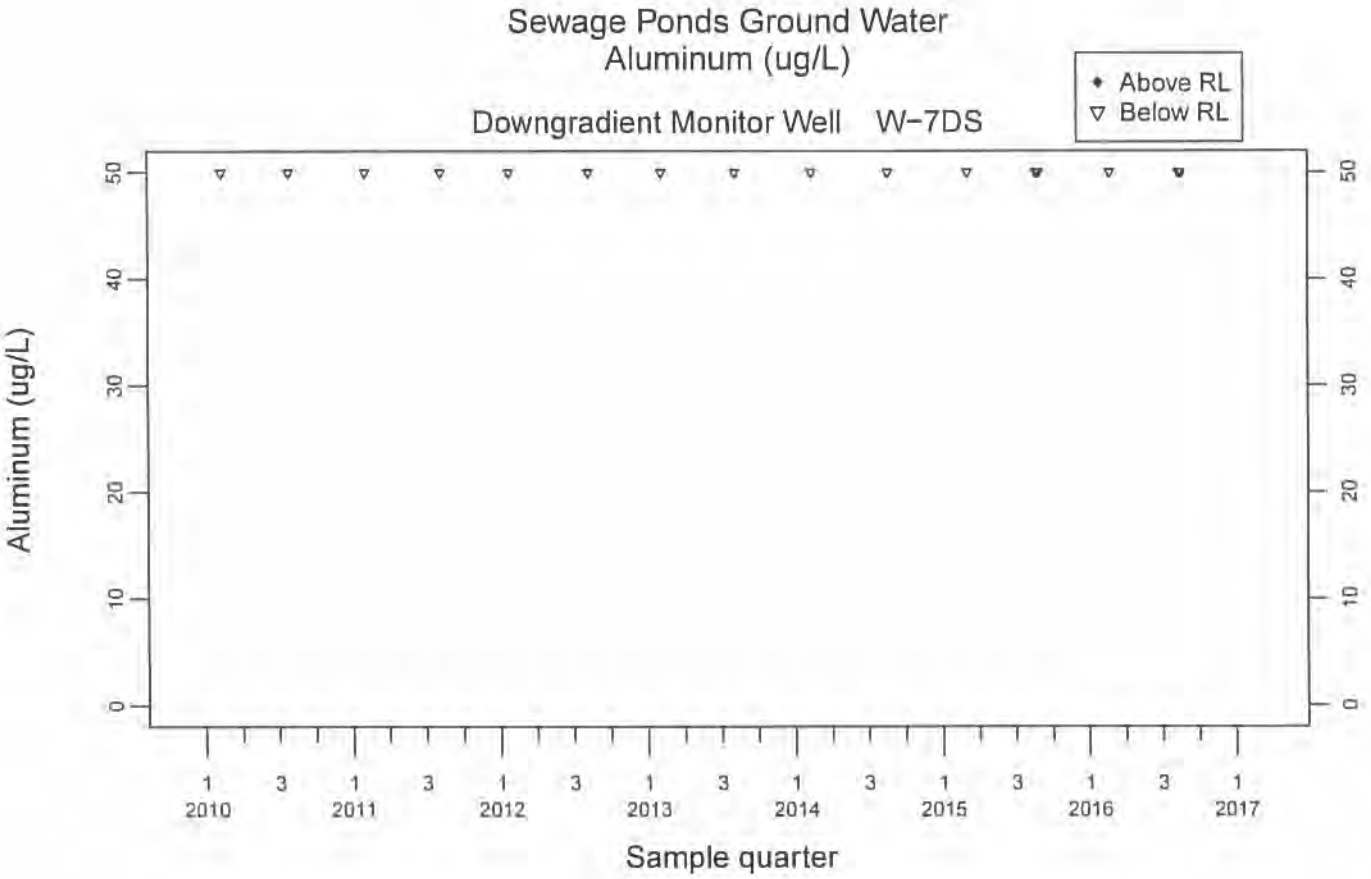

Downgradient Monitor Well W-25N-23
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

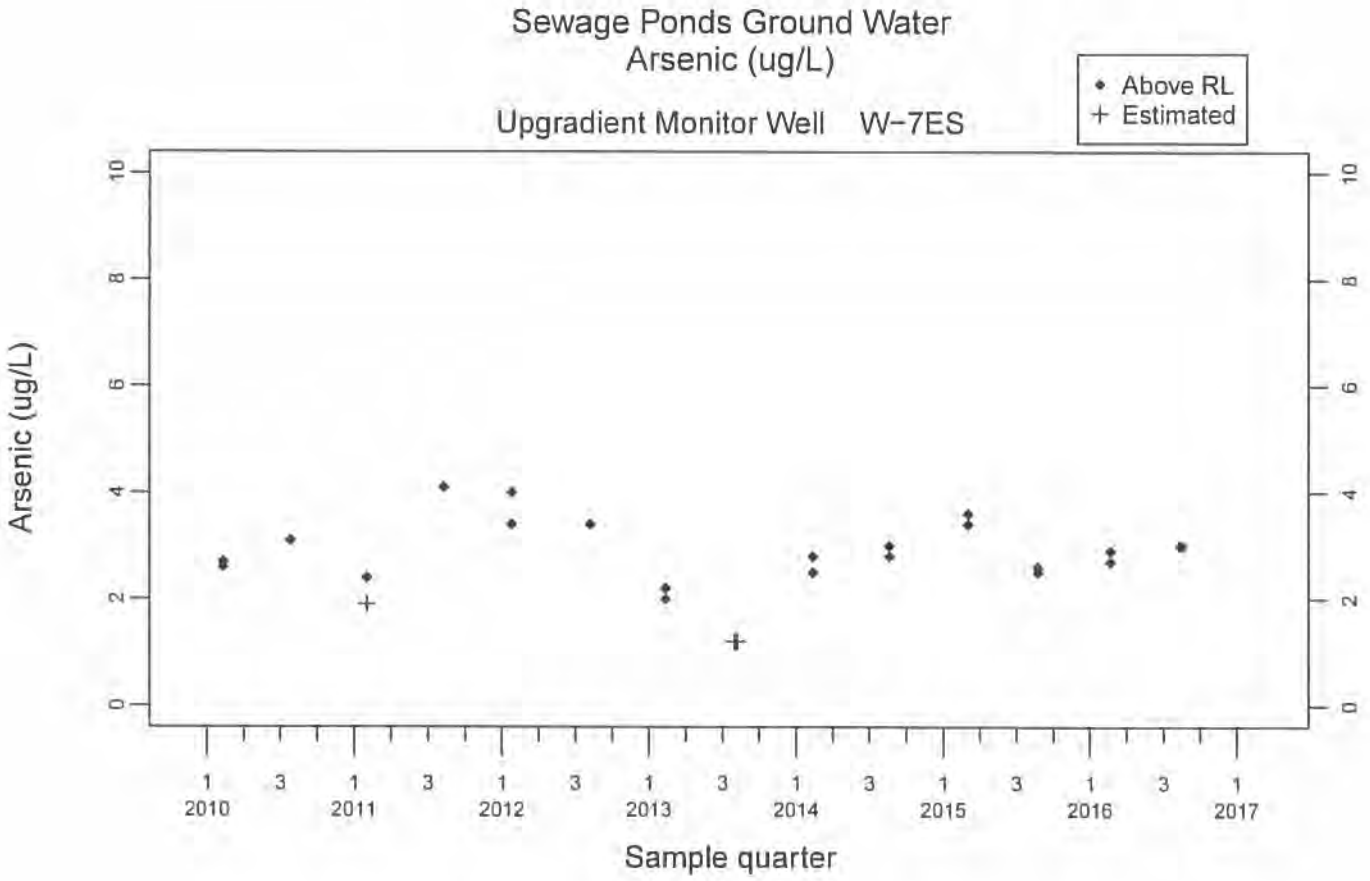

Sewage Ponds Ground Water
Aluminum (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

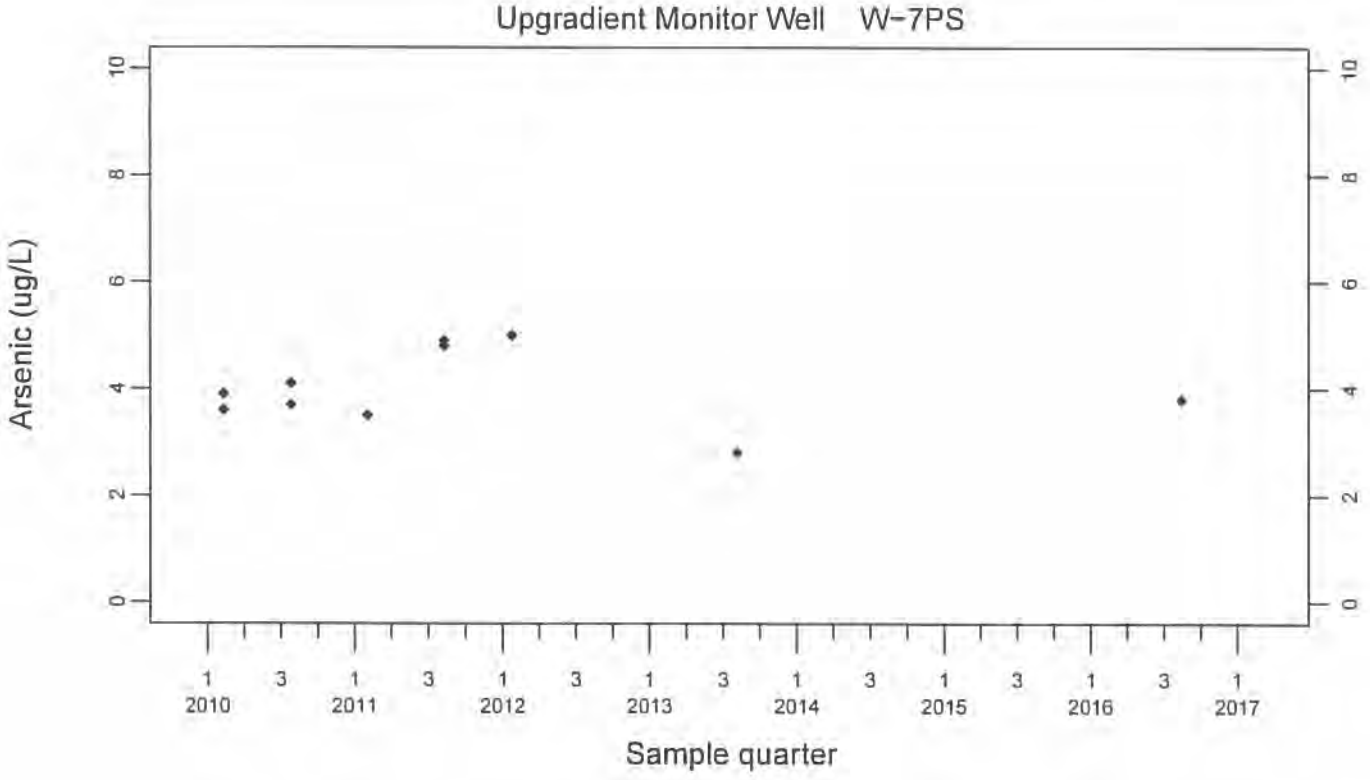

Downgradient Monitor Well W-26R-01
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

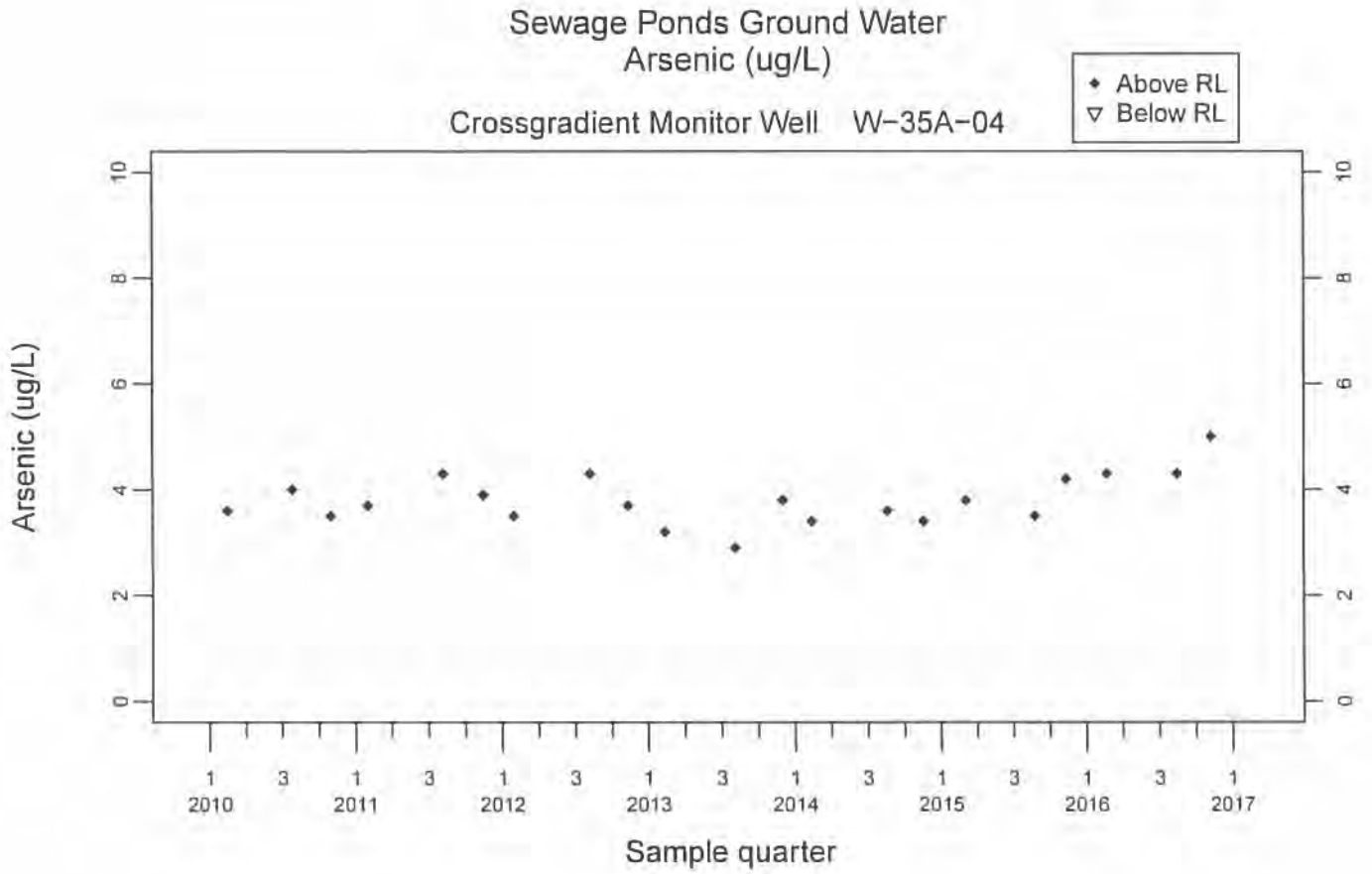

Sewage Ponds Ground Water
Aluminum (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

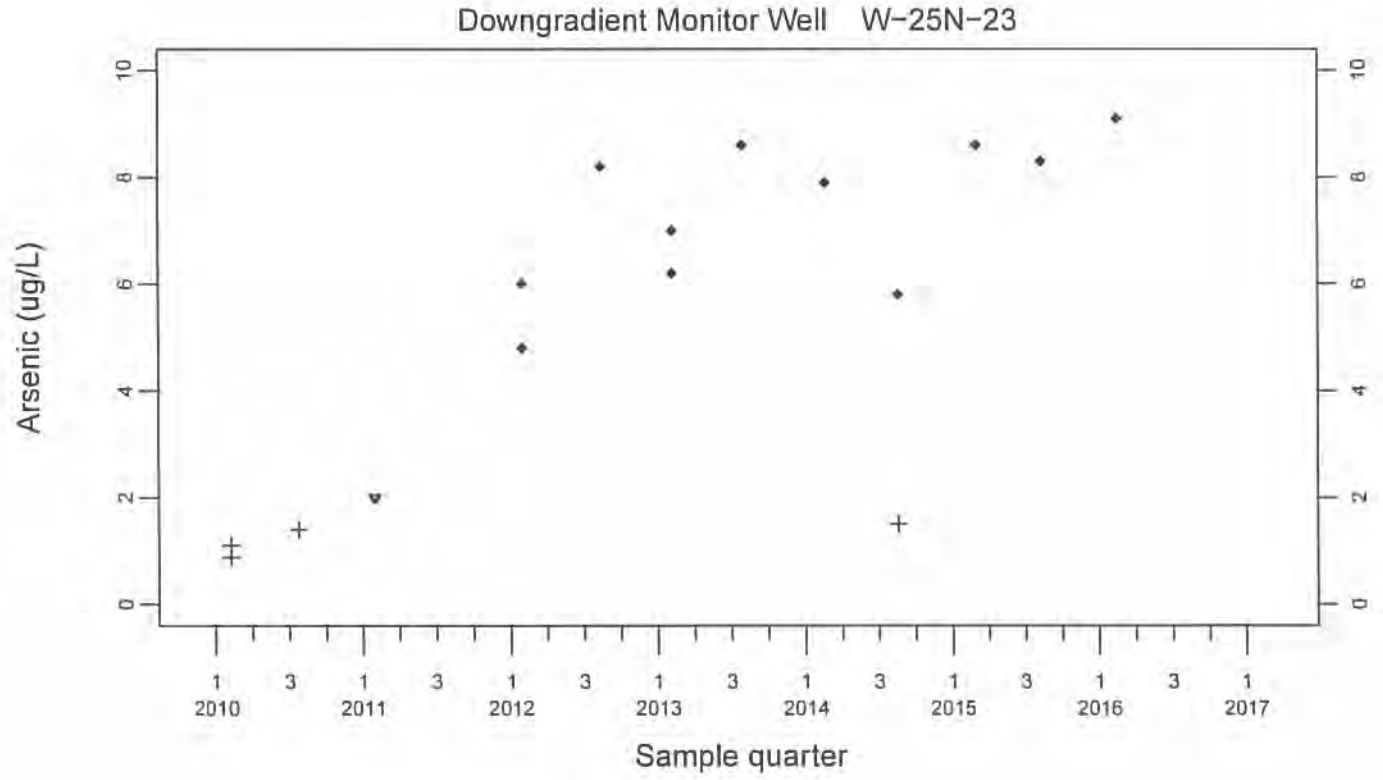

Downgradient Monitor Well W-26R-11
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

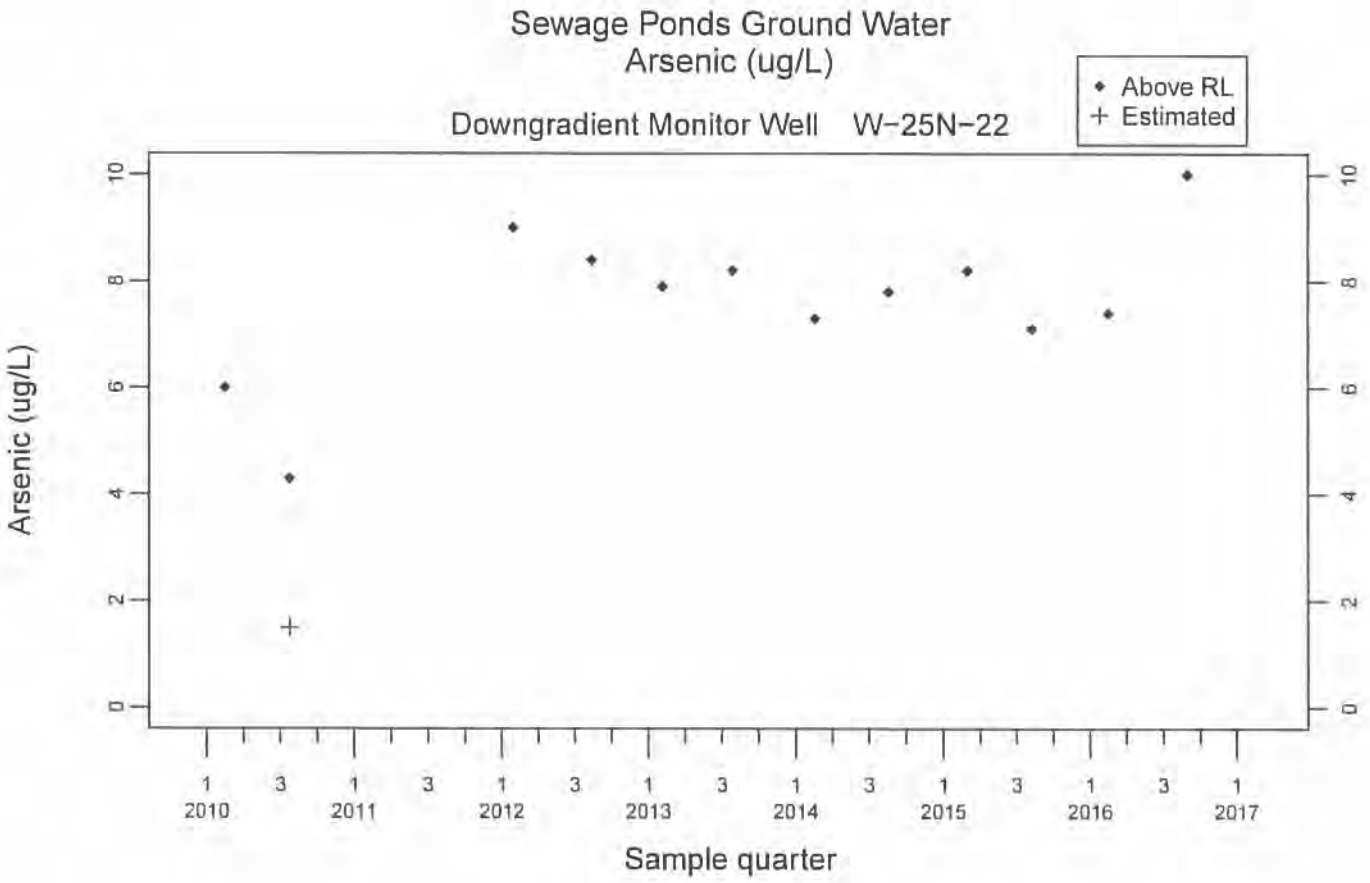

Sewage Ponds Ground Water
Aluminum (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Aluminum (ug/L)
0
10
20
30
40
50
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

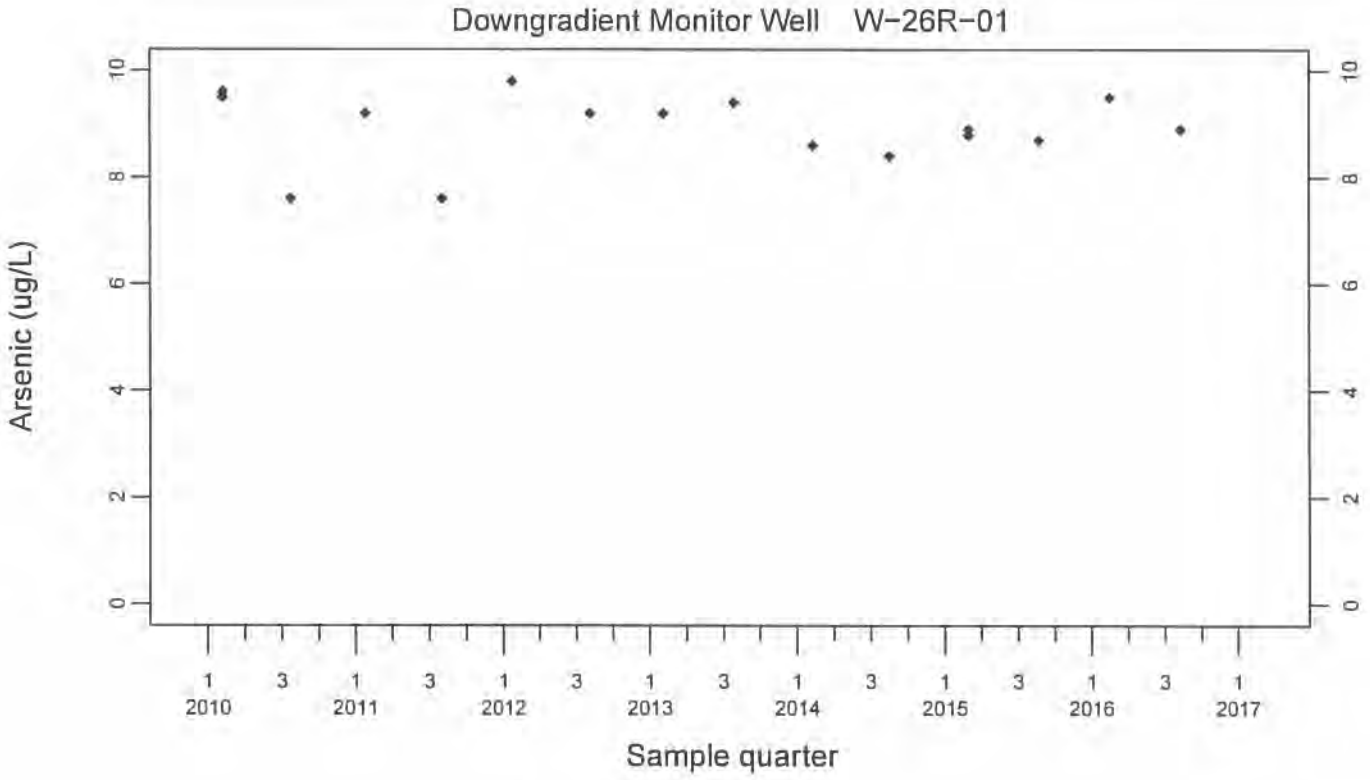

Sewage Ponds Ground Water
Arsenic (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Estimated
Arsenic (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

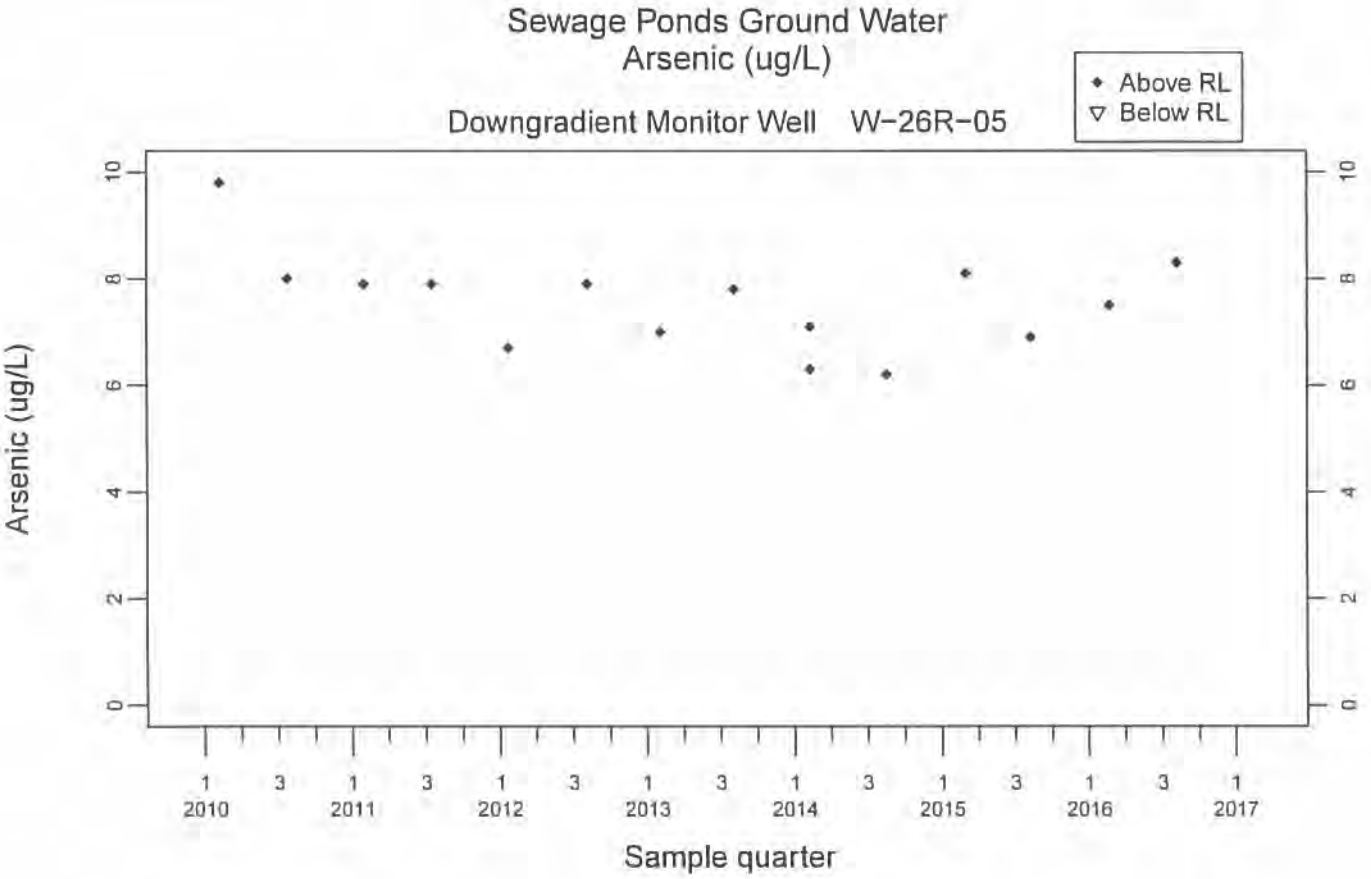

Upgradient Monitor Well W-7PS
Arsenic (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

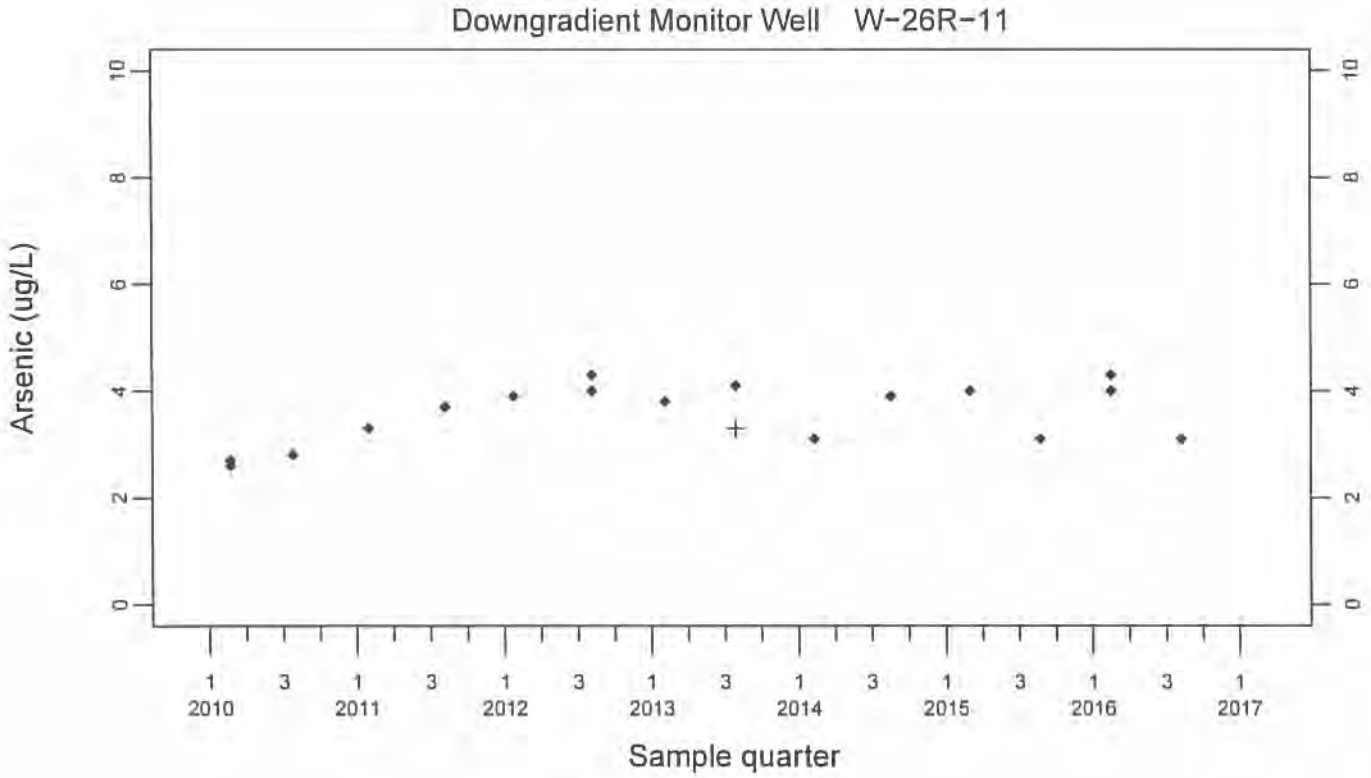

Sewage Ponds Ground Water
Arsenic (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

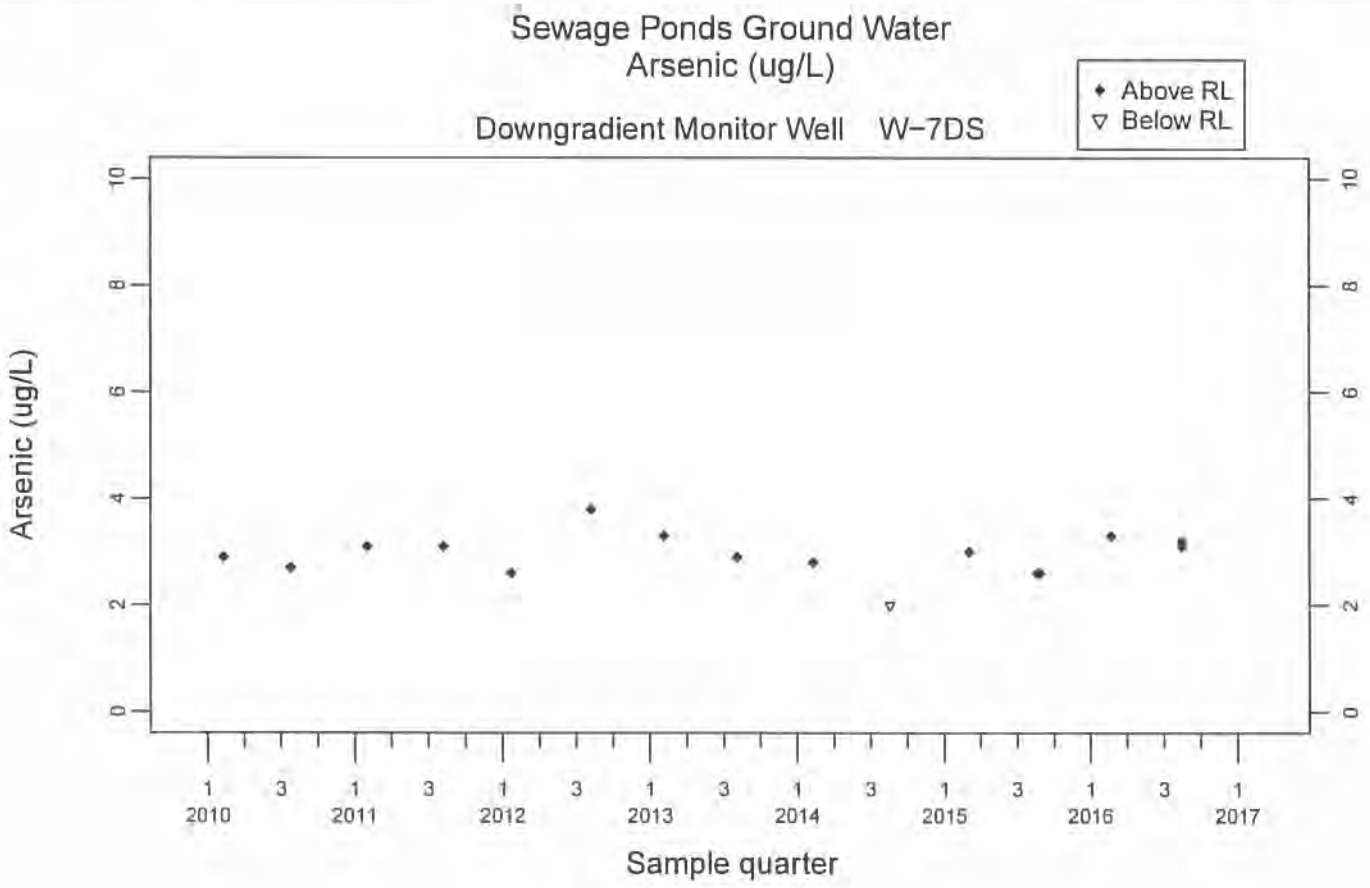

Downgradient Monitor Well W-25N-23
Arsenic (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

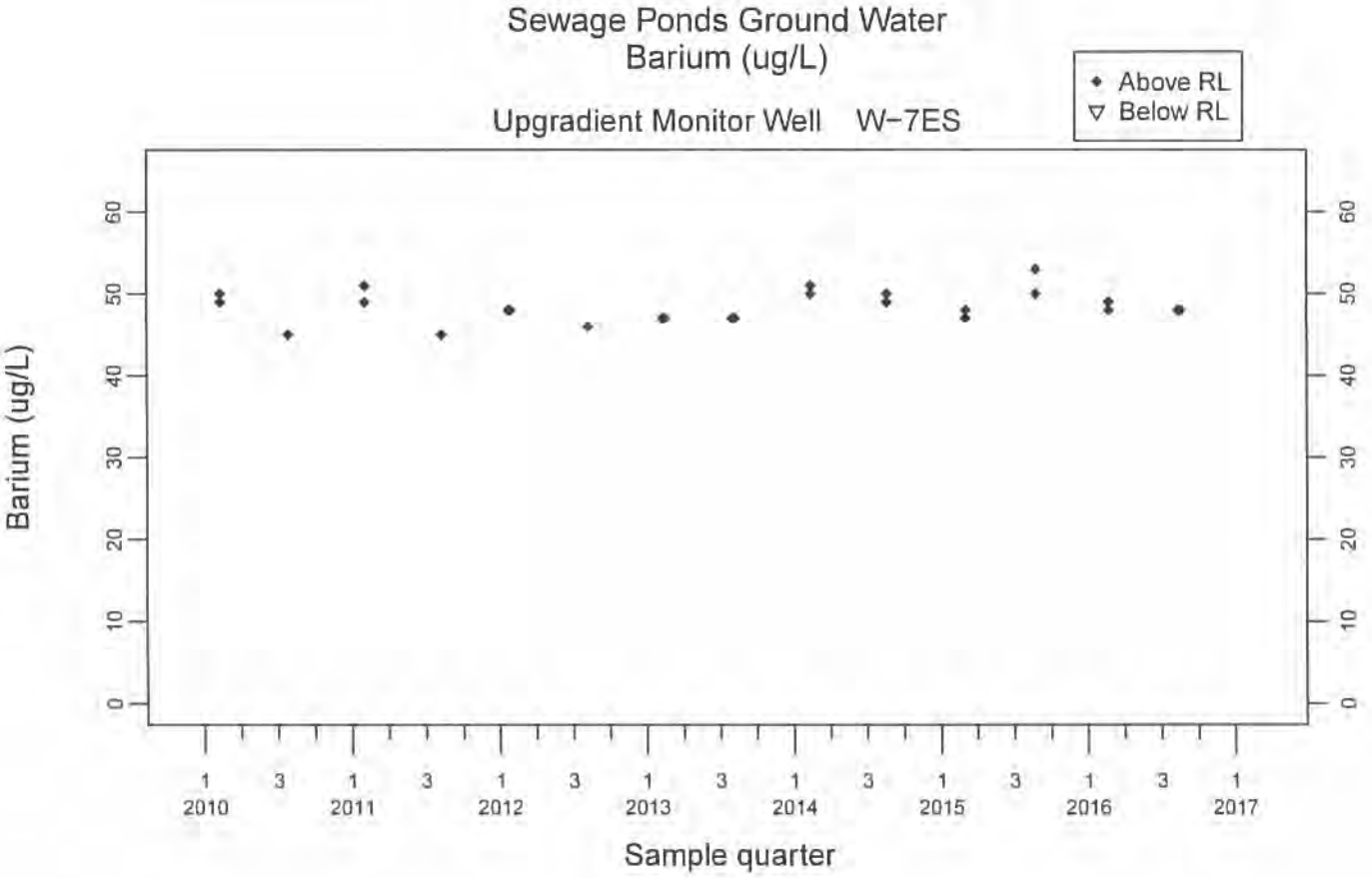

Sewage Ponds Ground Water
Arsenic (ug/L)
Downgradient Monitor Well W-25N-22
Above RL
Estimated
Arsenic (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

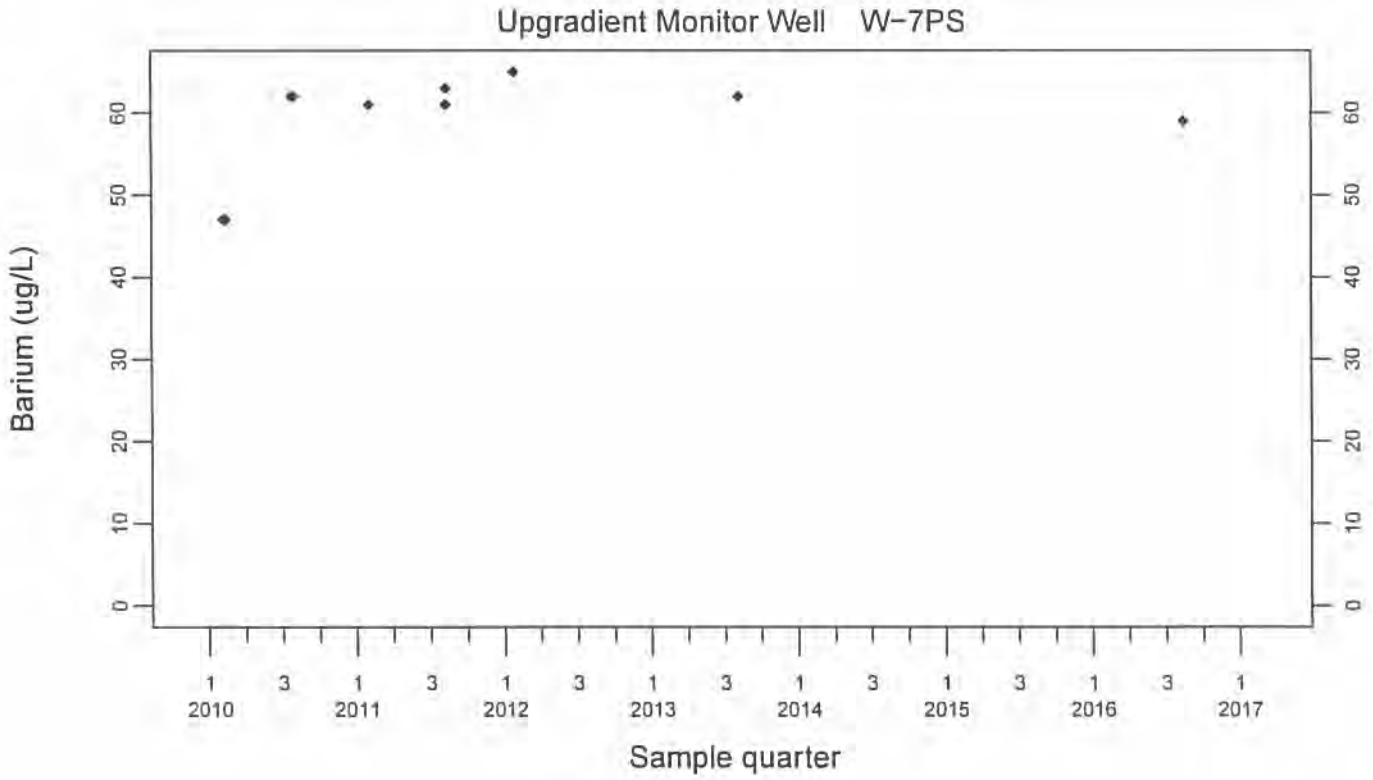

Downgradient Monitor Well W-26R-01
Arsenic (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

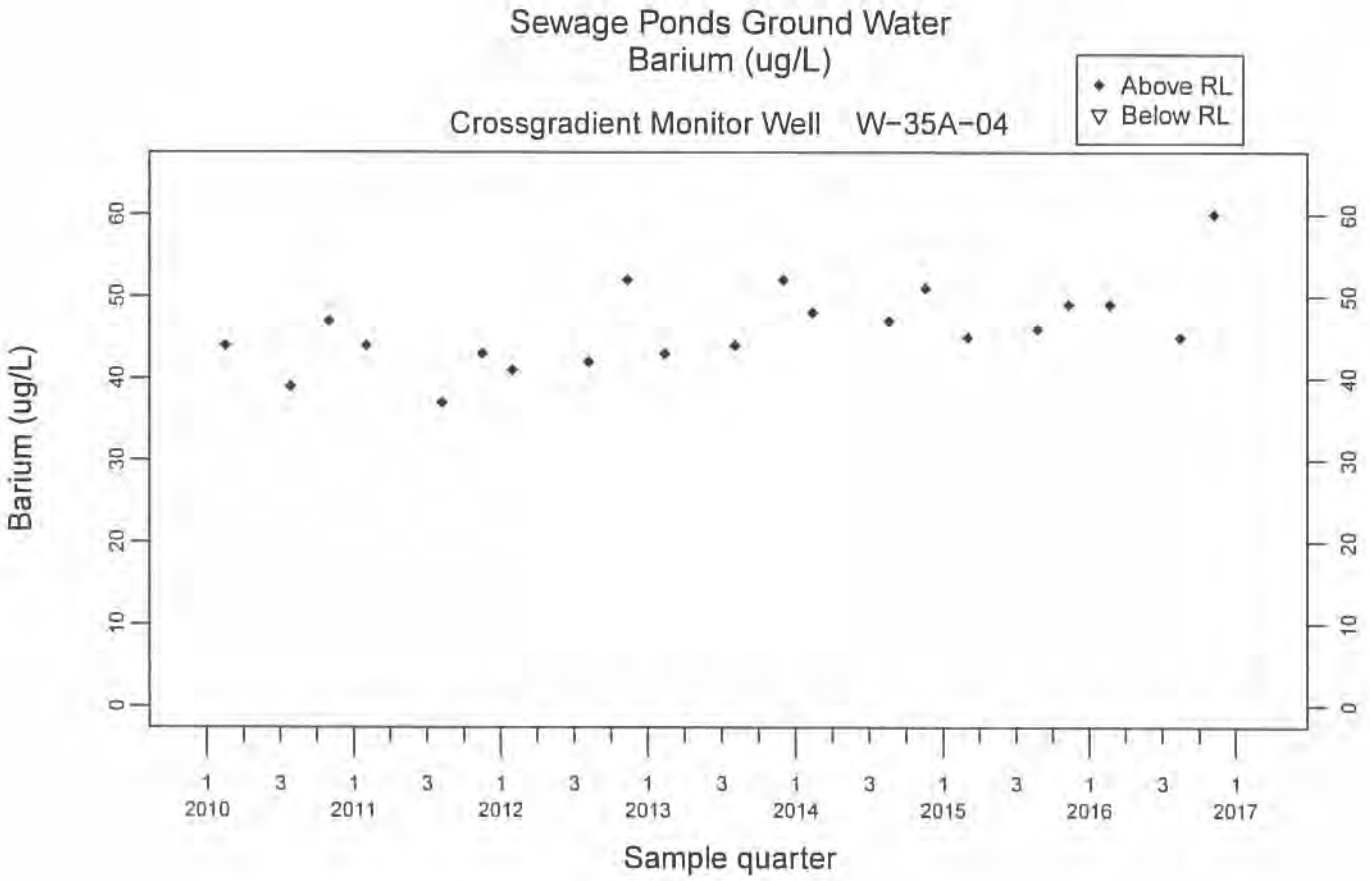

Sewage Ponds Ground Water
Arsenic (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Arsenic (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

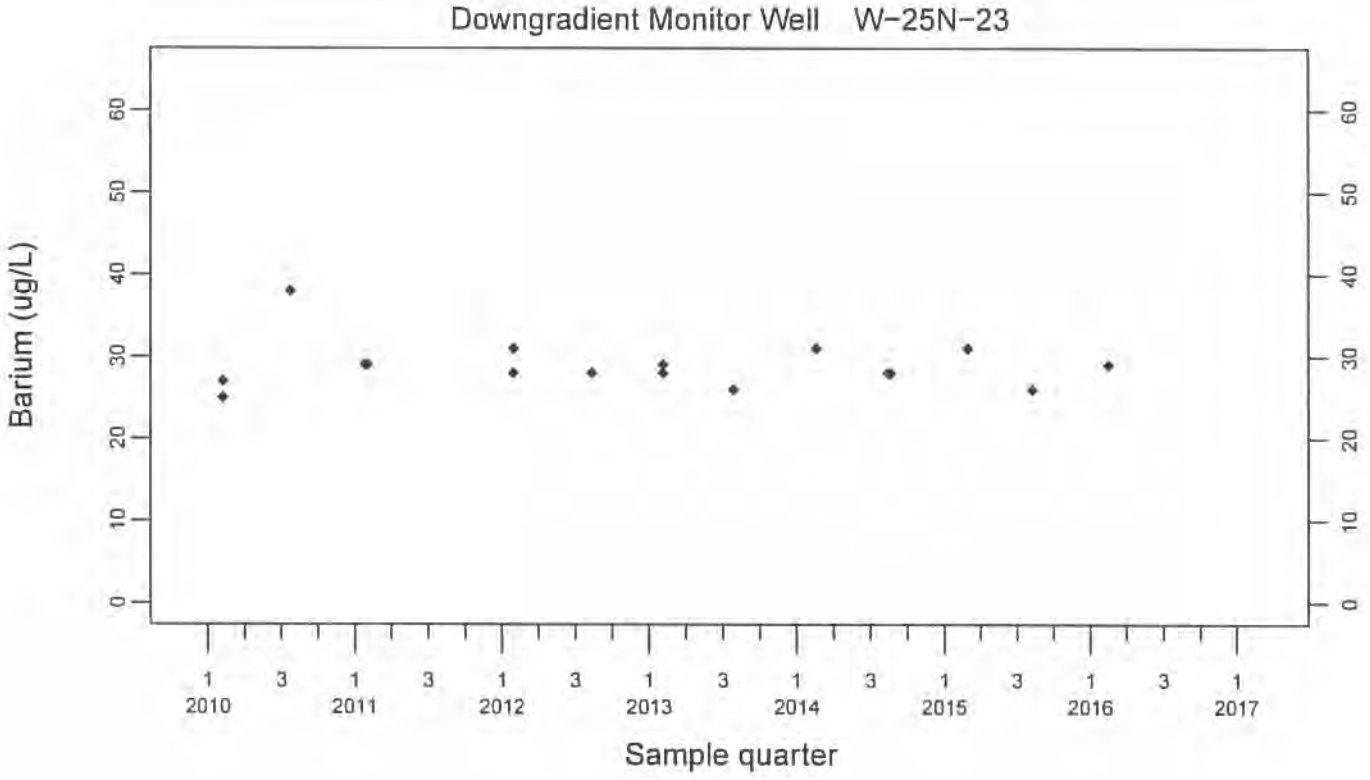

Downgradient Monitor Well W-26R-11
Arsenic (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

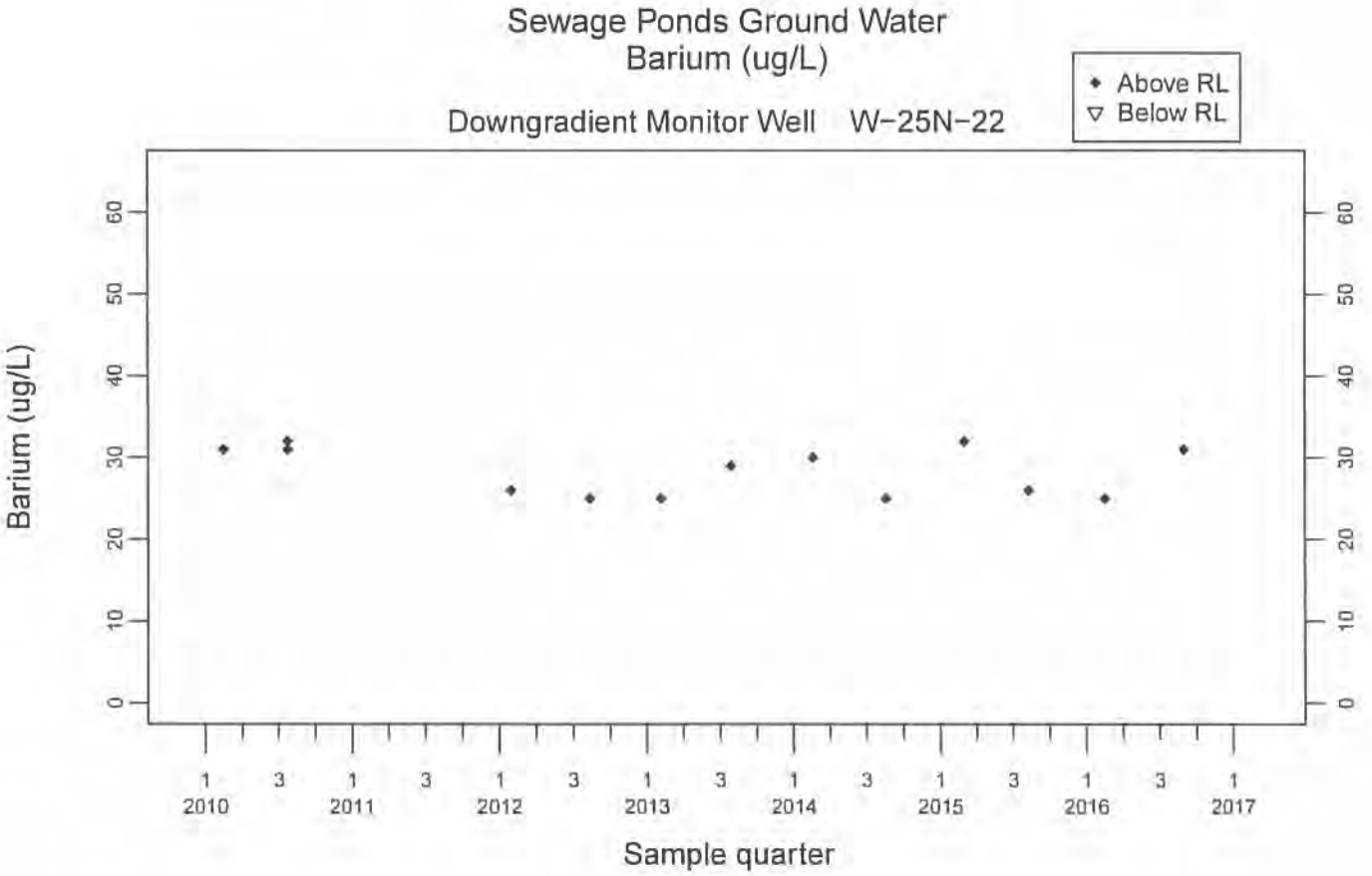

Sewage Ponds Ground Water
Arsenic (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Arsenic (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

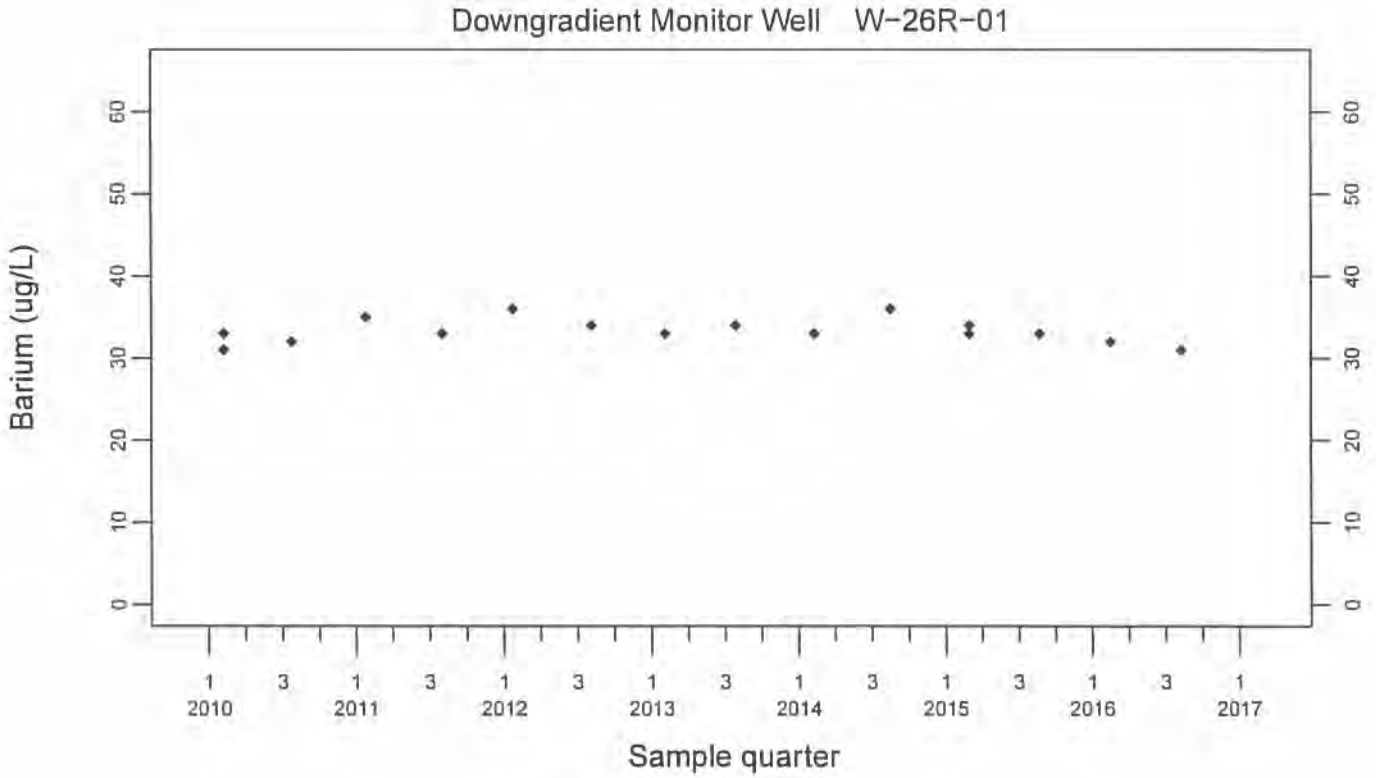

Sewage Ponds Ground Water
Barium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Upgradient Monitor Well W-7PS
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Barium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Downgradient Monitor Well W-25N-23
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Barium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Barium (ug/L)
0
10
20
30
40
50
60
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-01
Barium (ug/L)
0
10
20
30
40
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1 2010
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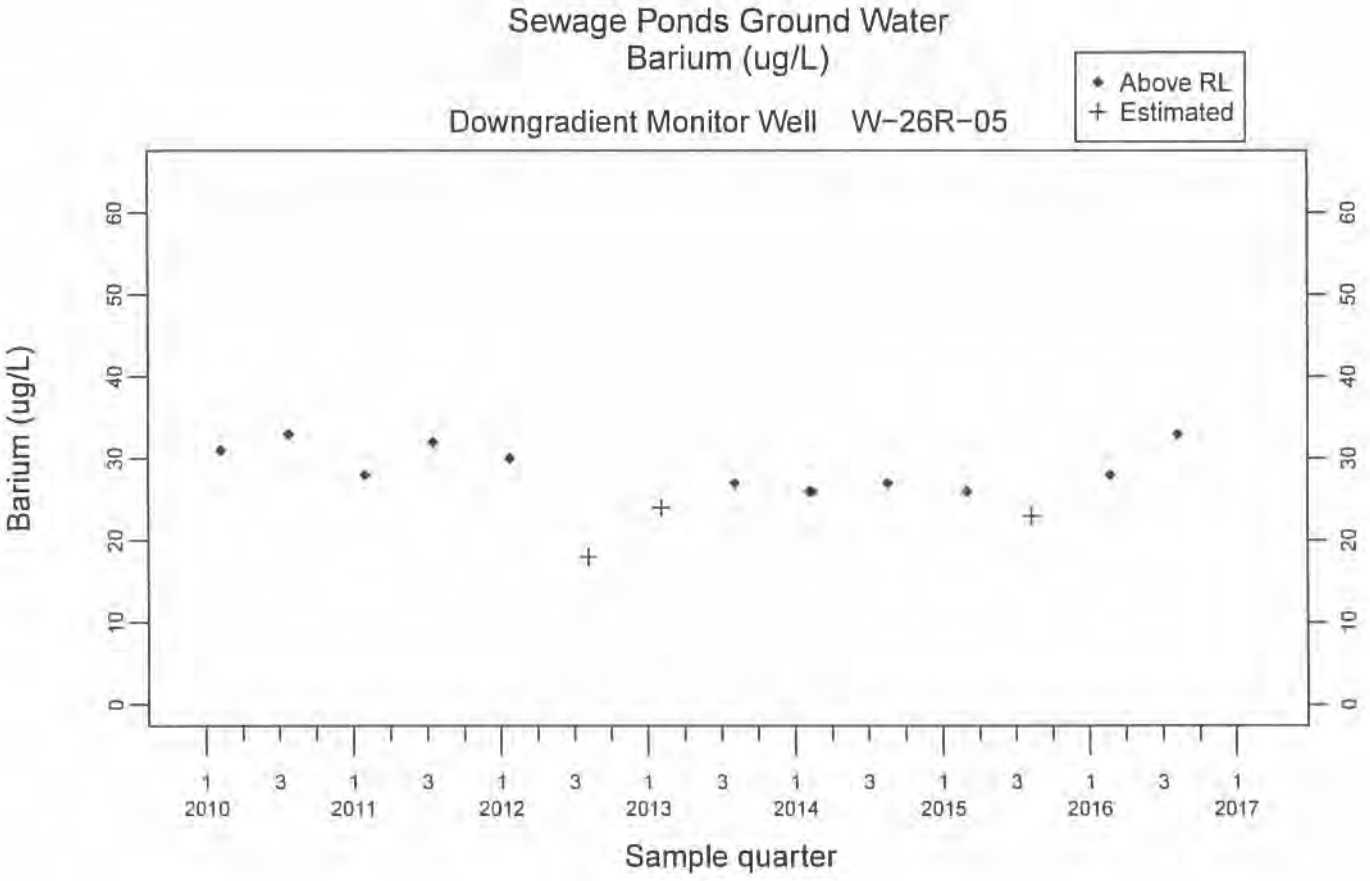
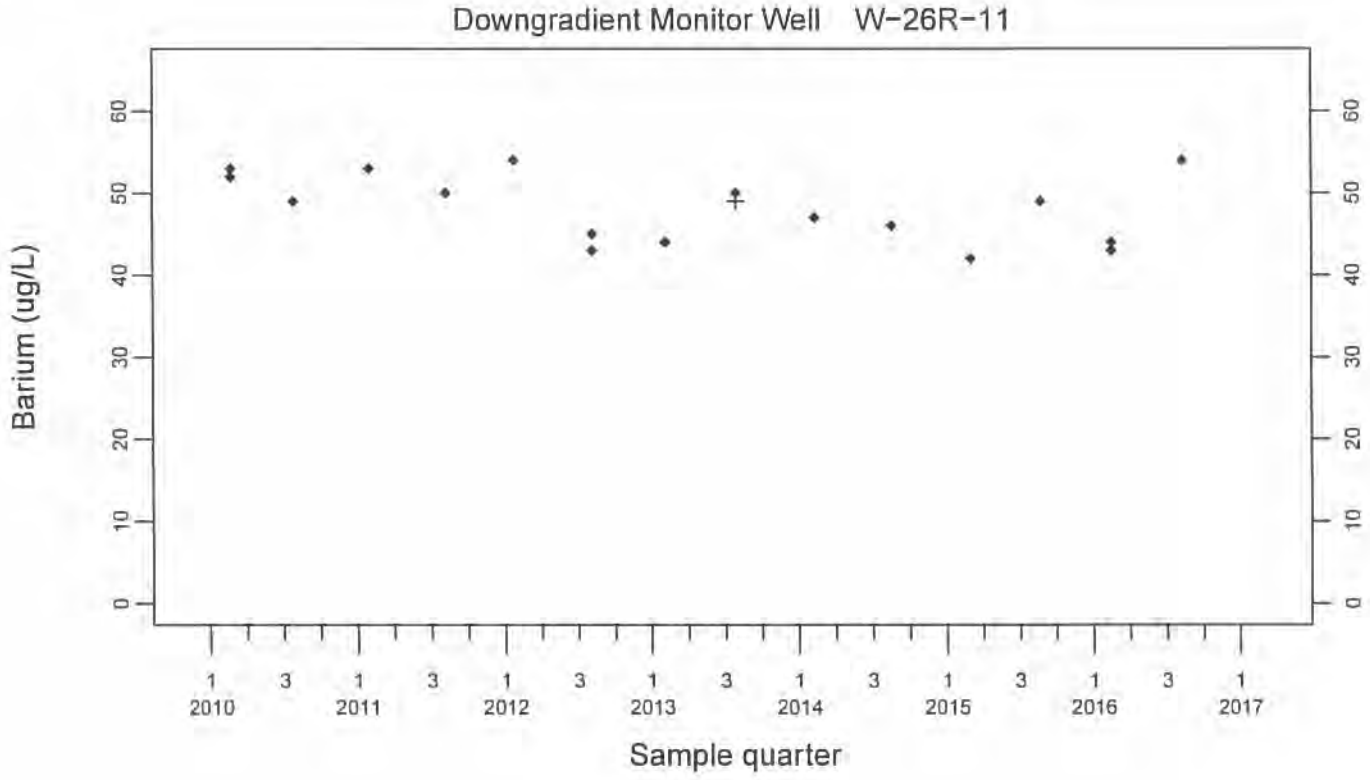
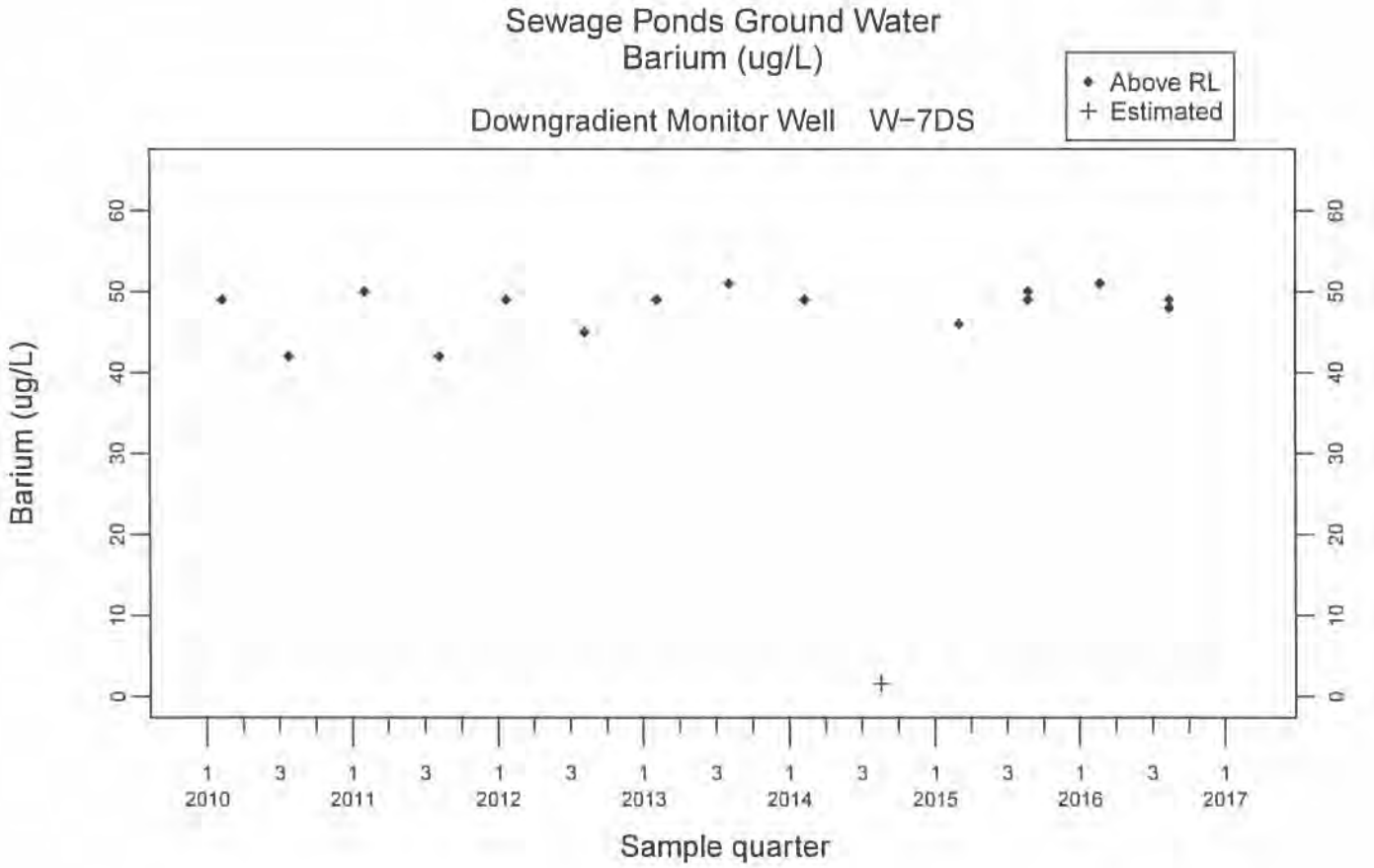
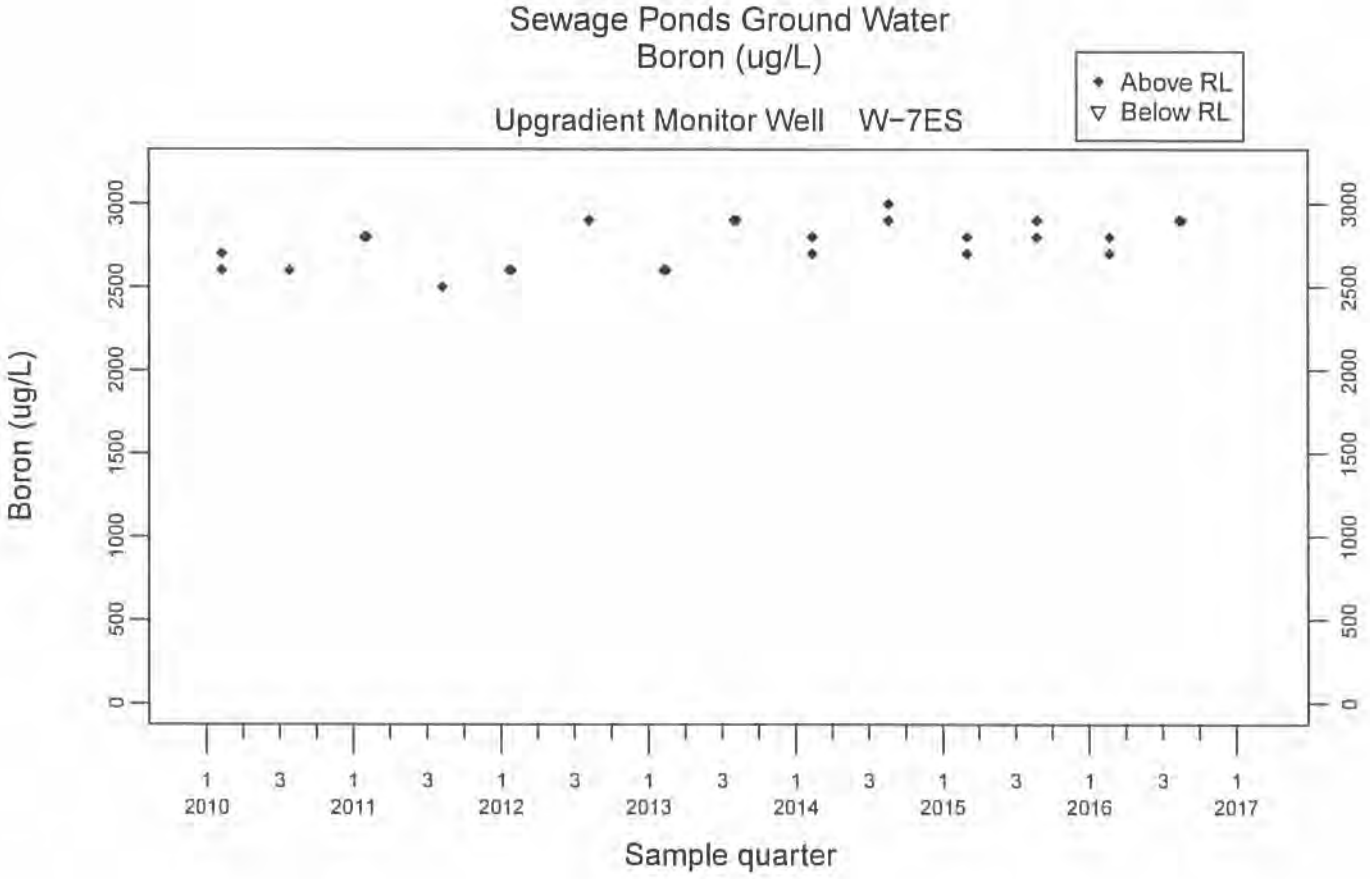
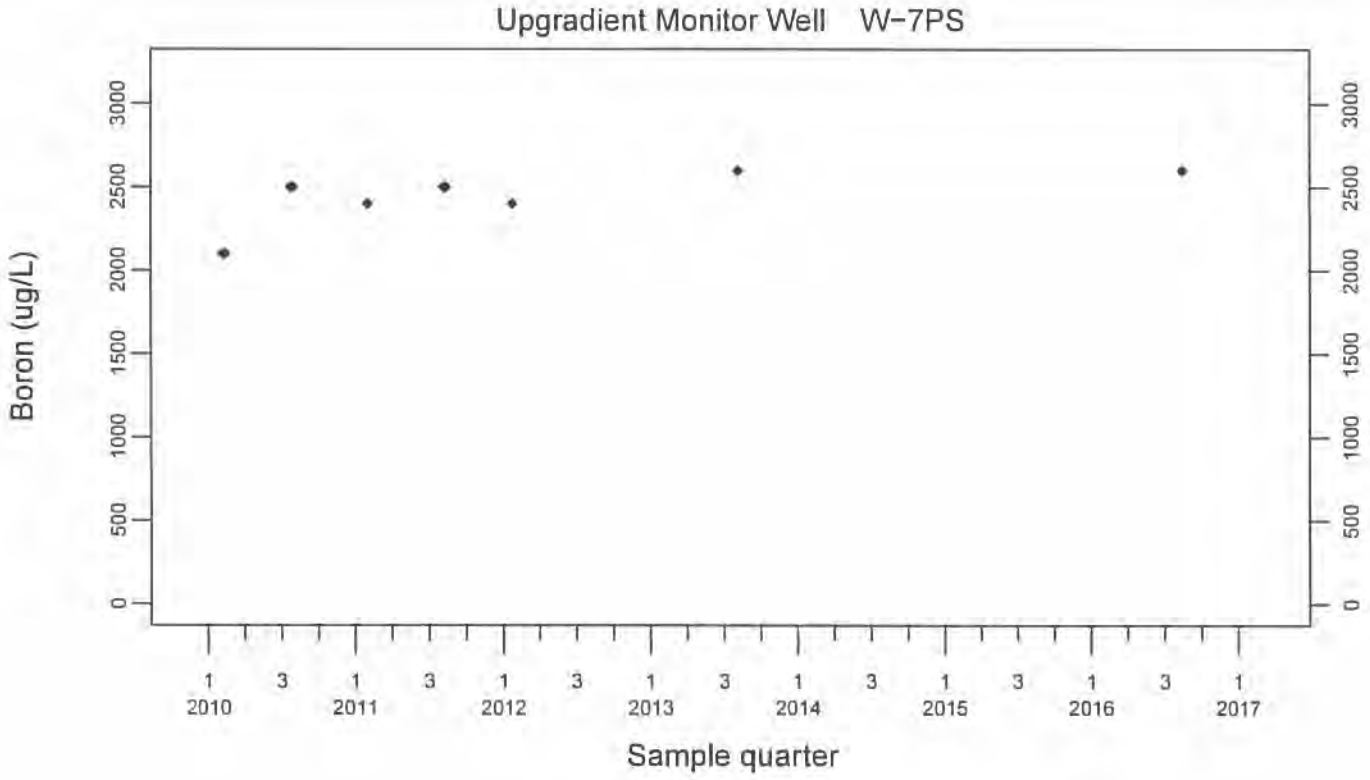
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

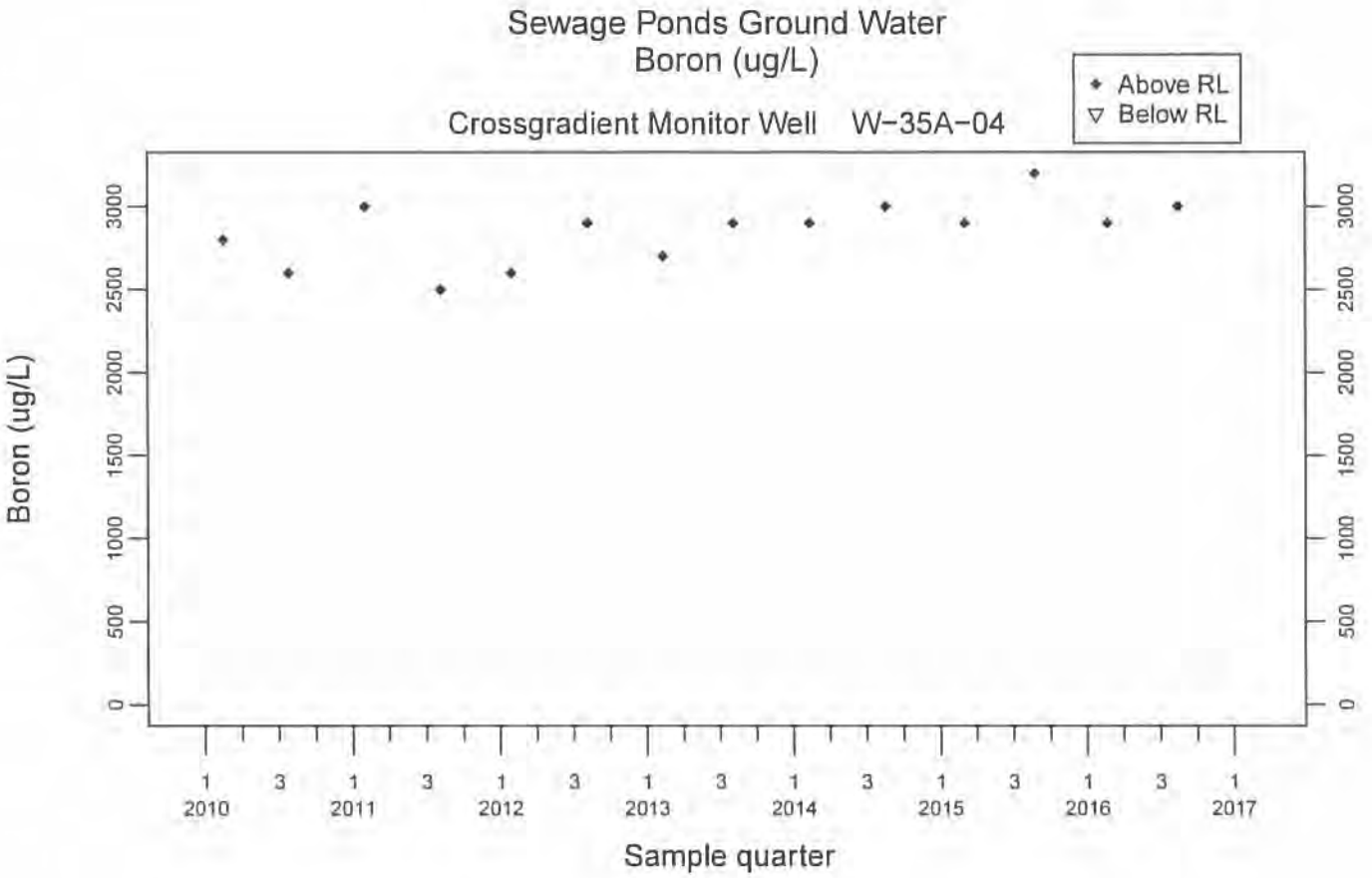

Sewage Ponds Ground Water
Barium (ug/L)
Above RL
Estimated
Downgradient Monitor Well W-26R-05
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

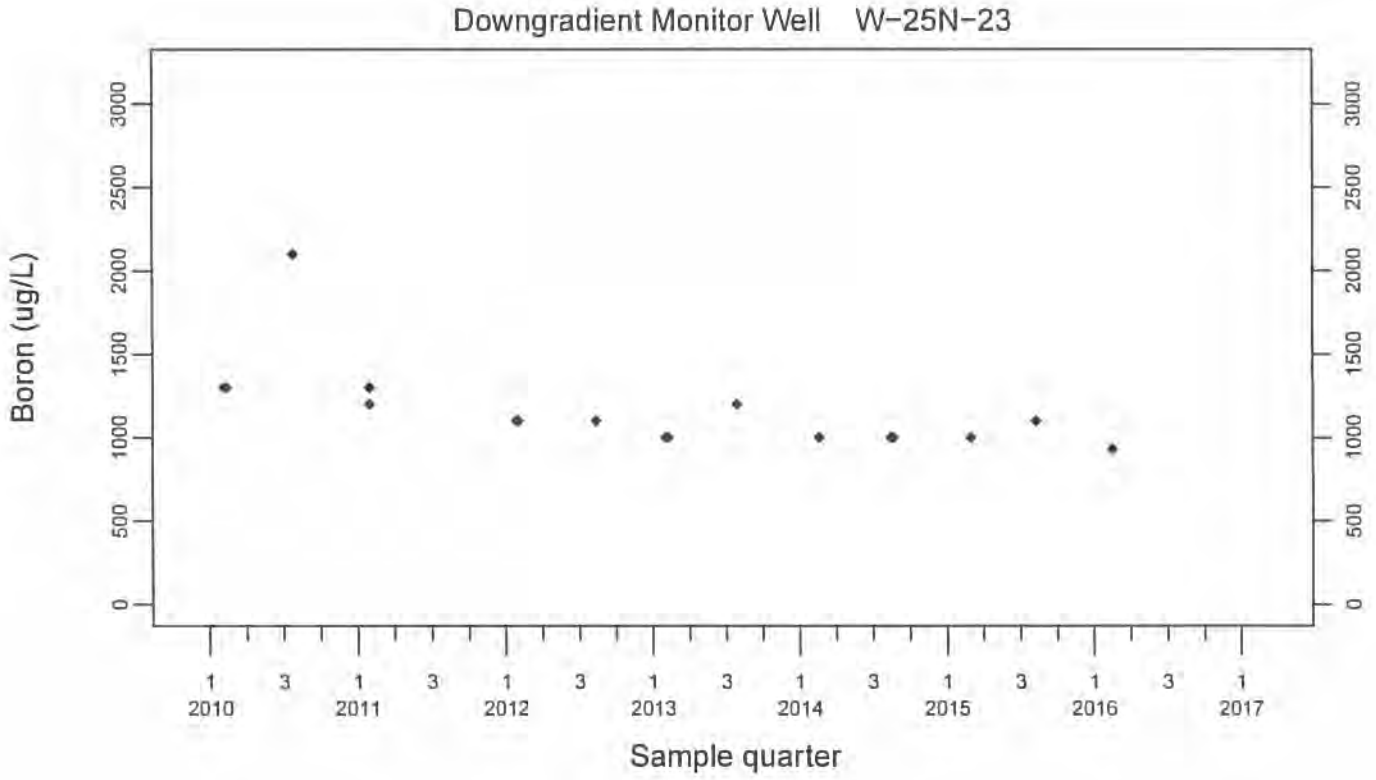

Downgradient Monitor Well W-26R-11
Barium (ug/L)
0
10
20
30
40
50
60
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

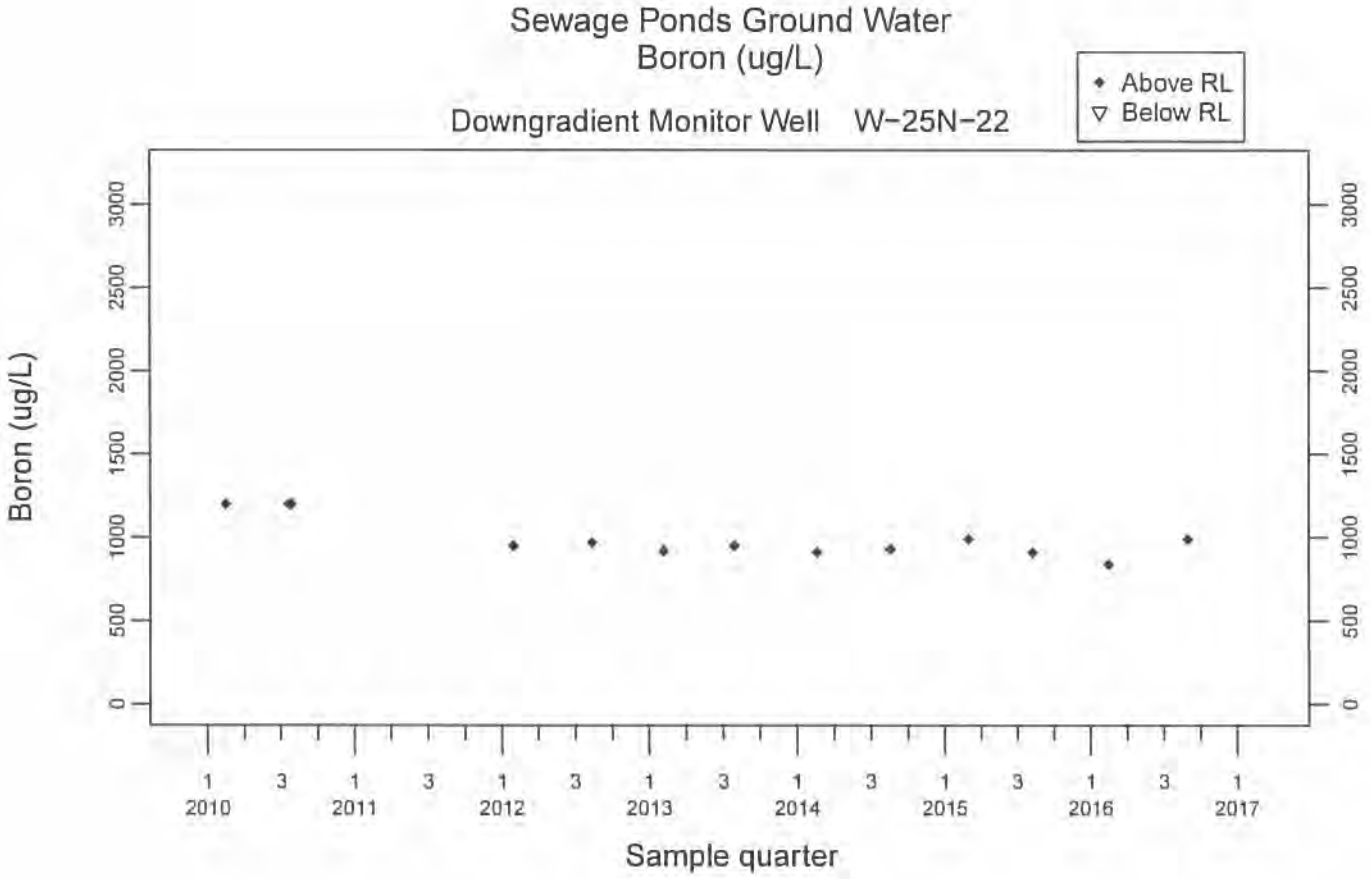

Sewage Ponds Ground Water
Barium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Estimated
Barium (ug/L)
0
10
20
30
40
50
60
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

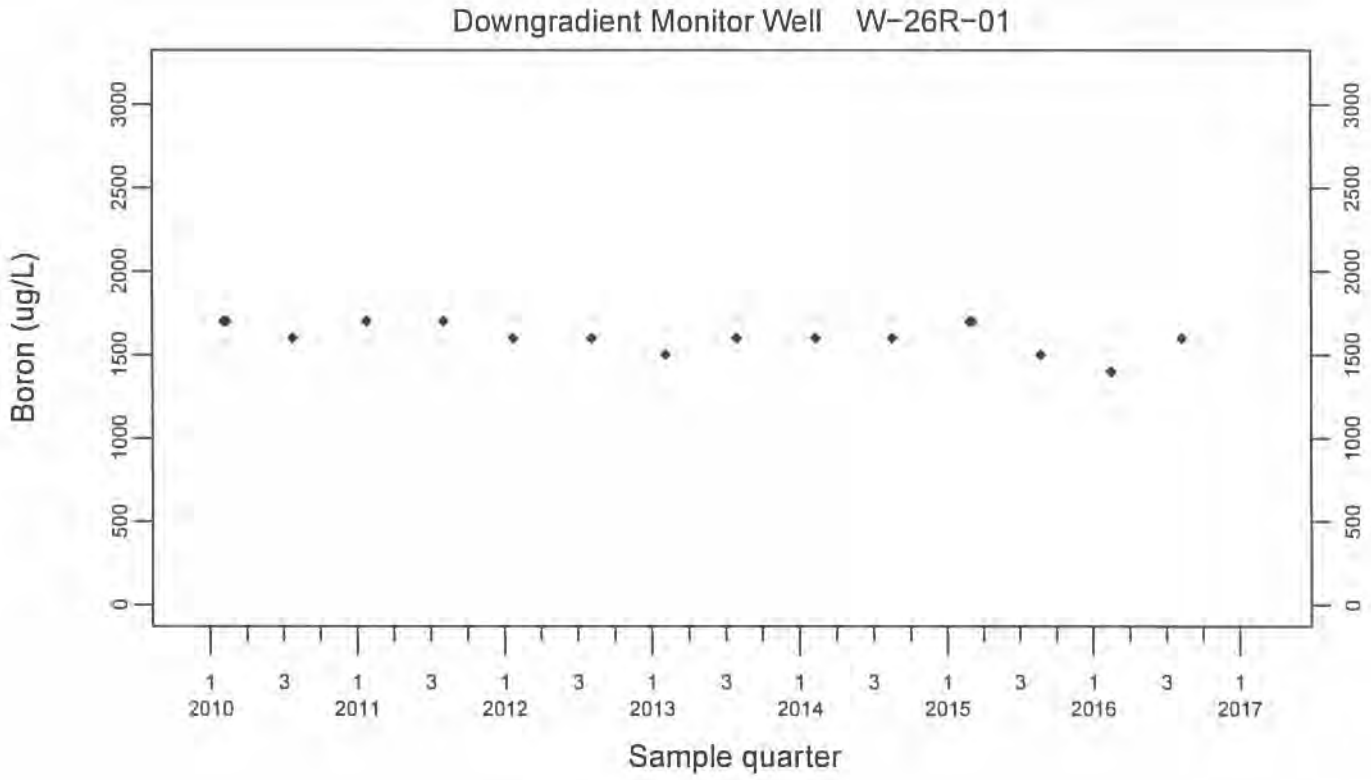

Sewage Ponds Ground Water
Boron (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

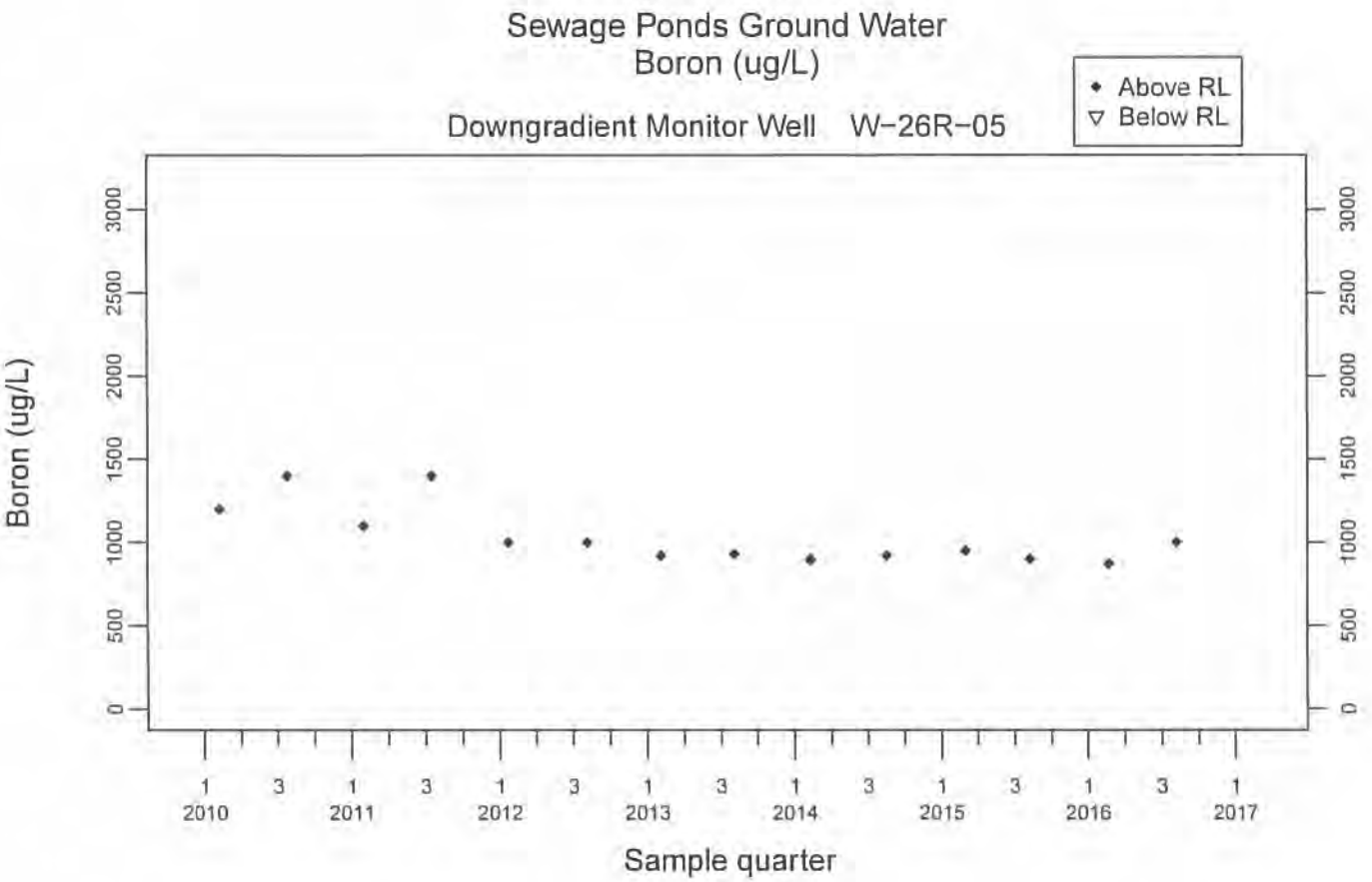

Upgradient Monitor Well W-7PS
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

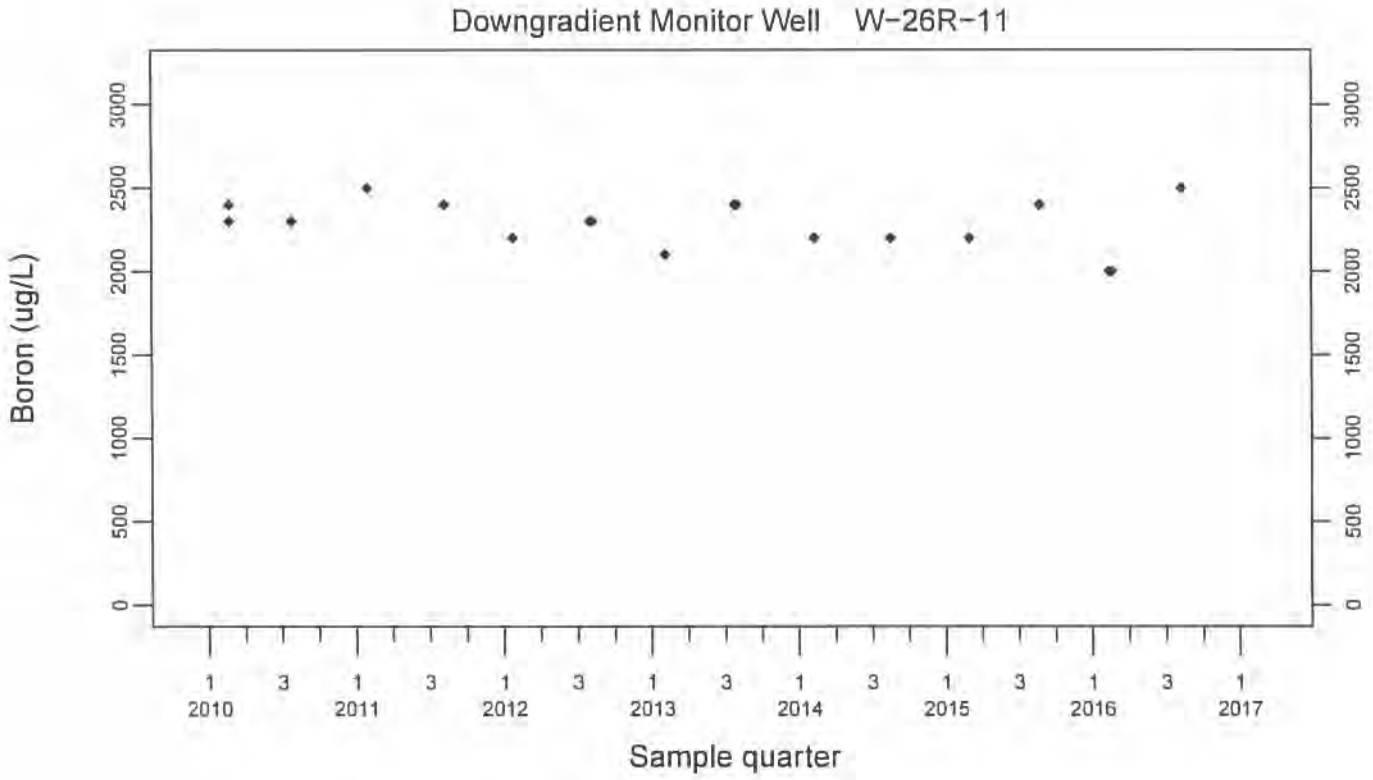

Sewage Ponds Ground Water
Boron (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
3
1
2016
3
1
2017
Sample quarter

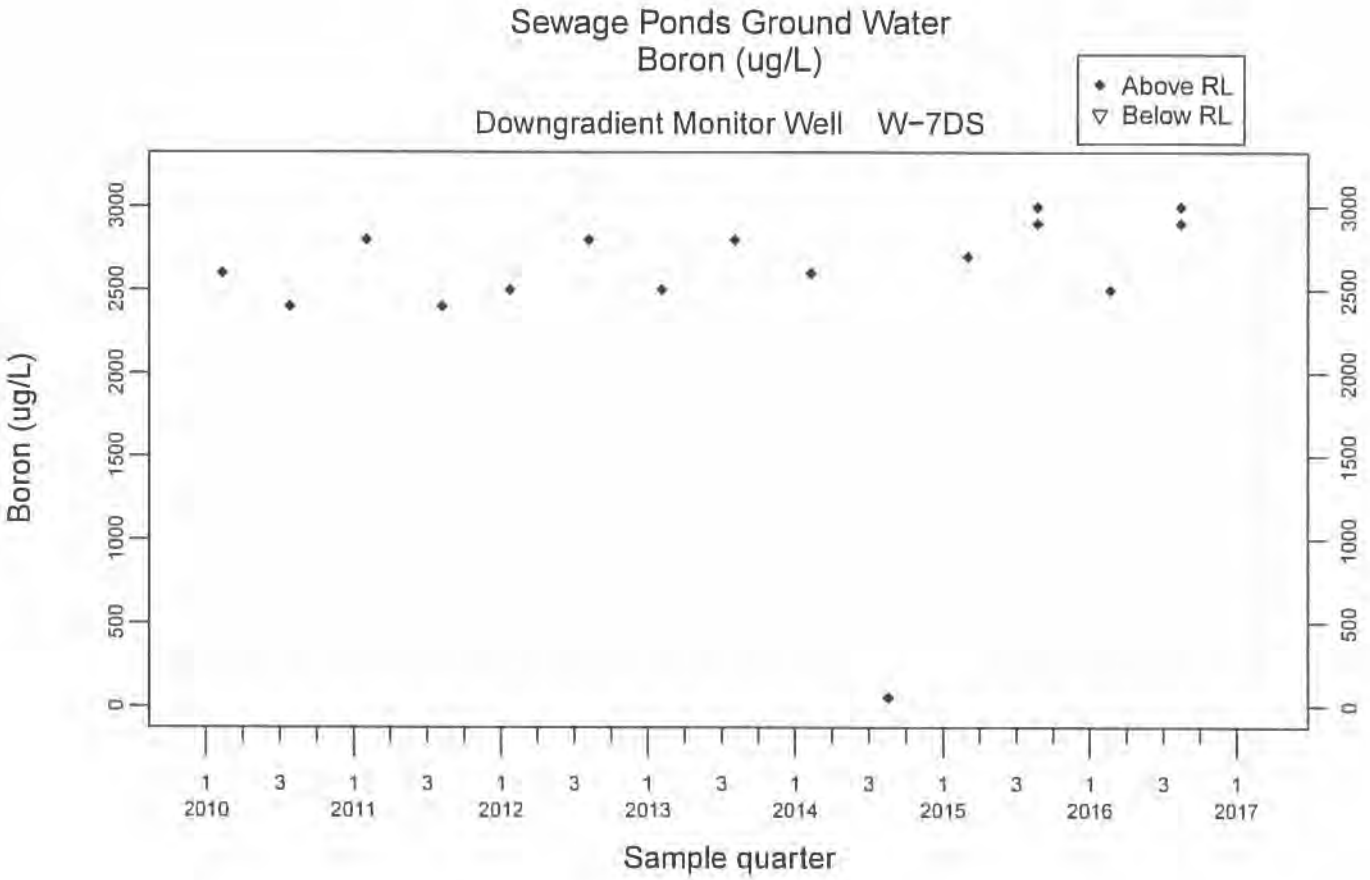

Downgradient Monitor Well W-25N-23
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
3
1
2016
3
1
2017
Sample quarter

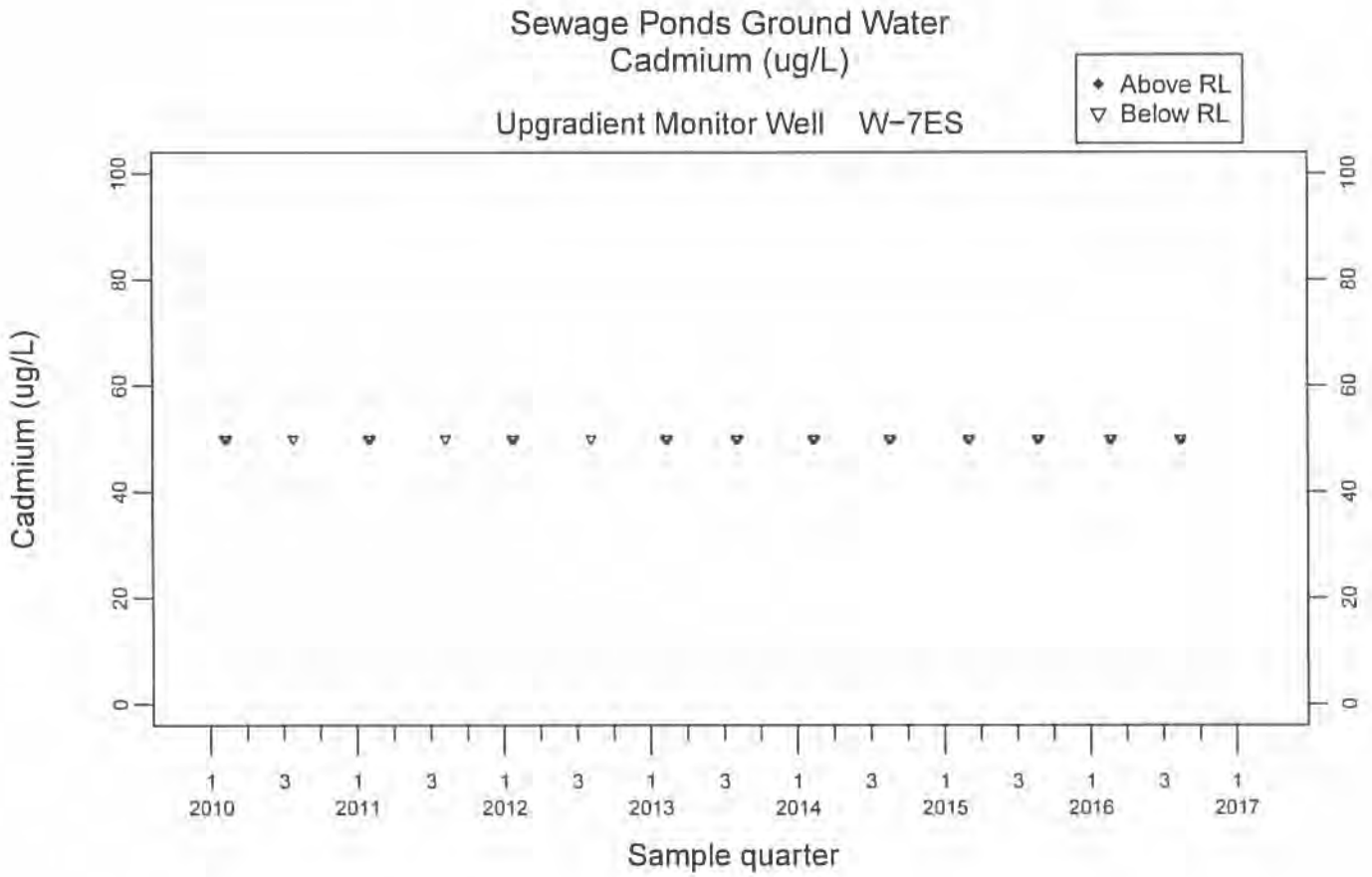

Sewage Ponds Ground Water
Boron (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

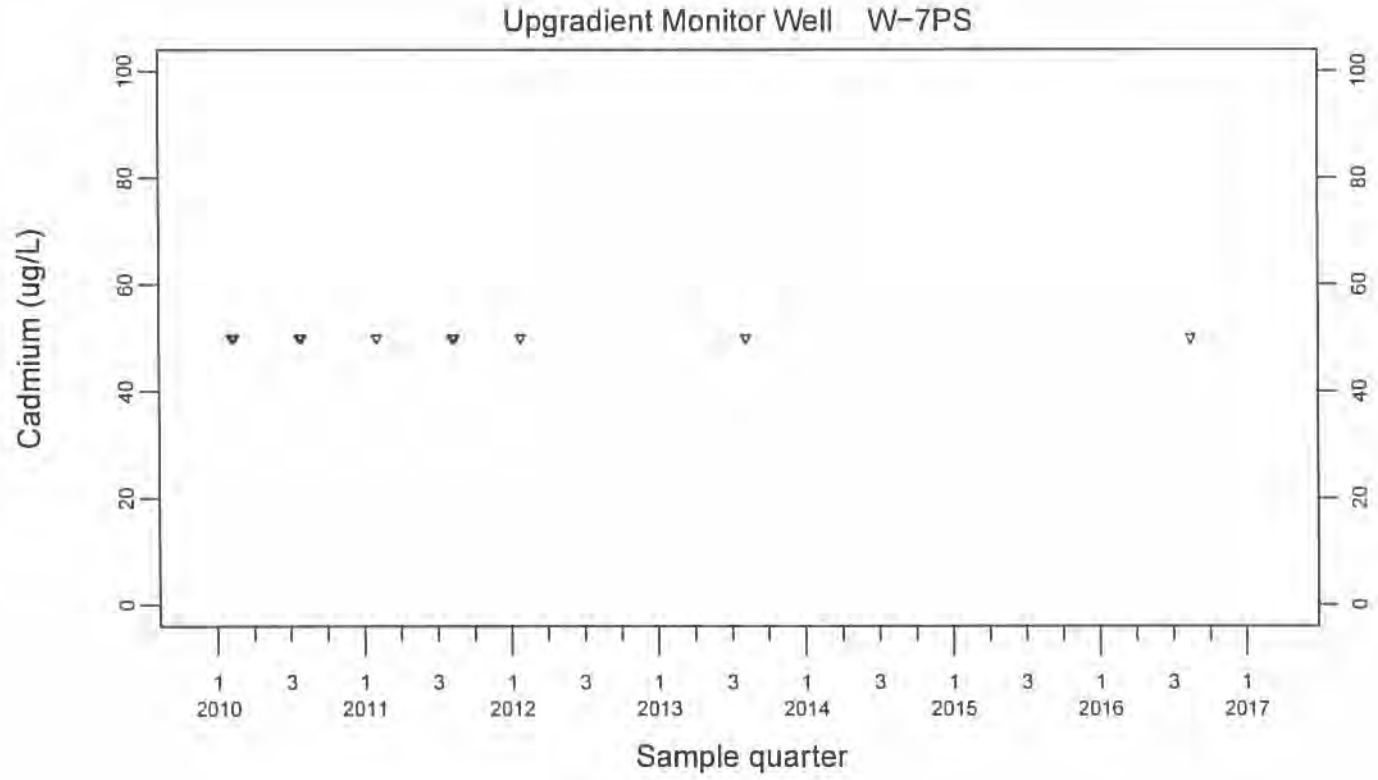

Downgradient Monitor Well W-26R-01
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

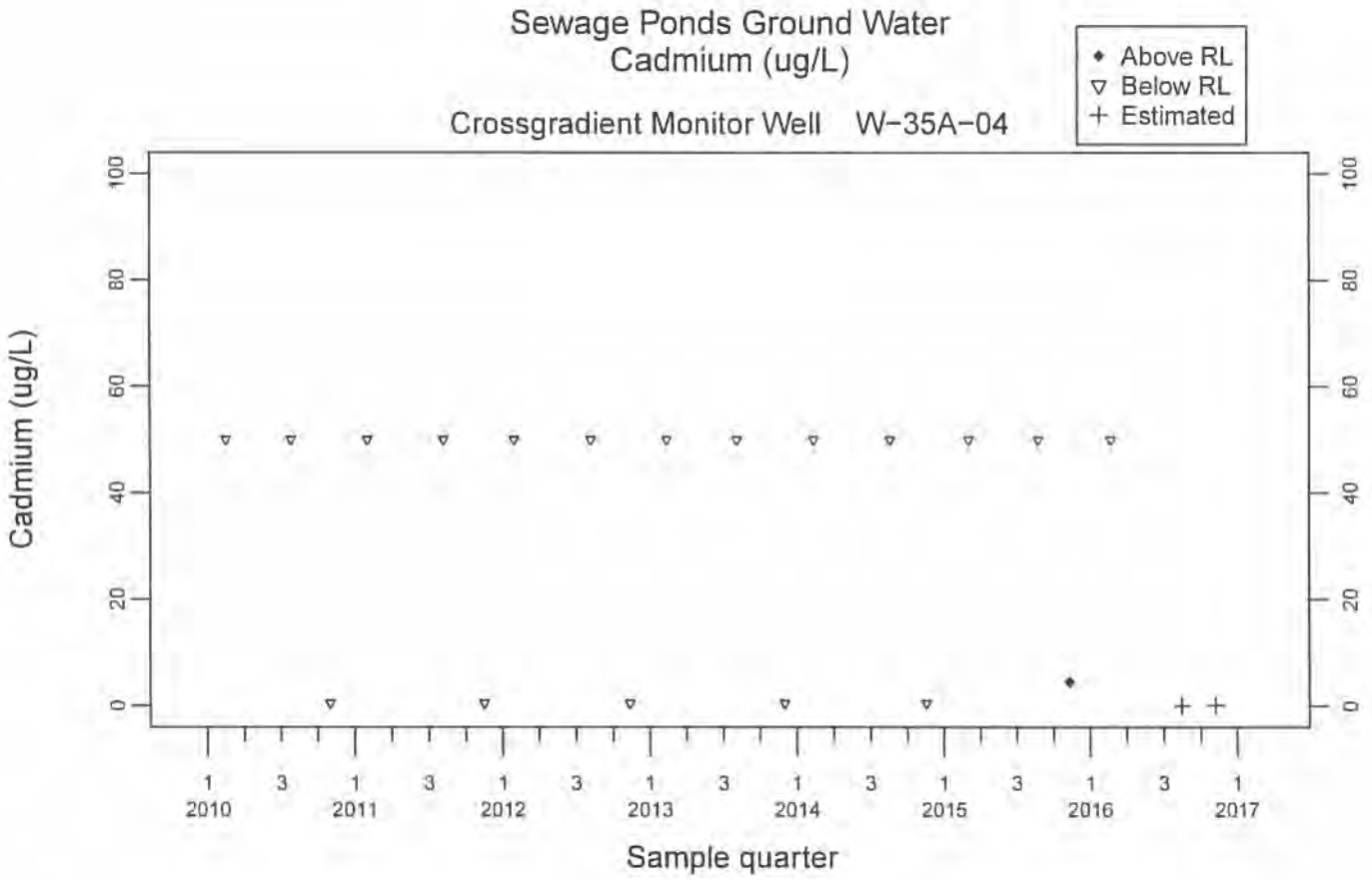

Sewage Ponds Ground Water
Boron (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

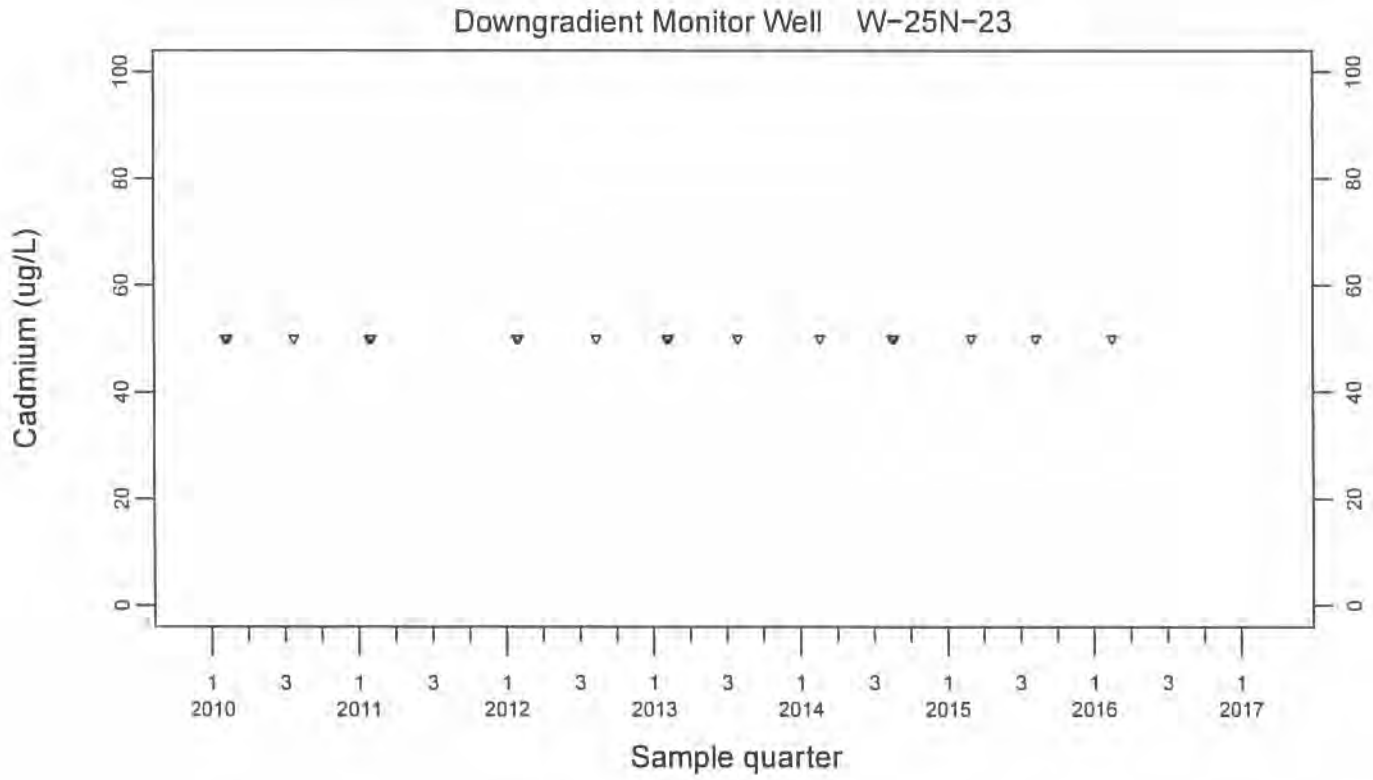

Downgradient Monitor Well W-26R-11
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

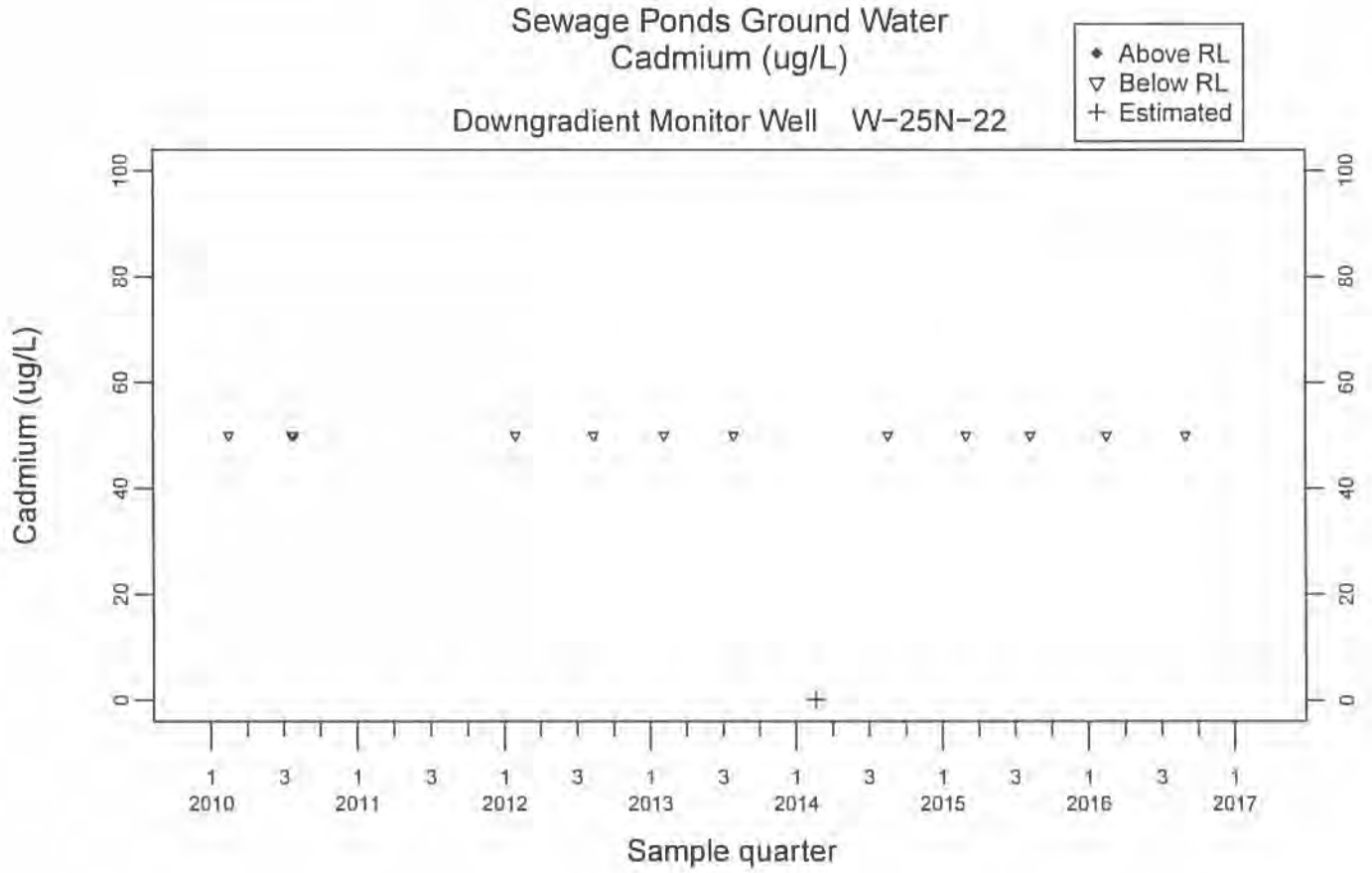

Sewage Ponds Ground Water
Boron (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Boron (ug/L)
0
500
1000
1500
2000
2500
3000
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
3
1
2016
3
1
2017
Sample quarter

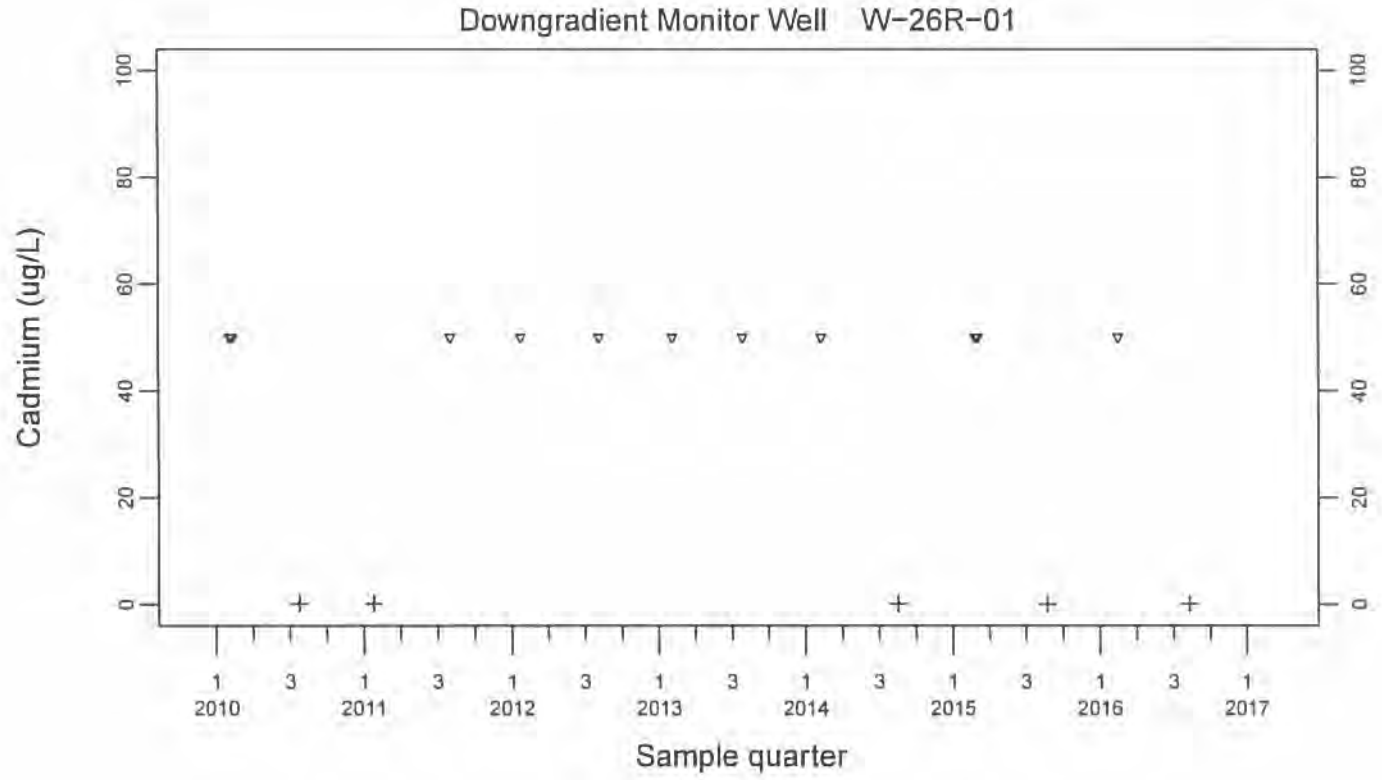

Sewage Ponds Ground Water
Cadmium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Cadmium (ug/L)
0
20
40
60
80
100
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

