SEMS Inc.
Southern Environmental Management & Specialties

3801 N. Causeway Boulevard, Suite 209
Metairie, LA 70002
Phone: 504.342.2340
Fax: 504.342.2543
www.semsinc.net

REDACTED VERSION

SECOND SEMI-ANNUAL 2016
OPERATION AND MAINTENANCE REPORT

DELATTE METALS SUPERFUND SITE
AGENCY INTEREST NO. 2328

DATE SUBMITTED:
JANUARY 31, 2017

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PREPARED FOR

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
POST OFFICE BOX 4312
BATON ROUGE, LOUISIANA 70821-4312
(225) 219-3236

PREPARED BY:
SEMS, INC. - NEW ORLEANS OFFICE
CONTACT: NICK RODEHORST
(504) 342-2340

NICK RODEHORST, P.E.
PROJECT MANAGER

BRIAN H. SULLIVAN, P.E.
PROJECT DIRECTOR

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1.0 INTRODUCTION AND BACKGROUND

SEMS, Inc. (SEMS), on behalf of the Louisiana Department of Environmental Quality (LDEQ), has prepared this Second Semi-Annual 2016 Operations and Maintenance (O&M) Report for the Delatte Metals Superfund Site, located in Tangipahoa Parish, Ponchatoula, Louisiana. The ongoing O&M Program at the Delatte Metals Superfund Site includes periodic Remedial Action (RA) groundwater and surface water sampling designed to determine if constituents of concern (COCs) are in a declining condition and to verify that COCs are not migrating horizontally past the permeable reactive barrier (PRB) or vertically into lower water bearing zones. This report summarizes the site activities conducted during the recent semi-annual monitoring period. A Facility Map depicting the well locations and site features is presented as **Figure 1**. A Surface Water Sample Location Map is presented as **Figure 2**. A brief status and history of the site are provided below.

The physical site location lies in a rural area approximately 5.5 miles south-southeast of Hammond, Louisiana, 1.5 miles southeast of Ponchatoula, Louisiana, and adjacent to the new Delatte Recycling, LLC facility located at 19113 Weinberger Road in Ponchatoula, Louisiana. The latitude and longitude for the site are 30°25'16"N and 90°24'39"W, respectively. The site is bounded to the south by Weinberger Road. Selser's Creek lies at the western property boundary and drainage ditches bound the site to the north and east. Residential properties are located immediately beyond these features to the north, south, east, and west. Numerous additional residences are located within a one-mile radius of the site.

According to previous reports, the 19-acre Delatte Metals Superfund Site includes the Delatte Metals, Inc. (DMI) facility and the abandoned North Ponchatoula Battery facility. DMI began business as the Delatte and Fuscia Battery Company in the early 1960's and continued as Delatte Metals, Inc. from the early 1980's until closing in 1993. Its operations included the dismantling of lead-acid batteries and smelting of recovered lead plates into ingots. The Ponchatoula Battery Company moved its operations to a site adjacent to the Delatte and Fuscia Battery Company between 1972 and 1978 and performed identical lead salvage operations and generated the same types of wastes until closing in 1981.

During LDEQ and EPA investigations, discharge from the facilities showed a pH range from 0.55 to 2 standard units (s.u.). Analytical samples from on-site soil and groundwater samples indicated the presence of heavy metals including lead, arsenic, and cadmium. An observed release of lead and cadmium to Selser's Creek was documented by the analytical data from the sediment samples collected at three probable points of entry.

RA operations were implemented at the site between November of 2002 and September of 2003. One of the objectives of the RA was to establish both pH neutrality and a stable, or preferably decreasing, trend in metals concentrations in groundwater down-gradient of the site. During the RA, the principle threat wastes were excavated, immobilized, and transported off-site for disposal. A permeable reactive barrier wall (PRB) was installed to neutralize the acidity of the shallow water-bearing zone and limit the migration of dissolved metals. Following the RA, an O&M Program was initiated to monitor the effectiveness of the selected remedy. The O&M Program initially included groundwater sampling of 31 monitor and water supply wells to verify the metal concentrations and pH in the site groundwater. The O&M Program was modified in September 2013 to include sampling of 44 monitor and water supply wells and five (5) surface water sample locations.

Three distinct and local water bearing zones (WBZ) were identified at the site during previous investigations. The three WBZ are located at the site from ground surface to approximately 100 feet below ground surface (ft.-bgs).

- The First WBZ is generally found between 5 and 15 ft.-bgs. This zone is semi-confined and is overlain by sandy/silty clay across the northern section of the site. During the Remedial Investigation (RI), a clay unit was encountered underneath this First WBZ. Currently twenty-two monitor wells are screened in this zone. This WBZ was previously classified according to RECAP as a Class 3B aquifer.

- The Second WBZ encountered at the site generally consists of intermittent layers of gray, tan, and orange clayey silt. At various locations, this WBZ is typically encountered between 15 and 40 ft.-bgs. The Second WBZ is considered to be confined and relatively

continuous across the site. Currently 13 monitor wells are screened in this zone. This WBZ was previously classified according to RECAP as a Class 2C aquifer.

- The Third WBZ encountered at the site consists of light brown to gray silty sand and sand. During the RI, this Third WBZ was encountered between 58 and 62 ft.-bgs, extending to the maximum depth of the site borings (100 ft.-bgs). The Third WBZ is considered to be confined and continuous across the site. There are currently four monitor wells screened in this zone. This WBZ was previously classified according to RECAP as a Class 1B aquifer.

The monitor wells installed in these WBZs and their construction details are summarized in **Table 1**. Underneath the three local WBZs identified at the site are three regional aquifers: The Shallow Aquifer (also known as the Upland Terrace Aquifer), the Ponchatoula Aquifer (which is subdivided into two units: the Upper and Lower Ponchatoula Aquifers), and the Tchefuncte Aquifer. The five (5) onsite and offsite water supply wells are screened below the Third WBZ. A summary of the water well characteristics is included in **Table 2**.

2.0 CHRONOLOGY OF EVENTS

A chronology of events that have occurred during the current semi-annual reporting period is as follows:

- July 29, 2016 - SEMS submitted the Operation and Maintenance Report – First Semi-annual 2016 to the LDEQ for approval.
- July 29, 2016 – SEMS submitted the Operation and Maintenance Report – Second Quarter 2016 to the LDEQ for approval.
- August 24, 2016 – SEMS mobilized to the site and performed third quarter 2016 O&M activities.
- October 31, 2016 – SEMS submitted the Operation and Maintenance Report – Third Quarter 2016 to the LDEQ for approval.
- November 7, 2016 – SEMS submitted a draft Quality Assurance Project Plan (QAPP) to the LDEQ for review.

- November 8, 9, 10, 11, 14, and 18, 2016 - SEMS mobilized to the site and performed fourth quarter / second semi-annual 2016 O&M activities.

3.0 OPERATION AND MAINTENANCE ACTIVITIES

Operation and Maintenance activities are performed in accordance with the 2016 LDEQ bid specifications. Operation and maintenance activities include well inspection, PRB inspection, review of institutional controls, groundwater monitoring, and surface water monitoring. The frequency of sample collection and reporting varies at each sample location. Monitor wells screened in the First and Second WBZ are sampled and reported on a semi-annual basis. Monitor wells screened in the Third WBZ are sampled on an annual basis, currently in the fourth quarter, and the results are included in the semi-annual reports. The onsite and offsite water supply wells are sampled on a quarterly basis. Surface water is sampled and reported on a semi-annual basis. The sampling and reporting schedule for each sample location is provided in **Table 3**.

On November 8th, 9th, 10th, 11th, 14th, and 18th, 2016, SEMS mobilized to the site and performed second semi-annual 2016 operation and maintenance activities. A total of 44 monitoring and water supply wells and five (5) surface water sample locations were sampled during this period. Inspection of the monitor wells and the PRB and review of the institutional controls were also performed during this period. Details of activities performed at the site are summarized below.

3.1 ACCESS TO WELLS

Clearing of the vegetative overgrowth around the monitor wells was performed prior to sampling to provide access to the wells.

3.2 MONITOR WELL INSPECTION

The monitor wells were inspected for damage during the groundwater sampling event. **Table 1** includes a listing of the monitor wells at the site, and **Figure 1** shows the locations of the wells.

The Well Inspection Checklist is included with the field data in **Attachment A**. No deficiencies were noticed during this sampling event.

3.3 PERMEABLE REACTIVE BARRIER (PRB) INSPECTION

The PRB was cleared of vegetative overgrowth by the LDEQ Contractor prior to the current sampling event. SEMS inspected the condition of the PRB during the current sampling event and noted the following:

- No cracks or erosion are visible in the PRB.
- Ground subsidence is evident at the northwest and northeast sides of the PRB. SEMS will place imported fill dirt at these low areas when site conditions allow. SEMS anticipates to perform fill dirt placement in Q2 2017.

The PRB will continue to be monitored quarterly.

3.4 REVIEW OF INSTITUTIONAL CONTROLS

Tangipahoa Parish Clerk of Court deed files 650403, 674853 and 674854 provide institutional controls restricting site reuse to an industrial scenario. SEMS conducted an online review of these records at the Tangipahoa Parish Clerk of Court website (www.tangiclerk.org) to confirm that they are still on file.

3.5 GROUNDWATER MONITORING, SAMPLING, AND ANALYTICAL PROCEDURES

During the second semi-annual 2016 sampling event a total of 44 monitoring wells and five (5) water supply wells were sampled. The locations of the monitor wells and water supply wells are shown on **Figure 1**. It should be noted that the location of the (b) (6) Well and monitor well GSGP-03 are not included on the facility map. The (b) (6) Well is located approximately 400

feet east of water well WW-04. Monitor well GSGP-03 is located approximately 330 feet west of monitor well MW-01.

Data for the determination of the groundwater potentiometric surface was collected at each monitoring well sampled during the event. The wells were uncapped to allow water levels to equilibrate to atmospheric conditions. After equilibration, depth-to-water was measured to the nearest one-hundredth of a foot with an interface probe. The interface probe was decontaminated prior to on-site work, between each well, and after fluid level measurements were completed. Fluid level measurements are summarized in **Table 4**.

Following gauging, the monitor wells were purged via low flow micro purging technique with a peristaltic pump (Geopump) using dedicated tubing. The purge rates were maintained between 0.1 and 0.5 liters per minute and were recorded on field forms. Water quality indicator parameters were measured constantly during well purging using a calibrated multi-parameter data sonde and flow-through cell. Groundwater samples were collected following the stabilization of at least three of the following water quality parameters: temperature, pH, conductivity, turbidity, oxidation–reduction potential, and dissolved oxygen. The five (5) water supply wells were purged by opening their spigots and allowing water to flow freely for 20 minutes prior to sample collection and instantaneous measurement of water quality indicator parameters using the multi-parameter data sonde. Water quality indicator field data were recorded manually on the field forms and are summarized on **Table 4**.

After the wells were properly purged and parameters had stabilized, the flow-through cell was removed from the sampling train to facilitate groundwater sample collection. The samples were collected using new, laboratory-supplied, pre-preserved containers, labeled, and placed on ice in a cooler. Quality Assurance/Quality Control (QA/QC) samples that included five duplicates, three matrix spikes, and three matrix spike duplicates were also collected. The groundwater and QA/QC sample containers were transported in the sample coolers to Pace Analytical Services (Pace) in St. Rose, Louisiana accompanied by proper chain-of-custody documentation.

Groundwater samples were analyzed for total metals including arsenic, cadmium, lead, manganese, nickel, and zinc via method SW-846 6010 or 6020. Groundwater samples collected from monitor wells screened in the First WBZ and located down-gradient of the PRB were also analyzed for sulfate and sulfide by methods SW-846 9056 and 9034, respectively. At sample locations where the stabilized turbidity parameter exceeded 10 nephelometric turbidity units (NTU), an additional sample was collected, field filtered using new 0.45 micron disposable filters and submitted for dissolved metals analysis. Additional samples for dissolved metals were thus collected at DW-01 and BA-01 due to final turbidity readings above 10 NTU. For these samples, the dissolved metals analytical data are considered to supersede the total metals data for compliance determination and are illustrated on the attached figures and historical graphs in lieu of the total metals data. Summaries of groundwater analytical data are provided in **Table 6** and are further discussed in Section 4.0. A copy of the laboratory reports and chain-of-custody documentation are included in **Attachment B**.

Groundwater collected at the site during low-flow sampling was contained in steel drums and stored at the designated holding area located south of the "North Well" water well. Potentially contaminated non-disposable materials were decontaminated onsite and the decontamination waters combined with purge water in the 55-gallon drums. Spent personal protective equipment, tubing, and other potentially contaminated disposable materials are stored in a separate 55-gallon metal drum. Copies of drum disposal manifests for this period, if applicable, are included in **Attachment A**.

3.6 SURFACE WATER MONITORING, SAMPLING, AND ANALYTICAL PROCEDURES

During the second semi-annual 2016 sampling event a total of five (5) surface water sampling locations were monitored and sampled. Surface water sample locations are shown on **Figure 2**.

Surface water samples from Selser's Creek (CA-41, CA-51, & Bridge) were collected a distance of five feet horizontally from the east embankment of the creek at the vertical midpoint. Surface water samples from Tributary 1 (CL-19 and CL-05) were collected at the horizontal and vertical

midpoint of the tributary. A peristaltic pump equipped with new polyethylene tubing was used to retrieve each sample. The tubing was attached to a rod in order to collect the sample from the desired location in the creek and replaced between each sample location. The samples were placed in new, laboratory-supplied, pre-preserved containers. At each sample location, instantaneous water quality indicator parameters were measured using the multi-parameter data sonde and recorded on the field forms (**Attachment A**). The surface water quality parameters are provided on **Table 5**.

Surface water samples were collected for both total and dissolved arsenic, cadmium, lead, manganese, nickel, and zinc analysis via methods SW-846 6010 and/or 6020. Samples for dissolved metals analysis were field-filtered using a new disposable 0.45 micron filter at each location. Summaries of the surface water analytical data are provided in **Table 6** and are further discussed in Section 4.0. A copy of the laboratory reports and chain-of-custody documentation are included in **Attachment B**.

4.0 ANALYTICAL DATA REVIEW

Below is a summary of SEMS review of the potentiometric and analytical data collected during the current period:

4.1 CURRENT MONITORING PERIOD GROUNDWATER FLOW DIRECTION

Potentiometric maps were prepared for the First, Second, and Third WBZ. The First, Second, and Third WBZ potentiometric maps are presented as Figures 3A, 3B, and 3C respectively. Potentiometric maps show the groundwater flow direction for this period as described below:

First WBZ: Groundwater generally flows northwest toward Selser's Creek.

Second WBZ: Groundwater generally flows north at the north end of the site and northwest toward Selser's Creek at the south end of the site.

Third WBZ: Groundwater generally flows east.

The current period groundwater flow directions are consistent with the minor fluctuations noted in the historic monitoring results.

4.2 CURRENT PERIOD CONSTITUENT CONCENTRATION

Site Cleanup levels for pH and lead are available in the QAPP prepared for the EPA in September 28, 2004. The Site Cleanup level for lead is 0.015 mg/L. The Site Cleanup level for pH is 7.0 standard units. Since a pH of exactly 7.0 s.u. is not practically obtainable, SEMS recommends that an alternative pH compliance standard be used for each WBZ based on its LDEQ Groundwater Classification. The First WBZ is classified as a Groundwater Class 3 non-drinking water under RECAP criteria. The pH range that is accepted by EPA for storm water discharges, 6.0-9.0 s.u., will be used to evaluate the First WBZ. The Second WBZ, Third WBZ, and Water Wells are classified under RECAP criteria as either Groundwater Class 1 or 2 drinking water aquifers. The pH range accepted by EPA for drinking water, 6.5-8.5 s.u., will be used for the Second WBZ, Third WBZ, and Water Wells. Under LAC Title 33, Part IX, designated uses of Selser's Creek (LDEQ Watershed Basin Subsegment 040603) do not include drinking water supply. The 6.0-9.0 pH range for stormwater discharge will therefore be used evaluate surface water.

Site Cleanup levels are not available for site COCs other than pH and lead. LDEQ RECAP Table 1 Screening Standards (SS) will be used to determine compliance levels for arsenic, cadmium, manganese, nickel, and zinc. No RECAP SS are available for sulfate and sulfide. The EPA's secondary maximum contaminant level (MCL) for sulfate in drinking water will be used for comparison purposes. The EPA secondary MCL for sulfate in drinking water is based upon the aesthetic qualities only and is currently not federally enforceable. No sulfide limiting standards are available for comparison to site groundwater and surface water sulfide concentrations. The sulfide data are presented without comparison to a compliance standard.

Below is a brief summary of all COCs exceeding the applicable site limiting standards:

Samples from the following wells and surface water sample locations were outside their applicable EPA acceptable pH range:

- **First WBZ Monitor Wells**: Monitor wells DW-01, DW-02, DW-03, MW-01, MW-02, MW-06, PW-04, BA-03, BA-09, GSGP-03, GSGP-06, GSGP-15, GSGP-18, GSGP-19, GSGP-22, NWGS-01, NWGS-02, NWGS-05, and NWGS-06 were below the EPA acceptable pH range of 6.0-9.0 s.u. with a minimum pH reading of 2.83 s.u. in monitor well DW-02.
- **Second WBZ Monitor Wells**: Monitor wells MW-03, MW-04, BA-01, BA-05 and BC-17 were below the EPA acceptable pH range of 6.5-8.5 s.u. with a minimum pH reading of 5.44 s.u. in monitor well BA-01.
- **Third WBZ Monitor Wells:** Monitor Wells BA-03A and BB-01 were above the EPA acceptable pH range opf 6.5-8.5 s.u. with a maximum pH reading of 9.81 s.u. in monitor well BB-01.
- **Water Supply Wells**: Water supply wells (b) (6) Well, WW-04, WW-09, North Well and South Well were above the EPA acceptable pH range of 6.5-8.5 s.u. with maximum pH readings of 9.11 s.u. at WW-04.
- **Surface Water**: Sample location CL-05 was below the EPA acceptable pH range of 6.0-9.0 with a pH reading of 5.93 s.u.

Samples from the following wells and surface water sample locations exhibited arsenic concentrations above the RECAP SS of 0.010 mg/L:

- **First WBZ Monitor Wells**: Monitor wells DW-01, DW-02, DW-03, MW-01, TEPA-P7D, NWGS-03, and NWGS-04 were above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.442 mg/L in monitor well NWGS-04.
- **Second WBZ Monitor Wells**: No monitor wells sampled were reported above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.0039 mg/L in monitor well DW-04.
- **Third WBZ Monitor Wells**: No monitor wells sampled were reported above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.0082 mg/L in monitor well BA-01A.

- **Water Supply Wells**: No water wells sampled were reported above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.0014 mg/L in the (b) (6) Well.
- **Surface Water**: No concentrations of total or dissolved arsenic in surface water were reported above the arsenic RECAP SS; the highest total arsenic concentrations were reported to be 0.0022 mg/L at sample locations CA-51 and Bridge.

Samples from the following wells and surface water sample locations exhibited cadmium concentrations above the RECAP SS of 0.005 mg/L:

- **First WBZ Monitor Wells**: Monitor wells DW-02, MW-02, MW-06, BA-03, GSGP-18, GSGP-19, TEPA-P7D, NWGS-01, NWGS-02, and NWGS-06 were reported above the cadmium RECAP SS. The highest cadmium concentration was reported to be 0.166 mg/L in monitor well NWGS-02.
- **Second WBZ Monitor Wells**: No monitor wells sampled were reported above the cadmium RECAP SS; all results were reported non-detect for cadmium.
- **Third WBZ Monitor Wells**: No monitor wells sampled were reported above the cadmium RECAP SS; all results were reported non-detect for cadmium.
- **Water Supply Wells**: No water wells sampled were reported above the cadmium RECAP SS; all results were reported non-detect for cadmium.
- **Surface Water**: No concentrations of total or dissolved cadmium in surface water were reported above the cadmium RECAP SS; all concentrations of total and dissolved cadmium were reported non-detect.

Samples from the following wells and surface water sample locations exhibited lead concentrations above the site cleanup level of 0.015 mg/L:

- **First WBZ Monitor Wells**: Monitor wells DW-02, DW-03, BA-03, TEPA-P7D, and NWGS-02 were reported above the site cleanup level for lead; the highest lead concentration was reported to be 0.175 mg/L in monitor well TEPA-P7D.

- **Second WBZ Monitor Wells**: Monitor well BC-17 was reported above the site cleanup level for lead. The highest lead concentration was reported to be 0.0218 mg/L in monitor well BC-17.
- **Third WBZ Monitor Wells**: No water wells sampled were reported above the site cleanup level for lead. The highest lead concentration was reported to be 0.0051 mg/L in monitor well BB-01.
- **Water Supply Wells**: No water wells sampled were reported above the site cleanup level for lead; all results were reported non-detect for lead.
- **Surface Water**: No concentrations of total or dissolved lead in surface water were reported above the site cleanup level for lead; the highest total lead concentration was reported to be 0.0033 mg/L at sample location CL-05.

Samples from the following wells and surface water sample locations exhibited manganese concentrations above the RECAP SS of 0.51 mg/L:

- **First WBZ Monitor Wells**: Monitor wells DW-01, DW-02, DW-03, MW-01, MW-02, MW-06, PW-04, BA-03, BA-09, GSGP-03, GSGP-06, GSGP-18, GSGP-19, GSGP-22, TEPA-P7D, NWGS-01, NWGS-02, NWGS-03, NWGS-04, and NWGS-06 were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 15.1 mg/L in monitor well GSGP-22.
- **Second WBZ Monitor Wells**: Monitor wells MW-03, BA-01, and BA-05 were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 10.6 mg/L in monitor well BA-05.
- **Third WBZ Monitor Wells**: No water wells sampled were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 0.0646 mg/L in monitoring well BA-05A.
- **Water Supply Wells**: No water wells sampled were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 0.0227 mg/L in the (b) (6) Well.
- **Surface Water**: No concentrations of total or dissolved manganese in surface water were reported above the manganese RECAP SS; the highest total

manganese concentration was reported to be 0.407 mg/L at sample location CL-05.

Samples from the following wells and surface water sample locations exhibited nickel concentrations above the RECAP SS of 0.073 mg/L:

- **First WBZ Monitor Wells**: Monitor wells DW-02, MW-01, BA-09, GSGP-06, and GSGP-22 were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.291 mg/L in monitor well GSGP-06.
- **Second WBZ Monitor Wells**: No monitor wells sampled were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.0321 mg/L in monitor well BA-05.
- **Third WBZ Monitor Wells**: No monitor wells sampled were reported above the nickel RECAP SS; all results were reported non-detect for nickel.
- **Water Supply Wells**: No water wells sampled were reported above the nickel RECAP SS; all wells were reported non-detect for nickel.
- **Surface Water**: No concentrations of total or dissolved nickel in surface water were reported above the nickel RECAP SS; the highest total nickel concentration was reported to be 0.0025 mg/L at sample location Bridge.

Samples from the following wells and surface water sample locations exhibited zinc concentrations above the RECAP SS of 1.1 mg/L:

- **First WBZ Monitor Wells**: No monitor wells were reported above the zinc RECAP SS; the highest zinc concentration was reported to be 0.513 mg/L in monitor well DW-02.
- **Second WBZ Monitor Wells**: No monitor wells were reported above the zinc RECAP SS; the highest zinc concentration was reported to be 0.0407 mg/L in monitor well BA-01.
- **Third WBZ Monitor Wells**: No monitor wells were reported above the zinc RECAP SS; all results were reported non-detect for zinc.

- **Water Supply Wells:** No water wells sampled were reported above the zinc RECAP SS; the highest zinc concentration was reported to be 0.048 mg/L in the South Well.
- **Surface Water**: No concentrations of total or dissolved zinc in surface water were reported above the zinc RECAP SS; the highest total zinc concentration was reported to be 0.0262 mg/L at sample location CA-51.

Only monitor wells that are screened in the First WBZ and located down-gradient of the PRB are analyzed for sulfate. The following monitor wells exhibited sulfate concentrations above the EPA Secondary MCL of 250 mg/L:

- **First WBZ**: Monitor wells DW-01, DW-03, MW-01, MW-02, BA-09, GSGP-22, TEPA-P7D, NWGS-01, NWGS-02, NWGS-03, NWGS-04, and NWGS-06 were reported above the EPA Secondary MCL; the highest sulfate concentration was reported to be 11,800 mg/L at monitor well GSGP-22.

Only monitor wells that are screened in the First WBZ and located down-gradient of the PRB are analyzed for sulfide. No EPA site cleanup standard or RECAP Standard is available for sulfide. All sulfide samples were reported non-detect for the current monitoring period.

Analytical results for this period are summarized in **Table 6**. Isoconcentration maps prepared for each WBZ and the water supply wells are presented as **Figures 4** through **12**. Following a review of the isoconcentration maps the following constituents were found to not be horizontally delineated to their applicable limiting standard:

- The First WBZ – pH, arsenic, cadmium, lead, manganese, nickel, and sulfate
- The Second WBZ – pH and manganese
- The Third WBZ - pH
- The Water Wells – pH

4.3 HISTORICAL GROUNDWATER AND SURFACE WATER MONITORING TRENDS

A historical summary of the groundwater analytical and potentiometric data from the past eight quarters is presented in **Table 7**. Historical surface water analytical data from the past eight quarters as available is presented in **Table 8**. Historical data trend graphs that show pH, arsenic, cadmium, lead, manganese, nickel, and zinc concentrations over time are presented in **Attachment C**. For graphing purposes, the reporting limit was used in place of all non-detected concentrations. The historical data trend graphs were completed in Excel and a linear regression trend line was generated by Excel using the previous eight quarters of data for each COC.

Only samples with at least eight time-independent observations and with at least two observations of analytical data exceeding site cleanup or RECAP SS are considered in the trend evaluation below. Historical concentrations from the wells previously sampled by the USGS and EPA (GSGP and TEPA wells) and the surface water sample locations previously sampled by the EPA are not available and trend analysis will not be performed until eight periods of data have been collected. Additionally, sulfate and sulfide were recently added to the list of COCs and trend analysis will also not be performed until eight periods of data have been collected. A review of the graphs and evaluation of constituent trends provides the information below:

First WBZ Trends

Exceeding constituent concentration trends were observed in the following wells:

Lead: Increasing: DW-02
Decreasing: DW-03 and BA-03

Arsenic: Increasing: DW-02, DW-03, and MW-01
Decreasing: DW-01

Manganese: Increasing: DW-01, MW-01, MW-02, and BA-03
Decreasing: DW-02, DW-03, MW-06, and PW-04
Stable: BA-09

Nickel: Increasing: MW-01
Decreasing: DW-02, DW-03, and BA-03
Stable: BA-09

Cadmium: Increasing: DW-02, MW-02, and BA-03
Decreasing: DW-01 and MW-06

Zinc: No exceedances observed for any two of the previous eight quarters.

pH: Below 6.0 s.u. and increasing: DW-02

Below 6.0 s.u. and decreasing: DW-01, DW-03, MW-01, MW-02, BA-03, and BA-09

Below 6.0 s.u. and stable: MW-06 and PW-04

Second WBZ Trends

Exceeding constituent concentration trends were observed in the following wells:

Lead: Decreasing: BC-17

Manganese: Decreasing: MW-03, BA-01, and BA-05

Arsenic, Cadmium, and Zinc:

No exceedances observed for any two of the previous eight quarters.

pH: Below 6.5 s.u. and decreasing: MW-03 and BA-05

Below 6.5 s.u. and stable: MW-04 and BA-01

Third WBZ Trends

Exceeding constituent concentration trends were observed in the following wells:

Lead, Arsenic, Manganese, Cadmium, and Zinc:

No exceedances observed for any two of the previous eight quarters

pH: Above 8.5 s.u and stable: BB-01

Water Well Trends

The following exceeding constituent concentration trends were observed in the following wells:

Lead, Arsenic, Manganese, Nickel, Cadmium, and Zinc: No exceedances observed for any two of the previous eight quarters.

pH: Above 8.5 s.u. and increasing: WW-04, WW-09, and (b) (6) Well

Above 8.5 s.u. and decreasing: South Well

Above 8.5 s.u. and stable: North Well

First Water Bearing Zone and PRB Observations

Long term trends of monitor wells screened in the First WBZ were evaluated from 2006 to present to determine if the PRB is effectively increasing the pH towards neutrality. Two up-gradient wells (BA-03 and DW-02) and two down-gradient wells (MW-01 and DW-01) were chosen to evaluate the effectiveness of the PRB. One monitor well (DW-03) outside of the PRB was also evaluated. These graphs are included in **Attachment C**. The following significant long term observations have been noted:

- The two up-gradient monitor wells (BA-03 and DW-02) show a decreasing trend in pH since 2006.
- Monitor well DW-01 down-gradient of the PRB shows an overall increasing trend in pH since 2006.
- Monitor well MW-01 down-gradient of the PRB shows a decreasing trend in pH since 2006.
- Monitor well DW-03 outside of the PRB shows a decreasing trend for pH since 2006.

Water Well Observations

Since offsite water supply wells WW-09, and WW-04 and the (b) (6) Well have had pH exceedances, the pH trends for these wells have been evaluated from 2006 to present. ((b) (6) Well data begins in 2008.) These additional graphs are provided in **Attachment C**.

- Water well WW-04 has shown an overall increasing trend since 2006, including the most recent eight quarters.
- Water well WW-09 has shown a decreasing trend since 2006 versus an increasing trend over the most recent eight quarters.
- The pH trend noted at the (b) (6) Well has been slightly increasing since 2008, including the most recent eight quarters.

The cause for the changes in the pH at these water wells is unknown.

4.4 QUALITY ASSURANCE/QUALITY CONTROL AND UNUSUAL FINDINGS

A summary of QA/QC samples collected is included in the field data sheets presented in **Attachment A**. Duplicate samples included Duplicate #1 (CA-51), Duplicate #2 (NWGS-03), Duplicate #3 (BA-09), Duplicate #4 (BC-25), and Duplicate #5 (North Well). All QA/QC duplicate sample analytical results were reported within a factor of 10 of the original analytical sample results. All data sets were accepted. Full laboratory analytical reports are included in Attachment B. Each laboratory analytical report includes laboratory QA/QC documentation.
The analytical data was reviewed by Environmental Data Professional, LLC (eDATApro), a third party data validator. eDATApro reviewed ten percent of the samples analyzed including samples GSGP-18, BA-05, DW-02, NWGS-06, and WW-09. The following changes were made to this report as a result of the data validation:

- Pace reported the WW-09 arsenic result as <0.0010 mg/L and the validated result was <0.0010 mg/L with a J flag.
- Pace reported the WW-09 cadmium result as <0.0010 mg/L and the validated result was <0.0010 mg/L with a J flag.
- Pace reported the WW-09 nickel result as <0.0010 mg/L and the validated result was <0.0010 mg/L with a J flag.

The tables and graphs have been updated to reflect these changes. No major discrepancies were found in the data validation report, which is included in **Attachment D**. The Level IV analytical report is attached to this report with a compact disk (CD) in an electronic format as requested by LDEQ.

The following unusual findings were noted during this report:

- There are no unusual findings to report for the current period.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on evaluation of data presented within this groundwater monitoring report.

- SEMS recommends continuing with periodic O&M in accordance with the 2016 LDEQ bid specifications.

TABLES

TABLE 1
MONITORING WELL DATA

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Well ID	Northing	Easting	Latitude	Longitude	Well Diameter (inches)	Total Well Depth (ft bgs)	Top of Casing Elevation (NGVD)	Ground Surface Elevation (NGVD)	Screened Interval Elevation (NGVD)	Screened Interval (ft bgs)
First Water-Bearing Zone										
DW-1	701226.57	3571439.3	30^0 25' 30"	90^0 24' 41"	2	19	13.36	12.03	3.5 to -6.5	8.5 to 18.5
DW-2	700994.96	3571554.5	30^0 25' 28"	90^0 24' 39"	2	11	14.12	12.65	7.2 to 2.2	5.5 to 10.5
DW-3	701096.8	3571730.9	30^0 25' 29"	90^0 24' 37"	2	16	11.59	10.09	4.6 to -5.4	5.5 to 15.5
MW-1	701242.6	3571218.6	30^0 25' 30"	90^0 24' 43"	2	28.5	15.08	13.58	0.6 to -14.4	13.0 to 28.0
MW-2	700954.99	3571119.9	30^0 25' 27"	90^0 24' 44"	2	10.5	14.23	11.79	6.8 to 1.8	5.0 to 10.0
MW-6	700833.83	3571351.4	30^0 25' 26"	90^0 24' 42"	2	16.5	16.77	15.17	NA	NA
MW-7*	701240.79	3571056.2	30^0 25' 30"	90^0 24' 45"	2	15	8.21	6.01	NA	NA
PW-4	701018.61	3571950.1	30^0 25' 28"	90^0 24' 35"	2	19.5	12.22	8.96	NA	NA
BA-03	701018.61	3571248.6	30^0 25' 28"	90^0 24' 43"	2	13.5	14.57	11.8	8.80 to -1.20	3.0 to 13.0
BA-09	701286.58	3571522.6	30^0 25' 31"	90^0 24' 40"	2	18.0	9.46	8.10	0.60 to -9.40	7.5 to 17.5
BC-31*	701305.48	3571090.6	30^0 25' 31"	90^0 24' 48"	2	16	11.36	8.75	3.25 to -6.75	5.5 to 15.5
GSGP-3	NA	NA	30^0 25' 30"	90^0 24' 47"	0.75	13.1	7.935	NA	-0.31 to -5.41	8.1 to 13.1
GSGP-6	NA	NA	30^0 25' 31"	90^0 24' 42"	0.75	14.3	11.725	NA	-0.66 to -5.76	9.3 to 14.3
GSGP-15	NA	NA	30^0 25' 29"	90^0 24' 37"	0.75	15.3	13.483	NA	1.07 to -4.03	10.3 to 15.3
GSGP-18	NA	NA	30^0 25' 27"	90^0 24' 43"	0.75	11.5	15.284	NA	8.88 to 3.78	6.5 to 11.5
GSGP-19	NA	NA	30^0 25' 27"	90^0 24' 45"	0.75	13.5	13.463	NA	3.56 to -1.54	8.5 to 13.5
GSGP-22	NA	NA	30^0 25' 30"	90^0 24' 39"	0.75	14.85	8.382	NA	-1.37 to -6.47	9.8 to 14.8
NWGS-01	NA	NA	30^0 25' 27"	90^0 24' 44"	1.5	11.0	12.937	10.44	4.54 to -0.56	5.9 to 11.0

Notes: 1) ft bgs = Feet below ground surface
2) ID = Identification
3) NA= Not available
4) NGVD = National Geodetic Vertical Datum
5) * = Well Plugged and Abandoned by the EPA

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MONITORING WELL DATA

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Well ID	Northing	Easting	Latitude	Longitude	Well Diameter (inches)	Total Well Depth (ft bgs)	Top of Casing Elevation (NGVD)	Ground Surface Elevation (NGVD)	Screened Interval Elevation (NGVD)	Screened Interval (ft bgs)
First Water-Bearing Zone										
NWGS-02	NA	NA	30^0 25' 27"	90^0 24' 45"	1.5	13.1	12.757	10.16	2.16 to -2.94	8.0 to 13.1
NWGS-03	NA	NA	30^0 25' 29"	90^0 24' 44"	1.5	14.5	13.355	10.66	1.26 to -3.84	9.4 to 14.5
NWGS-04	NA	NA	30^0 25' 30"	90^0 24' 42"	1.5	11.9	11.191	8.79	1.99 to -3.11	6.8 to 11.9
NWGS-05	NA	NA	30^0 25' 30"	90^0 24' 37"	1.5	9.9	11.058	8.31	3.51 to -1.59	4.8 to 9.9
NWGS-06	NA	NA	30^0 25' 27"	90^0 24' 45"	1.5	12.0	11.725	9.03	2.13 to -2.97	6.9 to 12.0
TEPA-P7D	NA	NA	30^0 25' 27"	90^0 24' 46"	1	NA	NA	NA	NA	NA
Second Water-Bearing Zone										
DW-4	7000081.4	3571557.4	30^0 25' 19"	90^0 24' 39"	2	38	14.21	13	-14.5 to -24.5	27.5 to 37.5
MW-A	701114.99	3571481.7	30^0 25' 29"	90^0 24' 40"	2	27.0	15.12	12.35	-4.2 to -14.2	16.5 to 26.5
MW-3	700801.96	3571573.60	30^0 25' 26"	90^0 24' 39"	2	27.5	14.8	12.83	-4.2 to 14.2	17.0 to 27.0
MW-4	701248.27	357817.05	30^0 25' 30"	90^0 24' 36"	2	24.0	17.38	14.67	1.2 to -8.8	13.5 to 23.5
MW-5*	701508.89	3571524.3	30^0 25' 33"	90^0 24' 40"	2	20.0	11.43	8.89	-5.6 to -10.6	14.5 to 19.5
BA-01	700965.85	3571654	30^0 25' 27"	90^0 24' 38"	2	26.0	14.57	11.48	-4.02 to -14.02	15.5 to 25.5
BA-05	701084.30	3571574.7	30^0 25' 29"	90^0 24' 39"	2	18.5	14.20	11.02	3.02 to -6.98	8.0 to 18.0
BA-09A	701290.47	3571515.1	30^0 25' 31"	90^0 24' 40"	2	42.0	11.10	7.92	-23.58 to -33.58	31.5 to 41.5
BC-01*	699516.45	3571517.6	30^0 25' 13"	90^0 24' 40"	2	26.5	15.99	13.35	-2.65 to -12.65	16.0 to 26.0
BC-03	699684.61	3571900.1	30^0 25' 15"	90^0 24' 36"	2	28.0	16.32	13.78	-3.72 to -13.72	17.5 to 27.5
BC-07	699855.32	3571454.1	30^0 25' 16"	90^0 24' 41"	2	18.5	11.37	8.19	0.19 to -9.81	8.0 to 18.0
BC-11*	699967.64	3571524.00	30^0 25' 18"	90^0 24' 40"	2	28.5	15.72	12.53	-5.47 to -15.47	18.0 to 28.0
BC-17	700232.77	3571685.2	30^0 25' 20"	90^0 24' 38"	2	28.0	15.18	12.22	-5.28 to -15.28	17.5 to 27.5

Notes: 1) ft bgs = Feet below ground surface
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TABLE 1
MONITORING WELL DATA

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Well ID	Northing	Easting	Latitude	Longitude	Well Diameter (inches)	Total Well Depth (ft bgs)	Top of Casing Elevation (NGVD)	Ground Surface Elevation (NGVD)	Screened Interval Elevation (NGVD)	Screened Interval (ft bgs)
Second Water-Bearing Zone										
BC-19	700257.08	3571479.8	30^0 25' 20"	90^0 24' 40"	2	22.5	13.85	10.92	-1.08 to -11.08	12.0 to 22.0
BC-21R	700499.25	3571655.5	30^0 25' 23"	90^0 24' 38"	2	17.5	15.28	12.62	0.62 to -4.38	12.0 to 17.0
BC-25	700599.29	3571504.10	30^0 25' 24"	90^0 24' 40"	2	32.0	15.73	12.66	-8.84 to -18.84	21.5 to 31.5
BC-27*	700721.57	3571738.1	30^0 25' 25"	90^0 24' 37"	2	28.0	15.91	13.04	-4.46 to -14.46	17.5 to 27.5
Third-Water-Bearing Zone										
BA-03A	701004.96	3571249.7	30^0 25' 43"	90^0 24' 43"	2	100.0	14.76	11.72	-77.78 to -87.78	89.5 to 99.5
BA-05A	701085.48	3571565.3	30^0 25' 29"	90^0 24' 39"	2	54.0	14.42	11.16	-24.84 to -28.34	36.0 to 39.5
BB-01	699827.30	3571572.4	30^0 25' 16"	90^0 24' 39"	2	96.0	15.75	12.69	-72.81 to -82.81	85.5 to 95.5
BA-01A	700957.45	3571661.4	30^0 25' 27"	90^0 24' 38"	2	46.0	15.03	11.61	-23.89 to -33.89	35.5 to 45.5

Notes: 1) ft bgs = Feet below ground surface
2) ID = Identification
3) NA= Not available
4) NGVD = National Geodetic Vertical Datum
5) * = Well Plugged and Abandoned by the EPA

TABLE 2
WATER WELL DATA

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Well ID	Address	Depth (feet)	Date Installed
WW-04[1]	39229 Keaghey Road Ponchatoula, LA 70454	Unknown	Unknown
WW-09[1]	39233 Keaghey Road Ponchatoula. LA70454	60	10/94
North Well[1]	19119 Weinberger Road Ponchatoula. LA 70454	Unknown	Unknown
South Well[1]	19113 Weinberger Road Ponchatoula, LA 70454	Unknown	Unknown
(b) (6) Well[2]	Keaghey Road Ponchatoula. LA70454	Unknown	Unknown

Notes:
[1] Designations for water wells were obtained from the Delatte Metals Remedial Investigation Report (Tetra Tech 2000).
[2] Designation was assigned based on current owners name.

TABLE 3
SAMPLING AND REPORTING SCHEDULE

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Sample ID	Sample Collection Frequency	Reporting Frequency	Analyses Required
First Water-Bearing Zone Monitoring Wells			
DW-1	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
DW-2	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
DW-3	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
MW-1	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
MW-2	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
MW-6	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
PW-4	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BA-03	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BA-09	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
GSGP-3	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
GSGP-6	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
GSGP-15	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
GSGP-18	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
GSGP-19	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
GSGP-22	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-01	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-02	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-03	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-04	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-05	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
NWGS-06	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides
TEPA-P7D	Semi-Annual	Semi-Annual	Total and Dissolved Metals*, Sulfates, Sulfides

Notes: 1) * All monitoring wells will be sampled for total metals. Monitoring wells will be sampled for dissolved metals as needed based upon turbidity readings in the field. All surface water samples will be sampled for both total and dissolved metals.

2) ** Monitoring wells in the 3rd WBZ will be sampled annually and the results will be included in the semi-annual report.

TABLE 3
SAMPLING AND REPORTING SCHEDULE

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Sample ID	Sample Collection Frequency	Reporting Frequency	Analyses Required
Second Water-Bearing Zone Monitoring Wells			
DW-4	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
MW-A	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
MW-3	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
MW-4	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BA-01	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BA-05	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BA-09A	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BC-03	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BC-17	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BC-19	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BC-21R	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
BC-25	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
Third-Water-Bearing Zone Monitoring Wells			
BA-03A	Annual	Semi-Annual**	Total and Dissolved Metals*
BA-05A	Annual	Semi-Annual**	Total and Dissolved Metals*
BB-01	Annual	Semi-Annual**	Total and Dissolved Metals*
BA-01A	Annual	Semi-Annual**	Total and Dissolved Metals*
Water Supply Wells			
WW-04	Quarterly	Quarterly	Total Metals
WW-09	Quarterly	Quarterly	Total Metals
North Well	Quarterly	Quarterly	Total Metals
South Well	Quarterly	Quarterly	Total Metals
(b) (6) Well	Quarterly	Quarterly	Total Metals
Surface Water			
CA-41	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
CA-51	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
CL-05	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
CL-19	Semi-Annual	Semi-Annual	Total and Dissolved Metals*
Bridge	Semi-Annual	Semi-Annual	Total and Dissolved Metals*

Notes: 1) * All monitoring wells will be sampled for total metals. Monitoring wells will be sampled for dissolved metals as needed based upon turbidity readings in the field. All surface water samples will be sampled for both total and dissolved metals.

2) ** Monitoring wells in the 3rd WBZ will be sampled annually and the results will be included in the semi-annual report.

TABLE 4
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
Past 2 Years Sampling Events (As Available)

Monitoring/ Sample Well No. & Date	Groundwater Elevation			Groundwater Quality Data					
	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
FIRST WATER-BEARING ZONE									
DW-01									
May-15	13.36	10.19	3.17	20.06	0.786	0.18	5.81	138	2.5
October-15	13.36	11.52	1.84	23.92	0.982	0.25	5.68	-40	9.9
May-16	13.36	10.32	3.04	20.81	0.738	0.28	5.54	-41	45.7
November-16	13.36	10.22	3.14	23.61	0.669	1.89	5.69	-295	19.8
DW-02									
May-15	14.12	4.48	9.64	23.02	5.49	0.24	2.93	212	0.5
October-15	14.12	6.81	7.31	26.80	5.50	0.79	2.85	113	2.0
May-16	14.12	4.78	9.34	23.89	3.89	0.23	2.35	-22	4.0
November-16	14.12	5.86	8.26	24.95	4.99	0.25	2.83	-167	3.5
DW-03									
May-15	11.59	5.88	5.71	19.70	3.91	0.14	3.38	13-	1.0
October-15	11.59	7.48	4.11	23.15	3.08	0.85	3.37	24	20.9
May-16	11.59	6.05	5.54	20.86	5.36	0.81	3.22	-35	7.7
November-16	11.59	5.98	5.61	23.55	0.773	0.19	3.10	-237	5.4
MW-01									
May-15	15.08	13.27	1.81	20.30	4.45	0.24	3.43	124	1.9
October-15	15.08	13.18	1.90	21.47	5.49	0.56	3.36	98	3.8
May-16	15.08	13.00	2.08	20.38	4.65	0.22	2.90	-82	2.3
November-16	15.08	12.44	2.64	21.71	5.24	0.18	3.15	-211	4.2
MW-02									
May-15	14.23	6.96	7.27	21.28	0.873	0.12	3.32	418	8.1
October-15	14.23	8.97	5.26	26.57	0.758	0.23	3.19	398	1.4
May-16	14.23	7.20	7.03	22.21	0.953	0.30	2.87	209	5.2
November-16	14.23	7.65	6.58	24.14	0.713	0.46	2.88	187	5.4
MW-06									
May-15	16.77	8.00	8.77	18.43	0.396	2.50	3.75	398	5.0
October-15	16.77	10.67	6.10	21.54	0.425	0.28	3.63	429	8.1
May-16	16.77	8.15	8.62	19.31	0.120	1.52	3.57	296	12.3
November-16	16.77	9.32	7.45	21.60	0.175	0.24	3.66	102	9.7
PW-04									
May-15	12.22	4.93	7.29	19.66	1.095	0.13	3.94	121	2.7
October-15	12.22	7.52	4.70	22.20	0.870	0.28	3.92	242	2.6
May-16	12.22	5.37	6.85	19.99	0.571	0.44	3.15	222	6.5
November-16	12.22	5.88	6.34	22.28	1.006	0.17	3.98	-125	7.7
BA-03									
May-15	14.57	6.46	8.11	22.96	0.513	3.16	4.39	352	4.2
October-15	14.57	8.73	5.84	26.45	1.85	0.22	3.15	456	2.8
May-16	14.57	6.72	7.85	25.28	1.001	1.65	3.35	159	5.8
November-16	14.57	7.49	7.08	24.80	0.979	0.69	3.32	166	7.0
BA-09									
May-15	9.46	7.99	1.47	19.42	3.98	0.12	3.53	1	1.8
October-15	9.46	8.78	0.68	22.24	3.61	0.26	3.67	45	2.3
May-16	9.46	7.76	1.70	20.05	3.63	0.20	3.04	-118	9.1
November-16	9.46	7.41	2.05	22.05	3.53	0.13	3.29	-209	4.9
GSGP-03									
May-15	7.94	5.10	2.84	20.12	0.240	0.14	5.71	-37	16.9
October-15	7.94	6.42	1.52	24.13	0.235	0.86	5.75	-137	8.8
May-16	7.94	6.24	1.70	20.10	0.247	0.42	5.50	-41	8.7
November-16	7.94	5.02	2.92	23.74	0.241	0.15	5.94	-122	7.2

TABLE 4
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
Past 2 Years Sampling Events (As Available)

Monitoring/ Sample Well No. & Date	Groundwater Elevation			Groundwater Quality Data					
	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
FIRST WATER-BEARING ZONE (continued)									
GSGP-06									
May-15	11.73	8.57	3.16	19.03	2.51	0.29	3.55	-34	9.0
October-15	11.73	9.07	2.66	21.61	2.62	0.46	3.46	11	2.6
May-16	11.73	4.38	7.35	19.24	3.71	0.30	2.91	-130	9.8
November-16	11.73	7.84	3.89	22.34	4.08	0.29	3.61	-193	5.8
GSGP-15									
May-15	13.48	8.06	5.42	21.34	0.328	1.39	3.55	426	4.9
October-15	13.48	9.95	3.53	24.10	0.326	0.54	3.43	237	4.1
May-16	13.48	8.39	5.09	21.19	0.189	3.71	3.14	232	9.1
November-16	13.48	8.41	5.07	24.28	0.247	0.97	3.65	165	5.6
GSGP-18									
May-15	15.28	9.82	5.46	18.93	0.594	1.17	3.34	468	3.7
October-15	15.28	12.46	2.82	21.51	1.116	4.98	3.29	392	9.8
May-16	15.28	10.01	5.27	19.52	0.789	0.66	2.66	311	5.8
November-16	15.28	11.08	4.20	21.94	1.09	0.79	3.03	297	6.1
GSGP-19									
May-15	13.46	7.88	5.58	18.32	1.51	0.16	3.63	290	6.4
October-15	13.46	9.80	3.66	21.63	1.316	4.79	3.72	286	9.5
May-16	13.46	8.28	5.18	19.30	0.819	0.41	3.42	287	5.2
November-16	13.46	8.60	4.86	21.72	0.751	0.14	3.35	233	9.1
GSGP-22									
May-15	8.38	6.29	2.09	19.99	10.30	0.17	3.39	-62	0.4
October-15	8.38	7.62	0.76	23.45	9.10	0.18	3.39	-34	3.5
May-16	8.38	6.30	2.08	20.96	10.17	0.42	2.84	-112	1.4
November-16	8.38	6.24	2.14	23.34	9.79	0.22	3.34	-236	5.3
TEPA-P7D									
May-15	NM	9.19	NA	21.17	1.216	4.40	5.64	154	31.1
October-15	NM	9.85	NA	22.31	1.173	6.57	6.15	186	26.2
May-16	NM	9.32	NA	20.85	0.924	7.22	6.45	189	9.6
November-16	NM	8.95	NA	21.00	1.273	6.82	6.55	-3	10.1
NWGS-01									
May-15	12.94	6.17	6.77	20.37	1.34	0.09	3.31	468	3.4
October-15	12.94	8.22	4.72	24.00	1.159	0.43	3.21	459	7.0
May-16	12.94	6.36	6.58	21.01	1.179	0.11	2.76	267	5.4
November-16	12.94	6.96	5.98	22.24	1.003	0.53	3.45	192	10.0
NWGS-02									
May-15	12.76	10.80	1.96	19.34	1.024	0.17	3.47	447	9.9
October-15	12.76	11.05	1.71	23.20	1.322	0.18	3.29	385	3.7
May-16	12.76	10.93	1.83	19.32	1.025	0.15	2.85	312	3.1
November-16	12.76	10.25	2.51	22.19	1.289	0.20	3.21	172	9.7
NWGS-03									
May-15	13.36	12.11	1.25	20.67	2.00	0.09	6.26	-130	25.9
October-15	13.36	11.71	1.65	24.00	2.35	0.80	6.23	-121	9.6
May-16	13.36	12.12	1.24	20.97	2.14	0.31	6.09	-227	9.6
November-16	13.36	11.18	2.18	24.45	2.05	0.15	6.39	-360	9.2

TABLE 4
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
Past 2 Years Sampling Events (As Available)

Monitoring/ Sample Well No. & Date	Groundwater Elevation			Groundwater Quality Data					
	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
FIRST WATER-BEARING ZONE (continued)									
NWGS-04									
May-15	11.91	9.32	2.59	21.25	2.91	0.13	6.12	-110	8.8
October-15	11.91	10.00	1.91	25.48	2.89	0.36	6.10	-96	8.6
May-16	11.91	9.10	2.81	21.63	2.69	0.13	6.08	-215	8.9
November-16	11.91	8.83	3.08	24.17	2.99	0.17	6.43	-362	10.1
NWGS-05									
May-15	11.06	8.16	2.90	21.68	0.146	5.21	3.90	405	131
October-15	11.06	11.72	-0.66	24.09	0.148	3.60	3.77	132	120
May-16	11.06	8.40	2.66	20.89	0.107	4.79	3.40	-23	9.8
November-16	11.06	9.61	1.45	23.93	0.105	4.73	3.89	138	7.0
NWGS-06									
May-15	11.73	10.31	1.42	18.78	0.788	0.59	3.54	383	9.8
October-15	11.73	10.25	1.48	21.54	0.979	0.33	3.37	372	8.8
May-16	11.73	10.00	1.73	19.07	0.987	0.91	2.94	336	8.1
November-16	11.73	9.22	2.51	21.66	0.707	0.42	3.29	198	6.0
SECOND WATER-BEARING ZONE									
DW-04									
May-15	14.21	4.36	9.85	20.52	1.276	0.47	7.08	49	1.2
October-15	14.21	6.70	7.51	21.61	1.074	0.17	7.07	-31	1.4
May-16	14.21	4.30	9.91	20.73	1.169	1.45	7.25	-21	2.2
November-16	14.21	6.01	8.20	21.68	1.001	0.17	7.31	9	4.0
MW-A									
May-15	15.12	9.55	5.57	21.21	0.846	0.24	7.11	-60	2.5
October-15	15.12	11.36	3.76	23.22	0.839	0.24	6.97	-11	2.9
May-16	15.12	9.56	5.56	22.15	0.830	0.24	6.93	-185	4.5
November-16	15.12	10.47	4.65	23.01	0.821	0.40	6.87	-238	5.6
MW-03									
May-15	14.80	5.94	8.86	19.65	2.09	0.17	6.56	102	3.3
October-15	14.80	9.97	4.83	21.06	2.04	0.22	6.49	-131	2.6
May-16	14.80	6.02	8.78	20.13	2.09	0.56	6.45	-116	6.1
November-16	14.80	9.02	5.78	21.73	2.09	0.45	6.30	-281	6.0
MW-04									
May-15	17.38	13.21	4.17	19.61	0.409	2.55	6.59	69	13.9
October-15	17.38	16.00	1.38	21.52	0.384	1.78	6.60	23	6.9
May-16	17.38	13.48	3.90	19.99	0.960	2.00	6.08	-70	8.8
November-16	17.38	14.20	3.18	21.29	0.415	1.24	6.31	-254	15.0
BA-01									
May-15	14.57	6.08	8.49	21.31	2.93	0.14	5.17	99	21.2
October-15	14.57	9.24	5.33	23.48	2.46	0.24	5.53	56	17.7
May-16	14.57	6.11	8.46	22.42	3.13	0.17	4.51	94	48.6
November-16	14.57	8.49	6.08	24.00	2.49	0.15	5.44	-163	28.1
BA-05									
May-15	14.20	7.29	6.91	20.75	5.62	0.27	6.12	-21	9.9
October-15	14.20	9.27	4.93	24.67	5.51	0.38	6.06	-9	2.9
May-16	14.20	7.25	6.95	21.83	5.99	0.42	5.92	-160	28.1
November-16	14.20	8.57	5.63	24.08	5.28	6.10	6.10	-180	7.6
BA-09A									
May-15	11.10	0.88	10.22	20.14	0.280	0.11	6.99	-86	1.8
October-15	11.10	1.51	9.59	20.84	0.254	0.21	6.99	-59	1.9
May-16	11.10	0.45	10.65	20.49	0.261	0.28	6.90	-179	2.3
November-16	11.10	0.50	10.60	20.59	0.253	0.15	6.95	-279	4.6

TABLE 4
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
Past 2 Years Sampling Events (As Available)

Monitoring/ Sample Well No. & Date	Groundwater Elevation			Groundwater Quality Data					
	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
SECOND WATER-BEARING ZONE (continued)									
BC-03									
May-15	16.32	4.81	11.51	21.58	3.41	0.21	7.02	21	1.4
October-15	16.32	8.33	7.99	23.51	3.52	0.20	7.00	-125	1.0
May-16	16.32	7.49	8.83	22.05	3.60	0.19	6.99	-52	1.9
November-16	16.32	7.45	8.87	23.34	3.58	0.24	7.06	7	4.3
BC-07									
May-15	11.37	3.16	8.21	19.38	2.60	1.09	7.02	270	1.1
October-15	11.37	7.01	4.36	22.43	2.49	0.88	7.02	81	1.1
May-16	11.37	3.30	8.07	20.20	2.51	2.69	7.20	-21	2.0
November-16	11.37	5.71	5.66	22.52	2.51	3.36	7.16	26	5.9
BC-17									
May-15	15.18	5.02	10.16	21.79	2.72	0.18	6.65	140	2.6
October-15	15.18	8.64	6.54	24.16	2.63	0.92	6.63	-7	1.4
May-16	15.18	5.28	9.90	22.18	2.72	0.18	6.57	110	2.5
November-16	15.18	8.02	7.16	24.15	2.61	0.14	6.37	-179	4.4
BC-19									
May-15	13.85	4.65	9.20	19.81	2.98	0.19	6.82	120	1.0
October-15	13.85	7.84	6.01	21.83	2.98	0.32	6.81	-7	1.1
May-16	13.85	4.83	9.02	20.25	3.01	0.16	6.76	11	3.1
November-16	13.85	7.23	6.62	21.87	3.03	0.22	7.05	-67	4.9
BC-21R									
May-15	15.28	5.68	9.60	20.52	1.133	0.14	6.86	21	3.0
October-15	15.28	10.29	4.99	23.14	1.394	0.42	6.71	-115	2.0
May-16	15.28	6.27	9.01	21.23	1.072	0.21	6.74	-54	3.2
November-16	15.28	9.01	6.27	22.62	1.410	2.11	7.05	-305	4.2
BC-25									
May-15	15.73	6.56	9.17	19.87	0.849	0.15	6.81	105	1.3
October-15	15.73	10.83	4.90	20.32	0.780	0.33	6.71	68	2.4
May-16	15.73	6.71	9.02	20.23	0.809	0.14	6.83	-24	1.4
November-16	15.73	9.72	6.01	20.94	0.787	0.13	6.73	-27	4.8
THIRD WATER-BEARING ZONE									
BA-03A									
October-15	14.76	2.34	12.42	24.05	0.311	0.66	7.87	173	2.0
November-16	14.76	1.14	13.62	22.33	0.302	0.79	8.55	42	5.2
BA-05A									
October-15	14.42	3.79	10.63	23.27	0.271	0.22	7.25	-41	2.1
November-16	14.42	2.70	11.72	21.94	0.261	0.10	6.86	-162	5.8
BB-01									
October-15	15.75	3.41	12.34	23.00	0.297	0.19	9.71	-191	3.7
November-16	15.75	2.20	13.55	22.23	0.304	0.13	9.81	-317	8.4
BA-01A									
October-15	15.03	5.11	9.92	23.54	0.267	0.20	7.21	-83	1.9
November-16	15.03	4.00	11.03	23.31	0.262	0.12	7.19	-372	5.9

TABLE 4
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
Past 2 Years Sampling Events (As Available)

Monitoring/ Sample Well No. & Date	Groundwater Elevation			Groundwater Quality Data					
	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
WATER WELLS									
(b) (6) **Well**									
January-15	NA	NA	NA	20.35	0.331	2.34	8.13	224	3.2
May-15	NA	NA	NA	21.45	0.291	5.91	8.27	-96	0.9
August-15	NA	NA	NA	23.08	0.306	2.39	8.24	-212	1.2
October-15	NA	NA	NA	20.82	0.284	3.54	8.27	-103	2.5
February-16	NA	NA	NA	22.34	0.295	3.26	8.24	-239	3.3
May-16	NA	NA	NA	21.48	0.288	4.49	8.51	-238	3.2
August-16	NA	NA	NA	24.25	0.247	2.52	8.77	-95	2.3
November-16	NA	NA	NA	19.82	0.304	1.42	8.65	-276	6.6
WW-04									
January-15	NA	NA	NA	19.28	0.301	2.78	8.67	164	5.1
May-15	NA	NA	NA	21.26	0.294	3.28	8.35	-166	2.5
August-15	NA	NA	NA	21.81	0.338	3.12	8.50	-183	1.9
October-15	NA	NA	NA	20.59	0.290	2.27	8.91	-223	0.9
February-16	NA	NA	NA	21.16	0.301	2.73	8.89	-311	3.5
May-16	NA	NA	NA	21.67	0.297	4.06	9.06	-275	6.9
August-16	NA	NA	NA	24.68	0.245	5.15	9.08	80	6.2
November-16	NA	NA	NA	19.84	0.292	1.77	9.11	-353	5.0
WW-09									
January-15	NA	NA	NA	17.48	0.298	6.50	8.61	196	4.3
May-15	NA	NA	NA	21.40	0.309	6.48	8.41	-63	2.6
August-15	NA	NA	NA	23.15	0.306	6.56	8.48	-216	0.6
October-15	NA	NA	NA	20.99	0.284	5.28	8.31	-58	1.5
February-16	NA	NA	NA	19.42	0.296	3.76	8.51	-244	6.2
May-16	NA	NA	NA	20.89	0.299	3.19	8.06	-258	1.5
August-16	NA	NA	NA	25.59	0.280	1.75	8.93	-288	1.8
November-16	NA	NA	NA	19.53	0.287	11.90	8.67	-351	5.9
North Well									
January-15	NA	NA	NA	21.63	0.296	1.99	8.86	181	3.8
May-15	NA	NA	NA	22.75	0.307	1.77	8.91	-99	1.4
August-15	NA	NA	NA	24.42	0.304	2.97	8.80	-246	1.4
October-15	NA	NA	NA	22.72	0.286	4.16	8.88	-225	2.0
February-16	NA	NA	NA	22.17	0.301	4.11	8.31	-174	4.3
May-16	NA	NA	NA	23.02	0.291	0.90	9.06	-266	2.3
August-16	NA	NA	NA	23.96	0.278	1.53	9.05	-305	2.2
November-16	NA	NA	NA	21.80	0.294	5.21	8.70	-319	6.8
South Well									
January-15	NA	NA	NA	19.08	0.300	1.70	9.08	183	3.3
May-15	NA	NA	NA	22.03	0.309	4.34	8.86	-79	2.7
August-15	NA	NA	NA	22.83	0.305	3.80	8.87	-210	1.0
October-15	NA	NA	NA	21.27	0.288	7.72	8.93	-205	1.9
February-16	NA	NA	NA	21.66	0.300	2.79	8.82	-138	6.9
May-16	NA	NA	NA	22.57	0.297	1.30	8.84	-132	3.6
August-16	NA	NA	NA	23.25	0.458	1.71	8.14	-170	3.0
November-16	NA	NA	NA	20.89	0.288	8.65	8.62	-159	9.7

Abbrev.: NA = Not Appliciable mg/L = milligrams per Liter NF = Not Found
NM = Not Measured NS = Not Sampled

TABLE 5
SURFACE WATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

Monitoring/Sampling Period: Past 2 Years Sampling Events (as available)

Monitoring/ Sample Well No. & Date	Surface Water Quality Data					
	Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH (Standard Units)	ORP (mV)	Turbidity (NTU)
CA-41						
May-15	25.86	0.283	4.84	7.07	82	24.8
October-15	22.40	0.366	5.67	7.37	83	25.1
May-16	22.80	0.264	7.61	6.94	17	25.3
November-16	20.24	0.071	8.01	6.67	115	123
CA-51						
May-15	25.25	0.283	4.85	7.11	4	1477
October-15	20.82	0.358	5.15	7.28	43	23.0
May-16	23.00	0.306	6.45	6.59	-13	31.5
November-16	20.27	0.056	5.92	6.32	124	124
CL-05						
May-15	NS	NS	NS	NS	NS	NS
October-15	NS	NS	NS	NS	NS	NS
May-16	NS	NS	NS	NS	NS	NS
November-16	20.27	0.080	1.94	5.93	141	10.4
CL-19						
May-15	27.03	0.271	6.91	7.93	-21	15.4
October-15	21.89	0.297	7.38	7.81	66	15.9
May-16	24.95	0.294	4.64	9.02	-212	57.3
November-16	21.05	0.113	8.13	6.57	109	20.1
Bridge						
May-15	25.54	0.296	5.97	7.30	84	19.9
October-15	20.01	0.019	6.06	7.47	94	18.8
May-16	25.55	0.256	7.67	7.26	64	24.4
November-16	20.72	0.134	4.58	6.80	109	129

NS = Not Sampled - monitoring point was dry

TABLE 6
CURRENT PERIOD ANALYTICAL SUMMARY
SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
1	Total Arsenic/7440-38-2	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.01	0.001	0.0021		No
2	Total Cadmium/7440-43-9	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.005	0.001	<0.0010		No
3	Total Lead/7439-92-1	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.015	0.001	<0.0010		No
4	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-01**	**Groundwater**	**2045754019**	**11/10/2016**	**0.51**	**0.001**	**1.25**		**Yes**
5	Total Nickel/7440-02-0	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.073	0.001	0.0298		No
6	Total Zinc/7440-66-6	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	1.1	0.005	0.0399		No
7	Dissolved Arsenic/7440-38-2	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.01	0.001	0.0017		No
8	Dissolved Cadmium/7440-43-9	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.005	0.001	<0.0010		No
9	Dissolved Lead/7439-92-1	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.015	0.001	<0.0010		No
10	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**BA-01**	**Groundwater**	**2045754019**	**11/10/2016**	**0.51**	**0.001**	**1.23**		**Yes**
11	Dissolved Nickel/7440-02-0	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	0.073	0.001	0.029		No
12	Dissolved Zinc/7440-66-6	EPA 6020	BA-01	Groundwater	2045754019	11/10/2016	1.1	0.005	0.0407		No
13	Total Arsenic/7440-38-2	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	0.01	0.001	0.0082		No
14	Total Cadmium/7440-43-9	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	0.005	0.001	<0.0010		No
15	Total Lead/7439-92-1	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	0.015	0.001	<0.0010		No
16	Total Manganese/7439-96-5	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	0.51	0.001	0.0233		No
17	Total Nickel/7440-02-0	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	0.073	0.001	<0.0010		No
18	Total Zinc/7440-66-6	EPA 6020	BA-01A	Groundwater	2045754049	11/10/2016	1.1	0.005	<0.0050		No
19	Total Arsenic/7440-38-2	EPA 6020	BA-03	Groundwater	2045754030	11/11/2016	0.01	0.001	0.0018		No
20	**Total Cadmium/7440-43-9**	**EPA 6020**	**BA-03**	**Groundwater**	**2045754030**	**11/11/2016**	**0.005**	**0.001**	**0.126**		**Yes**
21	**Total Lead/7439-92-1**	**EPA 6020**	**BA-03**	**Groundwater**	**2045754030**	**11/11/2016**	**0.015**	**0.001**	**0.0859**		**Yes**
22	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-03**	**Groundwater**	**2045754030**	**11/11/2016**	**0.51**	**0.001**	**2.95**		**Yes**
23	Total Nickel/7440-02-0	EPA 6020	BA-03	Groundwater	2045754030	11/11/2016	0.073	0.001	0.0626		No
24	Total Zinc/7440-66-6	EPA 6020	BA-03	Groundwater	2045754030	11/11/2016	1.1	0.005	0.244		No
25	Total Arsenic/7440-38-2	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	0.01	0.001	0.0012		No
26	Total Cadmium/7440-43-9	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	0.005	0.001	<0.0010		No
27	Total Lead/7439-92-1	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	0.015	0.001	<0.0010		No
28	Total Manganese/7439-96-5	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	0.51	0.001	0.0031		No
29	Total Nickel/7440-02-0	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	0.073	0.001	<0.0010		No
30	Total Zinc/7440-66-6	EPA 6020	BA-03A	Groundwater	2045754048	11/11/2016	1.1	0.005	<0.0050		No
31	Total Arsenic/7440-38-2	EPA 6020	BA-05	Groundwater	2045754025	11/14/2016	0.01	0.001	0.002		No
32	Total Cadmium/7440-43-9	EPA 6020	BA-05	Groundwater	2045754025	11/14/2016	0.005	0.001	<0.0010		No
33	Total Lead/7439-92-1	EPA 6020	BA-05	Groundwater	2045754025	11/14/2016	0.015	0.001	<0.0010		No
34	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-05**	**Groundwater**	**2045754025**	**11/14/2016**	**0.51**	**0.001**	**10.6**		**Yes**
35	Total Nickel/7440-02-0	EPA 6020	BA-05	Groundwater	2045754025	11/14/2016	0.073	0.001	0.0321		No
36	Total Zinc/7440-66-6	EPA 6020	BA-05	Groundwater	2045754025	11/14/2016	1.1	0.005	<0.0050		No
37	Total Arsenic/7440-38-2	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	0.01	0.001	0.002		No
38	Total Cadmium/7440-43-9	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	0.005	0.001	<0.0010		No
39	Total Lead/7439-92-1	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	0.015	0.001	<0.0010		No
40	Total Manganese/7439-96-5	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	0.51	0.001	0.0646		No
41	Total Nickel/7440-02-0	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	0.073	0.001	<0.0010		No

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SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
42	Total Zinc/7440-66-6	EPA 6020	BA-05A	Groundwater	2045754047	11/14/2016	1.1	0.005	<0.0050		No
43	Total Arsenic/7440-38-2	EPA 6020	BA-09	Groundwater	2045754038	11/10/2016	0.01	0.001	0.0069		No
44	Total Cadmium/7440-43-9	EPA 6020	BA-09	Groundwater	2045754038	11/10/2016	0.005	0.001	<0.0010		No
45	Total Lead/7439-92-1	EPA 6020	BA-09	Groundwater	2045754038	11/10/2016	0.015	0.001	<0.0010		No
46	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-09**	**Groundwater**	**2045754038**	**11/10/2016**	**0.51**	**0.001**	**3.91**		**Yes**
47	**Total Nickel/7440-02-0**	**EPA 6020**	**BA-09**	**Groundwater**	**2045754038**	**11/10/2016**	**0.073**	**0.001**	**0.105**		**Yes**
48	Total Zinc/7440-66-6	EPA 6020	BA-09	Groundwater	2045754038	11/10/2016	1.1	0.005	0.102		No
49	Sulfide/18496-25-8	EPA 9034	BA-09	Groundwater	2045754038	11/10/2016	NA	1	<1.0		No
50	**Sulfate/18785-72-3**	**EPA 9056**	**BA-09**	**Groundwater**	**2045754038**	**11/10/2016**	**250**	**500**	**4880**		**Yes**
51	Total Arsenic/7440-38-2	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	0.01	0.001	0.0024		No
52	Total Cadmium/7440-43-9	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	0.005	0.001	<0.0010		No
53	Total Lead/7439-92-1	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	0.015	0.001	<0.0010		No
54	Total Manganese/7439-96-5	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	0.51	0.001	0.0385		No
55	Total Nickel/7440-02-0	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	0.073	0.001	<0.0010		No
56	Total Zinc/7440-66-6	EPA 6020	BA-09A	Groundwater	2045754039	11/10/2016	1.1	0.005	<0.0050		No
57	Total Arsenic/7440-38-2	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	0.01	0.001	0.0048		No
58	Total Cadmium/7440-43-9	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	0.005	0.001	<0.0010		No
59	Total Lead/7439-92-1	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	0.015	0.001	0.0051		No
60	Total Manganese/7439-96-5	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	0.51	0.001	0.0045		No
61	Total Nickel/7440-02-0	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	0.073	0.001	<0.0010		No
62	Total Zinc/7440-66-6	EPA 6020	BB-01	Groundwater	2045754046	11/9/2016	1.1	0.005	<0.0050		No
63	Total Arsenic/7440-38-2	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	0.01	0.001	0.0012		No
64	Total Cadmium/7440-43-9	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	0.005	0.001	<0.0010		No
65	Total Lead/7439-92-1	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	0.015	0.001	<0.0010		No
66	Total Manganese/7439-96-5	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	0.51	0.001	0.1		No
67	Total Nickel/7440-02-0	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	0.073	0.001	<0.0010		No
68	Total Zinc/7440-66-6	EPA 6020	BC-07	Groundwater	2045754045	11/9/2016	1.1	0.005	<0.0050		No
69	Total Arsenic/7440-38-2	EPA 6020	BC-17	Groundwater	2045754016	11/10/2016	0.01	0.001	0.0016		No
70	Total Cadmium/7440-43-9	EPA 6020	BC-17	Groundwater	2045754016	11/10/2016	0.005	0.001	<0.0010		No
71	**Total Lead/7439-92-1**	**EPA 6020**	**BC-17**	**Groundwater**	**2045754016**	**11/10/2016**	**0.015**	**0.001**	**0.0218**		**Yes**
72	Total Manganese/7439-96-5	EPA 6020	BC-17	Groundwater	2045754016	11/10/2016	0.51	0.001	0.095		No
73	Total Nickel/7440-02-0	EPA 6020	BC-17	Groundwater	2045754016	11/10/2016	0.073	0.001	<0.0010		No
74	Total Zinc/7440-66-6	EPA 6020	BC-17	Groundwater	2045754016	11/10/2016	1.1	0.005	<0.0050		No
75	Total Arsenic/7440-38-2	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	0.01	0.001	<0.0010		No
76	Total Cadmium/7440-43-9	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	0.005	0.001	<0.0010		No
77	Total Lead/7439-92-1	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	0.015	0.001	<0.0010		No
78	Total Manganese/7439-96-5	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	0.51	0.001	0.0268		No
79	Total Nickel/7440-02-0	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	0.073	0.001	<0.0010		No
80	Total Zinc/7440-66-6	EPA 6020	BC-19	Groundwater	2045754044	11/11/2016	1.1	0.005	<0.0050		No
81	Total Arsenic/7440-38-2	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	0.01	0.001	<0.0010		No
82	Total Cadmium/7440-43-9	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	0.005	0.001	<0.0010		No

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Delatte Metals Superfund Site
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Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
83	Total Lead/7439-92-1	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	0.015	0.001	<0.0010		No
84	Total Manganese/7439-96-5	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	0.51	0.001	0.114		No
85	Total Nickel/7440-02-0	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	0.073	0.001	0.0013		No
86	Total Zinc/7440-66-6	EPA 6020	BC-21R	Groundwater	2045754018	11/10/2016	1.1	0.005	<0.0050		No
87	Total Arsenic/7440-38-2	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	0.01	0.001	<0.0010		No
88	Total Cadmium/7440-43-9	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	0.005	0.001	<0.0010		No
89	Total Lead/7439-92-1	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	0.015	0.001	<0.0010		No
90	Total Manganese/7439-96-5	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	0.51	0.001	0.176		No
91	Total Nickel/7440-02-0	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	0.073	0.001	<0.0010		No
92	Total Zinc/7440-66-6	EPA 6020	BC-25	Groundwater	2045754051	11/18/2016	1.1	0.005	<0.0050		No
93	Total Arsenic/7440-38-2	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	0.01	0.001	<0.0010		No
94	Total Cadmium/7440-43-9	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	0.005	0.001	<0.0010		No
95	Total Lead/7439-92-1	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	0.015	0.001	<0.0010		No
96	Total Manganese/7439-96-5	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	0.51	0.001	0.0647		No
97	Total Nickel/7440-02-0	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	0.073	0.001	0.0015		No
98	Total Zinc/7440-66-6	EPA 6020	BC-3	Groundwater	2045754009	11/9/2016	1.1	0.005	<0.0050		No
99	Total Arsenic/7440-38-2	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.01	0.001	0.0022		No
100	Total Cadmium/7440-43-9	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.005	0.001	<0.0010		No
101	Total Lead/7439-92-1	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.015	0.001	0.0029		No
102	Total Manganese/7439-96-5	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.51	0.001	0.185		No
103	Total Nickel/7440-02-0	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.073	0.001	0.0025		No
104	Total Zinc/7440-66-6	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	1.1	0.005	0.0255		No
105	Dissolved Arsenic/7440-38-2	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.01	0.001	0.0016		No
106	Dissolved Cadmium/7440-43-9	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.005	0.001	<0.0010		No
107	Dissolved Lead/7439-92-1	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.015	0.001	<0.0010		No
108	Dissolved Manganese/7439-96-5	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.51	0.001	0.133		No
109	Dissolved Nickel/7440-02-0	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	0.073	0.001	0.0013		No
110	Dissolved Zinc/7440-66-6	EPA 6020	BRIDGE	Surface Water	2045754004	11/8/2016	1.1	0.005	0.013		No
111	Total Arsenic/7440-38-2	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.01	0.001	0.0021		No
112	Total Cadmium/7440-43-9	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.005	0.001	<0.0010		No
113	Total Lead/7439-92-1	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.015	0.001	0.0027		No
114	Total Manganese/7439-96-5	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.51	0.001	0.17		No
115	Total Nickel/7440-02-0	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.073	0.001	0.0023		No
116	Total Zinc/7440-66-6	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	1.1	0.005	0.025		No
117	Dissolved Arsenic/7440-38-2	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.01	0.001	0.0015		No
118	Dissolved Cadmium/7440-43-9	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.005	0.001	<0.0010		No
119	Dissolved Lead/7439-92-1	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.015	0.001	<0.0010		No
120	Dissolved Manganese/7439-96-5	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.51	0.001	0.128		No
121	Dissolved Nickel/7440-02-0	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	0.073	0.001	0.0011		No
122	Dissolved Zinc/7440-66-6	EPA 6020	CA-41	Surface Water	2045754001	11/8/2016	1.1	0.005	0.0132		No
123	Total Arsenic/7440-38-2	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.01	0.001	0.0022		No

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Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
124	Total Cadmium/7440-43-9	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.005	0.001	<0.0010		No
125	Total Lead/7439-92-1	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.015	0.001	0.0028		No
126	Total Manganese/7439-96-5	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.51	0.001	0.172		No
127	Total Nickel/7440-02-0	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.073	0.001	0.0024		No
128	Total Zinc/7440-66-6	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	1.1	0.005	0.0262		No
129	Dissolved Arsenic/7440-38-2	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.01	0.001	0.0015		No
130	Dissolved Cadmium/7440-43-9	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.005	0.001	<0.0010		No
131	Dissolved Lead/7439-92-1	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.015	0.001	<0.0010		No
132	Dissolved Manganese/7439-96-5	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.51	0.001	0.127		No
133	Dissolved Nickel/7440-02-0	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	0.073	0.001	0.0014		No
134	Dissolved Zinc/7440-66-6	EPA 6020	CA-51	Surface Water	2045754002	11/8/2016	1.1	0.005	0.0133		No
135	Total Arsenic/7440-38-2	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.01	0.001	<0.0010		No
136	Total Cadmium/7440-43-9	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.005	0.001	<0.0010		No
137	Total Lead/7439-92-1	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.015	0.001	0.0033		No
138	Total Manganese/7439-96-5	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.51	0.001	0.407		No
139	Total Nickel/7440-02-0	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.073	0.001	0.0021		No
140	Total Zinc/7440-66-6	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	1.1	0.005	0.0208		No
141	Dissolved Arsenic/7440-38-2	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.01	0.001	<0.0010		No
142	Dissolved Cadmium/7440-43-9	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.005	0.001	<0.0010		No
143	Dissolved Lead/7439-92-1	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.015	0.001	0.0016		No
144	Dissolved Manganese/7439-96-5	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.51	0.001	0.38		No
145	Dissolved Nickel/7440-02-0	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	0.073	0.001	0.002		No
146	Dissolved Zinc/7440-66-6	EPA 6020	CL-05	Surface Water	2045754005	11/8/2016	1.1	0.005	0.0188		No
147	Total Arsenic/7440-38-2	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.01	0.001	<0.0010		No
148	Total Cadmium/7440-43-9	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.005	0.001	<0.0010		No
149	Total Lead/7439-92-1	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.015	0.001	0.0025		No
150	Total Manganese/7439-96-5	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.51	0.001	0.26		No
151	Total Nickel/7440-02-0	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.073	0.001	0.0013		No
152	Total Zinc/7440-66-6	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	1.1	0.005	0.0133		No
153	Dissolved Arsenic/7440-38-2	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.01	0.001	<0.0010		No
154	Dissolved Cadmium/7440-43-9	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.005	0.001	<0.0010		No
155	Dissolved Lead/7439-92-1	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.015	0.001	0.0014		No
156	Dissolved Manganese/7439-96-5	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.51	0.001	0.244		No
157	Dissolved Nickel/7440-02-0	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	0.073	0.001	0.0013		No
158	Dissolved Zinc/7440-66-6	EPA 6020	CL-19	Surface Water	2045754006	11/8/2016	1.1	0.005	0.0176		No
159	Total Arsenic/7440-38-2	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	0.01	0.001	0.0022		No
160	Total Cadmium/7440-43-9	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	0.005	0.001	<0.0010		No
161	Total Lead/7439-92-1	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	0.015	0.001	0.0028		No
162	Total Manganese/7439-96-5	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	0.51	0.001	0.173		No
163	Total Nickel/7440-02-0	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	0.073	0.001	0.0025		No
164	Total Zinc/7440-66-6	EPA 6020	DUP #1	Surface Water	2045754050	11/8/2016	1.1	0.005	0.0256		No

TABLE 6
CURRENT PERIOD ANALYTICAL SUMMARY
SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
165	**Total Arsenic/7440-38-2**	**EPA 6020**	**DUP#2**	**Groundwater**	**2045754043**	**11/11/2016**	**0.01**	**0.001**	**0.0285**		**Yes**
166	Total Cadmium/7440-43-9	EPA 6020	DUP#2	Groundwater	2045754043	11/11/2016	0.005	0.001	<0.0010		No
167	Total Lead/7439-92-1	EPA 6020	DUP#2	Groundwater	2045754043	11/11/2016	0.015	0.001	<0.0010		No
168	**Total Manganese/7439-96-5**	**EPA 6020**	**DUP#2**	**Groundwater**	**2045754043**	**11/11/2016**	**0.51**	**0.001**	**1.81**		**Yes**
169	Total Nickel/7440-02-0	EPA 6020	DUP#2	Groundwater	2045754043	11/11/2016	0.073	0.001	0.002		No
170	Total Zinc/7440-66-6	EPA 6020	DUP#2	Groundwater	2045754043	11/11/2016	1.1	0.005	<0.0050		No
171	Sulfide/18496-25-8	EPA 9034	DUP#2	Groundwater	2045754043	11/11/2016	NA	1	<1.0		No
172	**Sulfate/18785-72-3**	**EPA 9056**	**DUP#2**	**Groundwater**	**2045754043**	**11/11/2016**	**250**	**50**	**523**		**Yes**
173	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**0.01**	**0.001**	**0.375**		**Yes**
174	**Total Cadmium/7440-43-9**	**EPA 6020**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**0.005**	**0.001**	**0.0323**		**Yes**
175	Total Lead/7439-92-1	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	0.015	0.001	0.0067		No
176	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**0.51**	**0.001**	**1.14**		**Yes**
177	Total Nickel/7440-02-0	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	0.073	0.001	0.0094		No
178	Total Zinc/7440-66-6	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	1.1	0.005	0.0634		No
179	**Dissolved Arsenic/7440-38-2**	**EPA 6020**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**0.01**	**0.001**	**0.149**		**Yes**
180	Dissolved Cadmium/7440-43-9	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	0.005	0.001	0.0034		No
181	Dissolved Lead/7439-92-1	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	0.015	0.001	<0.0010		No
182	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**0.51**	**0.001**	**1.17**		**Yes**
183	Dissolved Nickel/7440-02-0	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	0.073	0.001	0.0098		No
184	Dissolved Zinc/7440-66-6	EPA 6020	DW-01	Groundwater	2045754028	11/11/2016	1.1	0.005	0.0566		No
185	Sulfide/18496-25-8	EPA 9034	DW-01	Groundwater	2045754028	11/11/2016	NA	1	<1.0		No
186	**Sulfate/18785-72-3**	**EPA 9056**	**DW-01**	**Groundwater**	**2045754028**	**11/11/2016**	**250**	**20**	**298**		**Yes**
187	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-02**	**Groundwater**	**2045754026**	**11/11/2016**	**0.01**	**0.001**	**0.0132**		**Yes**
188	**Total Cadmium/7440-43-9**	**EPA 6020**	**DW-02**	**Groundwater**	**2045754026**	**11/11/2016**	**0.005**	**0.001**	**0.0183**		**Yes**
189	**Total Lead/7439-92-1**	**EPA 6020**	**DW-02**	**Groundwater**	**2045754026**	**11/11/2016**	**0.015**	**0.001**	**0.0238**		**Yes**
190	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-02**	**Groundwater**	**2045754026**	**11/11/2016**	**0.51**	**0.001**	**7.5**		**Yes**
191	**Total Nickel/7440-02-0**	**EPA 6020**	**DW-02**	**Groundwater**	**2045754026**	**11/11/2016**	**0.073**	**0.001**	**0.257**		**Yes**
192	Total Zinc/7440-66-6	EPA 6020	DW-02	Groundwater	2045754026	11/11/2016	1.1	0.005	0.513		No
193	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-03**	**Groundwater**	**2045754023**	**11/10/2016**	**0.01**	**0.001**	**0.0165**		**Yes**
194	Total Cadmium/7440-43-9	EPA 6020	DW-03	Groundwater	2045754023	11/10/2016	0.005	0.001	<0.0010		No
195	Total Lead/7439-92-1	EPA 6020	DW-03	Groundwater	2045754023	11/10/2016	0.015	0.001	0.0022		No
196	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-03**	**Groundwater**	**2045754023**	**11/10/2016**	**0.51**	**0.001**	**0.778**		**Yes**
197	Total Nickel/7440-02-0	EPA 6020	DW-03	Groundwater	2045754023	11/10/2016	0.073	0.001	0.0269		No
198	Total Zinc/7440-66-6	EPA 6020	DW-03	Groundwater	2045754023	11/10/2016	1.1	0.005	0.0315		No
199	Sulfide/18496-25-8	EPA 9034	DW-03	Groundwater	2045754023	11/10/2016	NA	1	<1.0		No
200	**Sulfate/18785-72-3**	**EPA 9056**	**DW-03**	**Groundwater**	**2045754023**	**11/10/2016**	**250**	**100**	**490**		**Yes**
201	Total Arsenic/7440-38-2	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	0.01	0.001	0.0039		No
202	Total Cadmium/7440-43-9	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	0.005	0.001	<0.0010		No
203	Total Lead/7439-92-1	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	0.015	0.001	<0.0010		No
204	Total Manganese/7439-96-5	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	0.51	0.001	0.0442		No
205	Total Nickel/7440-02-0	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	0.073	0.001	<0.0010		No

TABLE 6
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SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
206	Total Zinc/7440-66-6	EPA 6020	DW-04	Groundwater	2045754010	11/9/2016	1.1	0.005	<0.0050		No
207	Total Arsenic/7440-38-2	EPA 6020	Duplicate 3	Groundwater	2045754052	11/18/2016	0.01	0.001	0.0074		No
208	Total Cadmium/7440-43-9	EPA 6020	Duplicate 3	Groundwater	2045754052	11/18/2016	0.005	0.001	<0.0010		No
209	Total Lead/7439-92-1	EPA 6020	Duplicate 3	Groundwater	2045754052	11/18/2016	0.015	0.001	<0.0010		No
210	**Total Manganese/7439-96-5**	**EPA 6020**	**Duplicate 3**	**Groundwater**	**2045754052**	**11/18/2016**	**0.51**	**0.001**	**3.81**		**Yes**
211	**Total Nickel/7440-02-0**	**EPA 6020**	**Duplicate 3**	**Groundwater**	**2045754052**	**11/18/2016**	**0.073**	**0.001**	**0.094**		**Yes**
212	Total Zinc/7440-66-6	EPA 6020	Duplicate 3	Groundwater	2045754052	11/18/2016	1.1	0.005	0.0928		No
213	Sulfide/18496-25-8	EPA 9034	Duplicate 3	Groundwater	2045754052	11/18/2016	NA	1	<1.0		No
214	**Sulfate/18785-72-3**	**EPA 9056**	**Duplicate 3**	**Groundwater**	**2045754052**	**11/18/2016**	**250**	**500**	**6480**		**Yes**
215	Total Arsenic/7440-38-2	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	0.01	0.001	<0.0010		No
216	Total Cadmium/7440-43-9	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	0.005	0.001	<0.0010		No
217	Total Lead/7439-92-1	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	0.015	0.001	<0.0010		No
218	Total Manganese/7439-96-5	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	0.51	0.001	0.17		No
219	Total Nickel/7440-02-0	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	0.073	0.001	<0.0010		No
220	Total Zinc/7440-66-6	EPA 6020	Duplicate 4	Groundwater	2045754053	11/18/2016	1.1	0.005	<0.0050		No
221	Total Arsenic/7440-38-2	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	0.01	0.001	<0.0010		No
222	Total Cadmium/7440-43-9	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	0.005	0.001	<0.0010		No
223	Total Lead/7439-92-1	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	0.015	0.001	<0.0010		No
224	Total Manganese/7439-96-5	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	0.51	0.001	0.0041		No
225	Total Nickel/7440-02-0	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	0.073	0.001	<0.0010		No
226	Total Zinc/7440-66-6	EPA 6020	Duplicate 5	Groundwater	2045754054	11/18/2016	1.1	0.005	<0.0050		No
227	Total Arsenic/7440-38-2	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	0.01	0.001	0.0012		No
228	Total Cadmium/7440-43-9	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	0.005	0.001	0.0025		No
229	Total Lead/7439-92-1	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	0.015	0.001	0.0014		No
230	Total Manganese/7439-96-5	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	0.51	0.001	0.198		No
231	Total Nickel/7440-02-0	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	0.073	0.001	0.0091		No
232	Total Zinc/7440-66-6	EPA 6020	GSGP-15	Groundwater	2045754021	11/10/2016	1.1	0.005	0.0159		No
233	Total Arsenic/7440-38-2	EPA 6020	GSGP-03	Groundwater	2045754003	11/8/2016	0.01	0.001	0.0049		No
234	Total Cadmium/7440-43-9	EPA 6020	GSGP-03	Groundwater	2045754003	11/8/2016	0.005	0.001	<0.0010		No
235	Total Lead/7439-92-1	EPA 6020	GSGP-03	Groundwater	2045754003	11/8/2016	0.015	0.001	0.001		No
236	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-03**	**Groundwater**	**2045754003**	**11/8/2016**	**0.51**	**0.001**	**0.875**		**Yes**
237	Total Nickel/7440-02-0	EPA 6020	GSGP-03	Groundwater	2045754003	11/8/2016	0.073	0.001	0.0011		No
238	Total Zinc/7440-66-6	EPA 6020	GSGP-03	Groundwater	2045754003	11/8/2016	1.1	0.005	0.005		No
239	Total Arsenic/7440-38-2	EPA 6020	GSGP-18	Groundwater	2045754013	11/9/2016	0.01	0.001	0.0015		No
240	**Total Cadmium/7440-43-9**	**EPA 6020**	**GSGP-18**	**Groundwater**	**2045754013**	**11/9/2016**	**0.005**	**0.001**	**0.126**		**Yes**
241	Total Lead/7439-92-1	EPA 6020	GSGP-18	Groundwater	2045754013	11/9/2016	0.015	0.001	0.0024		No
242	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-18**	**Groundwater**	**2045754013**	**11/9/2016**	**0.51**	**0.001**	**1.57**		**Yes**
243	Total Nickel/7440-02-0	EPA 6020	GSGP-18	Groundwater	2045754013	11/9/2016	0.073	0.001	0.0474		No
244	Total Zinc/7440-66-6	EPA 6020	GSGP-18	Groundwater	2045754013	11/9/2016	1.1	0.005	0.344		No
245	**Total Arsenic/7440-38-2**	**EPA 6020**	**GSGP-19**	**Groundwater**	**2045754014**	**11/9/2016**	**0.01**	**0.001**	**0.014**		**Yes**
246	**Total Cadmium/7440-43-9**	**EPA 6020**	**GSGP-19**	**Groundwater**	**2045754014**	**11/9/2016**	**0.005**	**0.001**	**0.0155**		**Yes**

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SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
247	Total Lead/7439-92-1	EPA 6020	GSGP-19	Groundwater	2045754014	11/9/2016	0.015	0.001	<0.0010		No
248	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-19**	**Groundwater**	**2045754014**	**11/9/2016**	**0.51**	**0.001**	**1.26**		**Yes**
249	Total Nickel/7440-02-0	EPA 6020	GSGP-19	Groundwater	2045754014	11/9/2016	0.073	0.001	0.0196		No
250	Total Zinc/7440-66-6	EPA 6020	GSGP-19	Groundwater	2045754014	11/9/2016	1.1	0.005	0.0399		No
251	Total Arsenic/7440-38-2	EPA 6020	GSGP-22	Groundwater	2045754024	11/10/2016	0.01	0.001	0.0095		No
252	Total Cadmium/7440-43-9	EPA 6020	GSGP-22	Groundwater	2045754024	11/10/2016	0.005	0.001	<0.0010		No
253	Total Lead/7439-92-1	EPA 6020	GSGP-22	Groundwater	2045754024	11/10/2016	0.015	0.001	<0.0010		No
254	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-22**	**Groundwater**	**2045754024**	**11/10/2016**	**0.51**	**0.001**	**15.1**		**Yes**
255	**Total Nickel/7440-02-0**	**EPA 6020**	**GSGP-22**	**Groundwater**	**2045754024**	**11/10/2016**	**0.073**	**0.001**	**0.263**		**Yes**
256	Total Zinc/7440-66-6	EPA 6020	GSGP-22	Groundwater	2045754024	11/10/2016	1.1	0.005	0.0625		No
257	Sulfide/18496-25-8	EPA 9034	GSGP-22	Groundwater	2045754024	11/10/2016	NA	1	<1.0		No
258	**Sulfate/18785-72-3**	**EPA 9056**	**GSGP-22**	**Groundwater**	**2045754024**	**11/10/2016**	**250**	**2000**	**11800**		**Yes**
259	Total Arsenic/7440-38-2	EPA 6020	GSGP-6	Groundwater	2045754040	11/10/2016	0.01	0.001	0.0051		No
260	Total Cadmium/7440-43-9	EPA 6020	GSGP-6	Groundwater	2045754040	11/10/2016	0.005	0.001	<0.0010		No
261	Total Lead/7439-92-1	EPA 6020	GSGP-6	Groundwater	2045754040	11/10/2016	0.015	0.001	<0.0010		No
262	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-6**	**Groundwater**	**2045754040**	**11/10/2016**	**0.51**	**0.001**	**4.6**		**Yes**
263	**Total Nickel/7440-02-0**	**EPA 6020**	**GSGP-6**	**Groundwater**	**2045754040**	**11/10/2016**	**0.073**	**0.001**	**0.291**		**Yes**
264	Total Zinc/7440-66-6	EPA 6020	GSGP-6	Groundwater	2045754040	11/10/2016	1.1	0.005	0.0806		No
265	**Total Arsenic/7440-38-2**	**EPA 6020**	**MW-01**	**Groundwater**	**2045754037**	**11/11/2016**	**0.01**	**0.001**	**0.0141**		**Yes**
266	Total Cadmium/7440-43-9	EPA 6020	MW-01	Groundwater	2045754037	11/11/2016	0.005	0.001	0.003		No
267	Total Lead/7439-92-1	EPA 6020	MW-01	Groundwater	2045754037	11/11/2016	0.015	0.001	0.0033		No
268	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-01**	**Groundwater**	**2045754037**	**11/11/2016**	**0.51**	**0.001**	**5.63**		**Yes**
269	**Total Nickel/7440-02-0**	**EPA 6020**	**MW-01**	**Groundwater**	**2045754037**	**11/11/2016**	**0.073**	**0.001**	**0.148**		**Yes**
270	Total Zinc/7440-66-6	EPA 6020	MW-01	Groundwater	2045754037	11/11/2016	1.1	0.005	0.128		No
271	Sulfide/18496-25-8	EPA 9034	MW-01	Groundwater	2045754037	11/11/2016	NA	1	<1.0		No
272	**Sulfate/18785-72-3**	**EPA 9056**	**MW-01**	**Groundwater**	**2045754037**	**11/11/2016**	**250**	**500**	**9850**		**Yes**
273	Total Arsenic/7440-38-2	EPA 6020	MW-02	Groundwater	2045754031	11/11/2016	0.01	0.001	<0.0010		No
274	**Total Cadmium/7440-43-9**	**EPA 6020**	**MW-02**	**Groundwater**	**2045754031**	**11/11/2016**	**0.005**	**0.001**	**0.0529**		**Yes**
275	Total Lead/7439-92-1	EPA 6020	MW-02	Groundwater	2045754031	11/11/2016	0.015	0.001	0.0033		No
276	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-02**	**Groundwater**	**2045754031**	**11/11/2016**	**0.51**	**0.001**	**0.937**		**Yes**
277	Total Nickel/7440-02-0	EPA 6020	MW-02	Groundwater	2045754031	11/11/2016	0.073	0.001	0.0352		No
278	Total Zinc/7440-66-6	EPA 6020	MW-02	Groundwater	2045754031	11/11/2016	1.1	0.005	0.127		No
279	Sulfide/18496-25-8	EPA 9034	MW-02	Groundwater	2045754031	11/11/2016	NA	1	<1.0		No
280	**Sulfate/18785-72-3**	**EPA 9056**	**MW-02**	**Groundwater**	**2045754031**	**11/11/2016**	**250**	**50**	**738**		**Yes**
281	Total Arsenic/7440-38-2	EPA 6020	MW-03	Groundwater	2045754011	11/9/2016	0.01	0.001	<0.0010		No
282	Total Cadmium/7440-43-9	EPA 6020	MW-03	Groundwater	2045754011	11/9/2016	0.005	0.001	<0.0010		No
283	Total Lead/7439-92-1	EPA 6020	MW-03	Groundwater	2045754011	11/9/2016	0.015	0.001	0.0047		No
284	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-03**	**Groundwater**	**2045754011**	**11/9/2016**	**0.51**	**0.001**	**0.842**		**Yes**
285	Total Nickel/7440-02-0	EPA 6020	MW-03	Groundwater	2045754011	11/9/2016	0.073	0.001	0.0019		No
286	Total Zinc/7440-66-6	EPA 6020	MW-03	Groundwater	2045754011	11/9/2016	1.1	0.005	<0.0050		No
287	Total Arsenic/7440-38-2	EPA 6020	MW-06	Groundwater	2045754012	11/11/2016	0.01	0.001	0.0013		No