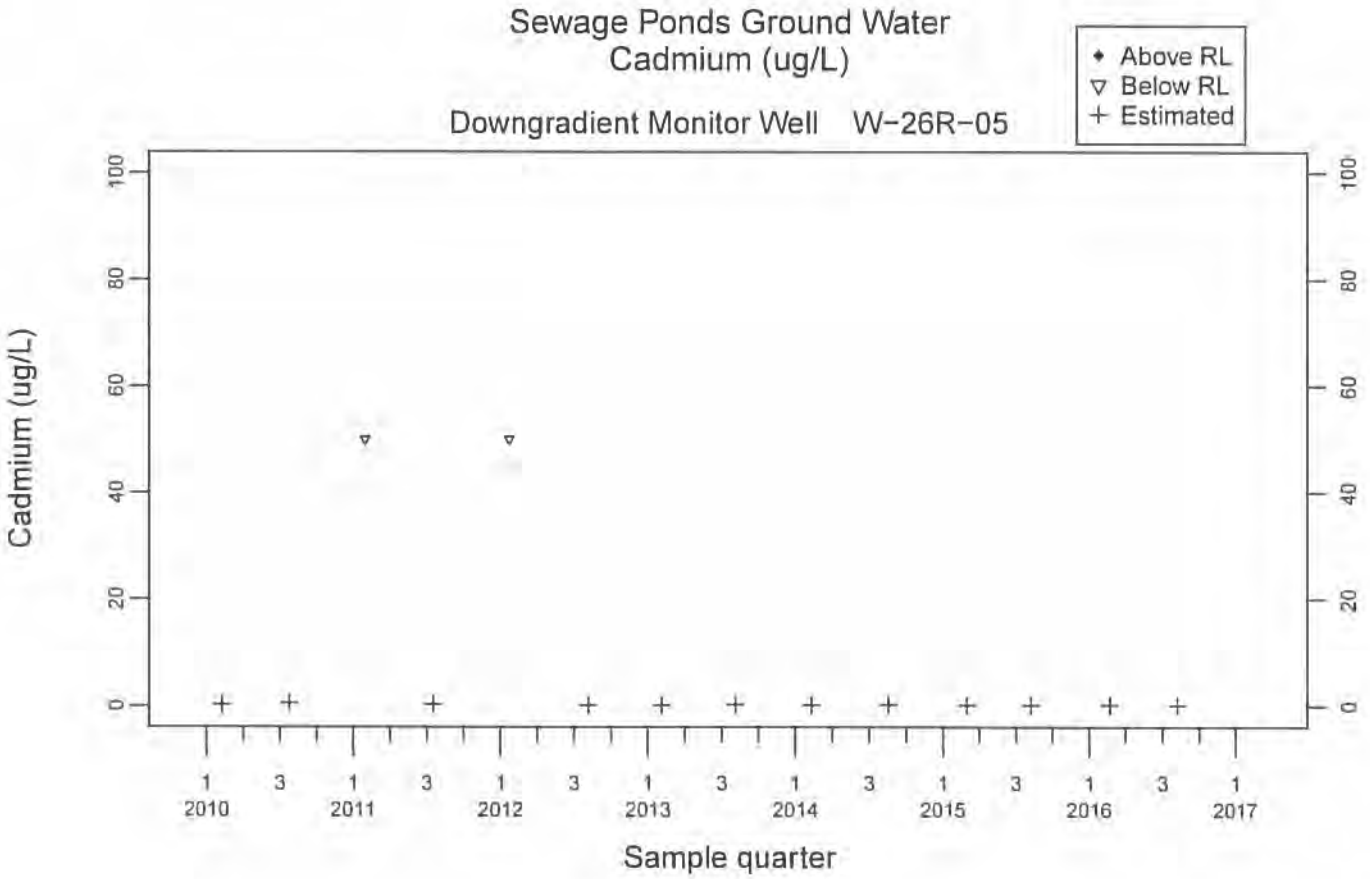

Upgradient Monitor Well W-7PS
Cadmium (ug/L)
0
20
40
60
80
100
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

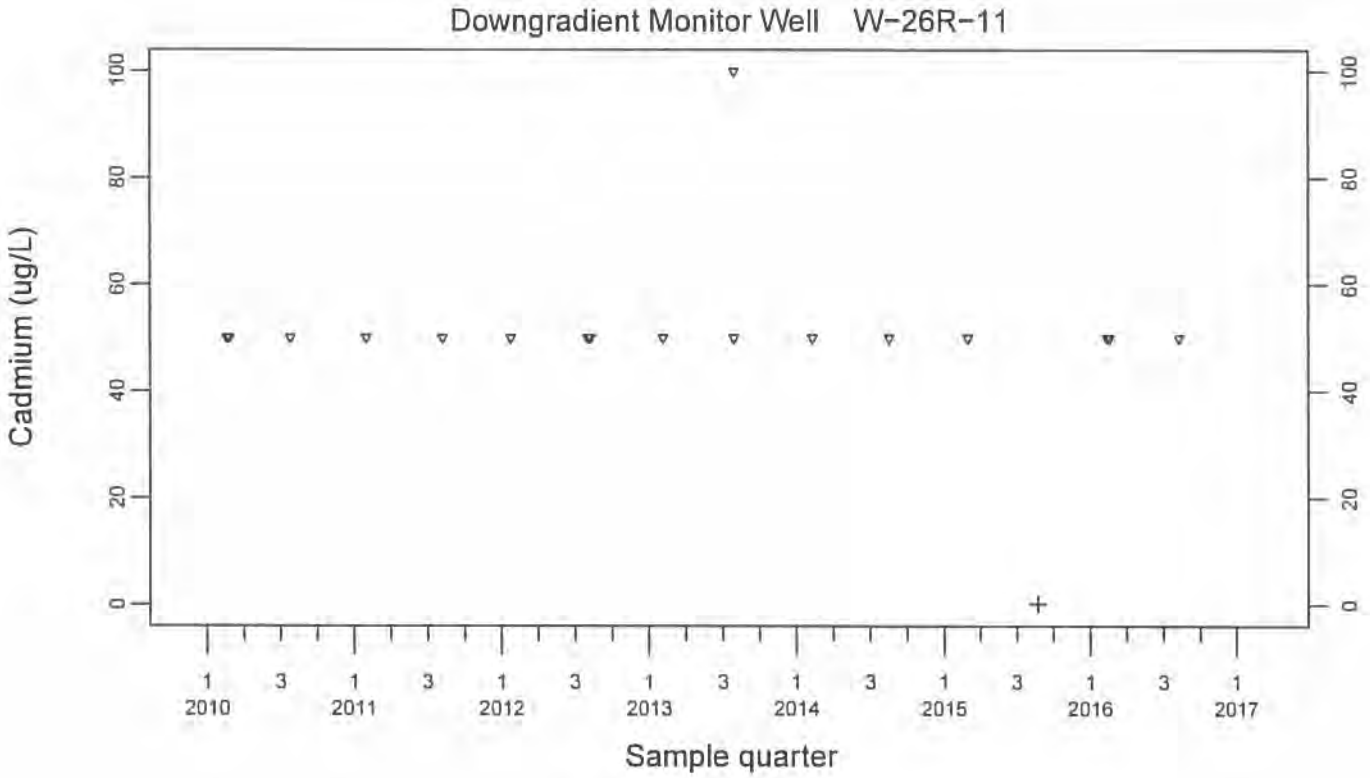

Sewage Ponds Ground Water
Cadmium (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Cadmium (ug/L)
0
20
40
60
80
100
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

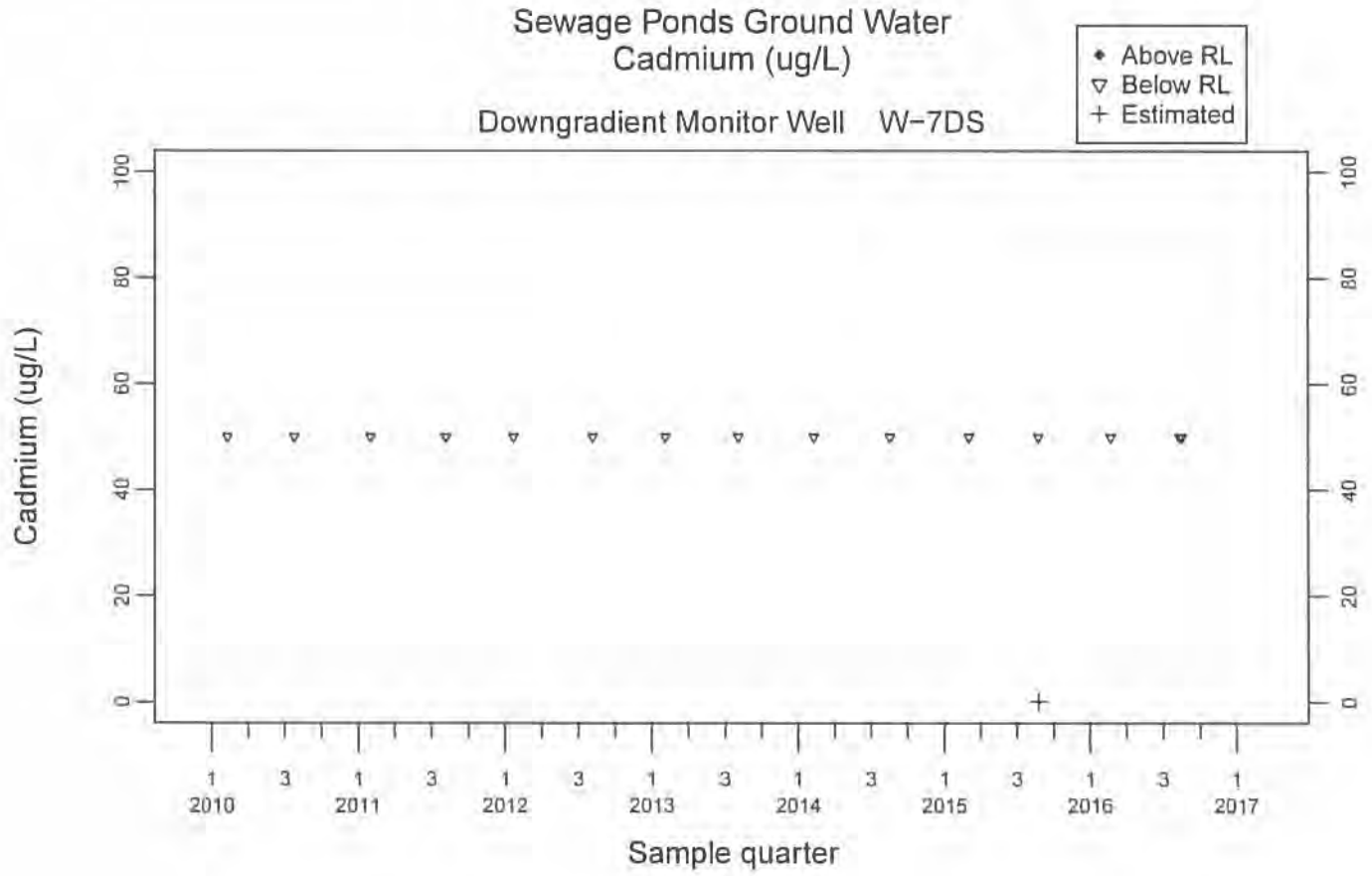

Downgradient Monitor Well W-25N-23
Cadmium (ug/L)
0
20
40
60
80
100
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

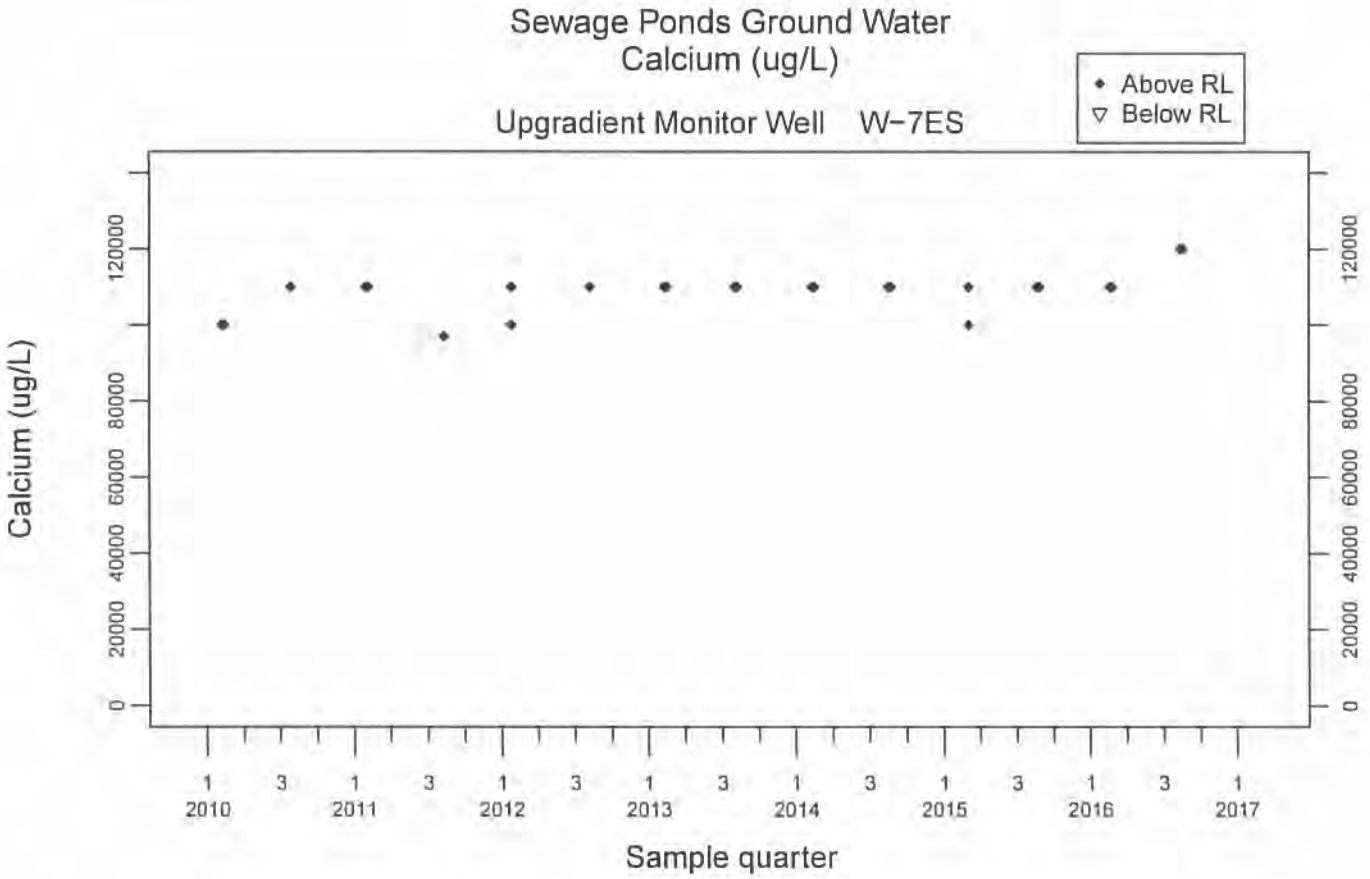

Sewage Ponds Ground Water
Cadmium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Cadmium (ug/L)
0
20
40
60
80
100
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

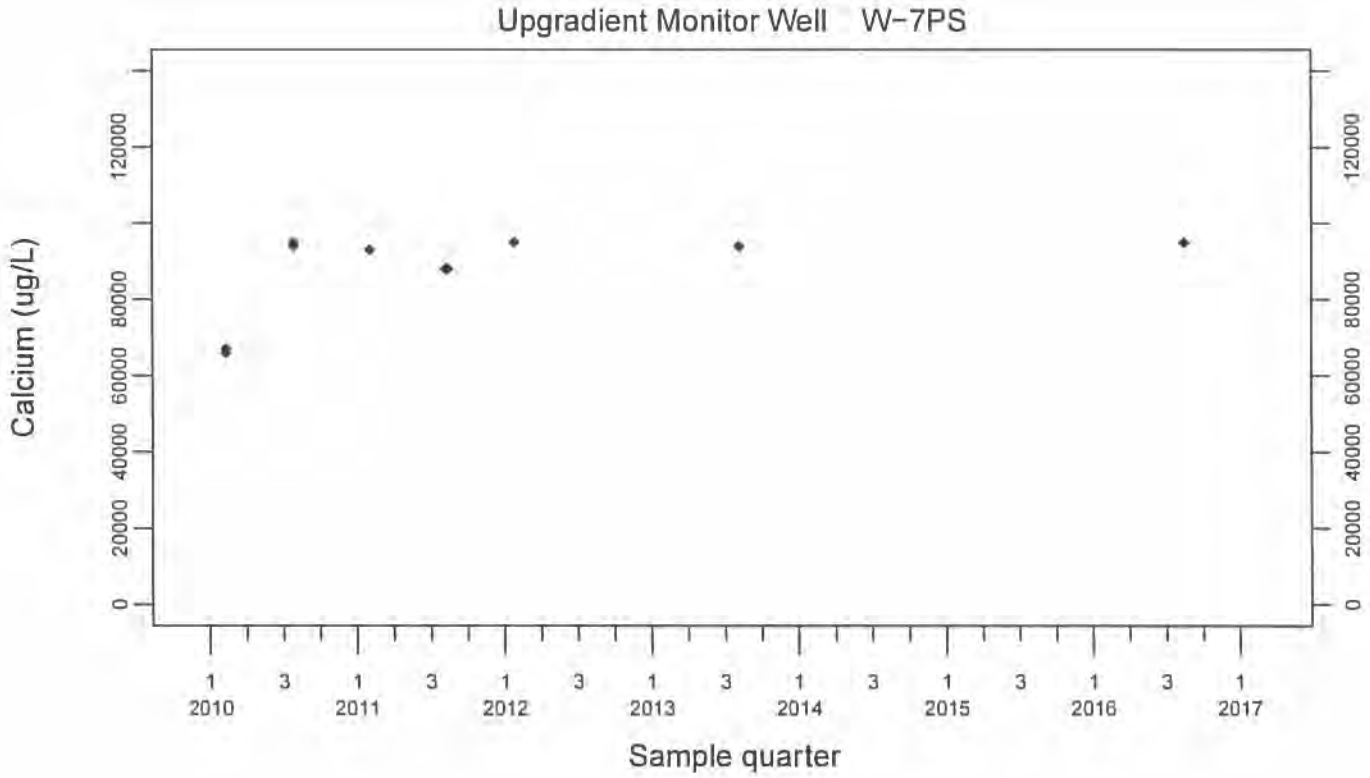

Downgradient Monitor Well W-26R-01
Cadmium (ug/L)
0
20
40
60
80
100
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

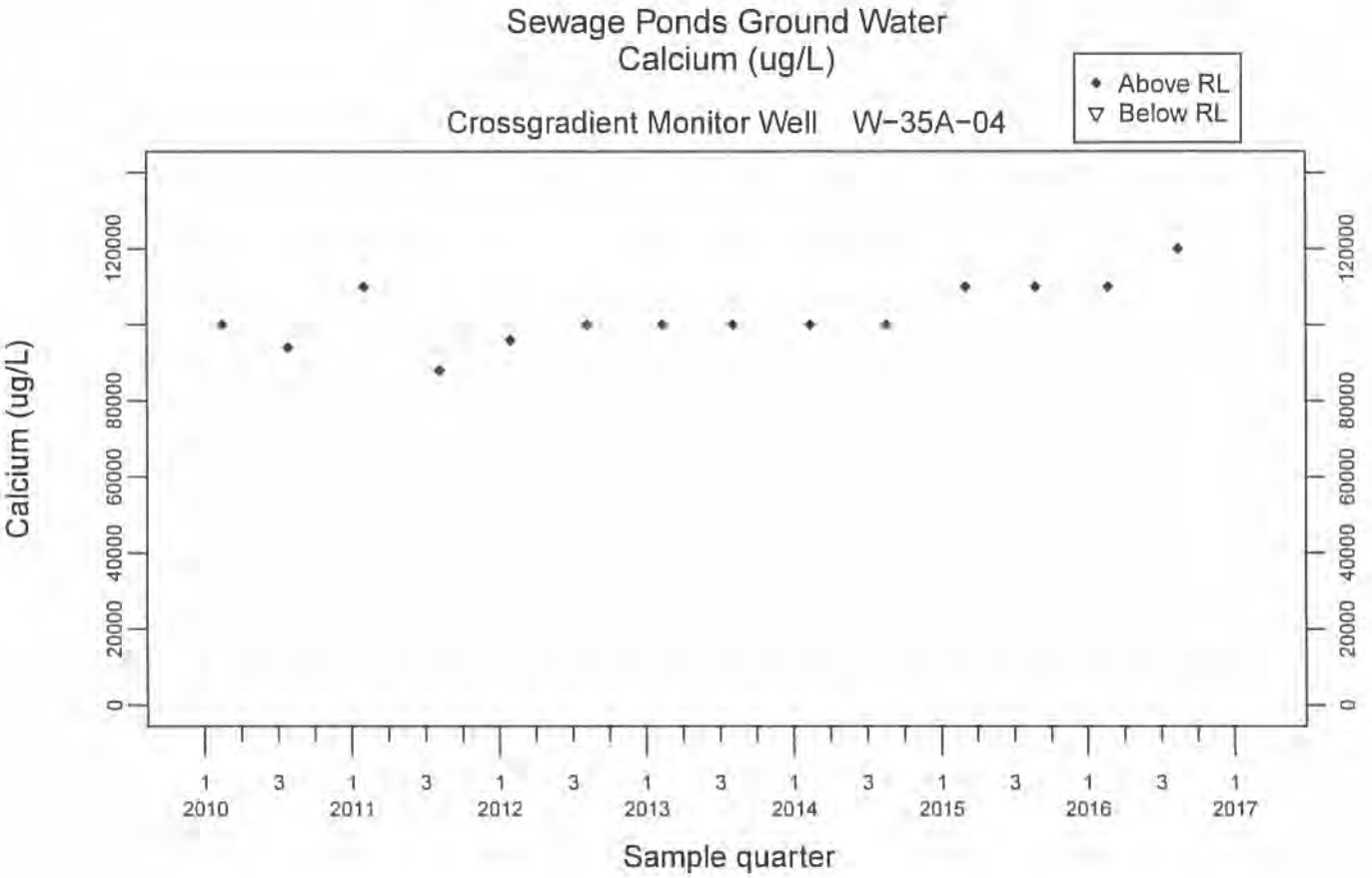

Sewage Ponds Ground Water
Cadmium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Cadmium (ug/L)
0
20
40
60
80
100
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

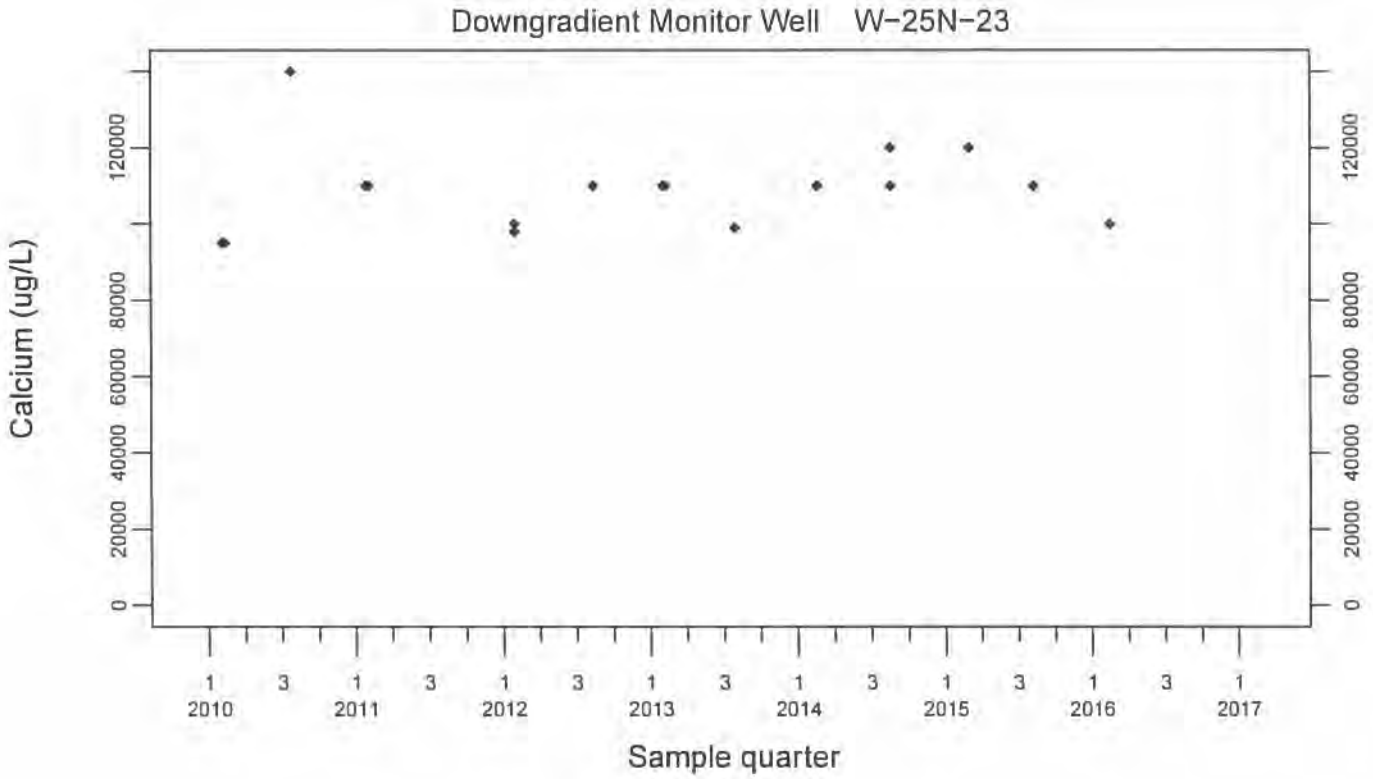

Downgradient Monitor Well W-26R-11
Cadmium (ug/L)
0
20
40
60
80
100
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

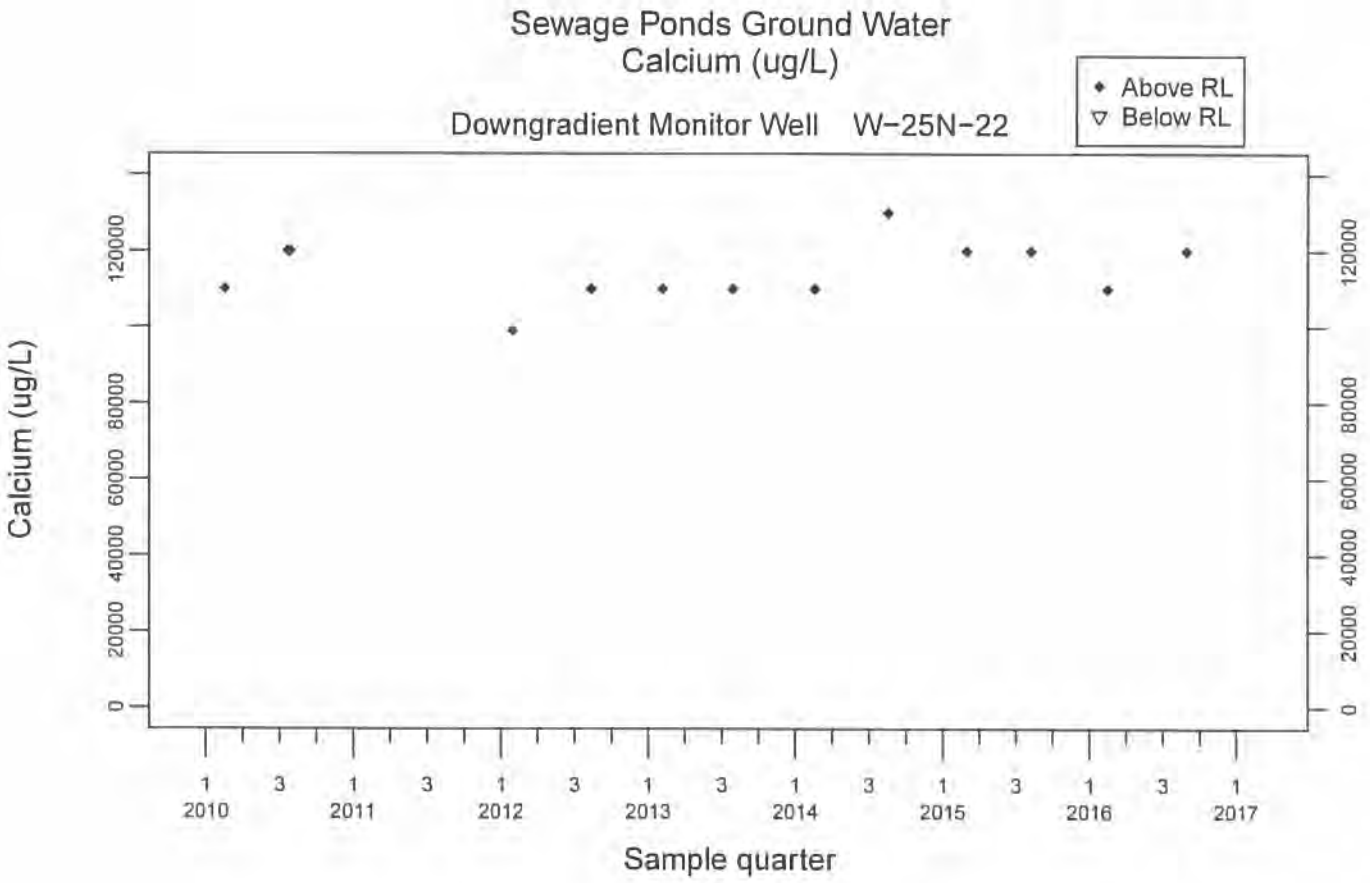

Sewage Ponds Ground Water
Cadmium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Cadmium (ug/L)
0
20
40
60
80
100
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

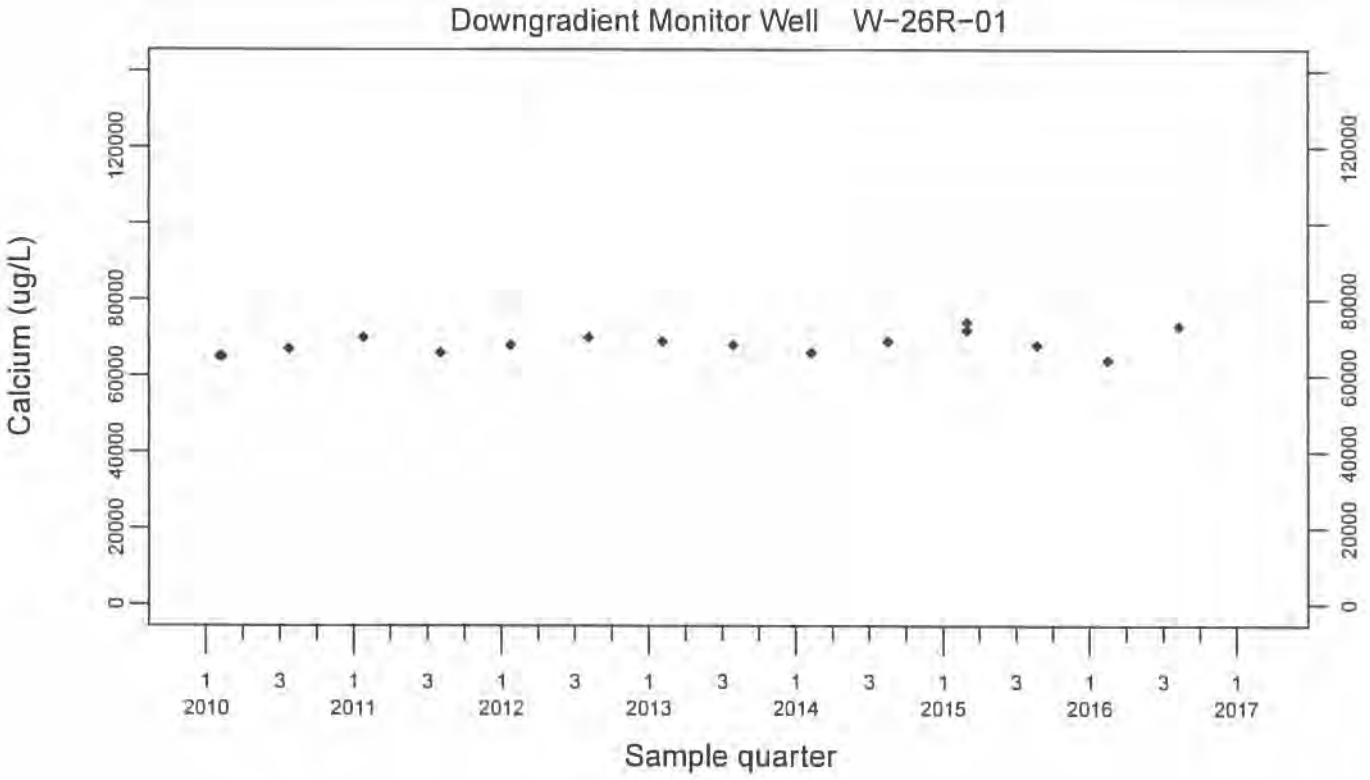

Sewage Ponds Ground Water
Calcium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

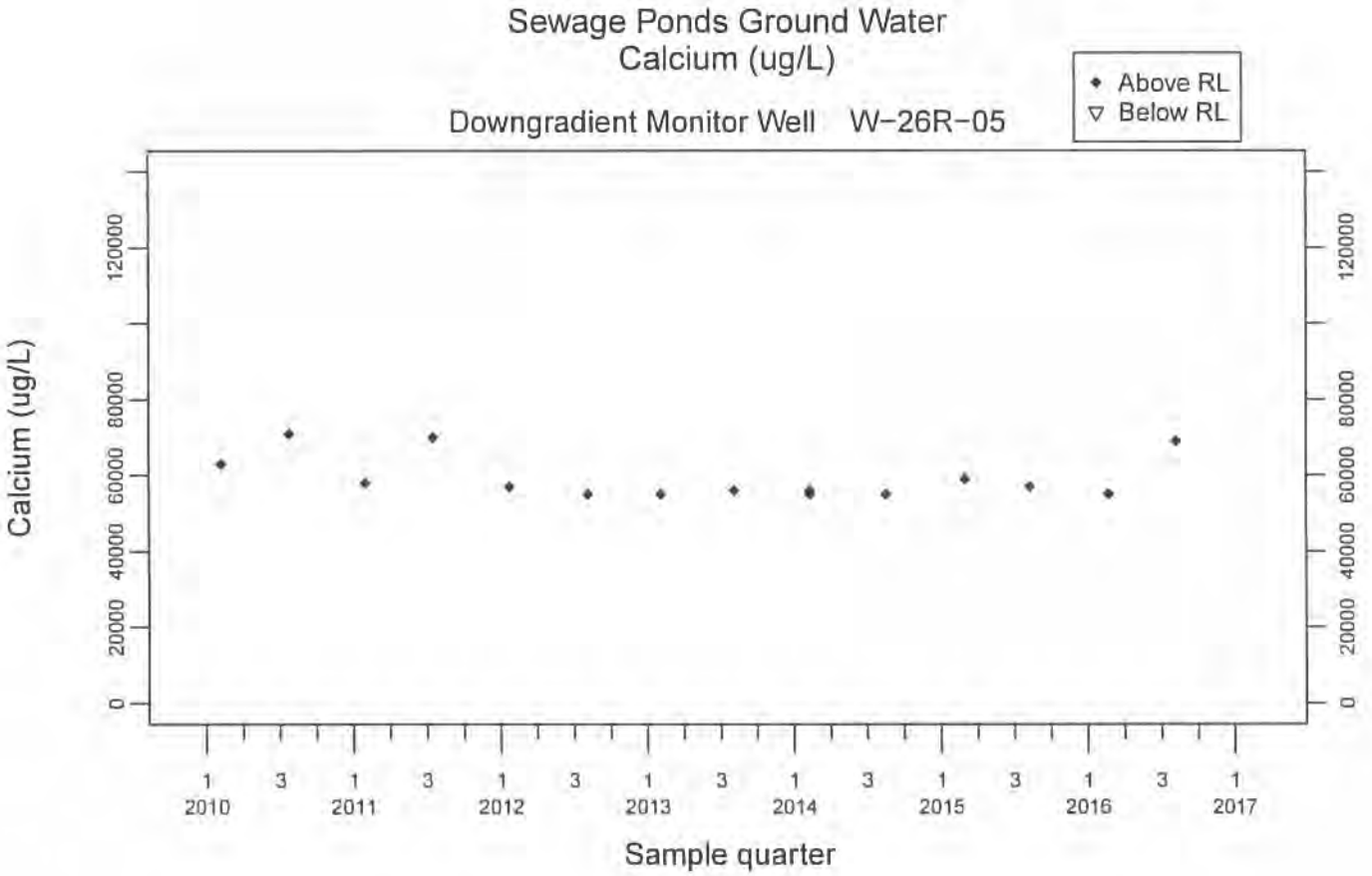

Upgradient Monitor Well W-7PS
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

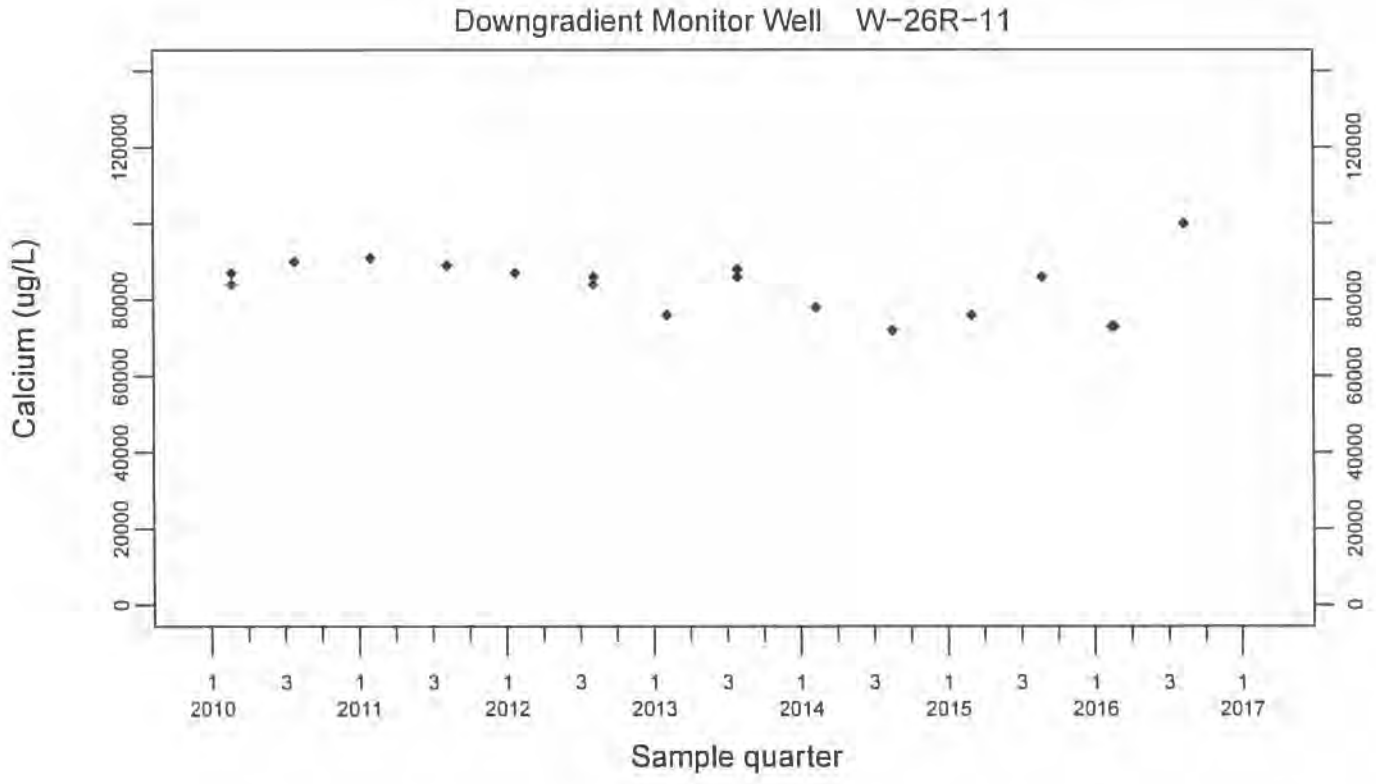

Sewage Ponds Ground Water
Calcium (ug/L)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

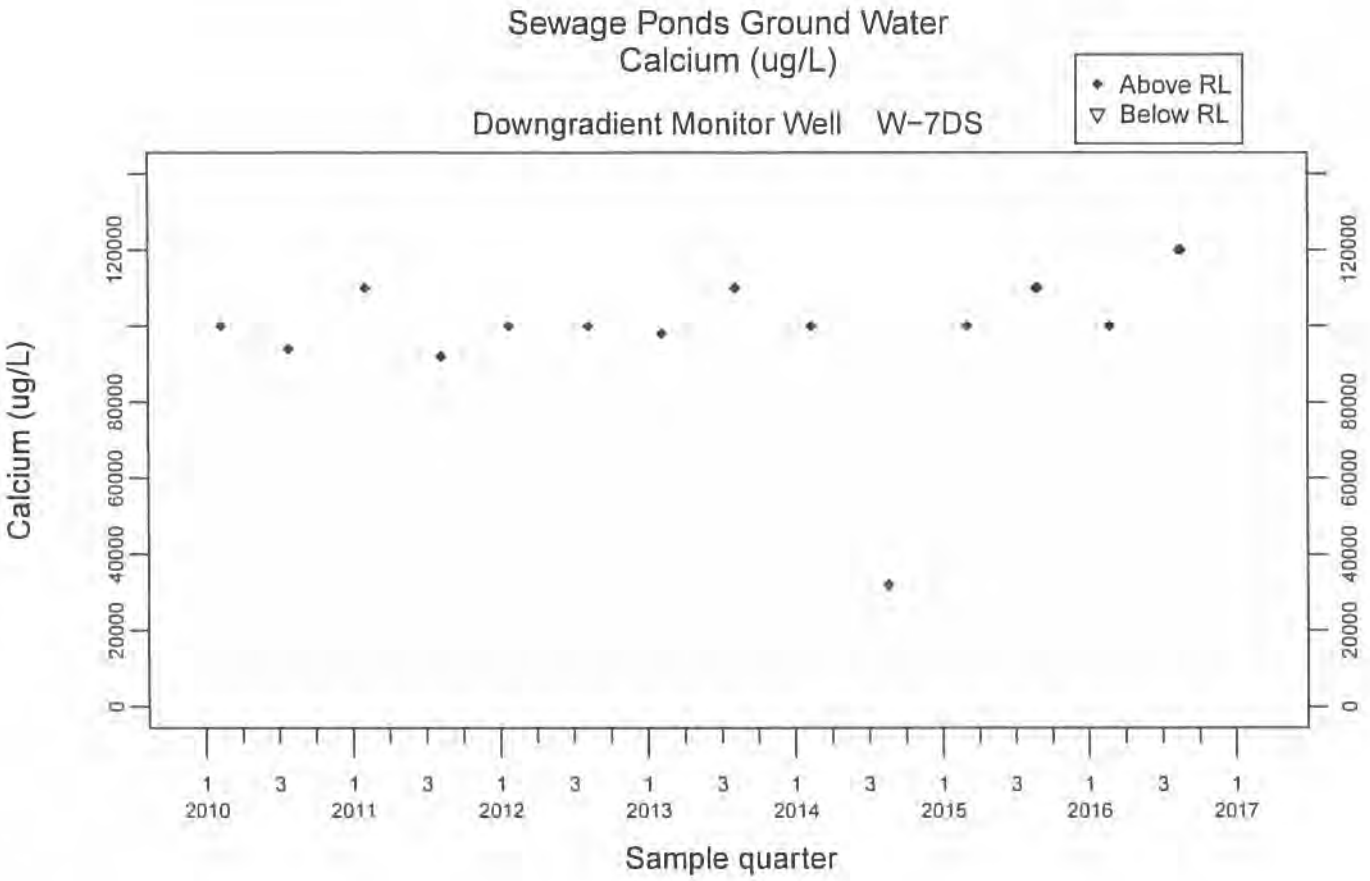

Downgradient Monitor Well W-25N-23
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

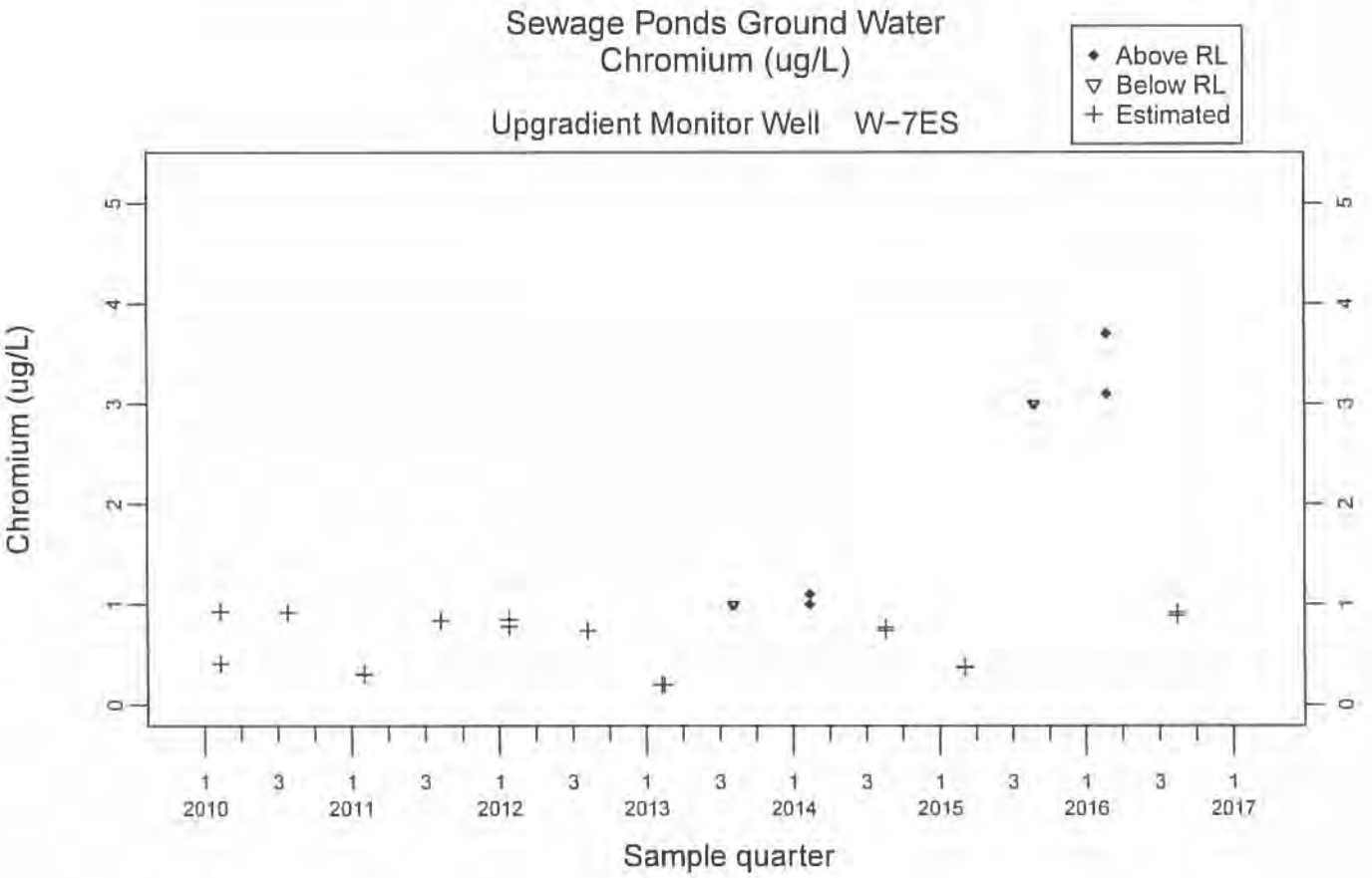

Sewage Ponds Ground Water
Calcium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

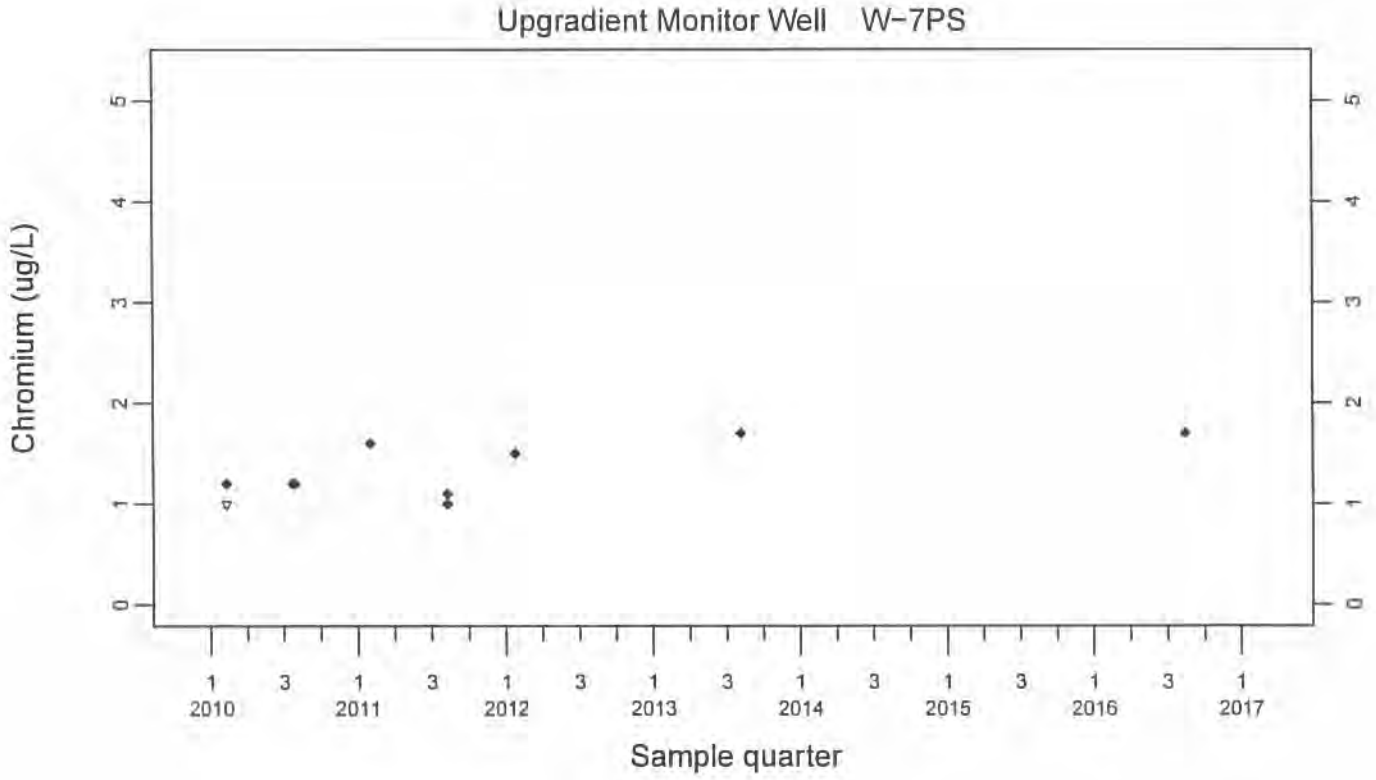

Downgradient Monitor Well W-26R-01
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

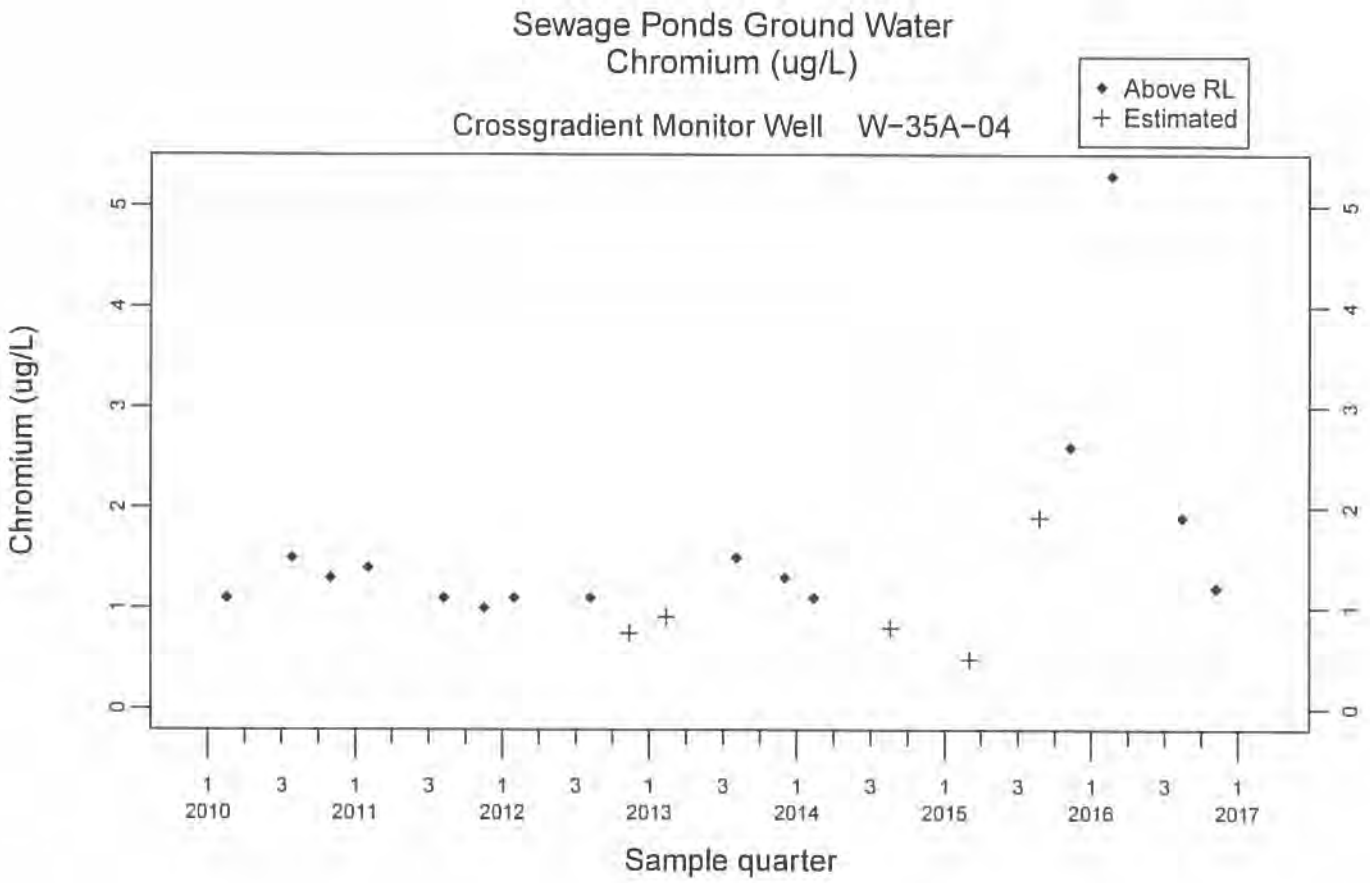

Sewage Ponds Ground Water
Calcium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

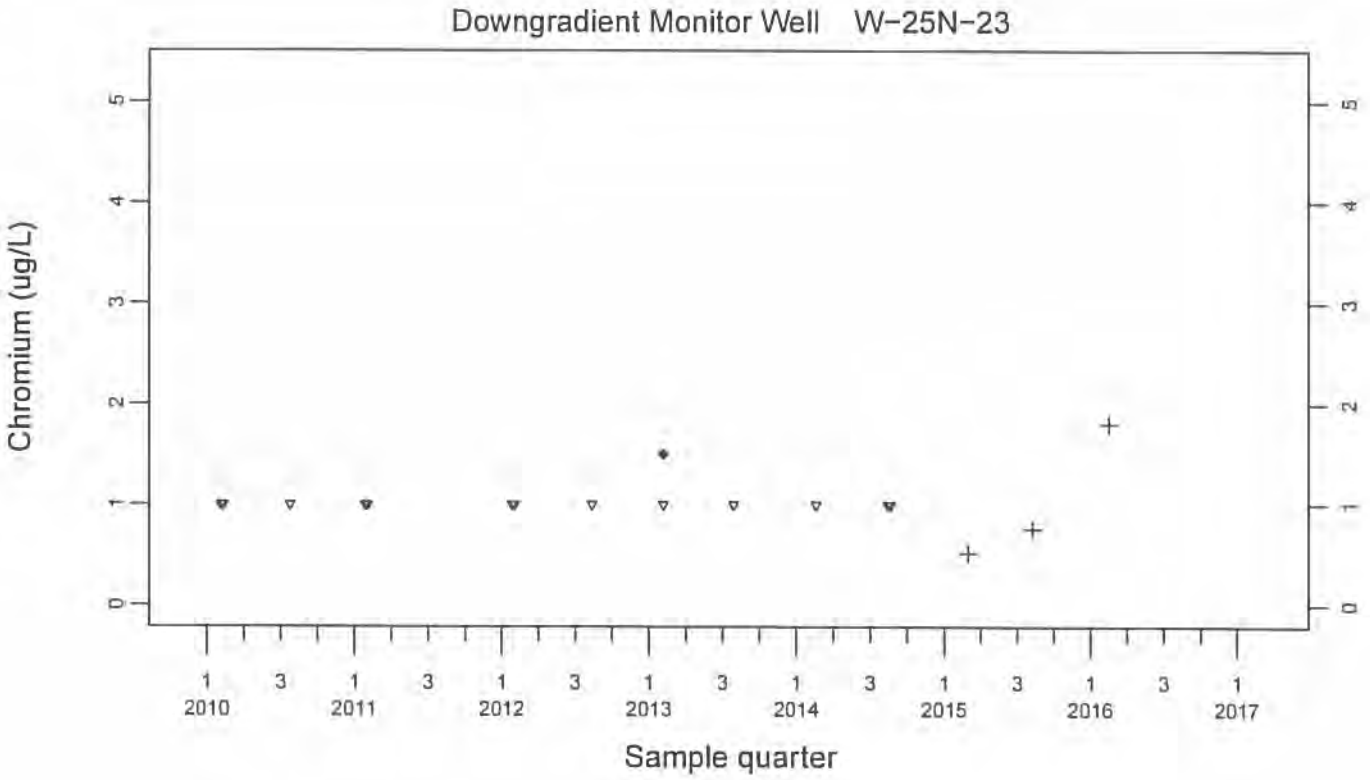

Downgradient Monitor Well W-26R-11
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

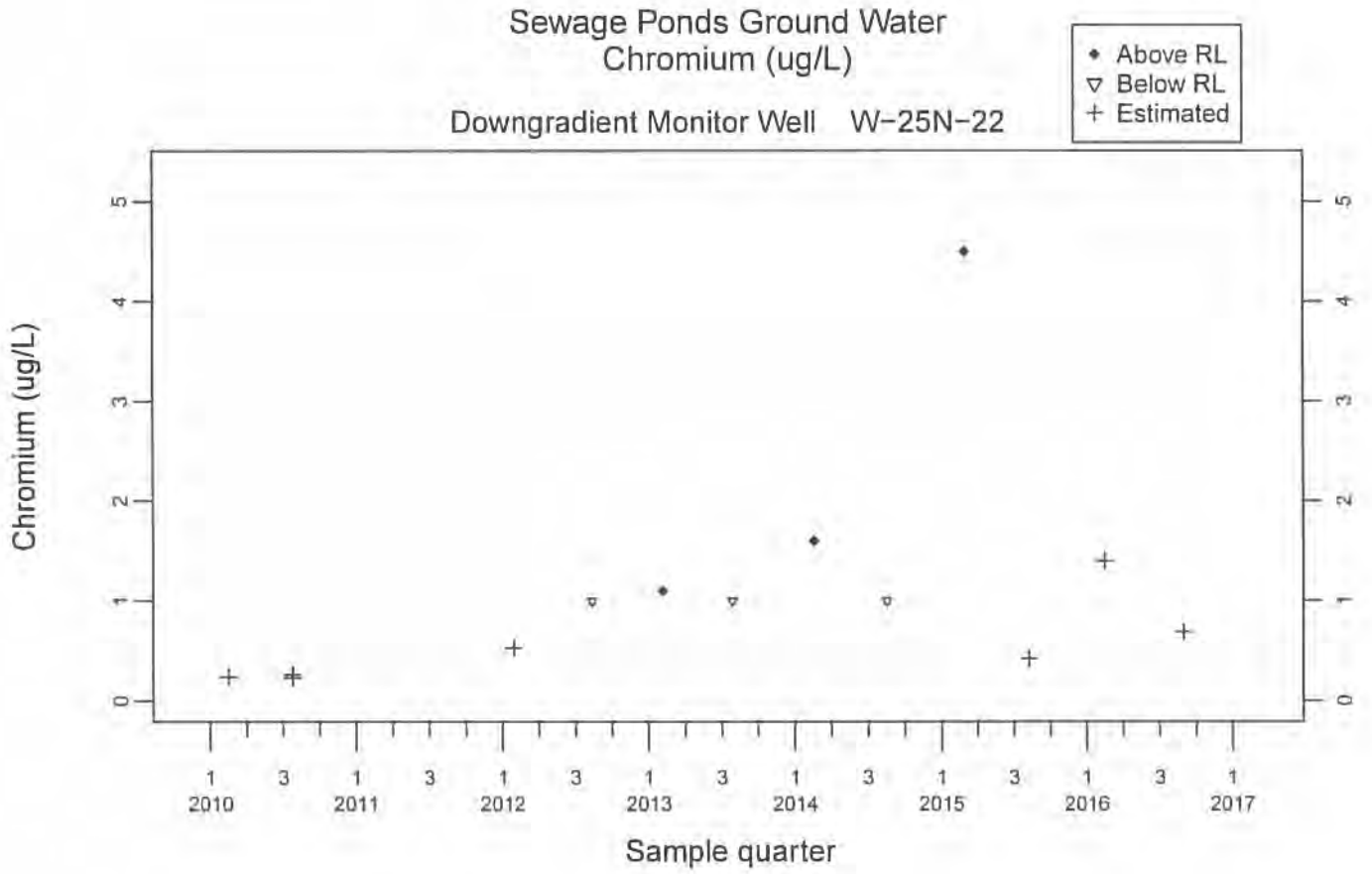

Sewage Ponds Ground Water
Calcium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Calcium (ug/L)
0
20000
40000
60000
80000
120000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

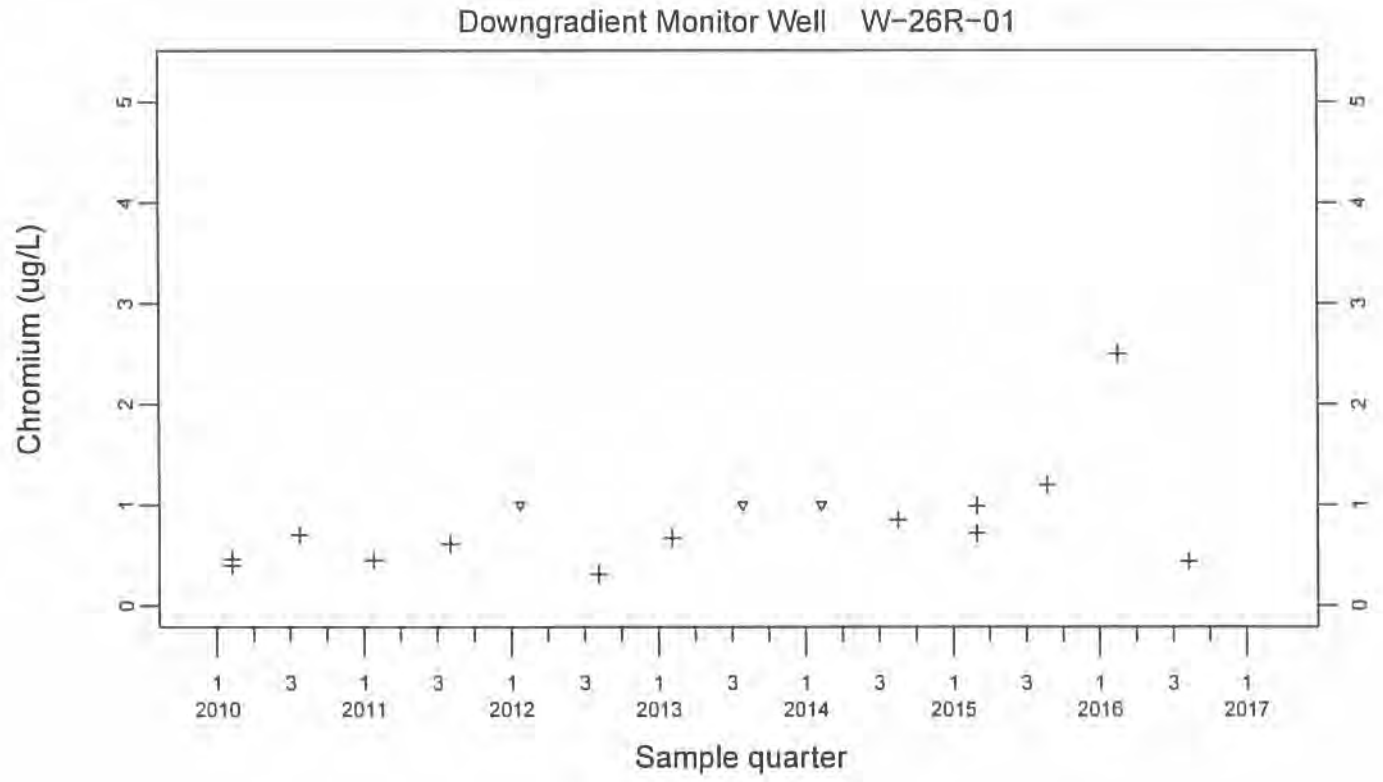

Sewage Ponds Ground Water
Chromium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

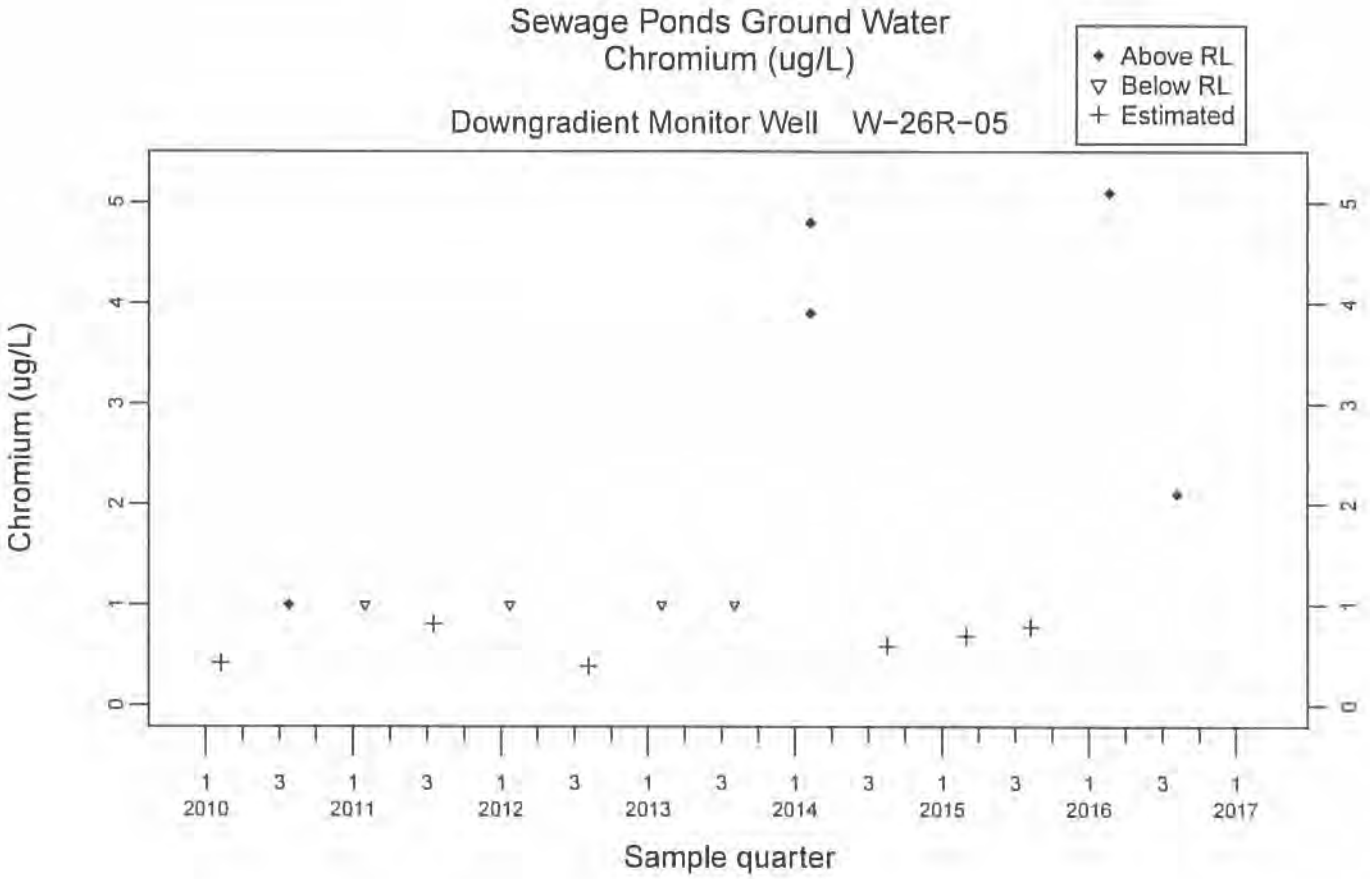

Upgradient Monitor Well W-7PS
Chromium (ug/L)
0
1
2
3
4
5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

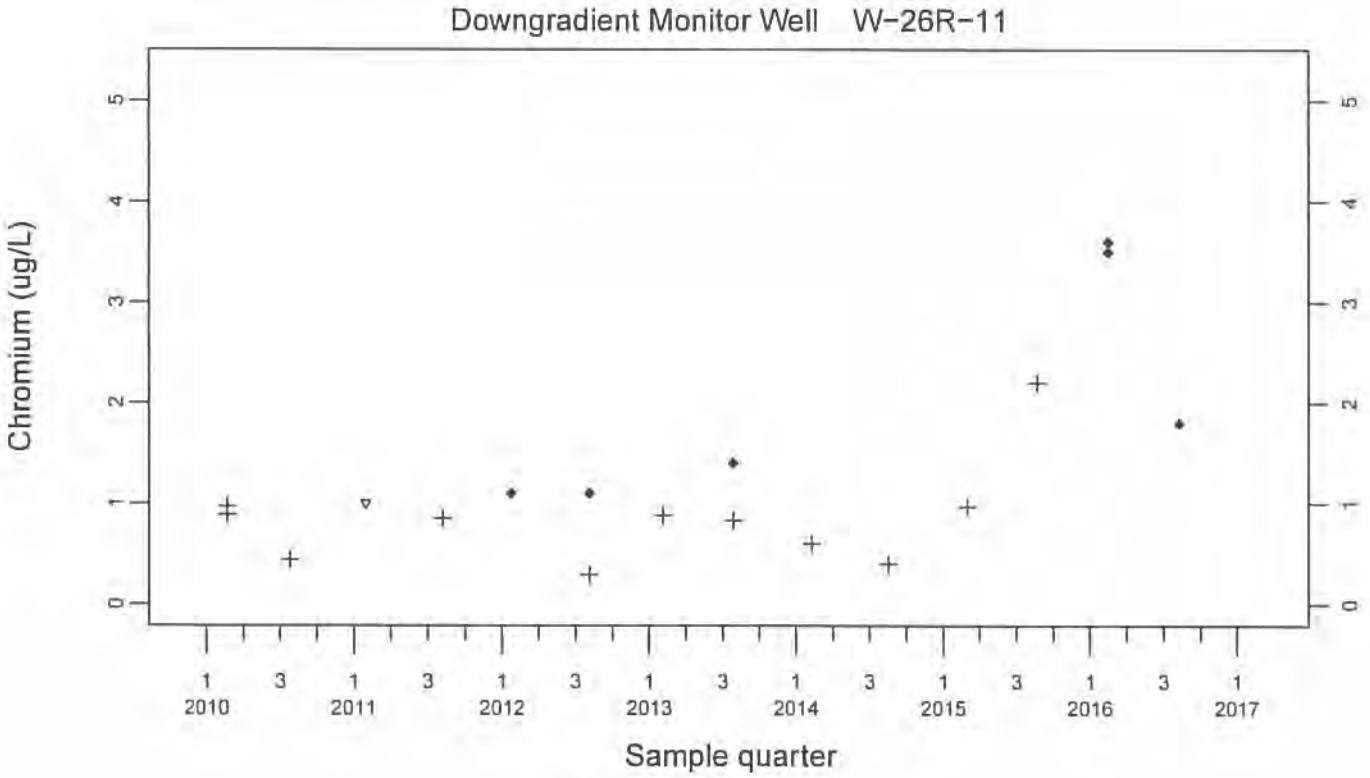

Sewage Ponds Ground Water
Chromium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Estimated
Chromium (ug/L)
0
1
2
3
4
5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

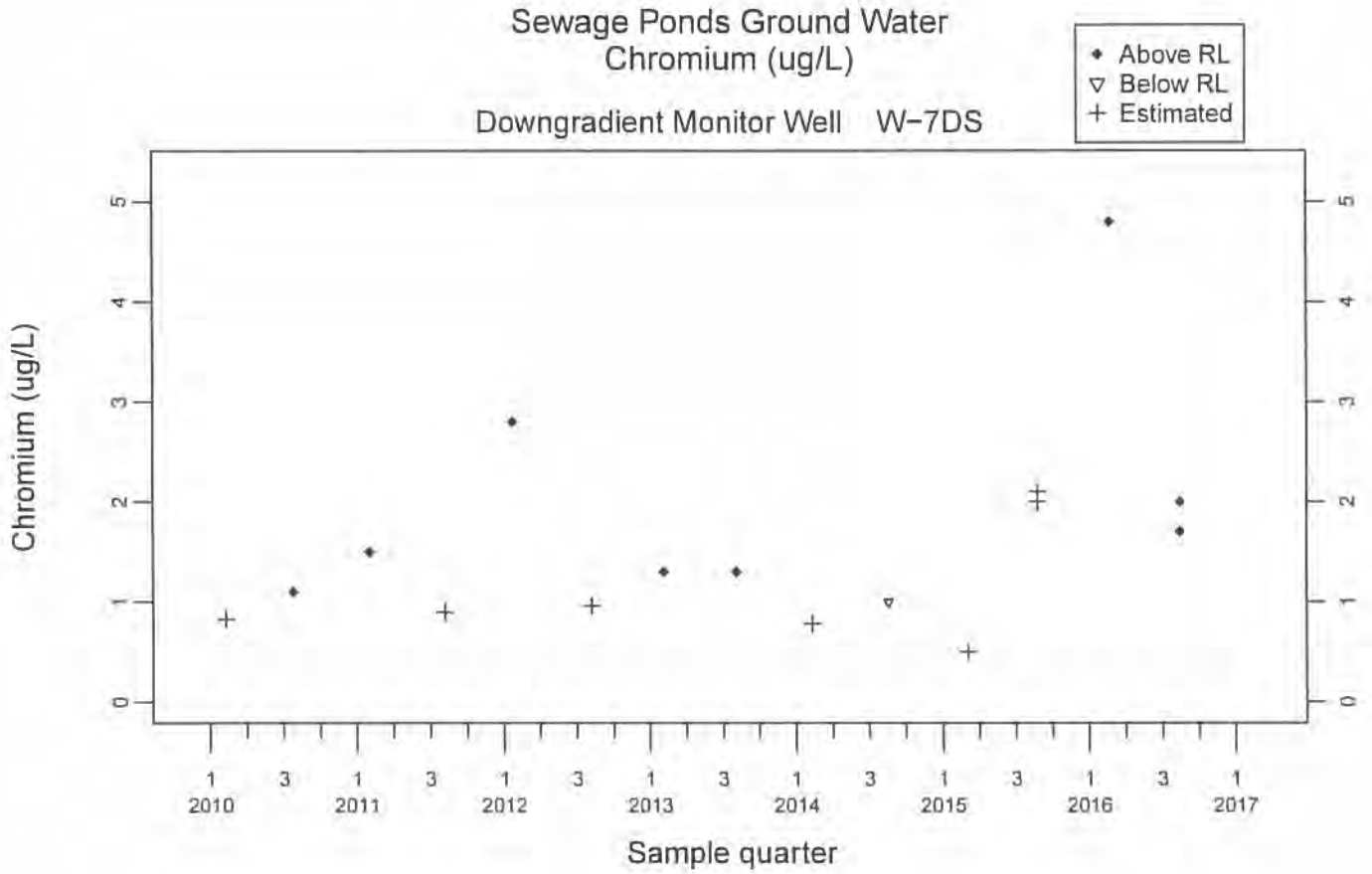

Downgradient Monitor Well W-25N-23
Chromium (ug/L)
0
1
2
3
4
5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

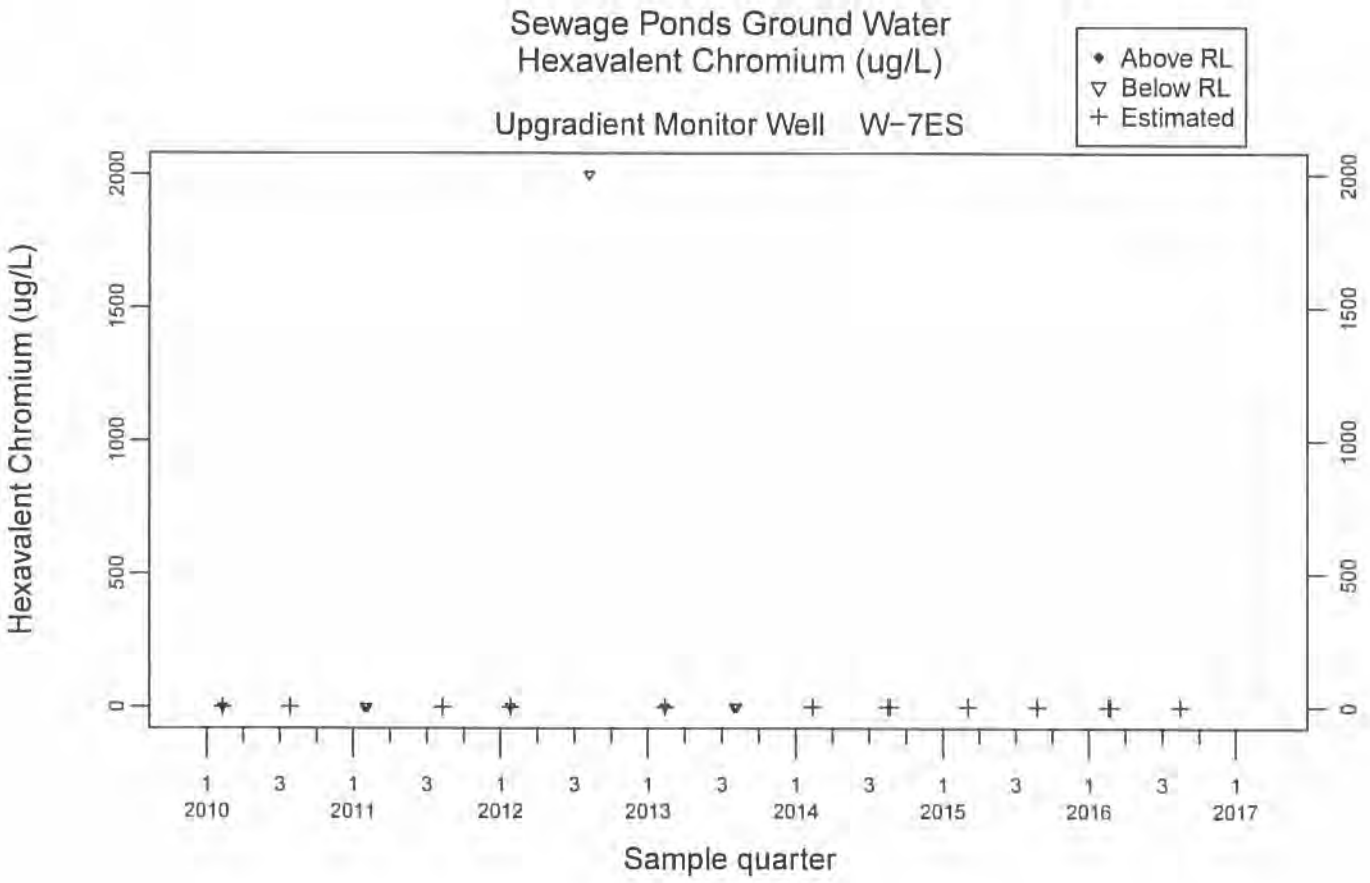

Sewage Ponds Ground Water
Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Chromium (ug/L)
0
1
2
3
4
5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

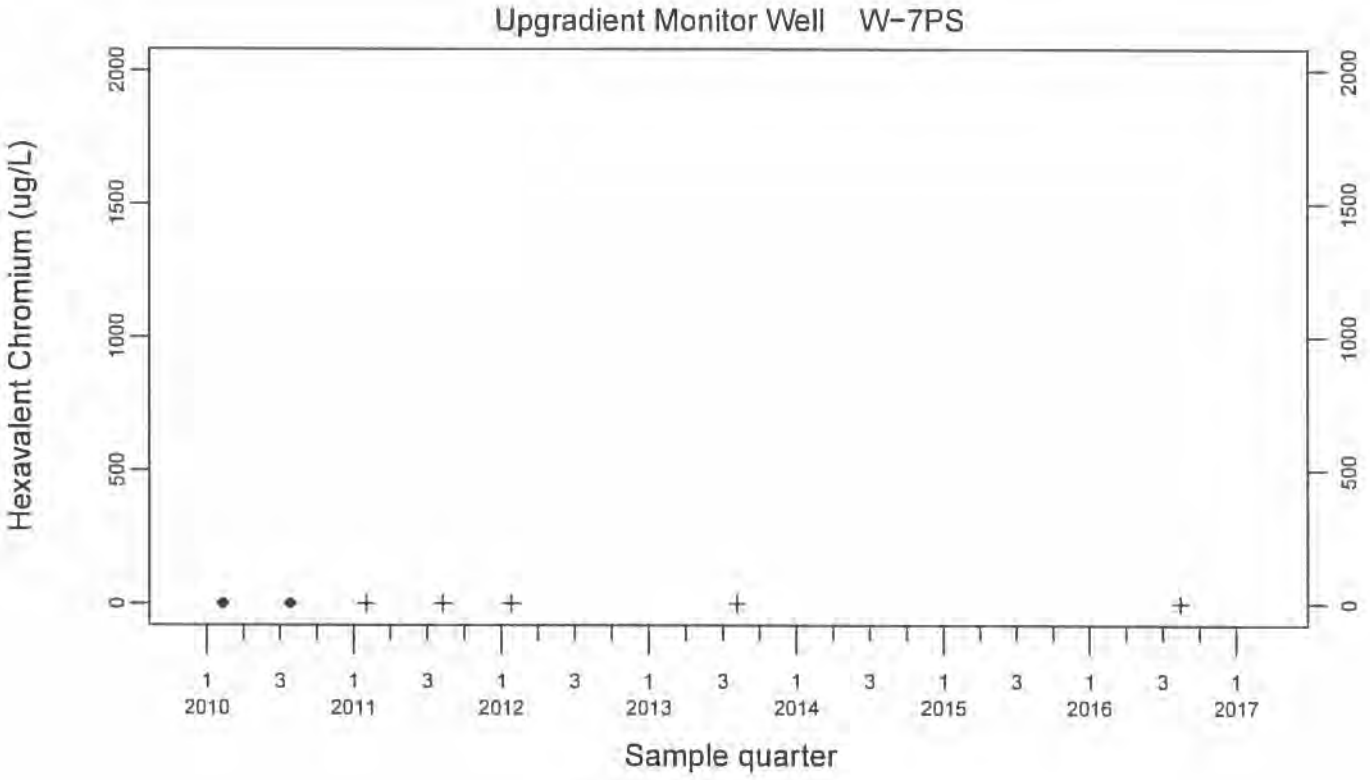

Downgradient Monitor Well W-26R-01
Chromium (ug/L)
0
1
2
3
4
5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

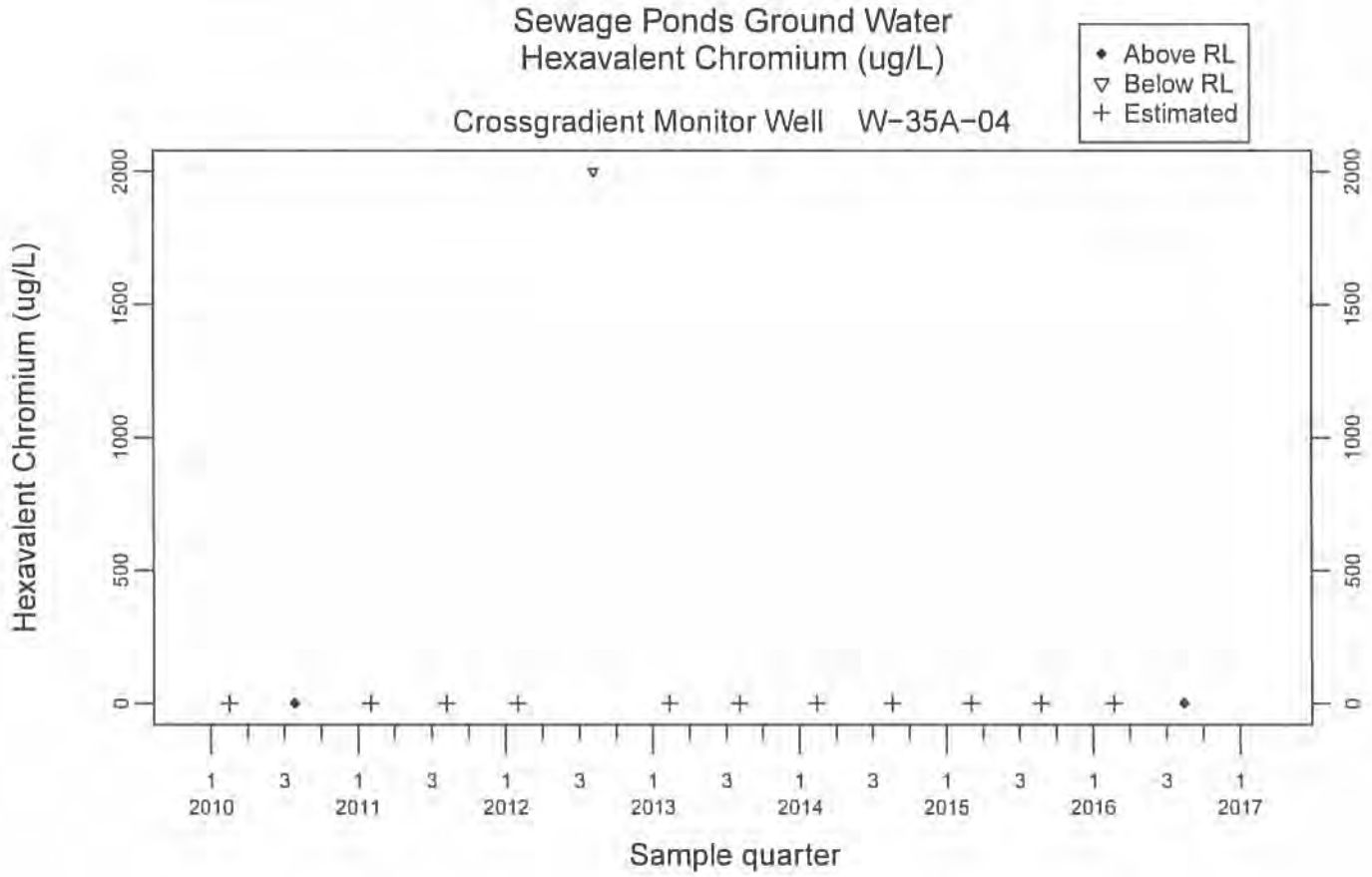

Sewage Ponds Ground Water
Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Chromium (ug/L)
0
1
2
3
4
5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

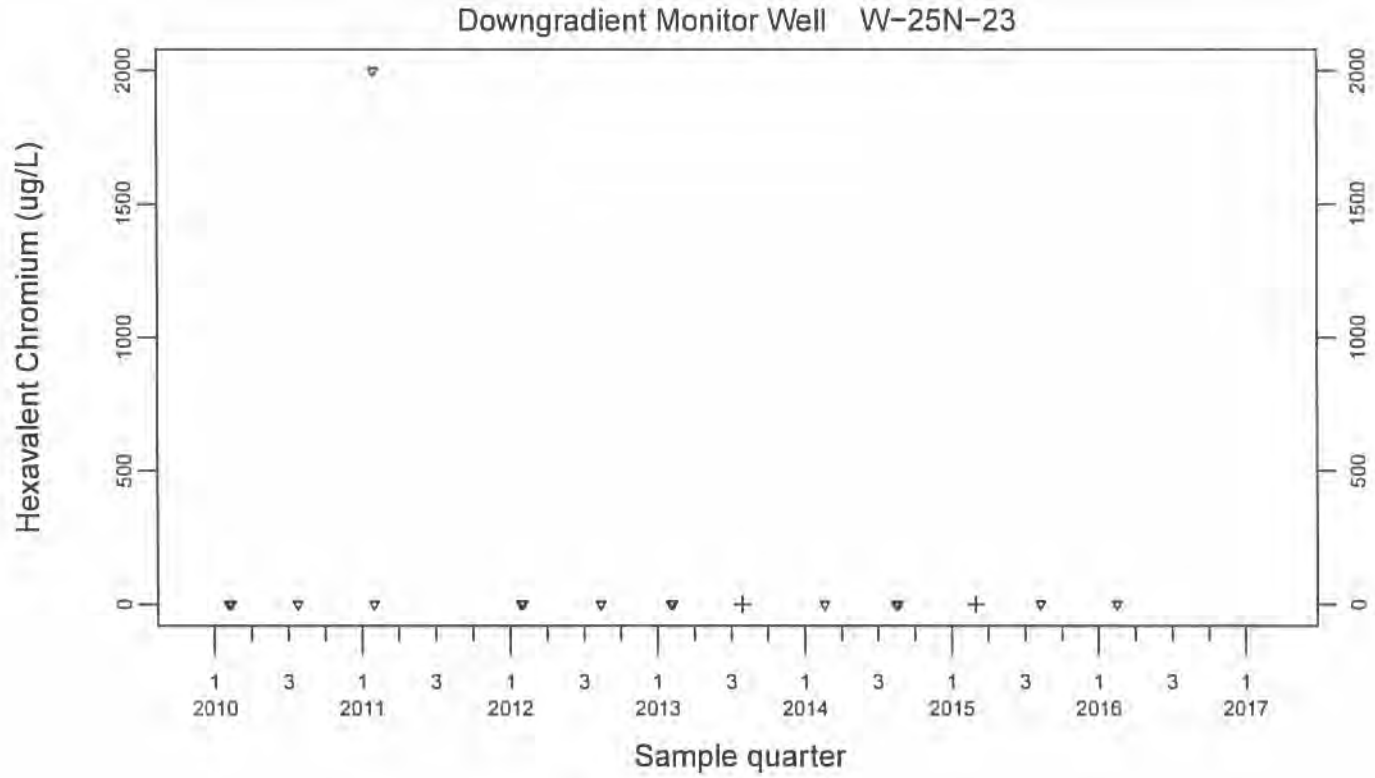

Downgradient Monitor Well W-26R-11
Chromium (ug/L)
0
1
2
3
4
5
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

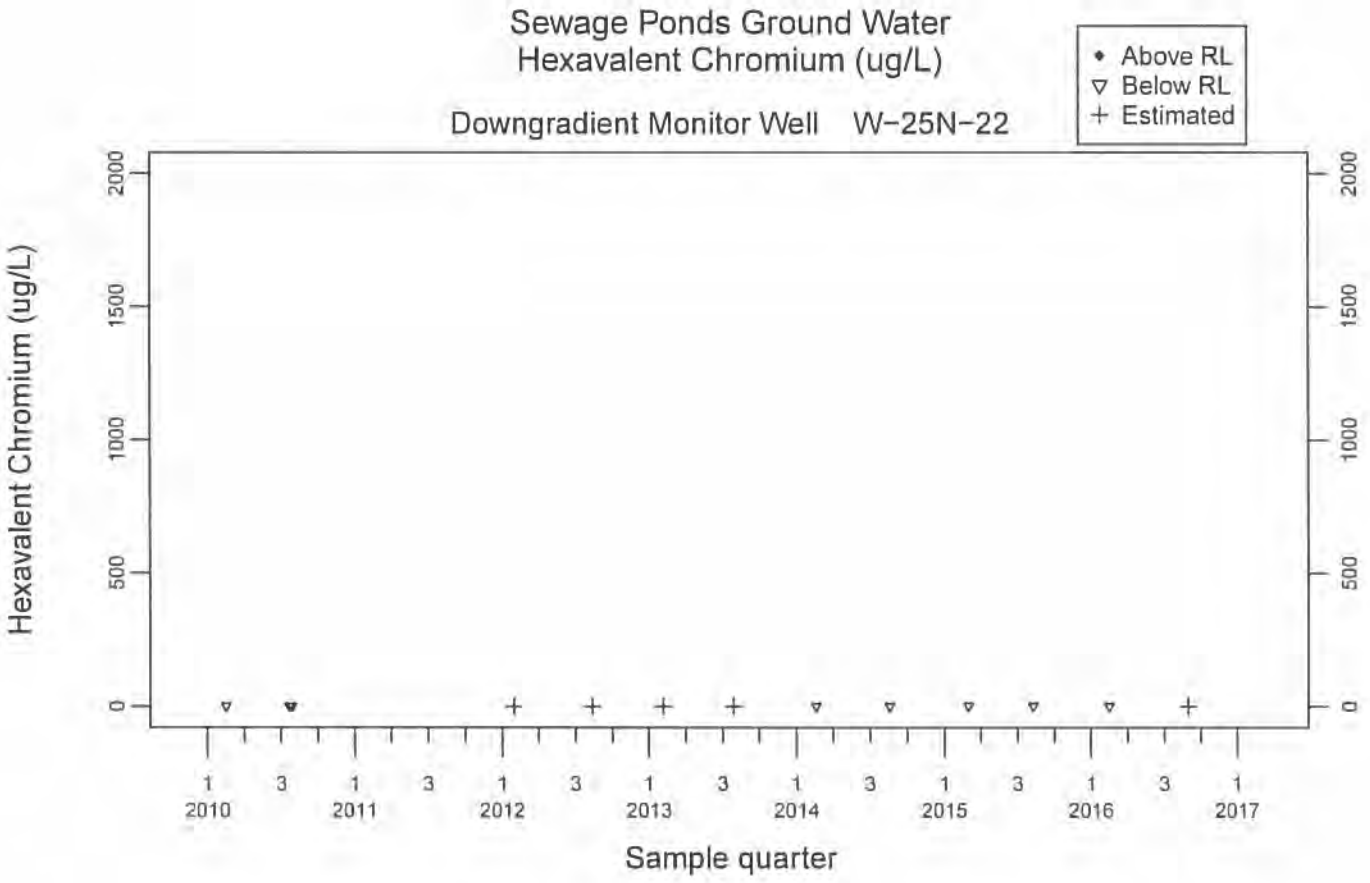

Sewage Ponds Ground Water
Chromium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Chromium (ug/L)
0
1
2
3
4
5
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

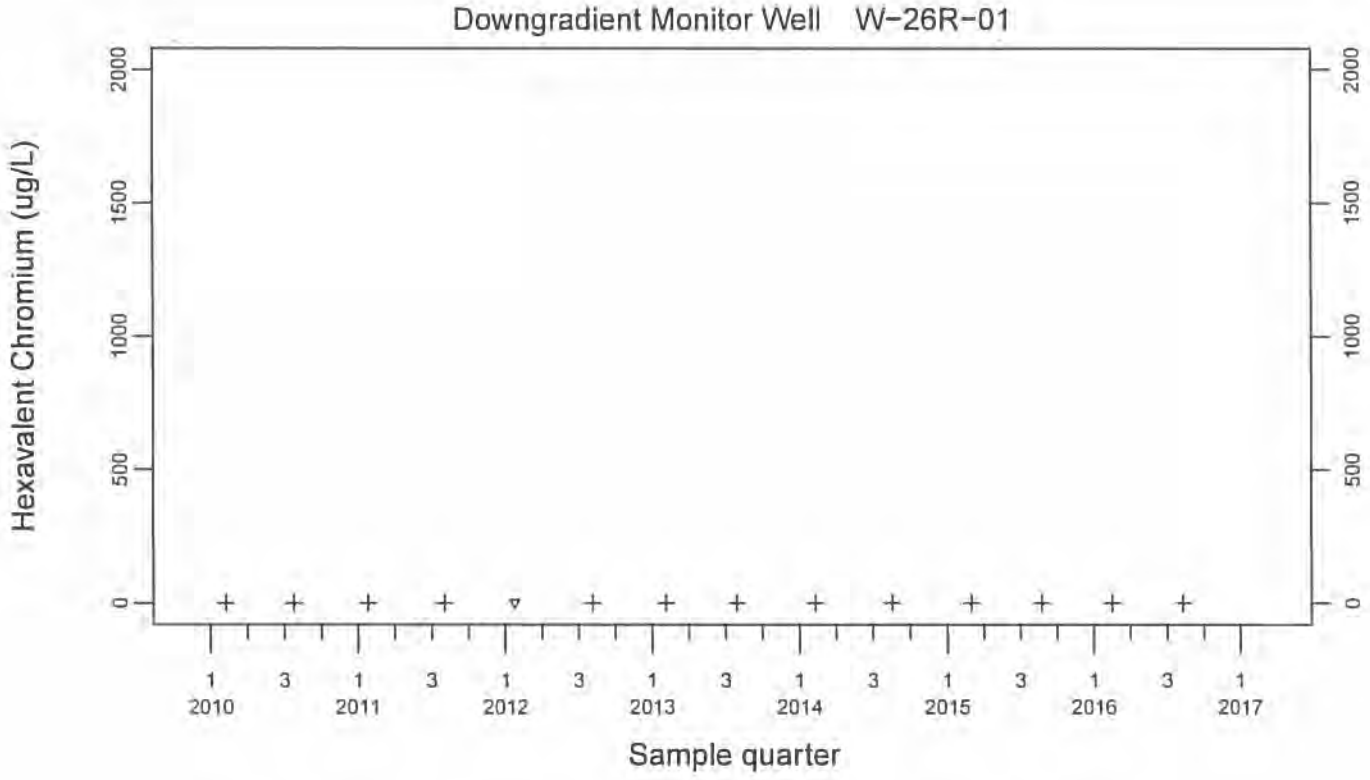

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

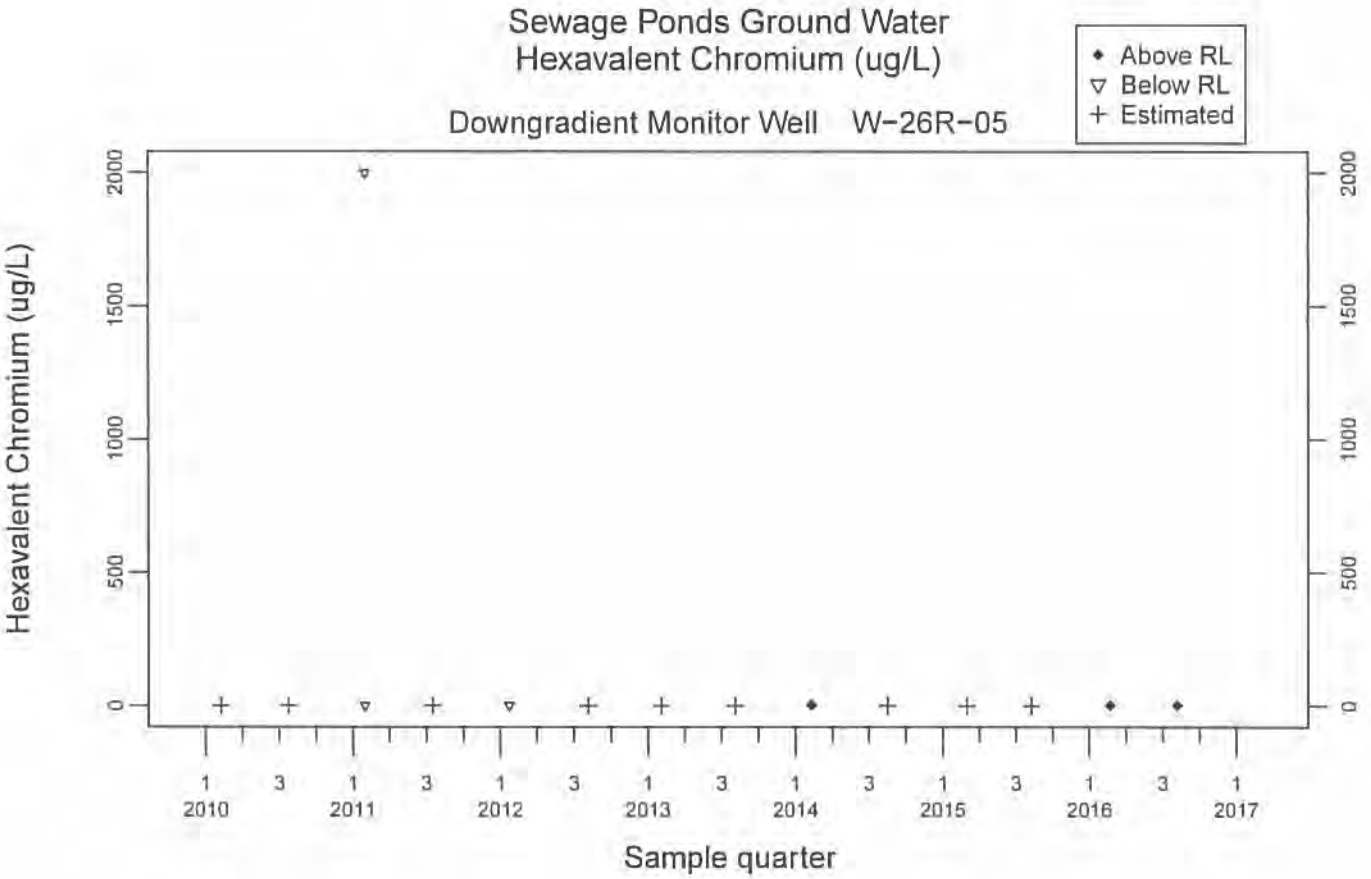

Upgradient Monitor Well W-7PS
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

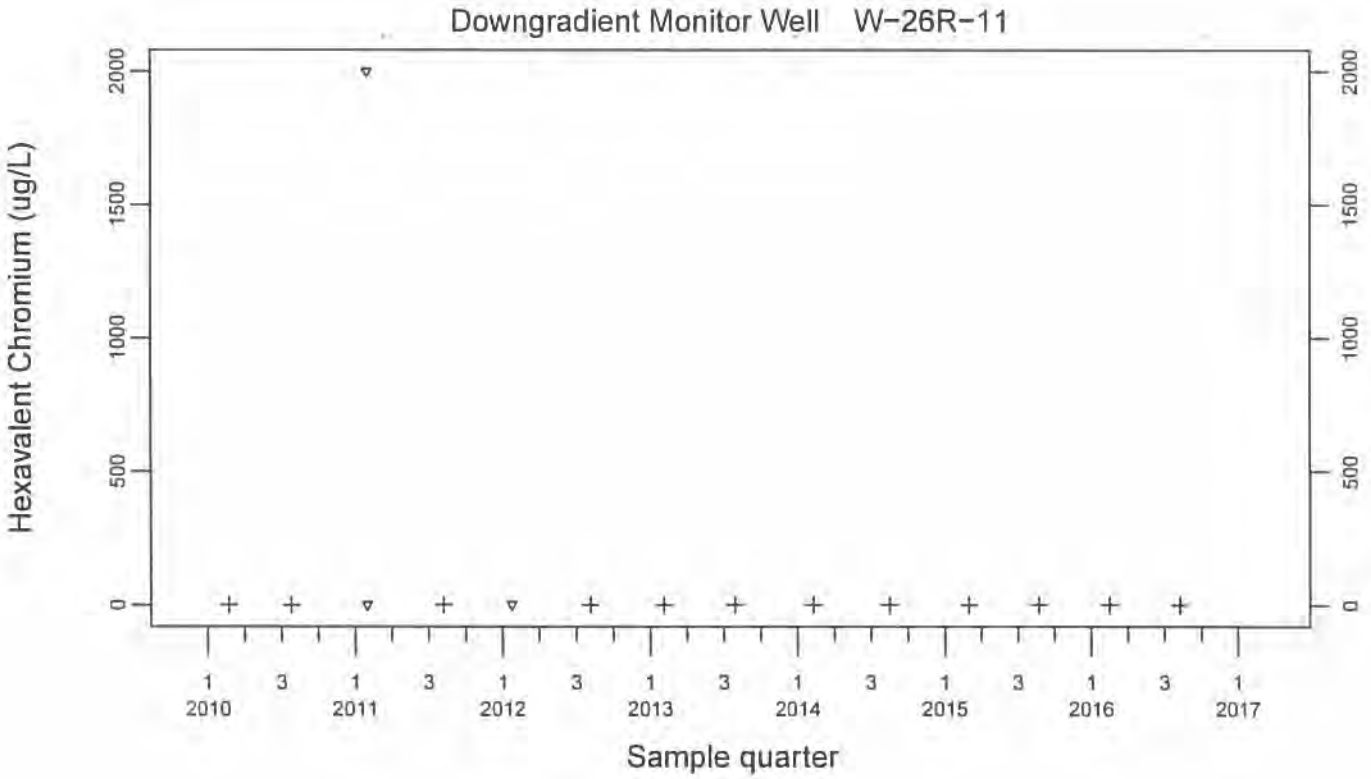

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

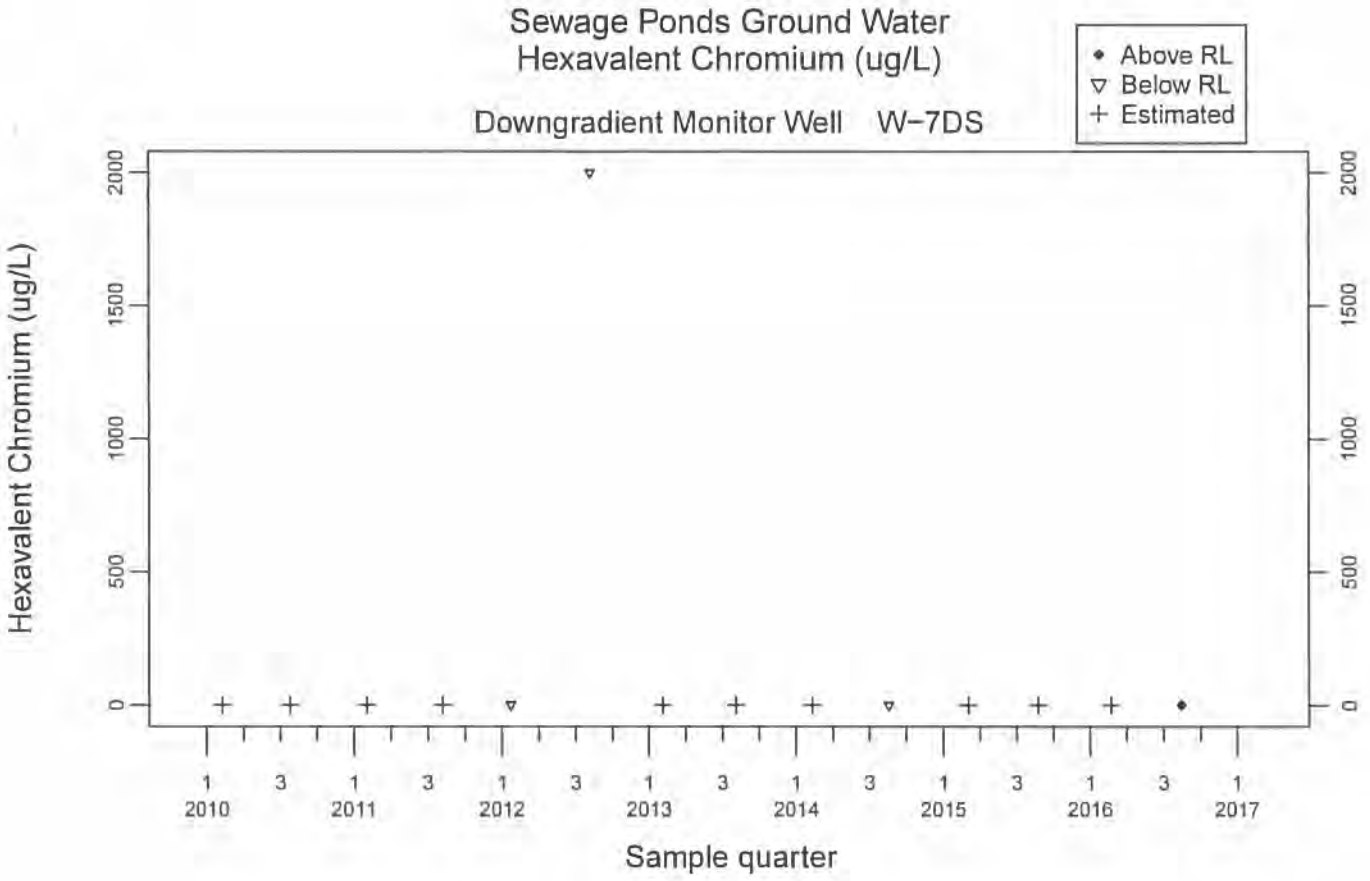

Downgradient Monitor Well W-25N-23
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

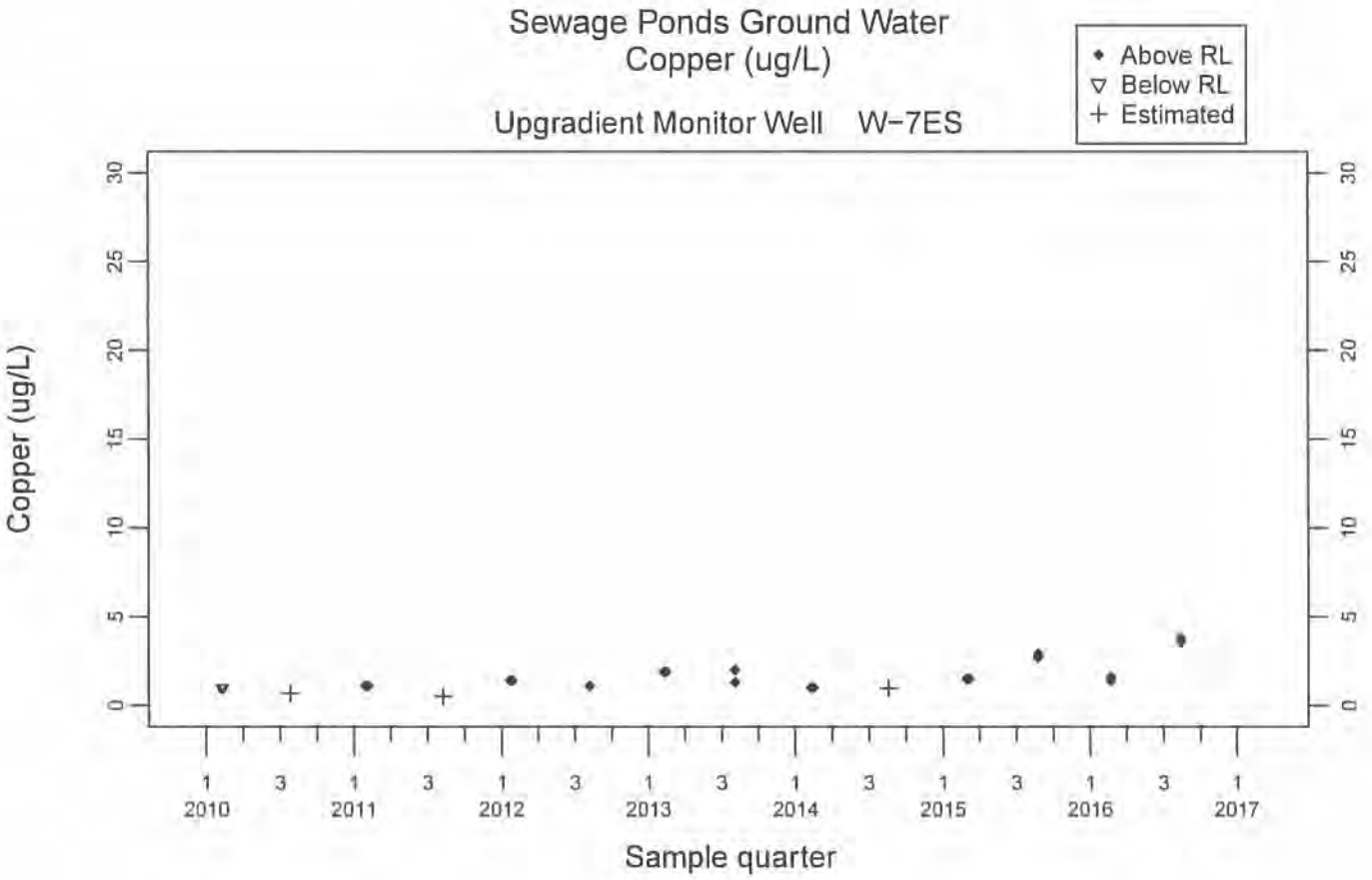

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

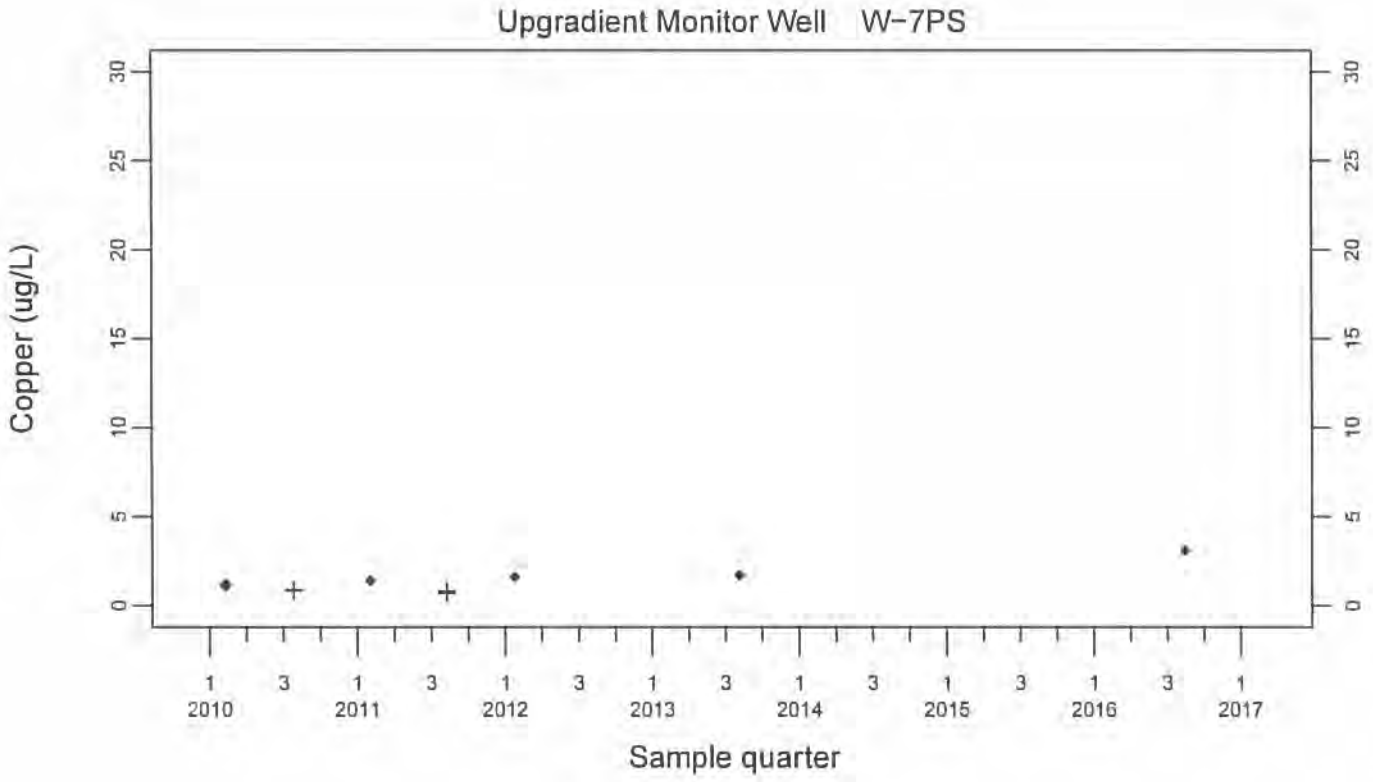

Downgradient Monitor Well W-26R-01
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

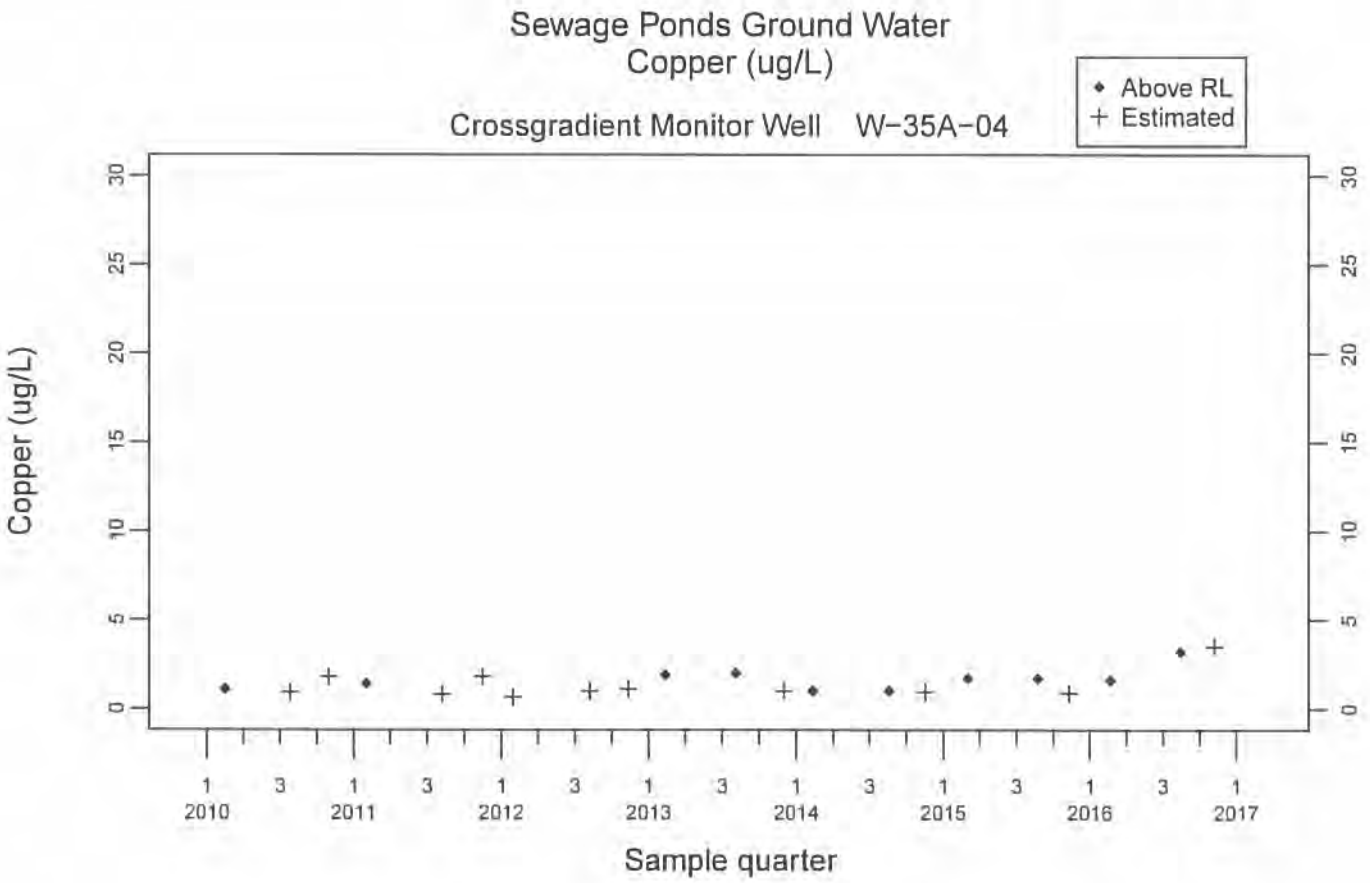

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

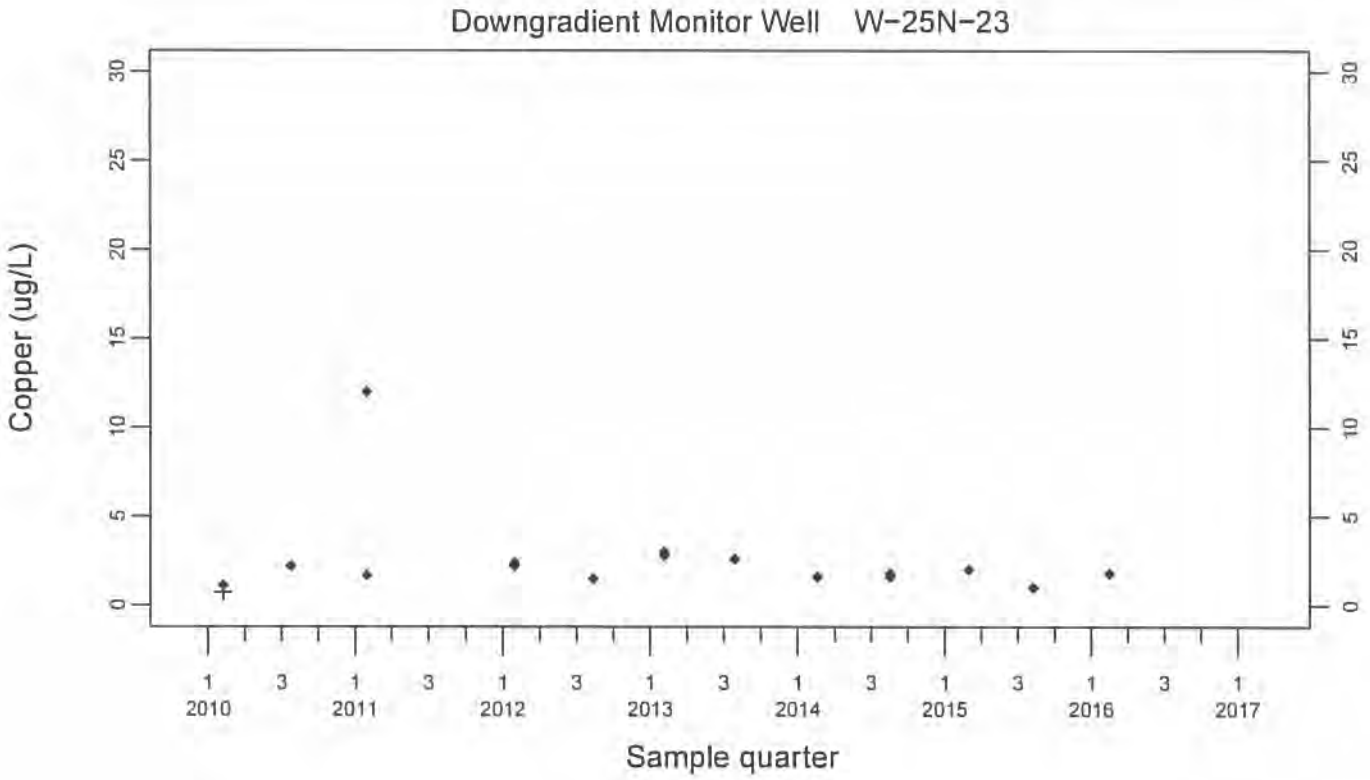

Downgradient Monitor Well W-26R-11
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