TABLE 6
CURRENT PERIOD ANALYTICAL SUMMARY
SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
288	**Total Cadmium/7440-43-9**	**EPA 6020**	**MW-06**	**Groundwater**	**2045754012**	**11/11/2016**	**0.005**	**0.001**	**0.006**		**Yes**
289	Total Lead/7439-92-1	EPA 6020	MW-06	Groundwater	2045754012	11/11/2016	0.015	0.001	<0.0010		No
290	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-06**	**Groundwater**	**2045754012**	**11/11/2016**	**0.51**	**0.001**	**0.709**		**Yes**
291	Total Nickel/7440-02-0	EPA 6020	MW-06	Groundwater	2045754012	11/11/2016	0.073	0.001	0.0069		No
292	Total Zinc/7440-66-6	EPA 6020	MW-06	Groundwater	2045754012	11/11/2016	1.1	0.005	0.0285		No
293	Total Arsenic/7440-38-2	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	0.01	0.001	<0.0010		No
294	Total Cadmium/7440-43-9	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	0.005	0.001	<0.0010		No
295	Total Lead/7439-92-1	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	0.015	0.001	0.0012		No
296	Total Manganese/7439-96-5	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	0.51	0.001	0.0242		No
297	Total Nickel/7440-02-0	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	0.073	0.001	<0.0010		No
298	Total Zinc/7440-66-6	EPA 6020	MW-4	Groundwater	2045754041	11/10/2016	1.1	0.005	<0.0050		No
299	Total Arsenic/7440-38-2	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	0.01	0.001	<0.0010		No
300	Total Cadmium/7440-43-9	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	0.005	0.001	<0.0010		No
301	Total Lead/7439-92-1	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	0.015	0.001	0.0019		No
302	Total Manganese/7439-96-5	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	0.51	0.001	0.004		No
303	Total Nickel/7440-02-0	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	0.073	0.001	<0.0010		No
304	Total Zinc/7440-66-6	EPA 6020	MW-A	Groundwater	2045754027	11/11/2016	1.1	0.005	0.0321		No
305	Total Arsenic/7440-38-2	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	0.01	0.001	<0.0010		No
306	Total Cadmium/7440-43-9	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	0.005	0.001	<0.0010		No
307	Total Lead/7439-92-1	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	0.015	0.001	<0.0010		No
308	Total Manganese/7439-96-5	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	0.51	0.001	0.0037		No
309	Total Nickel/7440-02-0	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	0.073	0.001	<0.0010		No
310	Total Zinc/7440-66-6	EPA 6020	NORTH WELL	Groundwater	2045754017	11/9/2016	1.1	0.005	0.0058		No
311	Total Arsenic/7440-38-2	EPA 6020	NWGS-01	Groundwater	2045754033	11/11/2016	0.01	0.001	0.003		No
312	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-01**	**Groundwater**	**2045754033**	**11/11/2016**	**0.005**	**0.001**	**0.0748**		**Yes**
313	Total Lead/7439-92-1	EPA 6020	NWGS-01	Groundwater	2045754033	11/11/2016	0.015	0.001	0.0079		No
314	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-01**	**Groundwater**	**2045754033**	**11/11/2016**	**0.51**	**0.001**	**2.64**		**Yes**
315	Total Nickel/7440-02-0	EPA 6020	NWGS-01	Groundwater	2045754033	11/11/2016	0.073	0.001	0.0403		No
316	Total Zinc/7440-66-6	EPA 6020	NWGS-01	Groundwater	2045754033	11/11/2016	1.1	0.005	0.148		No
317	Sulfide/18496-25-8	EPA 9034	NWGS-01	Groundwater	2045754033	11/11/2016	NA	1	<1.0		No
318	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-01**	**Groundwater**	**2045754033**	**11/11/2016**	**250**	**100**	**875**		**Yes**
319	Total Arsenic/7440-38-2	EPA 6020	NWGS-02	Groundwater	2045754034	11/11/2016	0.01	0.001	0.0019		No
320	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-02**	**Groundwater**	**2045754034**	**11/11/2016**	**0.005**	**0.001**	**0.166**		**Yes**
321	**Total Lead/7439-92-1**	**EPA 6020**	**NWGS-02**	**Groundwater**	**2045754034**	**11/11/2016**	**0.015**	**0.001**	**0.1**		**Yes**
322	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-02**	**Groundwater**	**2045754034**	**11/11/2016**	**0.51**	**0.001**	**2.41**		**Yes**
323	Total Nickel/7440-02-0	EPA 6020	NWGS-02	Groundwater	2045754034	11/11/2016	0.073	0.001	0.0664		No
324	Total Zinc/7440-66-6	EPA 6020	NWGS-02	Groundwater	2045754034	11/11/2016	1.1	0.005	0.276		No
325	Sulfide/18496-25-8	EPA 9034	NWGS-02	Groundwater	2045754034	11/11/2016	NA	1	<1.0		No
326	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-02**	**Groundwater**	**2045754034**	**11/11/2016**	**250**	**100**	**1830**		**Yes**
327	**Total Arsenic/7440-38-2**	**EPA 6020**	**NWGS-03**	**Groundwater**	**2045754036**	**11/11/2016**	**0.01**	**0.001**	**0.0282**		**Yes**
328	Total Cadmium/7440-43-9	EPA 6020	NWGS-03	Groundwater	2045754036	11/11/2016	0.005	0.001	<0.0010		No

TABLE 6
CURRENT PERIOD ANALYTICAL SUMMARY
SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
329	Total Lead/7439-92-1	EPA 6020	NWGS-03	Groundwater	2045754036	11/11/2016	0.015	0.001	<0.0010		No
330	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-03**	**Groundwater**	**2045754036**	**11/11/2016**	**0.51**	**0.001**	**1.81**		**Yes**
331	Total Nickel/7440-02-0	EPA 6020	NWGS-03	Groundwater	2045754036	11/11/2016	0.073	0.001	0.0018		No
332	Total Zinc/7440-66-6	EPA 6020	NWGS-03	Groundwater	2045754036	11/11/2016	1.1	0.005	<0.0050		No
333	Sulfide/18496-25-8	EPA 9034	NWGS-03	Groundwater	2045754036	11/11/2016	NA	1	<1.0		No
334	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-03**	**Groundwater**	**2045754036**	**11/11/2016**	**250**	**50**	**549**		**Yes**
335	**Total Arsenic/7440-38-2**	**EPA 6020**	**NWGS-04**	**Groundwater**	**2045754029**	**11/11/2016**	**0.01**	**0.001**	**0.442**	**Y**	**Yes**
336	Total Cadmium/7440-43-9	EPA 6020	NWGS-04	Groundwater	2045754029	11/11/2016	0.005	0.001	0.0028		No
337	Total Lead/7439-92-1	EPA 6020	NWGS-04	Groundwater	2045754029	11/11/2016	0.015	0.001	0.0037		No
338	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-04**	**Groundwater**	**2045754029**	**11/11/2016**	**0.51**	**0.001**	**3.75**	**Y**	**Yes**
339	Total Nickel/7440-02-0	EPA 6020	NWGS-04	Groundwater	2045754029	11/11/2016	0.073	0.001	0.0124		No
340	Total Zinc/7440-66-6	EPA 6020	NWGS-04	Groundwater	2045754029	11/11/2016	1.1	0.005	0.0292	Y	No
341	Sulfide/18496-25-8	EPA 9034	NWGS-04	Groundwater	2045754029	11/11/2016	NA	1	<1.0		No
342	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-04**	**Groundwater**	**2045754029**	**11/11/2016**	**250**	**100**	**1320**		**Yes**
343	Total Arsenic/7440-38-2	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	0.01	0.001	0.0026		No
344	Total Cadmium/7440-43-9	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	0.005	0.001	0.0011		No
345	Total Lead/7439-92-1	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	0.015	0.001	0.0103		No
346	Total Manganese/7439-96-5	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	0.51	0.001	0.0659		No
347	Total Nickel/7440-02-0	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	0.073	0.001	0.006		No
348	Total Zinc/7440-66-6	EPA 6020	NWGS-05	Groundwater	2045754022	11/10/2016	1.1	0.005	0.0116		No
349	Sulfide/18496-25-8	EPA 9034	NWGS-05	Groundwater	2045754022	11/10/2016	NA	1	<1.0		No
350	Sulfate/18785-72-3	EPA 9056	NWGS-05	Groundwater	2045754022	11/10/2016	250	5	81.2		No
351	Total Arsenic/7440-38-2	EPA 6020	NWGS-06	Groundwater	2045754035	11/9/2016	0.01	0.001	0.0021		No
352	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-06**	**Groundwater**	**2045754035**	**11/9/2016**	**0.005**	**0.001**	**0.0926**		**Yes**
353	Total Lead/7439-92-1	EPA 6020	NWGS-06	Groundwater	2045754035	11/9/2016	0.015	0.001	0.0021		No
354	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-06**	**Groundwater**	**2045754035**	**11/9/2016**	**0.51**	**0.001**	**1.31**		**Yes**
355	Total Nickel/7440-02-0	EPA 6020	NWGS-06	Groundwater	2045754035	11/9/2016	0.073	0.001	0.034		No
356	Total Zinc/7440-66-6	EPA 6020	NWGS-06	Groundwater	2045754035	11/9/2016	1.1	0.005	0.177		No
357	Sulfide/18496-25-8	EPA 9034	NWGS-06	Groundwater	2045754035	11/9/2016	NA	1	<1.0		No
358	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-06**	**Groundwater**	**2045754035**	**11/9/2016**	**250**	**50**	**925**		**Yes**
359	Total Arsenic/7440-38-2	EPA 6020	PW-04	Groundwater	2045754020	11/10/2016	0.01	0.001	0.0023		No
360	Total Cadmium/7440-43-9	EPA 6020	PW-04	Groundwater	2045754020	11/10/2016	0.005	0.001	<0.0010		No
361	Total Lead/7439-92-1	EPA 6020	PW-04	Groundwater	2045754020	11/10/2016	0.015	0.001	<0.0010		No
362	**Total Manganese/7439-96-5**	**EPA 6020**	**PW-04**	**Groundwater**	**2045754020**	**11/10/2016**	**0.51**	**0.001**	**1.12**		**Yes**
363	Total Nickel/7440-02-0	EPA 6020	PW-04	Groundwater	2045754020	11/10/2016	0.073	0.001	0.0219		No
364	Total Zinc/7440-66-6	EPA 6020	PW-04	Groundwater	2045754020	11/10/2016	1.1	0.005	0.0535		No
365	Total Arsenic/7440-38-2	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	0.01	0.001	0.0014		No
366	Total Cadmium/7440-43-9	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	0.005	0.001	<0.0010		No
367	Total Lead/7439-92-1	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	0.015	0.001	<0.0010		No
368	Total Manganese/7439-96-5	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	0.51	0.001	0.0227		No
369	Total Nickel/7440-02-0	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	0.073	0.001	<0.0010		No

TABLE 6
CURRENT PERIOD ANALYTICAL SUMMARY
SULFATE, SULFIDE, AND METALS

Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
370	Total Zinc/7440-66-6	EPA 6020	(b) (6) WELL	Groundwater	2045754007	11/10/2016	1.1	0.005	<0.0050		No
371	Total Arsenic/7440-38-2	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	0.01	0.001	<0.0010		No
372	Total Cadmium/7440-43-9	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	0.005	0.001	<0.0010		No
373	Total Lead/7439-92-1	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	0.015	0.001	<0.0010		No
374	Total Manganese/7439-96-5	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	0.51	0.001	0.0043		No
375	Total Nickel/7440-02-0	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	0.073	0.001	<0.0010		No
376	Total Zinc/7440-66-6	EPA 6020	SOUTH WELL	Groundwater	2045754015	11/9/2016	1.1	0.005	0.048		No
377	**Total Arsenic/7440-38-2**	**EPA 6020**	**TEPA-P7D**	**Groundwater**	**2045754032**	**11/11/2016**	**0.01**	**0.001**	**0.023**		**Yes**
378	**Total Cadmium/7440-43-9**	**EPA 6020**	**TEPA-P7D**	**Groundwater**	**2045754032**	**11/11/2016**	**0.005**	**0.001**	**0.0977**		**Yes**
379	**Total Lead/7439-92-1**	**EPA 6020**	**TEPA-P7D**	**Groundwater**	**2045754032**	**11/11/2016**	**0.015**	**0.001**	**0.175**		**Yes**
380	**Total Manganese/7439-96-5**	**EPA 6020**	**TEPA-P7D**	**Groundwater**	**2045754032**	**11/11/2016**	**0.51**	**0.001**	**2.1**		**Yes**
381	Total Nickel/7440-02-0	EPA 6020	TEPA-P7D	Groundwater	2045754032	11/11/2016	0.073	0.001	0.0444		No
382	Total Zinc/7440-66-6	EPA 6020	TEPA-P7D	Groundwater	2045754032	11/11/2016	1.1	0.005	0.141		No
383	Sulfide/18496-25-8	EPA 9034	TEPA-P7D	Groundwater	2045754032	11/11/2016	NA	1	<1.0		No
384	**Sulfate/18785-72-3**	**EPA 9056**	**TEPA-P7D**	**Groundwater**	**2045754032**	**11/11/2016**	**250**	**100**	**772**		**Yes**
385	Total Arsenic/7440-38-2	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	0.01	0.001	<0.0010		No
386	Total Cadmium/7440-43-9	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	0.005	0.001	<0.0010		No
387	Total Lead/7439-92-1	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	0.015	0.001	<0.0010		No
388	Total Manganese/7439-96-5	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	0.51	0.001	0.0033		No
389	Total Nickel/7440-02-0	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	0.073	0.001	<0.0010		No
390	Total Zinc/7440-66-6	EPA 6020	WW-04	Groundwater	2045754008	11/10/2016	1.1	0.005	<0.0050		No
391	Total Arsenic/7440-38-2	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	0.01	0.001	<0.0010	J	No
392	Total Cadmium/7440-43-9	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	0.005	0.001	<0.0010	J	No
393	Total Lead/7439-92-1	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	0.015	0.001	<0.0010		No
394	Total Manganese/7439-96-5	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	0.51	0.001	0.019		No
395	Total Nickel/7440-02-0	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	0.073	0.001	<0.0010	J	No
396	Total Zinc/7440-66-6	EPA 6020	WW-09	Groundwater	2045754042	11/10/2016	1.1	0.005	<0.0050		No

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
FIRST WATER BEARING ZONE																		
DW-01																		
May-15	13.36	10.19	3.17	**5.81**	<1.0	194	**0.167**	**0.0456**	<0.0010	**0.674**	0.0067	0.0824	--	--	--	--	--	--
October-15	13.36	11.52	1.84	**5.68**	<1.0	**264**	**0.250**	**0.0209**	<0.0010	**1.09**	0.0147	0.120	--	--	--	--	--	--
May-16	13.36	10.32	3.04	**5.54**	<1.0	217	**0.568**	**0.0409**	0.0124	**1.78**	0.0105	0.0747	**0.0524**	0.0395	<0.0010	**1.75**	0.0115	0.0795
November-16	13.36	10.22	3.14	**5.69**	<1.0	**298**	**0.375**	**0.0323**	0.0067	**1.14**	0.0094	0.0634	**0.149**	0.0034	<0.0010	**1.17**	0.0098	0.0566
DW-02																		
May-15	14.12	4.48	9.64	**2.93**	--	--	**0.0108**	**0.0176**	0.0126	**8.22**	**0.260**	0.527	--	--	--	--	--	--
October-15	14.12	6.81	7.31	**2.85**	--	--	**0.0135**	**0.0193**	0.0117	**9.04**	**0.305**	0.604	--	--	--	--	--	--
May-16	14.12	4.78	9.34	**2.35**	--	--	**0.0209**	**0.0318**	**0.0226 J**	**6.42**	**0.205**	0.419	--	--	--	--	--	--
November-16	14.12	5.86	8.26	**2.83**	--	--	**0.0132**	**0.0183**	**0.0238**	**7.50**	**0.257**	0.513	--	--	--	--	--	--
DW-03																		
May-15	11.59	5.88	5.71	**3.38**	<1.0	**4,000**	**0.0143**	0.0021	0.0077	**4.21**	**0.127**	0.156	--	--	--	--	--	--
October-15	11.59	7.48	4.11	**3.37**	<1.0	**3,030**	**0.0192**	0.0018	0.0099	**3.25**	**0.113**	0.128	**0.0190**	0.0016	0.0069	**3.02**	**0.108**	0.126
May-16	11.59	6.05	5.54	**3.22**	<1.0	**6,810**	**0.0224**	0.0040	**0.0237**	**6.20**	**0.191**	0.221	--	--	--	--	--	--
November-16	11.59	5.98	5.61	**3.10**	<1.0	**490**	**0.0165**	<0.0010	**0.0022**	**0.778**	0.0269	0.0315	--	--	--	--	--	--
MW-01																		
May-15	15.08	13.27	1.81	**3.43**	<1.0	**4,660 J**	**0.0120 J**	0.0022	0.0030	**4.42 J**	**0.113 J**	0.112 J	--	--	--	--	--	--
October-15	15.08	13.18	1.90	**3.36**	<1.0	**5,730**	**0.0138**	0.0029	0.0041	**6.02**	**0.157**	0.126	--	--	--	--	--	--
May-16	15.08	13.00	2.08	**2.90**	<1.0	**5,330**	**0.0142**	0.0031	0.0043	**5.22**	**0.132**	0.127	--	--	--	--	--	--
November-16	15.08	12.44	2.64	**3.15**	<1.0	**9,850**	**0.0141**	0.003	0.0033	**5.63**	**0.148**	0.128	--	--	--	--	--	--
MW-02																		
May-15	14.23	6.96	7.27	**3.32**	<1.0	**556**	0.0012	**0.0637**	0.0041	**0.914**	0.0345	0.145	--	--	--	--	--	--
October-15	14.23	8.97	5.26	**3.19**	<1.0	**414**	<0.0010	**0.0518**	0.0032	**1.01**	0.0324	0.134	--	--	--	--	--	--
May-16	14.23	7.20	7.03	**2.87**	<1.0	**810**	0.0017	**0.0938**	0.0058	**1.64**	0.0485	0.204	--	--	--	--	--	--
November-16	14.23	7.65	6.58	**2.88**	<1.0	**738**	<0.0010	**0.0529**	0.0033	**0.937**	0.0352	0.127	--	--	--	--	--	--
MW-06																		
May-15	16.77	8.00	8.77	**3.75**	--	--	<0.0010	**0.0185**	<0.0010	**1.42**	0.0129	0.0451	--	--	--	--	--	--
October-15	16.77	10.67	6.10	**3.63**	--	--	<0.0010	**0.0196**	<0.0010	**1.55**	0.0149	0.0523	--	--	--	--	--	--
May-16	16.77	8.15	8.62	**3.57**	--	--	<0.0010	0.0025	<0.0010	0.207	0.0034	0.0136	<0.0010	0.0037	<0.0010	0.380	0.0043	0.0145
November-16	16.77	9.32	7.45	**3.66**	--	--	0.0013	**0.006**	<0.0010	**0.709**	0.0069	0.0285	--	--	--	--	--	--
PW-04																		
May-15	12.22	4.93	7.29	**3.94**	--	--	0.0019	0.0012	0.0013	**1.23**	0.0221	0.0558	--	--	--	--	--	--
October-15	12.22	7.52	4.70	**3.92**	--	--	0.0028 J	0.0018 J	0.0011	**0.840**	0.0176 J	0.0408 J	--	--	--	--	--	--
May-16	12.22	5.37	6.85	**3.15**	--	--	<0.0010	<0.0010	0.0011	**0.799**	0.0127	0.0317	--	--	--	--	--	--
November-16	12.22	5.88	6.34	**3.98**	--	--	0.0023	<0.0010	<0.0010	**1.12**	0.0219	0.0535	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.0-9.0**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
FIRST WATER-BEARING ZONE (Continued)																		
BA-03																		
May-15	14.57	6.46	8.11	**4.39**	--	--	0.0017	**0.0488**	**0.0364**	**1.16**	0.0252	0.106	--	--	--	--	--	--
October-15	14.57	8.73	5.84	**3.15**	--	--	0.0029	**0.211**	**0.190**	**5.21**	**0.0992**	0.374	--	--	--	--	--	--
May-16	14.57	6.72	7.85	**3.35**	--	--	0.0016	**0.120**	**0.0966**	**2.99**	0.0583	0.231	--	--	--	--	--	--
November-16	14.57	7.49	7.08	**3.32**	--	--	0.0018	**0.126**	**0.0859**	**2.95**	0.0626	0.244	--	--	--	--	--	--
BA-09																		
May-15	9.46	7.99	1.47	**3.53**	<1.0	**7,560**	0.0066	<0.0010	<0.0010	**3.70**	**0.101**	0.113	--	--	--	--	--	--
October-15	9.46	8.78	0.68	**3.67**	<1.0	**4,470**	0.0073	<0.0010	<0.0010	**4.24**	**0.116**	0.112	--	--	--	--	--	--
May-16	9.46	7.76	1.70	**3.04**	<1.0	**1,710**	0.0064	<0.0010	<0.0010	**3.56**	**0.0984**	0.101	--	--	--	--	--	--
November-16	9.46	7.41	2.05	**3.29**	<1.0	**4,880**	0.0069	<0.0010	<0.0010	**3.91**	**0.105**	0.102	--	--	--	--	--	--
GSGP-03																		
May-15	7.94	5.10	2.84	**5.71**	--	--	0.0035	<0.0010	<0.0010	**0.890**	<0.0010	0.0053	0.0034	<0.0010	<0.0010	**0.832**	<0.0010	<0.0050
October-15	7.94	6.42	1.52	**5.75**	--	--	0.0045	<0.0010	<0.0010	**0.890**	<0.0010	<0.0050	--	--	--	--	--	--
May-16	7.94	6.24	1.70	**5.50**	--	--	0.0040	<0.0010	<0.0010	**1.01**	<0.0010	<0.0050	--	--	--	--	--	--
November-16	7.94	5.02	2.92	**5.94**	--	--	0.0049	<0.0010	0.001	**0.875**	0.0011	0.0050	--	--	--	--	--	--
GSGP-06																		
May-15	11.73	8.57	3.16	**3.55**	--	--	0.0057	<0.0010	0.0015	**2.59**	**0.209**	0.0548	--	--	--	--	--	--
October-15	11.73	9.07	2.66	**3.46**	--	--	0.0047	<0.0010	<0.0010	**2.96**	**0.620**	0.0778	--	--	--	--	--	--
May-16	11.73	4.38	7.35	**2.91**	--	--	0.0062	0.0026	0.0031	**4.80**	**0.182**	0.0889	--	--	--	--	--	--
November-16	11.73	7.84	3.89	**3.61**	--	--	0.0051	<0.0010	<0.0010	**4.6**	**0.291**	0.0806	--	--	--	--	--	--
GSGP-15																		
May-15	13.48	8.06	5.42	**3.55**	--	--	0.0011	0.0035	0.0020	0.287	0.0126	0.0260	--	--	--	--	--	--
October-15	13.48	9.95	3.53	**3.43**	--	--	0.0014	0.0035	0.0021	0.301	0.0128	0.0259	--	--	--	--	--	--
May-16	13.48	8.39	5.09	**3.14**	--	--	<0.0010	0.0020	0.0011 J	0.157	0.0076	0.0187	--	--	--	--	--	--
November-16	13.48	8.41	5.07	**3.65**	--	--	0.0012	0.0025	0.0014	0.198	0.0091	0.0159	--	--	--	--	--	--
GSGP-18																		
May-15	15.28	9.82	5.46	**3.34**	--	--	<0.0010	**0.142**	<0.0010	**0.687**	0.0236	0.200	--	--	--	--	--	--
October-15	15.28	12.46	2.82	**3.29**	--	--	0.0049	**0.0682**	**0.0302**	**5.83**	**0.107**	0.305	--	--	--	--	--	--
May-16	15.28	10.01	5.27	**2.66**	--	--	0.0038	**0.145**	0.0013	**1.47**	0.0416	0.335	--	--	--	--	--	--
November-16	15.28	11.08	4.20	**3.03**	--	--	0.0015	**0.126**	0.0024	**1.57**	0.0474	0.344	--	--	--	--	--	--
GSGP-19																		
May-15	13.46	7.88	5.58	**3.63**	--	--	0.0026 J	**0.0698**	0.0022	**3.28**	0.0547	0.166 J	--	--	--	--	--	--
October-15	13.46	9.80	3.66	**3.72**	--	--	0.0050 J	**0.0594 J**	0.0024	**2.89**	0.0521 J	0.167 J	--	--	--	--	--	--
May-16	13.46	8.28	5.18	**3.42**	--	--	0.0076	**0.0081**	<0.0010	**1.21**	0.0136	0.0372	--	--	--	--	--	--
November-16	13.46	8.60	4.86	**3.35**	--	--	**0.014**	**0.0155**	<0.0010	**1.26**	0.0196	0.0399	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.0-9.0**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
FIRST WATER-BEARING ZONE (Continued)																		
GSGP-22																		
May-15	8.38	6.29	2.09	**3.39**	4.0	**12,700**	**0.0104**	<0.0010	<0.0010	**15.4**	**0.261**	0.0490	--	--	--	--	--	--
October-15	8.38	7.62	0.76	**3.39**	<1.0	**10,900**	0.0090	<0.0010	<0.0010	**14.8**	**0.269**	0.0695	--	--	--	--	--	--
May-16	8.38	6.30	2.08	**2.84**	<1.0	**13,900**	**0.0109**	<0.0010	<0.0010	**17.4**	**0.288**	0.0533	--	--	--	--	--	--
November-16	8.38	6.24	2.14	**3.34**	<1.0	**11,800**	**0.0095**	<0.0010	<0.0010	**15.1**	**0.263**	0.0625	--	--	--	--	--	--
TEPA-P7D																		
May-15	NM	9.19	NA	**5.64**	<1.0	**457**	0.0024	**0.0801**	0.0131	**2.07**	0.0353	0.127	<0.0010	**0.0828**	0.0056	**2.11**	0.0358	0.141
October-15	NM	9.85	NA	6.15	<1.0	**460**	0.0044	0.0048	**0.0404**	0.170	0.0048	0.0151	0.0019	**0.0628**	0.0010	**1.81**	0.0351	0.120
May-16	NM	9.32	NA	6.45	<1.0	**579**	0.0014	**0.0634**	0.0034	**1.95**	0.0342	0.0994	--	--	--	--	--	--
November-16	NM	8.95	NA	6.55	<1.0	**772.00**	**0.023**	**0.0977**	**0.175**	**2.1**	0.0444	0.141	--	--	--	--	--	--
NWGS-01																		
May-15	12.94	6.17	6.77	**3.31**	<1.0	**1,480**	0.0027	**0.116**	**0.0204**	**3.62**	0.0550	0.212	--	--	--	--	--	--
October-15	12.94	8.22	4.72	**3.21**	<1.0	**736**	0.0033	**0.102**	**0.0197**	**4.04**	0.0510	0.224	--	--	--	--	--	--
May-16	12.94	6.36	6.58	**2.76**	<1.0	**906**	0.0027	**0.102**	0.0110	**3.34**	0.0518	0.178	--	--	--	--	--	--
November-16	12.94	6.96	5.98	**3.45**	<1.0	**875.00**	0.003	**0.075**	0.0079	**2.64**	0.0403	0.148	--	--	--	--	--	--
NWGS-02																		
May-15	12.76	10.80	1.96	**3.47**	<1.0	**914**	0.0020	**0.256**	**0.0985**	**2.08**	0.0505	0.248	--	--	--	--	--	--
October-15	12.76	11.05	1.71	**3.29**	<1.0	**985**	0.0026	**0.0711**	**0.116**	**2.77**	**0.0805**	0.347	--	--	--	--	--	--
May-16	12.76	10.93	1.83	**2.85**	<1.0	**847**	0.0015	**0.137**	**0.0616**	**2.27**	0.0530	0.232	--	--	--	--	--	--
November-16	12.76	10.25	2.51	**3.21**	<1.0	**1,830.00**	0.002	**0.166**	**0.1**	**2.41**	0.0664	0.276	--	--	--	--	--	--
NWGS-03																		
May-15	13.36	12.11	1.25	6.26	<1.0	**398**	**0.0204**	<0.0010	<0.0010	**1.65**	0.0024	0.0134	**0.0187**	<0.0010	<0.0010	**1.62**	0.0022	<0.0050
October-15	13.36	11.71	1.65	6.23	<1.0	**579**	**0.0261**	<0.0010	<0.0010	**2.10**	0.0011	<0.0050	--	--	--	--	--	--
May-16	13.36	12.12	1.24	6.09	<1.0	**554**	**0.0231**	<0.0010	<0.0010	**2.13**	0.0028	<0.0050	--	--	--	--	--	--
November-16	13.36	11.18	2.18	6.39	<1.0	**549.00**	**0.028**	<0.0010	<0.0010	**1.81**	0.0018	<0.0050	--	--	--	--	--	--
NWGS-04																		
May-15	11.91	9.32	2.59	6.12	<1.0	**1,120 J**	**0.332 J**	**0.0079**	0.0053	**3.88 J**	0.0165 J	0.0174 J	--	--	--	--	--	--
October-15	11.91	10.00	1.91	6.10	<1.0	**1,080**	**0.441**	0.0016	0.0020	**4.04**	0.0146	0.0063	--	--	--	--	--	--
May-16	11.91	9.10	2.81	6.08	<1.0	**1,130.00**	**0.334**	**0.0065**	0.0071	**4.21**	0.0154	0.0138	--	--	--	--	--	--
November-16	11.91	8.83	3.08	6.43	<1.0	**1,320.00**	**0.442**	0.003	0.0037	**3.75**	0.0124	0.0292	--	--	--	--	--	--
NWGS-05																		
May-15	11.06	8.16	2.90	**3.90**	<1.0	67.8	<0.0010	0.0018	0.0105	0.129	0.0086	0.0248	<0.0010	0.0016	0.0078	0.130	0.0074	0.0236
October-15	11.06	11.72	-0.66	**3.77**	<1.0	45.3	<0.0010	0.0013	0.0090	0.148	0.0072	0.0192	<0.0010	0.0011	0.0064	0.113	0.0058	0.0157
May-16	11.06	8.40	2.66	**3.40**	<1.0	35.9	0.0019	0.0012	0.0054	0.0771	0.0066	0.0182	--	--	--	--	--	--
November-16	11.06	9.61	1.45	**3.89**	<1.0	81.20	0.003	0.001	0.0103	0.0659	0.006	0.0116	--	--	--	--	--	--
NWGS-06																		
May-15	11.73	10.31	1.42	**3.54**	--	--	0.0020	**0.0690**	<0.0010	**1.46**	0.0340	0.142	--	--	--	--	--	--
October-15	11.73	10.25	1.48	**3.37**	<1.0	**630**	0.0035	**0.153**	0.0012	**1.94**	0.0480	0.232	--	--	--	--	--	--
May-16	11.73	10.00	1.73	**2.94**	<1.0	**661**	0.0020	**0.0506**	0.0014	**1.77**	0.0359	0.130	--	--	--	--	--	--
November-16	11.73	9.22	2.51	**3.29**	<1.0	**925.00**	0.002	**0.093**	0.0021	**1.31**	0.034	0.177	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.0-9.0**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
SECOND WATER-BEARING ZONE																		
DW-04																		
May-15	14.21	4.36	9.85	7.08	--	--	0.0024	<0.0010	<0.0010	0.0463	<0.0010	<0.0050	--	--	--	--	--	--
October-15	14.21	6.70	7.51	7.07	--	--	0.0034	<0.0010	0.0011	0.0464	<0.0010	<0.0050	--	--	--	--	--	--
May-16	14.21	4.30	9.91	7.25	--	--	0.0030	<0.0010	<0.0010	0.0185	<0.0010	<0.0050	--	--	--	--	--	--
November-16	14.21	6.01	8.20	7.31	--	--	0.0039	<0.0010	<0.0010	0.0442	<0.0010	<0.0050	--	--	--	--	--	--
MW-A																		
May-15	15.12	9.55	5.57	7.11	--	--	<0.0010	<0.0010	<0.0010	0.0039	<0.0010	<0.0050	--	--	--	--	--	--
October-15	15.12	11.36	3.76	6.97	--	--	<0.0010	<0.0010	<0.0010	0.0133	<0.0010	0.0136	--	--	--	--	--	--
May-16	15.12	9.56	5.56	6.93	--	--	<0.0010	<0.0010	0.0015	0.0166	<0.0010	0.0134	--	--	--	--	--	--
November-16	15.12	10.47	4.65	6.87	--	--	<0.0010	<0.0010	0.0019	0.004	<0.0010	0.0321	--	--	--	--	--	--
MW-03																		
May-15	14.80	5.94	8.86	6.56	--	--	<0.0010	<0.0010	0.0016	**1.32**	0.0012	<0.0050	--	--	--	--	--	--
October-15	14.80	9.97	4.83	**6.49**	--	--	<0.0010	<0.0010	<0.0010	**0.824**	<0.0010	<0.0050	--	--	--	--	--	--
May-16	14.80	6.02	8.78	**6.45**	--	--	<0.0010	<0.0010	0.0018	**1.14**	0.0015	<0.0050	--	--	--	--	--	--
November-16	14.80	9.02	5.78	**6.30**	--	--	<0.0010	<0.0010	0.0047	**0.842**	0.0019	<0.0050	--	--	--	--	--	--
MW-04																		
May-15	17.38	13.21	4.17	6.59	--	--	<0.0010	<0.0010	0.0012	0.0189	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050
October-15	17.38	16.00	1.38	6.60	--	--	<0.0010	<0.0010	<0.0010	0.0125	<0.0010	<0.0050	--	--	--	--	--	--
May-16	17.38	13.48	3.90	**6.08**	--	--	<0.0010	<0.0010	0.0014	0.0271	0.0012	<0.0050	--	--	--	--	--	--
November-16	17.38	14.20	3.18	**6.31**	--	--	<0.0010	<0.0010	0.0012	0.0242	<0.0010	<0.0050	--	--	--	--	--	--
BA-01																		
May-15	14.57	6.08	8.49	**5.17**	--	--	0.0032	<0.0010	0.0016	**1.49**	0.0499	0.0749	0.0032	<0.0010	0.0012	**1.43**	0.0484	0.0683
October-15	14.57	9.24	5.33	**5.53**	--	--	0.0023	<0.0010	0.0016	**1.27**	0.0322	0.0420	0.0020	<0.0010	<0.0010	**1.31**	0.0329	0.0441
May-16	14.57	6.11	8.46	**4.51**	--	--	0.0056	<0.0010	0.0015	**1.50**	0.0515	0.0910	0.0030	<0.0010	<0.0010	**1.43**	0.0522	0.0778
November-16	14.57	8.49	6.08	**5.44**	--	--	0.0021	<0.0010	<0.0010	**1.25**	0.0298	0.0399	0.0017	<0.0010	<0.0010	**1.23**	0.029	0.0407
BA-05																		
May-15	14.20	7.29	6.91	**6.12**	--	--	0.0020	<0.0010	<0.0010	**9.69**	0.0304	<0.0050	--	--	--	--	--	--
October-15	14.20	9.27	4.93	**6.06**	--	--	0.0020	<0.0010	<0.0010	**8.27**	0.0227	<0.0050	--	--	--	--	--	--
May-16	14.20	7.25	6.95	**5.92**	--	--	0.0018	<0.0010	<0.0010	**13.4**	0.0442	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050
November-16	14.20	8.57	5.63	**6.10**	--	--	0.002	<0.0010	<0.0010	**10.6**	0.0321	<0.0050	--	--	--	--	--	--
BA-09A																		
May-15	11.10	0.88	10.22	6.99	--	--	0.0024	<0.0010	<0.0010	0.0360	<0.0010	<0.0050	--	--	--	--	--	--
October-15	11.10	1.51	9.59	6.99	--	--	0.0022	<0.0010	<0.0010	0.0329	<0.0010	0.0063	--	--	--	--	--	--
May-16	11.10	0.45	10.65	6.90	--	--	0.0022	<0.0010	<0.0010	0.0323	<0.0010	0.0070	--	--	--	--	--	--
November-16	11.10	0.50	10.60	6.95	--	--	0.0024	<0.0010	<0.0010	0.0385	<0.0010	<0.0050	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
SECOND WATER-BEARING ZONE (Continued)																		
BC-03																		
May-15	16.32	4.81	11.51	7.02	--	--	<0.0010	<0.0010	<0.0010	0.0176	<0.0010	<0.0050	--	--	--	--	--	--
October-15	16.32	8.33	7.99	7.00	--	--	<0.0010	<0.0010	<0.0010	0.0428	<0.0010	<0.0050	--	--	--	--	--	--
May-16	16.32	7.49	8.83	6.99	--	--	<0.0010	<0.0010	<0.0010	0.0086	<0.0010	<0.0050	--	--	--	--	--	--
November-16	16.32	7.45	8.87	7.06	--	--	<0.0010	<0.0010	<0.0010	0.0647	0.0015	<0.0050	--	--	--	--	--	--
BC-07																		
May-15	11.37	3.16	8.21	7.02	--	--	0.0013	<0.0010	<0.0010	0.0291	0.0014	<0.0050 J	--	--	--	--	--	--
October-15	11.37	7.01	4.36	7.02	--	--	0.0012	<0.0010	<0.0010	0.0628	<0.0010	<0.0050	--	--	--	--	--	--
May-16	11.37	3.30	8.07	7.20	--	--	0.0011	<0.0010	<0.0010	0.0382	<0.0010	<0.0050	--	--	--	--	--	--
November-16	11.37	5.71	5.66	7.16	--	--	0.0012	<0.0010	<0.0010	0.1	<0.0010	<0.0050	--	--	--	--	--	--
BC-17																		
May-15	15.18	5.02	10.16	6.65	--	--	0.0015	0.0011	**0.0223**	0.235	0.0016	0.0122	--	--	--	--	--	--
October-15	15.18	8.64	6.54	6.63	--	--	0.0018	0.0010	**0.0367**	0.330	0.0017	<0.0050	--	--	--	--	--	--
May-16	15.18	5.28	9.90	6.57	--	--	0.0014	<0.0010	0.0143	0.0474	<0.0010	<0.0050	--	--	--	--	--	--
November-16	15.18	8.02	7.16	**6.37**	--	--	0.0016	<0.0010	**0.0218**	0.095	<0.0010	<0.0050	--	--	--	--	--	--
BC-19																		
May-15	13.85	4.65	9.20	6.82	--	--	<0.0010	<0.0010	<0.0010	0.0179	<0.0010	<0.0050	--	--	--	--	--	--
October-15	13.85	7.84	6.01	6.81	--	--	<0.0010	<0.0010	<0.0010	0.0238	<0.0010	<0.0050	--	--	--	--	--	--
May-16	13.85	4.83	9.02	6.76	--	--	<0.0010	<0.0010	<0.0010	0.0054	<0.0010	<0.0050	--	--	--	--	--	--
November-16	13.85	7.23	6.62	7.05	--	--	<0.0010	<0.0010	<0.0010	0.0268	<0.0010	<0.0050	--	--	--	--	--	--
BC-21R																		
May-15	15.28	5.68	9.60	6.86	--	--	<0.0010	<0.0010	<0.0010	0.247	0.0014	<0.0050	--	--	--	--	--	--
October-15	15.28	10.29	4.99	6.71	--	--	<0.0010	<0.0010	<0.0010	0.119	0.0013	<0.0050	--	--	--	--	--	--
May-16	15.28	6.27	9.01	6.74	--	--	<0.0010	<0.0010	<0.0010	0.333	0.0018	<0.0050	--	--	--	--	--	--
November-16	15.28	9.01	6.27	7.05	--	--	<0.0010	<0.0010	<0.0010	0.114	0.0013	<0.0050	--	--	--	--	--	--
BC-25																		
May-15	15.73	6.56	9.17	6.81	--	--	<0.0010	<0.0010	<0.0010	0.109	<0.0010	<0.0050	--	--	--	--	--	--
October-15	15.73	10.83	4.90	6.71	--	--	<0.0010	<0.0010	<0.0010	0.170	<0.0010	<0.0050	--	--	--	--	--	--
May-16	15.73	6.71	9.02	6.83	--	--	<0.0010	<0.0010	<0.0010	0.0693	<0.0010	<0.0050	--	--	--	--	--	--
November-16	15.73	9.72	6.01	6.73	--	--	<0.0010	<0.0010	<0.0010	0.176	<0.0010	<0.0050	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
THIRD WATER-BEARING ZONE																		
BA-03A																		
October-15	14.76	2.34	12.42	7.87	--	--	0.0019	<0.0010	<0.0010	0.0031	<0.0010	<0.0050	--	--	--	--	--	--
November-16	14.76	1.14	13.62	**8.55**	--	--	0.0012	<0.0010	<0.0010	0.0031	<0.0010	<0.0050	--	--	--	--	--	--
BA-05A																		
October-15	14.42	3.79	10.63	7.25	--	--	0.0018	<0.0010	<0.0010	0.0538	<0.0010	<0.0050	--	--	--	--	--	--
November-16	14.42	2.70	11.72	6.86	--	--	0.002	<0.0010	<0.0010	0.0646	<0.0010	<0.0050	--	--	--	--	--	--
BB-01																		
October-15	15.75	3.41	12.34	**9.71**	--	--	0.0046	<0.0010	0.0049	0.0032	<0.0010	<0.0050	--	--	--	--	--	--
November-16	15.75	2.20	13.55	**9.81**	--	--	0.0048	<0.0010	0.0051	0.0045	<0.0010	<0.0050	--	--	--	--	--	--
BA-01A																		
October-15	15.03	5.11	9.92	7.21	--	--	0.0074	<0.0010	<0.0010	0.0217	<0.0010	<0.0050	--	--	--	--	--	--
November-16	15.03	4.00	11.03	7.19	--	--	0.0082	<0.0010	<0.0010	0.0233	<0.0010	<0.0050	--	--	--	--	--	--
WATER WELLS																		
Reagan Well																		
January-15	NA	NA	NA	8.13	--	--	0.0015	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	--	--	--	--	--	--
May-15	NA	NA	NA	8.27	--	--	0.0015	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	--	--	--	--	--	--
August-15	NA	NA	NA	8.24	--	--	0.0015	<0.0010	<0.0010	0.0217	<0.0010	<0.0050	--	--	--	--	--	--
October-15	NA	NA	NA	8.27	--	--	0.0016	<0.0010	<0.0010	0.0228	<0.0010	<0.0050	--	--	--	--	--	--
February-16	NA	NA	NA	8.24			0.0014	<0.0010	<0.0010	0.0227	<0.0010	<0.0050	--	--	--	--	--	--
May-16	NA	NA	NA	**8.51**	--	--	0.0015	<0.0010	<0.0010	0.0232	<0.0010	<0.0050	--	--	--	--	--	--
August-16	NA	NA	NA	**8.77**	--	--	0.0015	<0.0010	<0.0010	0.0216	<0.0010	<0.0050	--	--	--	--	--	--
November-16	NA	NA	NA	**8.65**	--	--	0.0014	<0.0010	<0.0010	0.0227	<0.0010	<0.0050	--	--	--	--	--	--
WW-04																		
January-15	NA	NA	NA	**8.67**	--	--	<0.0010	<0.0010	<0.0010	0.0032	<0.0010	<0.0050	--	--	--	--	--	--
May-15	NA	NA	NA	8.35	--	--	<0.0010	<0.0010	<0.0010	0.0032	<0.0010	<0.0050	--	--	--	--	--	--
August-15	NA	NA	NA	8.50	--	--	<0.0010	<0.0010	<0.0010	0.0029	<0.0010	<0.0050	--	--	--	--	--	--
October-15	NA	NA	NA	**8.91**	--	--	<0.0010	<0.0010	<0.0010	0.0029	<0.0010	<0.0050	--	--	--	--	--	--
February-16	NA	NA	NA	**8.89**			<0.0010	<0.0010	<0.0010	0.0031	<0.0010	<0.0050	--	--	--	--	--	--
May-16	NA	NA	NA	**9.06**	--	--	<0.0010	<0.0010	<0.0010	0.0037	<0.0010	<0.0050	--	--	--	--	--	--
August-16	NA	NA	NA	**9.08**	--	--	<0.0010	<0.0010	<0.0010	0.004	<0.0010	<0.0050 J	--	--	--	--	--	--
November-16	NA	NA	NA	**9.11**	--	--	<0.0010	<0.0010	<0.0010	0.0033	<0.0010	<0.0050	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Past 2 Years Sampling Events (As Available)

	Potentiometric Data			Groundwater Analytical Data														
							Total Metals						Dissolved Metals					
Monitoring/ Sample Well No. & Date	TOC Elevation (ft-NGVD)	Depth to Water (feet)	Corrected GW Elev. (ft-NGVD)	pH (Standard Units)	Sulfide (mg/L)	Sulfate (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
WATER WELLS (Continued)																		
WW-09																		
January-15	NA	NA	NA	**8.61**	--	--	<0.0010	<0.0010	<0.0010	0.0189	<0.0010	<0.0050	--	--	--	--	--	--
May-15	NA	NA	NA	8.41	--	--	<0.0010	<0.0010	<0.0010	0.0191	<0.0010	<0.0050	--	--	--	--	--	--
August-15	NA	NA	NA	8.48	--	--	<0.0010	<0.0010	<0.0010	0.0186	<0.0010	<0.0050	--	--	--	--	--	--
October-15	NA	NA	NA	8.31	--	--	<0.0010	<0.0010	0.0011	0.0306	<0.0010	<0.0050	--	--	--	--	--	--
February-16	NA	NA	NA	**8.51**			<0.0010	<0.0010	0.0014	0.019	<0.0010	<0.0050	--	--	--	--	--	--
May-16	NA	NA	NA	8.06	--	--	<0.0010	<0.0010	<0.0010	0.0191	<0.0010	<0.0050	--	--	--	--	--	--
August-16	NA	NA	NA	**8.93**	--	--	<0.0010	<0.0010	<0.0010	0.0182	<0.0010	<0.0050	--	--	--	--	--	--
November-16	NA	NA	NA	**8.67**	--	--	<0.0010 J	<0.0010 J	<0.0010	0.019	<0.0010 J	<0.0050	--	--	--	--	--	--
North Well																		
January-15	NA	NA	NA	**8.86**	--	--	<0.0010	<0.0010	<0.0010	0.0027	<0.0010	<0.0050	--	--	--	--	--	--
May-15	NA	NA	NA	**8.91**	--	--	<0.0010	<0.0010	<0.0010	0.0053 J	<0.0010 J	<0.0050 J	--	--	--	--	--	--
August-15	NA	NA	NA	**8.80**	--	--	<0.0010	<0.0010	0.0027	0.0048	<0.0010	<0.0050	--	--	--	--	--	--
October-15	NA	NA	NA	**8.88**	--	--	<0.0010	<0.0010	0.0035	0.0039	<0.0010	<0.0050	--	--	--	--	--	--
February-16	NA	NA	NA	8.31			<0.0010	<0.0010	0.0024	0.0034	<0.0010	<0.0050	--	--	--	--	--	--
May-16	NA	NA	NA	**9.06**	--	--	<0.0010	<0.0010	<0.0010	0.0036	<0.0010	<0.0050	--	--	--	--	--	--
August-16	NA	NA	NA	**9.05**	--	--	<0.0010	<0.0010	<0.0010	0.0038	<0.0010	0.0081	--	--	--	--	--	--
November-16	NA	NA	NA	**8.70**	--	--	<0.0010	<0.0010	<0.0010	0.0037	<0.0010	0.0058	--	--	--	--	--	--
South Well																		
January-15	NA	NA	NA	**9.08**	--	--	<0.0010	<0.0010	<0.0010	0.0040	<0.0010	0.0099	--	--	--	--	--	--
May-15	NA	NA	NA	**8.86**	--	--	<0.0010	<0.0010	<0.0010	0.0044	<0.0010	0.0089	--	--	--	--	--	--
August-15	NA	NA	NA	**8.87**	--	--	<0.0010	<0.0010	<0.0010	0.0041	<0.0010	0.006	--	--	--	--	--	--
October-15	NA	NA	NA	**8.93**	--	--	<0.0010	<0.0010	<0.0010	0.0035	<0.0010	0.0077	--	--	--	--	--	--
February-16	NA	NA	NA	**8.82**			<0.0010	<0.0010	<0.0010	0.0042	<0.0010	0.0137	--	--	--	--	--	--
May-16	NA	NA	NA	**8.84**	--	--	<0.0010 J	<0.0010 J	<0.0010 J	0.0042 J	<0.0010 J	0.0079 J	--	--	--	--	--	--
August-16	NA	NA	NA	8.14	--	--	<0.0010	<0.0010	<0.0010	0.0035	<0.0010	0.0098	--	--	--	--	--	--
November-16	NA	NA	NA	**8.62**	--	--	<0.0010	<0.0010	<0.0010	0.0043	<0.0010	0.048	--	--	--	--	--	--
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**NA**	**250**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

Notes:

1) Top-of-casing (TOC) elevation - (depth to fluid) = Corrected GROUNDWATER (GW) elevation

2) Site specific cleanup standards were found in previous reports for Lead and pH only. The additional limiting standards for metals concentrations are LDEQ RECAP Screening Standards (SS) provided by LDEQ.

3) The Site Cleanup Standard for pH = 7.0 std. units; however, this is not a practicable standard. Data for the 1st WBZ, a GW Class 3 non-drinking water, is compared herein to the EPA Storm Water Discharge Standard of pH=6.0-9.0 std. units. The 2nd WBZ (GW Class 2), the 3rd WBZ and the water wells (both GW Class 1) are compared to the EPA Drinking Water Standard of pH = 6.5-8.5 std. units.

4) RECAP Standards are not available for sulfate and sulfide. The EPA's secondary maximum contaminant level (MCL) for sulfate in drinking water is 250 mg/L and is based upon the aesthetic qualities of taste and odor and is provided only as a reference standard. No sulfide limiting standards in water are available.

5) Bold Values Exceed Limiting Standards

6) Reporting Limits from the analytical reports are used for non-detect results

7) *Monitor well was removed from the Operations and Maintenance Plan by LDEQ Change Order issued Sep. 8, 2014. Data collected during the most recent eight quarters is presented.

Abrev.: NA = Not Applicable; mg/L= milligrams per Liter; NF = Not Found; NM = Not Measured; NS=Not Sampled; -- = Not Analyzed; D= Surrogate Recovery Unreportable due to Dilution; N = Recovery in the Matrix Spike and Matrix Spike Duplicate exceeded the control limit acceptance criteria; J = Flagged by lab - An estimated value between the MDL and PQL is provided.; B/V = Analyte Detected in the associated Method Blank above Rep. Limit; E= Concentrations Exceeding Calibration Range of Instrument

TABLE 8
HISTORICAL SURFACE WATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Monitoring/Sampling Period: Past 2 Years Sampling Events (as available)

	Surface Water Analytical Data												
Surface Water Monitoring Point No. & Date	pH Standard Unit	Total Metals						Dissolved Metals					
		Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)	Arsenic (mg/L)	Cadmium (mg/L)	Lead (mg/L)	Manganese (mg/L)	Nickel (mg/L)	Zinc (mg/L)
CA-41													
May-15	7.07	0.0028	<0.0010	0.0019	0.163	0.0022	0.0083	0.0021	<0.0010	<0.0010	0.116	0.0021	0.0067
October-15	7.37	0.003	<0.0010	0.0017	0.0674	0.0013	0.0075	0.0026	<0.0010	<0.0010	0.0384	0.0012	<0.0050
May-16	6.94	0.0028	<0.0010	0.0015	0.182	0.0024	0.0086	0.0021	<0.0010	<0.0010	0.134	0.0042	<0.0050
November-16	6.67	0.0021	<0.0010	0.0027	0.170	0.0023	0.0250	0.0015	<0.0010	<0.0010	0.128	0.0011	0.0132
CA-51													
May-15	7.11	0.0028	<0.0010	0.0014	0.113	0.0022	0.0088	0.0022	<0.0010	<0.0010	0.0976	0.0019	0.0099
October-15	7.28	0.0027	<0.0010	0.0015	0.0645	0.0015	0.0102	0.0026	<0.0010	<0.0010	0.0366	0.001	<0.0050
May-16	6.59	0.0037	<0.0010	0.0025	0.379	0.0045	0.0161	0.0028	<0.0010	<0.0010	0.351	0.0037	0.0080
November-16	6.32	0.0022	<0.0010	0.0028	0.172	0.0024	0.0262	0.0015	<0.0010	<0.0010	0.127	0.0014	0.0133
CL-05													
May-15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
October-15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
May-16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
November-16	**5.93**	<0.0010	<0.0010	0.0033	0.407	0.0021	0.0208	<0.0010	<0.0010	0.0016	0.380	0.0020	0.0188
CL-19													
May-15	7.93	<0.0010	<0.0010	0.0014	0.0891	<0.0010	<0.0050	<0.0010	<0.0010	0.0010	0.0538	<0.0010	0.0089
October-15	7.81	<0.0010	<0.0010	0.0011	0.0256	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	0.0126	<0.0010	<0.0050
May-16	9.02	<0.0010	<0.0010	0.0016	0.0635	<0.0010	<0.0050	<0.0010	<0.0010	<0.0010	0.0364	<0.0010	<0.0050
November-16	6.57	<0.0010	<0.0010	0.0025	0.260	0.0013	0.0133	<0.0010	<0.0010	0.0014	0.244	0.0013	0.0176
Bridge													
May-15	7.30	0.0023	<0.0010	<0.0010	0.0628	0.0019	0.0082	0.0029	<0.0010	0.0013	0.0888	0.0021	0.0082
October-15	7.47	0.0028	<0.0010	0.0012	0.0374	0.0015	0.0068	0.0026	<0.0010	<0.0010	0.0174	0.001	<0.0050
May-16	7.26	0.0028	<0.0010	0.0012	0.107	0.0025	0.0086	0.0022	<0.0010	<0.0010	0.0739	0.0020	<0.0050
November-16	6.80	0.0022	<0.0010	0.0029	0.185	0.0025	0.0255	0.0016	<0.0010	<0.0010	0.133	0.0013	0.0130
SITE CLEANUP or LDEQ RECAP SS	**6.0-9.0**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**	**0.010**	**0.005**	**0.015**	**0.51**	**0.073**	**1.1**

Notes:

1) Site specific cleanup standards were found in previous reports for Lead and pH only. The additional screening standards are from the LDEQ RECAP Screening Standards. which were provided by the LDEQ.

2) The Site Cleanup Standard for pH = 7.0 s.u.; however the EPA Storm Water Discharge Standards for pH=6.0-9.0 s.u are being used for comparison purposes.

3) Bold Values Exceed Site Cleanup or RECAP SS

4) Reporting Limits from the analytical reports are used for non-detect results

Abrev.: NA = Not Applicable

NS = Not Sampled, Dry

D= Surrogate Recovery Unreportable due to Dilution

N = Recovery in the Matrix Spike and Matrix Spike Duplicate exceeded the control limit a

J = Flagged by lab - An estimated value between the MDL and PQL is provided.

B/V = Analyte Detected in the associated Method Blank above Rep. Limit

E= Concentrations Exceeding Calibration Rand of Instrument

FIGURES

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
GSGP-15
MW-04
NWGS-05
WW-09
DW-03
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
GSGP-22
BA-05
BA-05A
DW-02
MW-05
BA-09
TEPA9-H
BA-09A
DW-01
MW-A
MW-03
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-25
BC-19
BC-07
FORMER BUILDINGS
(BURNED DOWN)
GSGP-6
NWGS-04
MW-06
BA-03
BA-03A
GSGP-18
MW-01
TEPA-6H
NWGS-03
TEPA-P10
NWGS-01
MW-02
TEPA-P9
BC-31
MW-07
NWGS-02
GSGP-19
TEPA-1H
TEPA-P7D
TEPA-P6
NWGS-06
BC-03
WEINBERGER ROAD
SELSER'S CREEK

150 0 150
SCALE IN FEET

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- USGS MONITORING WELL-FIRST WATER-BEARING ZONE
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) SITE LOCATED IMMEDIATELY ADJACENT TO 19113 WEINBERGER ROAD, PONCHATOULA, LOUISIANA
3) SITE IS LOCATED AT GRID COORDINATES 30° 25' 16" N. AND 90° 24' 39" W.
4) EPA PIEZOMETERS WERE ADDED BASED ON LOCATIONS PROVIDED BY EPA.
5) THE (b) (6) WELL IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 400 FEET EAST OF WATER WELL WW-04.
6) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.

DRAWN BY	LDG 01/28/15	CHECKED BY	DRAWING NO. NEW FAC
		APPROVED BY	

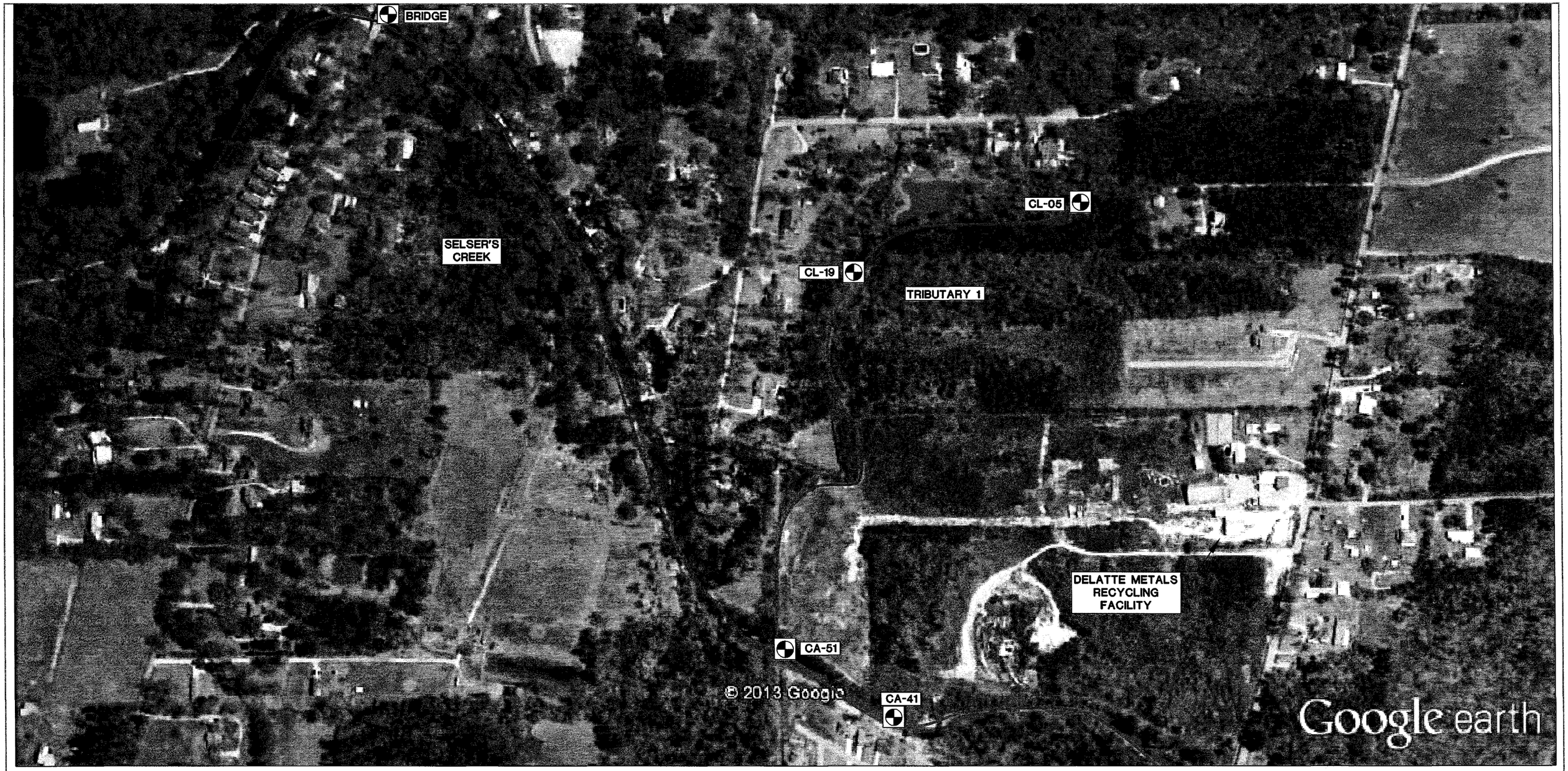
FIGURE 1

FACILITY MAP

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



LEGEND

SURFACE WATER SAMPLE LOCATION

APPROXIMATE SCALE IN FEET

305 0 305

DRAWN BY	LDG 01/06/14	CHECKED BY:	DRAWING NO. OM
		APPROVED BY:	

FIGURE 2

SURFACE WATER SAMPLE LOCATIONS

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(6.34)
PW-04

3.0

5.0

7.0

GSGP-15
(5.07)

MW-04

NWGS-05
(1.45)

WW-09

DW-03
(5.61)

BC-27

NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

GSGP-22
(2.14)

BA-05

BA-05A

MW-05

BA-09
(2.05)

TEPA9-H

BA-09A

DW-02
(8.26)

MW-03

DW-04

BC-11

BB-01

SOUTH WELL

BC-01

BC-03

7.0

BC-25

BC-19

DW-01
(3.14)

MW-A

BC-07

FORMER BUILDINGS
(BURNED DOWN)

GSGP-6
(3.89)

NWGS-04
(3.08)

MW-06
(7.45)

BA-03
(7.08)

BA-03A

GSGP-18
(4.20)

MW-01
(2.64)

TEPA-6H

TEPA-P10

NWGS-01 (5.98)

5.0

NWGS-03
(2.18)

MW-02 (6.58)

TEPA-P9

BC-31

MW-07

(2.51) NWGS-02

GSGP-19 (4.86)

TEPA-1H

TEPA-P6

TEPA-P7D
(NA)

NWGS-06
(2.51)

3.0

WEINBERGER ROAD

SELSER'S CREEK

150 0 150
SCALE IN FEET

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- USGS MONITORING WELL-FIRST WATER-BEARING ZONE
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (3.14) GROUNDWATER ELEVATION (NGVD)
- 5.0 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) SITE LOCATED IMMEDIATELY ADJACENT TO 19113 WEINBERGER ROAD, PONCHATOULA, LOUISIANA
3) SITE IS LOCATED AT GRID COORDINATES 30° 25' 16" N. AND 90° 24' 39" W.
4) EPA PIEZOMETERS WERE ADDED BASED ON LOCATIONS PROVIDED BY EPA.
5) THE [redacted] WELL IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 400 FEET EAST OF WATER WELL WW-04.
6) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/001

FIGURE 3A
FIRST WATER BEARING ZONE POTENTIOMETRIC MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
4.0
6.0 PW-04
8.0
BC-03
(8.87)
8.0
GSGP-15
MW-04
(3.18)
NWGS-05
WW-09
DW-03
BC-27
NORTH WELL
(7.16)
BC-17
BA-01A
BA-01
(6.08)
BC-21R
(6.27)
GSGP-22
BA-05
(5.63)
6.0
BB-01
MW-05
BA-09
TEPA9-H
4.0
BA-05A
DW-02
MW-03
(5.78)
DW-04
(8.20)
BC-11
SOUTH WELL
BC-01
BA-09A
*(10.60)
BC-25
(6.01)
BC-19
(6.62)
DW-01
MW-A
(4.65)
BC-07
(5.66)
GSGP-6
NWGS-04
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
GSGP-18
MW-01
TEPA-6H
TEPA-P10
NWGS-01
NWGS-03
MW-02
TEPA-P9
BC-31
MW-07
NWGS-02
GSGP-19
TEPA-1H
TEPA-P7D
TEPA-P6
NWGS-06
WEINBERGER ROAD
SELSER'S CREEK

150 0 150
SCALE IN FEET

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- USGS MONITORING WELL-FIRST WATER-BEARING ZONE
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (8.20) GROUNDWATER ELEVATION (NGVD)
- 6.0 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION
- * NOT USED IN CONTOURING

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) SITE LOCATED IMMEDIATELY ADJACENT TO 19113 WEINBERGER ROAD, PONCHATOULA, LOUISIANA
3) SITE IS LOCATED AT GRID COORDINATES 30° 25' 16" N. AND 90° 24' 39" W.
4) EPA PIEZOMETERS WERE ADDED BASED ON LOCATIONS PROVIDED BY EPA.
5) THE [redacted] WELL IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 400 FEET EAST OF WATER WELL WW-04.
6) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.

DRAWN BY	LDG 01/25/17	CHECKED BY JCB	DRAWING NO. 16/4TH QTR/002
		APPROVED BY	

FIGURE 3B
SECOND WATER BEARING ZONE POTENTIOMETRIC MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
GSGP-15
MW-04
NWGS-05
DW-03
WW-09
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
(11.03)
12.0
GSGP-22
BA-05
BA-05A
(11.72)
DW-02
MW-03
DW-04
BC-11
BB-01
(13.55)
SOUTH WELL
BC-01
BC-03
MW-05
BA-09
BA-09A
DW-01
MW-A
BC-25
13.0
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-07
GSGP-6
NWGS-04
MW-06
BA-03
BA-03A
(13.62)
GSGP-18
MW-01
NWGS-01
NWGS-03
MW-02
BC-31
MW-07
NWGS-02
TEPA-P7D
NWGS-06
GSGP-19
WEINBERGER ROAD
SELSER'S CREEK

150 0 150
SCALE IN FEET

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- USGS MONITORING WELL-FIRST WATER-BEARING ZONE
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (13.62) GROUNDWATER ELEVATION (NGVD)
- 12.0 GROUNDWATER CONTOUR ELEVATION
- GROUNDWATER FLOW DIRECTION
- NU = NOT USED FOR CONTOURING

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) SITE LOCATED IMMEDIATELY ADJACENT TO 19113 WEINBERGER ROAD, PONCHATOULA, LOUISIANA
3) SITE IS LOCATED AT GRID COORDINATES 30° 25' 16" N. AND 90° 24' 39" W.
4) EPA PIEZOMETERS WERE ADDED BASED ON LOCATIONS PROVIDED BY EPA.
5) THE (b) (6) WELL IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 400 FEET EAST OF WATER WELL WW-04.
6) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.

DRAWN BY	LDG 01/25/17	CHECKED BY	DRAWING NO. 16/4TH QTR/003
		APPROVED BY	

FIGURE 3C
THIRD WATER BEARING ZONE POTENTIOMETRIC MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(3.98)
PW-04

3.0

GSGP-15
(3.65)

MW-04

NWGS-05
(3.89)

WW-09

DW-03
(3.10)

BC-27

NORTH WELL

BC-17

BA-01A

BA-01

BC-21R

GSGP-22
(3.34)

BA-05

BA-05A

DW-02
(2.83)

MW-03

BC-03

BB-01

SOUTH WELL

BC-11

DW-04

BC-01

MW-05

4.0

BA-09
(3.29)

BA-09A

TEPA9-H

BC-25

BC-19

3.0

DW-01
(5.69)

MW-A

BC-07

NWGS-04
(6.43)

GSGP-8
(3.61)

5.0

FORMER BUILDINGS
(BURNED DOWN)

MW-06
(3.66)

BA-03
(3.32)

BA-03A

4.0

MW-01
(3.15)

GSGP-18
(3.03)

TEPA-6H

TEPA-P10

3.0

NWGS-01 (3.45)

NWGS-03
(6.39)

MW-02
(2.58)

TEPA-P9

TEPA-P7D (6.55)

BC-31

NWGS-02
(3.21)

GSGP-19
(3.55)

MW-07

TEPA-1N

TEPA-P6

NWGS-06
(3.29)

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (5.69) pH LEVEL IN STANDARD UNITS
- 3.00 – pH CONTOUR

NOTE:

1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA CLEANUP LEVEL FOR pH IS 7.0 S.U.. THE EPA ACCEPTABLE RANGE FOR STORM WATER DISCHARGE, 6.0–9.0 S.U., IS USED TO EVALUATE THE FIRST WBZ SINCE THE GROUNDWATER OF THIS ZONE IS CLASSIFIED AS LDEQ GROUNDWATER CLASS 3B, A NON-DRINKING WATER.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE pH READING AT MONITORING WELL GSGP-03 WAS 5.94 (STANDARD UNITS).

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY JLB	DRAWING NO. 16/4TH QTR/004
		APPROVED BY JLB	

FIGURE 4A
FIRST WATER BEARING ZONE
pH CONTOUR MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

PW-04

MW-04
(6.31)

WW-09

DW-03

6.5

BC-27

NORTH WELL

BC-17
(6.37)

6.5

BC-21R
(7.05)

BA-01A

BA-01
(5.44)

(6.10)
BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A
(6.95)

DW-01

MW-A
(6.87)

MW-03
(6.30)

BC-25
(6.73)

(7.05)
BC-19

DW-04
(7.31)

BC-11

BB-01

SOUTH WELL

BC-01

(7.06)
BC-03

BC-07
(7.16)

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (7.31) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA CLEANUP LEVEL FOR pH IS 7.0 S.U.. THE EPA ACCEPTABLE RANGE FOR DRINKING WATER, 6.5–8.50 S.U., IS USED TO EVALUATE THE FIRST, SECOND, AND THIRD WBZ, AND WATER WELLS SINCE THEY ARE CLASSIFIED AS LDEQ GROUNDWATER CLASS 1 AND 2 DRINKING WATER AQUIFERS.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/005

FIGURE 4B
SECOND WATER BEARING ZONE pH COUNTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(7.19)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(6.86)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
(9.81)
BB-01
8.5
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(8.55)
8.5
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (8.55) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

NOTE: MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/006A

FIGURE 4C
THIRD WATER BEARING ZONE pH CONTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(9.11)

PW-04

MW-04

WW-09
(8.67)

DW-03

BC-27

(8.70)
NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

BA-05

BA-05A

DW-02

MW-03

DW-04

BC-03

BB-01

SOUTH WELL
(8.62)

BC-11

BC-01

MW-05

BA-09

BA-09A

DW-01

MW-A

BC-25

BC-19

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (9.11) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

NOTES:

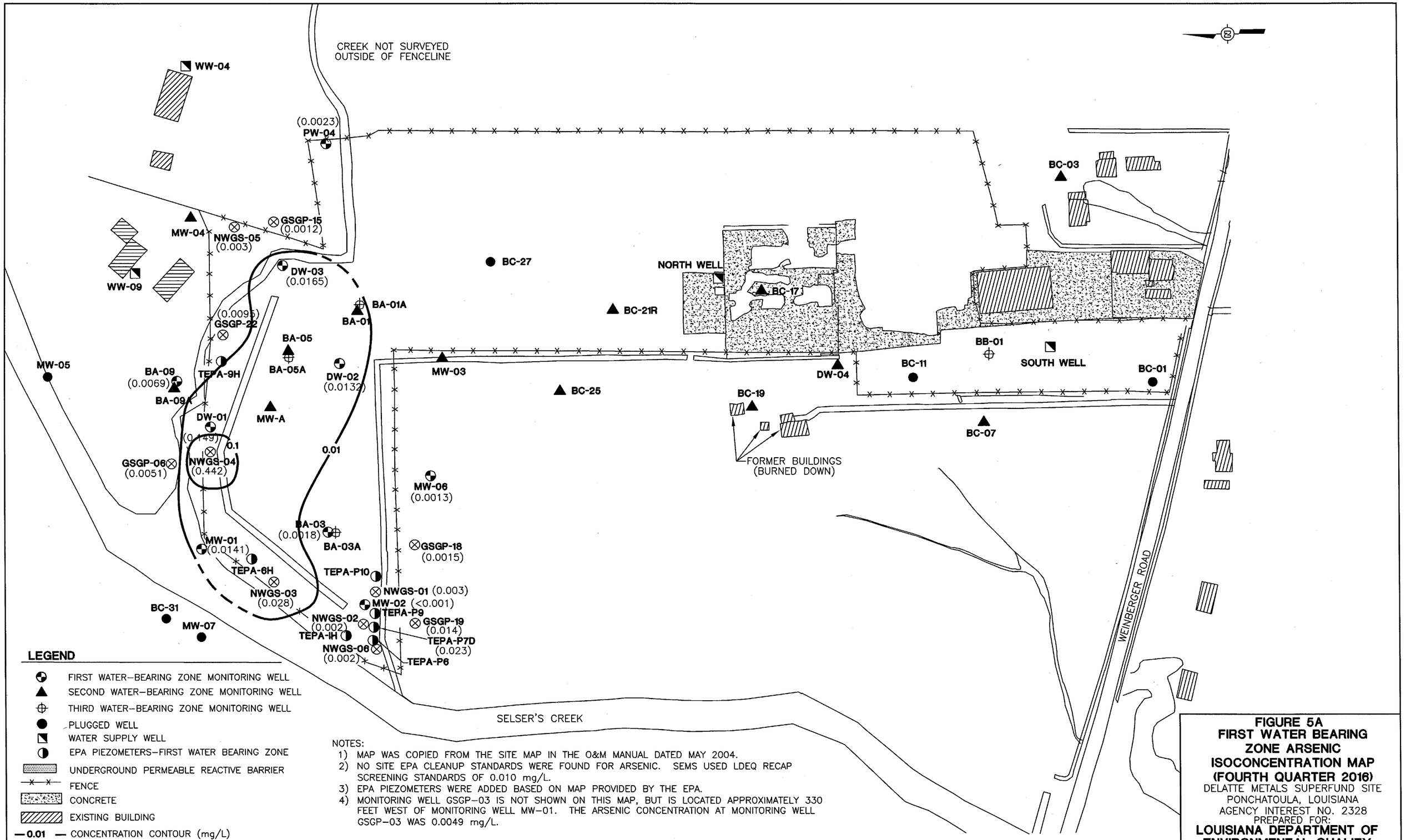
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA CLEANUP LEVEL FOR pH IS 7.0 S.U.. THE EPA ACCEPTABLE RANGE FOR DRINKING WATER, 6.5-8.50 S.U., IS USED TO EVALUATE THE FIRST, SECOND, AND THIRD WBZ, AND WATER WELLS SINCE THEY ARE CLASSIFIED AS LDEQ GROUNDWATER CLASS 1 AND 2 DRINKING WATER AQUIFERS.
3) THE pH OF THE (b) (6) WELL WAS 8.65 S.U.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/007

FIGURE 4D
WATER WELL
pH CONTOUR MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
(0.0023)
PW-04
BC-03
GSGP-15
(0.0012)
MW-04
NWGS-05
(0.003)
WW-09
DW-03
(0.0165)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
(0.0096)
GSGP-22
BA-05
BA-05A
DW-02
(0.0132)
MW-05
BA-09
(0.0069)
TEPA-9H
BA-09A
MW-03
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-25
BC-19
DW-01
(0.149)
MW-A
BC-07
0.1
0.01
GSGP-06
(0.0051)
NWGS-04
(0.442)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
(0.0013)
BA-03
(0.0018)
BA-03A
MW-01
(0.0141)
GSGP-18
(0.0015)
TEPA-6H
TEPA-P10
NWGS-03
(0.028)
NWGS-01 (0.003)
MW-02 (<0.001)
TEPA-P9
BC-31
MW-07
NWGS-02
(0.002)
GSGP-19
(0.014)
TEPA-1H
TEPA-P7D
(0.023)
NWGS-06
(0.002)
TEPA-P6
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
EPA PIEZOMETERS-FIRST WATER BEARING ZONE
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
0.01 CONCENTRATION CONTOUR (mg/L)
mg/L MILLIGRAMS PER LITER
(0.149) ARSENIC CONCENTRATIONS IN mg/L
NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR ARSENIC. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE ARSENIC CONCENTRATION AT MONITORING WELL GSGP-03 WAS 0.0049 mg/L.
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/25/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/011
FIGURE 5A
FIRST WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(<0.001)
WW-09
DW-03
BA-01A
BA-01
(0.0017)
(0.002)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(0.0024)
DW-01
MW-A
(<0.001)
MW-03
(<0.001)
BC-27
BC-21R
(<0.001)
BC-25
(<0.001)
NORTH WELL
BC-17
(0.0016)
(<0.001)
BC-19
DW-04
(0.0039)
BC-11
BB-01
SOUTH WELL
BC-01
(<0.001)
BC-03
BC-07
(0.0012)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L — MILLIGRAMS PER LITER
- (0.0039) — ARSENIC CONCENTRATION IN mg/L
- —0.01— CONCENTRATION CONTOUR (mg/L)

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ARSENIC.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY JWB	DRAWING NO. 16/4TH QTR/012
		APPROVED BY	

FIGURE 5B

SECOND WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (FOURTH QUARTER 2016)

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(0.0082)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.002)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.0048)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(0.0012)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (0.0012) ARSENIC CONCETRATIONS IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ARSENIC

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY	DRAWING NO. 16/4TH QTR/013
		APPROVED BY	

FIGURE 5C
THIRD WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.001)

PW-04

MW-04

WW-09
(<0.001)

DW-03

BA-01A

BA-01

BC-27

BC-21R

(<0.001)
NORTH WELL

BC-17

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.001)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (<0.001) ARSENIC CONCETRATIONS IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.010 mg/L.
3. NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ARSENIC.
4. THE ARSENIC CONCENTRATION FOR THE (b) (6) WELL WAS 0.0014 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/014

FIGURE 5D
WATER WELL ARSENIC ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(<0.001)
PW-04

GSGP-15
(0.0025)

MW-04

NWGS-05
(0.001)

WW-09

DW-03
(<0.001)

BC-27

NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

(<0.001)
GSGP-22

BA-05

BA-05A

DW-02
(0.0183)

MW-05

BA-09
(<0.001)

BA-09A

TEPA-9H

DW-01
(0.0034)

MW-A

MW-03

BC-25

DW-04

BC-11

BB-01

SOUTH WELL

BC-01

BC-19

BC-07

FORMER BUILDINGS
(BURNED DOWN)

BC-03

0.005

NWGS-04
(0.003)

GSGP-06
(<0.001)

MW-06
(0.006)

BA-03
(0.126)

BA-03A

GSGP-18
(0.126)

MW-01
(0.003)

TEPA-6H

TEPA-P10

NWGS-01
(0.075)

0.05

NWGS-03
(<0.001)

MW-02 (0.0529)

TEPA-P9

BC-31

MW-07

NWGS-02
(0.166)

GSGP-19 (0.0155)

TEPA-1H

TEPA-P7D (0.0977)

NWGS-06
(0.093)

TEPA-P6

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- **-0.005-** CONCENTRATION CONTOUR (mg/L)
- mg/L MILLIGRAMS PER LITER
- (0.0034) CADMIUM CONCENTRATION IN mg/L

NOTES:

1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.005 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA AND WERE NOT SAMPLED BY SEMS.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE CADMIUM CONCENTRATION AT MONITORING WELL GSGP-03 WAS <0.001 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/026

FIGURE 6A
FIRST WATER BEARING ZONE CADMIUM CONTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

PW-04

MW-04
(<0.001)

WW-09

DW-03

BC-27

NORTH WELL

BC-17
(<0.001)

(<0.001)
BC-03

BA-01A

BA-01
(<0.001)

BC-21R
(<0.001)

(<0.001)
BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A
(<0.001)

DW-01

MW-A
(<0.001)

MW-03
(<0.001)

BC-25
(<0.001)

DW-04
(<0.001)

BC-19
(<0.001)

BB-01

SOUTH WELL

BC-11

BC-01

BC-07
(<0.001)

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- NA NOT ANALYZED
- (<0.001) CADMIUM CONCENTRATION IN mg/L

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.005 mg/L.
3) NO WELLS EXCEEDED THE LDEQ RECAP SCREEING STANDARD FOR CADMIUM.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/027

FIGURE 6B
SECOND WATER BEARING ZONE CADMIUM COUNTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
(<0.001)
BA-05
BA-05A
(<0.001)
DW-02
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(<0.001)
SOUTH WELL
BC-01
BC-03
BC-07
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-06
FORMER BUILDINGS
(BURNED DOWN)
BA-03
BA-03A
(<0.001)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (<0.001) CADMIUM CONCENTRATION IN mg/L

NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.005 mg/L.
3) NO WELLS EXCEEDED THE LDEQ RECAP SCREENING STANDARD FOR CADMIUM.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/032

FIGURE 6C
THIRD WATER BEARING ZONE CADMIUM CONTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

(0.000638)

WW-04
(<0.001)

PW-04

MW-04

WW-09
(<0.001)

DW-03

BC-27

(<0.001)
NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.001)

BC-01

BC-03

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L — MILLIGRAMS PER LITER
- (<0.001) — CADMIUM CONCENTRATION IN mg/L
- NA — NOT ANALYZED

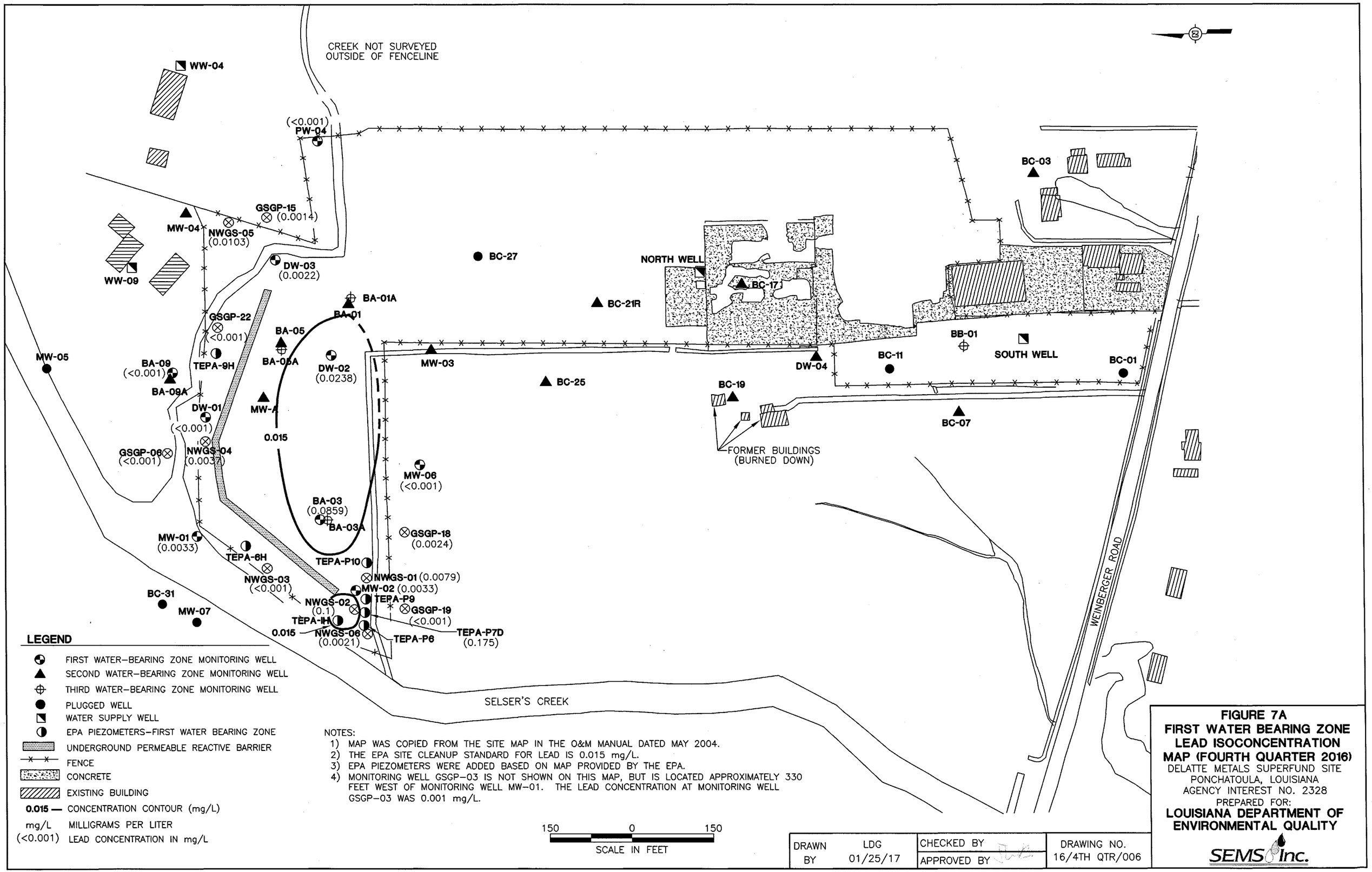
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.005 mg/L.
3) NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR CADMIUM.
4) THE CADMIUM CONCENTRATION FOR THE (b) (6) WELL WAS <0.001 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/019

FIGURE 6D
WATER WELL
CADMIUM CONTOUR MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
(<0.001)
PW-04
GSGP-15
(0.0014)
MW-04
NWGS-05
(0.0103)
WW-09
DW-03
(0.0022)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
GSGP-22
(<0.001)
BA-05
BA-05A
DW-02
(0.0238)
MW-05
BA-09
(<0.001)
TEPA-9H
BA-09A
DW-01
(<0.001)
MW-A
0.015
GSGP-06
(<0.001)
NWGS-04
(0.0037)
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-03
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
(<0.001)
BA-03
(0.0859)
BA-03A
GSGP-18
(0.0024)
MW-01
(0.0033)
TEPA-6H
TEPA-P10
NWGS-03
(<0.001)
NWGS-01 (0.0079)
MW-02 (0.0033)
BC-31
MW-07
NWGS-02
(0.1)
TEPA-P9
GSGP-19
(<0.001)
TEPA-11
0.015
NWGS-06
(0.0021)
TEPA-P6
TEPA-P7D
(0.175)
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
EPA PIEZOMETERS-FIRST WATER BEARING ZONE
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
0.015 — CONCENTRATION CONTOUR (mg/L)
mg/L MILLIGRAMS PER LITER
(<0.001) LEAD CONCENTRATION IN mg/L
NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE LEAD CONCENTRATION AT MONITORING WELL GSGP-03 WAS 0.001 mg/L.
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/25/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/006
FIGURE 7A
FIRST WATER BEARING ZONE LEAD ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(0.0012)
WW-09
DW-03
BA-01A
BA-01
(<0.001)
BC-27
NORTH WELL
BC-17
(0.0218)
BC-21R
(<0.001)
(<0.001)
BC-03
(<0.001)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.001)
DW-01
MW-A
(0.0019)
MW-03
(0.0047)
BC-25
(<0.001)
(<0.001)
BC-19
DW-04
(<0.001)
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
(<0.001)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L — MILLIGRAMS PER LITER
- (<0.001) — LEAD CONCENTRATION IN mg/L
- **0.015** — CONCENTRATION CONTOUR (mg/L)

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE SITE CLEANUP STANDARDS FOR LEAD.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY	DRAWING NO. 16/4TH QTR/008
		APPROVED BY	

FIGURE 7B
SECOND WATER BEARING ZONE LEAD ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

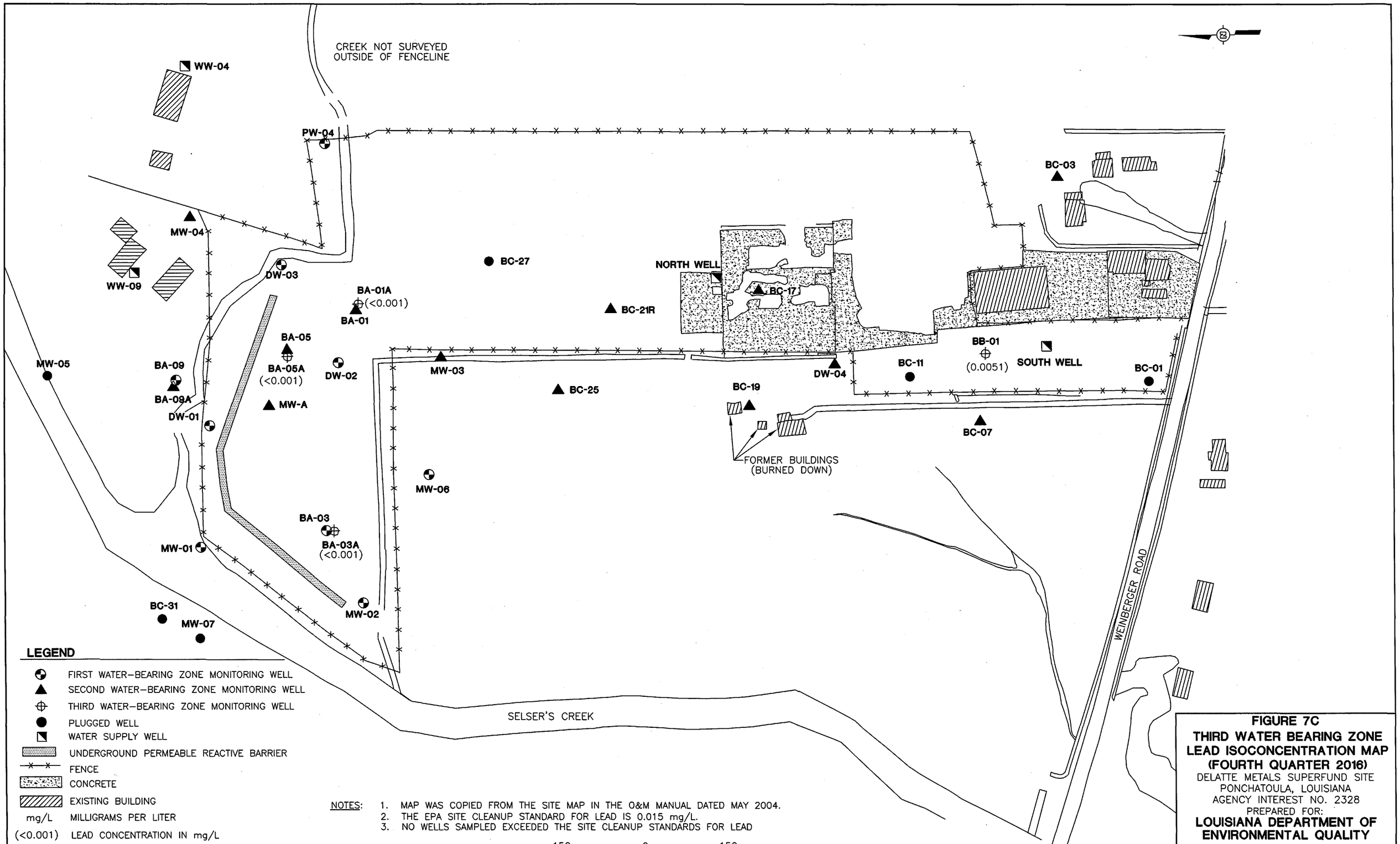


FIGURE 7C
THIRD WATER BEARING ZONE LEAD ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.001)

PW-04

MW-04

WW-09
(<0.001)

DW-03

BA-01A

BA-01

BC-27

(<0.001)
NORTH WELL

BC-17

BC-21R

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.001)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- 0.015 CONCENTRATION CONTOUR (mg/L)
- mg/L MILLIGRAMS PER LITER
- (<0.001) LEAD CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE SITE CLEANUP STANDARDS FOR LEAD.
4. THE LEAD CONCENTRATION FOR THE (b) (6) WELL WAS <0.001 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/010

FIGURE 7D
WATER WELL
LEAD ISOCONCENTRATION MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04

(1.12)
PW-04

GSGP-15
(0.198)

MW-04

NWGS-05
(0.0659)

WW-09

DW-03
(0.778)

BA-01A

BA-01

GSGP-22
(15.1)

BA-05

BA-05A

BA-09
(3.91)

TEPA-9H

DW-02
(7.50)

5.1

BA-09A

MW-05

DW-01
(1.17)

MW-A

NWGS-04
(3.75)

GSGP-06
(4.6)

5.1

MW-01
(5.63)

TEPA-6H

BA-03
(2.95)

BA-03A

NWGS-03
(1.81)

BC-31

MW-07

TEPA-P10

NWGS-02
(2.41)

TEPA-1H

NWGS-06
(1.31)

NWGS-01 (2.64)

MW-02 (0.937)

TEPA-P9

GSGP-19 (1.26)

TEPA-P7D (2.1)

TEPA-P6

MW-03

0.51

MW-06
(0.709)

GSGP-18
(1.57)

BC-27

BC-21R

NORTH WELL

BC-17

BC-25

BC-19

FORMER BUILDINGS
(BURNED DOWN)

DW-04

BC-03

BC-11

BB-01

SOUTH WELL

BC-01

BC-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- 5.1 CONCENTRATION CONTOUR (mg/L)
- mg/L MILLIGRAMS PER LITER
- (1.17) MANGANESE CONCENTRATION IN mg/L

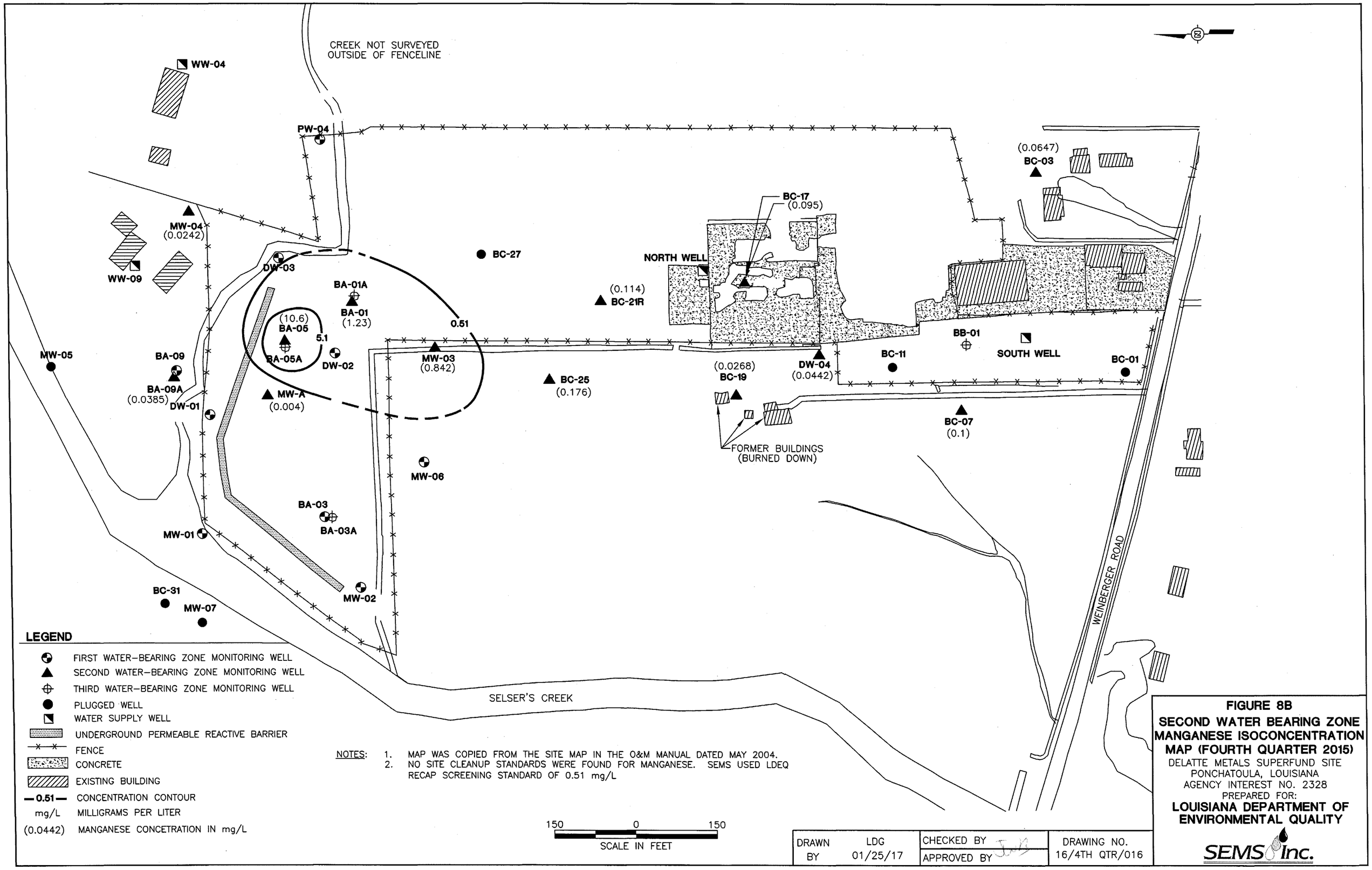
NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.51 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE MANGANESE CONCENTRATION AT MONITORING WELL GSGP-03 WAS 0.875 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/015

FIGURE 8A
FIRST WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
PW-04
MW-04
(0.0242)
WW-09
DW-03
BA-01A
BA-01
(1.23)
(10.6)
BA-05
5.1
BA-05A
DW-02
0.51
MW-05
BA-09
BA-09A
(0.0385)
DW-01
MW-A
(0.004)
MW-03
(0.842)
BC-27
(0.114)
BC-21R
BC-25
(0.176)
NORTH WELL
BC-17
(0.095)
(0.0268)
BC-19
DW-04
(0.0442)
BC-11
BB-01
SOUTH WELL
BC-01
(0.0647)
BC-03
BC-07
(0.1)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
0.51 CONCENTRATION CONTOUR
mg/L MILLIGRAMS PER LITER
(0.0442) MANGANESE CONCETRATION IN mg/L
NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/25/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/016
FIGURE 8B
SECOND WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (FOURTH QUARTER 2015)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
WW-09
DW-03
(0.0233)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(0.0646)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(0.0045)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(0.0031)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (0.0031) MANGANESE CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L
3. NO WELLS SAMPLED EXCEEDING THE LDEQ SCREENING STANDARDS FOR MANGANESE

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY JLB	DRAWING NO. 16/4TH QTR/017
		APPROVED BY	

FIGURE 8C
THIRD WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(0.0033)

PW-04

MW-04

WW-09
(0.019)

DW-03

BA-01A

BA-01

BC-27

(0.0037)
NORTH WELL

BC-17

BC-21R

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(0.0043)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (0.0033) MANGANESE CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.51 mg/L.
3. NO WELLS SAMPLED EXCEEDING THE LDEQ SCREENING STANDARDS FOR MANGANESE.
4. THE MANGANESE CONCENTRATION FOR THE (b) (6) WELL WAS 0.0227 mg/L.

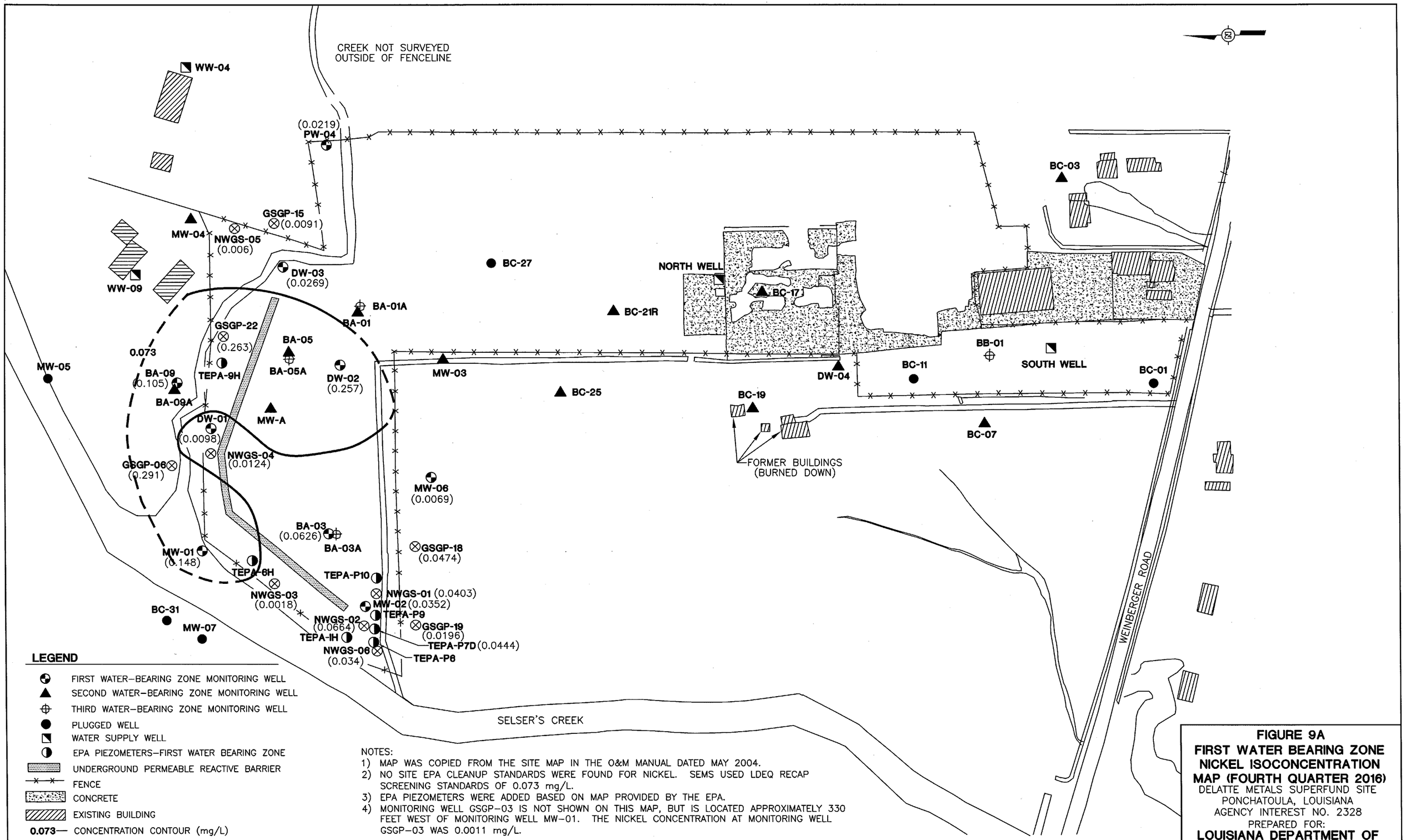
150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/25/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/018

FIGURE 8D
WATER WELL MANGANESE ISOCONCENTRATION MAP (FOURTH QUARTER 2016)

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS WERE FOUND FOR NICKEL. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE NICKEL CONCENTRATION AT MONITORING WELL GSGP-03 WAS 0.0011 mg/L.

DRAWN BY	LDG 01/26/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/019

FIGURE 9A
FIRST WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
PW-04
MW-04
(<0.001)
WW-09
DW-03
BA-01A
BA-01
(0.029)
(0.0321)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.001)
MW-A
(<0.001)
DW-01
BC-27
BC-21R
(0.0013)
NORTH WELL
BC-17
(<0.001)
MW-03
(0.0019)
BC-25
(<0.001)
(<0.001)
BC-19
DW-04
(<0.001)
BC-11
BB-01
SOUTH WELL
BC-01
(0.0015)
BC-03
BC-07
(<0.001)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L MILLIGRAMS PER LITER
- (<0.001) NICKEL CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FOR NICKEL. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ SCREENING STANDARD FOR NICKEL.

150 0 150
SCALE IN FEET

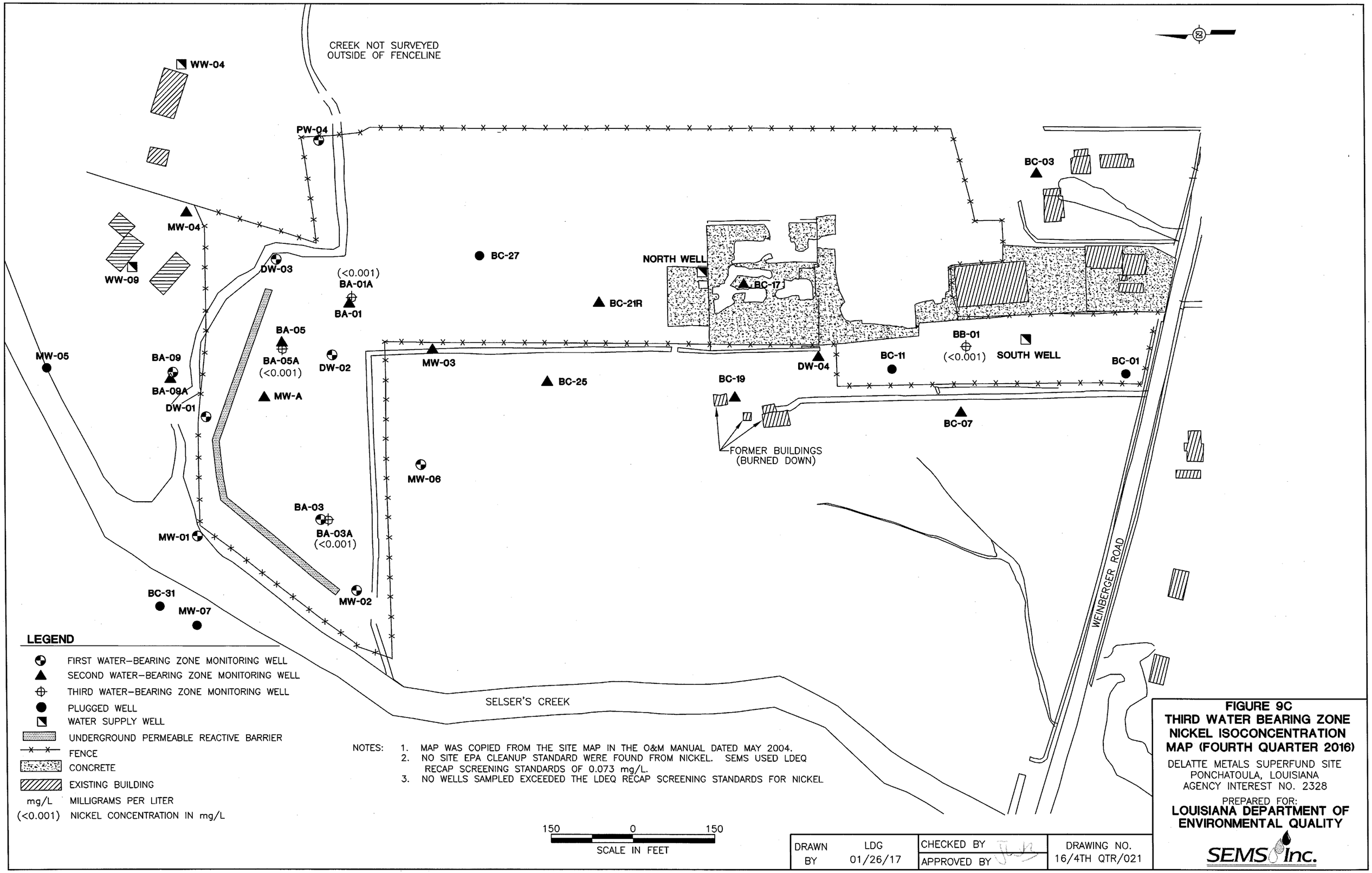
DRAWN BY	LDG 01/26/17	CHECKED BY	DRAWING NO. 16/4TH QTR/020
		APPROVED BY	

FIGURE 9B
SECOND WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (FOURTH QUARTER 2016)

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
PW-04
MW-04
WW-09
DW-03
(<0.001)
BA-01A
BA-01
BC-27
NORTH WELL
BC-17
BC-21R
BC-03
BA-05
BA-05A
(<0.001)
DW-02
MW-05
BA-09
BA-09A
DW-01
MW-A
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
(<0.001)
SOUTH WELL
BC-01
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
(<0.001)
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MILLIGRAMS PER LITER
(<0.001) NICKEL CONCENTRATION IN mg/L
NOTES: 1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FROM NICKEL. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR NICKEL
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/26/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/021
FIGURE 9C
THIRD WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

WW-04
(<0.001)

PW-04

MW-04

WW-09
(<0.001)

DW-03

BA-01A

BA-01

BC-27

BC-21R

(<0.001)
NORTH WELL

BC-17

BC-03

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(<0.001)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- mg/L — MILLIGRAMS PER LITER
- (<0.001) — NICKEL CONCENTRATION IN mg/L

NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE EPA CLEANUP STANDARD WERE FOUND FOR NICKEL. SEMS USED LDEQ RECAP SCREENING STANDARDS OF 0.073 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARDS FOR NICKEL.
4. THE NICKEL CONCENTRATION FOR THE (b) (6) WELL WAS <0.001 mg/L.

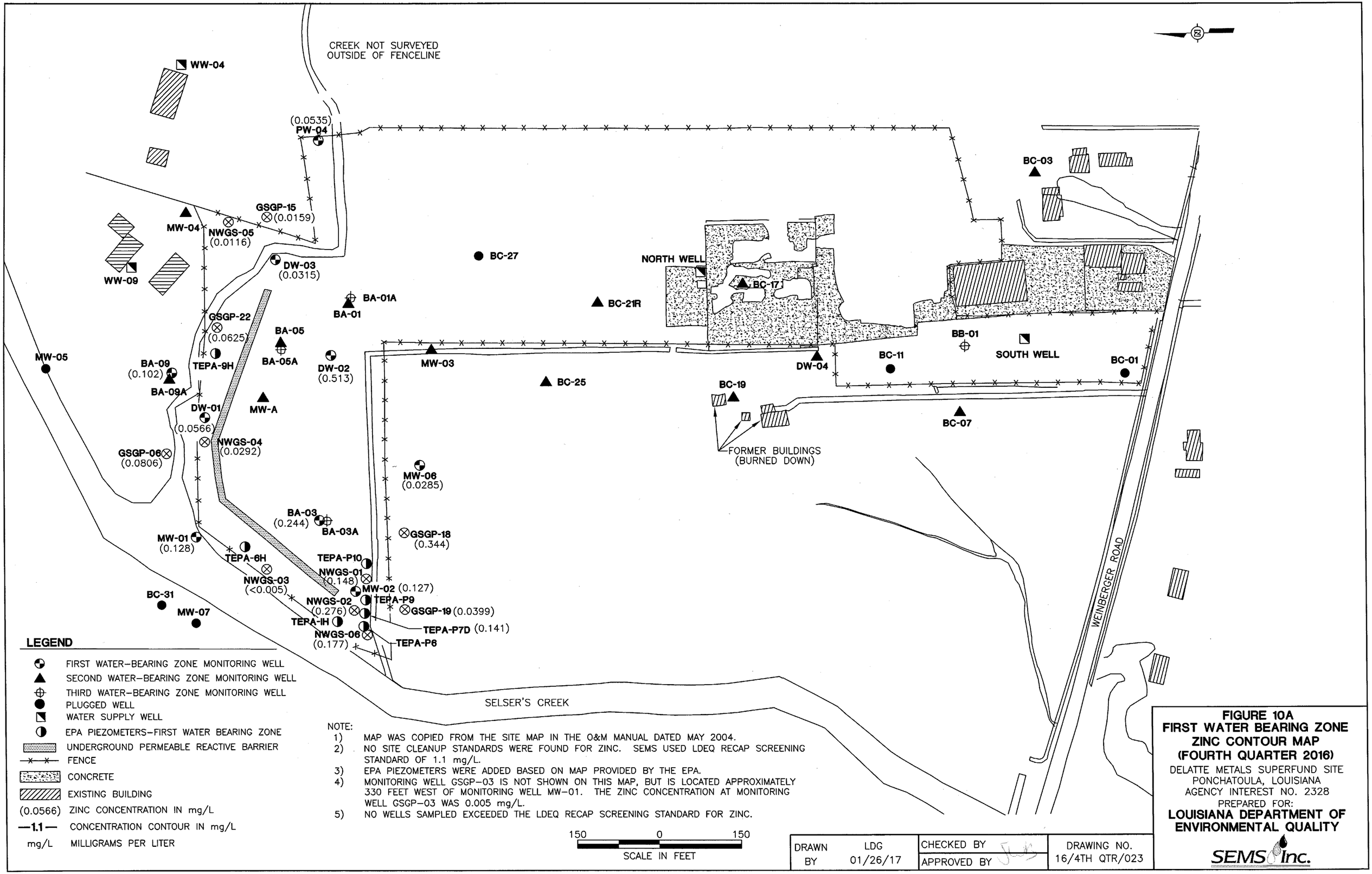
150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/022

FIGURE 9D
WATER WELL
NICKEL ISOCONCENTRATION MAP
(FOURTH QUARTER 2016)

DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (0.0566) ZINC CONCENTRATION IN mg/L
- —1.1— CONCENTRATION CONTOUR IN mg/L
- mg/L MILLIGRAMS PER LITER

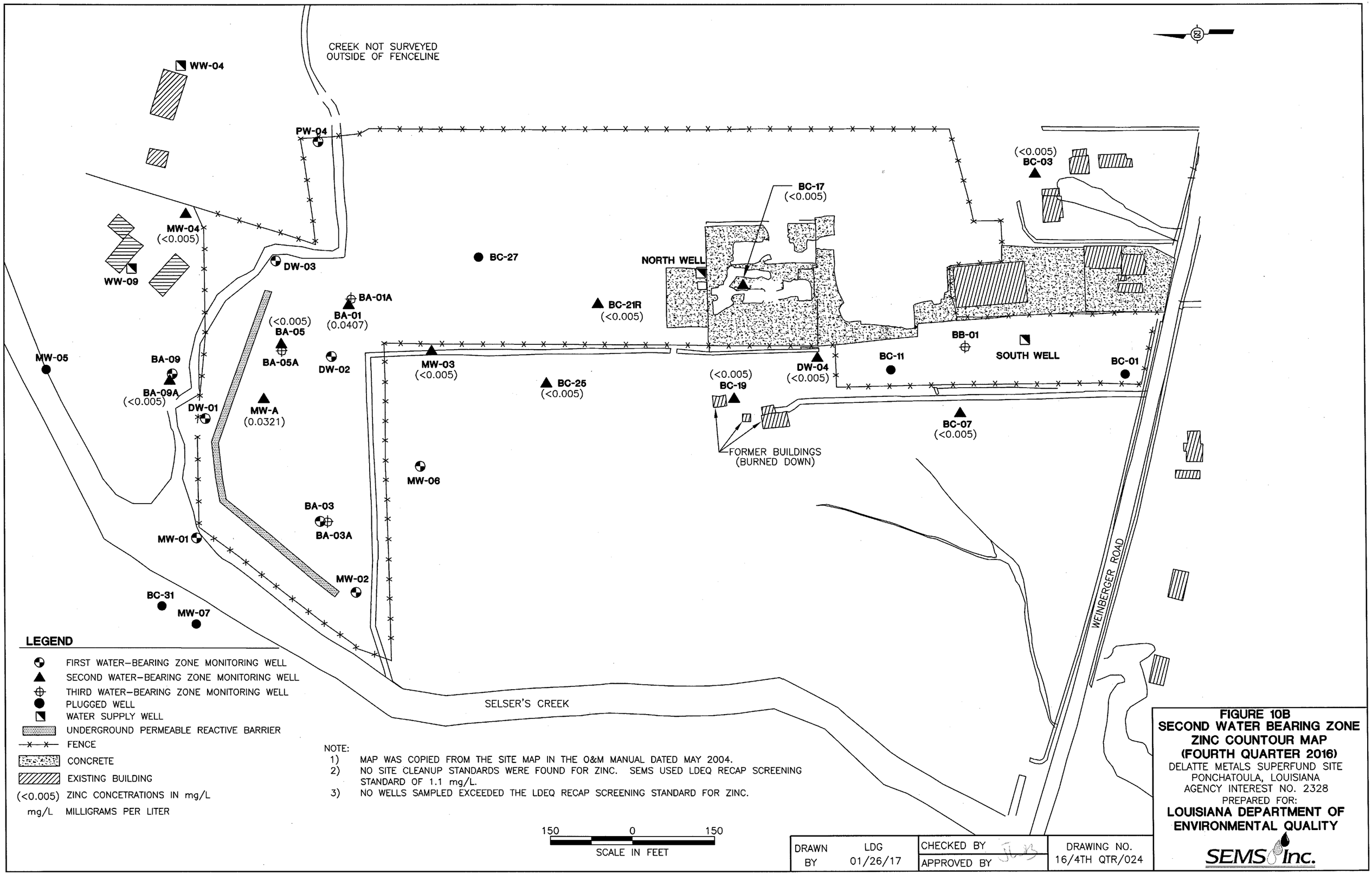
NOTE:

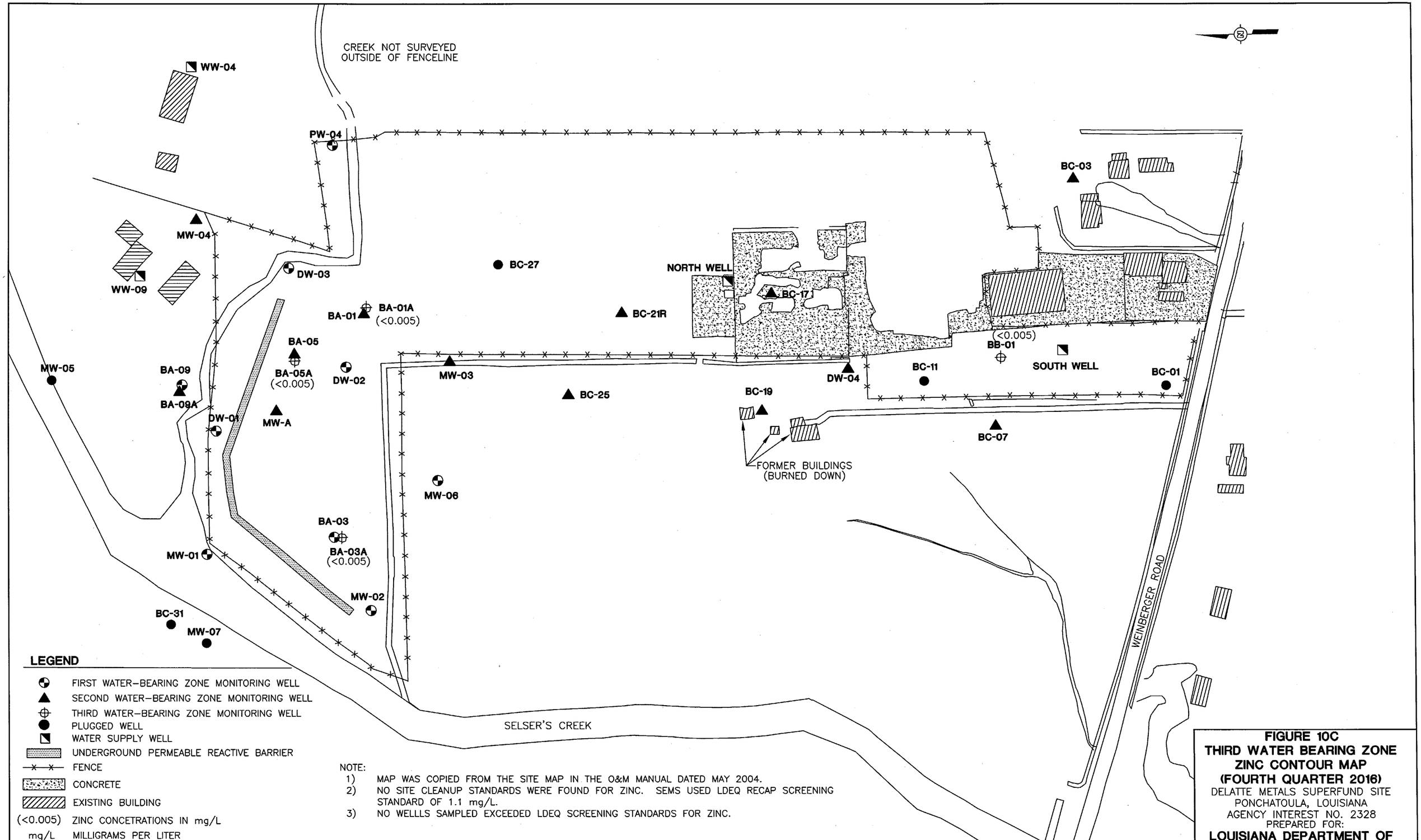
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01. THE ZINC CONCENTRATION AT MONITORING WELL GSGP-03 WAS 0.005 mg/L.
5) NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARD FOR ZINC.

DRAWN BY	LDG 01/26/17	CHECKED BY APPROVED BY	DRAWING NO. 16/4TH QTR/023

FIGURE 10A
FIRST WATER BEARING ZONE ZINC CONTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
PW-04
MW-04
(<0.005)
WW-09
DW-03
BC-27
NORTH WELL
BC-17
(<0.005)
BC-03
(<0.005)
BA-01A
BA-01
(0.0407)
BC-21R
(<0.005)
(<0.005)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.005)
DW-01
MW-A
(0.0321)
MW-03
(<0.005)
BC-25
(<0.005)
(<0.005)
BC-19
DW-04
(<0.005)
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
(<0.005)
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
(<0.005) ZINC CONCETRATIONS IN mg/L
mg/L MILLIGRAMS PER LITER
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
3) NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARD FOR ZINC.
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/26/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/024
FIGURE 10B
SECOND WATER BEARING ZONE
ZINC COUNTOUR MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF
ENVIRONMENTAL QUALITY
SEMS Inc.



NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
3) NO WELLLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ZINC.

DRAWN BY	LDG 01/26/17	CHECKED BY JLH	DRAWING NO. 16/4TH QTR/031
		APPROVED BY	

FIGURE 10C
THIRD WATER BEARING ZONE ZINC CONTOUR MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

CREEK NOT SURVEYED
OUTSIDE OF FENCELINE

(<0.005)
WW-04

PW-04

MW-04

WW-09
(<0.005)

DW-03

BC-27

(0.0058)
NORTH WELL

BC-17

BC-21R

BA-01A

BA-01

BA-05

BA-05A

DW-02

MW-05

BA-09

BA-09A

DW-01

MW-A

MW-03

BC-25

BC-19

DW-04

BC-11

BB-01

SOUTH WELL
(0.048)

BC-01

BC-07

FORMER BUILDINGS
(BURNED DOWN)

BC-03

MW-06

BA-03

BA-03A

MW-01

MW-02

BC-31

MW-07

WEINBERGER ROAD

SELSER'S CREEK

LEGEND

- FIRST WATER-BEARING ZONE MONITORING WELL
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (<0.005) ZINC CONCETRATIONS IN mg/L
- mg/L MILLIGRAMS PER LITER

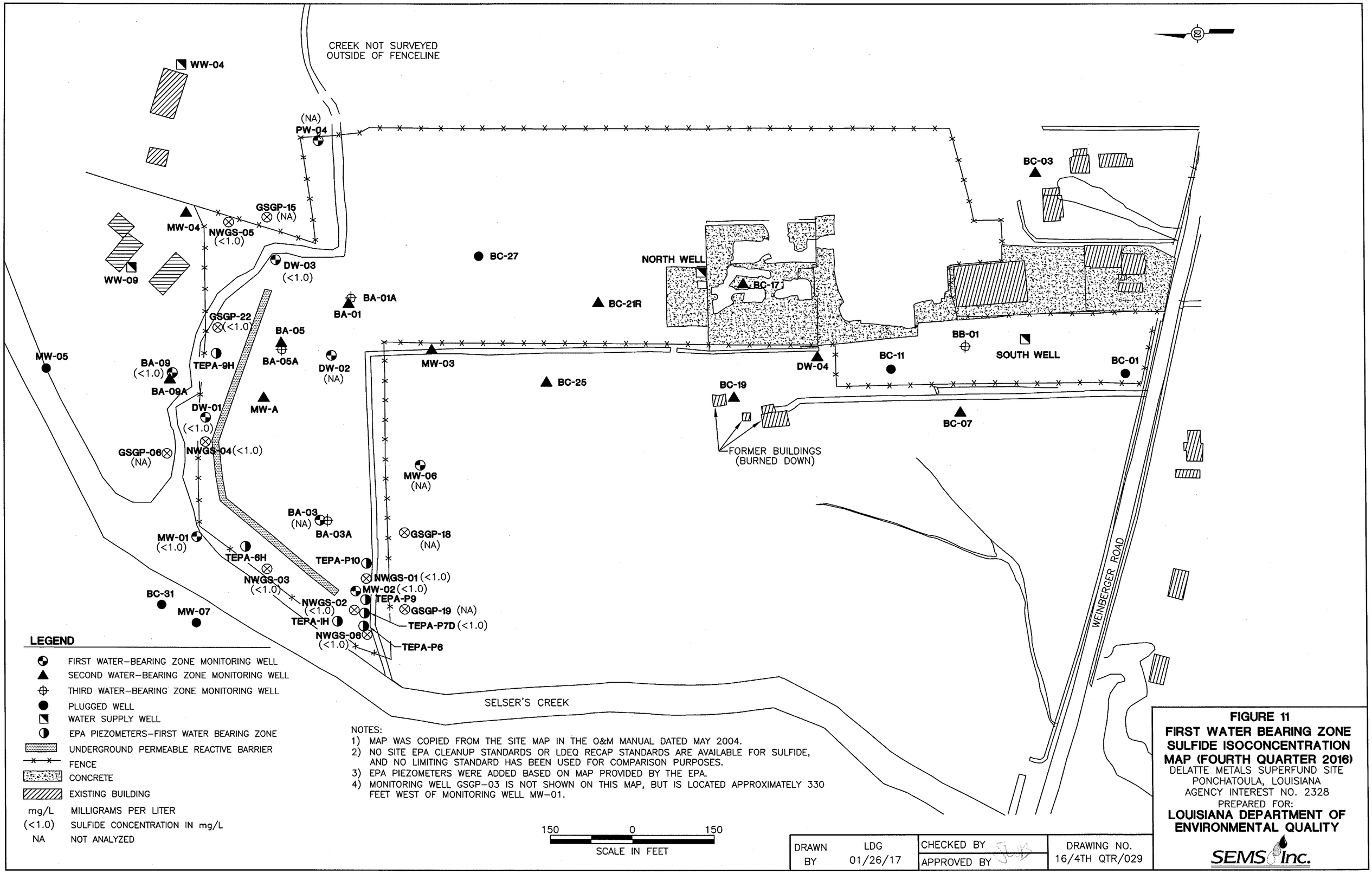
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
3) NO WELLS SAMPLED EXCEEDED LDEQ SCREENING STANDARDS FOR ZINC.
4) THE ZINC CONCENTRATION FOR THE (b) (6) WELL WAS <0.005 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 01/26/17	CHECKED BY / APPROVED BY	DRAWING NO. 16/4TH QTR/025

FIGURE 10D
WATER WELL
ZINC CONTOUR MAP
(FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

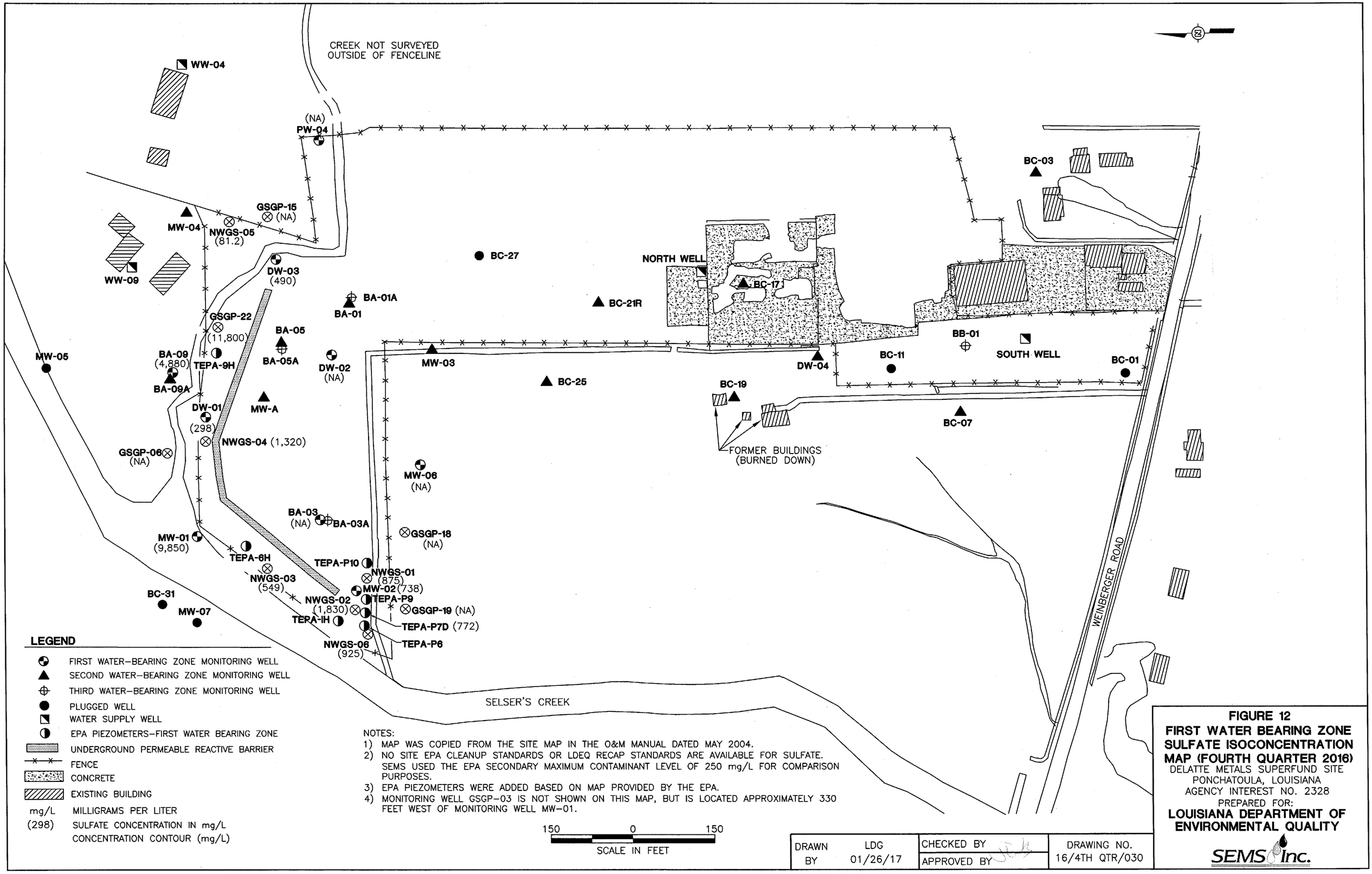


NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS OR LDEQ RECAP STANDARDS ARE AVAILABLE FOR SULFIDE, AND NO LIMITING STANDARD HAS BEEN USED FOR COMPARISON PURPOSES.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.

DRAWN BY	LDG 01/26/17	CHECKED BY JLB	DRAWING NO. 16/4TH QTR/029
		APPROVED BY	

FIGURE 11
FIRST WATER BEARING ZONE SULFIDE ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.


CREEK NOT SURVEYED
OUTSIDE OF FENCELINE
WW-04
(NA)
PW-04
GSGP-15
(NA)
MW-04
NWGS-05
(81.2)
WW-09
DW-03
(490)
BA-01A
BA-01
GSGP-22
(11,800)
BA-05
BA-05A
MW-05
BA-09
(4,880)
TEPA-9H
BA-09A
DW-02
(NA)
DW-01
(298)
MW-A
NWGS-04 (1,320)
GSGP-06
(NA)
BA-03
(NA)
BA-03A
MW-01
(9,850)
TEPA-6H
NWGS-03
(549)
BC-31
MW-07
TEPA-P10
NWGS-01
(875)
MW-02 (738)
NWGS-02
(1,830)
TEPA-P9
GSGP-19 (NA)
TEPA-1H
TEPA-P7D (772)
NWGS-06
(925)
TEPA-P6
MW-06
(NA)
GSGP-18
(NA)
MW-03
BC-27
BC-21R
BC-25
NORTH WELL
BC-17
DW-04
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-03
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
WEINBERGER ROAD
SELSER'S CREEK
LEGEND
FIRST WATER-BEARING ZONE MONITORING WELL
SECOND WATER-BEARING ZONE MONITORING WELL
THIRD WATER-BEARING ZONE MONITORING WELL
PLUGGED WELL
WATER SUPPLY WELL
EPA PIEZOMETERS-FIRST WATER BEARING ZONE
UNDERGROUND PERMEABLE REACTIVE BARRIER
FENCE
CONCRETE
EXISTING BUILDING
mg/L MILLIGRAMS PER LITER
(298) SULFATE CONCENTRATION IN mg/L
CONCENTRATION CONTOUR (mg/L)
NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS OR LDEQ RECAP STANDARDS ARE AVAILABLE FOR SULFATE. SEMS USED THE EPA SECONDARY MAXIMUM CONTAMINANT LEVEL OF 250 mg/L FOR COMPARISON PURPOSES.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING WELL GSGP-03 IS NOT SHOWN ON THIS MAP, BUT IS LOCATED APPROXIMATELY 330 FEET WEST OF MONITORING WELL MW-01.
150 0 150
SCALE IN FEET
DRAWN BY LDG 01/26/17
CHECKED BY
APPROVED BY
DRAWING NO. 16/4TH QTR/030
FIGURE 12
FIRST WATER BEARING ZONE SULFATE ISOCONCENTRATION MAP (FOURTH QUARTER 2016)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

ATTACHMENT A

FIELD DATA SHEETS & WASTE MANIFESTS

DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG

PROJECT GENERAL INFORMATION

Client: LDEQ

Date: 11/8/16 - 11/11/16 & 11/18/16

Facility #: Delatte Metals Superfund Site

Activities: Notify facility of arrival. Inspect facility monitoring wells and PRB for integrity. Gauge, and sample appropriate wells.

Address: Weinberger Road, Ponchatoula, LA

Project #: 207-0031

SEMS ACTIVITY DOCUMENTATION (Continued On Back)

Time (Military)	Notes & Observations
Arrived : (Various)	Notified facility personnel of arrival : YES NO Have H&S plan : YES NO
	Potentiometric data collection procedures: Locate monitoring wells, open to allow for water level equilibration, inspect/document well integrity, measure total well depth, measure depth-to-water (to 0.00'). Measure wells from least contaminated to most contaminated. Well purging procedures: Use low flow micro purge methods and monitor water quality characteristics. When water quality characteristics stabilize record characteristics and collect sample. Transport purge water to on-site 55-gallon drums for containment and disposal. Groundwater sample collection procedures: Collect samples with dedicated well equipment by low flow micro purge methods after water quality characteristics have stabilized. Transfer samples to a proper container (on ice) for transport to the designated lab for analyses. Ship samples for overnight delivery, with completed chain-of-custody documentation. Sample wells in the same order as they were purged.
Departed : (Various)	

SEMS EQUIPMENT & MATERIALS USED

Task	Description	Accounting Code	Unit	Quantity
03	Operation, maintenance and related activities per well.		well	44
04	Surface Water sampling activities per well		well	5
08	Well Labels		each	43
09	Well Locks		each	—
10	Concrete Pad		each	—
11	Well cover		each	—
12	Repainting		each (well)	42
13	Post Replacement		each	—
14	Clearing Access to wells		each (clearing event)	1

SEMS PERSONNEL INFORMATION

Employee Name: Nick Rodehorst

Employee Signature: [signature]

SEMS, Inc.

DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG

SEMS EQUIPMENT & MATERIALS USED

Task	Description	Accounting Code	Unit	Quantity
15	Characterization / profiling related to disposal		Each profile	—
16	Disposal of Decon Water and Purgewater - Haz		gallon	—
17	Disposal of Decon Water and Purgewater - Nonhaz		gallon	—
18	Disposal of PPE, Haz		drum	—
19	Disposal of PPE, Nonhaz		drum	—

Employee Name: Nick Rodehorst Employee Signature:

SEMS, Inc.

Delatte Metals O&M QA/QC Checklist

SEMS Project #: 207-0031
Field Crew: Nick Roedhorst
Nick Burnham
Ben Durel

MS/MSD (Every 20 Samples)
Field Duplicate (Every 10 Samples)

MS/ MSD	Field Duplicate	Sample ID on COC	Sample Location ID of Original Sample (Field Duplicate)	Date	Time	Notes
	X	Duplicate #1	CA-51	11/8/16	940	
	X	Duplicate #2	NWGS-03	11/11/16	1316	
	X	Duplicate #3	BA-09	11/10/16	1044	
	X	Duplicate #4	BC-25	11/10/16	1129	
	X	Duplicate #5	North well	11/10/16	0955	
X		MS #1	NWGS-04	11/11/16	1250	
X		MSD #1	NWGS-04	11/11/16	1250	
X		MS #2	WW-09	11/10/16	926	
X		MSD #2	WW-09	11/10/16	926	
X		MS #3	BA-03A	11/11/16	1541	
X		MSD #3	BA-03A	11/11/16	1541	

Delatte Metals O&M PRB Inspection Checklist

SEMS Project #: 207-0031

Field Crew: Nick Redehorst, Nick Burnham, Ben Durel

Date Inspected 11/10/2017

Is the soil overlying the PRB cracked, eroded, or show any other pathways that could allow for surface water to enter the subsurface?	
PRB Cleared	Yes
PRB Accessible	Yes, minor ruts in access road.
PRB Cracks Identified	None.
PRB Erosion Identified	None
Photos Taken	—
NOTES: Subsidence identified & marked with pin flags. Fill dirt will be added as soon as conditions allow.	

PRB=Permeable reactive barrier

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0031
Field Crew: Nick Rackhorsit
Nick Burnham
Ben Durel

Well No.	Date Inspected	Wells Labeled	Wells Locked	Post Condition	Paint Needed	Pad Condition	Well Access	Standing/ Ponded Water	Collision Damage	Frost Heaving	Casing Degradation	Well Subsidence	Photos Taken	Notes
GSGP-03	11/8/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
(b) (6) Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
WW-04		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
BC-03	11/10/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-labeled & painted
BC-07		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
DW-04		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BC-19		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BC-25		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-03		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-06		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-18		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-19		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0031
Field Crew: Nick Rockhorst
Nick Burnham
Ben Durel

Well No.	Date Inspected	Wells Labeled	Wells Locked	Post Condition	Paint Needed	Pad Condition	Well Access	Standing/ Ponded Water	Collision Damage	Frost Heaving	Casing Degradation	Well Subsidence	Photos Taken	Notes
BB-01	11/9/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-labeled & painted
South Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
BC-17		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-labeled & painted
North Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
BC-21R		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-label & painted
BA-01A		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-01		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
PW-04		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-15		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
DW-03	11/10/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-22		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-05		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0031
Field Crew: Nick Rockhorst
Nick Burkhart
Ben Durel

Well No.	Date Inspected	Wells Labeled	Wells Locked	Post Condition	Paint Needed	Pad Condition	Well Access	Standing/ Ponded Water	Collision Damage	Frost Heaving	Casing Degradation	Well Subsidence	Photos Taken	Notes
BA-05A	11/10/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-labeled & painted
DW-02		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-A		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
DW-01		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-03		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-03A		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-02	11/9/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
TEPA-P7D		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
NWGS-01		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
NWGS-02		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
NWGS-03		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
NWGS-04		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0031
Field Crew: Nick Rackhorst
Nick Burkham
Ben Durel

Well No.	Date Inspected	Wells Labeled	Wells Locked	Post Condition	Paint Needed	Pad Condition	Well Access	Standing/ Ponded Water	Collision Damage	Frost Heaving	Casing Degradation	Well Subsidence	Photos Taken	Notes
NWGS-05	11/10/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Re-labeled & painted
NWGS-06	11/11/16	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-01		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-09		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-09A		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-6		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
MW-4		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
WW-09	✓	NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	✓

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CA-41
Date/Time 11/8/2016 @ 9:40 **Sampled By:** NB/BD

A. TYPE OF MONITORING POINT

☑ Stream ☐ Road Ditch ☐ Drainage Ditch ☐ Tributary ☐ Other

Description: Selser's Creek

B. PURPOSE OF MONITORING POINT

☑ Downstream ☐ Upstream ☐ Other

Description: Approximately 150 feet downstream from the southwest corner of the PRB field.

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point: cloudy water

Was monitoring point dry? ☐ Yes ☒ No
Too little water to sample? ☐ Yes ☒ No
Was water flowing? ☒ Yes ☐ No
Description: water flowing relatively rapidly

D. FIELD MEASUREMENT

Weather Conditions: Overcast, high 60s

Temperature (°C): 20.24
Specific Conductivity (mS/cm): 0.071
Dissolved Oxygen (mg/L): 8.01
pH (std. units): 6.67
ORP (mV): 115
Turbidity (NTU): 123

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

Dup #1

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CA-51
Date/Time 11/8/16 @ 917 **Sampled By:** BD/NR

A. TYPE OF MONITORING POINT

☑ Stream ☐ Road Ditch ☐ Drainage Ditch ☐ Tributary ☐ Other

Description: Selser's Creek

B. PURPOSE OF MONITORING POINT

☐ Downstream ☐ Upstream ☑ Other

Description: Adjacent to the site.

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point: cloudy water

Was monitoring point dry? ☐ Yes ☒ No
Too little water to sample? ☐ Yes ☒ No
Was water flowing? ☑ Yes ☐ No
Description: water flowing relatively rapidly

D. FIELD MEASUREMENT

Weather Conditions: overcast, high 60s

Temperature (°C): 20.27
Specific Conductivity (mS/cm): 0.056
Dissolved Oxygen (mg/L): 5.92
pH (std. units): 6.32
ORP (mV): 124
Turbidity (NTU): 124

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: Bridge
Date/Time 11/8/16 @ 1000 **Sampled By:** BD/NB/NR

A. TYPE OF MONITORING POINT

☑ Stream ☐ Road Ditch ☐ Drainage Ditch ☐ Tributary ☐ Other

Description: Selser's Creek

B. PURPOSE OF MONITORING POINT

☐ Downstream ☑ Upstream ☐ Other

Description: Approximately 2,500 feet upstream from the site at Esterbrook Road Bridge.

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point: Cloudy water

Was monitoring point dry? ☐ Yes ☐ No
Too little water to sample? ☐ Yes ☒ No
Was water flowing? ☒ Yes ☐ No
Description: Water flowing rapidly

D. FIELD MEASUREMENT

Weather Conditions: Overcast, high 60s

Temperature (°C): 20.77
Specific Conductivity (mS/cm): 0.134
Dissolved Oxygen (mg/L): 4.58
pH (std. units): 6.80
ORP (mV): 109
Turbidity (NTU): 129

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CL-05
Date/Time 11/8/2016 @ 1020 **Sampled By:** NB/BD

A. TYPE OF MONITORING POINT

☐ Stream ☐ Road Ditch ☐ Drainage Ditch ☑ Tributary ☐ Other

Description: Northern Tributary (Tributary 1)

B. PURPOSE OF MONITORING POINT

☐ Downstream ☑ Upstream ☐ Other

Description: Approximately 1,800 feet southeast of the point where Tributary 1 meets Selser's Creek

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point: relatively clear

Was monitoring point dry? ☐ Yes ☑ No
Too little water to sample? ☐ Yes ☑ No
Was water flowing? ☑ Yes ☐ No
Description: flowing relatively rapidly.

D. FIELD MEASUREMENT

Weather Conditions: overcast, high 60s

Temperature (°C): 20.27
Specific Conductivity (mS/cm): 0.080
Dissolved Oxygen (mg/L): 1.94
pH (std. units): 5.93
ORP (mV): 141
Turbidity (NTU): 10.4

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CL-19
Date/Time 11/8/2016 1040 **Sampled By:** BO/NB

A. TYPE OF MONITORING POINT

☐ Stream ☐ Road Ditch ☐ Drainage Ditch ☑ Tributary ☐ Other

Description: Northern Tributary (Tributary 1)

B. PURPOSE OF MONITORING POINT

☐ Downstream ☑ Upstream ☐ Other

Description: Approximately 1250 feet east of the point where Tributary 1 meets Selser's Creek

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point:

relatively clear

Was monitoring point dry? ☐ Yes ☑ No (N/A)
Too little water to sample? ☐ Yes ☑ No
Was water flowing? ☑ Yes ☐ No
Description:

D. FIELD MEASUREMENT

Weather Conditions: Overcast, high 60s

Temperature (°C): 21.05
Specific Conductivity (mS/cm): 0.113
Dissolved Oxygen (mg/L): 8.13
pH (std. units): 6.57
ORP (mV): 109
Turbidity (NTU): 20.1

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-03
Date Purged/Sampled: 11/8/16 **Sampled By:** NB/BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 15.0 ft.
Static Depth to Groundwater (**DTW**): 5.02 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.9 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/8/16 @ 852 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft) x 10 = 0.23 gal x 3 = 0.69 gal

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
844	300	23.66	0.251	1.79	5.92	-28	19.4	5.02
849	"	23.71	0.241	0.20	5.93	-113	8.8	—
852	"	23.74	0.241	0.15	5.94	-122	7.2	—

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: (b) (6) Well
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @0955 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0955		19.82	0.304	1.42	8.65	-276	6.6	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1 DUP #2

(b) (6) Well

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: WW-04
Date Purged/Sampled: 11/10/2016 **Sampled By:** BE/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @0805 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/-1°C	+/-3%	+/-10%	+/-0.1	+/-10%	+/-10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0905		19.84	0.292	1.77	9.11	-353	5.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-03
Date Purged/Sampled: 11/9/2016 **Sampled By:** BO/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 28.0 ft.
Static Depth to Groundwater (**DTW**): 7.45 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 17.5 ft.
Height of Water Column (**H=TD-DTW**): 20.55 ft.

Purge Flow Rate: 200 mL/min
Volume Purged: 2 gallons
Date/Time of Sample: 11/9/16 @ 1016 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 3.34 gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1000	200	23.40	3.57	0.84	7.21	25	4.9	
1005	↓	23.42	3.58	0.44	7.13	-8	5.3	
1010	↓	23.30	3.58	0.26	7.05	-3	4.4	
1013	↓	23.38	3.58	0.24	7.05	1	4.5	
1016	↓	23.34	3.58	0.24	7.06	7	4.3	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-07
Date Purged/Sampled: 11/9/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 18.5 ft.
Static Depth to Groundwater (DTW): 5.71 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 8.0 ft.
Height of Water Column (H=TD-DTW): 12.79 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: [illegible] gallons
Date/Time of Sample: 11/9/16@1046 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 2.08 gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1030	300	22.40	2.48	9.93	7.37	33.0	8.0	
1035	150	22.50	2.52	2.57	7.16	26.0	6.6	
1040	"	22.56	2.51	3.30	7.19	25.0	5.7	
1043	"	22.52	2.51	3.47	7.17	26.0	5.7	
1046	"	22.52	2.51	3.36	7.16	26.0	5.9	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-04
Date Purged/Sampled: 11/9/2016 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 38 ft.
Static Depth to Groundwater (**DTW**): 6.01 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 27.5 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/16@1146 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1125	300	22.57	1.066	7.96	7.80	-72	7.6	
1130	"	21.92	1.003	0.42	7.49	-38	6.2	
1135	"	21.73	1.000	0.23	7.36	-6	4.3	
1140	"	21.69	1.010	0.19	7.32	6	4.1	
1143	"	21.64	1.004	0.17	7.30	10	3.8	
1146	"	21.68	1.001	0.17	7.31	9	4.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-19
Date Purged/Sampled: 11/11/2016 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 22.5 ft.
Static Depth to Groundwater (DTW): 7.23 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 12.0 ft.
Height of Water Column (H=TD-DTW): 15.27 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @ 926 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0910	250	21.60	3.03	2.10	6.87	-75	8.4	
0915	"	21.99	3.00	0.31	7.02	-67	5.4	
0920	"	21.94	3.03	0.23	7.04	-69	5.0	
0923	"	21.89	3.05	0.21	7.05	-68	4.8	
0926	"	21.87	3.03	0.22	7.05	-67	4.9	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-25
Date Purged/Sampled: 11/9/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 32.0 ft.
Static Depth to Groundwater (**DTW**): 9.72 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 21.5 ft.
Height of Water Column (**H=TD-DTW**): 22.28 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/16 @ 1221 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1205	300	21.67	0.798	3.36	7.13	-149	13.4	
1210	"	21.29	0.786	0.28	6.87	-85	5.5	
1215	"	21.13	0.789	0.20	6.80	-60	4.9	
1218	"	20.99	0.789	0.16	6.80	-33	4.4	
1221	"	20.94	0.787	0.13	6.73	-27	4.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-25
Date Purged/Sampled: 11/9/16 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 32.0 ft.
Static Depth to Groundwater (**DTW**): 9.72 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 21.5 ft.
Height of Water Column (**H=TD-DTW**): 22.28 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/16@1221 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 3.63 gal. (1 well volume) 10.9 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1205	300	21.67	0.798	3.36	7.93	-149	13.4	
1210	300	21.29	0.786	0.28	7.67	-85	5.5	
1215	300	21.13	0.789	0.20	7.60	-60	4.9	
1218	300	20.97	0.789	0.16	7.60	-33	4.4	
1221	300	20.94	0.787	0.13	7.53	-27	4.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-25
Date Purged/Sampled: 11/18/16 **Sampled By:** NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 32.0 ft.
Static Depth to Groundwater (**DTW**): 9.55 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 21.5 ft.
Height of Water Column (**H=TD-DTW**): 22.45 ft.

Purge Flow Rate: 350 mL/min
Volume Purged: 2.0 gallons
Date/Time of Sample: 11/18/16 ~~1129~~ @1129 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 3.66 gal. (1 well volume) 10.98 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1115	350	22.13	0.826	6.77	8.19	-132	8.8	
1120	350	21.13	0.767	0.20	8.77	-181	5.1	
1123	350	21.08	0.772	0.17	8.78	-182	4.9	
1126	350	21.08	0.767	0.16	8.79	-185	5.6	
1129	350	21.09	0.766	0.15	8.78	-185	5.2	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

* BC-25 Sample & Duplicate 4 *

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-03
Date Purged/Sampled: 11/9/14 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 27.5 ft.
Static Depth to Groundwater (**DTW**): 9.02 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 17.0 ft.
Height of Water Column (**H=TD-DTW**): 18.48 ft.

Purge Flow Rate: 150 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/14 @ 1412 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 3.01 gal. (1 well volume) 9.03 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1350	150	22.35	2.09	2.55	6.44	-255	6.6	
1355	150	22.15	2.09	1.49	6.36	-268	6.7	
1400		21.91	2.08	0.84	6.32	-273	5.4	
1405		21.70	2.08	0.47	6.30	-277	5.7	
1408		21.62	2.08	0.33	6.30	-281	6.0	
1412		21.73	2.09	0.45	6.30	-281	6.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-06
Date Purged/Sampled: 11/11/16 **Sampled By:** NB/BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 16.5 ft.
Static Depth to Groundwater (**DTW**): 9.32 ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): 7.18 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @1002 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0947	300	21.34	0.160	6.39	5.03	18	443	
0952	"	21.57	0.158	0.27	3.70	100	99.1	
0955	"	21.60	0.169	0.25	3.67	106	30.9	
0958	"	21.61	0.172	0.25	3.66	104	16.7	
1002	"	21.60	0.175	0.24	3.66	102	9.7	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-18
Date Purged/Sampled: 11/9/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 15.0 ft.
Static Depth to Groundwater (**DTW**): 11.08 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.9 ft.
Height of Water Column (**H=TD-DTW**): 3.92 ft.

Purge Flow Rate: 100 mL/min
Volume Purged: 0.75 gallons
Date/Time of Sample: 11/9/16 @ 1531 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft) 0.09 x 3 → 0.27 Gallons

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1520	100	21.94	2.06	1.93	3.10	126	176	
1525	100	21.94	1.11	1.07	3.00	267	25.3	
1528	100	21.94	1.10	0.82	3.02	292	5.5	
1531	100	21.94	1.09	6.79	3.03	297	6.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-19
Date Purged/Sampled: 11/9/14 **Sampled By:** BO/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 15.0 ft.
Static Depth to Groundwater (**DTW**): 8.60 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.9 ft.
Height of Water Column (**H=TD-DTW**): 6.4 ft.

Purge Flow Rate: 200 mL/min
Volume Purged: 0.5 gallons
Date/Time of Sample: 11/9/14 @ 1556 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft) .1472 x3 → 0.45 s

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1545	200	21.74	0.768	0.85	3.65	252	82.2	
1550	200	21.75	0.737	0.16	3.54	238	10.1	
1553	200	21.75	0.746	0.12	3.43	235	10.1	
1556		21.72	0.751	0.14	3.35	233	9.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-06
Date Purged/Sampled: 11/9/14 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 14.7 ft.
Static Depth to Groundwater (**DTW**): 9.22 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.7 ft.
Height of Water Column (**H=TD-DTW**): 5.48 ft.

Purge Flow Rate: 250 mL/min
Volume Purged: 3.5 gallons
Date/Time of Sample: 11/9/14 @ 1503 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 0.893 gal. (1 well volume) 2.67 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1435	250	21.77	0.778	7.98	3.69	-3	125	
1445	250	21.70	0.703	0.36	3.31	177	19.2	
1455	250	21.67	0.700	0.42	3.28	191	6.6	
1500	250	21.67	0.701	0.43	3.27	197	5.9	
1503	250	21.66	0.707	0.42	3.23	198	6.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BB-01
Date Purged/Sampled: 11/9/14 **Sampled By:** BO/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 96.0 ft.
Static Depth to Groundwater (**DTW**): 2.20 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 85.5 ft.
Height of Water Column (**H=TD-DTW**): 93.8 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/14 @ 1718 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 15.28 gal. (1 well volume) 45.8 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1705	300	23.29	0.289	4.00	8.11	-294	8.7	
1710	300	22.41	0.307	0.40	9.16	-323	8.6	
1715	300	22.24	0.303	0.15	9.79	-322	8.6	
1718	300	22.23	0.304	0.13	9.81	-317	8.4	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: South Well
Date Purged/Sampled: 1700 11/9/16 **Sampled By:** SD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/16 @ 1700 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1700		20.89	0.208	8.65	8.62	-159	8.7	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-17
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB/NR

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 28.0 ft.
Static Depth to Groundwater (**DTW**): 8.02 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 17.5 ft.
Height of Water Column (**H=TD-DTW**): 19.98 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1134 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1117	300	24.48	1.382	3.72	6.07	-206	5.6	
1123	300	23.99	2.68	0.38	6.34	-189	4.1	
1128	300	24.12	2.68	0.19	6.37	-187	4.2	
1131	300	24.15	2.68	0.16	6.37	-180	4.3	
1134	300	24.15	2.61	0.14	6.37	-179	4.4	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: North Well
Date Purged/Sampled: 11/9/14 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/9/14 @ 1630 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1630		21.88	0.294	5.21	8.70	-319	6.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: North Well
Date Purged/Sampled: 11/18/16 **Sampled By:** NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/18/16 @0955 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0955	–	22.52	0.277	1.30	10.71	-405	7.2	–

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

North Well

*Duplicate 5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-21R
Date Purged/Sampled: 11/10/16 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 17.5 ft.
Static Depth to Groundwater (DTW): 9.01 ft.
Screen Length (SL) from Boring Logs: 5 ft.
Depth to Top of Well Screen (TD-SL): 12.0 ft.
Height of Water Column (H=TD-DTW): 8.46 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1301 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1240	300	22.99	0.982	3.08	7.32	-206	4.2	
1245	"	23.02	1.092	1.77	7.14	-355	4.2	
1250	"	22.88	1.102	2.67	7.18	-320	4.5	
1255	"	22.75	1.368	2.40	7.10	-314	3.9	
1258	"	22.62	1.407	2.12	7.06	-308	4.0	
1301	"	22.62	1.410	2.11	7.05	-305	4.2	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-01A
Date Purged/Sampled: 11/20/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 46.0 ft.
Static Depth to Groundwater (**DTW**): 4.00 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 35.5 ft.
Height of Water Column (**H=TD-DTW**): 42 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/20/16 @1358 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 6.846 gal. (1 well volume) 20.5 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1340	300	23.55	0.296	2.09	6.78	-354	5.2	
1345	300	23.46	0.261	0.20	7.00	-366	5.5	
1350	300	23.33	0.260	0.14	7.14	-372	5.8	
1355	300	23.37	0.260	0.13	7.19	-372	5.8	
1358		23.31	0.262	0.12	7.19	-372	5.9	
1358								

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-01
Date Purged/Sampled: 11/10/14 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 26.0 ft.
Static Depth to Groundwater (**DTW**): 8.49 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 15.5 ft.
Height of Water Column (**H=TD-DTW**): 17.51 ft.

Purge Flow Rate: 350 mL/min
Volume Purged: 1.5 gallons
Date/Time of Sample: 11/10/14 @ 1330 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 2.85 gal. (1 well volume) 8.56 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1310	350	24.79	2.45	1.13	5.66	-201	45.0	
1315	350	24.60	2.45	0.22	5.46	-187	53.4	
1320	350	24.08	2.46	0.15	5.44	-175	47.4	
1325	350	24.06	2.54	0.40	5.41	-164	27.5	
1328	350	24.00	2.49	0.15	5.44	-163	28.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected	X	Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: PW-04
Date Purged/Sampled: 11/10/16 **Sampled By:** BD /NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 19.5 ft.
Static Depth to Groundwater (**DTW**): 5.88 ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): 13.62 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16@1533 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 2.22 gal. (1 well volume) 6.66 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1515	300	22.41	0.763	3.40	3.88	133	14.7	
1520	300	22.33	0.891	0.23	3.97	35	7.9	
1525	300	22.30	0.939	0.18	3.99	-79	6.6	
1530	300	22.27	1.023	0.15	3.99	-129	7.9	
1533	300	22.28	1.006	0.17	3.98	-125	7.7	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-15
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 17.3 ft.
Static Depth to Groundwater (**DTW**): 8.41 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 12.2 ft.
Height of Water Column (**H=TD-DTW**): 8.89 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1508 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1450		24.14	0.161	3.71	3.79	142	258	
1455		24.26	0.230	1.23	3.63	156	11.5	
1500		24.28	0.244	1.07	3.62	163	6.6	
1505		24.27	0.248	0.99	3.66	164	5.7	
1508		24.28	0.247	0.97	3.65	165	5.6	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-05
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 12.65 ft.
Static Depth to Groundwater (**DTW**): 9.61 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 7.65 ft.
Height of Water Column (**H=TD-DTW**): 3.04 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 1/10/16 @ 1436 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1415		24.11	0.099	2.85	4.48	-33	37.1	
1420		23.99	0.106	2.64	3.91	94	23.2	
1425		24.13	0.106	4.03	3.89	120	16.1	
1430		24.01	0.105	4.51	3.88	132	10.2	
1433		23.97	0.104	4.75	3.88	136	8.3	
1436		23.93	0.105	4.73	3.89	138	7.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-03
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NLS

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 16 ft.
Static Depth to Groundwater (**DTW**): 5.98 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 5.5 ft.
Height of Water Column (**H=TD-DTW**): 10.02 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1556 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.63 gal. (1 well volume) 4.89 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1540	300	23.31	0.416	7.70	2.80	62	29.9	
1545	300	23.57	0.381	0.31	3.08	-188	13.9	
1550	300	23.55	0.756	0.20	3.10	-234	5.5	
1553	300	23.55	0.769	0.18	3.08	-234	5.4	
1556	300	23.55	0.773	0.19	3.10	-237	5.4	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-22
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 17.5 ft.
Static Depth to Groundwater (**DTW**): 6.24 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 12.4 ft.
Height of Water Column (**H=TD-DTW**): 11.26 ft.

Purge Flow Rate: 250 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1618 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft) - 0.258 x3 -> 0.77

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1605	250	23.35	9.46	1.73	3.27	-215	22.1	
1610	250	23.38	10.01	0.31	3.33	-235	5.8	
1615	250	23.35	9.83	0.20	3.33	-237	5.5	
1618	250	23.34	9.79	0.22	3.34	-236	5.3	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-05
Date Purged/Sampled: 11/14/16 **Sampled By:** BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18.5 ft.
Static Depth to Groundwater (**DTW**): 8.57 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 8.0 ft.
Height of Water Column (**H=TD-DTW**): 9.43 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: @1024 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.53 gal. (1 well volume) 4.61 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1005	300	23.61	5.10	4.09	5.72	-115	53.7	
1010	300	24.01	5.06	0.41	5.65	-126	48.3	
1015	300	24.07	5.25	2.71	5.65	-141	22.1	
1018	300	24.13	5.28	5.66	6.00	-166	11.2	
1021	300	24.10	5.28	6.07	6.03	-170	9.0	
1024	300	24.08	5.28	6.10	6.10	-180	7.6	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	✓	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-09A
Date Purged/Sampled: 11/14/16 **Sampled By:** BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): ~~42.0~~ 54 ft.
Static Depth to Groundwater (**DTW**): 2.70 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 31.5 ft.
Height of Water Column (**H=TD-DTW**): 51.3 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/14/16 @ 1048 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 8.36 gal. (1 well volume) 25.08 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1035	300	21.96	0.262	0.54	7.15	-209	7.7	
1040	300	21.91	0.259	0.10	6.91	-175	6.2	
1045	300	21.92	0.260	0.09	6.88	-166	5.5	
1048	300	21.94	0.261	0.10	6.86	-162	5.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-02
Date Purged/Sampled: 11/14/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 11 ft.
Static Depth to Groundwater (**DTW**): 5.86 ft.
Screen Length (**SL**) from Boring Logs: 5 ft.
Depth to Top of Well Screen (**TD-SL**): 5.5 ft.
Height of Water Column (**H=TD-DTW**): ____ ft.

Purge Flow Rate: 300 mL/min
Volume Purged: ____ gallons
Date/Time of Sample: 11/14/16 @ 1620 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 0.837 gal. (1 well volume) 2.51 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) ____ gal. (1 well volume) ____ gal. (3 well volumes)
☐ Other: ____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) ____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1608	300	24.41	9.07	5.92	2.72	-157	13.7	
1611	300	24.87	6.85	0.55	2.77	-176	5.8	
1614	300	24.52	5.34	0.29	2.81	-173	4.4	
1617	300	24.36	5.06	0.25	2.82	-170	3.6	
1620	300	24.95	4.99	0.25	2.83	-167	3.5	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-A
Date Purged/Sampled: 11/11/16 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 27 ft.
Static Depth to Groundwater (**DTW**): 10.47 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 16.5 ft.
Height of Water Column (**H=TD-DTW**): 16.53 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/14/16 @ 1644 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 2.69 gal. (1 well volume) 8.08 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1633	300	23.05	0.856	4.90	6.08	-198	42.9	
1638	300	23.30	0.817	0.57	6.75	-235	6.8	
1641	300	23.05	0.817	0.45	6.86	-238	5.7	
1644	300	23.01	0.821	0.40	6.87	-238	4.6	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-01
Date Purged/Sampled: 11/11/10 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 19 ft.
Static Depth to Groundwater (**DTW**): 10.22 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 8.5 ft.
Height of Water Column (**H=TD-DTW**): 8.78 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/10 @ ~~1229~~ 1225 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.43 gal. (1 well volume) 4.29 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
~~1150~~	300	21.57	0.002	10.01	6.18	-112	~~104~~	
1155	300	~~21.67~~	~~0.002~~	~~3.83~~	5.89	-12	103	VOID
~~1200~~	~~300~~	21.80	0.002	3.88	5.87	-14	103	
~~1203~~								
1210	300	23.56	0.565	8.03	5.51	-48	25.5	
1213		2						
1216		23.65	0.623	3.35	5.59	-273	38.0	
1219		23.64	0.674	3.10	5.66	-287	32.4	
1223		23.61	0.669	1.89	5.69	-295	19.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

1225

Total Metals Collected	X	Dissolved Metals Collected	X	Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-04
Date Purged/Sampled: 11/11/16 **Sampled By:** BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 14.3 ft.
Static Depth to Groundwater (**DTW**): 8.83 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.3 ft.
Height of Water Column (**H=TD-DTW**): 5.47 ft.

Purge Flow Rate: _____ mL/min
Volume Purged: DRY gallons
Date/Time of Sample: 11/11/16 @ 1250 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1235		23.82	3.16	0.97	6.31	-324	362	
1240		24.15	3.07	0.31	6.39	-355	24.2	
1243		24.17	3.00	0.20	6.41	-360	17.9	
1246		24.17	3.00	0.19	6.42	-360	14.3	
1250		24.17	2.99	0.17	6.43	-362	10.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET _____ OF _____ MS/MSD #1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-03
Date Purged/Sampled: 11/11/16 **Sampled By:** BO/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 13.5 ft.
Static Depth to Groundwater (**DTW**): 7.49 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 3 ft.
Height of Water Column (**H=TD-DTW**): 6.01 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @ 1601 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 0.979 gal. (1 well volume) 2.93 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1549	300	24.16	0.257	4.15	4.26	83	19.3	
1552	300	24.72	0.663	1.14	3.50	158	12.6	
1555	300	24.72	0.914	0.72	3.35	165	8.2	
1558	300	24.77	0.965	0.71	3.34	166	7.5	
1601	300	24.80	0.979	0.69	3.32	166	7.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-03A
Date Purged/Sampled: 11/11/16 **Sampled By:** BD /NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 100 ft.
Static Depth to Groundwater (**DTW**): 1.14 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 89.5 ft.
Height of Water Column (**H=TD-DTW**): 98.86 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @1541 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 16.1 gal. (1 well volume) 48.3 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1527	300	22.46	0.311	4.48	7.18	95	11.4	
1532	300	22.41	0.304	1.00	8.04	68	6.5	
1535	300	22.36	0.305	0.84	8.37	55	5.5	
1538	300	22.33	0.304	0.81	8.48	48	4.9	
1541	300	22.33	0.302	0.79	8.55	42	5.2	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-02
Date Purged/Sampled: 11/11/16 **Sampled By:** BD/WB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 10.5 ft.
Static Depth to Groundwater (**DTW**): 7.65 ft.
Screen Length (**SL**) from Boring Logs: 5 ft.
Depth to Top of Well Screen (**TD-SL**): 5 ft.
Height of Water Column (**H=TD-DTW**): 2.85 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @ 1446 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 0.46 gal. (1 well volume) 1.4 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1435	300	23.46	0.710	4.15	2.93	165	16.1	
1440	300	24.02	0.686	1.13	2.88	183	9.6	
1443	300	24.12	0.703	0.76	2.88	182	7.1	
1446	300	24.14	0.713	0.46	2.88	187	5.4	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: TEPA-P7D
Date Purged/Sampled: 11/11/16 **Sampled By:** NB/BD

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): 8.95 ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @1418 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 1" Well (H x 0.041 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1350	350	21.25	0.851	4.59	5.37	31.0	49.3	
1355	"	21.62	0.765	4.32	5.97	64.0	42.1	
1400	"	21.46	0.809	4.43	6.32	34.0	41.3	
1403	"	21.38	0.845	6.08	6.40	24.0	35.1	
1406	"	21.27	0.890	6.63	6.49	18.0	27.3	
1409	"	21.13	1.063	6.74	6.59	6.0	20.1	
1412	"	21.07	1.149	6.81	6.61	1	17.3	
1415	"	21.03	1.236	6.81	6.59	-3	14.4	
1418	"	21.00	1.273	6.82	6.55	-3	10.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-01
Date Purged/Sampled: 11/11/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 13.5 ft.
Static Depth to Groundwater (DTW): 6.96 ft.
Screen Length (SL) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (TD-SL): 8.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @ 1520 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/-3%	+/- 10%	+/-0.1	+/-10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1500	250	22.20	1.269	5.78	3.36	186	122	
1505	"	22.19	1.134	0.71	3.32	191	32.5	
1510	"	22.18	1.027	0.56	3.38	192	18.2	
1513	"	22.21	1.014	0.53	3.40	192	17.1	
1516	"	22.25	0.999	0.52	3.44	193	13.4	
1520	"	22.24	1.003	0.53	3.45	192	10.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-02
Date Purged/Sampled: 11/11/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 15.7 ft.
Static Depth to Groundwater (**DTW**): 10.25 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 10.7 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @ 1345 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1330	300	22.09	1.061	6.60	3.49	123	14.6	
1335	"	22.22	1.172	0.43	3.22	126	12.5	
1338	"	22.19	1.240	0.29	3.18	160	10.1	
1341	"	22.22	1.286	0.23	3.17	174	9.1	
1345	"	22.19	1.289	0.20	3.21	172	9.7	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-03
Date Purged/Sampled: 11/11/16 **Sampled By:** BO/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 17.2 ft.
Static Depth to Groundwater (**DTW**): 11.18 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 12.2 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @1316 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 1.5" Well (H x 0.092 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1300	250	24.26	2.68	2.51	6.18	-348	103	
1305	"	24.38	2.31	0.25	6.39	-352	36.1	
1310	"	24.45	2.09	0.20	6.40	-358	14.0	
1313	"	24.43	2.07	0.16	6.40	-359	10.2	
1316	"	24.45	2.05	0.15	6.39	-360	9.2	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-01
Date Purged/Sampled: 11/11/16 **Sampled By:** NB/BS

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 28.5 ft.
Static Depth to Groundwater (DTW): 12.44 ft.
Screen Length (SL) from Boring Logs: 15 ft.
Depth to Top of Well Screen (TD-SL): 13 ft.
Height of Water Column (H=TD-DTW): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/11/16 @1046 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1030	350	21.47	5.08	2.18	3.14	-181	9.2	
1035	"	21.66	5.18	0.24	3.16	-197	5.1	
1040	"	21.70	5.22	0.19	3.15	-210	4.6	
1043	"	21.72	5.24	0.18	3.16	-210	4.2	
1046	"	21.71	5.24	0.18	3.15	-211	4.2	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-09
Date Purged/Sampled: 11/10/16 **Sampled By:** BD / NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18 ft.
Static Depth to Groundwater (**DTW**): 7.41 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 7.5 ft.
Height of Water Column (**H=TD-DTW**): 10.59 ft.

Purge Flow Rate: 350 mL/min
Volume Purged: 2 gallons
Date/Time of Sample: 11/10/16 @ 1026 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.72 gal. (1 well volume) 5.17 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1016	350	21.20	3.66	0.64	3.40	-171	13.3	
1015	350	21.64	4.02	0.20	3.14	-195	9.0	
1020	350	21.83	3.67	0.16	3.16	-197	6.5	
1023	350	21.94	3.55	0.14	3.24	-205	5.0	
1026	350	22.05	3.53	0.13	3.29	-209	4.9	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-09
Date Purged/Sampled: 11/8/16 **Sampled By:** NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18 ft.
Static Depth to Groundwater (**DTW**): 8.20 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 7.5 ft.
Height of Water Column (**H=TD-DTW**): 9.8 ft.

Purge Flow Rate: 300 mL/min
Volume Purged: 1.5 gallons
Date/Time of Sample: 11/8/16 @1044 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.597 gal. (1 well volume) 4.79 gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1030	300	22.26	3.66	0.63	6.07	-284	16.7	
1035	300	22.31	3.66	0.22	6.08	-293	10.5	
1038	300	22.40	3.66	0.19	6.01	-287	8.9	
1041	300	22.47	3.66	0.18	6.07	-289	8.5	
1044	300	22.22	3.65	0.18	6.01	-282	8.1	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected	X	Sulfides Collected	X

SHEET 1 OF 1

BA-09

Duplicate 3

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-09A
Date Purged/Sampled: 11/10/16 **Sampled By:** BS/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 42.0 ft.
Static Depth to Groundwater (**DTW**): 0.50 ft.
Screen Length (**SL**) from Boring Logs: 10 ft.
Depth to Top of Well Screen (**TD-SL**): 31.5 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 1006 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/-1°C	+/-3%	+/-10%	+/-0.1	+/-10%	+/-10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0950	300	20.27	0.295	2.91	5.83	-255	5.5	
0955	"	20.40	0.251	0.23	6.70	-285	5.0	
1000	"	20.50	0.254	0.17	6.86	-285	4.2	
1003	"	20.56	0.252	0.16	6.90	-283	4.6	
1006	"	20.59	0.253	0.15	6.95	-279	4.6	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-06
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 14.36 ft.
Static Depth to Groundwater (**DTW**): 7.84 ft.
Screen Length (**SL**) from Boring Logs: 5.0 ft.
Depth to Top of Well Screen (**TD-SL**): 9.6 ft.
Height of Water Column (**H=TD-DTW**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 939 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ Other: 0.75" Well (H x 0.023 gal/ft)

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0925	350	21.78	1.78	7.59	4.84	-181	30.1	
0930	"	22.24	3.89	0.44	3.67	-199	14.1	
0933	"	22.28	4.02	0.36	3.64	-198	6.9	
0936	"	22.30	4.07	0.31	3.62	-195	6.1	
0939	"	22.34	4.08	0.29	3.61	-193	5.8	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-04
Date Purged/Sampled: 11/10/16 **Sampled By:** BD/NB/NR

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 24 ft.
Static Depth to Groundwater (DTW): 14.20 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 13.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16@1056 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☒ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☐ Other (Specify) _____

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
1040	300	21.46	0.461	1.15	5.82	-226	6.8	
1045	"	21.40	0.451	0.62	6.14	-251	6.0	
1050	"	21.29	0.430	0.92	6.23	-259	13.6	
1053	"	21.30	0.419	1.13	6.29	-258	14.2	
1056	"	21.29	0.415	1.24	6.31	-254	15.0	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected	X	Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0031
Site Location: Ponchatoula, Louisiana
Monitor Well No.: WW-09
Date Purged/Sampled: 11/10/16 **Sampled By:** BD /NB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 60 ft.
Static Depth to Groundwater (**DTW**): UNK ft.
Screen Length (**SL**) from Boring Logs: UNK ft.
Depth to Top of Well Screen (**TD-SL**): UNK ft.
Height of Water Column (**H=TD-DTW**): UNK ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 11/10/16 @ 0920 Time

WELL CASING VOLUME CALCULATIONS

☐ 2" Well (H x 0.163 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☒ 4" Well (H x 0.653 gal/ft) _____ gal. (1 well volume) _____ gal. (3 well volumes)
☐ Other: _____

PURGING METHOD

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☒ Water Well
☐ Other (Specify)

METHOD OF SAMPLE COLLECTION

☐ Peristaltic Pump
☐ Low-flow Submersible Pump
☐ Bailer ☐ Dedicated ☐ Disposable
☒ Other (Specify) Let water flow for 15 minutes

LOW-FLOW MONITORING PARAMETERS

Time	Flow Rate	Temp.	Specific Conductivity	Dissolved Oxygen	pH	ORP	Turbidity	DTW
hr/min	mL/min	°C	mS/cm	mg/L	Standard Units	mV	NTU or FTU	feet
Targets	100 - 500 mL/min	+/- 1°C	+/- 3%	+/- 10%	+/- 0.1	+/- 10%	+/- 10% (if >10 NTU or FTU)	<0.3 ft. or Top of Screen
0920		19.53	0.287	11.90	8.67	-351	5.9	

Notes: 1. Well is stable if 3 consecutive measurements of as many as 3 indicators are within their target ranges.
2. Take measurements every 3 to 5 minutes.

Total Metals Collected	X	Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1 MS/MSD #1

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

Pace Analytical Services, Inc.
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

August 30, 2016

Nick Rodehorst
SEMS
3801 N. Causeway Blvd
Metairie, LA 70002

RE: Project: Delatte Metals
Pace Project No.: 2041663

Dear Nick Rodehorst:
Enclosed are the analytical results for sample(s) received by the laboratory on August 25, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

William Shackelford
william.shackelford@pacelabs.com
Project Manager

Enclosures

cc: Lab Data, SEMS, Inc.
Jerry Sossamon, SEMS Metairie
Brian Sullivan, SEMS

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CERTIFICATIONS

Project: Delatte Metals
Pace Project No.: 2041663

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylviania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

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SAMPLE SUMMARY

Project: Delatte Metals
Pace Project No.: 2041663

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2041663001	**NORTH WELL**	Water	08/24/16 09:00	08/25/16 11:35
2041663002	**SOUTH WELL**	Water	08/24/16 09:35	08/25/16 11:35
2041663003	**(b) (6) [redacted] WELL**	Water	08/24/16 10:15	08/25/16 11:35
2041663004	**WW-04**	Water	08/24/16 10:40	08/25/16 11:35
2041663005	**WW-09**	Water	08/24/16 11:10	08/25/16 11:35
2041663006	**DUPLICATE**	Water	08/24/16 11:30	08/25/16 11:35

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2041663

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2041663001	NORTH WELL	EPA 6020	KJR	6
2041663002	SOUTH WELL	EPA 6020	KJR	6
2041663003	(b) (6) [redacted] WELL	EPA 6020	KJR	6
2041663004	WW-04	EPA 6020	KJR	6
2041663005	WW-09	EPA 6020	KJR	6
2041663006	DUPLICATE	EPA 6020	KJR	6

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: NORTH WELL **Lab ID: 2041663001** Collected: 08/24/16 09:00 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 22:44	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 22:44	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 22:44	7439-92-1	
Manganese	**3.8**	ug/L	1.0	1	08/26/16 09:03	08/26/16 22:44	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 22:44	7440-02-0	
Zinc	**8.1**	ug/L	5.0	1	08/26/16 09:03	08/26/16 22:44	7440-66-6	M1

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: SOUTH WELL **Lab ID: 2041663002** Collected: 08/24/16 09:35 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:12	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:12	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:12	7439-92-1	
Manganese	**3.5**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:12	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:12	7440-02-0	
Zinc	**9.8**	ug/L	5.0	1	08/26/16 09:03	08/26/16 23:12	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: [redacted] **WELL** **Lab ID: 2041663003** Collected: 08/24/16 10:15 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.5**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:16	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:16	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:16	7439-92-1	
Manganese	**21.6**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:16	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:16	7440-02-0	
Zinc	ND	ug/L	5.0	1	08/26/16 09:03	08/26/16 23:16	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: WW-04 **Lab ID: 2041663004** Collected: 08/24/16 10:40 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:20	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:20	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:20	7439-92-1	
Manganese	**4.0**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:20	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:20	7440-02-0	
Zinc	ND	ug/L	5.0	1	08/26/16 09:03	08/26/16 23:20	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: WW-09 **Lab ID: 2041663005** Collected: 08/24/16 11:10 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:32	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:32	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:32	7439-92-1	
Manganese	**18.2**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:32	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:32	7440-02-0	
Zinc	ND	ug/L	5.0	1	08/26/16 09:03	08/26/16 23:32	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2041663

Sample: DUPLICATE **Lab ID: 2041663006** Collected: 08/24/16 11:30 Received: 08/25/16 11:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:36	7440-38-2	
Cadmium	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:36	7440-43-9	
Lead	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:36	7439-92-1	
Manganese	**3.9**	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:36	7439-96-5	
Nickel	ND	ug/L	1.0	1	08/26/16 09:03	08/26/16 23:36	7440-02-0	
Zinc	ND	ug/L	5.0	1	08/26/16 09:03	08/26/16 23:36	7440-66-6	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2041663

QC Batch: 61860 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 2041663001, 2041663002, 2041663003, 2041663004, 2041663005, 2041663006

METHOD BLANK: 255282 Matrix: Water
Associated Lab Samples: 2041663001, 2041663002, 2041663003, 2041663004, 2041663005, 2041663006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	08/26/16 21:07	
Cadmium	ug/L	ND	1.0	08/26/16 21:07	
Lead	ug/L	ND	1.0	08/26/16 21:07	
Manganese	ug/L	ND	1.0	08/26/16 21:07	
Nickel	ug/L	ND	1.0	08/26/16 21:07	
Zinc	ug/L	ND	5.0	08/26/16 21:07	

LABORATORY CONTROL SAMPLE: 255283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	21.6	108	83-115	
Cadmium	ug/L	20	21.0	105	85-115	
Lead	ug/L	20	20.3	102	84-115	
Manganese	ug/L	20	21.0	105	85-115	
Nickel	ug/L	20	20.9	105	80-118	
Zinc	ug/L	20	20.9	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 255284 255285

Parameter	Units	2041663001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	20	20	20.7	20.9	103	105	80-120	1	20	
Cadmium	ug/L	ND	20	20	20.3	20.4	101	102	80-120	1	20	
Lead	ug/L	ND	20	20	20.8	20.9	100	101	80-120	1	20	
Manganese	ug/L	3.8	20	20	23.4	23.8	98	100	80-120	1	20	
Nickel	ug/L	ND	20	20	20.0	20.3	100	101	80-120	2	20	
Zinc	ug/L	8.1	20	20	23.3	23.2	76	76	80-120	0	20	M1

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

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QUALIFIERS

Project: Delatte Metals
Pace Project No.: 2041663

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The Nelac Institute

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2041663

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2041663001	**NORTH WELL**	EPA 3010	61860	EPA 6020	61864
2041663002	**SOUTH WELL**	EPA 3010	61860	EPA 6020	61864
2041663003	(b) (6) [redacted] **WELL**	EPA 3010	61860	EPA 6020	61864
2041663004	**WW-04**	EPA 3010	61860	EPA 6020	61864
2041663005	**WW-09**	EPA 3010	61860	EPA 6020	61864
2041663006	**DUPLICATE**	EPA 3010	61860	EPA 6020	61864

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Pace A

WO# : 2041663

2041663

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of

Section A
Required Client Information:

Company:	Sems Inc.
Address:	3801 N. Causeway #209
	Metairie, La. 70602
Email To:	rtibbs@semsinc.net
Phone:	985-502-7345
Fax:	
Requested Due Date/TAT:	

Required Project Information:

Report To:	Rick Tibbs
Copy To:	
Purchase Order No.:	
Project Name:	Delatte Metals
Project Number:	207-0029

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Randy Shackelford
Pace Profile #:	6306

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D
Required Client Information

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	METALS	MS/MSD	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	NORTH WELL	WT	G			08/24/16	9:00		3			X							X	X		REGULAR TAT
2	SOUTH WELL	WT	G			08/24/16	9:35		1			X							X			REGULAR TAT
3	(b) (6) WELL	WT	G			08/24/16	10:15		1			X							X			REGULAR TAT
4	WW-04	WT	G			08/24/16	10:40		1			X							X			REGULAR TAT
5	WW-09	WT	G			08/24/16	11:10		1			X							X			REGULAR TAT
6	DUPLICATE	WT	G			08/24/16	11:30		1			X							X			REGULAR TAT
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Report only: AS, Cd, Pb,Mn,Ni and Zn	Rick Tibbs / Sems Inc.	8/25/16	840	Alvin Gill Pace	8/25/16	840				
	Alvin Gill Pace	8-25-16	1135	Karen H Brown	8/25/16	1135	6.0	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: RICK TIBBS

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 8/24/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-Feb-2007

WO#: 2041663

PM: WRS Due Date: 09/09/16

CLIENT: 20-sems Met

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition U

Project #: 20

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact: ☐Yes ☑No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: (Wet) Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 8-25-16

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☐Yes	☑No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☐Yes	☐No	☑N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☑No	☐N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 — If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO_3 _____ H_2SO_4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

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(504)469-0333

December 13, 2016

Nick Rodehorst
SEMS
3801 N. Causeway Blvd
Metairie, LA 70002

RE: Project: Delatte Metals
Pace Project No.: 2045754

Dear Nick Rodehorst:
Enclosed are the analytical results for sample(s) received by the laboratory between November 14, 2016 and November 21, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

William Shackelford
william.shackelford@pacelabs.com
Project Manager

Enclosures

cc: Lab Data, SEMS, Inc.
Jerry Sossamon, SEMS Metairie
Brian Sullivan, SEMS

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CERTIFICATIONS

Project: Delatte Metals
Pace Project No.: 2045754

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch: 11277CA
Florida Department of Health (NELAC): E87595
Illinois Environmental Protection Agency: 0025721
Kansas Department of Health and Environment (NELAC): E-10266
Louisiana Dept. of Environmental Quality (NELAC/LELAP): 02006
Pennsylviania Dept. of Env Protection (NELAC): 68-04202
Texas Commission on Env. Quality (NELAC): T104704405-09-TX
U.S. Dept. of Agriculture Foreign Soil Import: P330-10-00119
Commonwealth of Virginia (TNI): 480246

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 15-016-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407
Utah Certification #: KS00021
Kansas Field Laboratory Accreditation: # E-92587
Missouri Certification: 10070

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SAMPLE SUMMARY

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2045754001	CA-41	Water	11/08/16 09:40	11/14/16 15:35
2045754002	CA-51	Water	11/08/16 09:17	11/14/16 15:35
2045754003	GSGP-03	Water	11/08/16 08:52	11/14/16 15:35
2045754004	BRIDGE	Water	11/08/16 10:00	11/14/16 15:35
2045754005	CL-05	Water	11/08/16 10:20	11/14/16 15:35
2045754006	CL-19	Water	11/08/16 10:40	11/14/16 15:35
2045754007	(b) (6) WELL	Water	11/10/16 09:55	11/14/16 15:35
2045754008	WW-04	Water	11/10/16 09:05	11/14/16 15:35
2045754009	BC-3	Water	11/09/16 10:16	11/14/16 15:35
2045754010	DW-04	Water	11/09/16 11:46	11/14/16 15:35
2045754011	MW-03	Water	11/09/16 14:12	11/14/16 15:35
2045754012	MW-06	Water	11/11/16 10:06	11/14/16 15:35
2045754013	GSGP-18	Water	11/09/16 15:31	11/14/16 15:35
2045754014	GSGP-19	Water	11/09/16 15:59	11/14/16 15:35
2045754015	SOUTH WELL	Water	11/09/16 17:00	11/14/16 15:35
2045754016	BC-17	Water	11/10/16 11:34	11/14/16 15:35
2045754017	NORTH WELL	Water	11/09/16 16:30	11/14/16 15:35
2045754018	BC-21R	Water	11/10/16 13:01	11/14/16 15:35
2045754019	BA-01	Water	11/10/16 13:30	11/14/16 15:35
2045754020	PW-04	Water	11/10/16 15:33	11/14/16 15:35
2045754021	GSG-15	Water	11/10/16 15:08	11/14/16 15:35
2045754022	NWGS-05	Water	11/10/16 14:36	11/14/16 15:35
2045754023	DW-03	Water	11/10/16 15:56	11/14/16 15:35
2045754024	GSGP-22	Water	11/10/16 16:18	11/14/16 15:35
2045754025	BA-05	Water	11/14/16 10:24	11/14/16 15:35
2045754026	DW-02	Water	11/11/16 16:20	11/14/16 15:35
2045754027	MW-A	Water	11/11/16 16:44	11/14/16 15:35
2045754028	DW-01	Water	11/11/16 12:25	11/14/16 15:35
2045754029	NWGS-04	Water	11/11/16 12:20	11/14/16 15:35
2045754030	BA-03	Water	11/11/16 16:01	11/14/16 15:35
2045754031	MW-02	Water	11/11/16 14:46	11/14/16 15:35
2045754032	TEPA-P7D	Water	11/11/16 14:18	11/14/16 15:35
2045754033	NWGS-01	Water	11/11/16 15:20	11/14/16 15:35
2045754034	NWGS-02	Water	11/11/16 13:45	11/14/16 15:35
2045754035	NWGS-06	Water	11/09/16 15:03	11/14/16 15:35
2045754036	NWGS-03	Water	11/11/16 13:16	11/14/16 15:35
2045754037	MW-01	Water	11/11/16 10:46	11/14/16 15:35

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SAMPLE SUMMARY

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2045754038	BA-09	Water	11/10/16 10:26	11/14/16 15:35
2045754039	BA-09A	Water	11/10/16 10:06	11/14/16 15:35
2045754040	GSGP-6	Water	11/10/16 09:39	11/14/16 15:35
2045754041	MW-4	Water	11/10/16 10:56	11/14/16 15:35
2045754042	WW-09	Water	11/10/16 09:26	11/14/16 15:35
2045754043	DUP#2	Water	11/11/16 00:00	11/14/16 15:35
2045754044	BC-19	Water	11/11/16 09:26	11/14/16 15:35
2045754045	BC-07	Water	11/09/16 10:46	11/14/16 15:35
2045754046	BB-01	Water	11/09/16 17:18	11/14/16 15:35
2045754047	BA-05A	Water	11/14/16 10:48	11/14/16 15:35
2045754048	BA-03A	Water	11/11/16 15:41	11/14/16 15:35
2045754049	BA-01A	Water	11/10/16 13:58	11/14/16 15:35
2045754050	DUP #1	Water	11/08/16 00:00	11/14/16 15:35
2045754051	BC-25	Water	11/18/16 11:29	11/21/16 14:30
2045754052	Duplicate 3	Water	11/18/16 10:44	11/21/16 14:30
2045754053	Duplicate 4	Water	11/18/16 11:29	11/21/16 14:30
2045754054	Duplicate 5	Water	11/18/16 09:55	11/21/16 14:30

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2045754001	CA-41	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754002	CA-51	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754003	GSGP-03	EPA 6020	KJR	6	PASI-N
2045754004	BRIDGE	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754005	CL-05	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754006	CL-19	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754007	(b) (6) [redacted] WELL	EPA 6020	KJR	6	PASI-N
2045754008	WW-04	EPA 6020	KJR	6	PASI-N
2045754009	BC-3	EPA 6020	KJR	6	PASI-N
2045754010	DW-04	EPA 6020	KJR	6	PASI-N
2045754011	MW-03	EPA 6020	KJR	6	PASI-N
2045754012	MW-06	EPA 6020	KJR	6	PASI-N
2045754013	GSGP-18	EPA 6020	KJR	6	PASI-N
2045754014	GSGP-19	EPA 6020	KJR	6	PASI-N
2045754015	SOUTH WELL	EPA 6020	KJR	6	PASI-N
2045754016	BC-17	EPA 6020	KJR	6	PASI-N
2045754017	NORTH WELL	EPA 6020	KJR	6	PASI-N
2045754018	BC-21R	EPA 6020	KJR	6	PASI-N
2045754019	BA-01	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2045754020	PW-04	EPA 6020	KJR	6	PASI-N
2045754021	GSG-15	EPA 6020	KJR	6	PASI-N
2045754022	NWGS-05	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754023	DW-03	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754024	GSGP-22	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754025	BA-05	EPA 6020	KJR	6	PASI-N

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2045754026	DW-02	EPA 6020	KJR	6	PASI-N
2045754027	MW-A	EPA 6020	KJR	6	PASI-N
2045754028	DW-01	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754029	NWGS-04	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754030	BA-03	EPA 6020	KJR	6	PASI-N
2045754031	MW-02	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754032	TEPA-P7D	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754033	NWGS-01	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754034	NWGS-02	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754035	NWGS-06	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754036	NWGS-03	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754037	MW-01	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754038	BA-09	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754039	BA-09A	EPA 6020	KJR	6	PASI-N
2045754040	GSGP-6	EPA 6020	KJR	6	PASI-N
2045754041	MW-4	EPA 6020	KJR	6	PASI-N

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2045754042	WW-09	EPA 6020	KJR	6	PASI-N
2045754043	DUP#2	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754044	BC-19	EPA 6020	KJR	6	PASI-N
2045754045	BC-07	EPA 6020	KJR	6	PASI-N
2045754046	BB-01	EPA 6020	KJR	6	PASI-N
2045754047	BA-05A	EPA 6020	KJR	6	PASI-N
2045754048	BA-03A	EPA 6020	KJR	6	PASI-N
2045754049	BA-01A	EPA 6020	KJR	6	PASI-N
2045754050	DUP #1	EPA 6020	KJR	6	PASI-N
2045754051	BC-25	EPA 6020	KJR	6	PASI-N
2045754052	Duplicate 3	EPA 6020	KJR	6	PASI-N
		EPA 9034	LJL	1	PASI-N
		EPA 9056	RAB	1	PASI-K
2045754053	Duplicate 4	EPA 6020	KJR	6	PASI-N
2045754054	Duplicate 5	EPA 6020	KJR	6	PASI-N

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: CA-41 **Lab ID: 2045754001** Collected: 11/08/16 09:40 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:02	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:02	7440-43-9	
Lead	**2.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:02	7439-92-1	
Manganese	**170**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:02	7439-96-5	
Nickel	**2.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:02	7440-02-0	
Zinc	**25.0**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:02	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**128**	ug/L	1.0	1	11/23/16 09:06	12/05/16 01:51	7439-96-5	
Nickel, Dissolved	**1.1**	ug/L	1.0	1	11/23/16 09:06	12/05/16 01:51	7440-02-0	
Zinc, Dissolved	**13.2**	ug/L	5.0	1	11/23/16 09:06	12/05/16 01:51	7440-66-6	
Arsenic, Dissolved	**1.5**	ug/L	1.0	1	11/23/16 09:06	12/05/16 01:51	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 01:51	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 01:51	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: CA-51 **Lab ID: 2045754002** Collected: 11/08/16 09:17 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:06	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:06	7440-43-9	
Lead	**2.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:06	7439-92-1	
Manganese	**172**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:06	7439-96-5	
Nickel	**2.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:06	7440-02-0	
Zinc	**26.2**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:06	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**127**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:15	7439-96-5	
Nickel, Dissolved	**1.4**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:15	7440-02-0	
Zinc, Dissolved	**13.3**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:15	7440-66-6	
Arsenic, Dissolved	**1.5**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:15	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:15	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:15	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSGP-03 **Lab ID: 2045754003** Collected: 11/08/16 08:52 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**4.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:10	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:10	7440-43-9	
Lead	**1.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:10	7439-92-1	
Manganese	**875**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:10	7439-96-5	
Nickel	**1.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:10	7440-02-0	
Zinc	**5.0**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:10	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BRIDGE **Lab ID: 2045754004** Collected: 11/08/16 10:00 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:14	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:14	7440-43-9	
Lead	**2.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:14	7439-92-1	
Manganese	**185**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:14	7439-96-5	
Nickel	**2.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:14	7440-02-0	
Zinc	**25.5**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:14	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**133**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:19	7439-96-5	
Nickel, Dissolved	**1.3**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:19	7440-02-0	
Zinc, Dissolved	**13.0**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:19	7440-66-6	
Arsenic, Dissolved	**1.6**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:19	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:19	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:19	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: CL-05 **Lab ID: 2045754005** Collected: 11/08/16 10:20 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:18	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:18	7440-43-9	
Lead	**3.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:18	7439-92-1	
Manganese	**407**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:18	7439-96-5	
Nickel	**2.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:18	7440-02-0	
Zinc	**20.8**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:18	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**380**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:23	7439-96-5	
Nickel, Dissolved	**2.0**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:23	7440-02-0	
Zinc, Dissolved	**18.8**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:23	7440-66-6	
Arsenic, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:23	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:23	7440-43-9	
Lead, Dissolved	**1.6**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:23	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: CL-19 **Lab ID: 2045754006** Collected: 11/08/16 10:40 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:22	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:22	7440-43-9	
Lead	**2.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:22	7439-92-1	
Manganese	**260**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:22	7439-96-5	
Nickel	**1.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:22	7440-02-0	
Zinc	**13.3**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:22	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**244**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:27	7439-96-5	
Nickel, Dissolved	**1.3**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:27	7440-02-0	
Zinc, Dissolved	**17.6**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:27	7440-66-6	
Arsenic, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:27	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:27	7440-43-9	
Lead, Dissolved	**1.4**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:27	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: (b) (6) **WELL** **Lab ID: 2045754007** Collected: 11/10/16 09:55 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:26	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:26	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:26	7439-92-1	
Manganese	**22.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:26	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:26	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:26	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: WW-04 **Lab ID: 2045754008** Collected: 11/10/16 09:05 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:30	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:30	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:30	7439-92-1	
Manganese	**3.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:30	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:30	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:30	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-3 **Lab ID: 2045754009** Collected: 11/09/16 10:16 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:42	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:42	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:42	7439-92-1	
Manganese	**64.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:42	7439-96-5	
Nickel	**1.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:42	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:42	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DW-04 **Lab ID: 2045754010** Collected: 11/09/16 11:46 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**3.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:46	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:46	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:46	7439-92-1	
Manganese	**44.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:46	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:46	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:46	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-03 **Lab ID: 2045754011** Collected: 11/09/16 14:12 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:49	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:49	7440-43-9	
Lead	**4.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:49	7439-92-1	
Manganese	**842**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:49	7439-96-5	
Nickel	**1.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:49	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:49	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-06 **Lab ID: 2045754012** Collected: 11/11/16 10:06 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:53	7440-38-2	
Cadmium	**6.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:53	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:53	7439-92-1	
Manganese	**709**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:53	7439-96-5	
Nickel	**6.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:53	7440-02-0	
Zinc	**28.5**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:53	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSGP-18 **Lab ID: 2045754013** Collected: 11/09/16 15:31 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:57	7440-38-2	
Cadmium	**126**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:57	7440-43-9	
Lead	**2.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:57	7439-92-1	
Manganese	**1570**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:57	7439-96-5	
Nickel	**47.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 03:57	7440-02-0	
Zinc	**344**	ug/L	5.0	1	11/18/16 13:24	12/05/16 03:57	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSGP-19 **Lab ID: 2045754014** Collected: 11/09/16 15:59 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**14.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:01	7440-38-2	
Cadmium	**15.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:01	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:01	7439-92-1	
Manganese	**1260**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:01	7439-96-5	
Nickel	**19.6**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:01	7440-02-0	
Zinc	**39.9**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:01	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: SOUTH WELL **Lab ID: 2045754015** Collected: 11/09/16 17:00 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:05	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:05	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:05	7439-92-1	
Manganese	**4.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:05	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:05	7440-02-0	
Zinc	**48.0**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:05	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-17 **Lab ID: 2045754016** Collected: 11/10/16 11:34 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.6**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:09	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:09	7440-43-9	
Lead	**21.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:09	7439-92-1	
Manganese	**95.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:09	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:09	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:09	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NORTH WELL **Lab ID: 2045754017** Collected: 11/09/16 16:30 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:13	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:13	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:13	7439-92-1	
Manganese	**3.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:13	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:13	7440-02-0	
Zinc	**5.8**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:13	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-21R **Lab ID: 2045754018** Collected: 11/10/16 13:01 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:17	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:17	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:17	7439-92-1	
Manganese	**114**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:17	7439-96-5	
Nickel	**1.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:17	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:17	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-01 **Lab ID: 2045754019** Collected: 11/10/16 13:30 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:29	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:29	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:29	7439-92-1	
Manganese	**1250**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:29	7439-96-5	
Nickel	**29.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:29	7440-02-0	
Zinc	**39.9**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:29	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**1230**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:31	7439-96-5	
Nickel, Dissolved	**29.0**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:31	7440-02-0	
Zinc, Dissolved	**40.7**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:31	7440-66-6	
Arsenic, Dissolved	**1.7**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:31	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:31	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:31	7439-92-1	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: PW-04 **Lab ID: 2045754020** Collected: 11/10/16 15:33 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:48	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:48	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:48	7439-92-1	
Manganese	**1120**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:48	7439-96-5	
Nickel	**21.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:48	7440-02-0	
Zinc	**53.5**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:48	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSG-15 **Lab ID: 2045754021** Collected: 11/10/16 15:08 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:52	7440-38-2	
Cadmium	**2.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:52	7440-43-9	
Lead	**1.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:52	7439-92-1	
Manganese	**198**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:52	7439-96-5	
Nickel	**9.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:52	7440-02-0	
Zinc	**15.9**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:52	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-05 **Lab ID: 2045754022** Collected: 11/10/16 14:36 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.6**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:56	7440-38-2	
Cadmium	**1.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:56	7440-43-9	
Lead	**10.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:56	7439-92-1	
Manganese	**65.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:56	7439-96-5	
Nickel	**6.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:56	7440-02-0	
Zinc	**11.6**	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:56	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:01		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**81.2**	mg/L	5.0	5		11/30/16 00:44	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DW-03 **Lab ID: 2045754023** Collected: 11/10/16 15:56 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**16.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:00	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:00	7440-43-9	
Lead	**2.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:00	7439-92-1	
Manganese	**778**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:00	7439-96-5	
Nickel	**26.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:00	7440-02-0	
Zinc	**31.5**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:00	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:02		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**490**	mg/L	100	100		11/30/16 22:45	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSGP-22 **Lab ID: 2045754024** Collected: 11/10/16 16:18 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**9.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:04	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:04	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:04	7439-92-1	
Manganese	**15100**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:04	7439-96-5	
Nickel	**263**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:04	7440-02-0	
Zinc	**62.5**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:04	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:02		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**11800**	mg/L	2000	2000		12/01/16 07:46	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-05 **Lab ID: 2045754025** Collected: 11/14/16 10:24 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:16	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:16	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:16	7439-92-1	
Manganese	**10600**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:16	7439-96-5	
Nickel	**32.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:16	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:16	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DW-02 **Lab ID: 2045754026** Collected: 11/11/16 16:20 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**13.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:20	7440-38-2	
Cadmium	**18.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:20	7440-43-9	
Lead	**23.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:20	7439-92-1	
Manganese	**7500**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:20	7439-96-5	
Nickel	**257**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:20	7440-02-0	
Zinc	**513**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:20	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-A **Lab ID: 2045754027** Collected: 11/11/16 16:44 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:24	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:24	7440-43-9	
Lead	**1.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:24	7439-92-1	
Manganese	**4.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:24	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:24	7440-02-0	
Zinc	**32.1**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:24	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DW-01 **Lab ID: 2045754028** Collected: 11/11/16 12:25 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**375**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:28	7440-38-2	
Cadmium	**32.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:28	7440-43-9	
Lead	**6.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:28	7439-92-1	
Manganese	**1140**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:28	7439-96-5	
Nickel	**9.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:28	7440-02-0	
Zinc	**63.4**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:28	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Manganese, Dissolved	**1170**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:35	7439-96-5	
Nickel, Dissolved	**9.8**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:35	7440-02-0	
Zinc, Dissolved	**56.6**	ug/L	5.0	1	11/23/16 09:06	12/05/16 02:35	7440-66-6	
Arsenic, Dissolved	**149**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:35	7440-38-2	
Cadmium, Dissolved	**3.4**	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:35	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	11/23/16 09:06	12/05/16 02:35	7439-92-1	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:02		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**298**	mg/L	20.0	20		11/30/16 01:30	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-04 **Lab ID: 2045754029** Collected: 11/11/16 12:20 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**442**	ug/L	1.0	1	11/18/16 13:24	12/05/16 02:38	7440-38-2	M1
Cadmium	**2.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 02:38	7440-43-9	
Lead	**3.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 02:38	7439-92-1	
Manganese	**3750**	ug/L	1.0	1	11/18/16 13:24	12/05/16 02:38	7439-96-5	M1
Nickel	**12.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 02:38	7440-02-0	
Zinc	**29.2**	ug/L	5.0	1	11/18/16 13:24	12/05/16 02:38	7440-66-6	M1
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:11		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1320**	mg/L	100	100		11/30/16 01:45	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-03 **Lab ID: 2045754030** Collected: 11/11/16 16:01 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:32	7440-38-2	
Cadmium	**126**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:32	7440-43-9	
Lead	**85.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:32	7439-92-1	
Manganese	**2950**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:32	7439-96-5	
Nickel	**62.6**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:32	7440-02-0	
Zinc	**244**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:32	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-02 **Lab ID: 2045754031** Collected: 11/11/16 14:46 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:36	7440-38-2	
Cadmium	**52.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:36	7440-43-9	
Lead	**3.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:36	7439-92-1	
Manganese	**937**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:36	7439-96-5	
Nickel	**35.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:36	7440-02-0	
Zinc	**127**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:36	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:11		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**738**	mg/L	50.0	50		11/30/16 03:02	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: TEPA-P7D **Lab ID: 2045754032** Collected: 11/11/16 14:18 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**23.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:40	7440-38-2	
Cadmium	**97.7**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:40	7440-43-9	
Lead	**175**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:40	7439-92-1	
Manganese	**2100**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:40	7439-96-5	
Nickel	**44.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:40	7440-02-0	
Zinc	**141**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:40	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:11		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**772**	mg/L	100	100		12/01/16 00:10	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-01 **Lab ID: 2045754033** Collected: 11/11/16 15:20 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**3.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:44	7440-38-2	
Cadmium	**74.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:44	7440-43-9	
Lead	**7.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:44	7439-92-1	
Manganese	**2640**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:44	7439-96-5	
Nickel	**40.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:44	7440-02-0	
Zinc	**148**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:44	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:11		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**875**	mg/L	100	100		11/30/16 03:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-02 **Lab ID: 2045754034** Collected: 11/11/16 13:45 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:48	7440-38-2	
Cadmium	**166**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:48	7440-43-9	
Lead	**100**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:48	7439-92-1	
Manganese	**2410**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:48	7439-96-5	
Nickel	**66.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:48	7440-02-0	
Zinc	**276**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:48	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:22		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1830**	mg/L	100	100		11/30/16 04:04	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-06 **Lab ID: 2045754035** Collected: 11/09/16 15:03 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:51	7440-38-2	
Cadmium	**92.6**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:51	7440-43-9	
Lead	**2.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:51	7439-92-1	
Manganese	**1310**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:51	7439-96-5	
Nickel	**34.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 05:51	7440-02-0	
Zinc	**177**	ug/L	5.0	1	11/18/16 13:24	12/05/16 05:51	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:01		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**925**	mg/L	50.0	50		11/30/16 04:19	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: NWGS-03 **Lab ID: 2045754036** Collected: 11/11/16 13:16 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**28.2**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:03	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:03	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:03	7439-92-1	
Manganese	**1810**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:03	7439-96-5	
Nickel	**1.8**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:03	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 06:03	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:22		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**549**	mg/L	50.0	50		11/30/16 04:35	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-01 **Lab ID: 2045754037** Collected: 11/11/16 10:46 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**14.1**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:07	7440-38-2	
Cadmium	**3.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:07	7440-43-9	
Lead	**3.3**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:07	7439-92-1	
Manganese	**5630**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:07	7439-96-5	
Nickel	**148**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:07	7440-02-0	
Zinc	**128**	ug/L	5.0	1	11/18/16 13:24	12/05/16 06:07	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:22		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**9850**	mg/L	500	500		11/30/16 04:50	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-09 **Lab ID: 2045754038** Collected: 11/10/16 10:26 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**6.9**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:11	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:11	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:11	7439-92-1	
Manganese	**3910**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:11	7439-96-5	
Nickel	**105**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:11	7440-02-0	
Zinc	**102**	ug/L	5.0	1	11/18/16 13:24	12/05/16 06:11	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:02		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**4880**	mg/L	500	500		12/01/16 00:38	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-09A **Lab ID: 2045754039** Collected: 11/10/16 10:06 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.4**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:15	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:15	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:15	7439-92-1	
Manganese	**38.5**	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:15	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 06:15	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 06:15	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: GSGP-6 **Lab ID: 2045754040** Collected: 11/10/16 09:39 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**5.1**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:35	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:35	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:35	7439-92-1	
Manganese	**4600**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:35	7439-96-5	
Nickel	**291**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:35	7440-02-0	
Zinc	**80.6**	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:35	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: MW-4 **Lab ID: 2045754041** Collected: 11/10/16 10:56 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:39	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:39	7440-43-9	
Lead	**1.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:39	7439-92-1	
Manganese	**24.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:39	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:39	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:39	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: WW-09 **Lab ID: 2045754042** Collected: 11/10/16 09:26 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:33	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:33	7440-43-9	
Lead	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:33	7439-92-1	
Manganese	**19.0**	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:33	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/18/16 13:24	12/05/16 04:33	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/18/16 13:24	12/05/16 04:33	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DUP#2 **Lab ID: 2045754043** Collected: 11/11/16 00:00 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**28.5**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:51	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:51	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:51	7439-92-1	
Manganese	**1810**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:51	7439-96-5	
Nickel	**2.0**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:51	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:51	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/16/16 10:22		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**523**	mg/L	50.0	50		11/30/16 05:21	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-19 **Lab ID: 2045754044** Collected: 11/11/16 09:26 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:55	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:55	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:55	7439-92-1	
Manganese	**26.8**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:55	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:55	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:55	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-07 **Lab ID: 2045754045** Collected: 11/09/16 10:46 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:59	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:59	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:59	7439-92-1	
Manganese	**100**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:59	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:59	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:59	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BB-01 **Lab ID: 2045754046** Collected: 11/09/16 17:18 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**4.8**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:02	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:02	7440-43-9	
Lead	**5.1**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:02	7439-92-1	
Manganese	**4.5**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:02	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:02	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 07:02	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-05A **Lab ID: 2045754047** Collected: 11/14/16 10:48 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.0**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:06	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:06	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:06	7439-92-1	
Manganese	**64.6**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:06	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:06	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 07:06	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-03A **Lab ID: 2045754048** Collected: 11/11/16 15:41 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**1.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:19	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:19	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:19	7439-92-1	
Manganese	**3.1**	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:19	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 06:19	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 06:19	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BA-01A **Lab ID: 2045754049** Collected: 11/10/16 13:58 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**8.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:10	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:10	7440-43-9	
Lead	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:10	7439-92-1	
Manganese	**23.3**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:10	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:10	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/22/16 05:00	12/05/16 07:10	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: DUP #1 **Lab ID: 2045754050** Collected: 11/08/16 00:00 Received: 11/14/16 15:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**2.2**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:14	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:14	7440-43-9	
Lead	**2.8**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:14	7439-92-1	
Manganese	**173**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:14	7439-96-5	
Nickel	**2.5**	ug/L	1.0	1	11/22/16 05:00	12/05/16 07:14	7440-02-0	
Zinc	**25.6**	ug/L	5.0	1	11/22/16 05:00	12/05/16 07:14	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: BC-25 **Lab ID: 2045754051** Collected: 11/18/16 11:29 Received: 11/21/16 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:26	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:26	7440-43-9	
Lead	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:26	7439-92-1	
Manganese	**176**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:26	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:26	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/29/16 05:00	12/04/16 20:26	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: Duplicate 3 **Lab ID: 2045754052** Collected: 11/18/16 10:44 Received: 11/21/16 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	**7.4**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:30	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:30	7440-43-9	
Lead	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:30	7439-92-1	
Manganese	**3810**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:30	7439-96-5	
Nickel	**94.0**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:30	7440-02-0	
Zinc	**92.8**	ug/L	5.0	1	11/29/16 05:00	12/04/16 20:30	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		11/23/16 09:35		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**6480**	mg/L	500	500		12/01/16 00:53	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: Duplicate 4 **Lab ID: 2045754053** Collected: 11/18/16 11:29 Received: 11/21/16 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:34	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:34	7440-43-9	
Lead	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:34	7439-92-1	
Manganese	**170**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:34	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:34	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/29/16 05:00	12/04/16 20:34	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2045754