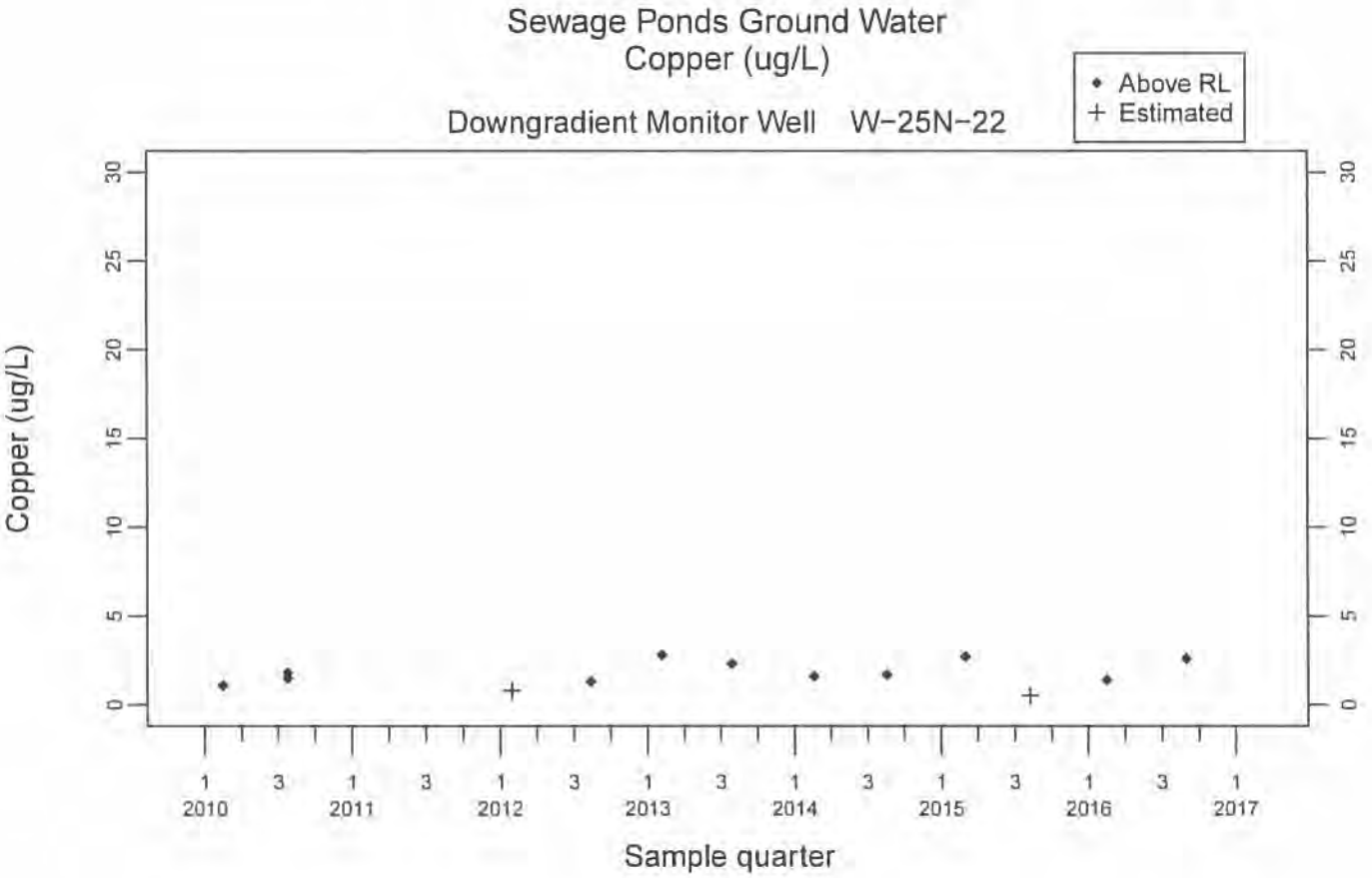

Sewage Ponds Ground Water
Hexavalent Chromium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Hexavalent Chromium (ug/L)
0
500
1000
1500
2000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

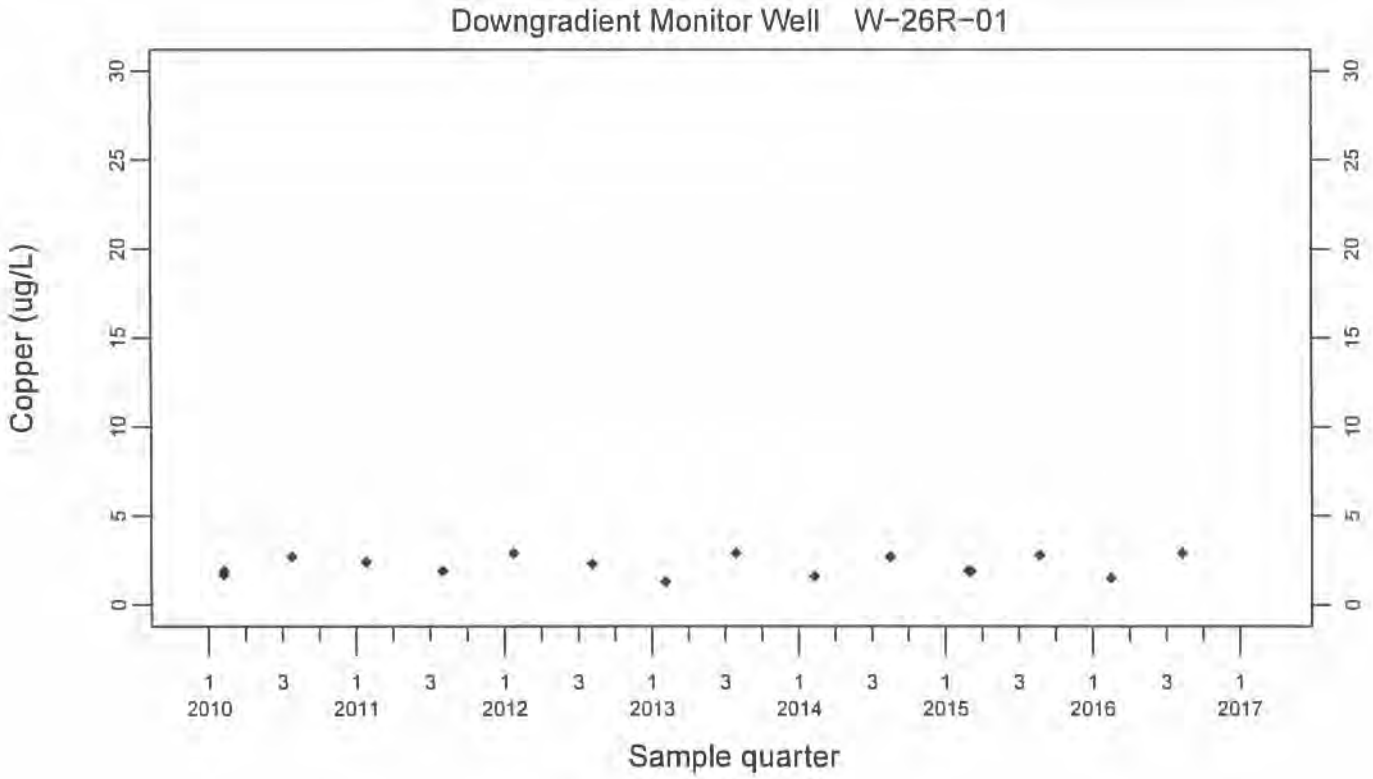

Sewage Ponds Ground Water
Copper (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

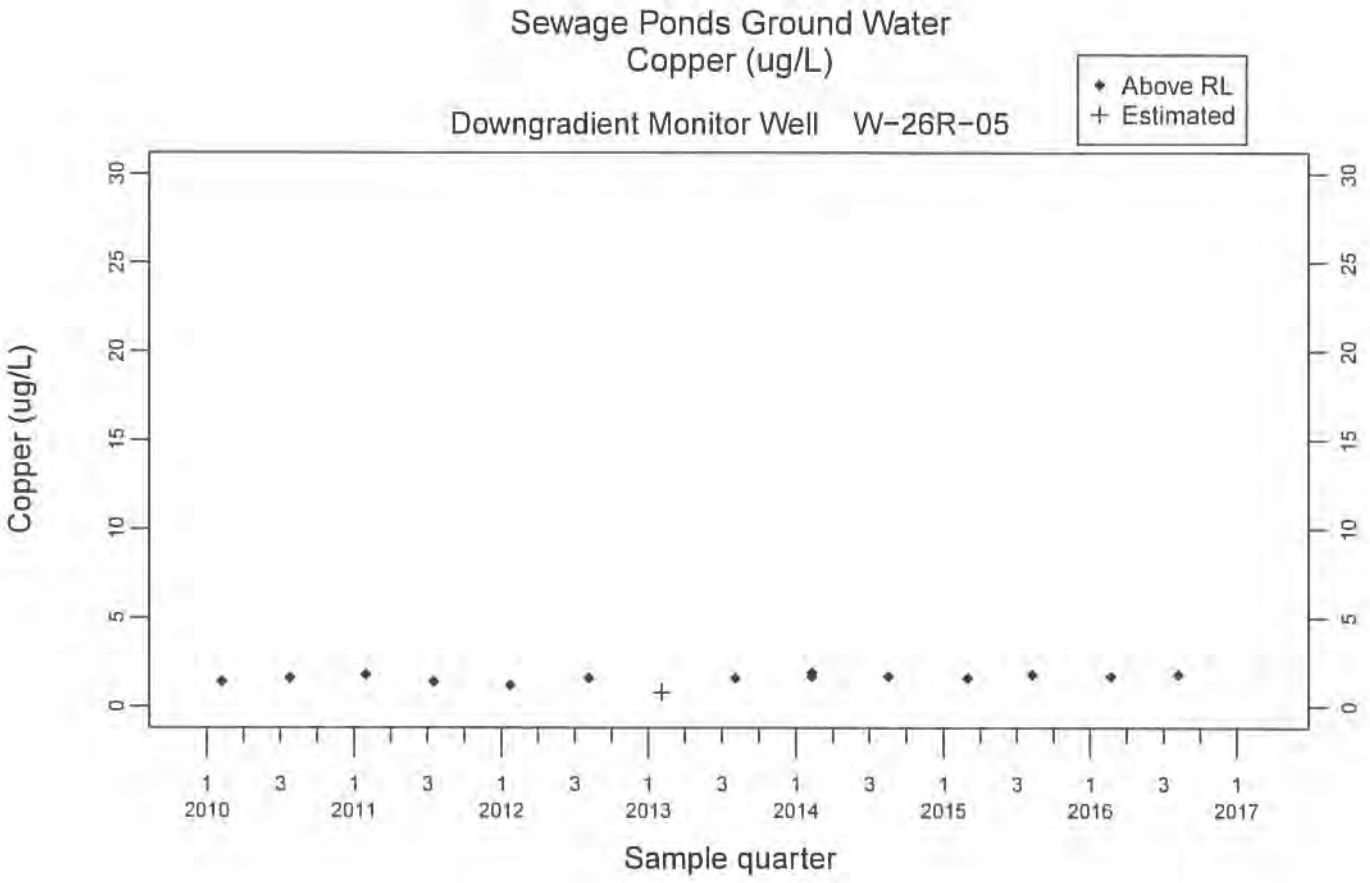

Upgradient Monitor Well W-7PS
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

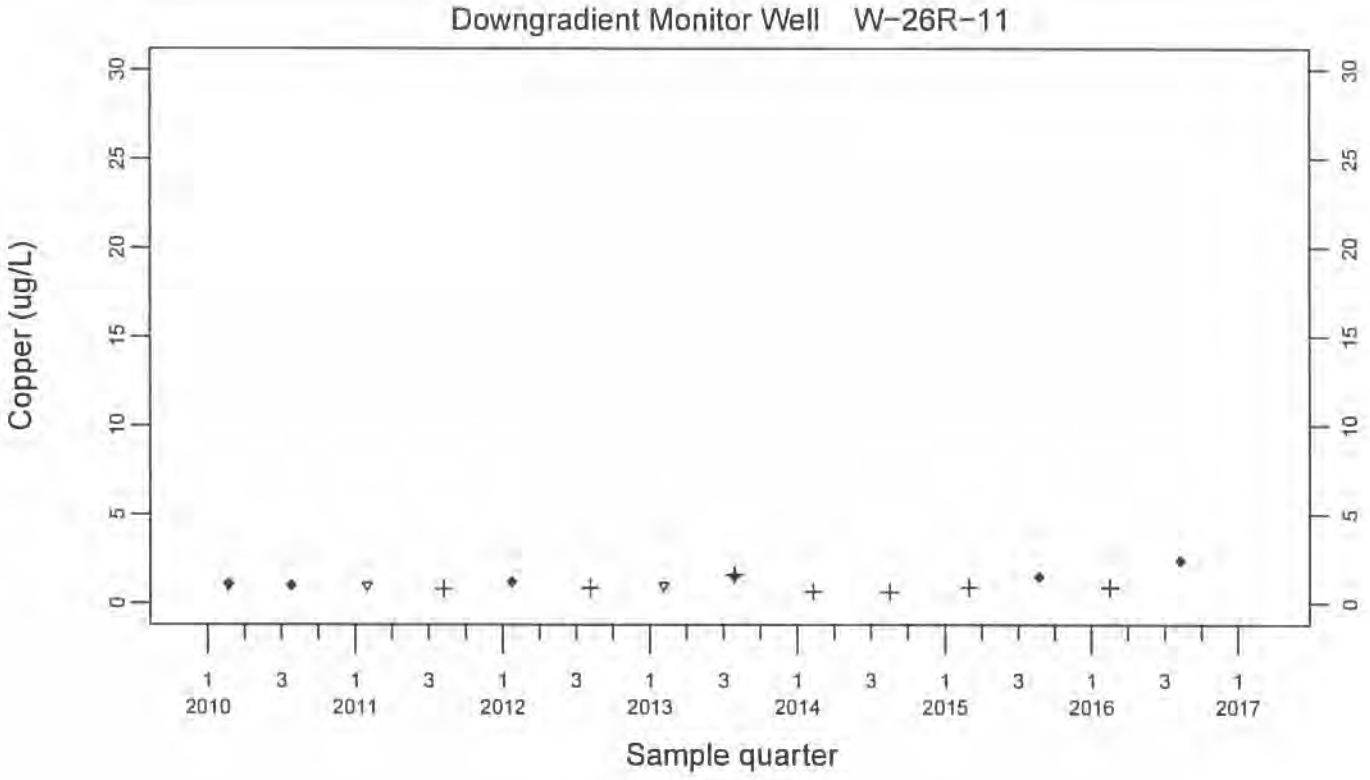

Sewage Ponds Ground Water
Copper (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Estimated
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

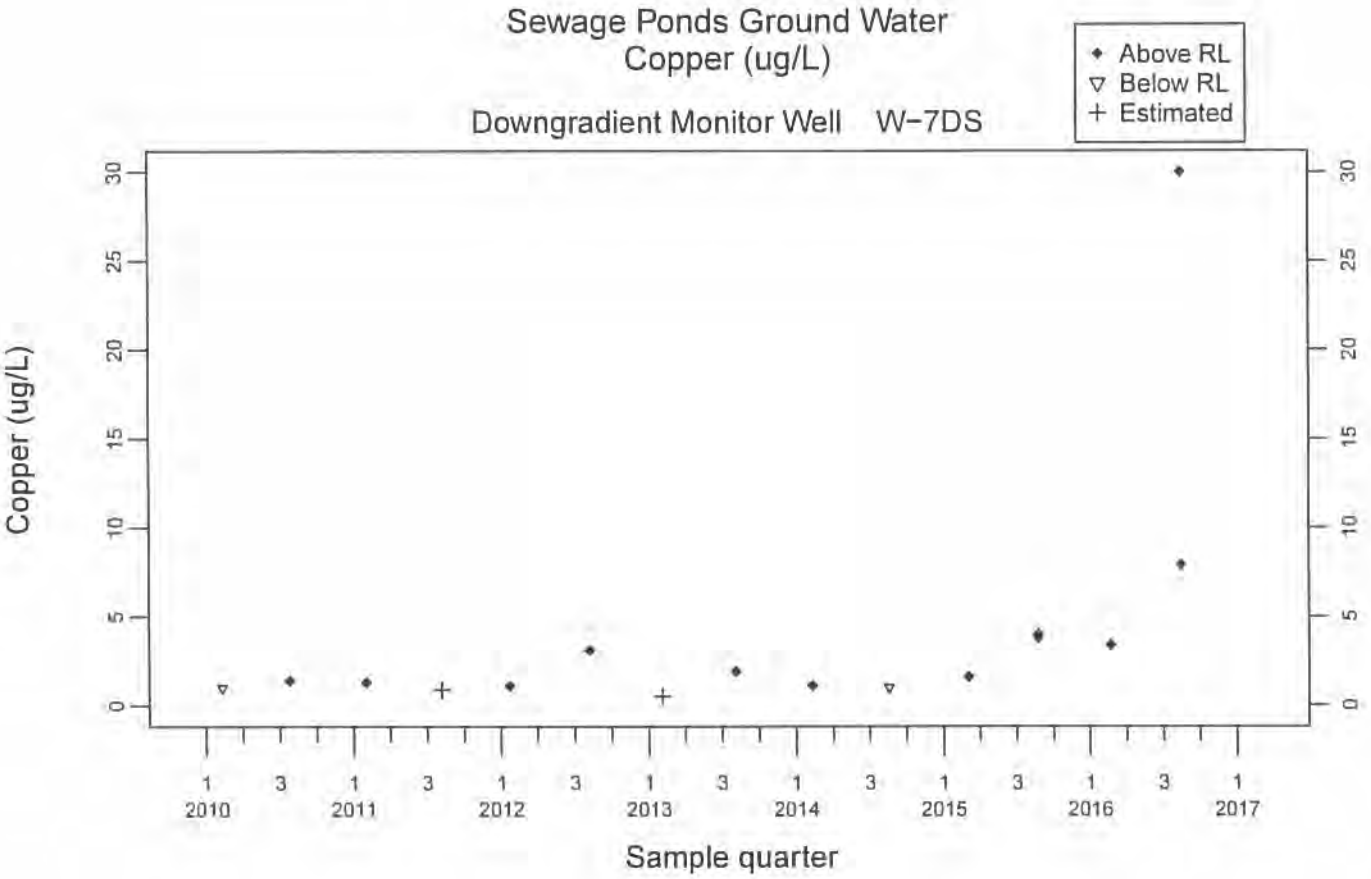

Downgradient Monitor Well W-25N-23
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

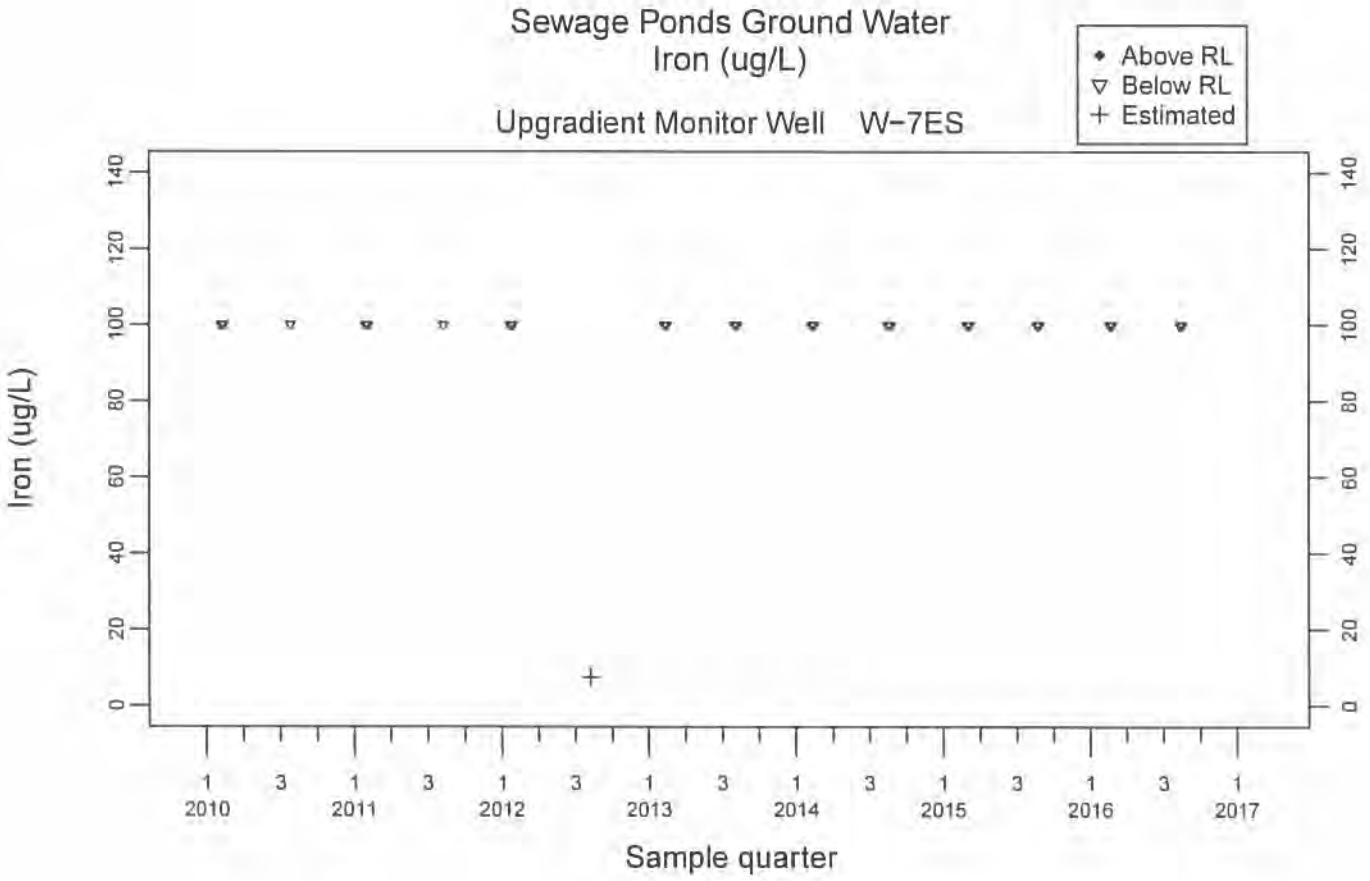

Sewage Ponds Ground Water
Copper (ug/L)
Downgradient Monitor Well W-25N-22
Above RL
Estimated
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

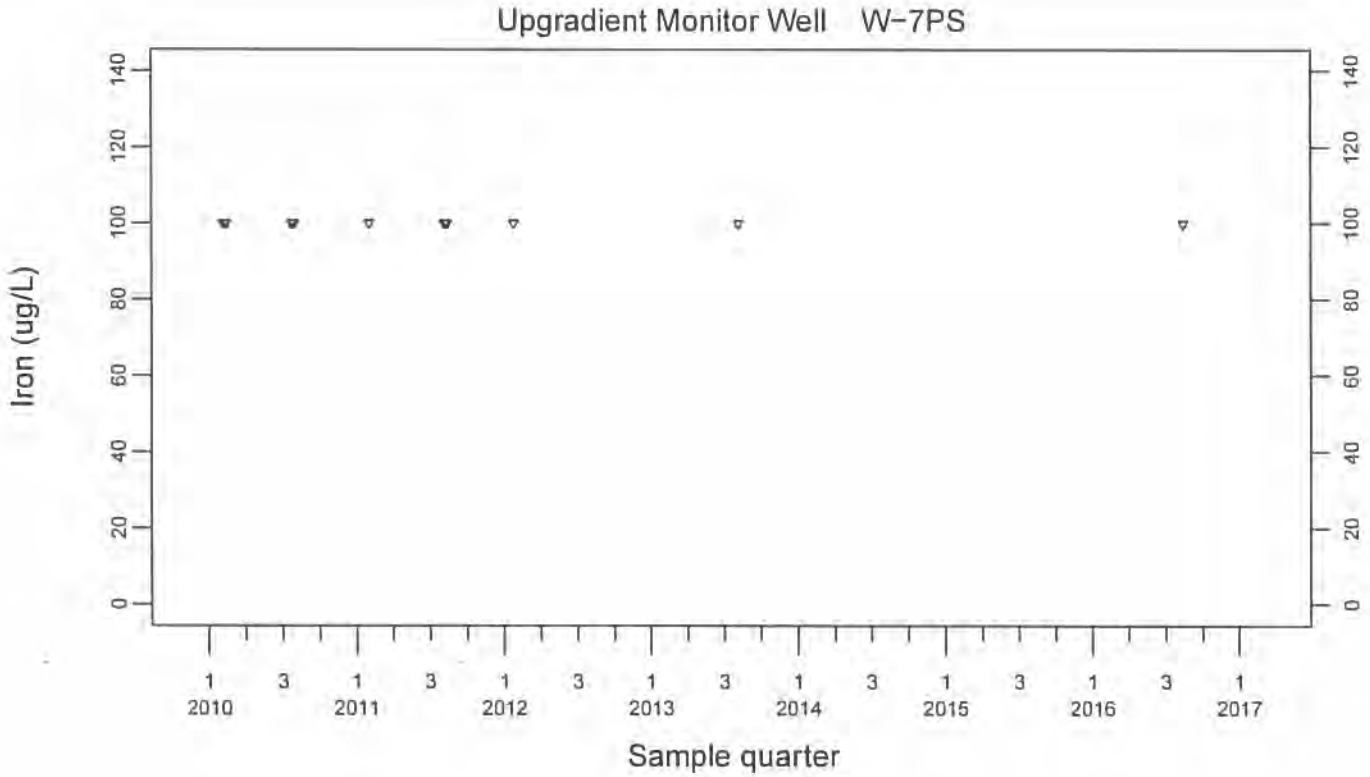

Downgradient Monitor Well W-26R-01
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

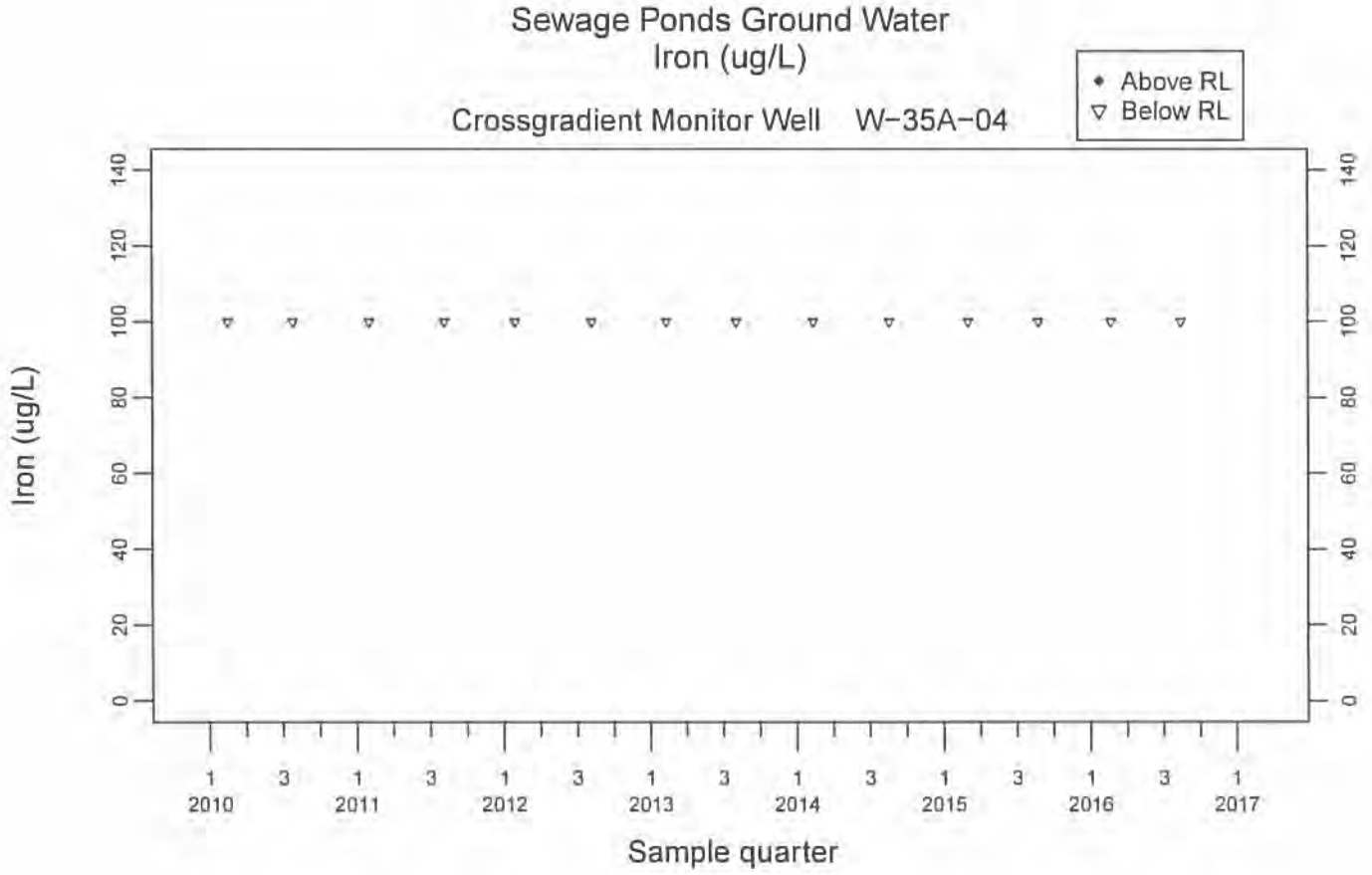

Sewage Ponds Ground Water
Copper (ug/L)
Above RL
Estimated
Downgradient Monitor Well W-26R-05
Copper (ug/L)
0
5
10
15
20
25
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

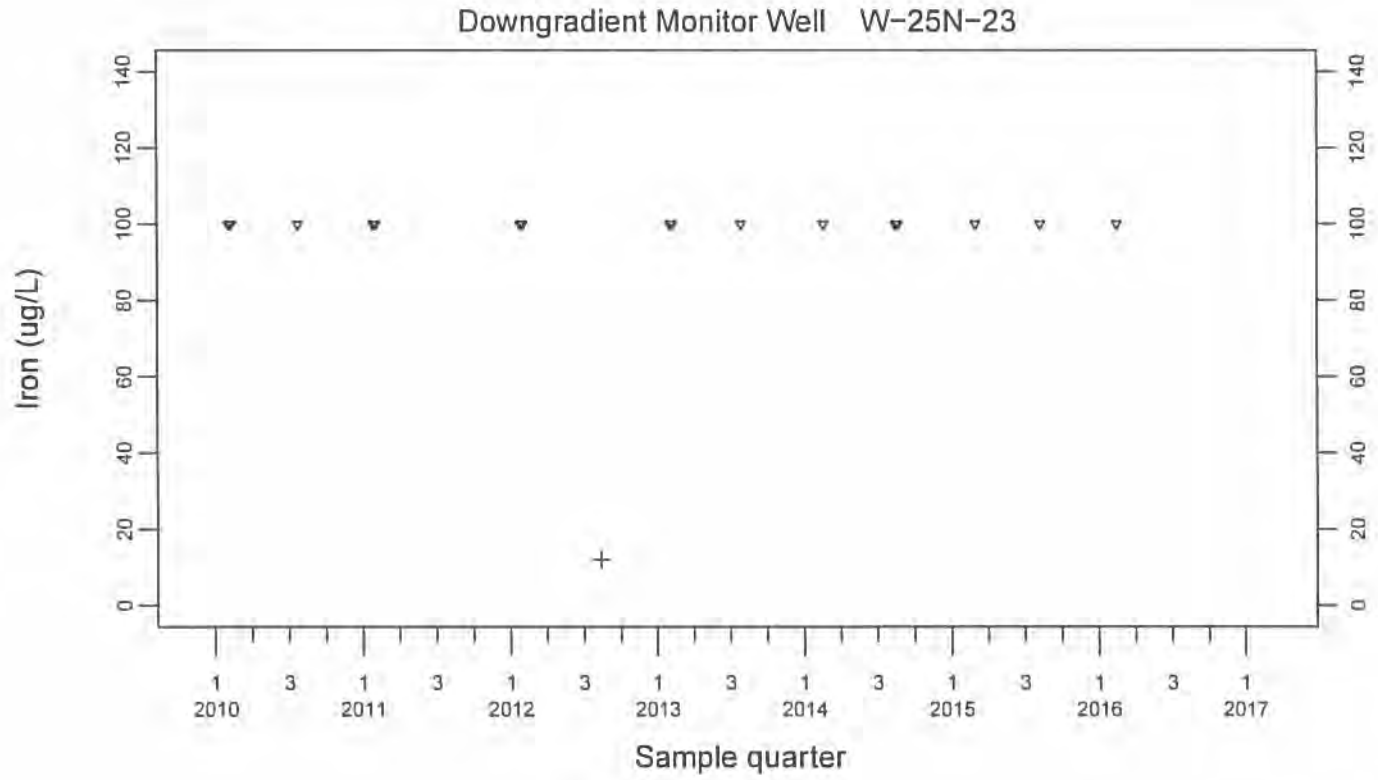

Downgradient Monitor Well W-26R-11
Copper (ug/L)
0
5
10
15
20
25
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

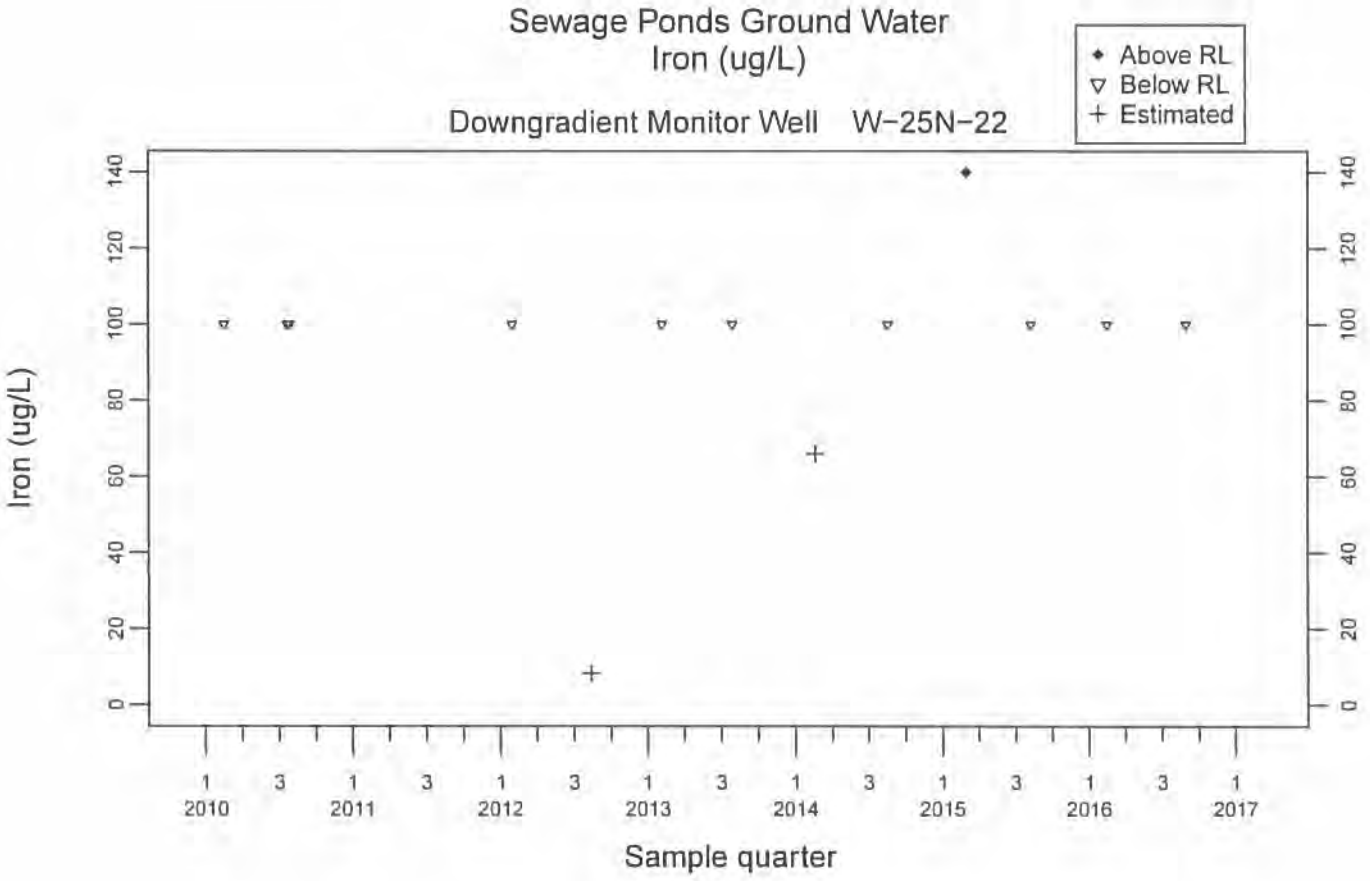

Sewage Ponds Ground Water
Copper (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Copper (ug/L)
0
5
10
15
20
25
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

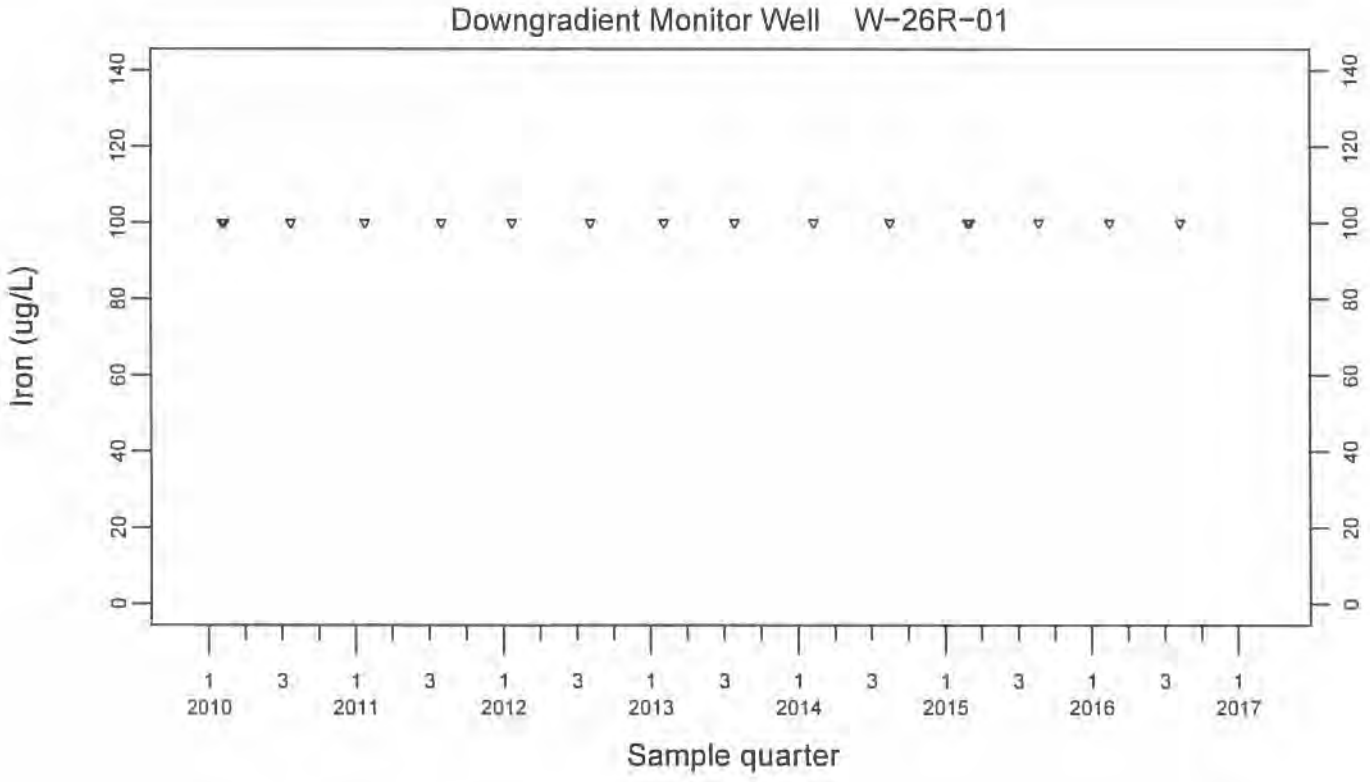

Sewage Ponds Ground Water
Iron (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

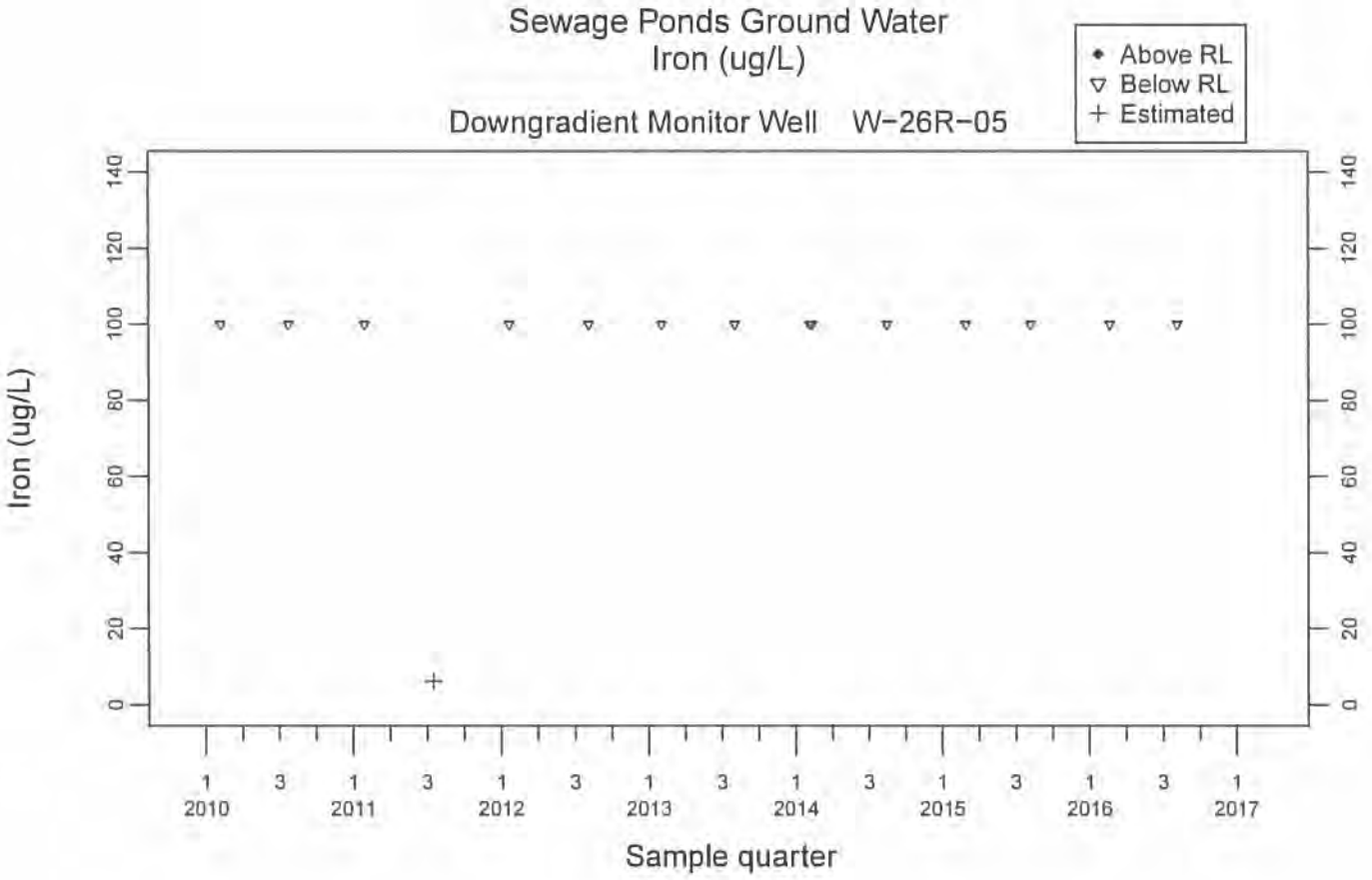

Upgradient Monitor Well W-7PS
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

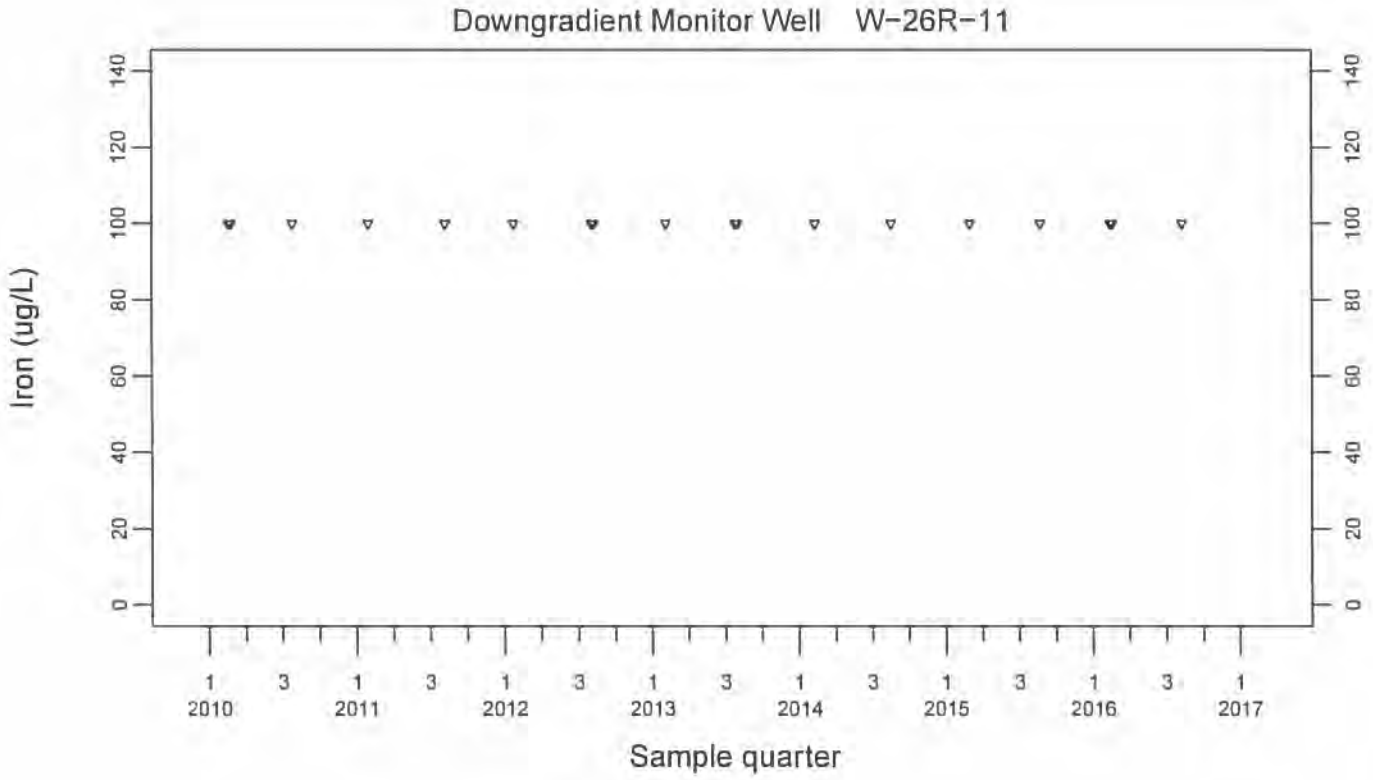

Sewage Ponds Ground Water
Iron (ug/L)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

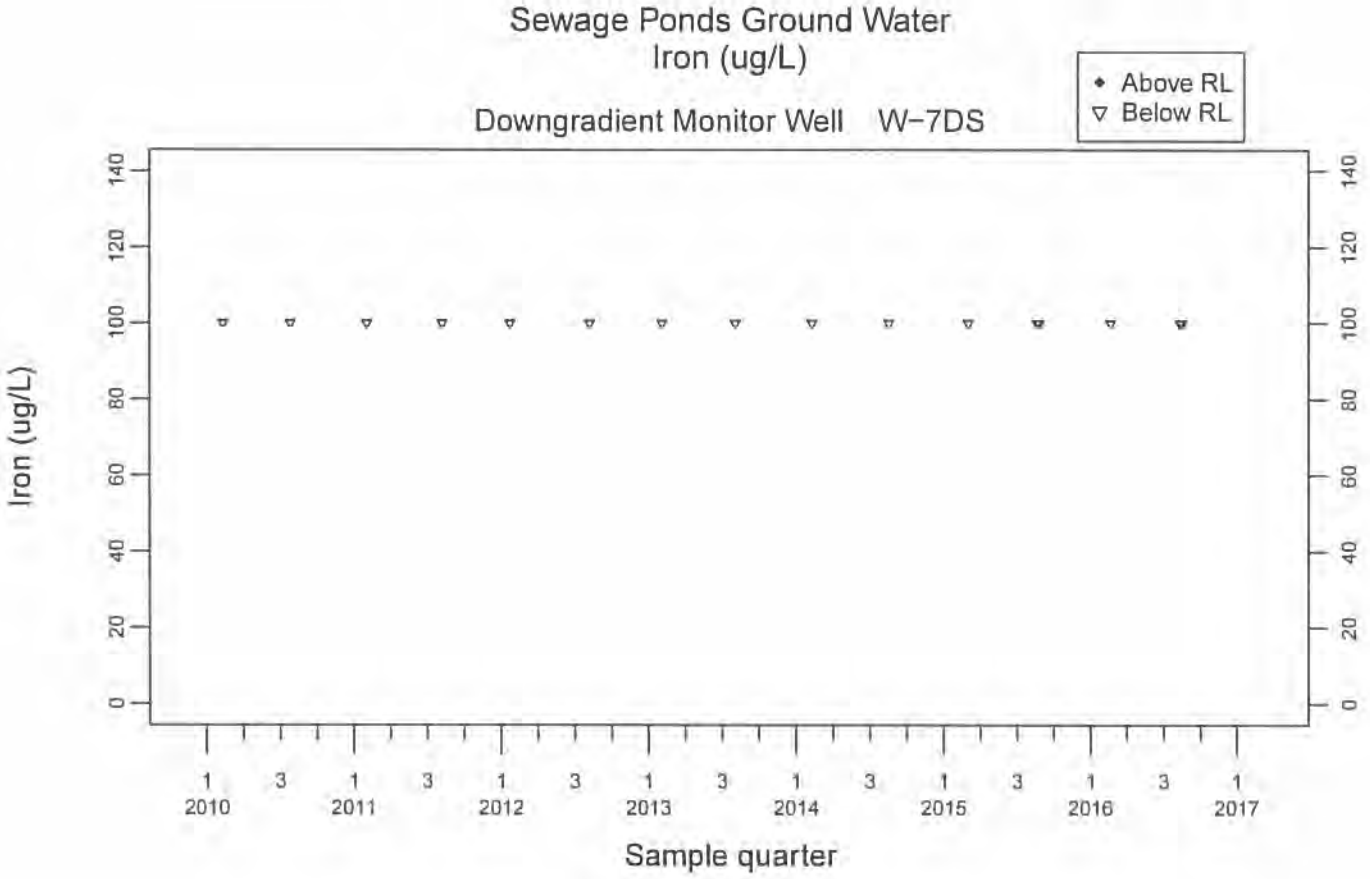

Downgradient Monitor Well W-25N-23
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

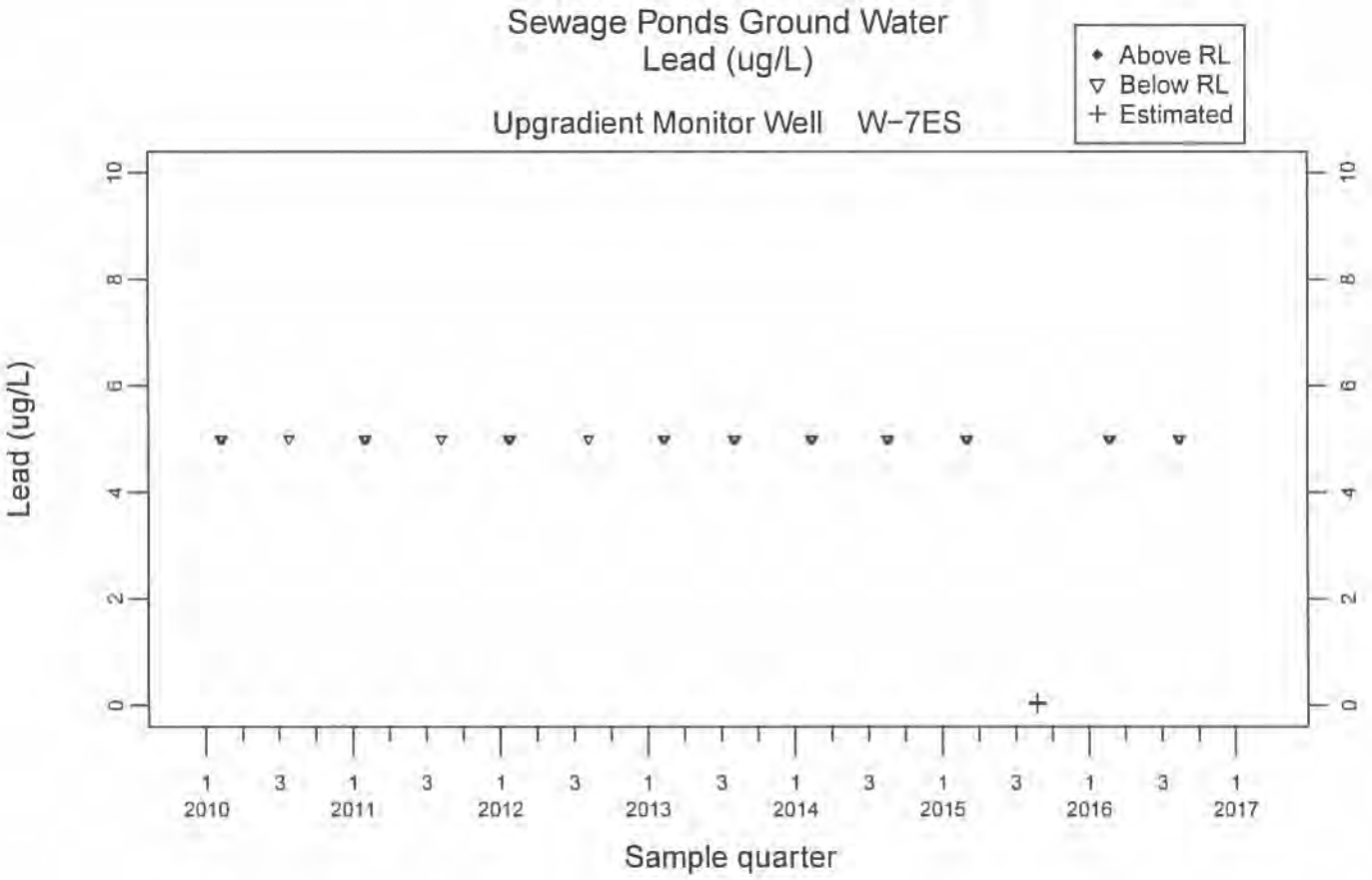

Sewage Ponds Ground Water
Iron (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

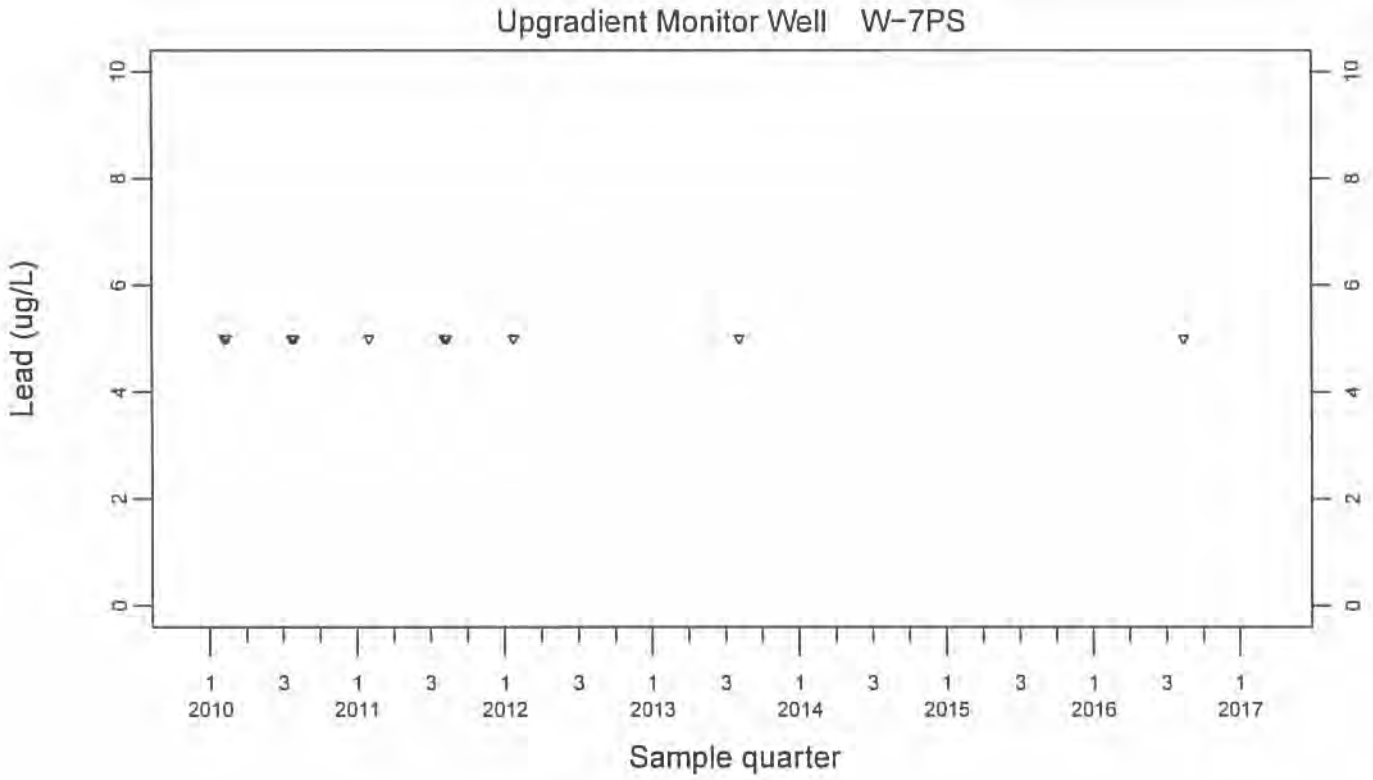

Downgradient Monitor Well W-26R-01
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

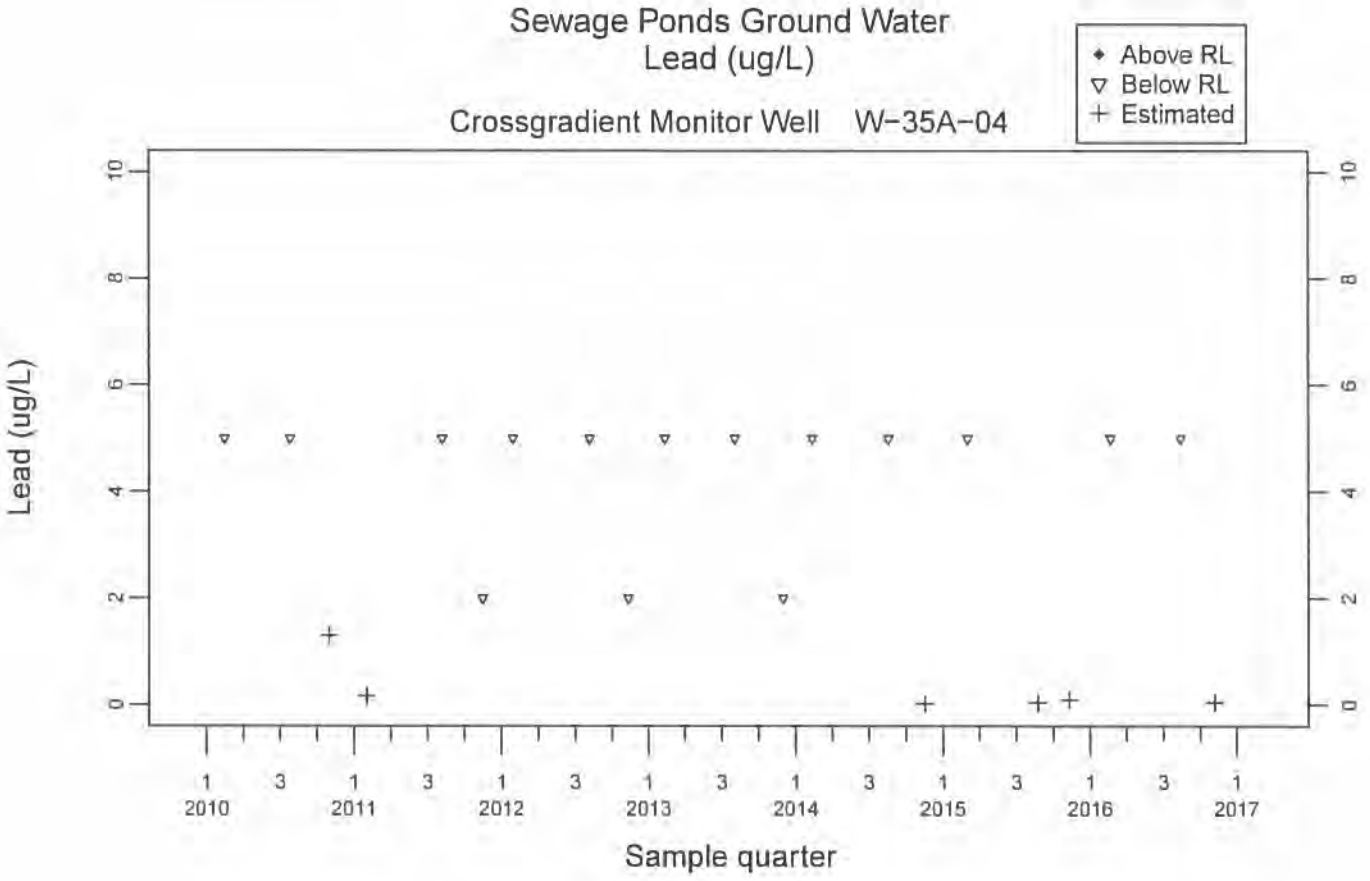

Sewage Ponds Ground Water
Iron (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

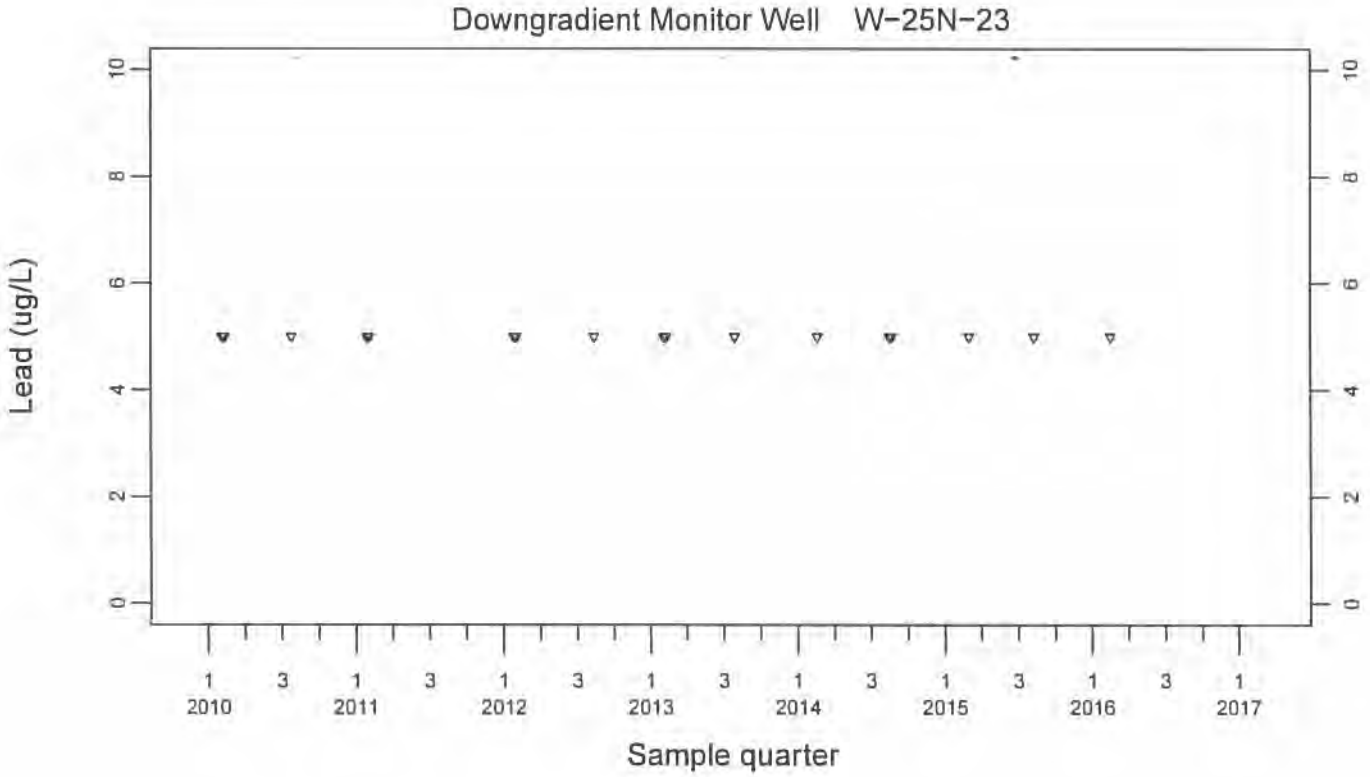

Downgradient Monitor Well W-26R-11
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

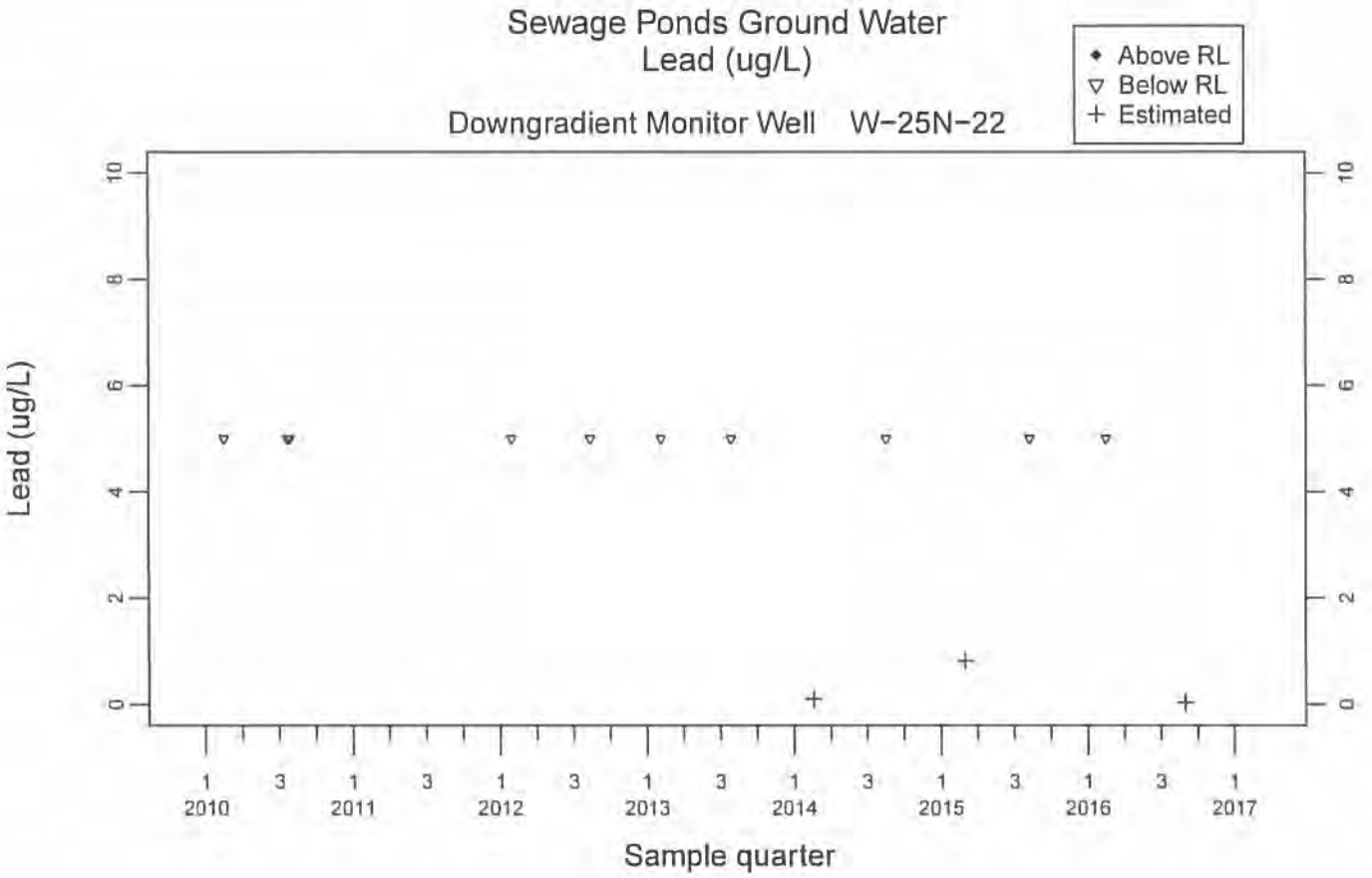

Sewage Ponds Ground Water
Iron (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Iron (ug/L)
0
20
40
60
80
100
120
140
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

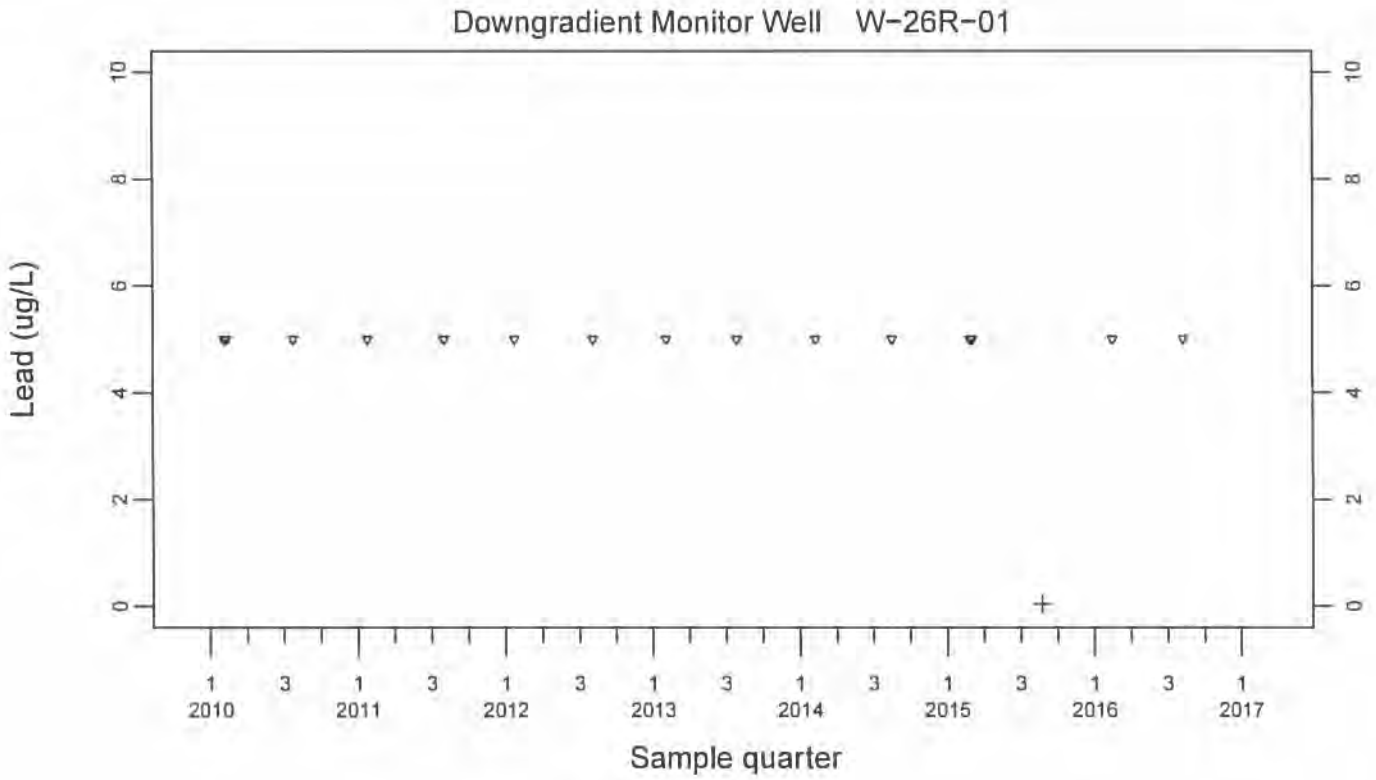

Sewage Ponds Ground Water
Lead (ug/L)
Above RL
Below RL
Estimated
Upgradient Monitor Well W-7ES
Lead (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

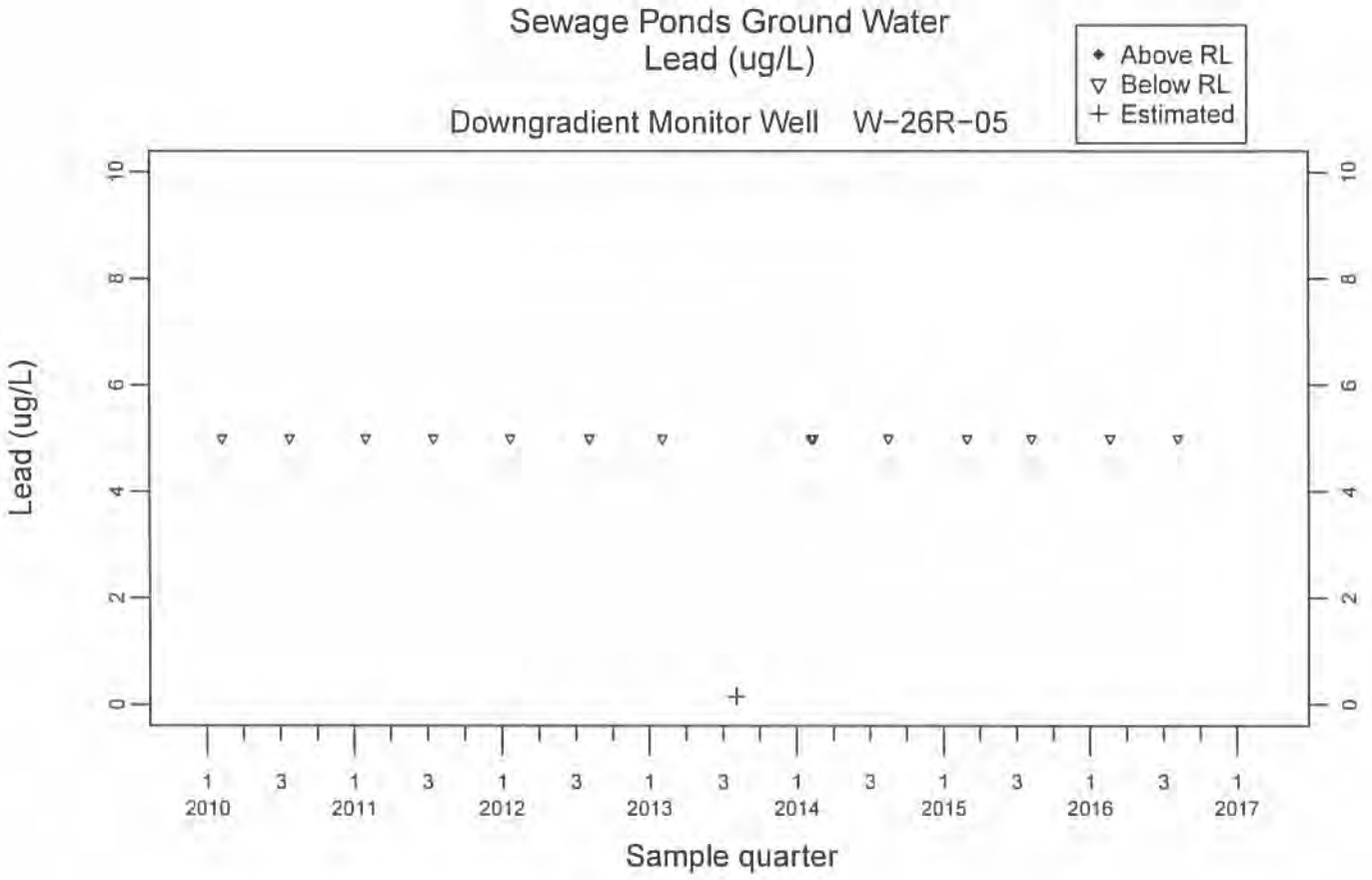

Upgradient Monitor Well W-7PS
Lead (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

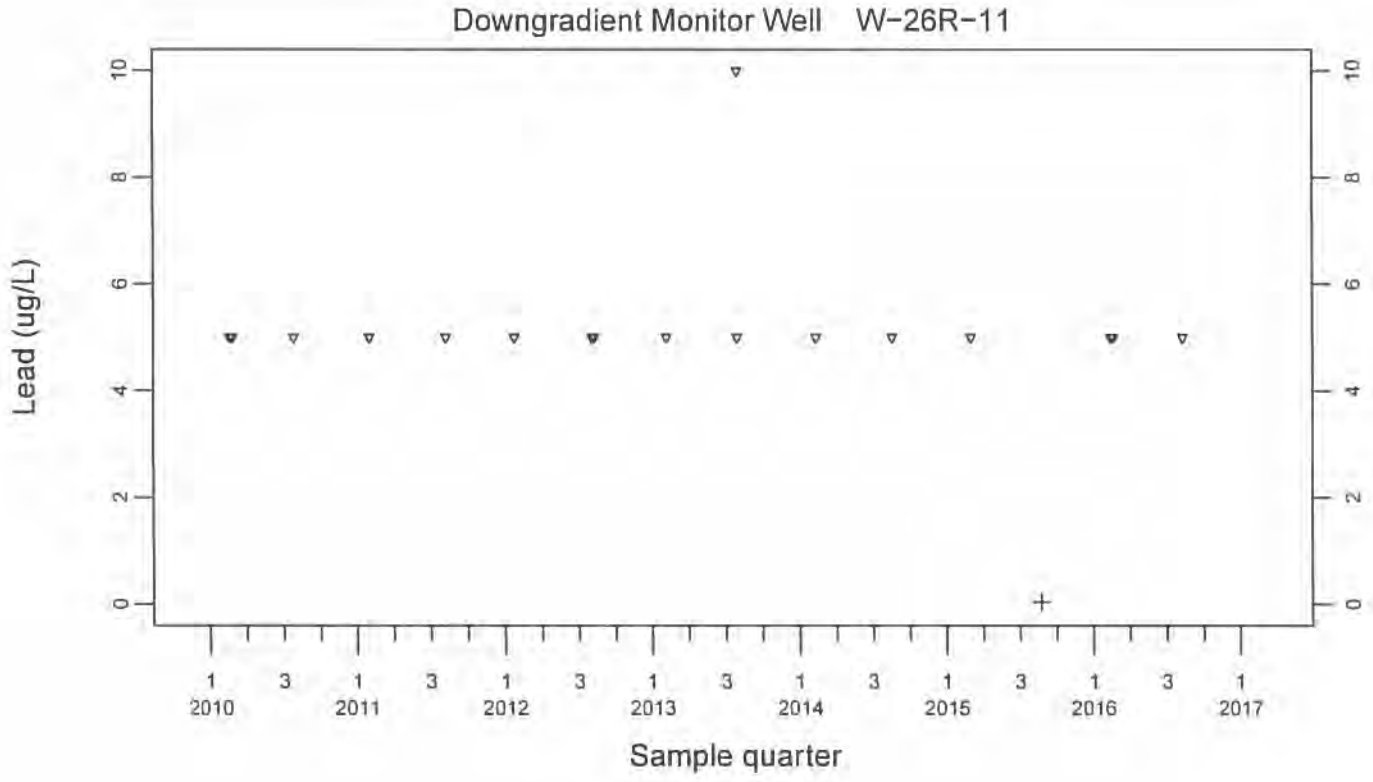

Sewage Ponds Ground Water
Lead (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Lead (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

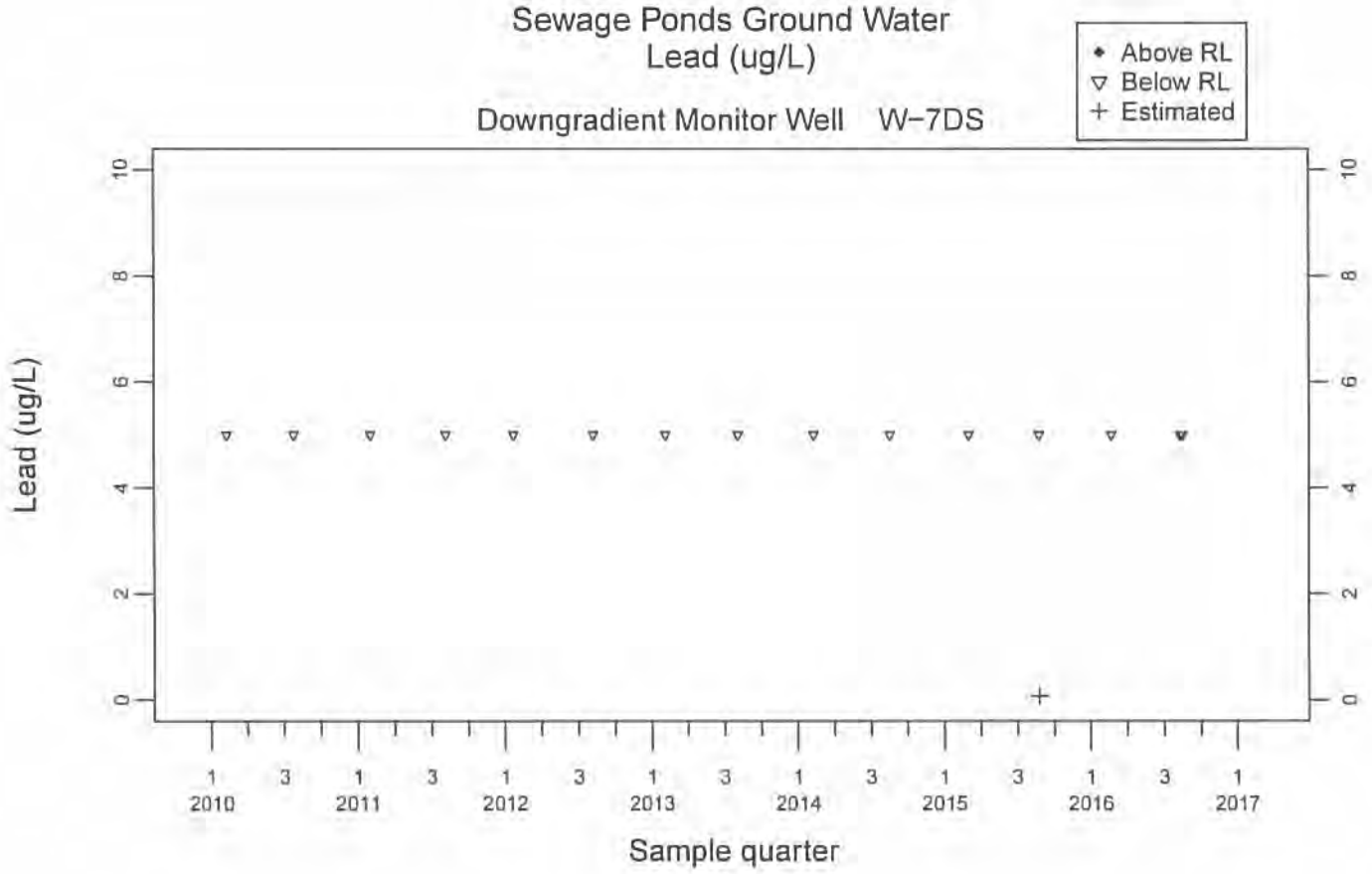

Downgradient Monitor Well W-25N-23
Lead (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

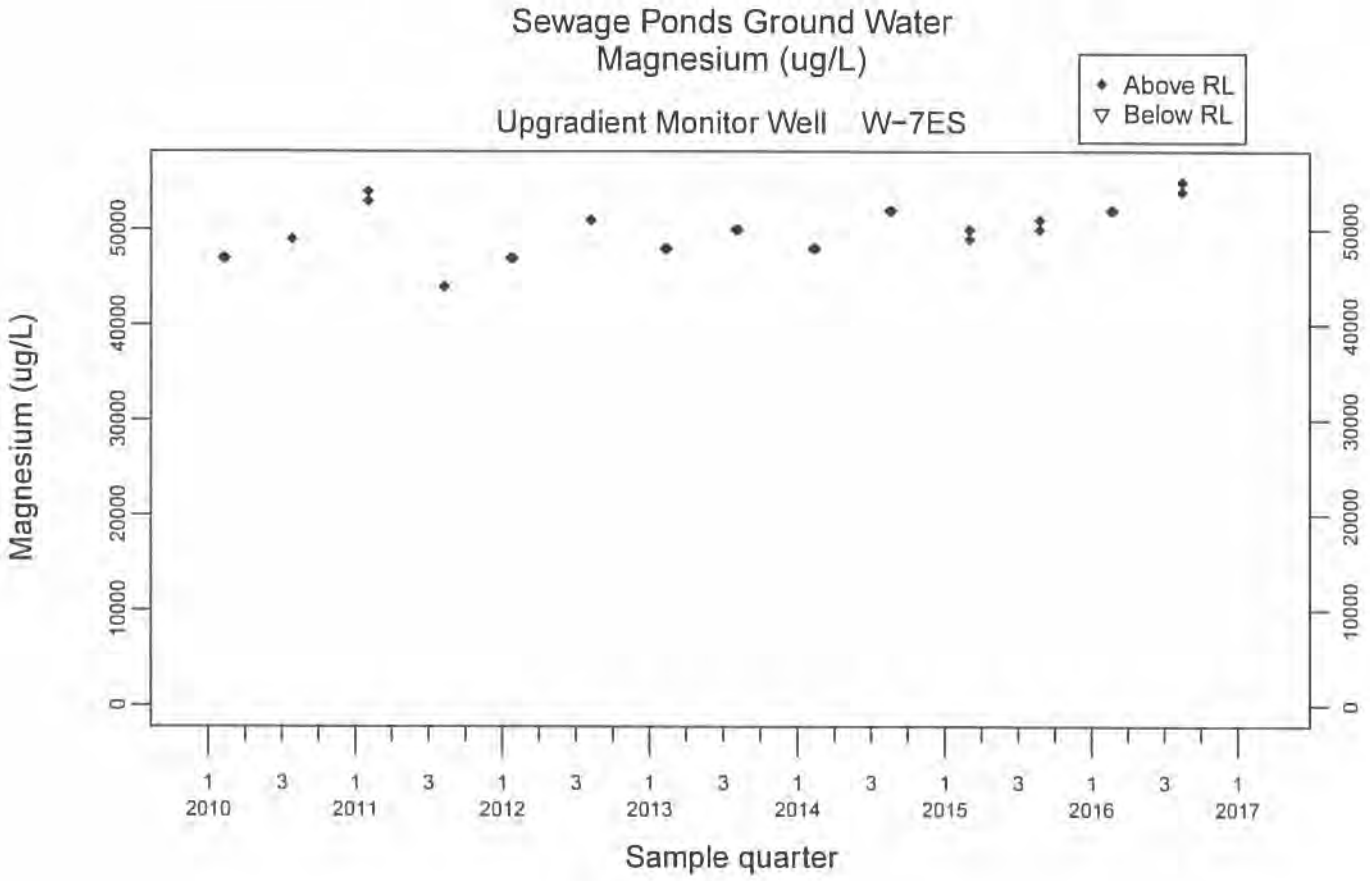

Sewage Ponds Ground Water
Lead (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Lead (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

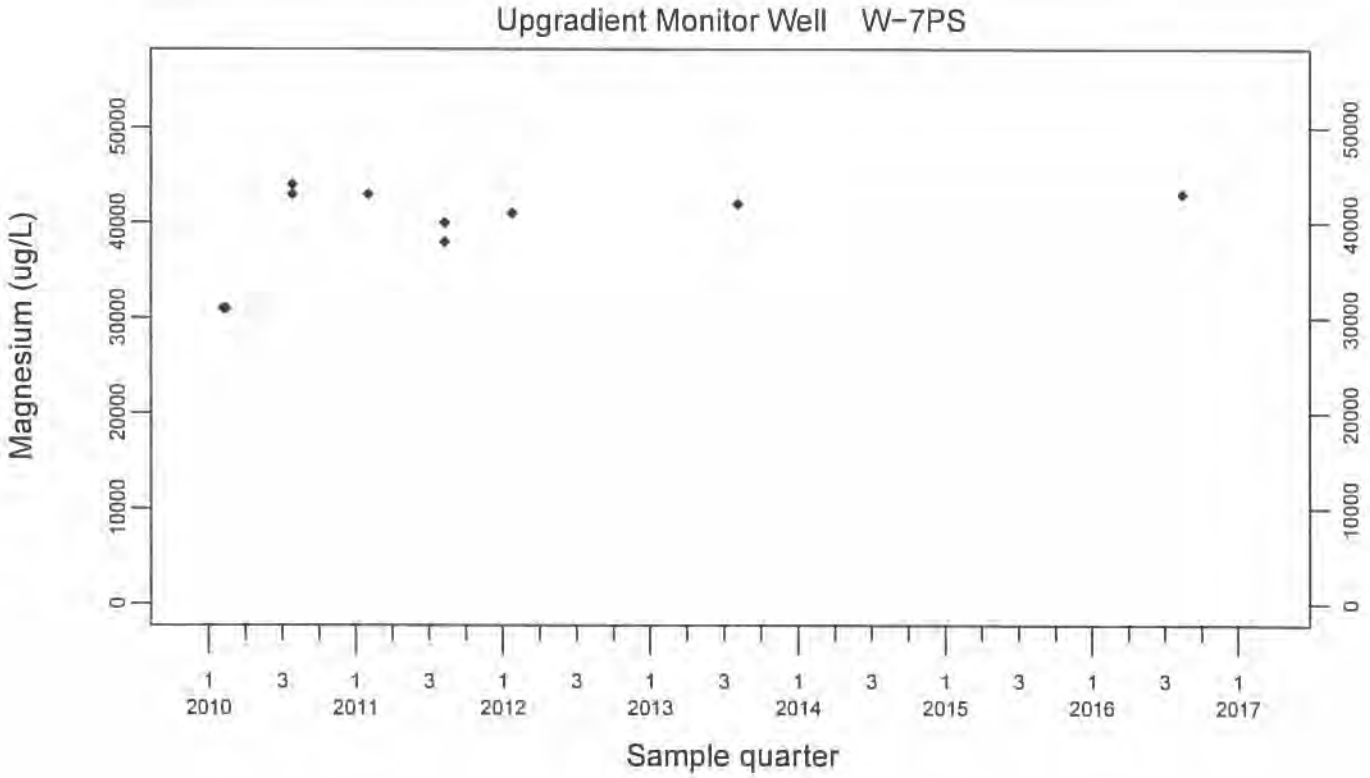

Downgradient Monitor Well W-26R-01
Lead (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

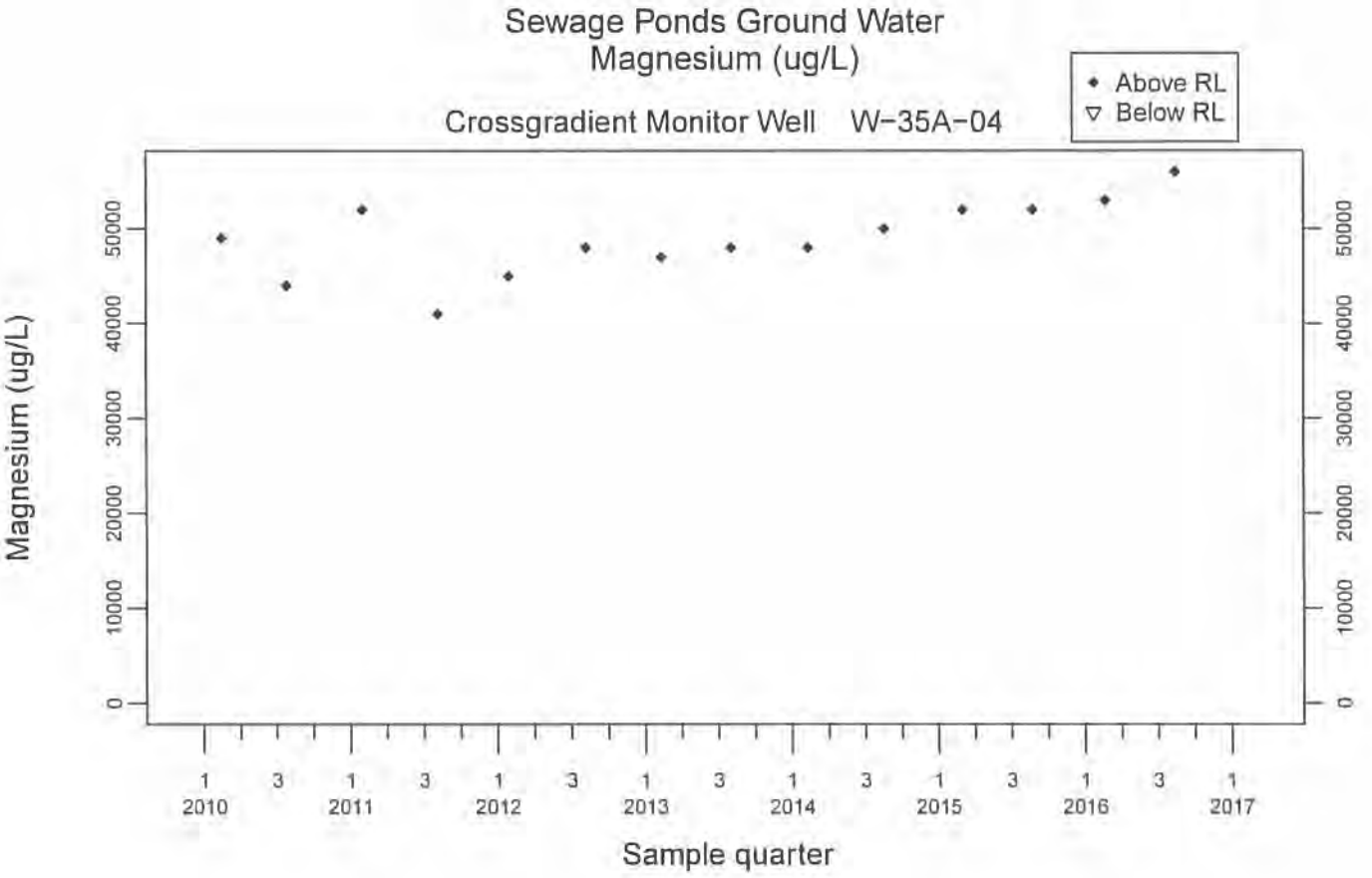

Sewage Ponds Ground Water
Lead (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Lead (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

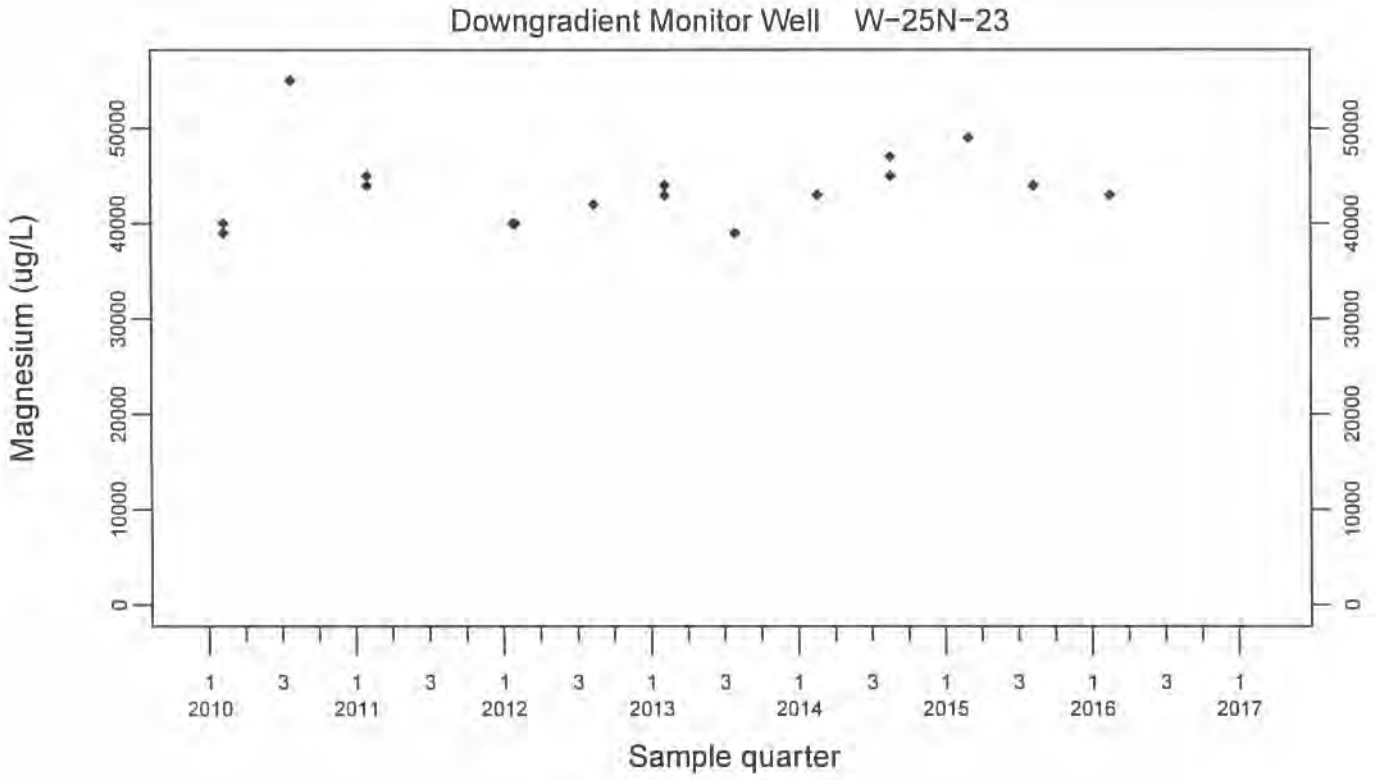

Downgradient Monitor Well W-26R-11
Lead (ug/L)
0
2
4
6
8
10
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

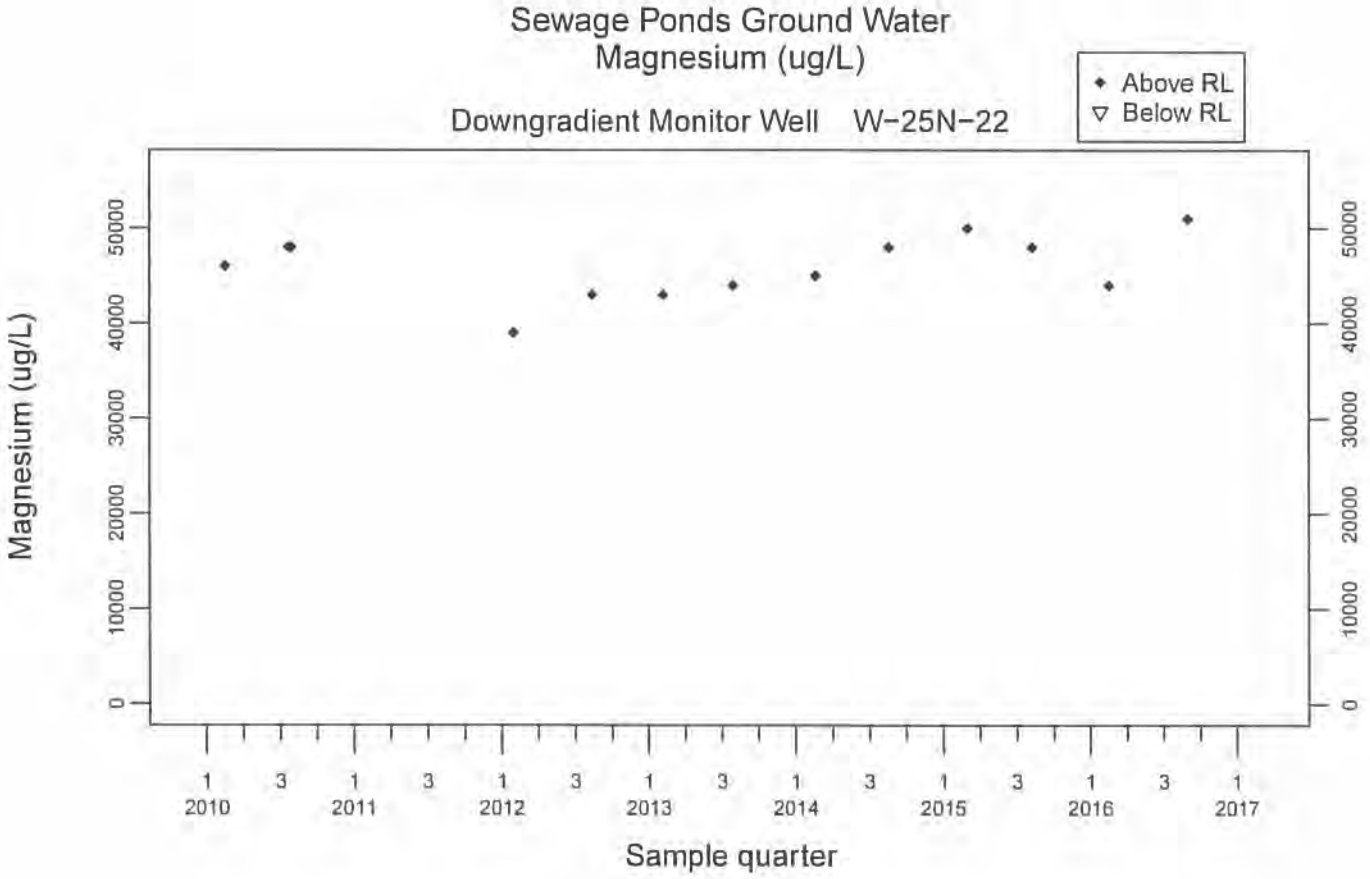

Sewage Ponds Ground Water
Lead (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Lead (ug/L)
0
2
4
6
8
10
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

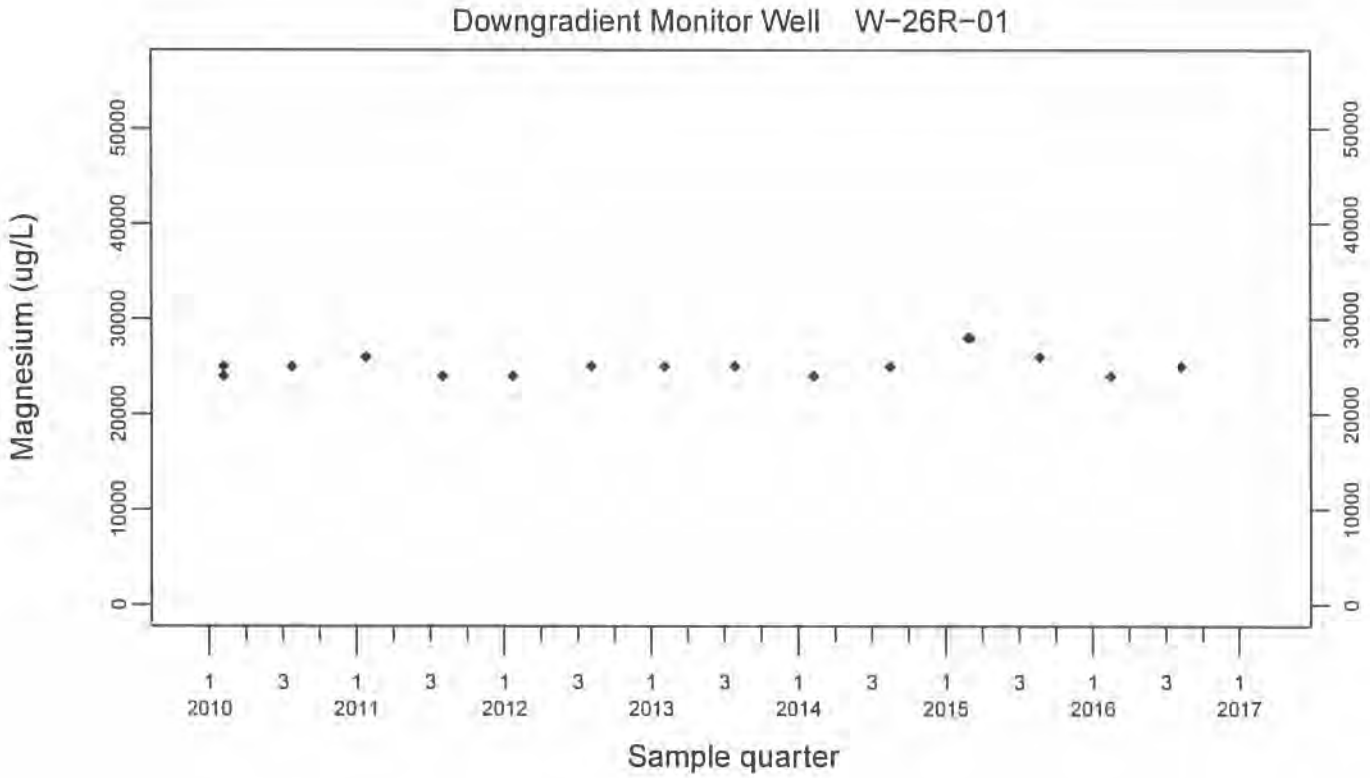

Sewage Ponds Ground Water
Magnesium (ug/L)
Above RL
Below RL
Upgradient Monitor Well W-7ES
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

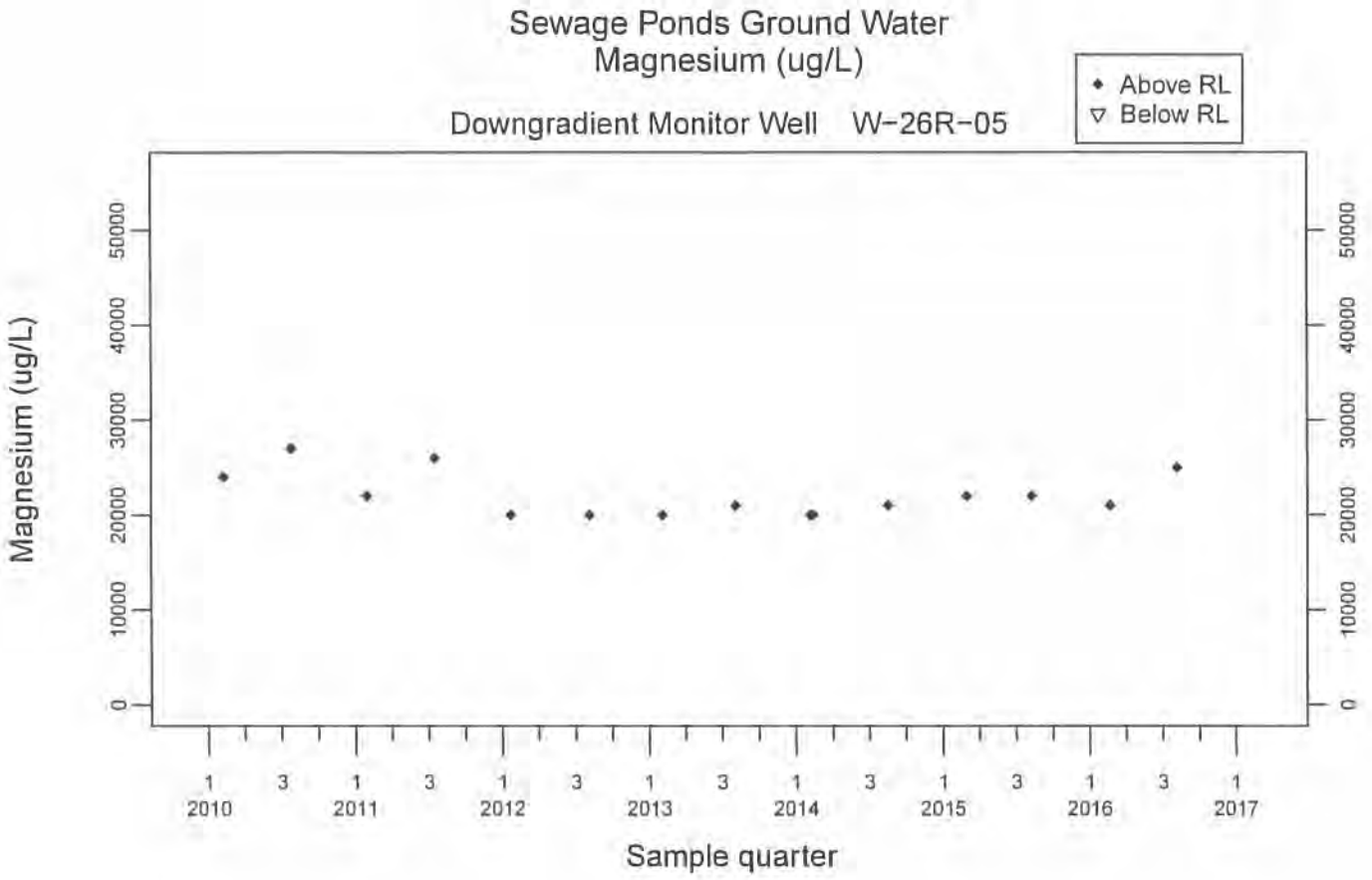

Upgradient Monitor Well W-7PS
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

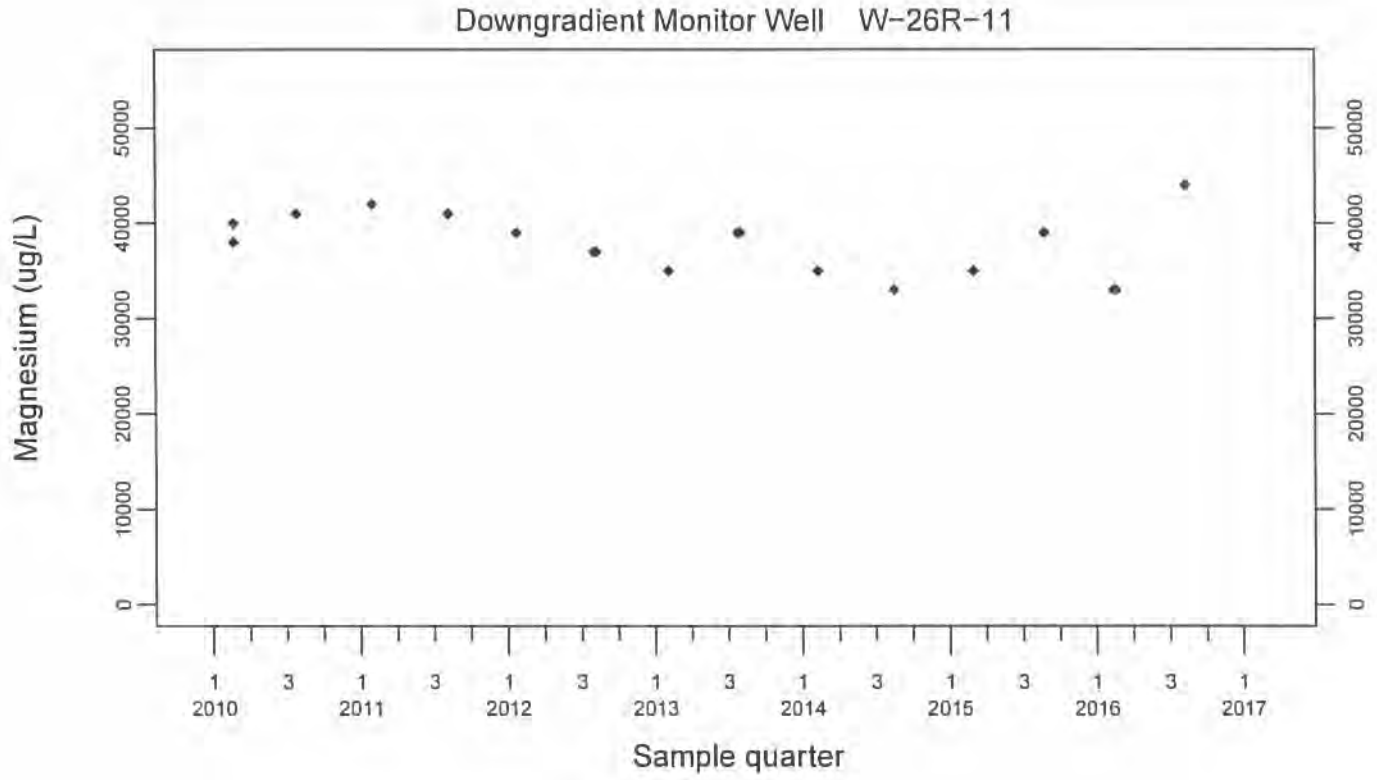

Sewage Ponds Ground Water
Magnesium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

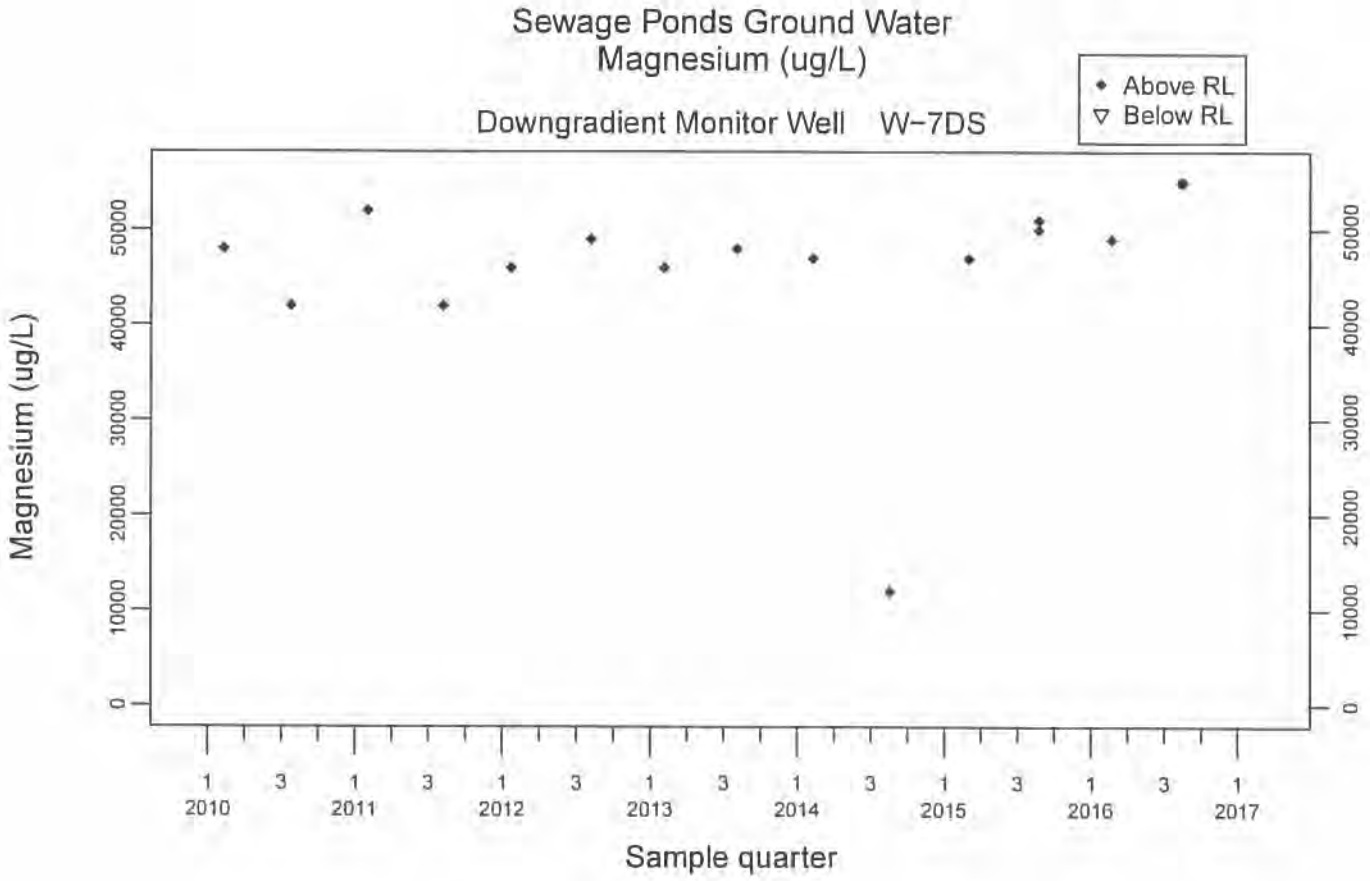

Downgradient Monitor Well W-25N-23
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

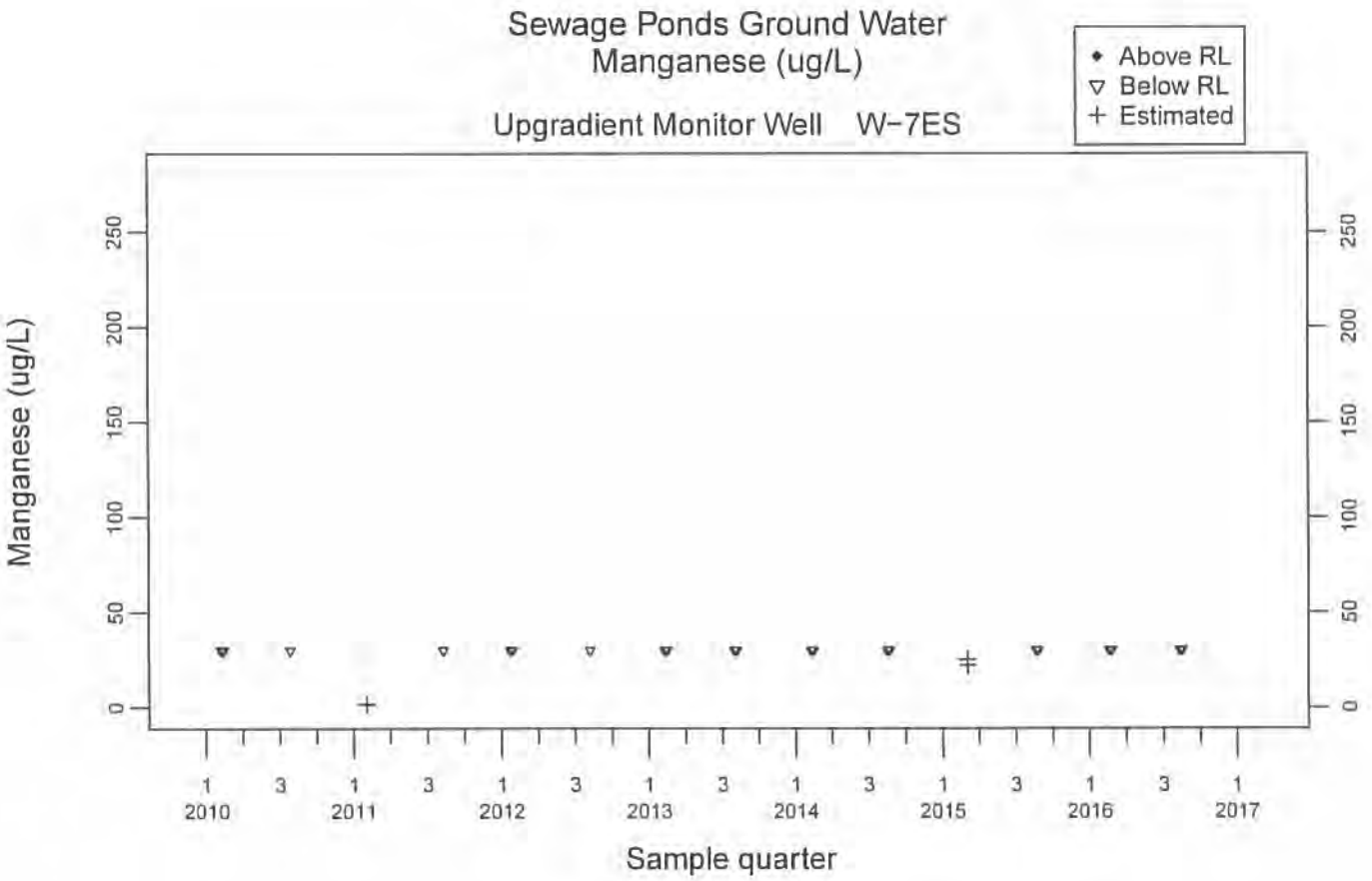

Sewage Ponds Ground Water
Magnesium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

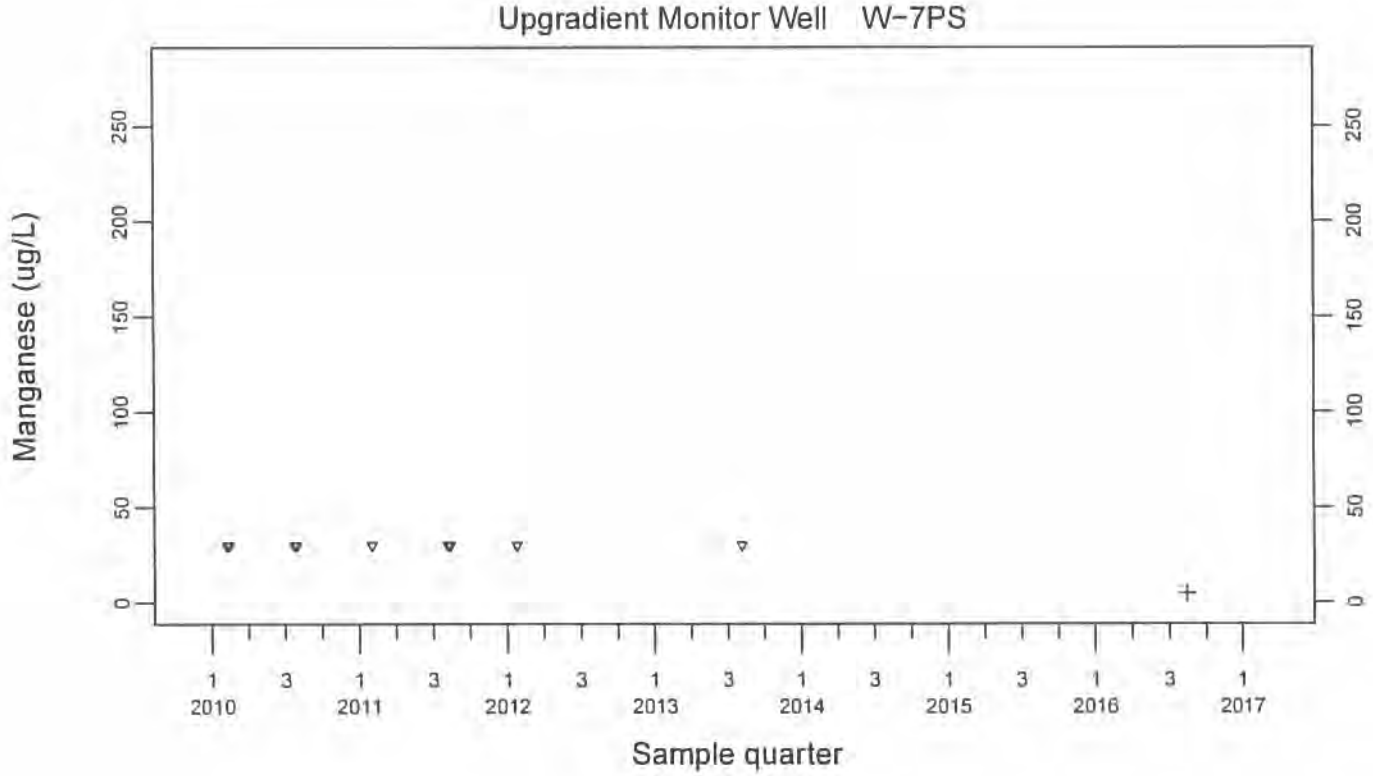

Downgradient Monitor Well W-26R-01
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

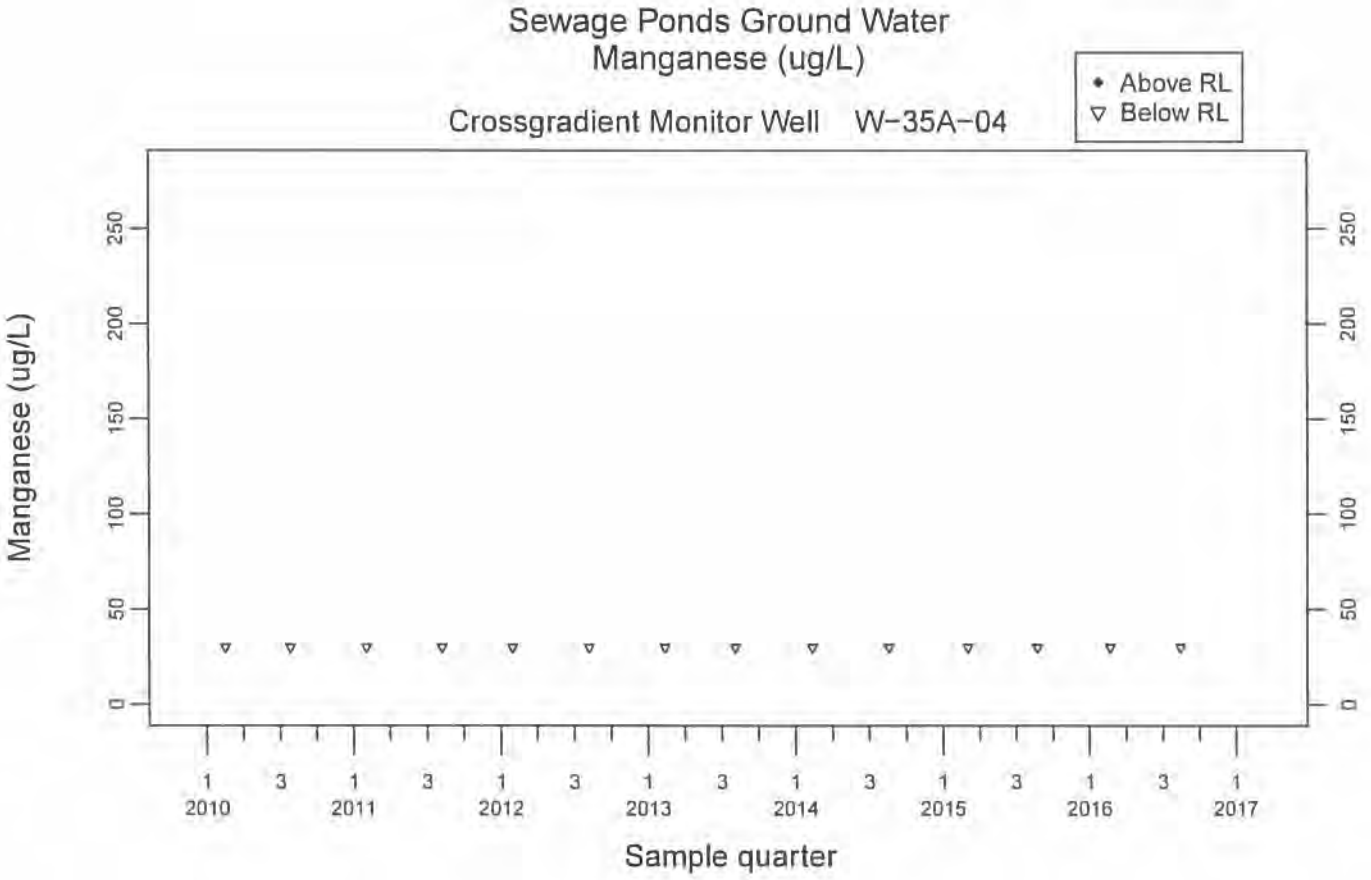

Sewage Ponds Ground Water
Magnesium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