Sample: Duplicate 5 **Lab ID: 2045754054** Collected: 11/18/16 09:55 Received: 11/21/16 14:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010							
Arsenic	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:38	7440-38-2	
Cadmium	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:38	7440-43-9	
Lead	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:38	7439-92-1	
Manganese	**4.1**	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:38	7439-96-5	
Nickel	ND	ug/L	1.0	1	11/29/16 05:00	12/04/16 20:38	7440-02-0	
Zinc	ND	ug/L	5.0	1	11/29/16 05:00	12/04/16 20:38	7440-66-6	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 67966 | Analysis Method: EPA 6020
QC Batch Method: EPA 3010 | Analysis Description: 6020 MET
Associated Lab Samples: 2045754001, 2045754002, 2045754003, 2045754004, 2045754005, 2045754006, 2045754007, 2045754008, 2045754009, 2045754010, 2045754011, 2045754012, 2045754013, 2045754014, 2045754015, 2045754016, 2045754017, 2045754018, 2045754019, 2045754029

METHOD BLANK: 283168 | Matrix: Water
Associated Lab Samples: 2045754001, 2045754002, 2045754003, 2045754004, 2045754005, 2045754006, 2045754007, 2045754008, 2045754009, 2045754010, 2045754011, 2045754012, 2045754013, 2045754014, 2045754015, 2045754016, 2045754017, 2045754018, 2045754019, 2045754029

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	12/05/16 01:20	
Cadmium	ug/L	ND	1.0	12/05/16 01:20	
Lead	ug/L	ND	1.0	12/05/16 01:20	
Manganese	ug/L	ND	1.0	12/05/16 01:20	
Nickel	ug/L	ND	1.0	12/05/16 01:20	
Zinc	ug/L	ND	5.0	12/05/16 01:20	

LABORATORY CONTROL SAMPLE: 283169

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	21.4	107	83-115	
Cadmium	ug/L	20	21.6	108	85-115	
Lead	ug/L	20	20.1	100	84-115	
Manganese	ug/L	20	20.9	105	85-115	
Nickel	ug/L	20	21.2	106	80-118	
Zinc	ug/L	20	21.5	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 283170 283171

Parameter	Units	2045754029 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	442	20	20	456	464	68	109	80-120	2	20	M1
Cadmium	ug/L	2.8	20	20	21.4	21.4	93	93	80-120	0	20	
Lead	ug/L	3.7	20	20	24.8	25.0	105	106	80-120	1	20	
Manganese	ug/L	3750	20	20	3730	3800	-90	265	80-120	2	20	M1
Nickel	ug/L	12.4	20	20	29.8	29.8	87	87	80-120	0	20	
Zinc	ug/L	29.2	20	20	44.9	45.3	78	81	80-120	1	20	M1

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 67967 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 2045754020, 2045754021, 2045754022, 2045754023, 2045754024, 2045754025, 2045754026, 2045754027, 2045754028, 2045754030, 2045754031, 2045754032, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754038, 2045754039, 2045754042

METHOD BLANK: 283172 Matrix: Water
Associated Lab Samples: 2045754020, 2045754021, 2045754022, 2045754023, 2045754024, 2045754025, 2045754026, 2045754027, 2045754028, 2045754030, 2045754031, 2045754032, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754038, 2045754039, 2045754042

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	12/05/16 01:28	
Cadmium	ug/L	ND	1.0	12/05/16 01:28	
Lead	ug/L	ND	1.0	12/05/16 01:28	
Manganese	ug/L	ND	1.0	12/05/16 01:28	
Nickel	ug/L	ND	1.0	12/05/16 01:28	
Zinc	ug/L	ND	5.0	12/05/16 01:28	

LABORATORY CONTROL SAMPLE: 283173

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	20.9	105	83-115	
Cadmium	ug/L	20	21.0	105	85-115	
Lead	ug/L	20	19.7	98	84-115	
Manganese	ug/L	20	20.5	103	85-115	
Nickel	ug/L	20	21.0	105	80-118	
Zinc	ug/L	20	21.6	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 283174 283175

Parameter	Units	2045754042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	20	20	20.3	20.2	100	100	80-120	0	20	
Cadmium	ug/L	ND	20	20	20.5	20.5	102	102	80-120	0	20	
Lead	ug/L	ND	20	20	21.0	20.9	102	101	80-120	0	20	
Manganese	ug/L	19.0	20	20	38.9	38.7	99	98	80-120	1	20	
Nickel	ug/L	ND	20	20	19.9	20.0	99	100	80-120	0	20	
Zinc	ug/L	ND	20	20	20.1	20.3	100	101	80-120	1	20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 67968 | Analysis Method: EPA 6020
QC Batch Method: EPA 3010 | Analysis Description: 6020 MET
Associated Lab Samples: 2045754040, 2045754041, 2045754043, 2045754044, 2045754045, 2045754046, 2045754047, 2045754048, 2045754049, 2045754050

METHOD BLANK: 283176 | Matrix: Water
Associated Lab Samples: 2045754040, 2045754041, 2045754043, 2045754044, 2045754045, 2045754046, 2045754047, 2045754048, 2045754049, 2045754050

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	12/05/16 01:36	
Cadmium	ug/L	ND	1.0	12/05/16 01:36	
Lead	ug/L	ND	1.0	12/05/16 01:36	
Manganese	ug/L	ND	1.0	12/05/16 01:36	
Nickel	ug/L	ND	1.0	12/05/16 01:36	
Zinc	ug/L	ND	5.0	12/05/16 01:36	

LABORATORY CONTROL SAMPLE: 283177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	20.6	103	83-115	
Cadmium	ug/L	20	20.8	104	85-115	
Lead	ug/L	20	19.5	98	84-115	
Manganese	ug/L	20	20.4	102	85-115	
Nickel	ug/L	20	20.7	103	80-118	
Zinc	ug/L	20	21.7	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 283178 283179

Parameter	Units	2045754048 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.2	20	20	21.5	21.3	102	101	80-120	1	20	
Cadmium	ug/L	ND	20	20	20.8	20.8	104	103	80-120	0	20	
Lead	ug/L	ND	20	20	20.8	20.7	101	101	80-120	0	20	
Manganese	ug/L	3.1	20	20	24.1	22.5	105	97	80-120	7	20	
Nickel	ug/L	ND	20	20	20.8	20.7	101	101	80-120	0	20	
Zinc	ug/L	ND	20	20	23.4	23.4	104	104	80-120	0	20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 68593 | Analysis Method: EPA 6020
QC Batch Method: EPA 3010 | Analysis Description: 6020 MET
Associated Lab Samples: 2045754051, 2045754052, 2045754053, 2045754054

METHOD BLANK: 285931 | Matrix: Water
Associated Lab Samples: 2045754051, 2045754052, 2045754053, 2045754054

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	12/04/16 17:17	
Cadmium	ug/L	ND	1.0	12/04/16 17:17	
Lead	ug/L	ND	1.0	12/04/16 17:17	
Manganese	ug/L	ND	1.0	12/04/16 17:17	
Nickel	ug/L	ND	1.0	12/04/16 17:17	
Zinc	ug/L	ND	5.0	12/04/16 17:17	

LABORATORY CONTROL SAMPLE: 285932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	20.3	101	83-115	
Cadmium	ug/L	20	20.5	102	85-115	
Lead	ug/L	20	19.1	95	84-115	
Manganese	ug/L	20	19.9	100	85-115	
Nickel	ug/L	20	20.5	102	80-118	
Zinc	ug/L	20	20.7	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 285933 285934

Parameter	Units	2045988003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	ND	20	20	14.0	14.3	68	70	80-120	2	20	M1
Cadmium	ug/L	ND	20	20	15.3	15.3	77	76	80-120	0	20	M1
Lead	ug/L	ND	20	20	24.2	23.9	119	118	80-120	1	20	
Manganese	ug/L	0.16 mg/L	20	20	175	174	94	90	80-120	0	20	
Nickel	ug/L	ND	20	20	13.4	13.8	64	66	80-120	3	20	M1
Zinc	ug/L	ND	20	20	14.0	13.3	66	62	80-120	5	20	M1

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 67969 | Analysis Method: EPA 6020
QC Batch Method: EPA 3005A | Analysis Description: 6020 MET Dissolved
Associated Lab Samples: 2045754001, 2045754002, 2045754004, 2045754005, 2045754006, 2045754019, 2045754028

METHOD BLANK: 283180 | Matrix: Water
Associated Lab Samples: 2045754001, 2045754002, 2045754004, 2045754005, 2045754006, 2045754019, 2045754028

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	ND	1.0	12/05/16 01:43	
Cadmium, Dissolved	ug/L	ND	1.0	12/05/16 01:43	
Lead, Dissolved	ug/L	ND	1.0	12/05/16 01:43	
Manganese, Dissolved	ug/L	ND	1.0	12/05/16 01:43	
Nickel, Dissolved	ug/L	ND	1.0	12/05/16 01:43	
Zinc, Dissolved	ug/L	ND	5.0	12/05/16 01:43	

LABORATORY CONTROL SAMPLE: 283181

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	20	20.8	104	80-120	
Cadmium, Dissolved	ug/L	20	20.8	104	80-120	
Lead, Dissolved	ug/L	20	19.6	98	80-120	
Manganese, Dissolved	ug/L	20	20.4	102	80-120	
Nickel, Dissolved	ug/L	20	21.2	106	80-120	
Zinc, Dissolved	ug/L	20	21.0	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 283182 283183

Parameter	Units	2045754001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	1.5	20	20	21.7	21.5	101	100	75-125	1	20	
Cadmium, Dissolved	ug/L	ND	20	20	20.7	20.5	104	102	75-125	1	20	
Lead, Dissolved	ug/L	ND	20	20	20.2	20.1	99	99	75-125	0	20	
Manganese, Dissolved	ug/L	128	20	20	147	147	98	98	75-125	0	20	
Nickel, Dissolved	ug/L	1.1	20	20	21.5	21.4	102	101	75-125	1	20	
Zinc, Dissolved	ug/L	13.2	20	20	35.0	34.0	109	104	75-125	3	20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 67854 | Analysis Method: EPA 9034
QC Batch Method: EPA 9034 | Analysis Description: 9034 Sulfide Waste Water
Associated Lab Samples: 2045754022, 2045754023, 2045754024, 2045754028, 2045754029, 2045754031, 2045754032, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754038, 2045754043

METHOD BLANK: 282454 | Matrix: Water
Associated Lab Samples: 2045754022, 2045754023, 2045754024, 2045754028, 2045754029, 2045754031, 2045754032, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754038, 2045754043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	11/16/16 10:01	

LABORATORY CONTROL SAMPLE: 282455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	18.4	92	80-120	

MATRIX SPIKE SAMPLE: 282457

Parameter	Units	2045754029 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	20	18.4	88	75-125	

SAMPLE DUPLICATE: 282456

Parameter	Units	2045754029 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 68459
QC Batch Method: EPA 9034
Analysis Method: EPA 9034
Analysis Description: 9034 Sulfide Waste Water
Associated Lab Samples: 2045754052

METHOD BLANK: 285457
Matrix: Water
Associated Lab Samples: 2045754052

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	11/23/16 09:35	

LABORATORY CONTROL SAMPLE: 285458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	18.4	92	80-120	

MATRIX SPIKE SAMPLE: 285460

Parameter	Units	2045754052 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	20	18.4	88	75-125	

SAMPLE DUPLICATE: 285459

Parameter	Units	2045754052 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 456808 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 2045754022, 2045754028, 2045754029, 2045754031, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754043

METHOD BLANK: 1870316 | Matrix: Water
Associated Lab Samples: 2045754022, 2045754028, 2045754029, 2045754031, 2045754033, 2045754034, 2045754035, 2045754036, 2045754037, 2045754043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	11/30/16 00:13	

LABORATORY CONTROL SAMPLE: 1870317

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	5.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1870318 1870319

Parameter	Units	2045754029 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	1320	500	500	1890	1890	115	114	80-120	0	15	

SAMPLE DUPLICATE: 1870320

Parameter	Units	2045754031 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	738	765	4	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 457001 | Analysis Method: EPA 9056
QC Batch Method: EPA 9056 | Analysis Description: 9056 IC Anions
Associated Lab Samples: 2045754023, 2045754032, 2045754038, 2045754052

METHOD BLANK: 1871060 | Matrix: Water
Associated Lab Samples: 2045754023, 2045754032, 2045754038, 2045754052

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	11/30/16 22:16	

LABORATORY CONTROL SAMPLE: 1871061

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

SAMPLE DUPLICATE: 1871064

Parameter	Units	2045754032 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	772	765	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2045754

QC Batch: 457115
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Associated Lab Samples: 2045754024

METHOD BLANK: 1871251
Matrix: Water
Associated Lab Samples: 2045754024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	12/01/16 07:18	

LABORATORY CONTROL SAMPLE: 1871252

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1871253 1871254

Parameter	Units	2045754024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	11800	10000	10000	21100	21000	93	92	80-120	1	15	

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QUALIFIERS

Project: Delatte Metals
Pace Project No.: 2045754

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The Nelac Institute

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City
PASI-N	Pace Analytical Services - New Orleans

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2045754001	CA-41	EPA 3010	67966	EPA 6020	68161
2045754002	CA-51	EPA 3010	67966	EPA 6020	68161
2045754003	GSGP-03	EPA 3010	67966	EPA 6020	68161
2045754004	BRIDGE	EPA 3010	67966	EPA 6020	68161
2045754005	CL-05	EPA 3010	67966	EPA 6020	68161
2045754006	CL-19	EPA 3010	67966	EPA 6020	68161
2045754007	(b) (6) WELL	EPA 3010	67966	EPA 6020	68161
2045754008	WW-04	EPA 3010	67966	EPA 6020	68161
2045754009	BC-3	EPA 3010	67966	EPA 6020	68161
2045754010	DW-04	EPA 3010	67966	EPA 6020	68161
2045754011	MW-03	EPA 3010	67966	EPA 6020	68161
2045754012	MW-06	EPA 3010	67966	EPA 6020	68161
2045754013	GSGP-18	EPA 3010	67966	EPA 6020	68161
2045754014	GSGP-19	EPA 3010	67966	EPA 6020	68161
2045754015	SOUTH WELL	EPA 3010	67966	EPA 6020	68161
2045754016	BC-17	EPA 3010	67966	EPA 6020	68161
2045754017	NORTH WELL	EPA 3010	67966	EPA 6020	68161
2045754018	BC-21R	EPA 3010	67966	EPA 6020	68161
2045754019	BA-01	EPA 3010	67966	EPA 6020	68161
2045754020	PW-04	EPA 3010	67967	EPA 6020	68162
2045754021	GSG-15	EPA 3010	67967	EPA 6020	68162
2045754022	NWGS-05	EPA 3010	67967	EPA 6020	68162
2045754023	DW-03	EPA 3010	67967	EPA 6020	68162
2045754024	GSGP-22	EPA 3010	67967	EPA 6020	68162
2045754025	BA-05	EPA 3010	67967	EPA 6020	68162
2045754026	DW-02	EPA 3010	67967	EPA 6020	68162
2045754027	MW-A	EPA 3010	67967	EPA 6020	68162
2045754028	DW-01	EPA 3010	67967	EPA 6020	68162
2045754029	NWGS-04	EPA 3010	67966	EPA 6020	68161
2045754030	BA-03	EPA 3010	67967	EPA 6020	68162
2045754031	MW-02	EPA 3010	67967	EPA 6020	68162
2045754032	TEPA-P7D	EPA 3010	67967	EPA 6020	68162
2045754033	NWGS-01	EPA 3010	67967	EPA 6020	68162
2045754034	NWGS-02	EPA 3010	67967	EPA 6020	68162
2045754035	NWGS-06	EPA 3010	67967	EPA 6020	68162
2045754036	NWGS-03	EPA 3010	67967	EPA 6020	68162
2045754037	MW-01	EPA 3010	67967	EPA 6020	68162
2045754038	BA-09	EPA 3010	67967	EPA 6020	68162
2045754039	BA-09A	EPA 3010	67967	EPA 6020	68162
2045754040	GSGP-6	EPA 3010	67968	EPA 6020	68444
2045754041	MW-4	EPA 3010	67968	EPA 6020	68444
2045754042	WW-09	EPA 3010	67967	EPA 6020	68162
2045754043	DUP#2	EPA 3010	67968	EPA 6020	68444
2045754044	BC-19	EPA 3010	67968	EPA 6020	68444
2045754045	BC-07	EPA 3010	67968	EPA 6020	68444
2045754046	BB-01	EPA 3010	67968	EPA 6020	68444

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2045754047	BA-05A	EPA 3010	67968	EPA 6020	68444
2045754048	BA-03A	EPA 3010	67968	EPA 6020	68444
2045754049	BA-01A	EPA 3010	67968	EPA 6020	68444
2045754050	DUP #1	EPA 3010	67968	EPA 6020	68444
2045754051	BC-25	EPA 3010	68593	EPA 6020	68693
2045754052	Duplicate 3	EPA 3010	68593	EPA 6020	68693
2045754053	Duplicate 4	EPA 3010	68593	EPA 6020	68693
2045754054	Duplicate 5	EPA 3010	68593	EPA 6020	68693
2045754001	CA-41	EPA 3005A	67969	EPA 6020	68547
2045754002	CA-51	EPA 3005A	67969	EPA 6020	68547
2045754004	BRIDGE	EPA 3005A	67969	EPA 6020	68547
2045754005	CL-05	EPA 3005A	67969	EPA 6020	68547
2045754006	CL-19	EPA 3005A	67969	EPA 6020	68547
2045754019	BA-01	EPA 3005A	67969	EPA 6020	68547
2045754028	DW-01	EPA 3005A	67969	EPA 6020	68547
2045754022	NWGS-05	EPA 9034	67854		
2045754023	DW-03	EPA 9034	67854		
2045754024	GSGP-22	EPA 9034	67854		
2045754028	DW-01	EPA 9034	67854		
2045754029	NWGS-04	EPA 9034	67854		
2045754031	MW-02	EPA 9034	67854		
2045754032	TEPA-P7D	EPA 9034	67854		
2045754033	NWGS-01	EPA 9034	67854		
2045754034	NWGS-02	EPA 9034	67854		
2045754035	NWGS-06	EPA 9034	67854		
2045754036	NWGS-03	EPA 9034	67854		
2045754037	MW-01	EPA 9034	67854		
2045754038	BA-09	EPA 9034	67854		
2045754043	DUP#2	EPA 9034	67854		
2045754052	Duplicate 3	EPA 9034	68459		
2045754022	NWGS-05	EPA 9056	456808		
2045754023	DW-03	EPA 9056	457001		
2045754024	GSGP-22	EPA 9056	457115		
2045754028	DW-01	EPA 9056	456808		
2045754029	NWGS-04	EPA 9056	456808		
2045754031	MW-02	EPA 9056	456808		
2045754032	TEPA-P7D	EPA 9056	457001		
2045754033	NWGS-01	EPA 9056	456808		
2045754034	NWGS-02	EPA 9056	456808		
2045754035	NWGS-06	EPA 9056	456808		
2045754036	NWGS-03	EPA 9056	456808		
2045754037	MW-01	EPA 9056	456808		
2045754038	BA-09	EPA 9056	457001		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2045754

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2045754043	**DUP#2**	EPA 9056	456808		
2045754052	**Duplicate 3**	EPA 9056	457001		

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CHAIN-OF-CUSTODY / Analytical Requ

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fi

WO# : 2045754

2045754

Section A
Required Client Information:

Company: SEMS Metairie
Address: 3801 N. Causeway Blvd
Metairie, LA 70002
Email: nrodehorst@semsinc.net
Phone: NONE Fax:
Requested Due Date:

Section B
Required Project Information:

Report To: Nick Rodehorst
Copy To:
Purchase Order #:
Project Name: Delatte Metals
Project #:

Section C
Invoice Information:

Attention:
Company Name:
Address:
Pace Quote:
Pace Project Manager: william.shackelford@pacelabs.com,
Pace Profile #: 6306 line 1

Regulatory Agency:
State / Location: LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
1	CA-41	WT		11/8/16	0940														X	X				
2	CA-51	WT		11/8/16	0917														X	X				
3	GSGP-03	WT		11/8/16	0852														X					
4	BRIDGE	WT		11/8/16	1000														X	X				
5	CL-05	WT		11/8/16	1020														X	X				
6	CL-19	WT		11/8/16	1040														X	X				
7	(b) (6) WELL	WT		11/10/16	0955														X					
8	WW-04	WT		11/10/16	0905														X					
9	BC-03	WT		11/9/16	1016														X					
10	DW-04	WT		11/9/16	1146														X					
11	BC-25	WT		11/9/16	1221														X					
12	MW-03	WT		11/9/16	1412														X					

MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sulfides go to Pace KS Method 9056		11/14/16	1320		11/14/16	1320	4.5
Sulfate		11/14/16	1535		11/14/16	1535	4.3
							2.9
							1.0

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Ben Durel
SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency:

State / Location: LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
13	MW-06	WT		11/11/16	1002														X					
14	GSGP-18	WT		11/9/16	1531														X					
15	GSGP-19	WT		11/9/16	1559														X					
16	SOUTH WELL	WT		11/9/16	1700														X					
17	BC-17	WT		11/10/16	1134														X					
18	NORTH WELL	WT		11/9/16	1630														X					
19	BC-21R	WT		11/10/16	1301														X					
20	BA-01	WT		11/10/16	1350														X					
21	PW-04	WT		11/10/16	1533														X					
22	GSGP-15	WT		11/10/16	1508														X					
23	NWGS-05	WT		11/10/16	1436														X		X	X		
24	DW-03	WT		11/10/16	1556														X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~Sulfides~~ go to Pace KS Method 9056		11/14/16	1320		11/14/16	1320	4.5			
Sulfate		11/14/16	1535		11/14/16	1535	4.3	Y	N	Y
							29			
							1.0			

	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Durel

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3601 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency	
State / Location	
	LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals							Residual Chlorine (Y/N)	
25	GSGP-22	WT		11/10/16	1618														X		X	X										
26	BA-05	WT		11/11/16	1024														X													
27	DW-02	WT		11/11/16	1620														X													
28	MW-A	WT		11/11/16	1644														X													
29	DW-01	WT		11/11/16	1225														X		X	X										
30	NWGS-04	WT		11/11/16	1250														X		X	X										
31	BA-03	WT		11/11/16	1601														X													
32	MW-02	WT		11/11/16	1446														X		X	X										
33	TEPA-P7D	WT		11/11/16	1418														X		X	X										
34	NWGS-01	WT		11/11/16	1520														X		X	X										
35	NWGS-02	WT		11/11/16	1345														X		X	X										
36	NWGS-06	WT		11/11/16	1503														X		X	X										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~Sulfides~~ go to Pace KS Method 9056	[signature]	11/14/16	1320	[signature]	11/14/16	1320	4.5			
Sulfate	[signature]	11/14/16	1535	[signature]	11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			

SAMPLER NAME AND SIGNATURE			TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Ben Durel					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 11/14/16				

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency	
State / Location	
	LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals							Residual Chlorine (Y/N)	
37	NWGS-03	WT		11/10/16	1316														X		X	X									
38	MW-01	WT		11/10/16	1046														X		X	X									
39	BA-09	WT		11/10/16	1026														X		X	X									
40	BA-09A	WT		11/10/16	1006														X												
41	GSGP-6	WT		11/10/16	0939														X												
42	MW-4	WT		11/10/16	1056														X												
43	WW-09	WT		11/10/16	0926														X												
44	DUP #1	WT		11/10/16	—														X		X	X									
45	DUP#2	WT		11/11/16	—														X		X	X									
46	DUP#3	WT		11/10/16	—														X												
47	DUP#4	WT		11/8/16	—														X												
48	DUP#5	WT		11/11/16	—														X												

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~Sulfides~~ go to Pace KS Method 9056	[signature]	11/14/16	1320	[signature]	11/14/16	1320	4.5			
Sulfate	[signature]	11/14/16	1535	[signature]	11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Duval

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency:
State / Location: LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)	
49	BC-19	WT		11/11/16	0926														X						
50	MS#1	WT		11/11/16	1250														X		X	X			
51	BC-07	WT		11/9/16	1046														X						
52	MSD#1	WT		11/11/16	1250														X		X	X			
53	MS#2	WT		11/11/16	0926														X						
54	MSD#2	WT		11/11/16	0926														X						
55	MS#3	WT		11/11/16	1540														X						
56	MSD#3	WT		11/11/16	1540														X						
57	BB-01	WT		11/9/16	1718														X						
58	BA-05A	WT		11/10/16	1048														X						
59	BA-03A	WT		11/11/16	1541														X						
60																									

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Sulfides go to Pace KS Method 9056		11/14/16	1320		11/14/16	1320	4.5			
Sulfate		11/14/16	1535		11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Durel

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTO

The Chain-of-Custody is a LEGAL

WO#: 2045754

PM: WRS Due Date: 11/30/16

CLIENT: 20-sems Met

Page: 1 of 1

2156131

Section A Required Client Information:

Company: SEMS Metairie
Address: 3801 N. Causeway Blv
Metairie, LA 70002
Email To: nrodehorst@semsinc.net
Phone: 225-924-2002 Fax: —
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To:
Purchase Order No.:
Project Name: Delatte Metals
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: william.shockelford@pacelabs.com
Pace Profile #: 6306 line 1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: ____

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): Metals (Gaoic, MS)	Sulfate 9034	Sulfide 9056 (KS)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BC-25	WT	G	11/18/16	1129							1						✓				
2	Duplicate 3	↓	↓	↓	1049					1		1		1				✓	✓	✓		
3	Duplicate 4	↓	↓	↓	1129							1						✓				
4	Duplicate 5	↓	↓	↓	0955							1						✓				
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Sulfides go to Pace KS method 9056	[signature]	11-21-16	0945	[signature] Pace	11-21-16	0945				
	[signature] Pace	11-21-16	1050	[signature]	11-21-16	1130				
	[signature]	11/21/16	1430	[signature]	11-21-16	1430	1.2	Y	N	Y
							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Burnham
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/18/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

WO#: 2045754

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

PM: WRS Due Date: 11/30/16
CLIENT: 20-sems Met

Proj

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☐Yes ☑No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11-15-16 WMB

Temp must be measured from Temperature blank when present

					Comments:
Temperature Blank Present"?	☐Yes	☐No	☑N/A	1	
Chain of Custody Present:	☑Yes	☐No	☐N/A	2	
Chain of Custody Complete:	☐Yes	☑No	☐N/A	3	
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4	
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5	
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6	
Sufficient Volume:	☑Yes	☐No	☐N/A	7	
Correct Containers Used:	☑Yes	☐No	☐N/A	8	
Filtered vol. Rec. for Diss. tests	☑Yes	☐No	☐N/A	9	field filtered
Sample Labels match COC:	☐Yes	☑No	☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14	
Trip Blank Present:	☐Yes	☑No		15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

See Attachment

Per client do not log in samples: Dup 3 11/10, Dup 2 collected 11/10 not on COC, & Dup 1 11/10 did not receive MT container.

Received samples BA-01A 11/10 @ 1358 & Dup #1 11/08 not on COC per client log in

Did not receive containers for samples: BC-25, DUP #4, & DUP #5

DW-01 & BA-01 Received Dissolved MT containers not on COC login per client

NWGS-04, WW-09, & BA-03A received MS/MSD containers not specified on COC log in as RQS per client

Received MS/MSD containers for BC-19 per client disregard containers only one container for this sample no RQS.

WO#: 2045754

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Rece

PM: WRS Due Date: 11/30/16
CLIENT: 20-sems Met

Project

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals Intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11-22-16 MP

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☐Yes	☑No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

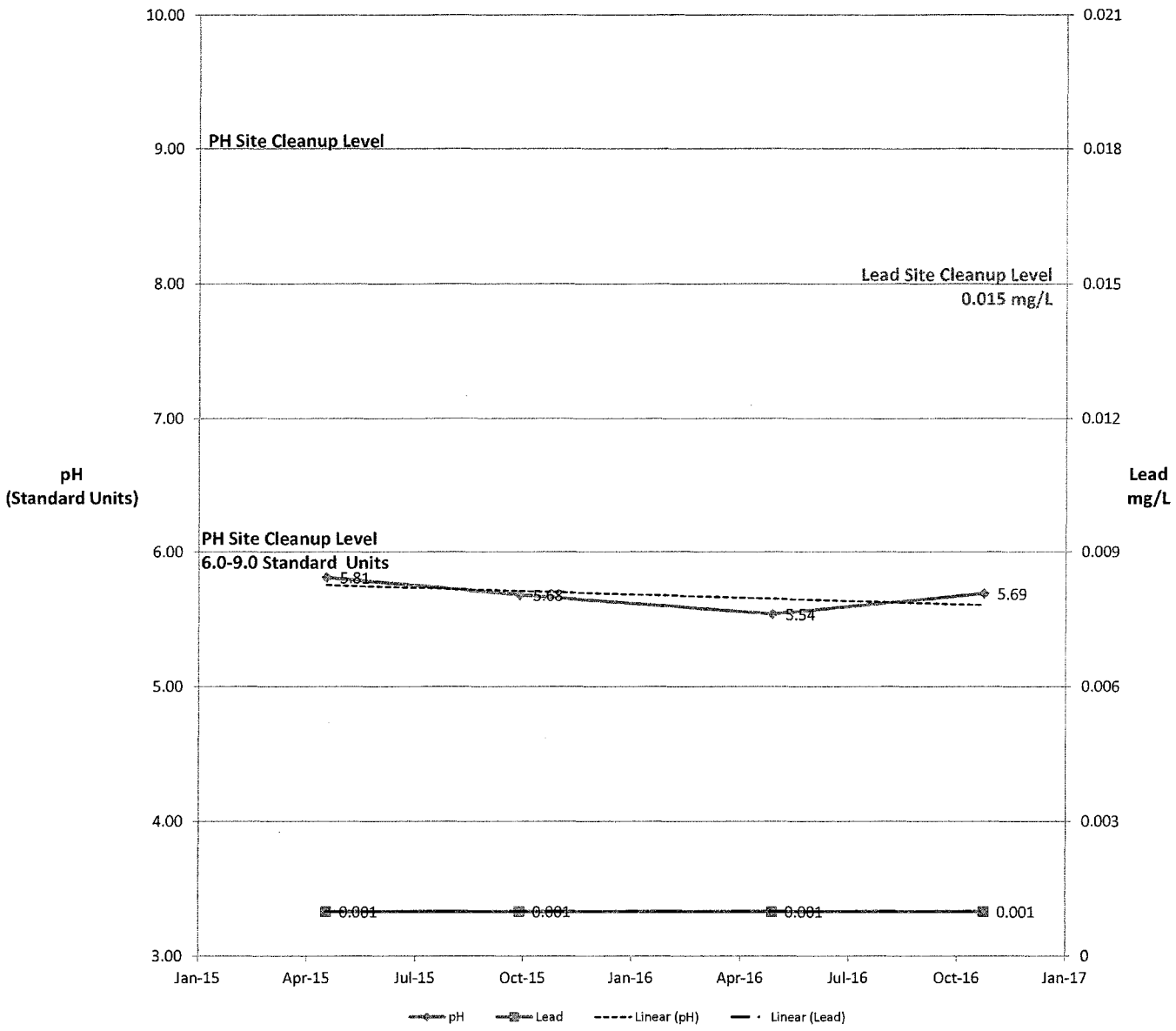
Rec. 11/21/16 * Add on samples to project

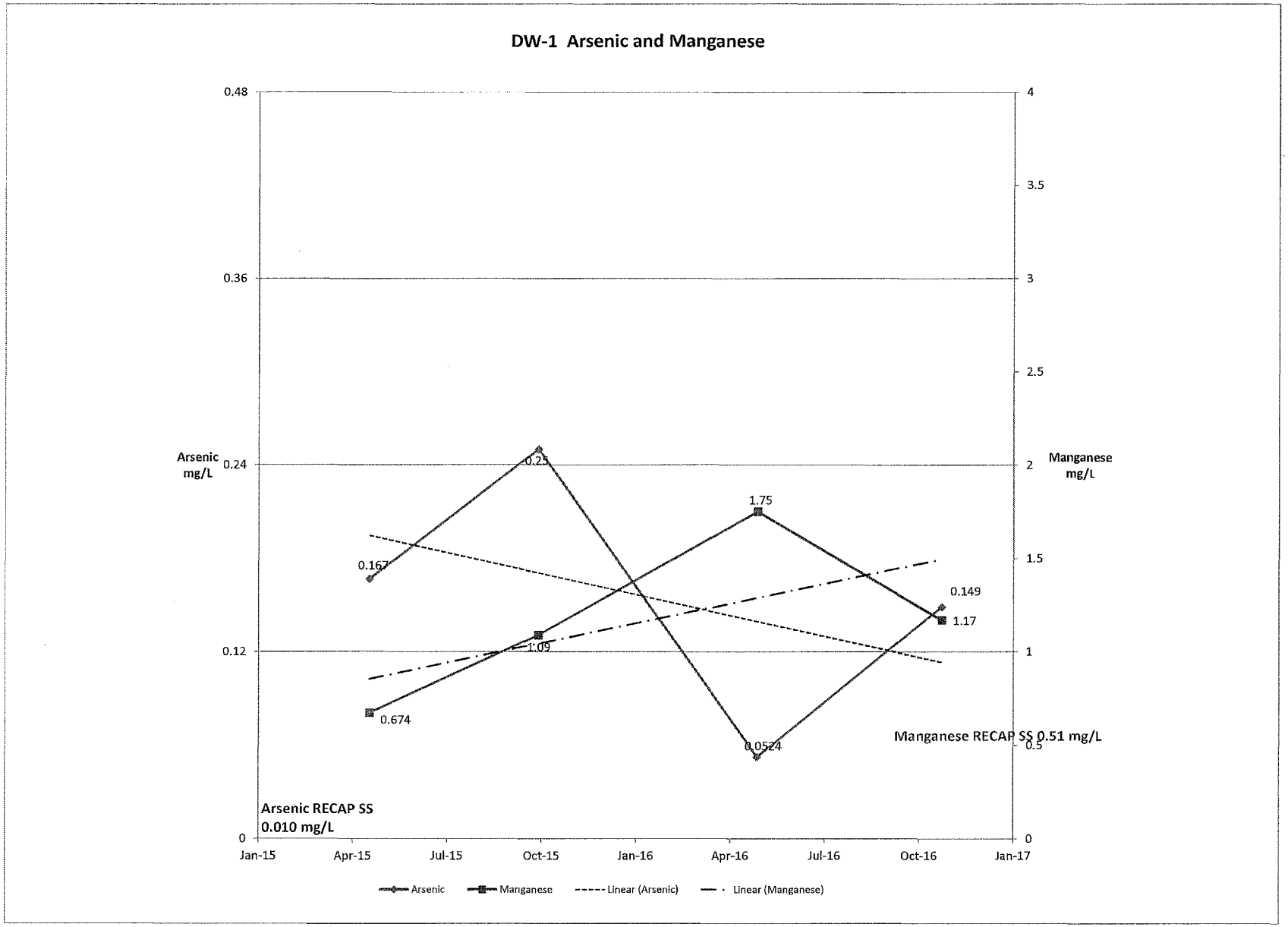
ATTACHMENT C

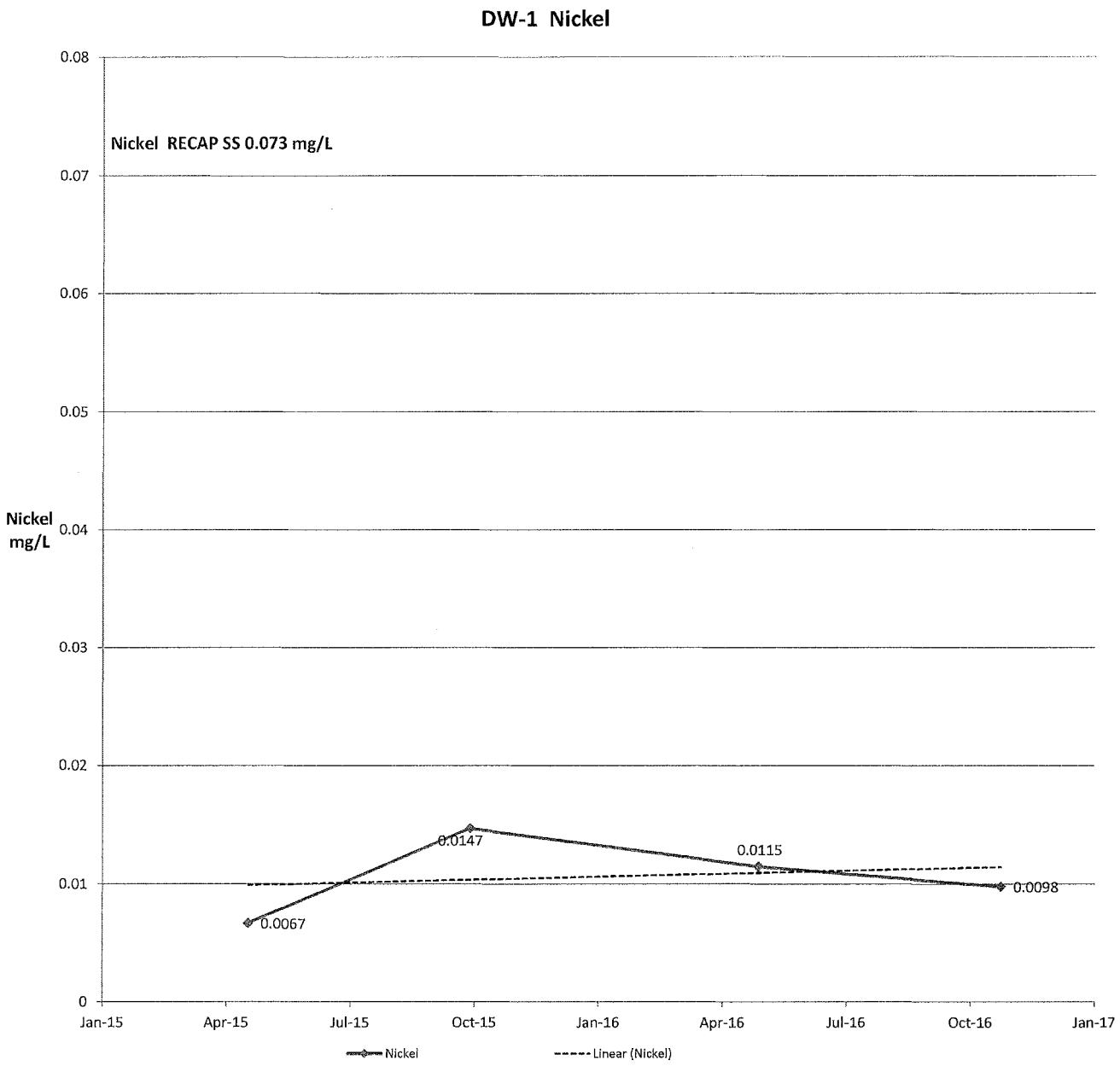
HISTORICAL CONCENTRATION
VS.
TIME GRAPHS

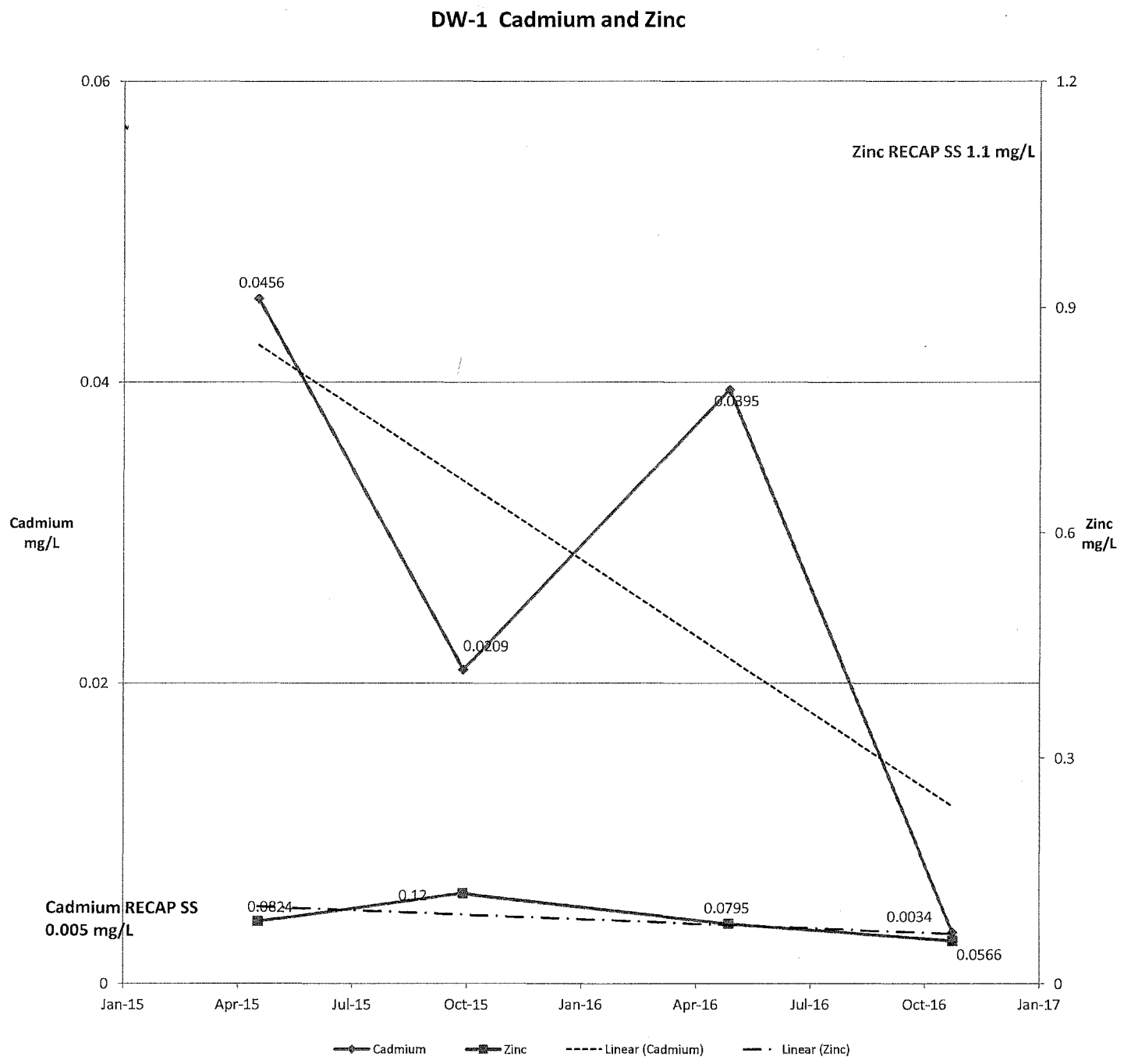
FIRST WATER BEARING ZONE

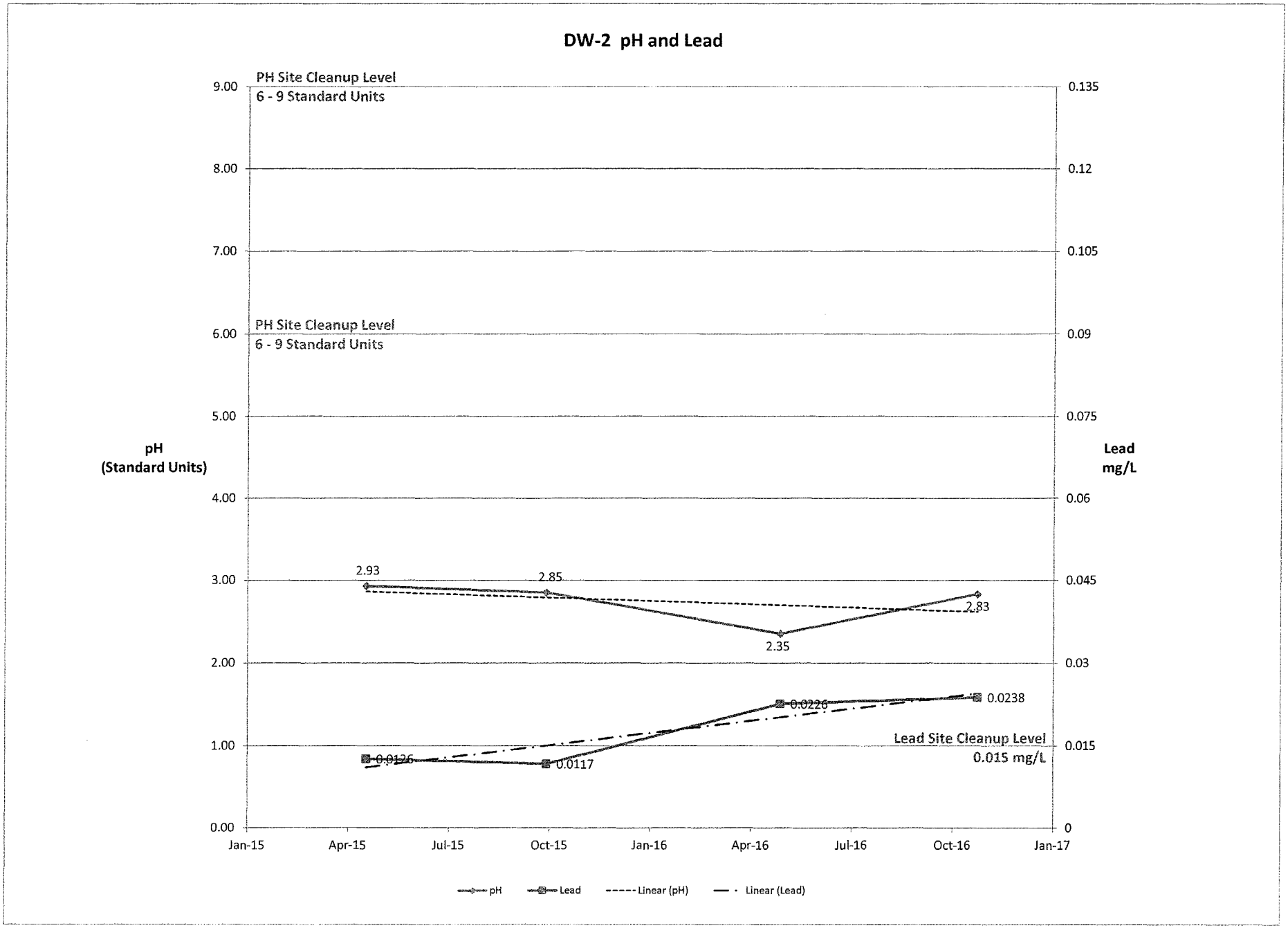
(PAST EIGHT QUARTERS)

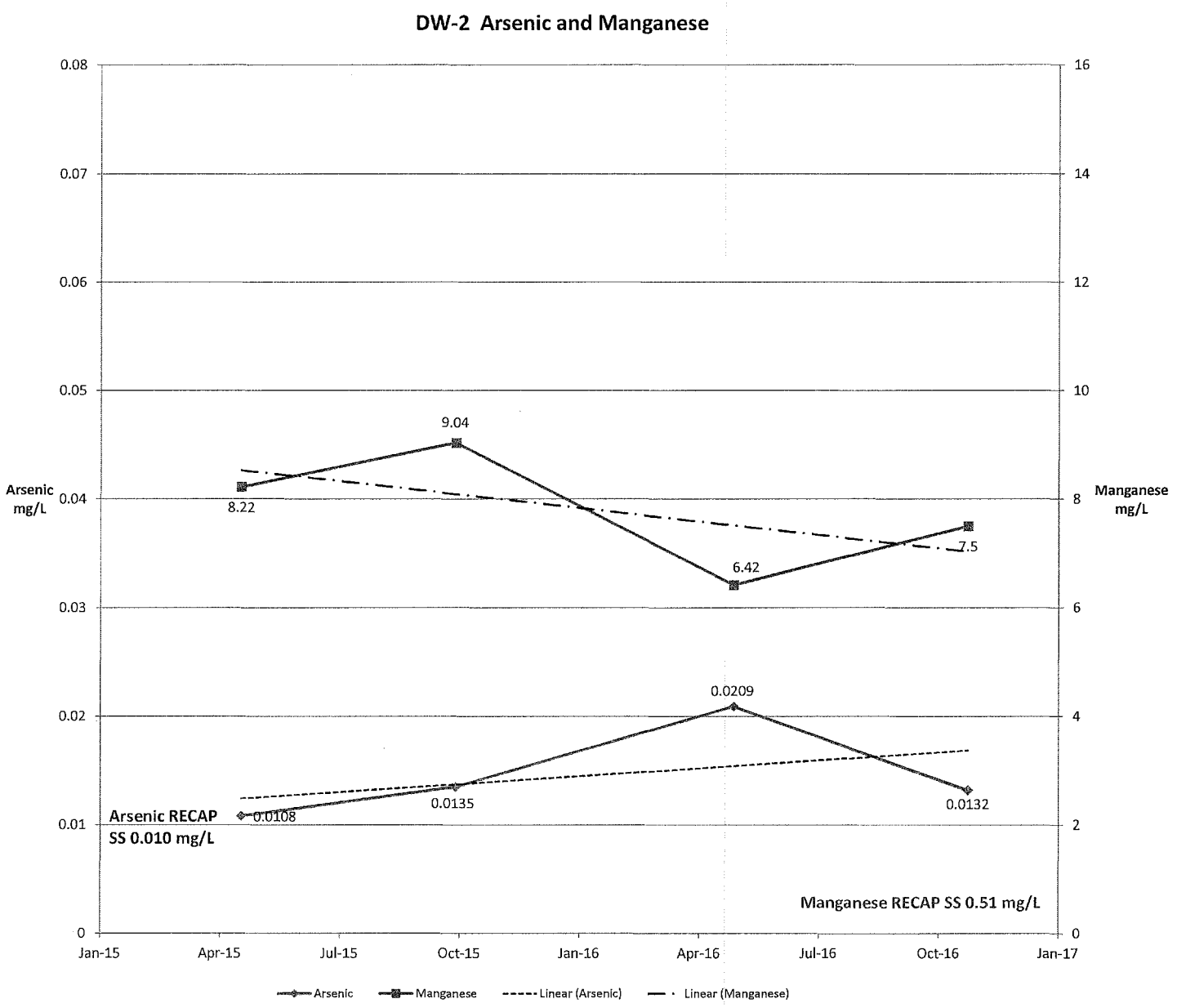

DW-1 pH and Lead
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
0.021
0.018
0.015
0.012
0.009
0.006
0.003
0
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.0-9.0 Standard Units
5.81
5.68
5.54
5.69
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

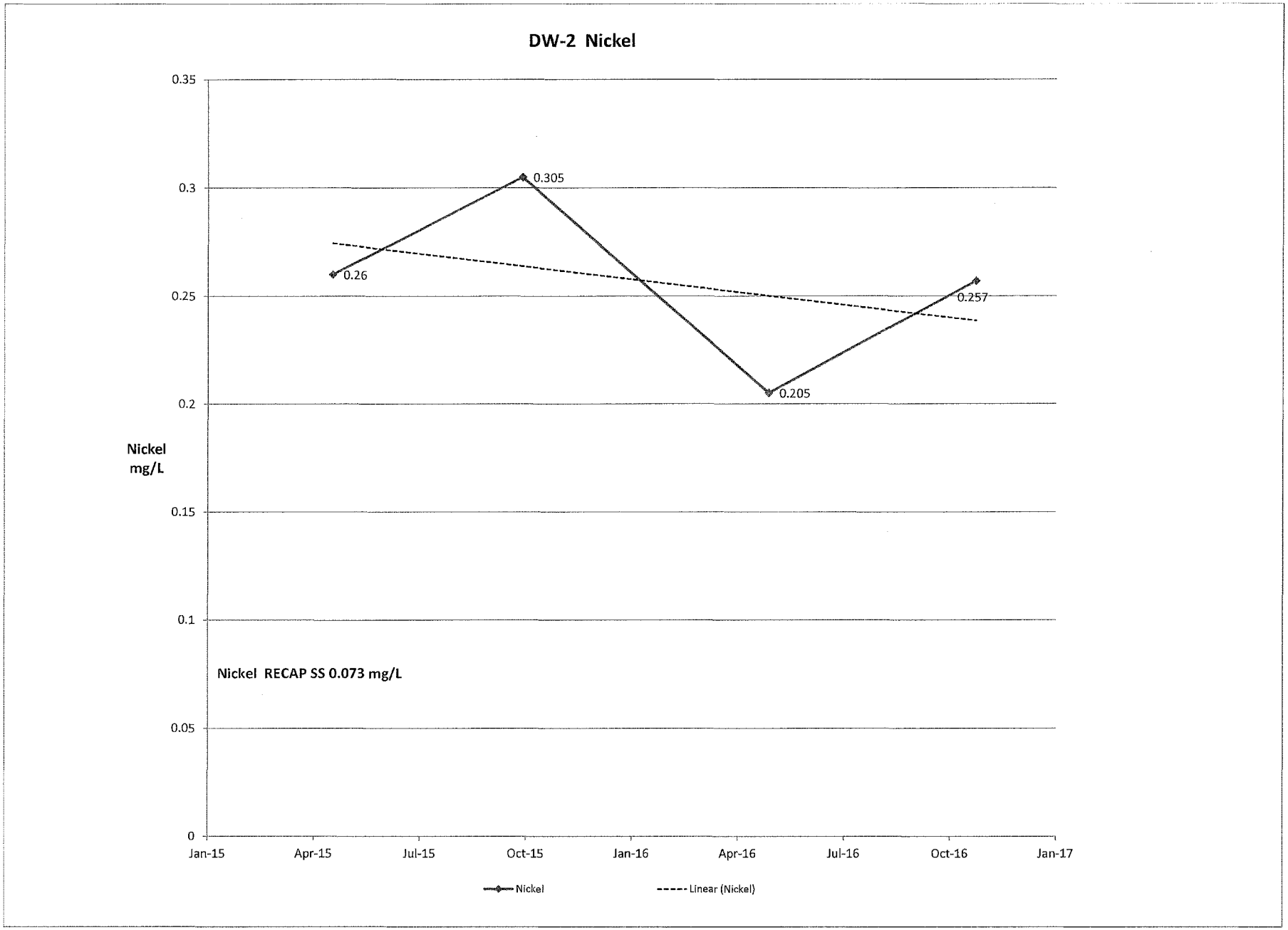

DW-1 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.48
0.36
0.24
0.12
0
4
3.5
3
2.5
2
1.5
1
0.5
0
0.25
0.167
1.75
0.149
1.17
1.09
0.674
0.0524
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS
0.010 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

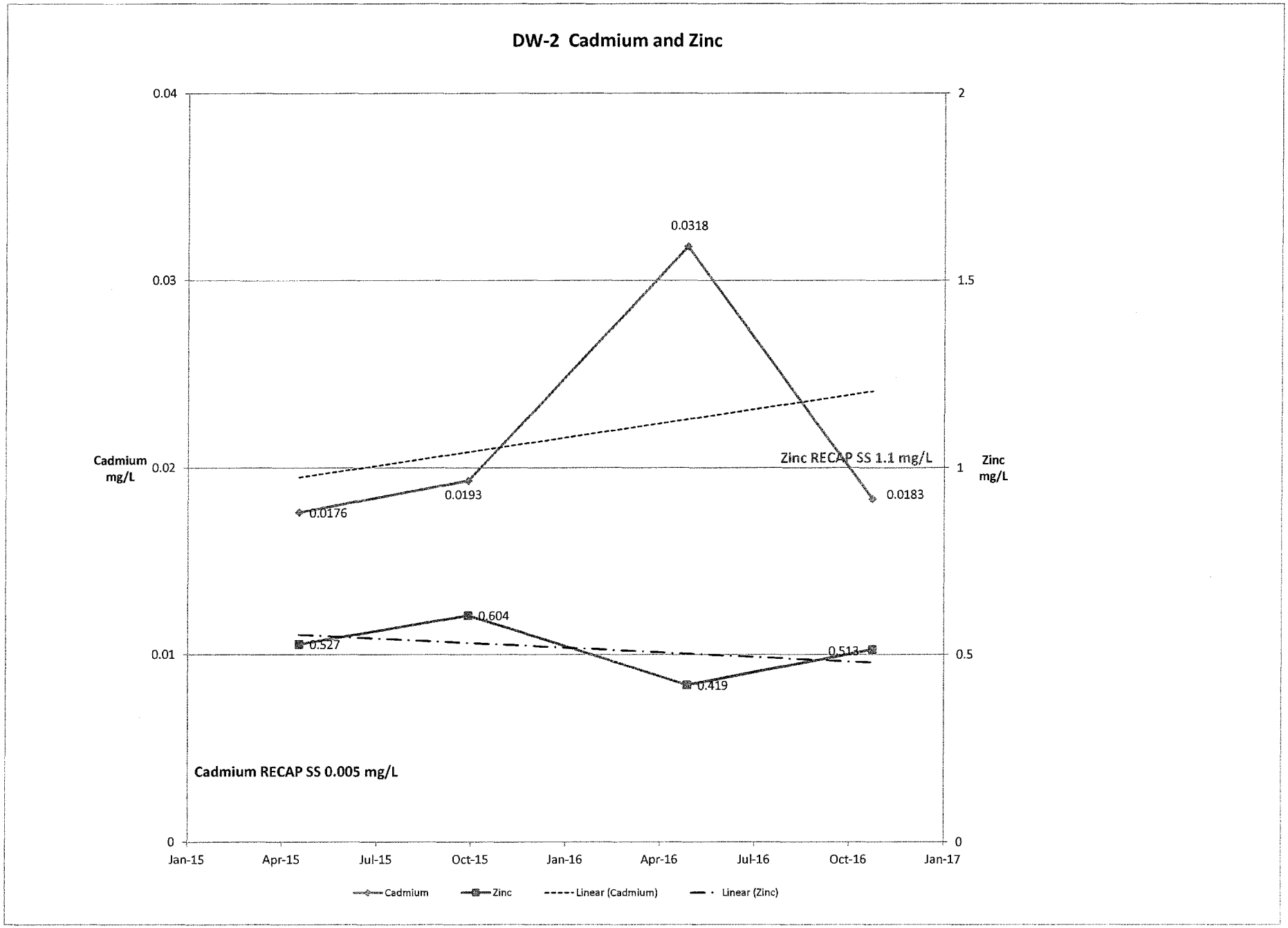

DW-1 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0067
0.0147
0.0115
0.0098
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

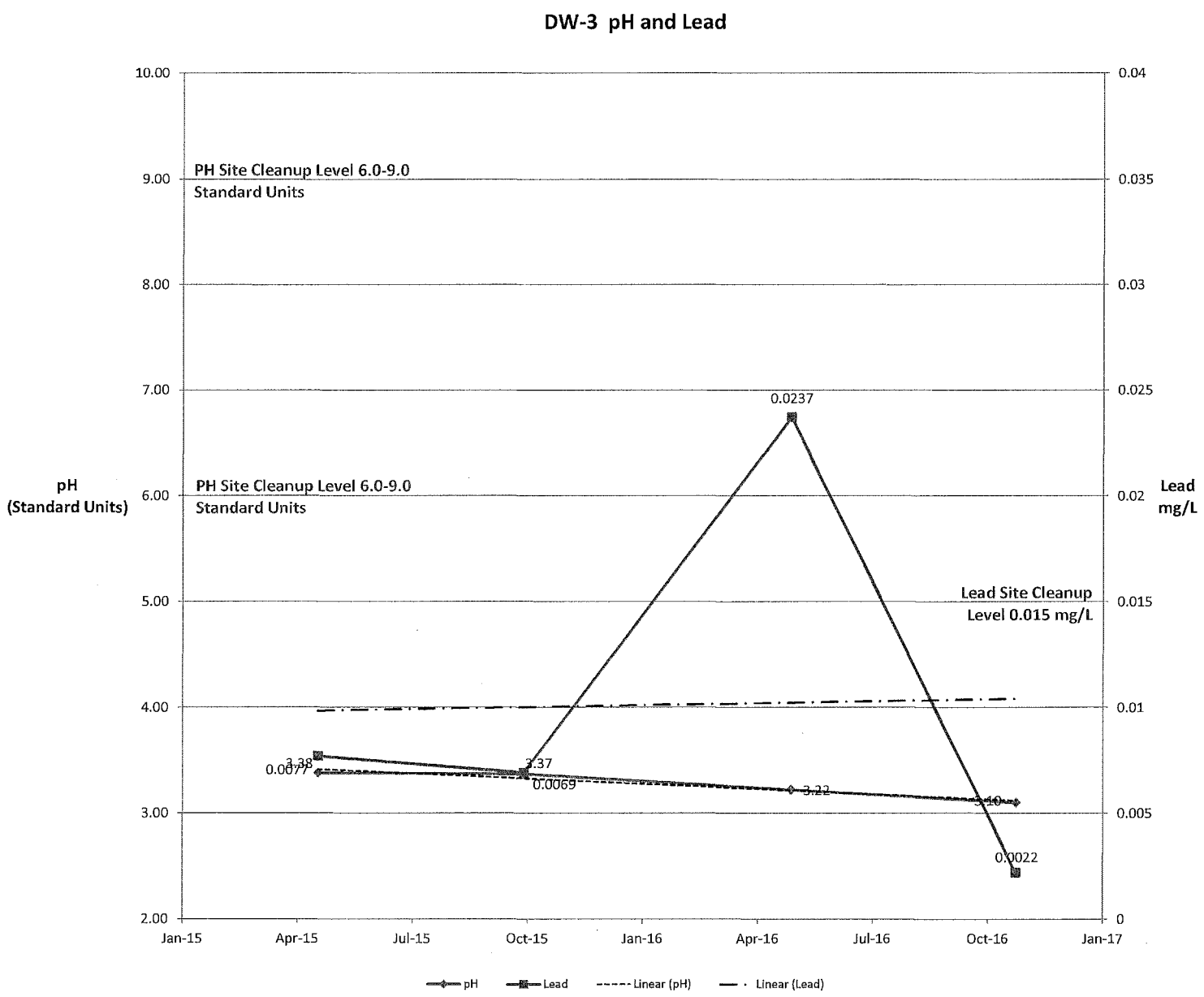

DW-1 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.06
0.04
0.02
0
1.2
0.9
0.6
0.3
0
0.0456
0.0209
0.0395
0.0824
0.12
0.0795
0.0034
0.0566
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

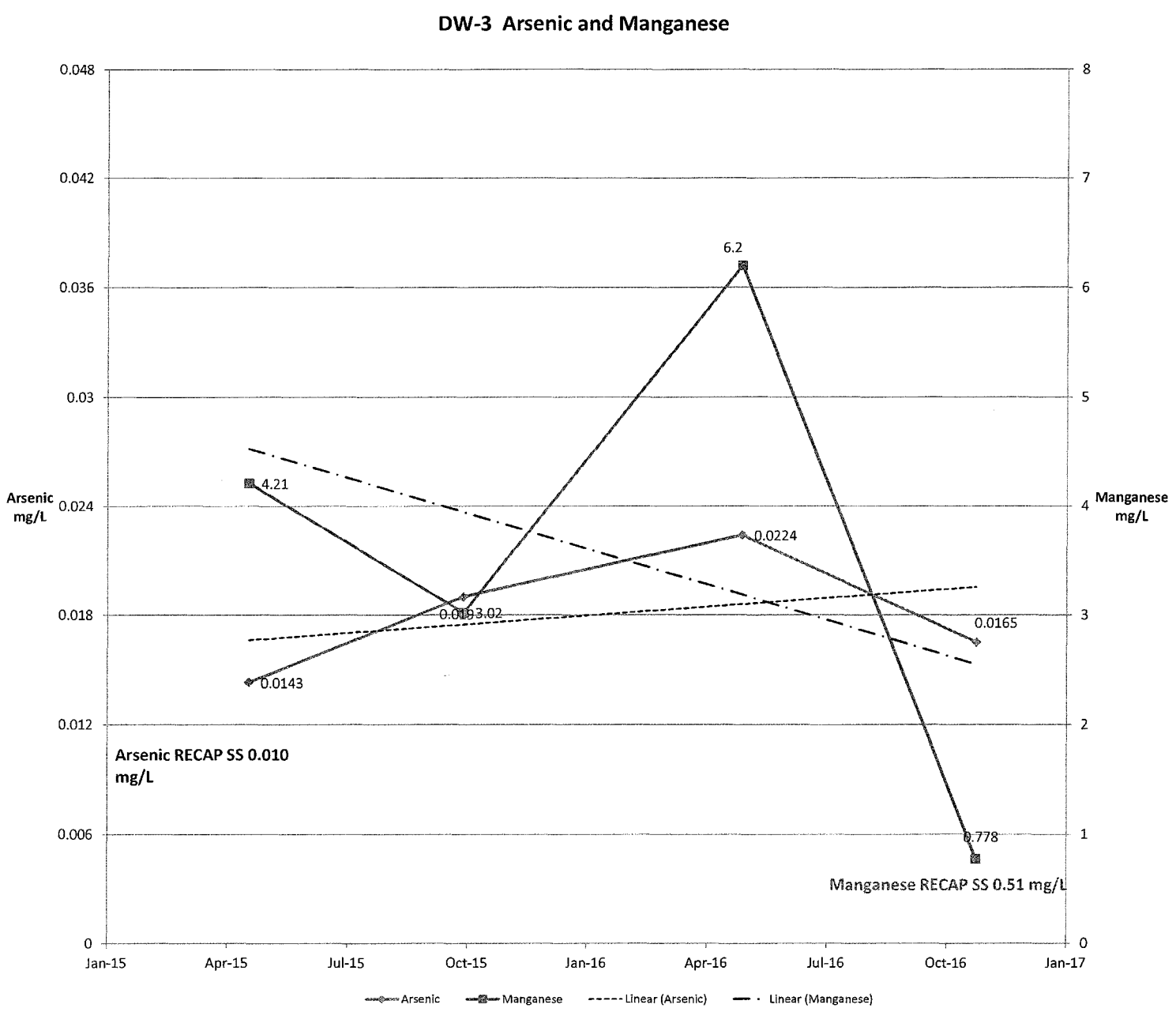

DW-2 pH and Lead
PH Site Cleanup Level
6 - 9 Standard Units
PH Site Cleanup Level
6 - 9 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.135
0.12
0.105
0.09
0.075
0.06
0.045
0.03
0.015
0
2.93
2.85
2.35
2.83
0.0126
0.0117
0.0226
0.0238
Lead Site Cleanup Level
0.015 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

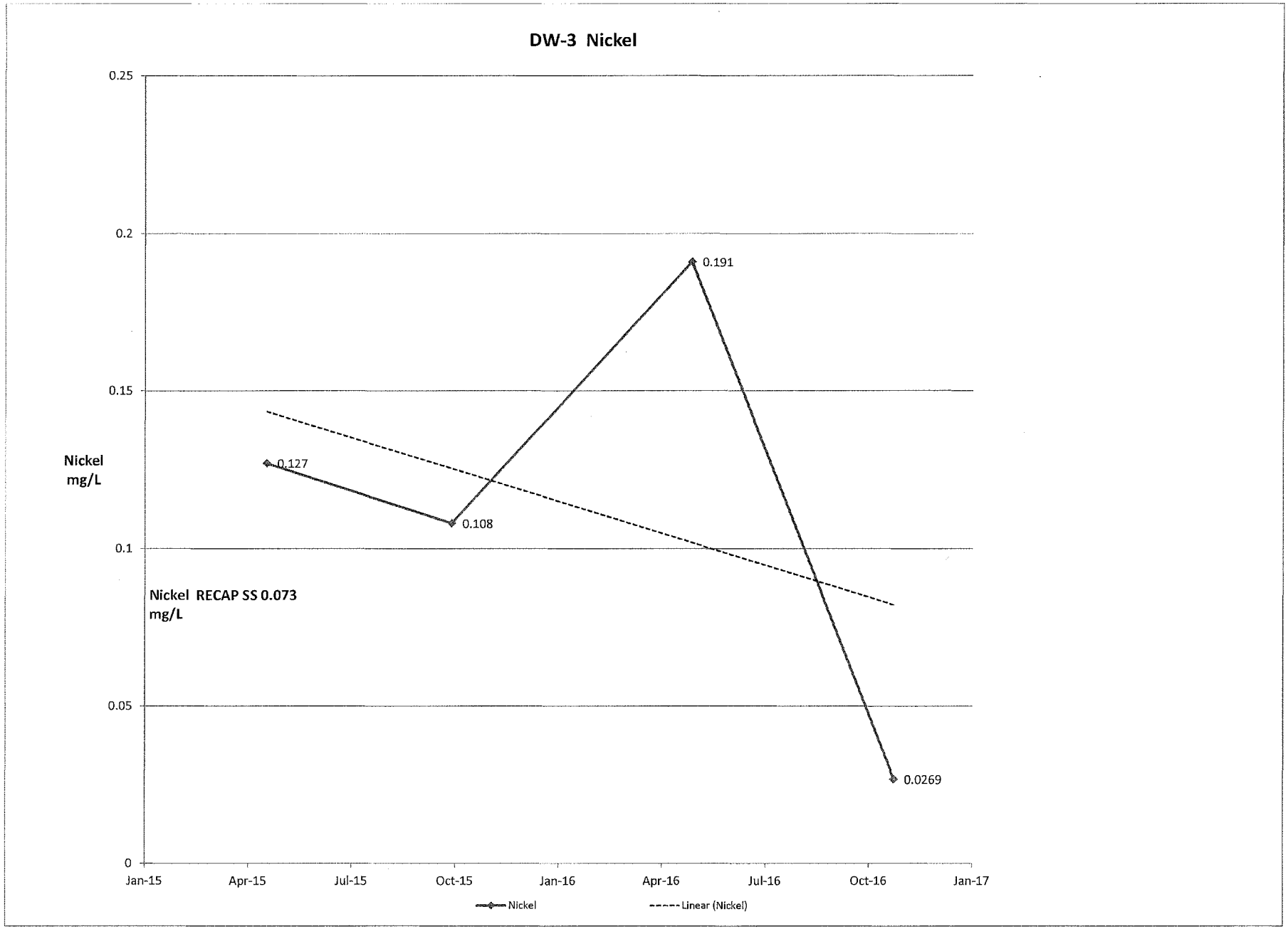

DW-2 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
16
14
12
10
8
6
4
2
0
9.04
8.22
6.42
7.5
0.0209
0.0108
0.0135
0.0132
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

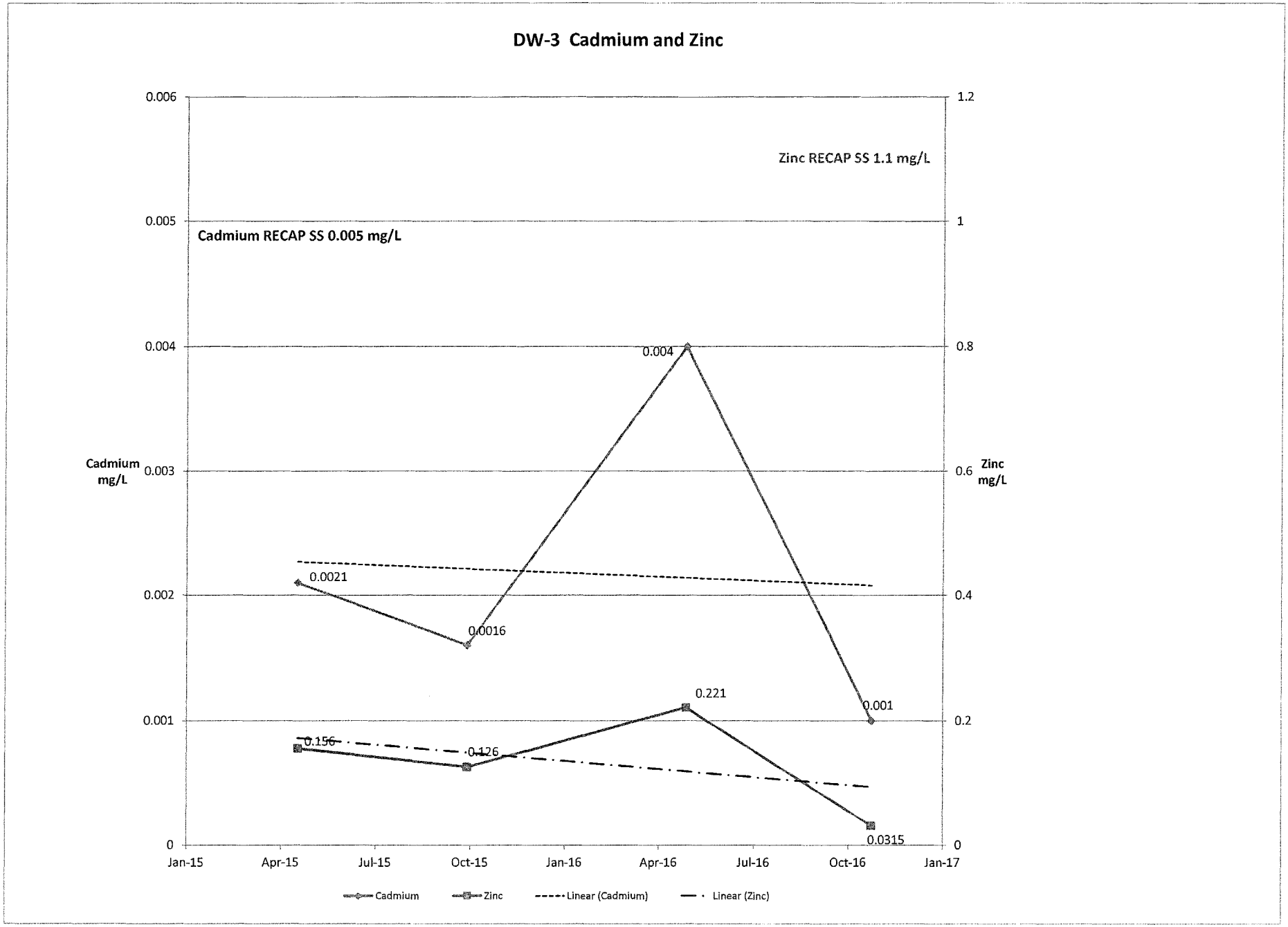

DW-2 Nickel
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
Nickel
mg/L
0.26
0.305
0.205
0.257
Nickel RECAP SS 0.073 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

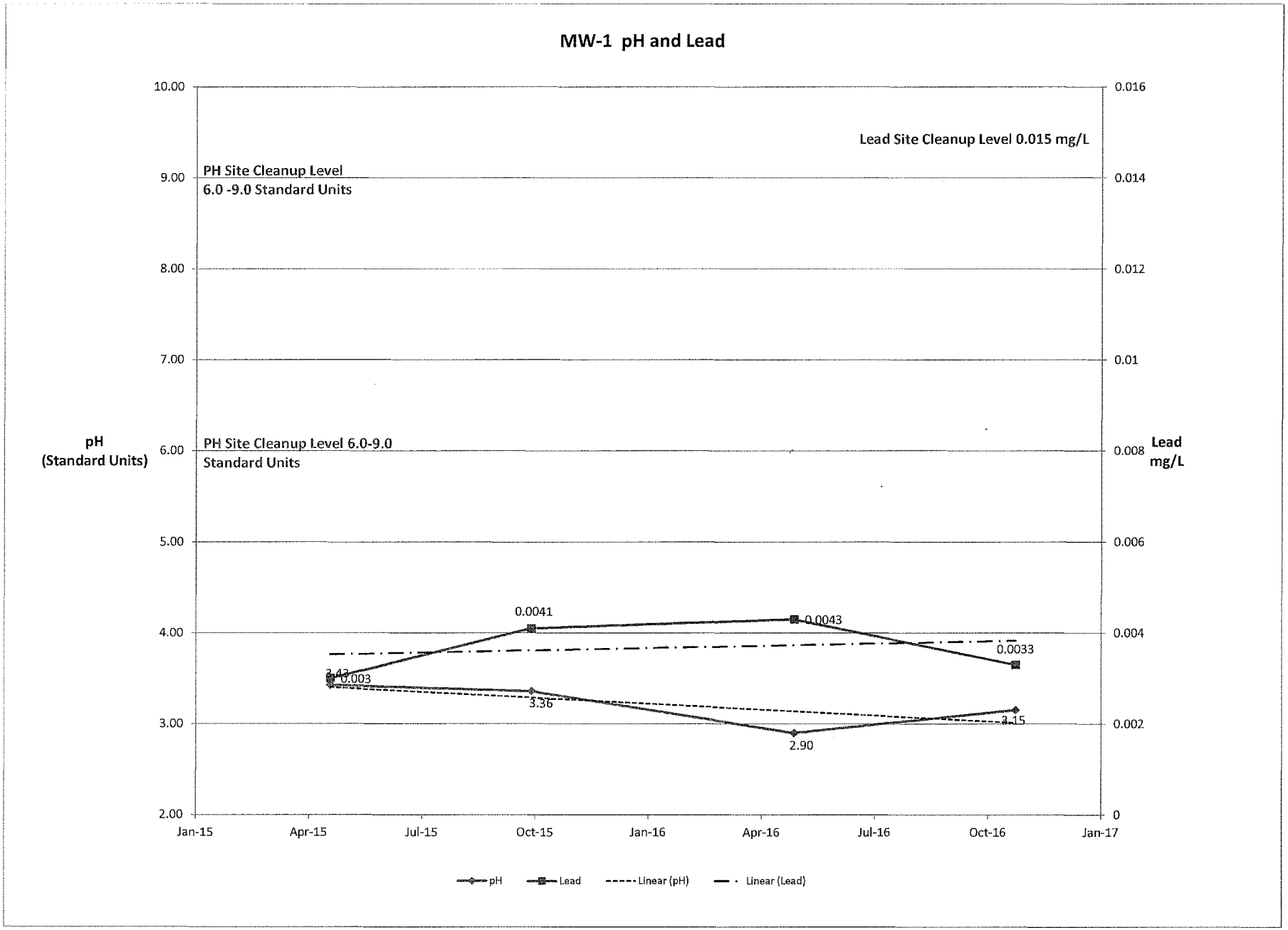

DW-2 Cadmium and Zinc
Cadmium mg/L
Zinc mg/L
0.04
0.03
0.02
0.01
0
2
1.5
1
0.5
0
0.0318
0.0176
0.0193
0.0183
Zinc RECAP SS 1.1 mg/L
0.604
0.527
0.513
0.419
Cadmium RECAP SS 0.005 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

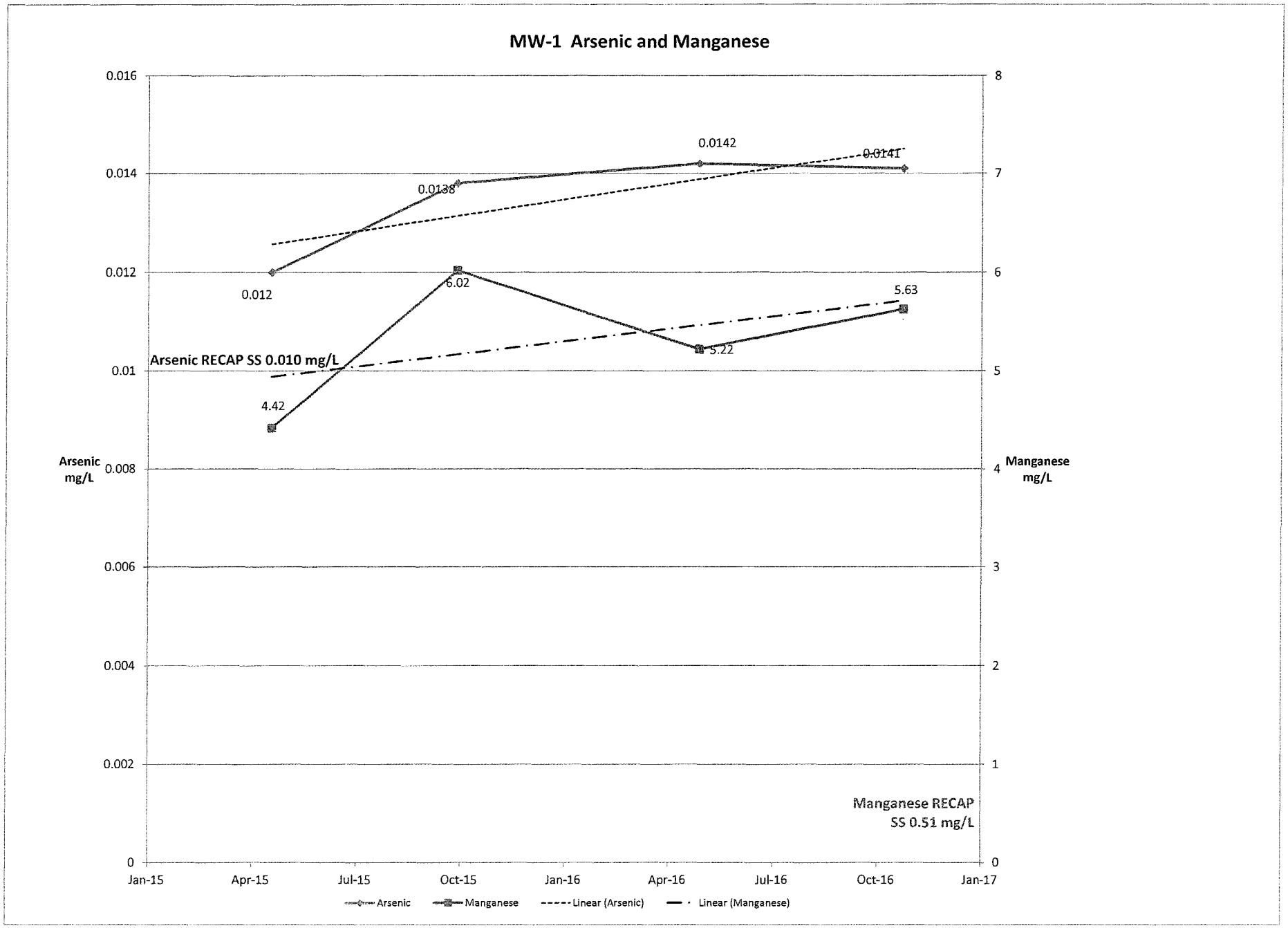

DW-3 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0
Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
Lead Site Cleanup
Level 0.015 mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0.0237
3.38
0.0077
3.37
0.0069
3.22
3.10
0.0022
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

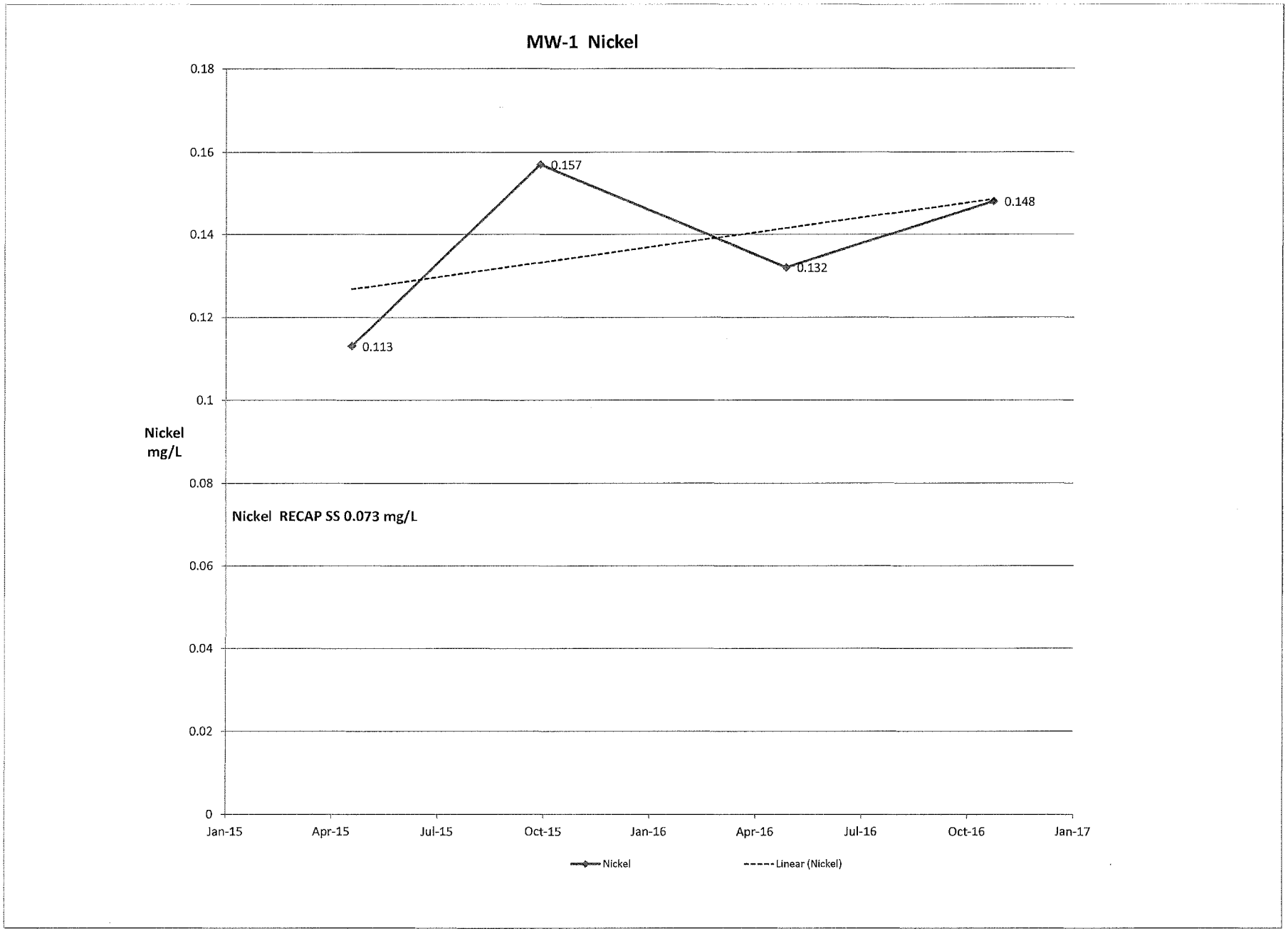

DW-3 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.048
0.042
0.036
0.03
0.024
0.018
0.012
0.006
0
8
7
6
5
4
3
2
1
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
4.21
6.2
0.0224
0.0193.02
0.0165
0.0143
0.778
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

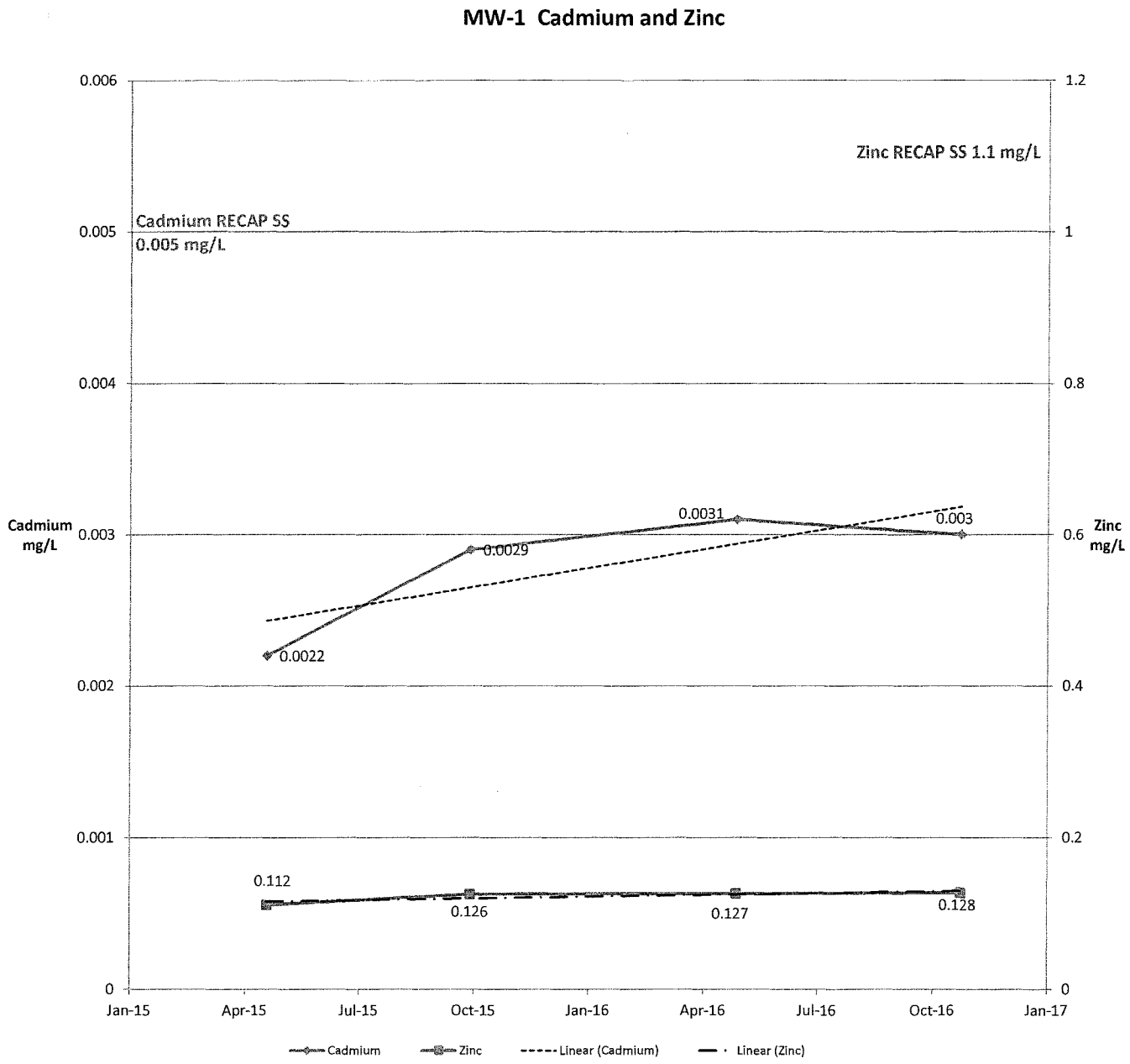

DW-3 Nickel
0.25
0.2
0.15
0.1
0.05
0
Nickel
mg/L
0.127
0.108
0.191
0.0269
Nickel RECAP SS 0.073
mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

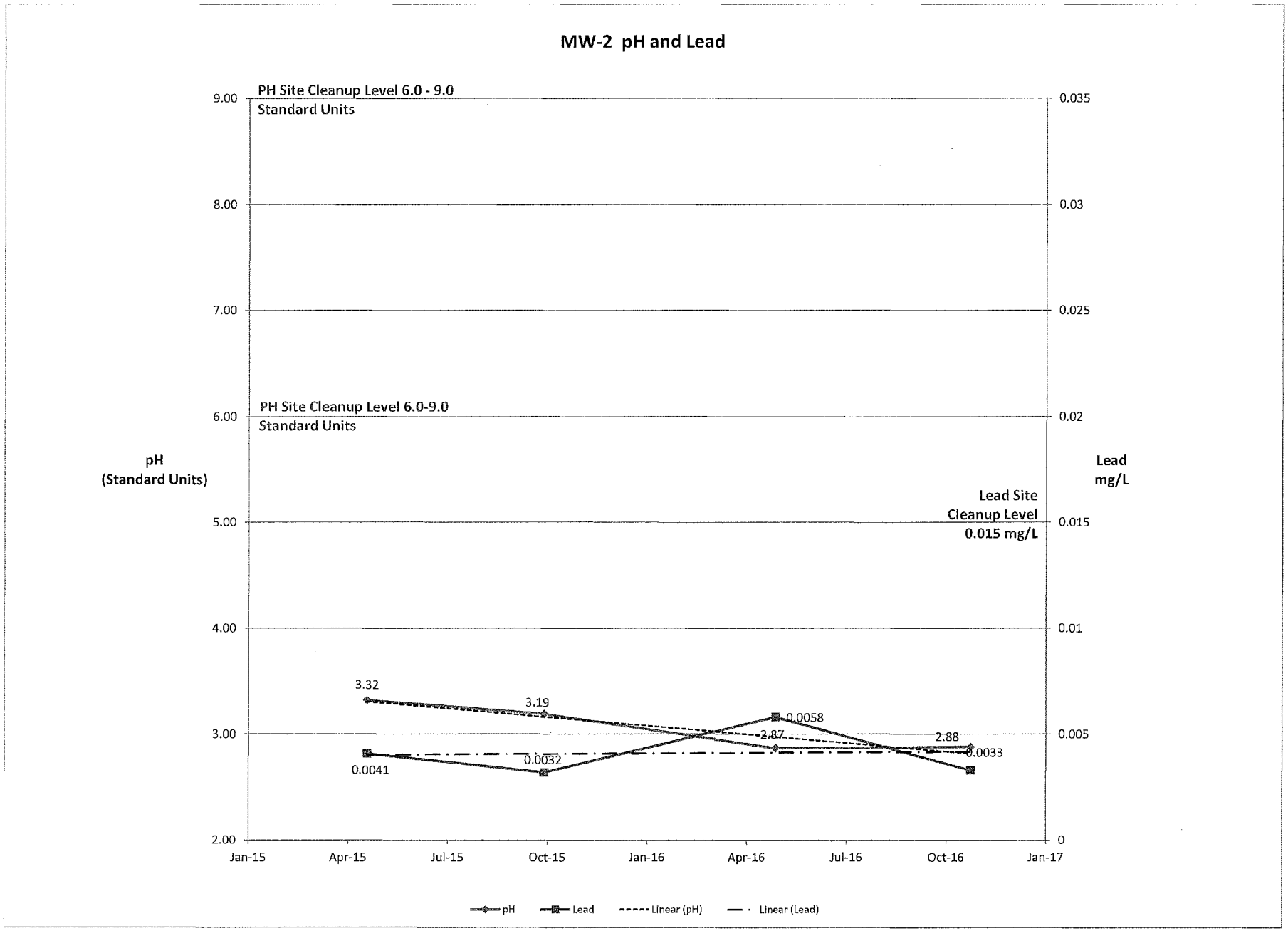

DW-3 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.0021
0.0016
0.004
0.001
0.156
0.126
0.221
0.0315
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

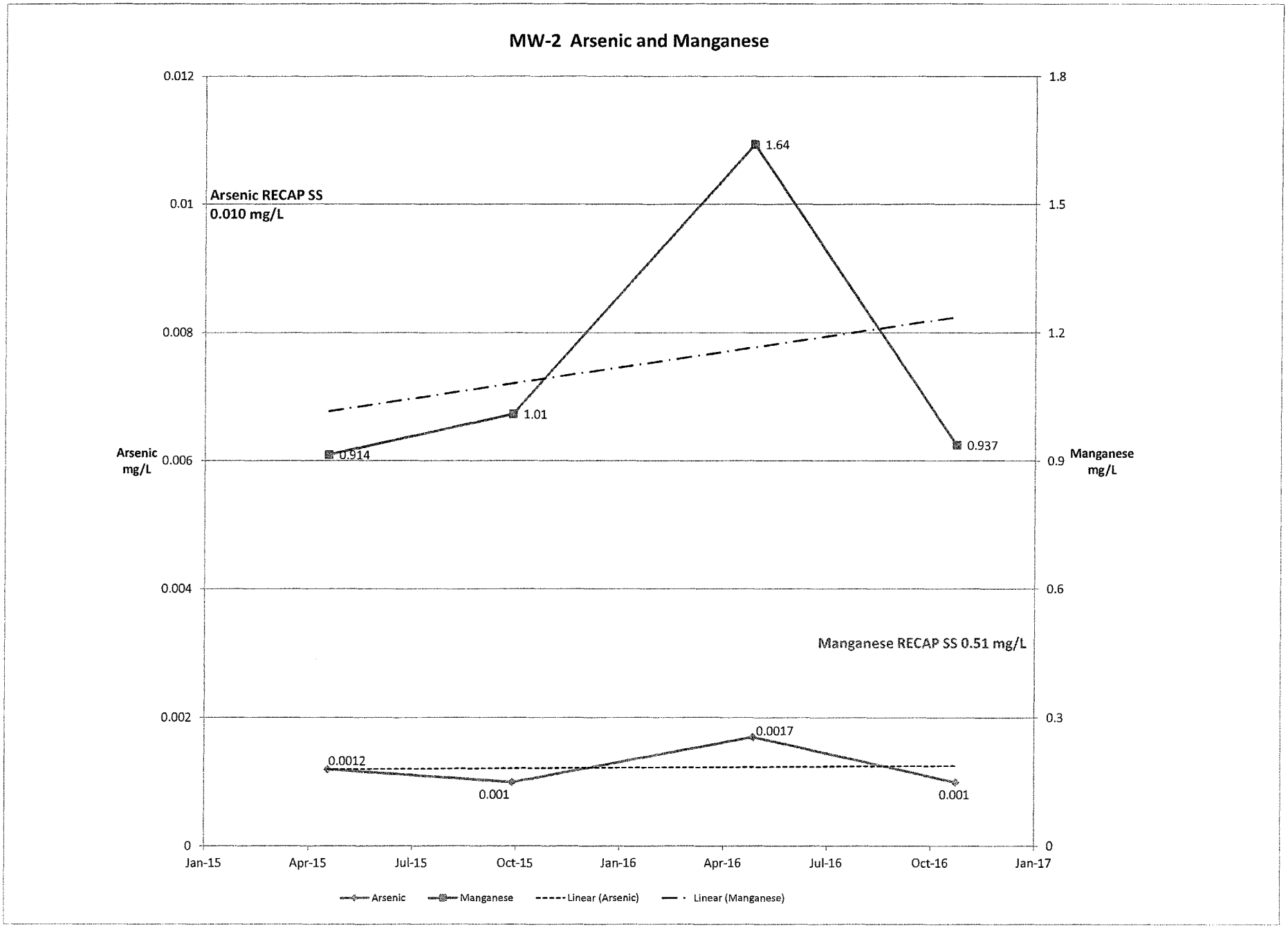

MW-1 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.0 -9.0 Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
0.0041
0.0043
0.0033
3.43
0.003
3.36
2.90
3.15
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

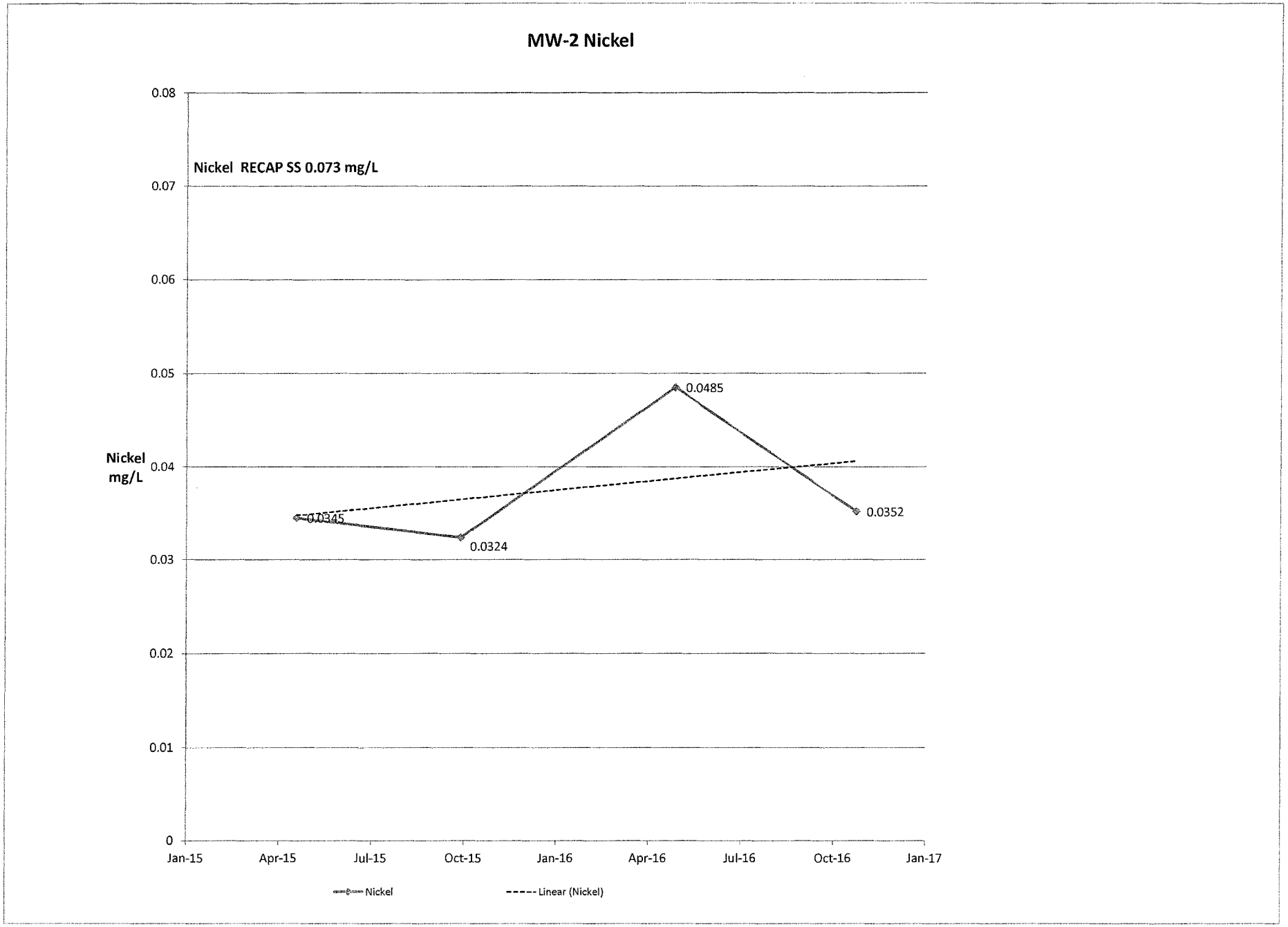

MW-1 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
8
7
6
5
4
3
2
1
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
0.012
0.0138
0.0142
0.0141
4.42
6.02
5.22
5.63
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

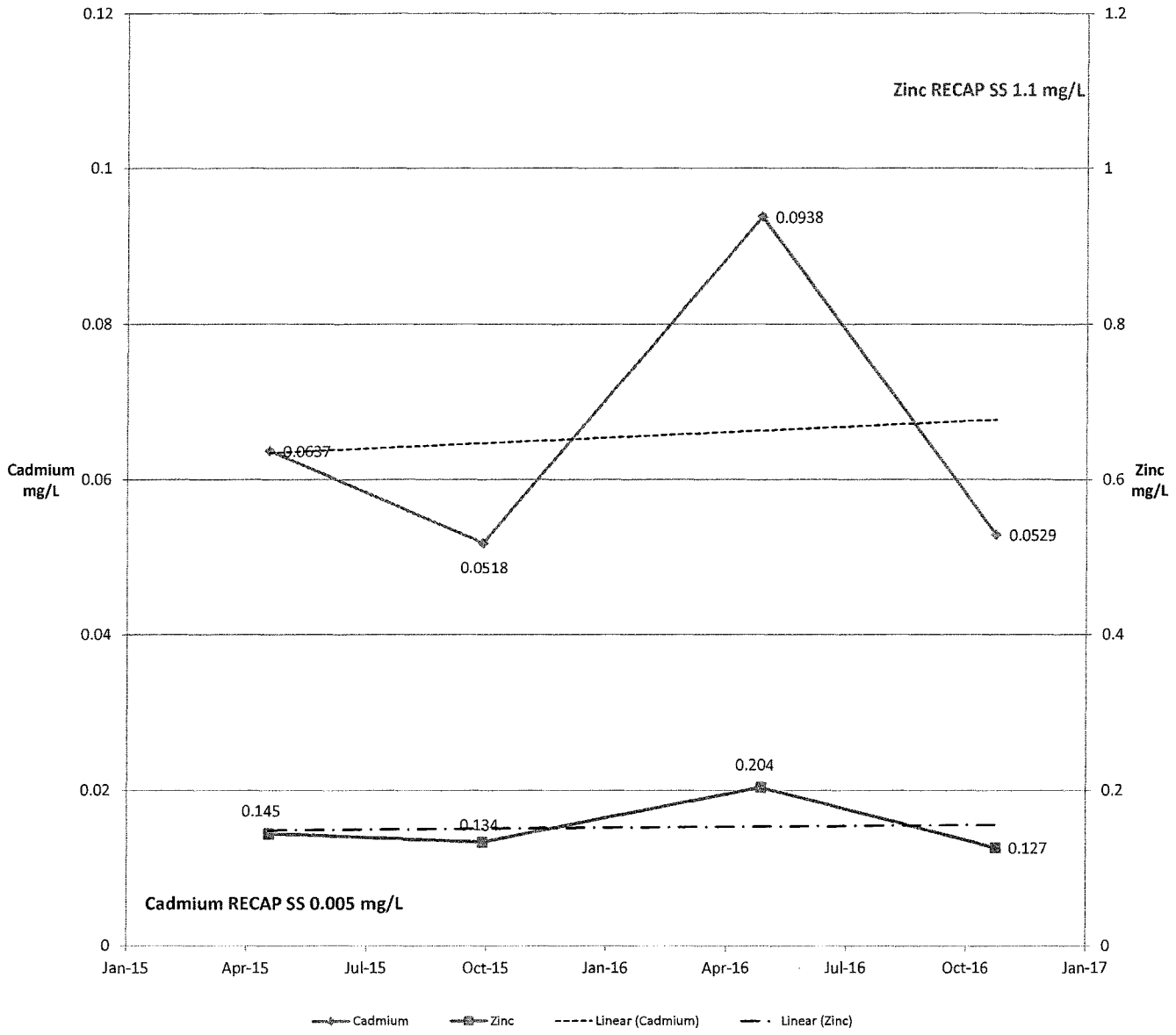

MW-1 Nickel
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Nickel
mg/L
0.157
0.148
0.132
0.113
Nickel RECAP SS 0.073 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

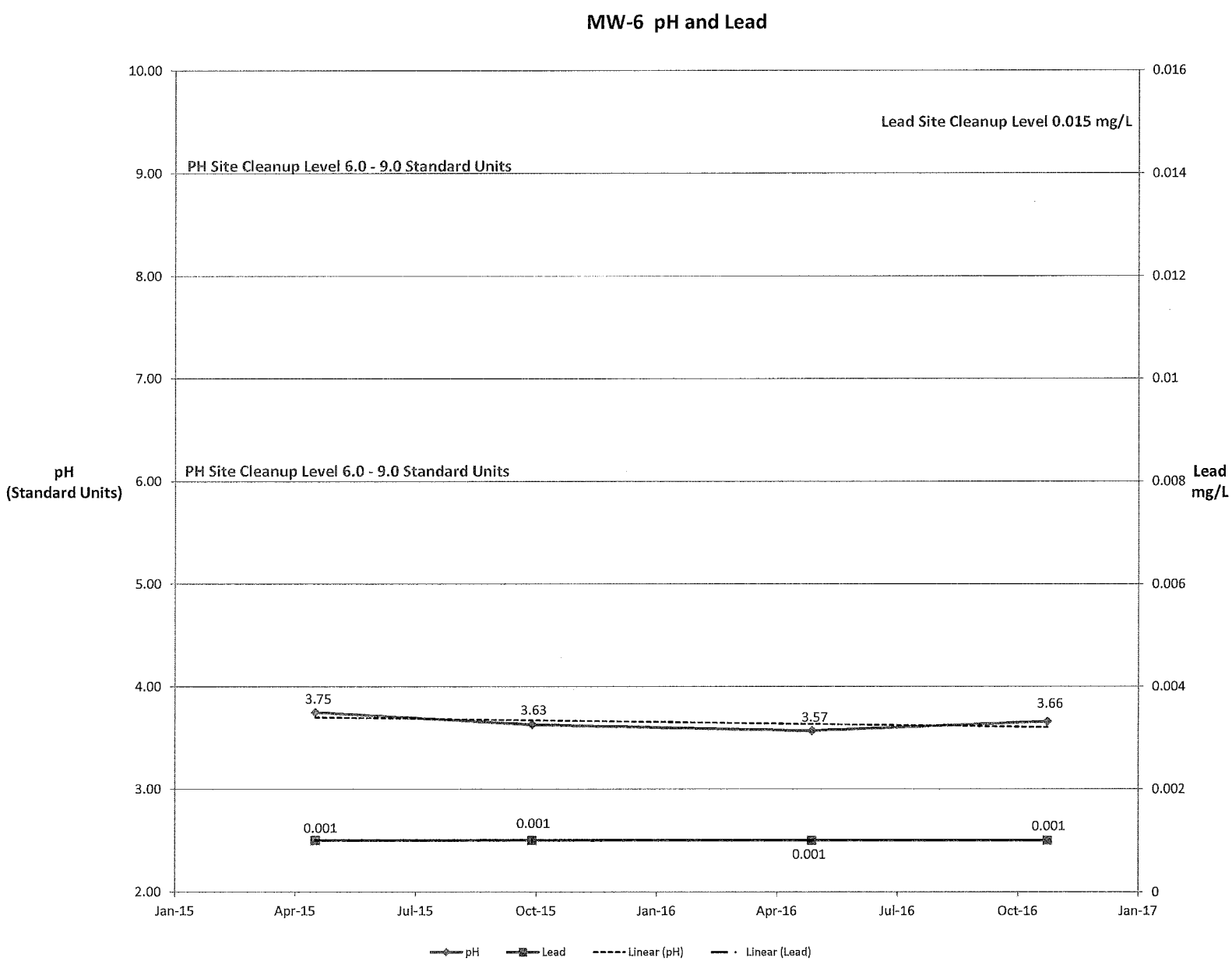

MW-1 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.0022
0.0029
0.0031
0.003
0.112
0.126
0.127
0.128
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

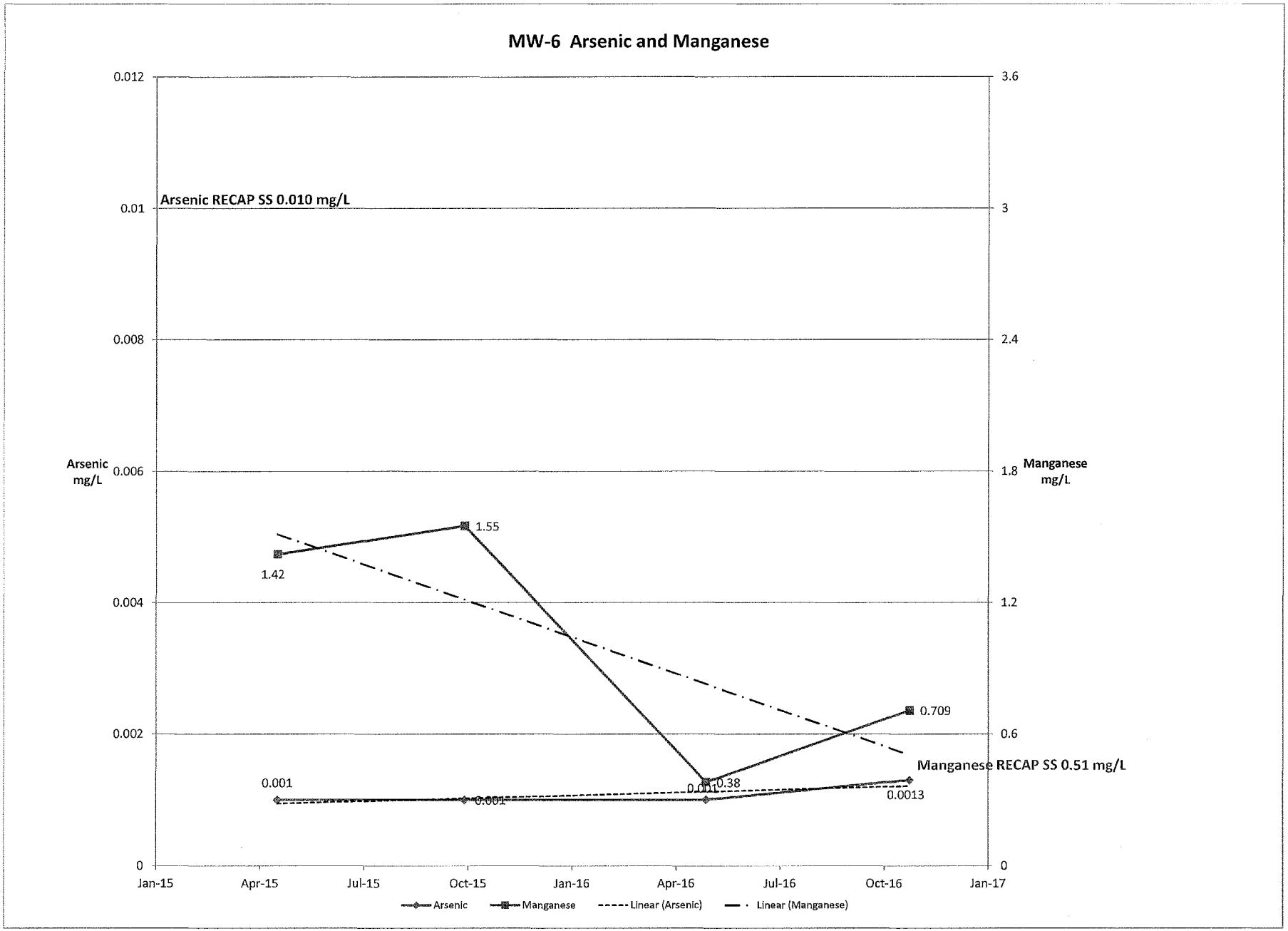

MW-2 pH and Lead
PH Site Cleanup Level 6.0 - 9.0
Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
Lead Site
Cleanup Level
0.015 mg/L
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
3.32
3.19
2.87
2.88
0.0058
0.0041
0.0032
0.0033
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

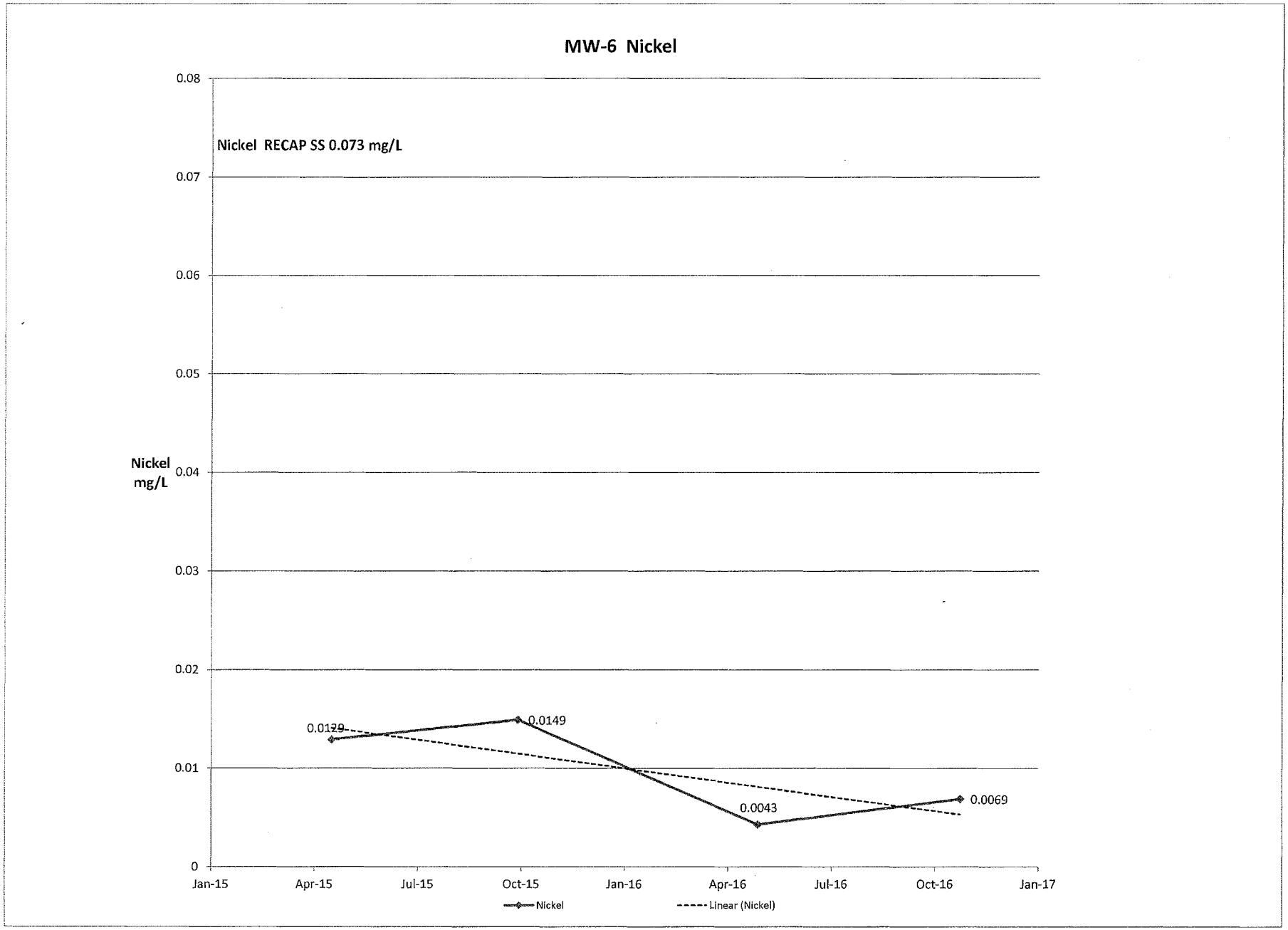

MW-2 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
1.64
1.01
0.914
0.937
0.0017
0.0012
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

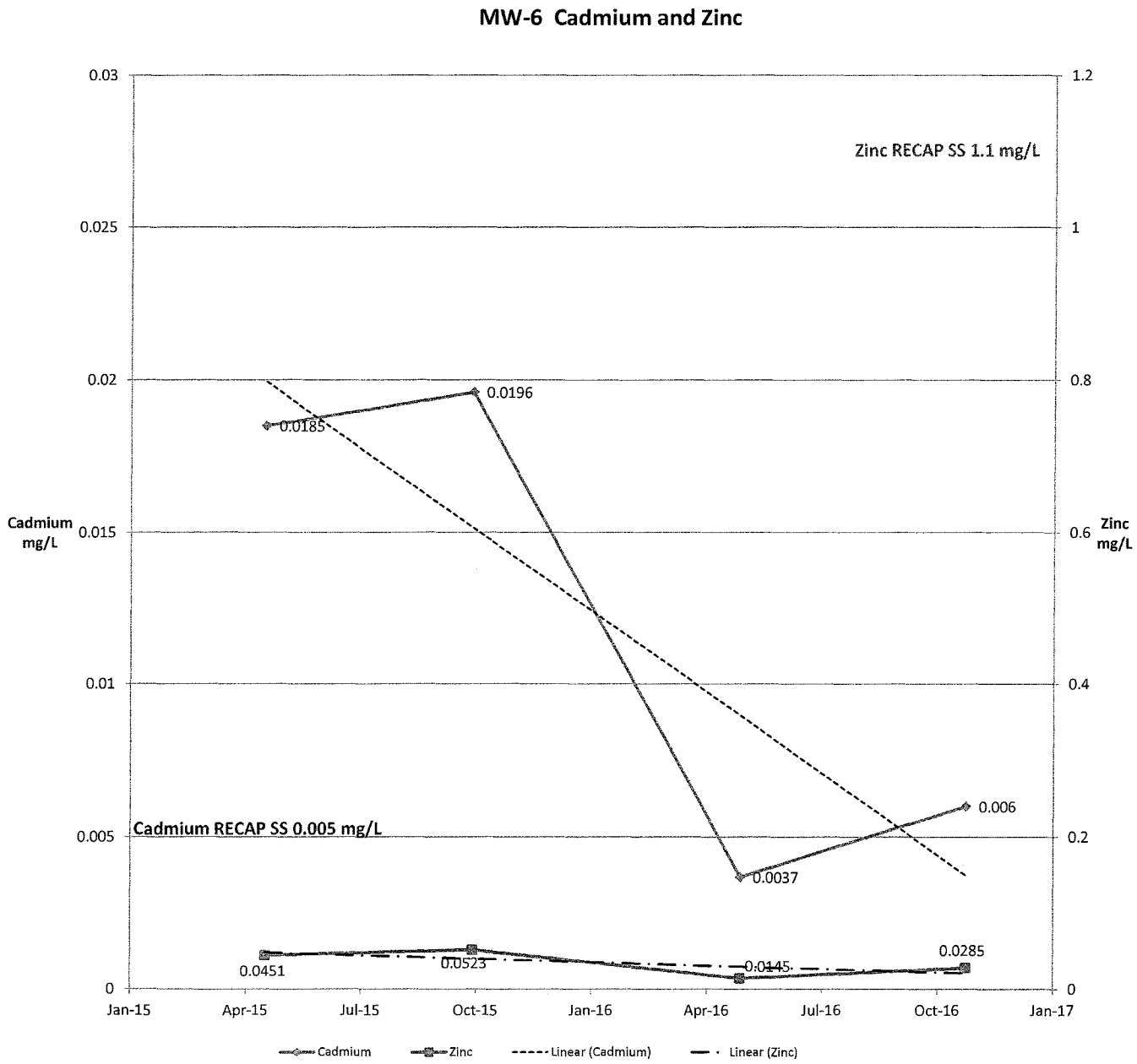

MW-2 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0345
0.0324
0.0485
0.0352
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

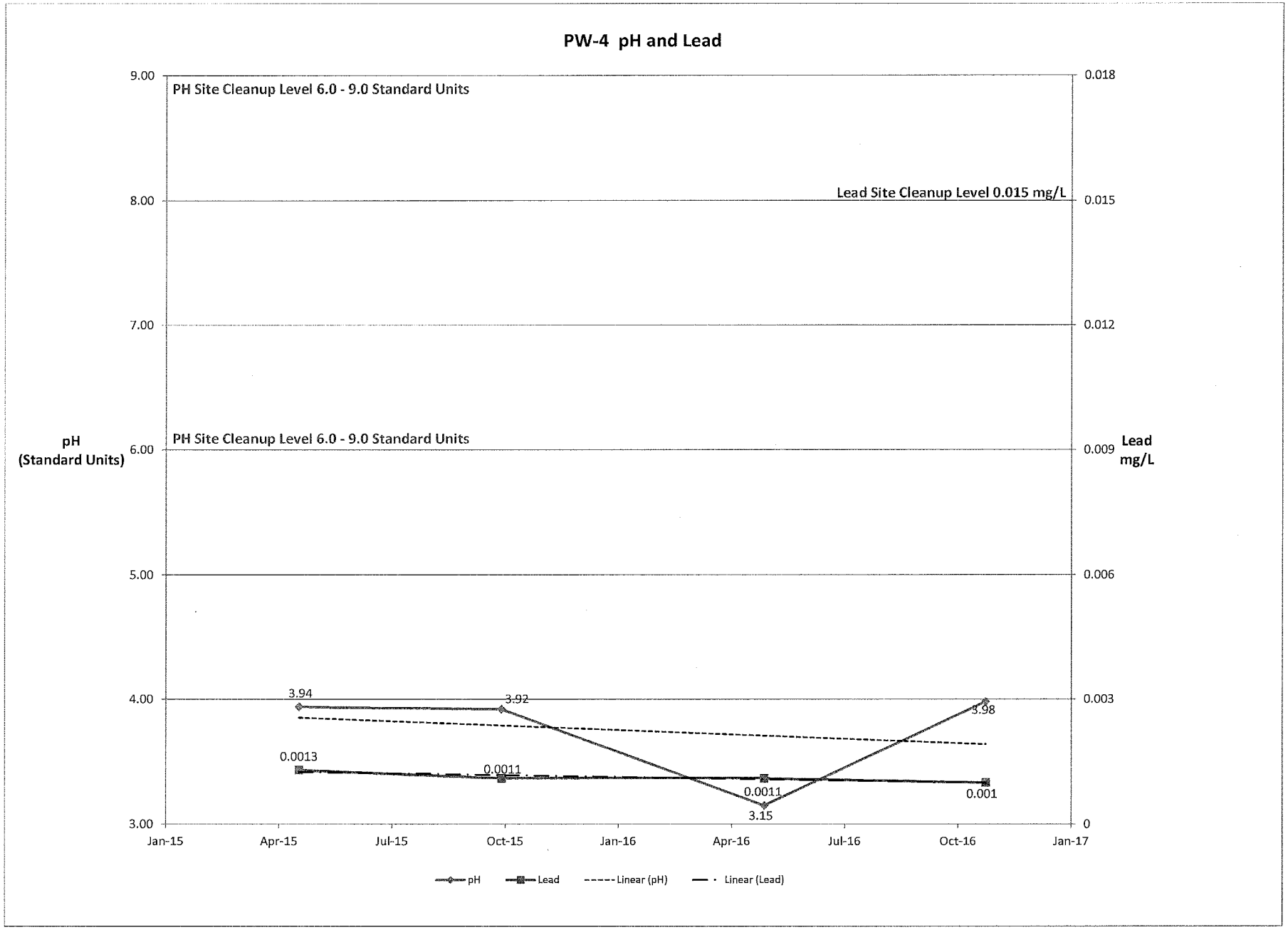

MW-2 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.12
0.1
0.08
0.06
0.04
0.02
0
1.2
1
0.8
0.6
0.4
0.2
0
0.0637
0.0518
0.0938
0.0529
0.145
0.134
0.204
0.127
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

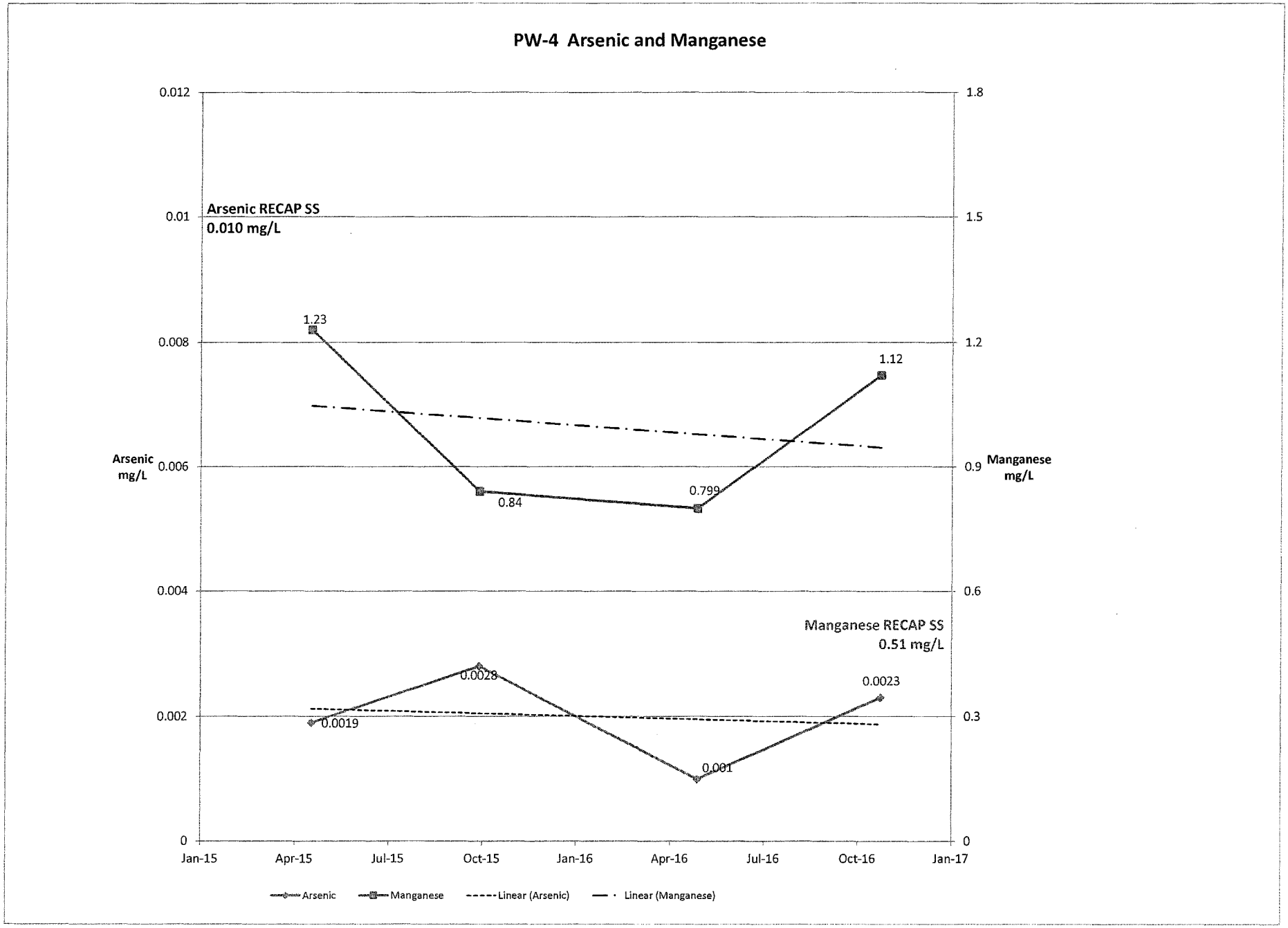

MW-6 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.0 - 9.0 Standard Units
PH Site Cleanup Level 6.0 - 9.0 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
3.75
3.63
3.57
3.66
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

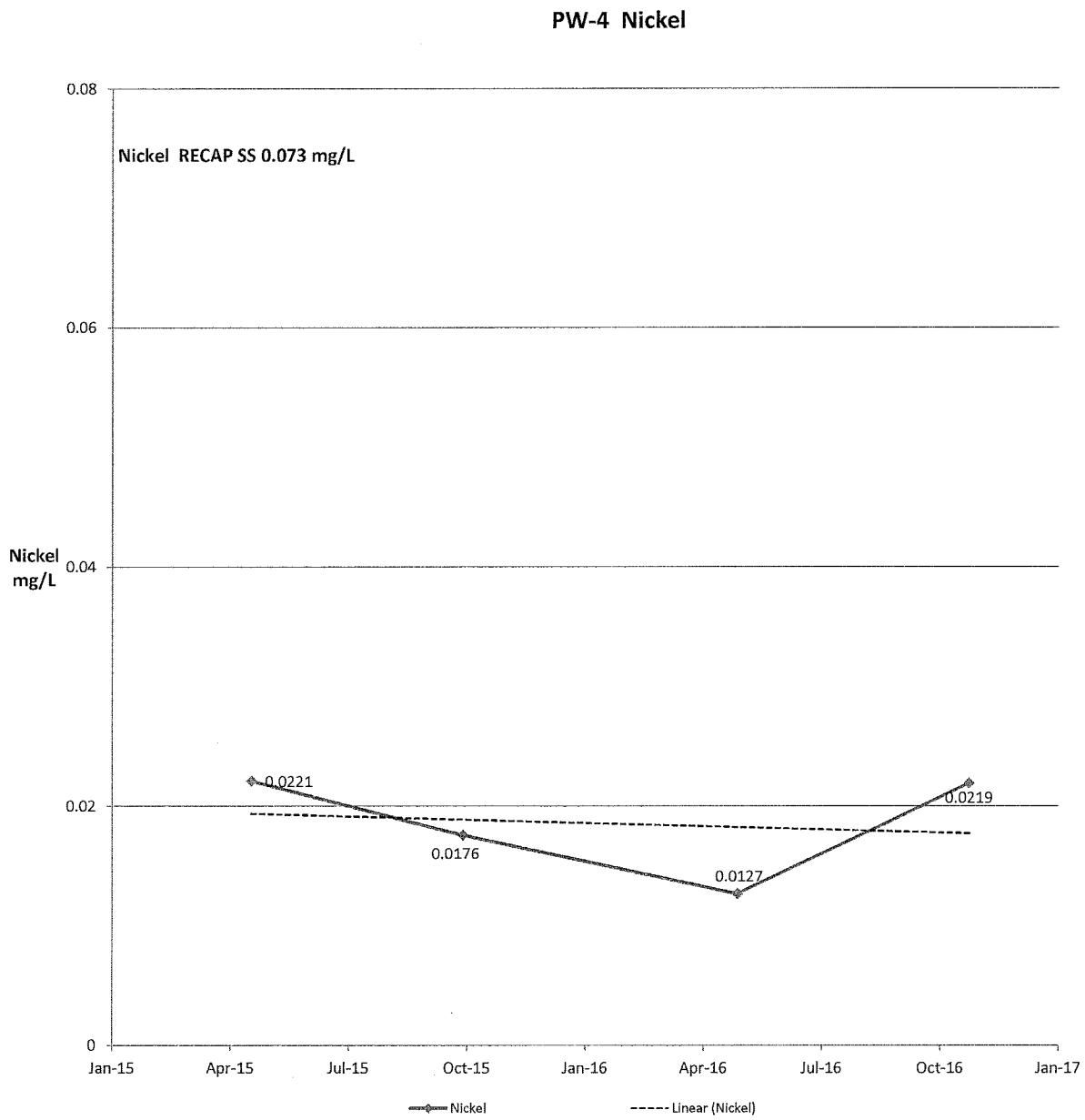

MW-6 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
3.6
3
2.4
1.8
1.2
0.6
0
1.42
1.55
0.38
0.709
0.001
0.001
0.001
0.0013
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


MW-6 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0129
0.0149
0.0043
0.0069
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

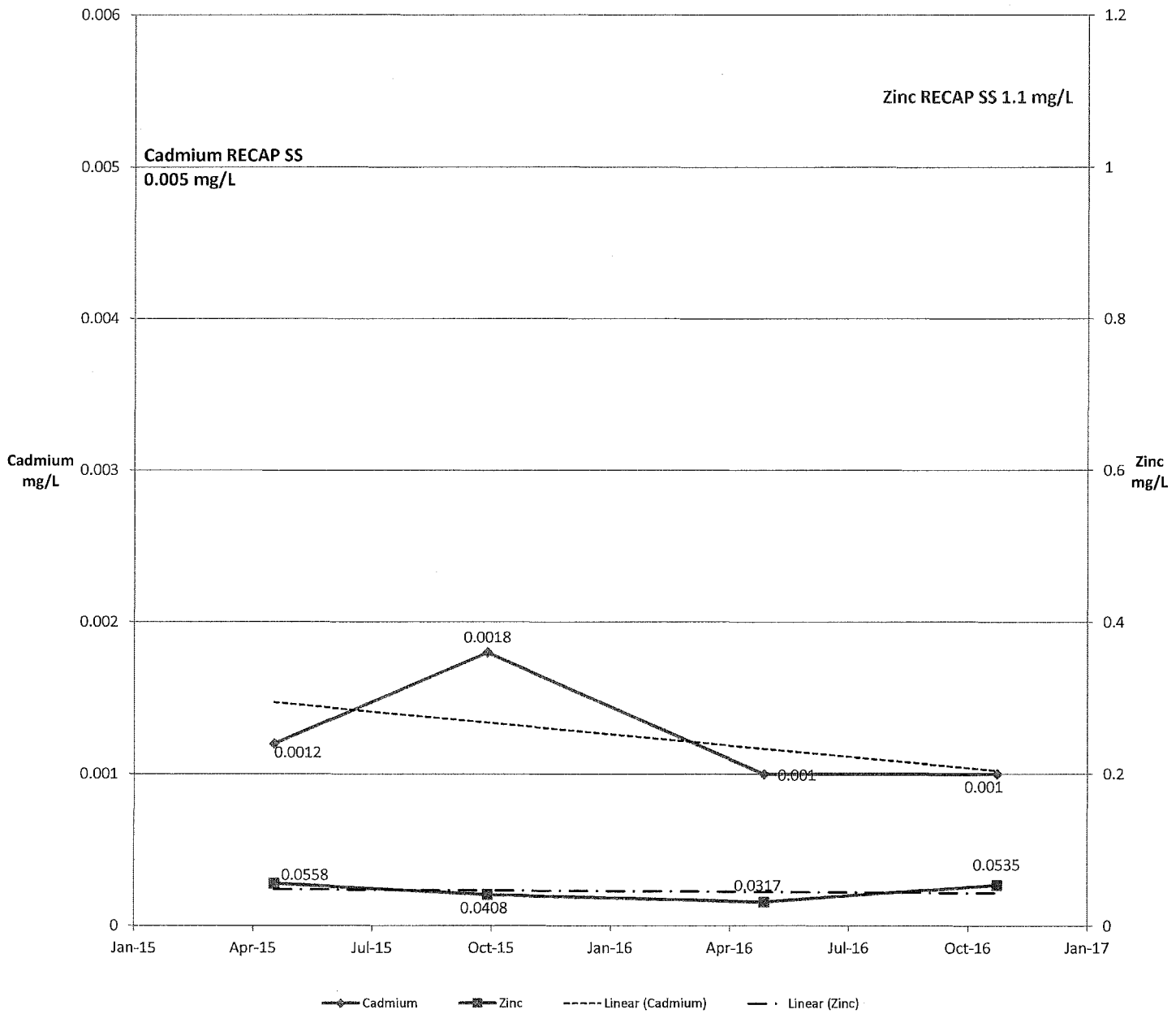

MW-6 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.03
0.025
0.02
0.015
0.01
0.005
0
1.2
1
0.8
0.6
0.4
0.2
0
0.0185
0.0196
0.0037
0.006
0.0451
0.0523
0.0145
0.0285
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

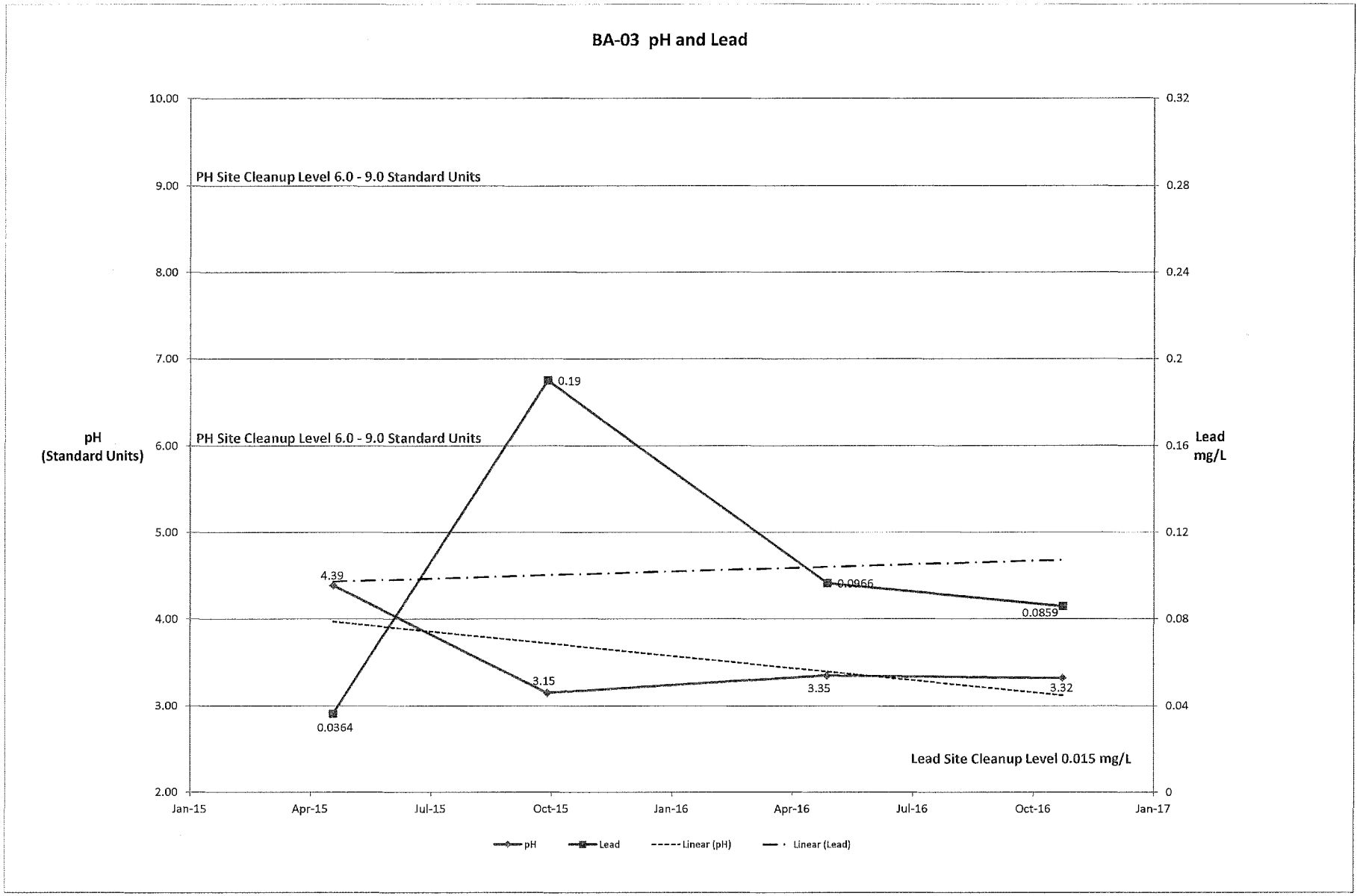

PW-4 pH and Lead
PH Site Cleanup Level 6.0 - 9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.0 - 9.0 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
0.018
0.015
0.012
0.009
0.006
0.003
0
3.94
3.92
3.15
3.98
0.0013
0.0011
0.0011
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

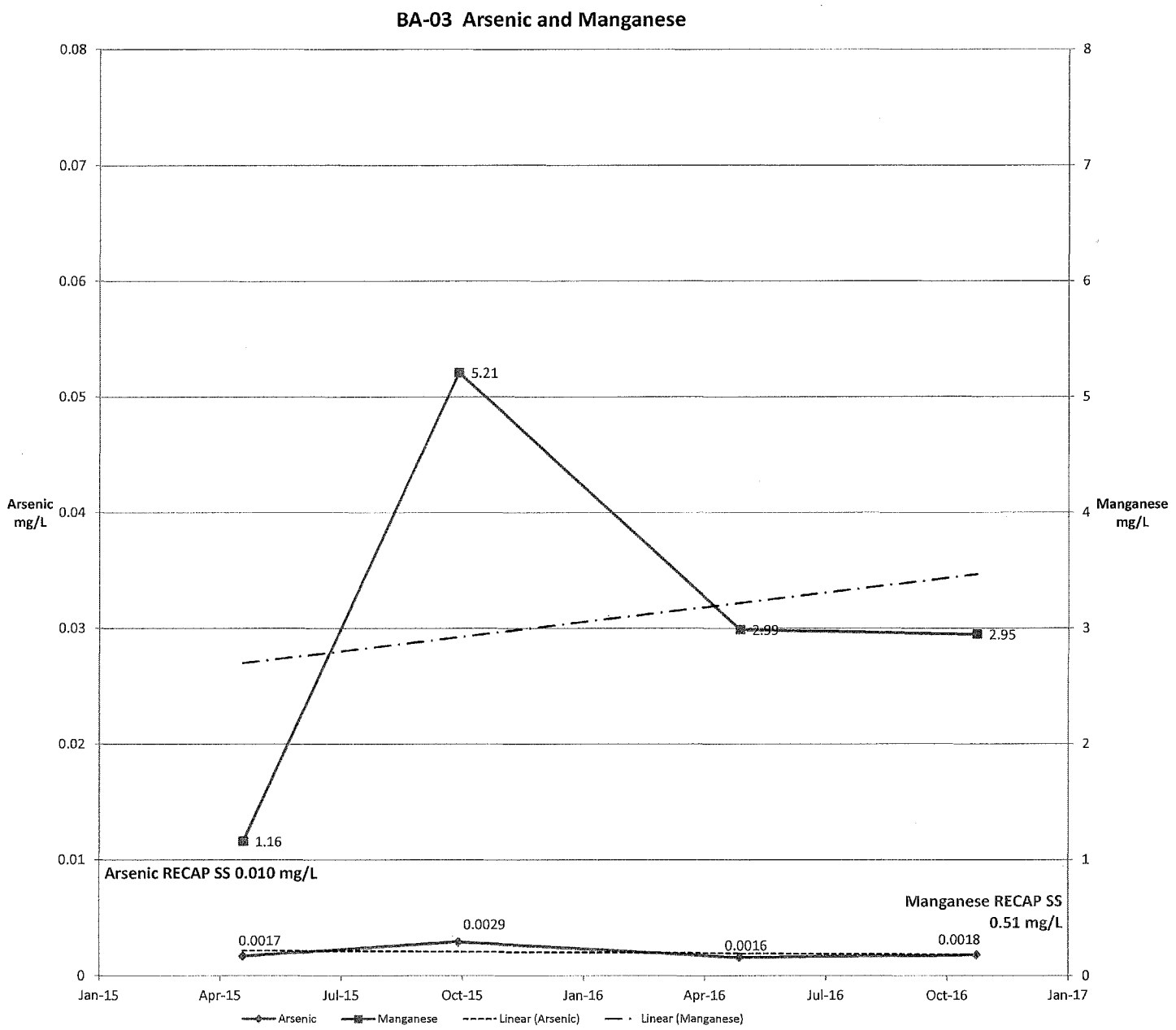

PW-4 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS
0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
1.23
0.84
0.799
1.12
0.0019
0.0028
0.001
0.0023
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

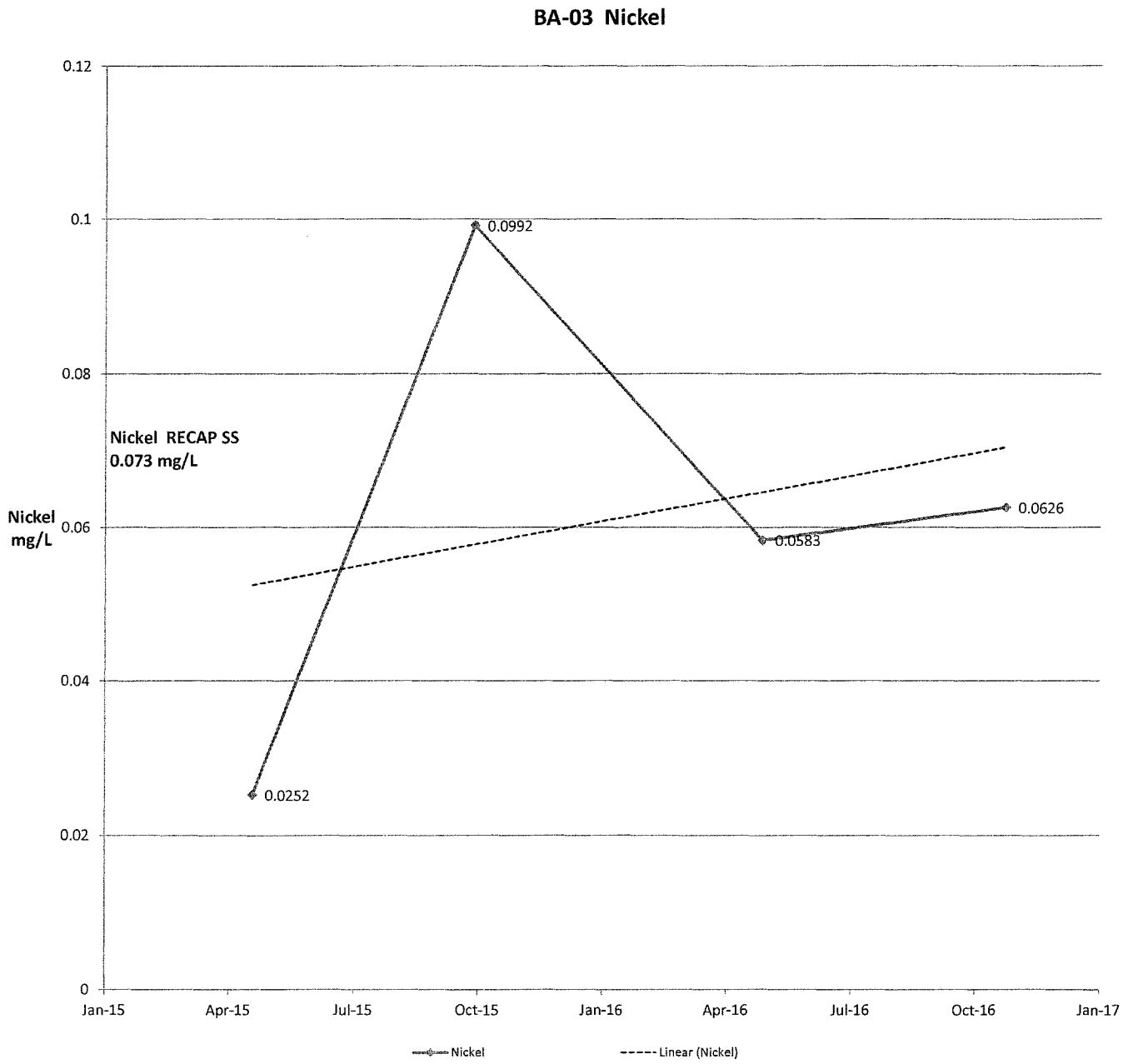

PW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.06
0.04
0.02
0
0.0221
0.0176
0.0127
0.0219
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

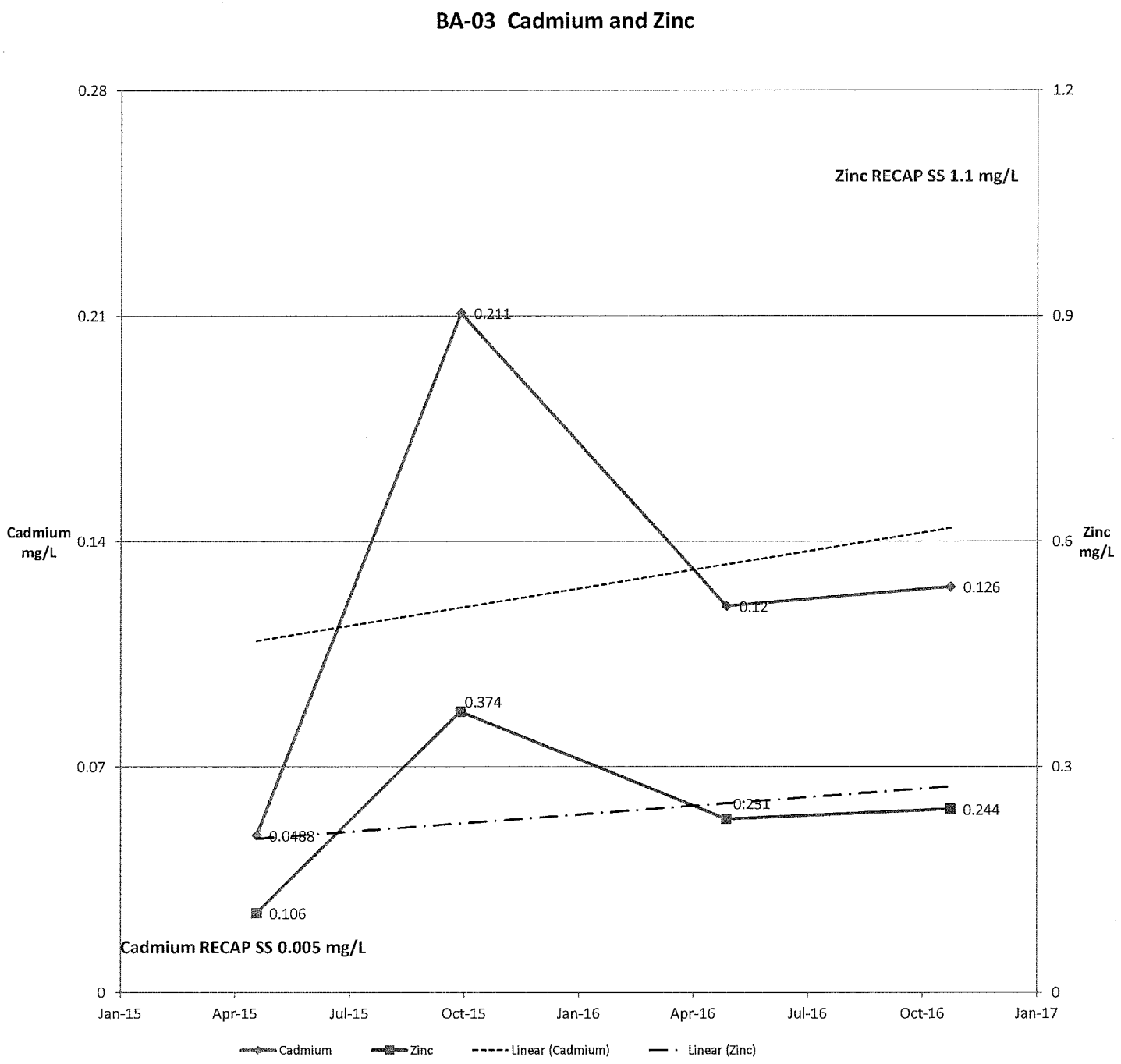
PW-4 Cadmium and Zinc

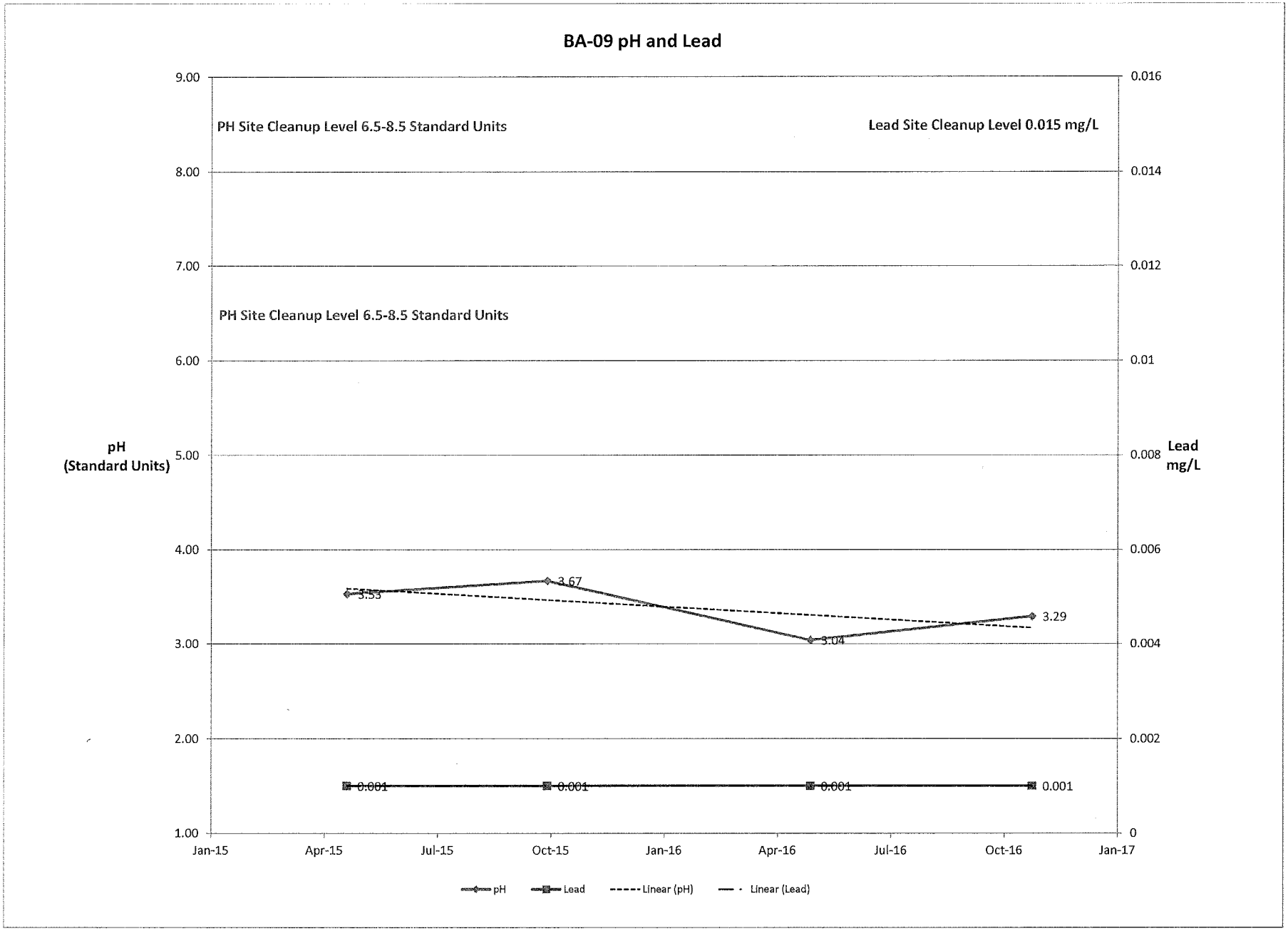


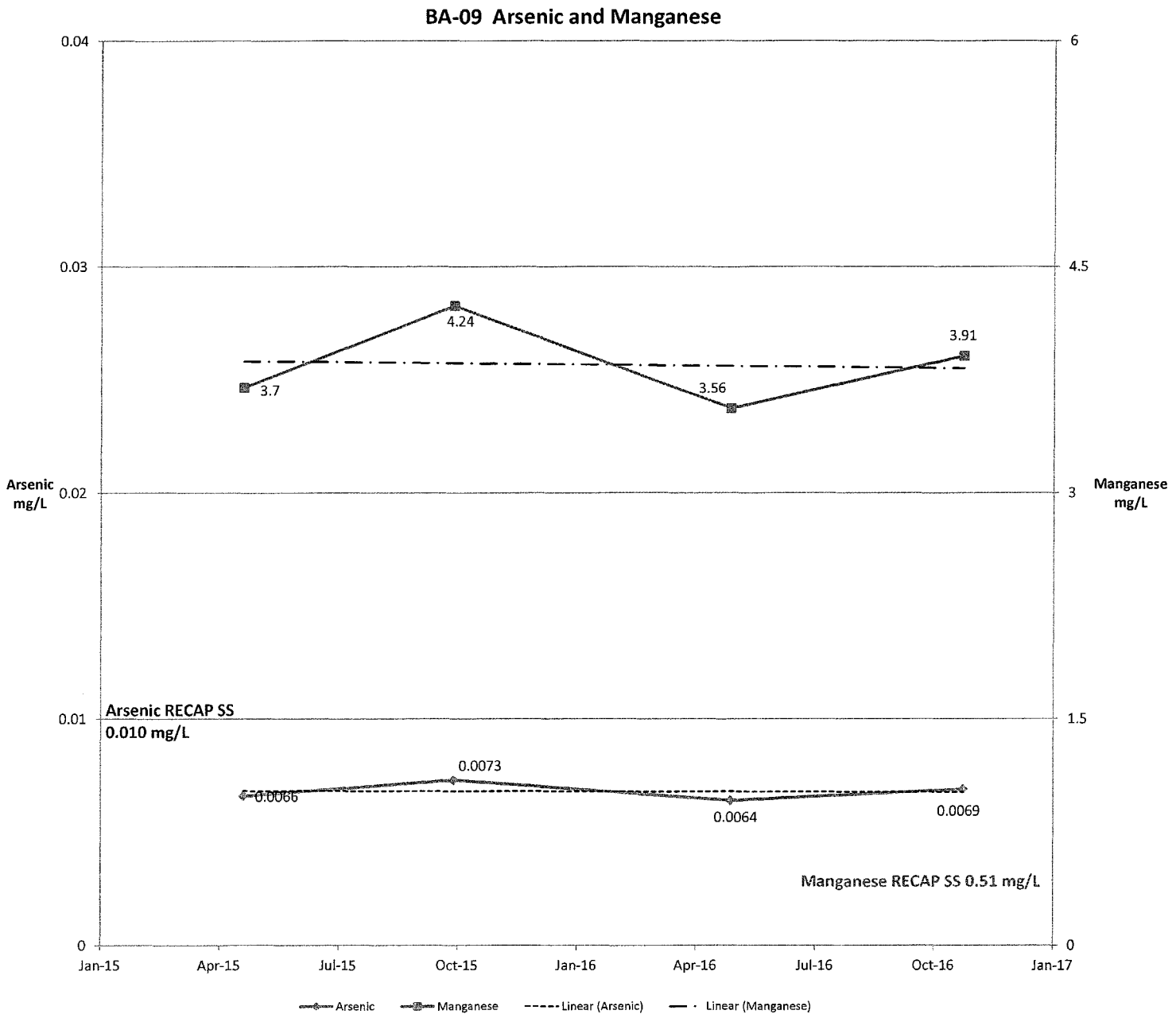

BA-03 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0 - 9.0 Standard Units
PH Site Cleanup Level 6.0 - 9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.32
0.28
0.24
0.2
0.16
0.12
0.08
0.04
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
4.39
0.19
0.0966
0.0859
3.15
3.35
3.32
0.0364
pH
Lead
Linear (pH)
Linear (Lead)

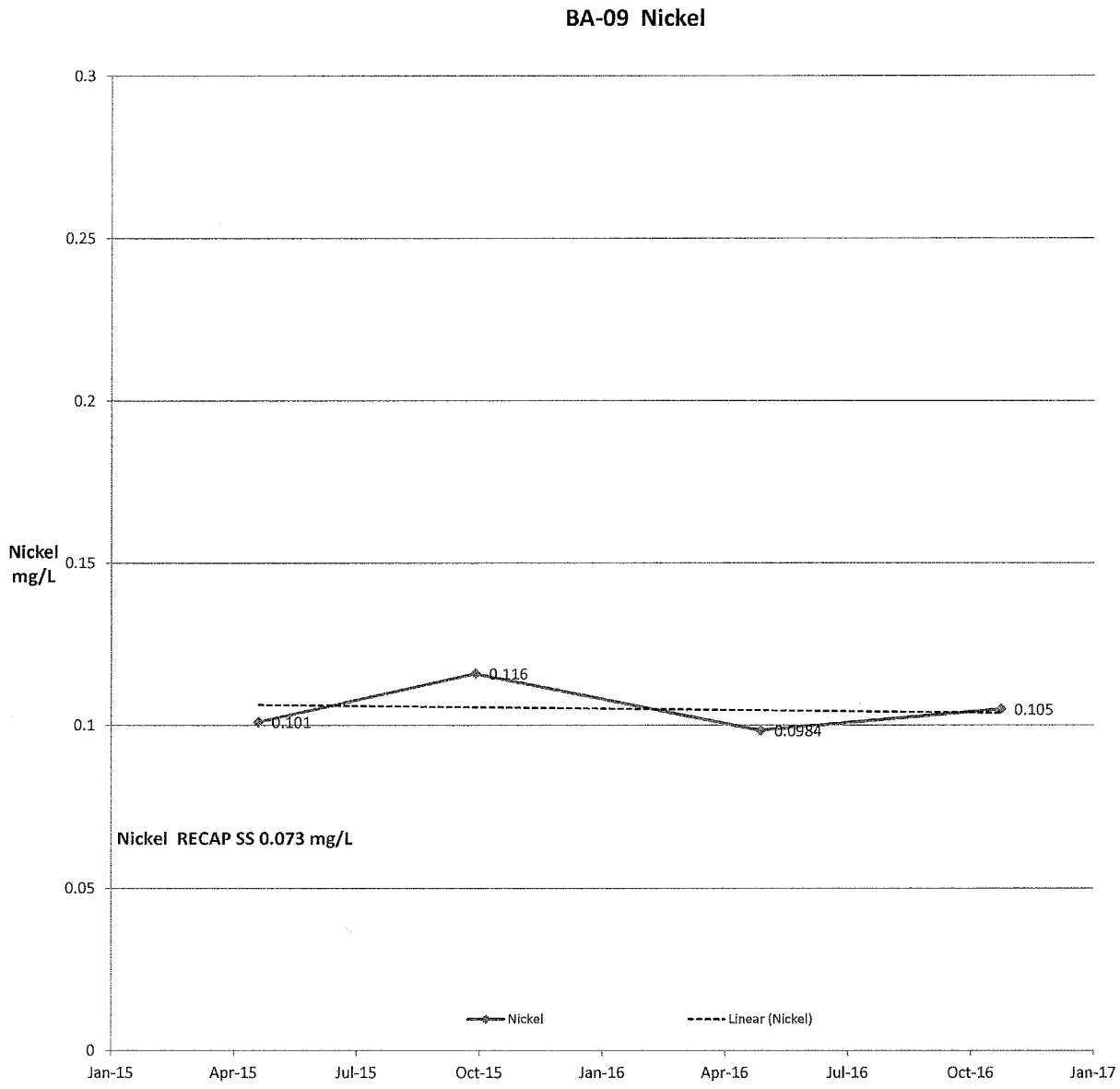

BA-03 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
8
7
6
5
4
3
2
1
0
5.21
1.16
2.99
2.95
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.0017
0.0029
0.0016
0.0018
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


BA-03 Nickel
0.12
0.1
0.08
0.06
0.04
0.02
0
Nickel
mg/L
Nickel RECAP SS
0.073 mg/L
0.0992
0.0252
0.0583
0.0626
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

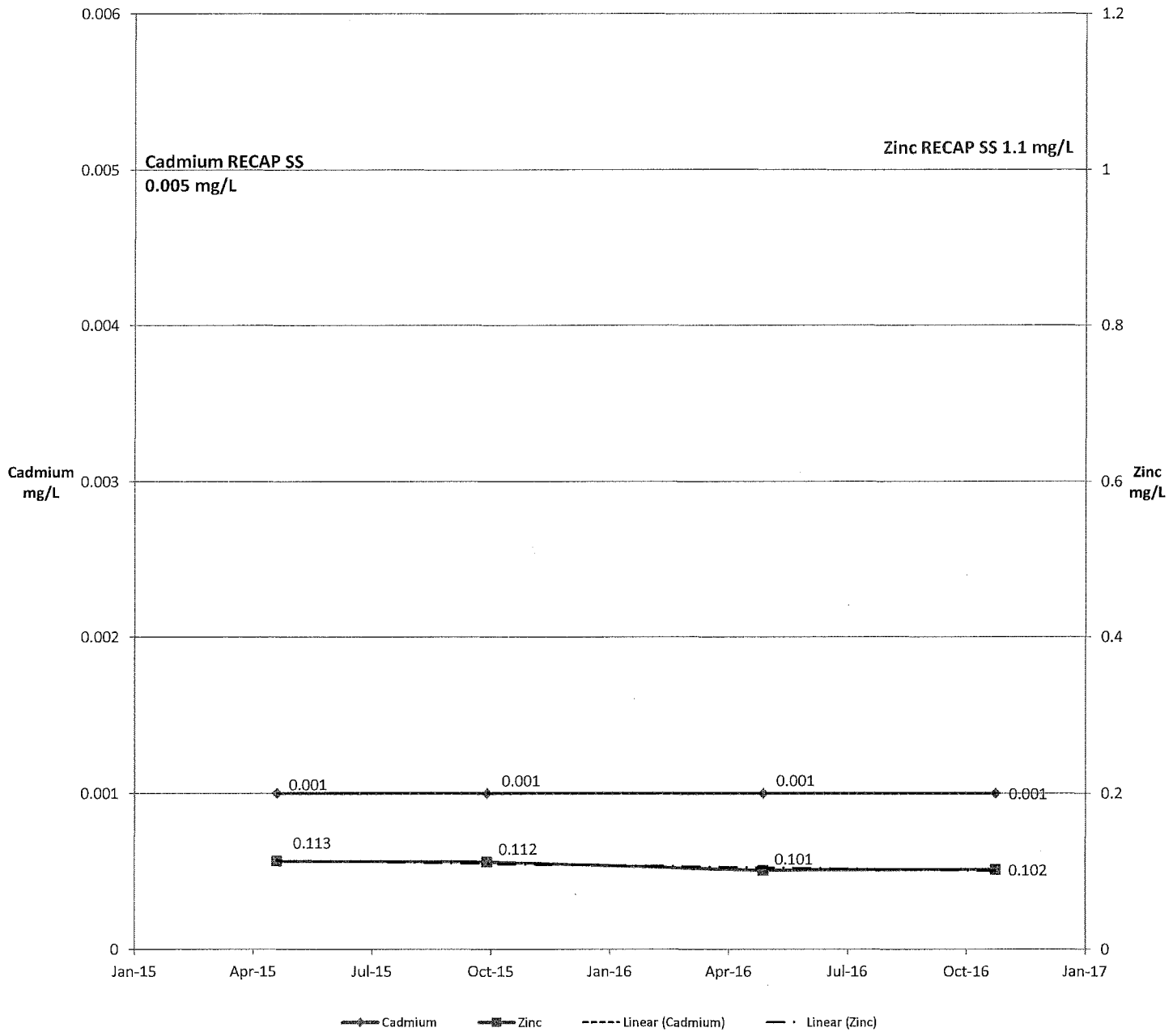

BA-03 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.28
0.21
0.14
0.07
0
1.2
0.9
0.6
0.3
0
0.211
0.12
0.126
0.374
0.231
0.244
0.0488
0.106
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


BA-09 pH and Lead
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
3.53
3.67
3.04
3.29
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)


BA-09 Arsenic and Manganese
0.04
0.03
0.02
0.01
0
Arsenic mg/L
6
4.5
3
1.5
0
Manganese mg/L
4.24
3.91
3.7
3.56
Arsenic RECAP SS
0.010 mg/L
0.0073
0.0066
0.0064
0.0069
Manganese RECAP SS 0.51 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

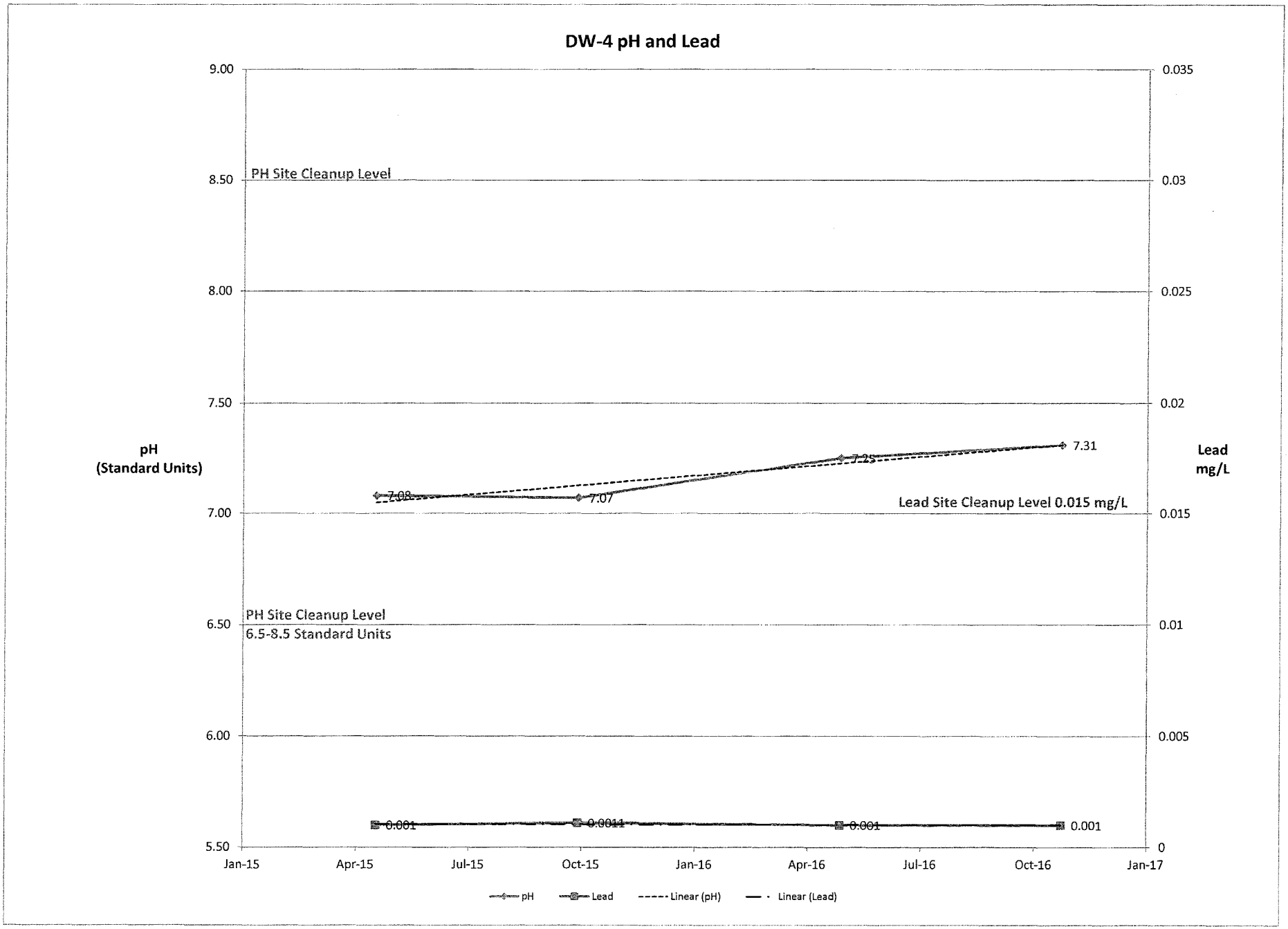

BA-09 Nickel
Nickel mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
0.101
0.116
0.0984
0.105
Nickel RECAP SS 0.073 mg/L
Nickel
Linear (Nickel)
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17

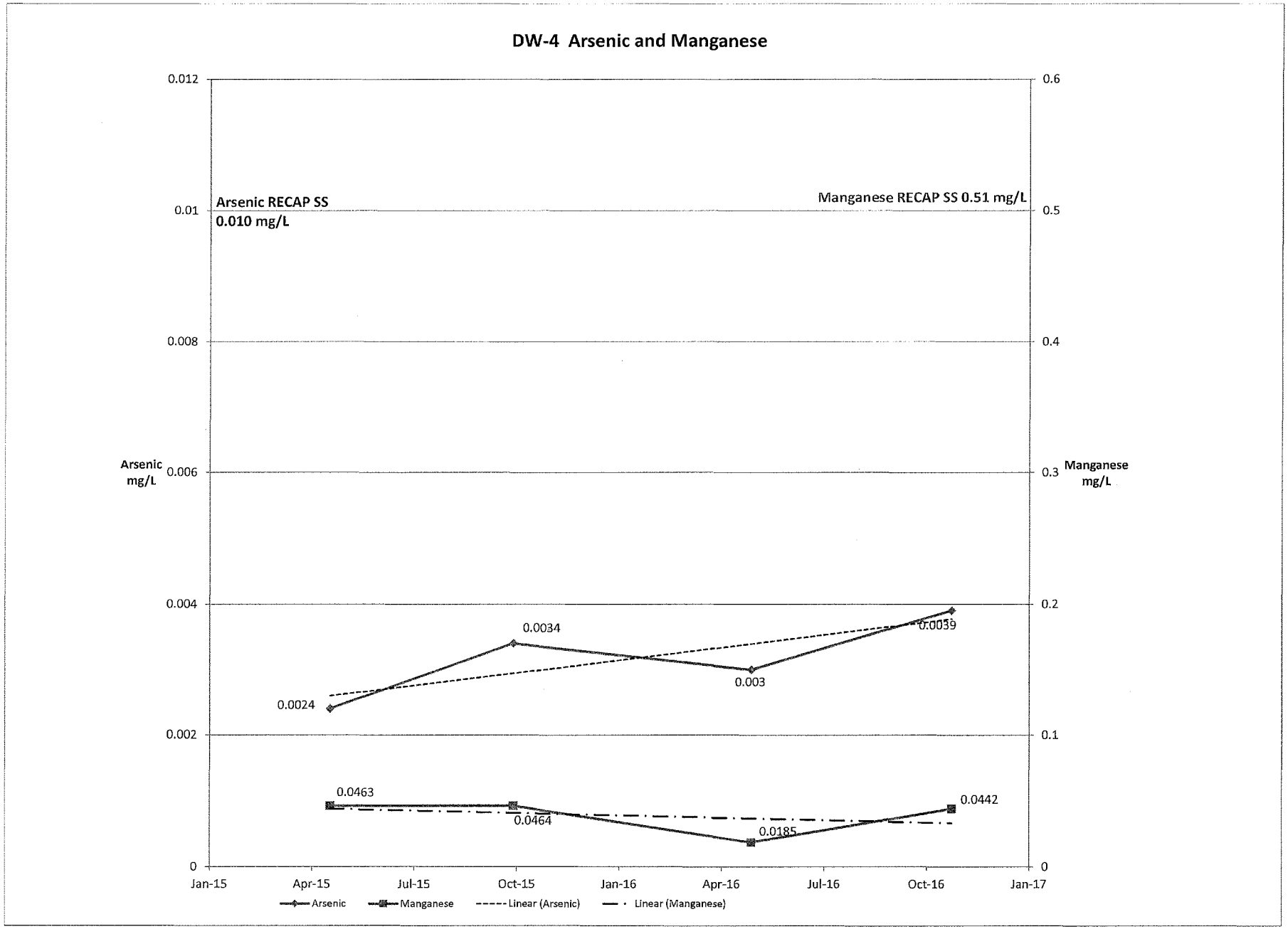
BA-09 Cadmium and Zinc

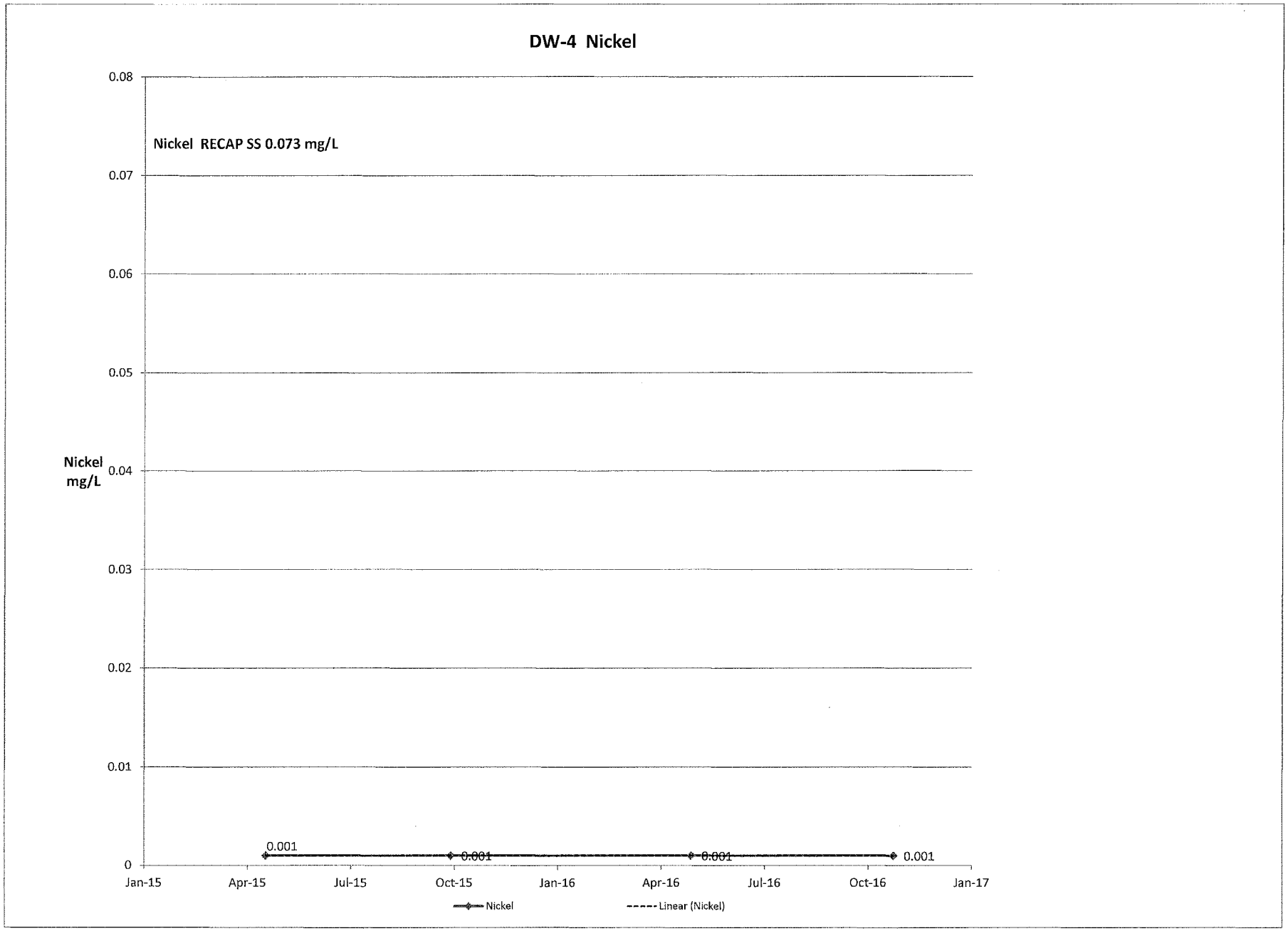


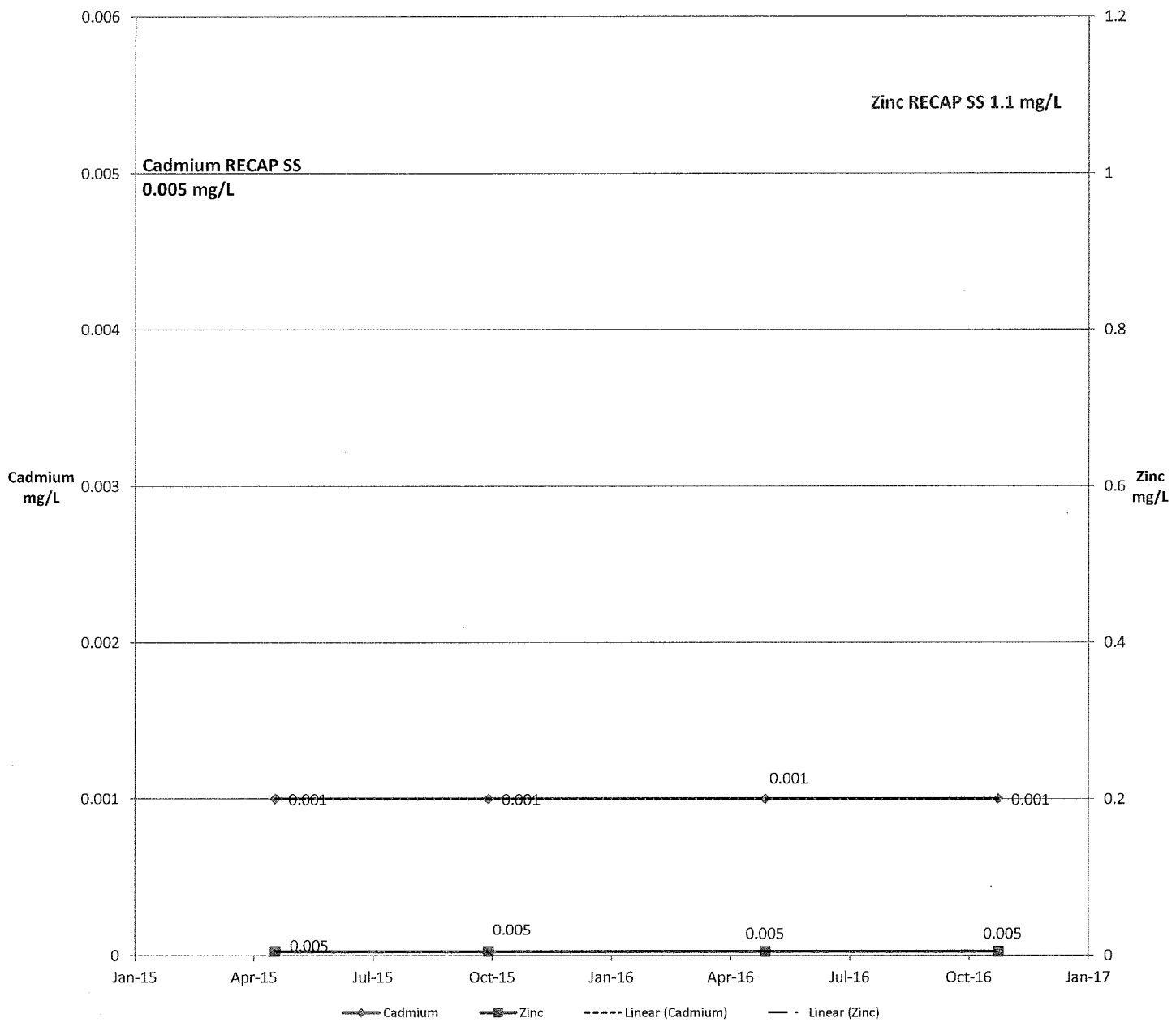
SECOND WATER BEARING ZONE

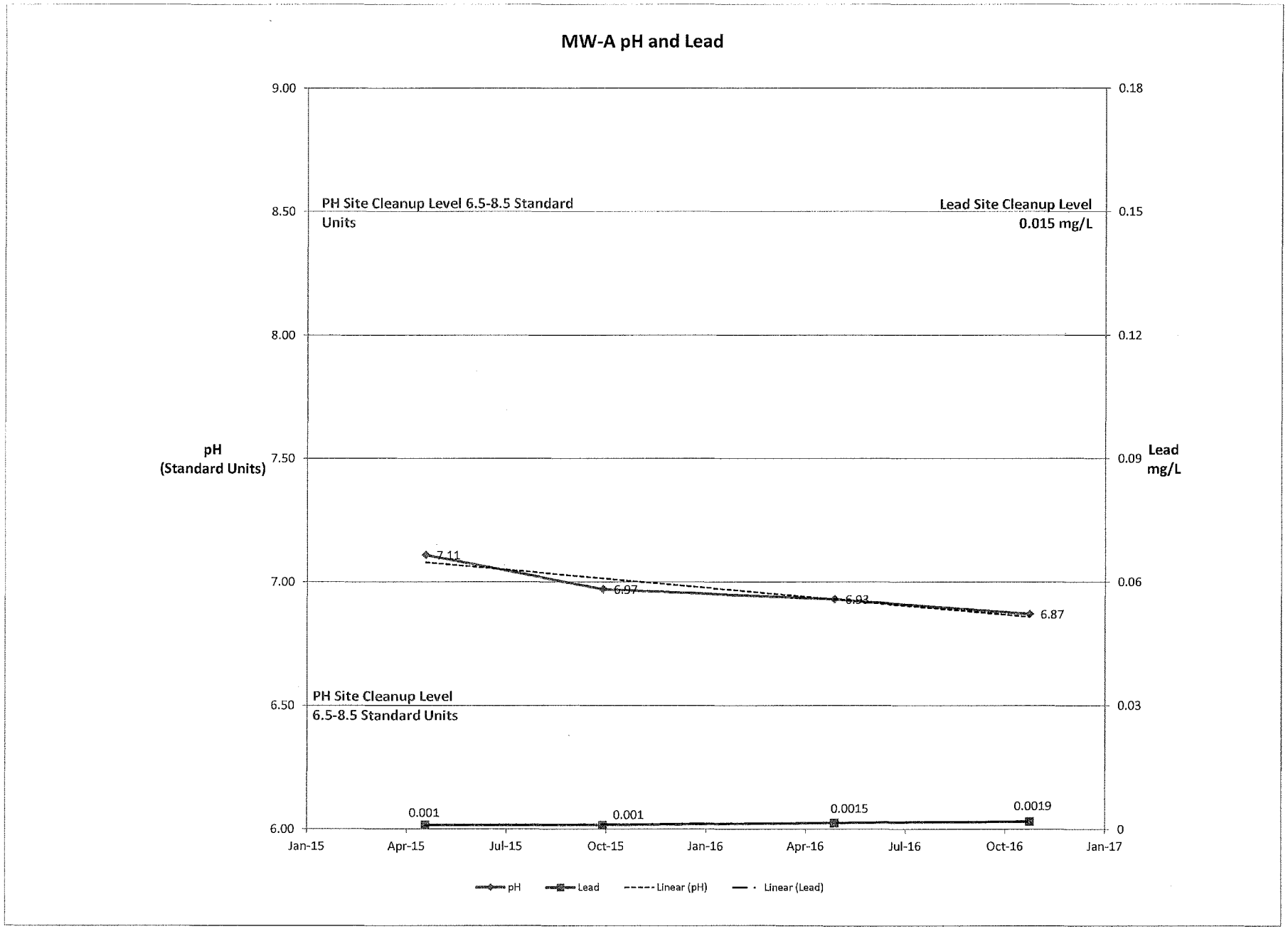
(PAST EIGHT QUARTERS)

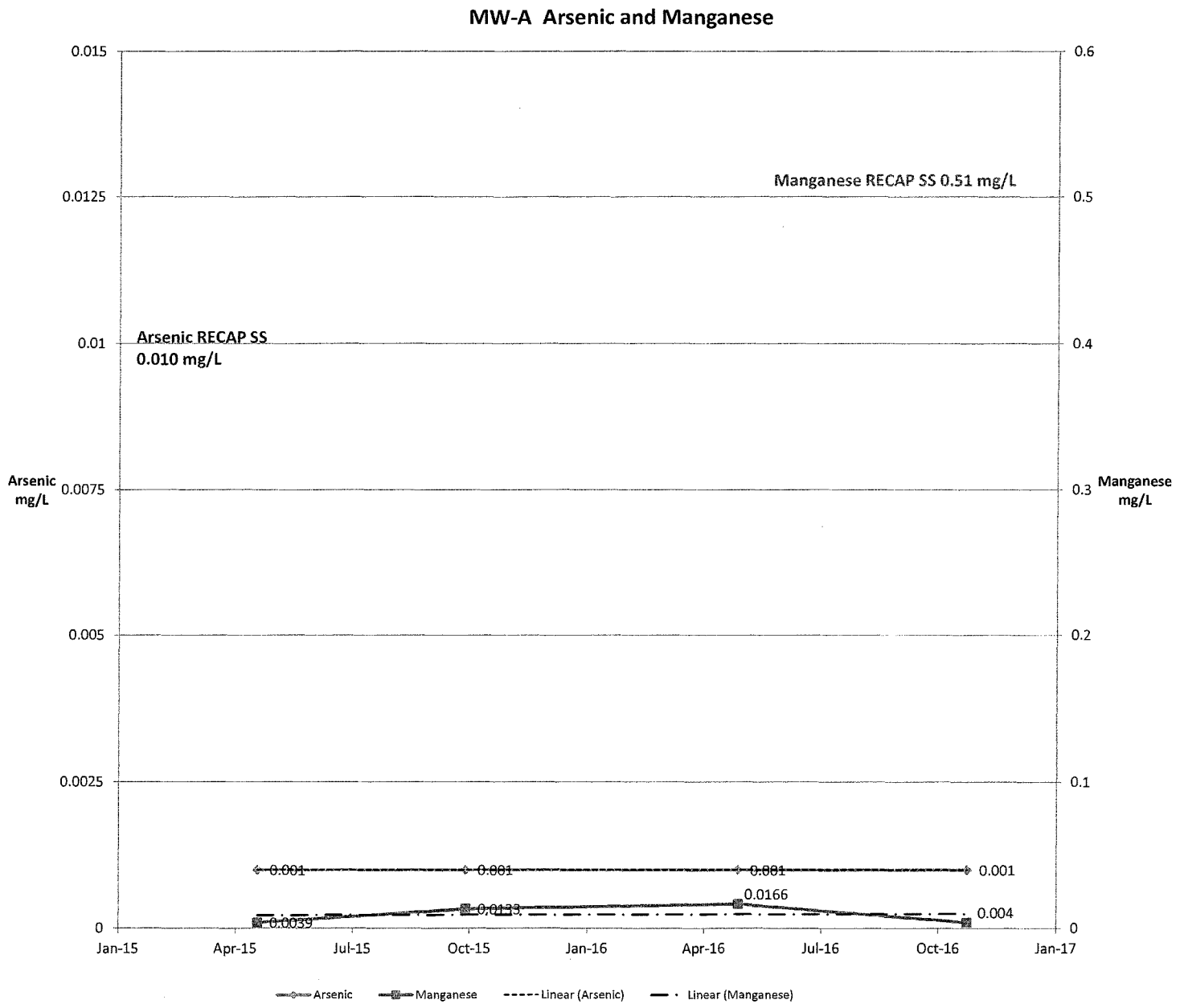

DW-4 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
PH Site Cleanup Level
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
7.08
7.07
7.25
7.31
0.001
0.0011
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