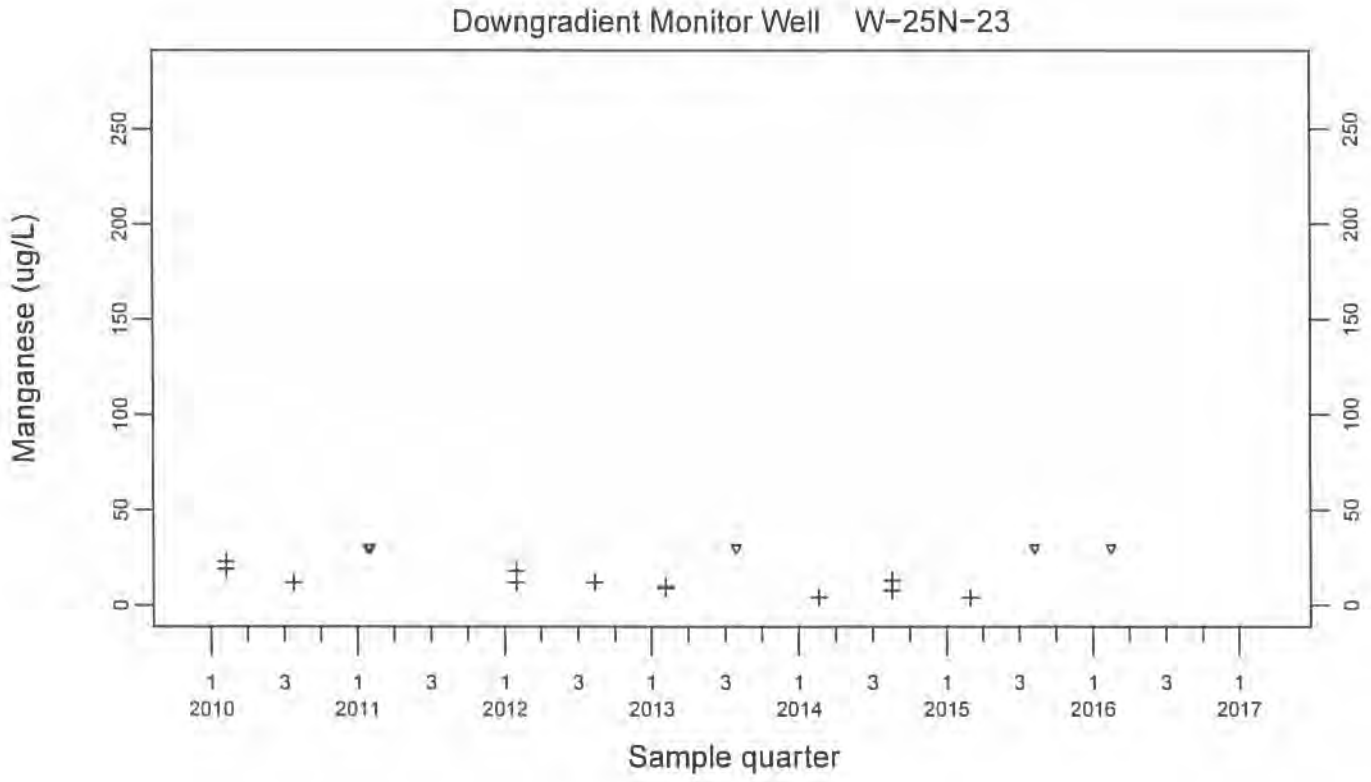

Downgradient Monitor Well W-26R-11
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

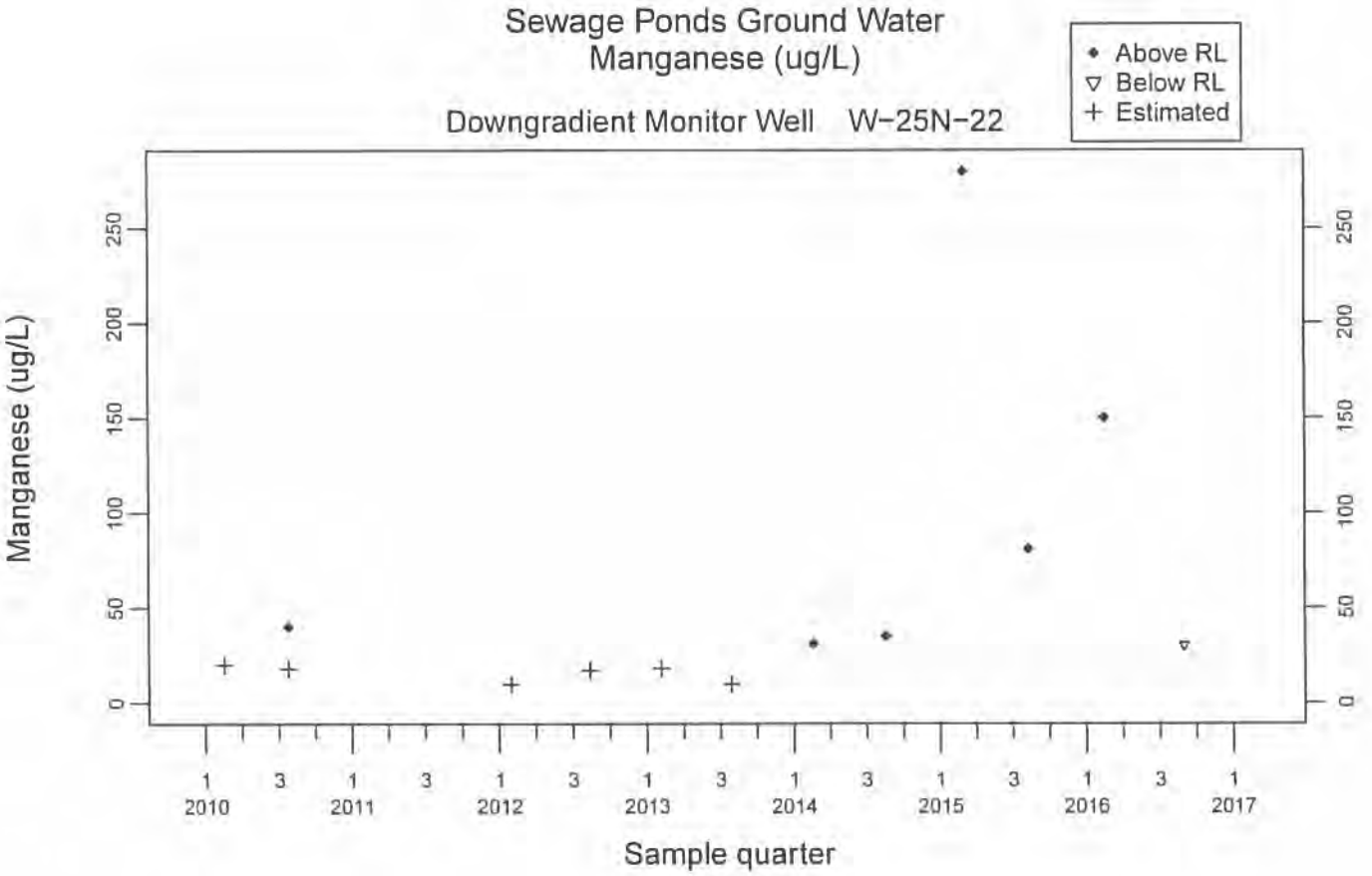

Sewage Ponds Ground Water
Magnesium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Magnesium (ug/L)
0
10000
20000
30000
40000
50000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

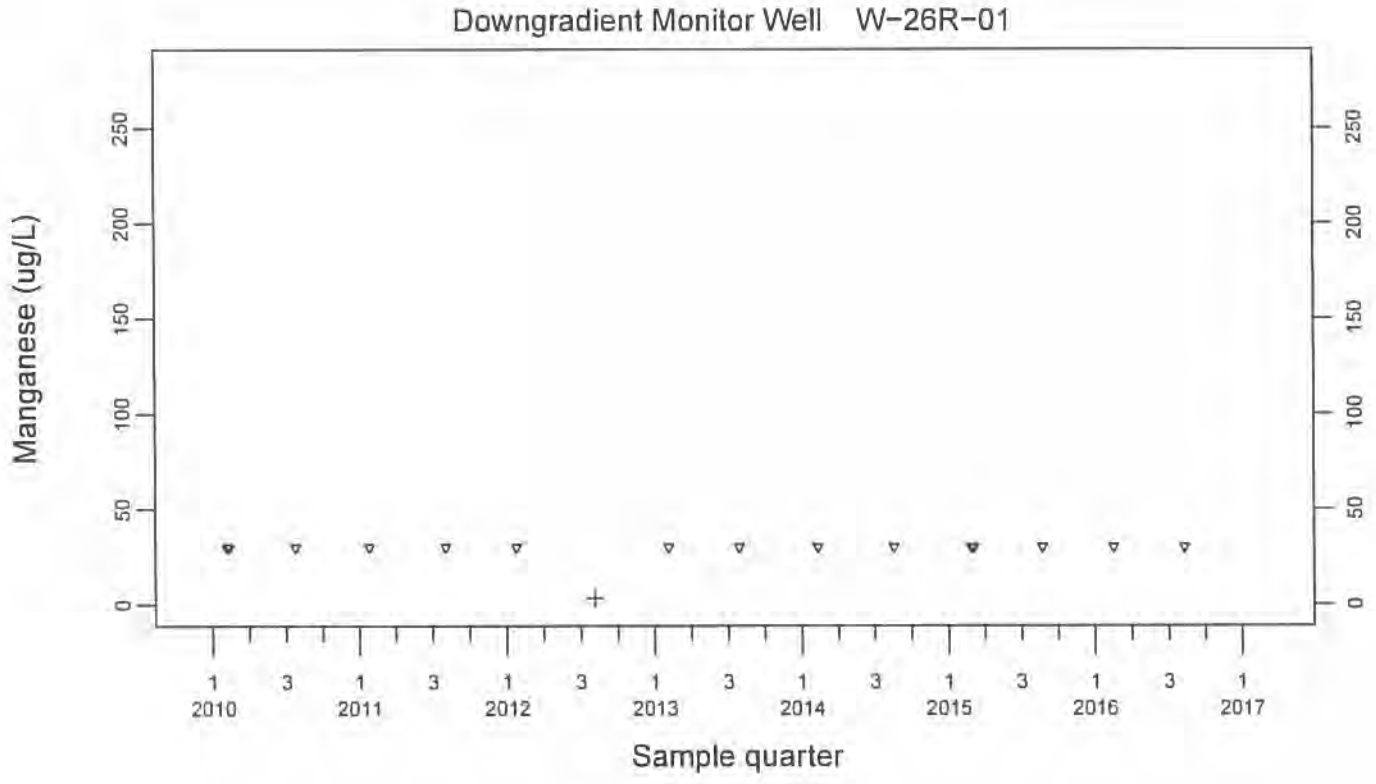

Sewage Ponds Ground Water
Manganese (ug/L)
Above RL
Below RL
Estimated
Upgradient Monitor Well W-7ES
Manganese (ug/L)
0
50
100
150
200
250
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

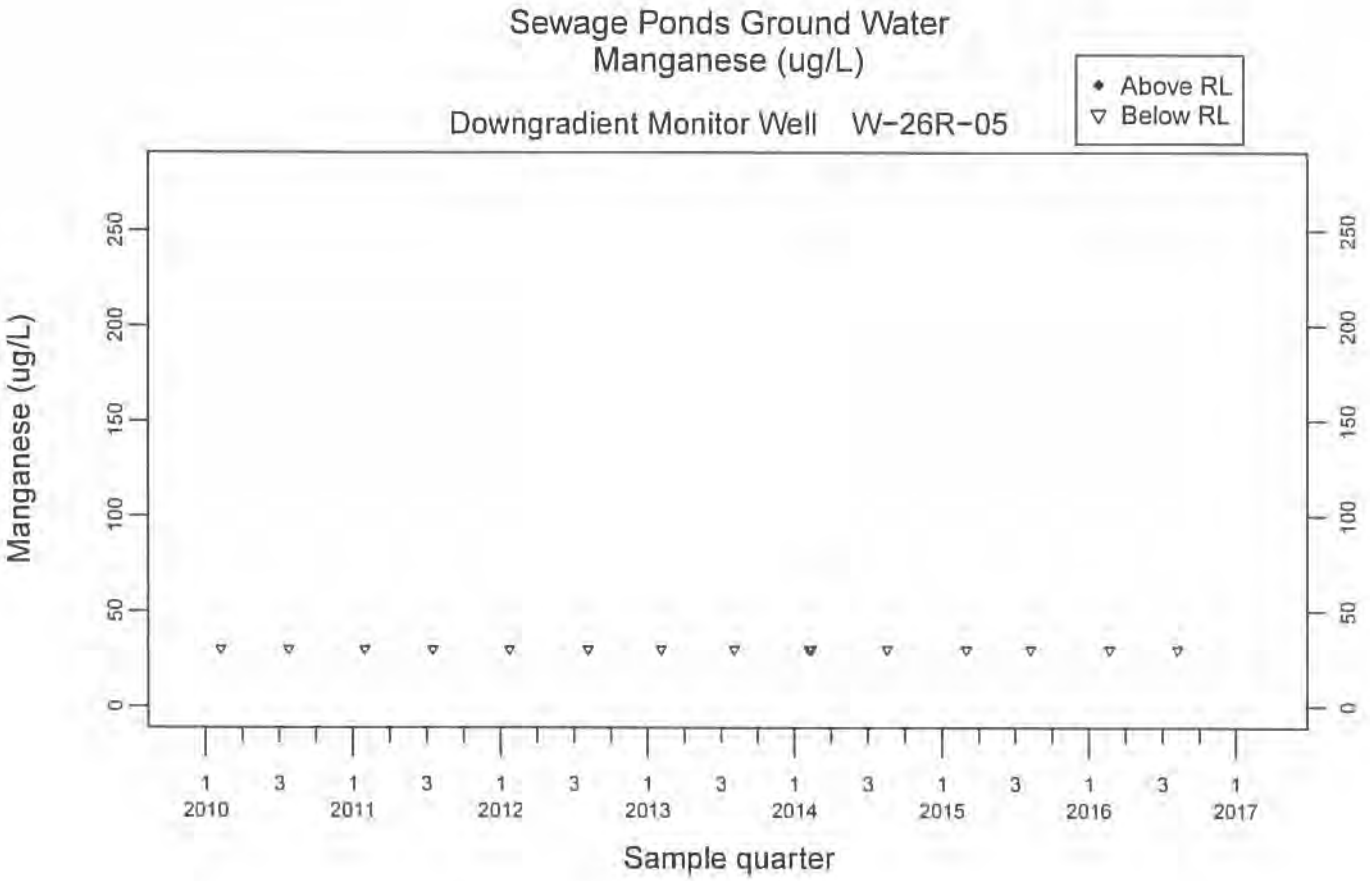

Upgradient Monitor Well W-7PS
Manganese (ug/L)
0
50
100
150
200
250
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

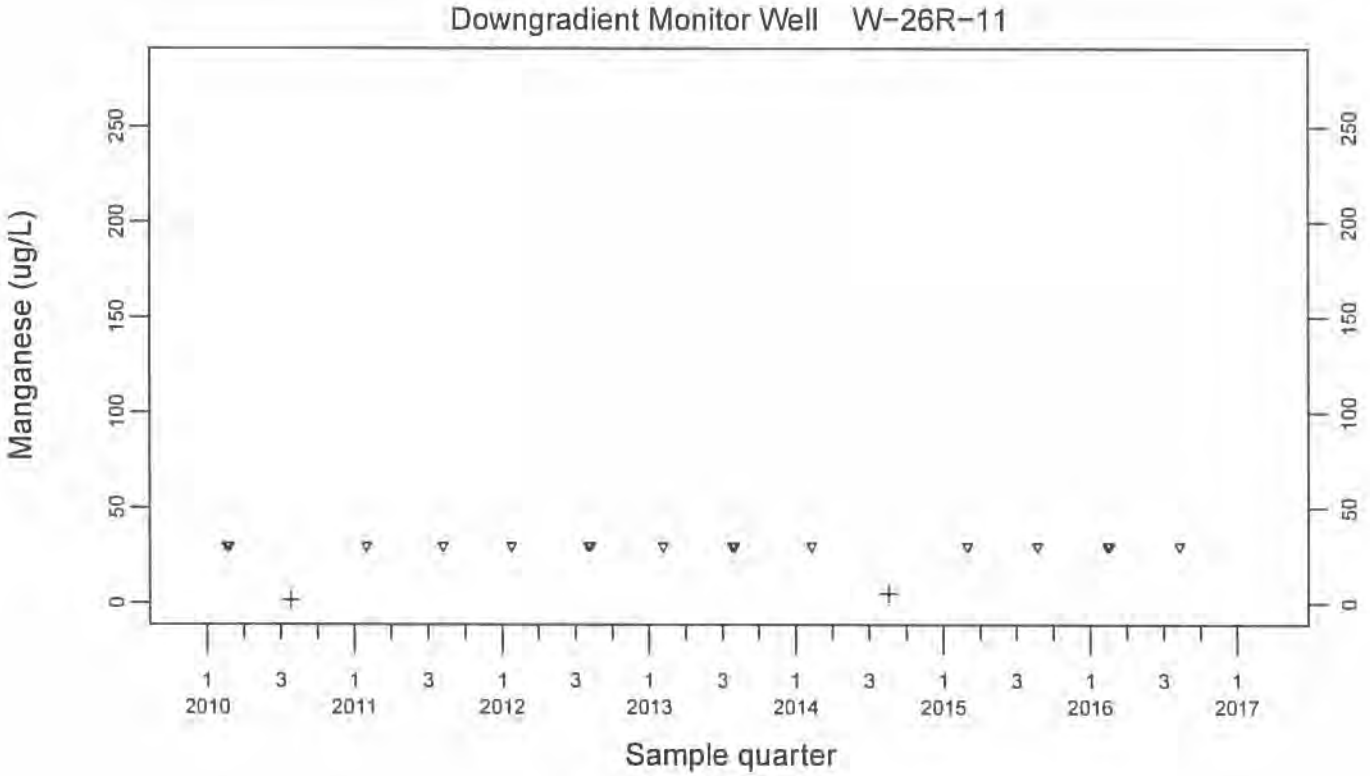

Sewage Ponds Ground Water
Manganese (ug/L)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Manganese (ug/L)
0
50
100
150
200
250
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

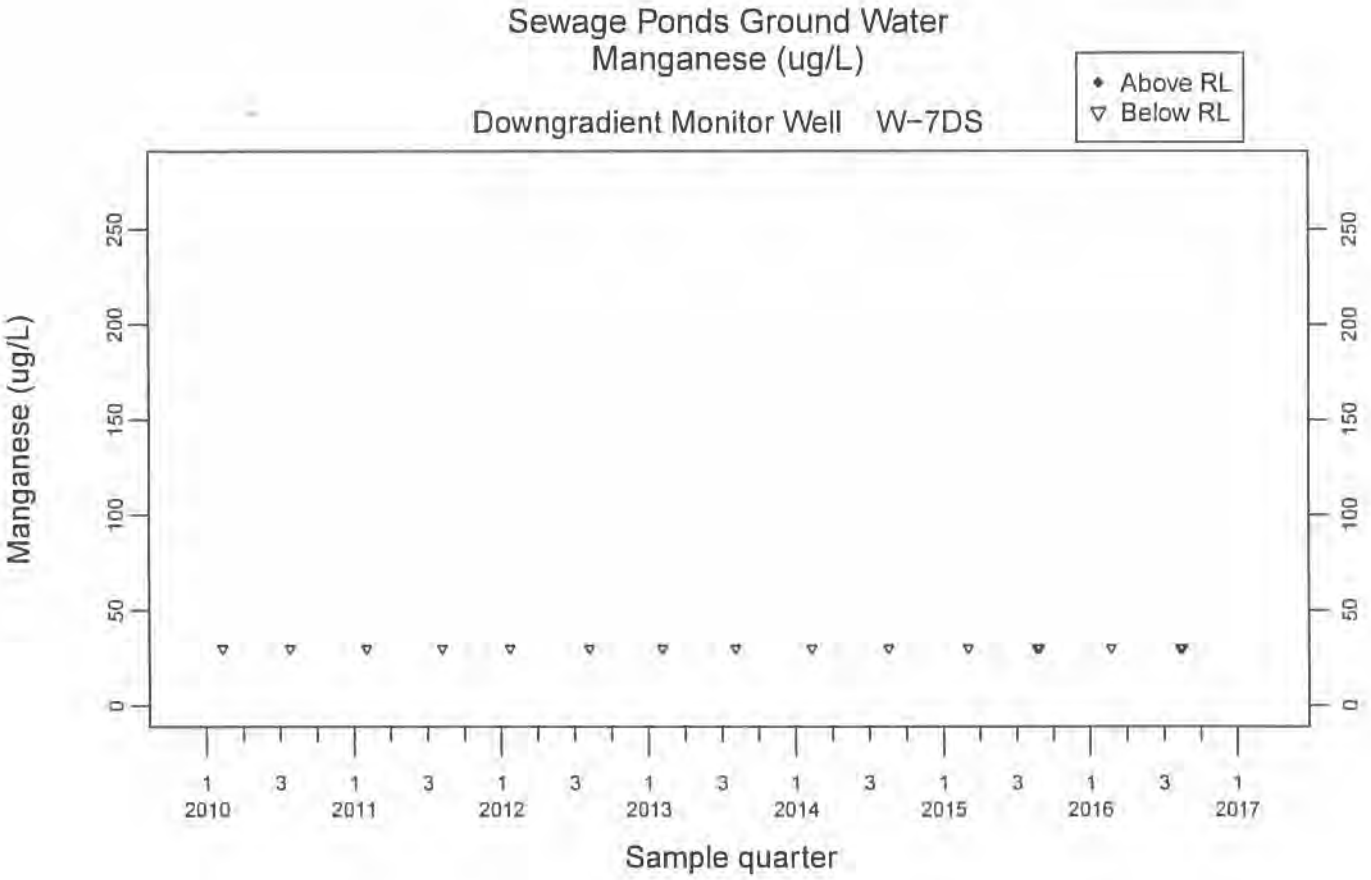

Downgradient Monitor Well W-25N-23
Manganese (ug/L)
0
50
100
150
200
250
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

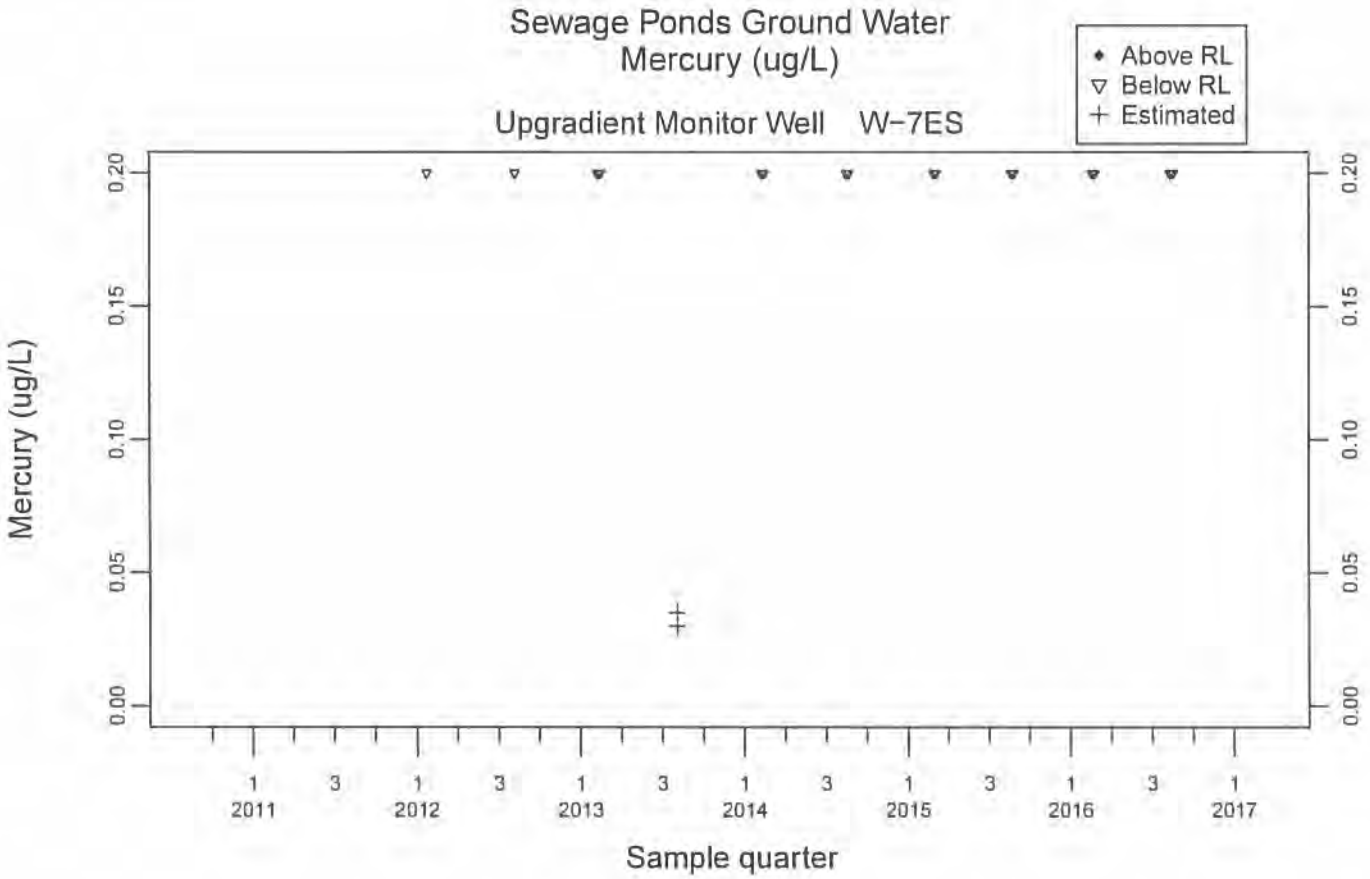

Sewage Ponds Ground Water
Manganese (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Manganese (ug/L)
0
50
100
150
200
250
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

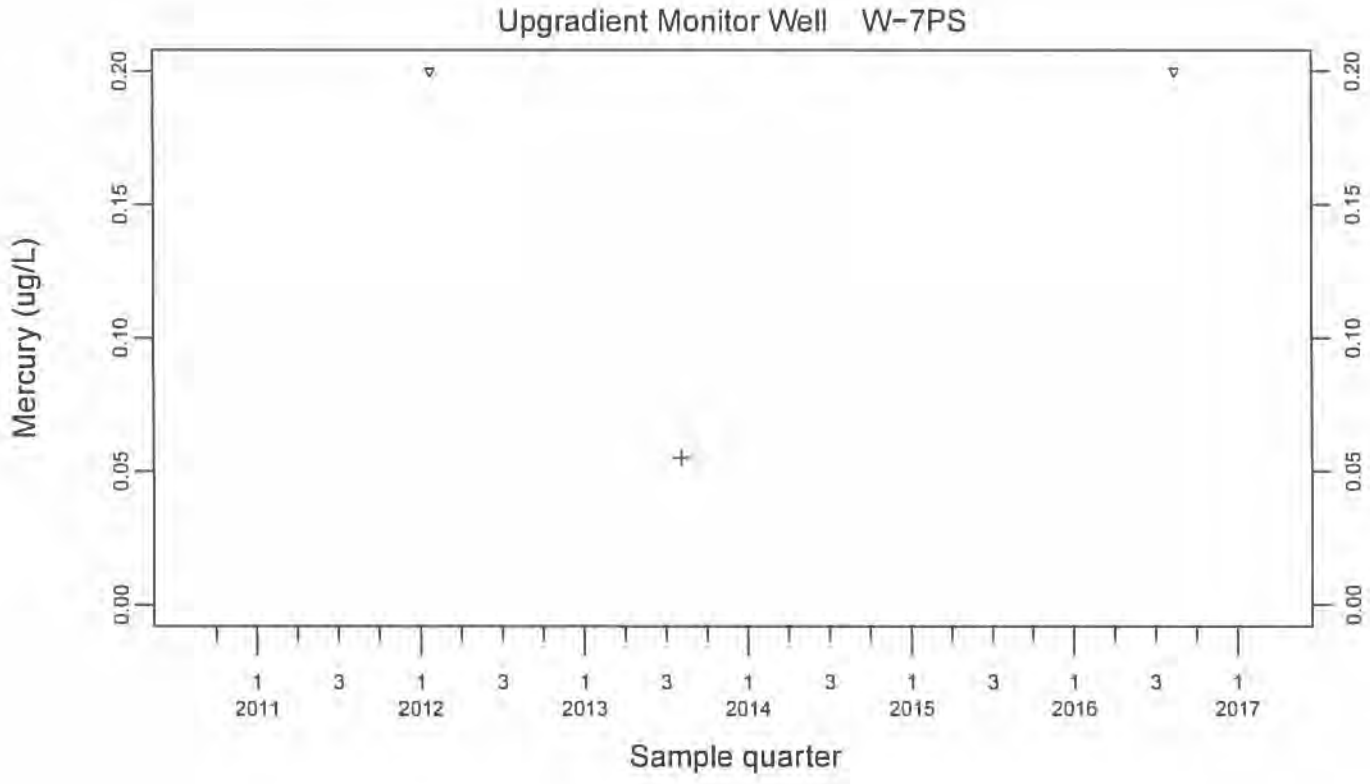

Downgradient Monitor Well W-26R-01
Manganese (ug/L)
0
50
100
150
200
250
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

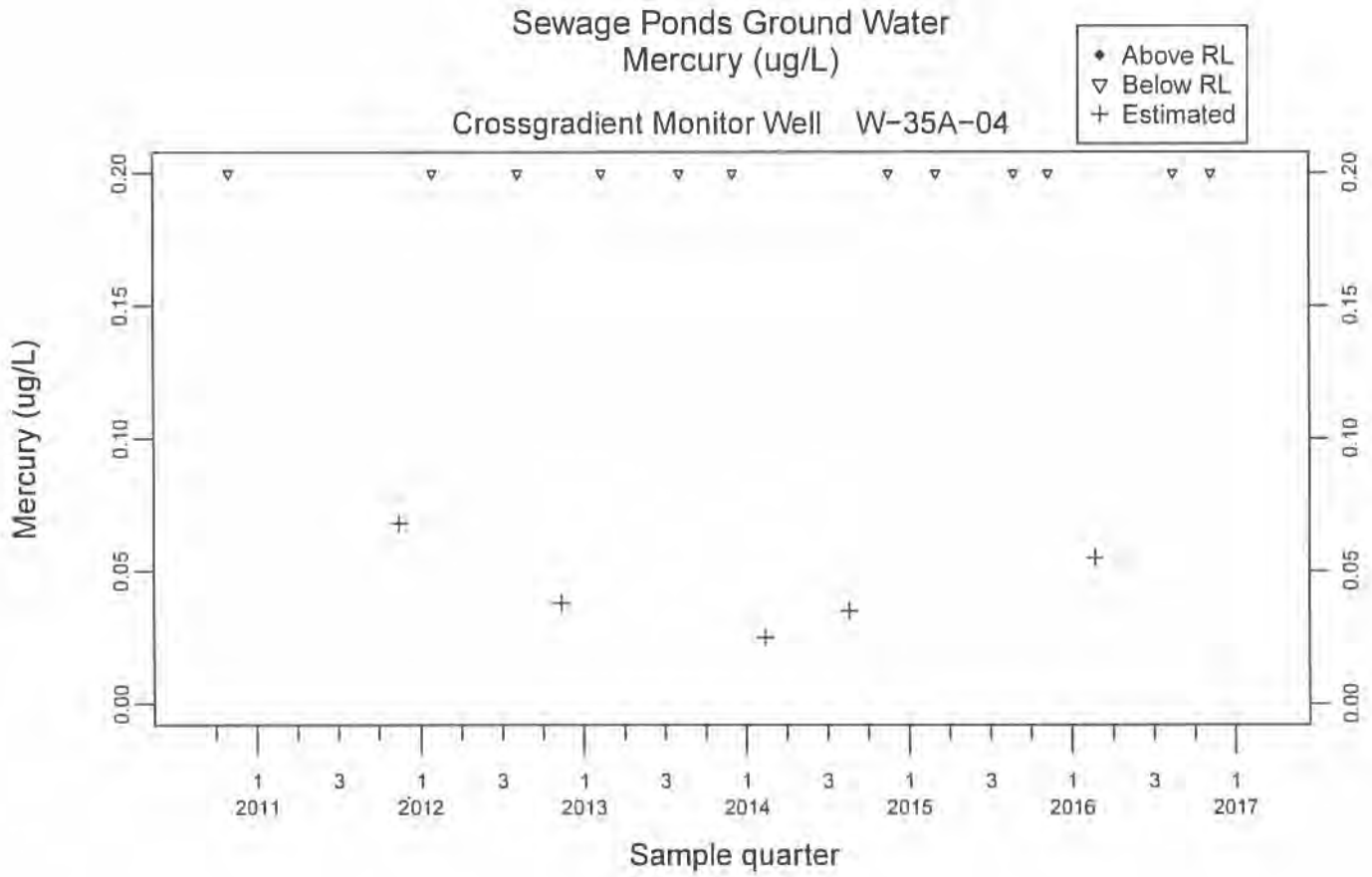

Sewage Ponds Ground Water
Manganese (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Manganese (ug/L)
0
50
100
150
200
250
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

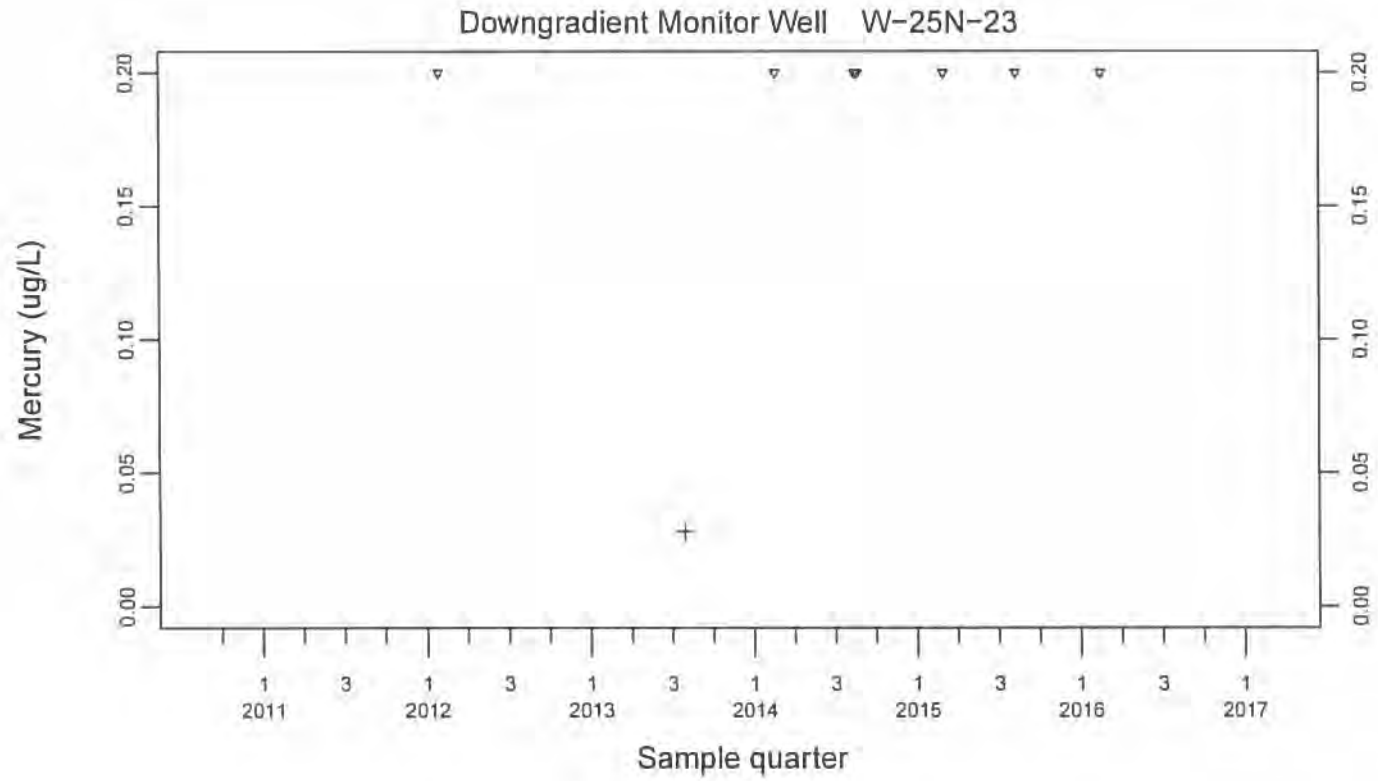

Downgradient Monitor Well W-26R-11
Manganese (ug/L)
0
50
100
150
200
250
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

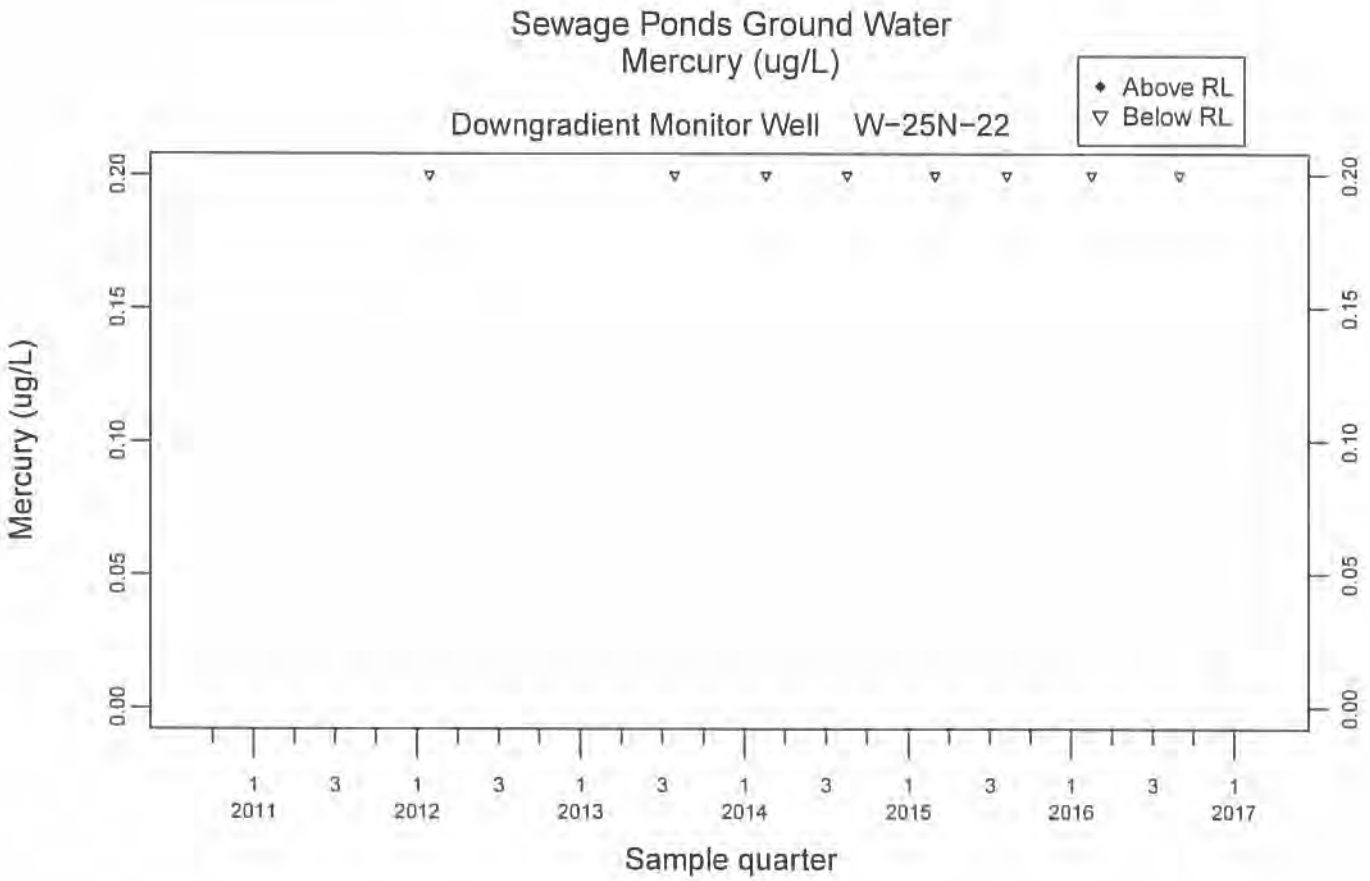

Sewage Ponds Ground Water
Manganese (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Manganese (ug/L)
0
50
100
150
200
250
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

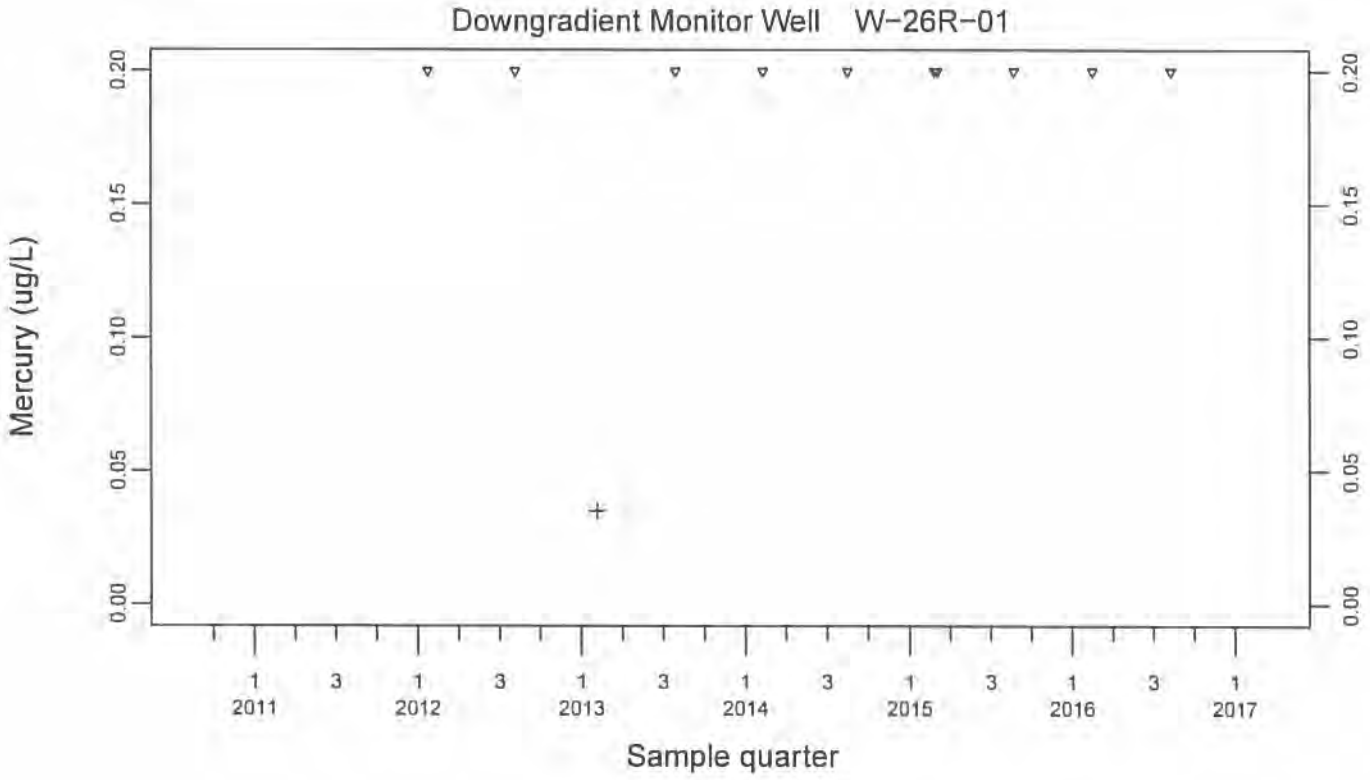

Sewage Ponds Ground Water
Mercury (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

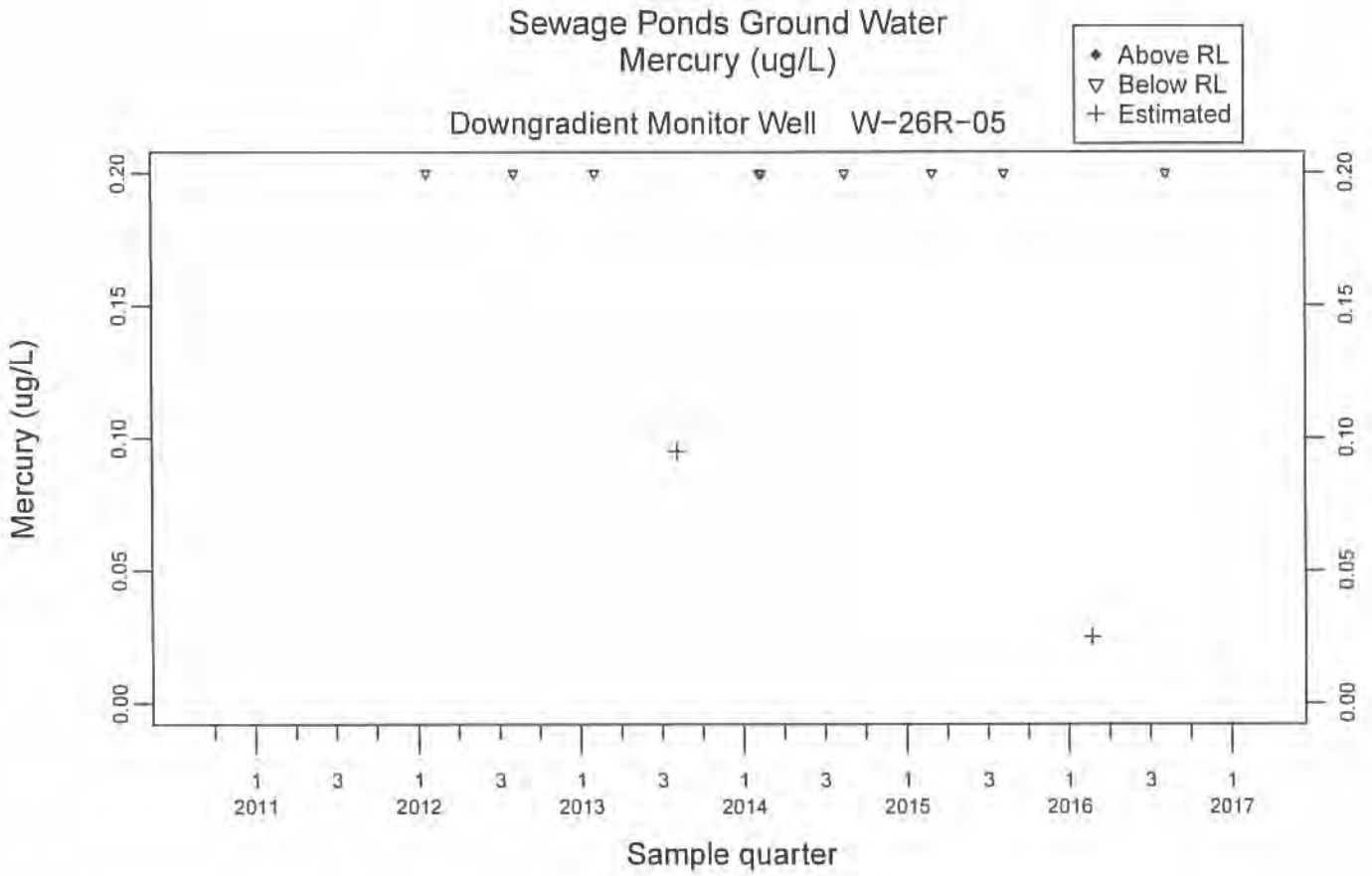

Upgradient Monitor Well W-7PS
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

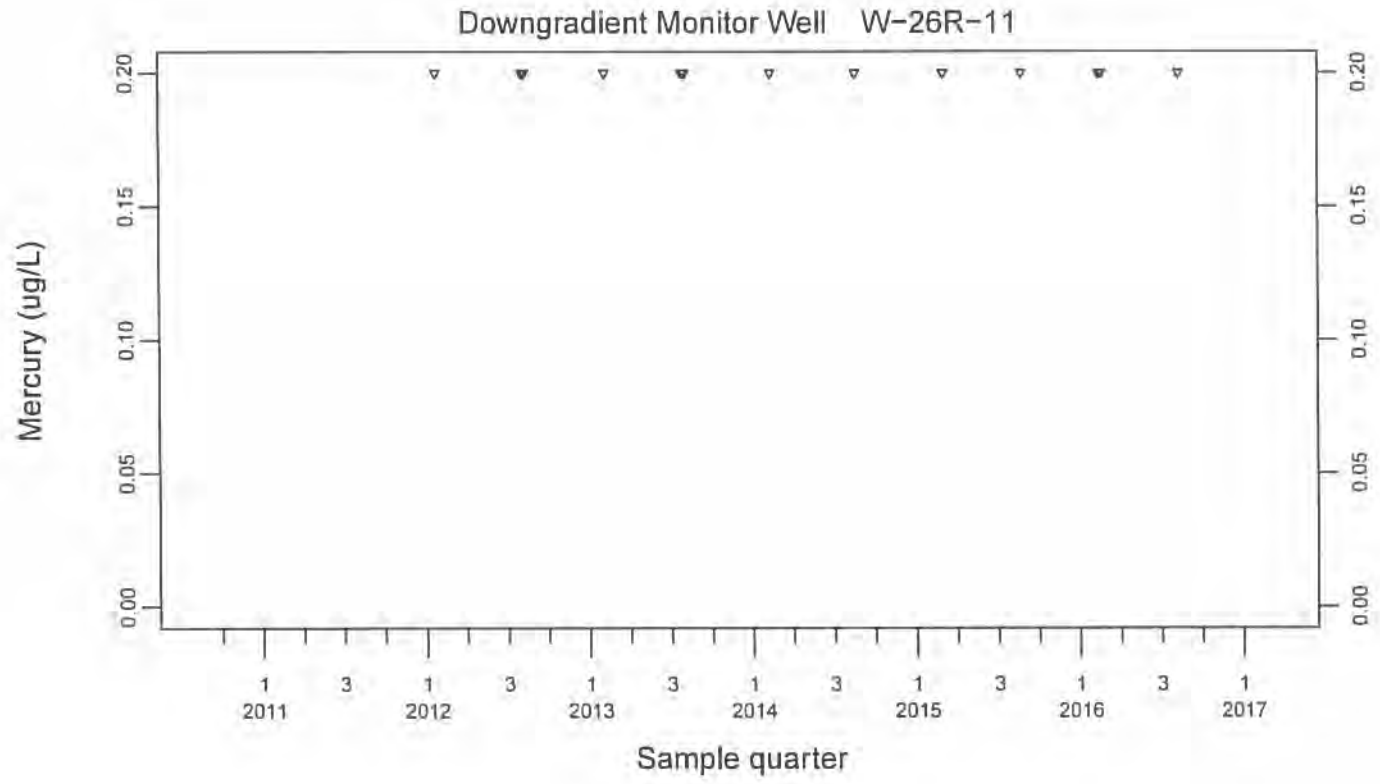

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

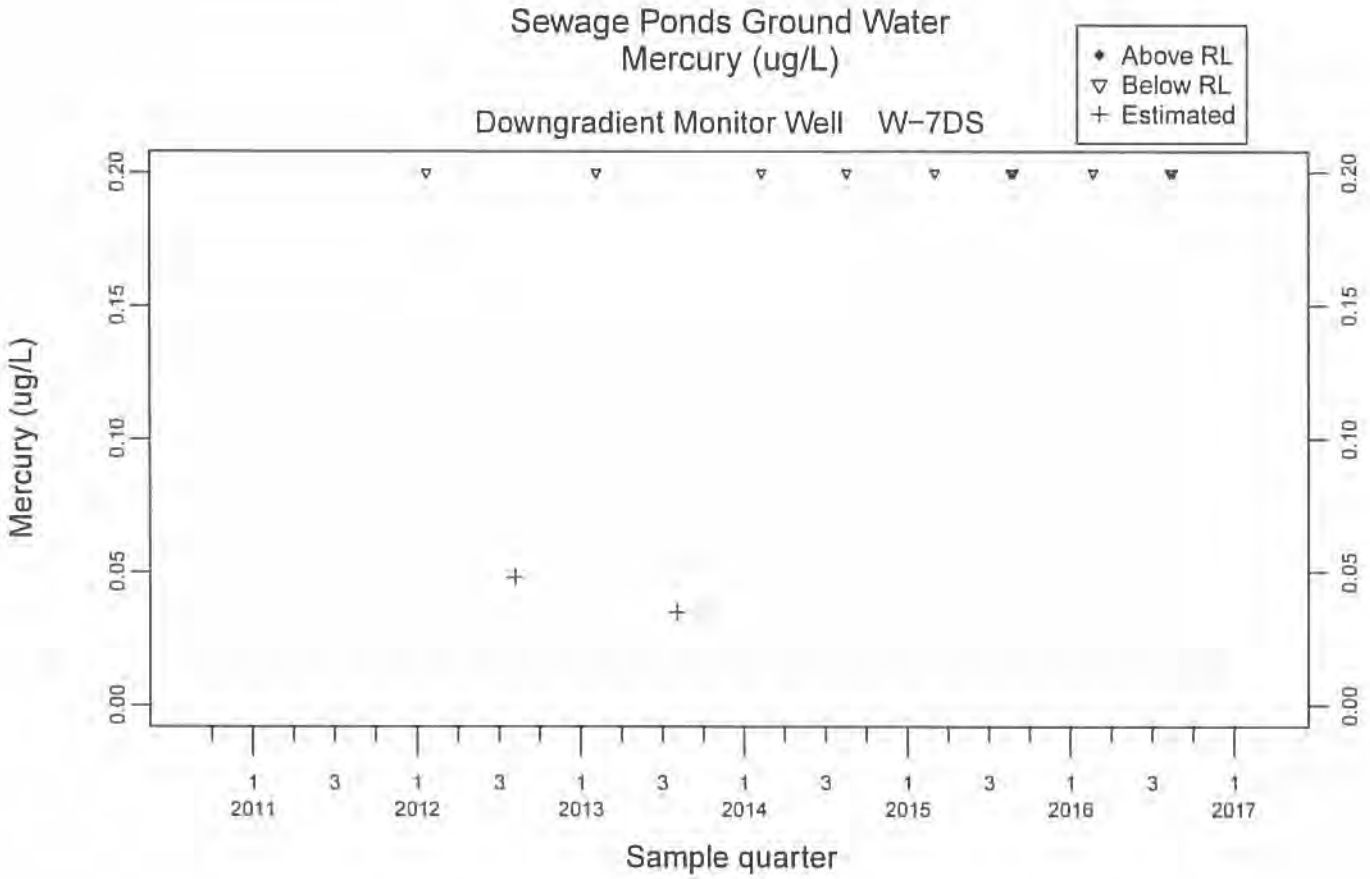

Downgradient Monitor Well W-25N-23
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

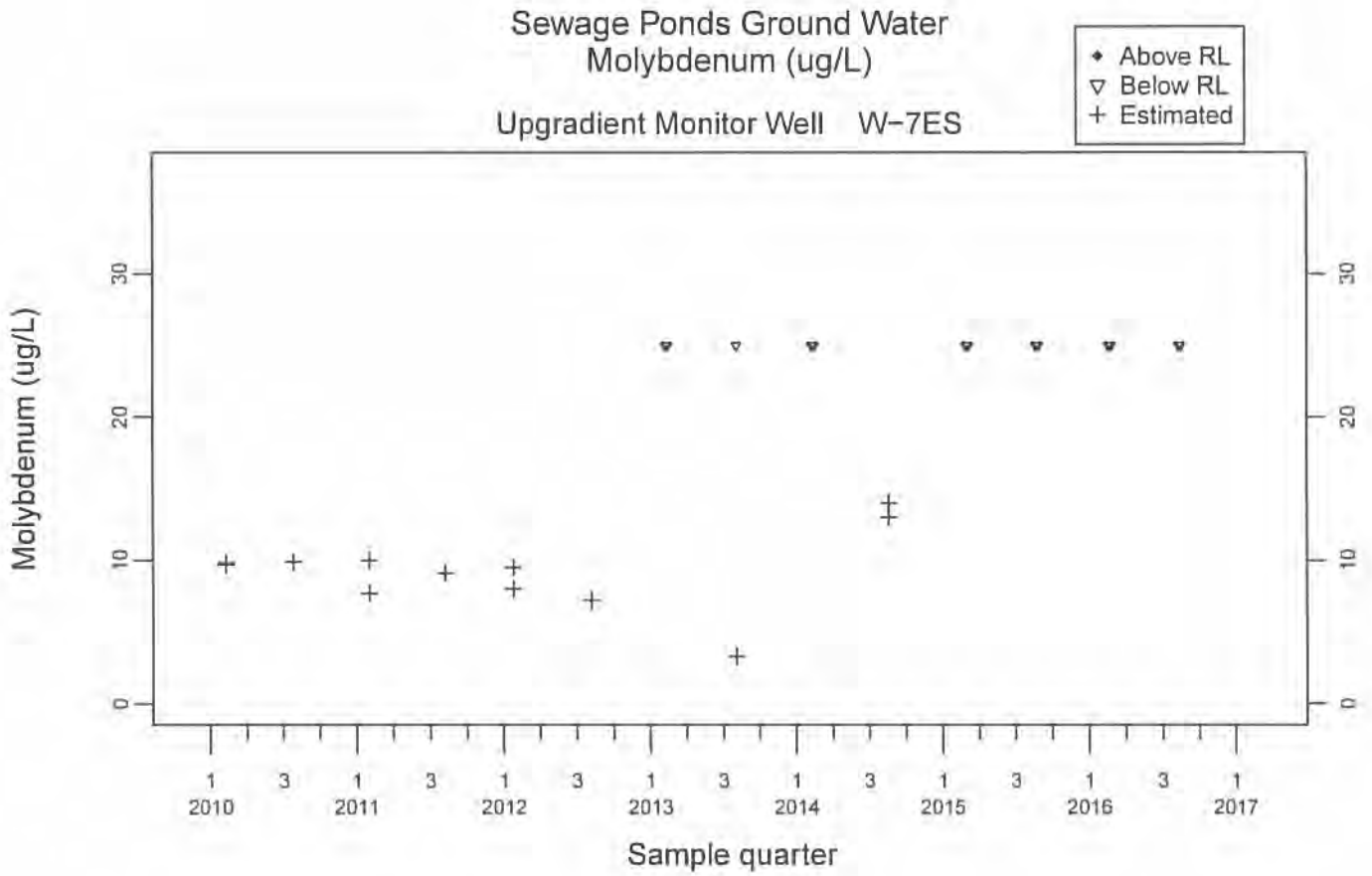

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

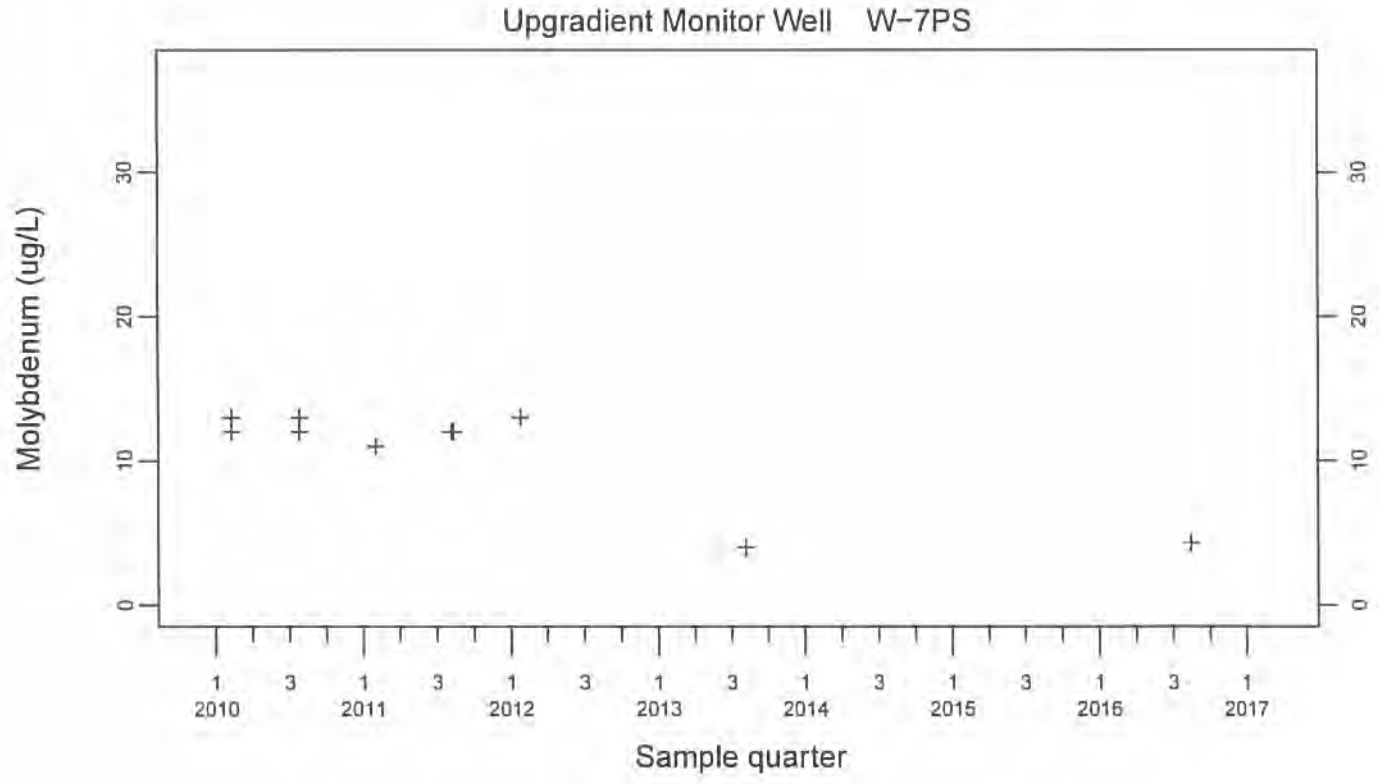

Downgradient Monitor Well W-26R-01
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

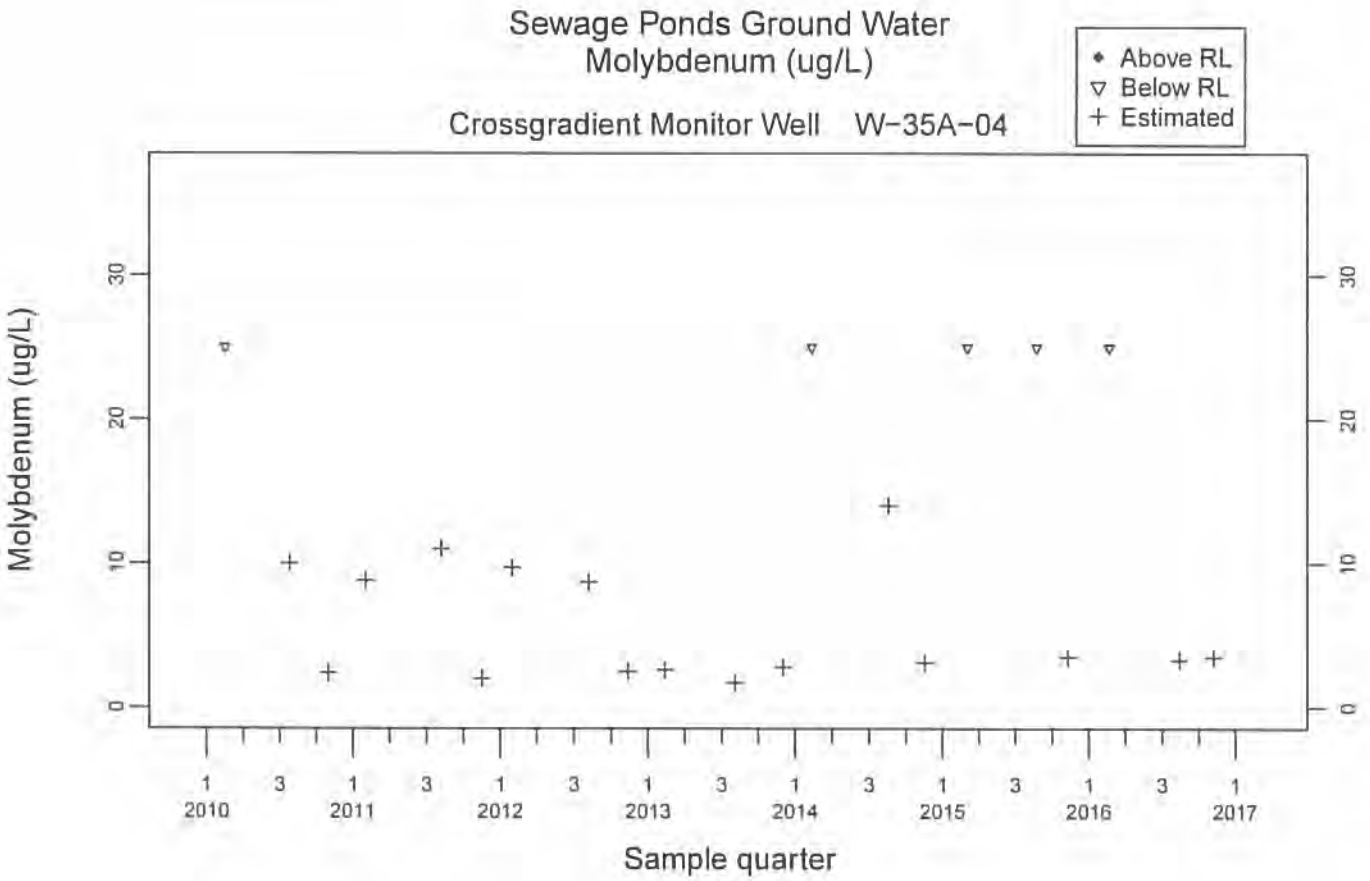

Sewage Ponds Ground Water
Mercury (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

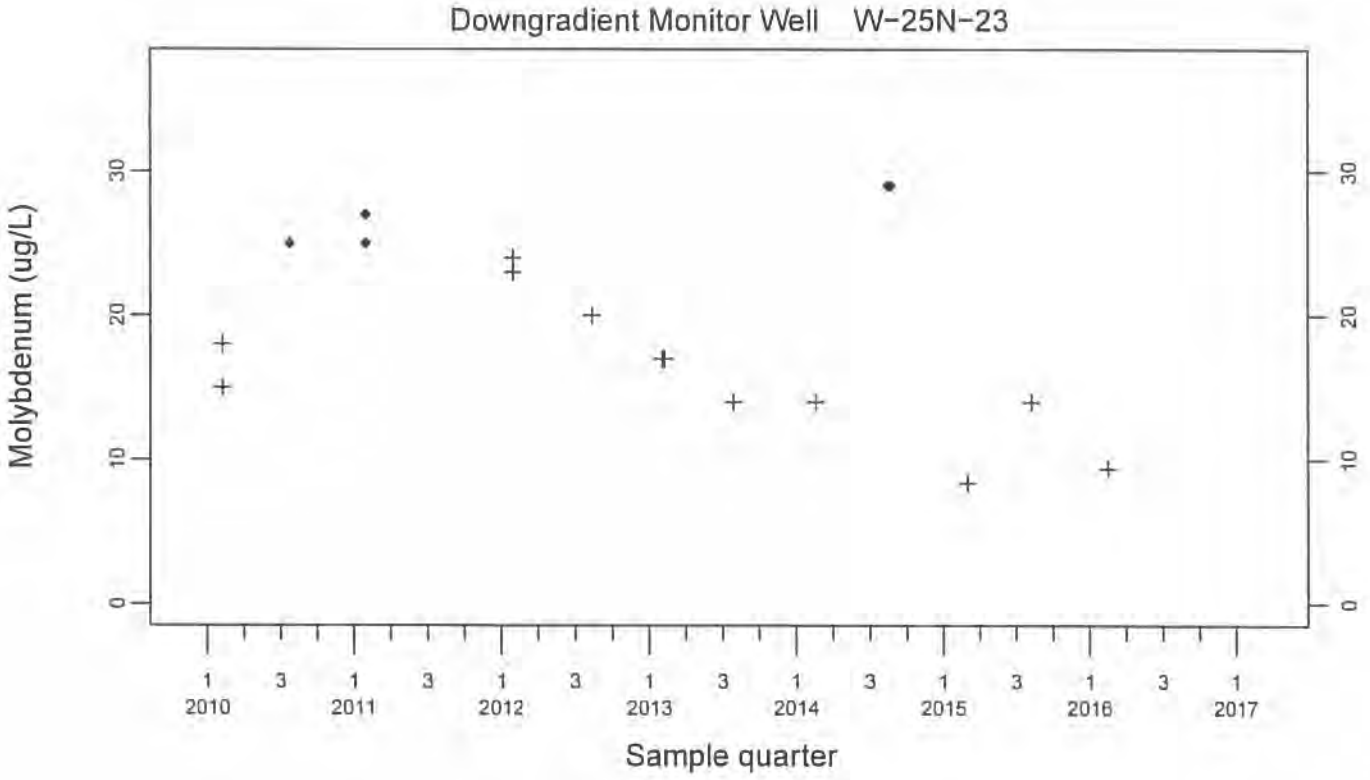

Downgradient Monitor Well W-26R-11
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Mercury (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Mercury (ug/L)
0.00
0.05
0.10
0.15
0.20
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

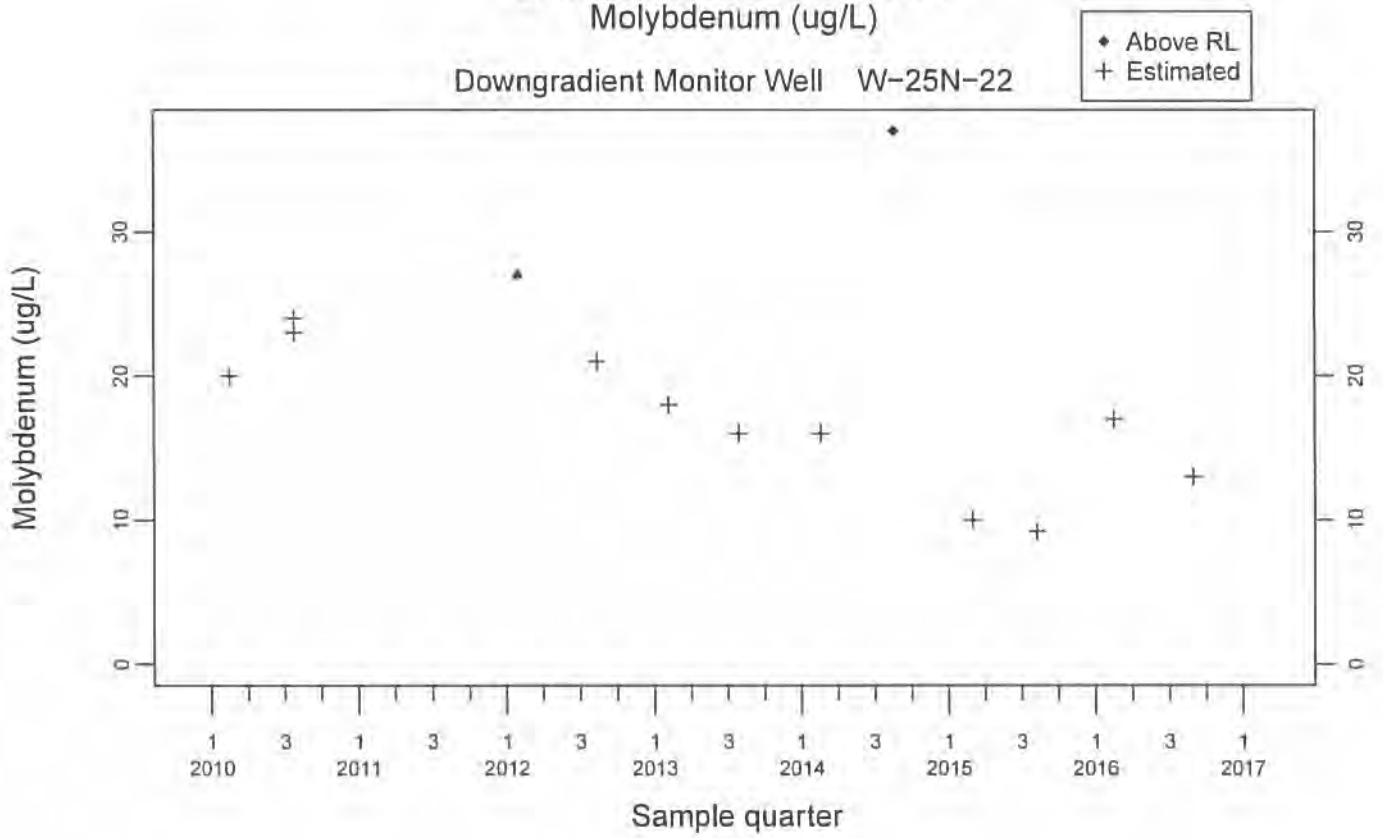

Sewage Ponds Ground Water
Molybdenum (ug/L)
Above RL
Below RL
Estimated
Upgradient Monitor Well W-7ES
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

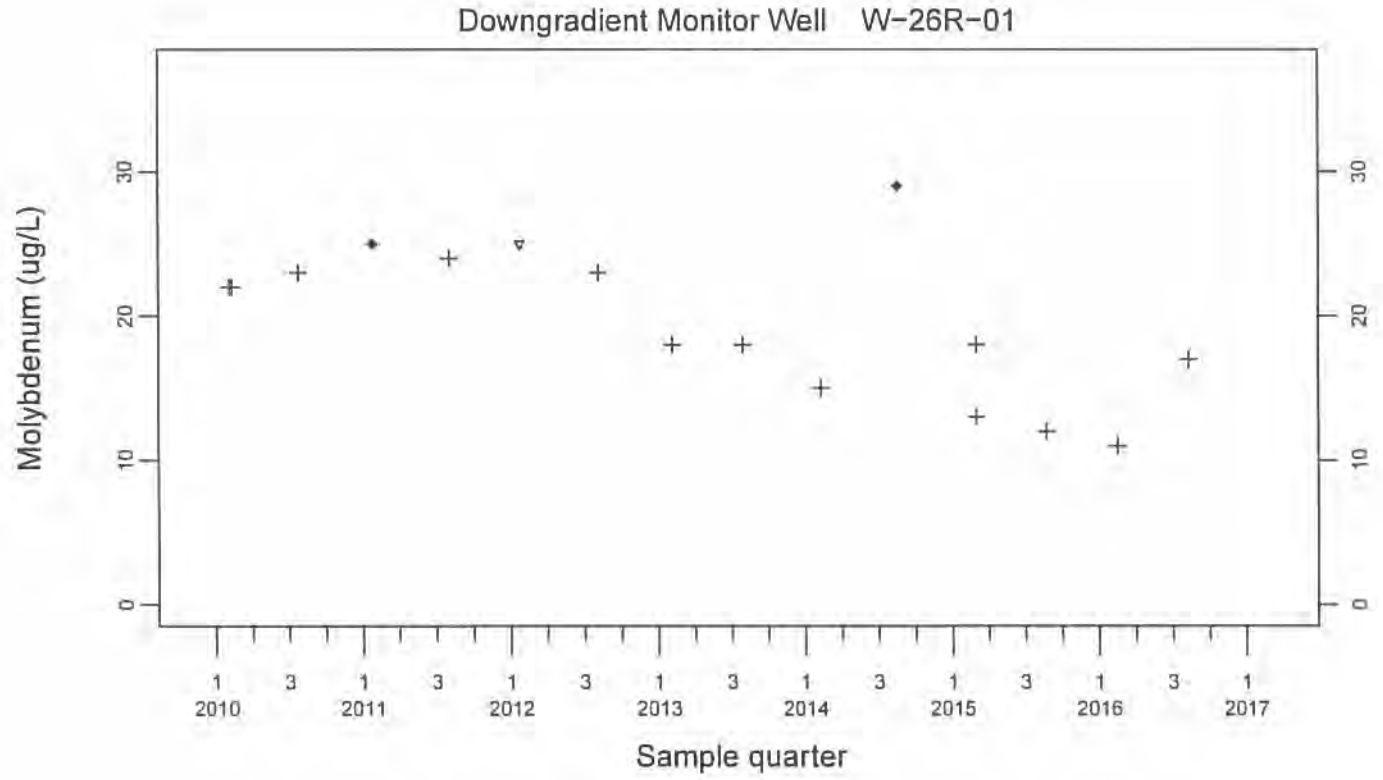

Upgradient Monitor Well W-7PS
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

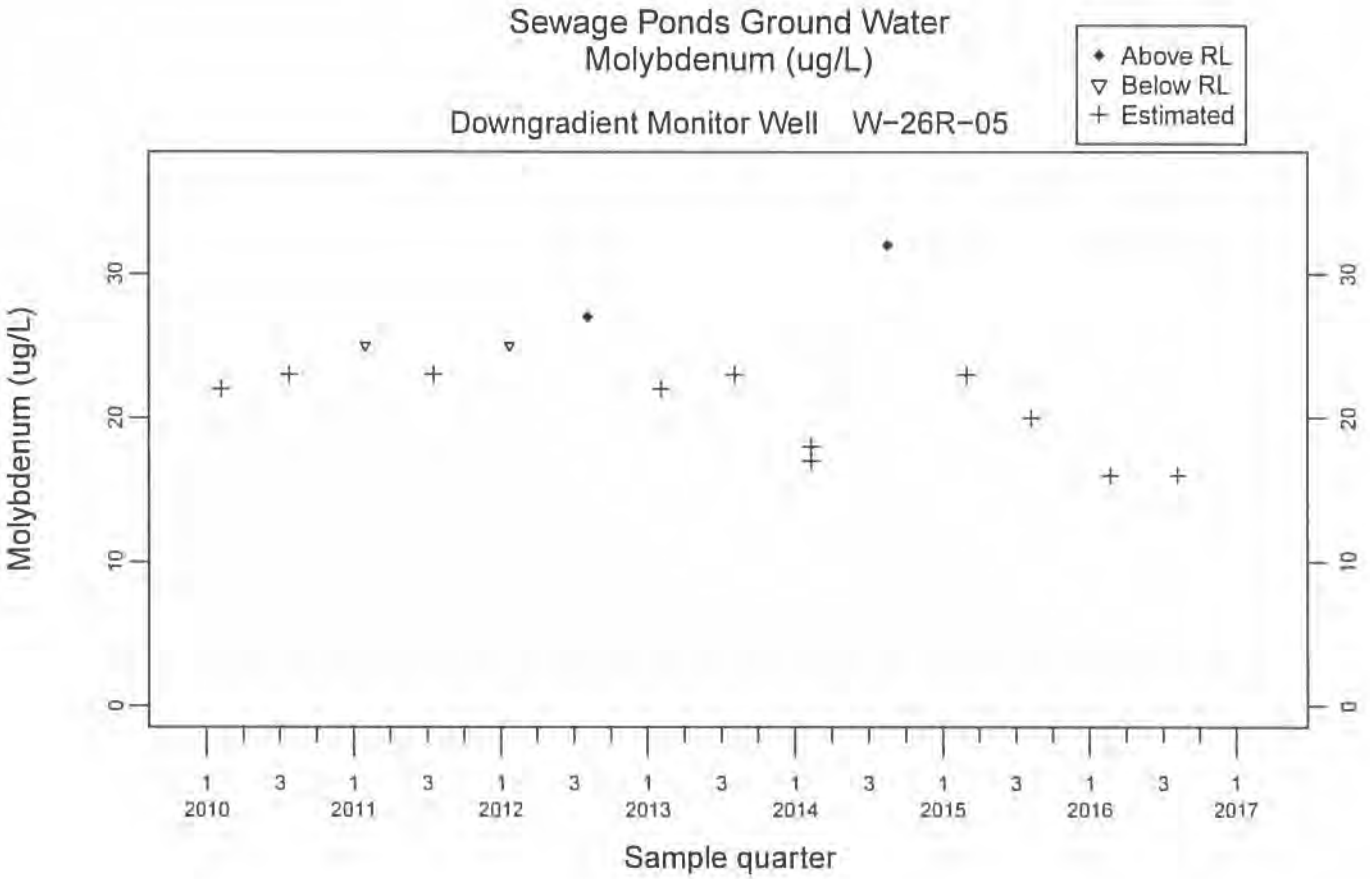

Sewage Ponds Ground Water
Molybdenum (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

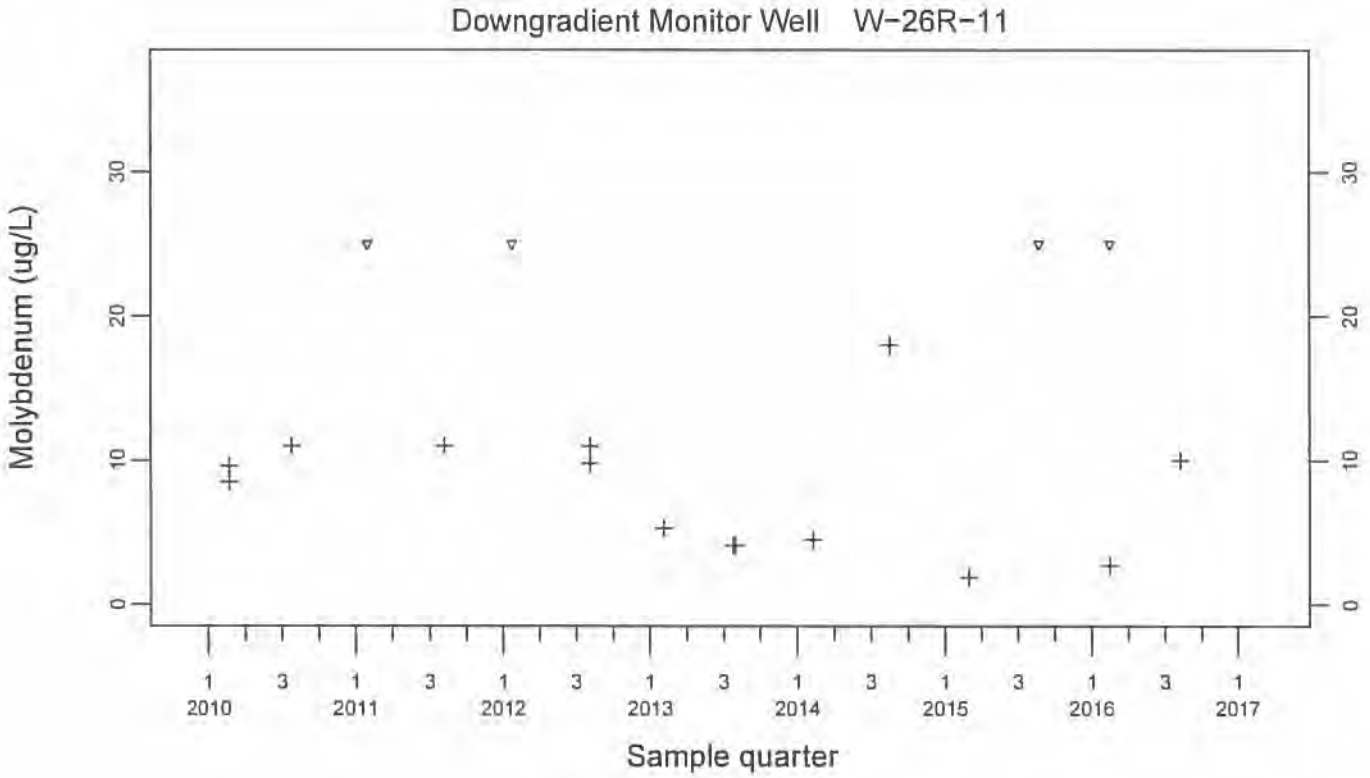

Downgradient Monitor Well W-25N-23
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

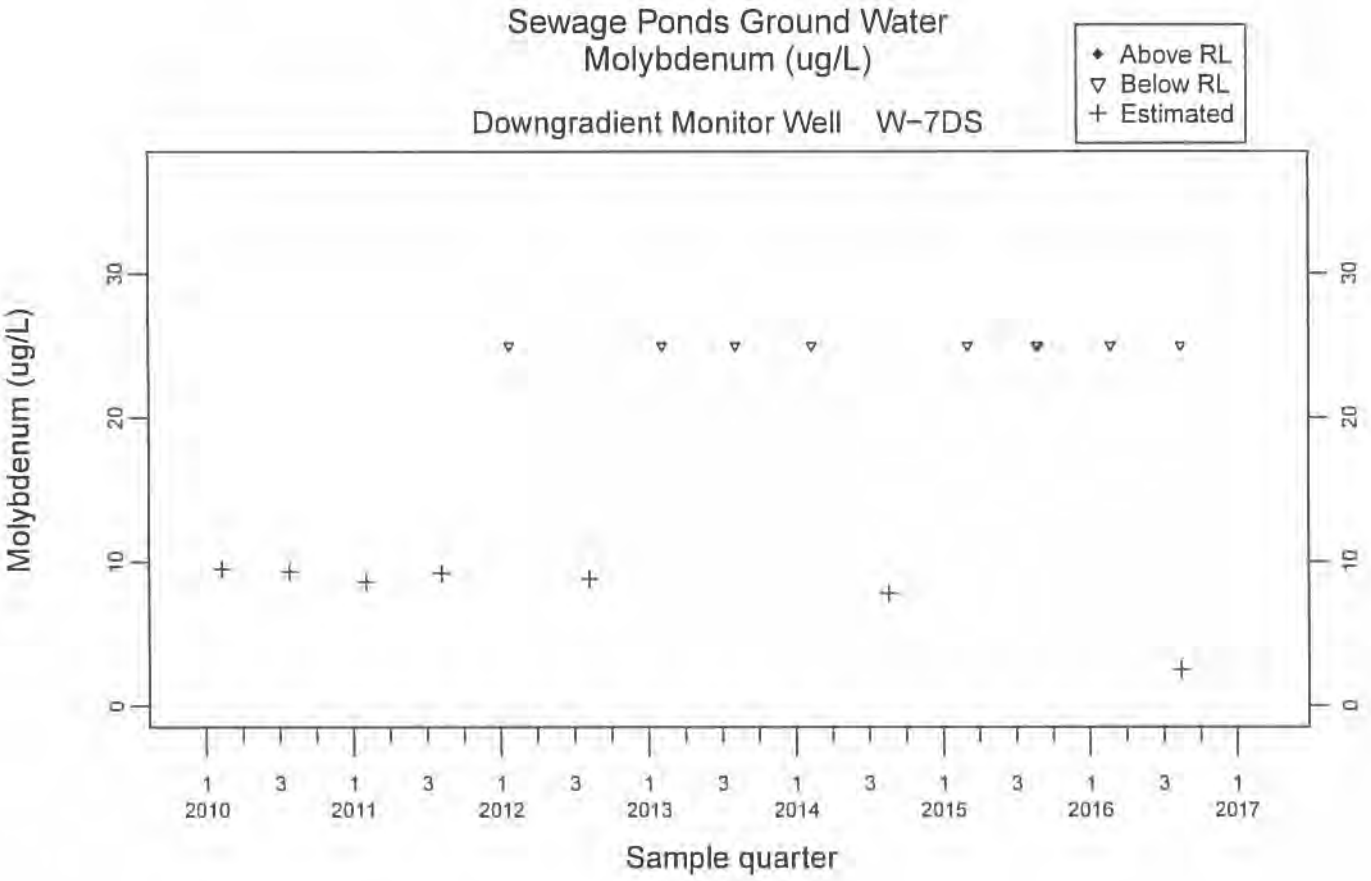
Sewage Ponds Ground Water
Molybdenum (ug/L)

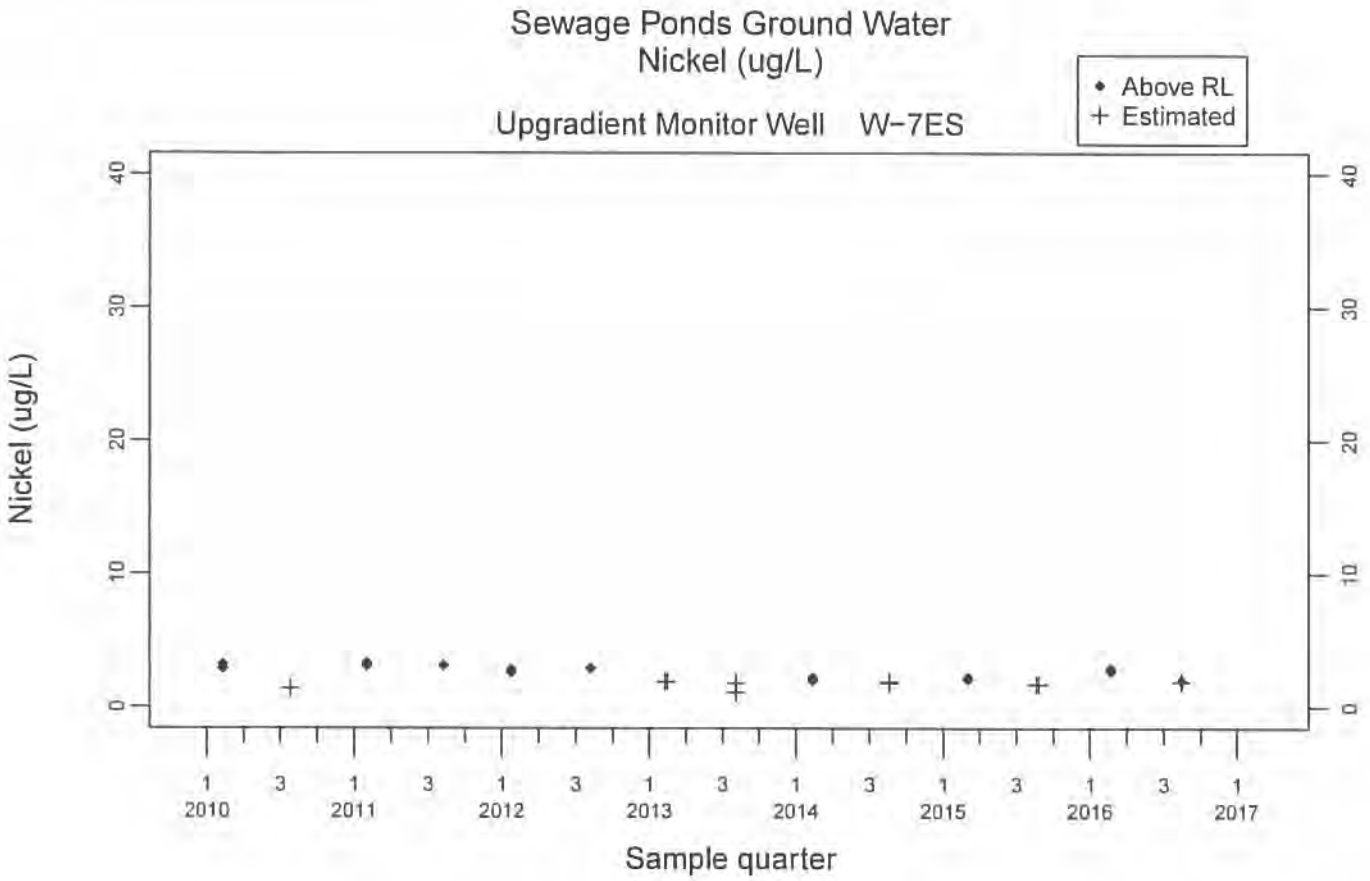


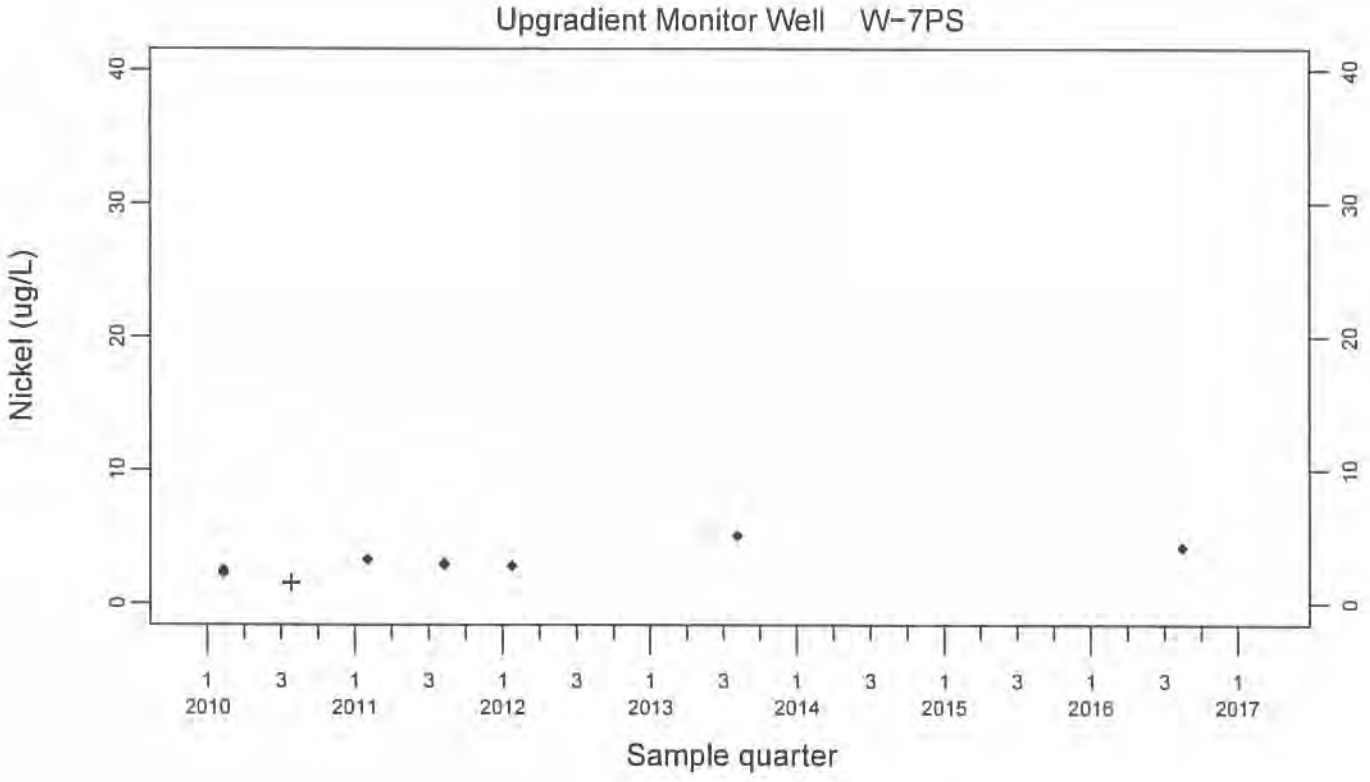


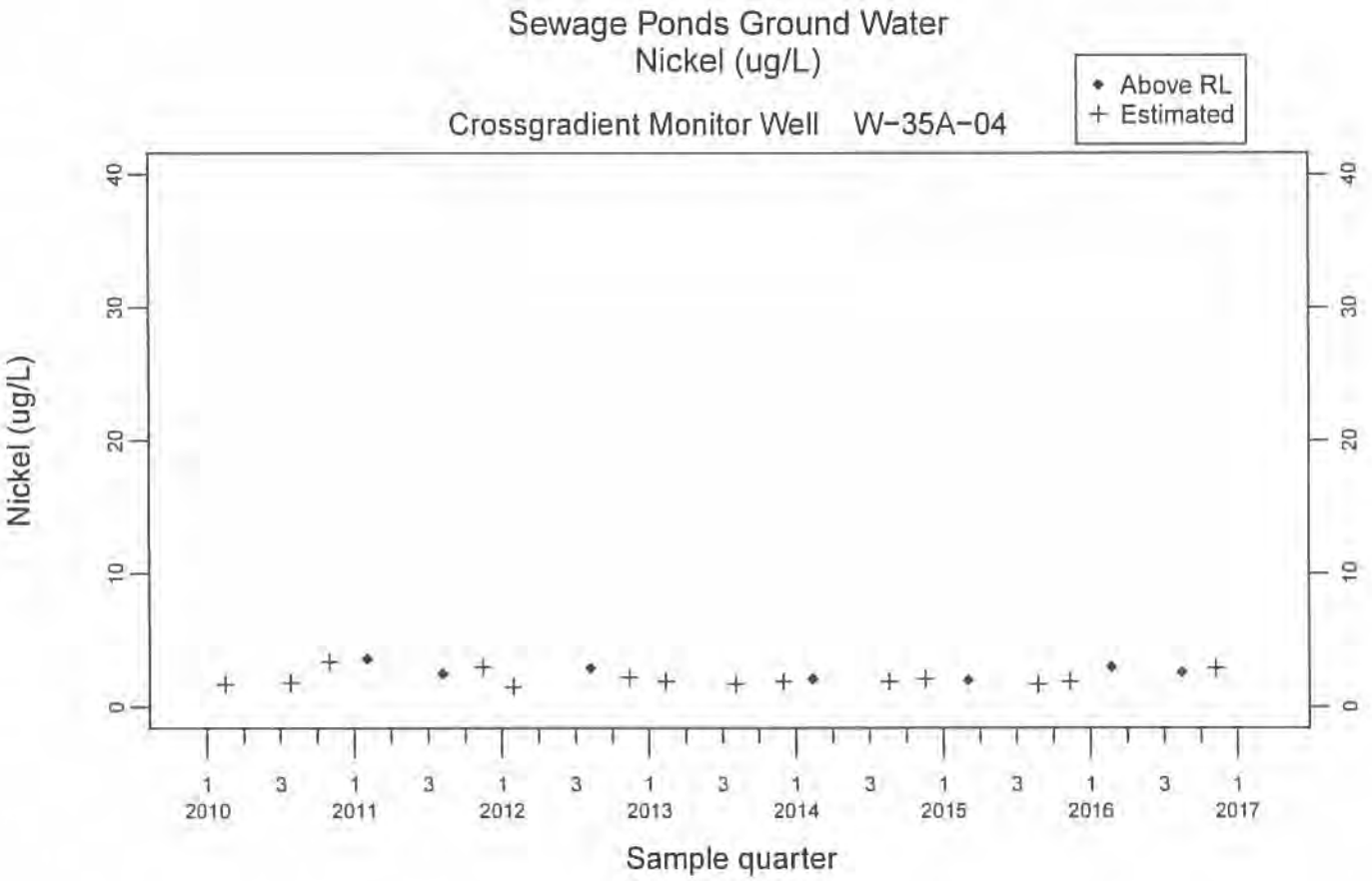

Sewage Ponds Ground Water
Molybdenum (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

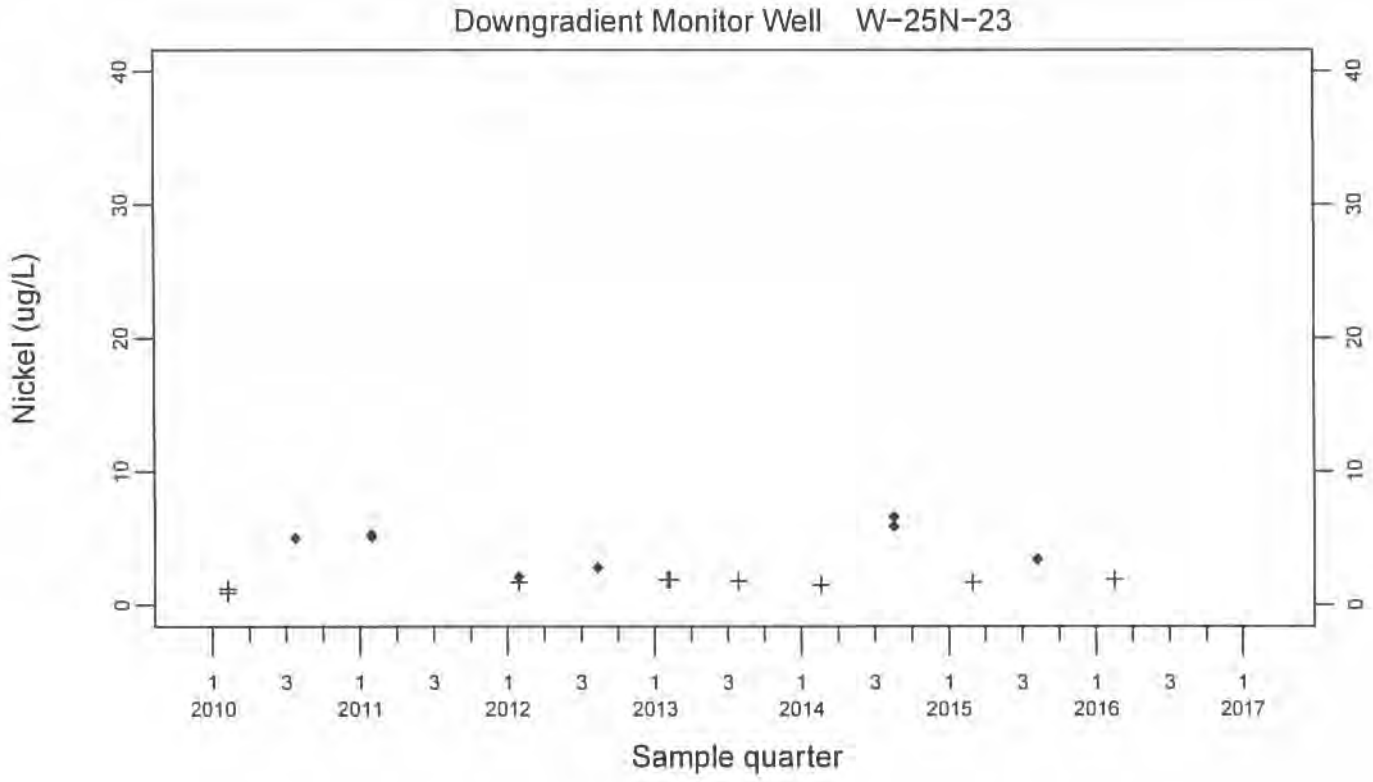

Downgradient Monitor Well W-26R-11
Molybdenum (ug/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

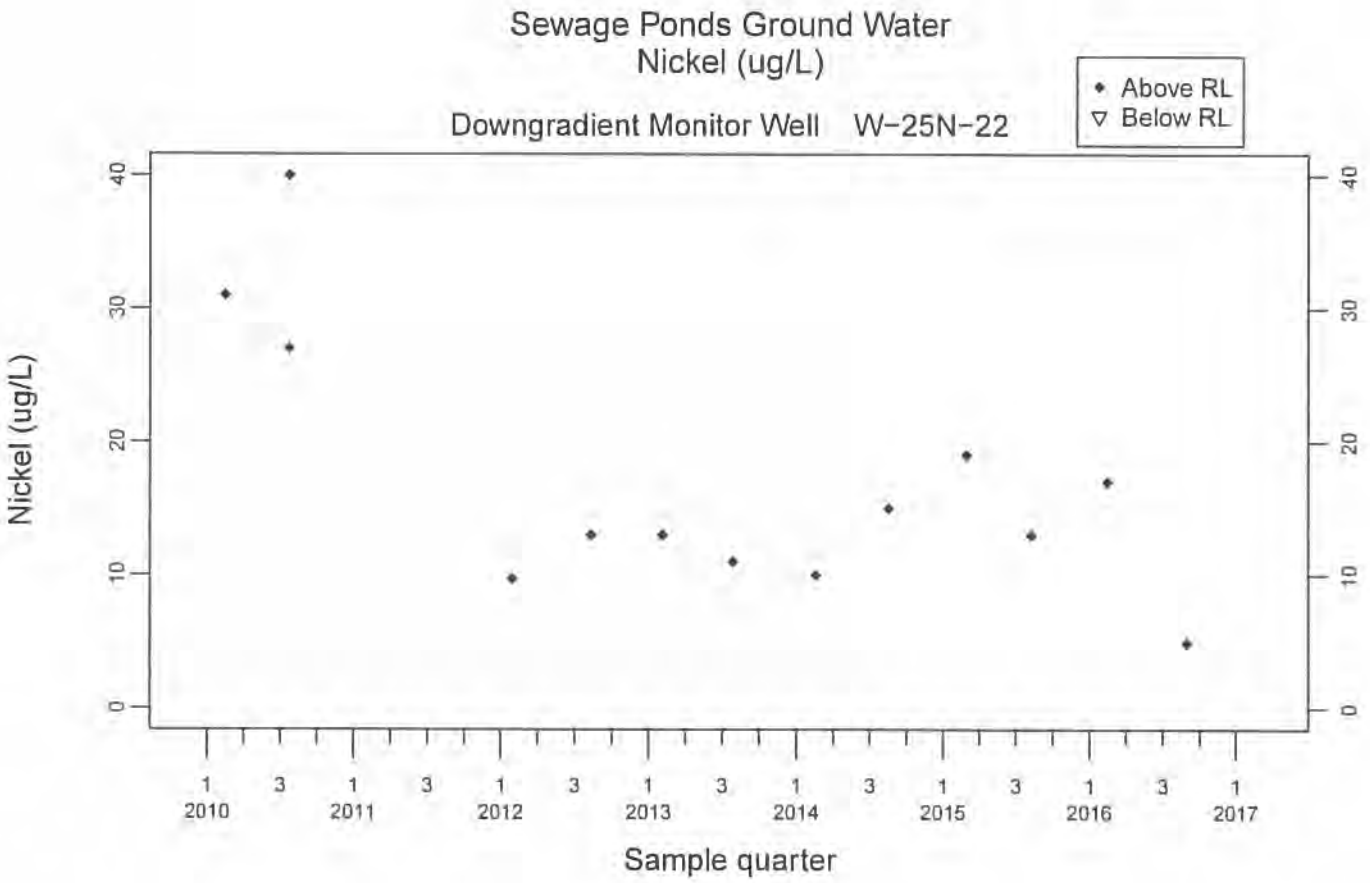

Sewage Ponds Ground Water
Molybdenum (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Molybdenum (ug/L)
0
10
20
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

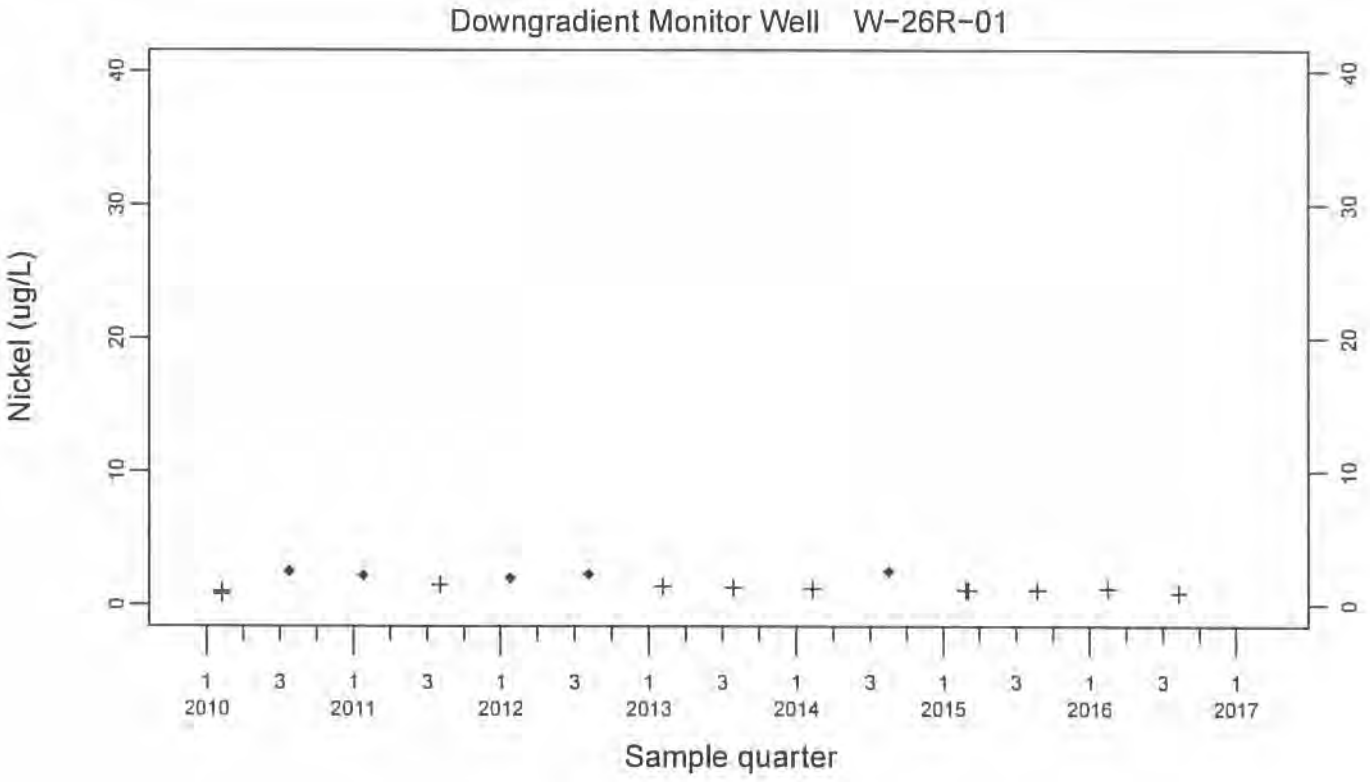

Sewage Ponds Ground Water
Nickel (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

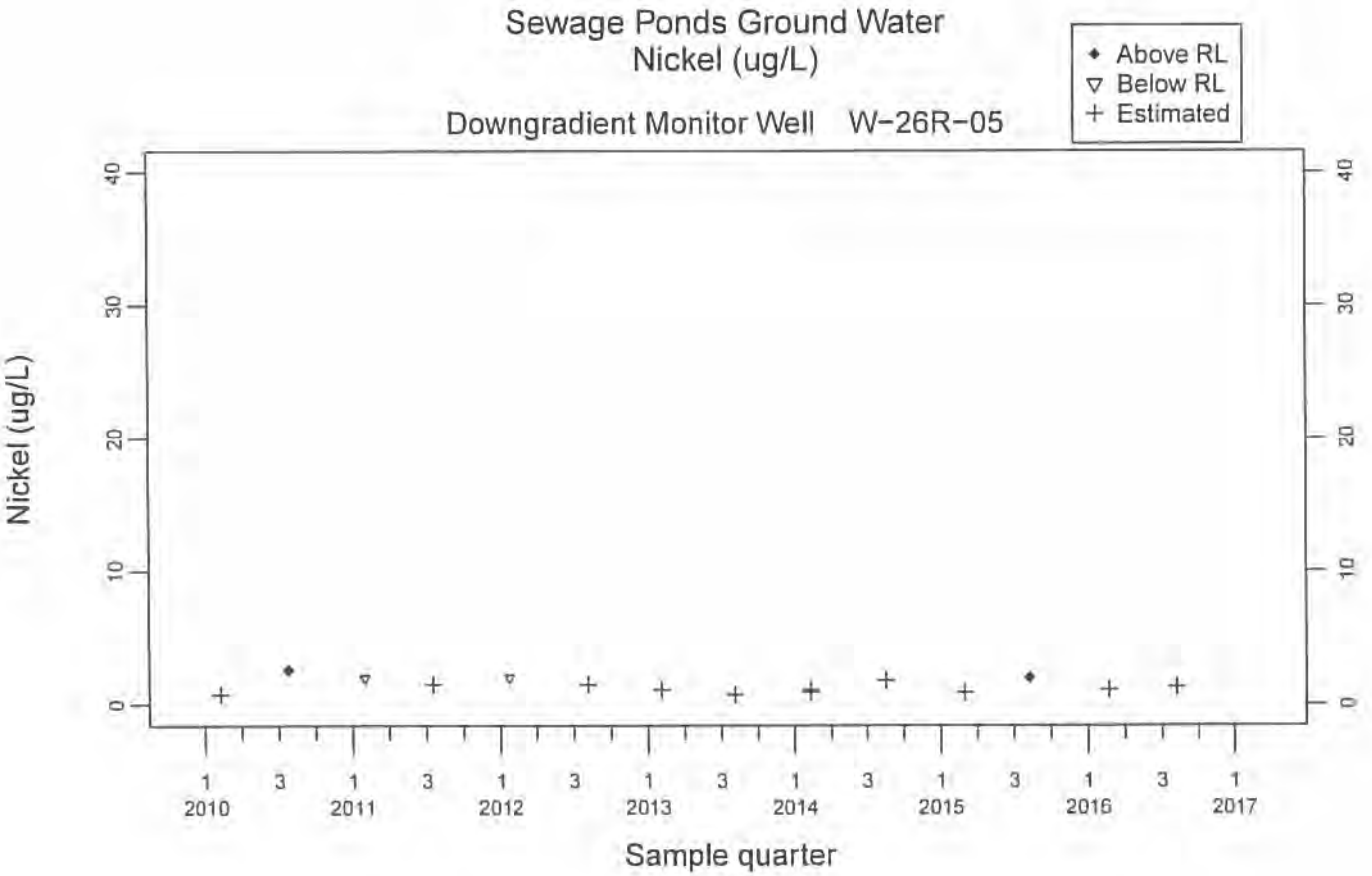

Upgradient Monitor Well W-7PS
Nickel (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

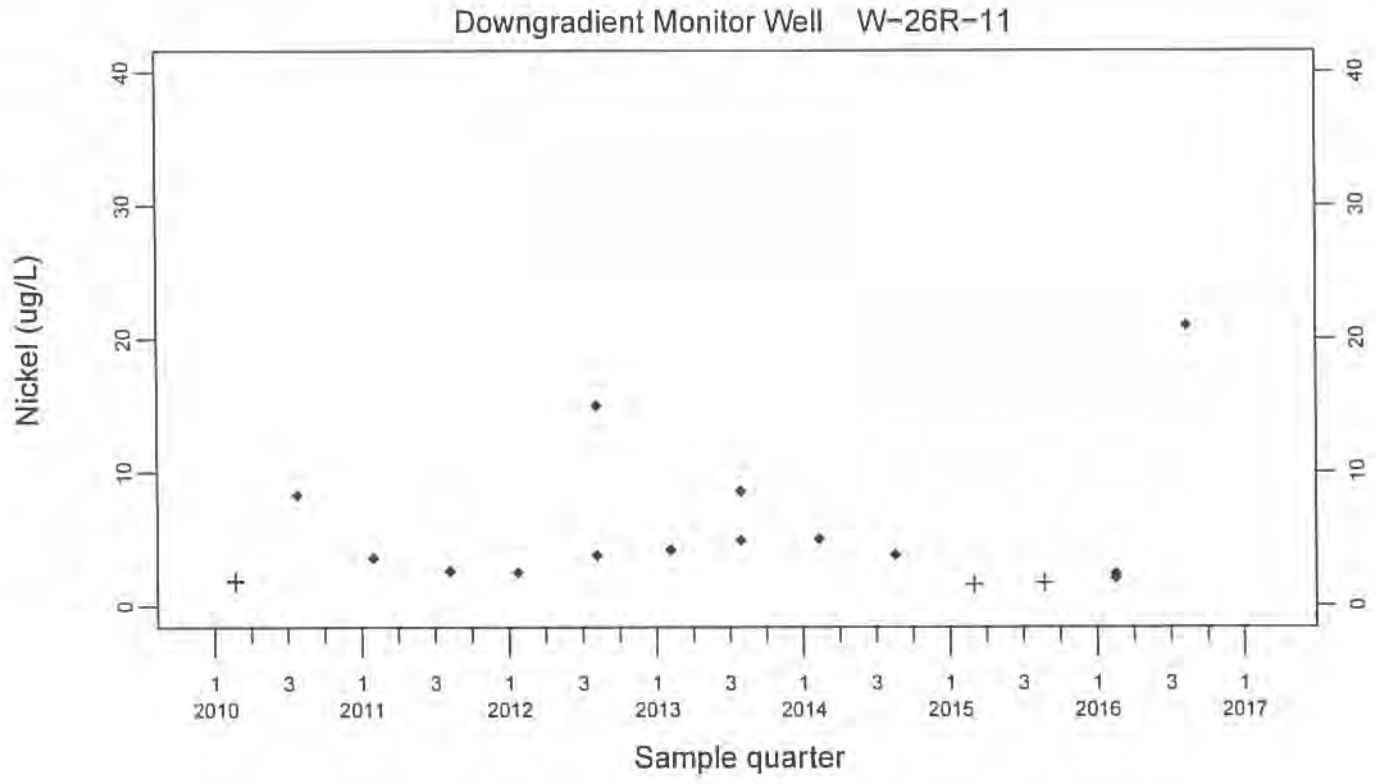

Sewage Ponds Ground Water
Nickel (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

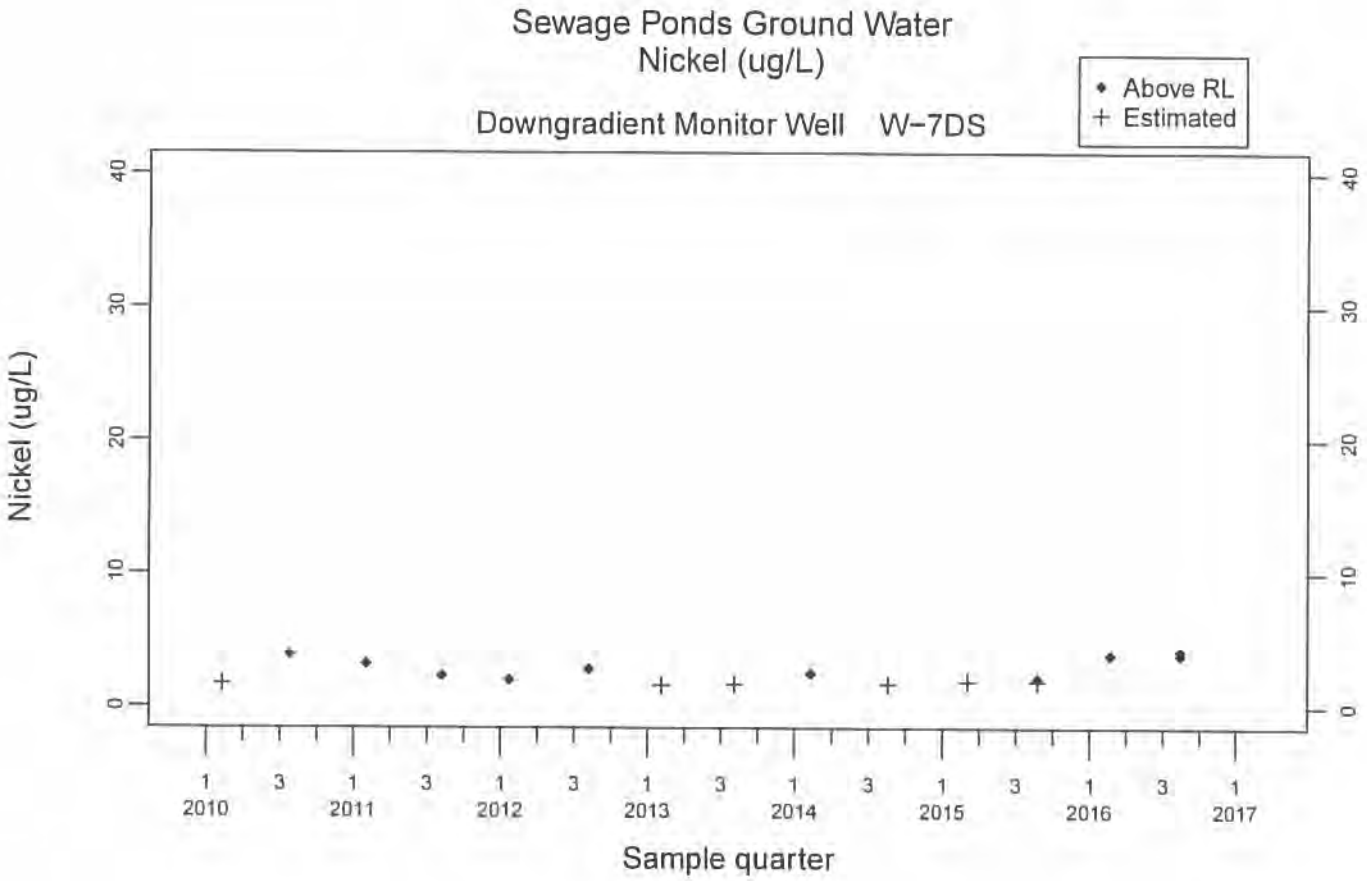

Downgradient Monitor Well W-25N-23
Nickel (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

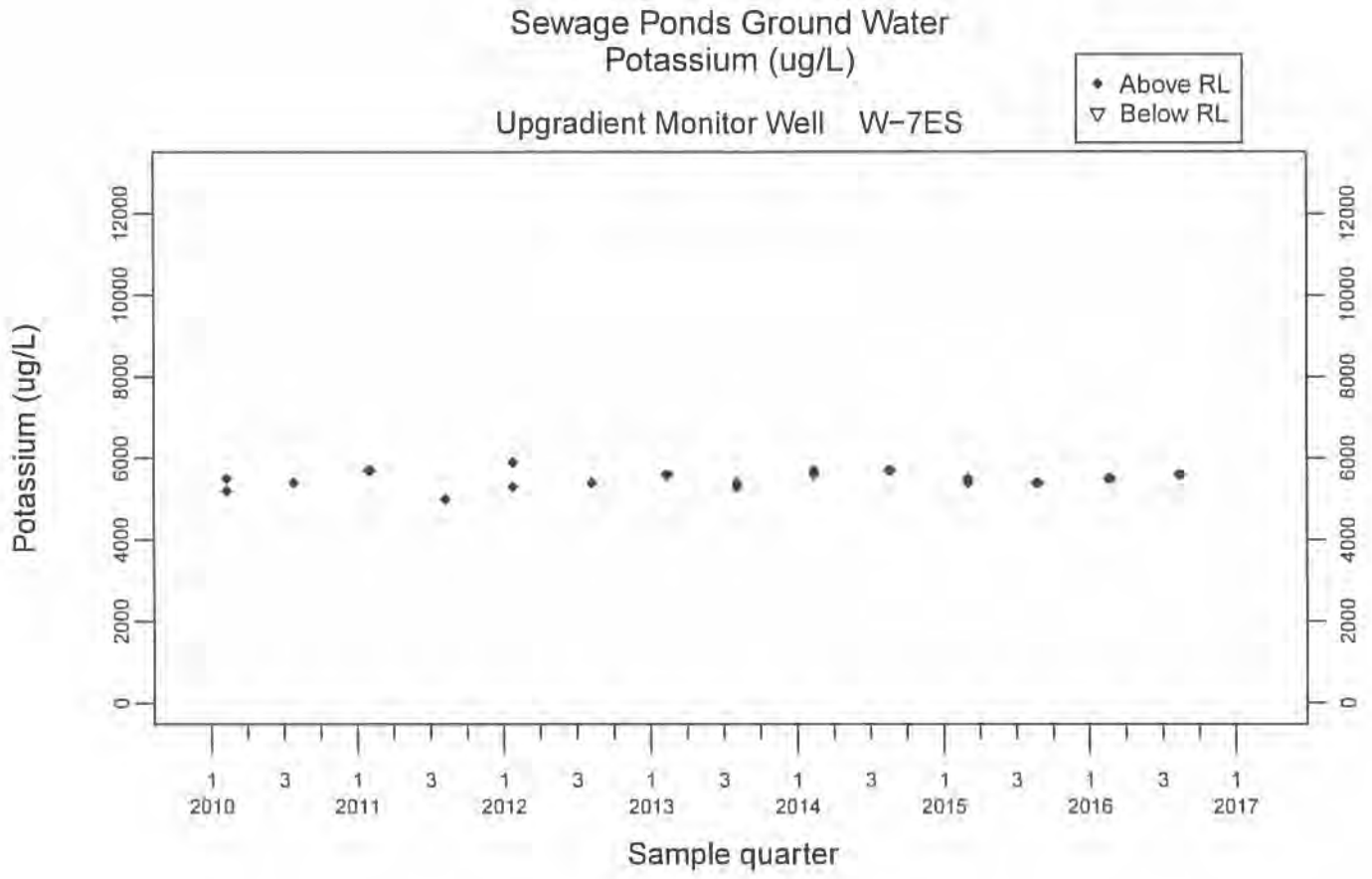

Sewage Ponds Ground Water
Nickel (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Nickel (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