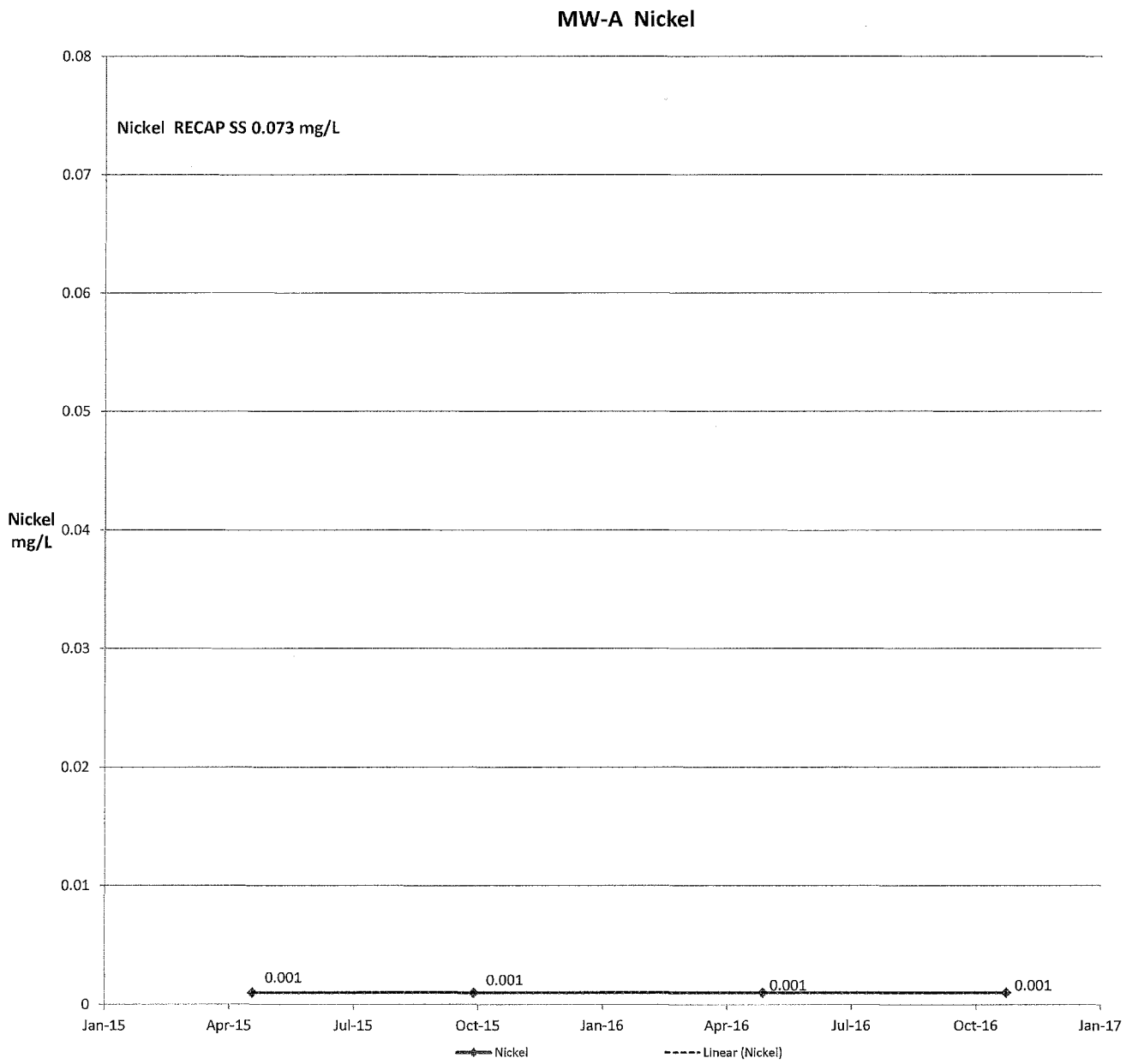

DW-4 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0024
0.0034
0.003
0.0039
0.0463
0.0464
0.0185
0.0442
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

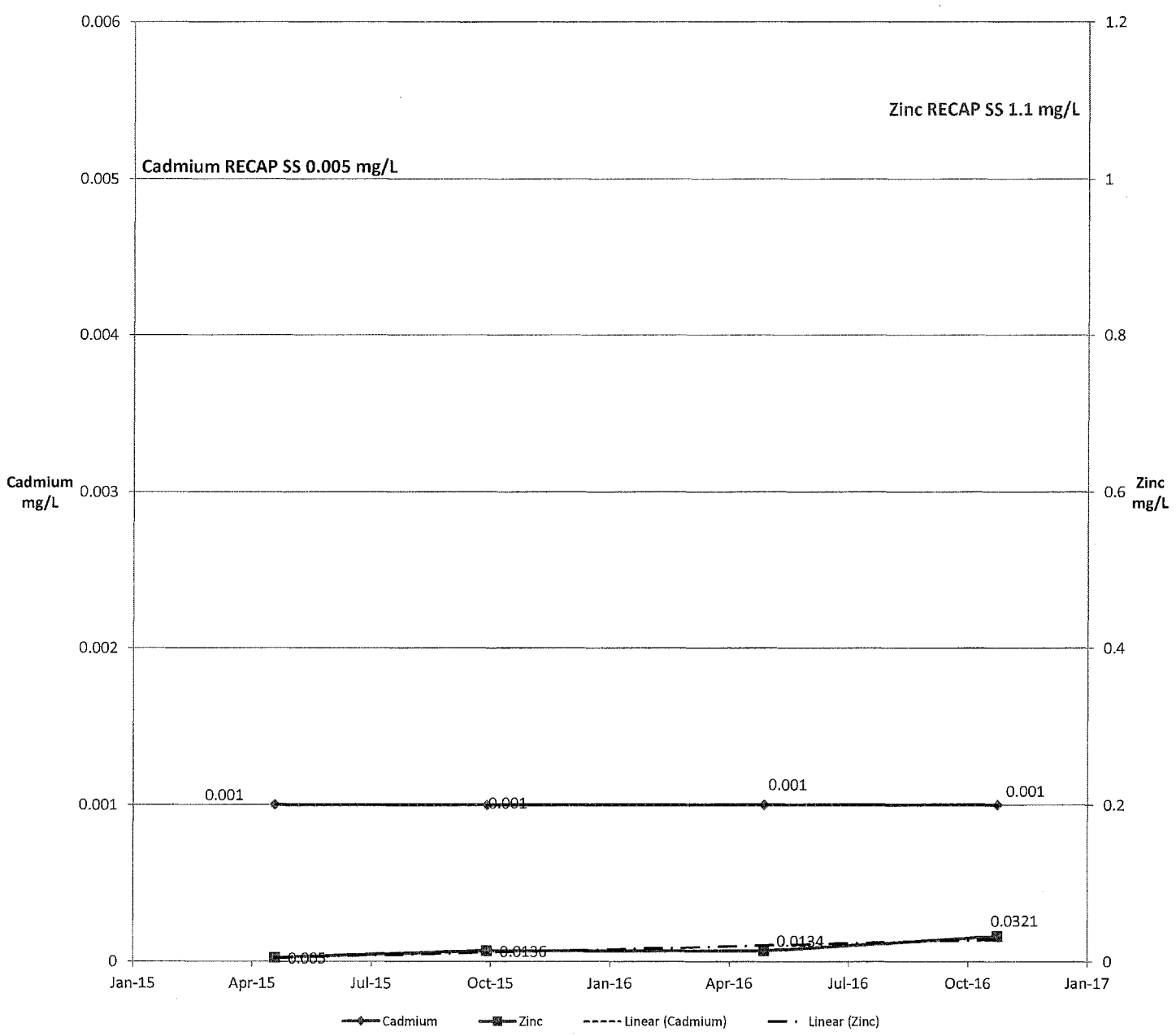

DW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

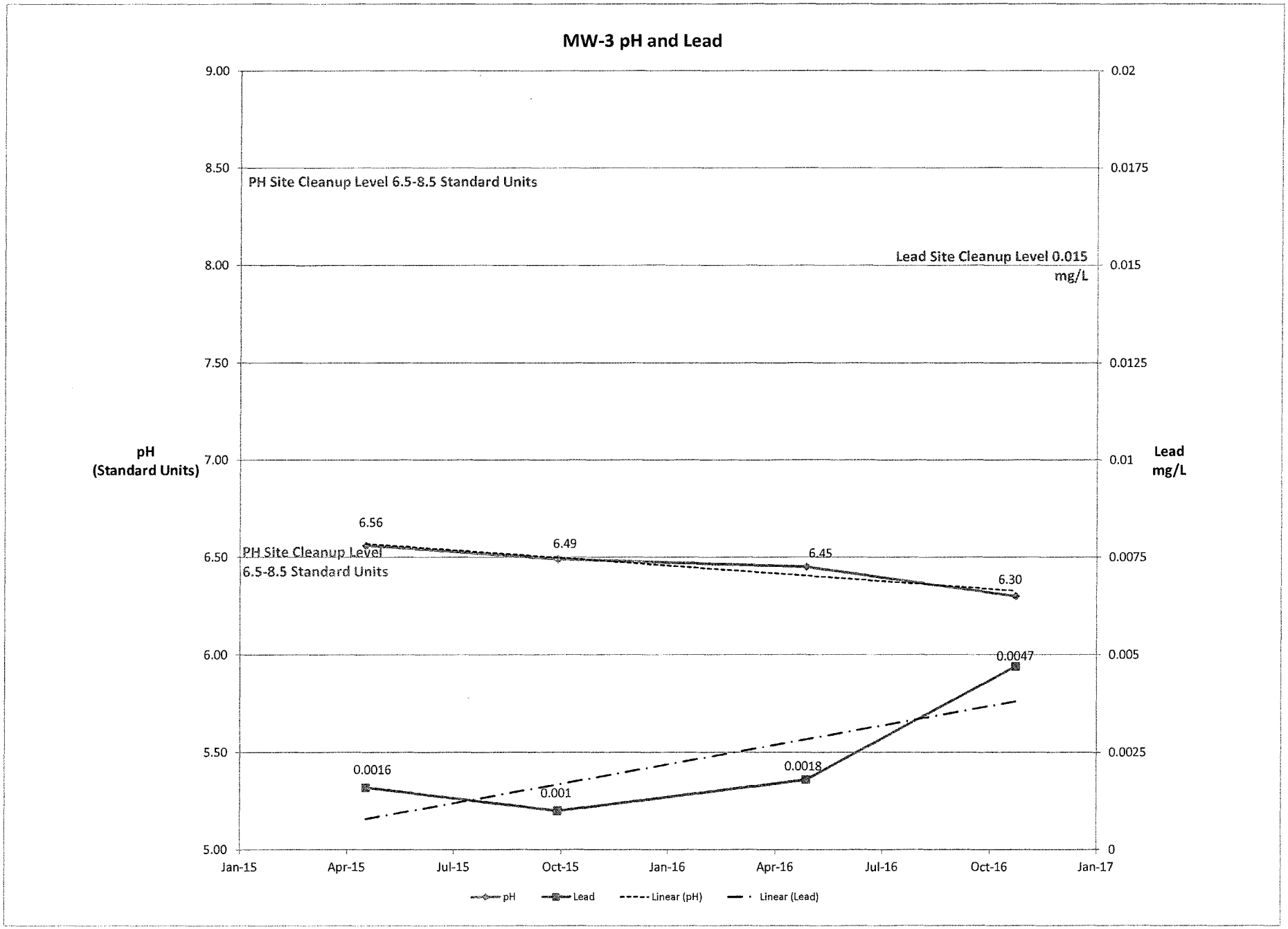

DW-4 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

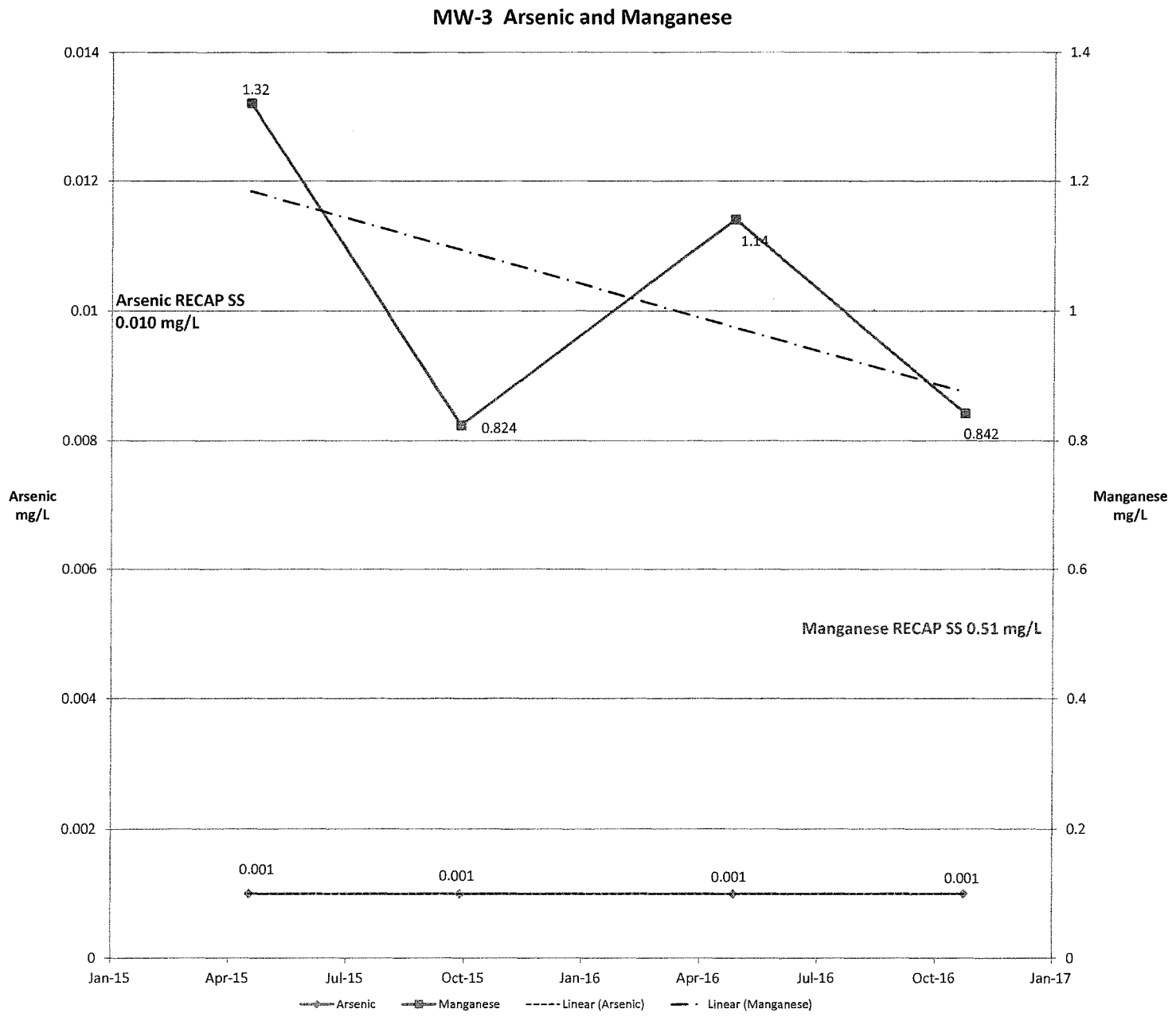

MW-A pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.18
0.15
0.12
0.09
0.06
0.03
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
7.11
6.97
6.93
6.87
0.001
0.001
0.0015
0.0019
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

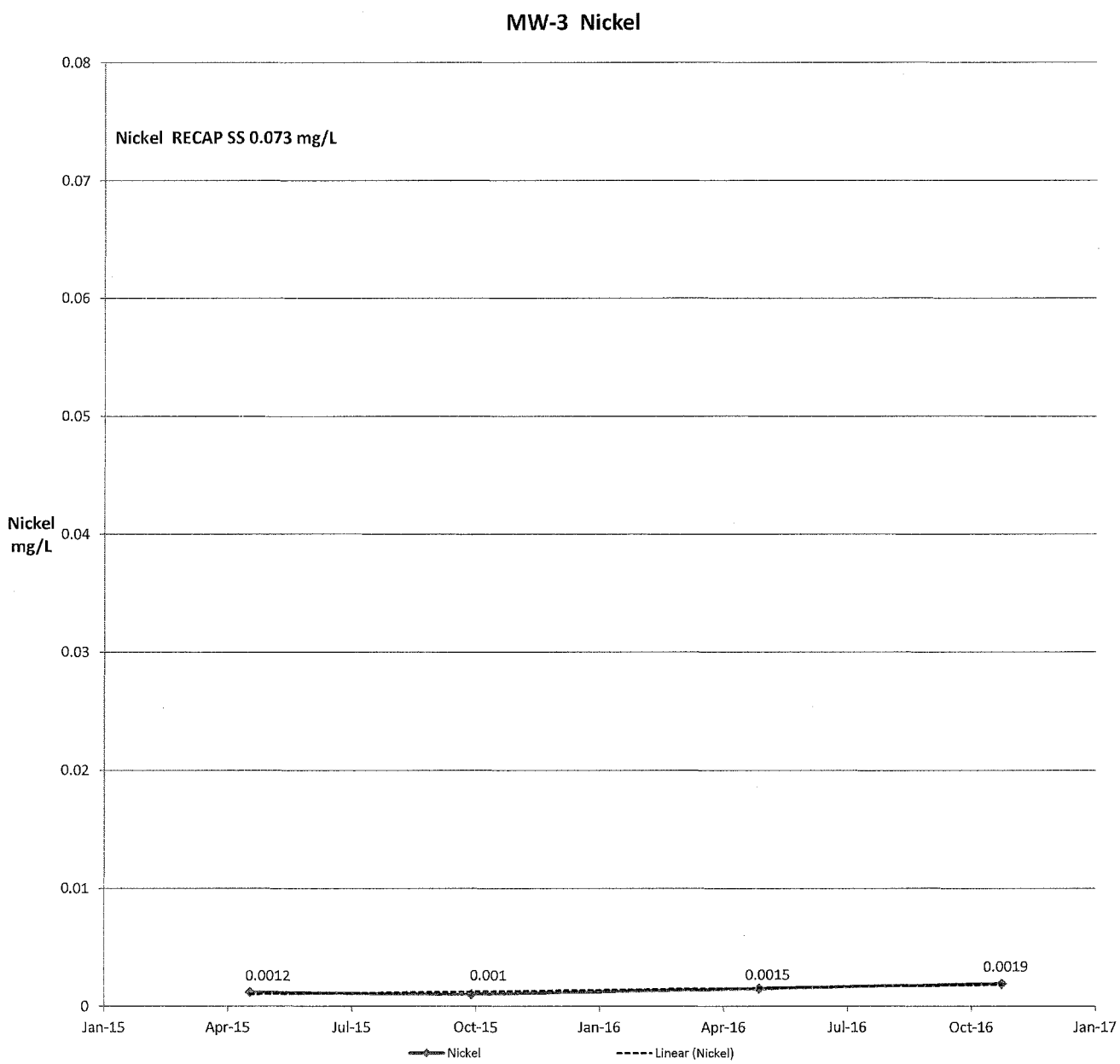

MW-A Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS
0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.0166
0.0133
0.004
0.0039
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

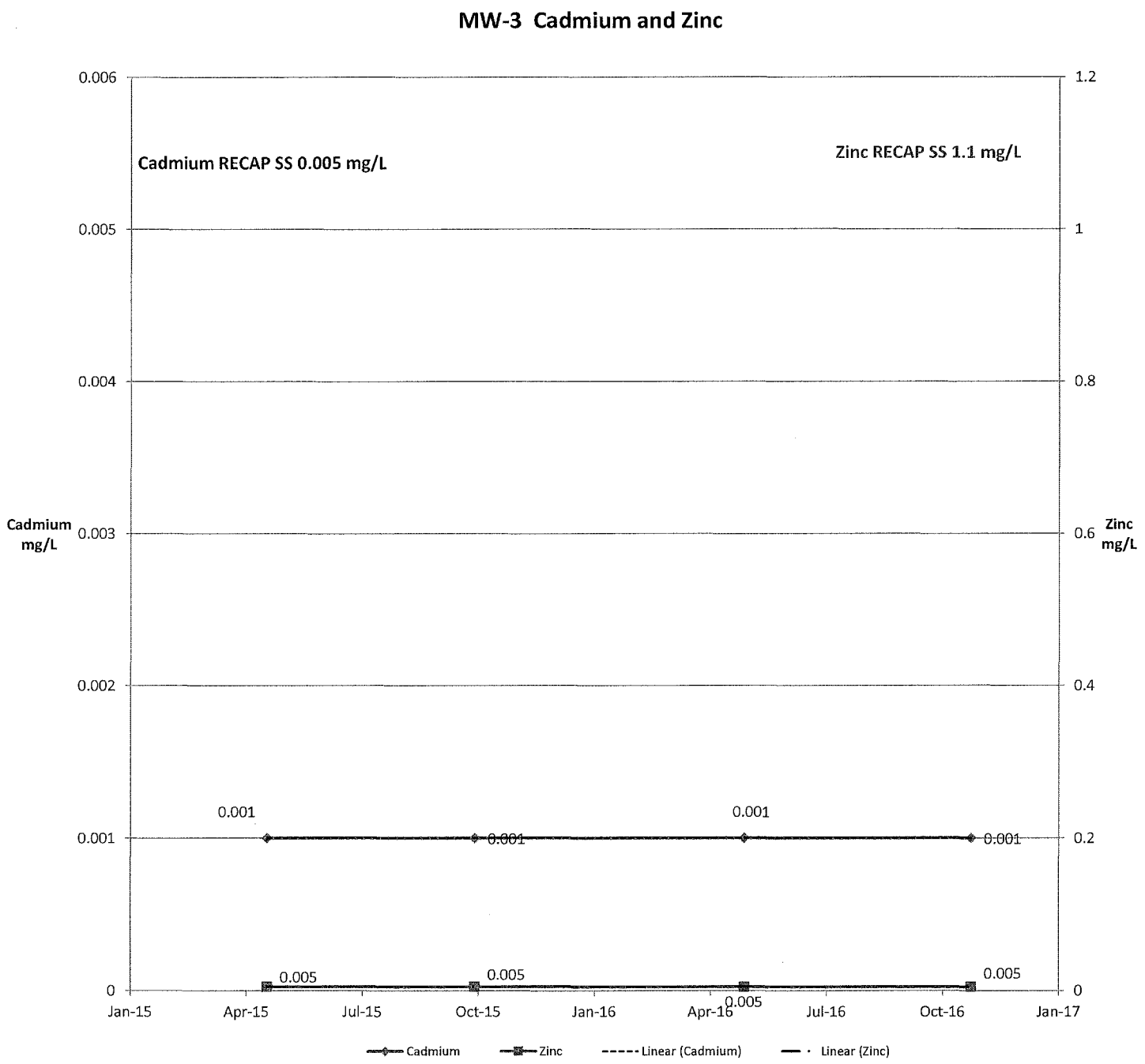

MW-A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

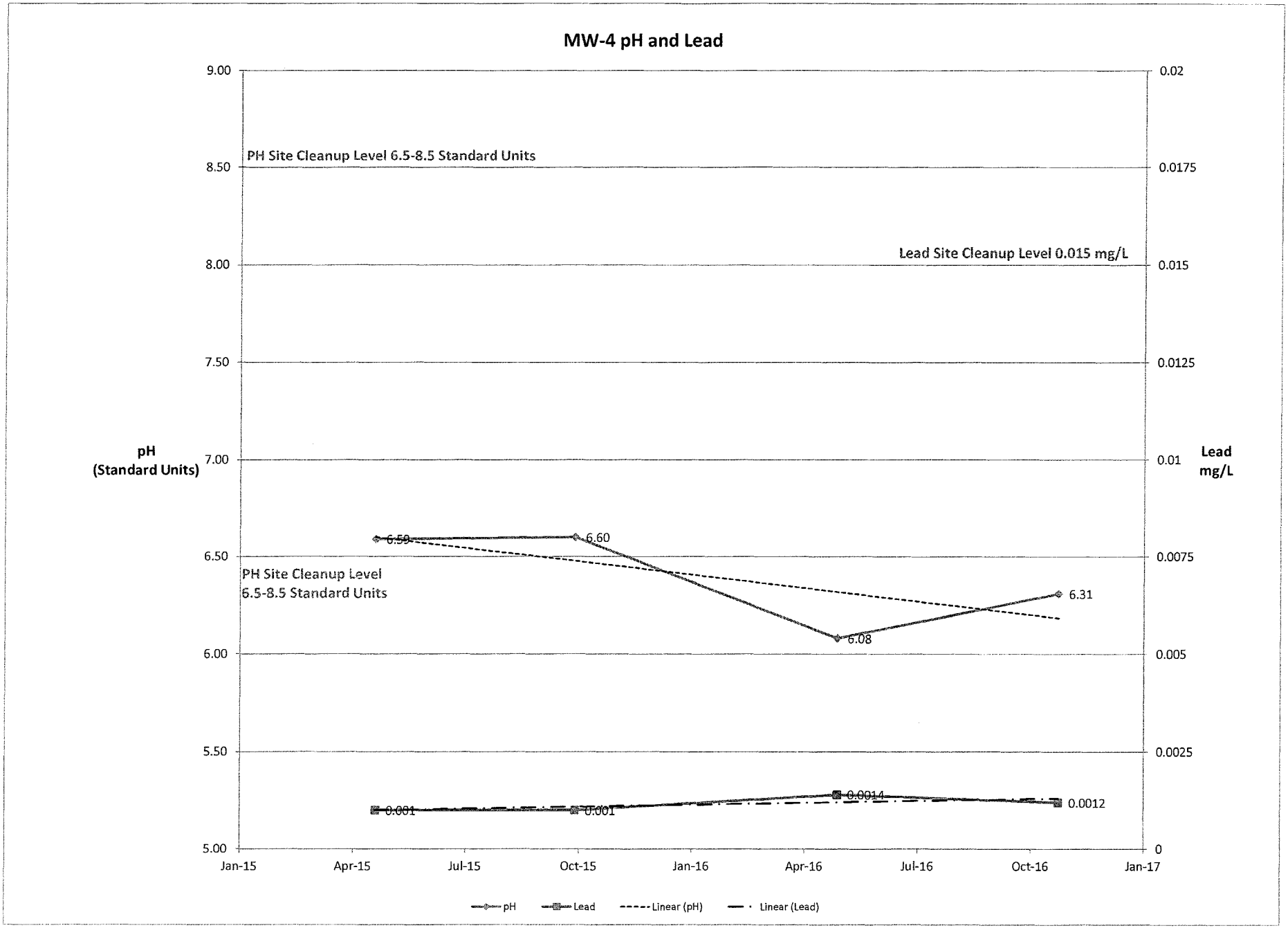

MW-A Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.0136
0.0134
0.0321
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

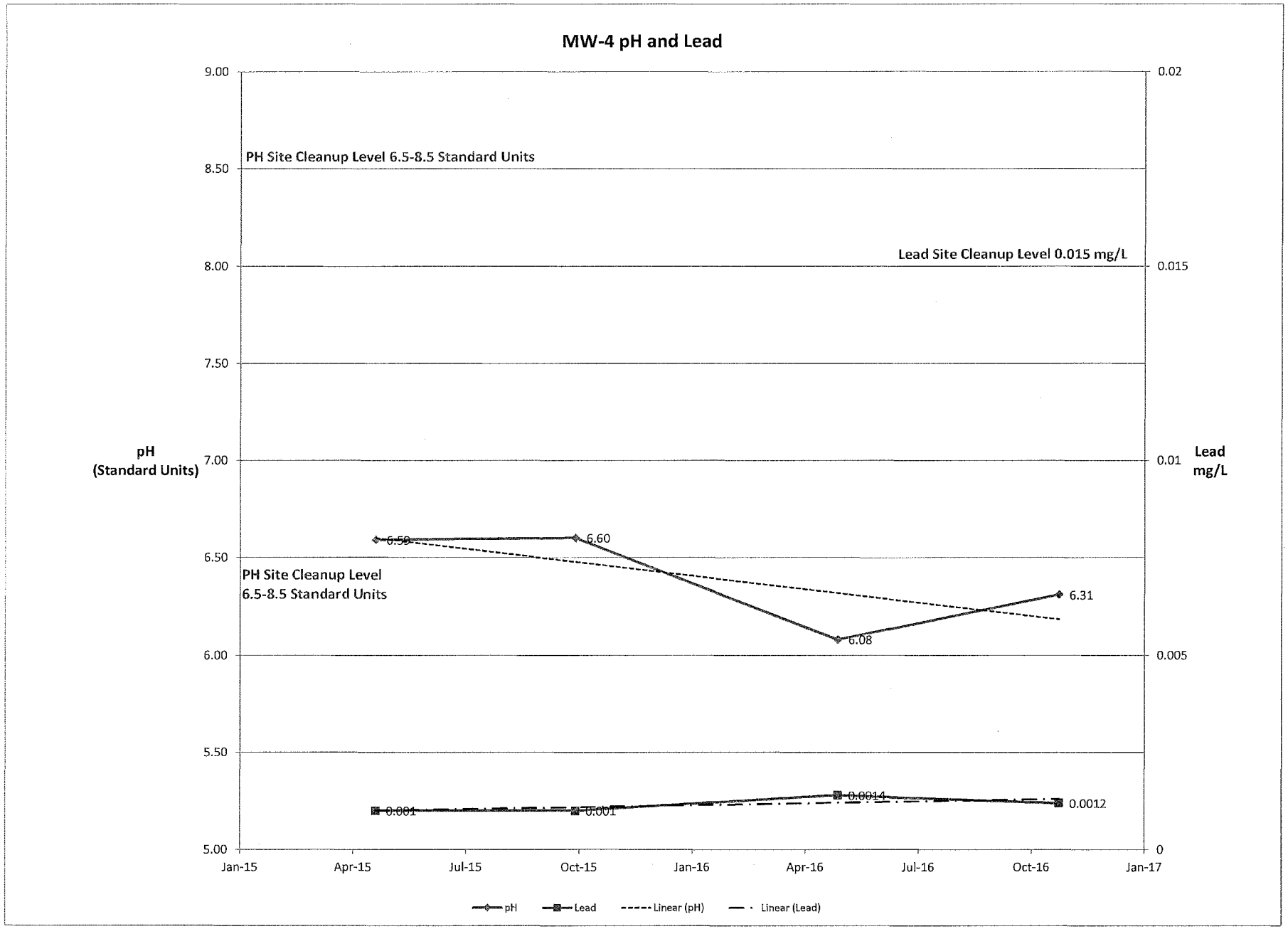

MW-3 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.56
6.49
6.45
6.30
0.0016
0.001
0.0018
0.0047
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

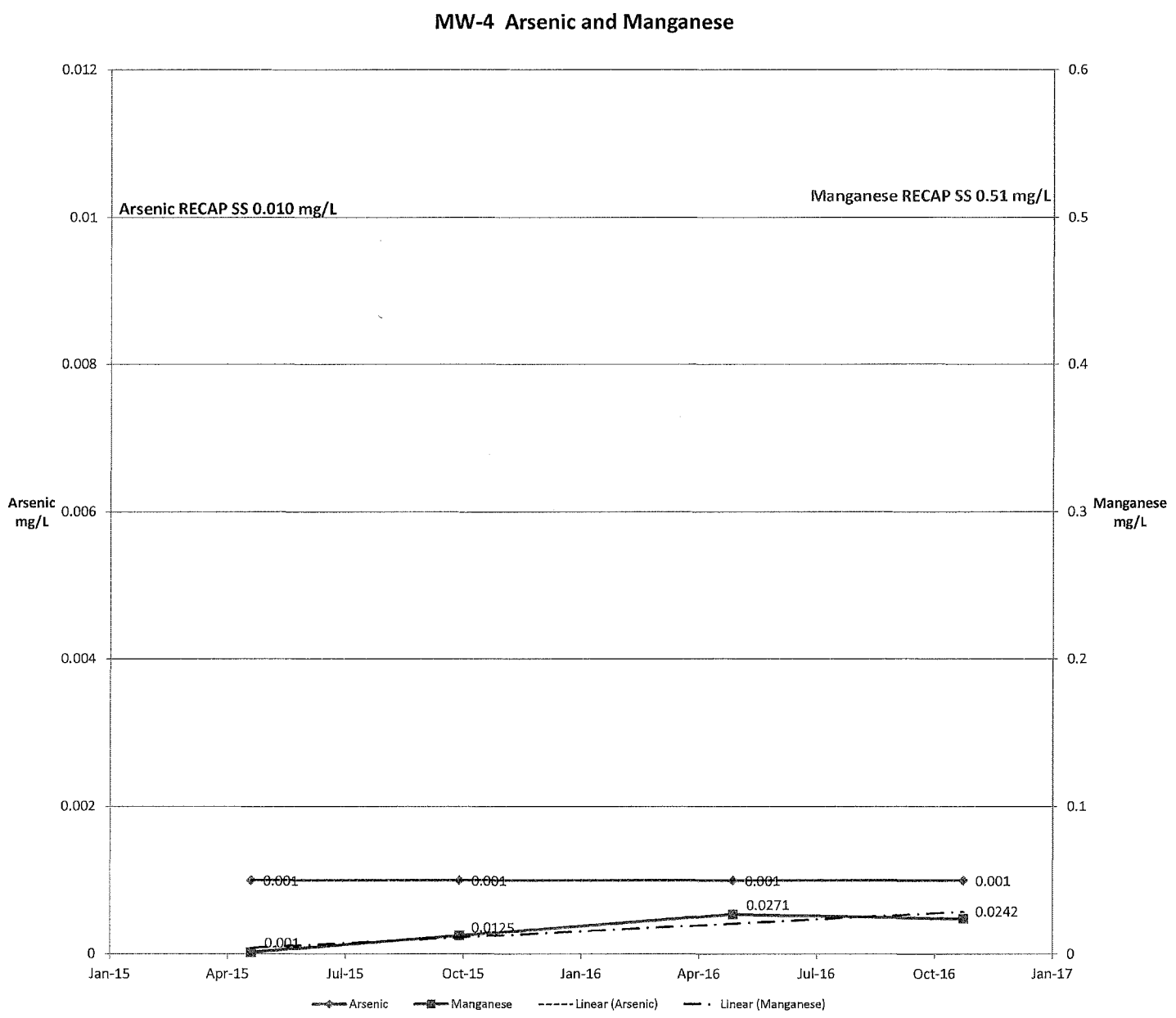

MW-3 Arsenic and Manganese
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Arsenic mg/L
Manganese mg/L
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
1.32
0.824
1.14
0.842
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

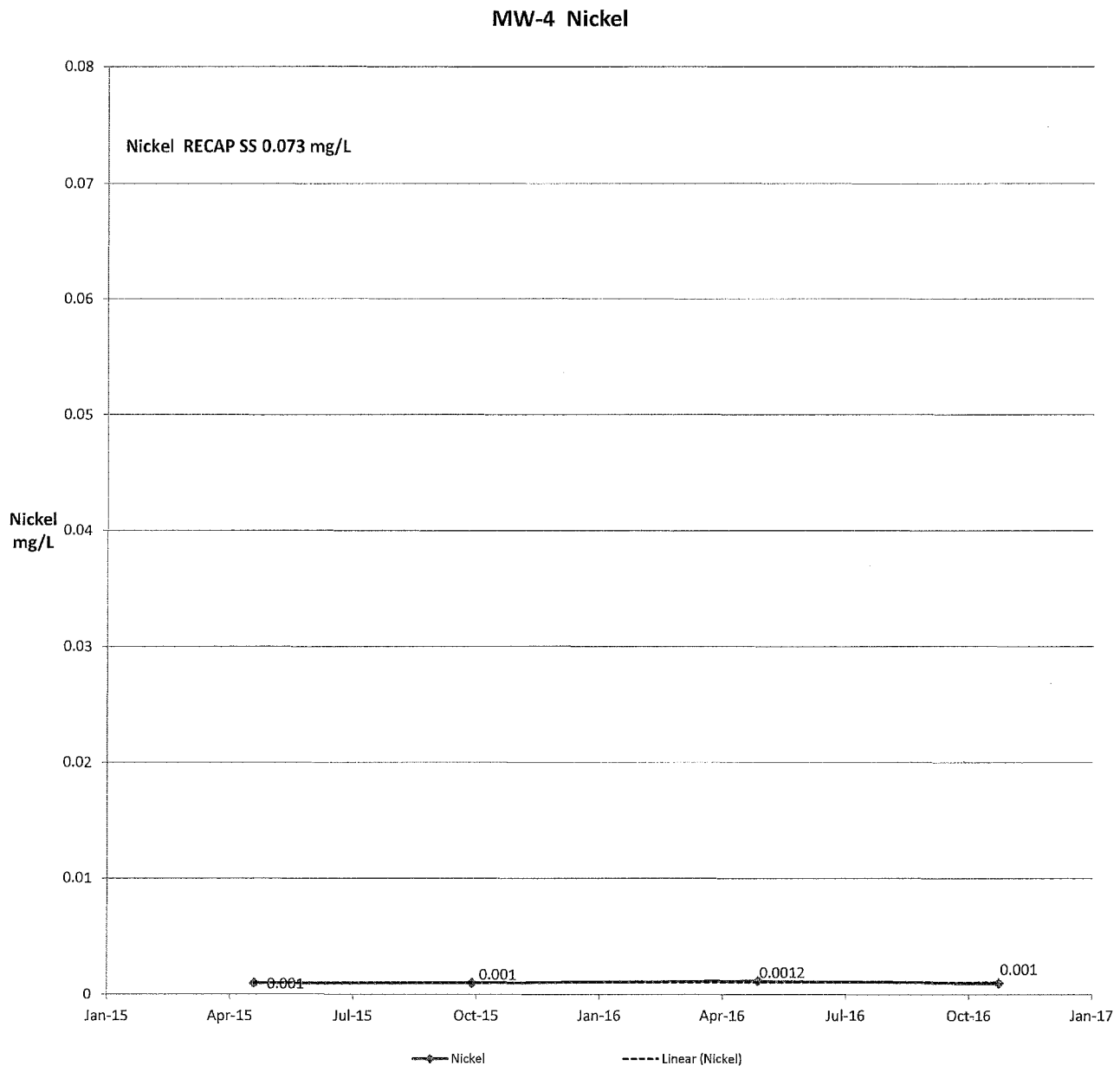

MW-3 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0012
0.001
0.0015
0.0019
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)


MW-3 Cadmium and Zinc
Cadmium RECAP SS 0.005 mg/L
Zinc RECAP SS 1.1 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

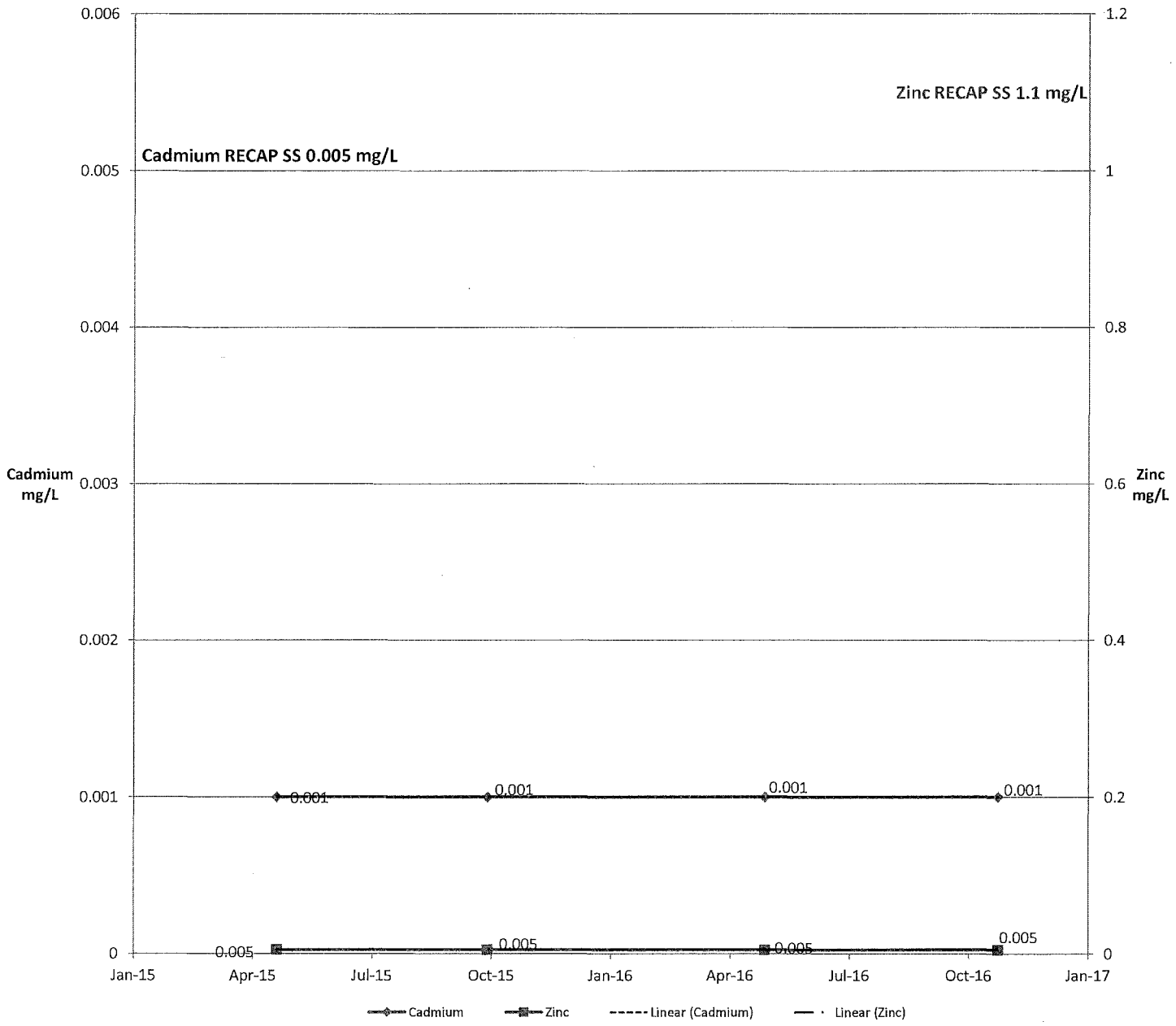

MW-4 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.59
6.60
6.08
6.31
0.001
0.001
0.0014
0.0012
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

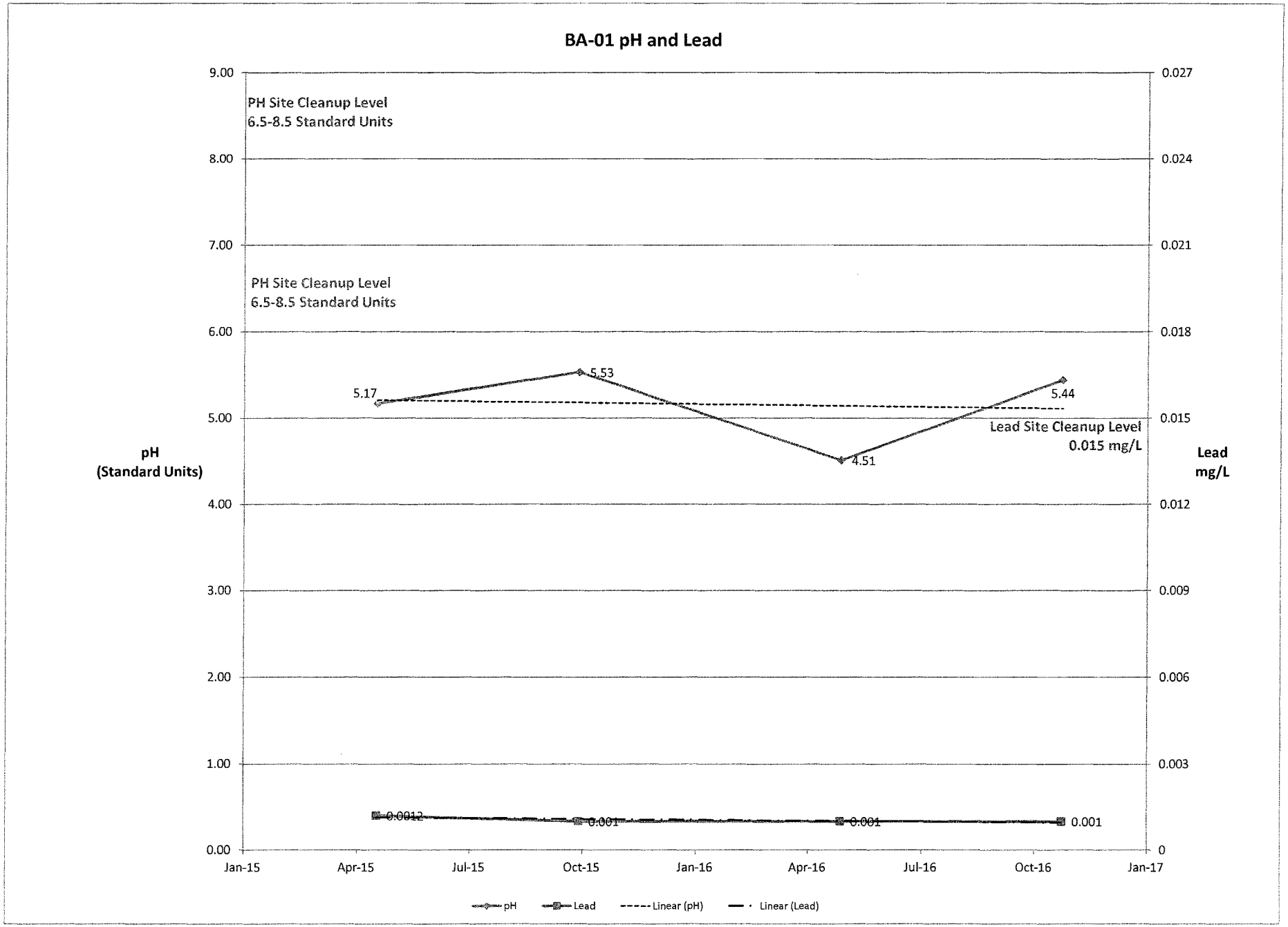

MW-4 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.59
6.60
6.08
6.31
0.001
0.001
0.0014
0.0012
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

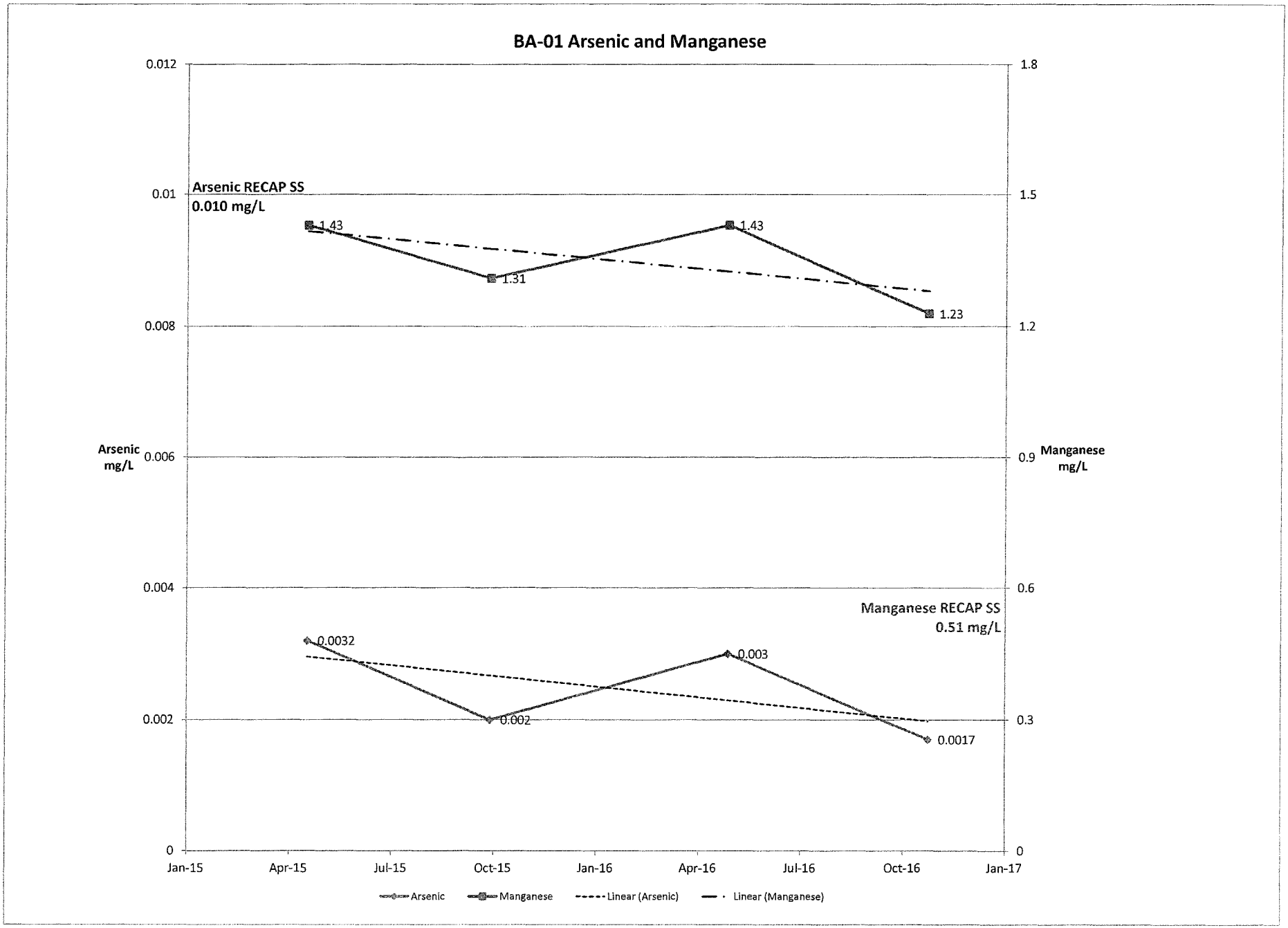

MW-4 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.0125
0.0271
0.0242
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

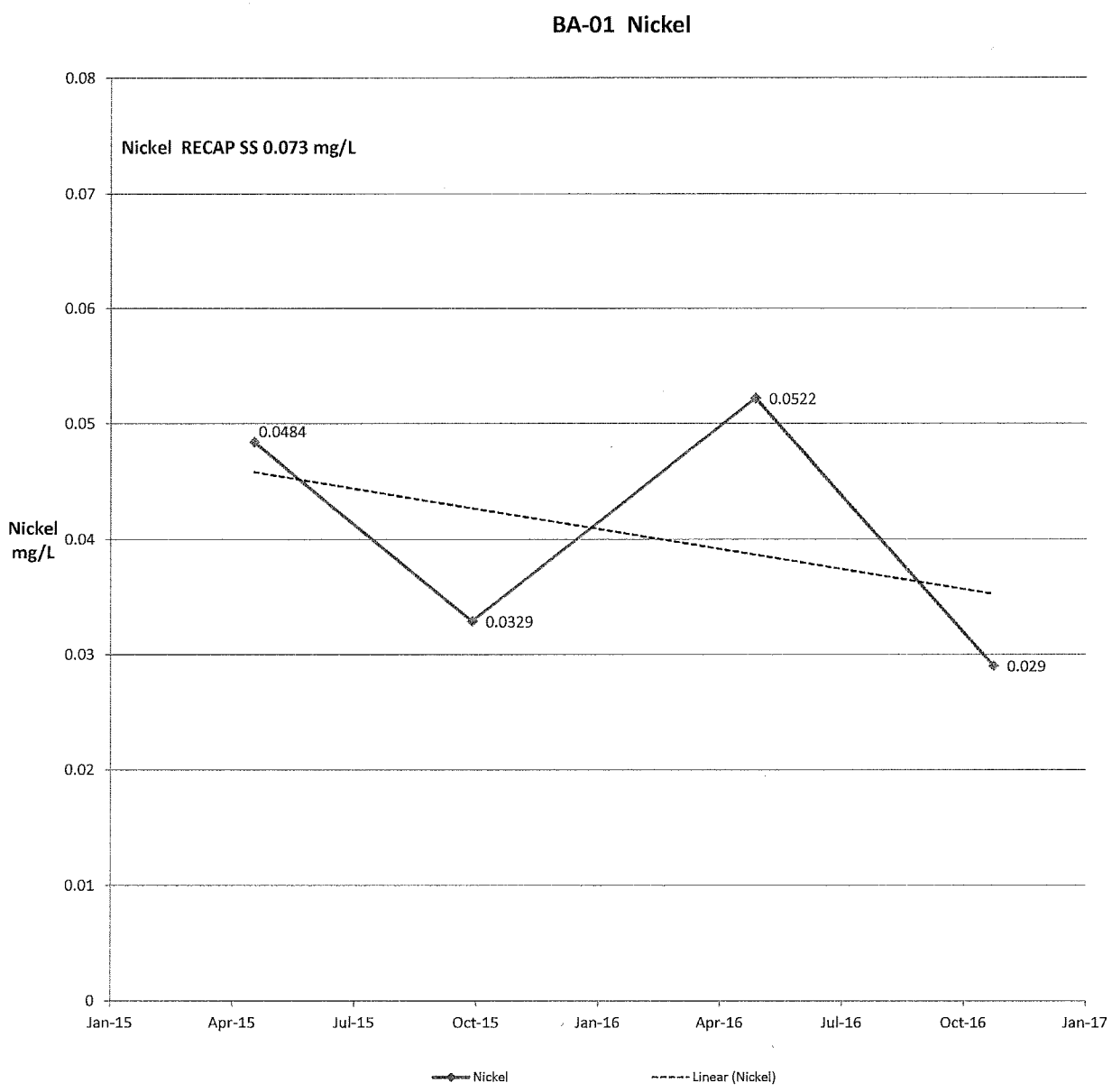

MW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.0012
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

MW-4 Cadmium and Zinc

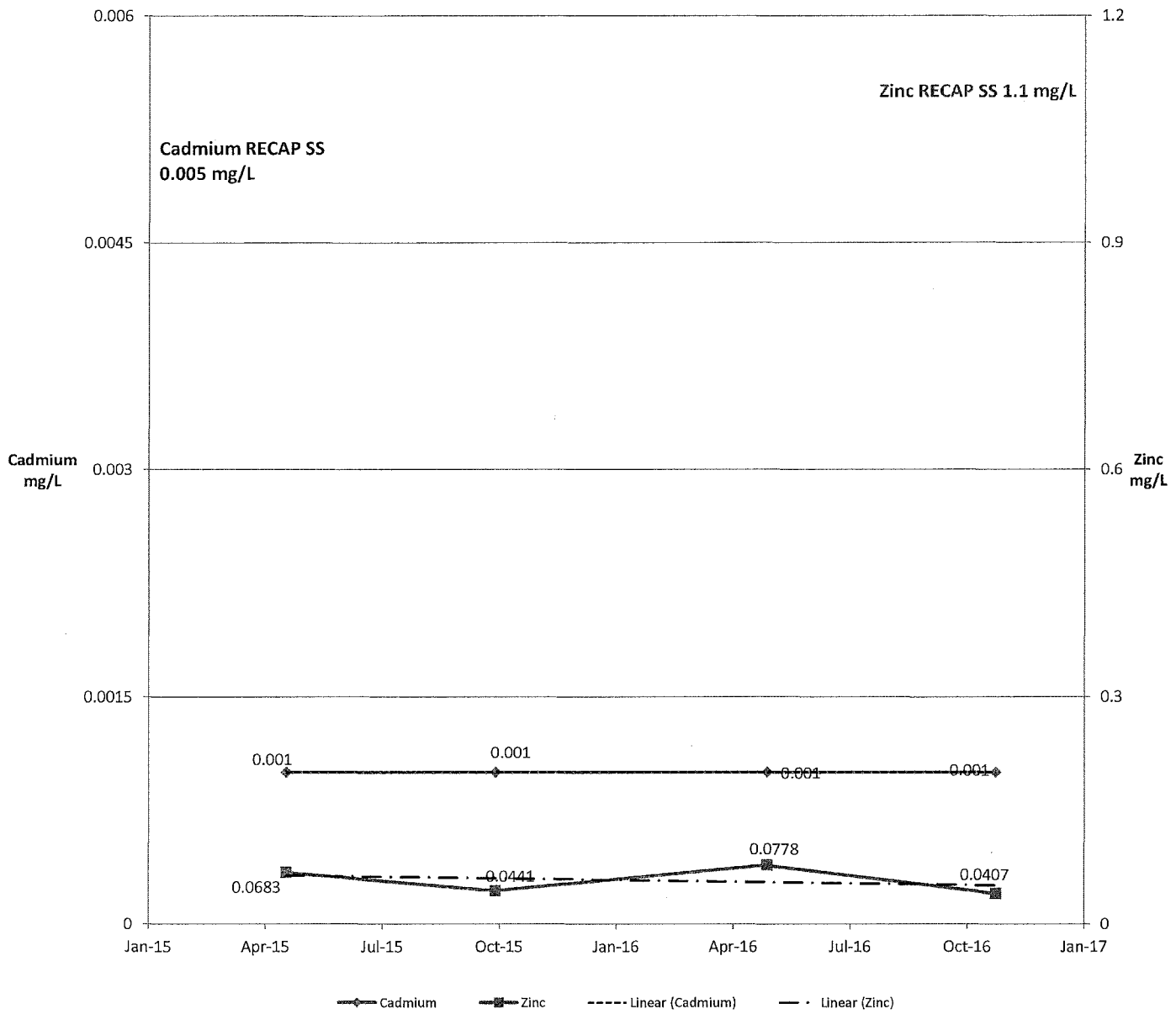


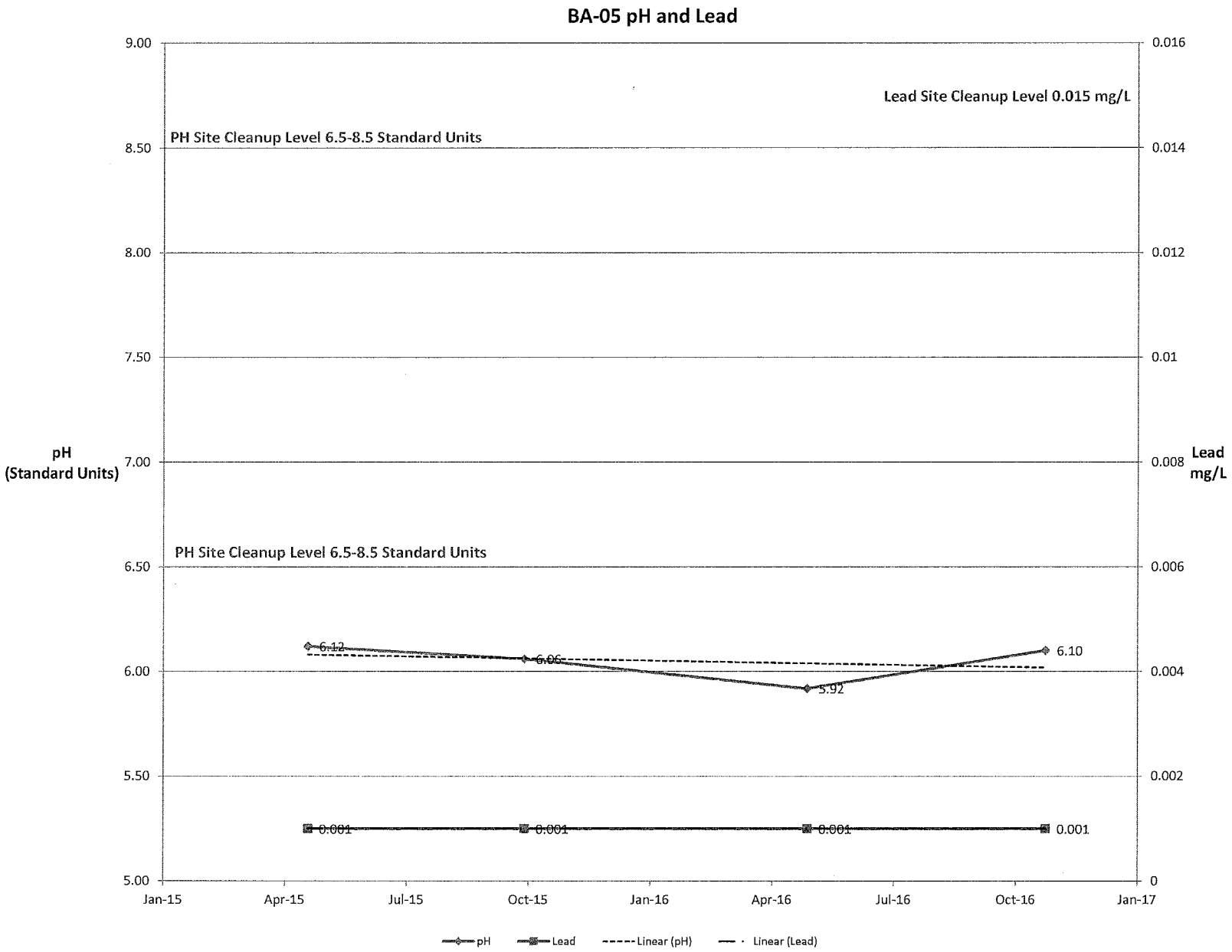

BA-01 pH and Lead
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
5.17
5.53
4.51
5.44
0.0012
0.001
0.001
0.001
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
0.027
0.024
0.021
0.018
0.015
0.012
0.009
0.006
0.003
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

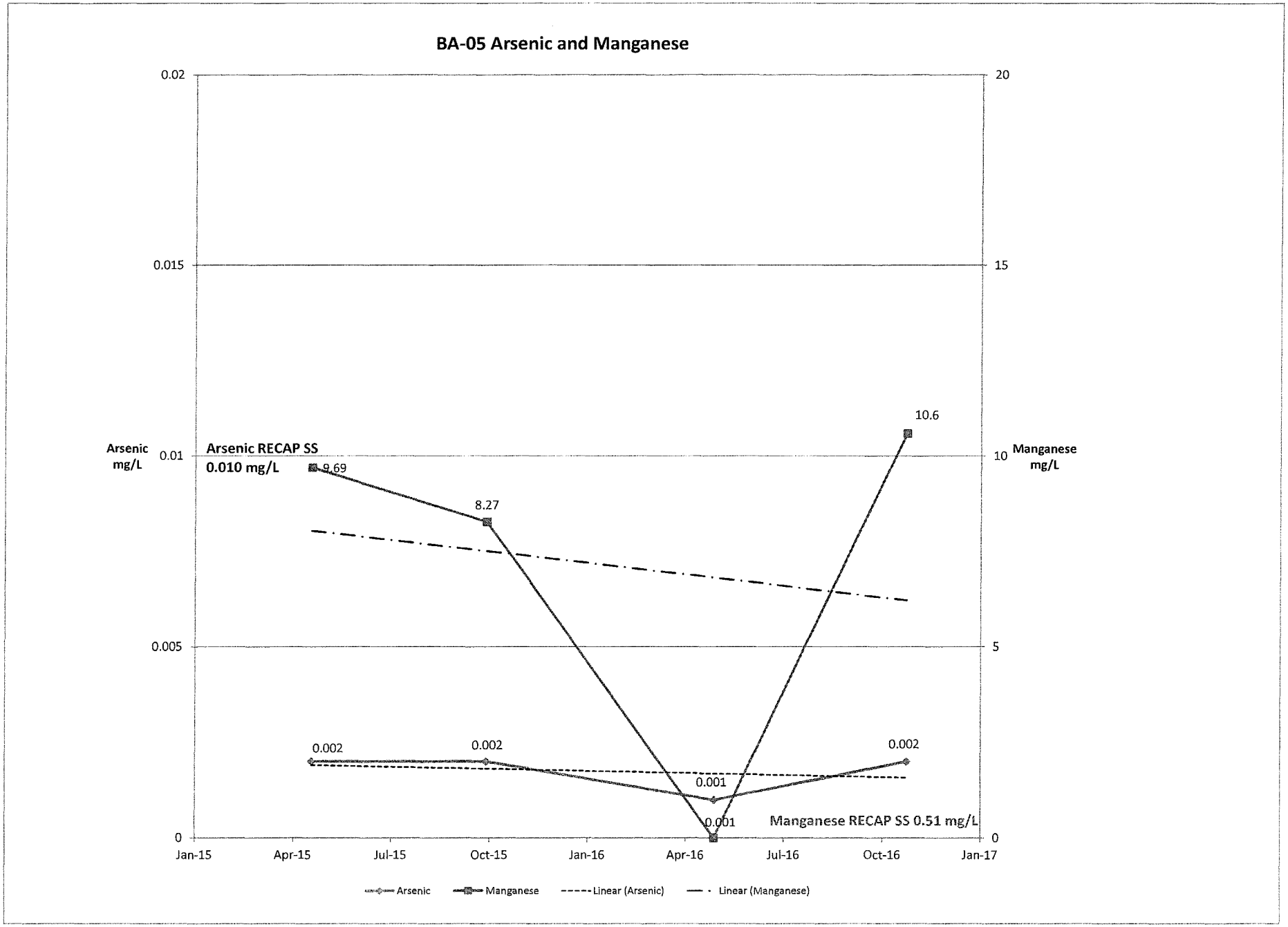

BA-01 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS
0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
1.43
1.31
1.43
1.23
0.0032
0.002
0.003
0.0017
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

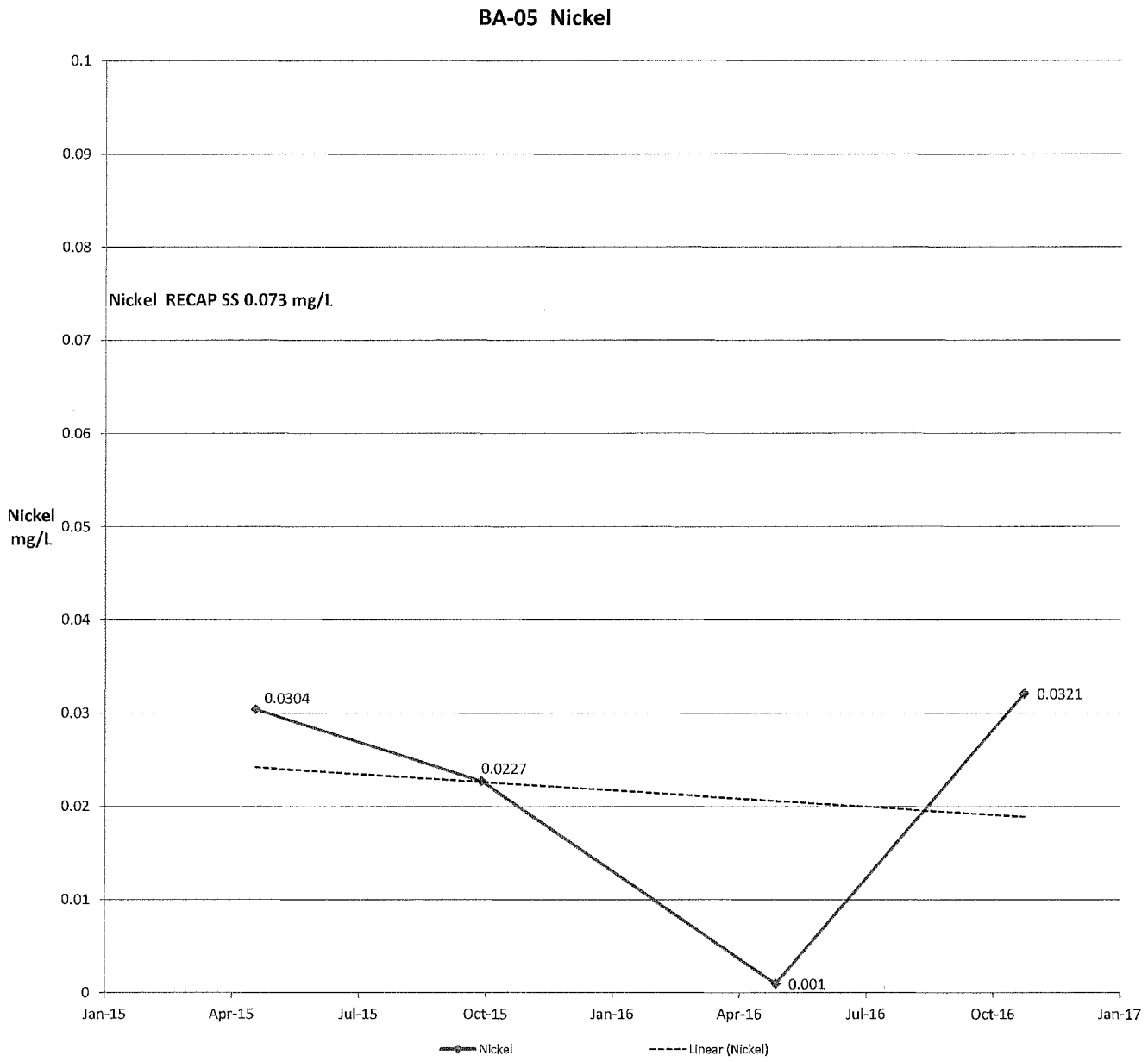

BA-01 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0484
0.0329
0.0522
0.029
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

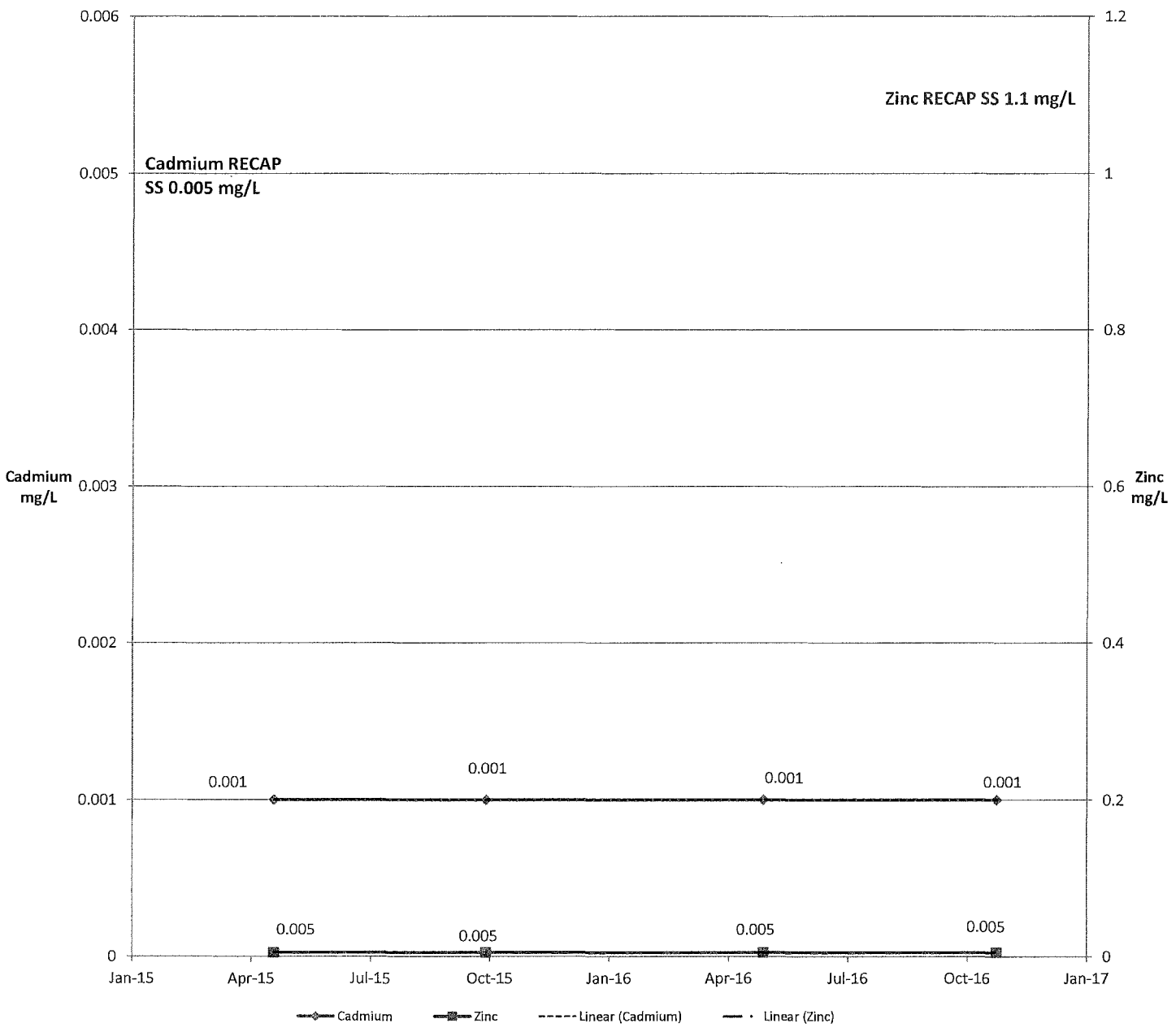
BA-01 Cadmium and Zinc

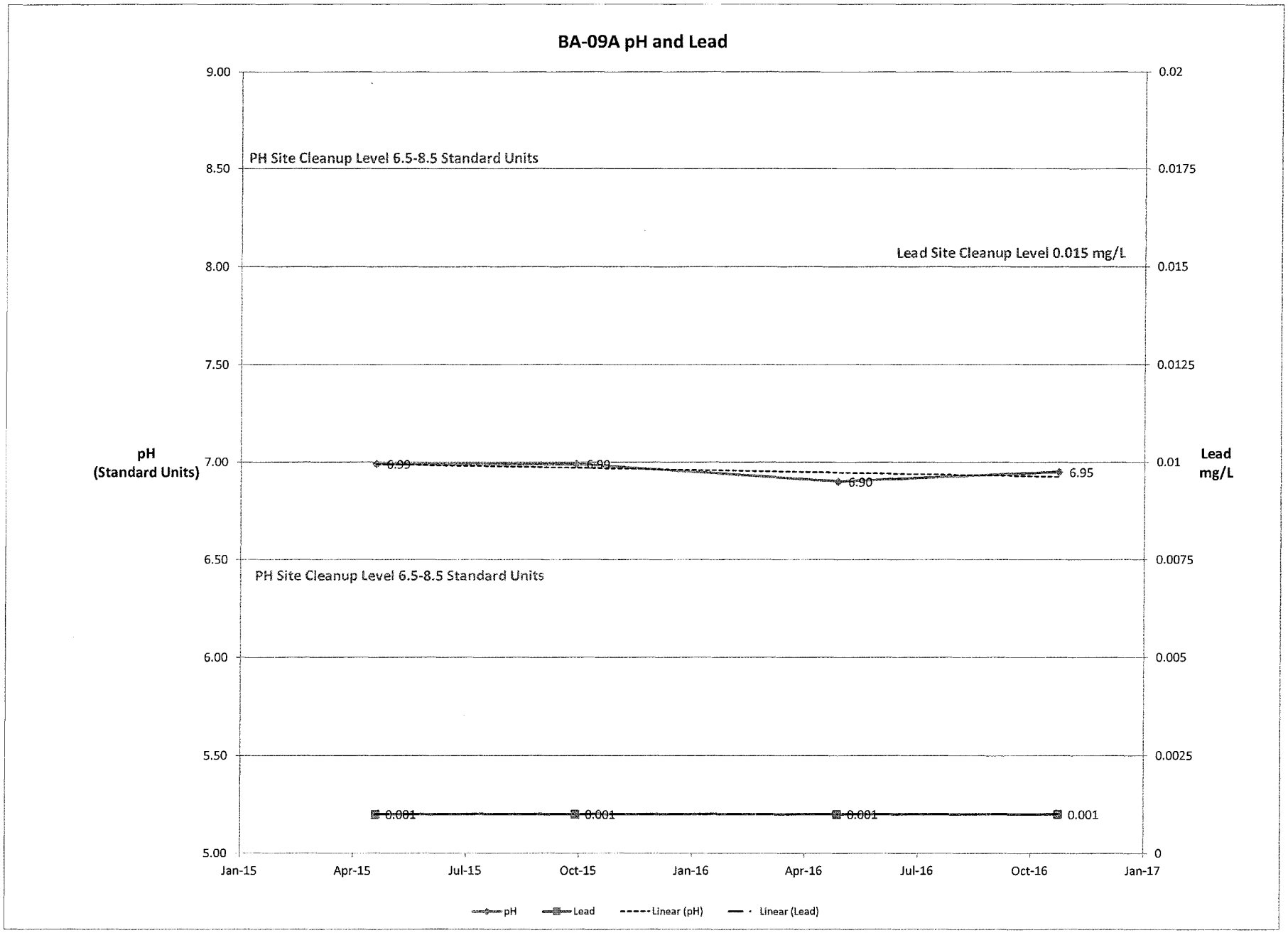


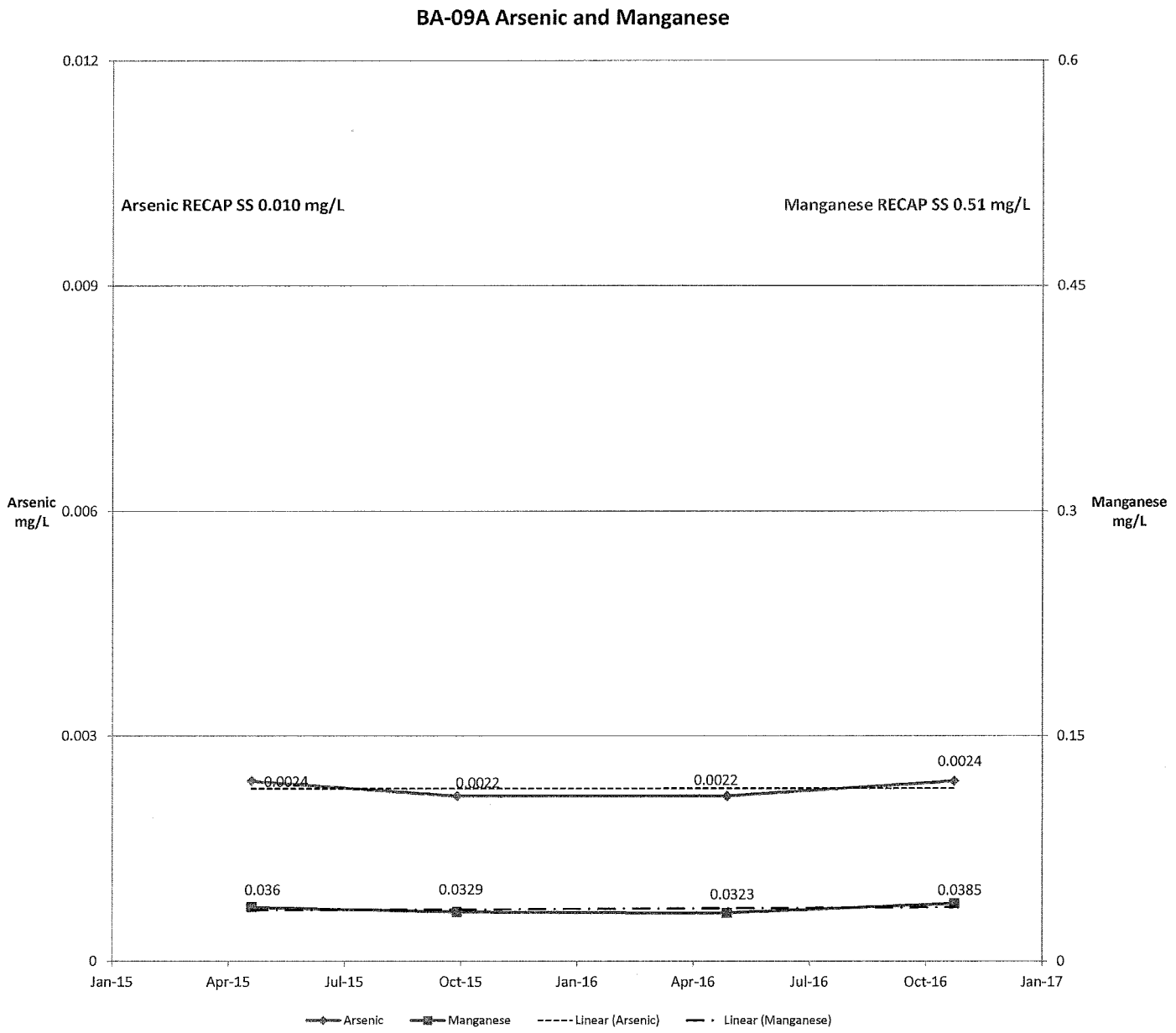

BA-05 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH (Standard Units)
Lead mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
6.12
6.06
5.92
6.10
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

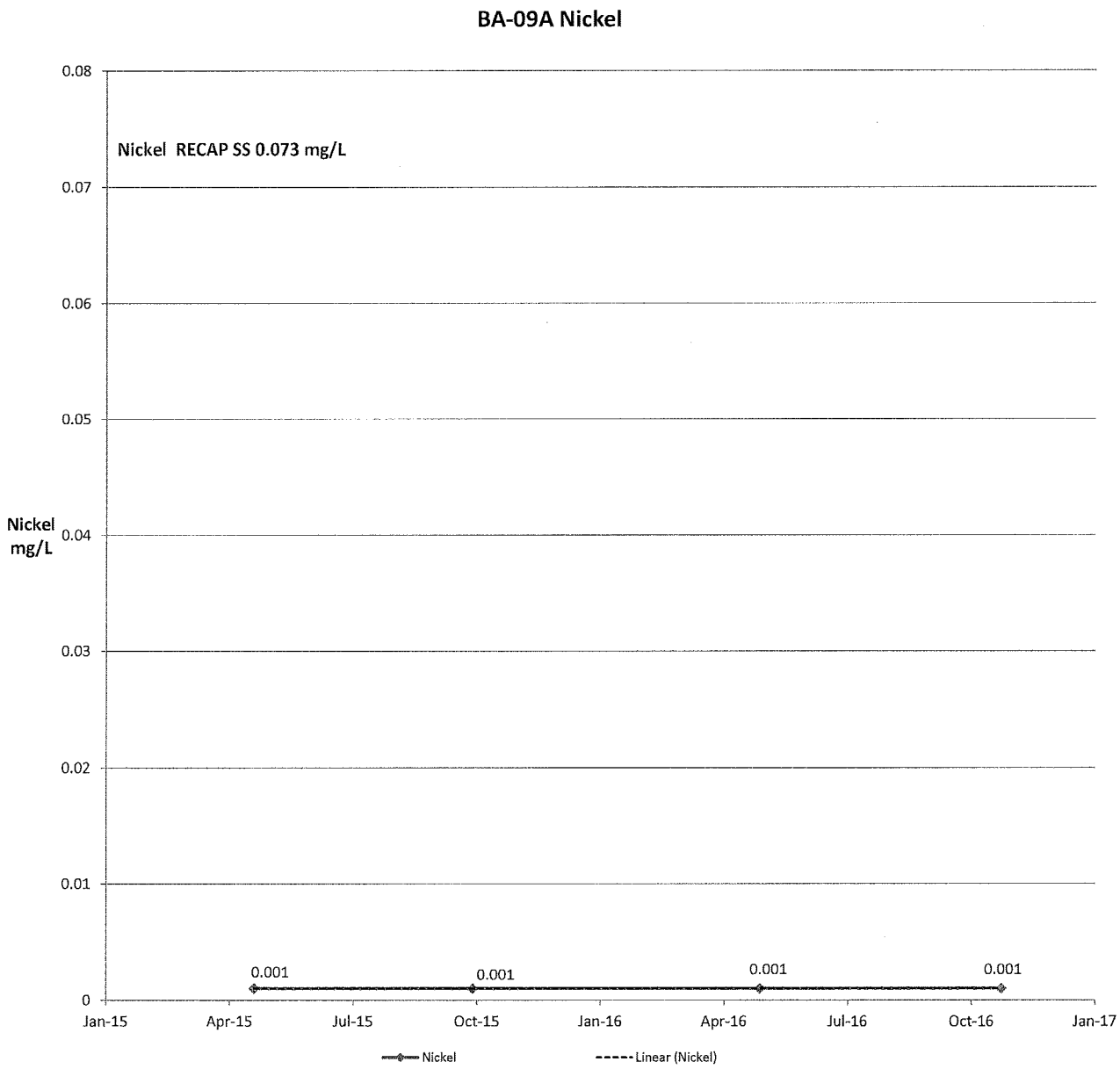

BA-05 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
20
15
10
5
0
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
9.69
8.27
0.001
0.001
10.6
0.002
0.002
0.002
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

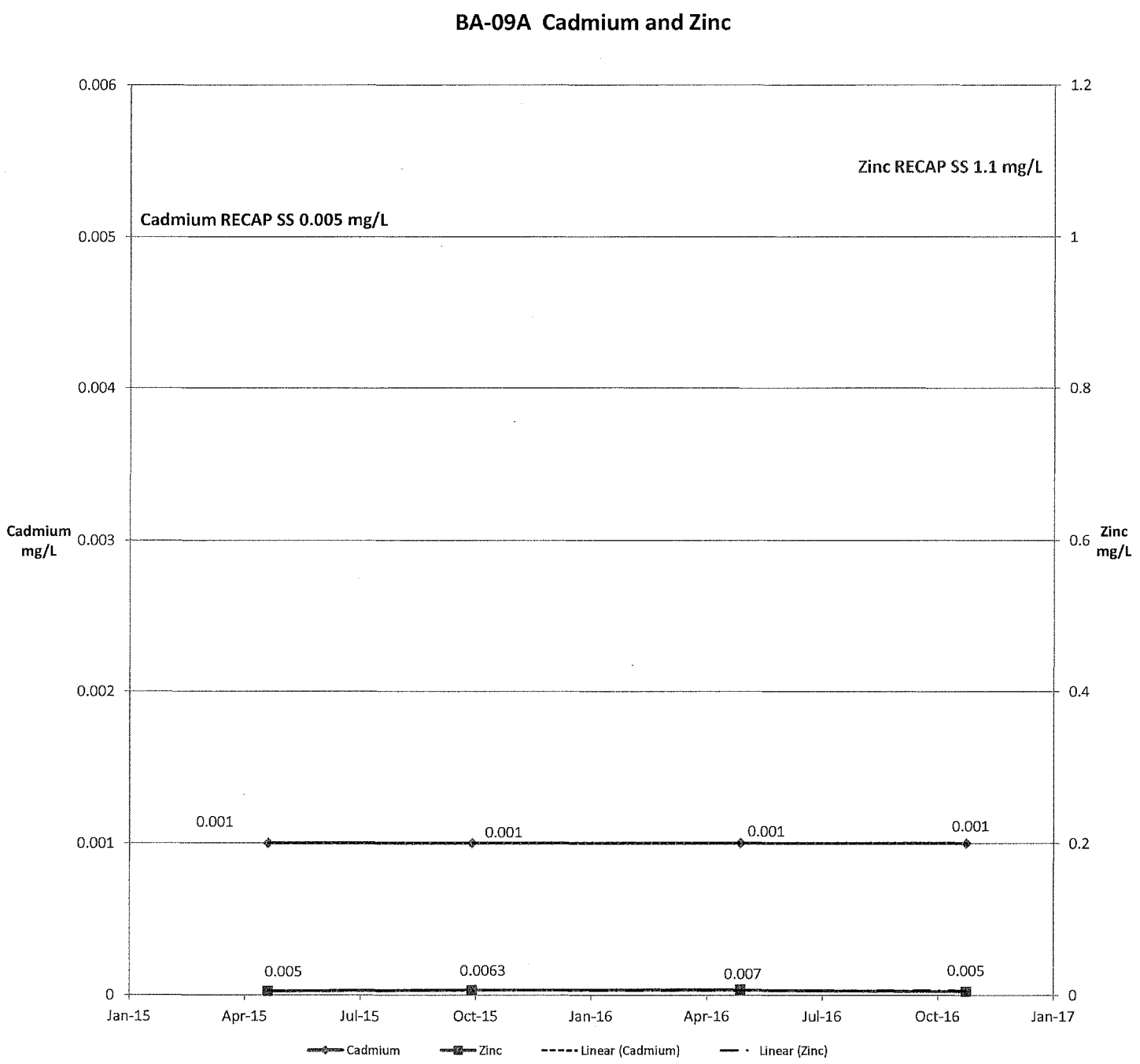

BA-05 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0304
0.0227
0.001
0.0321
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

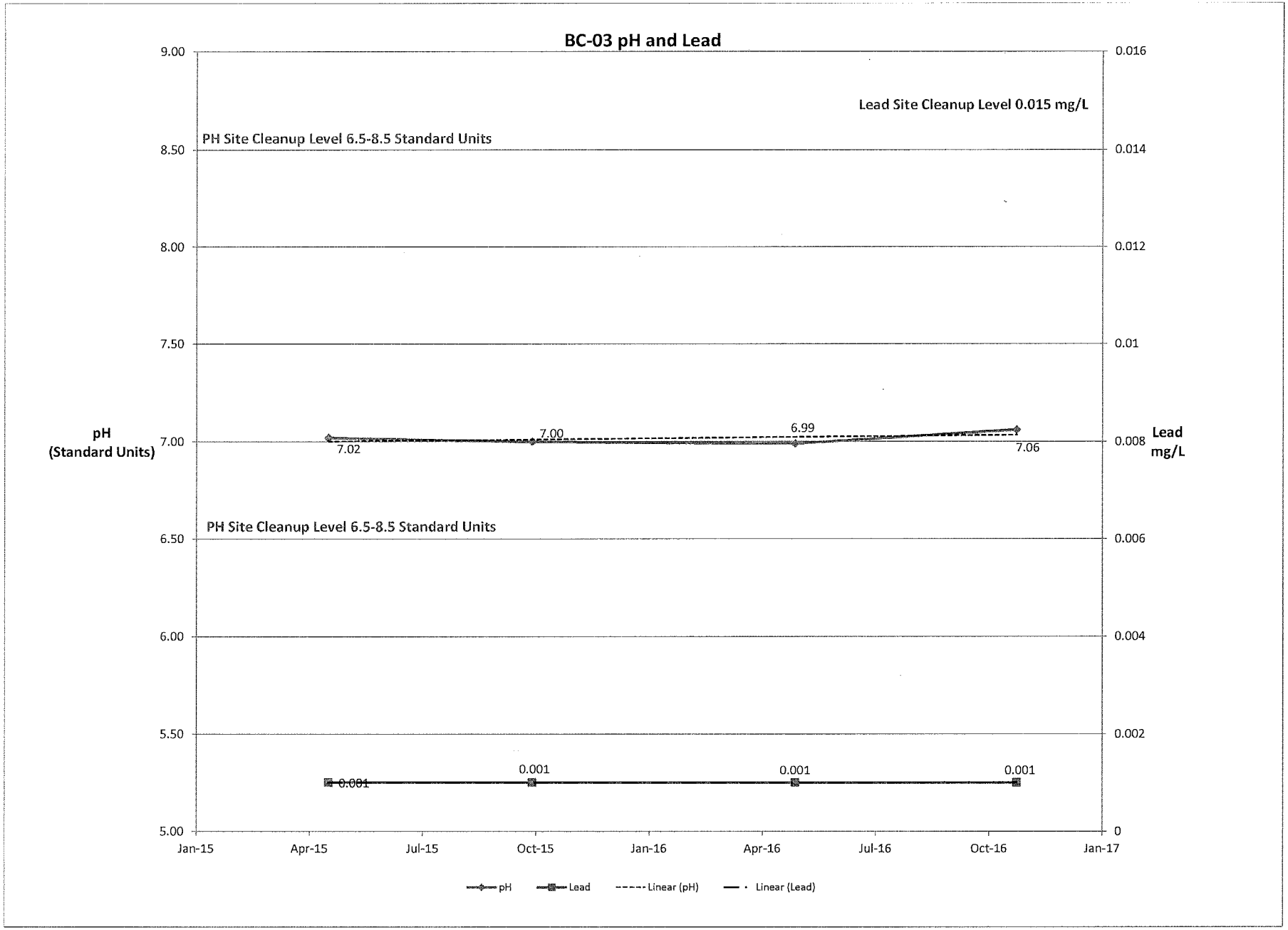

BA-05 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP
SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

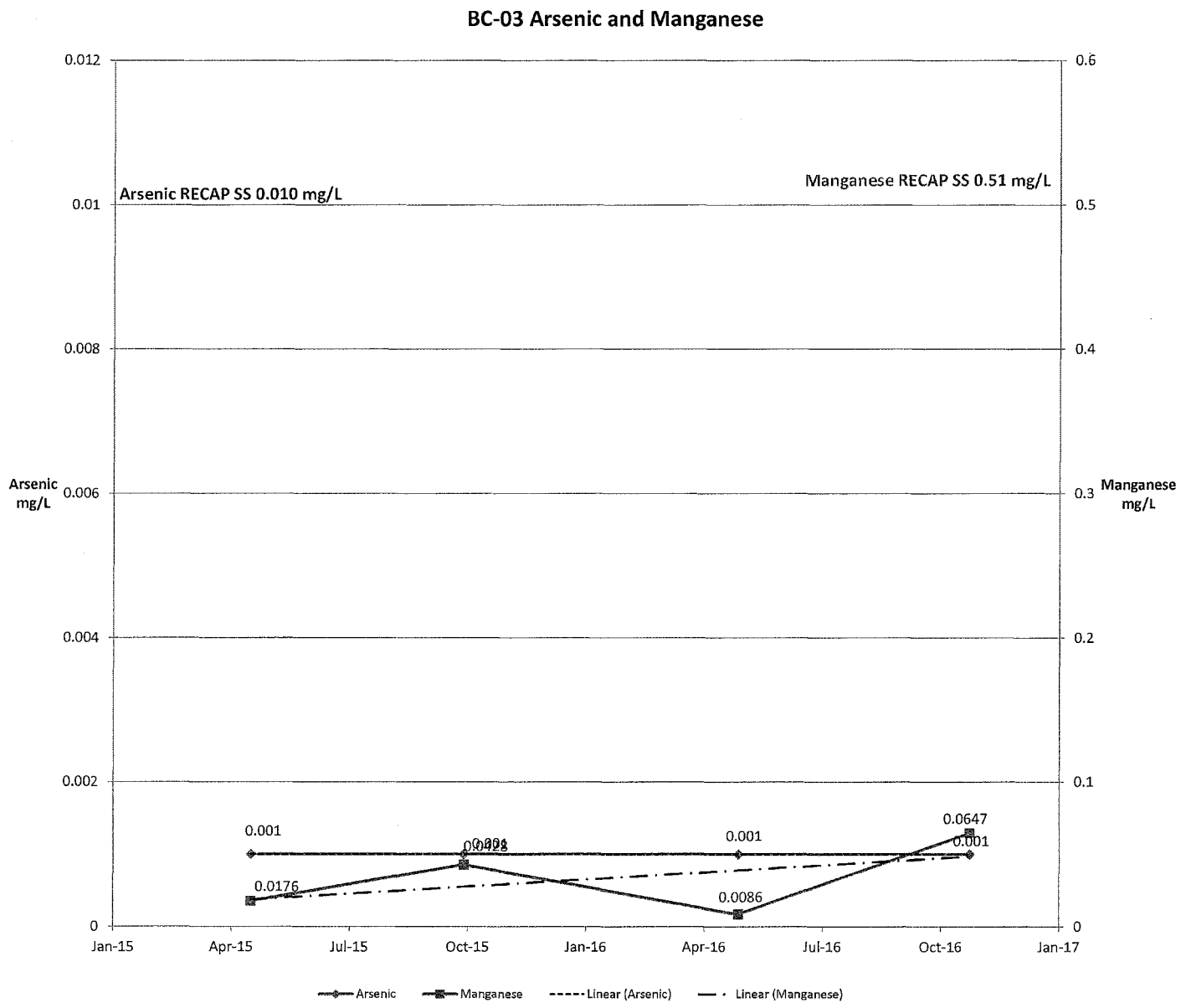

BA-09A pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
pH
(Standard Units)
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
6.99
6.99
6.90
6.95
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

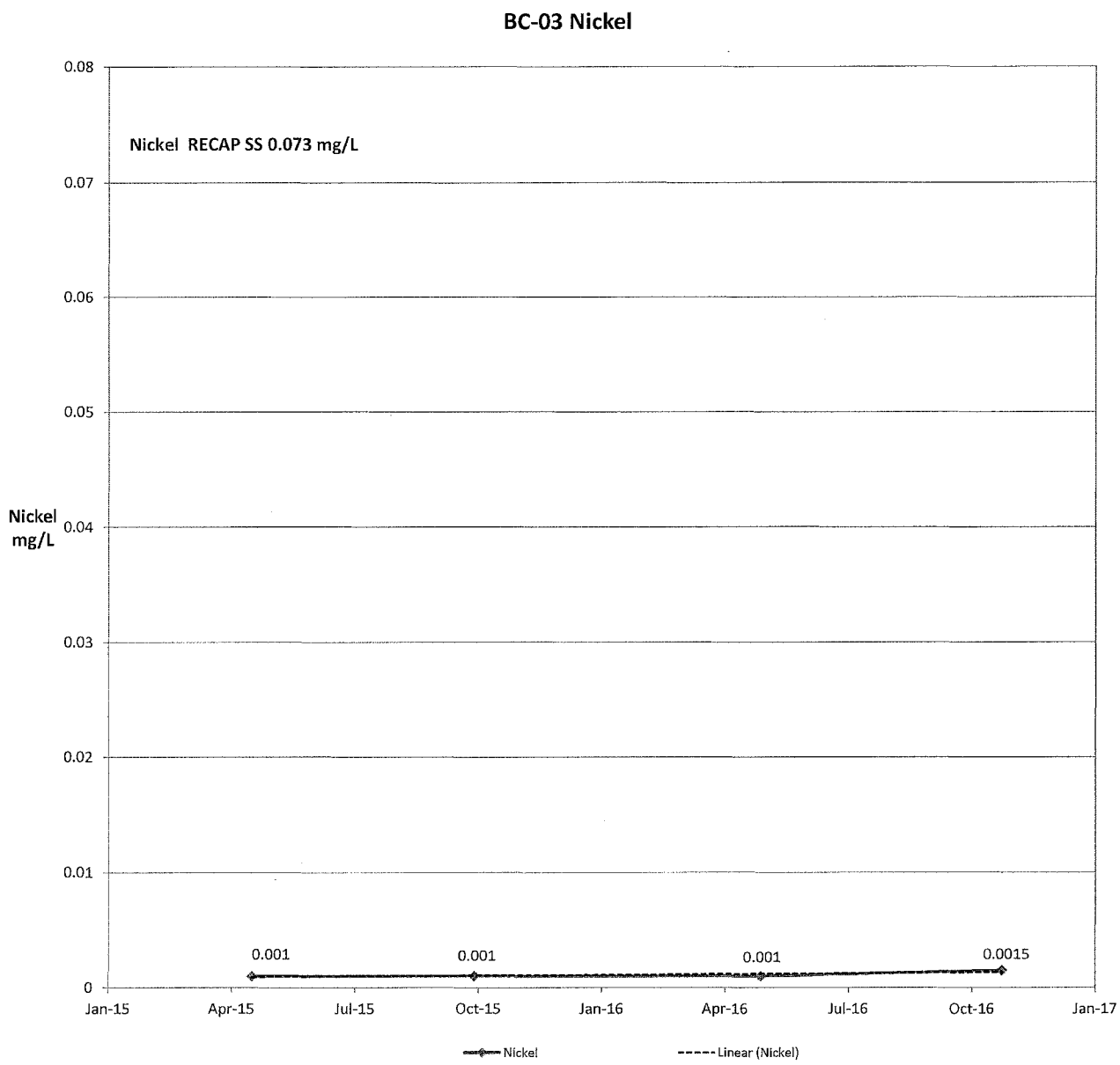

BA-09A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.009
0.006
0.003
0
0.6
0.45
0.3
0.15
0
0.0024
0.0022
0.0022
0.0024
0.036
0.0329
0.0323
0.0385
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