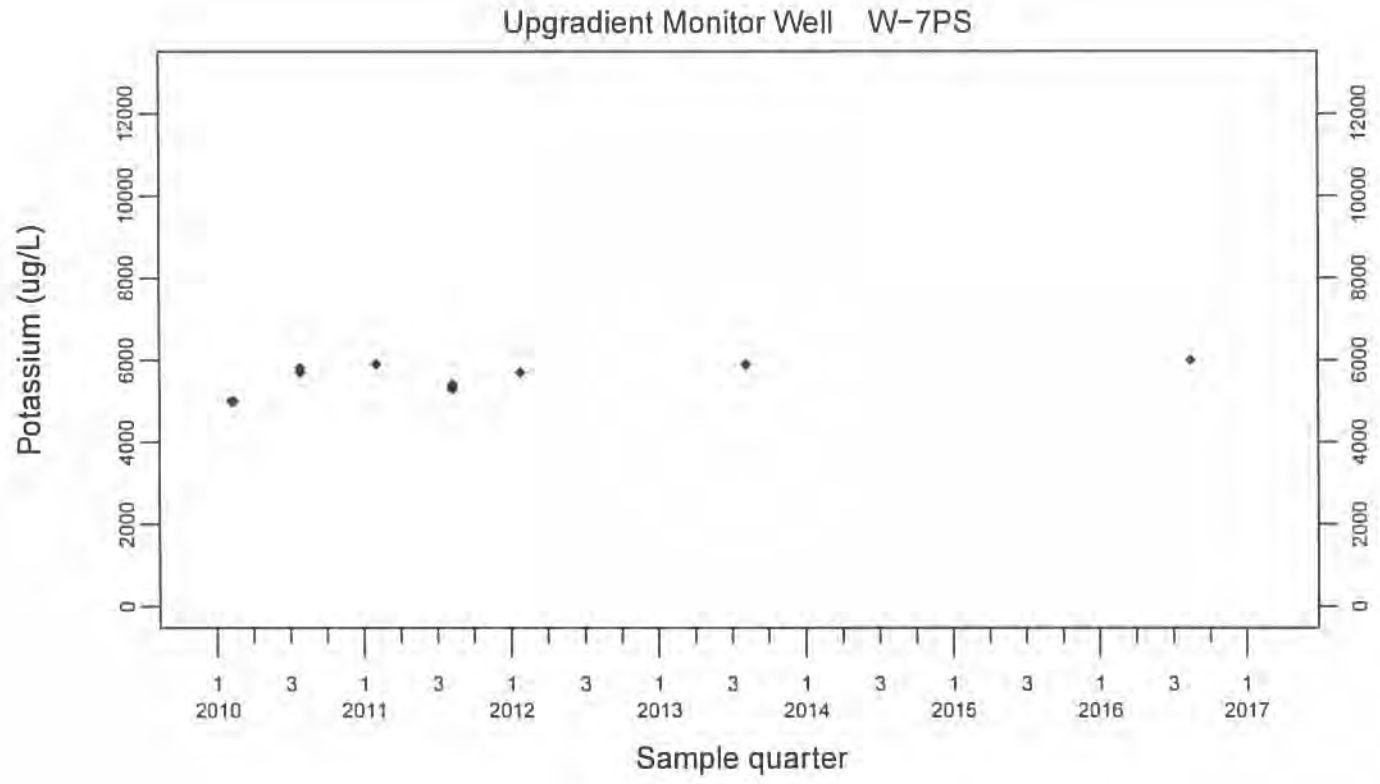

Downgradient Monitor Well W-26R-01
Nickel (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

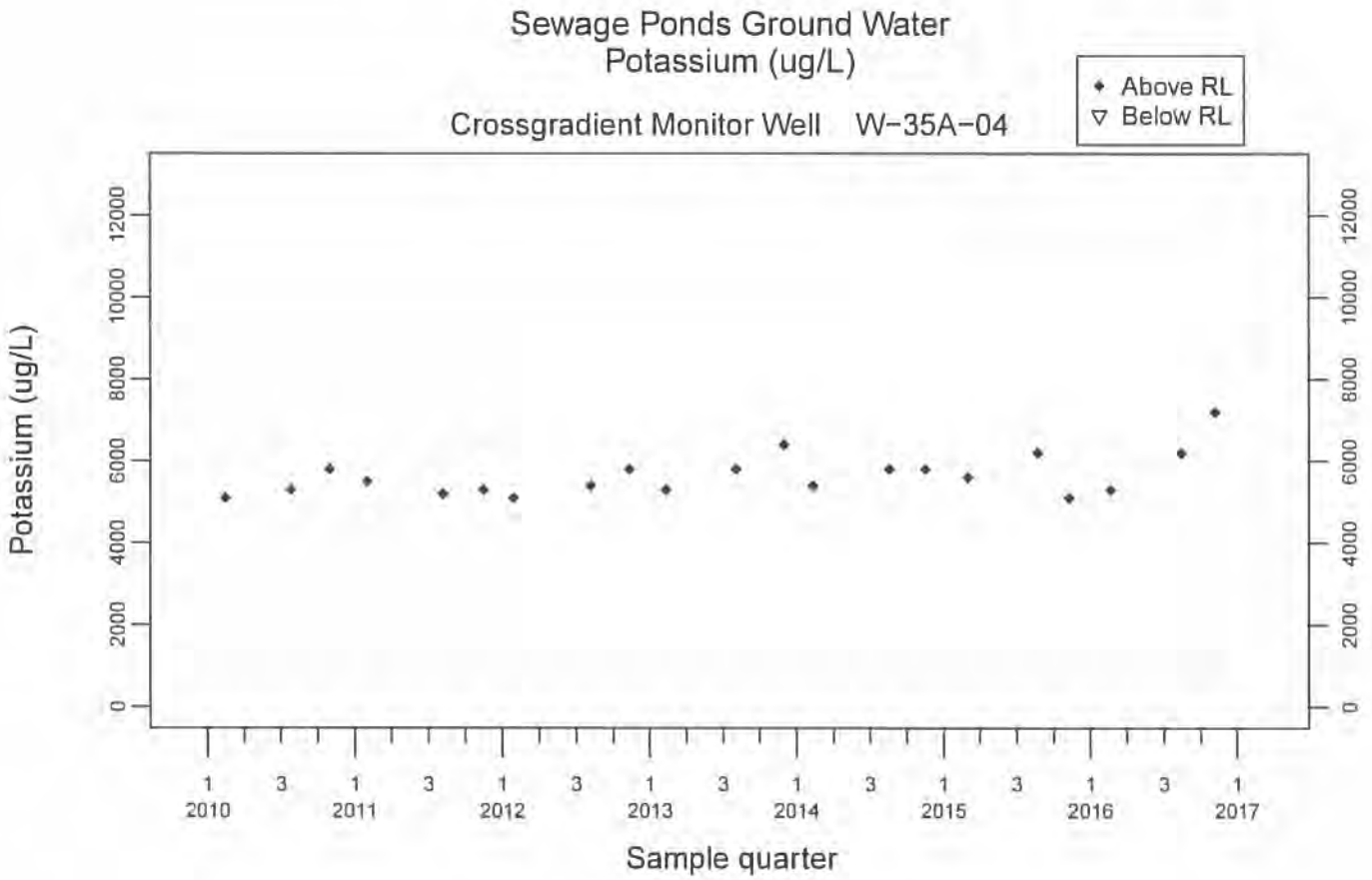

Sewage Ponds Ground Water
Nickel (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Nickel (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

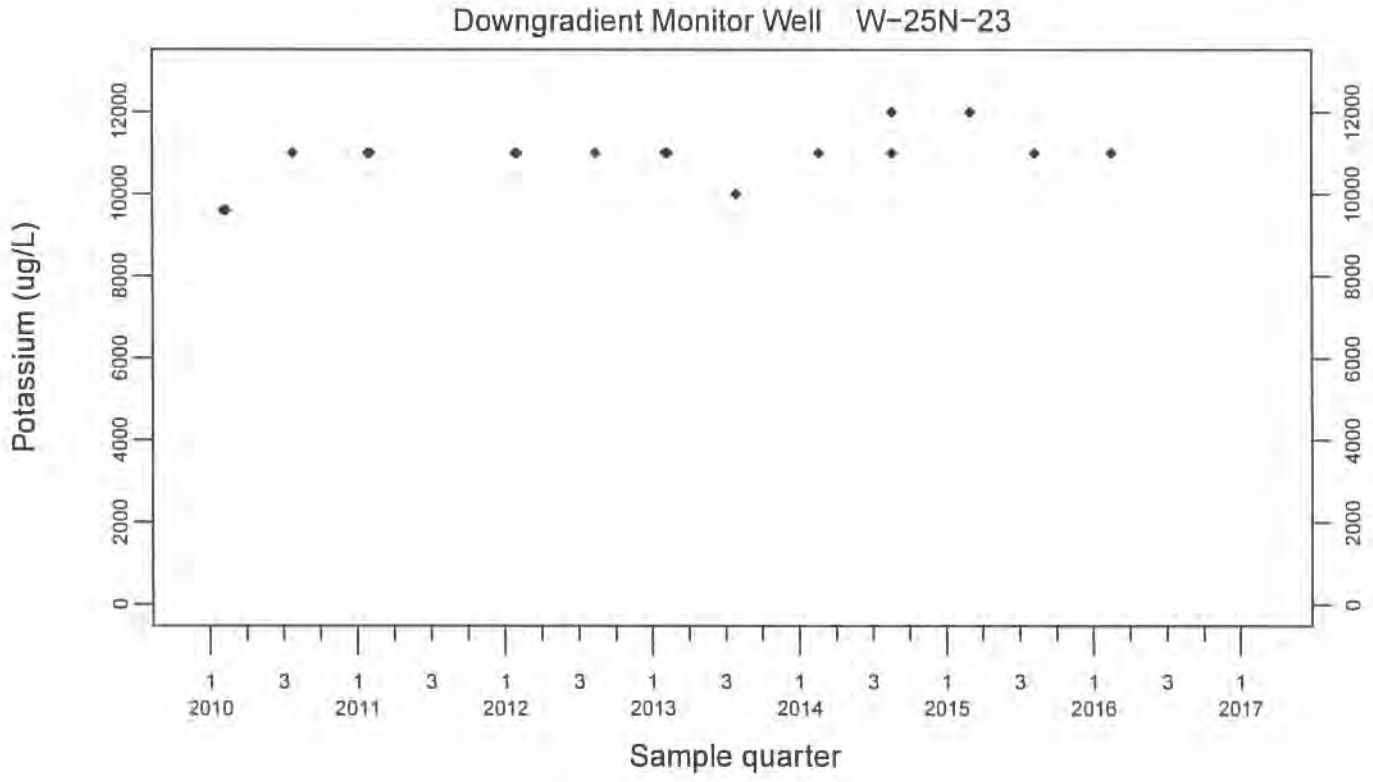

Downgradient Monitor Well W-26R-11
Nickel (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

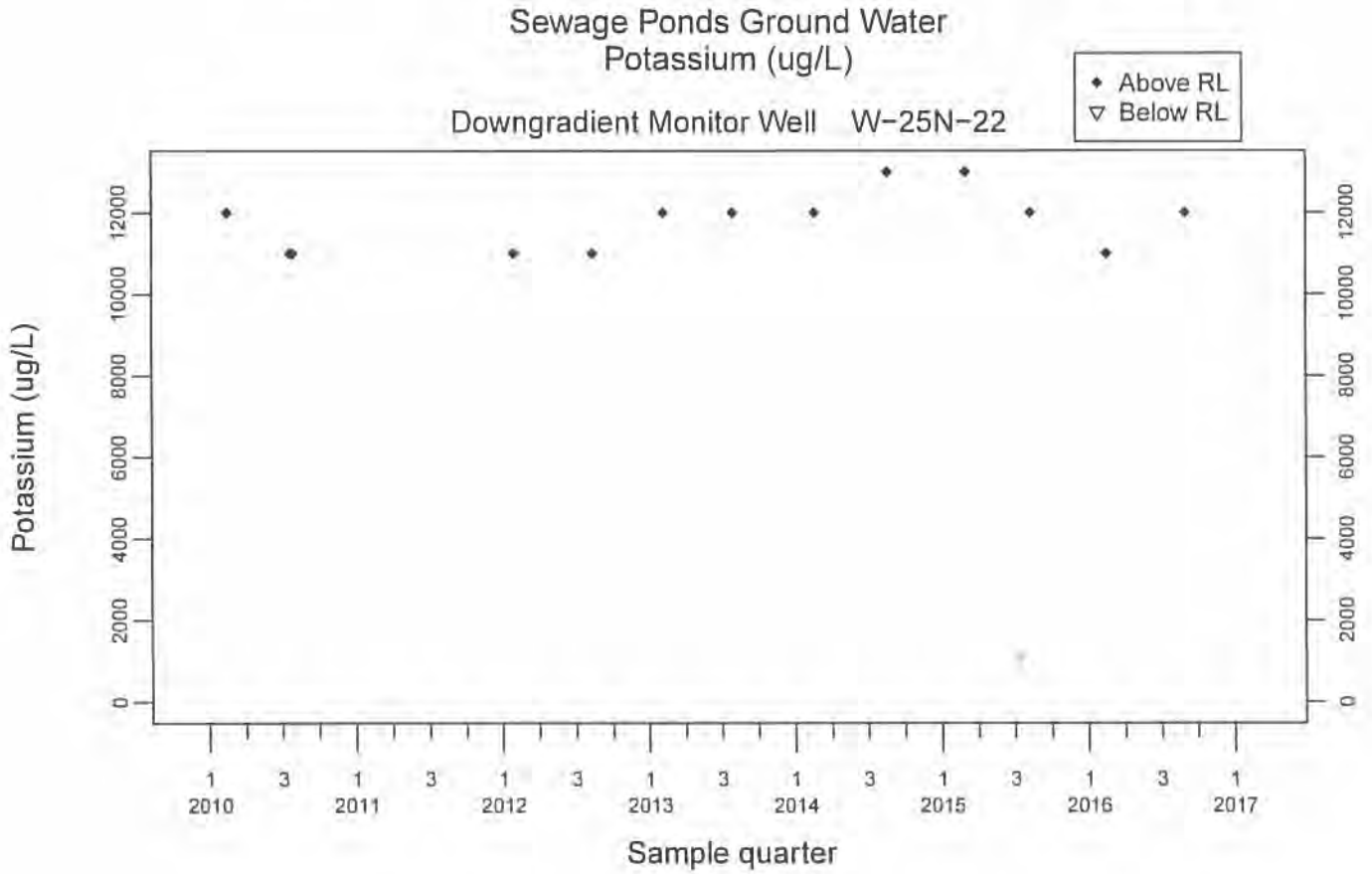

Sewage Ponds Ground Water
Nickel (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Estimated
Nickel (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

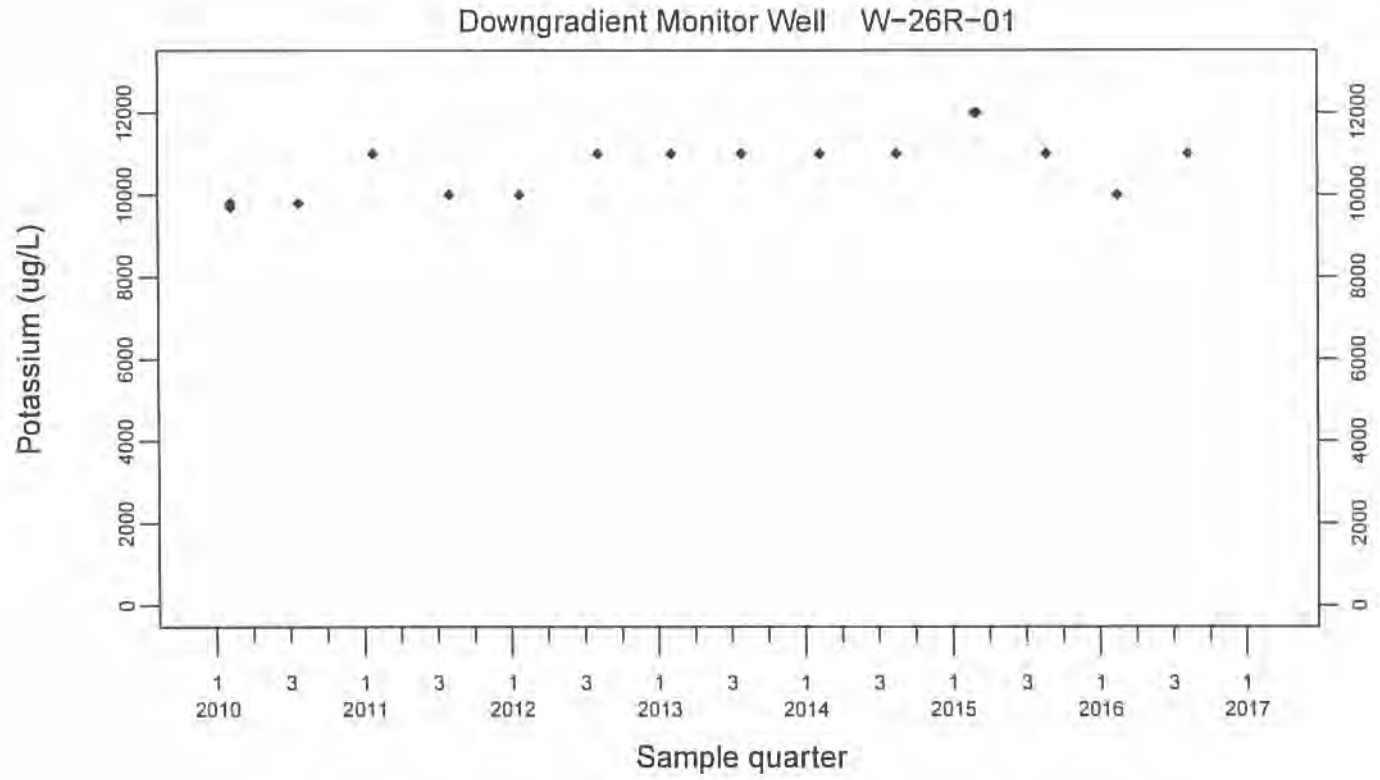

Sewage Ponds Ground Water
Potassium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

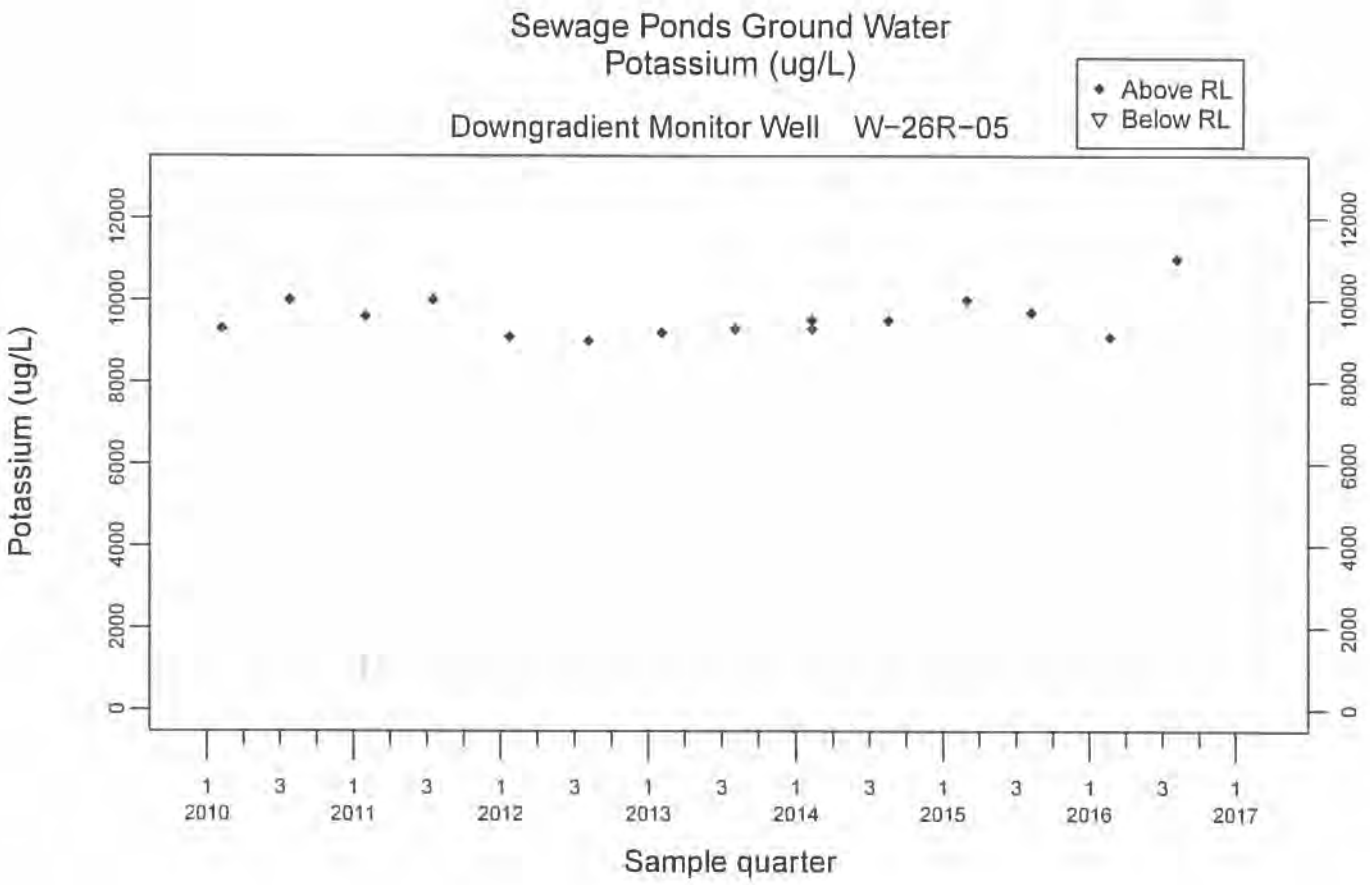

Upgradient Monitor Well W-7PS
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

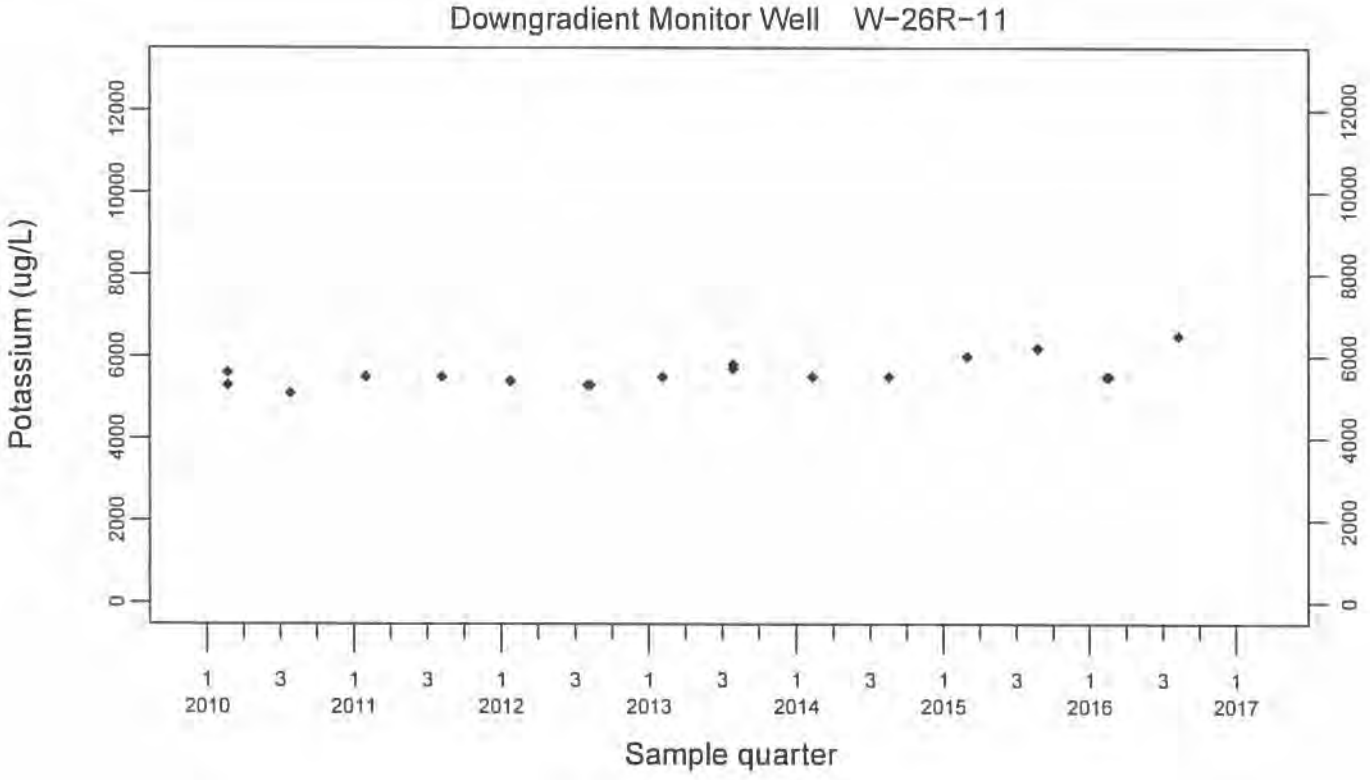

Sewage Ponds Ground Water
Potassium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

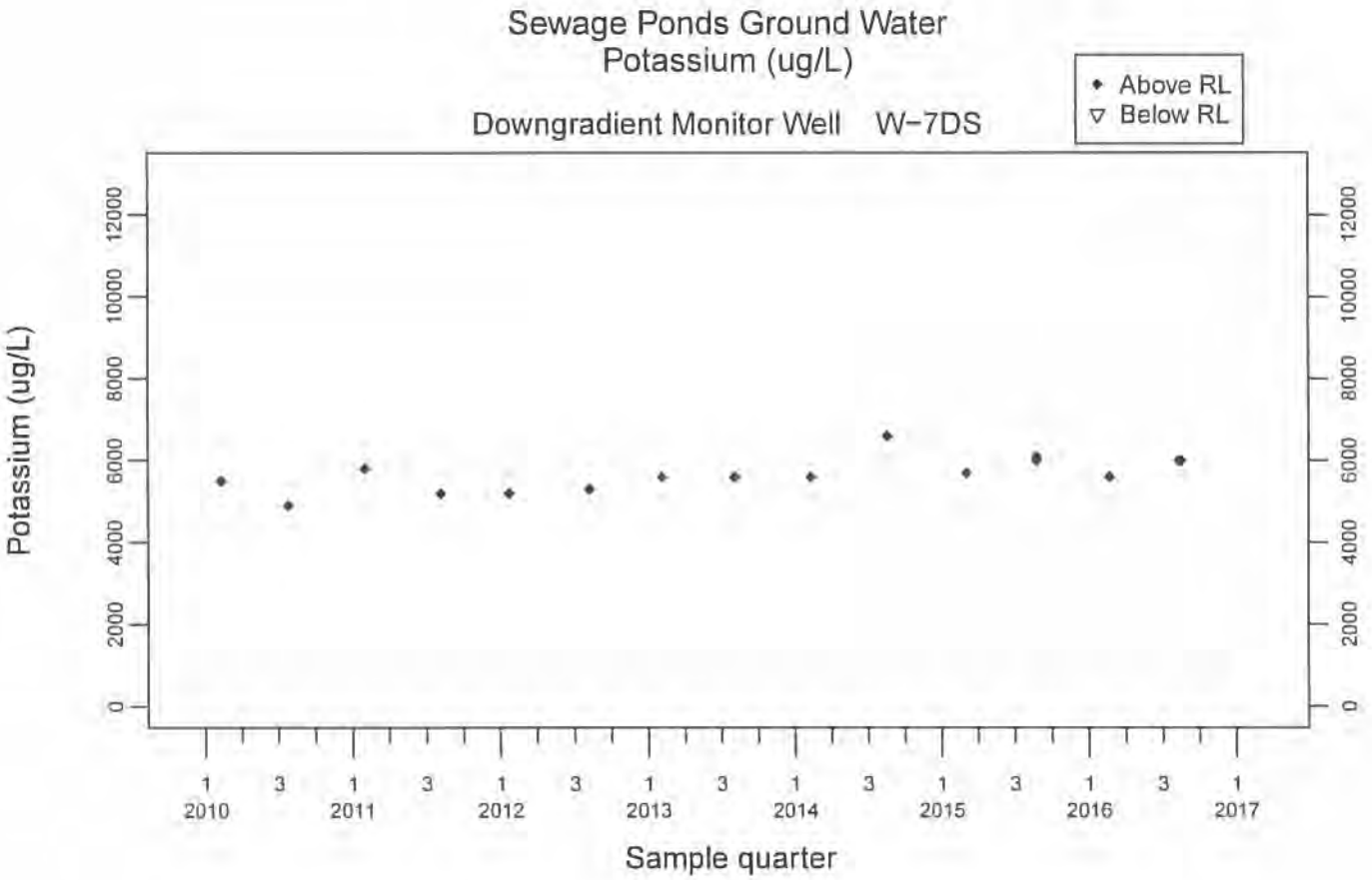

Downgradient Monitor Well W-25N-23
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

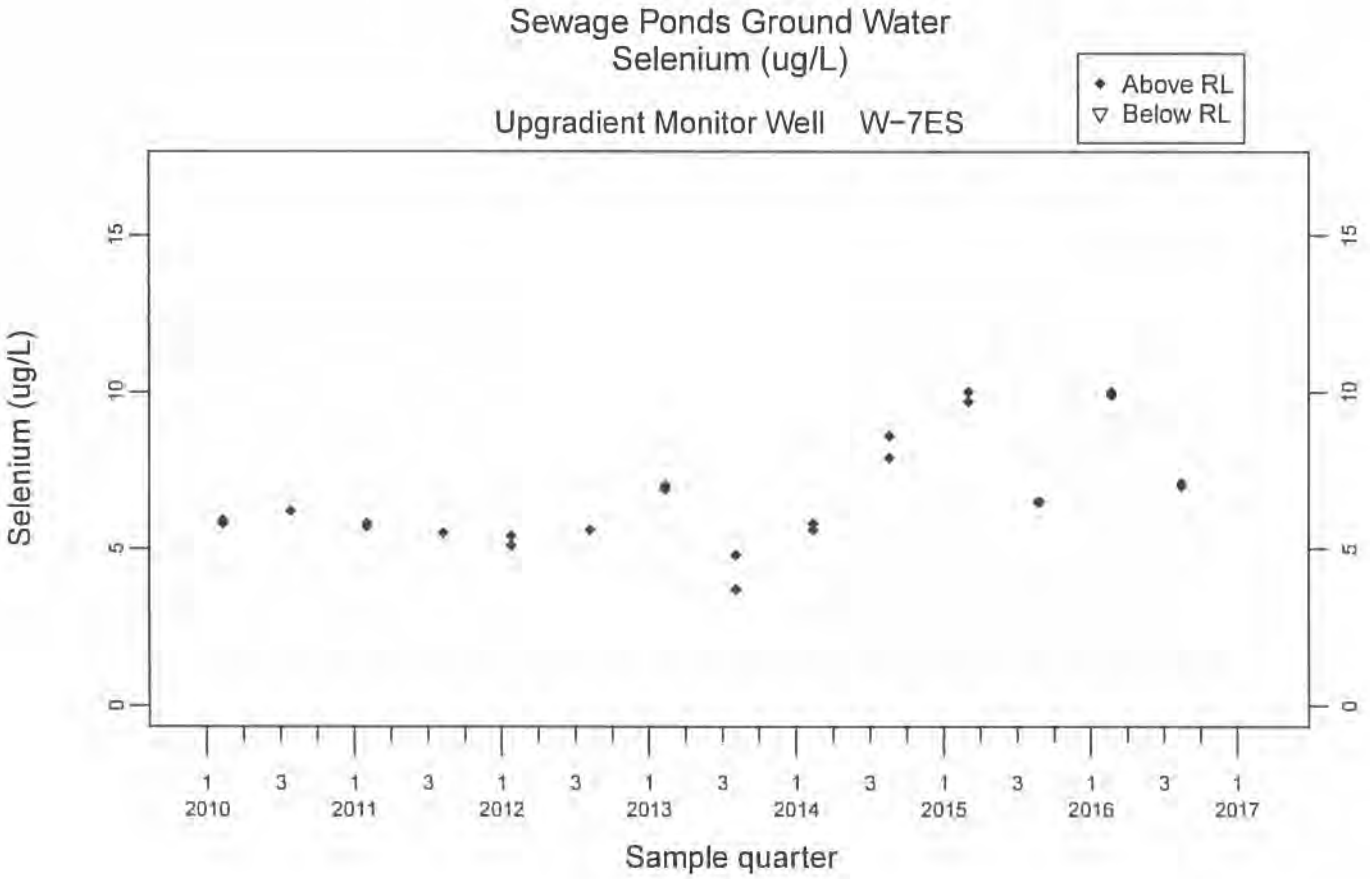

Sewage Ponds Ground Water
Potassium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

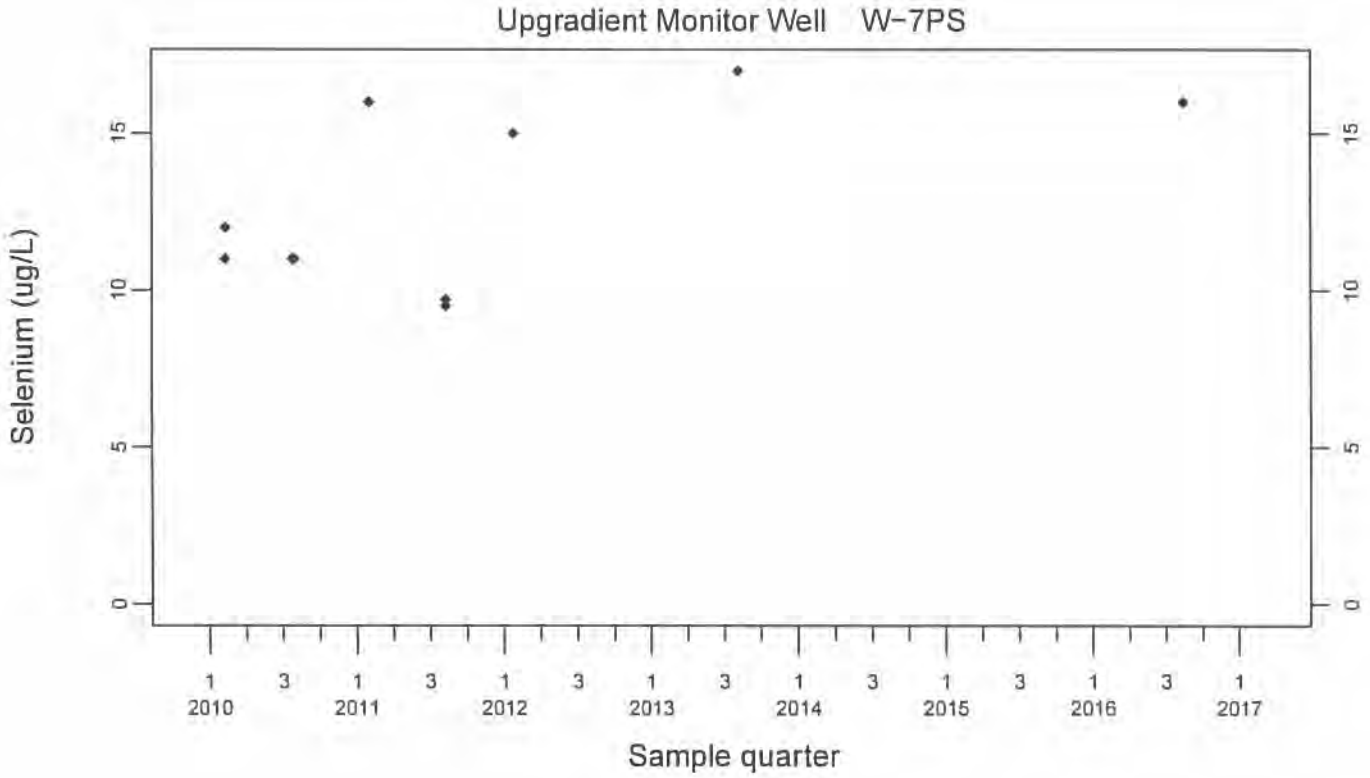

Downgradient Monitor Well W-26R-01
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

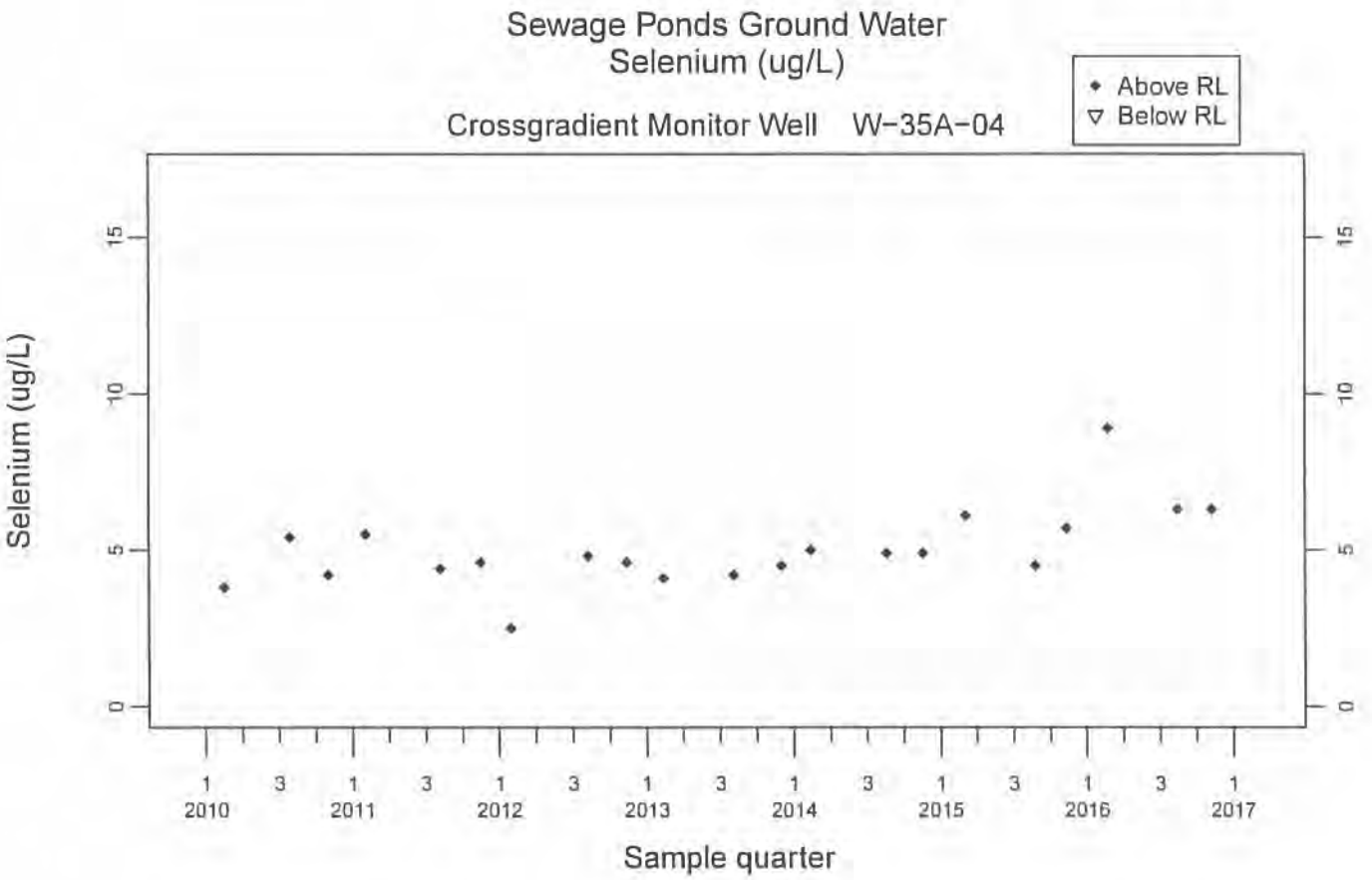

Sewage Ponds Ground Water
Potassium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

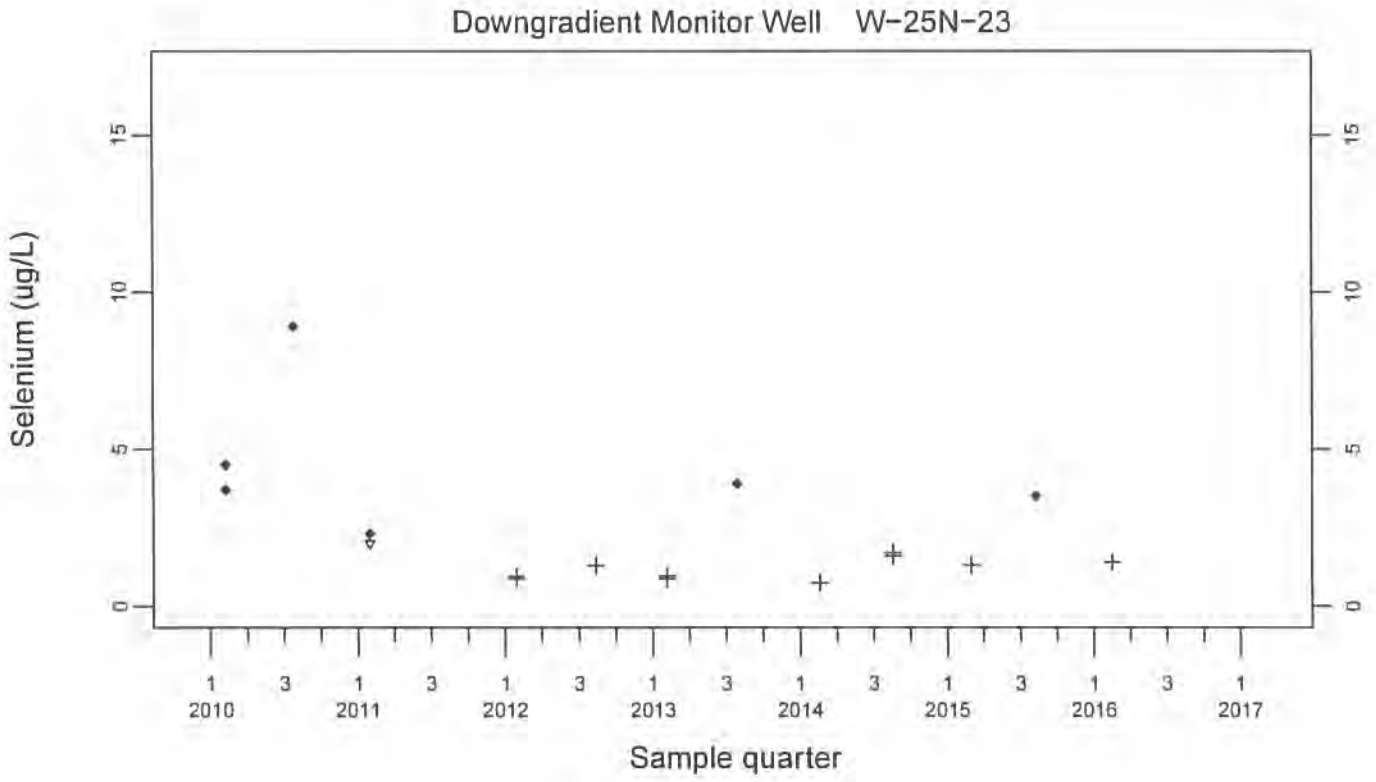

Downgradient Monitor Well W-26R-11
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

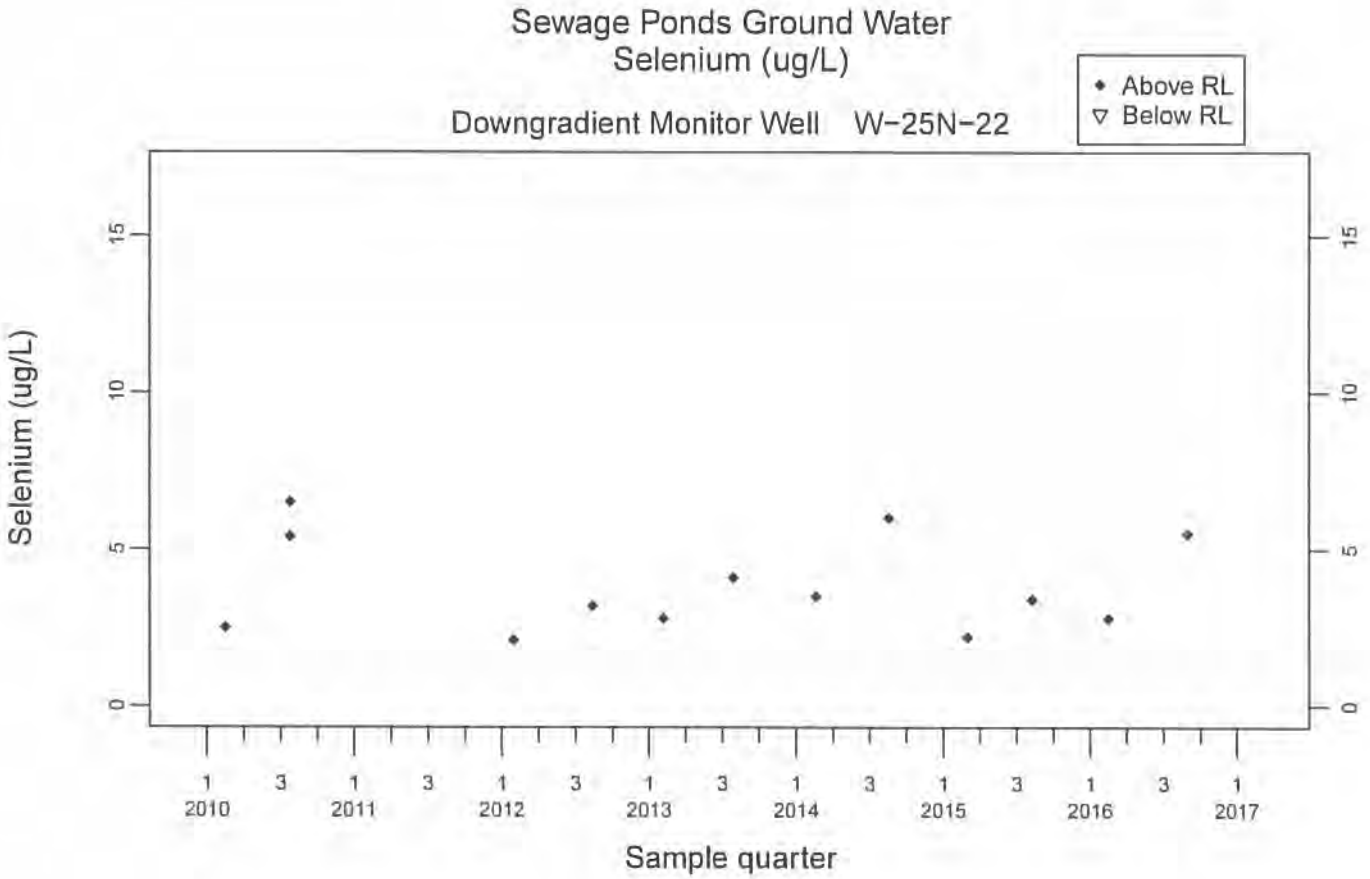

Sewage Ponds Ground Water
Potassium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Potassium (ug/L)
0
2000
4000
6000
8000
10000
12000
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter


Sewage Ponds Ground Water
Selenium (ug/L)
Above RL
Below RL
Upgradient Monitor Well W-7ES
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Upgradient Monitor Well W-7PS
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Selenium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-25N-23
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Selenium (ug/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
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1 2013
3
1 2014
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1 2015
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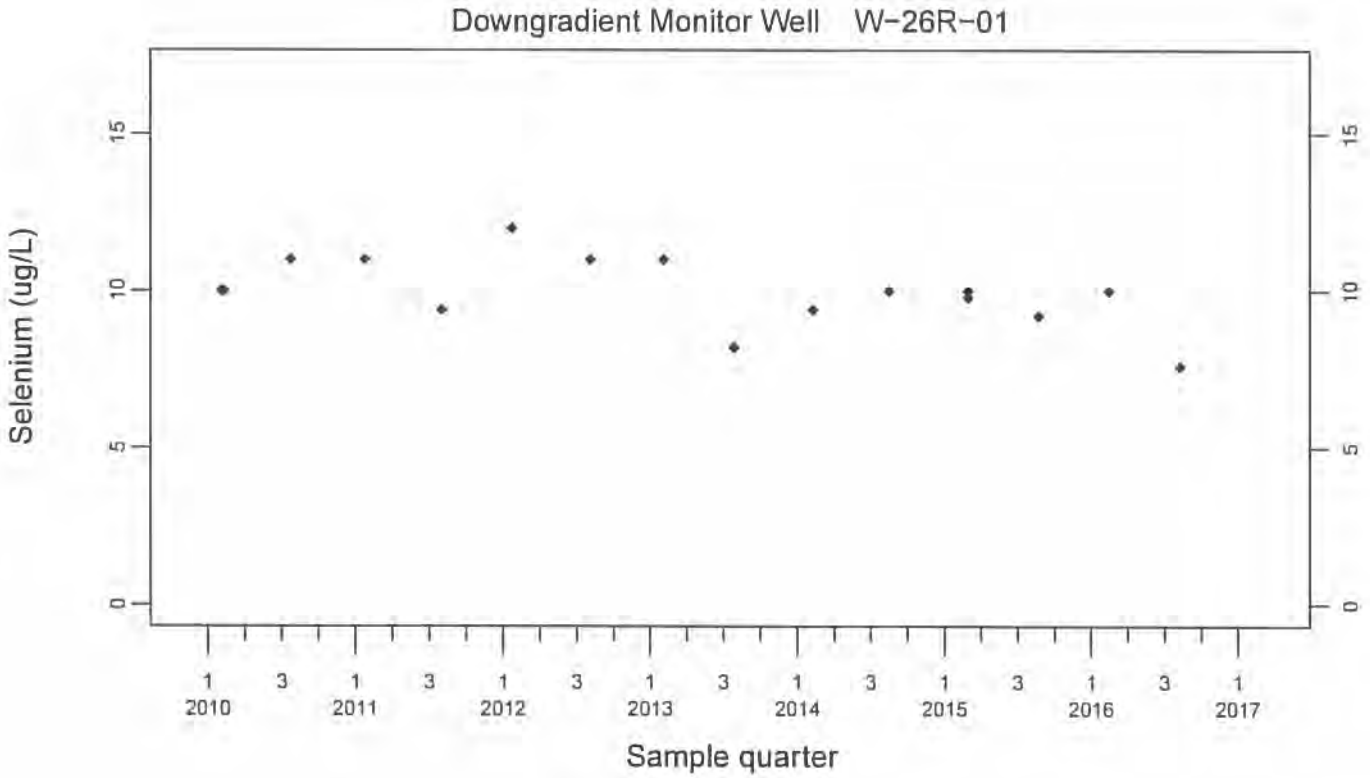
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-01
Selenium (ug/L)
0
5
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15
1 2010
3
1 2011
3
1 2012
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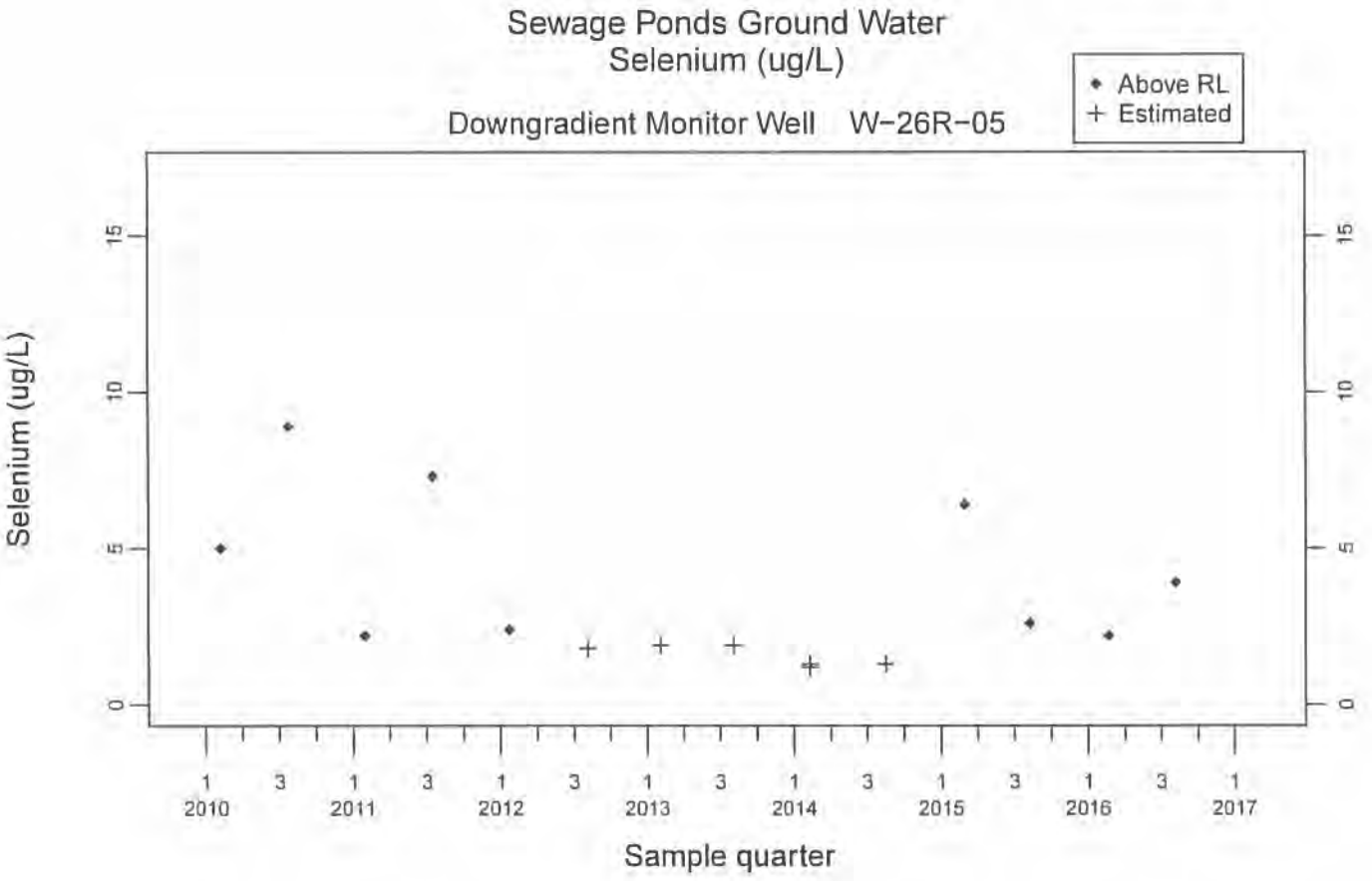
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Selenium (ug/L)
Above RL
Estimated
Downgradient Monitor Well W-26R-05
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
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1 2013
3
1 2014
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1 2015
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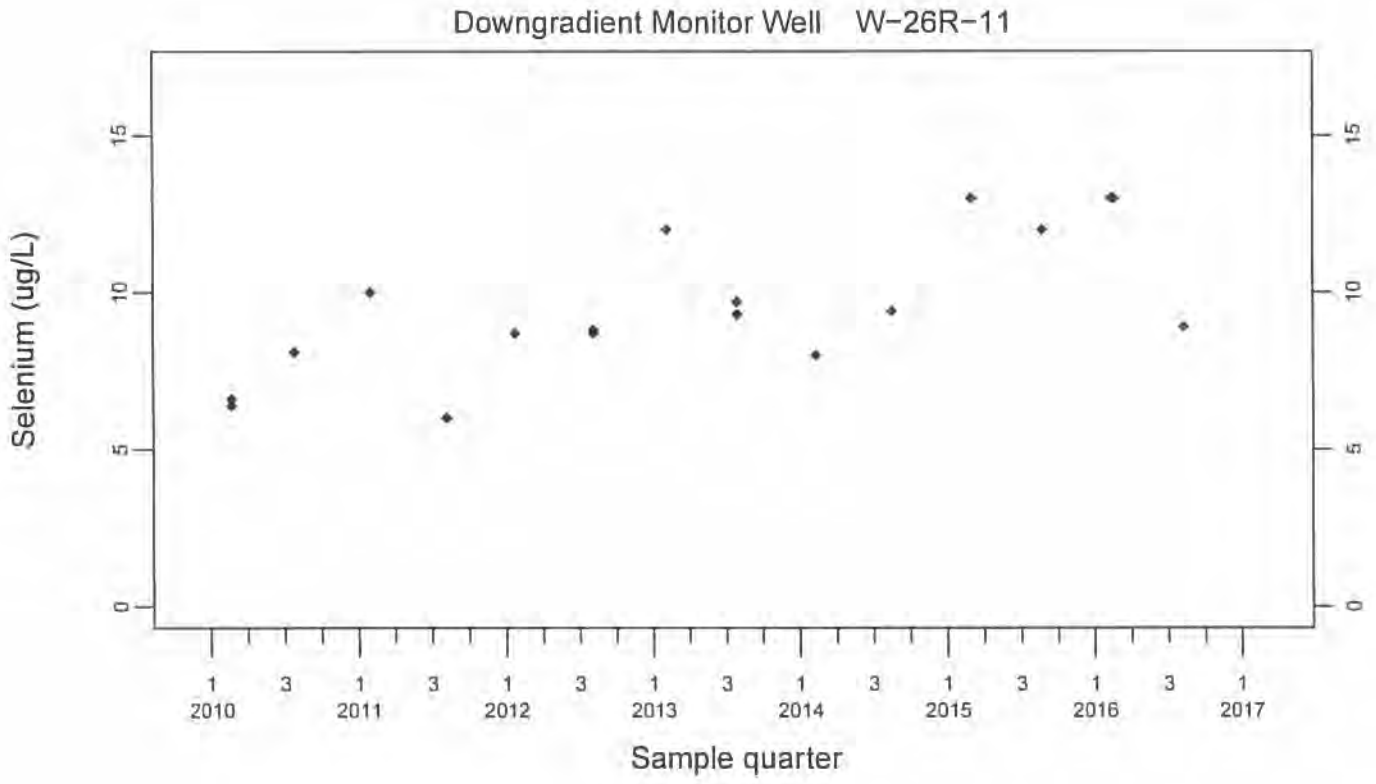
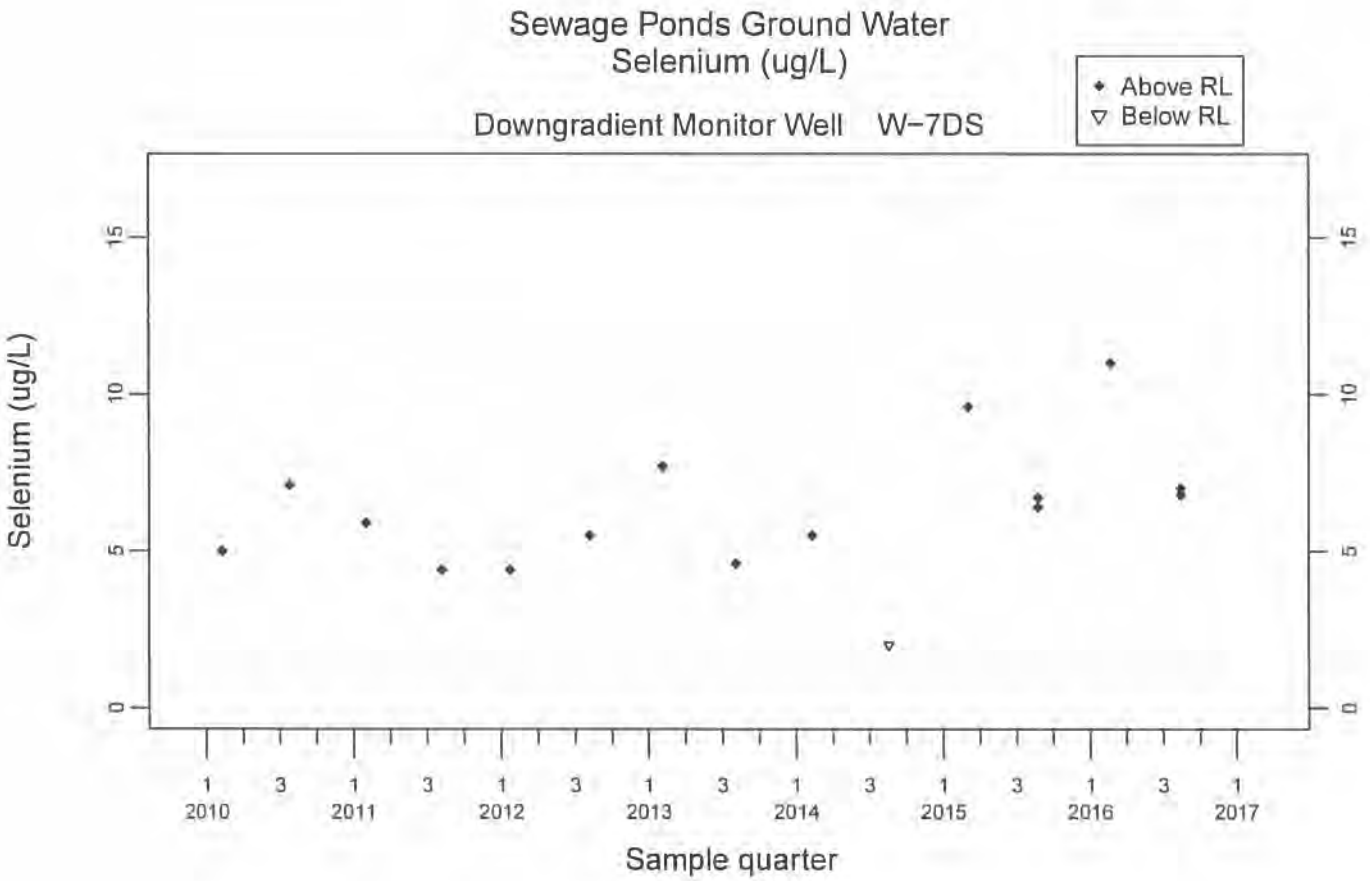
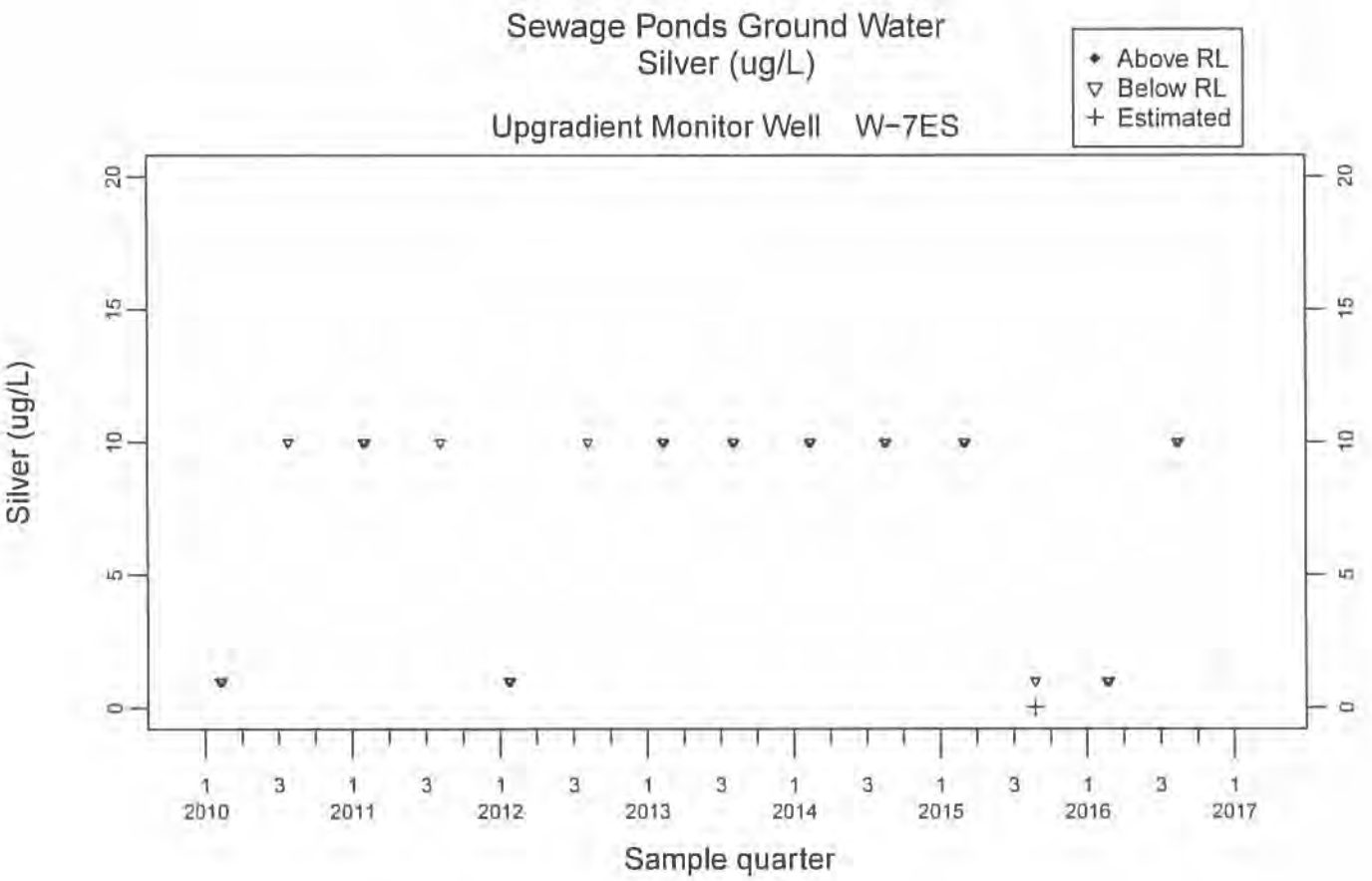
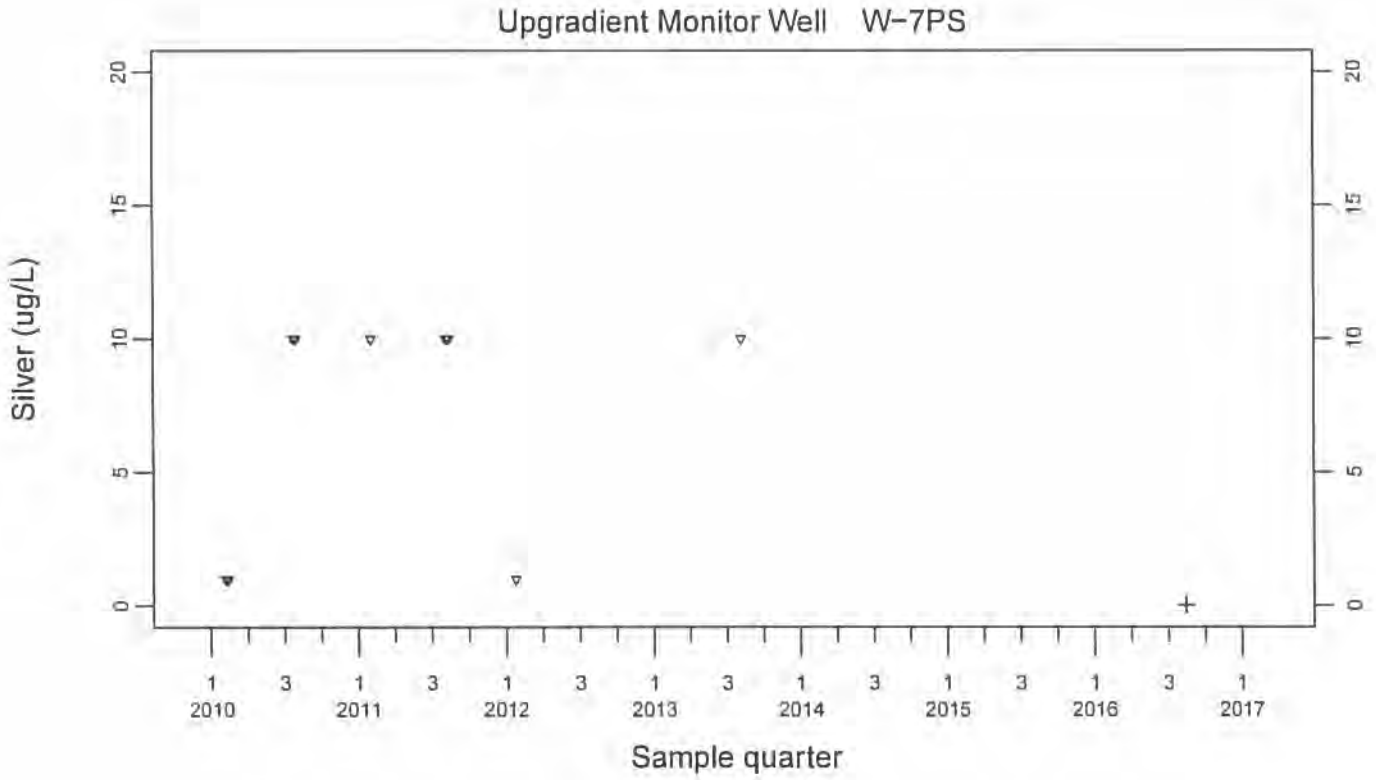
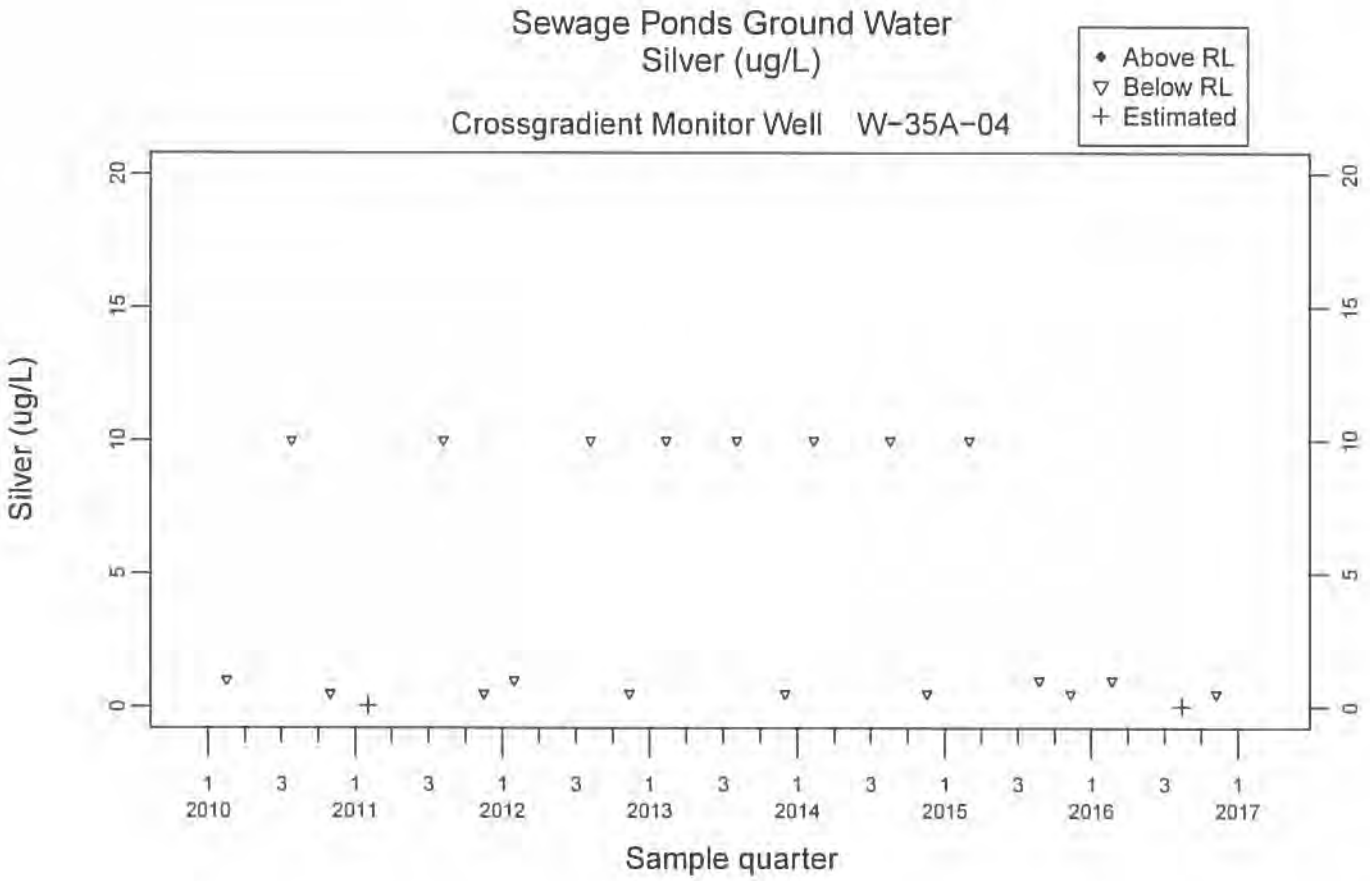
1 2016
3
1 2017
Sample quarter

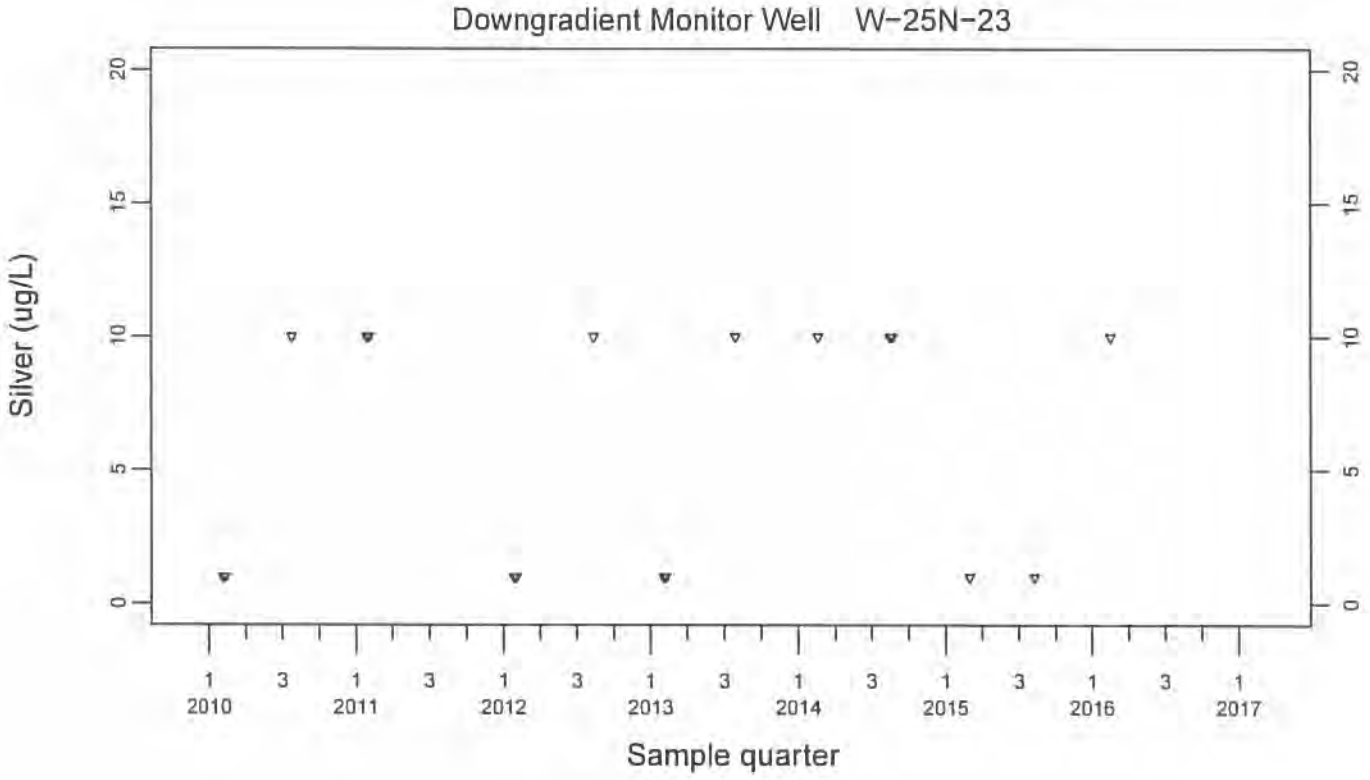

Downgradient Monitor Well W-26R-11
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Selenium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Selenium (ug/L)
0
5
10
15
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Silver (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Silver (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Upgradient Monitor Well W-7PS
Silver (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Silver (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Silver (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Downgradient Monitor Well W-25N-23
Silver (ug/L)
0
5
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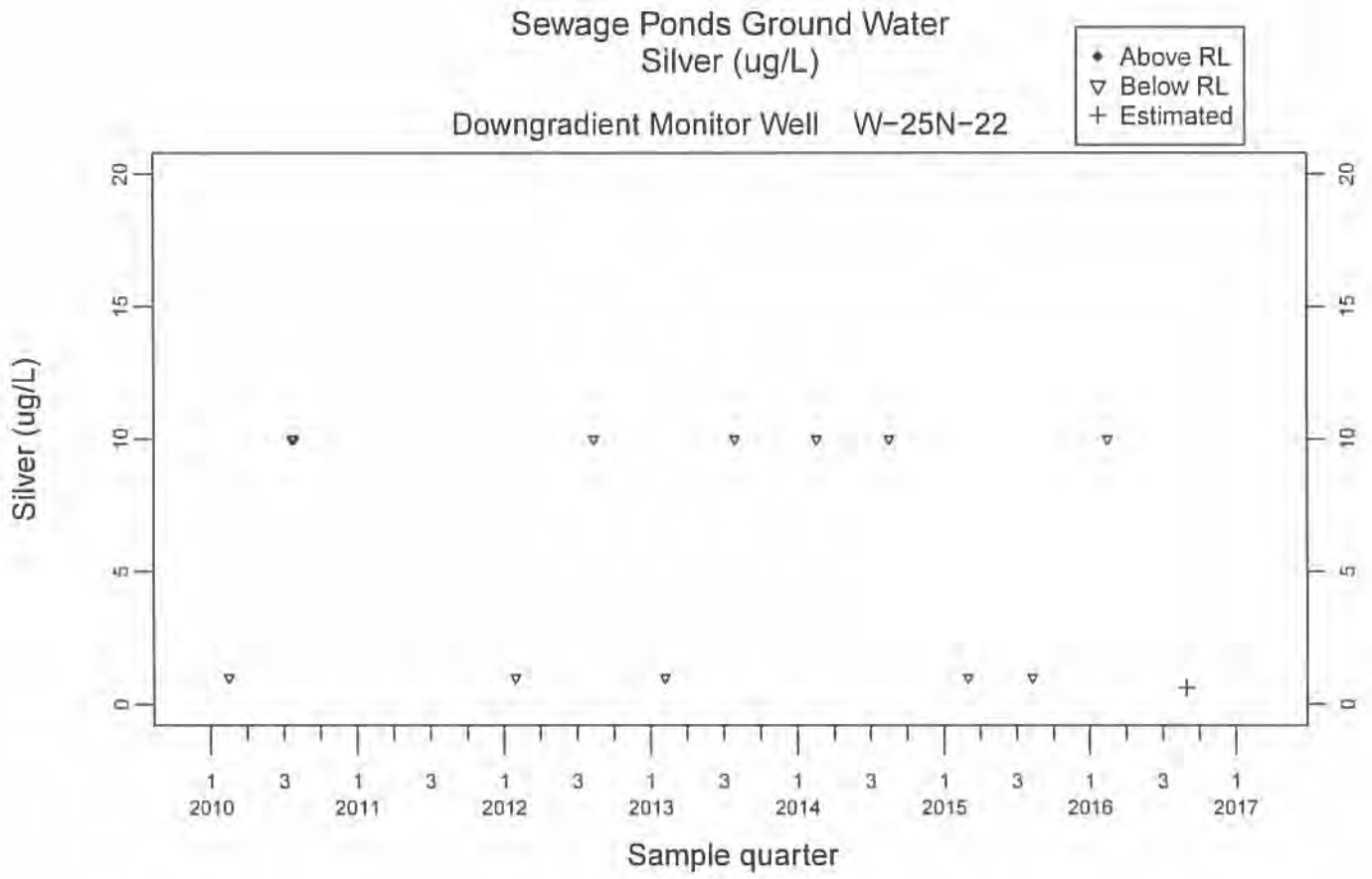
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Silver (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Silver (ug/L)
0
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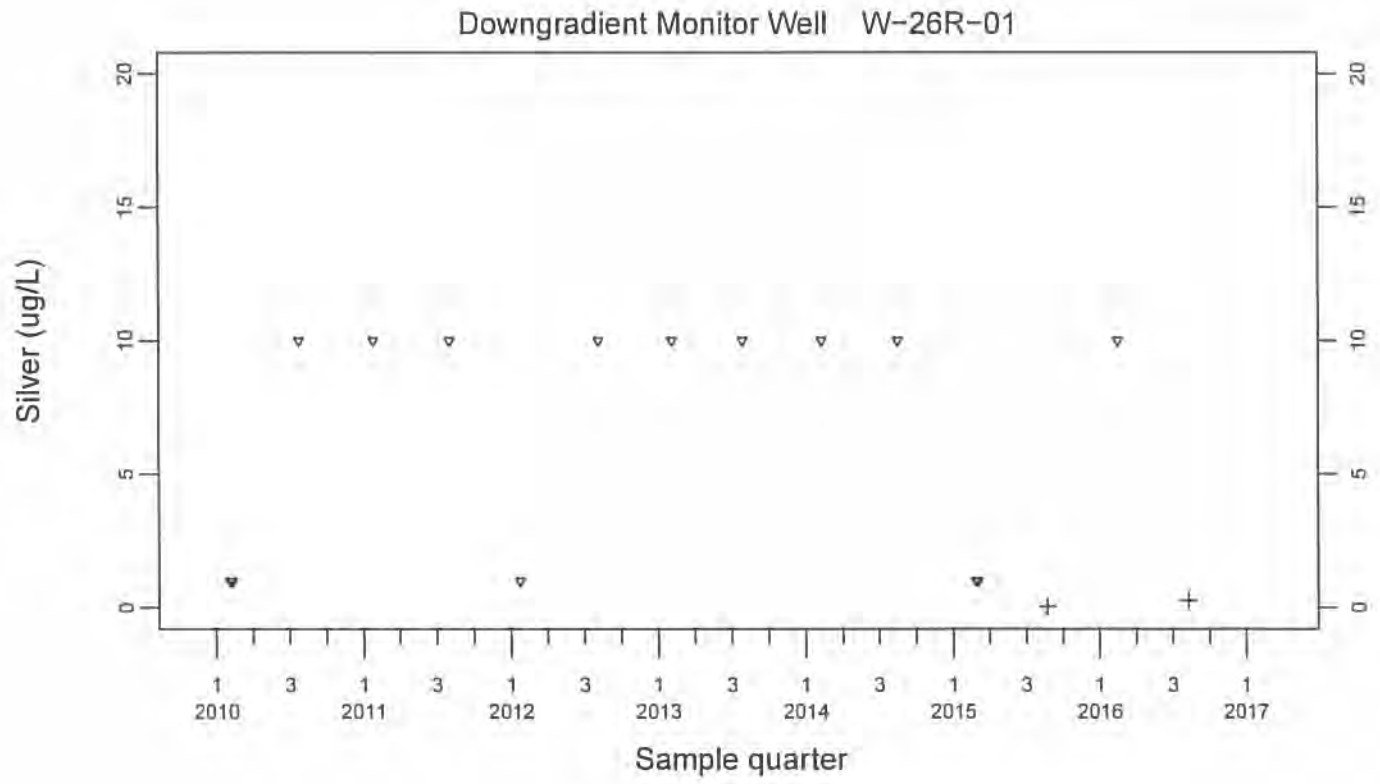
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Downgradient Monitor Well W-26R-01
Silver (ug/L)
0
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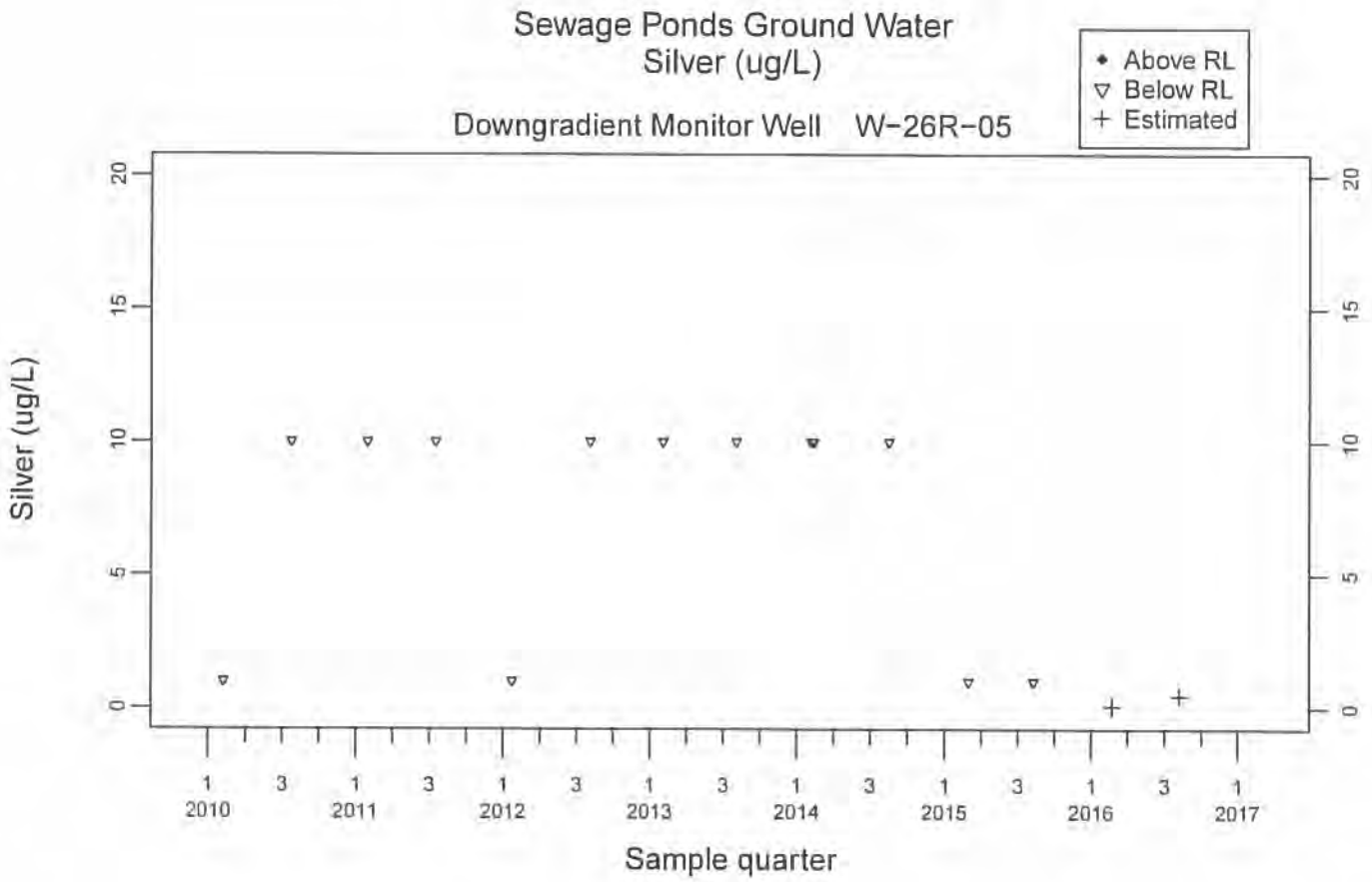
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Silver (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Silver (ug/L)
0
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1 2010
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1 2011
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1 2012
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1 2013
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1 2014
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1 2015
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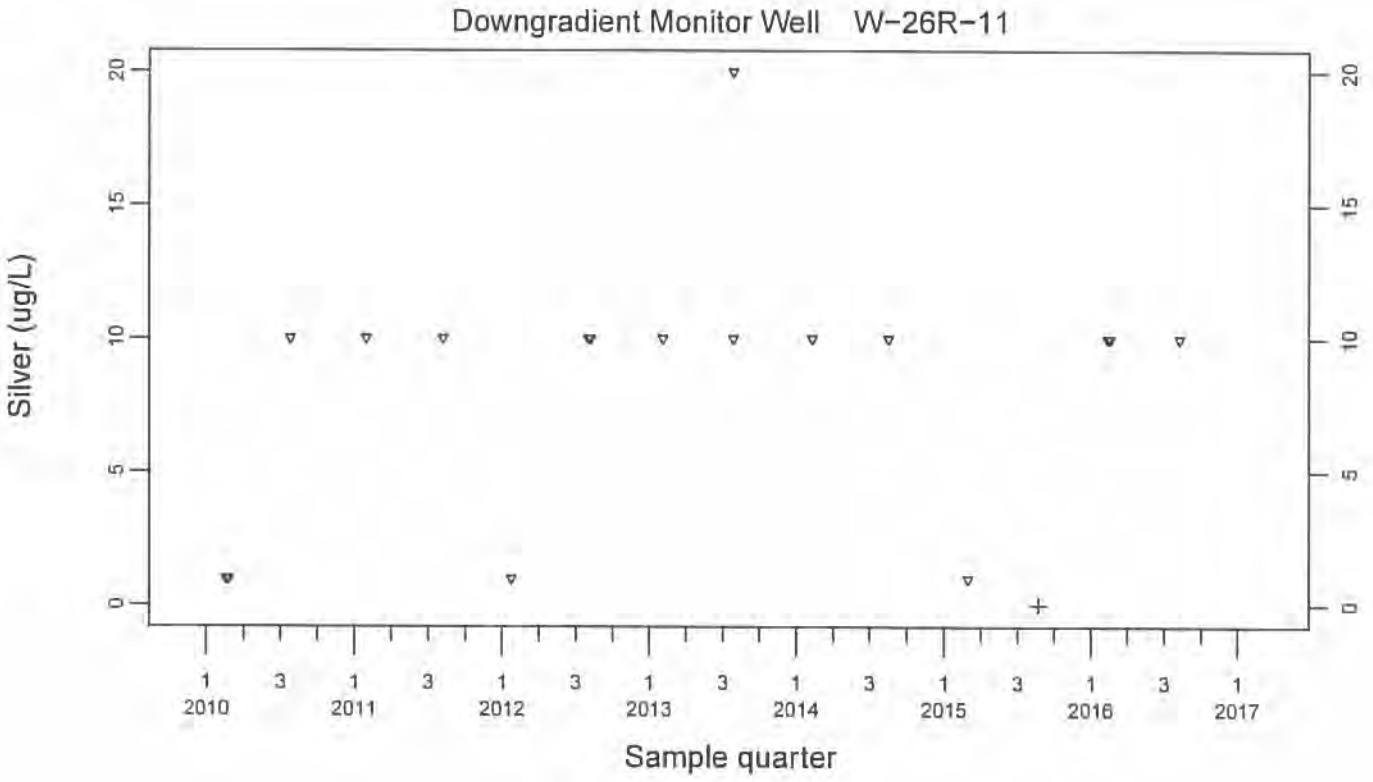
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-11
Silver (ug/L)
0
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1 2010
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1 2011
3
1 2012
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1 2013
3
1 2014
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1 2015
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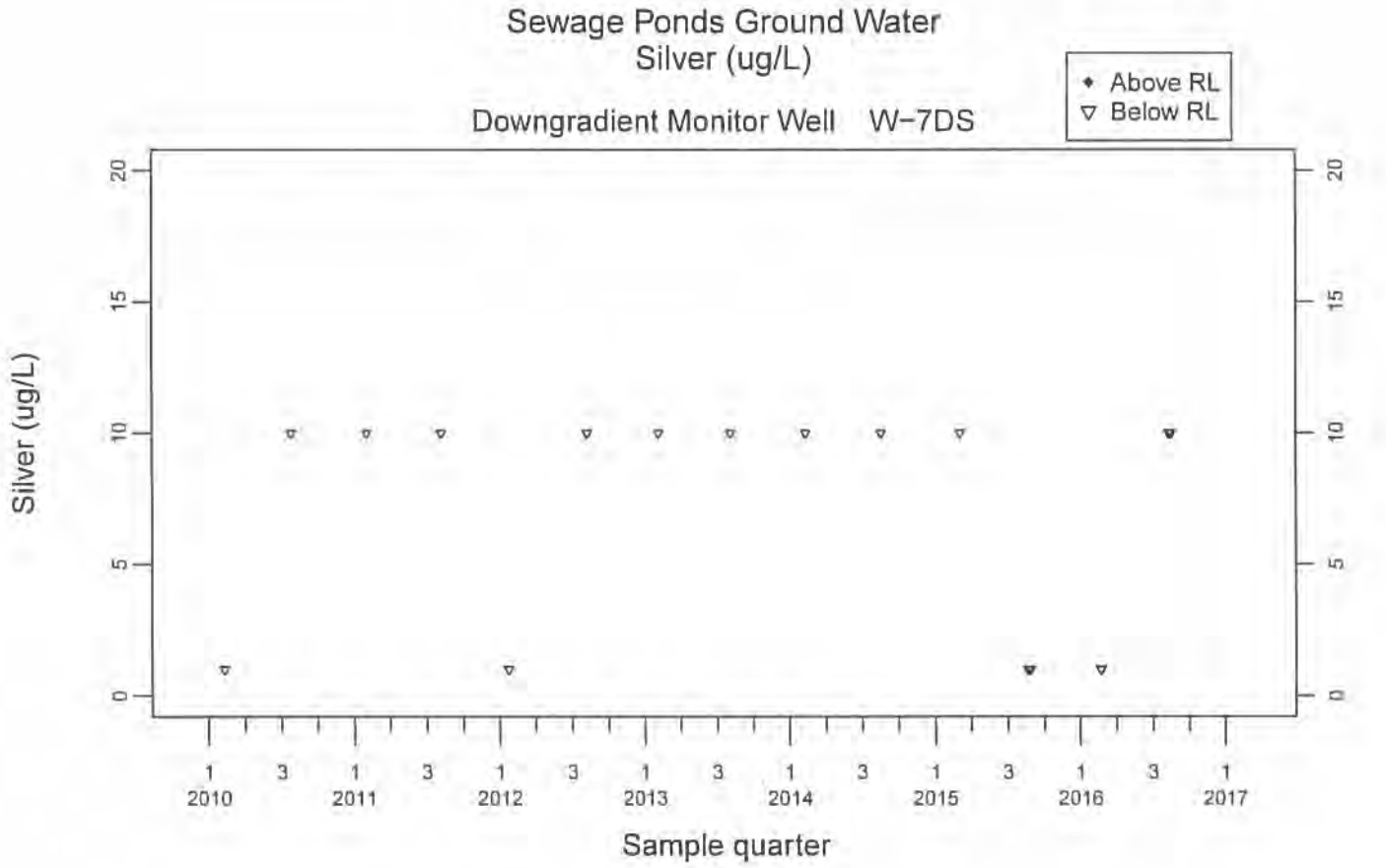
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Silver (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Silver (ug/L)
0
5
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1 2010
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1 2011
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1 2012
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1 2013
3
1 2014
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1 2015
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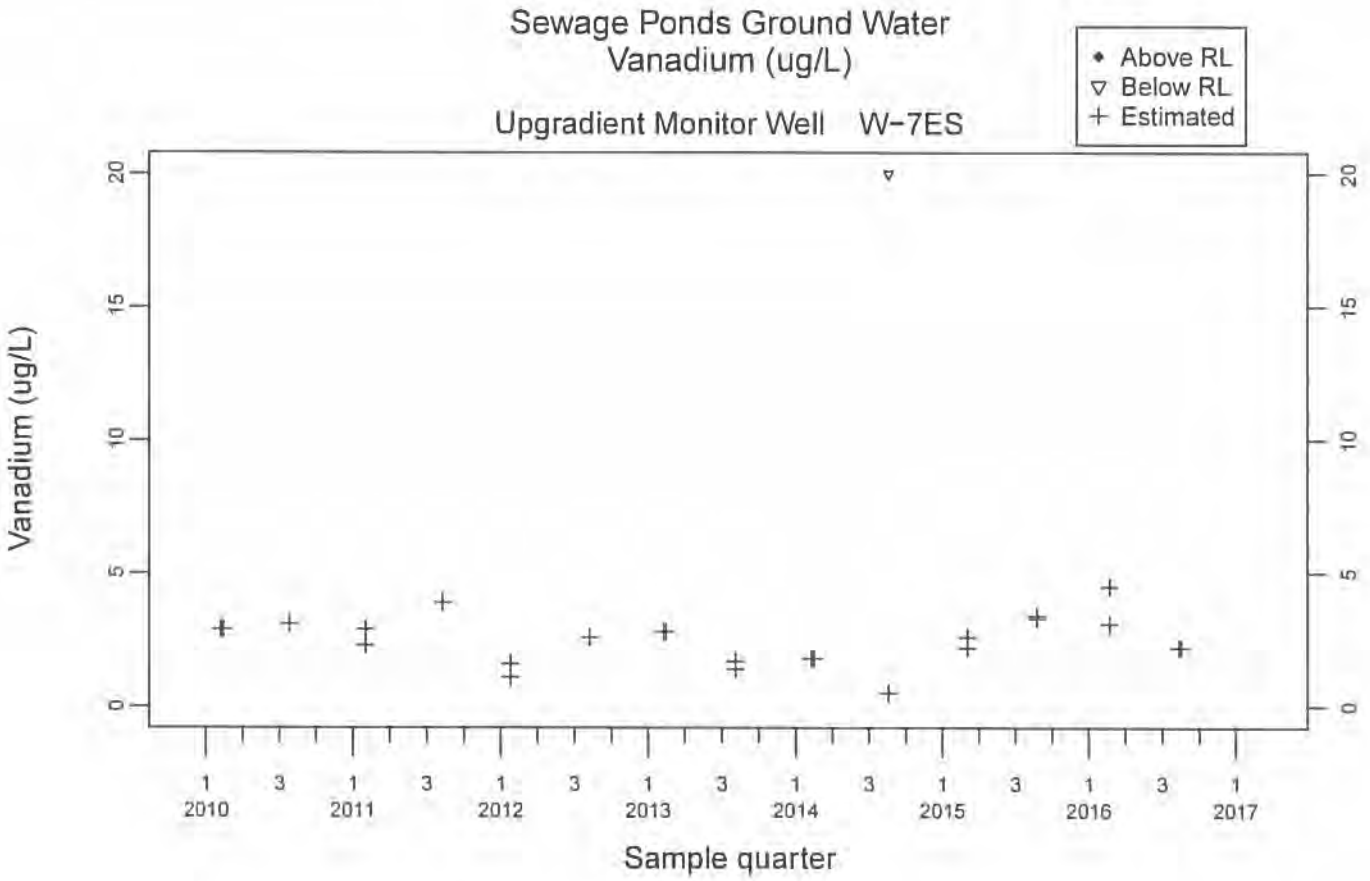
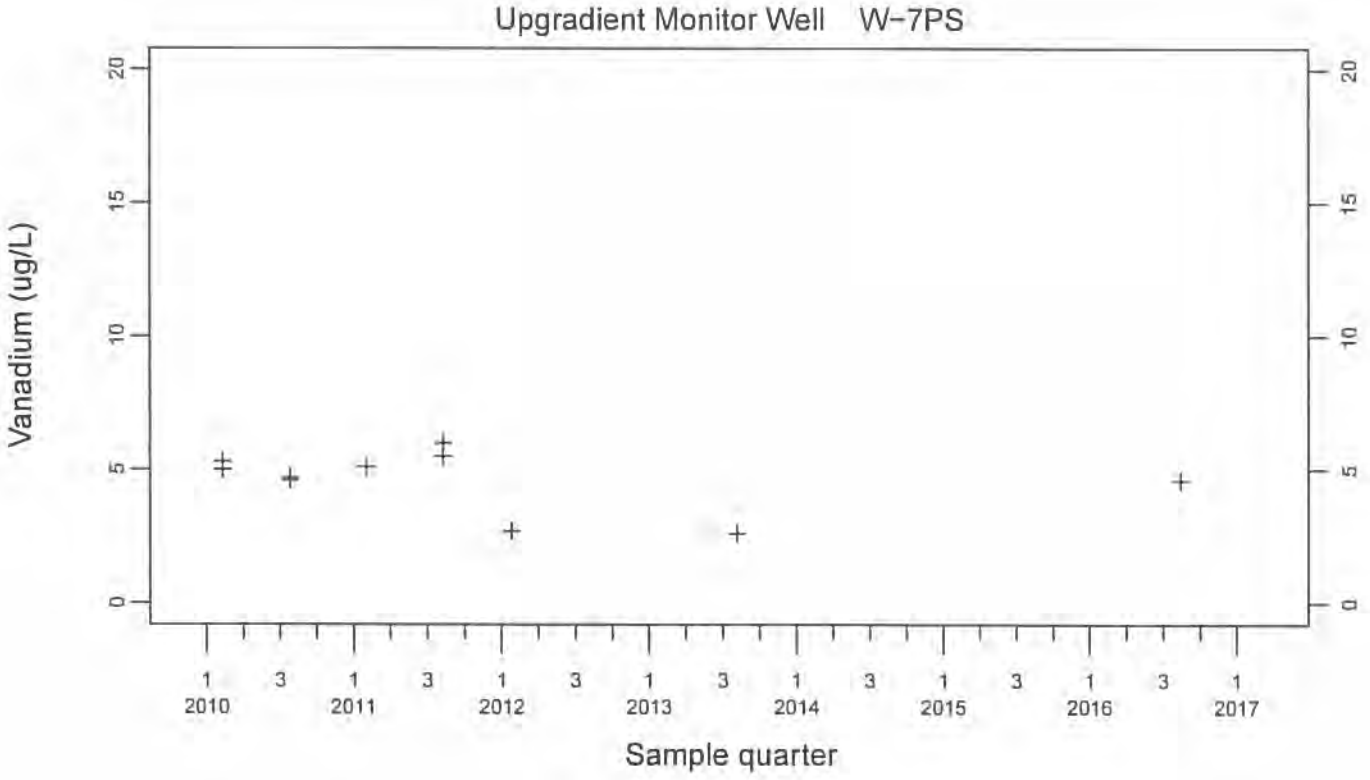
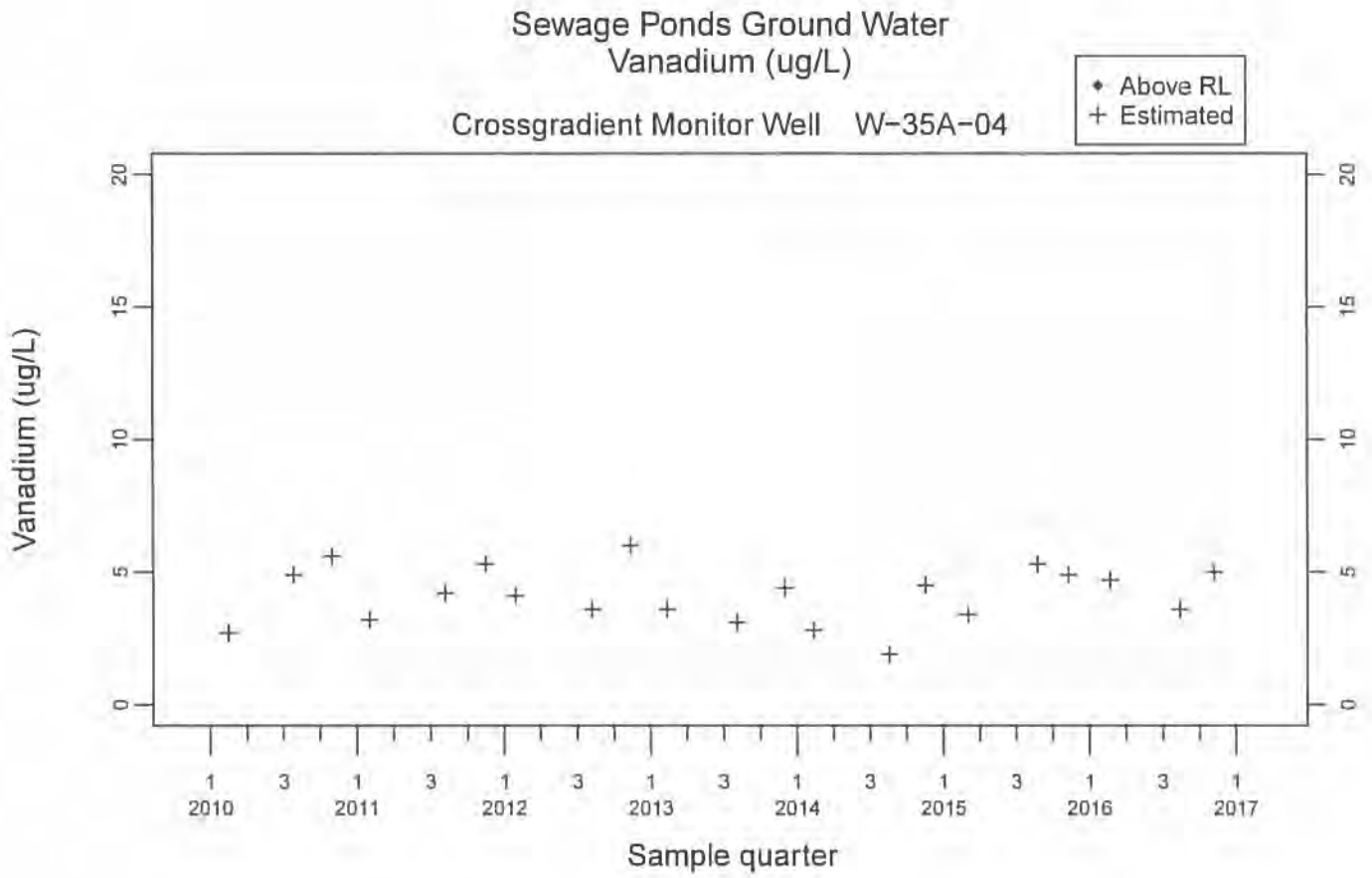
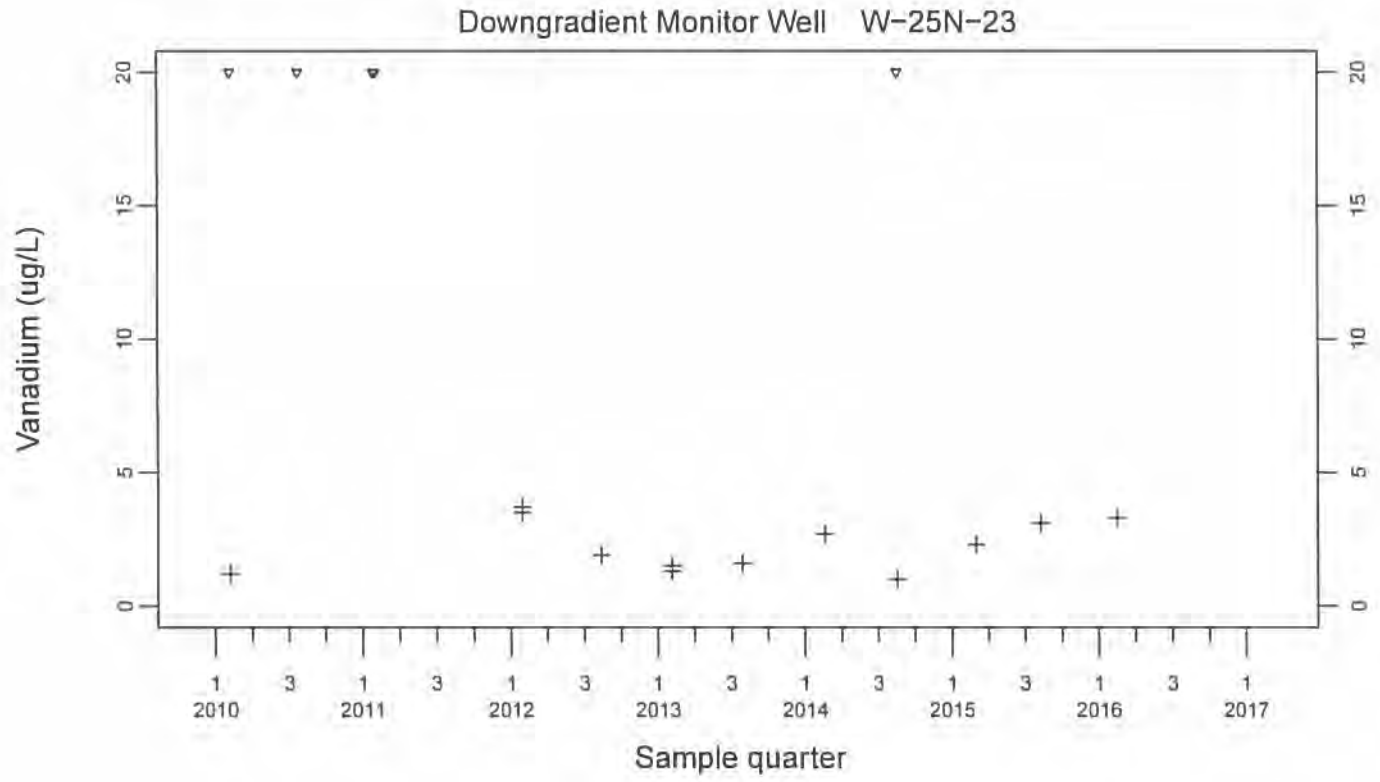
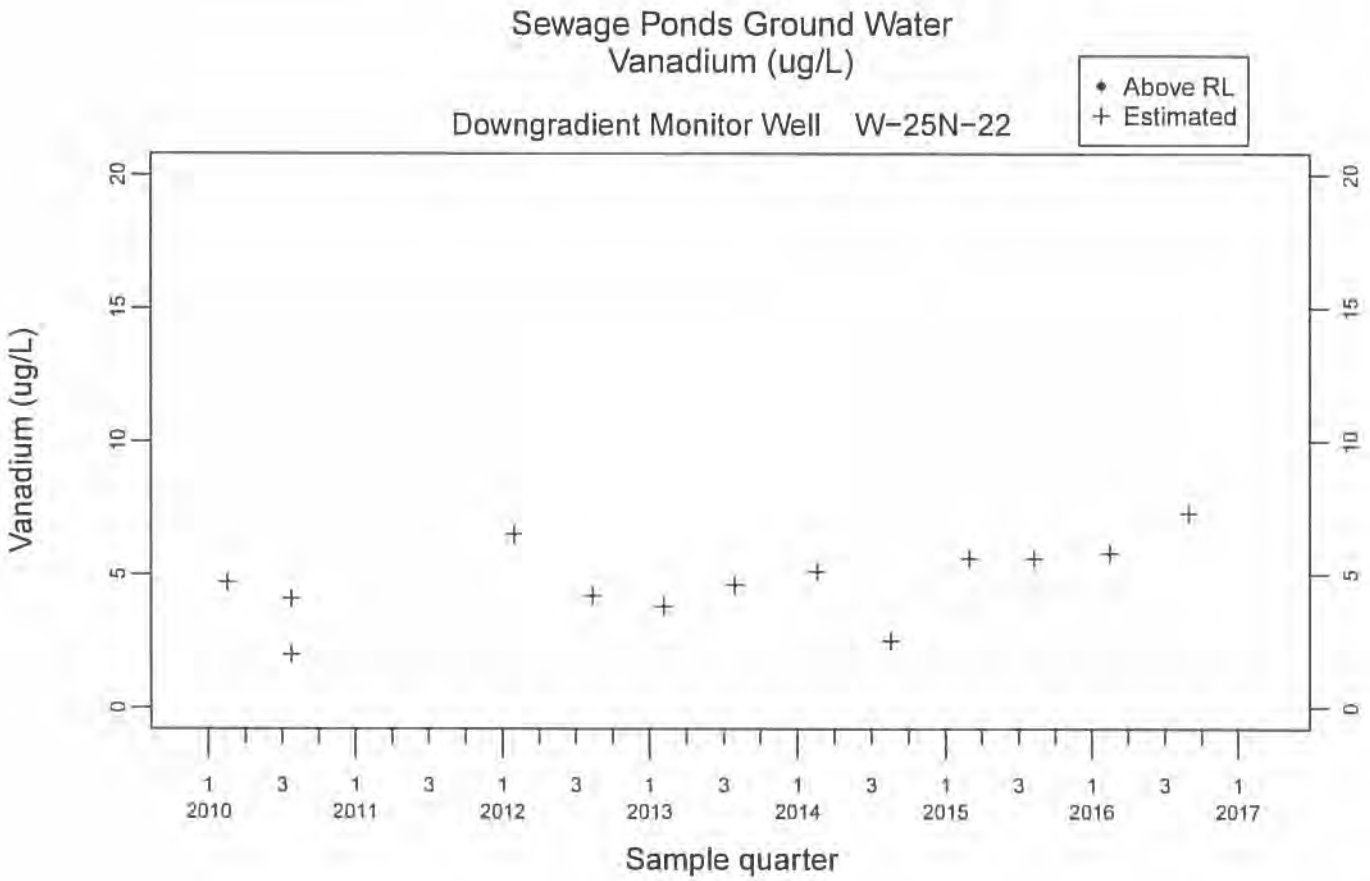
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Vanadium (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Upgradient Monitor Well W-7PS
Vanadium (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Vanadium (ug/L)
Crossgradient Monitor Well W-35A-04
Above RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Downgradient Monitor Well W-25N-23
Vanadium (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Vanadium (ug/L)
Downgradient Monitor Well W-25N-22
Above RL
Estimated
Vanadium (ug/L)
0
5
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1 2010
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1 2011
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1 2012
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1 2013
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1 2014
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1 2015
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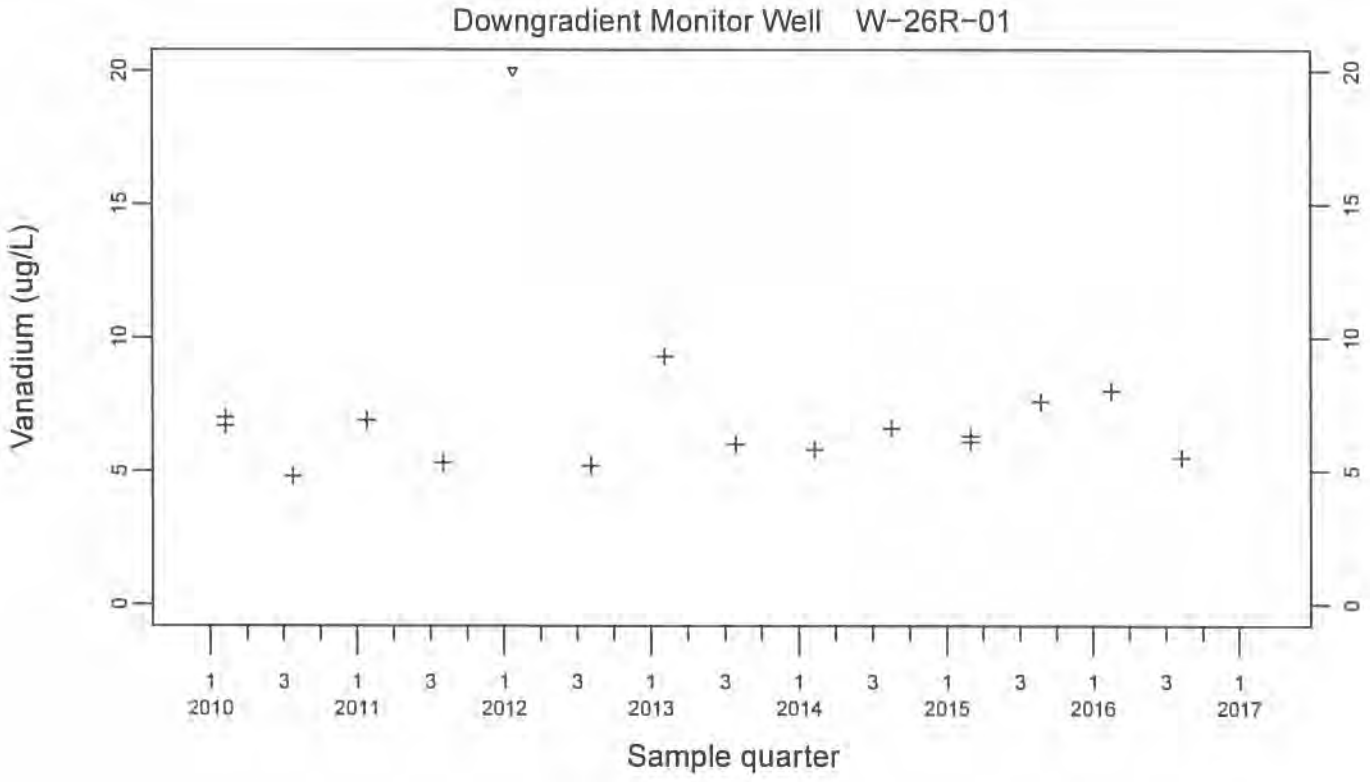
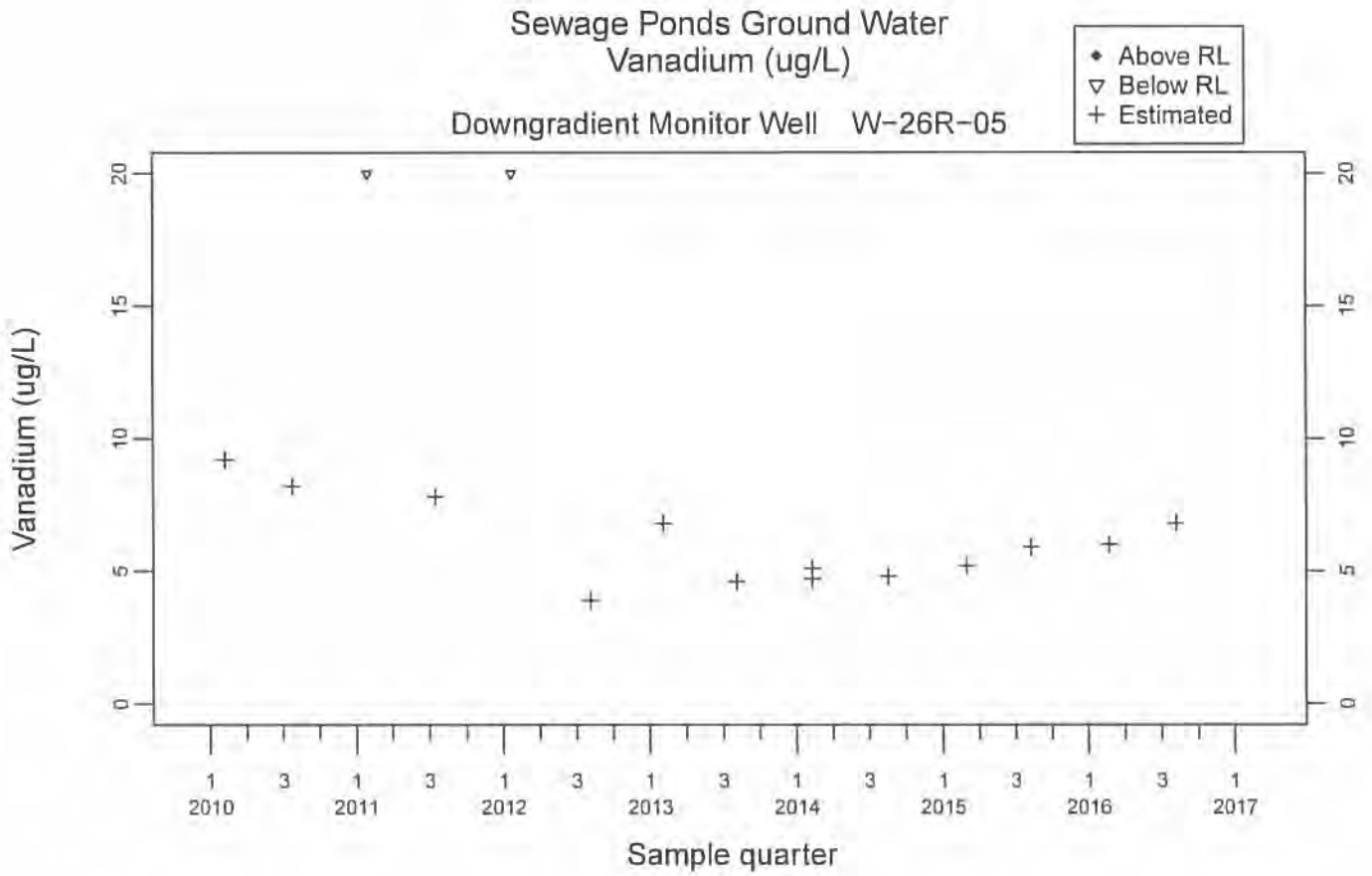
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-01
Vanadium (ug/L)
0
5
10
15
20
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Vanadium (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Vanadium (ug/L)
0
5
10
15
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1 2010
3
1 2011
3
1 2012
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1 2013
3
1 2014
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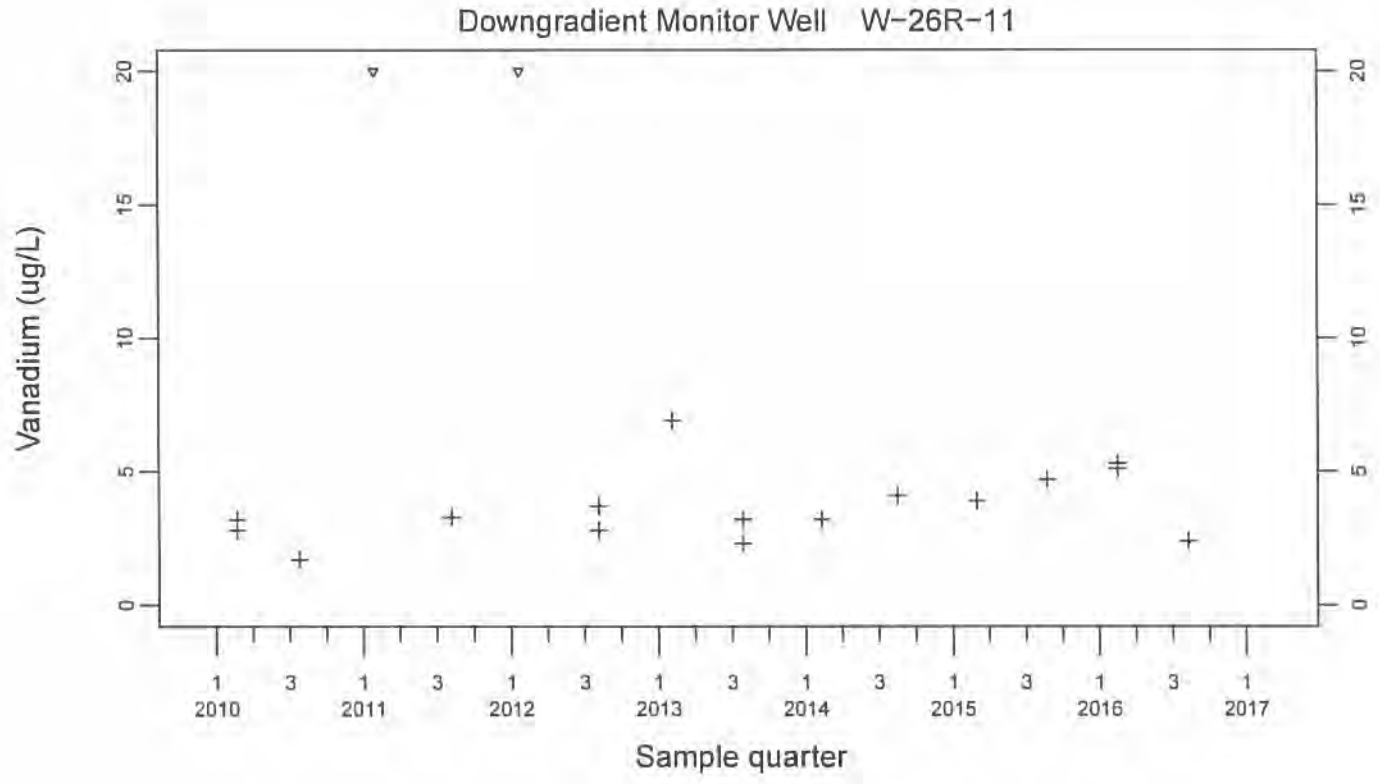
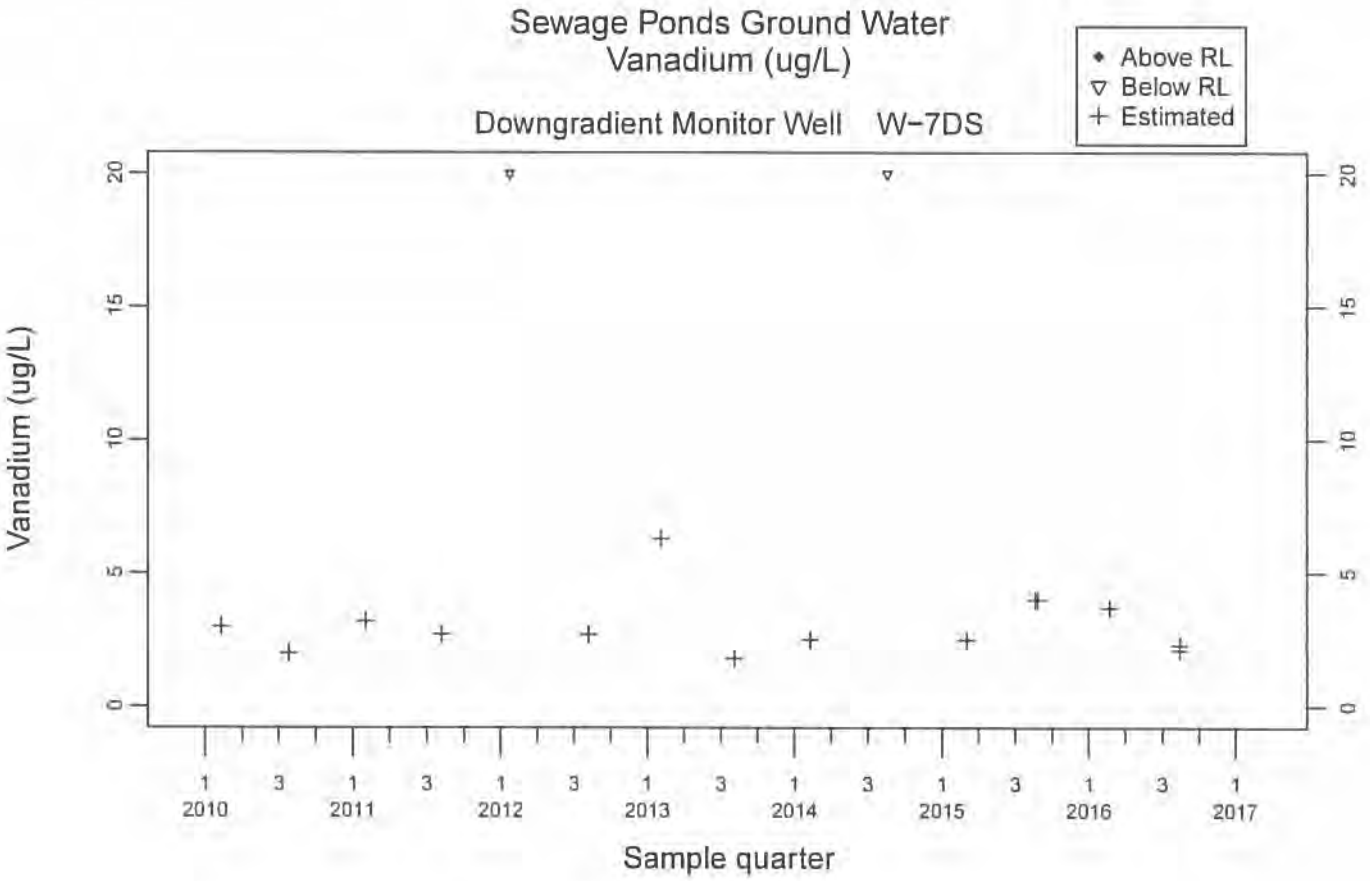
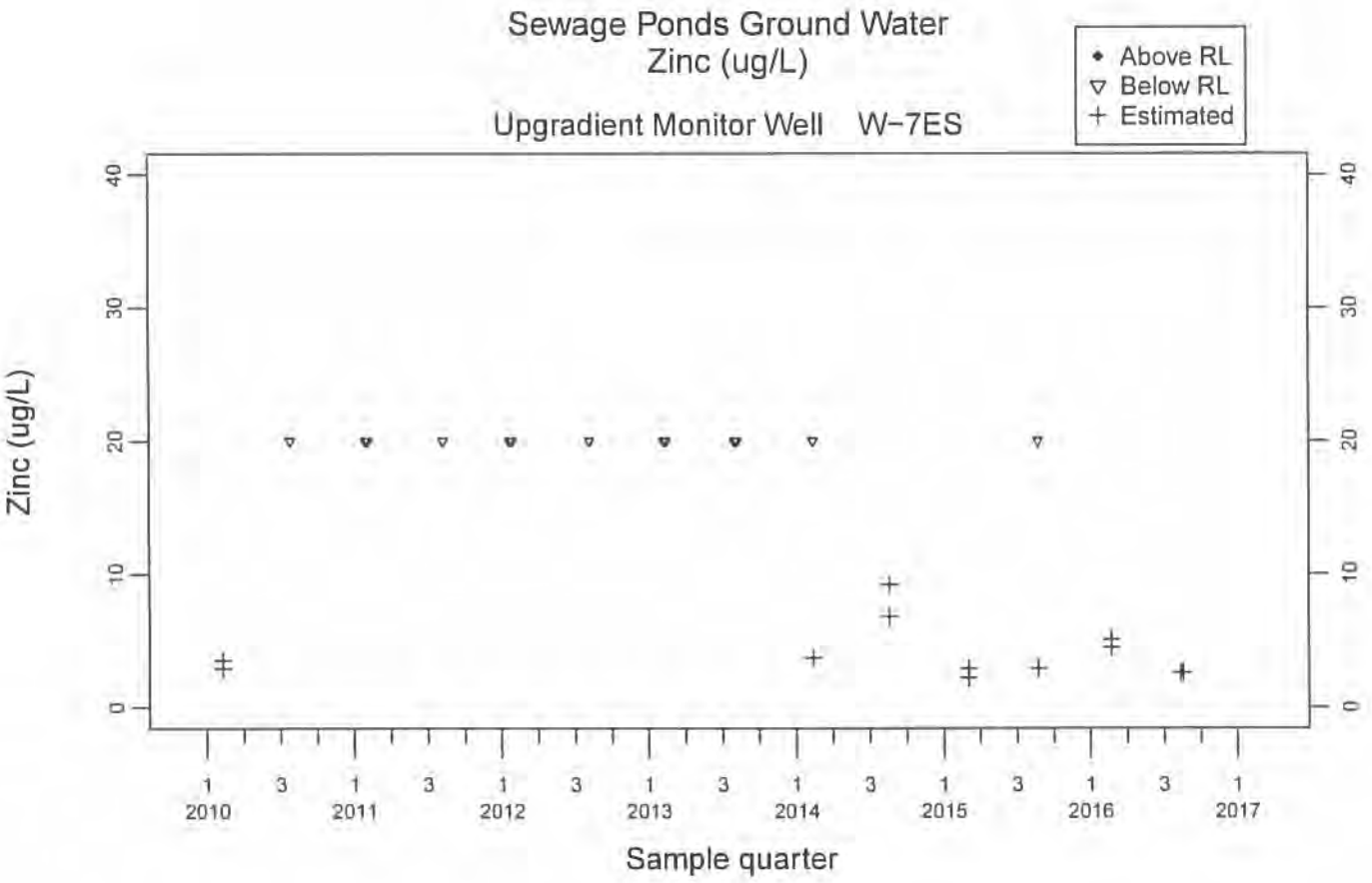
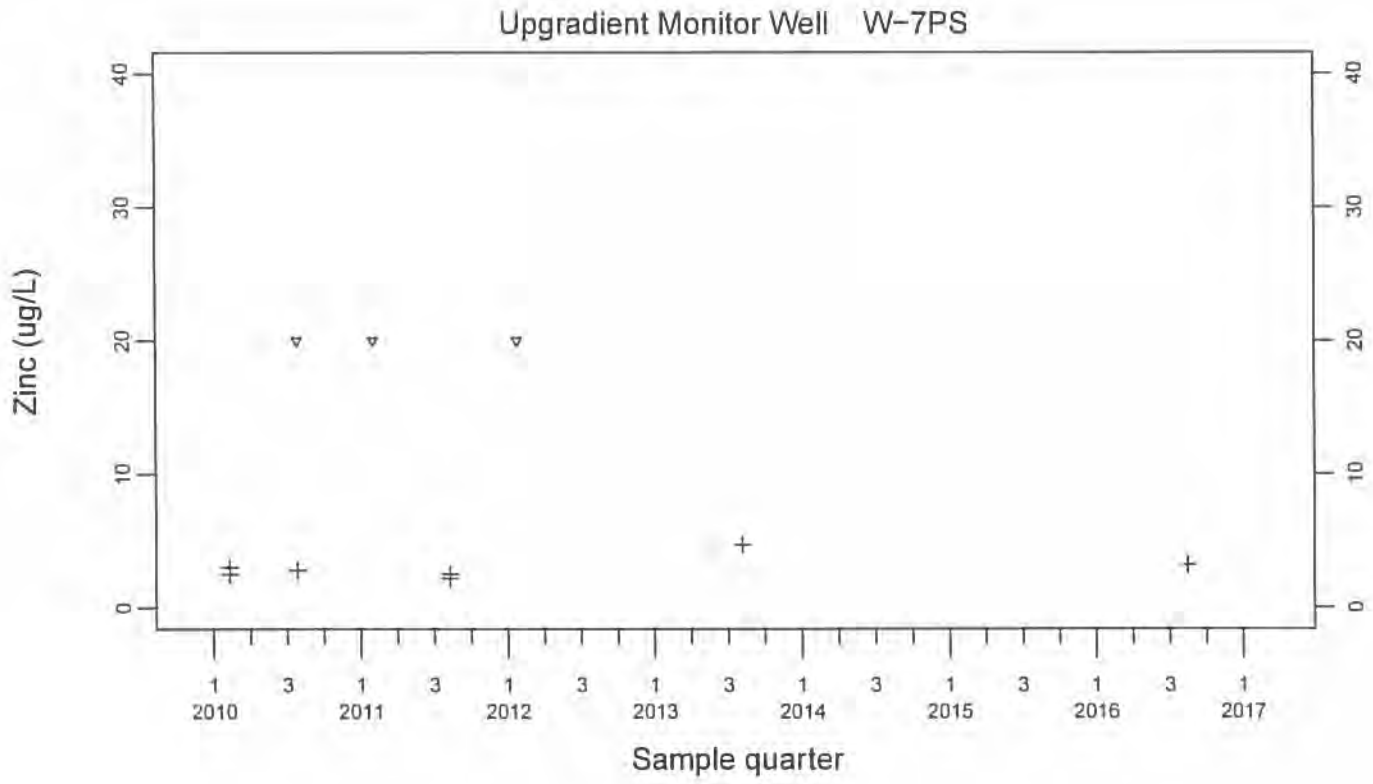
1 2015
3
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-11
Vanadium (ug/L)
0
5
10
15
20
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Vanadium (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Vanadium (ug/L)
0
5
10
15
20
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Zinc (ug/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Estimated
Zinc (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Upgradient Monitor Well W-7PS
Zinc (ug/L)
0
10
20
30
40
1 2010
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1 2011
3
1 2012
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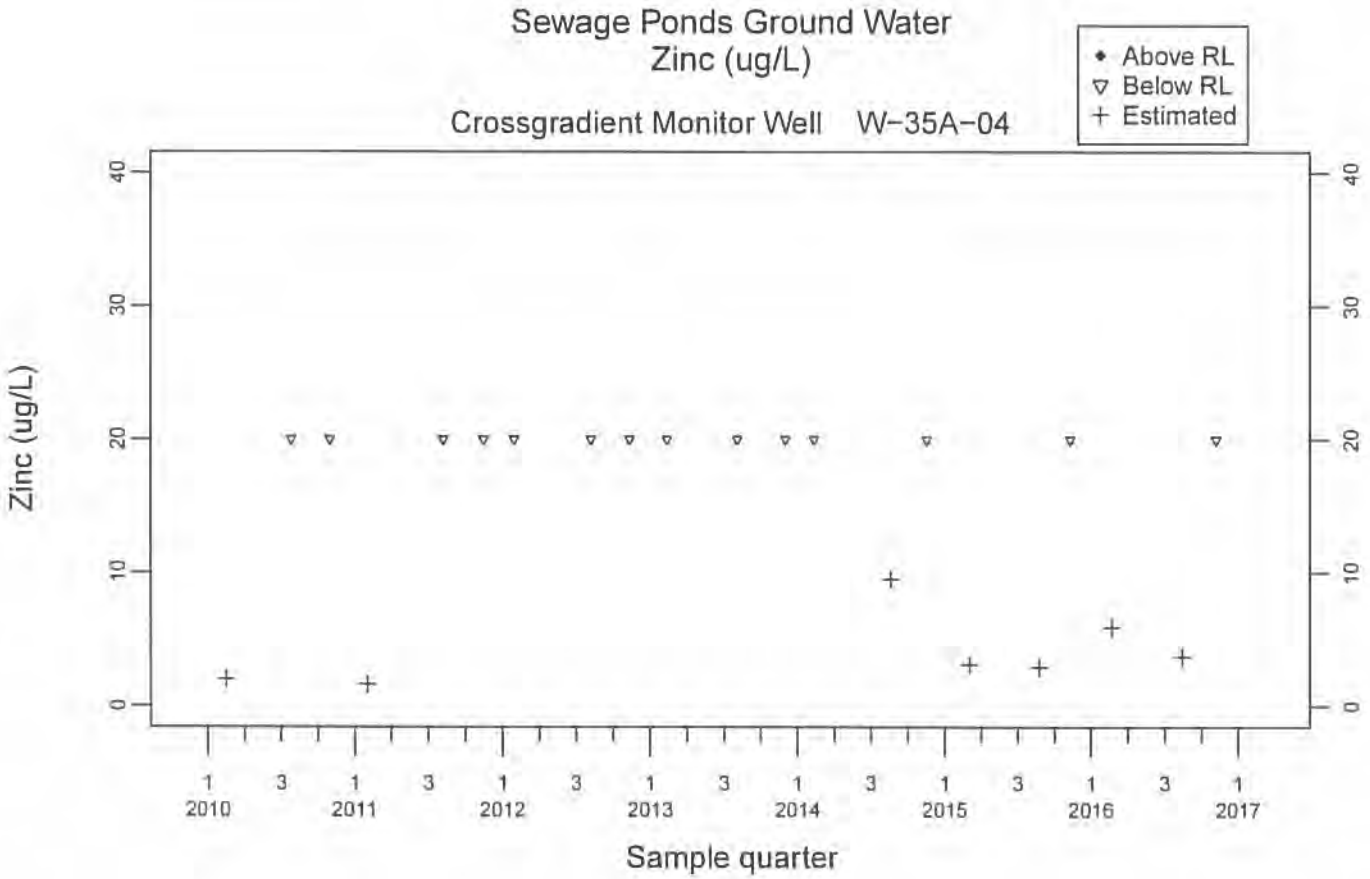
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Zinc (ug/L)
Above RL
Below RL
Estimated
Crossgradient Monitor Well W-35A-04
Zinc (ug/L)
0
10
20
30
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1 2010
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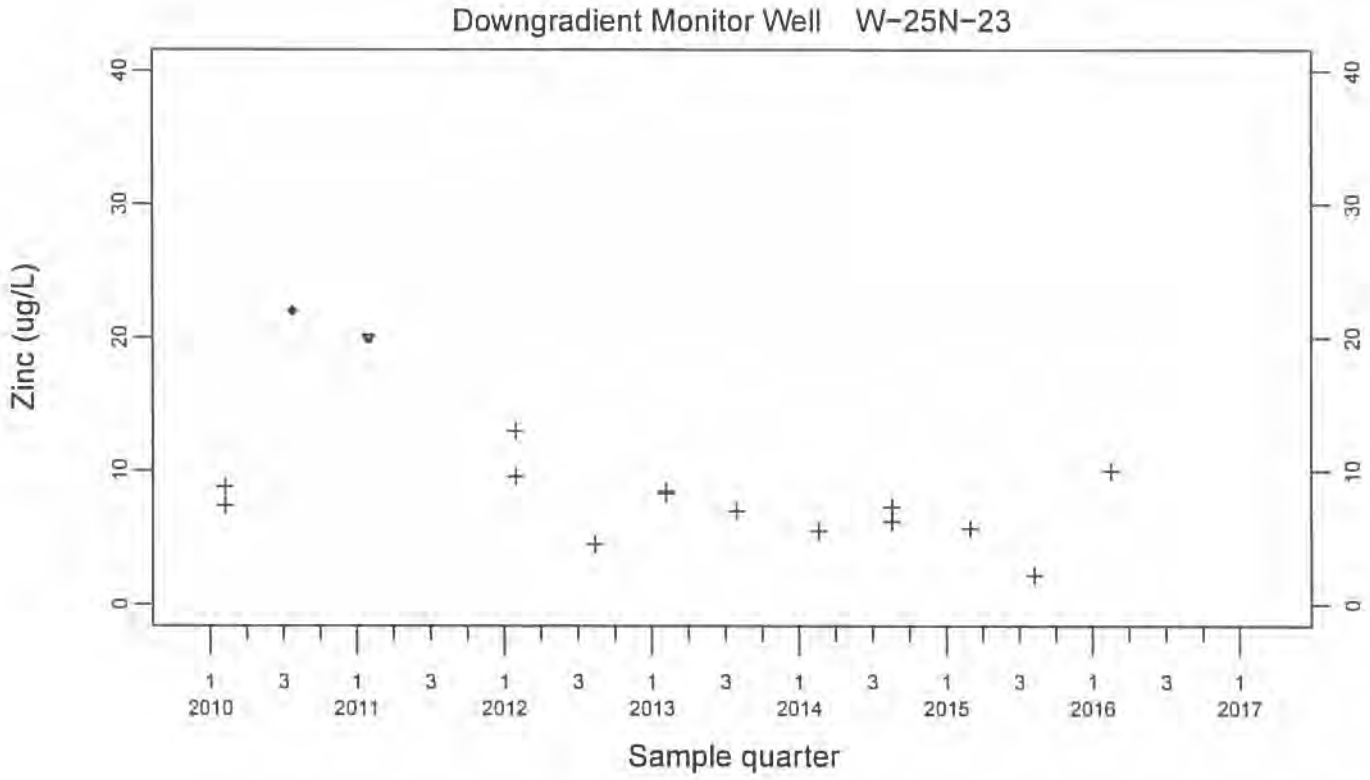
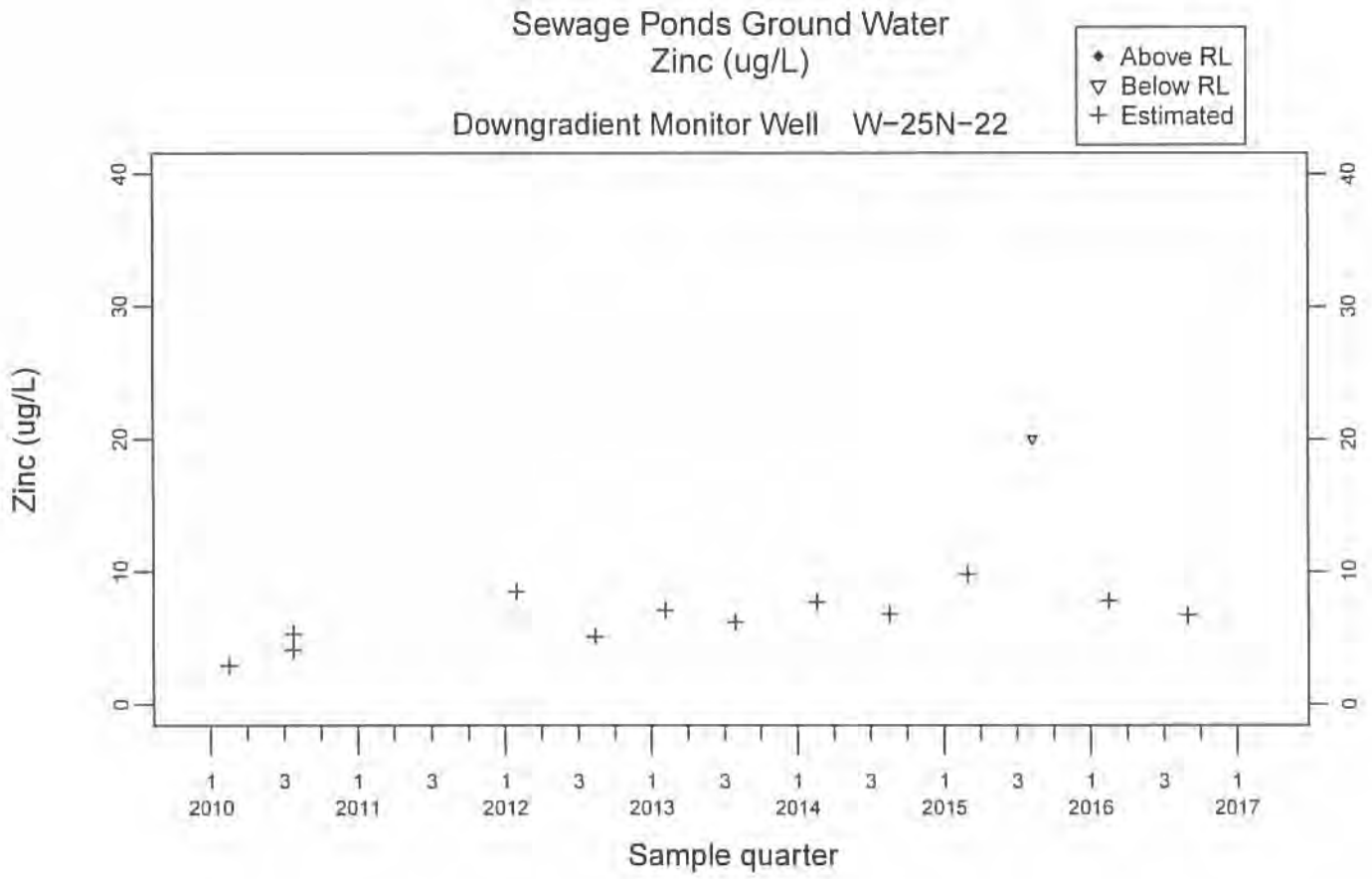
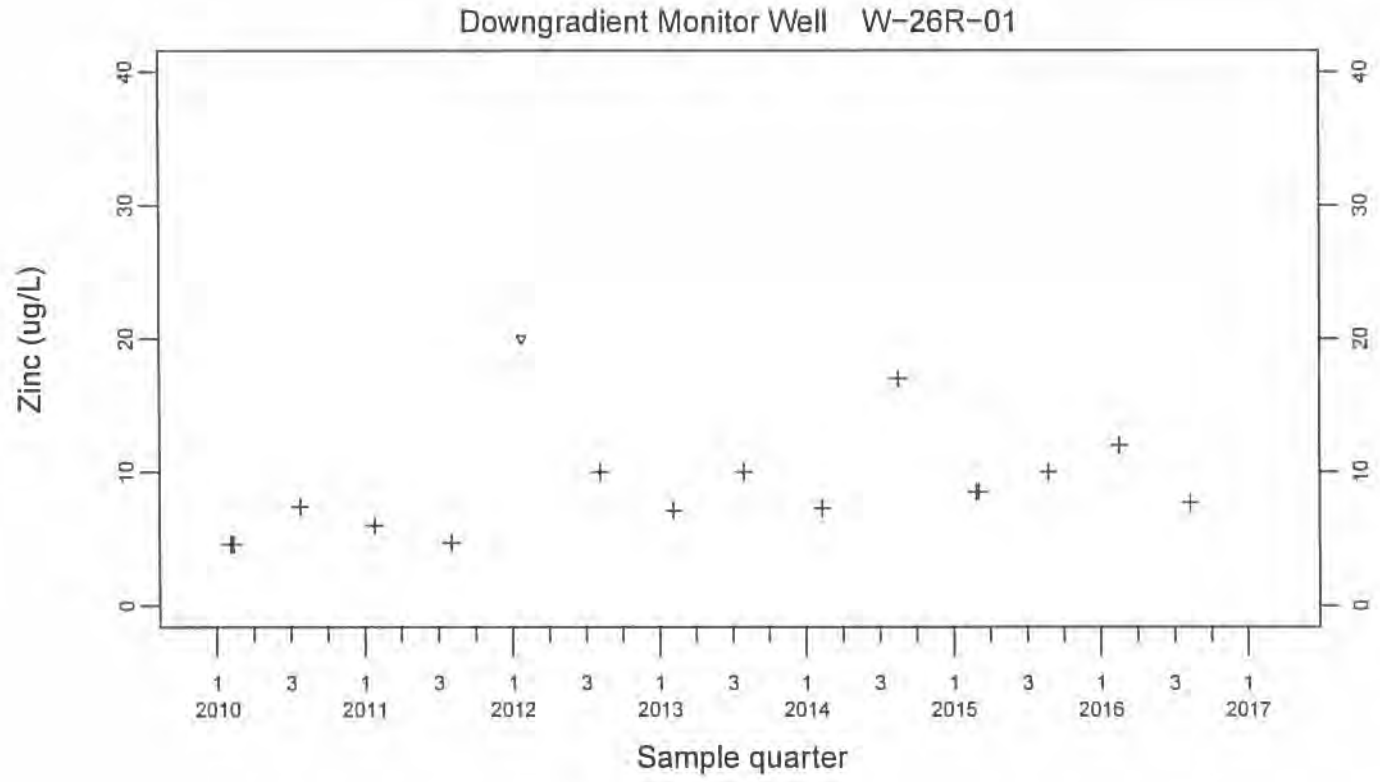
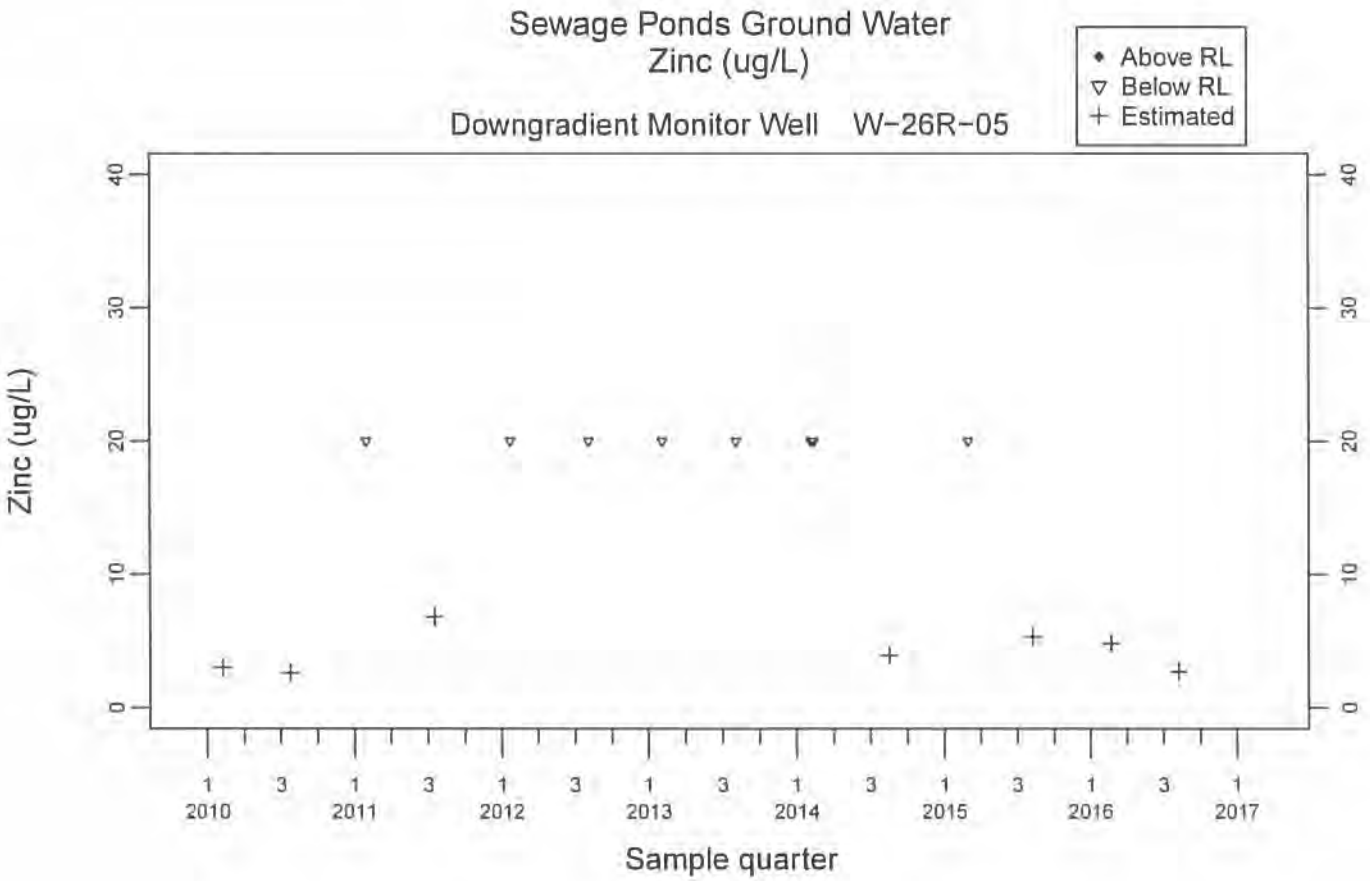
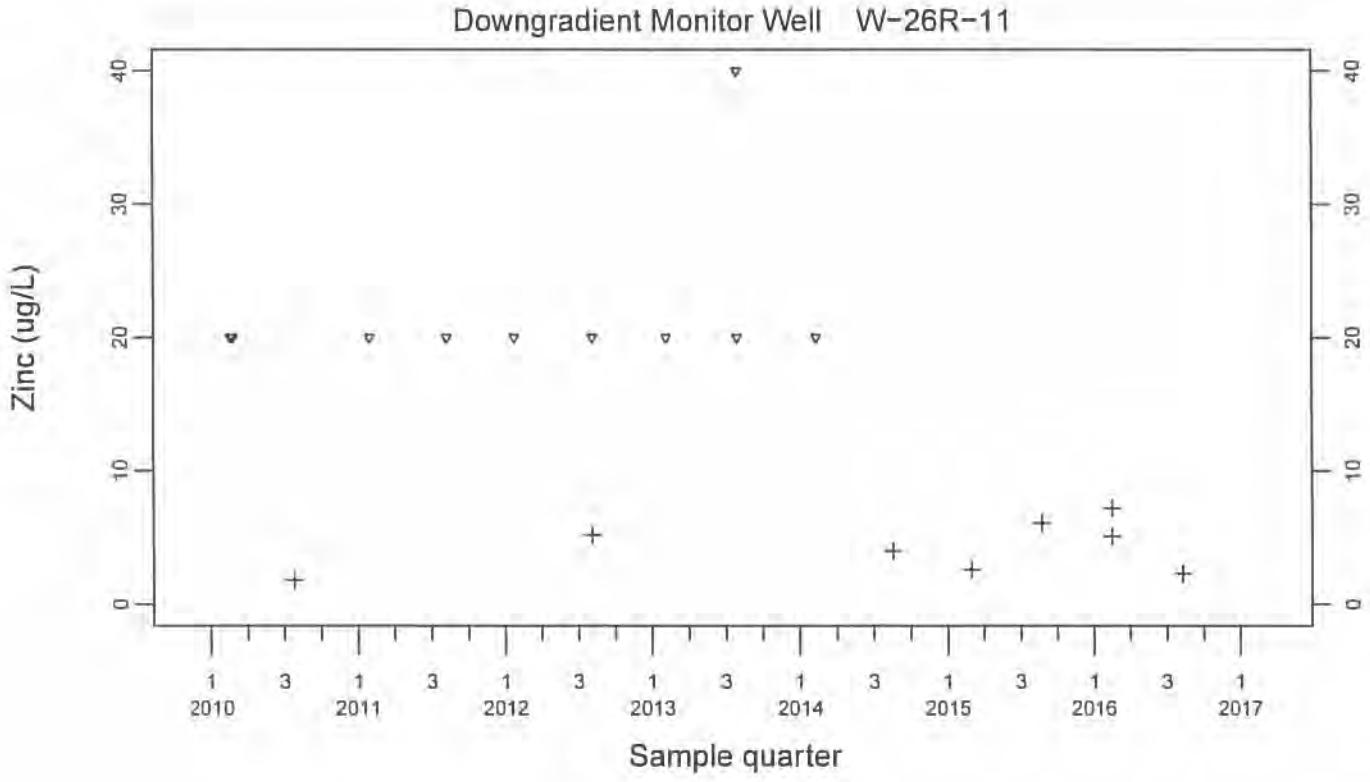
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

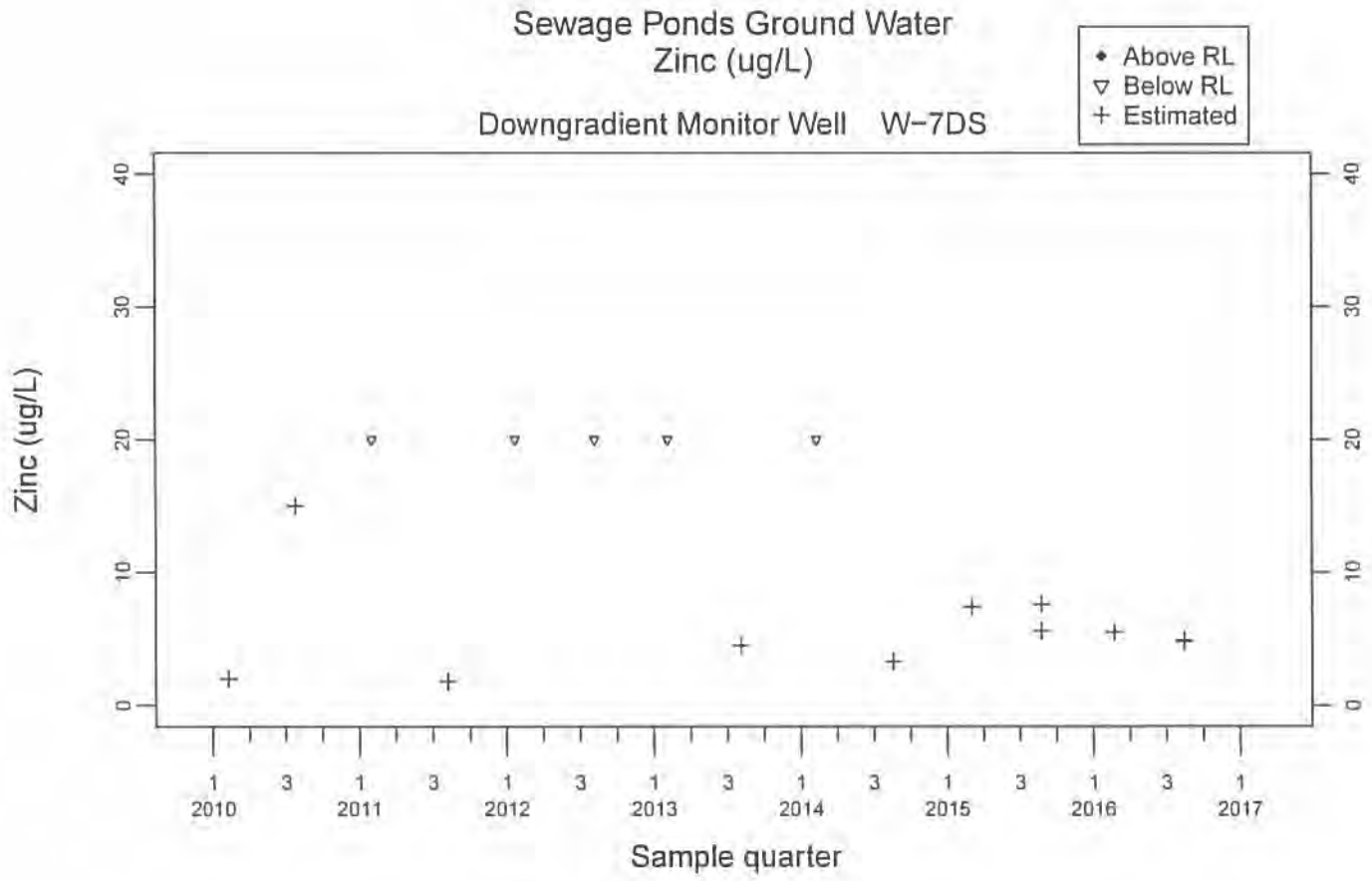

Downgradient Monitor Well W-25N-23
Zinc (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

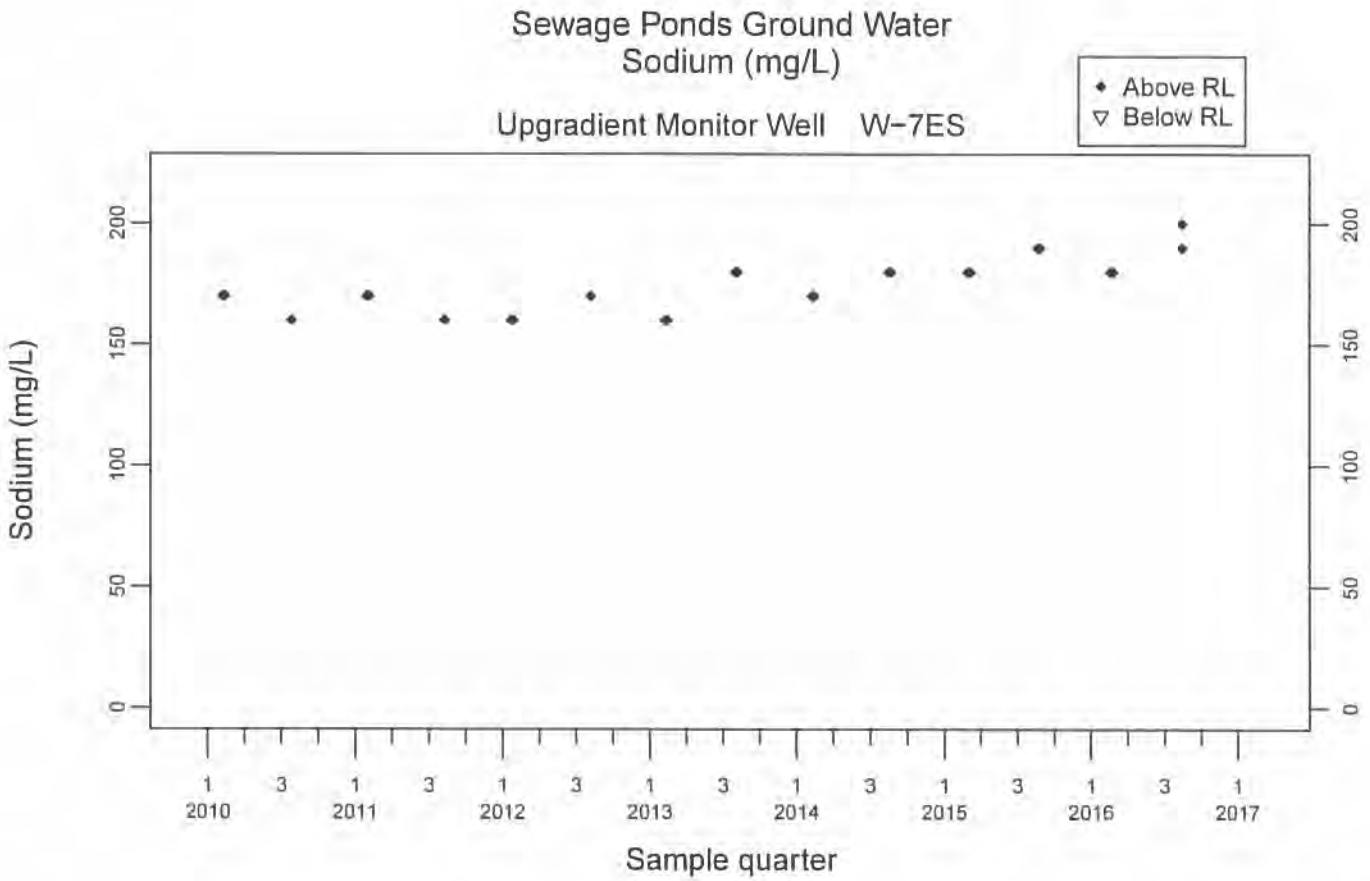

Sewage Ponds Ground Water
Zinc (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-25N-22
Zinc (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

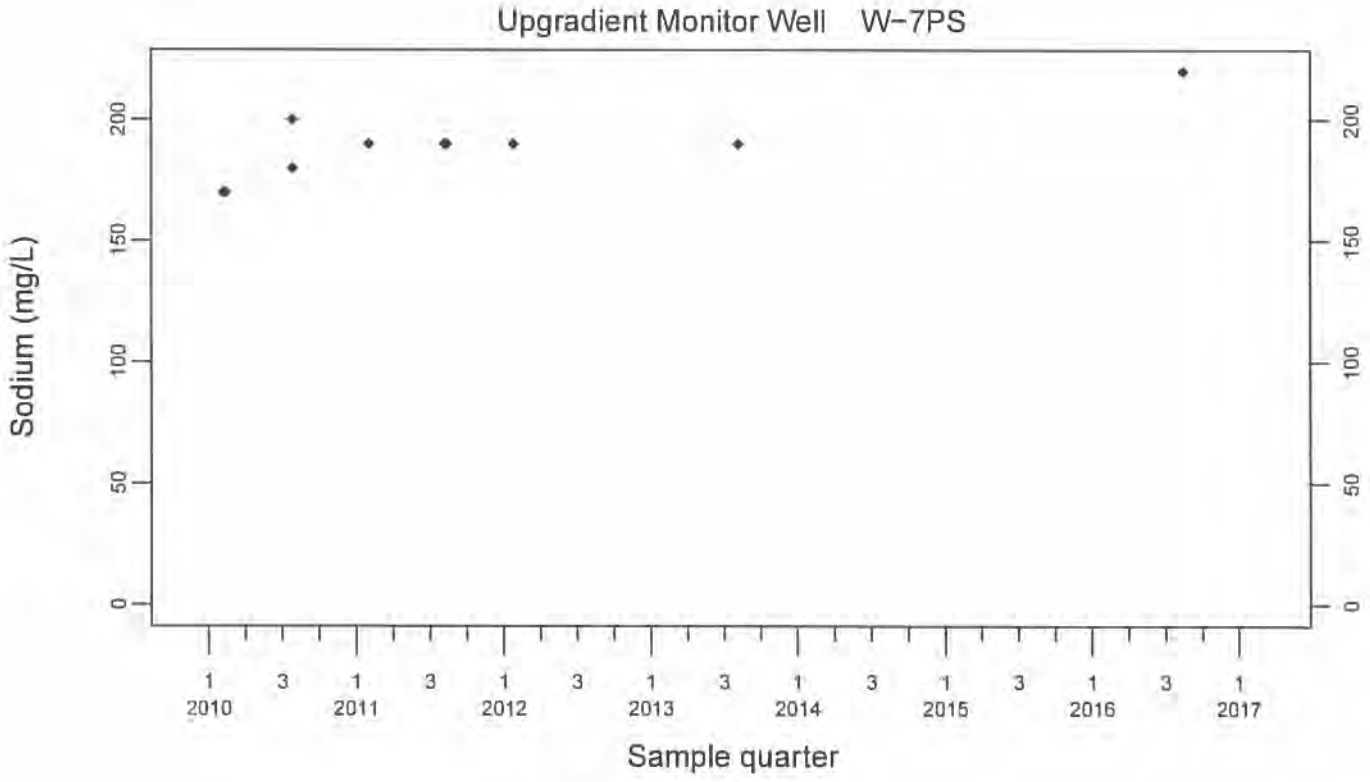

Downgradient Monitor Well W-26R-01
Zinc (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

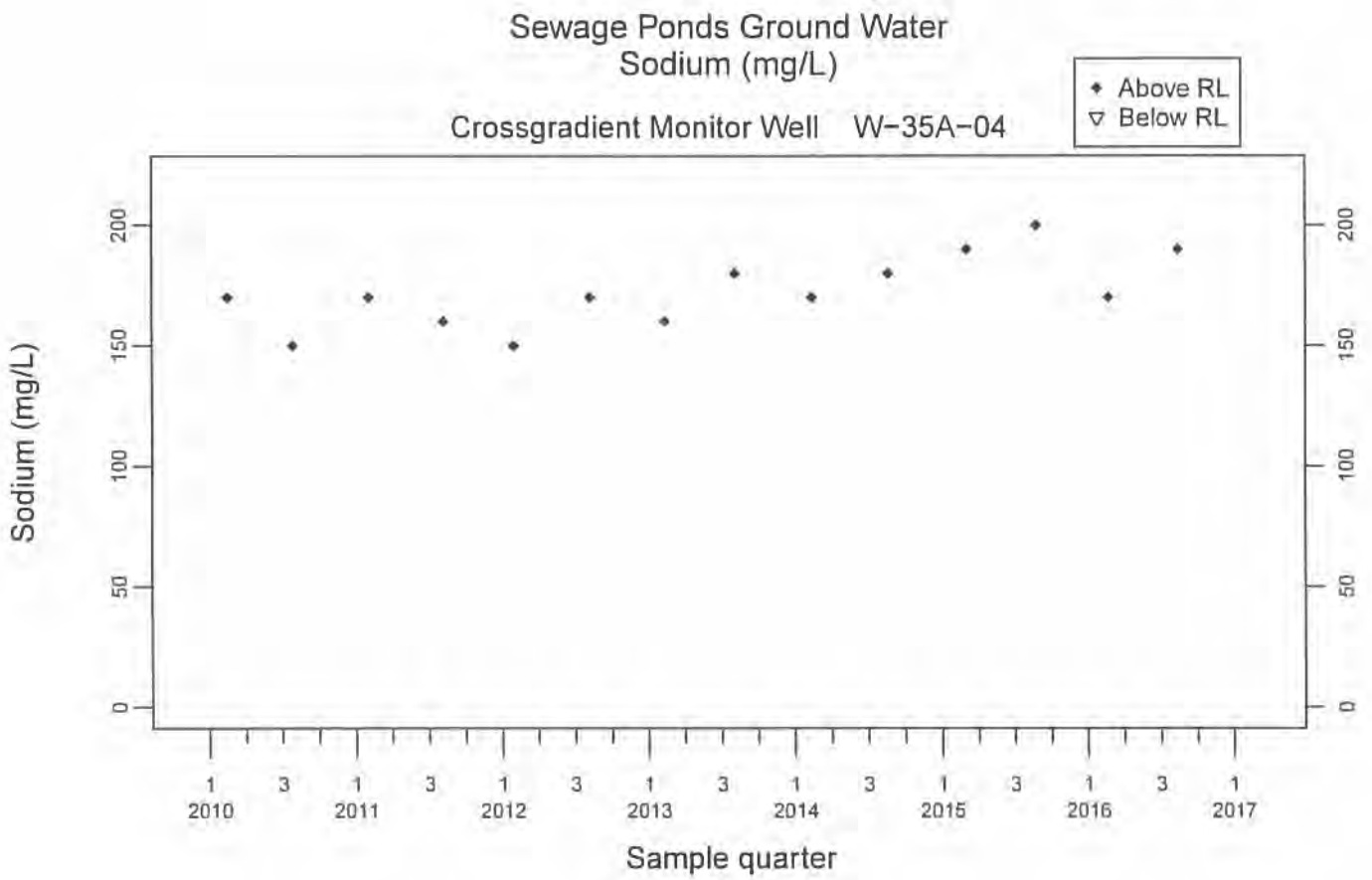

Sewage Ponds Ground Water
Zinc (ug/L)
Above RL
Below RL
Estimated
Downgradient Monitor Well W-26R-05
Zinc (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

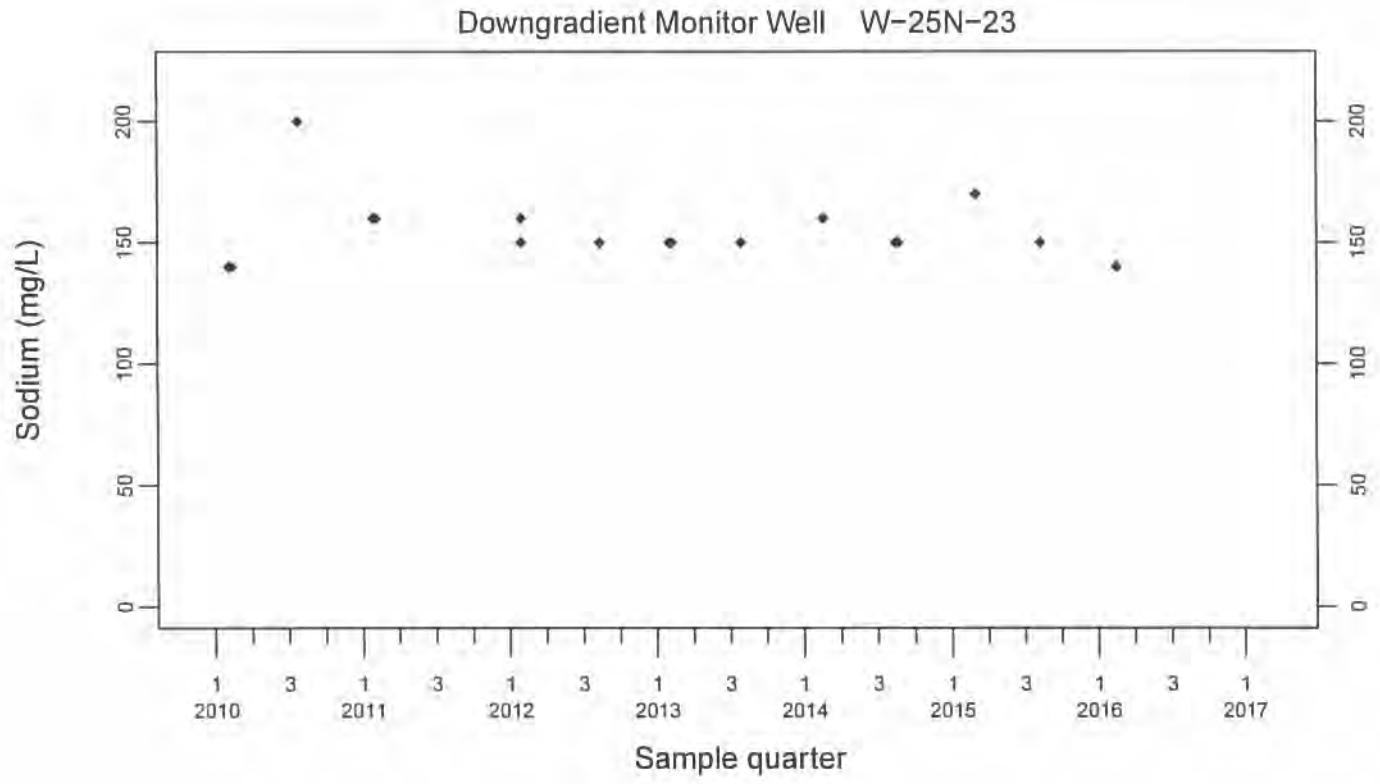

Downgradient Monitor Well W-26R-11
Zinc (ug/L)
0
10
20
30
40
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

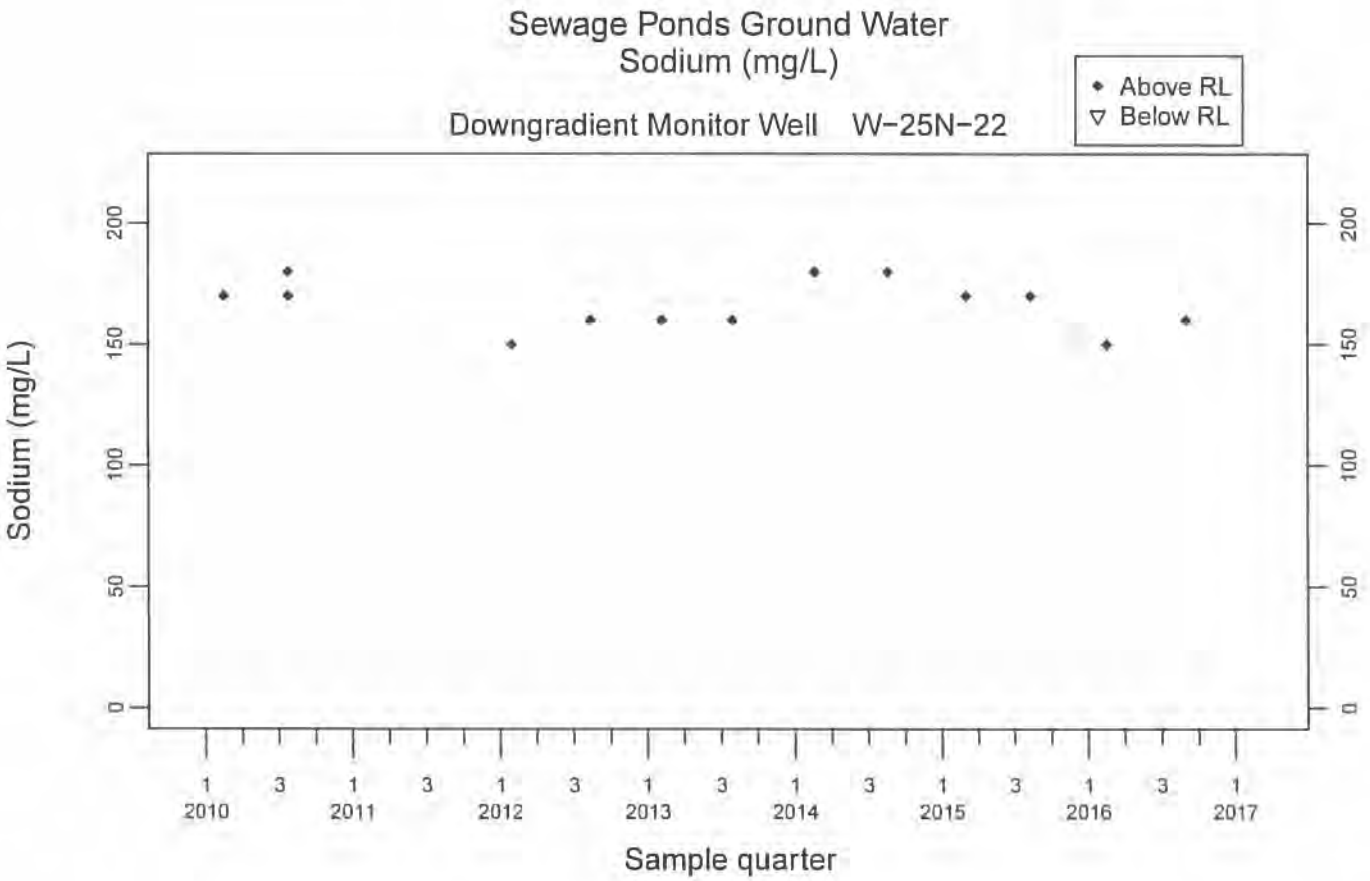

Sewage Ponds Ground Water
Zinc (ug/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Estimated
Zinc (ug/L)
0
10
20
30
40
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

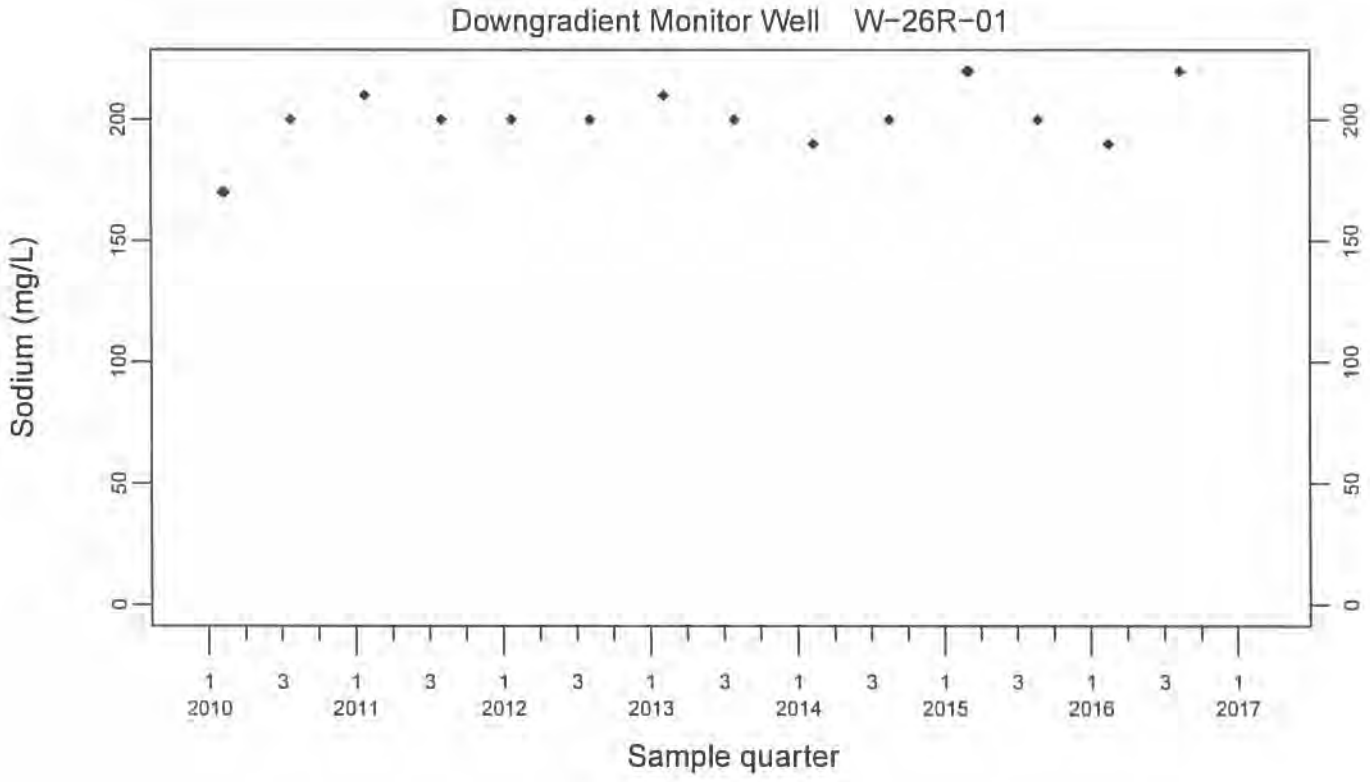

Sewage Ponds Ground Water
Sodium (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Sodium (mg/L)
0
50
100
150
200
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

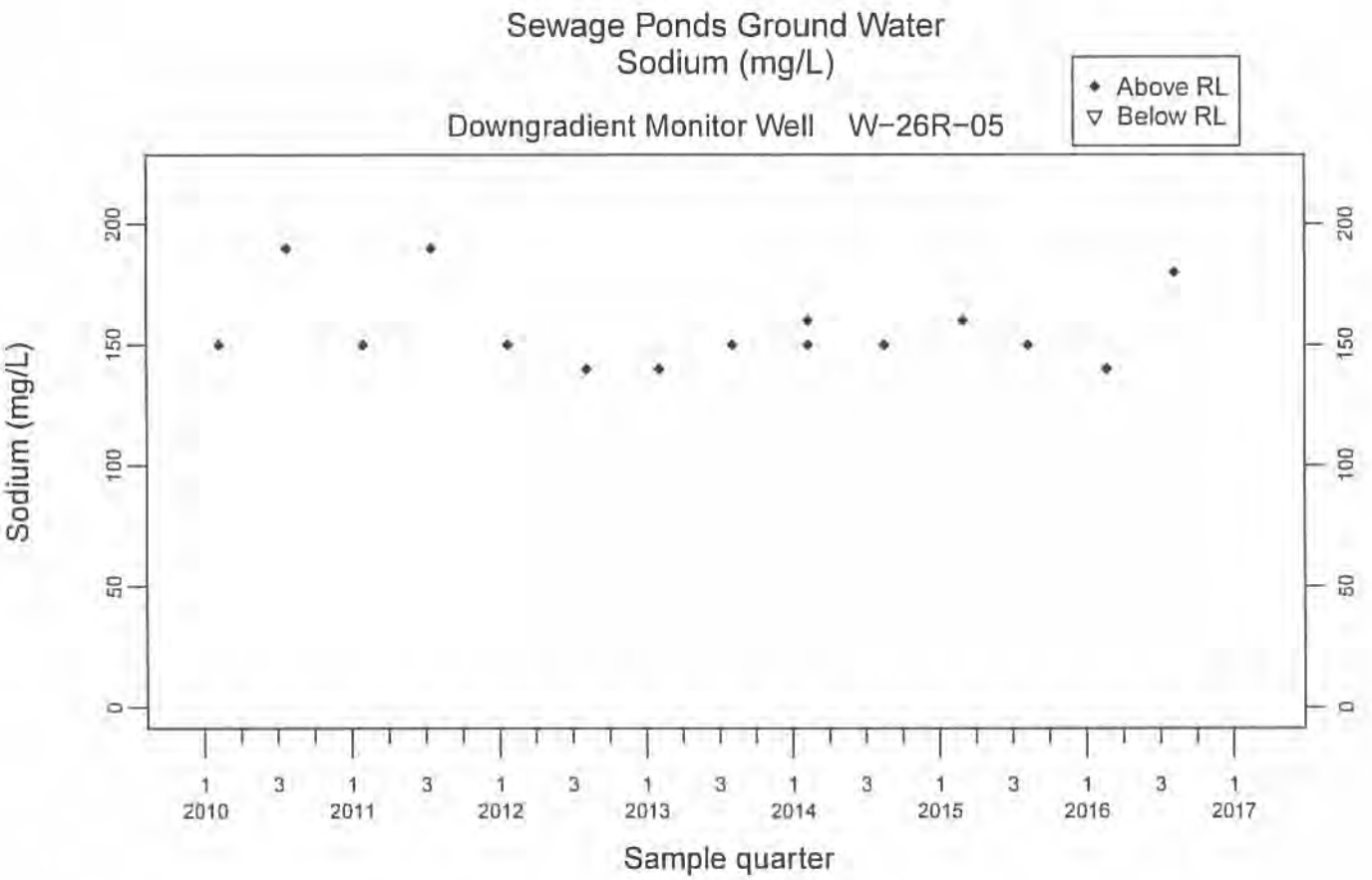

Upgradient Monitor Well W-7PS
Sodium (mg/L)
0
50
100
150
200
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

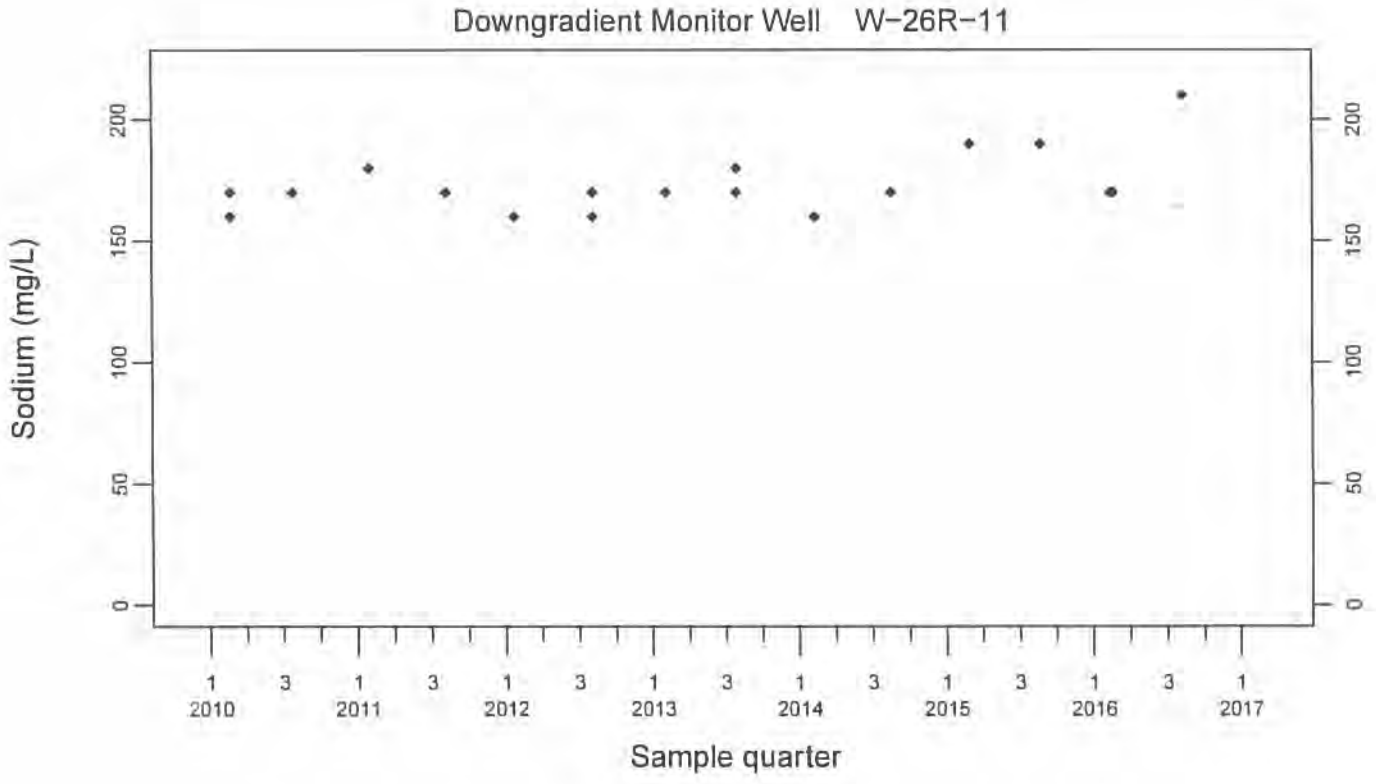

Sewage Ponds Ground Water
Sodium (mg/L)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

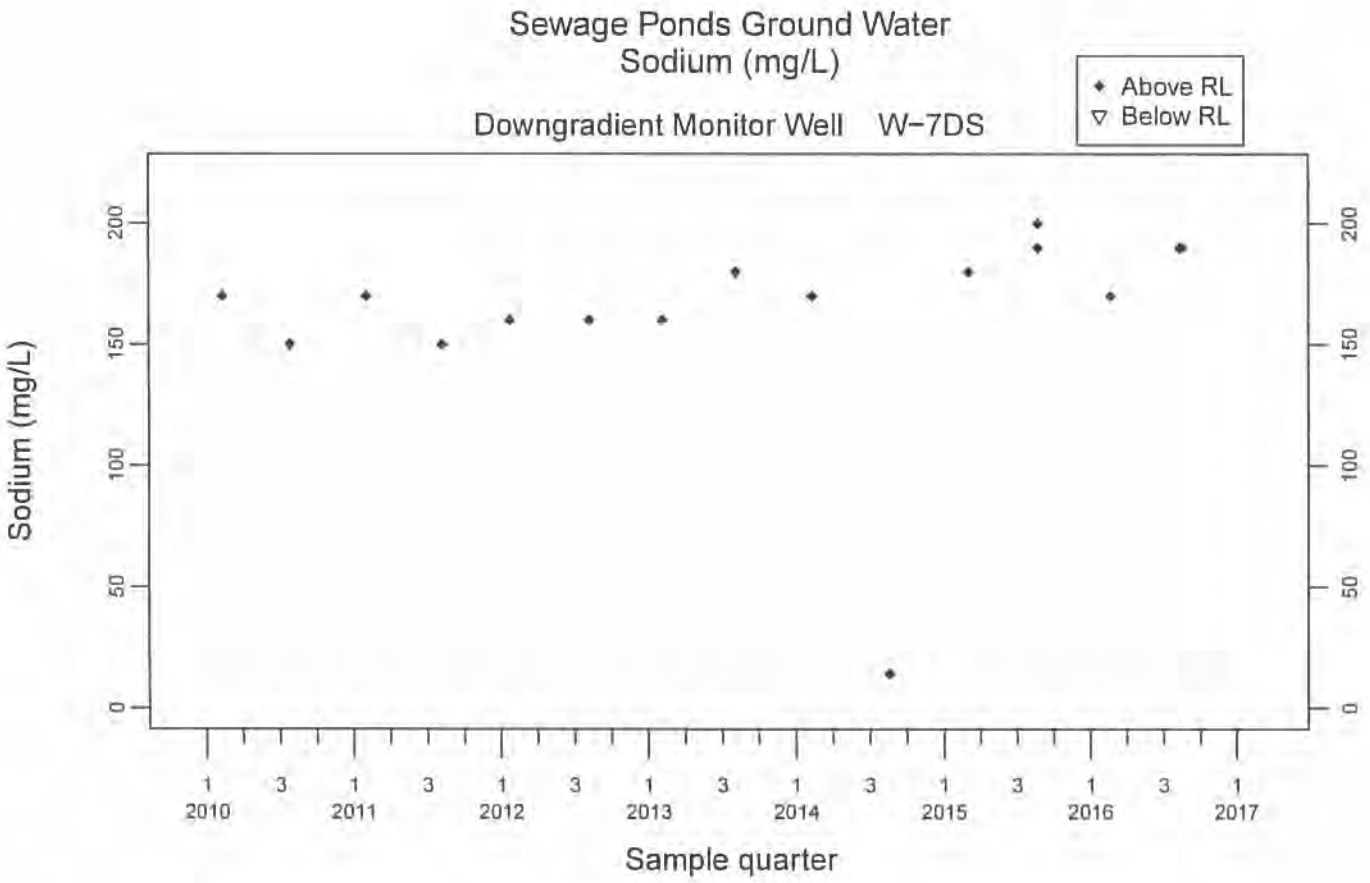

Downgradient Monitor Well W-25N-23
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

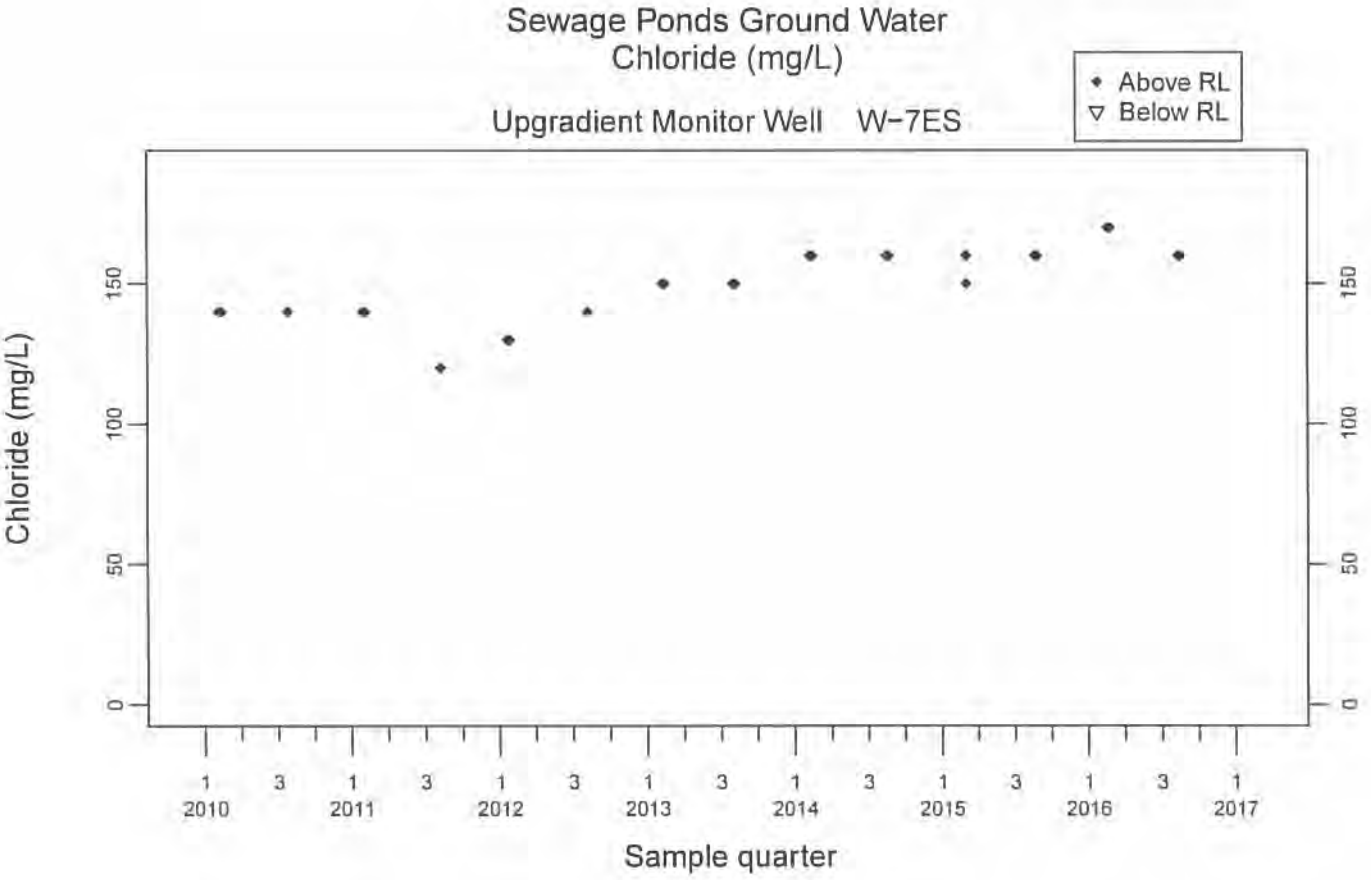

Sewage Ponds Ground Water
Sodium (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

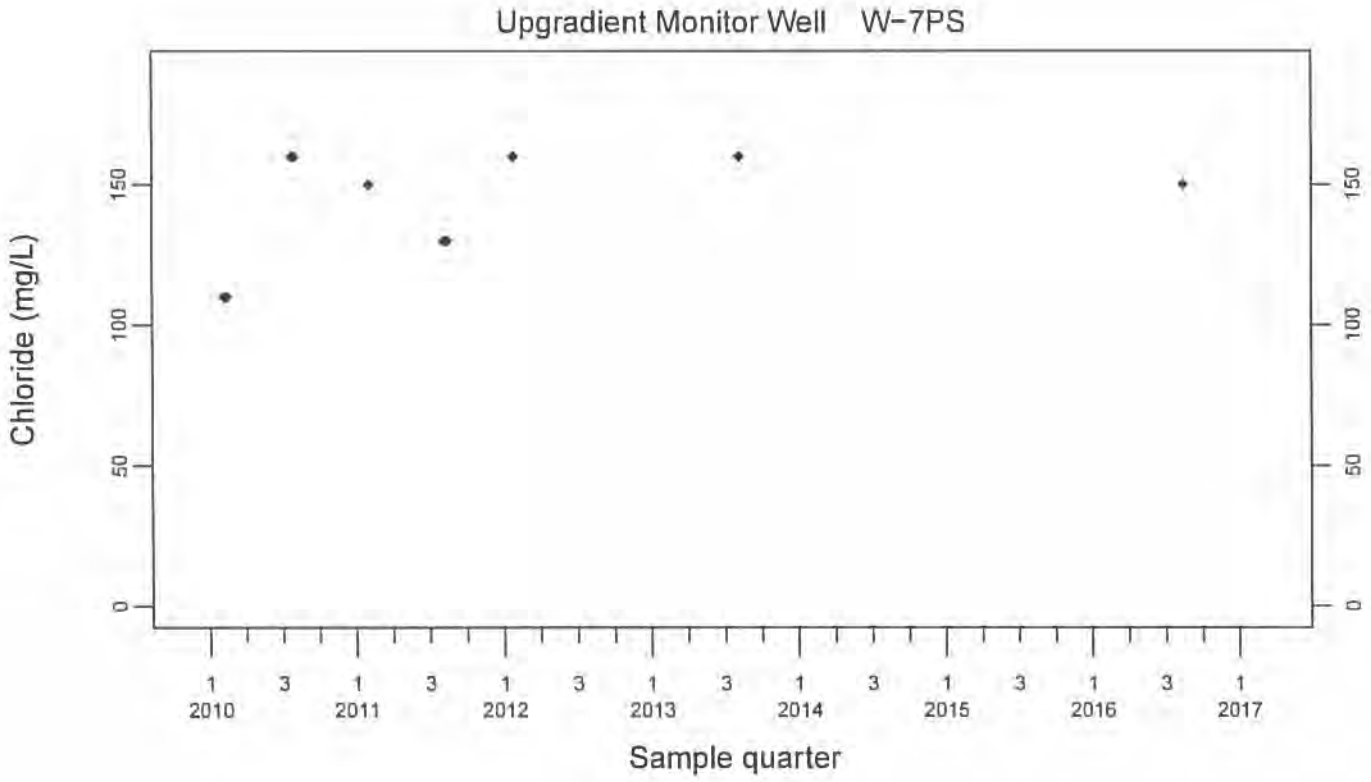

Downgradient Monitor Well W-26R-01
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

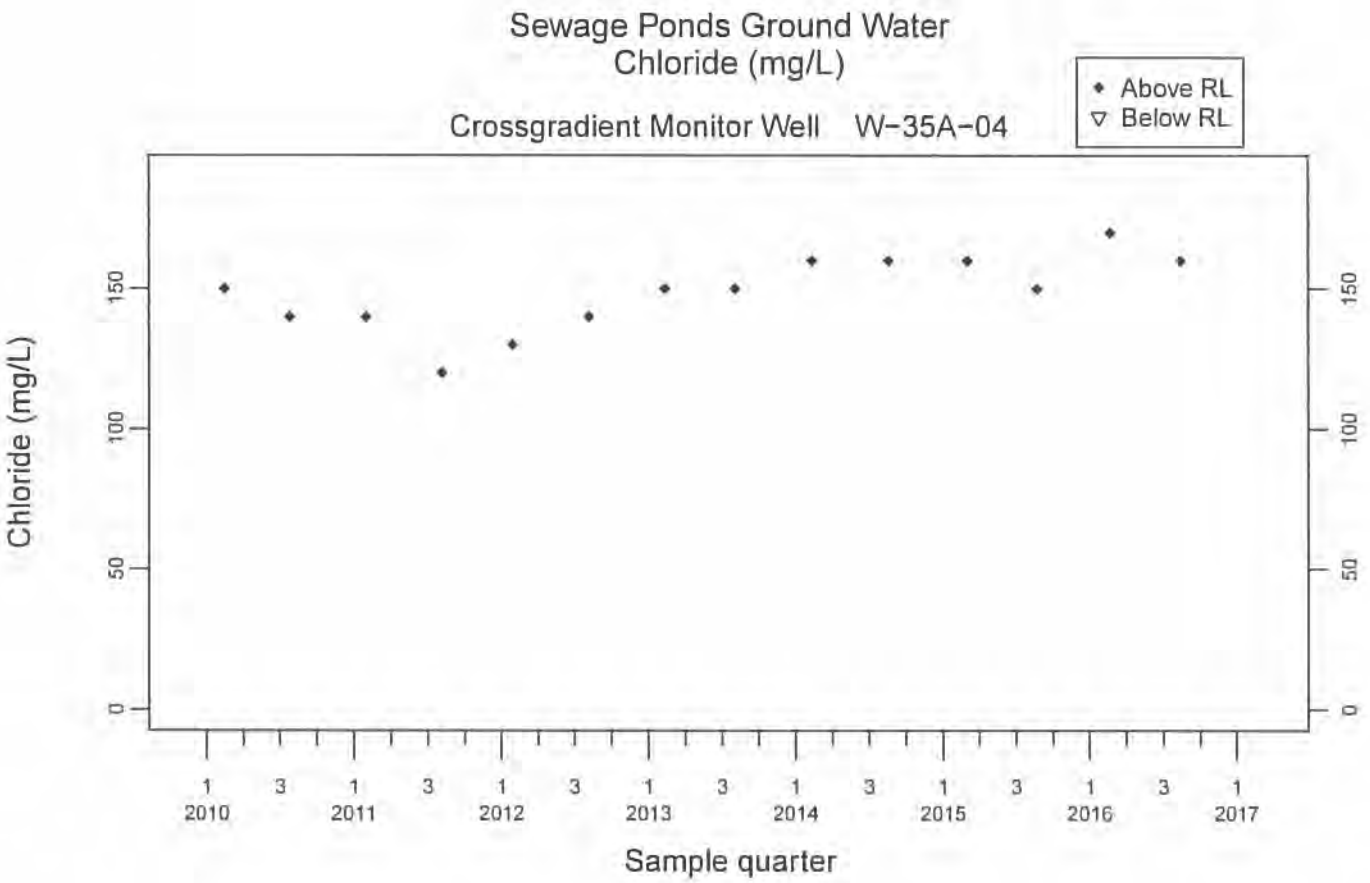

Sewage Ponds Ground Water
Sodium (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

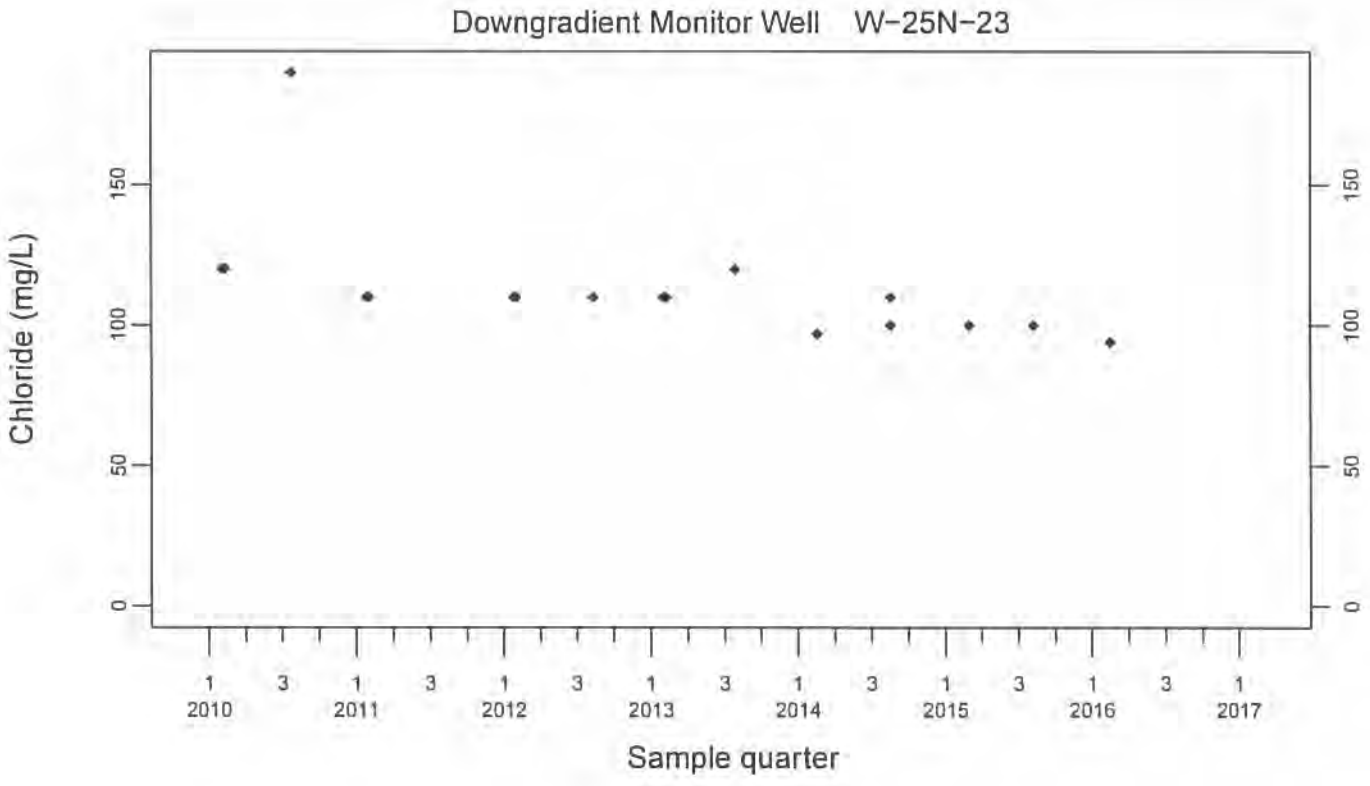

Downgradient Monitor Well W-26R-11
Sodium (mg/L)
0
50
100
150
200
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

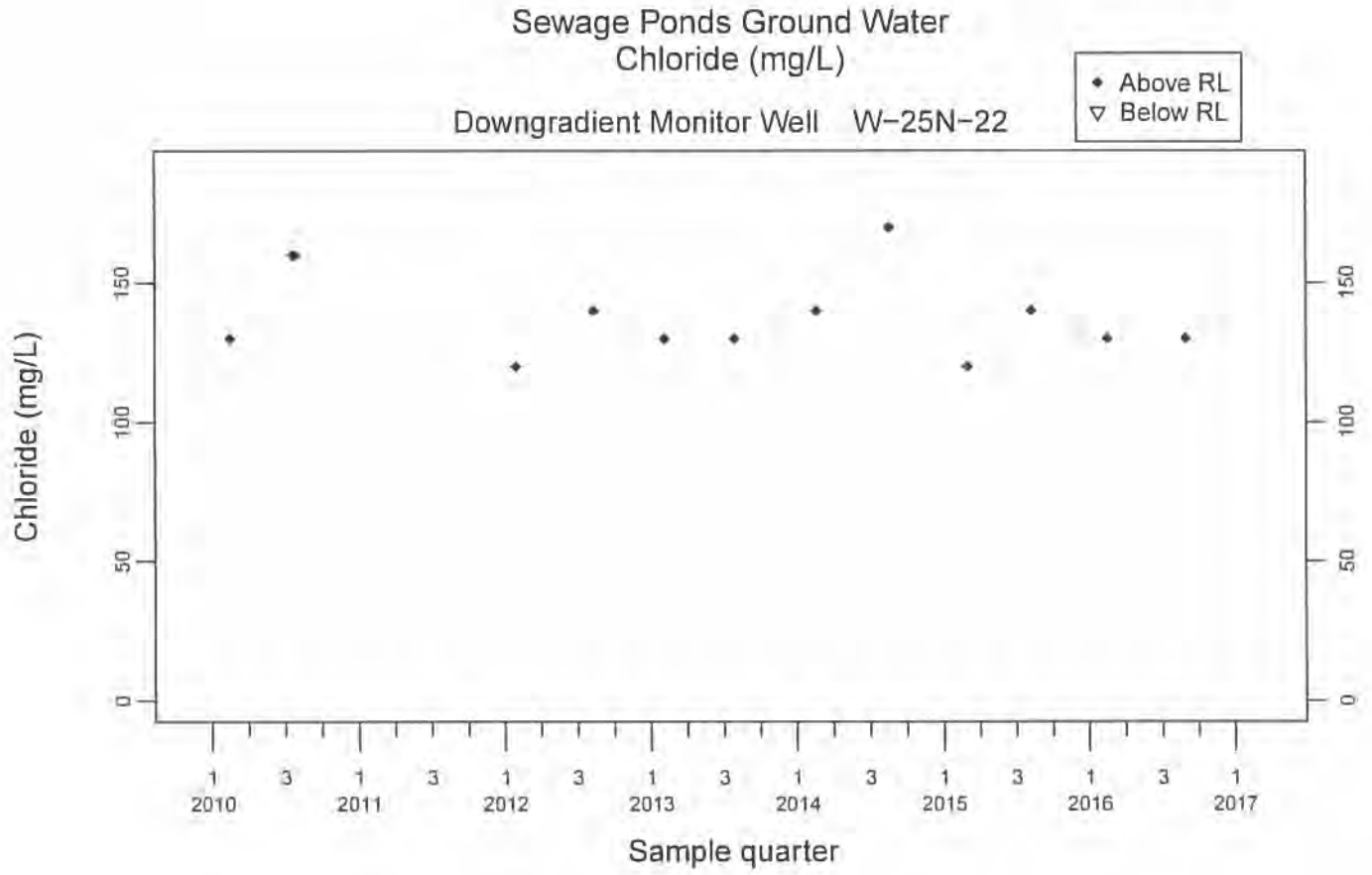

Sewage Ponds Ground Water
Sodium (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Sodium (mg/L)
0
50
100
150
200
1
2010
3
1
2011
3
1
2012
3
1
2013
3
1
2014
3
1
2015
3
1
2016
3
1
2017
Sample quarter

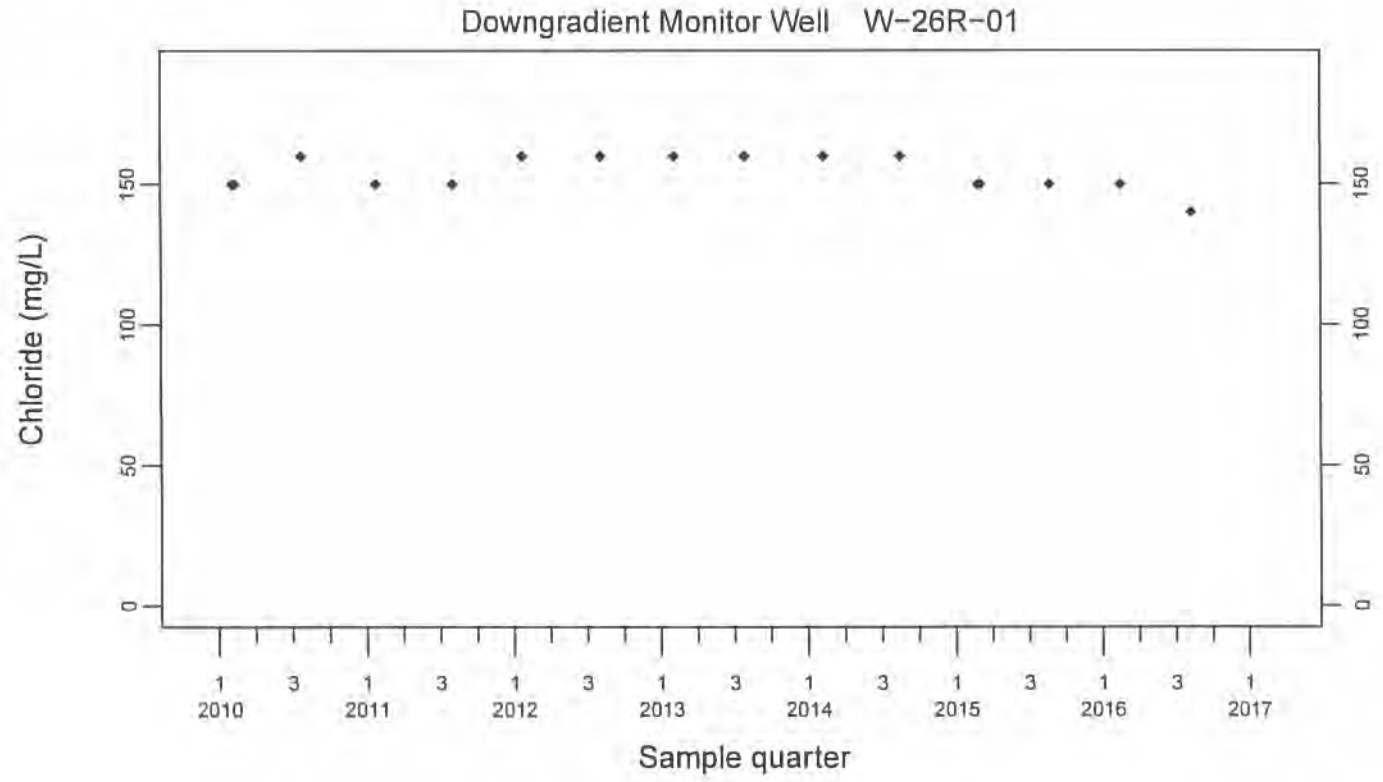

Sewage Ponds Ground Water
Chloride (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

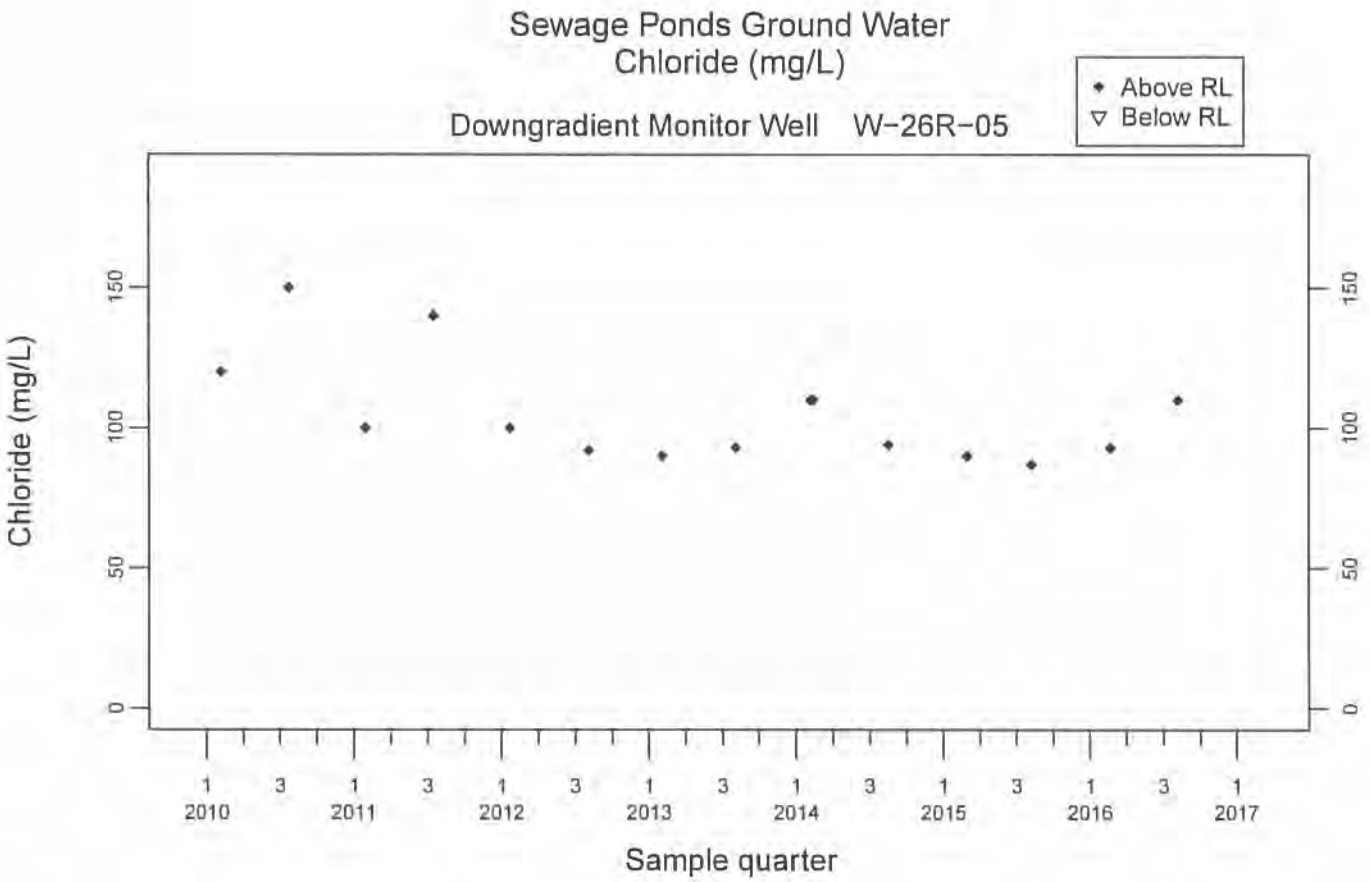

Upgradient Monitor Well W-7PS
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

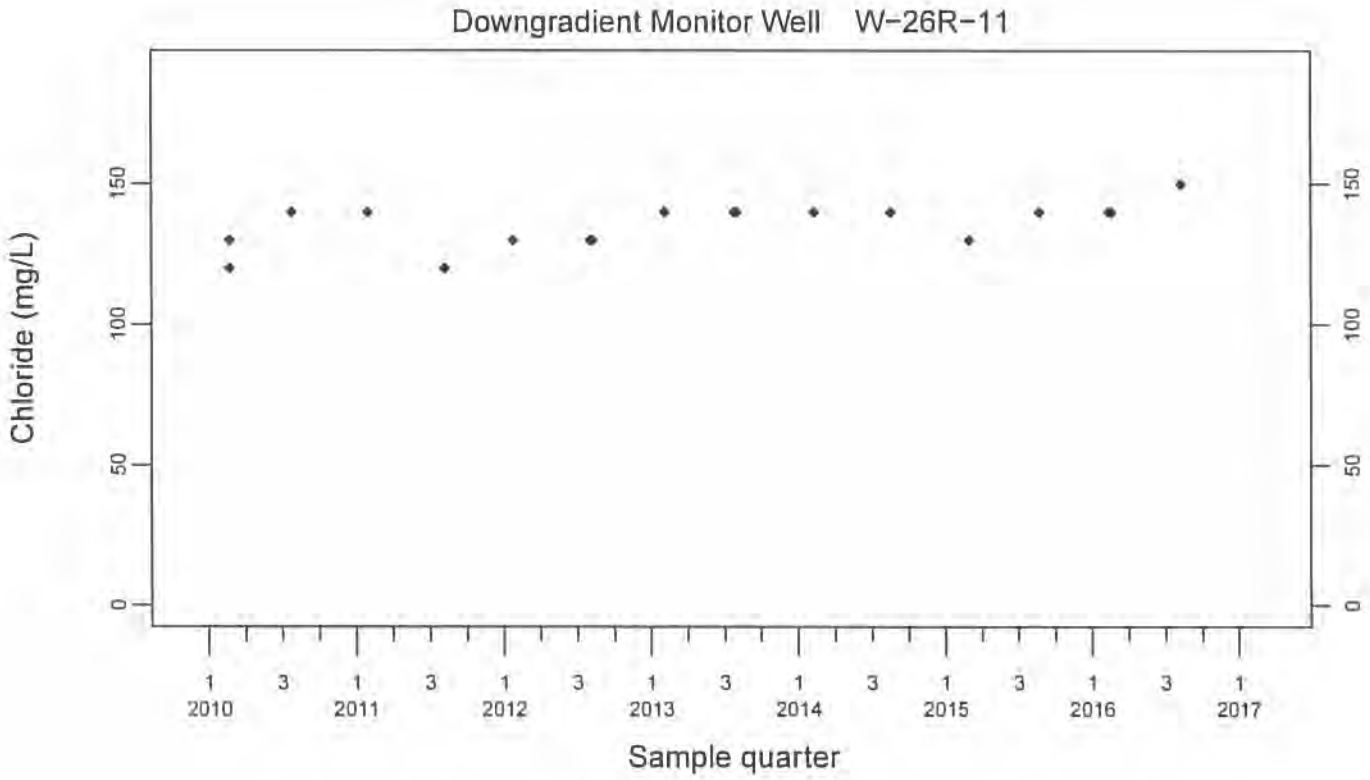

Sewage Ponds Ground Water
Chloride (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

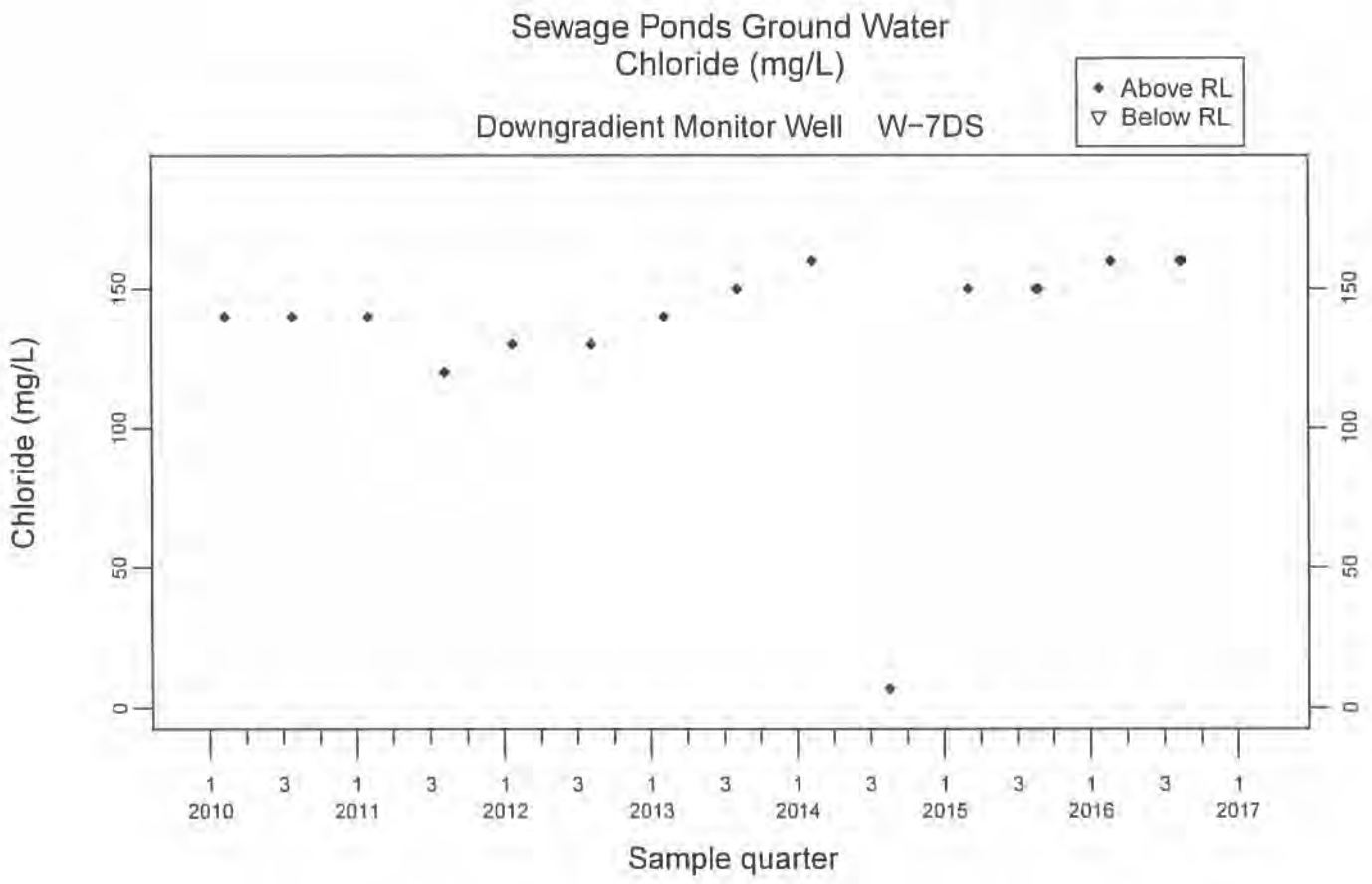

Downgradient Monitor Well W-25N-23
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

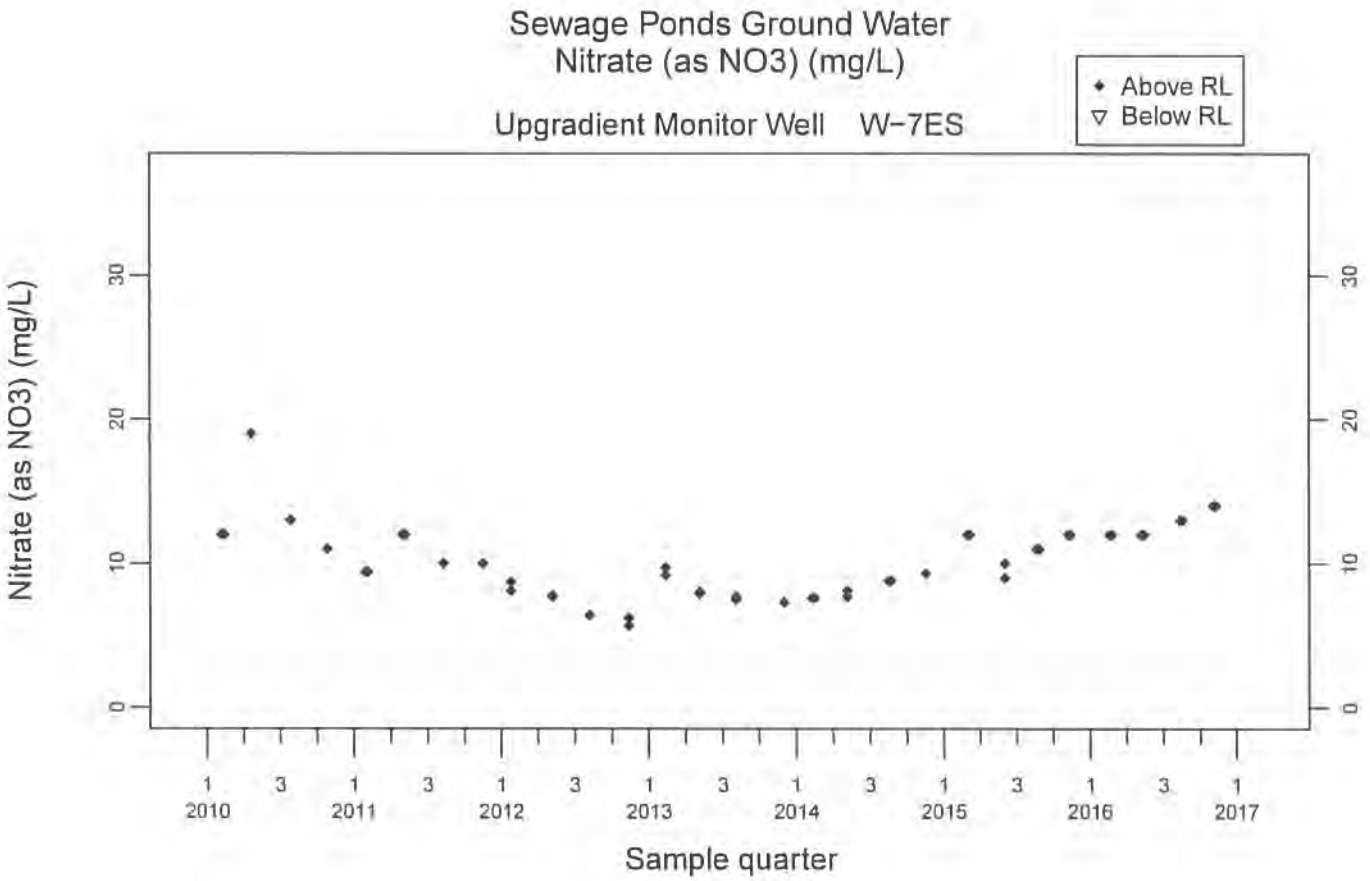

Sewage Ponds Ground Water
Chloride (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

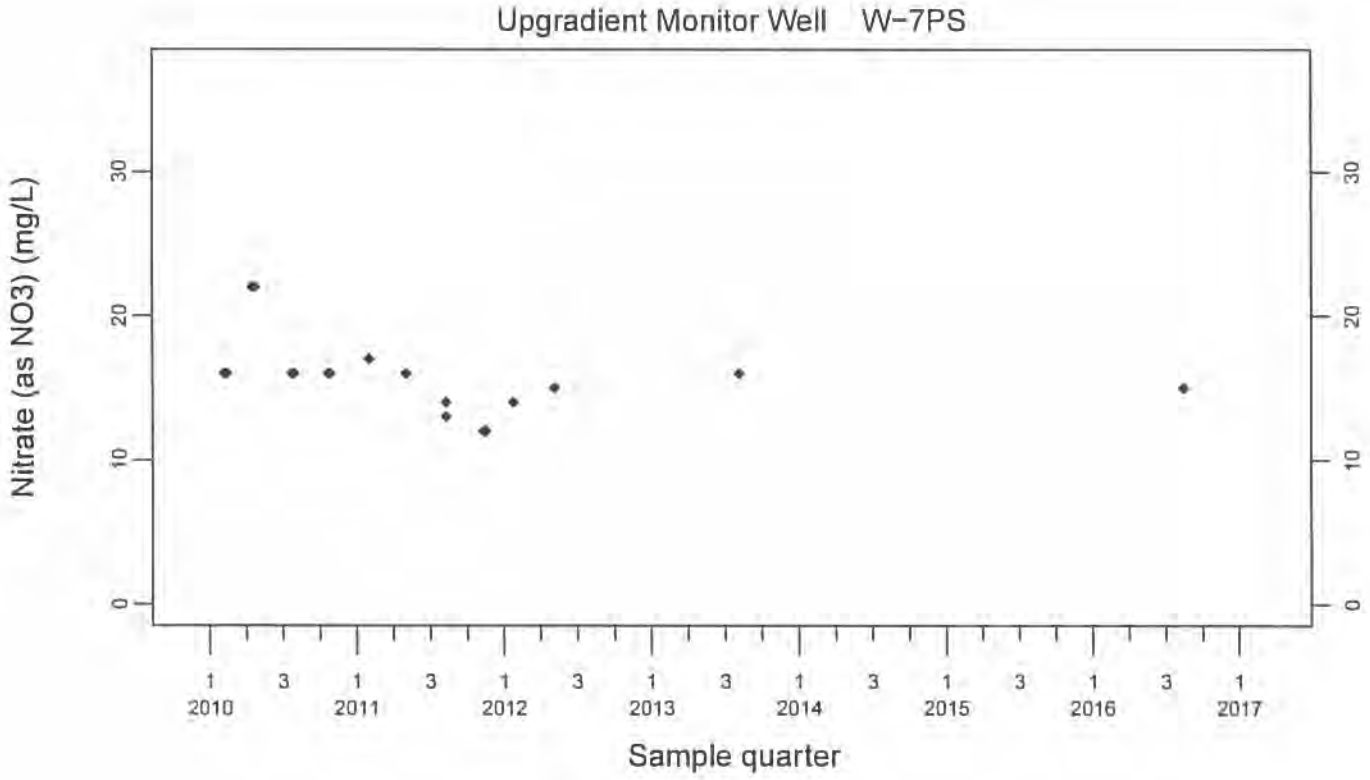

Downgradient Monitor Well W-26R-01
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

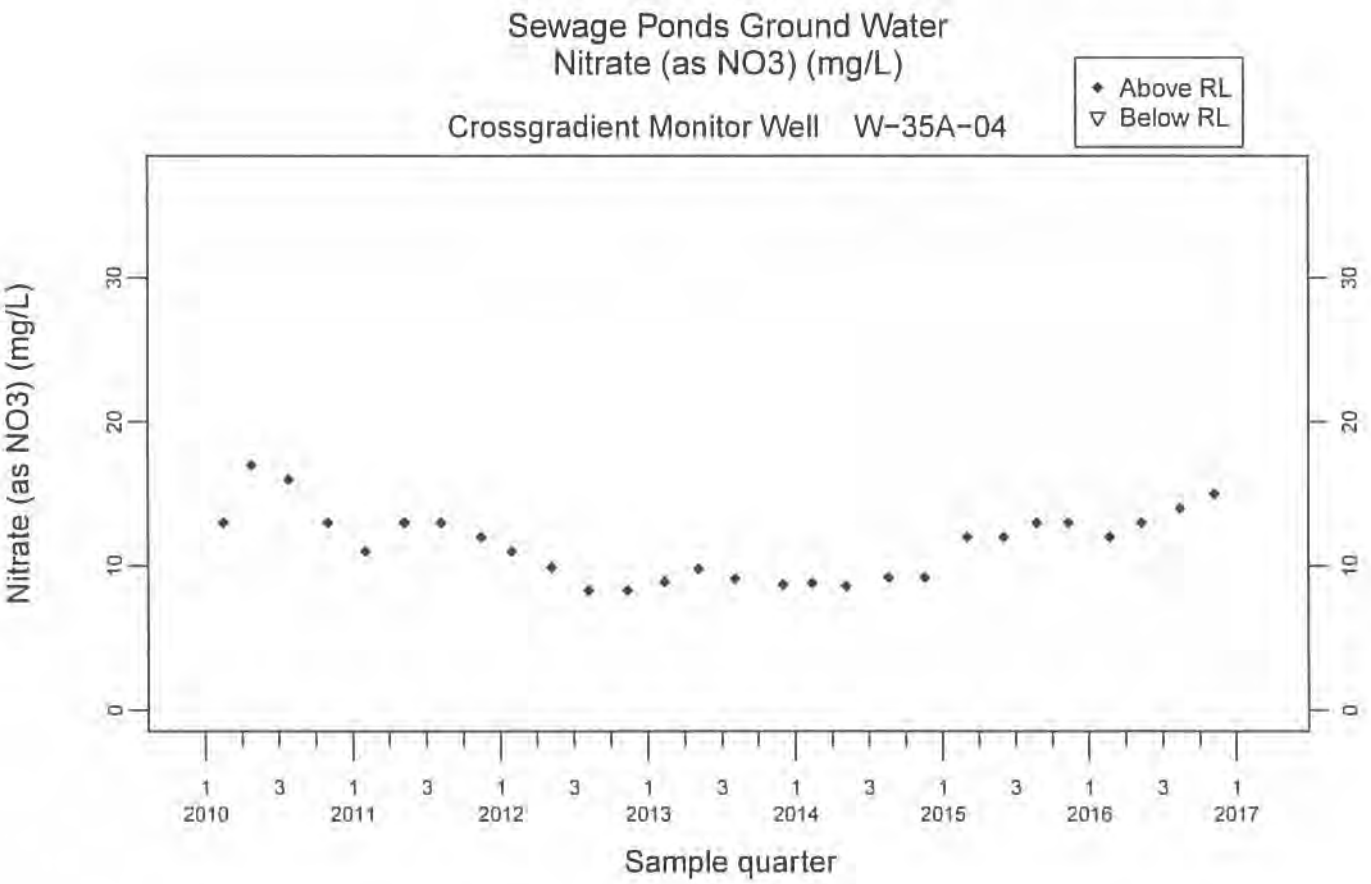

Sewage Ponds Ground Water
Chloride (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Chloride (mg/L)
0
50
100
150
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

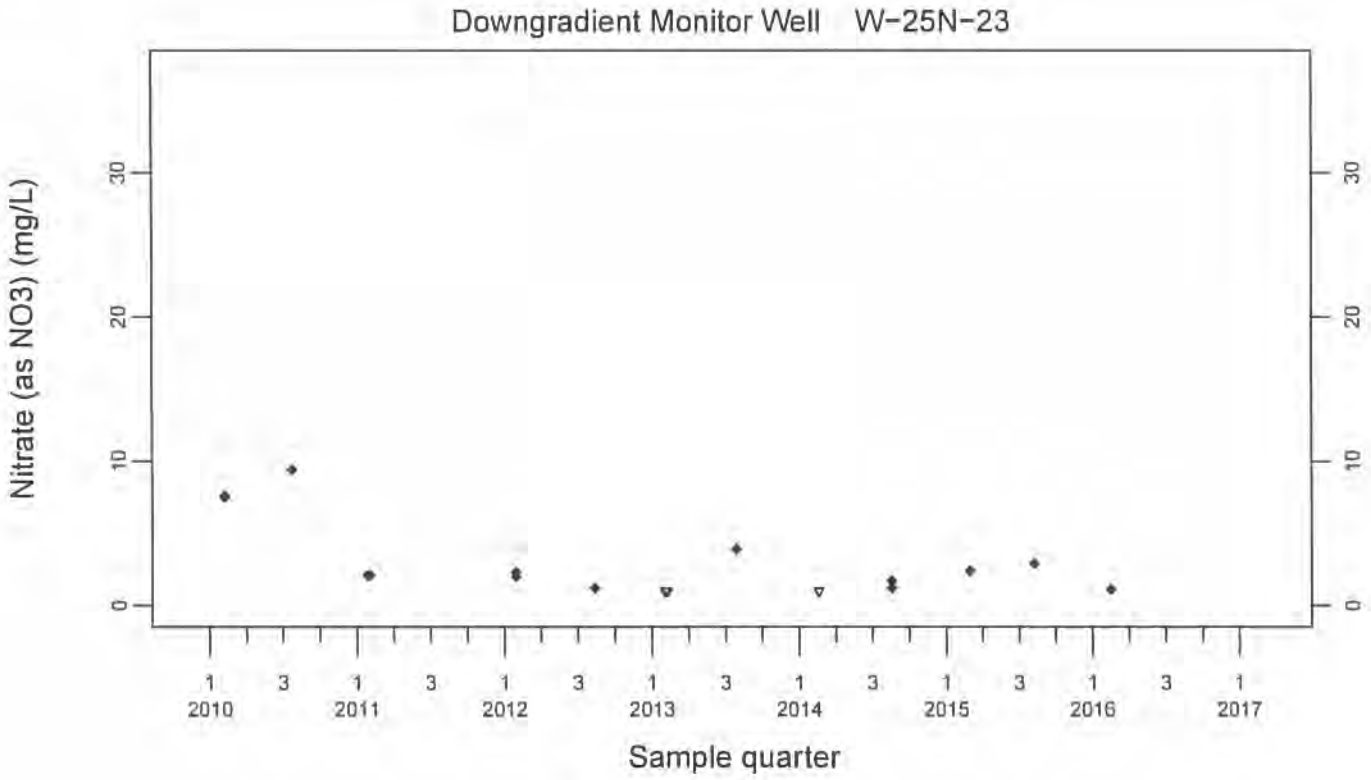

Downgradient Monitor Well W-26R-11
Chloride (mg/L)
0
50
100
150
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

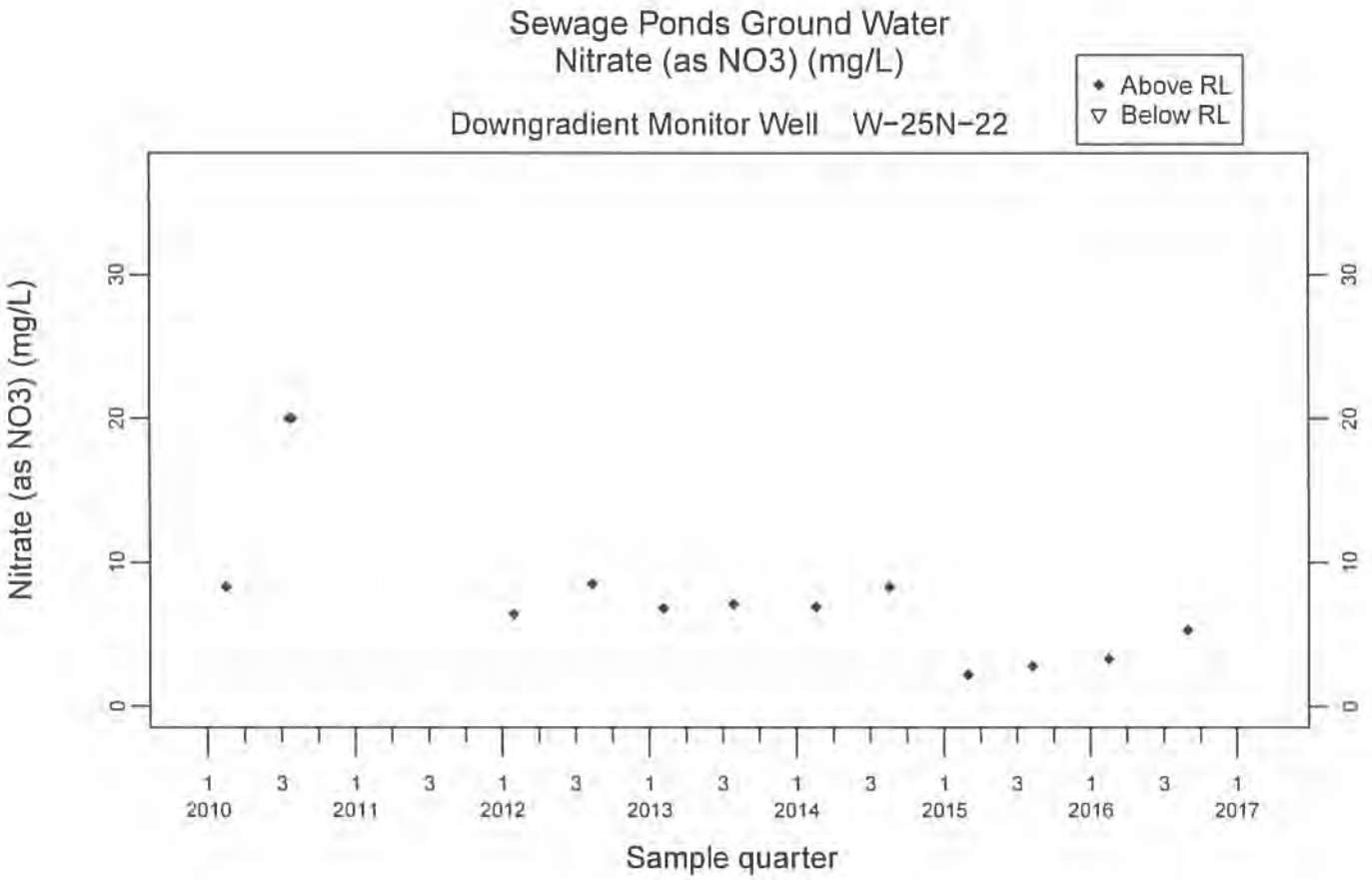

Sewage Ponds Ground Water
Chloride (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Chloride (mg/L)
0
50
100
150
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

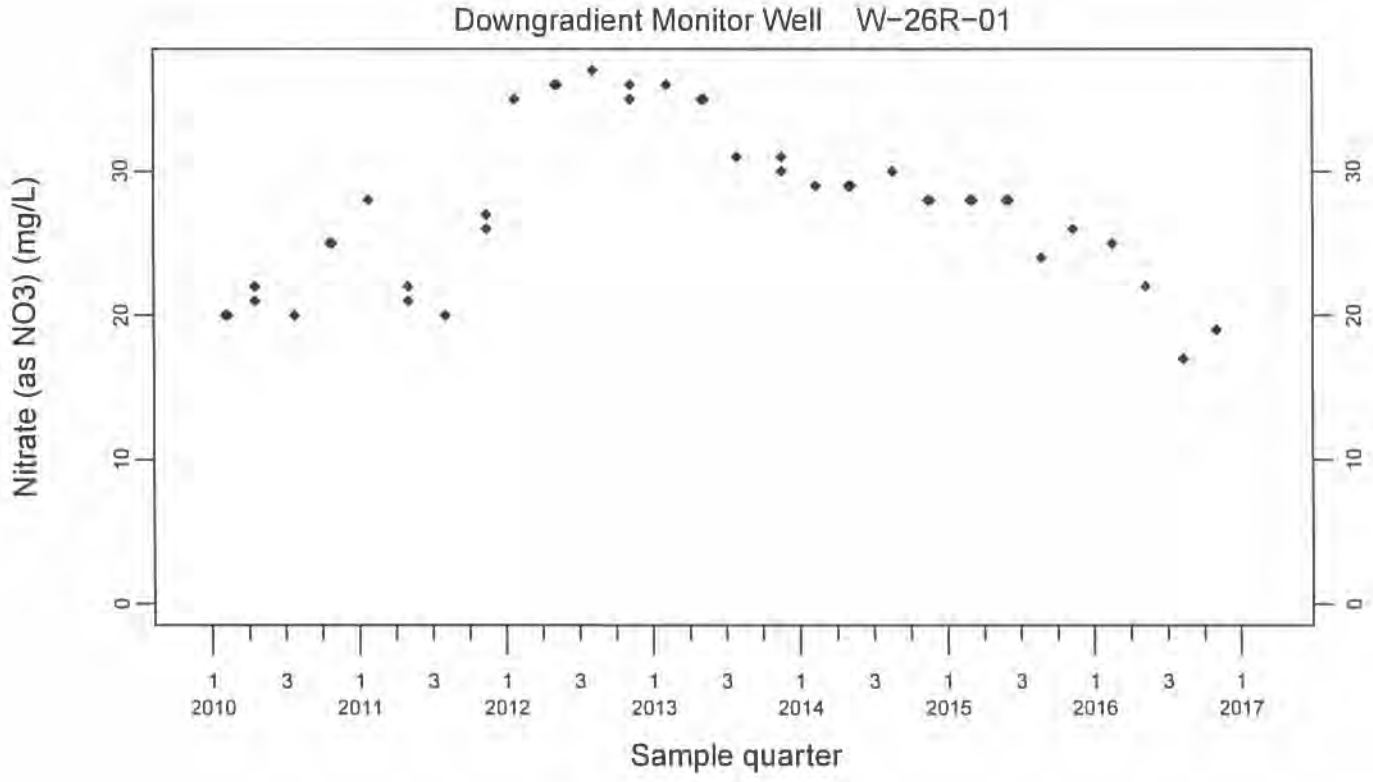

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Above RL
Below RL
Upgradient Monitor Well W-7ES
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