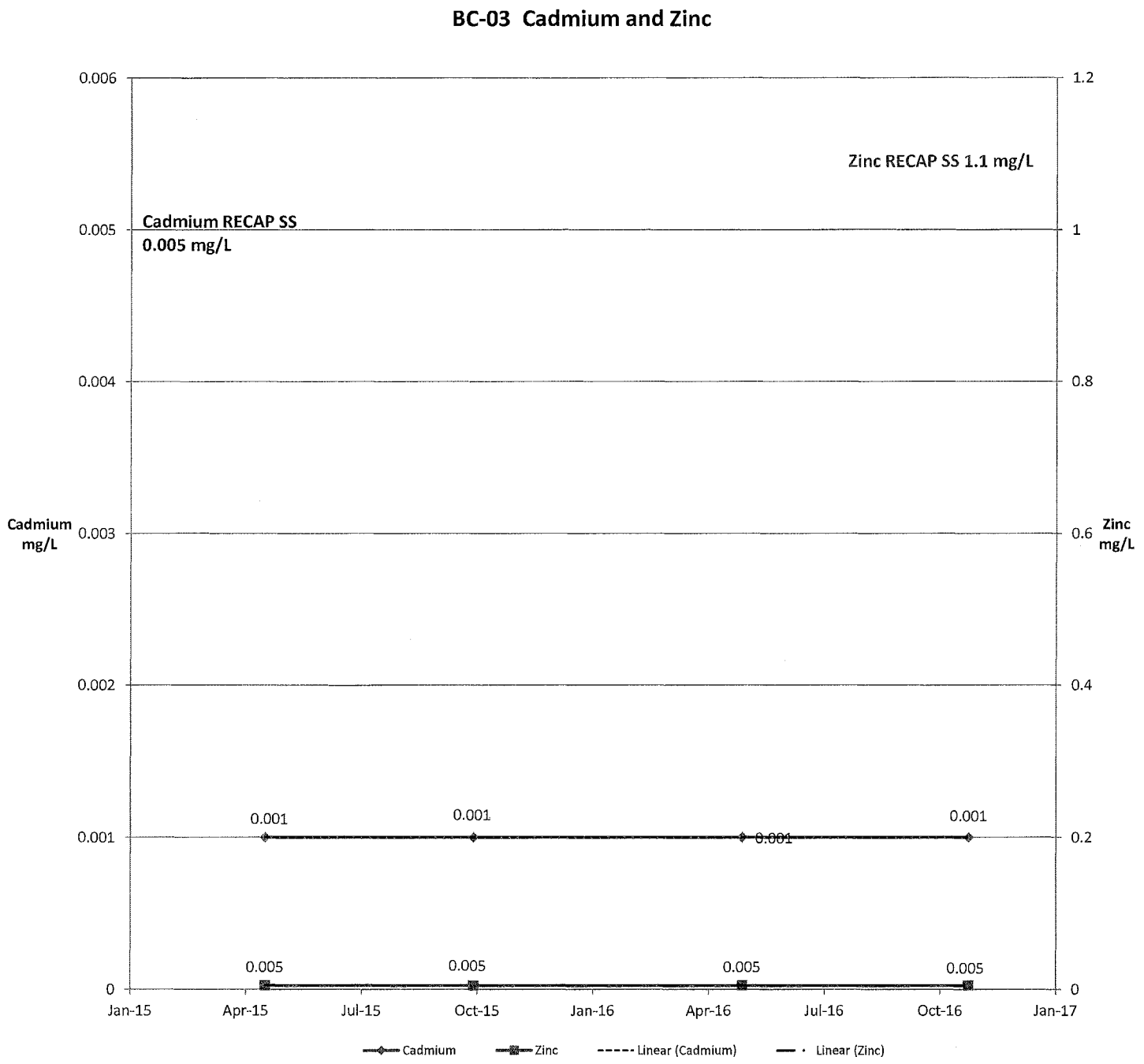

BA-09A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

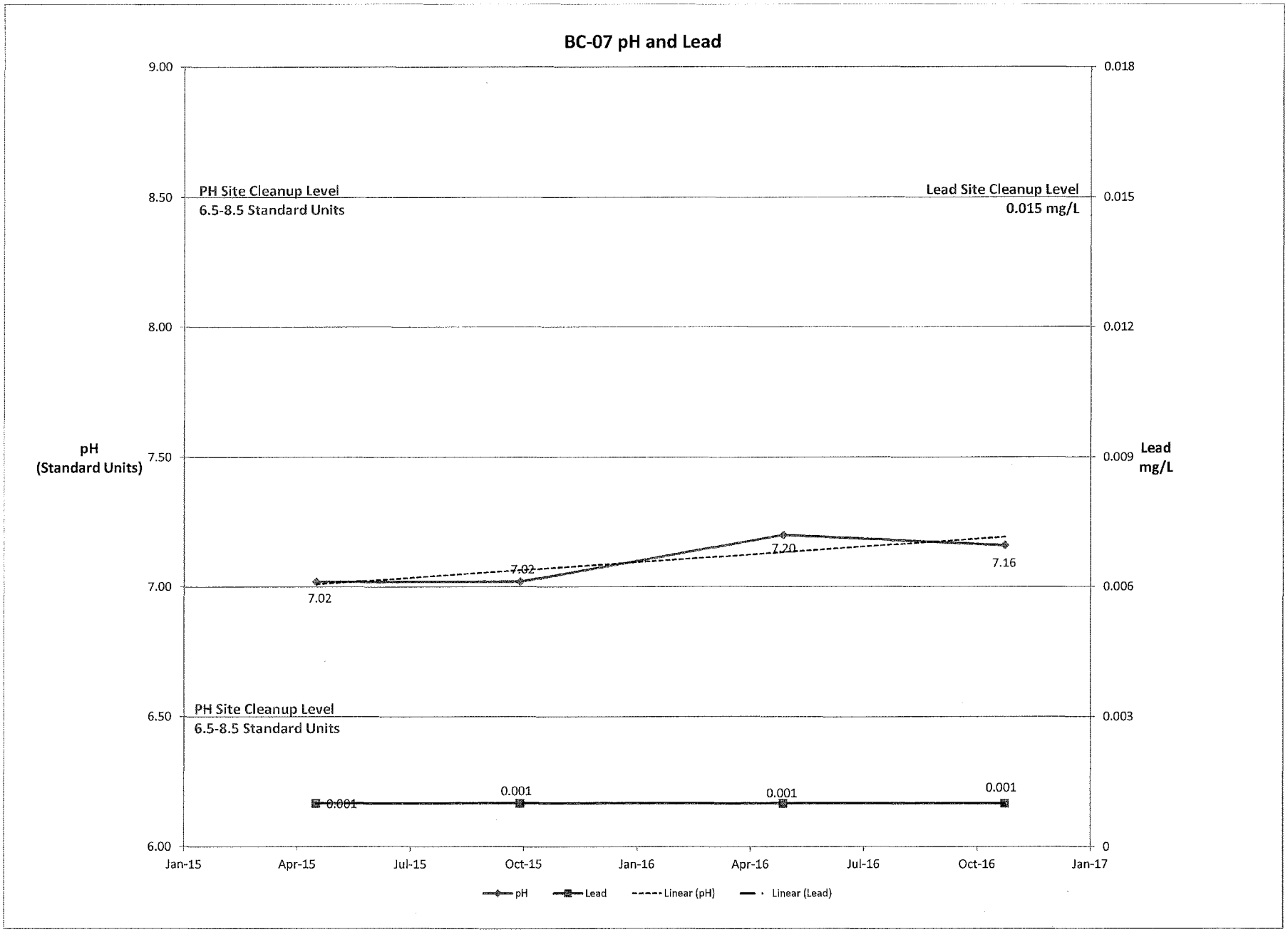

BA-09A Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.0063
0.007
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

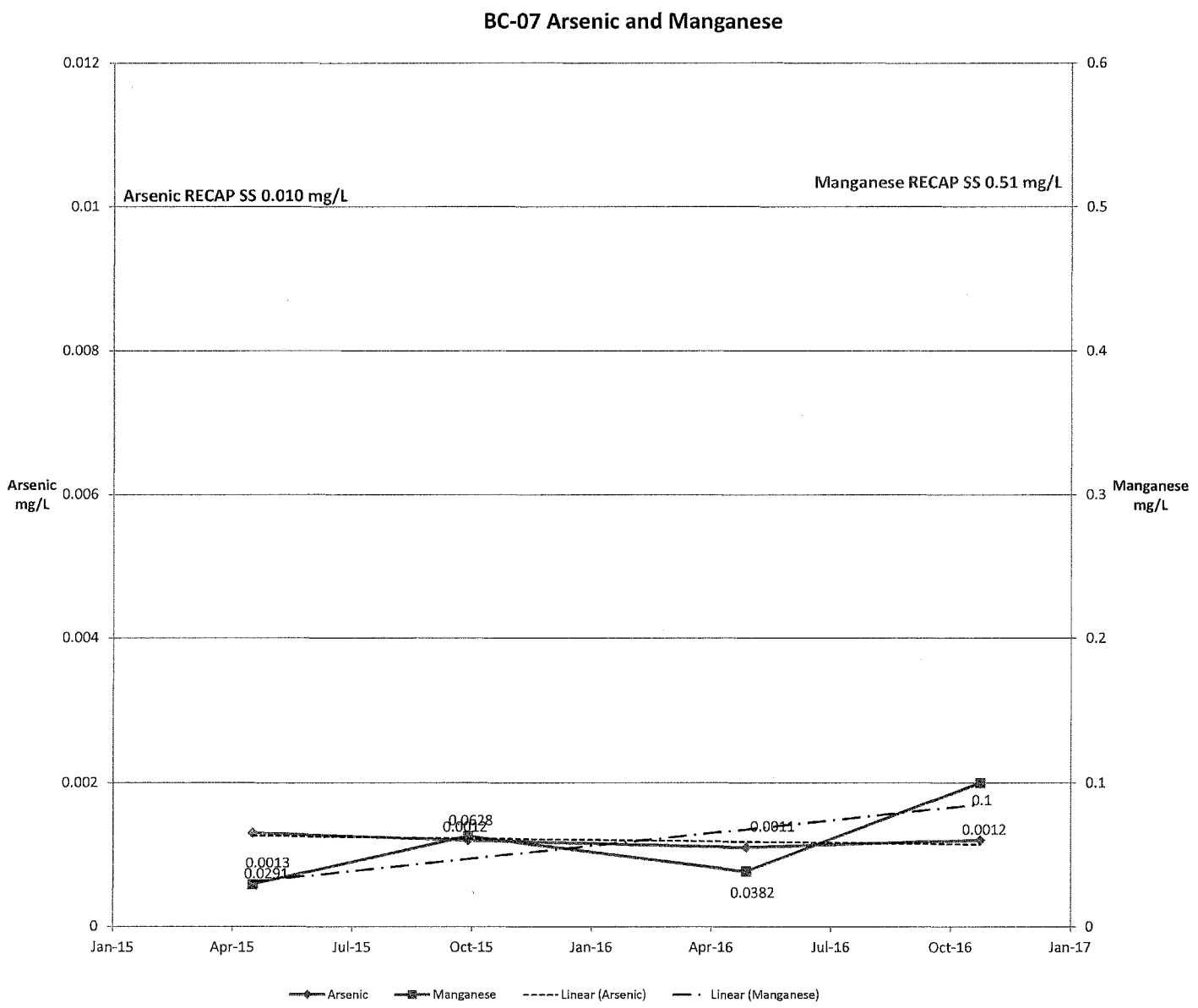

BC-03 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH (Standard Units)
Lead mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
7.02
7.00
6.99
7.06
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

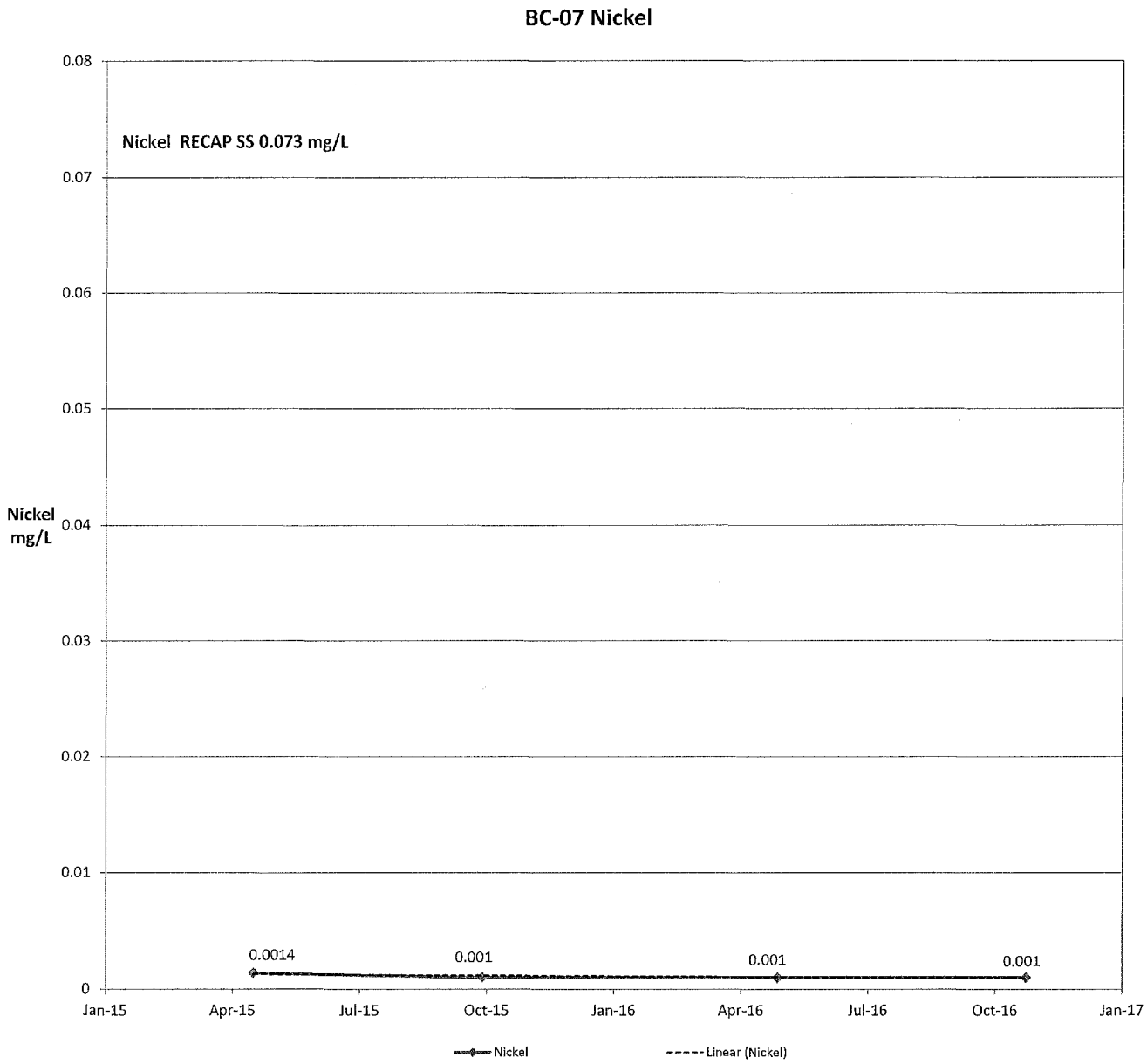

BC-03 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.0176
0.0086
0.001
0.0647
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


BC-03 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.0015
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

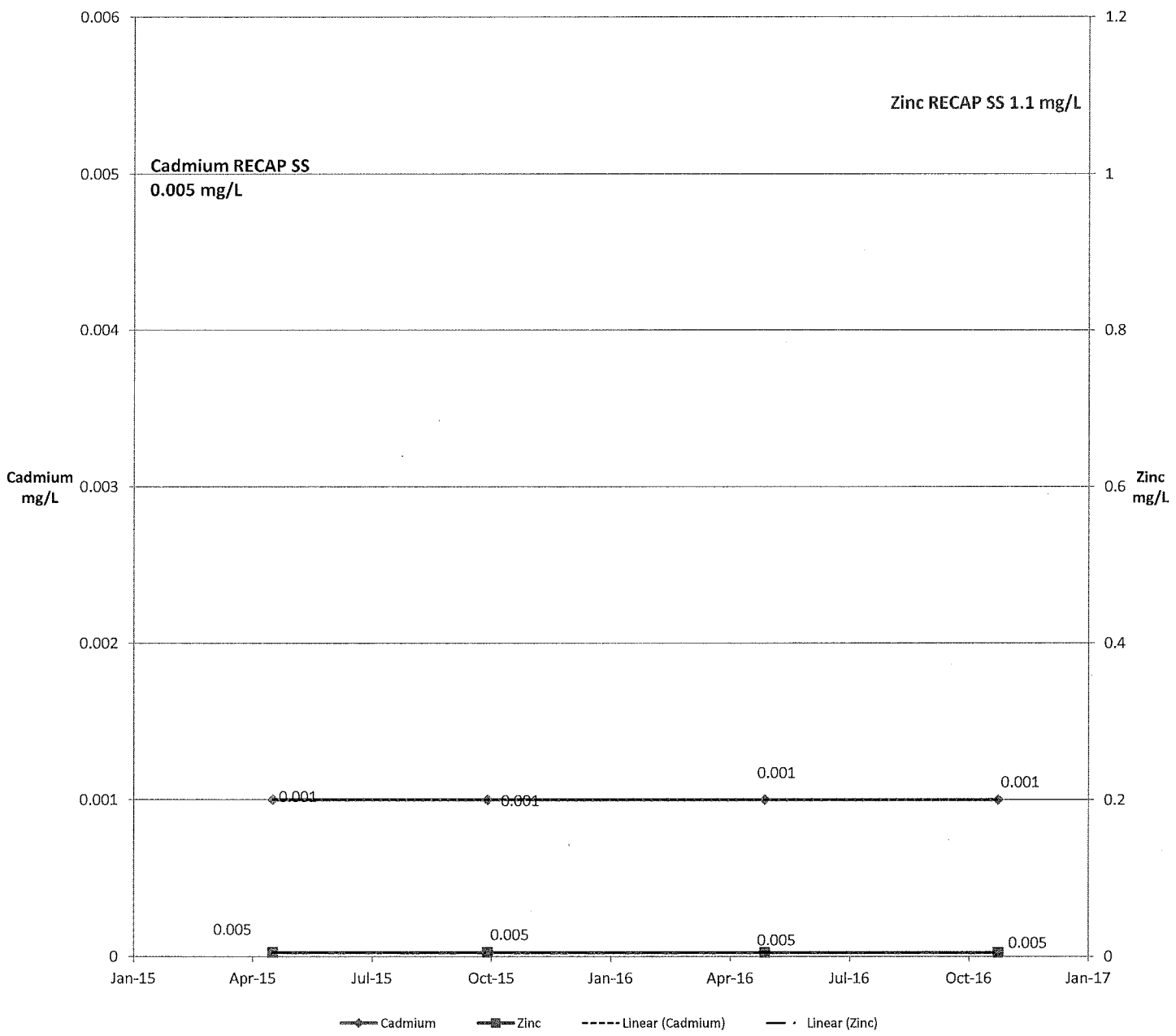

BC-03 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

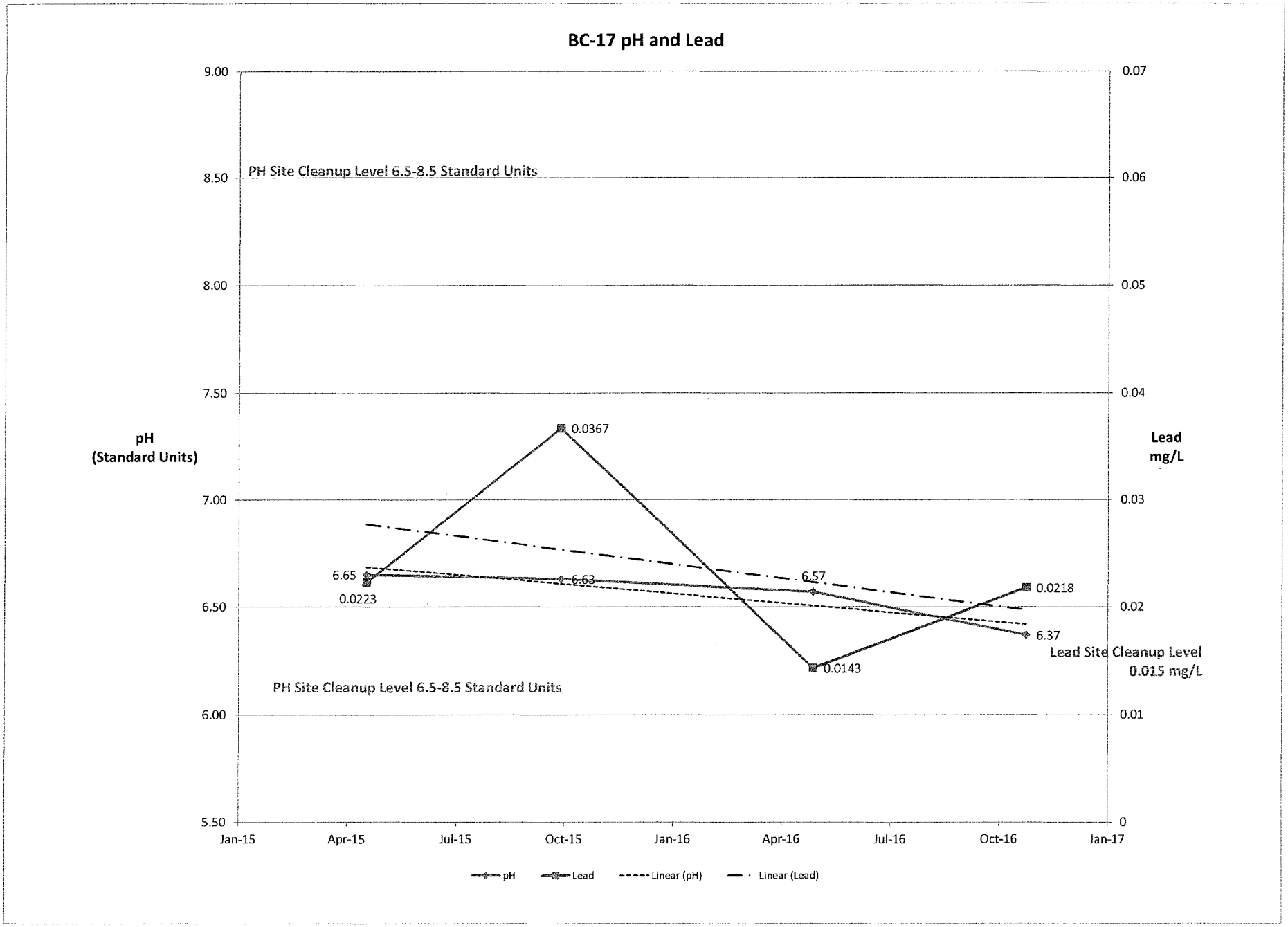

BC-07 pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.018
0.015
0.012
0.009
0.006
0.003
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
7.02
7.02
7.20
7.16
PH Site Cleanup Level
6.5-8.5 Standard Units
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

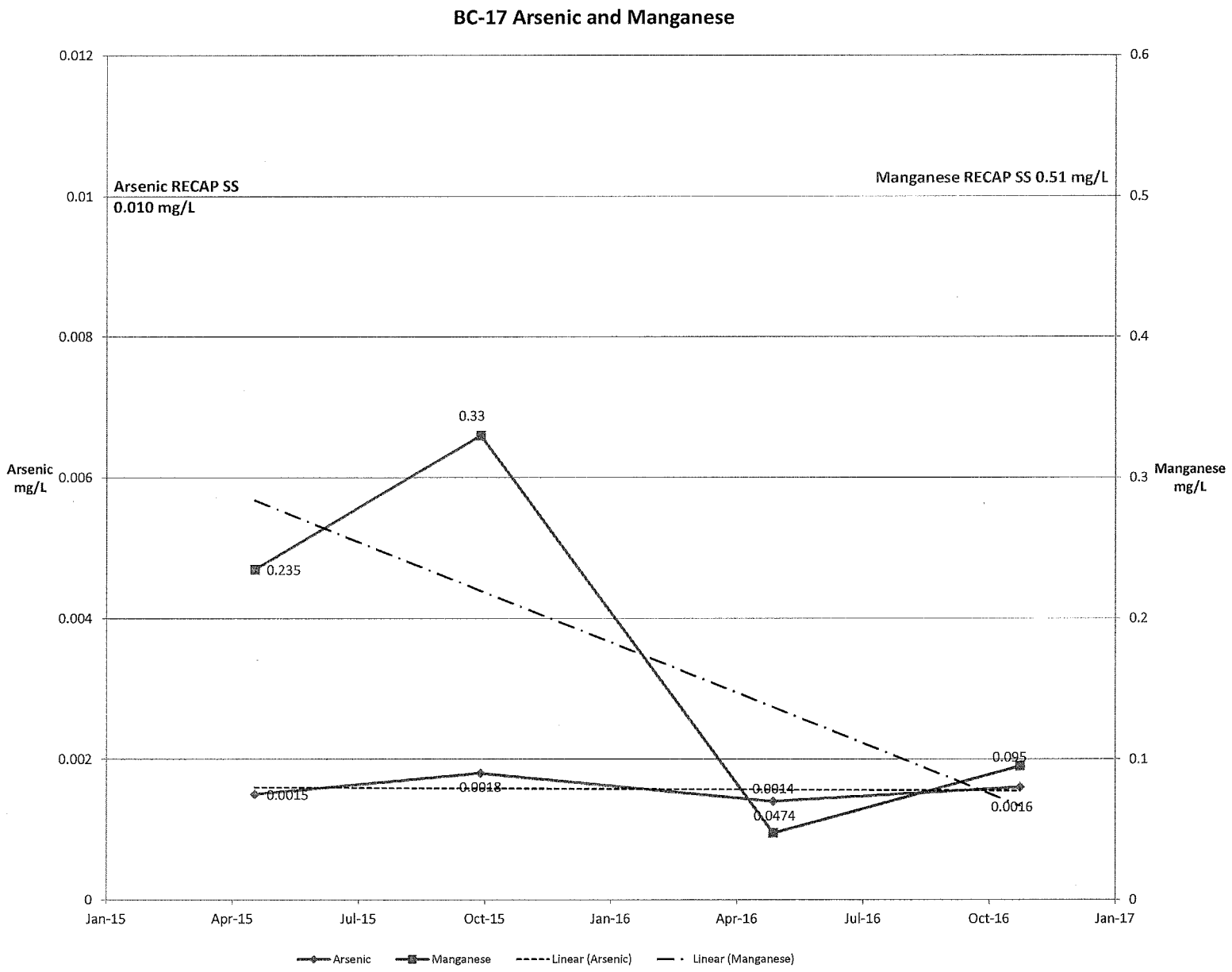

BC-07 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
0.0013
0.0291
0.0628
0.0012
0.0382
0.0011
0.1
0.0012
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

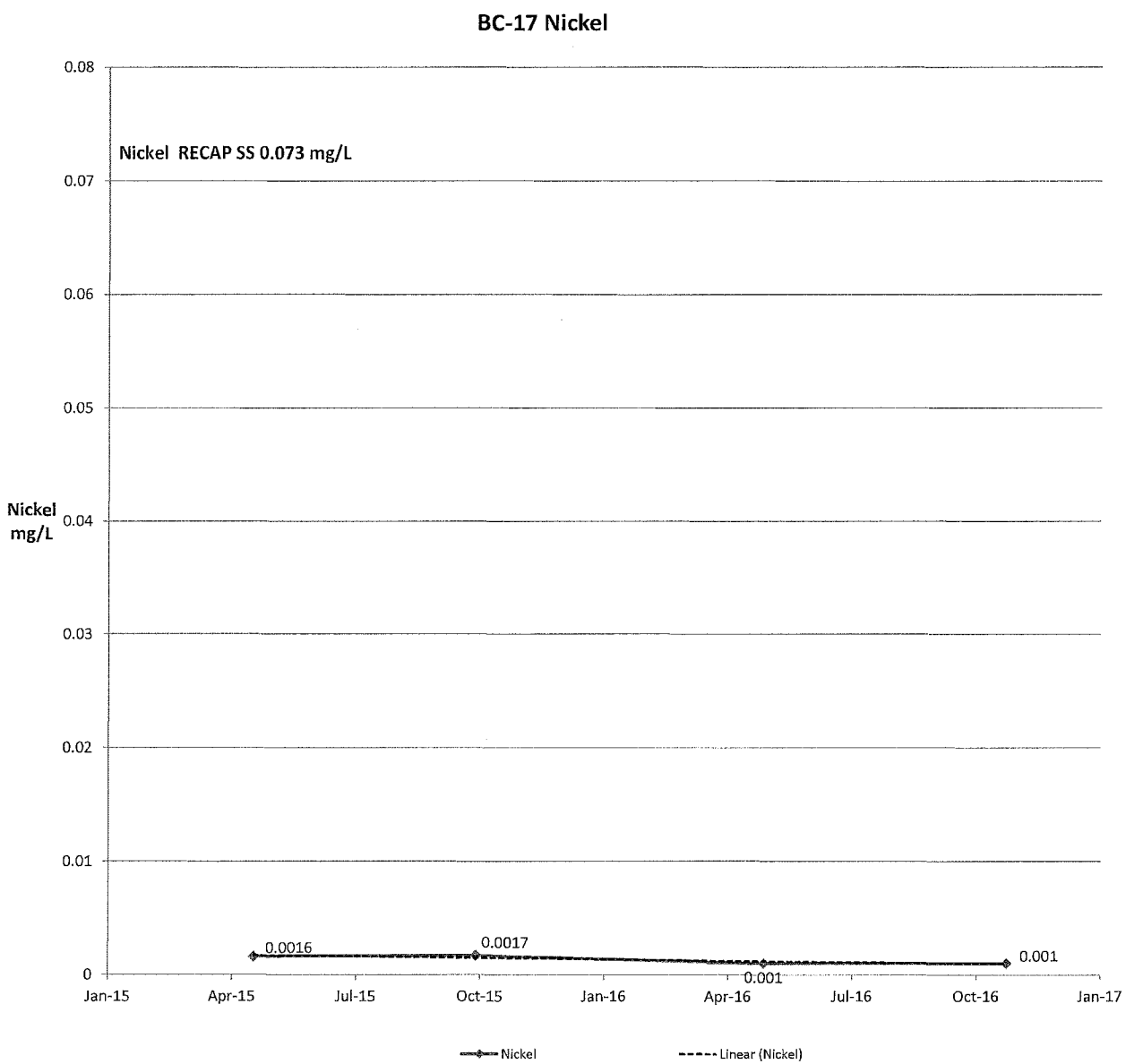

BC-07 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0014
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

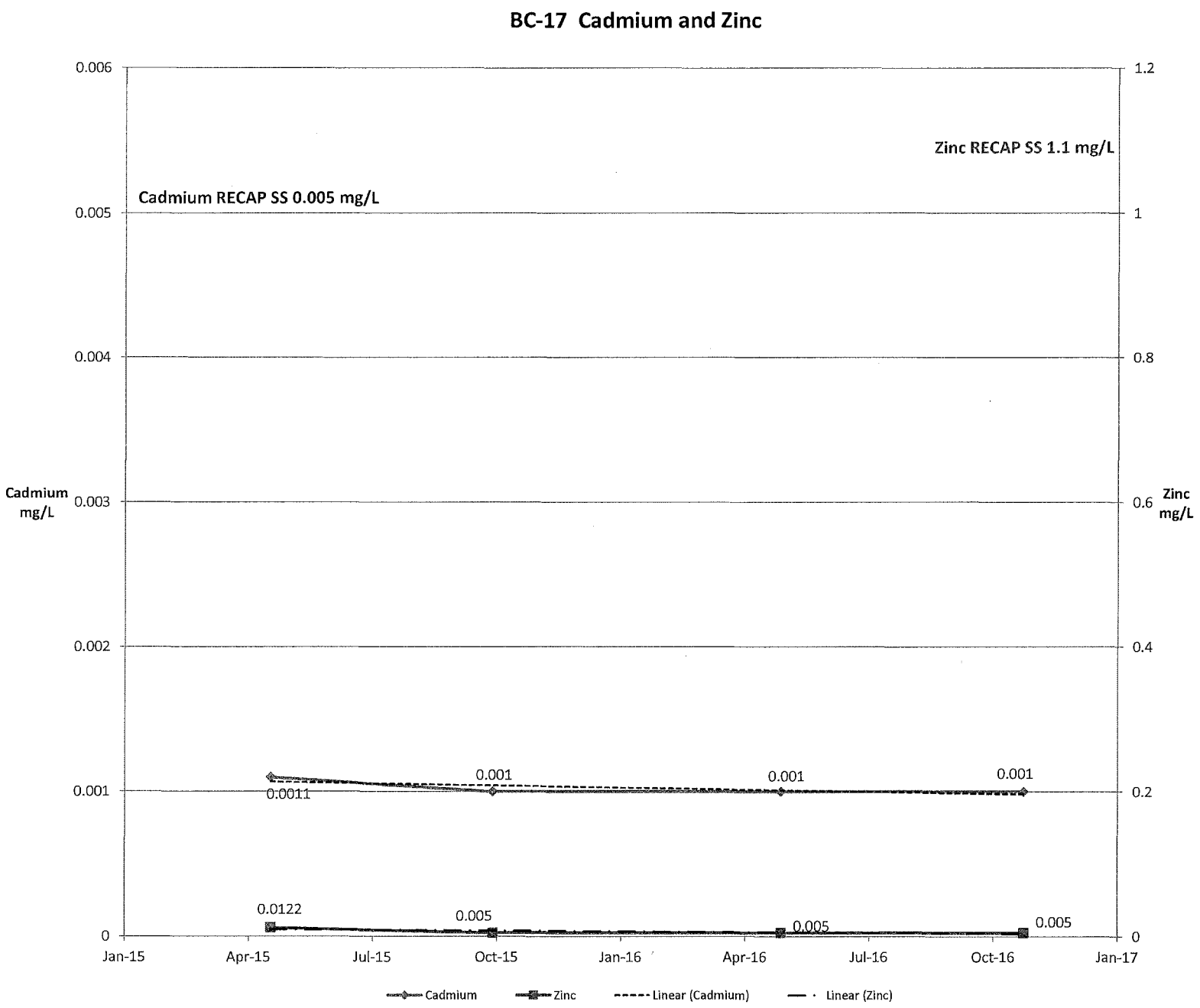
BC-07 Cadmium and Zinc

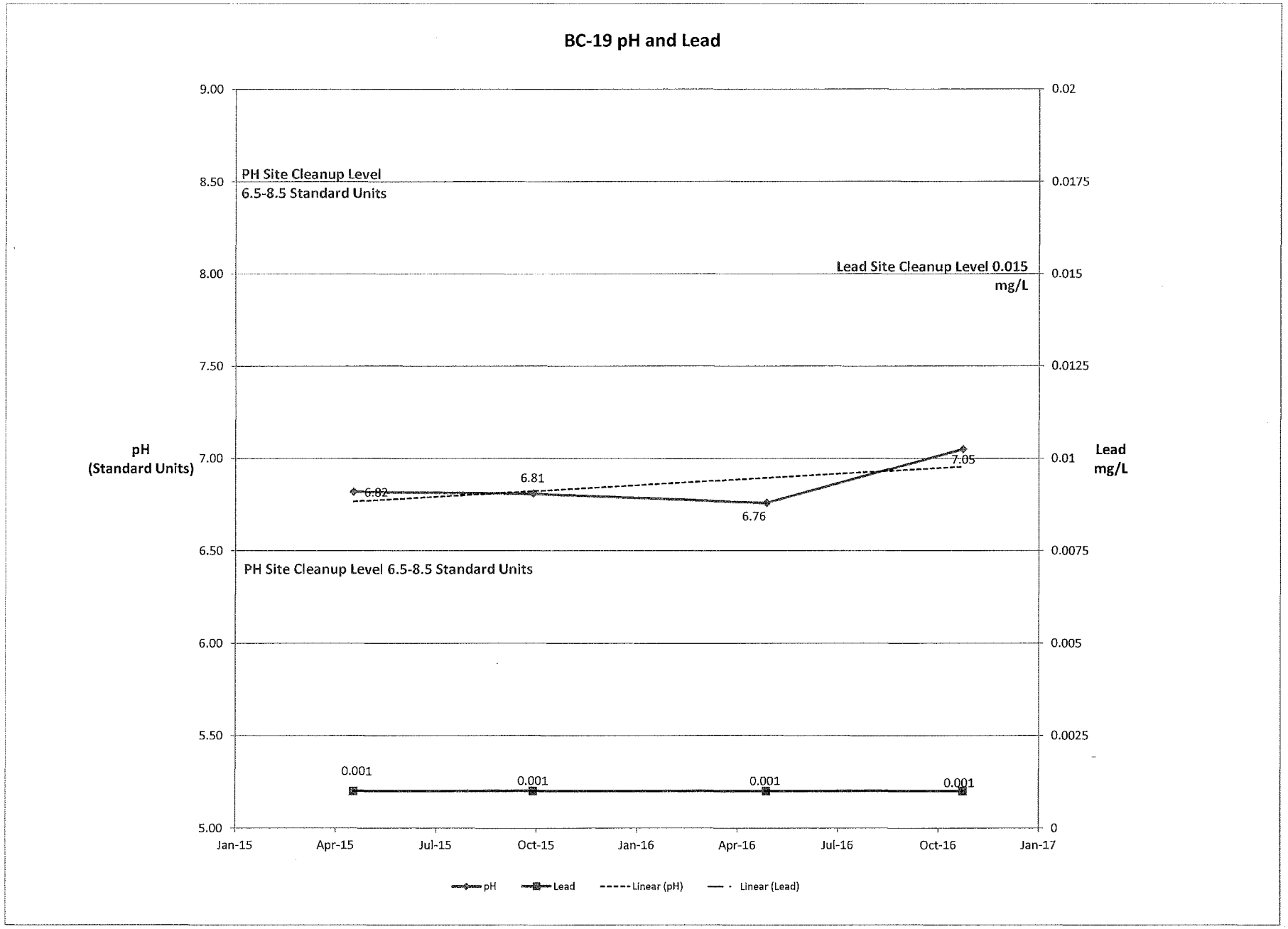


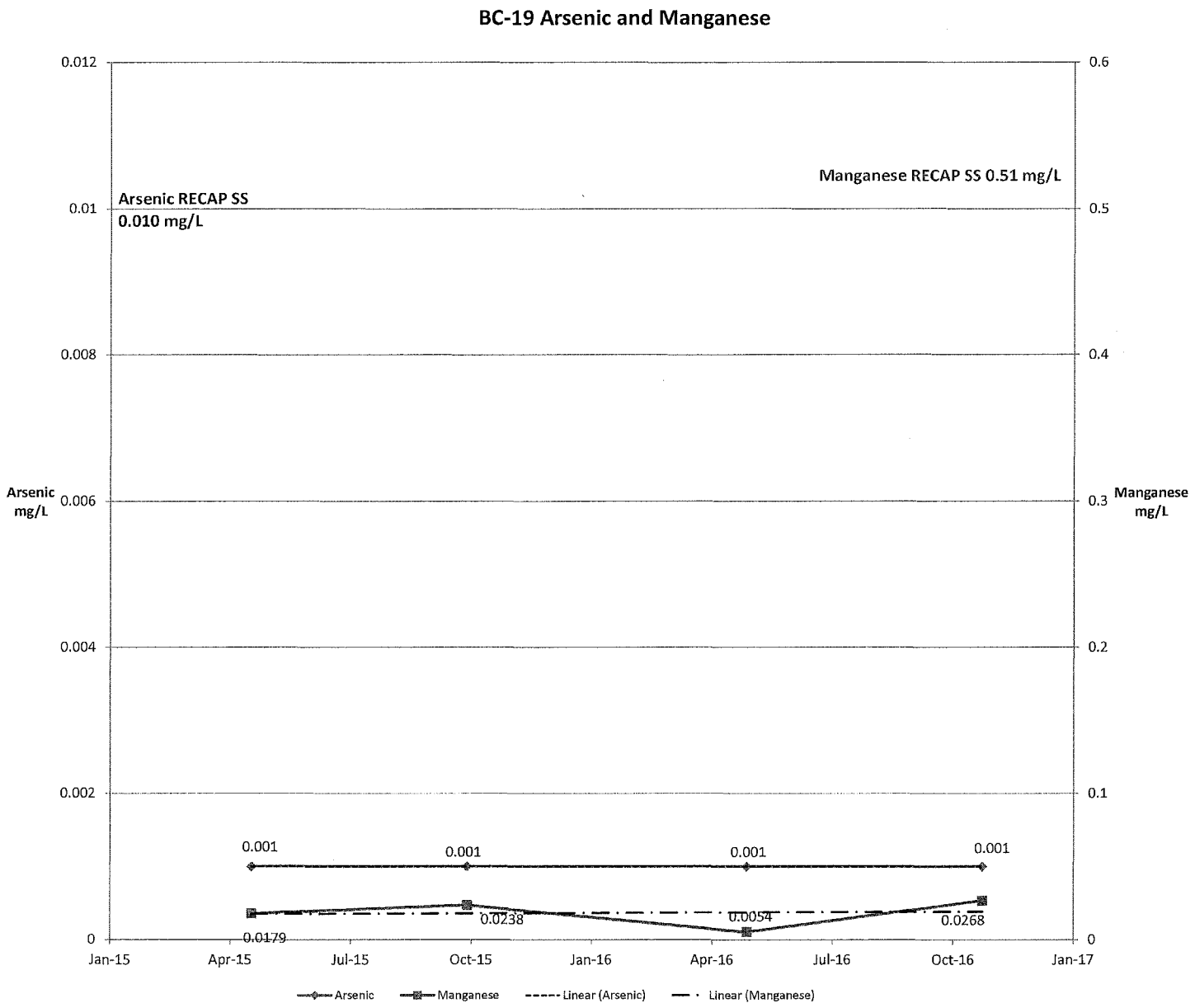

BC-17 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
0.0367
6.65
0.0223
6.63
6.57
0.0143
0.0218
6.37
Lead Site Cleanup Level
0.015 mg/L
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

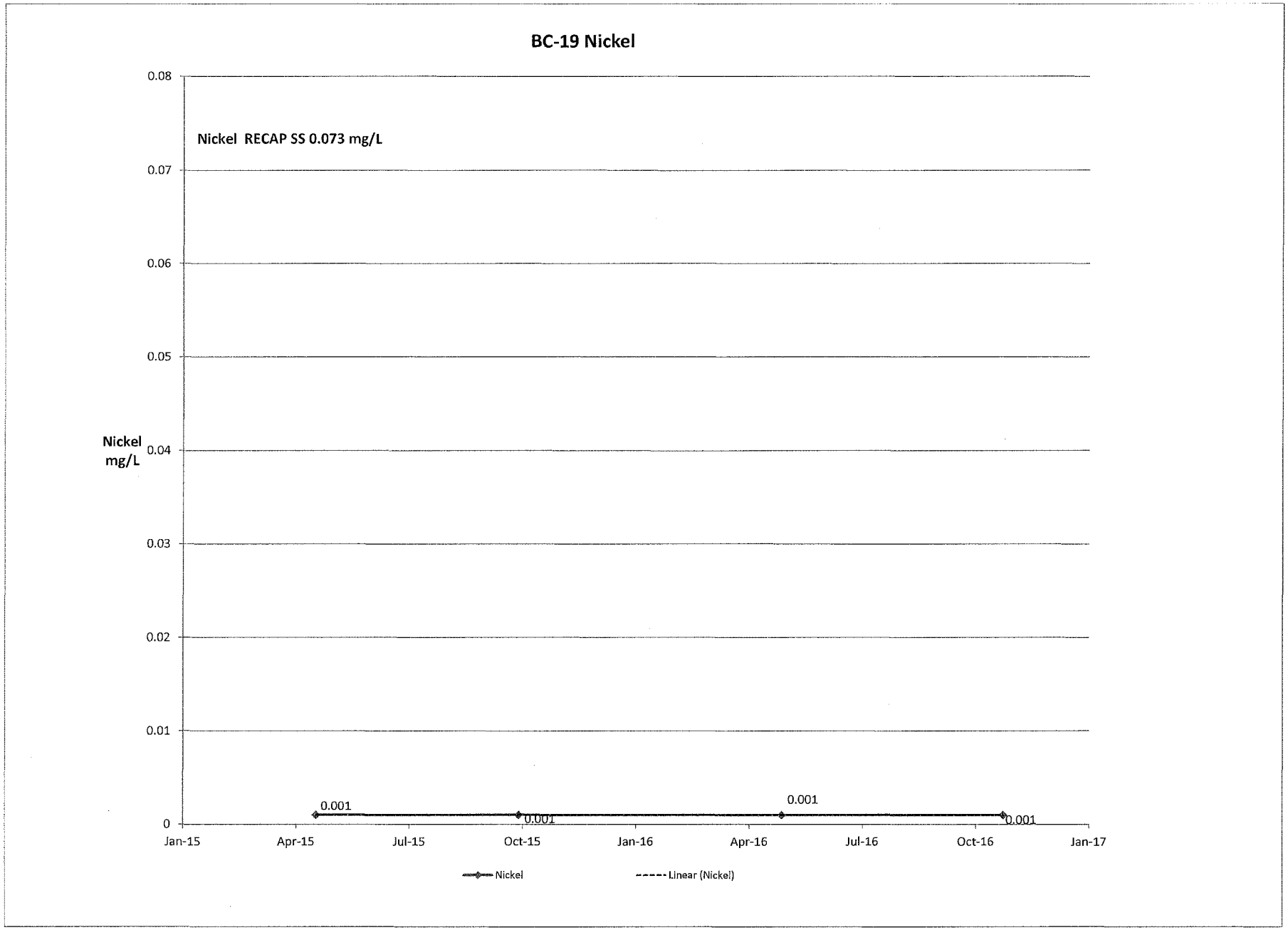

BC-17 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.33
0.235
0.0015
0.0018
0.0014
0.0474
0.095
0.0016
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


BC-17 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0016
0.0017
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

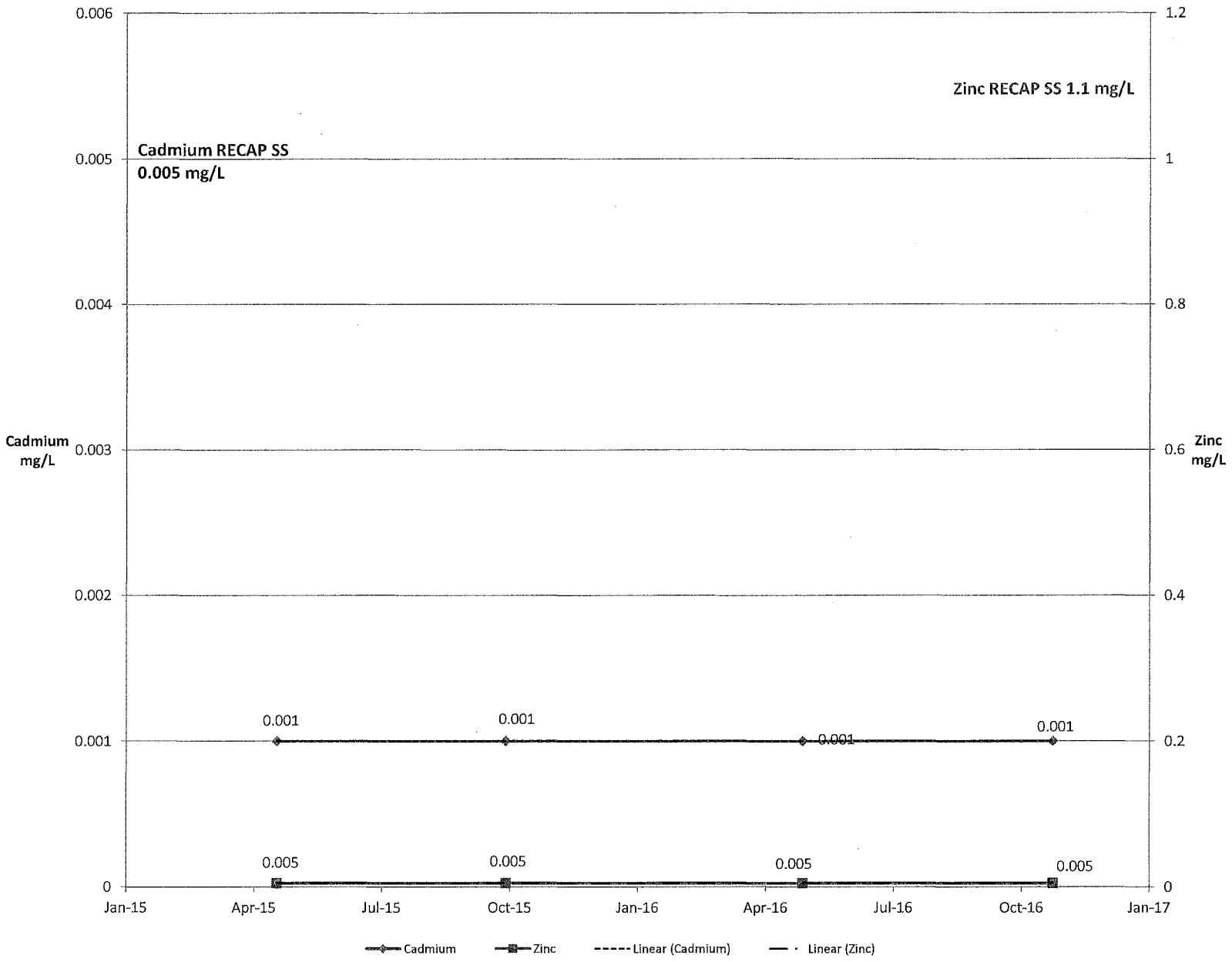

BC-17 Cadmium and Zinc
Cadmium RECAP SS 0.005 mg/L
Zinc RECAP SS 1.1 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.0011
0.0122
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

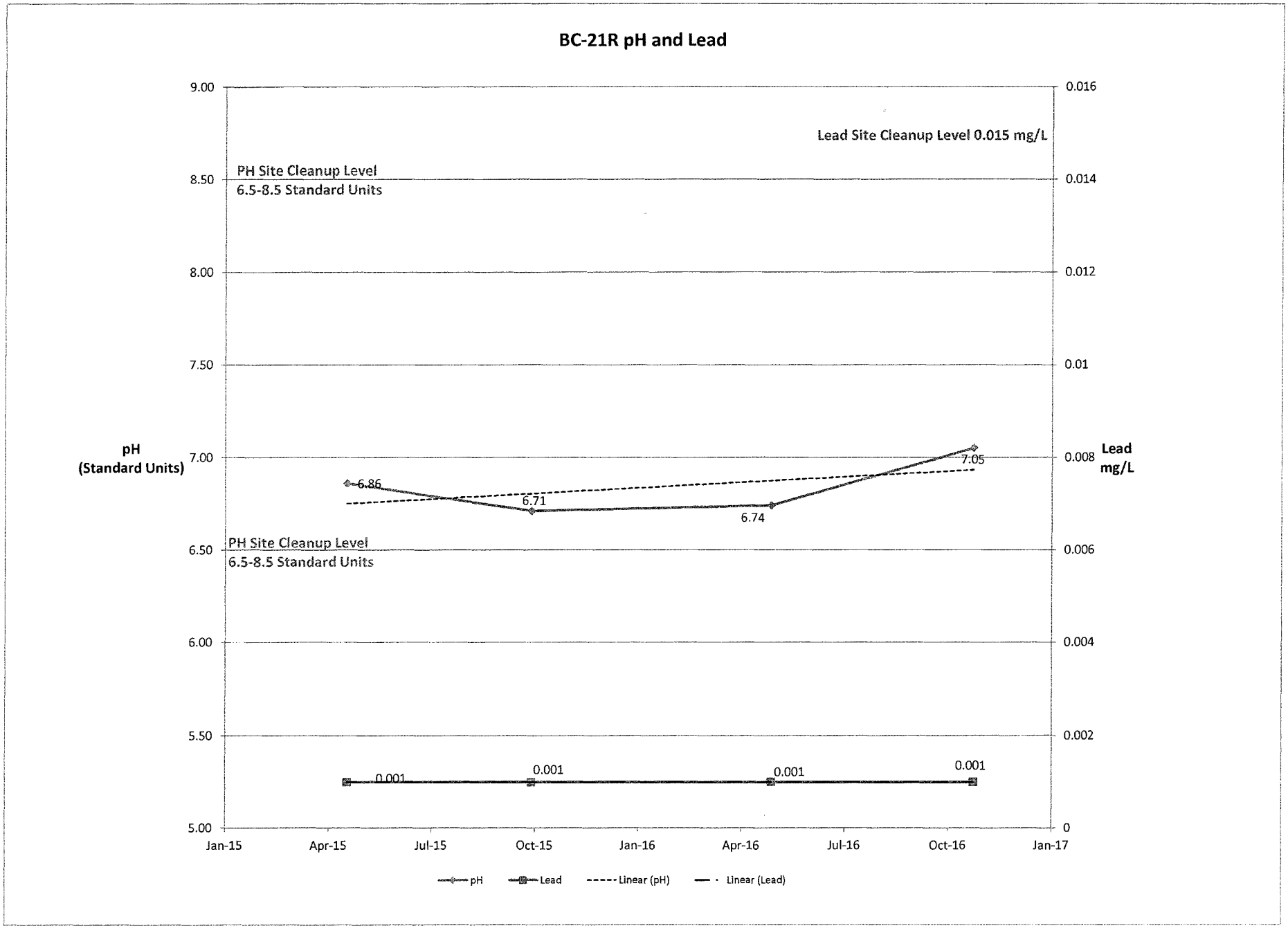

BC-19 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
6.82
6.81
6.76
7.05
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

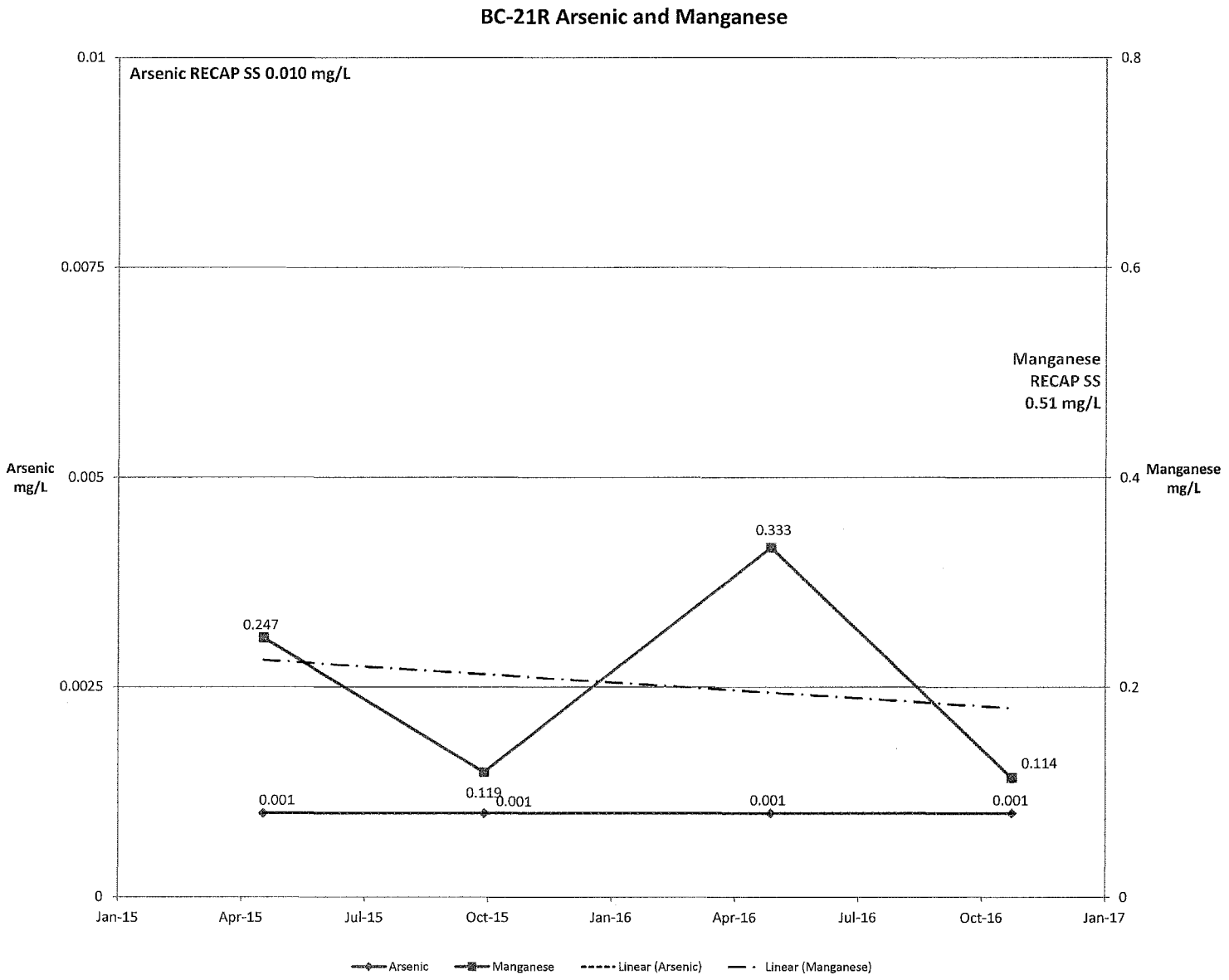

BC-19 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.0179
0.0238
0.0054
0.0268
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

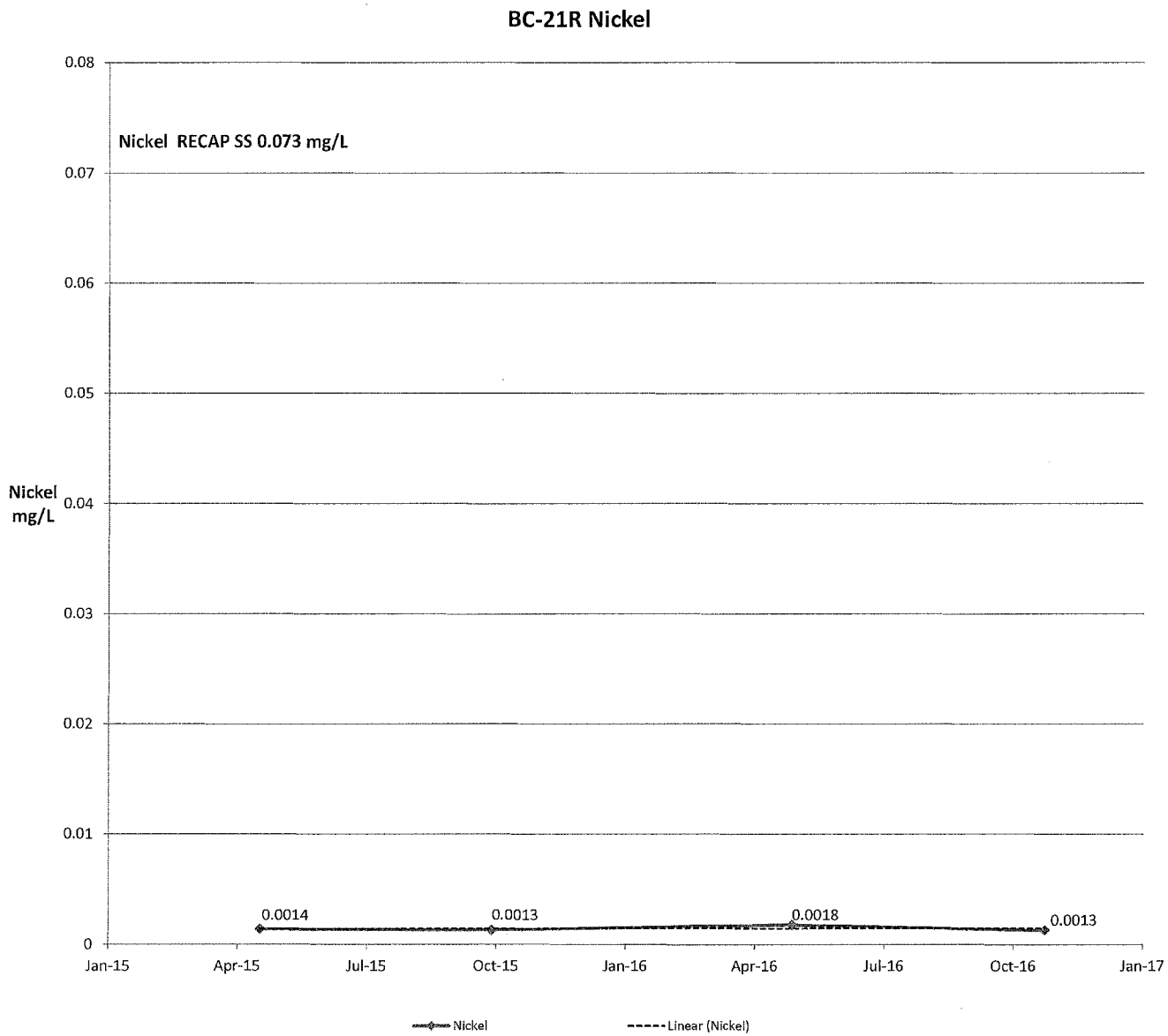

BC-19 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

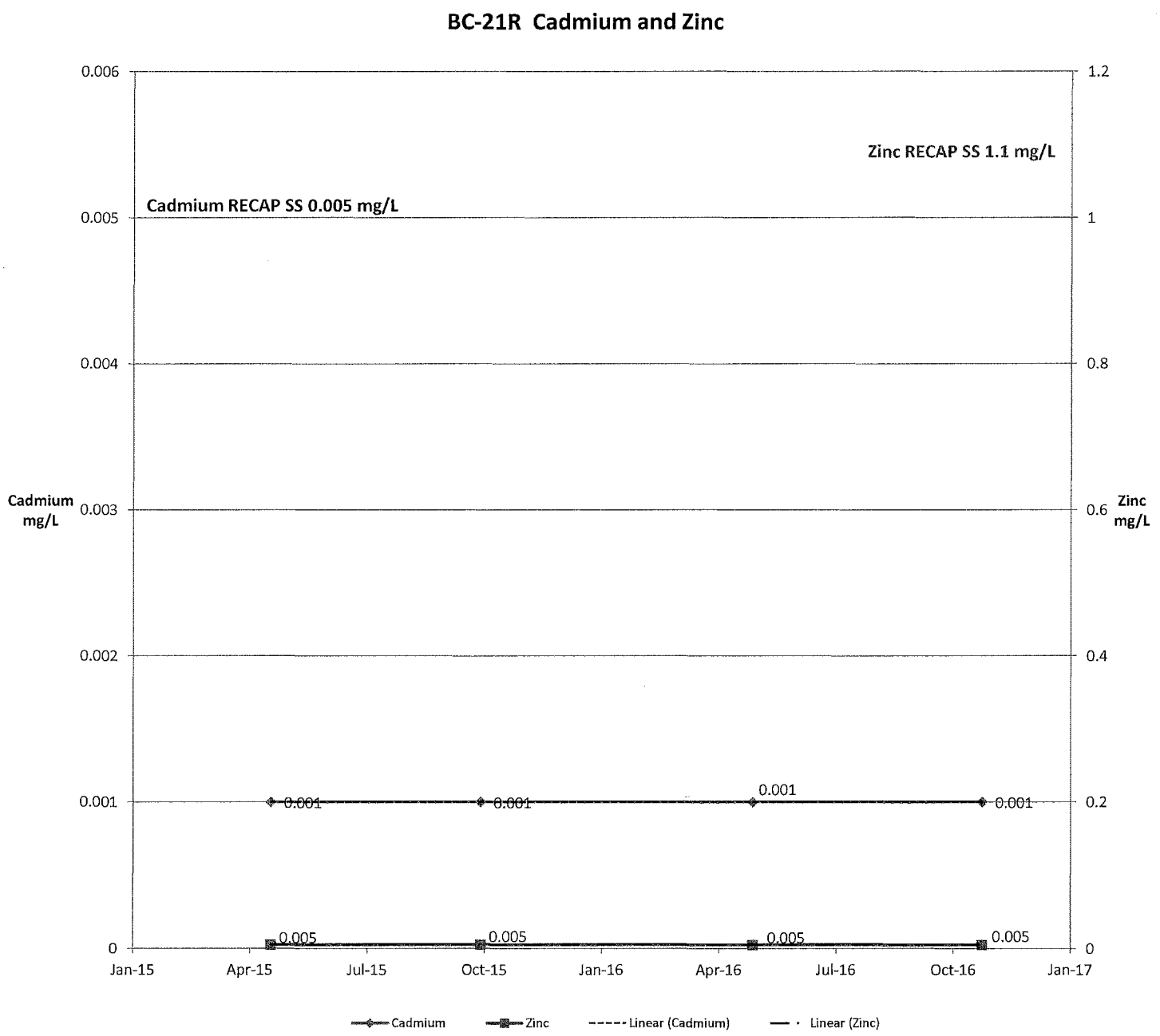
BC-19 Cadmium and Zinc

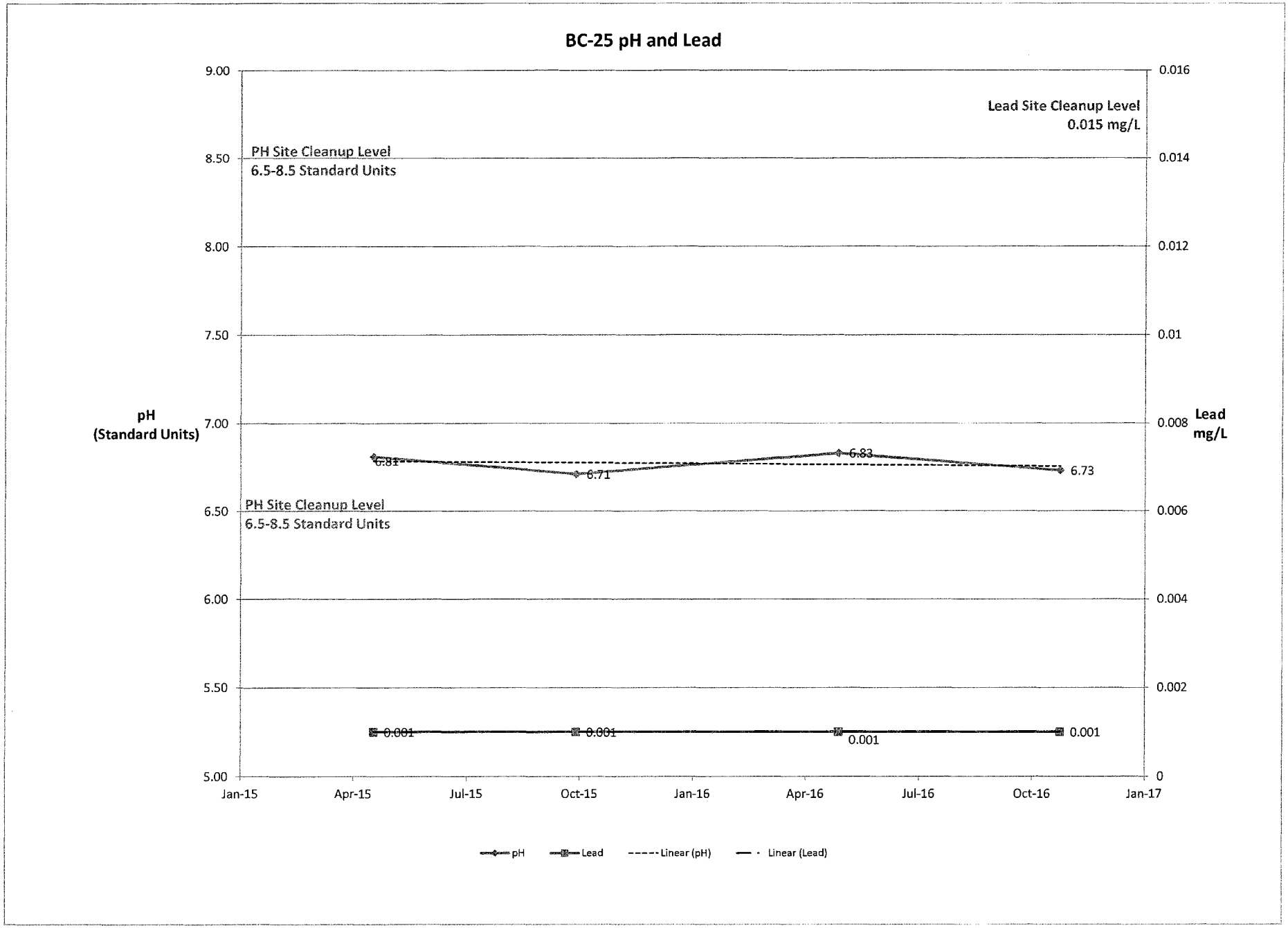


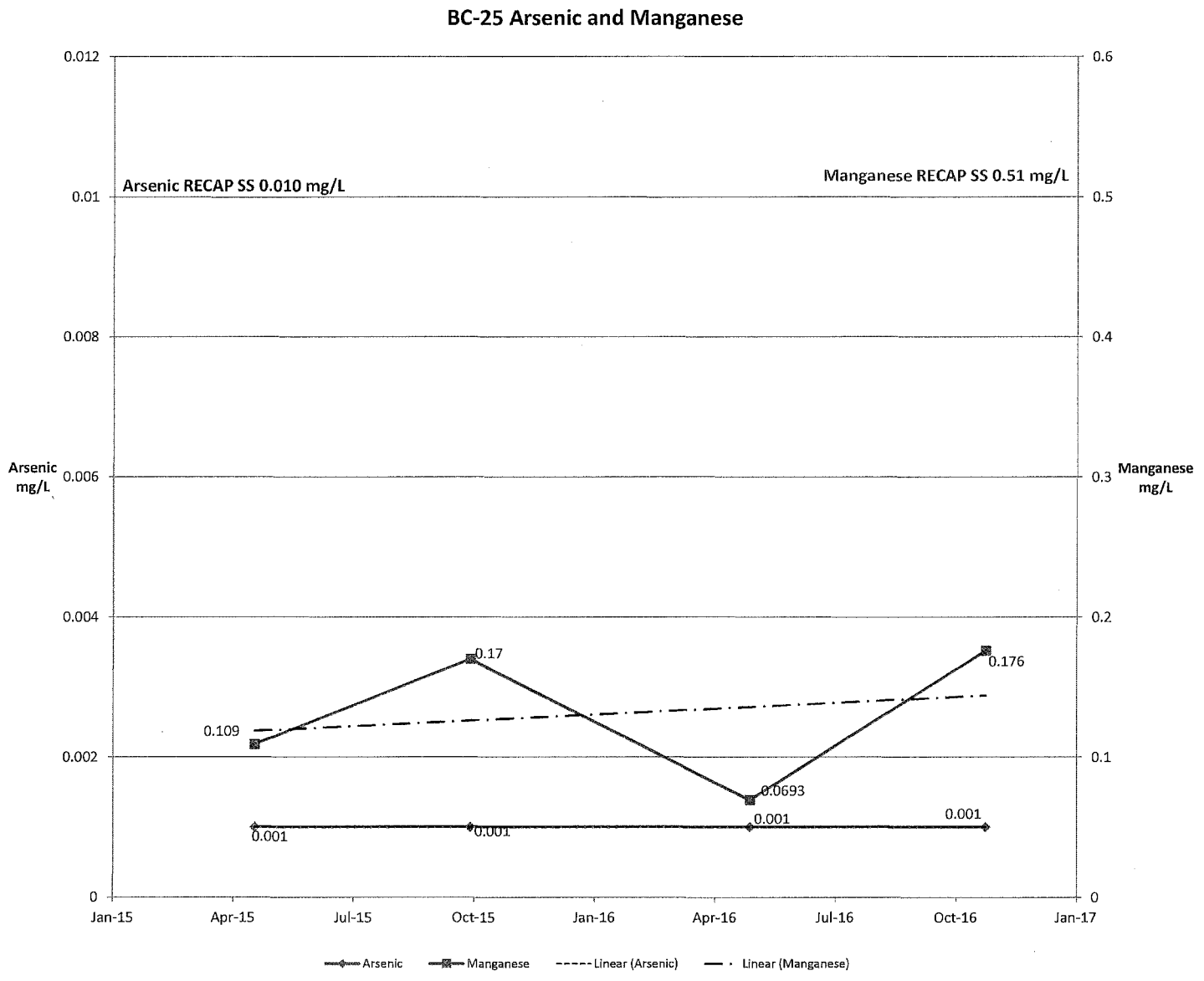

BC-21R pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
6.86
6.71
6.74
7.05
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

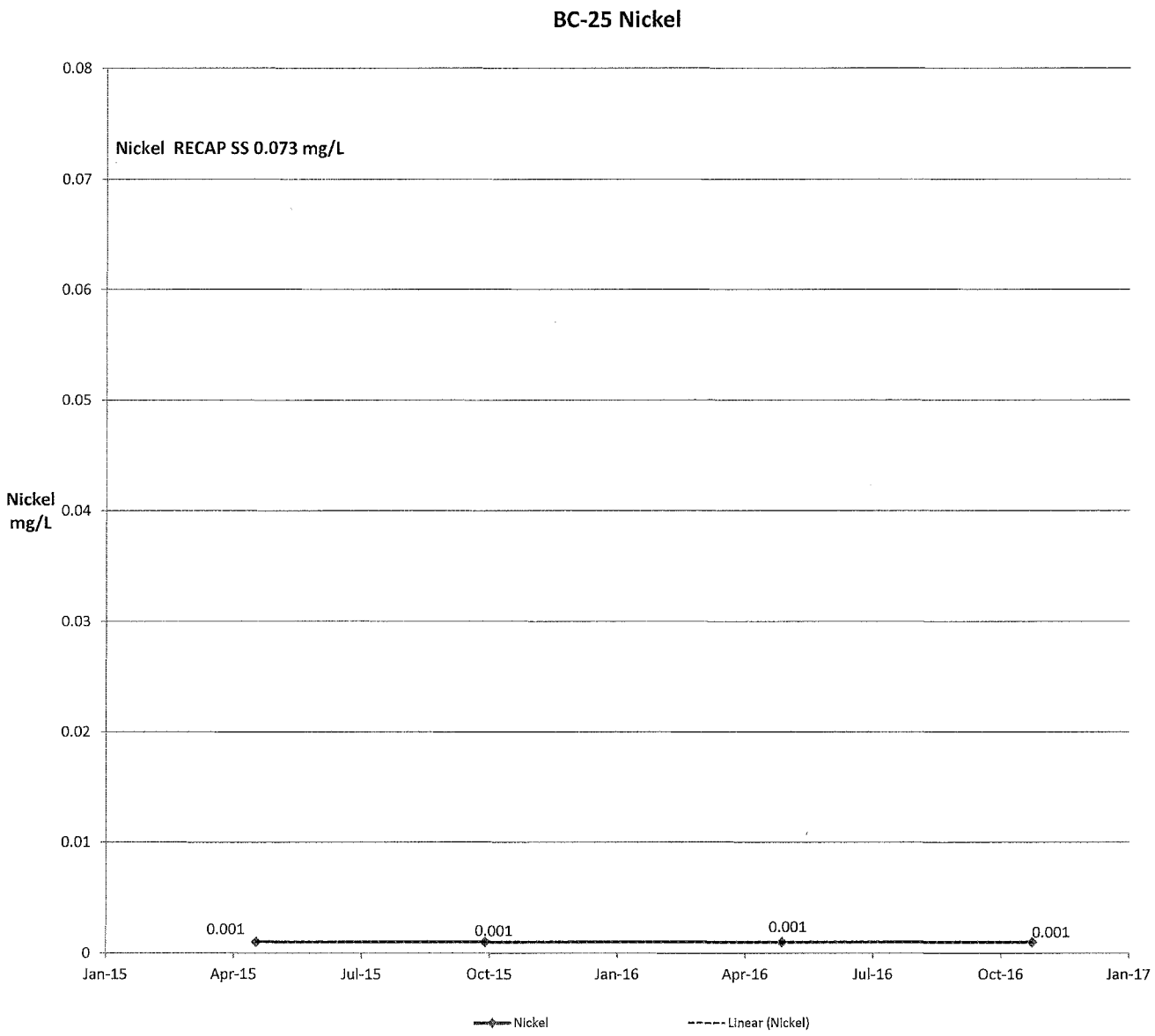

BC-21R Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.01
0.0075
0.005
0.0025
0
0.8
0.6
0.4
0.2
0
0.247
0.119
0.333
0.114
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

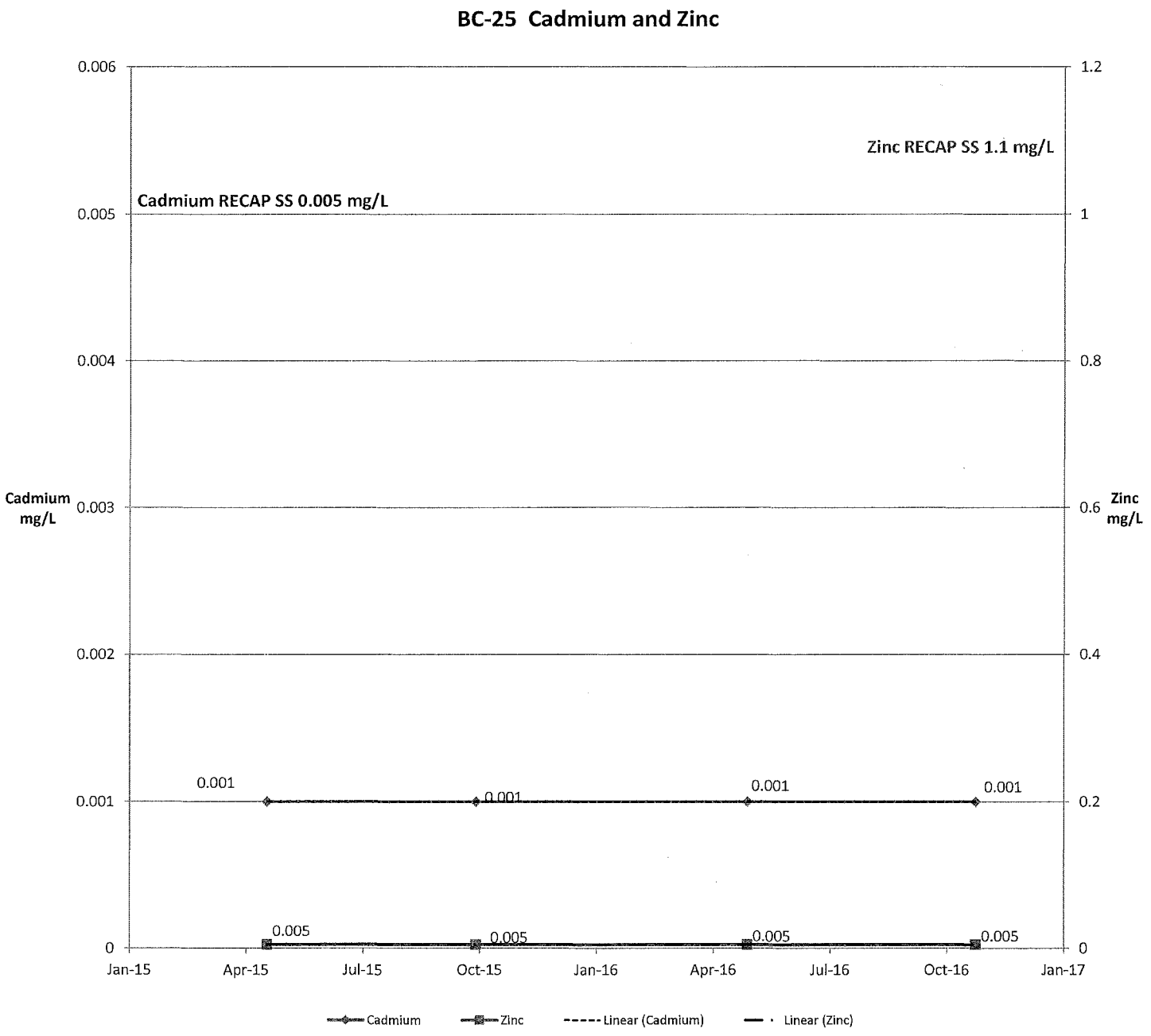

BC-21R Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0014
0.0013
0.0018
0.0013
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)


BC-21R Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


BC-25 pH and Lead
pH
(Standard Units)
Lead
mg/L
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
6.81
6.71
6.83
6.73
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

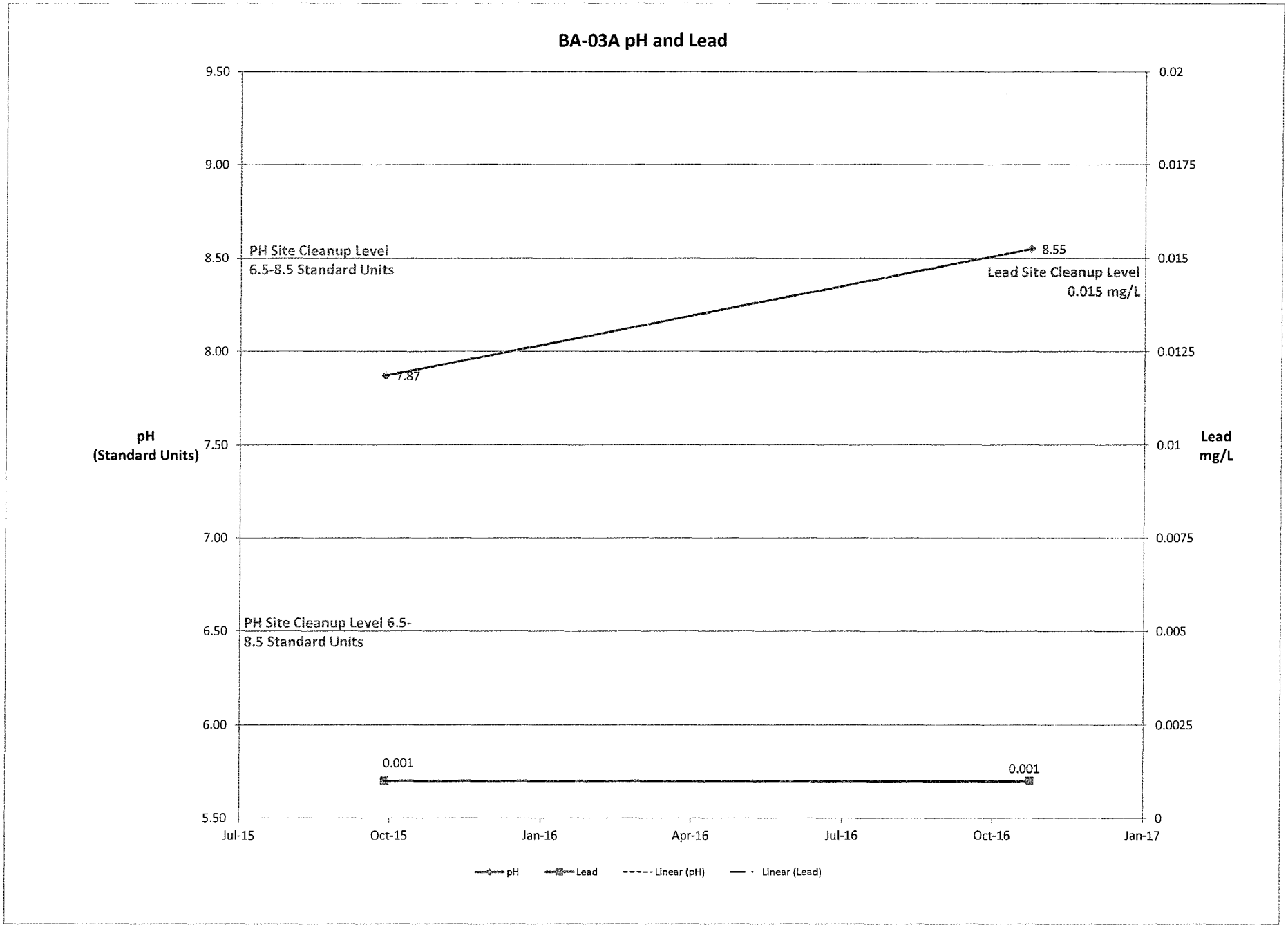

BC-25 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.109
0.17
0.0693
0.176
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

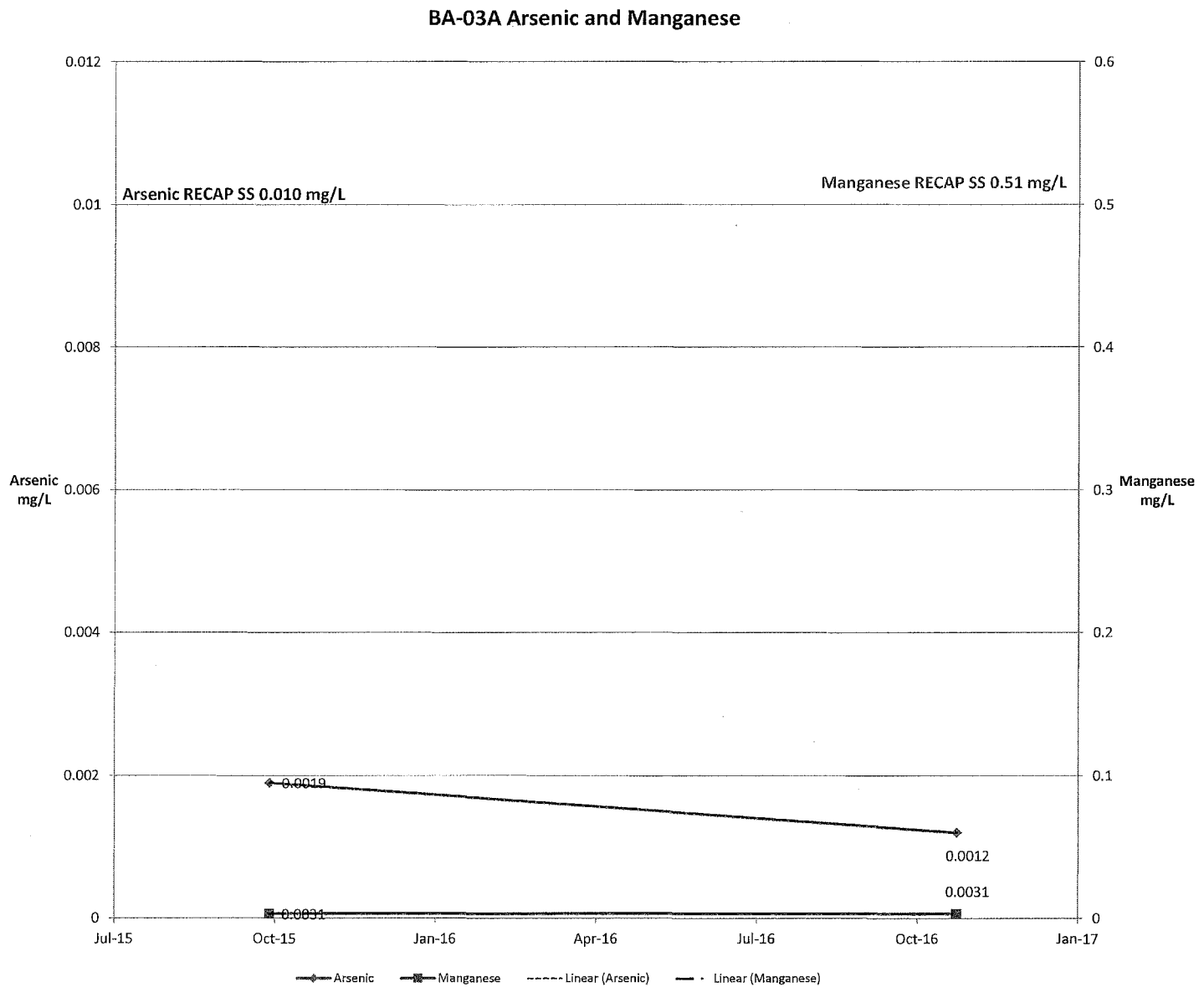

BC-25 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

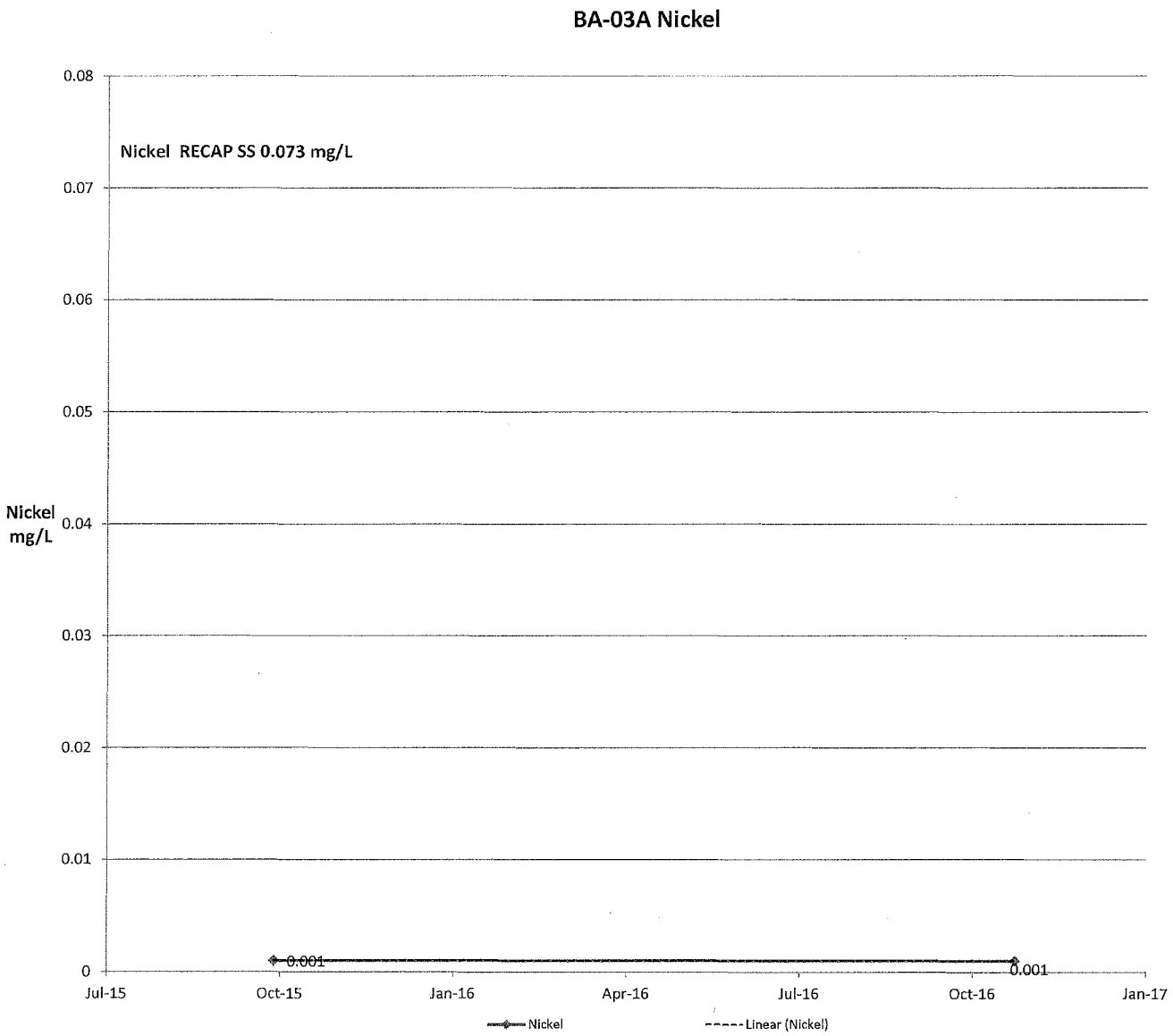

BC-25 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

THIRD WATER BEARING ZONE

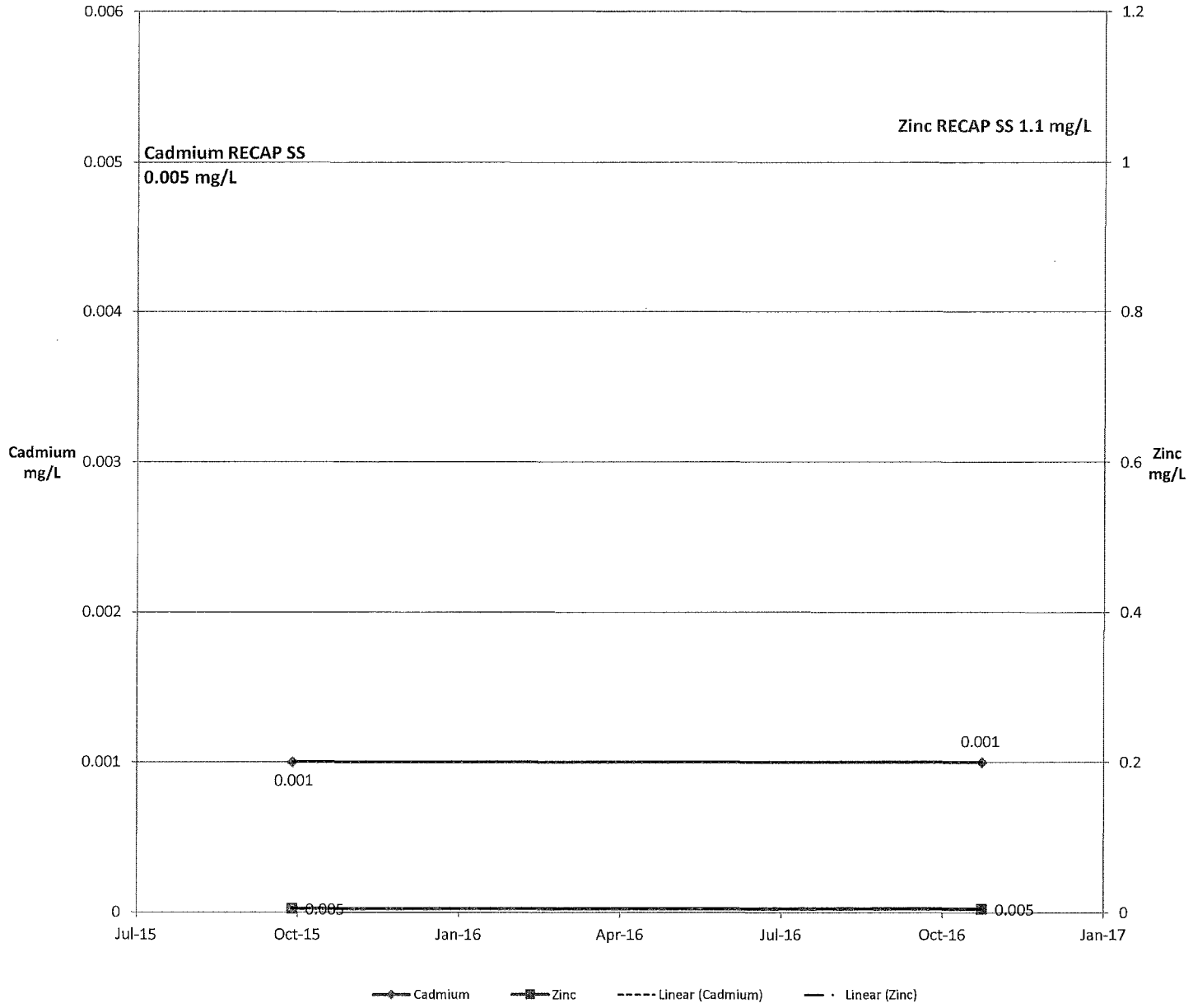
(PAST EIGHT QUARTERS)

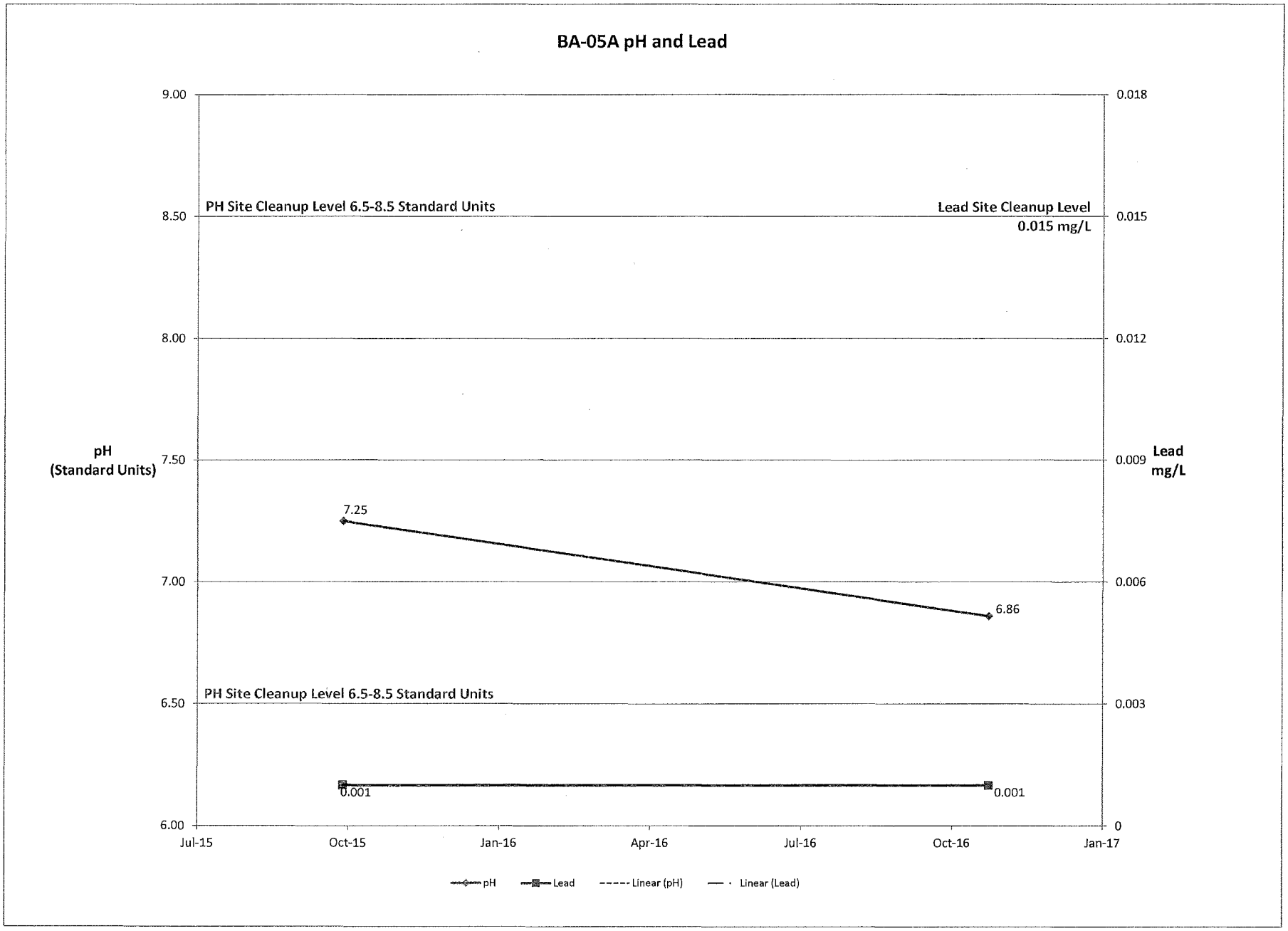

BA-03A pH and Lead
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
pH
(Standard Units)
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
8.55
Lead Site Cleanup Level
0.015 mg/L
7.87
PH Site Cleanup Level 6.5-
8.5 Standard Units
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

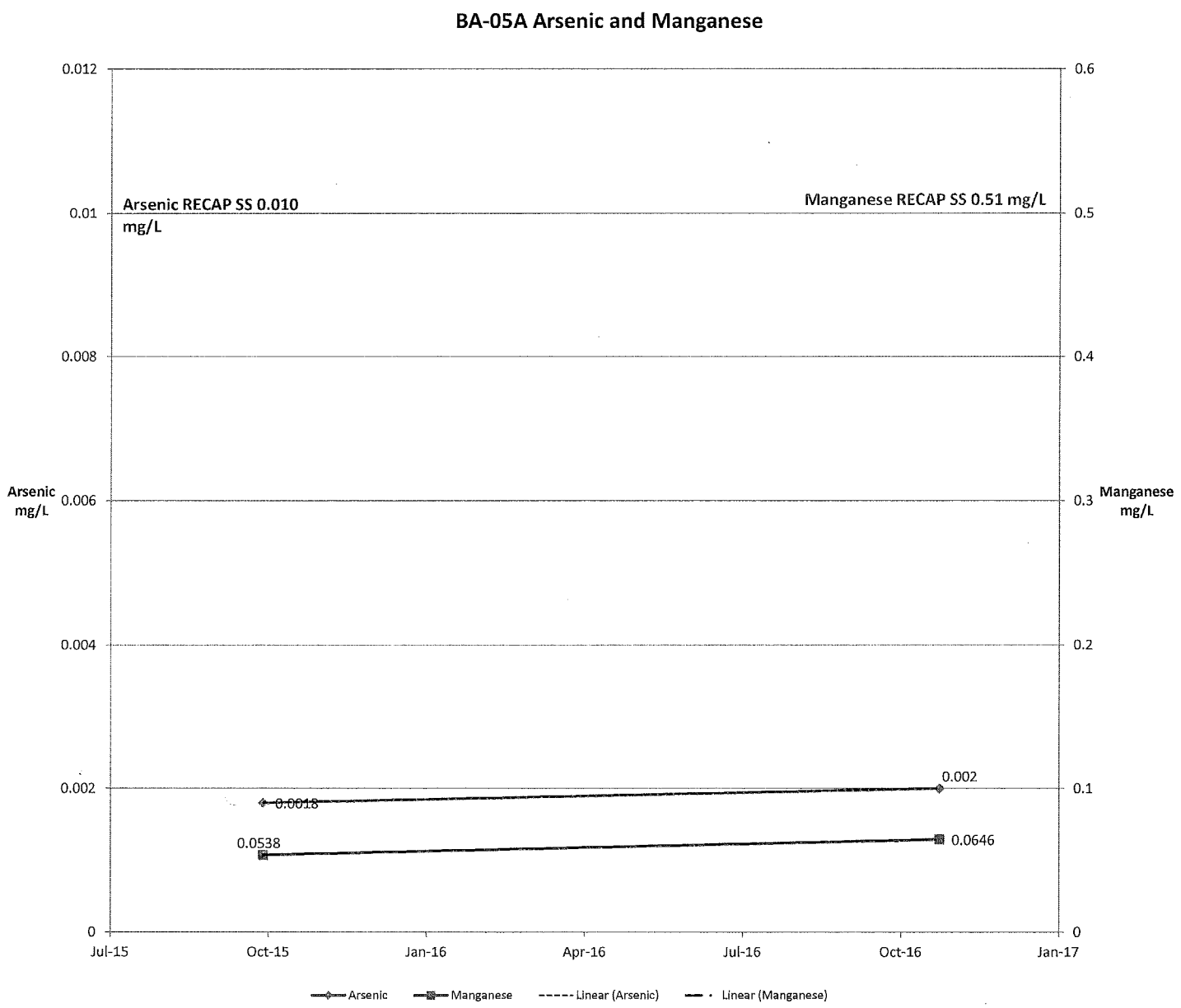

BA-03A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0019
0.0012
0.0031
0.0031
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