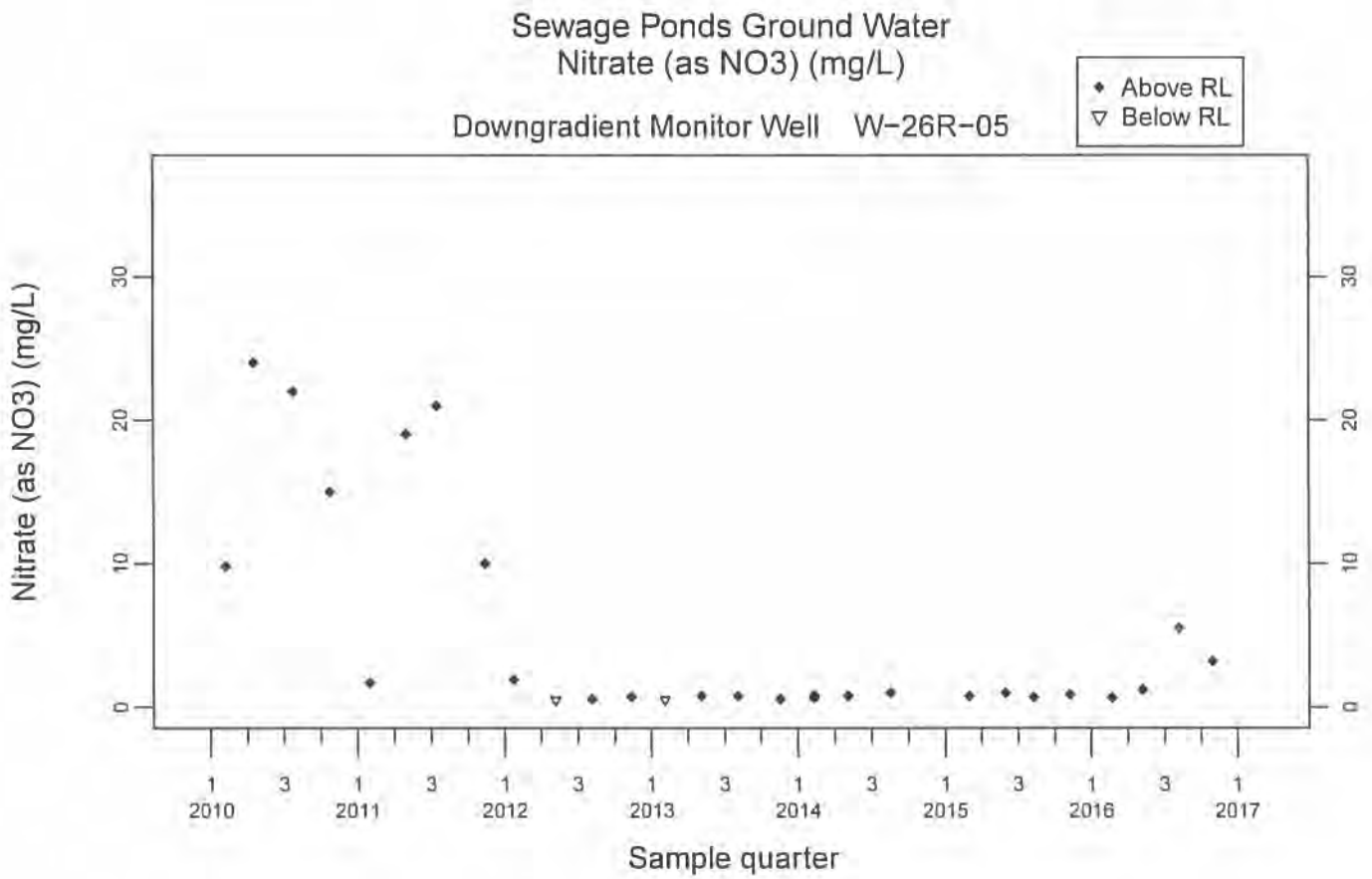

Upgradient Monitor Well W-7PS
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

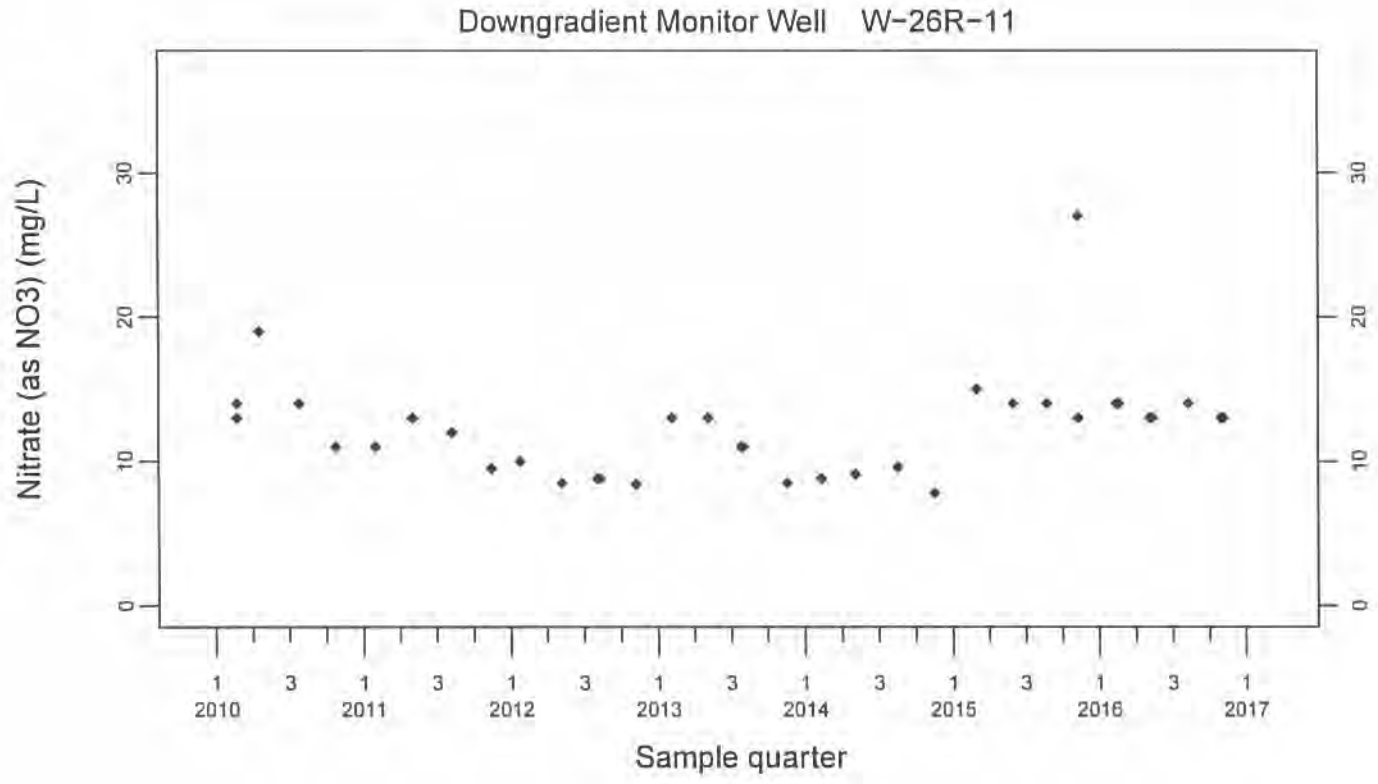

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

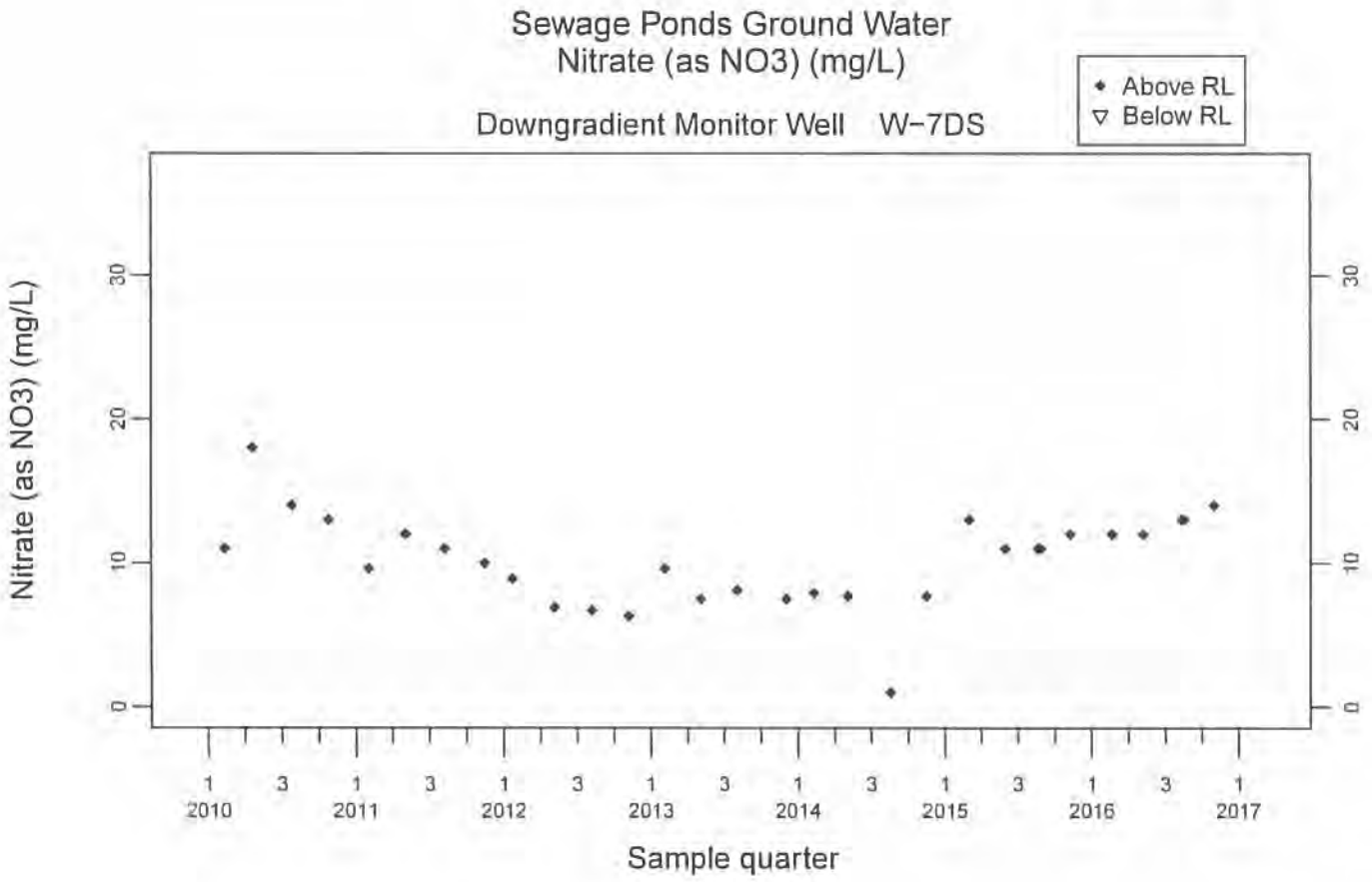

Downgradient Monitor Well W-25N-23
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

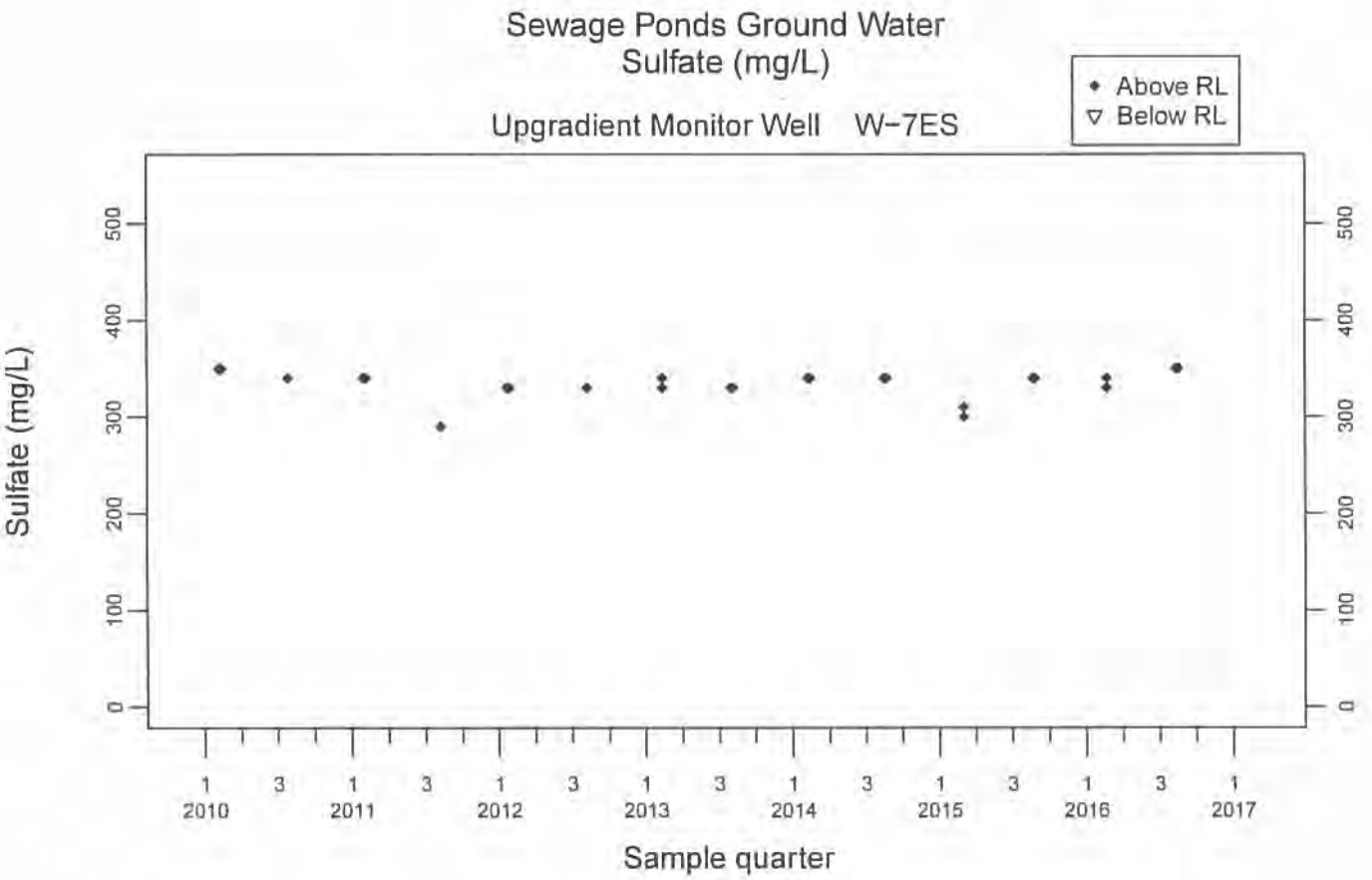

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

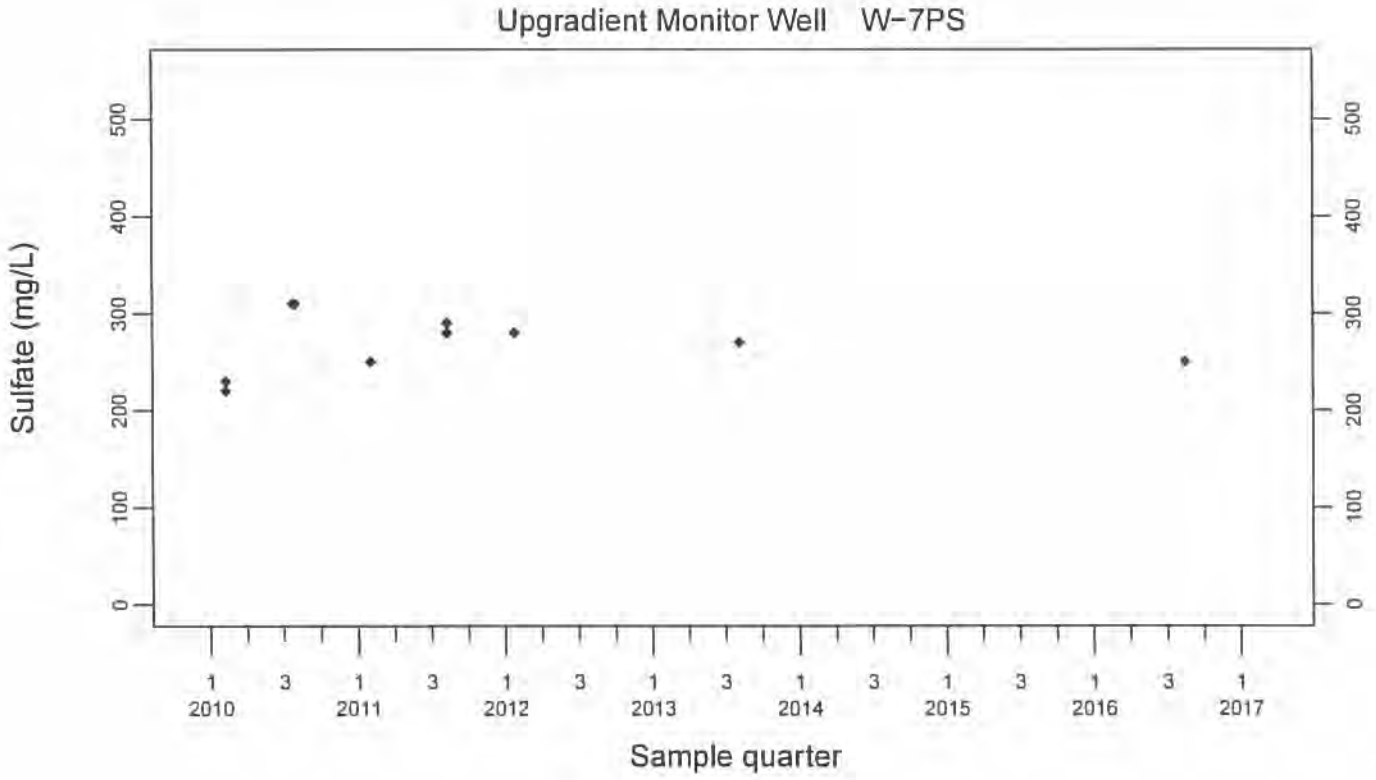

Downgradient Monitor Well W-26R-01
Nitrate (as NO3) (mg/L)
0
10
20
30
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

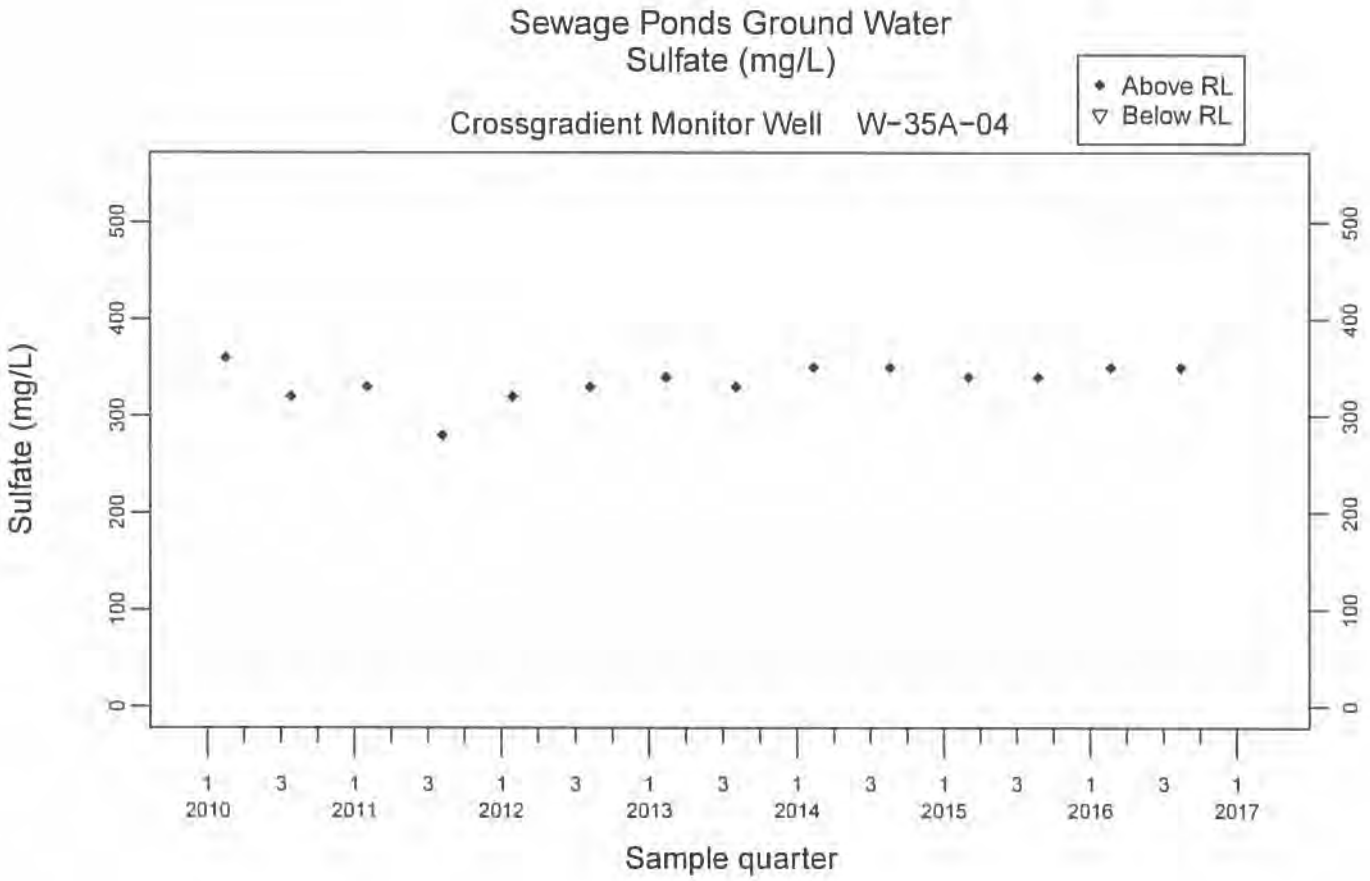

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Nitrate (as NO3) (mg/L)
0
10
20
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

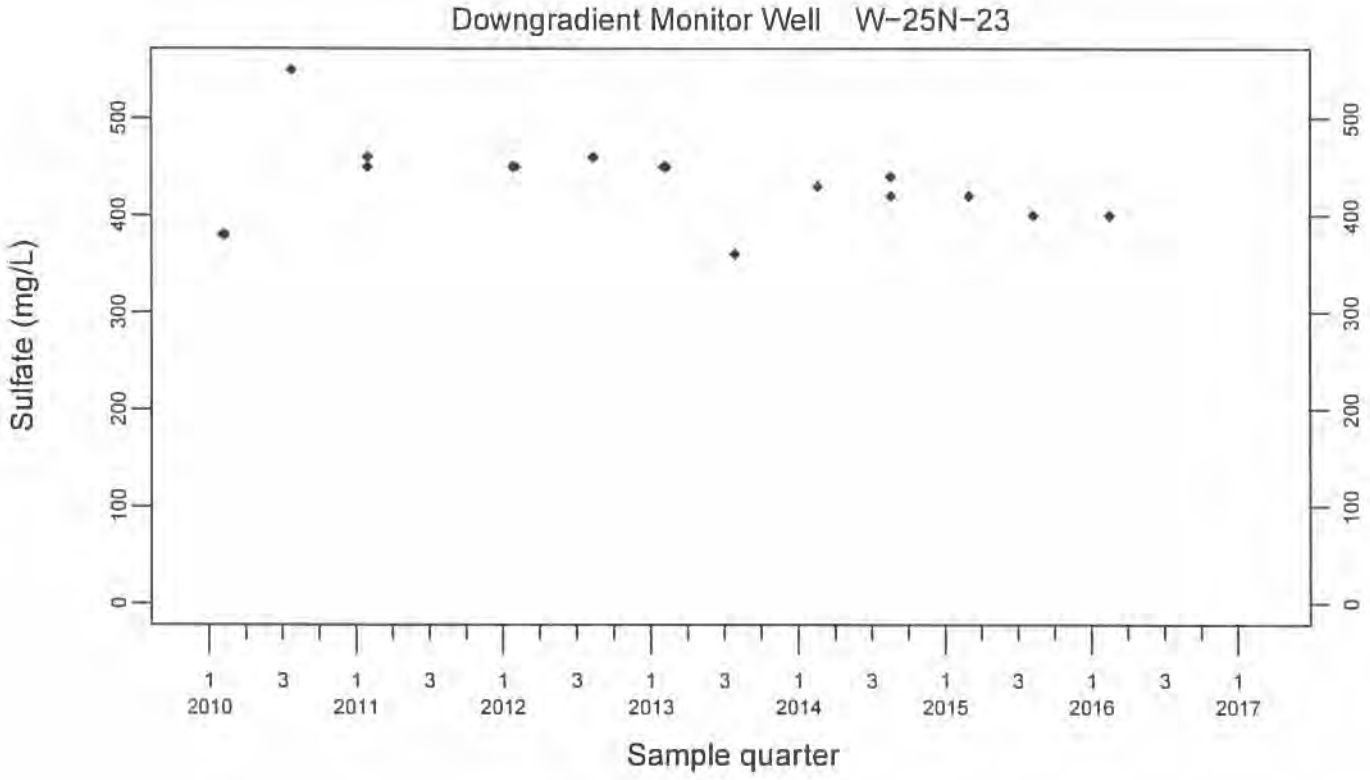

Downgradient Monitor Well W-26R-11
Nitrate (as NO3) (mg/L)
0
10
20
30
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

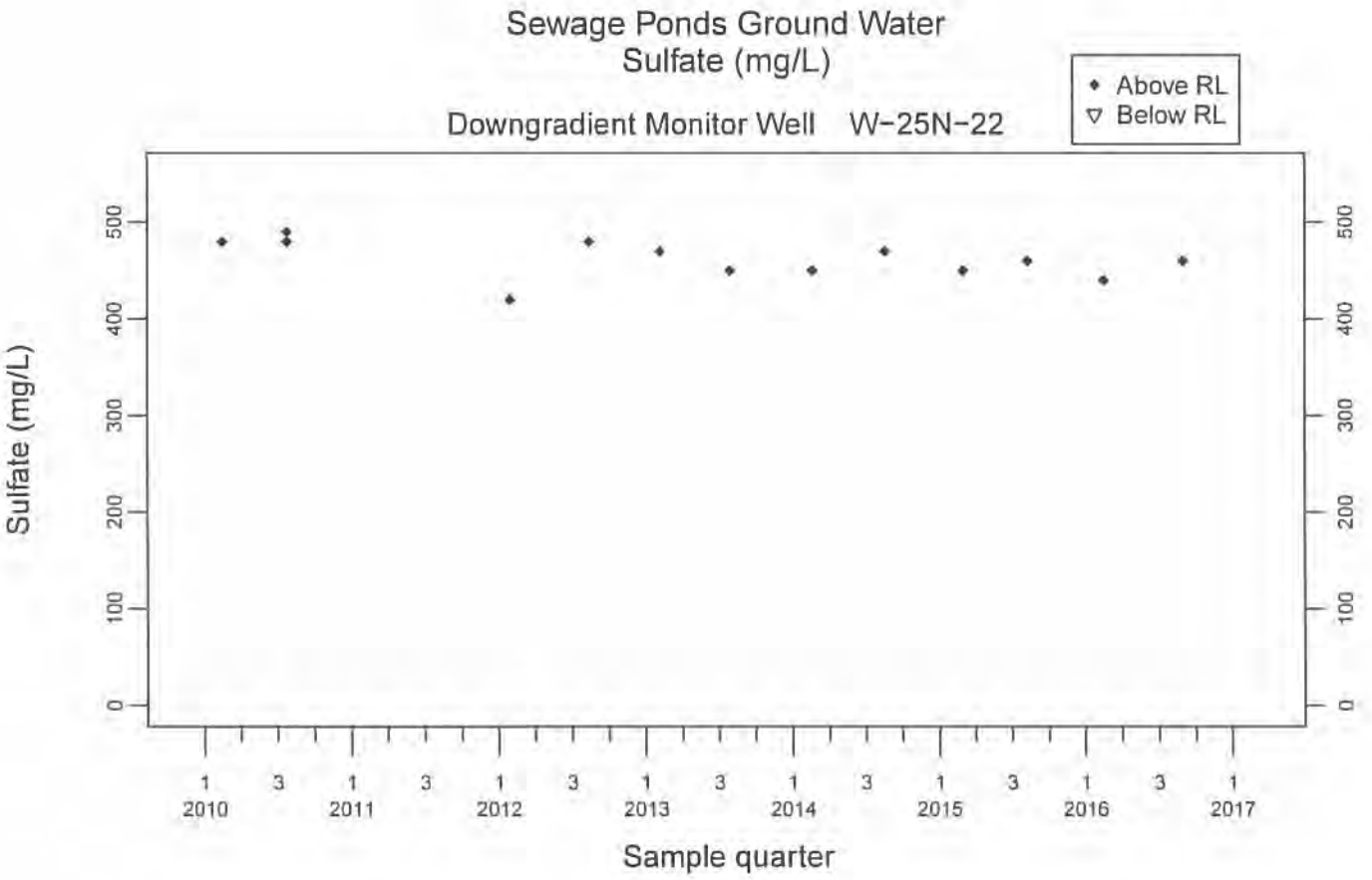

Sewage Ponds Ground Water
Nitrate (as NO3) (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Nitrate (as NO3) (mg/L)
0
10
20
30
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

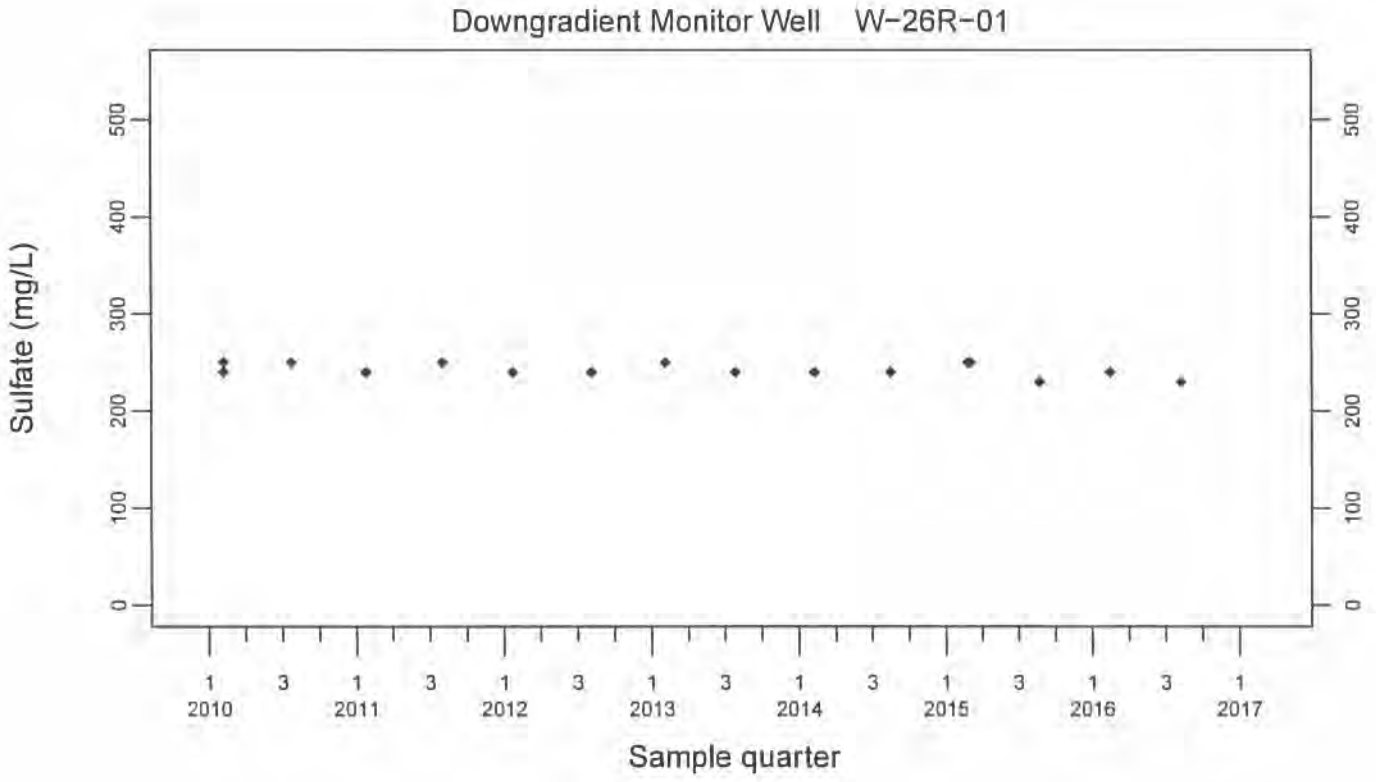

Sewage Ponds Ground Water
Sulfate (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

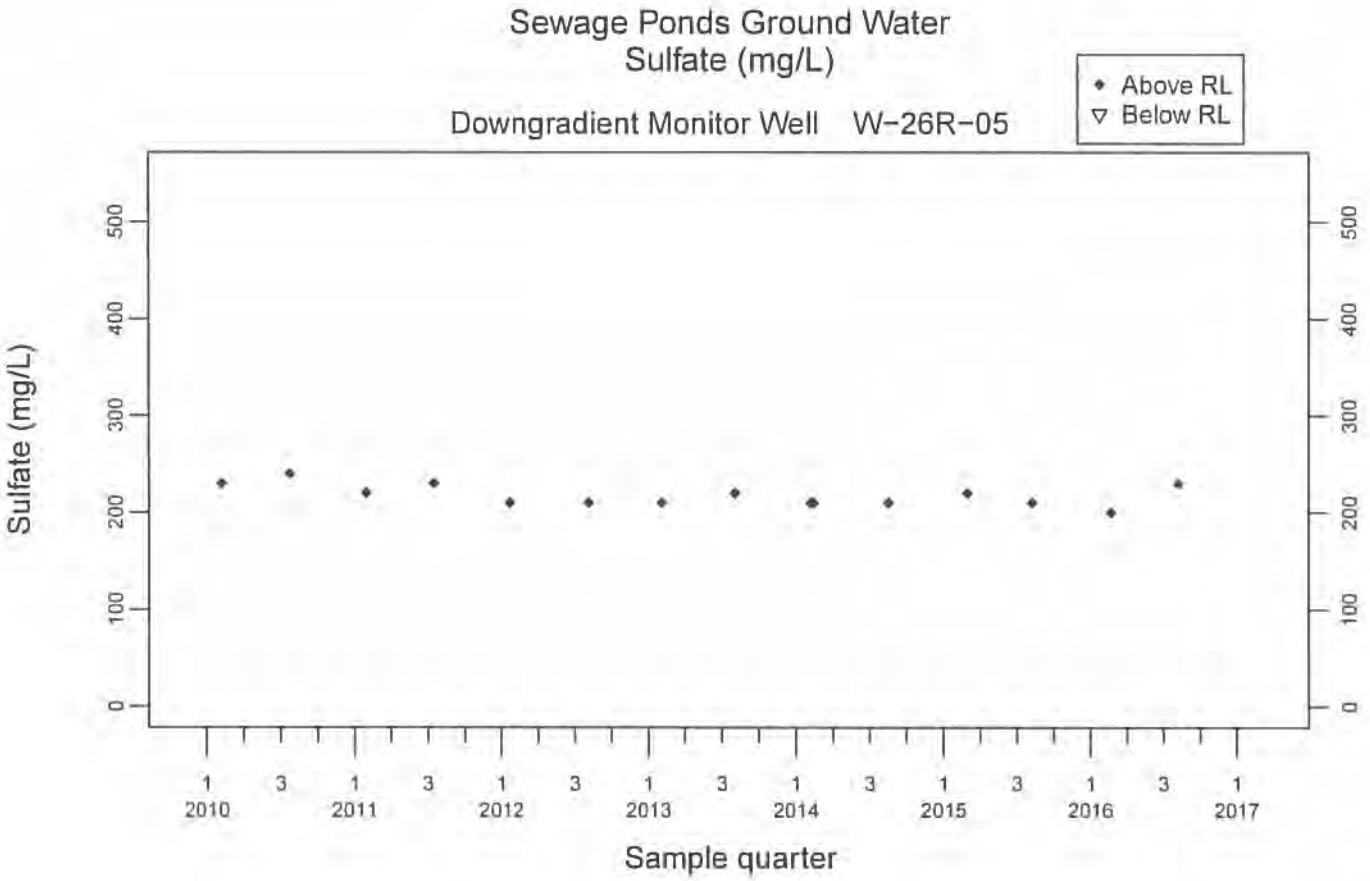

Upgradient Monitor Well W-7PS
Sulfate (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

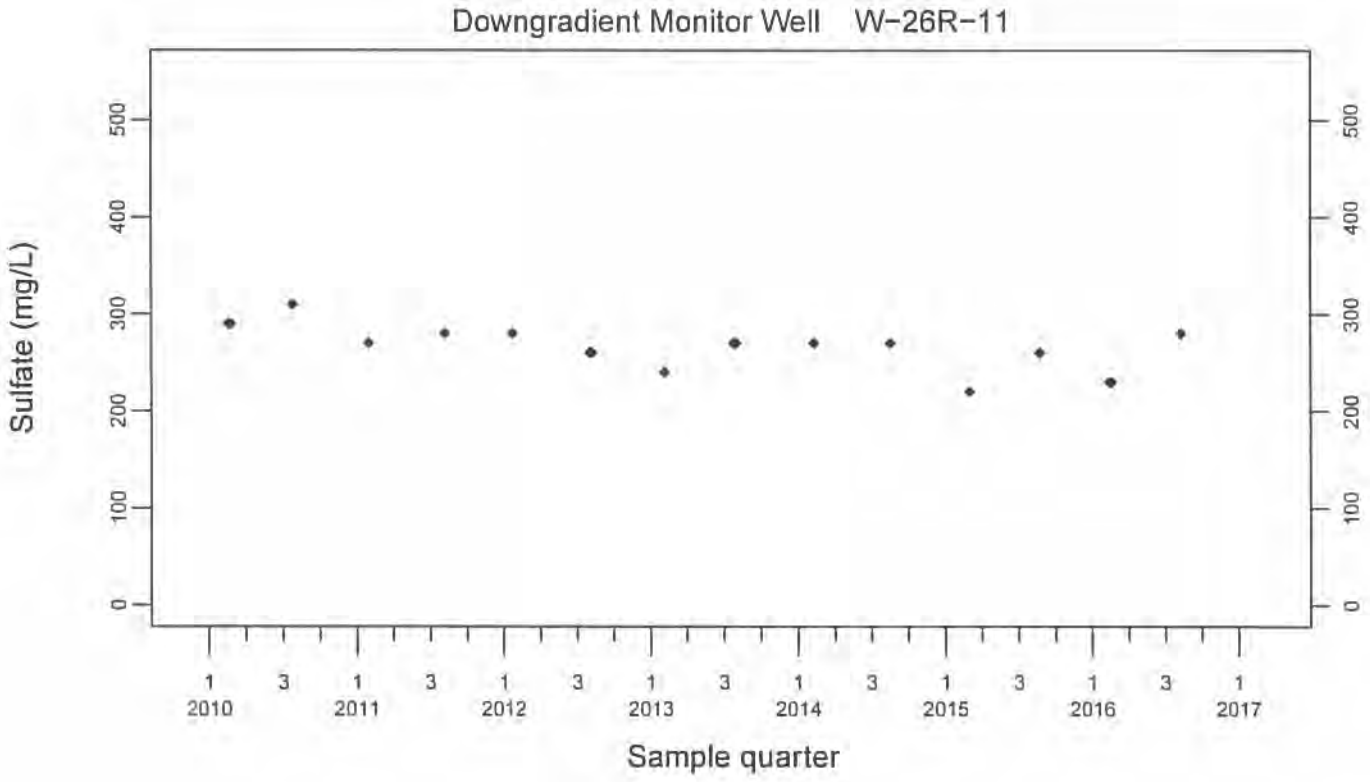

Sewage Ponds Ground Water
Sulfate (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

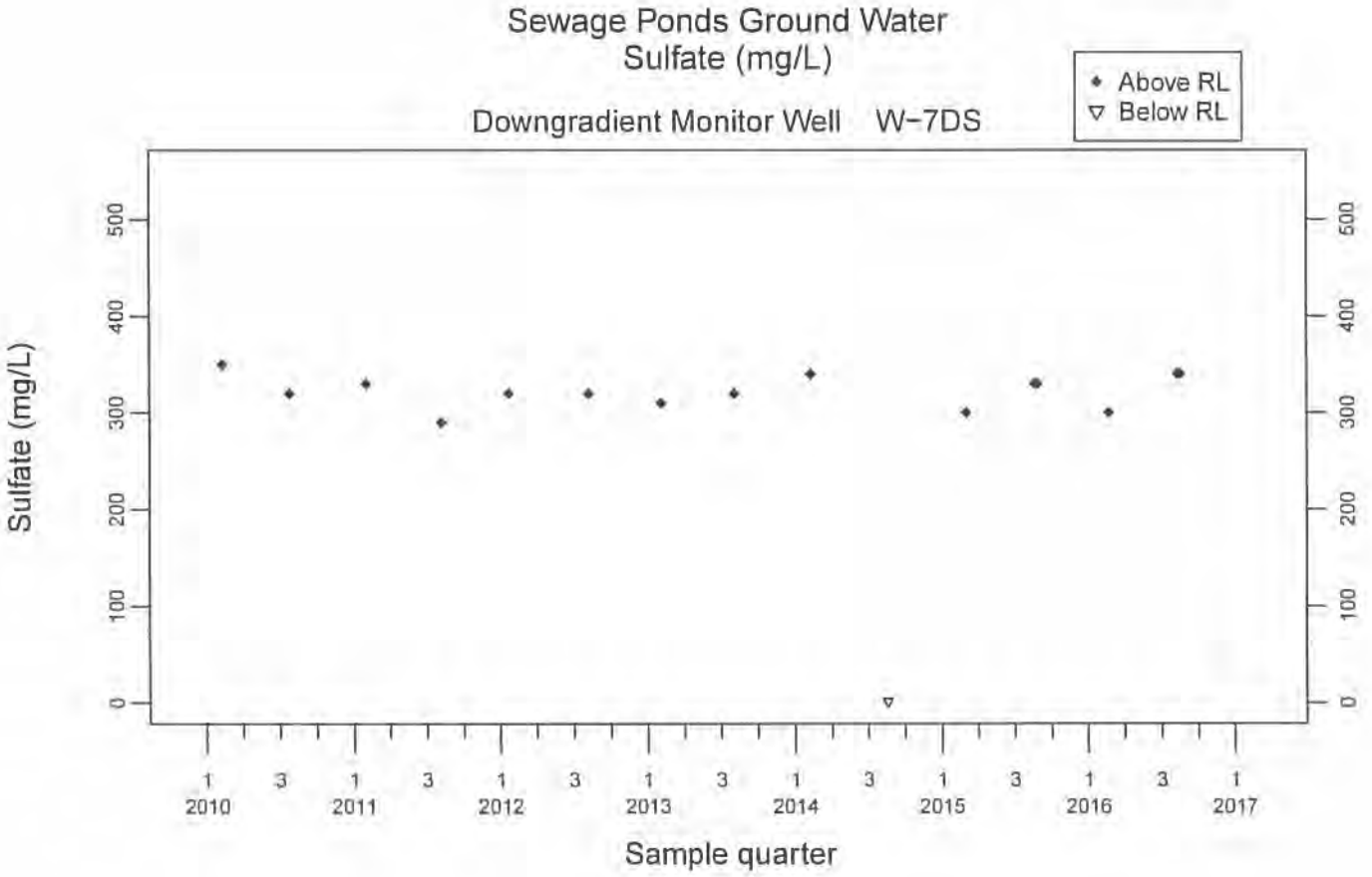

Downgradient Monitor Well W-25N-23
Sulfate (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

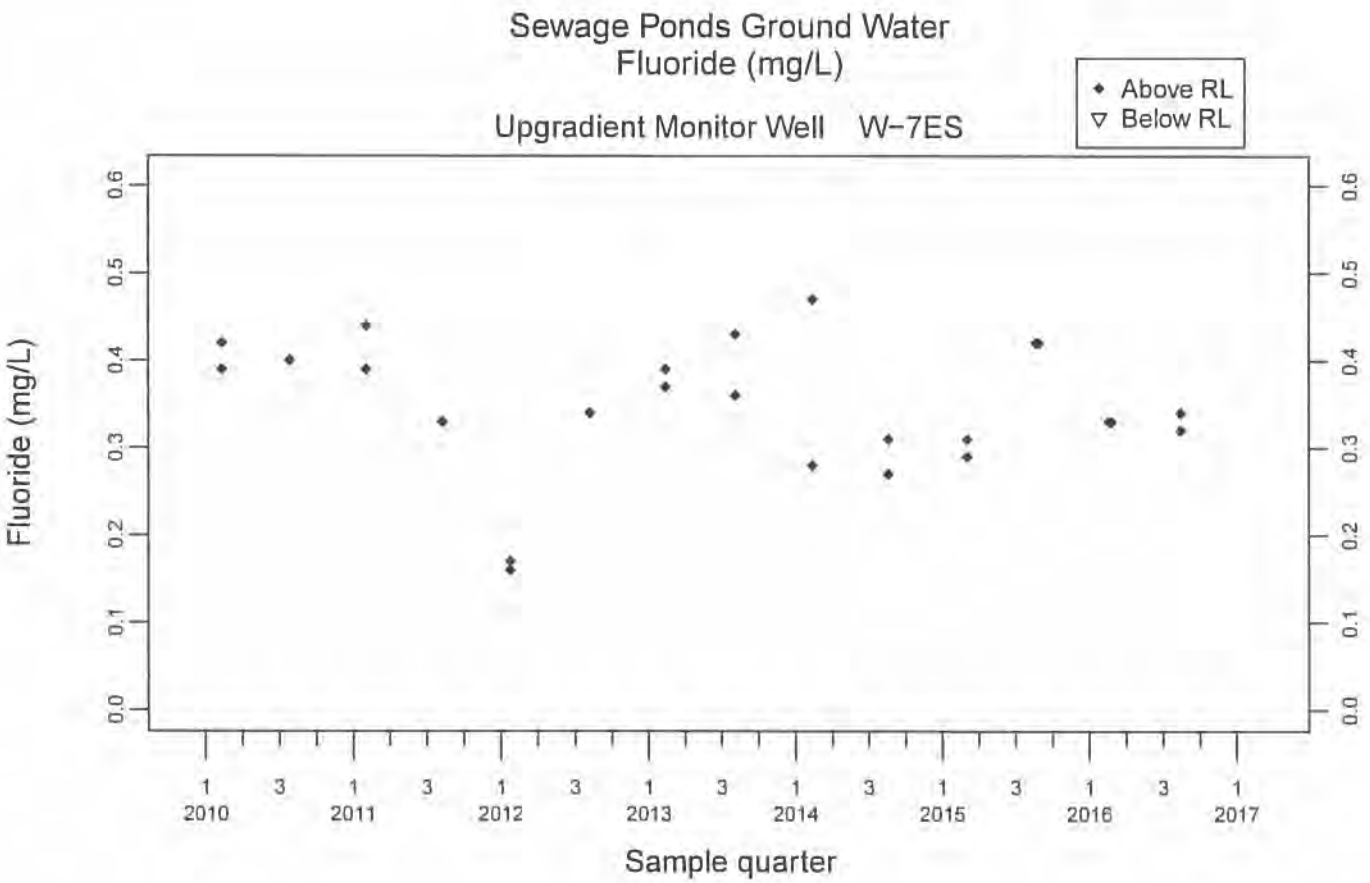

Sewage Ponds Ground Water
Sulfate (mg/L)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

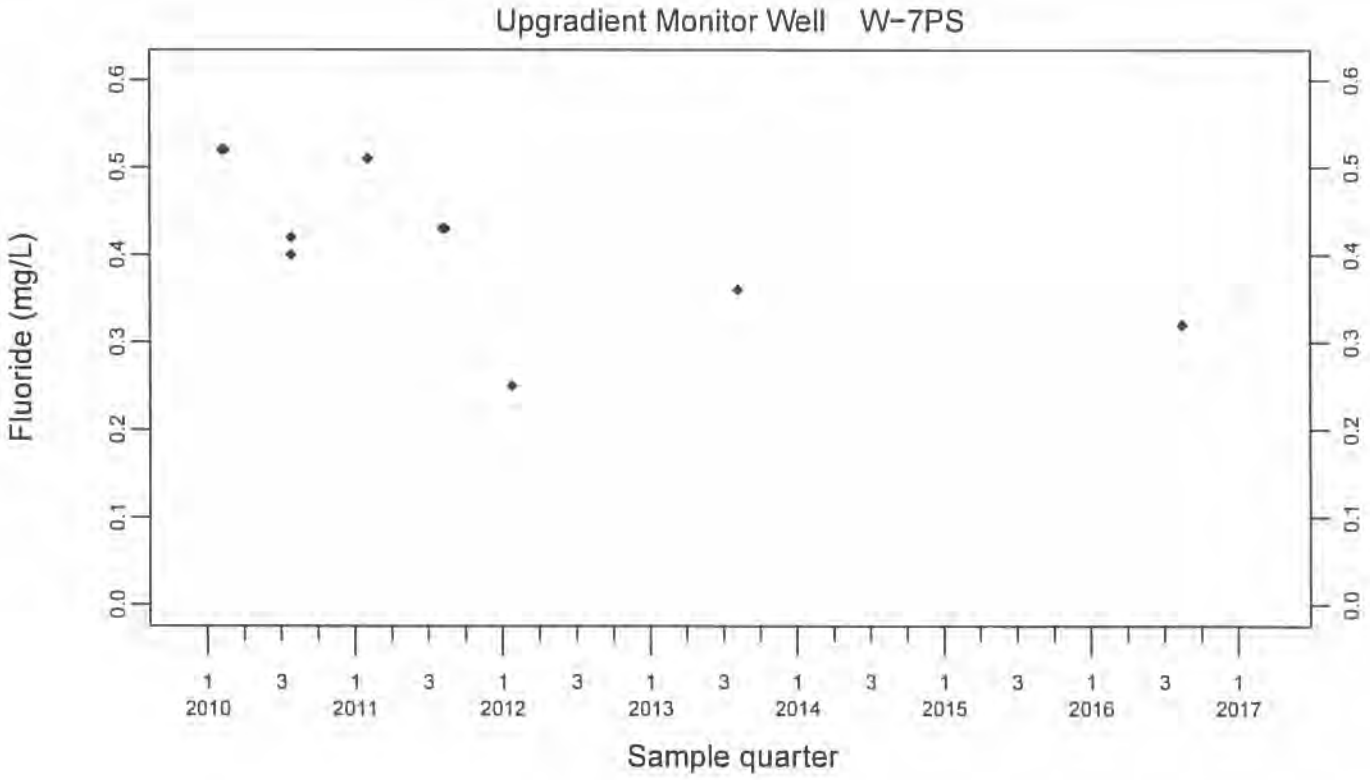

Downgradient Monitor Well W-26R-01
Sulfate (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

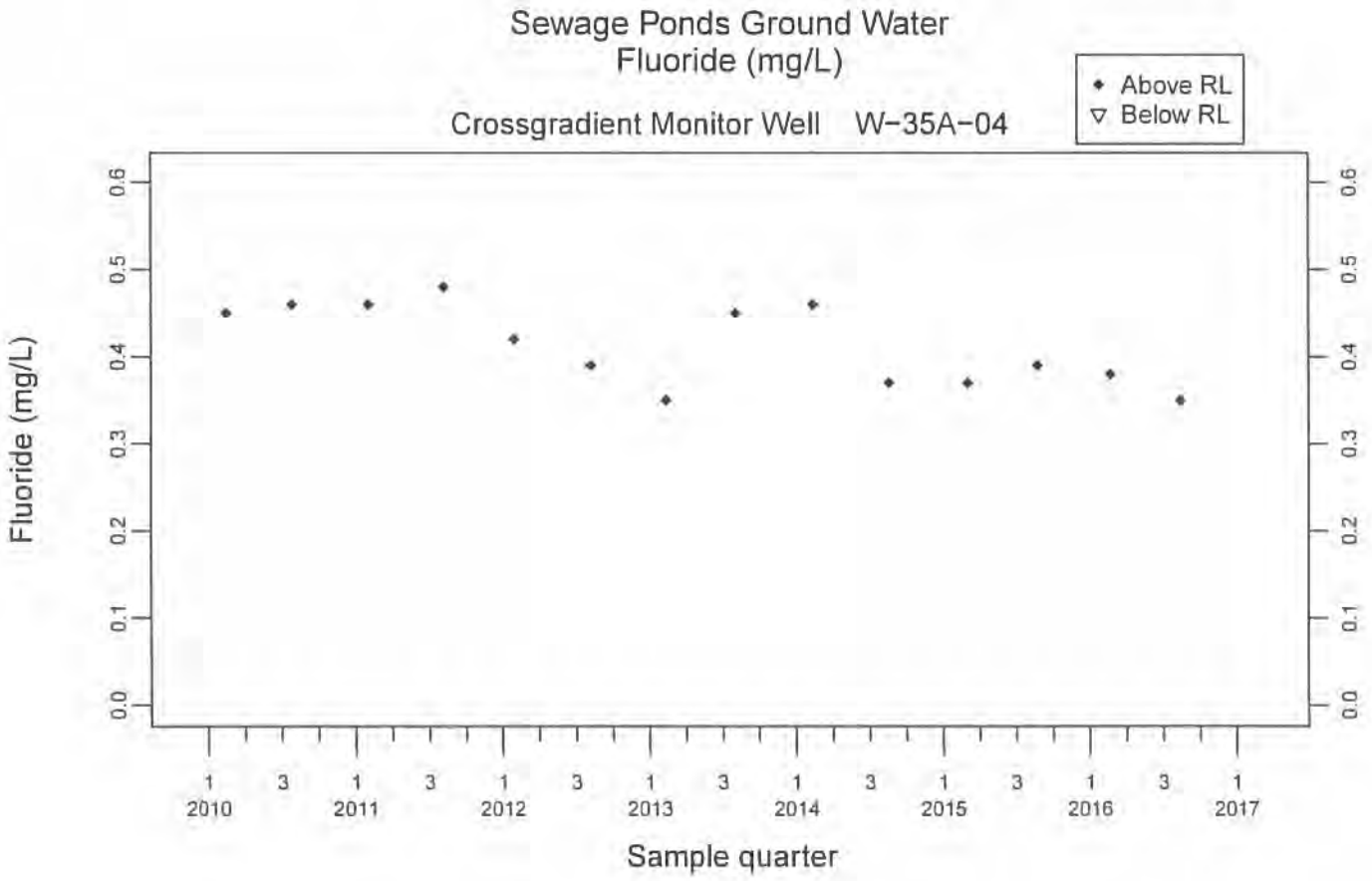

Sewage Ponds Ground Water
Sulfate (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
Sulfate (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

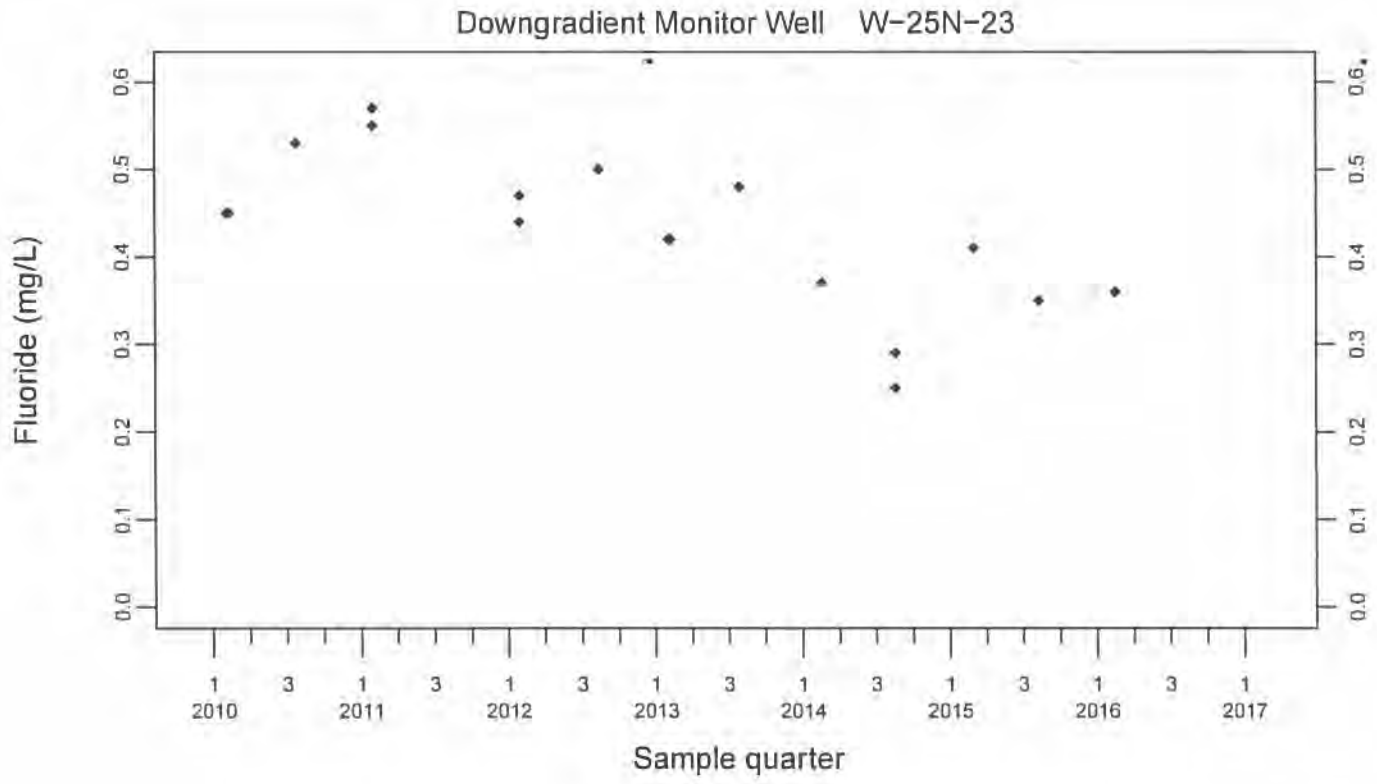

Downgradient Monitor Well W-26R-11
Sulfate (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

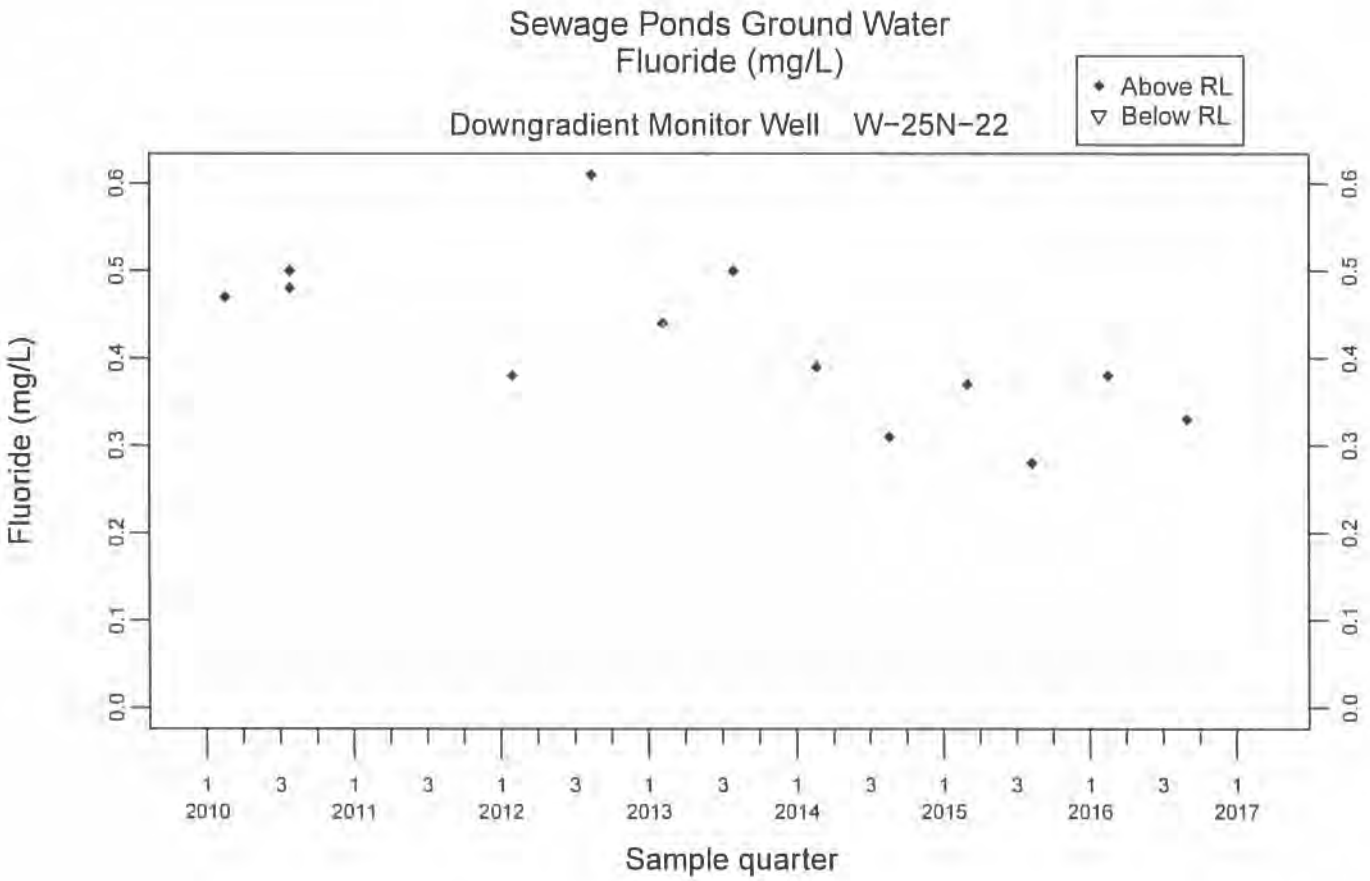

Sewage Ponds Ground Water
Sulfate (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Sulfate (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

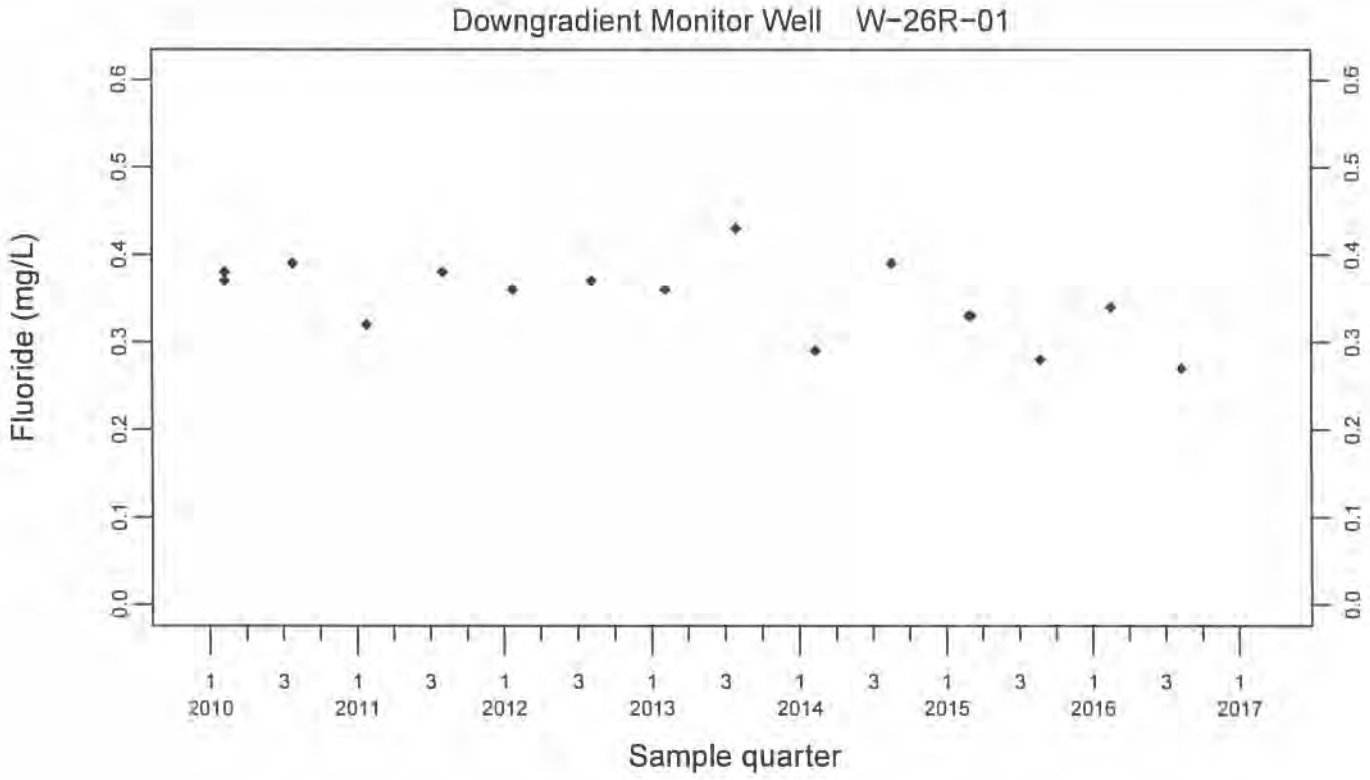

Sewage Ponds Ground Water
Fluoride (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

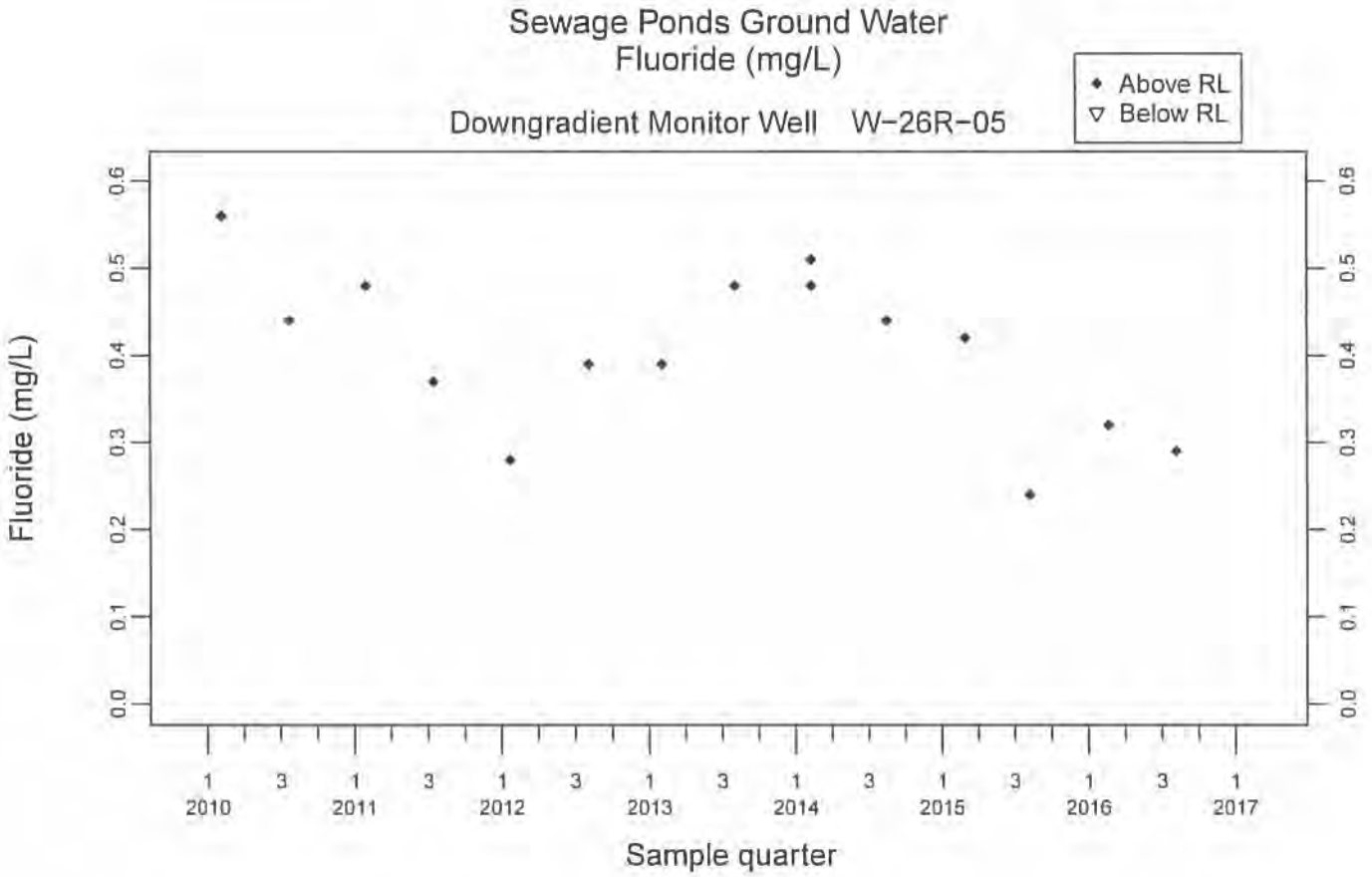

Upgradient Monitor Well W-7PS
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

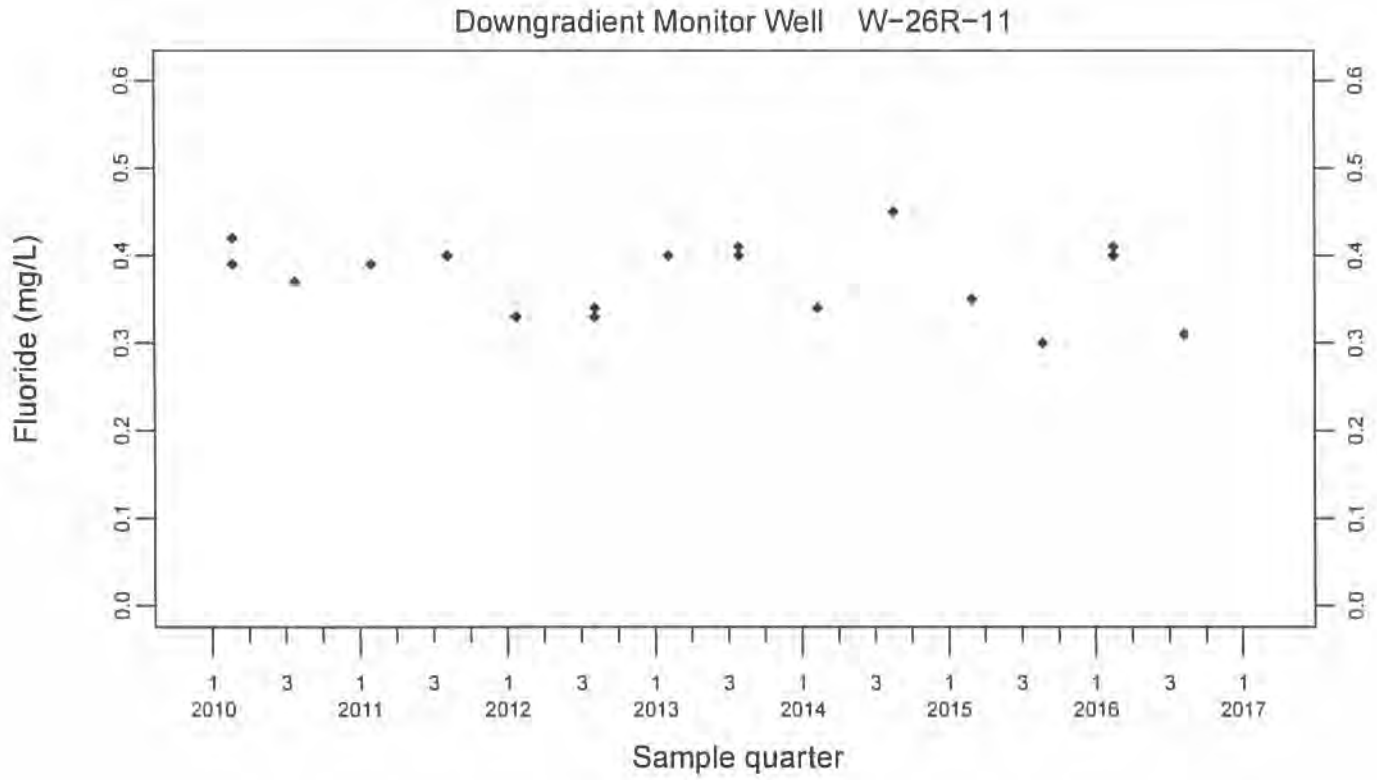

Sewage Ponds Ground Water
Fluoride (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

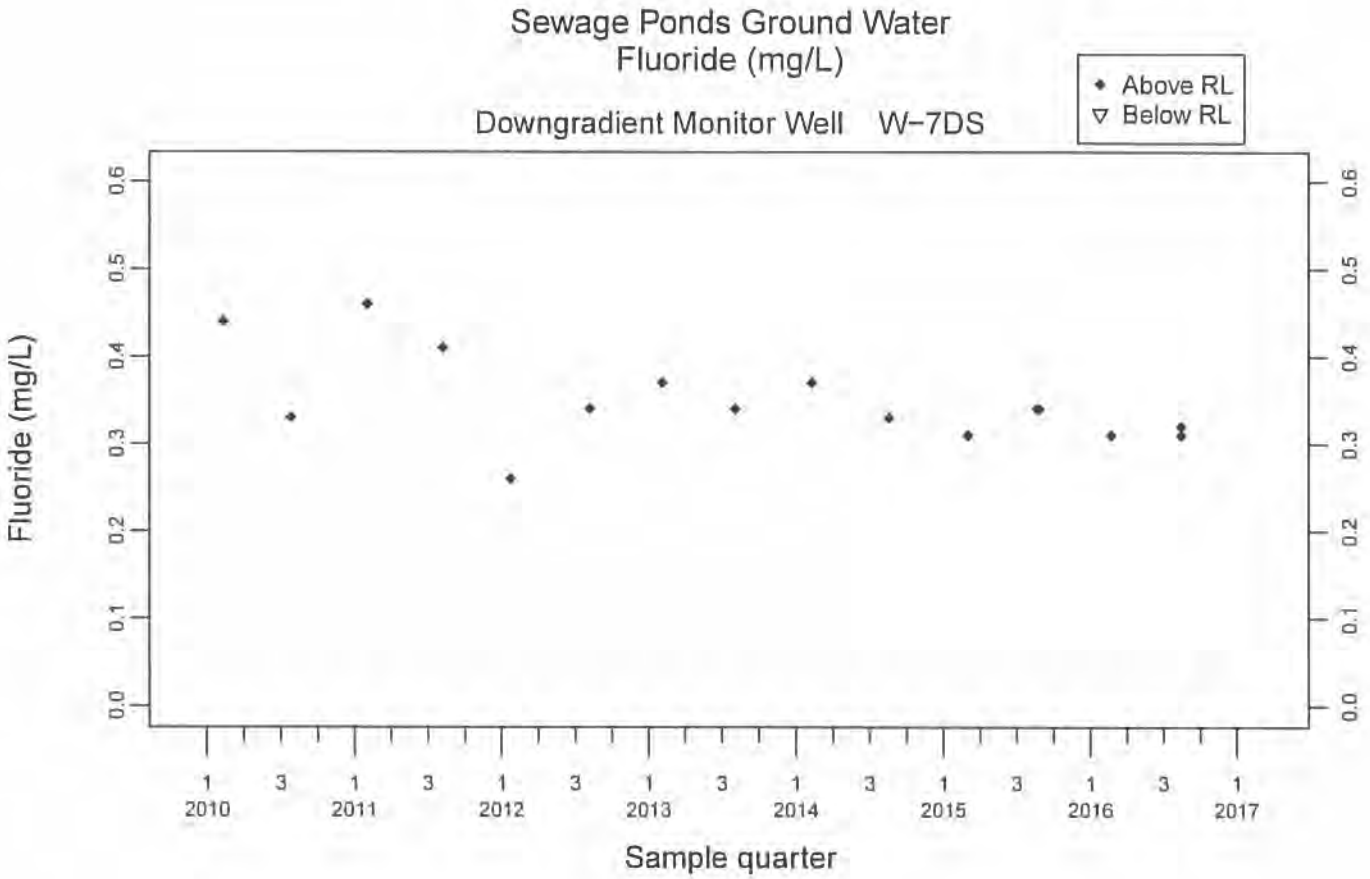

Downgradient Monitor Well W-25N-23
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

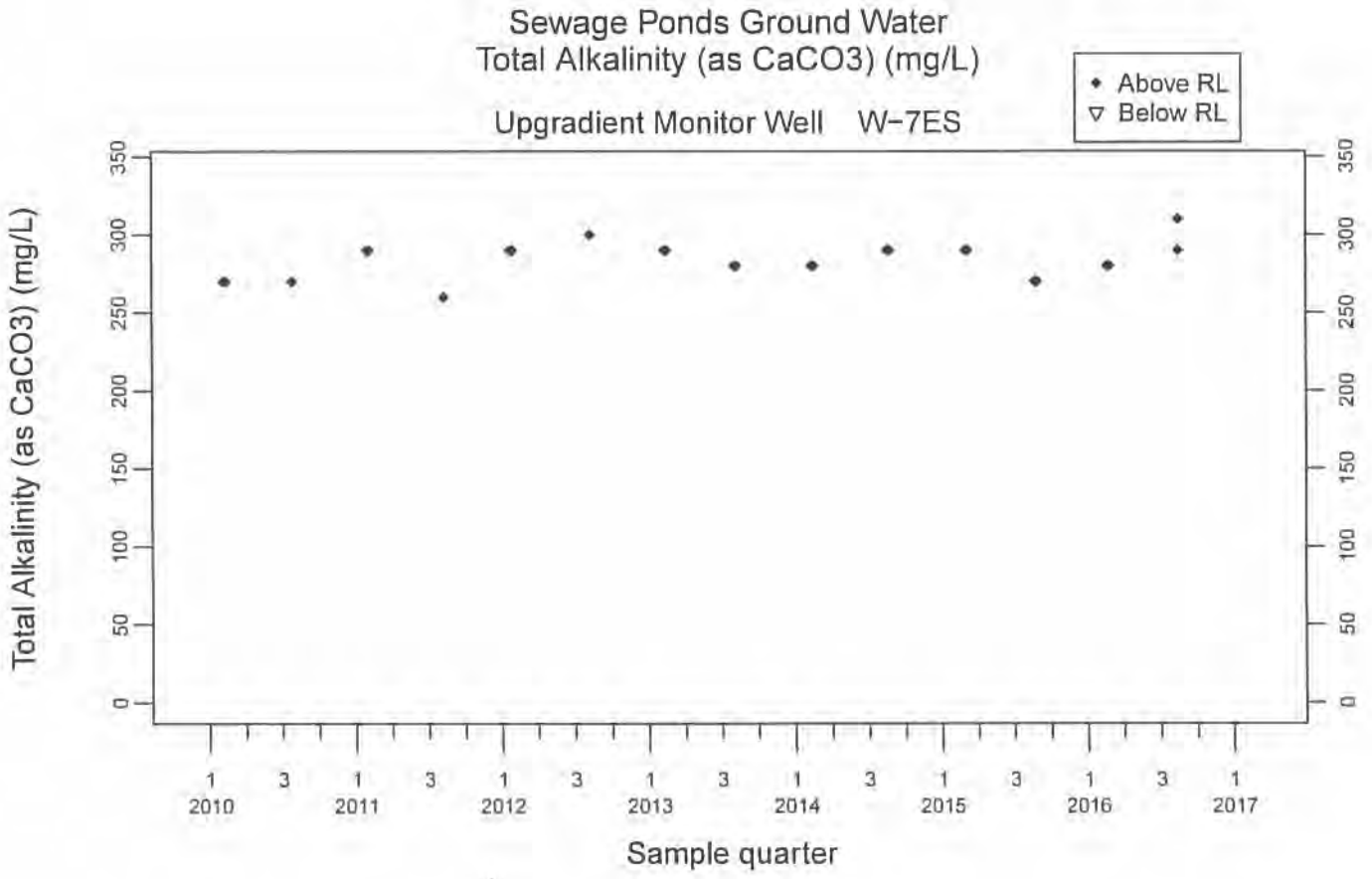

Sewage Ponds Ground Water
Fluoride (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

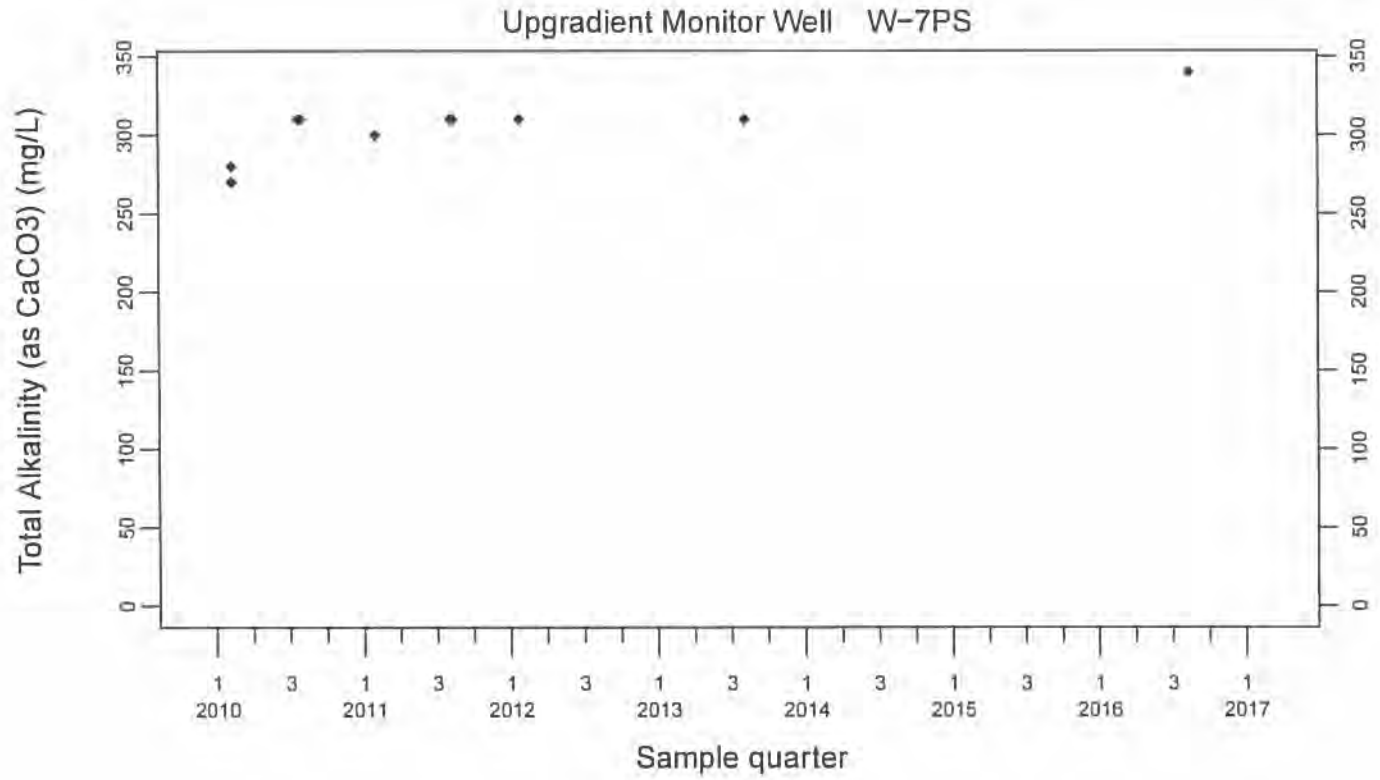

Downgradient Monitor Well W-26R-01
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

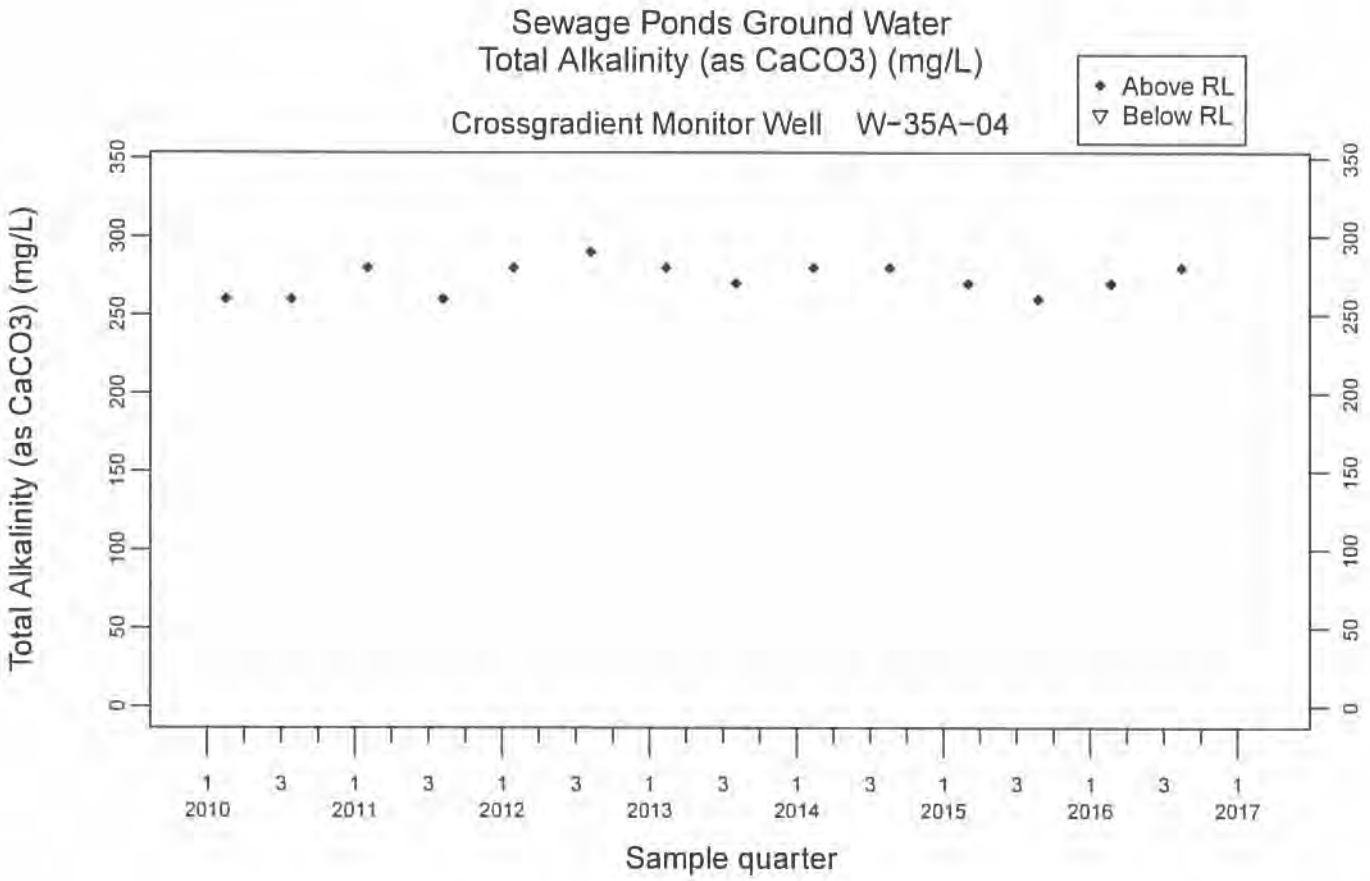

Sewage Ponds Ground Water
Fluoride (mg/L)
Downgradient Monitor Well W-26R-05
Above RL
Below RL
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

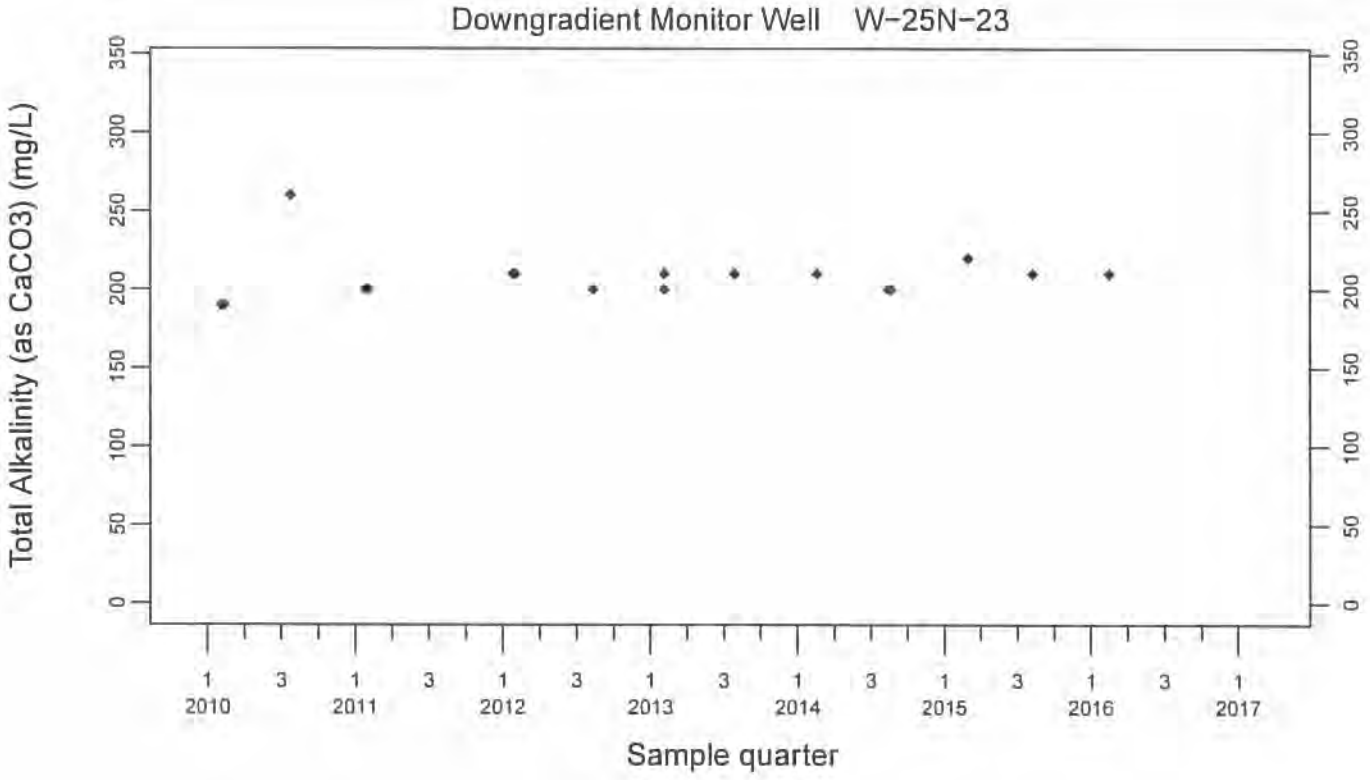

Downgradient Monitor Well W-26R-11
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

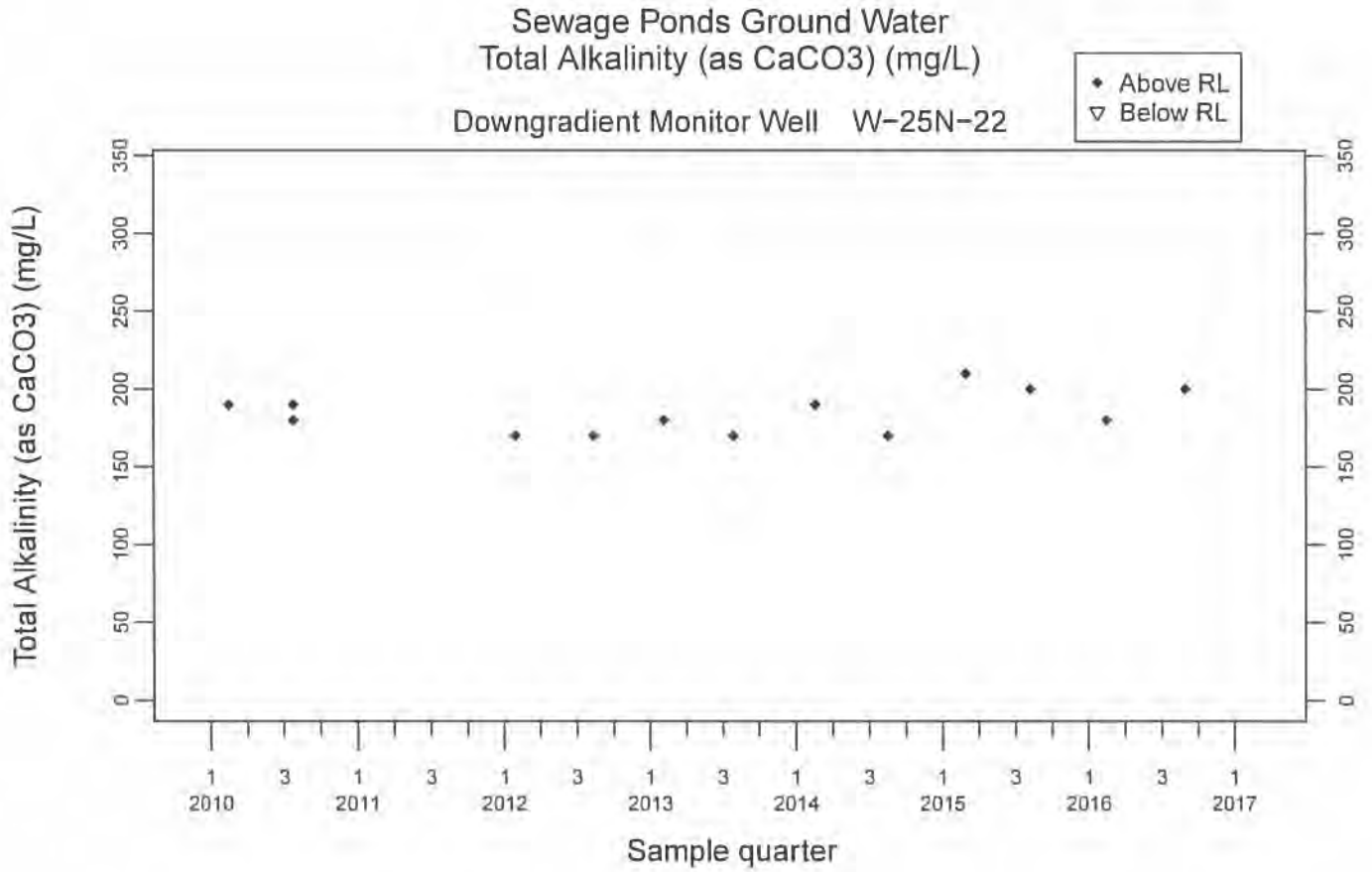

Sewage Ponds Ground Water
Fluoride (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Fluoride (mg/L)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

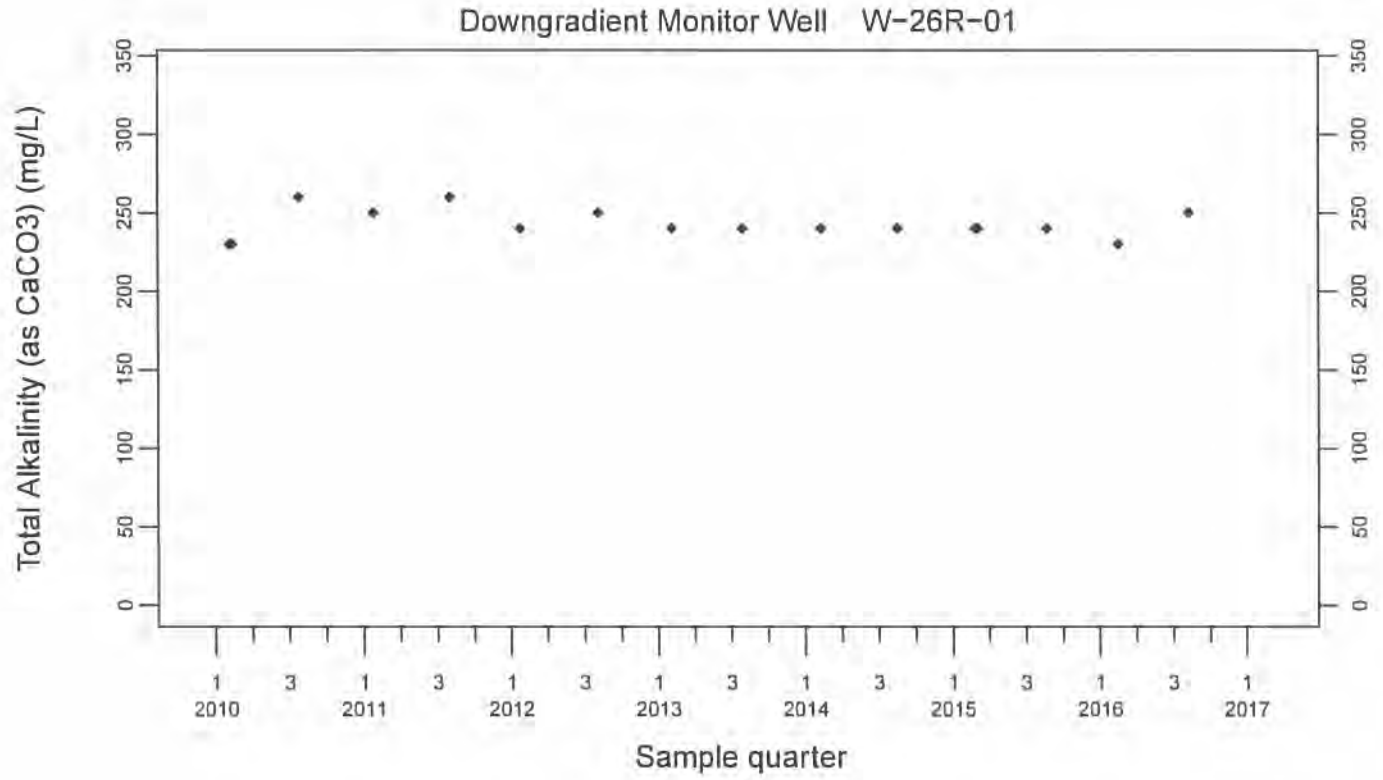

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Upgradient Monitor Well W-7PS
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

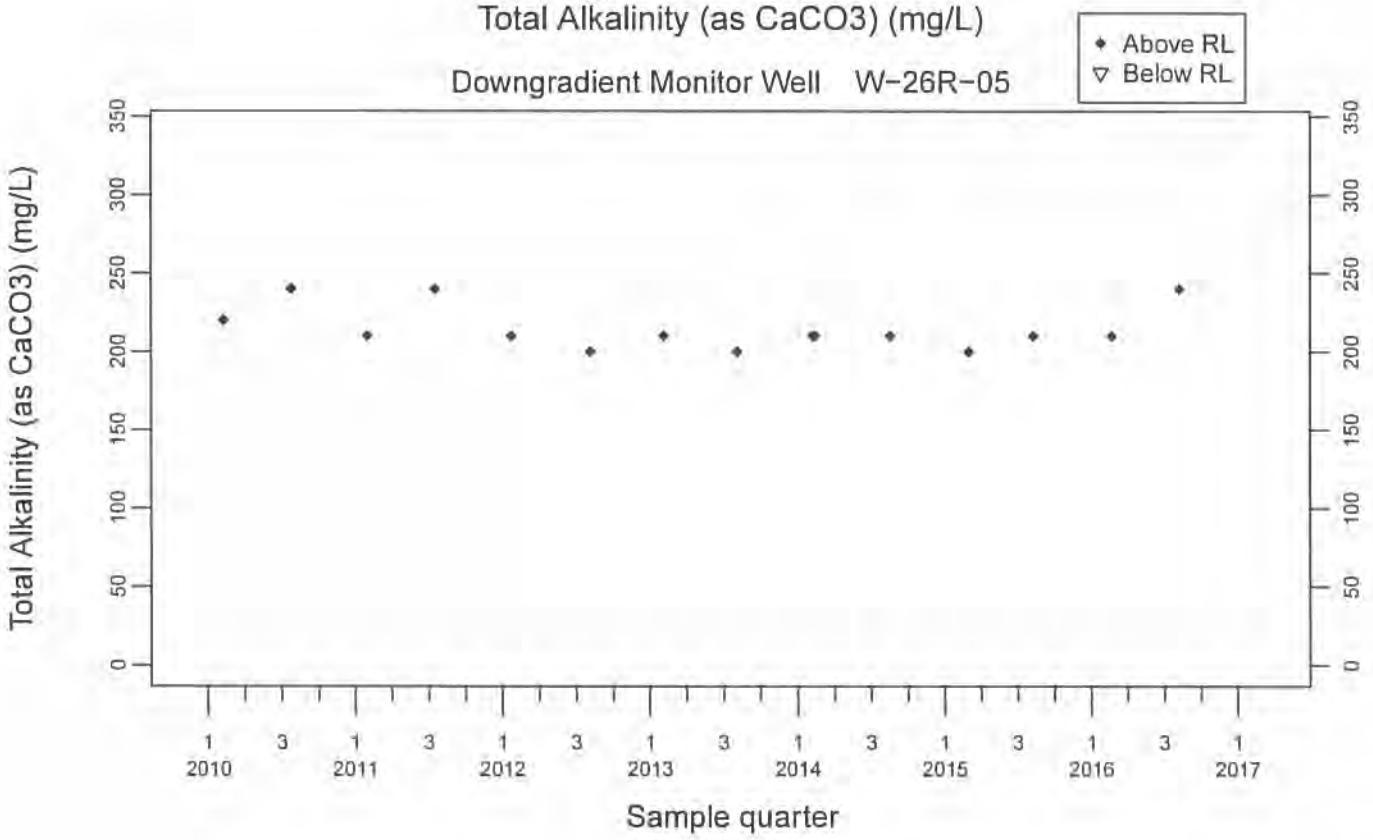

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Above RL
Below RL
Crossgradient Monitor Well W-35A-04
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

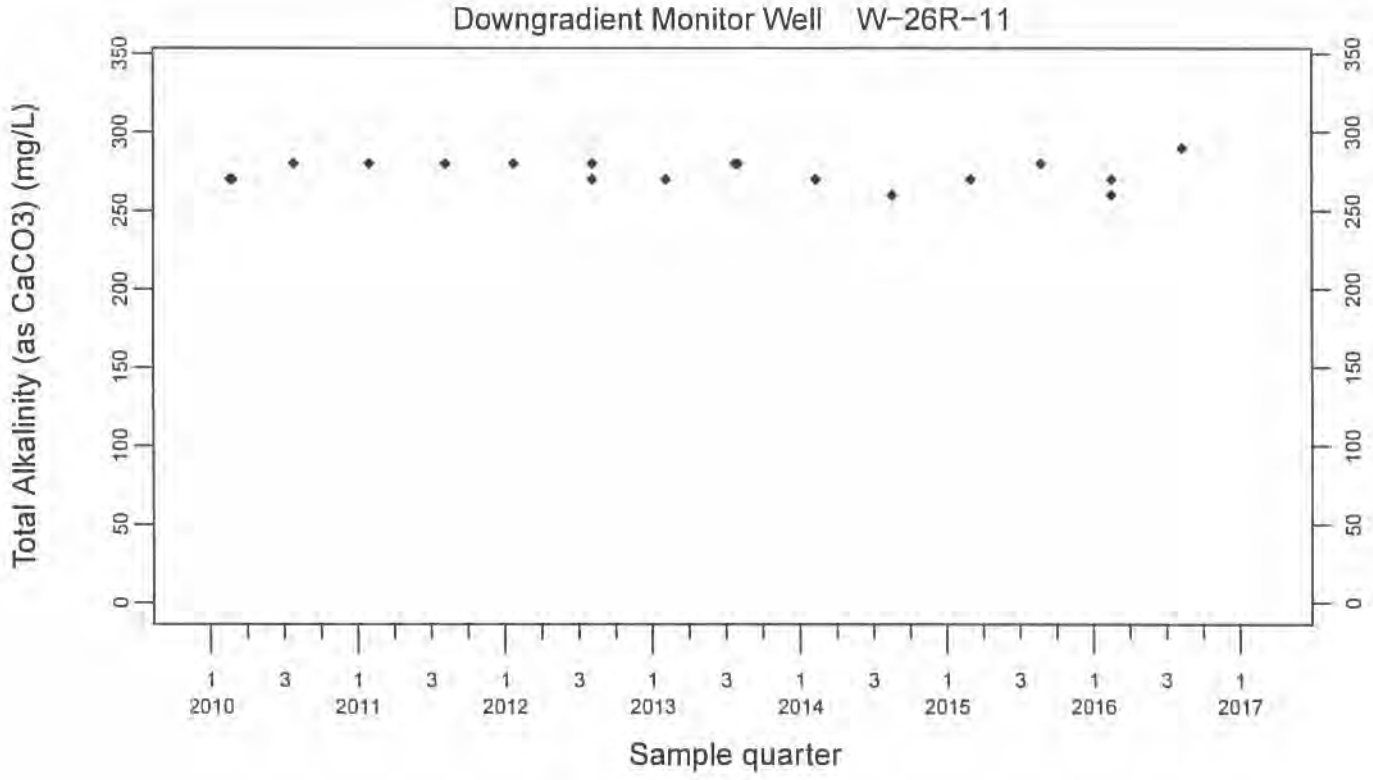

Downgradient Monitor Well W-25N-23
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

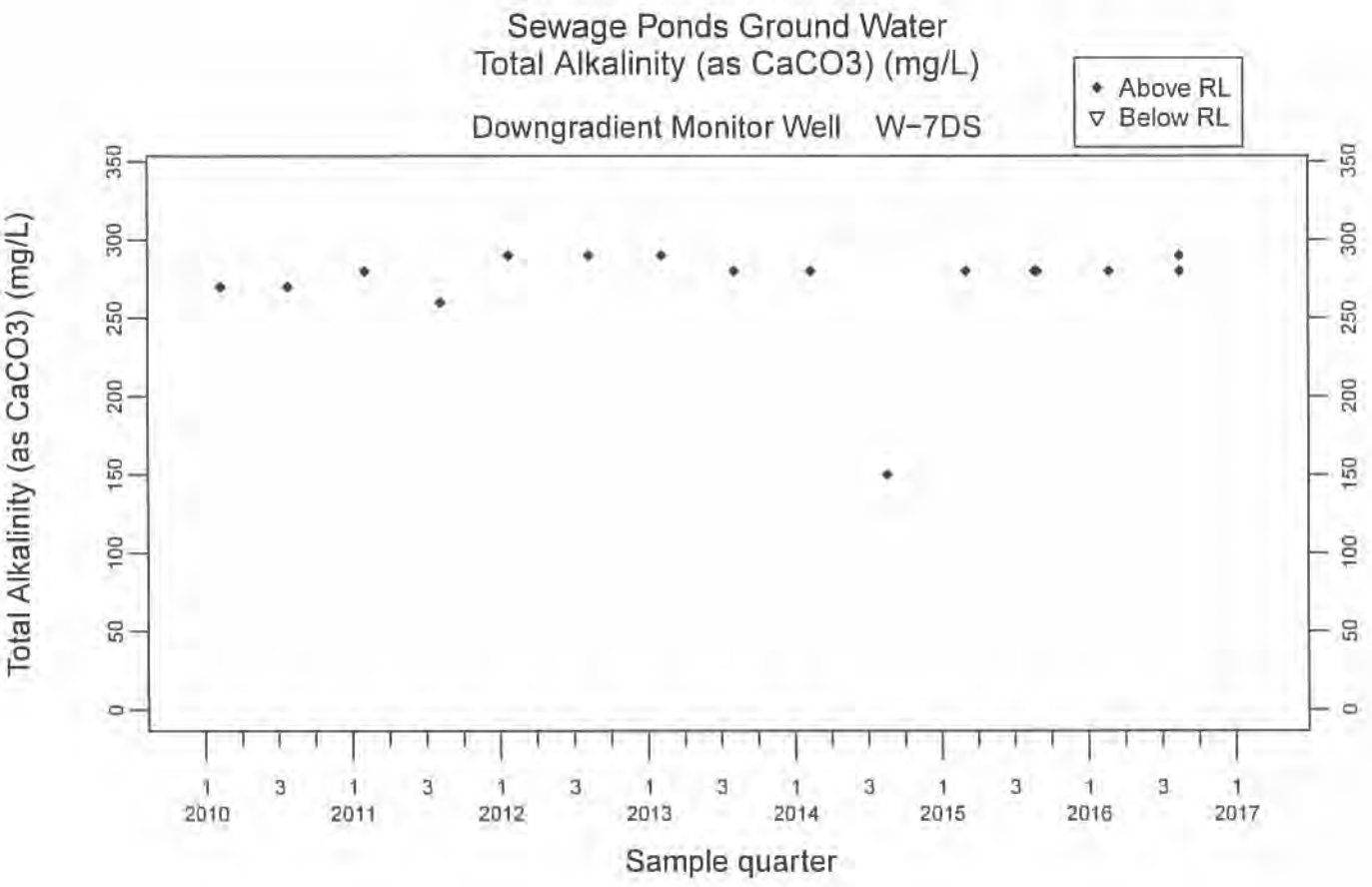

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

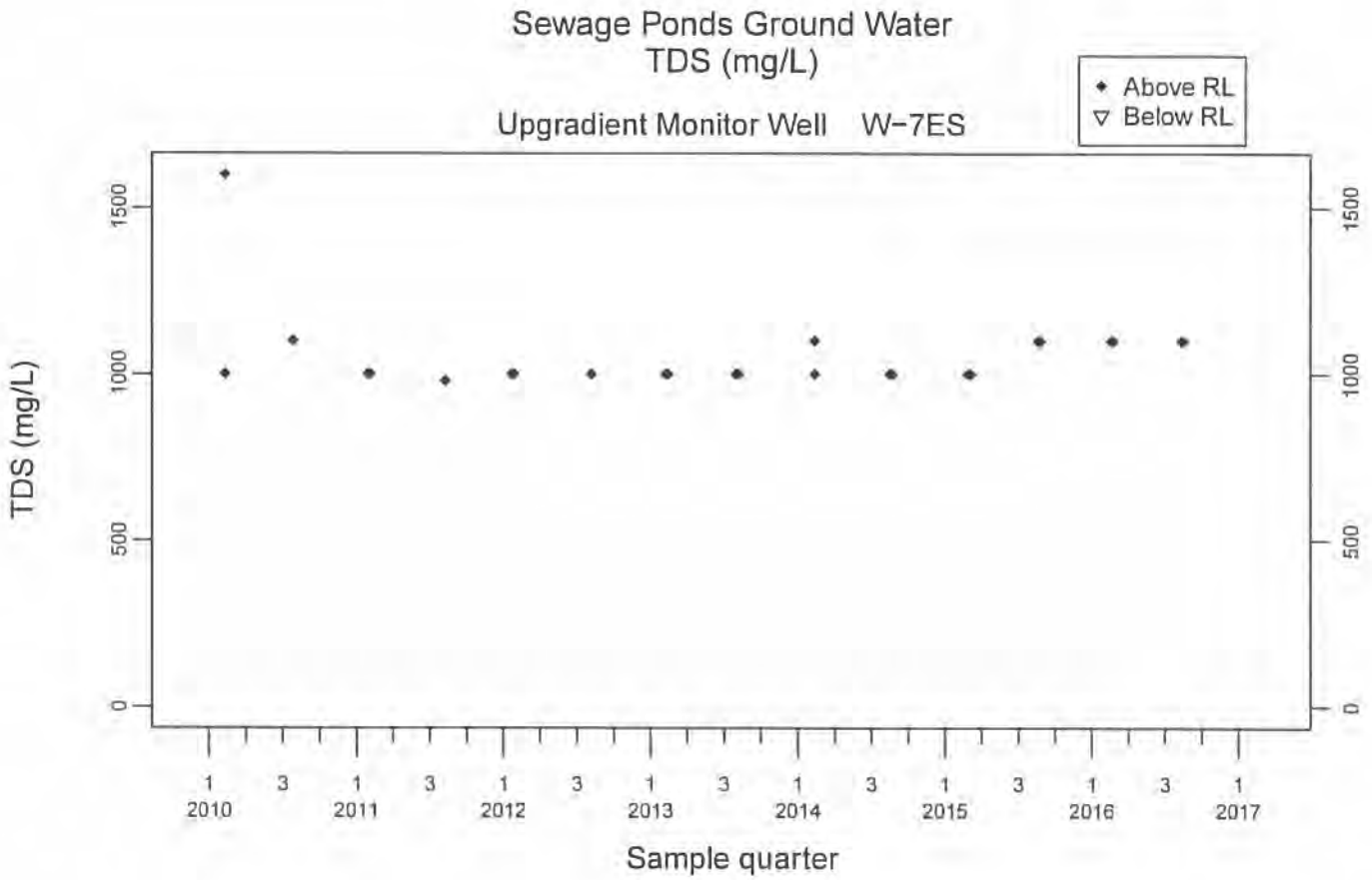

Downgradient Monitor Well W-26R-01
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

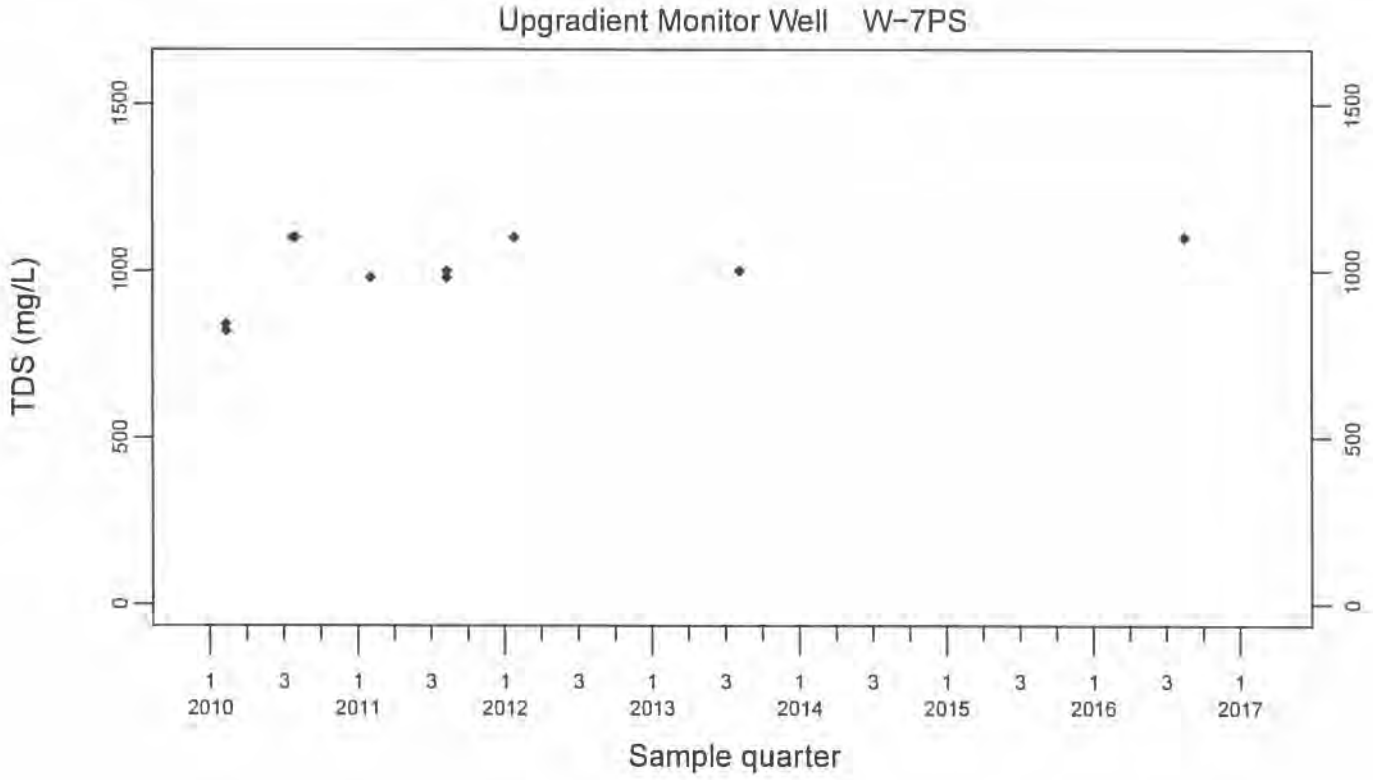
Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)

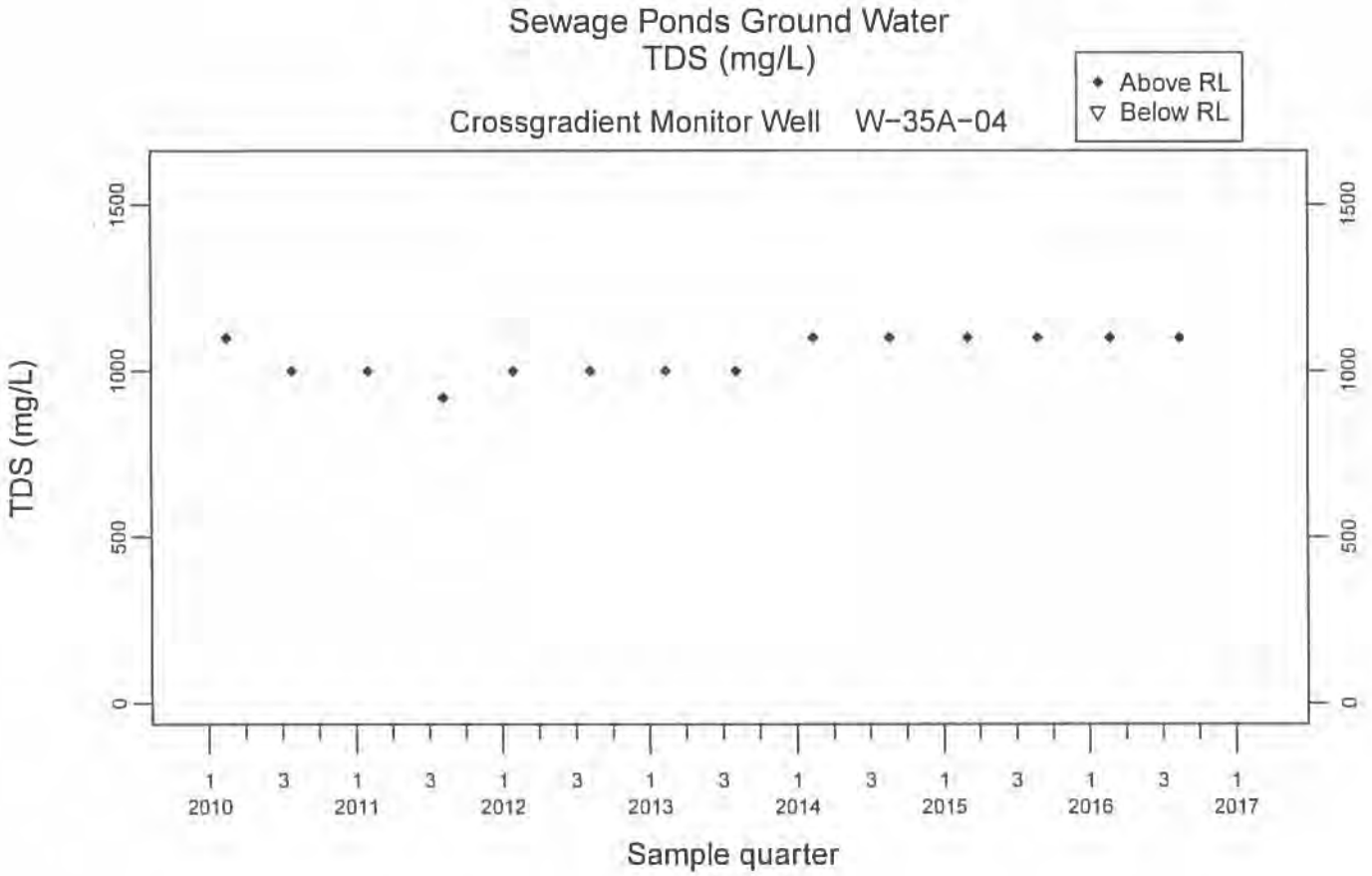


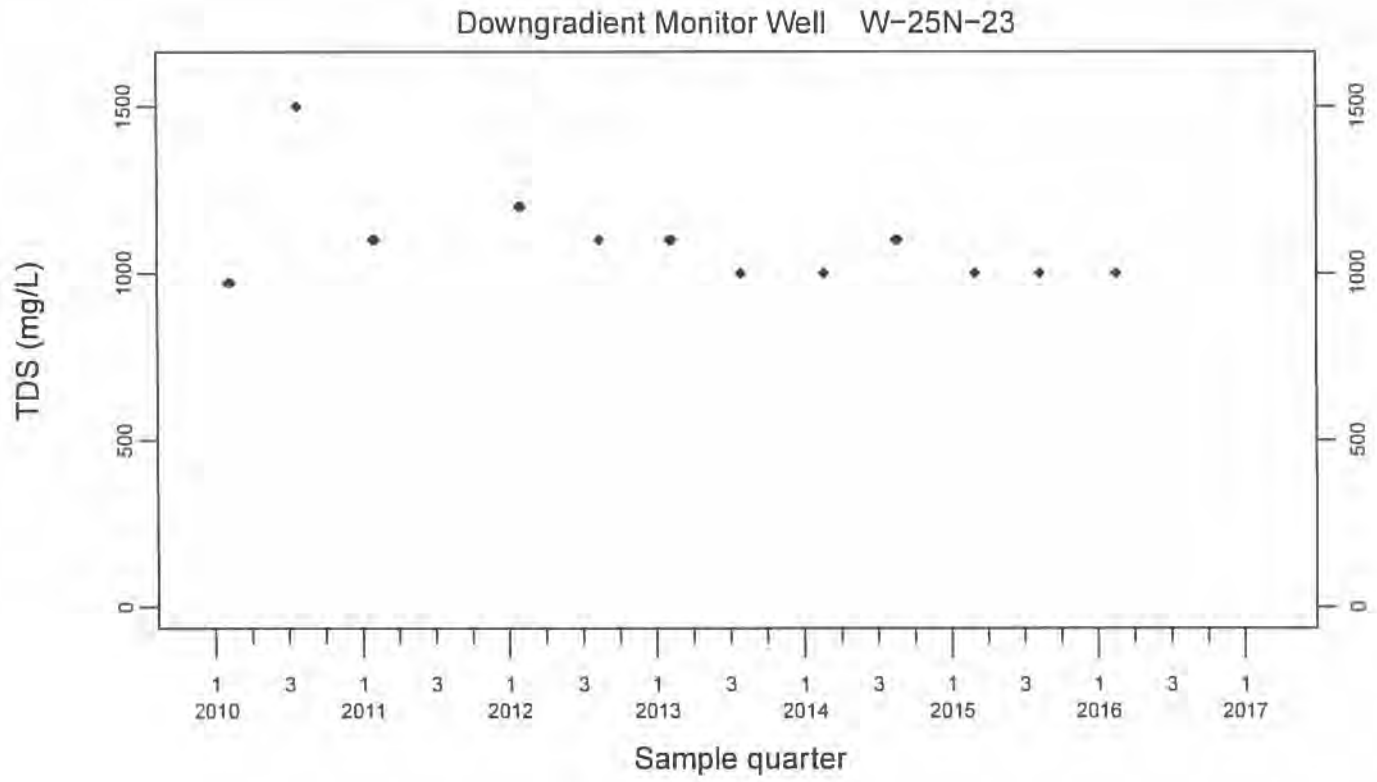


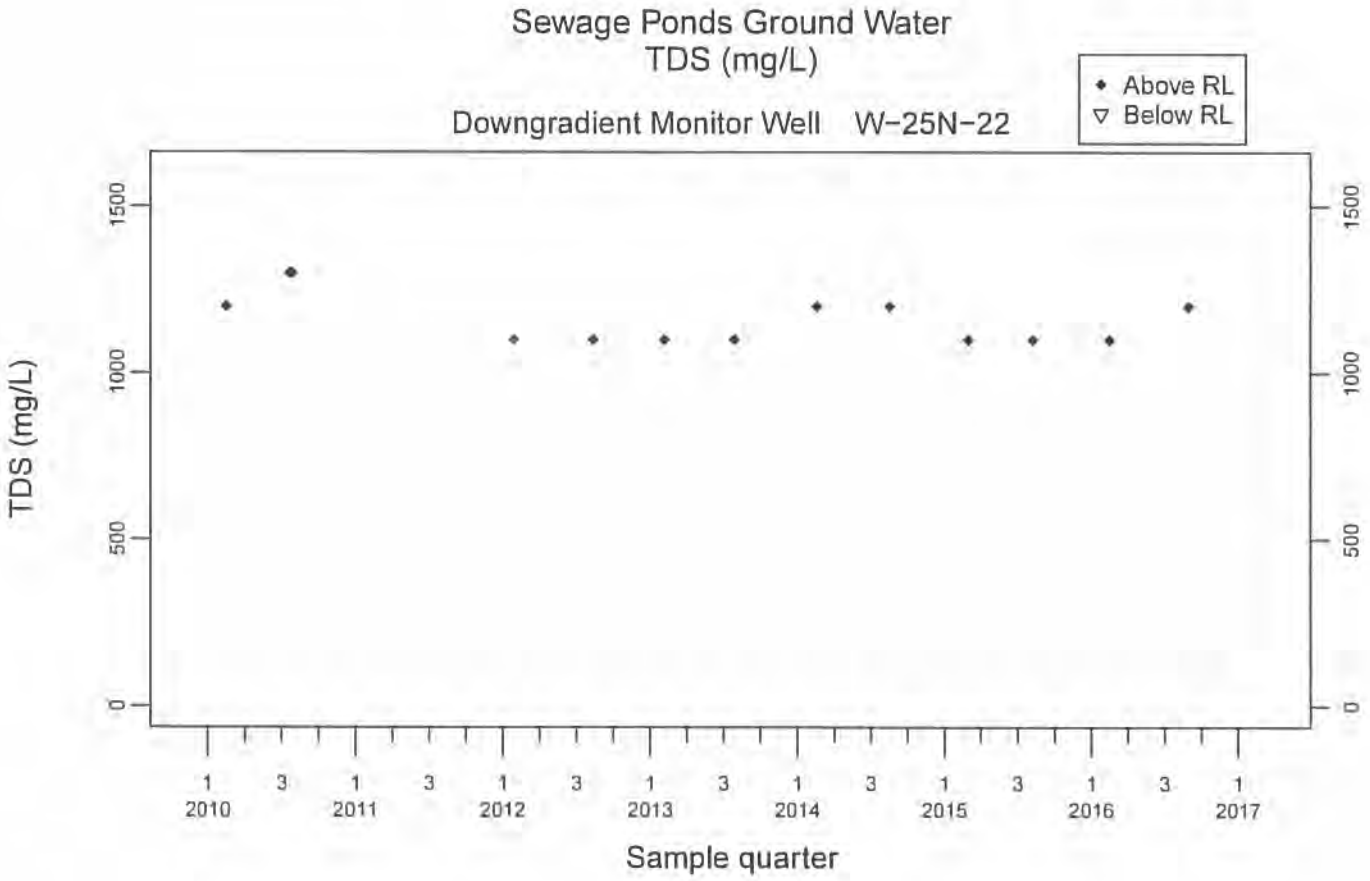

Sewage Ponds Ground Water
Total Alkalinity (as CaCO3) (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Total Alkalinity (as CaCO3) (mg/L)
0
50
100
150
200
250
300
350
1
3
2010
2011
2012
2013
2014
2015
2016
2017
Sample quarter

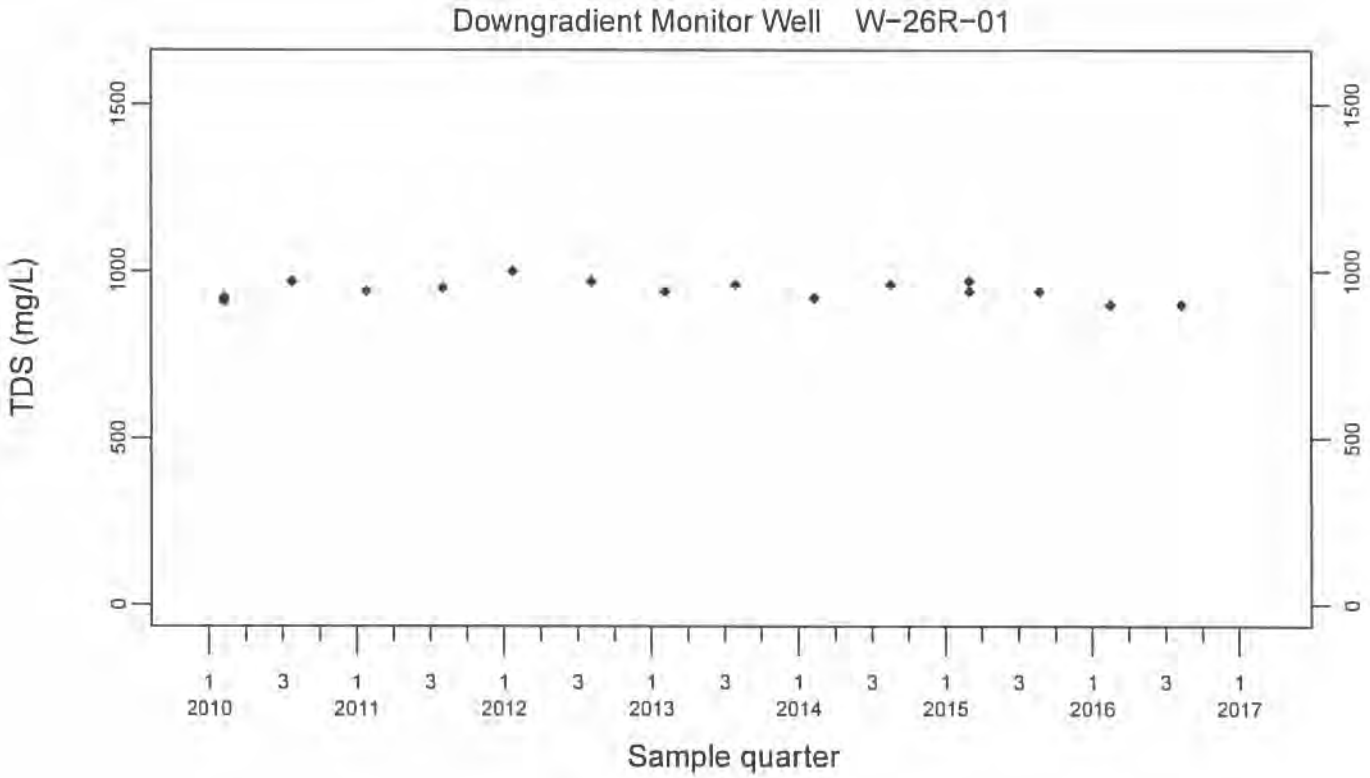

Sewage Ponds Ground Water
TDS (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

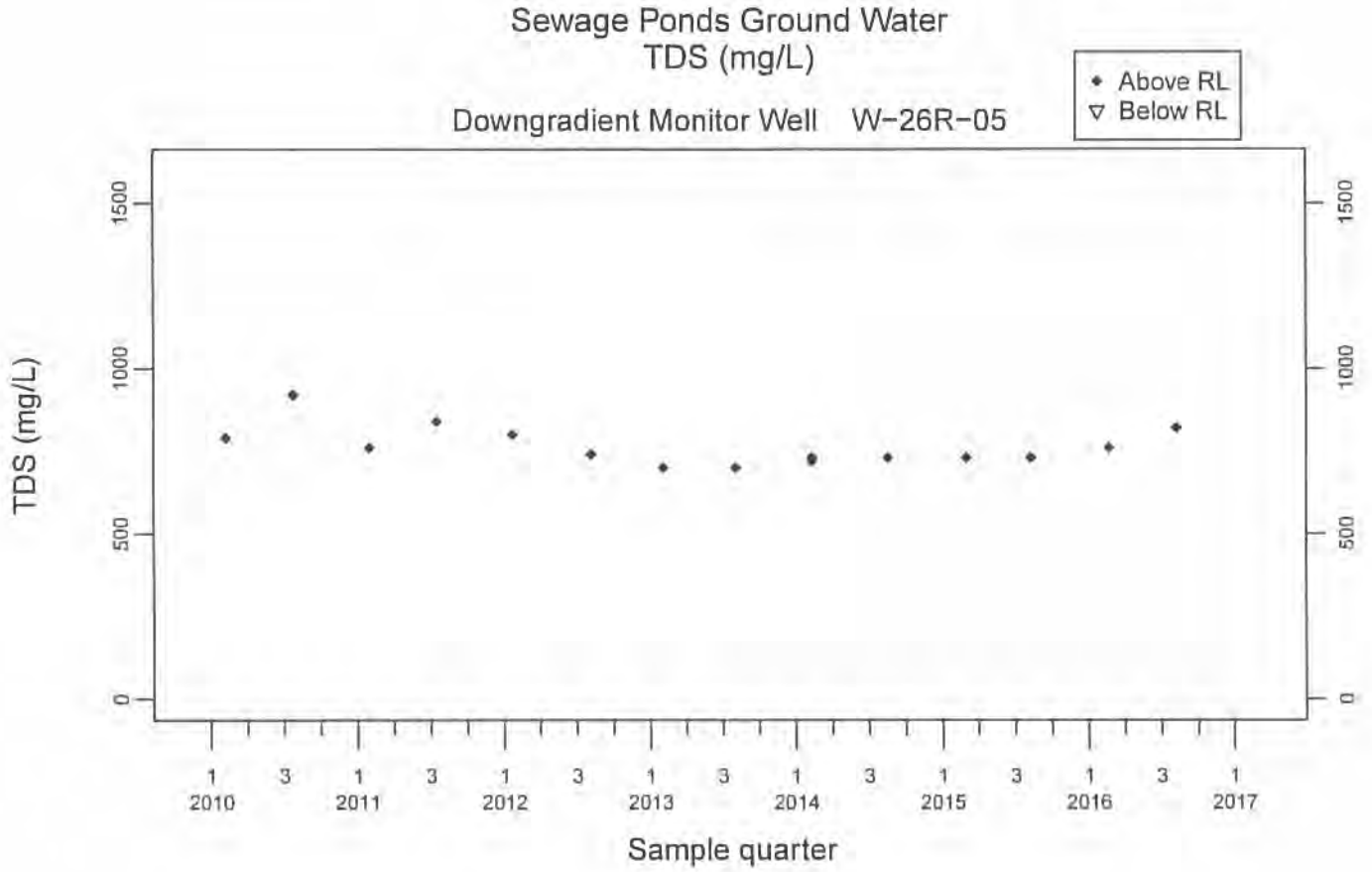

Upgradient Monitor Well W-7PS
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

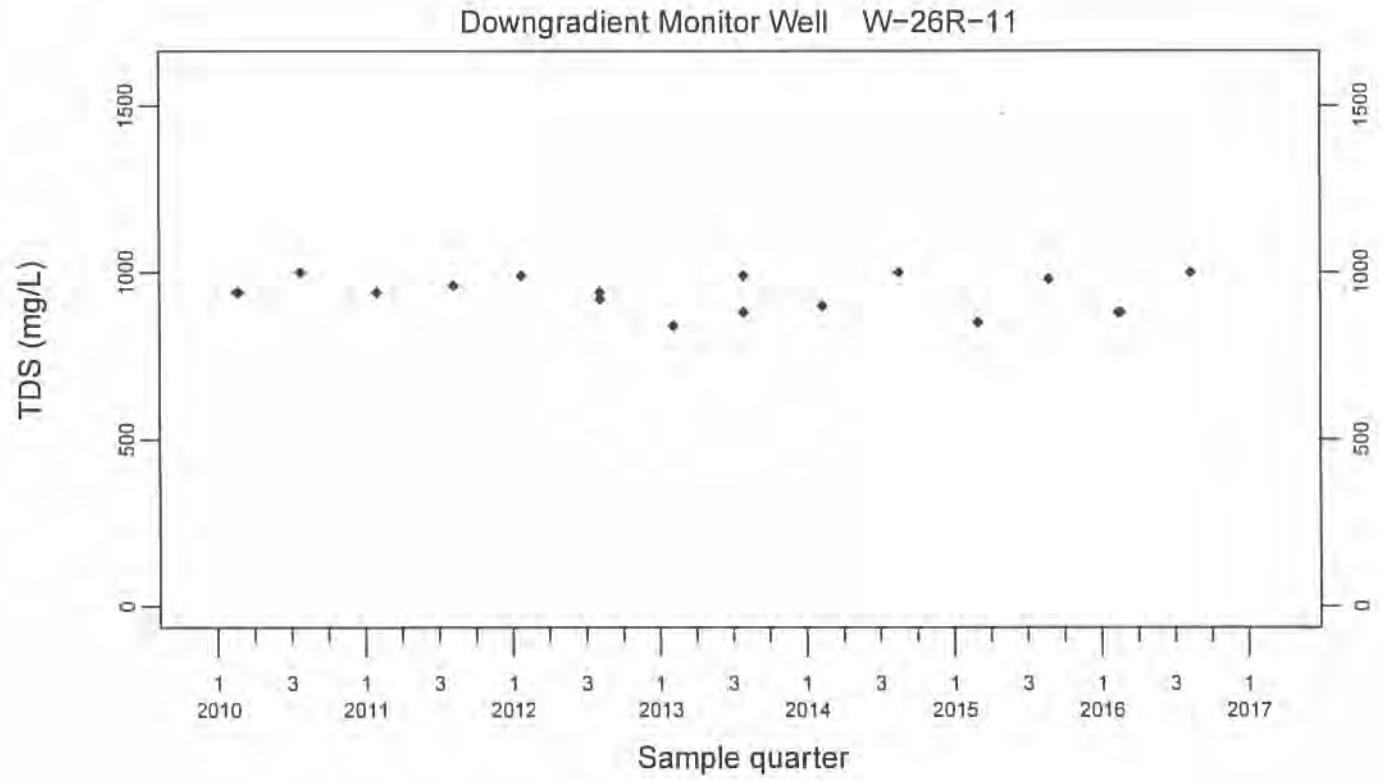

Sewage Ponds Ground Water
TDS (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

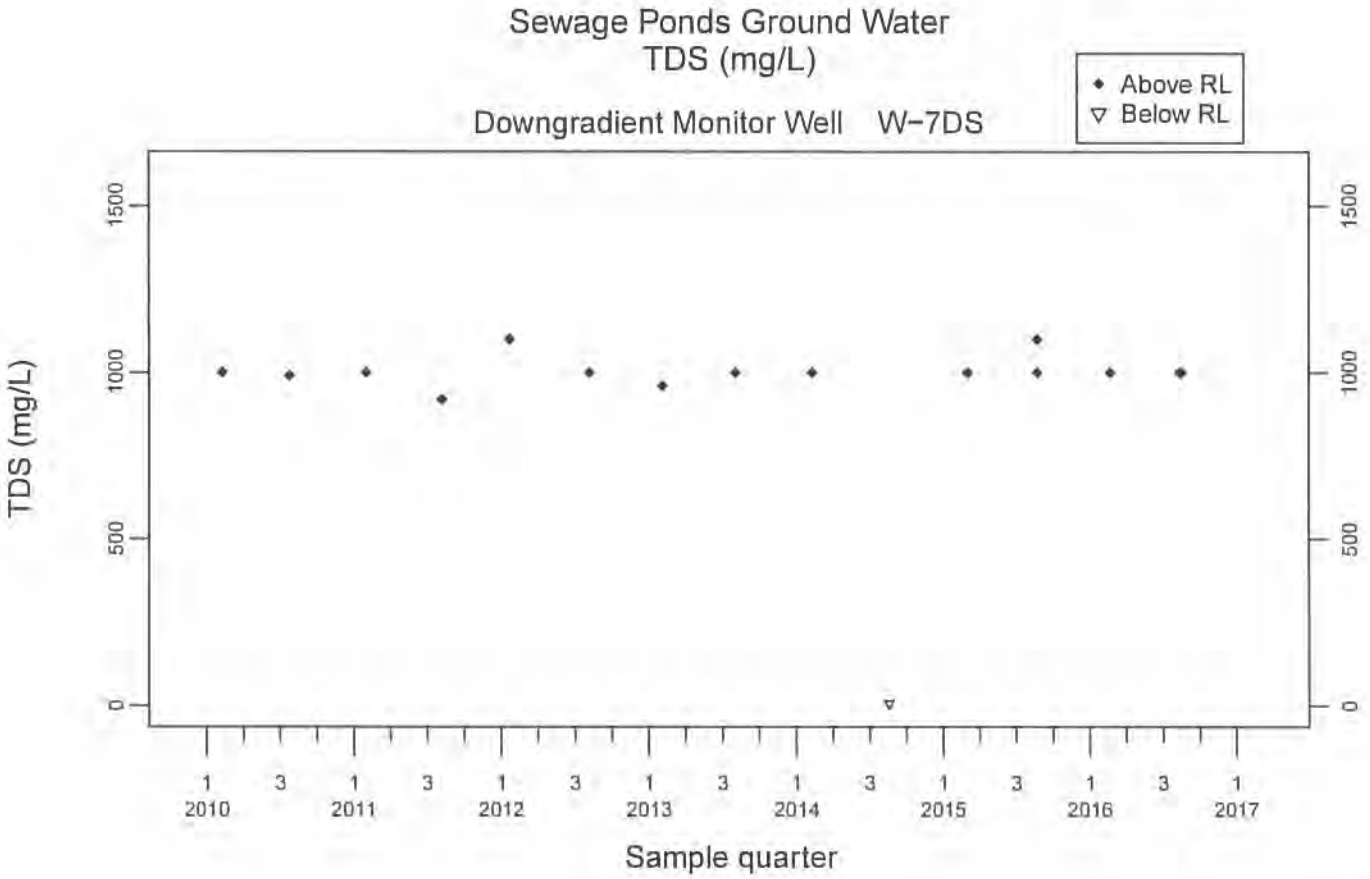

Downgradient Monitor Well W-25N-23
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

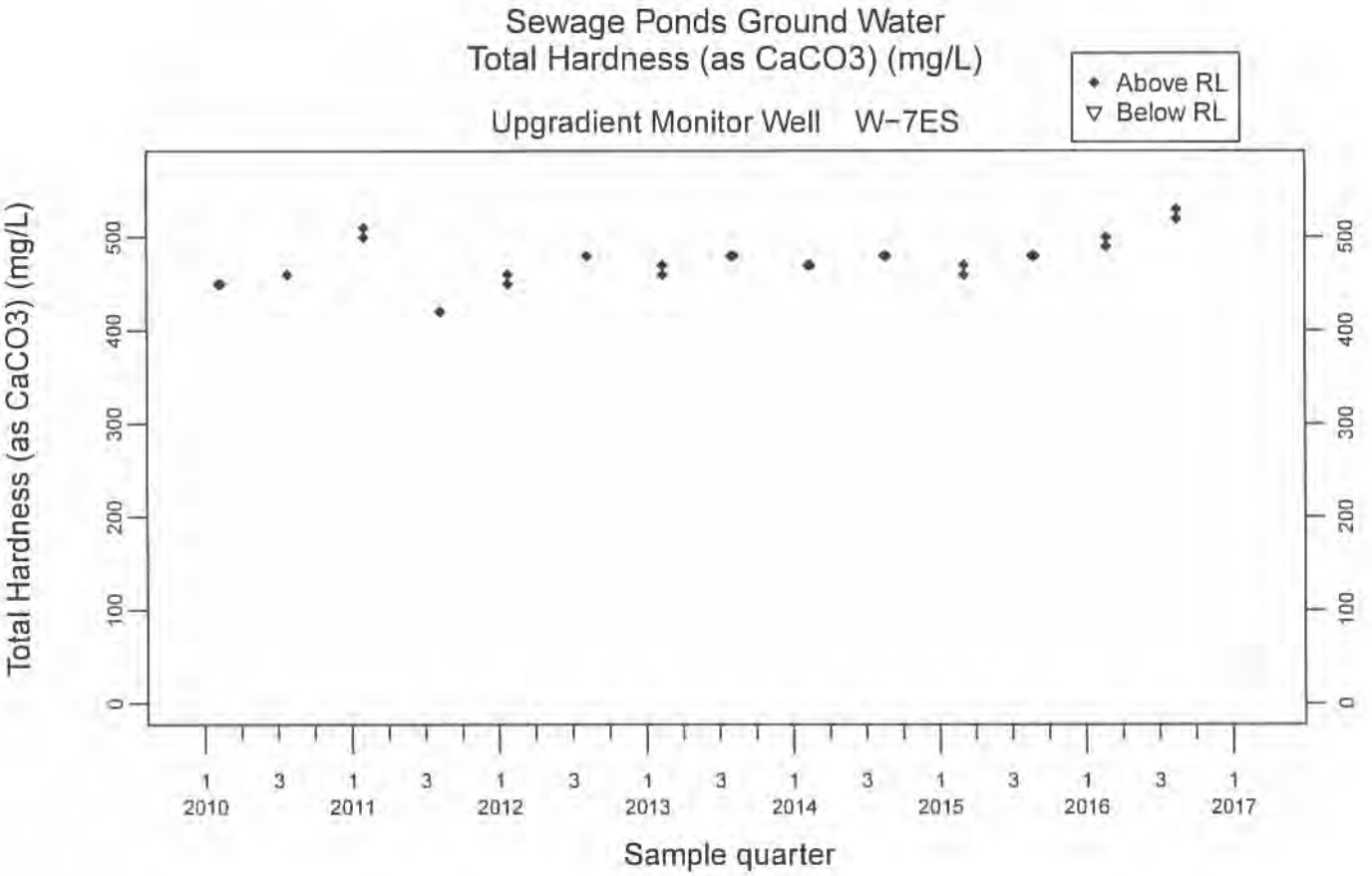

Sewage Ponds Ground Water
TDS (mg/L)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

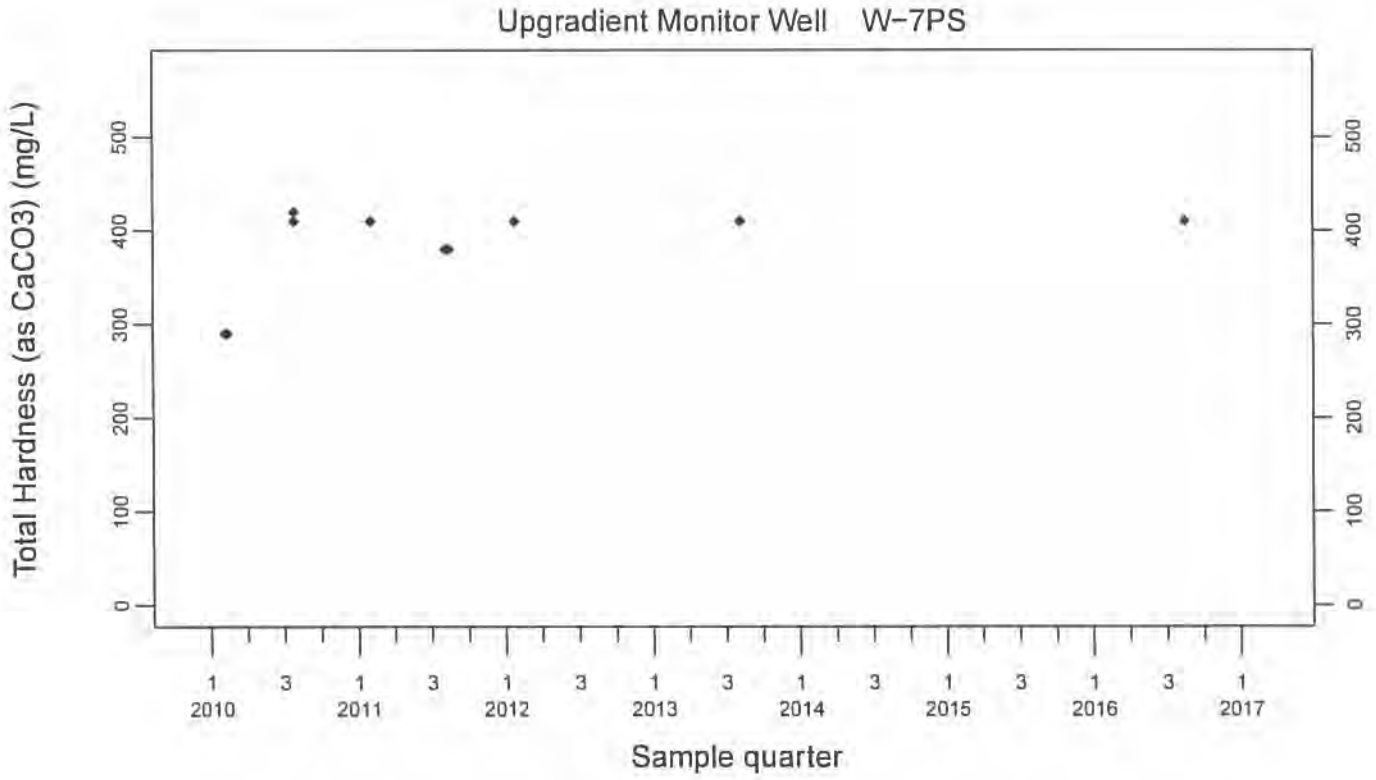

Downgradient Monitor Well W-26R-01
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

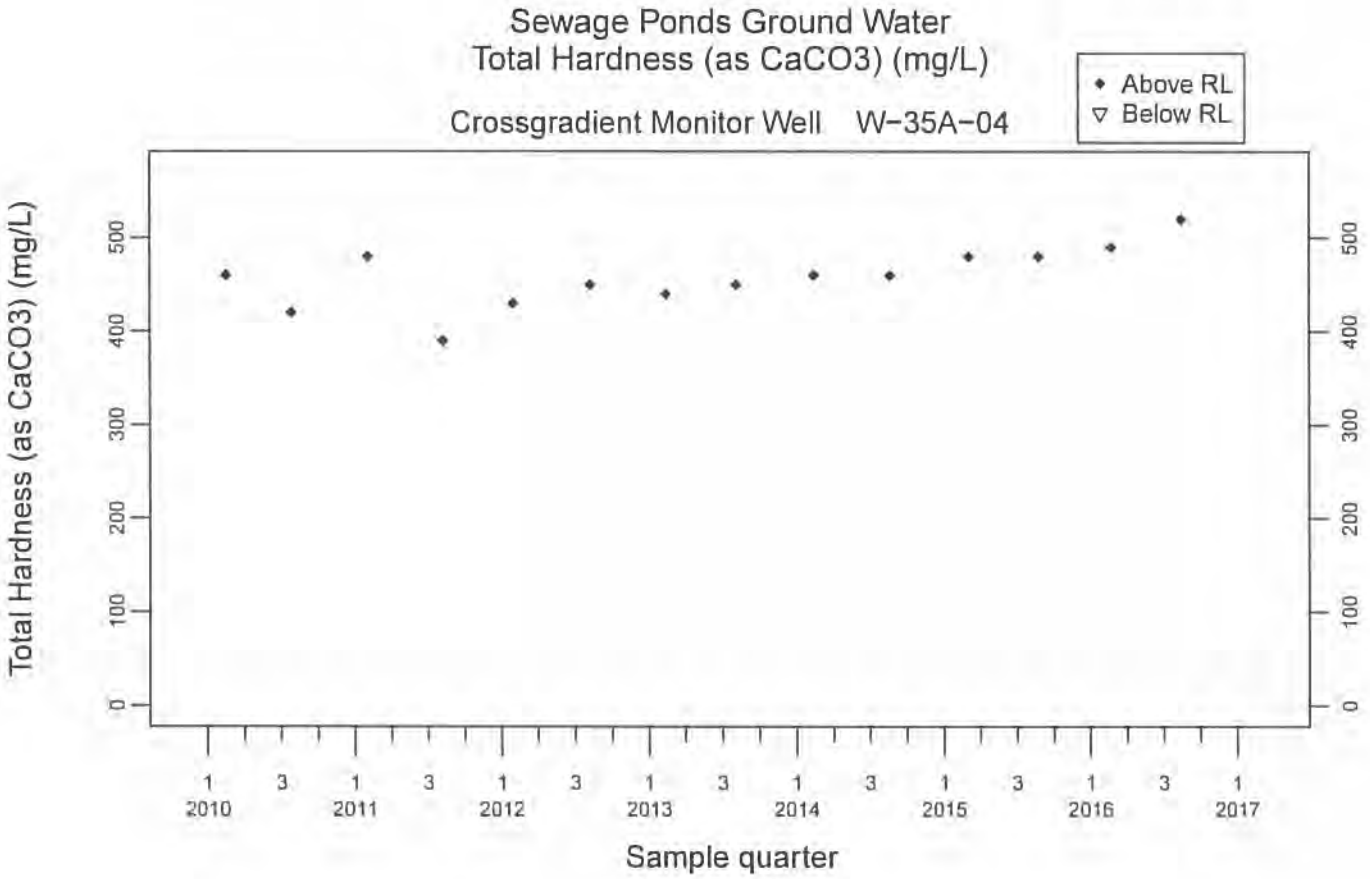

Sewage Ponds Ground Water
TDS (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-26R-05
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

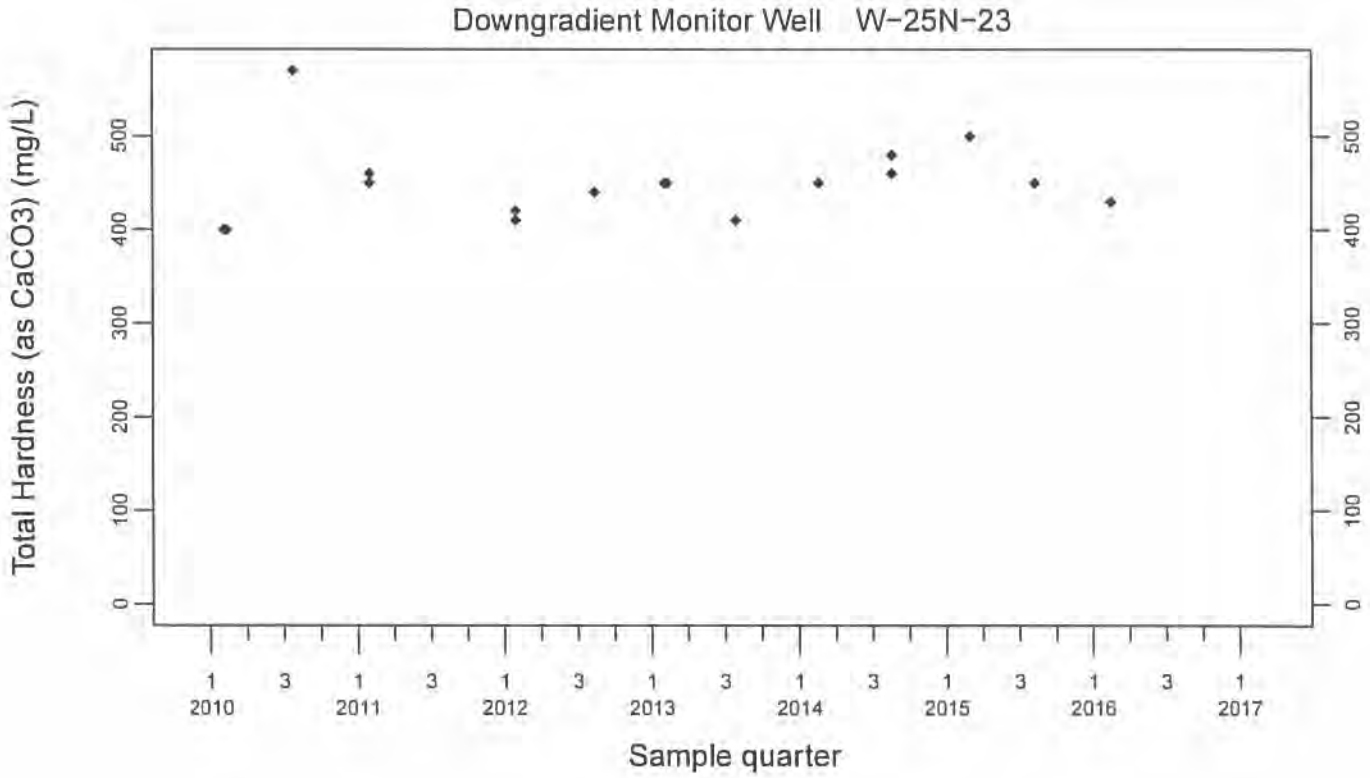

Downgradient Monitor Well W-26R-11
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

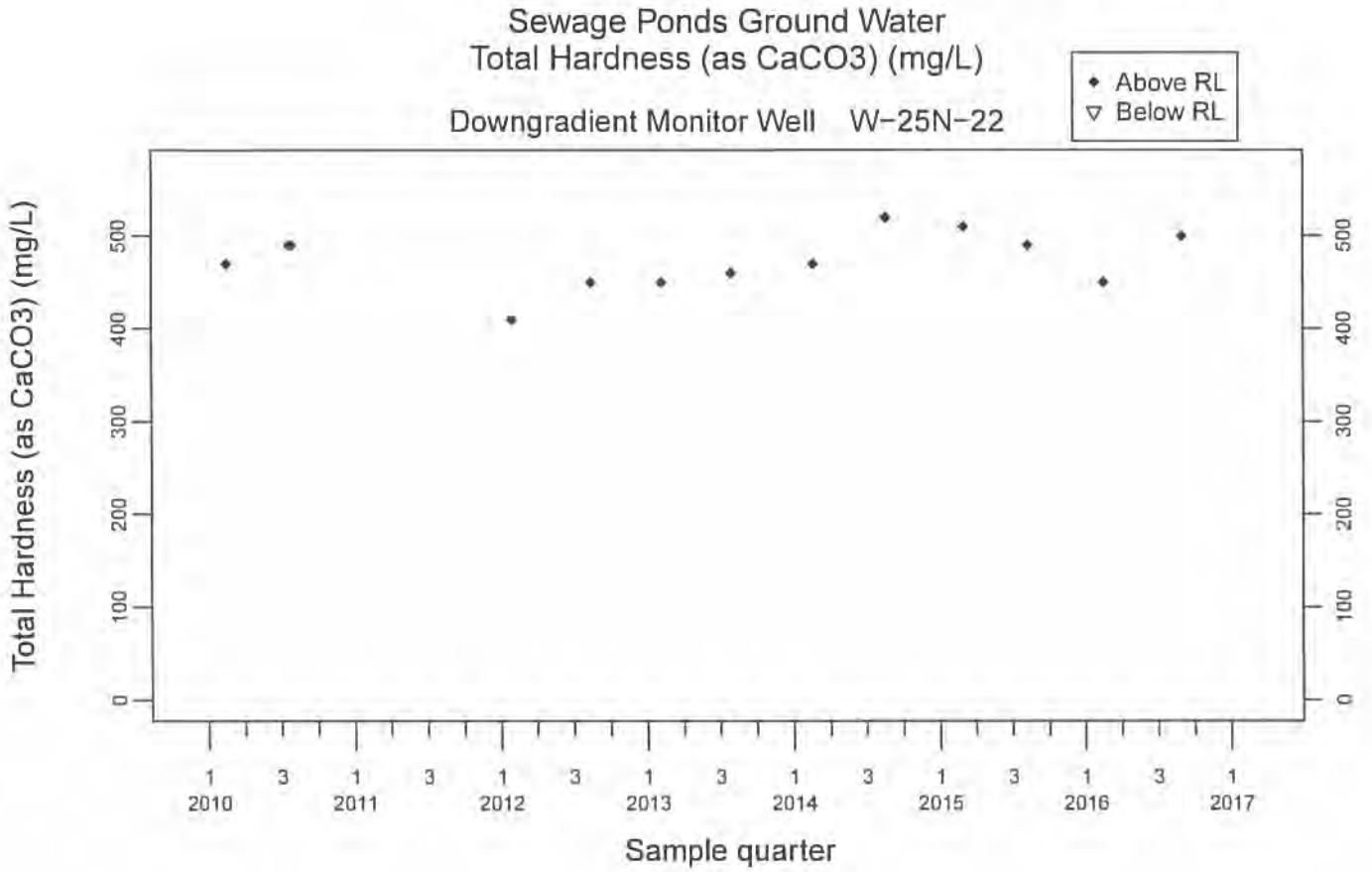

Sewage Ponds Ground Water
TDS (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
TDS (mg/L)
0
500
1000
1500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

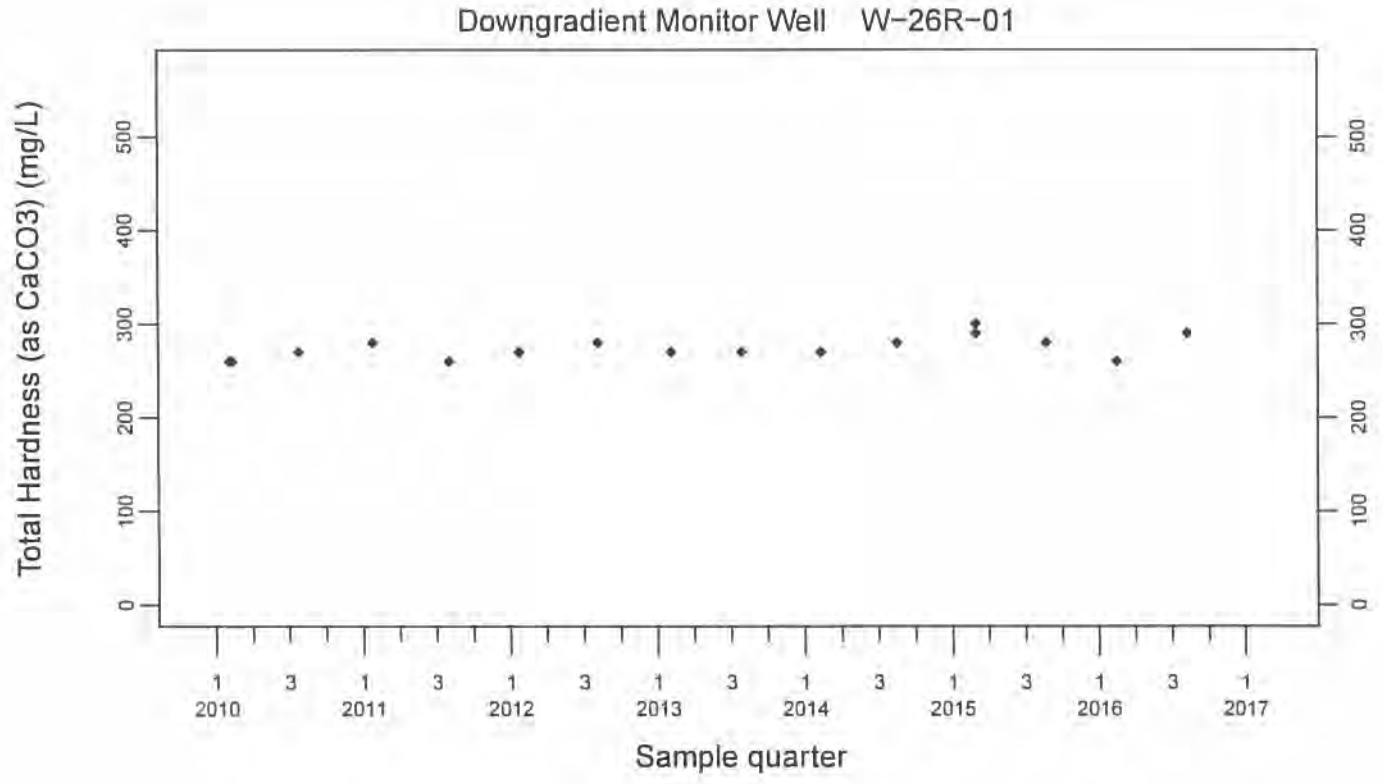

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

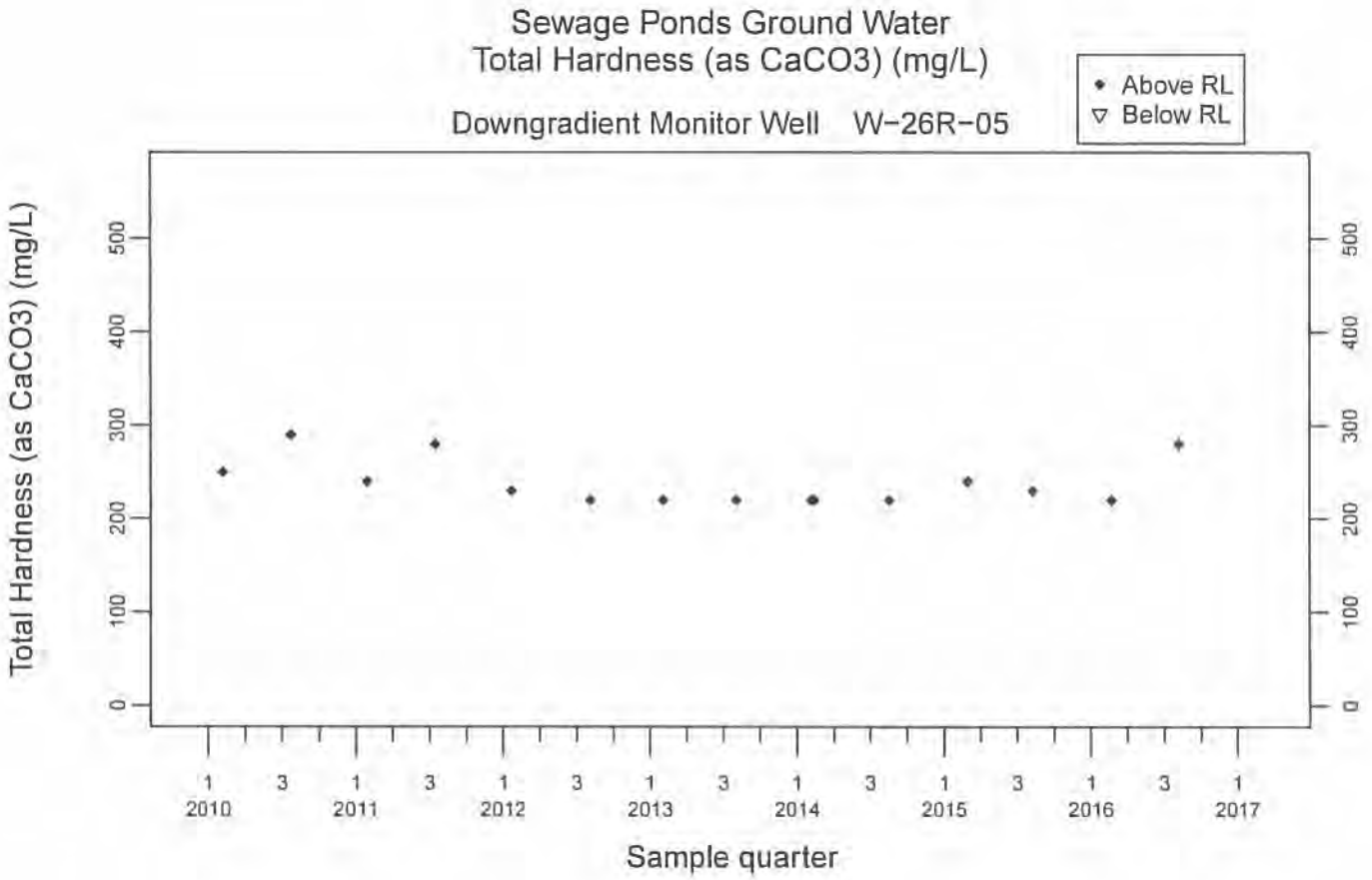

Upgradient Monitor Well W-7PS
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

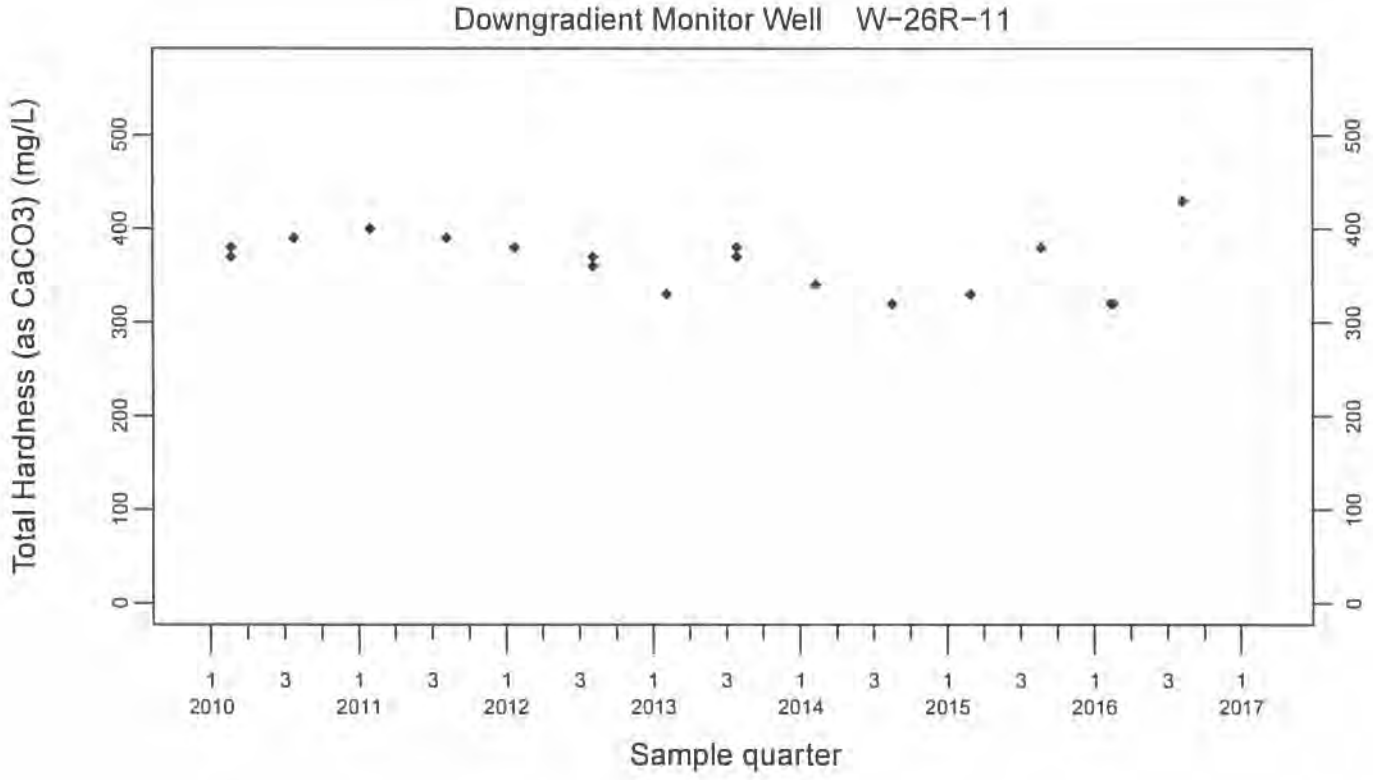

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Crossgradient Monitor Well W-35A-04
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

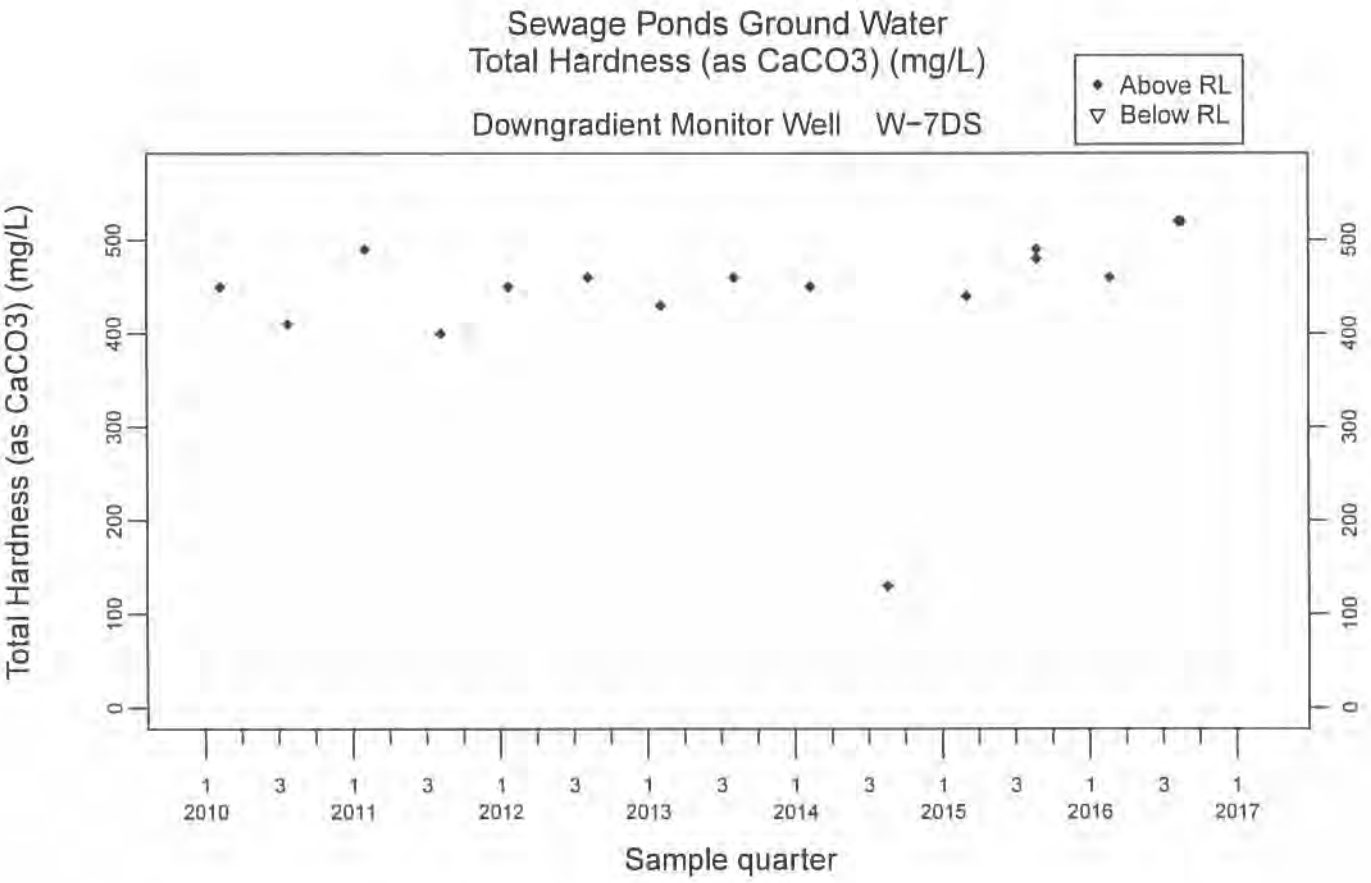

Downgradient Monitor Well W-25N-23
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

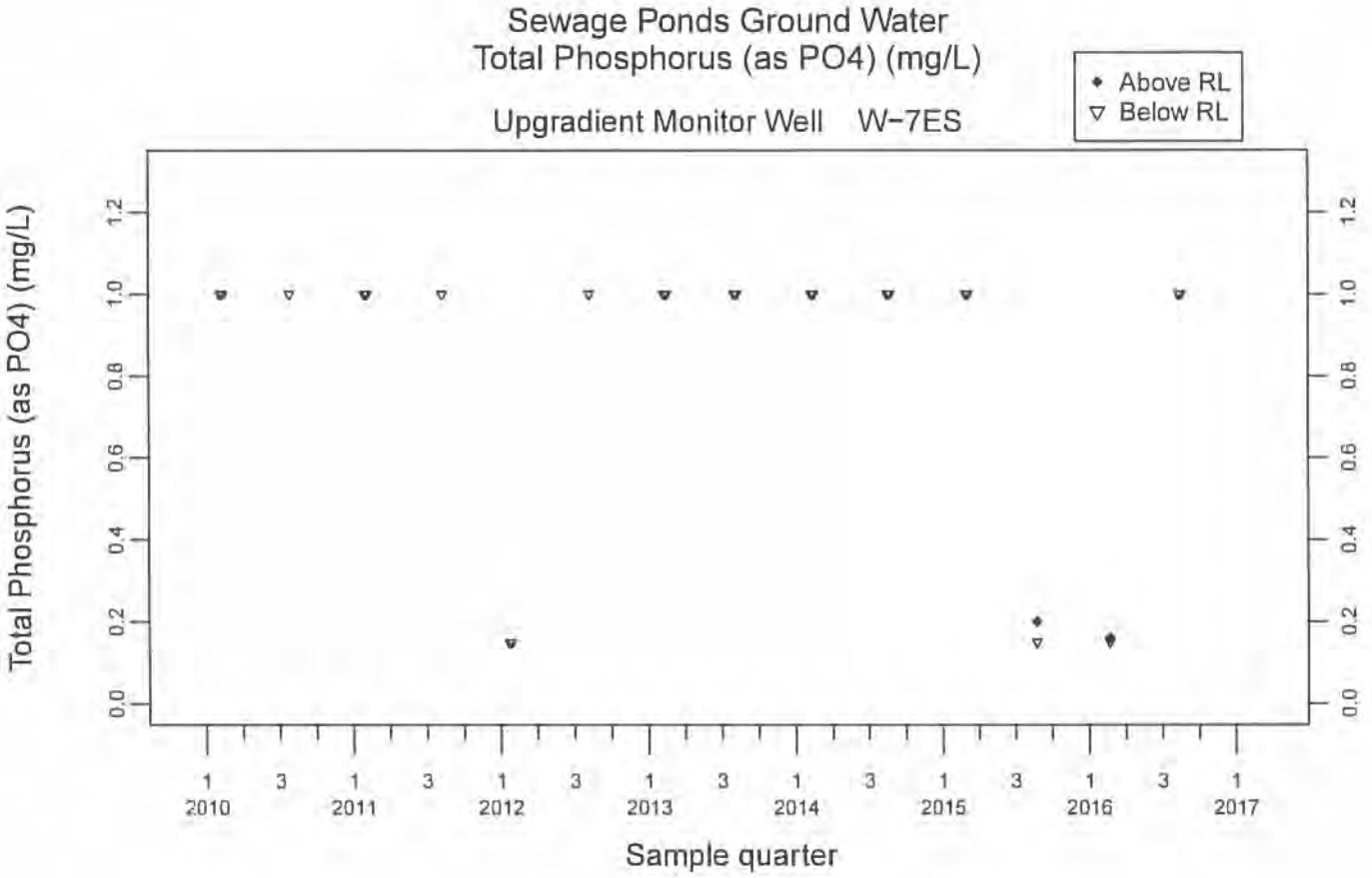

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W-25N-22
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter

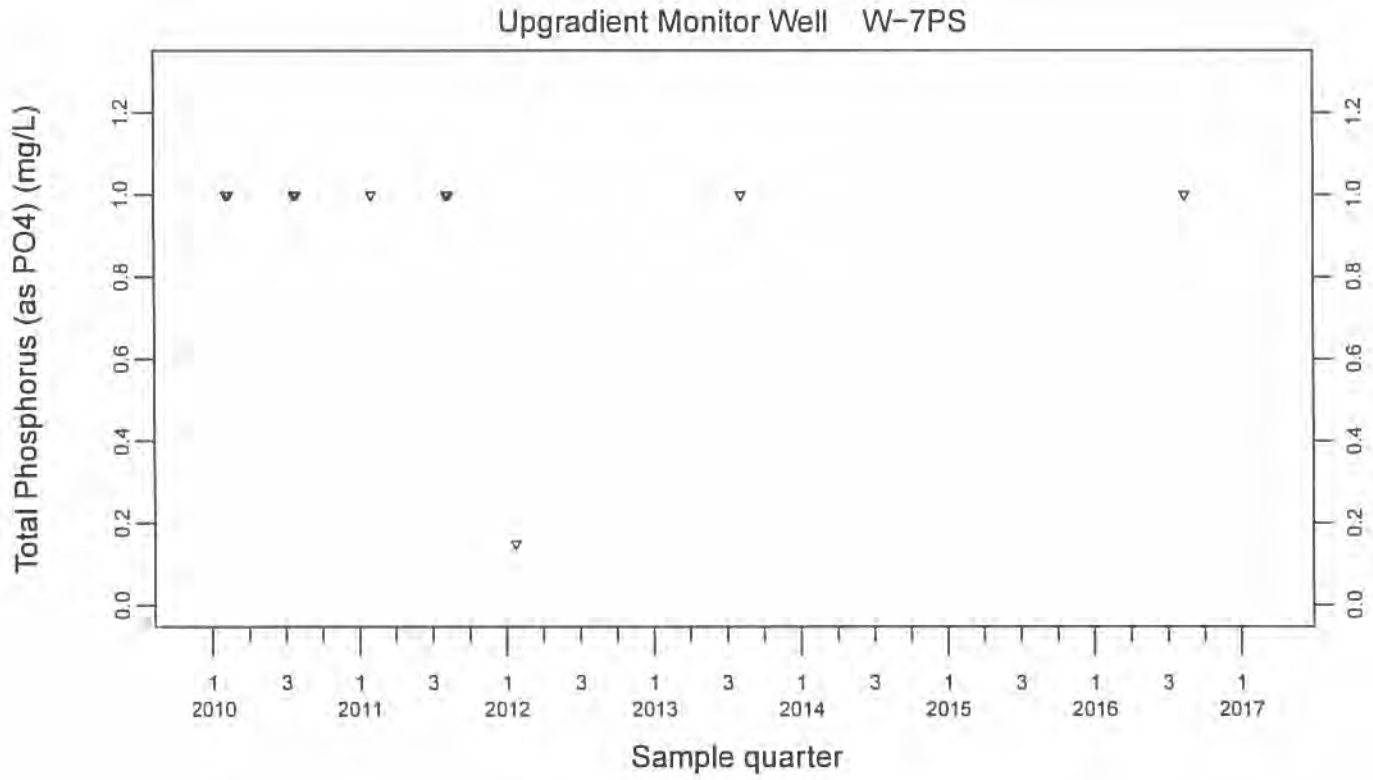

Downgradient Monitor Well W-26R-01
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 3 1 3 1 3 1 3 1 3 1 3 1 3 1
2010 2011 2012 2013 2014 2015 2016 2017
Sample quarter


Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W-26R-05
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

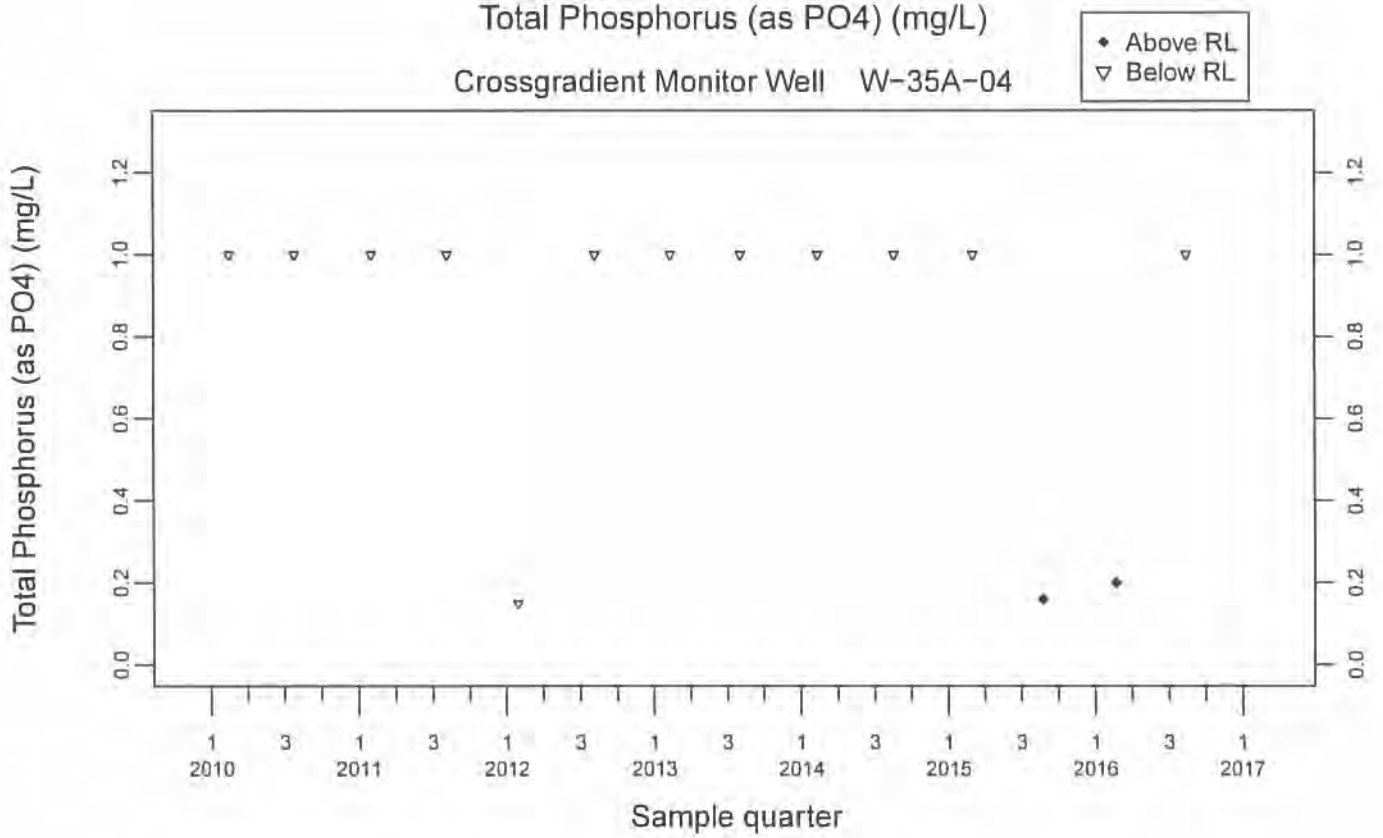

Downgradient Monitor Well W-26R-11
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

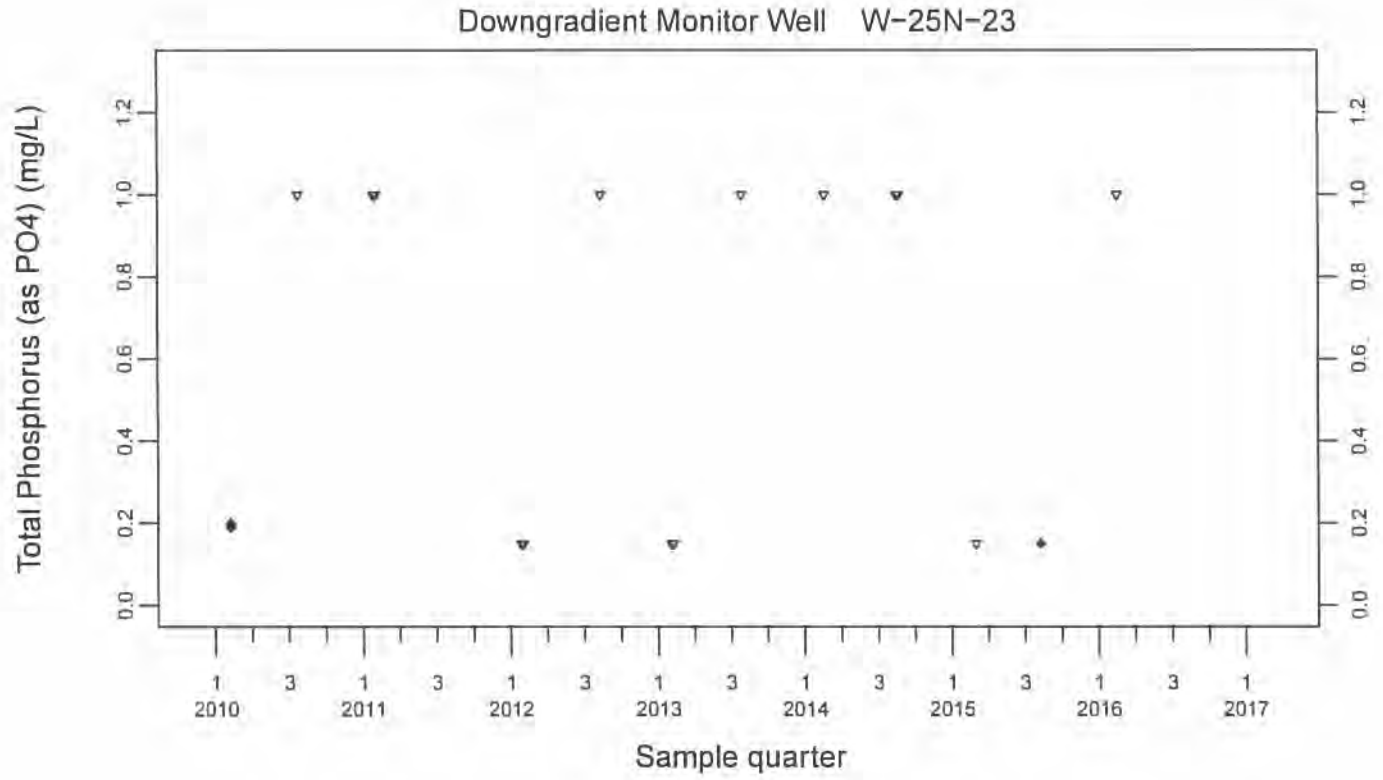

Sewage Ponds Ground Water
Total Hardness (as CaCO3) (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Total Hardness (as CaCO3) (mg/L)
0
100
200
300
400
500
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

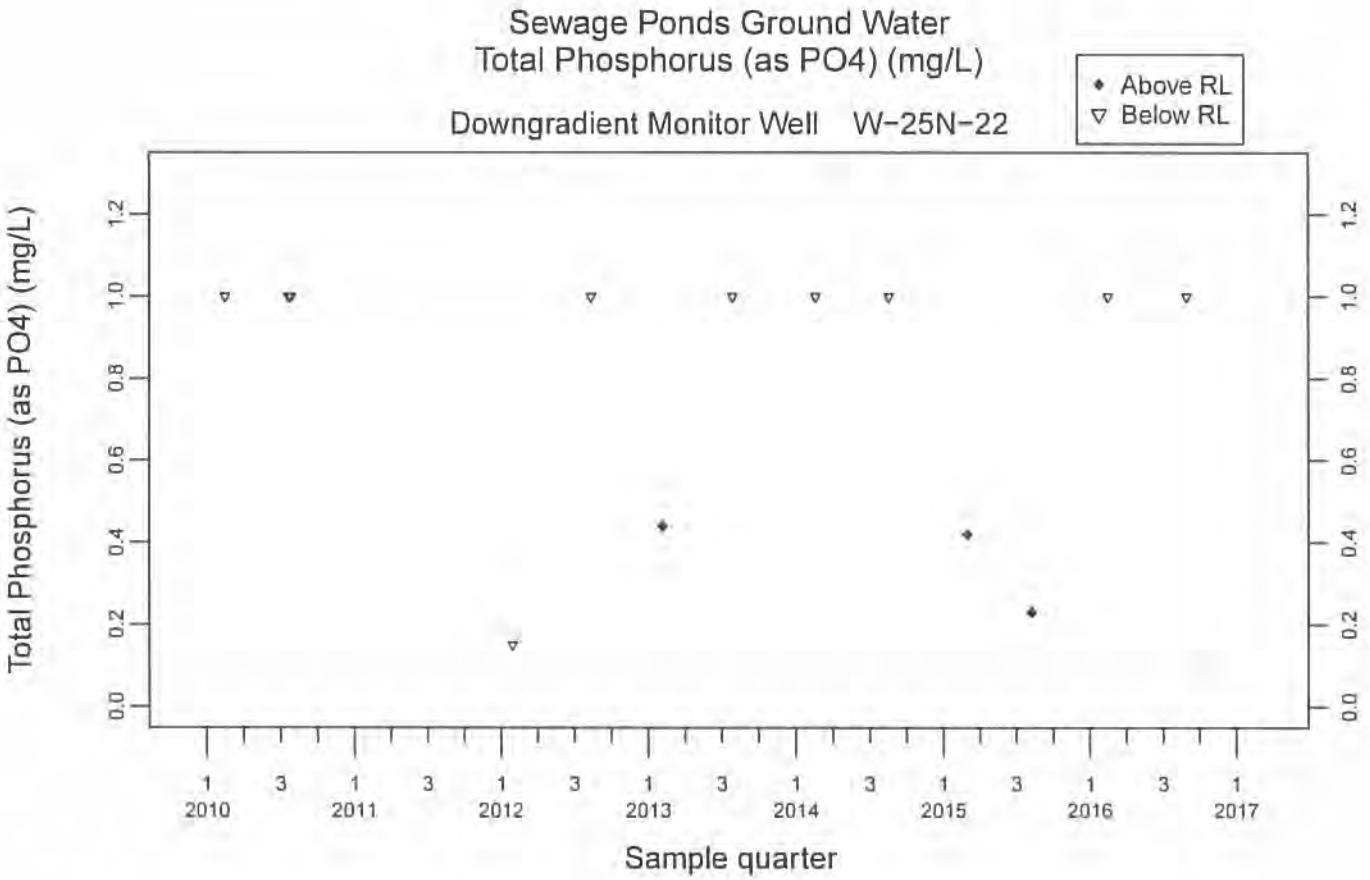

Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Upgradient Monitor Well W-7ES
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

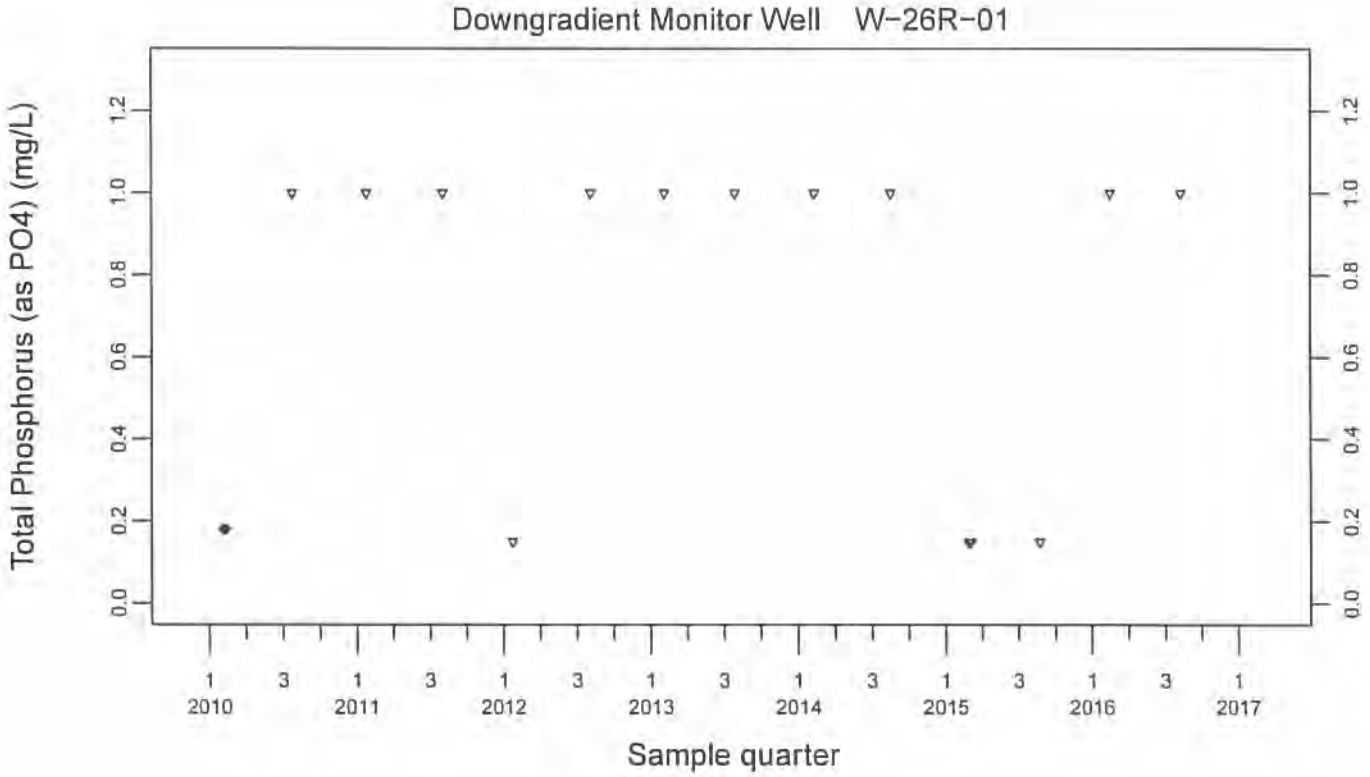

Upgradient Monitor Well W-7PS
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)






Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Above RL
Below RL
Downgradient Monitor Well W-25N-22
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-01
Total Phosphorus (as PO4) (mg/L)
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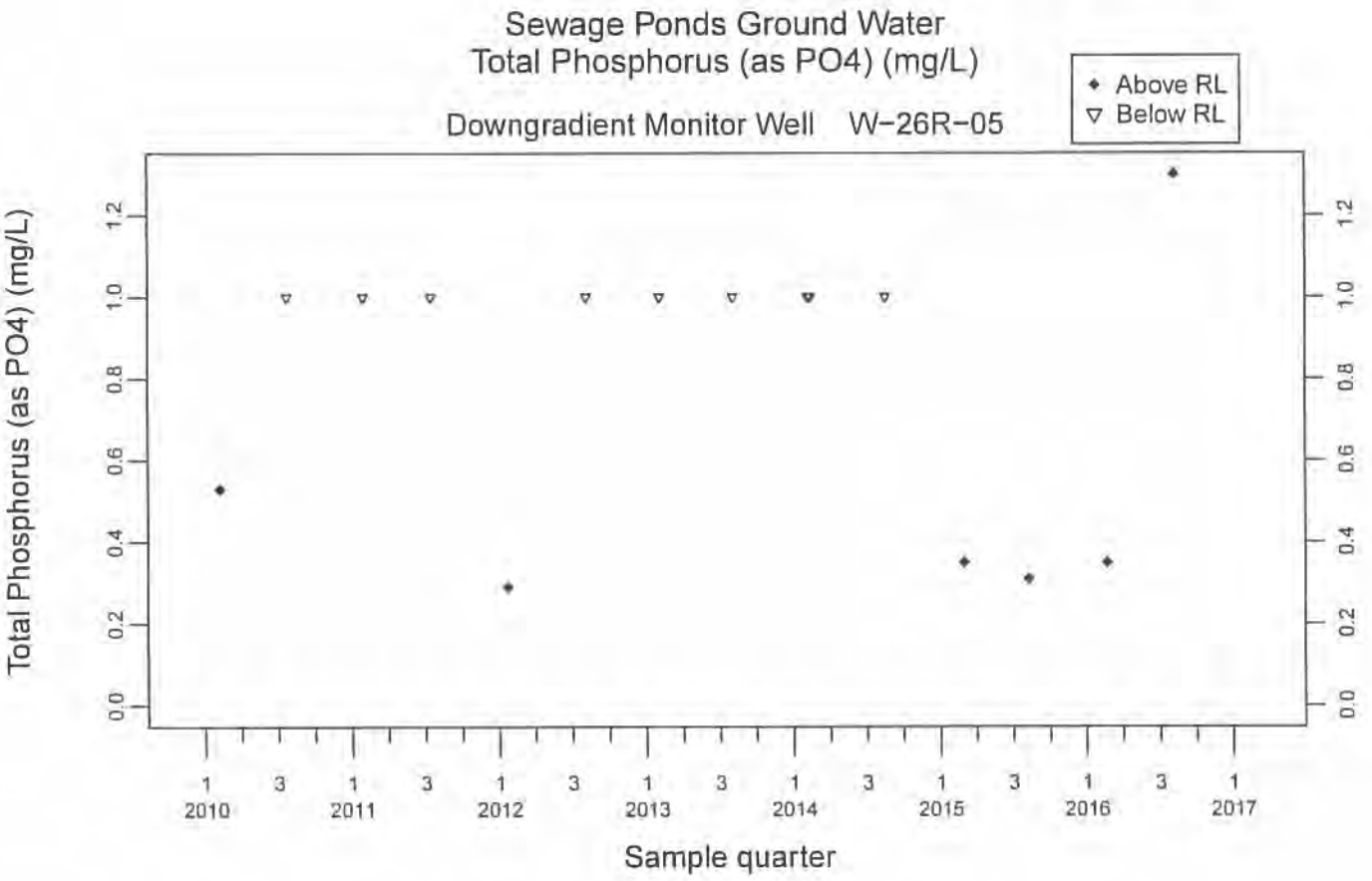
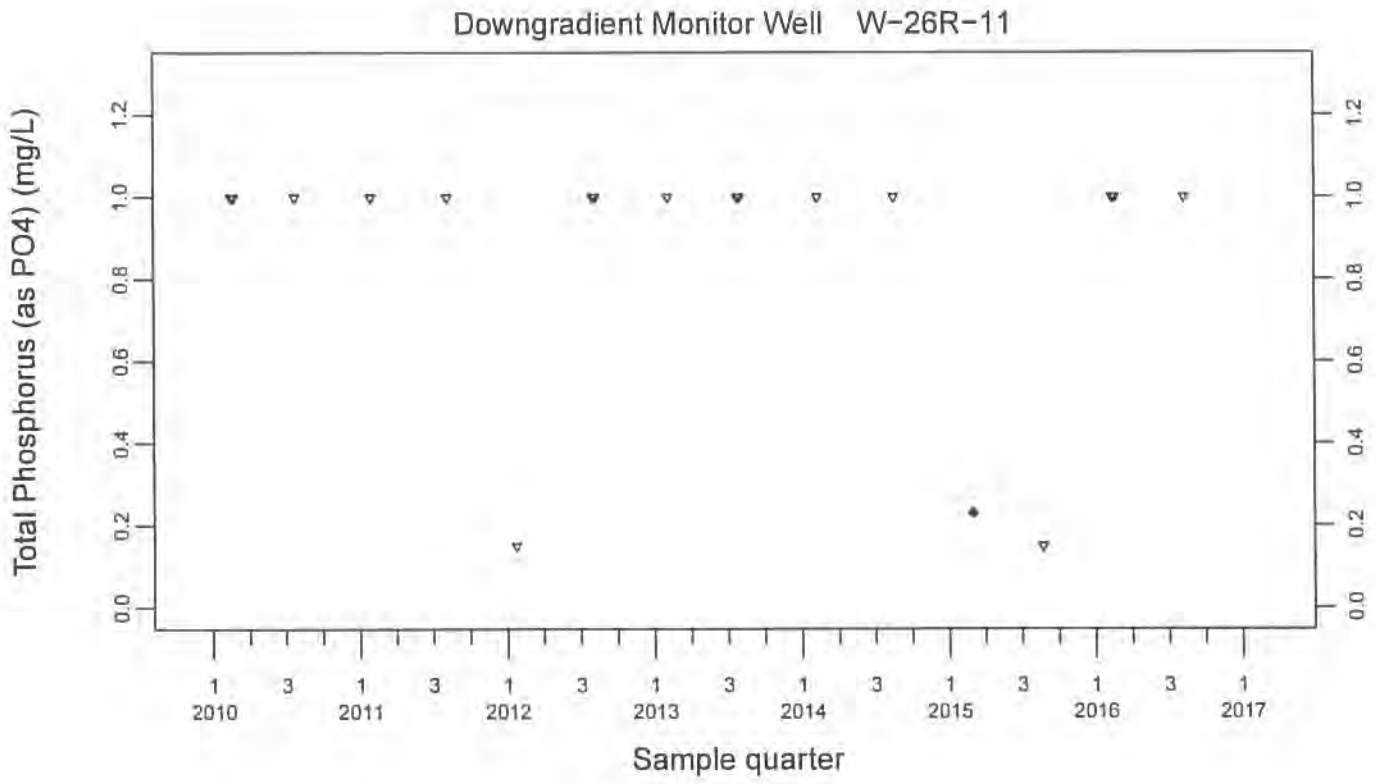
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Downgradient Monitor Well W-26R-05
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Downgradient Monitor Well W-26R-11
Total Phosphorus (as PO4) (mg/L)
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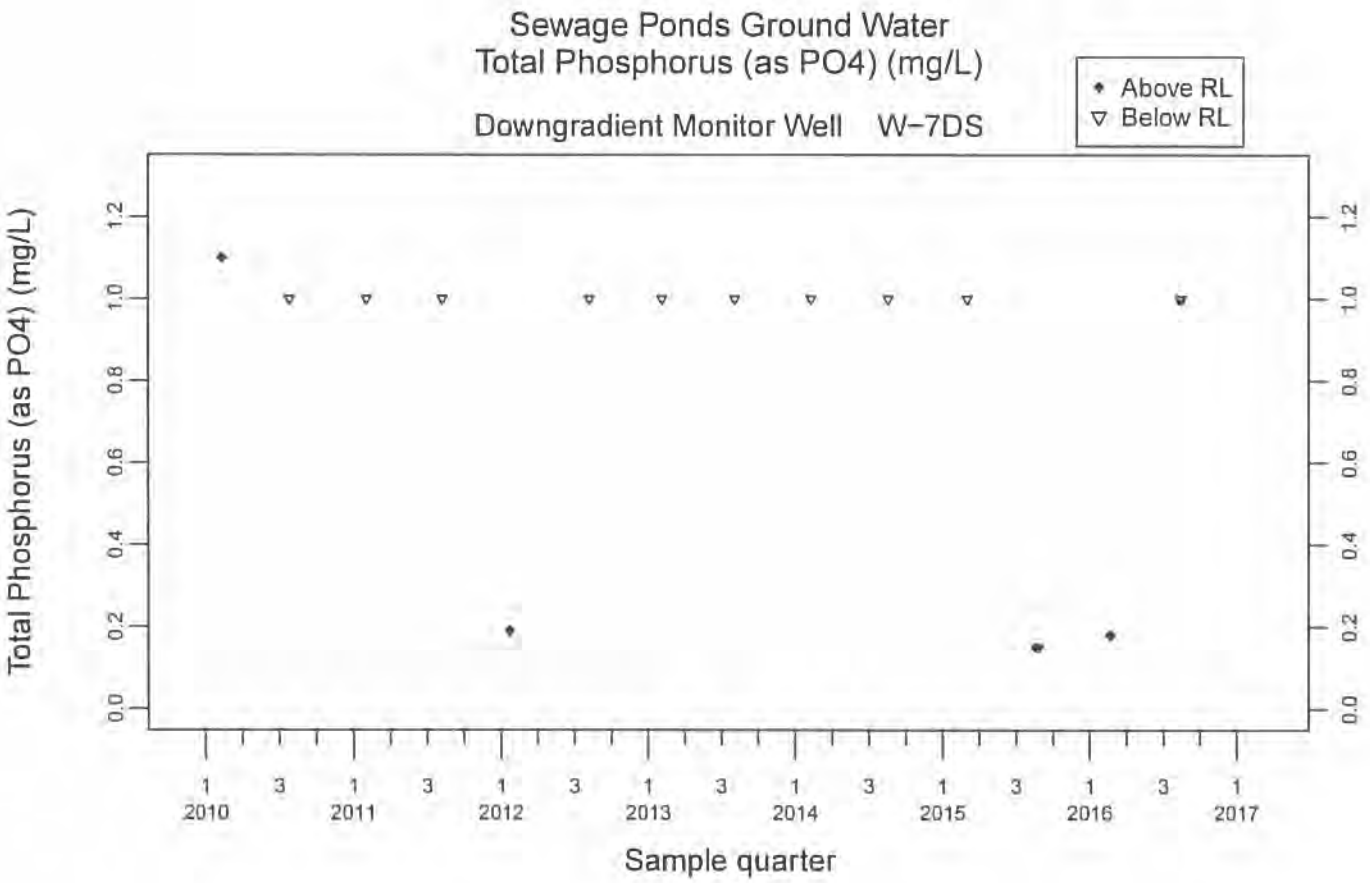
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter


Sewage Ponds Ground Water
Total Phosphorus (as PO4) (mg/L)
Downgradient Monitor Well W-7DS
Above RL
Below RL
Total Phosphorus (as PO4) (mg/L)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1 2010
3
1 2011
3
1 2012
3
1 2013
3
1 2014
3
1 2015
3
1 2016
3
1 2017
Sample quarter

Appendix B

Cooling Tower Network

Cooling Tower Blowdown Effluent Monitoring Network with Discharges to Percolation Pits (Bldgs. 801, 812, 817A, 825, 826, 827A, and 851) and Cooling Tower Percolation Pit Inspection Forms

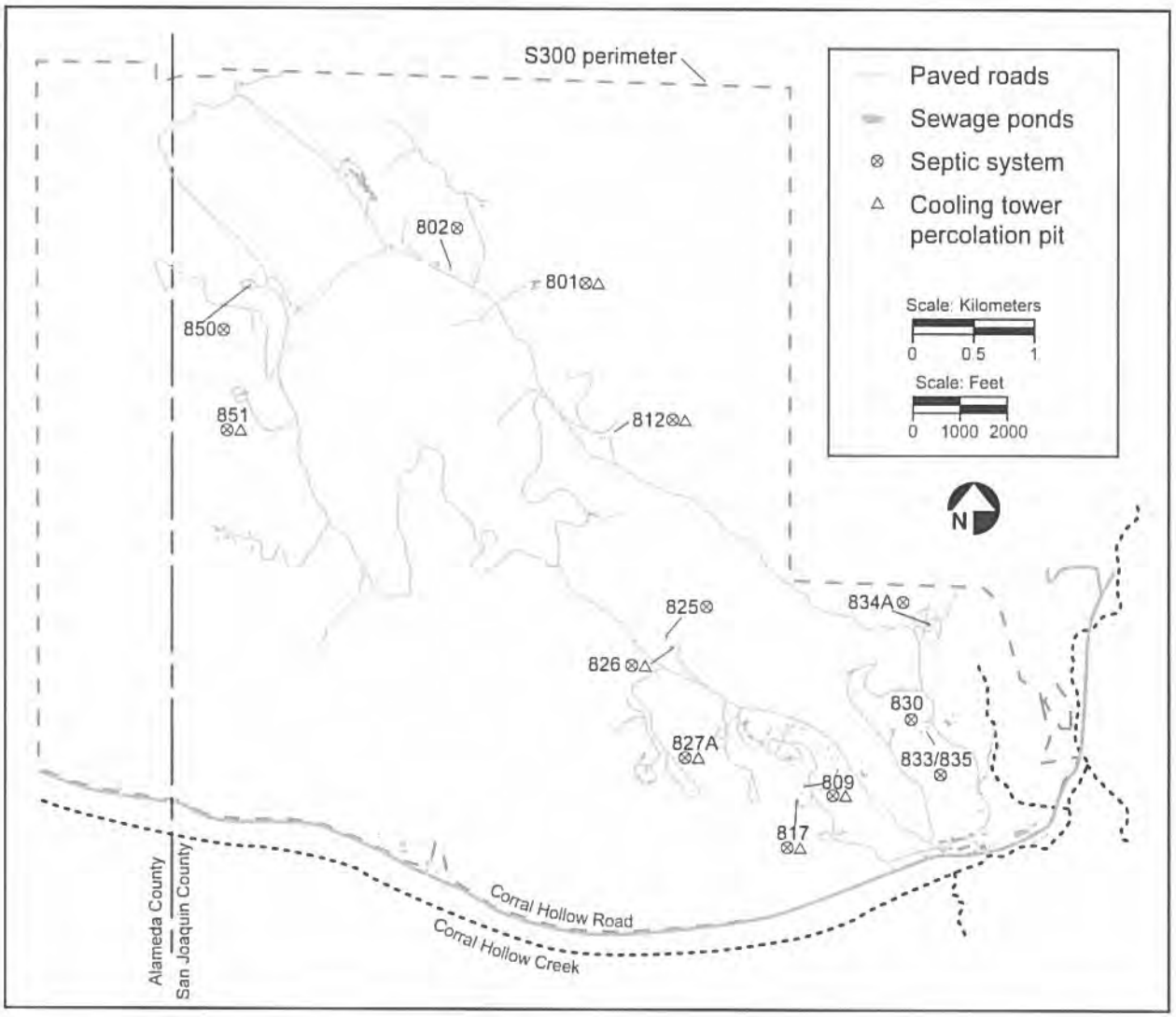


Figure B.1. Location of Site 300 cooling towers.

Table B-1. Site 300 cooling tower wastewater monitoring network 2016 anions data summary.

Building/Location	Date	Sodium (mg/L)	Chloride (mg/L)	Nitrate (as NO3) (mg/L)	Sulfate (mg/L)	Fluoride (mg/L)	Bromide (mg/L)
3-801ACT01-TW	May 17	800	290	<2.5	530	0.60	1.7
3-801ACT01-TW	Oct 18	420	150	0.57	280	0.33	3.5
3-817ACT01-TW	May 17	910	380	<2.5	690	0.89	1.1
3-817ACT01-TW	Oct 18	310	110	0.72	210	0.24	4.2
3-826FCT01-TW	May 17	430	160	<1	300	0.33	<0.2
3-826FCT01-TW	Oct 18	450	160	<0.5	300	0.33	6.7
3-827ACT01-TW	May 17	220	90	<0.5	170	0.18	<0.1
3-827ACT01-TW	Oct 18	580	230	<1	420	0.52	18
3-851BFCT03-TW	May 17	580	220	1.4	410	0.41	4.2
3-851BFCT03-TW	Oct 18	620	220	1.2	420	0.52	6.4

Table B–2. Site 300 cooling tower wastewater monitoring network 2016 metals analysis data summary.

Analyte (µg/L)	Month	3-801ACT01-TW	3-817ACT01-TW	3-826FCT01-TW	3-827ACT01-TW	3-851BFCT03-TW
Aluminum	Q2	<50	<50	<50	<50	<50
	Q4	<50	<50	<50	<50	81
Arsenic	Q2	<2	<10	<2	<2	<2
	Q4	<2	<2	<2	17	3.2
Barium	Q2	29	<120	<25	<25	<25
	Q4	<25	<25	<25	39	31
Boron	Q2	3000	3400	1700	850	2100
	Q4	1500	1100	1700	2500	2400
Cadmium	Q2	<50	<250	<50	<50	<50
	Q4	<50	<50	<50	<50	<50
Calcium	Q2	37000	26000	16000	9300	30000
	Q4	18000	11000	15000	22000	28000
Chromium	Q2	1.3	<5	1.4	1.4	1.9
	Q4	1.5	1.9	1.4	1.8	3.1
Hexavalent Chromium	Q2	<1	<1	<1	<1	<1
	Q4	<1	<1	<1	<1	1.4
Copper	Q2	51	85	4.0	4.6	110
	Q4	69	12	22	39	290
Iron	Q2	240	330	<100	<100	300
	Q4	150	270	100	150	450
Lead	Q2	<5	<25	<5	<5	<5
	Q4	<5	<5	<5	<5	<5
Magnesium	Q2	<1000	870	<500	<500	<500
	Q4	<500	<500	<500	<500	<500
Manganese	Q2	<30	<30	<30	<30	<30
	Q4	<30	<30	<30	<30	<30
Mercury	Q2	<0.2	<0.2	<0.2	<0.2	<0.2
	Q4	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum	Q2	56	68	29	<25	39
	Q4	31	26	34	49	49
Nickel	Q2	<2	<10	<2	<2	<2
	Q4	3.4	2.5	3.3	4.2	4.2
Potassium	Q2	29000	38000	16000	8100	23000
	Q4	18000	10000	15000	44000	42000
Selenium	Q2	<2	<10	<2	<2	4.2
	Q4	6.8	<2	2.4	66	17
Silver	Q2	<10	<50	<10	<10	<10
	Q4	<10	<10	<10	<10	<10
Vanadium	Q2	<20	<100	<20	<20	<20
	Q4	<20	<20	<20	<20	<20
Zinc	Q2	21	<100	<20	<20	41
	Q4	23	35	<20	130	100

Table B-3. Site 300 cooling tower wastewater monitoring network 2016 physical characteristics data summary.

Well/ Location	Date	pH	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
3-801ACT01-TW	May 17	9.1	3240	700	2300	93	2.9
3-801ACT01-TW	Oct 18	8.9	1730	380	1300	45	6.4
3-817ACT01-TW	May 17	9.1	3930	790	2800	68	12
3-817ACT01-TW	Oct 18	8.8	1310	290	930	29	<1
3-826FCT01-TW	May 17	8.9	1840	390	1300	41	<1
3-826FCT01-TW	Oct 18	9.0	1900	430	1400	39	<1
3-827ACT01-TW	May 17	8.6	1050	220	760	24	<1
3-827ACT01-TW	Oct 18	9.0	2570	570	2000	56	44
3-851BFCT03-TW	May 17	9.0	2540	550	1800	76	4.7
3-851BFCT03-TW	Oct 18	9.0	2490	550	1900	70	29

Table B-4. Site 300 cooling tower wastewater monitoring network 2016 QA data summary.

Constituent	Units	3-817ACT01-TW	3-817ACT01-TW	3-851BFCT03-TW	3-851BFCT03-TW	3-851BFCT03-TW	3-851BFCT03-TW
		May 17	May 17	Oct 18	Oct 18	Oct 25	Oct 25
		Routine	Duplicate	Routine	Duplicate	Routine	Duplicate
pH	Units	9.1	9.2	9.0	9.0	-	-
Specific Conductance	µmhos/cm	3930	3850	2490	2490	-	-
Aluminum	µg/L	<50	<50	81	69	-	-
Arsenic	µg/L	<10	<2	3.2	3.8	-	-
Barium	µg/L	<120	46	31	31	-	-
Boron	µg/L	3400	3700	2400	2200	-	-
Cadmium	µg/L	<250	<50	<50	<50	-	-
Calcium	µg/L	26000	27000	28000	25000	-	-
Chromium	µg/L	<5	1.4	3.1	3.3	-	-
Hexavalent Chromium	µg/L	<1	<1	-	-	1.4	1.4
Copper	µg/L	85	87	290	290	-	-
Iron	µg/L	330	350	450	430	-	-
Lead	µg/L	<25	<5	<5	7.3	-	-
Magnesium	µg/L	870	<1000	<500	<500	-	-
Manganese	µg/L	<30	<30	<30	<30	-	-
Mercury	µg/L	<0.2	<0.2	<0.2	<0.2	-	-
Molybdenum	µg/L	68	79	49	42	-	-
Nickel	µg/L	<10	<2	4.2	4.3	-	-
Potassium	µg/L	38000	40000	42000	38000	-	-
Selenium	µg/L	<10	2.5	17	17	-	-
Silver	µg/L	<50	<10	<10	<10	-	-
Vanadium	µg/L	<100	<20	<20	<20	-	-
Zinc	µg/L	<100	76	100	94	-	-
Sodium	mg/L	910	970	620	560	-	-
Chloride	mg/L	380	380	220	220	-	-
Nitrate (as NO3)	mg/L	<2.5	<2.5	1.2	1.0	-	-

Table B-4. Site 300 cooling tower wastewater monitoring network 2016 QA data summary (cont.).

Sulfate	mg/L	690	690	420	420	-	-
Fluoride	mg/L	0.89	0.86	0.52	0.45	-	-
Bromide	mg/L	1.1	1.0	6.4	6.3	-	-
Total Alkalinity (as CaCO3)	mg/L	790	780	550	550	-	-
Total dissolved solids (TDS)	mg/L	2800	2800	1900	1900	-	-
Total Hardness (as CaCO3)	mg/L	68	72	70	64	-	-
Total Phosphorus (as PO4)	mg/L	12	11	29	29	-	-

FIELD TRACKING FORM

Semi-Annual SITE 300 Cooling Towers

Special Instructions:
Should be sampled in early April and October.
See back of form for additional access information

LAB	CoC#	Ship It #
BC Labs	71096	212433

pH meter calibrated on: 10/18/16
Specific Conductance meter calibrated on: 10/18/16

Sample Date: 10/18/16

Location Indentifier	Location DUP taken -year/quarter	Sample Time	Initials	Field Measurments		BC Labs				Comments
				pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 500mL Poly	S3WETCHEM 1000mL Poly	E300.0/BR 250ml Poly	
3-801ACT01-TW	2012/2nd	1025	MS	8.41	1612 uS	1	1	1	1	
3-817ACT01-TW	2016/2nd	0850	MS	8.31	1210 uS	1	1	1	1	
3-825ACT01-TW	2015/2nd	~~0911~~	~~MS~~	~~8.76~~	~~1684 uS~~	1	1	1	1	825 off Line
3-826FCT01-TW	2015/4th	0910	MS	8.76	1684 uS	1	1	1	1	
3-827ACT01-TW	2014/4TH	0930	MS	8.95	2.39 mS	1	1	1	1	
3-851BFCT03-TW	2016/4th	0950	MS	9.01	2.42 mS	1	1	1	1	
Duplicate of 3-851BFCT03-TW										
3-B9900-01-TW		0950	MS			1	1	1	1	

☑ Copy to Analyst, Rick Blake.

Rev. 5-15-14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 71096
Document Control #: 71096
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 43058
PCI Task #: 1.03.06.11.01
Email: efa-dmt@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
ShipIt Release #: 212453
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-801ACT01-01-TW	10/18/2016 10:25	TW	P	1	COOLTOWER	E300.0	BR	
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3-801ACT01-01-TW	10/18/2016 10:25	TW	P	0	COOLTOWER	S3METALS	ALL	
3-801ACT01-01-TW	10/18/2016 10:25	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-801ACT01-01-TW	10/18/2016 10:25	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-817ACT01-01-TW	10/18/2016 08:50	TW	P	1	COOLTOWER	E300.0	BR	
3-817ACT01-01-TW	10/18/2016 08:50	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-817ACT01-01-TW	10/18/2016 08:50	TW	P	0	COOLTOWER	S3METALS	ALL	
3-817ACT01-01-TW	10/18/2016 08:50	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-817ACT01-01-TW	10/18/2016 08:50	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-826FCT01-01-TW	10/18/2016 09:10	TW	P	1	COOLTOWER	E300.0	BR	
3-826FCT01-01-TW	10/18/2016 09:10	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-826FCT01-01-TW	10/18/2016 09:10	TW	P	0	COOLTOWER	S3METALS	ALL	
3-826FCT01-01-TW	10/18/2016 09:10	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-826FCT01-01-TW	10/18/2016 09:10	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-827ACT01-01-TW	10/18/2016 09:30	TW	P	1	COOLTOWER	E300.0	BR	
3-827ACT01-01-TW	10/18/2016 09:30	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-827ACT01-01-TW	10/18/2016 09:30	TW	P	0	COOLTOWER	S3METALS	ALL	
3-827ACT01-01-TW	10/18/2016 09:30	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-827ACT01-01-TW	10/18/2016 09:30	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-851BFCT03-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	E300.0	BR	
3-851BFCT03-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3ANIONS	ALL	
3-851BFCT03-01-TW	10/18/2016 09:50	TW	P	0	COOLTOWER	S3METALS	ALL	
3-851BFCT03-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-851BFCT03-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3WETCHEM	ALL	
3-B9900-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	E300.0	BR	
3-B9900-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3ANIONS	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Neal Brunckhorst	LLNL/EFA	10/18/2016	1500	2 Mary Bogan	BC Lab	10/18/16	1630
2				3			
3				4			
4				5			

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 71096
Document Control #: 71096
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 43058
PCI Task #: 1.03.06.11.01
Email: efa-dmt@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
ShipIt Release #: 212433
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B9900-01-TW	10/18/2016 09:50	TW	P	0	COOLTOWER	S3METALS	ALL	
3-B9900-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3METALS	TOTAL	
3-B9900-01-TW	10/18/2016 09:50	TW	P	1	COOLTOWER	S3WETCHEM	ALL	

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Neal Brunckhorst	LLNL/EFA	10/18/2016	1500	2 Doug Bogan	BC LAB	10-18-16	1650
2				3			
3				4			
4				5			

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 71116
Document Control #: 71116
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 43058
PCI Task #: 1.03.06.11.01
Email: efa-dmt@llnl.gov
DMT Additional Copies: BC Labs - Run Hexavalent Chromium using the S3METALS PQL of 0.001 mg/L

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: COOLTOWER
ShipIt Release #: 212652
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-801ACT01-01-TW	10/25/2016 09:30	TW	P	1	COOLTOWER	E218.6	ALL	See note
3-817ACT01-01-TW	10/25/2016 09:00	TW	P	1	COOLTOWER	E218.6	ALL	See note
3-826FCT01-01-TW	10/25/2016 09:10	TW	P	1	COOLTOWER	E218.6	ALL	See note
3-827ACT01-01-TW	10/25/2016 09:15	TW	P	1	COOLTOWER	E218.6	ALL	See note
3-851BFCT01-01-TW	10/25/2016 09:40	TW	P	1	COOLTOWER	E218.6	ALL	See note
3-B9900-01-TW	10/25/2016 09:40	TW	P	1	COOLTOWER	E218.6	ALL	See note

Relinquished Signature	Company	Date	Time	Received Signature	Company	Date	Time
1 Kent Brunckhorst	LLNL/EFA	10/25/2016	1450	2 Tracy Bogan	BCLAB	10-25-16	1520
2				3			
3				4			
4				5			

Revision Printed: 11/24/2015/13/04/05

Signature Order - 1: Sampler, 2: Courier, 3: Lab, 4: Analyst, 5: DMT

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	(Yes)/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		Notified Rick Blake, Supervisor & FPOC
3. Is there standing water in the Christy box?	(Yes)/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	(Yes)/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		Repairs are pending

Supervisor's Signature _____ Date 8/15/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2018

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 7/13/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-13-16 Inspector ROCKSTEAD Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		Note: All discharges are transfered to GSA Sewer Pond until Percolation maintenance is complete

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7-25-16 Inspector David Rockstead Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	(Yes)/No	Cooling tower drain is overflowing to Perc Pit
If yes to any of the above, note date, actions taken, and type of repairs when made.		Repairs are Pending

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	Cooling tower to Pit drain line is overflowing
If yes to any of the above, note date, actions taken, and type of repairs when made.		Repairs are pending

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 8/18/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8-4-16 Inspector David Rockstead Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	(Yes) No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		Repairs are Pending

Supervisor's Signature: _____ Date 8/19/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	(Yes)/No	drain to pit is slow
If yes to any of the above, note date, actions taken, and type of repairs when made.		Maintenance and/or repairs are pending

Supervisor's Signature [signature] Date 10/30/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/30/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/30/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/30/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/30/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector ROCKSTEAD Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/30/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/2016 Inspector Zach Reis Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10/31/2016

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/16 Inspector Zach Reis Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10/31/2016

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/16 Inspector Zach Reis Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/31/2016

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/16 Inspector Zach Reis Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10/31/2016

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/16 Inspector Zach Reis Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 10/31/2016

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/31/16 Inspector Zach Reis Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 10/31/2016

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes (No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-827)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/24/2016 Inspector Zach Reis Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 11/24/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 851

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/26/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/26/16

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Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 826

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12/26/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 817A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12/26/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 809

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature _____ Date 12/26/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Cooling Tower Percolation Pit Inspection Checklist*
For Buildings 801, 809, 817A, 826, 827A, and 851
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12/26/16 Inspector Zach Reis Building Number 801

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA, (L-627)

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12/26/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Appendix C

Mechanical Equipment Network

Mechanical Equipment Discharge Effluent Monitoring for Buildings 806A, 827A, 827C, 827D, 827E Mechanical Equipment Room Percolation Pit Inspection Forms

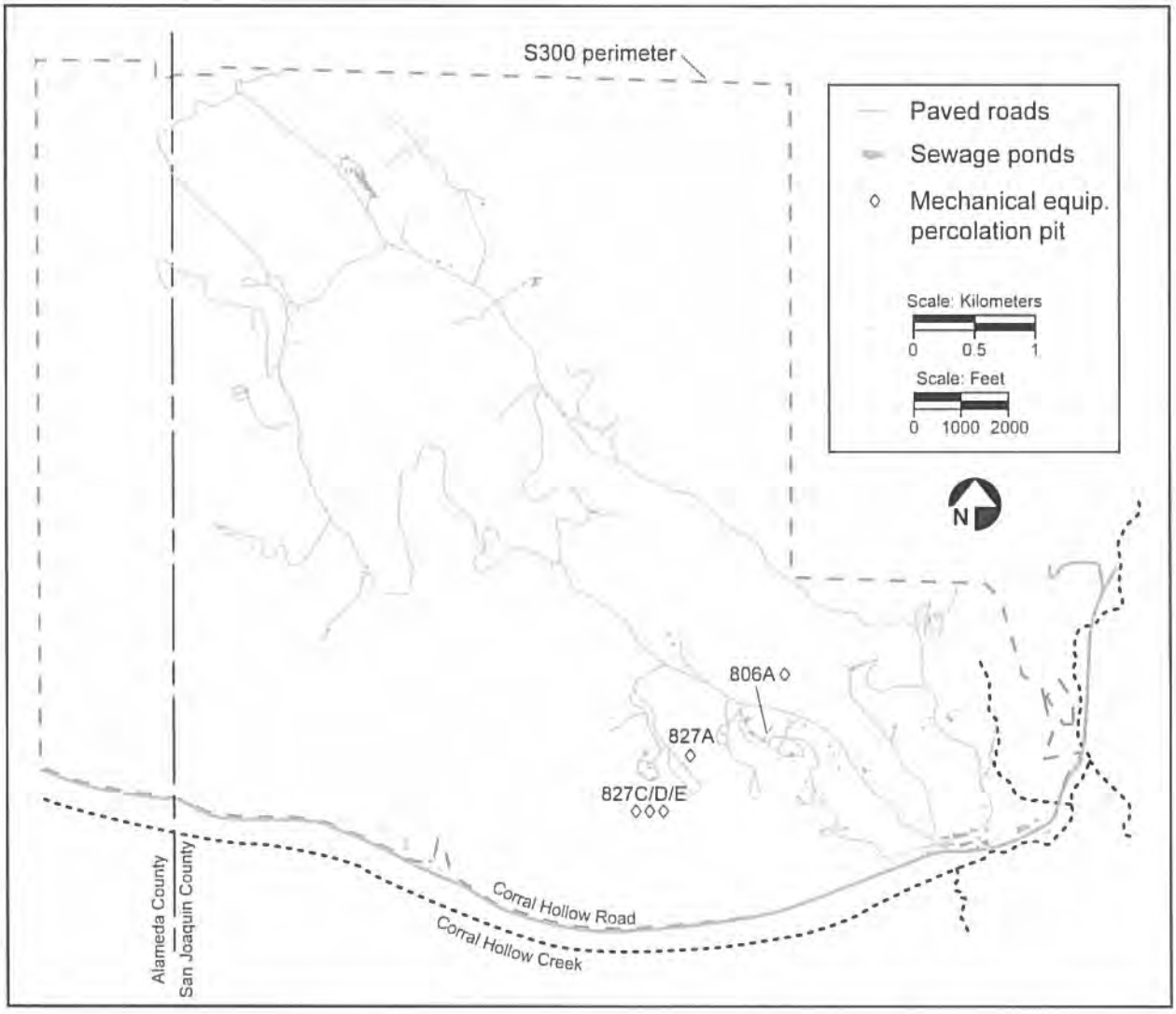

Figure C-1. Location of mechanical equipment wastewater percolation pits.

Table C-1. Site 300 mechanical equipment discharge effluent monitoring 2016 anions data summary.

Well	Date	Sodium mg/L	Chloride mg/L	Nitrate (as NO3) mg/L	Sulfate mg/L	Fluoride mg/L
3-B806A-OW**	May 2	220	91	<0.5	180	0.22
3-B806A-OW**	May 2 DUP	260	90	<0.5	170	0.21
3-B806A-OW**	Oct 3	240	94	<0.5	170	0.18
3-B827C-OW	May 9	230	92	0.87	180	0.28
3-B827C-OW	Oct 4	360	140	1.2	240	0.31
3-B827D-OW	May 4	350	150	1.1	280	0.28
3-B827E-OW	May 3	760	230	<2.5	500	0.36
3-B827E-OW	Oct 3	330	120	<0.5	230	0.25
3-B827A-OW*	May 4	340	130	0.53	240	0.29
3-B827A-OW*	Oct 4	310	120	<1	220	0.24
3-B827A-OW*	Oct 4 DUP	320	110	<1	210	0.25

(-) Sample not required. *Name change from 3-CT-PERC-OW to 3-B827A-OW. (**) Name change from 3-B806B-OW to 3-B806A-OW.

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary.

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Aluminum (µg/L)	May 2	<50	<50	-	-	-	-	-
	May 3	-	-	-	-	<100	-	-
	May 4	-	-	-	270	-	<50	-
	May 9	-	-	140	-	-	-	-
	Oct 3	<50	-	-	-	130	-	-
	Oct 4	-	-	<50	-	-	<50	<50
Arsenic (µg/L)	May 2	<10	<10	-	-	-	-	-
	May 3	-	-	-	-	5.2	-	-
	May 4	-	-	-	<2	-	<4	-
	May 9	-	-	<2	-	-	-	-
	Oct 3	<2	-	-	-	<2	-	-
	Oct 4	-	-	<2	-	-	<4	<4
Barium (µg/L)	May 2	<120	<120	-	-	-	-	-
	May 3	-	-	-	-	<25	-	-
	May 4	-	-	-	32	-	<50	-
	May 9	-	-	<25	-	-	-	-
	Oct 3	<25	-	-	-	<25	-	-
	Oct 4	-	-	<25	-	-	<50	<50
Boron (µg/L)	May 2	990	1000	-	-	-	-	-
	May 3	-	-	-	-	2300	-	-
	May 4	-	-	-	1500	-	1300	-
	May 9	-	-	910	-	-	-	-
	Oct 3	910	-	-	-	1200	-	-
	Oct 4	-	-	1300	-	-	1200	1200

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary (cont.).

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Cadmium (µg/L)	May 2	<250	<250	-	-	-	-	-
	May 3	-	-	-	-	<50	-	-
	May 4	-	-	-	<50	-	<100	-
	May 9	-	-	<50	-	-	-	-
	Oct 3	<50	-	-	-	<50	-	-
	Oct 4	-	-	<50	-	-	<100	<100
Calcium (µg/L)	May 2	7900	9200	-	-	-	-	-
	May 3	-	-	-	-	7600	-	-
	May 4	-	-	-	5600	-	13000	-
	May 9	-	-	9300	-	-	-	-
	Oct 3	8600	-	-	-	7000	-	-
	Oct 4	-	-	3100	-	-	13000	13000
Chromium (µg/L)	May 2	<15	<15	-	-	-	-	-
	May 3	-	-	-	-	5.1	-	-
	May 4	-	-	-	<1	-	<2	-
	May 9	-	-	3.2	-	-	-	-
	Oct 3	<1	-	-	-	1.6	-	-
	Oct 4	-	-	<1	-	-	<2	<2
Chromium (VI) (µg/L)	May 2	<1	<1	-	-	-	-	-
	May 3	-	-	-	-	<1	-	-
	May 4	-	-	-	<1	-	<1	-
	May 9	-	-	<1	-	-	-	-
	Oct 3	<1	-	-	-	<1	-	-
	Oct 4	-	-	<1	-	-	<1	<1

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary (cont.).

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Copper (µg/L)	May 2	19	19	-	-	-	-	-
	May 3	-	-	-	-	3500	-	-
	May 4	-	-	-	400	-	5.5	-
	May 9	-	-	640	-	-	-	-
	Oct 3	19	-	-	-	120	-	-
	Oct 4	-	-	1000	-	-	10	11
Iron (µg/L)	May 2	<100	<100	-	-	-	-	-
	May 3	-	-	-	-	10000	-	-
	May 4	-	-	-	18000	-	<100	-
	May 9	-	-	11000	-	-	-	-
	Oct 3	<100	-	-	-	3100	-	-
	Oct 4	-	-	6600	-	-	210	<100
Lead (µg/L)	May 2	<25	<25	-	-	-	-	-
	May 3	-	-	-	-	130	-	-
	May 4	-	-	-	36	-	<10	-
	May 9	-	-	40	-	-	-	-
	Oct 3	<5	-	-	-	6.2	-	-
	Oct 4	-	-	12	-	-	<10	<10
Magnesium (µg/L)	May 2	<500	<500	-	-	-	-	-
	May 3	-	-	-	-	<1000	-	-
	May 4	-	-	-	<500	-	<500	-
	May 9	-	-	<500	-	-	-	-
	Oct 3	<500	-	-	-	<500	-	-
	Oct 4	-	-	<500	-	-	<500	<500

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary (cont.).

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Manganese (µg/L)	May 2	<30	<30	-	-	-	-	-
	May 3	-	-	-	-	410	-	-
	May 4	-	-	-	290	-	<30	-
	May 9	-	-	120	-	-	-	-
	Oct 3	<30	-	-	-	43	-	-
	Oct 4	-	-	97	-	-	<30	<30
Mercury (µg/L)	May 2	<0.2	<0.2	-	-	-	-	-
	May 3	-	-	-	-	<0.2	-	-
	May 4	-	-	-	<0.2	-	<0.2	-
	May 9	-	-	<0.2	-	-	-	-
	Oct 3	<0.2	-	-	-	0.22	-	-
	Oct 4	-	-	<0.2	-	-	<0.2	<0.2
Molybdenum (µg/L)	May 2	<25	<25	-	-	-	-	-
	May 3	-	-	-	-	<50	-	-
	May 4	-	-	-	28	-	25	-
	May 9	-	-	<25	-	-	-	-
	Oct 3	<25	-	-	-	26	-	-
	Oct 4	-	-	28	-	-	<25	26
Nickel (µg/L)	May 2	<10	<10	-	-	-	-	-
	May 3	-	-	-	-	44	-	-
	May 4	-	-	-	13	-	<4	-
	May 9	-	-	8.9	-	-	-	-
	Oct 3	<2	-	-	-	2.6	-	-
	Oct 4	-	-	5.3	-	-	<4	<4

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary (cont.).

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Potassium (µg/L)	May 2	8100	9500	-	-	-	-	-
	May 3	-	-	-	-	650000	-	-
	May 4	-	-	-	130000	-	13000	-
	May 9	-	-	44000	-	-	-	-
	Oct 3	8500	-	-	-	63000	-	-
	Oct 4	-	-	34000	-	-	16000	16000
Selenium (µg/L)	May 2	<10	<10	-	-	-	-	-
	May 3	-	-	-	-	3.9	-	-
	May 4	-	-	-	<2	-	<4	-
	May 9	-	-	<2	-	-	-	-
	Oct 3	<2	-	-	-	<2	-	-
	Oct 4	-	-	<2	-	-	6.6	7.6
Silver (µg/L)	May 2	<50	<50	-	-	-	-	-
	May 3	-	-	-	-	<50	-	-
	May 4	-	-	-	<10	-	<20	-
	May 9	-	-	<10	-	-	-	-
	Oct 3	<10	-	-	-	<10	-	-
	Oct 4	-	-	<10	-	-	<20	<20
Vanadium (µg/L)	May 2	<100	<100	-	-	-	-	-
	May 3	-	-	-	-	<20	-	-
	May 4	-	-	-	<20	-	<40	-
	May 9	-	-	<20	-	-	-	-
	Oct 3	<20	-	-	-	<20	-	-
	Oct 4	-	-	<20	-	-	<40	<40

Table C–2. Site 300 mechanical equipment discharge effluent monitoring 2016 metals data summary (cont.).

Analyte	Date	3-B806A-OW**	3-B806A-OW DUP**	3-B827C-OW	3-B827D-OW	3-B827E-OW	3-B827A-OW*	3-B827A-OW DUP*
Zinc (µg/L)	May 2	<100	<100	-	-	-	-	-
	May 3	-	-	-	-	150	-	-
	May 4	-	-	-	120	-	<40	-
	May 9	-	-	120	-	-	-	-
	Oct 3	<20	-	-	-	45	-	-
	Oct 4	-	-	49	-	-	54	58

Note:
– = Sampling not required, sampling was performed for that analyte on a different date.
*Name change from 3-CT-PERC-OW to 3-B827A-OW. (**) Name change from 3-B806B-OW to 3-B806A-OW.

Table C-3. Site 300 mechanical equipment discharge effluent monitoring 2016 physical data.

Well	Date	pH (Units)	Specific Conductance (µmhos/cm)	Total Alkalinity (as CaCO3) (mg/L)	Total dissolved solids (TDS) (mg/L)	Total Hardness (as CaCO3) (mg/L)	Total Phosphorus (as PO4) (mg/L)
3-B806A-OW**	May 2	8.5	1050	220	690	21	0.15
3-B806A-OW**	May 2 DUP	8.3	1070	240	720	24	0.15
3-B806A-OW**	Oct 3	8.7	1110	230	740	22	<1
3-B827C-OW	May 9	9.0	1240	270	900	25	18
3-B827C-OW	Oct 4	9.7	1670	350	1100	8.1	12
3-B827D-OW	May 4	9.5	1930	410	1300	15	9.6
3-B827E-OW	May 3	11.0	4800	1300	3900	20	290
3-B827E-OW	Oct 3	9.2	1600	370	1200	18	18
3-B827A-OW*	May 4	8.7	1460	290	960	35	1.0
3-B827A-OW*	Oct 4	8.8	1400	290	1000	33	8.6
3-B827A-OW*	Oct 4 DUP	8.8	1400	290	1000	33	8.9

*Name change from 3-CT-PERC-OW to 3-B827A-OW. (**) Name change from 3-B806B-OW to 3-B806A-OW.

FIELD TRACKING FORM

Semi-Annual Site 300 Mechanical Equipment Room/Percolation Pit Discharge

Special Instructions: Should be sampled in early April and October.
See back of form for additional access information
** For 3-CT-PERC-01-OW Contact FPOC; Off-road travel

LAB	CoC#	Ship It #
BC Labs	70895	211965

pH meter calibrated on: 10/4/16
Specific Conductance meter calibrated on: 10/4/16

Sample Date: 10/4/16

			Field Meas		BC Labs				Comments
Location Indentifier	Sample Time	Initials	pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	S3WETCHEM 1000mL Poly		
3-B827A-OW ~~3-CT-PERC-01-OW**~~	1410	KB	7.73	1305uS	1	1	1		B27C Started at 07:40 76, 130 ml Samples collected over a 6 hour time period 1 Sample every 5 min Approx 8 Liters collected *Orange/Rust color Sample CT-PERC Started at 0755 76, 130 ml Samples collected over a 6 hour time period. 1 Sample every 5 min Approx 8 Liters collected
3-B827C-01-OW	1350	KB	8.72	1563uS	1	1	1		
3-B827D-01-OW									
3-B827E-01-OW									
~~3-B806B-01-OW~~ 3-B806A-OW									
Duplicate of 3-CT-PERC-01-OW									
3-B9900-OW	1410	KB			1	1	1		

☑ Copy to Analyst, Rick Blake.

Revised 3/18/14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Access/COC #: 70895
Document Control #: 70895
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 43058
PCI Task #: 1.03.06.11.01
Email: efa-dmt@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: MECHEQUIPMNTRMS
ShipIt Release #: 211965
Add'l Email:

Additional Instructions:

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B827C-01-OW	10/04/2016 13:50	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827C-01-OW	10/04/2016 13:50	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827C-01-OW	10/04/2016 13:50	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827C-01-OW	10/04/2016 13:50	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B9900-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B9900-01-OW	10/04/2016 14:10	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B9900-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B9900-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-CT-PERC-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-CT-PERC-01-OW	10/04/2016 14:10	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-CT-PERC-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-CT-PERC-01-OW	10/04/2016 14:10	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	

	Relinquished Signature	Company	Date	Time		Received Signature	Company	Date	Time
1	[signature]	LLNL/EFA	10/4/2016	1520	2	[signature]	BC (A)	10-4-16	1630
2					3				
3					4				
4					5				

FIELD TRACKING FORM

Semi-Annual Site 300 Mechanical Equipment Room/Percolation Pit Discharge

Special Instructions: Should be sampled in early April and October.
See back of form for additional access information
** For 3-CT-PERC-01-OW Contact FPOC; Off-road travel

LAB	CoC#	Ship It #
BC Labs	70882	211944

pH meter calibrated on: 10/3/16
Specific Conductance meter calibrated on: 10/3/16

Sample Date: 10/3/16

			Field Meas		BC Labs				Comments
Location Indentifier	Sample Time	Initials	pH	Specific Conductance	S3METALS 500mL Poly	S3ANIONS 1 x 500ml Poly	S3WETCHEM 1000mL Poly		
3-827A-OW ~~3-CT-PERC-01-OW**~~									B06B STARTED at 7:40 76,130 ml. Samples collected over a 6 hour time period. Approx. 7 Liters collected. 1 Sample every 5 min.
3-B827C-01-OW									
3-B827D-01-OW									
3-B827E-01-OW	1435	KS	6.26	1265 uS	1	1	1		B827E STARTED at 0810 80,130ml Samples collected over a 6 hour time period 1 Sample every 5 min Approx 4 Liters collected
~~3-B806B-01-OW~~	1350	KS	9.16	876 uS	1	1	1		
3B806A-OW									
Duplicate of 3-CT-PERC-01-OW									
3-B9900-OW									

☑ Copy to Analyst, Rick Blake.

Revised 3/18/14

Chain of Custody

EFA Data Management Team
Lawrence Livermore National Laboratory
P.O. Box 808 L-627
Livermore, CA 94551

Work Authorized By: EFA
TRR Approver: Della Burruss
Project Info:

Access/COC #: 70882
Document Control #: 70882
Requester/LLNL Analyst: R. Blake
Organization / Sampler: EFA / brunckhorst2
PCI Project #: 43058
PCI Task #: 1.03.06.11.01
Email: efa-dmt@llnl.gov
DMT Additional Copies:

Analytical Lab : BCLABS-BAK
TAT: 20d
Analytical Lab Log #:
Project/Network: MECHEQUIPMNTRMS
ShipIt Release #: 211944
Add'l Email:

Additional Instructions:

Sample ID	Sampled Date/Time	Matrix	Cont. Type	Cont. Count	Study Area	Req. Analysis	Analysis Detail	Lab Instructions
3-B806B-01-OW	10/03/2016 13:50	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B806B-01-OW	10/03/2016 13:50	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B806B-01-OW	10/03/2016 13:50	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B806B-01-OW	10/03/2016 13:50	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	
3-B827E-01-OW	10/03/2016 14:35	AQ	P	1	MECHEQUIPM	S3ANIONS	ALL	
3-B827E-01-OW	10/03/2016 14:35	AQ	P	0	MECHEQUIPM	S3METALS	ALL	
3-B827E-01-OW	10/03/2016 14:35	AQ	P	1	MECHEQUIPM	S3METALS	TOTAL	
3-B827E-01-OW	10/03/2016 14:35	AQ	P	1	MECHEQUIPM	S3WETCHEM	ALL	

	Relinquished Signature	Company	Date	Time		Received Signature	Company	Date	Time
1	Neal Brunckhorst	LLNL/EFA	10/3/2016	1340	2	Tony Bogan	BC Lab	10-3-16	1635
2					3				
3					4				
4					5				

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 6/29/2016 Inspector MARK KRAUSS Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 6/30/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

7/12/16

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7/6/16 Inspector LEE P. CALDEIRA Building Number 827A CT 3 -Peak-ON

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes (No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Lee P Caldeira Date 7/6/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7/6/16 Inspector Lee P. CALDEIRA Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes (No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Lee P Cal Date 7/6/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7/6/16 Inspector Lee P. CALDEIRA Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Victoria A. Gallegos Lee P. Caldeira Date 7/6/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 7/6/16 Inspector LEE P. CALDEIRA Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Lee P Cal Date 7/6/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/3/16 Inspector LEE P CALDEIRA Building Number 3-CT-PERC-ON

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes (No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 8 3 16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/3/16 Inspector LEE CALDERA Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/3/16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/3/16 Inspector LEE CALDEIRA Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/3/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/3/16 Inspector LEE CALDEIRA Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes (No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes (No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes (No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes (No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8.3.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/4/2016 Inspector MARK KRAUHS Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 8/4/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

[signature] 8/11/16

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 8/30/2016 Inspector MARK KRAMER Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 8/30/16

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9/14/16

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector LEE P. CALDEIRA Building Number B827A CT

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Hallinan Date 9.7.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector LEE P. CALDEIRA Building Number B827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Wellington Date 9.7.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector LEE P. CALDEIRA Building Number B827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Peter J. Caldeira Date 9.7.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 9-7-16 Inspector LEE P. CALDEIRA Building Number B827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No (No circled)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No (No circled)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No (No circled)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No (No circled)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 9·7·16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-5-16 Inspector LEE P. CALDEIRA Building Number B827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 10.5.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

BMD

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-5-16 Inspector LEE P. CALDERA Building Number B827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Hallaghan Date 10·5·16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-5-16 Inspector LEE P. CALDEIRA Building Number B827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Dallaghe Date 10.5.16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10-5-16 Inspector LEE P. CALDEIRA Building Number B827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 10-5-16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 10/4/2016 Inspector MARK KRAUHS Building Number 806 B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 10/4/16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

10-11-16

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/3/2016 Inspector Mark Krauka Building Number 806B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 11/3/16

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11/10/16

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-2-16 Inspector Lee P Caldeira Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 11.3.16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-2-16 Inspector Lee P CALPETINA Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 11·3·16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-2-16 Inspector Lee P CALDEIRA Building Number 827D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick G. Gallagher Date 11-3-16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11-2-16 Inspector Lee P CALDEIRA Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Ballagh Date 11·3·16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 11/30/2016 Inspector MARK KRAUHS Building Number 806 B

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Robert Bates Date 11/30/16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-7-16 Inspector LEE P. CALDEIRA Building Number 827A

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature Patrick J. Gallagher Date 12·8·16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-7-16 Inspector LEE P. CALDEIRA Building Number 827C

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/No (No circled)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/No (No circled)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/No (No circled)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/No (No circled)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12-8-16

* Note: This form may be modified or used as is for documenting the routine inspections of the percolation pits permitted under Monitoring and Reporting Program Order Number R5-2008-0148, Revision 1. If standing water is observed in the monthly inspection, increase inspection frequency to weekly until no standing water is observed.

Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-7-16 Inspector LEE P. CALDEIRA Building Number 827 D

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12-8-16

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Monthly/Weekly Mechanical Equipment Percolation Pit Inspection Checklist*
For Buildings 827A, 827C, 827D, 827E and 806A
Waste Discharge Requirements Order Number R5-2008-0148
Monitoring and Reporting Program Order No. R5-2008-0148, Revision 1

Date 12-7-16 Inspector LEE P. CALDEIRA Building Number 827E

Instructions: Circle the appropriate response for each item below, and record the date and time. Provide descriptions and comments if necessary. Attach additional paper if extra space is needed.

This record is to be maintained by the Inspecting Organization for a minimum of 5 years and made available by request of EPD or regulatory personnel.

Send a completed copy to the attention of Rick Blake, EFA (L-627), Environmental Functional Area.

Check Items	Response	Description and Comments:
1. Is water flowing from the Christy box?	Yes/(No)	
2. Are there any signs of recent overflow (damp dirt around Christy box)?	Yes/(No)	
If yes is indicated to either 1 or 2, contact the ES&H Team EA or off hours contact the EDO (pager 04097 or 27595) immediately to arrange for reporting to the regulatory agency and sample collection.		
3. Is there standing water in the Christy box?	Yes/(No)	
If yes is indicated in 3, note depth and increase inspection frequency to weekly until no water is noted		
4. Are there any other indications that the percolation pit requires maintenance (e.g., excessive build up scale, accumulation of dirt or debris).	Yes/(No)	
If yes to any of the above, note date, actions taken, and type of repairs when made.		

Supervisor's Signature [signature] Date 12-8-16

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Environmental Functional Area, Lawrence Livermore National Laboratory
P.O. Box 808, L-627, Livermore, California 94551