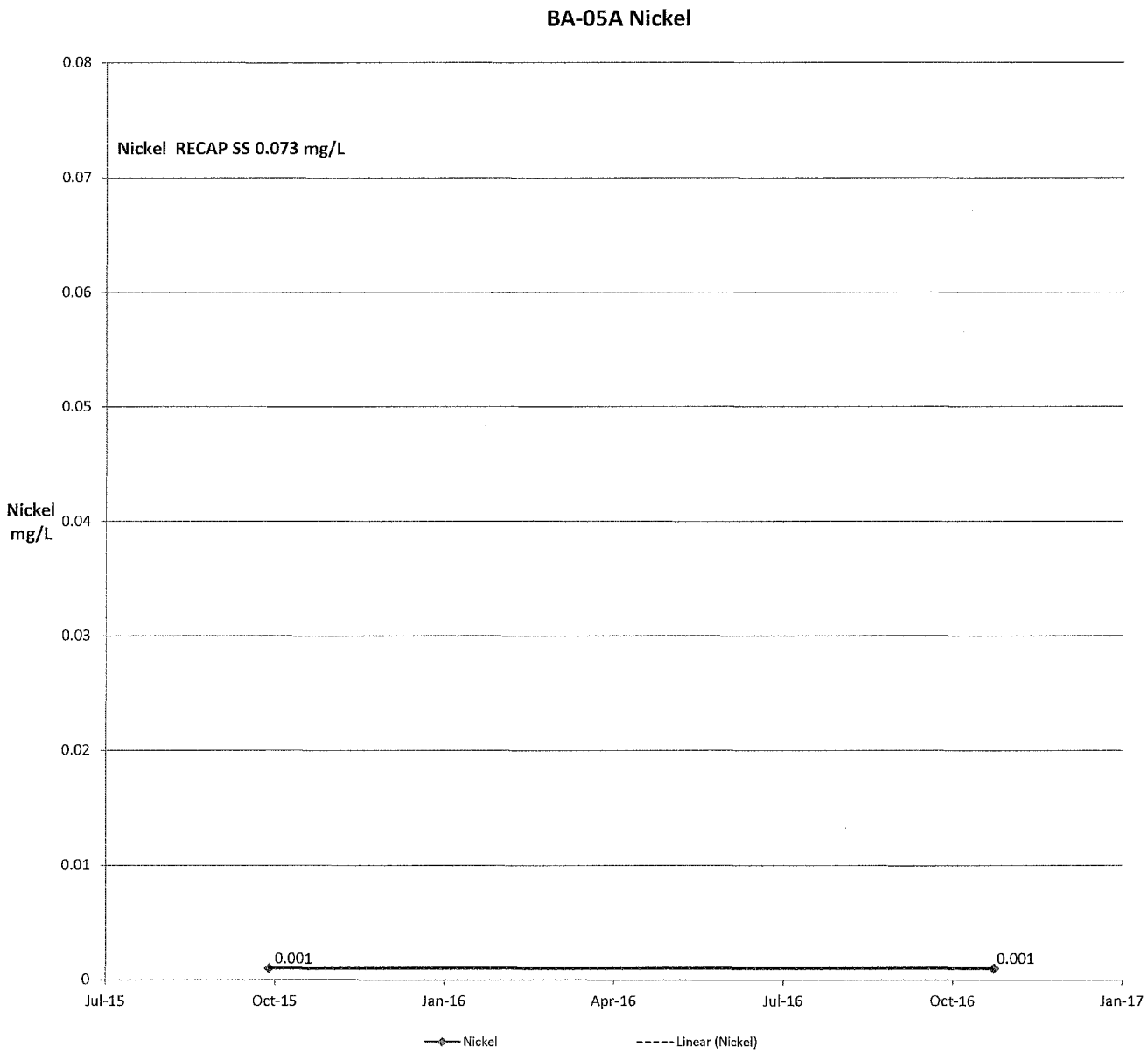

BA-03A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

BA-03A Cadmium and Zinc

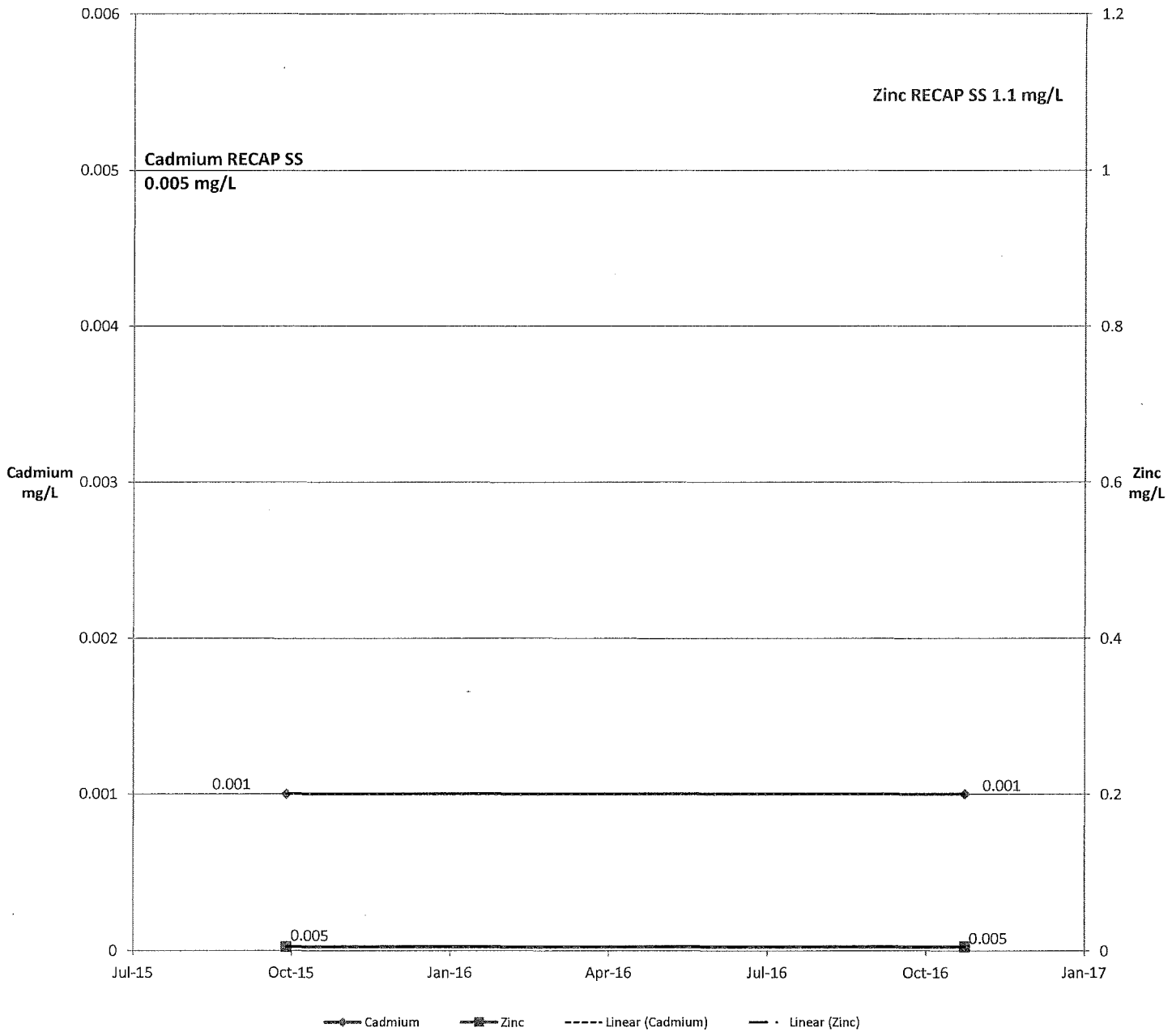


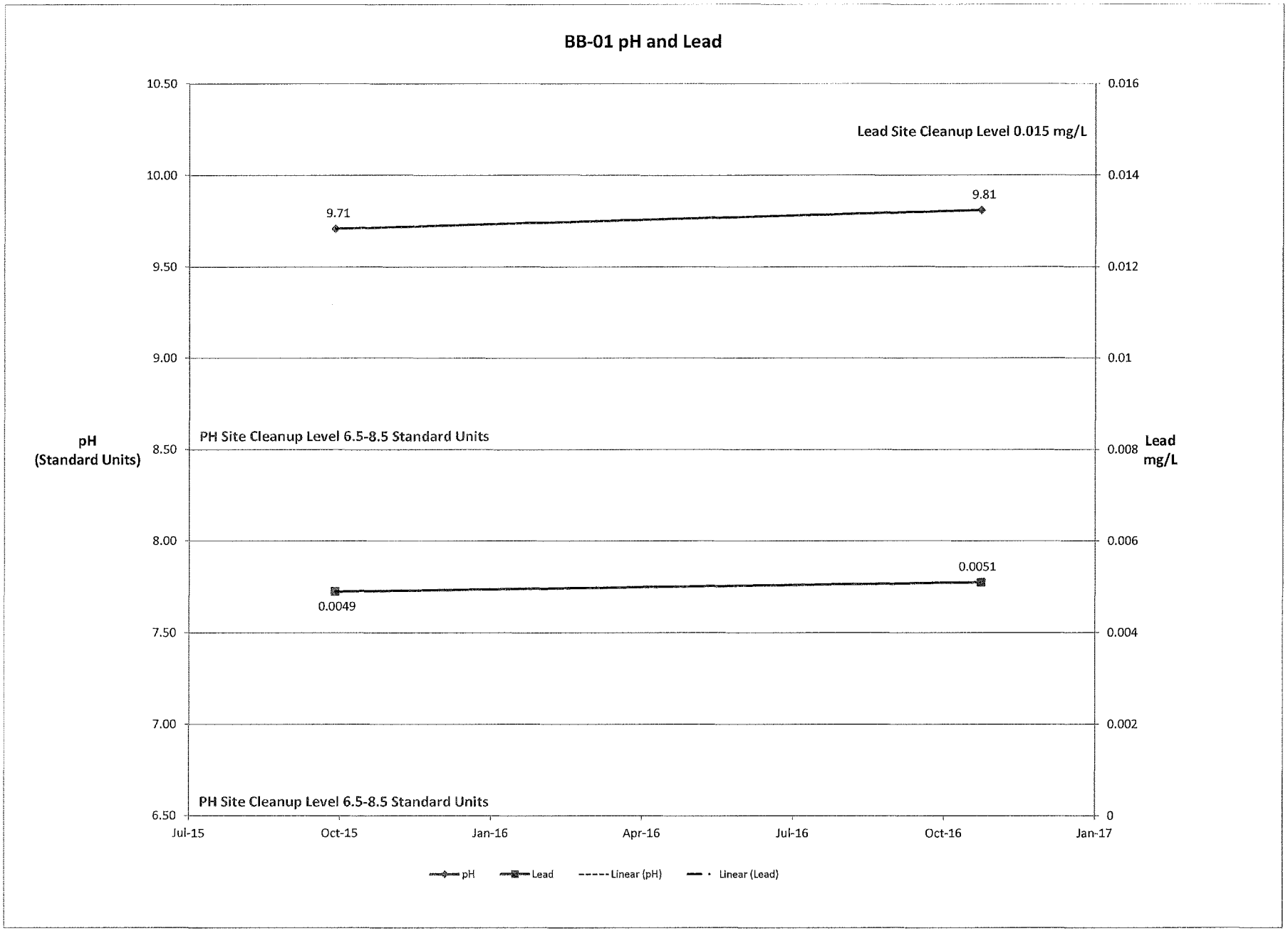

BA-05A pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.018
0.015
0.012
0.009
0.006
0.003
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
7.25
6.86
PH Site Cleanup Level 6.5-8.5 Standard Units
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

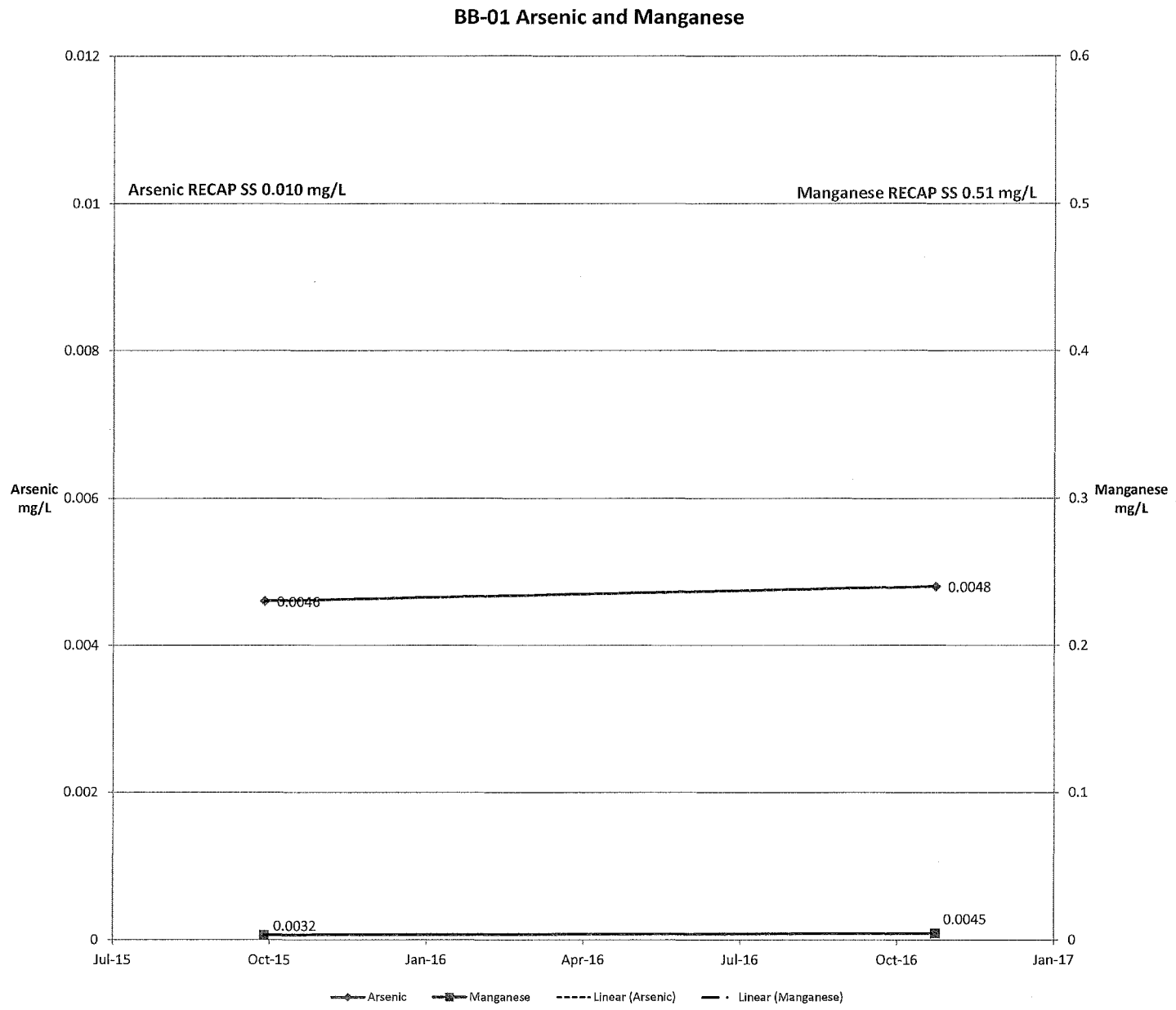

BA-05A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0018
0.002
0.0538
0.0646
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

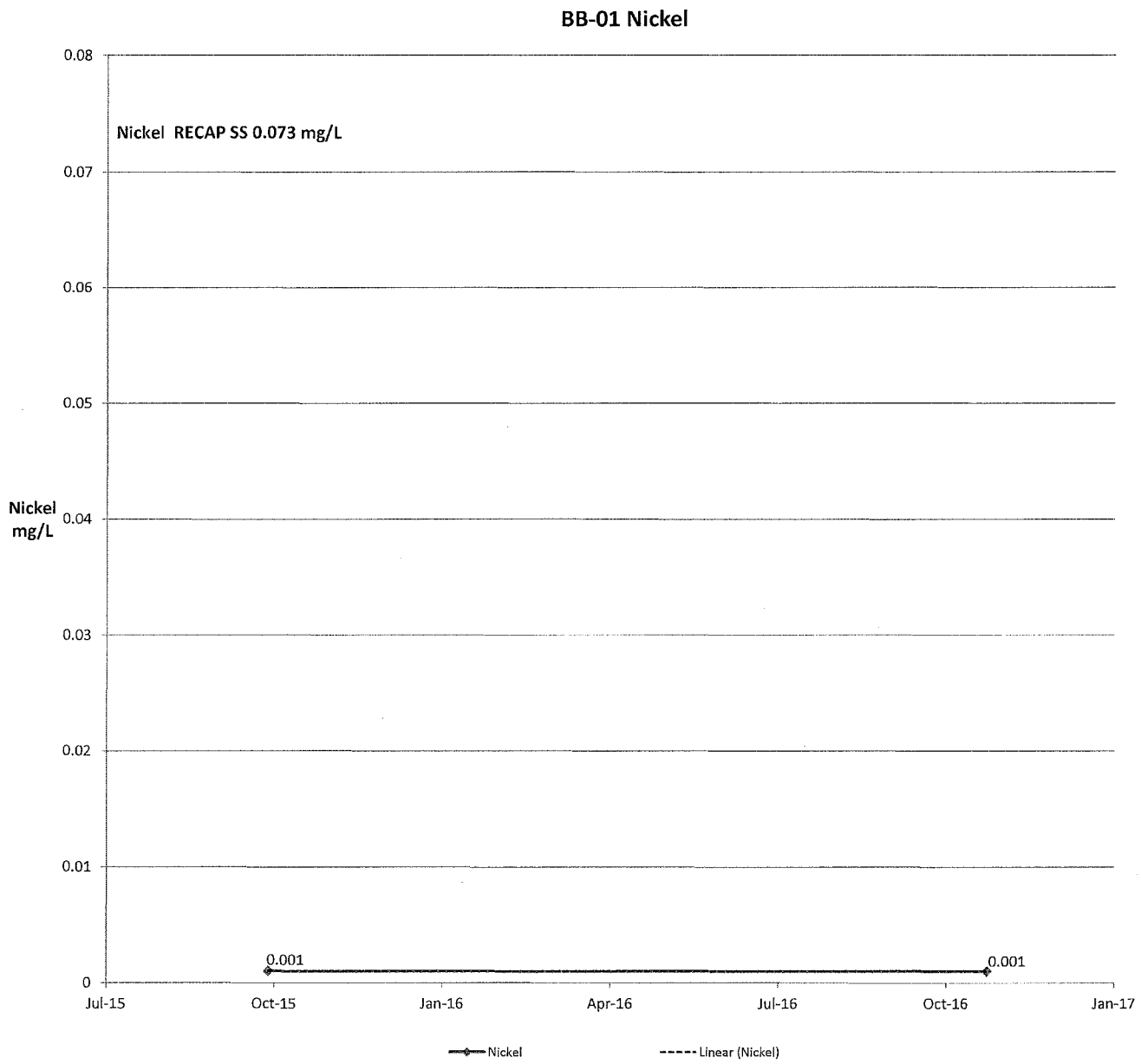

BA-05A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

BA-05A Cadmium and Zinc

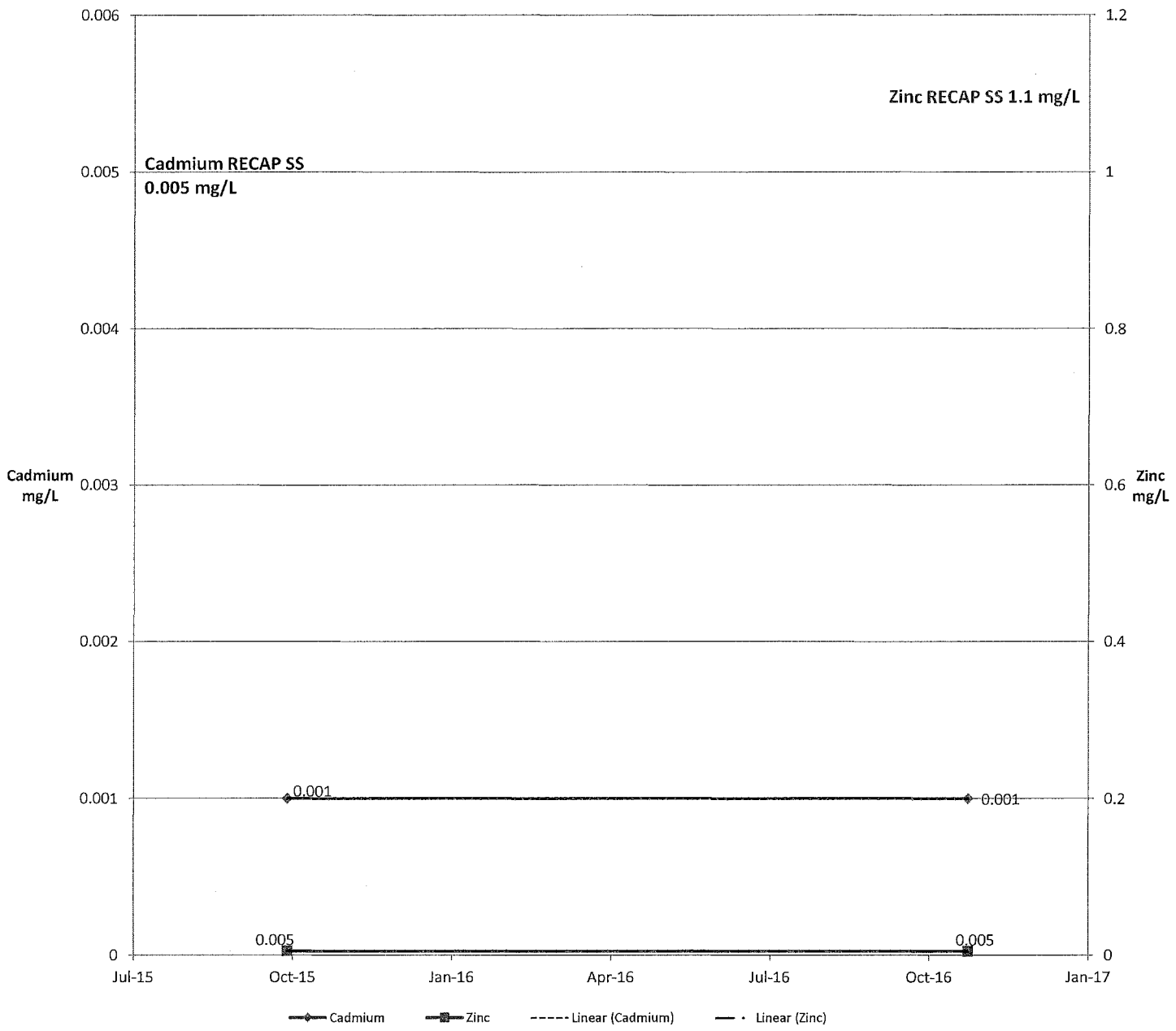


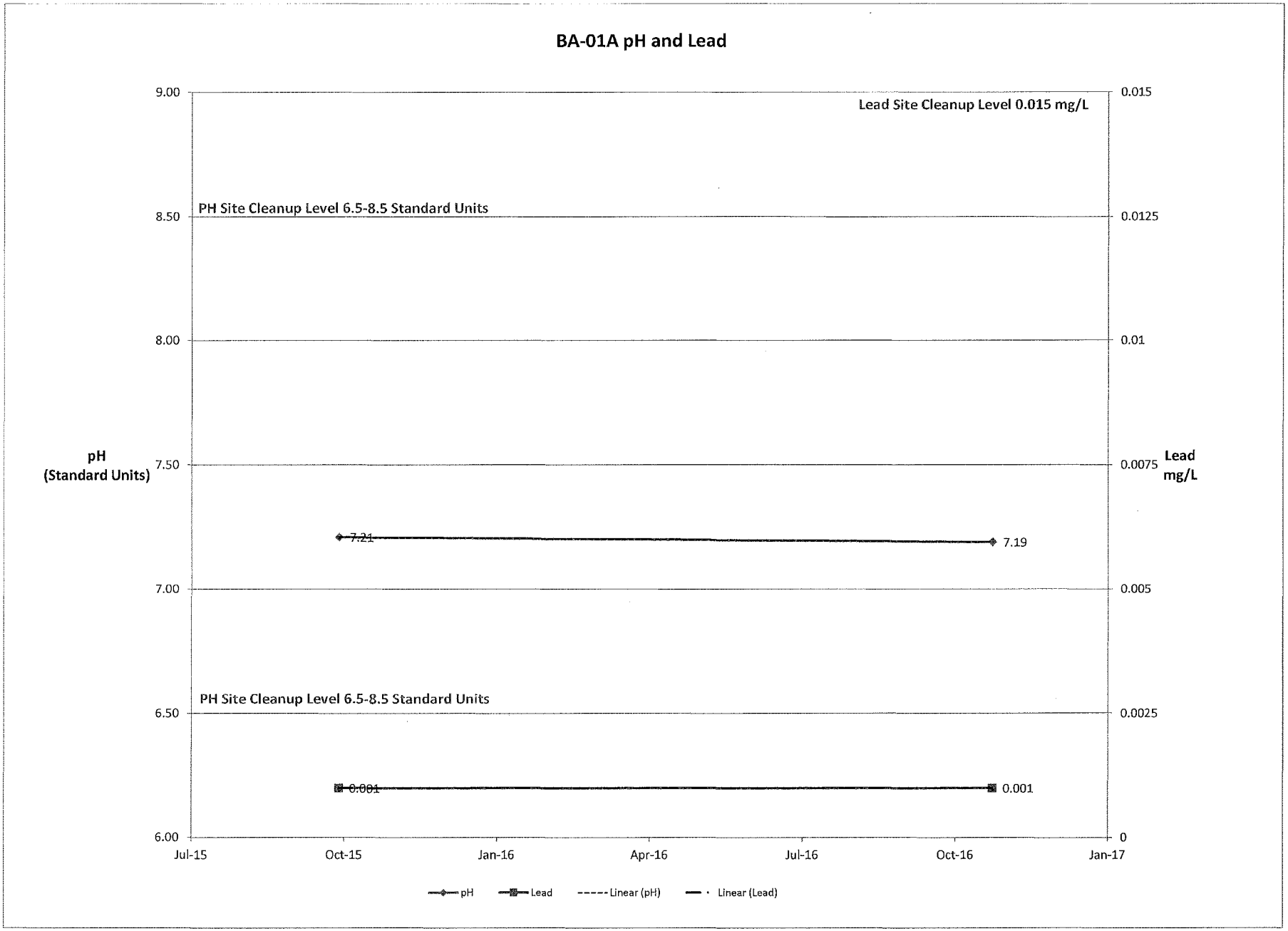

BB-01 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
9.71
9.81
0.0049
0.0051
pH
(Standard Units)
Lead
mg/L
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

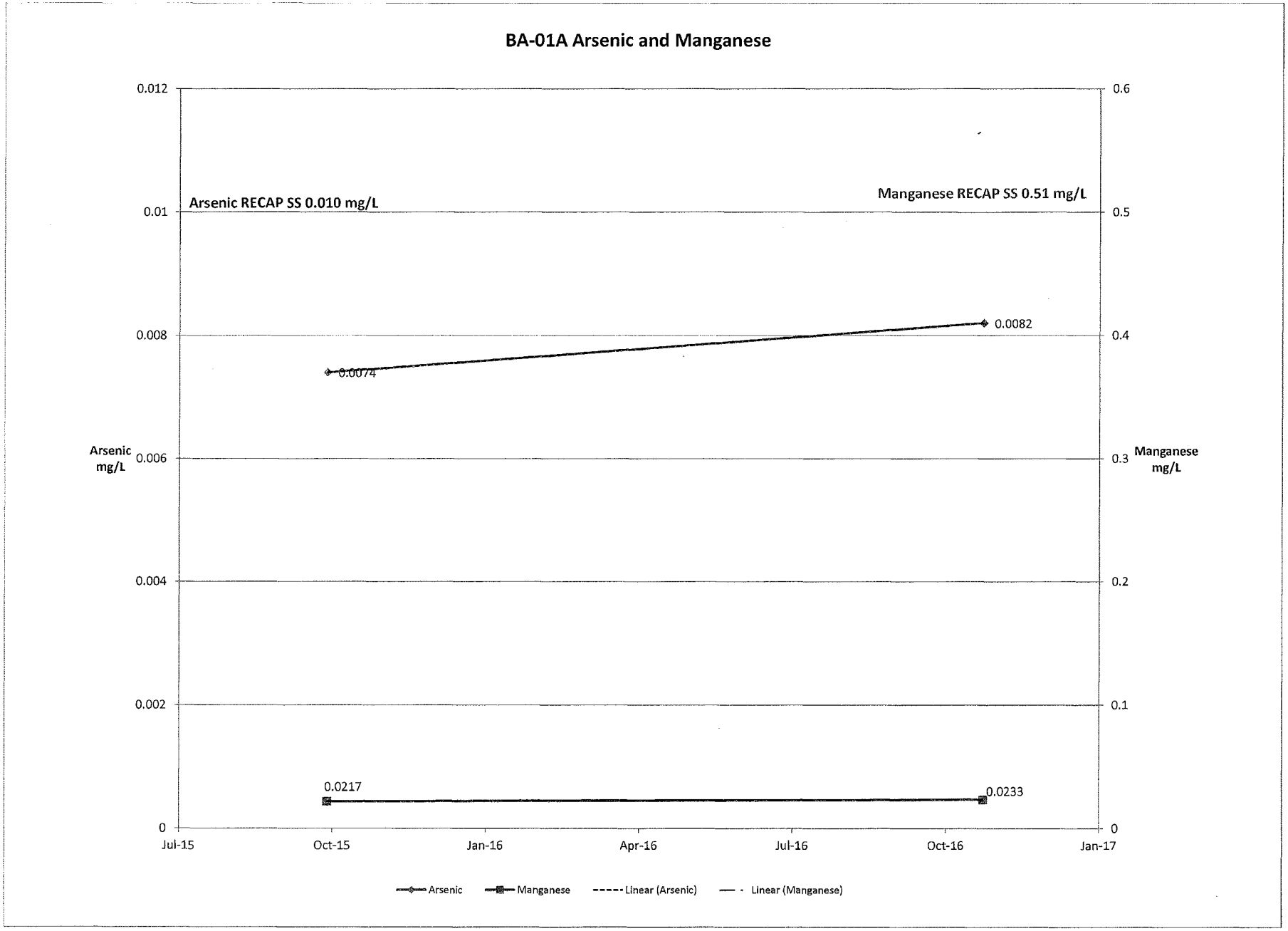

BB-01 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0046
0.0048
0.0032
0.0045
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

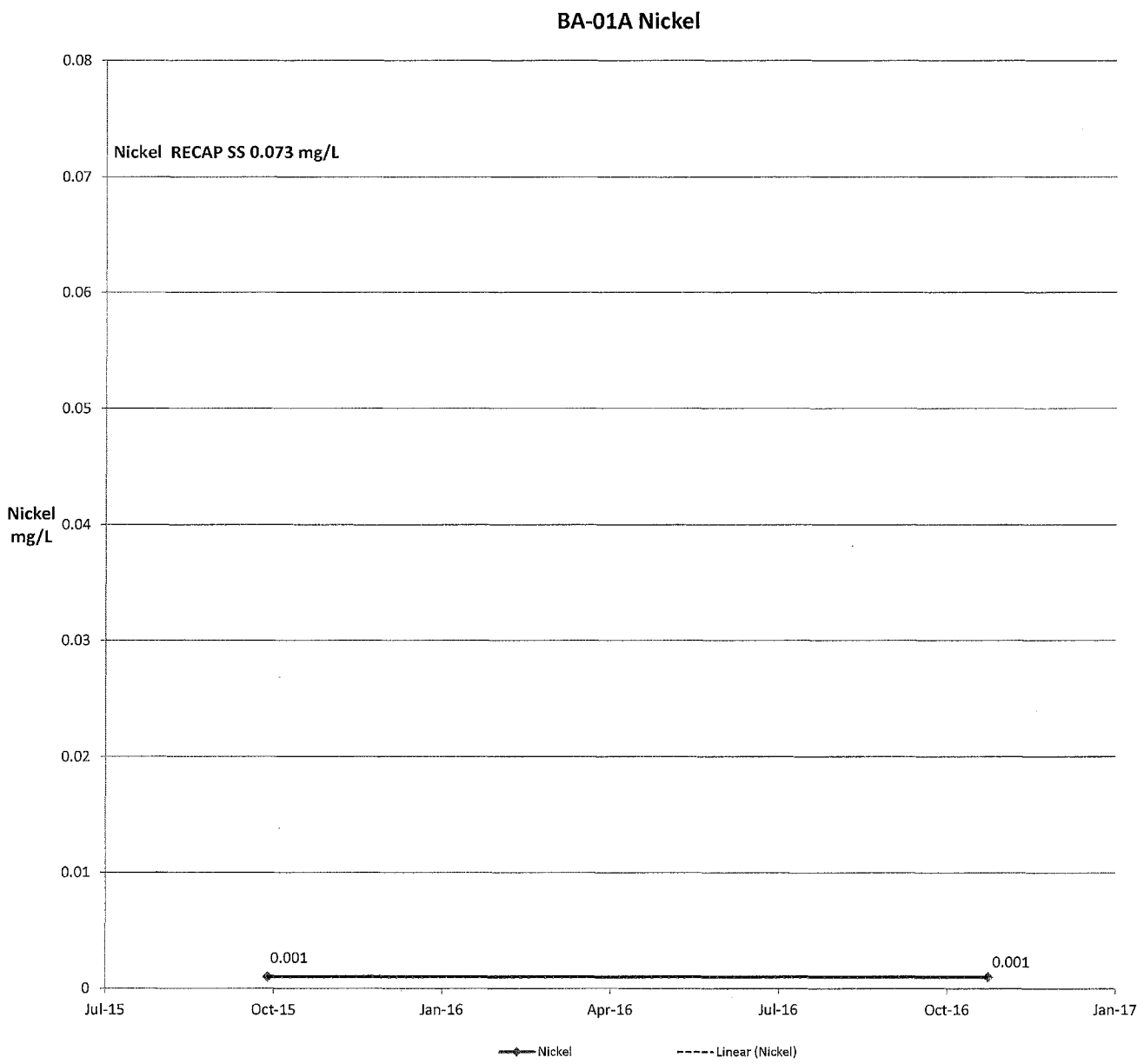

BB-01 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

BB-01 Cadmium and Zinc

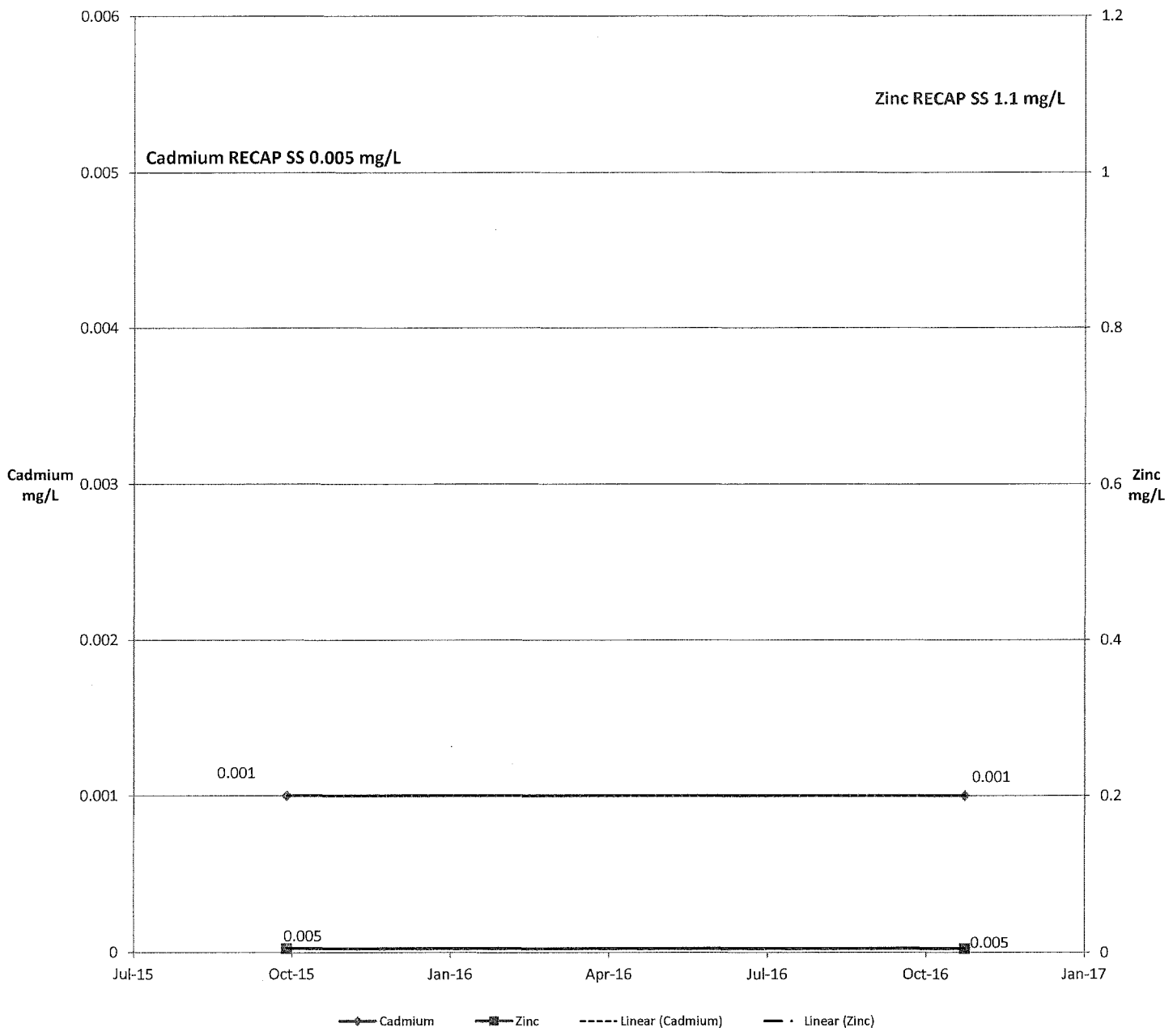



BA-01A pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
7.21
7.19
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)


BA-01A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.0074
0.0082
0.0217
0.0233
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

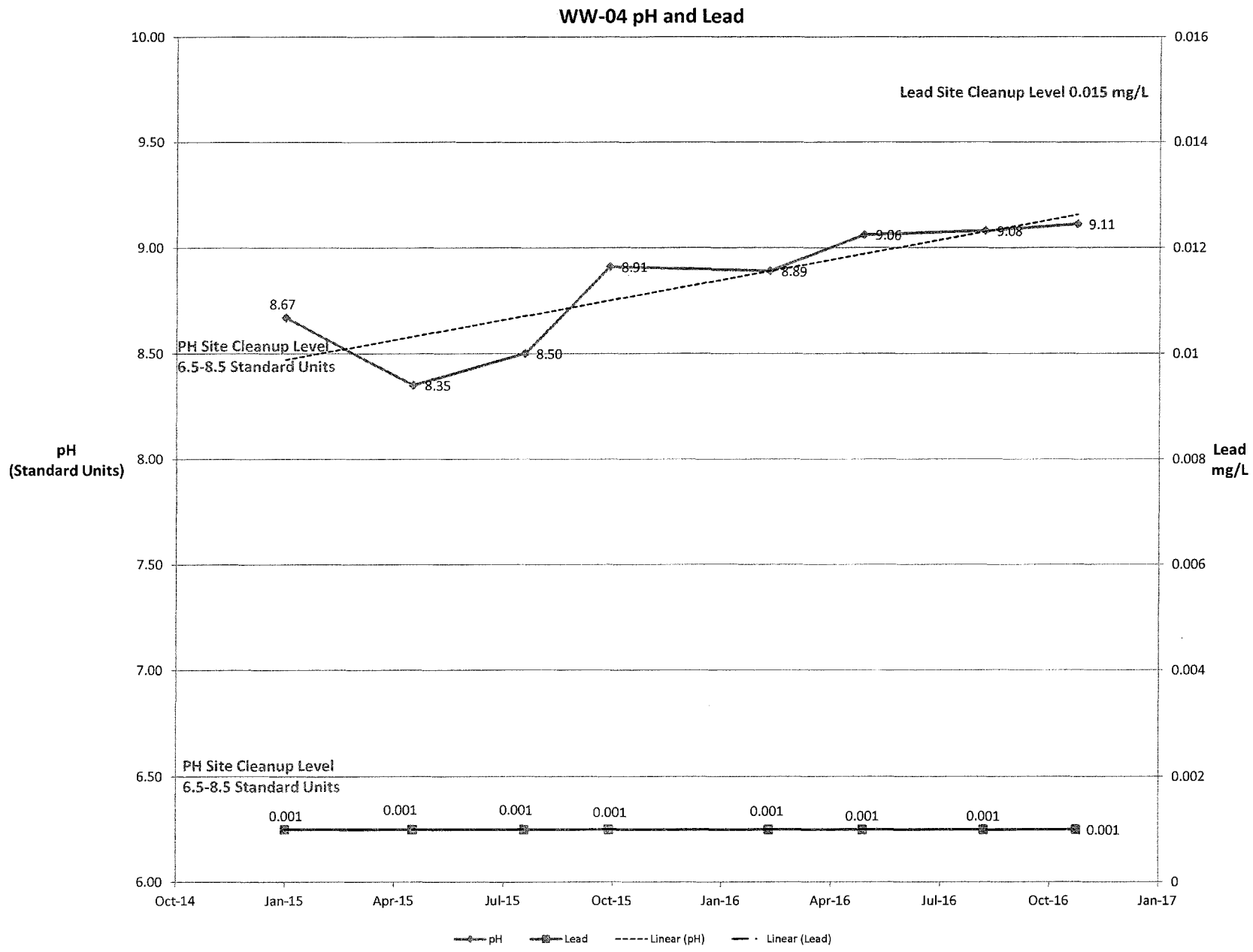

BA-01A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

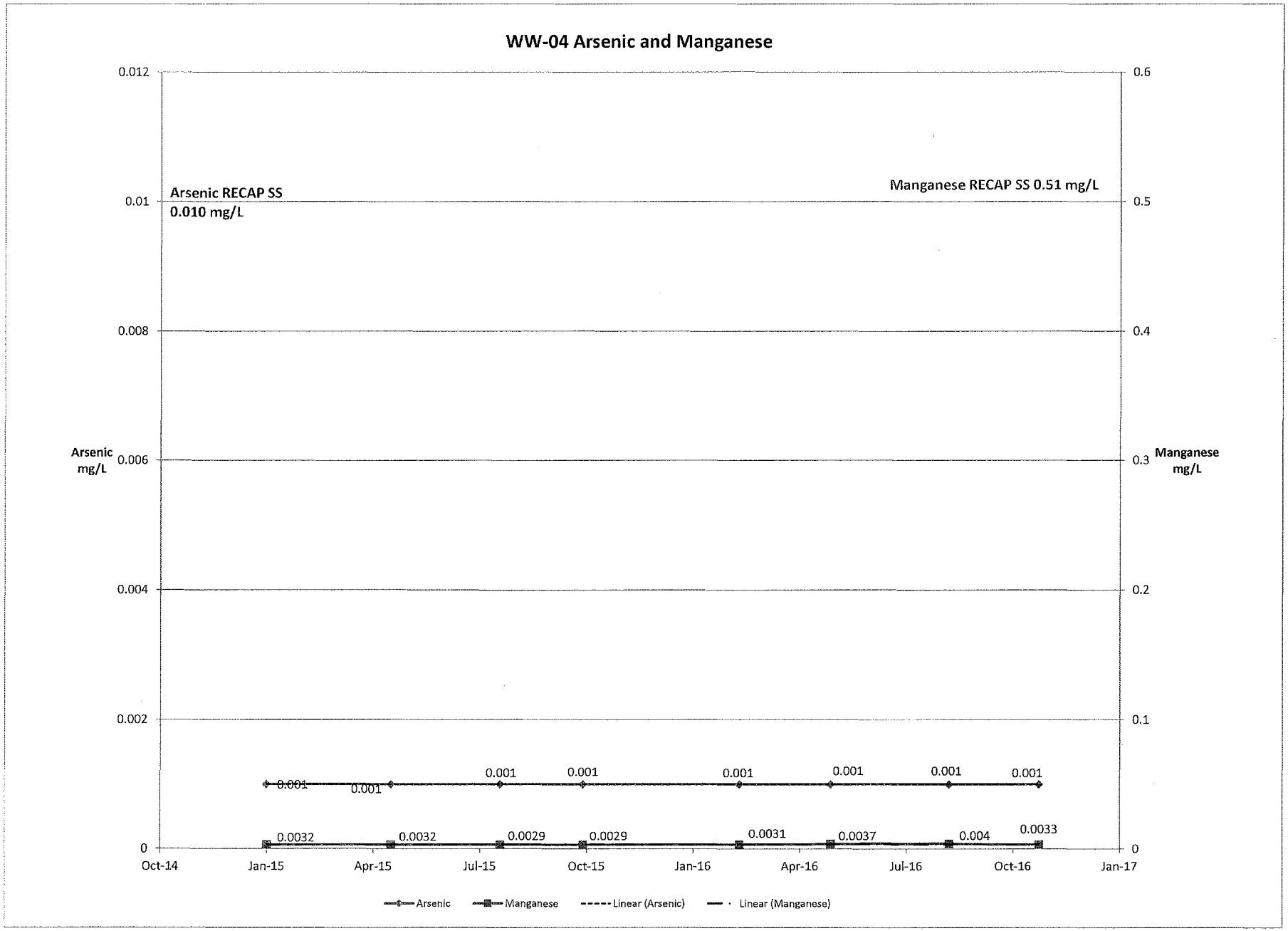
BA-01A Cadmium and Zinc

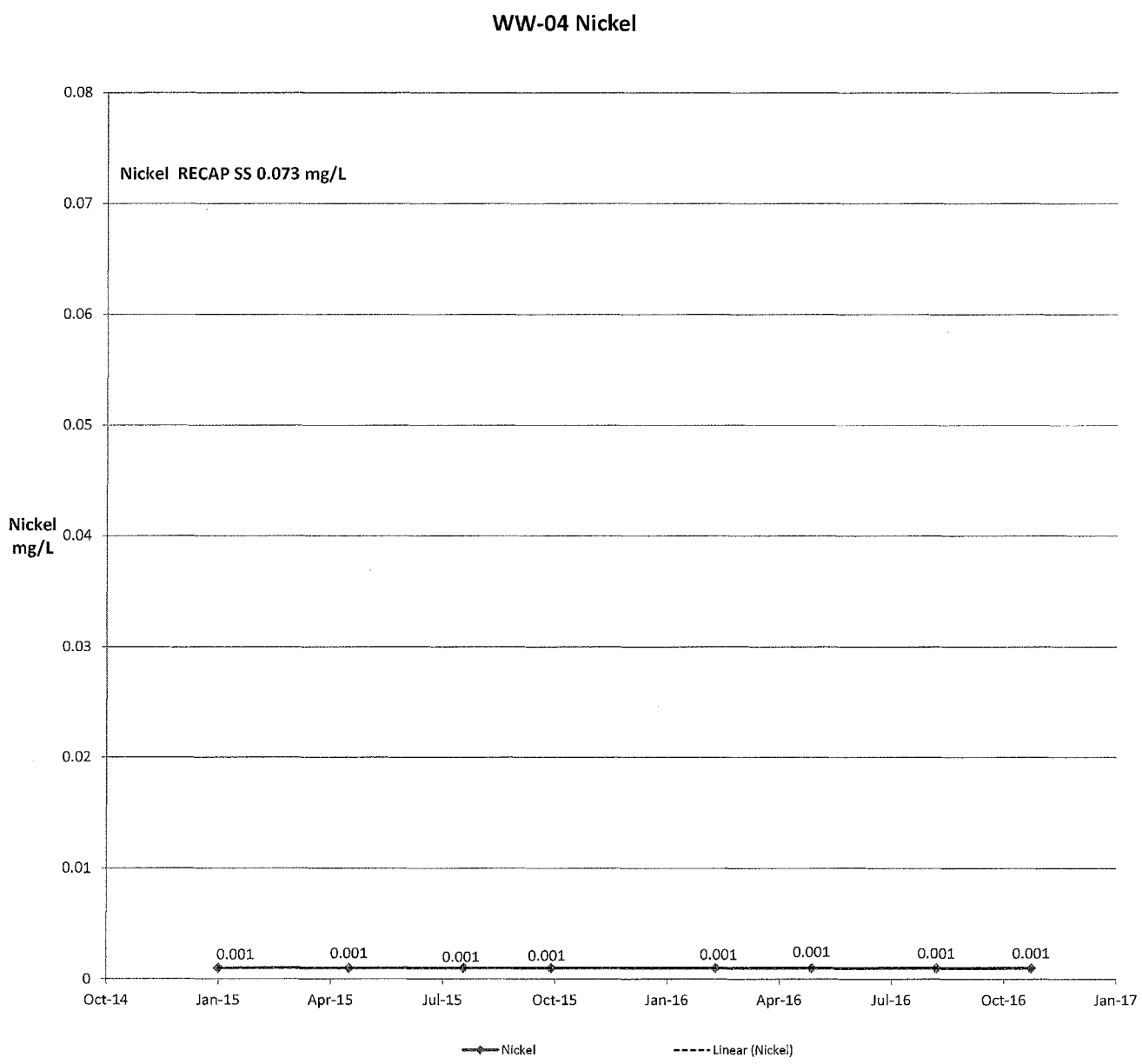


WATER WELLS

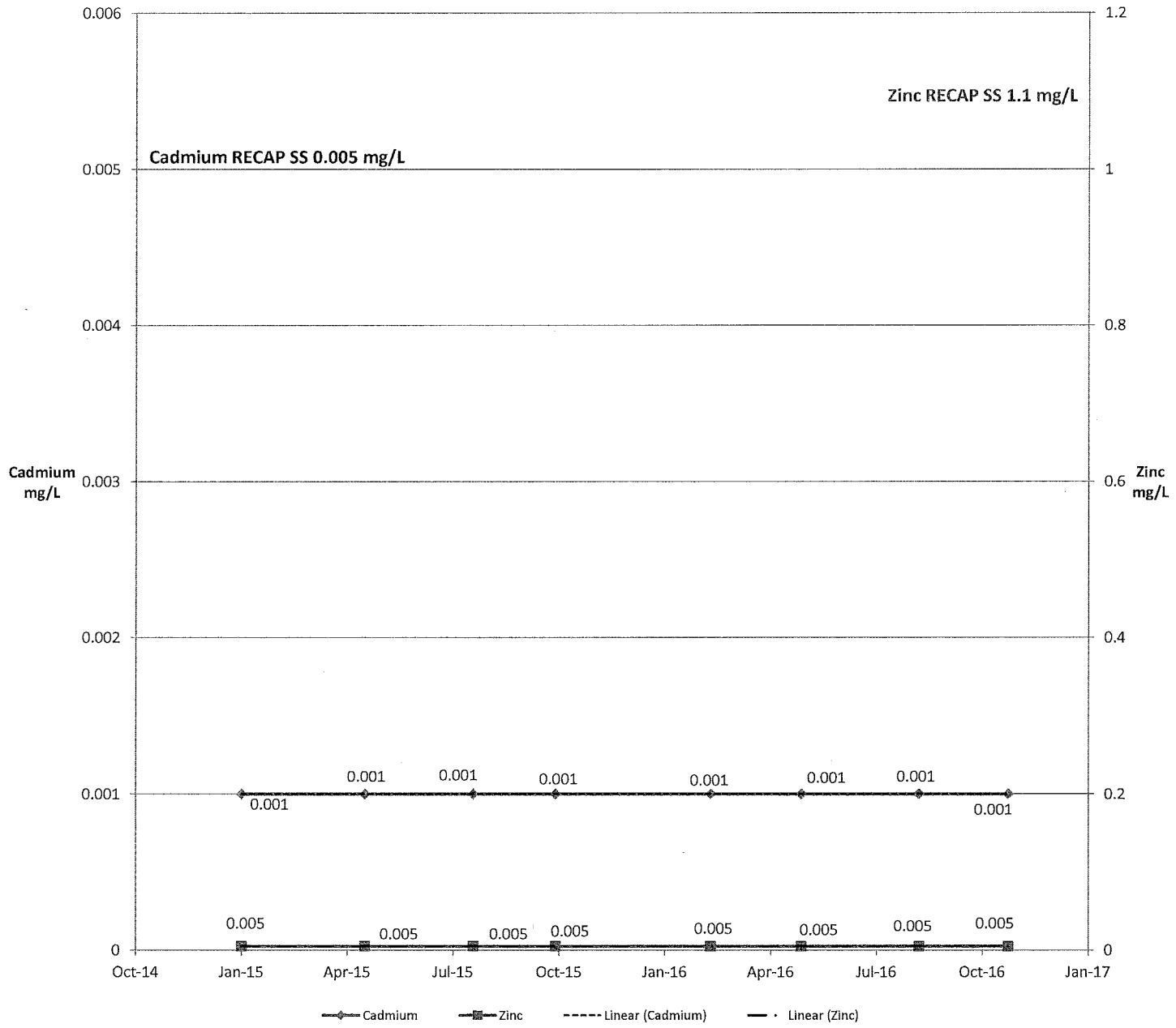
(PAST EIGHT QUARTERS)

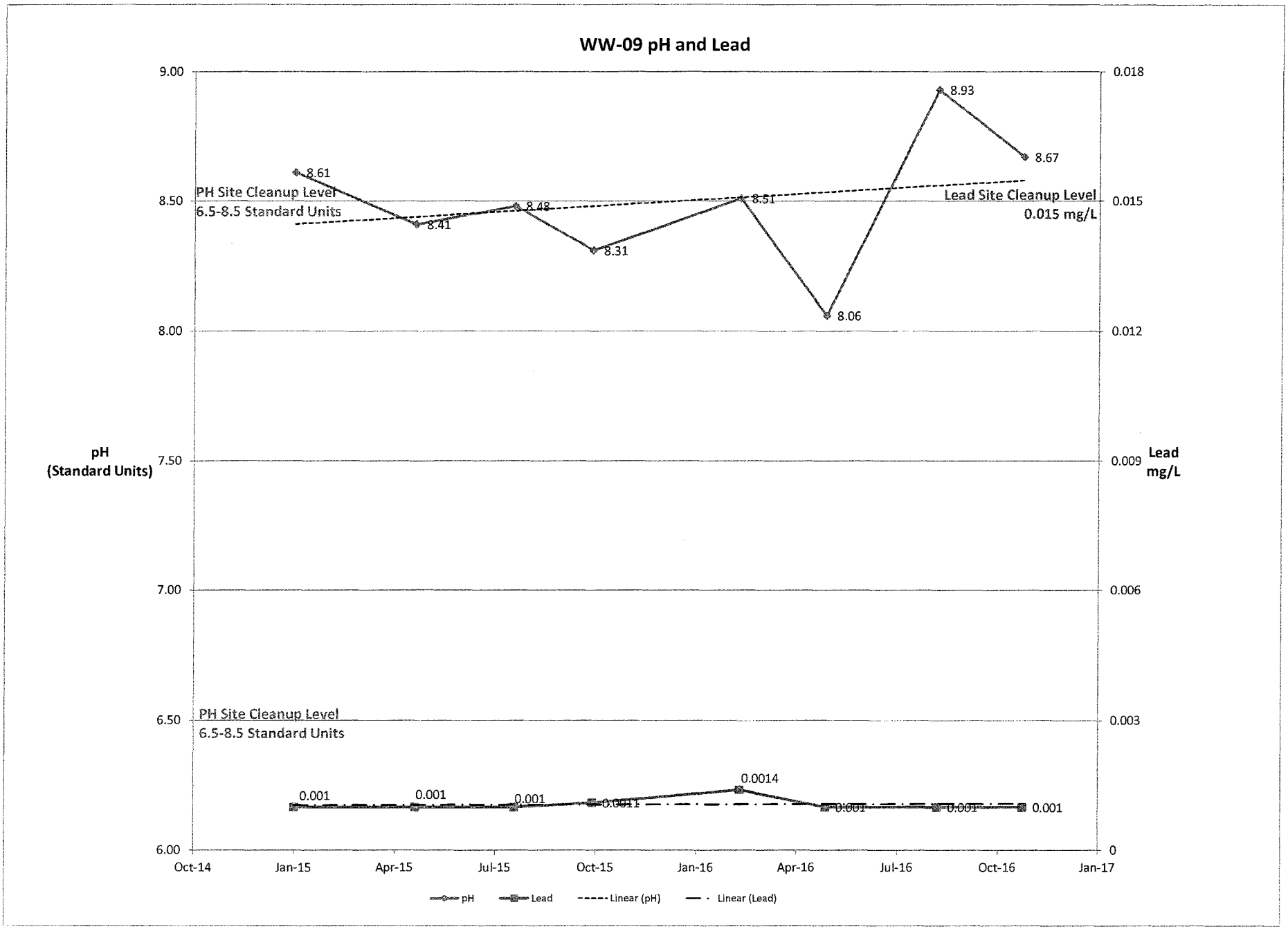

WW-04 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
8.67
8.35
8.50
8.91
8.89
9.06
9.08
9.11
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

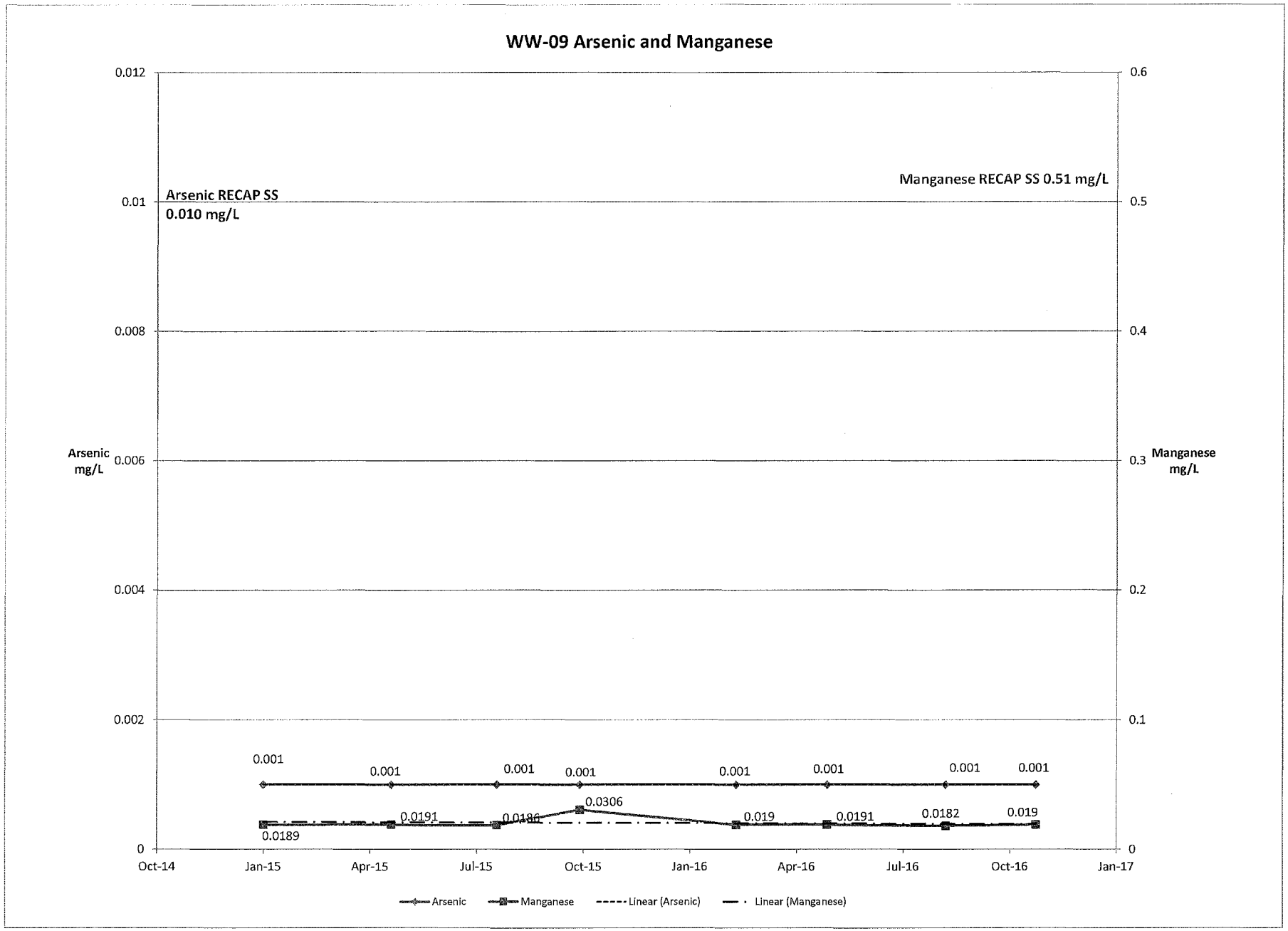

WW-04 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0032
0.0032
0.0029
0.0029
0.0031
0.0037
0.004
0.0033
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

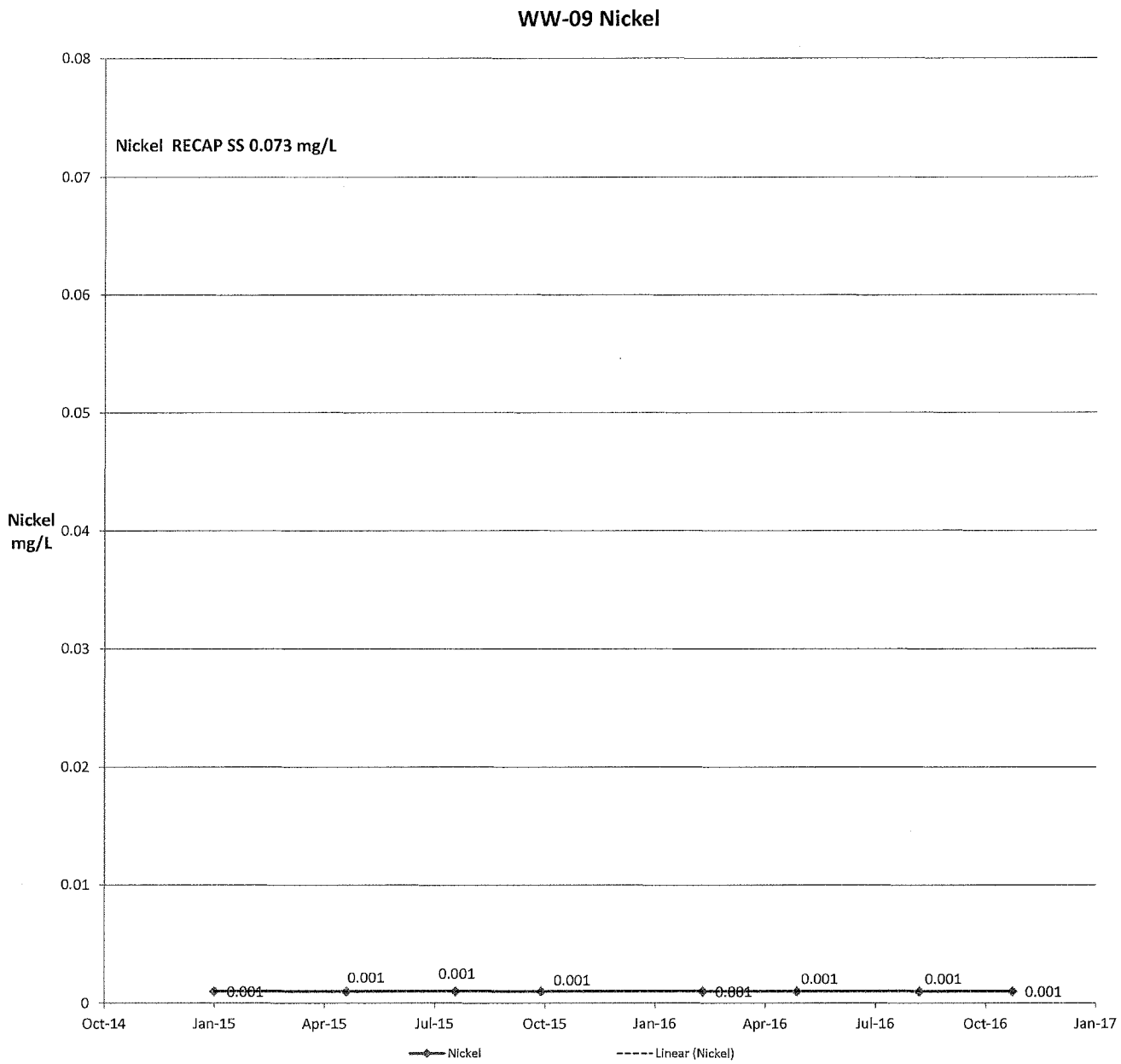

WW-04 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

WW-04 Cadmium and Zinc

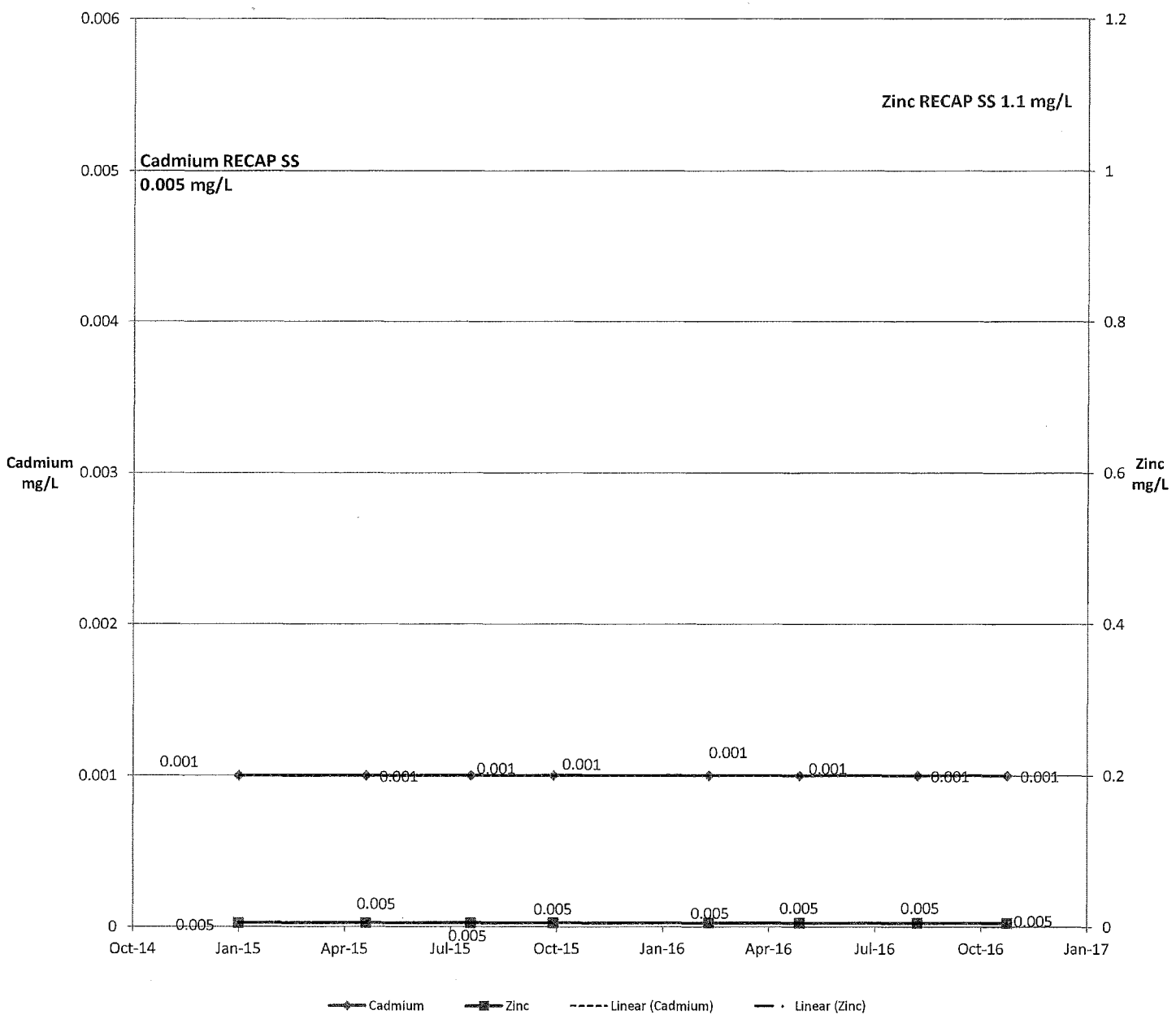


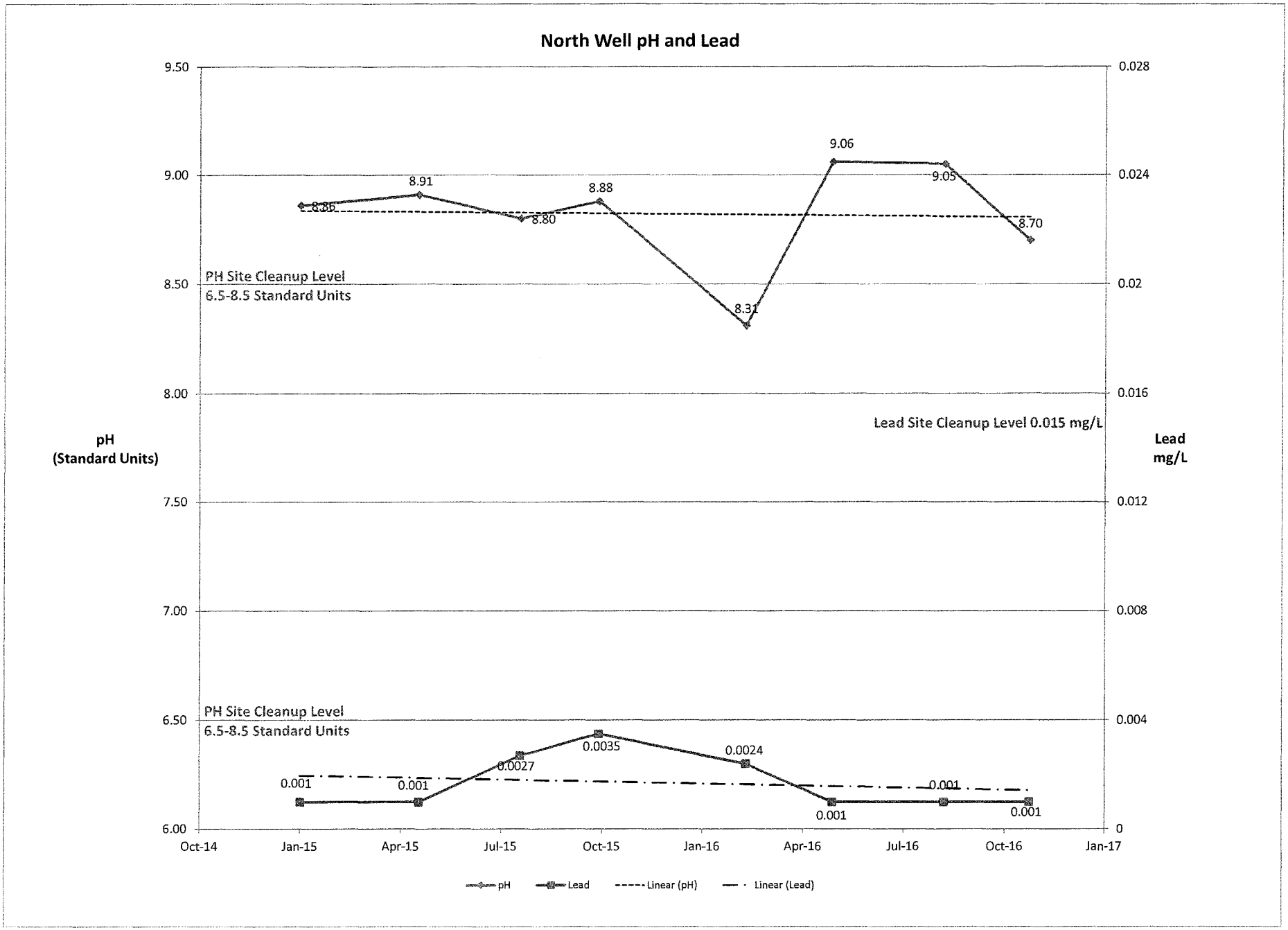

WW-09 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
8.61
8.41
8.48
8.31
8.51
8.06
8.93
8.67
0.001
0.001
0.001
0.0011
0.0014
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

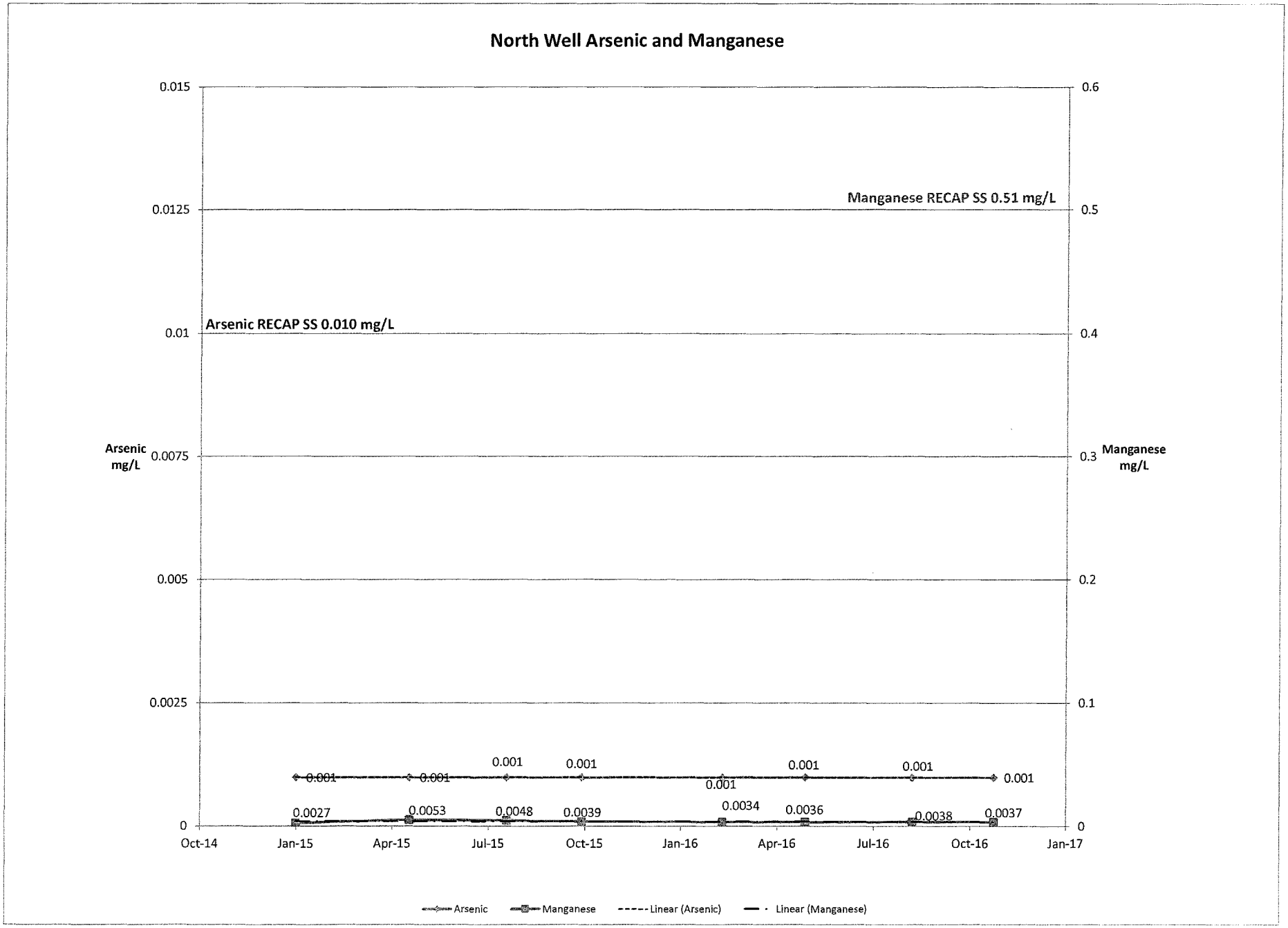

WW-09 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0189
0.0191
0.0186
0.0306
0.019
0.0191
0.0182
0.019
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

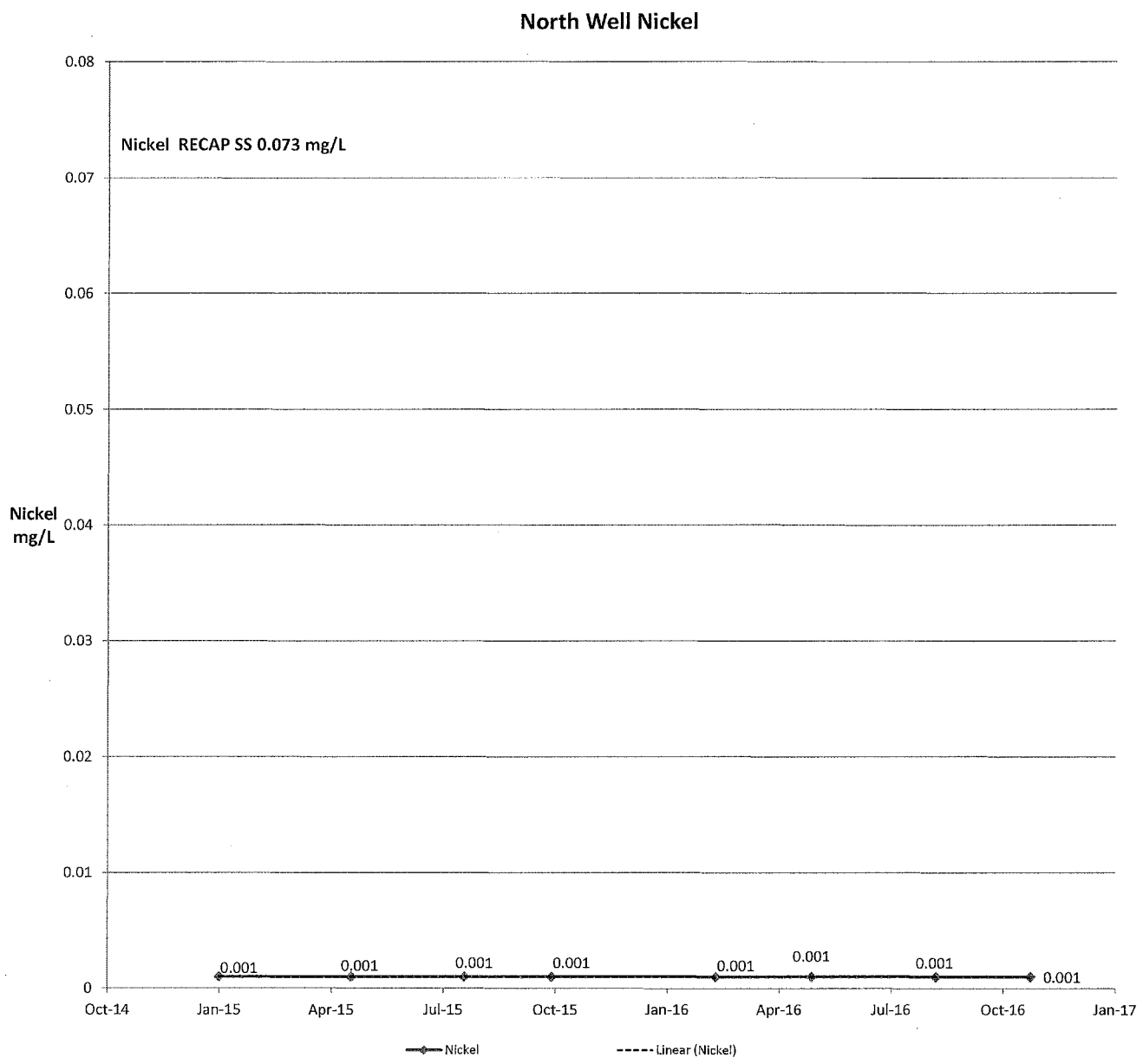

WW-09 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

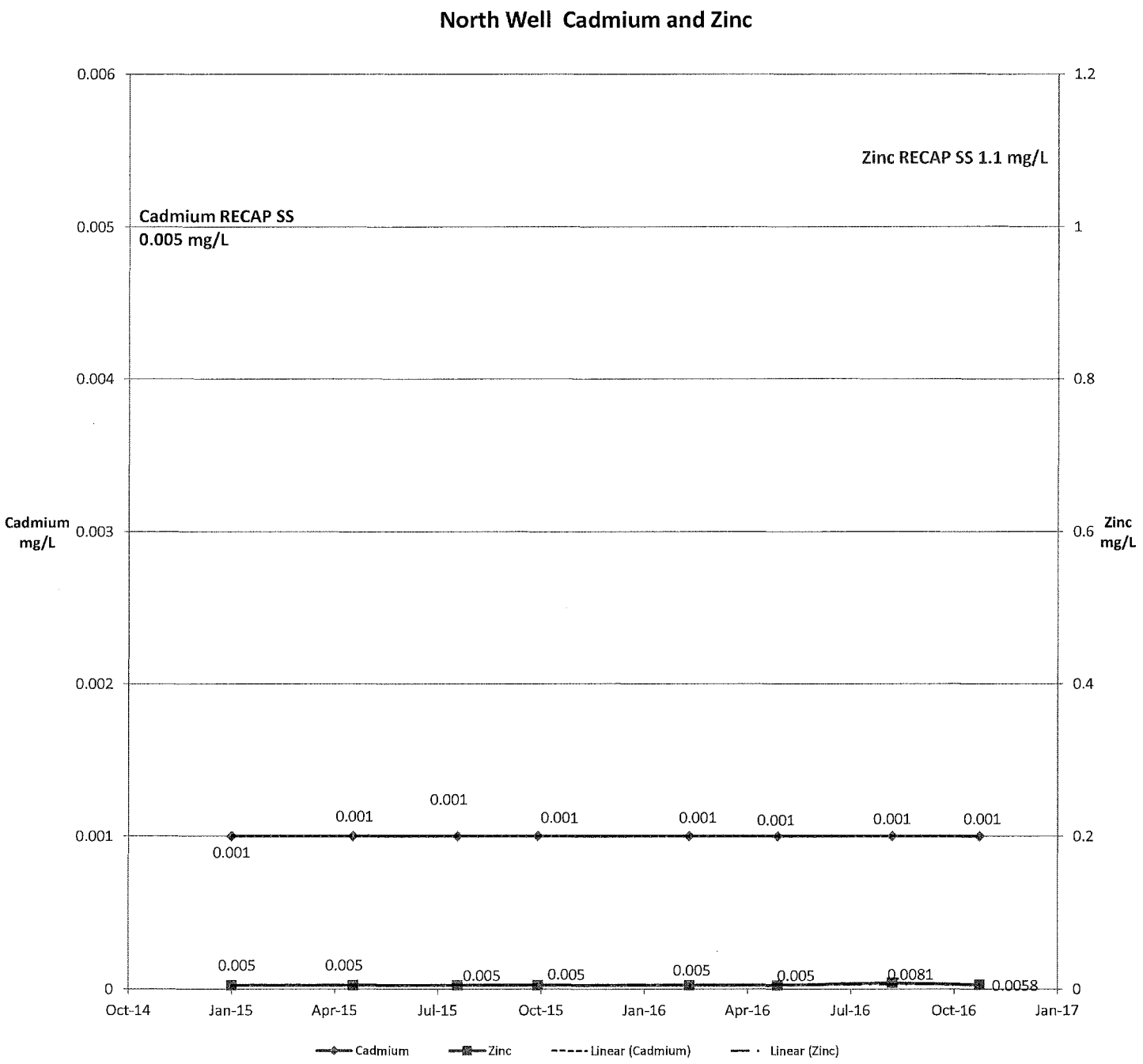
WW-09 Cadmium and Zinc

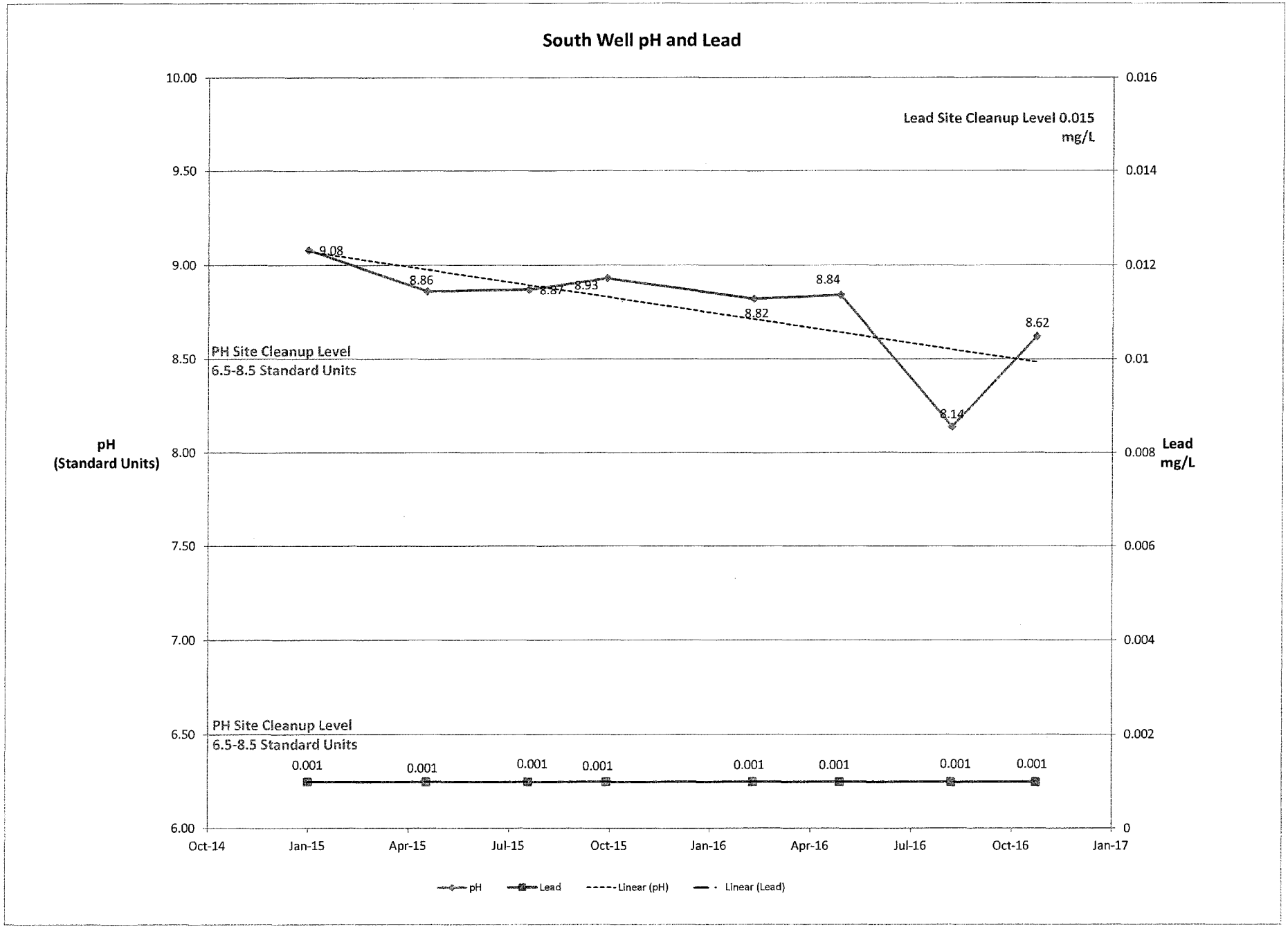


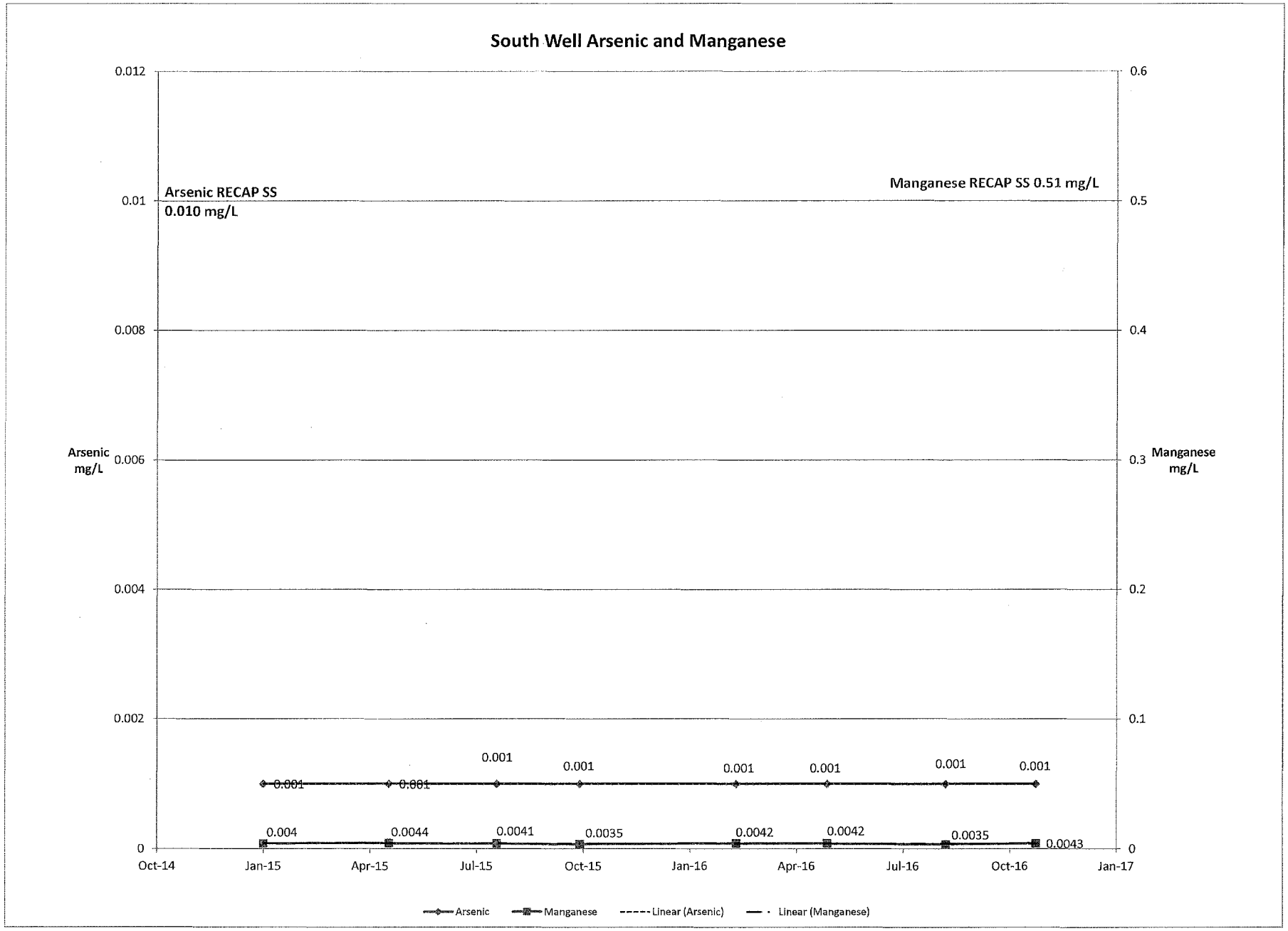

North Well pH and Lead
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.028
0.024
0.02
0.016
0.012
0.008
0.004
0
Lead
mg/L
8.86
8.91
8.80
8.88
8.31
9.06
9.05
8.70
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
0.001
0.001
0.0027
0.0035
0.0024
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

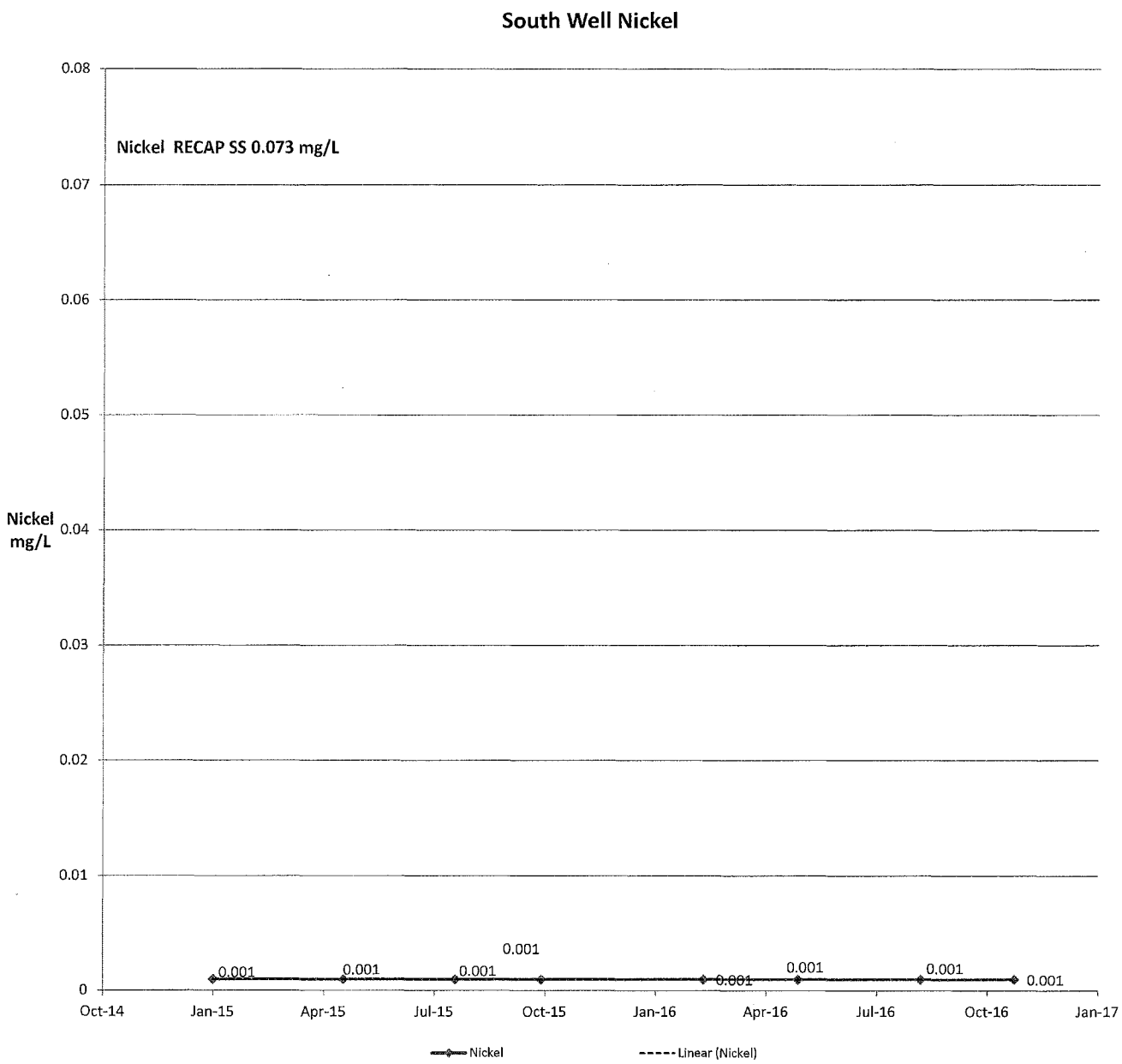

North Well Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
0.6
0.5
0.4
0.3
0.2
0.1
0
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0027
0.0053
0.0048
0.0039
0.0034
0.0036
0.0038
0.0037
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

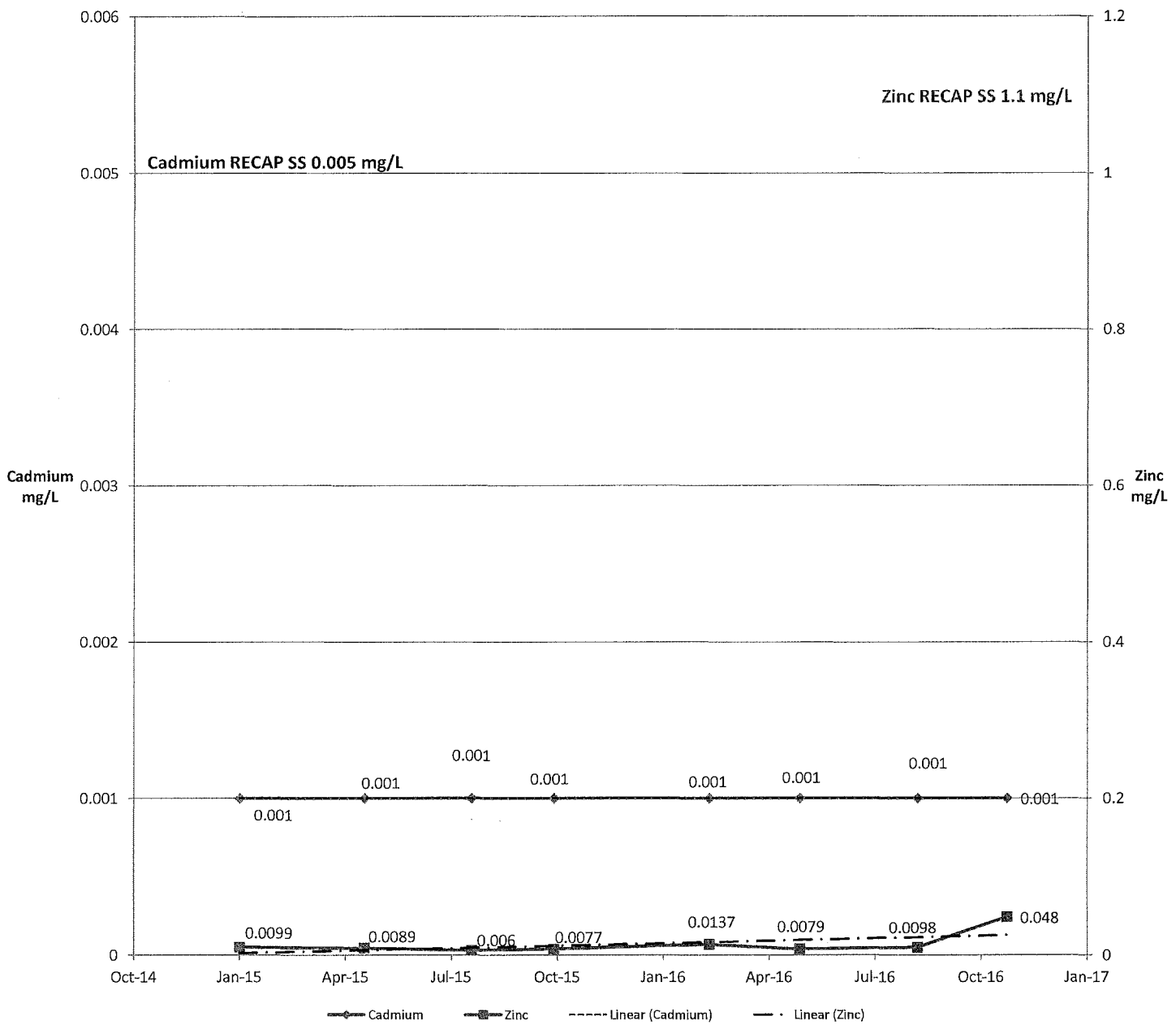

North Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

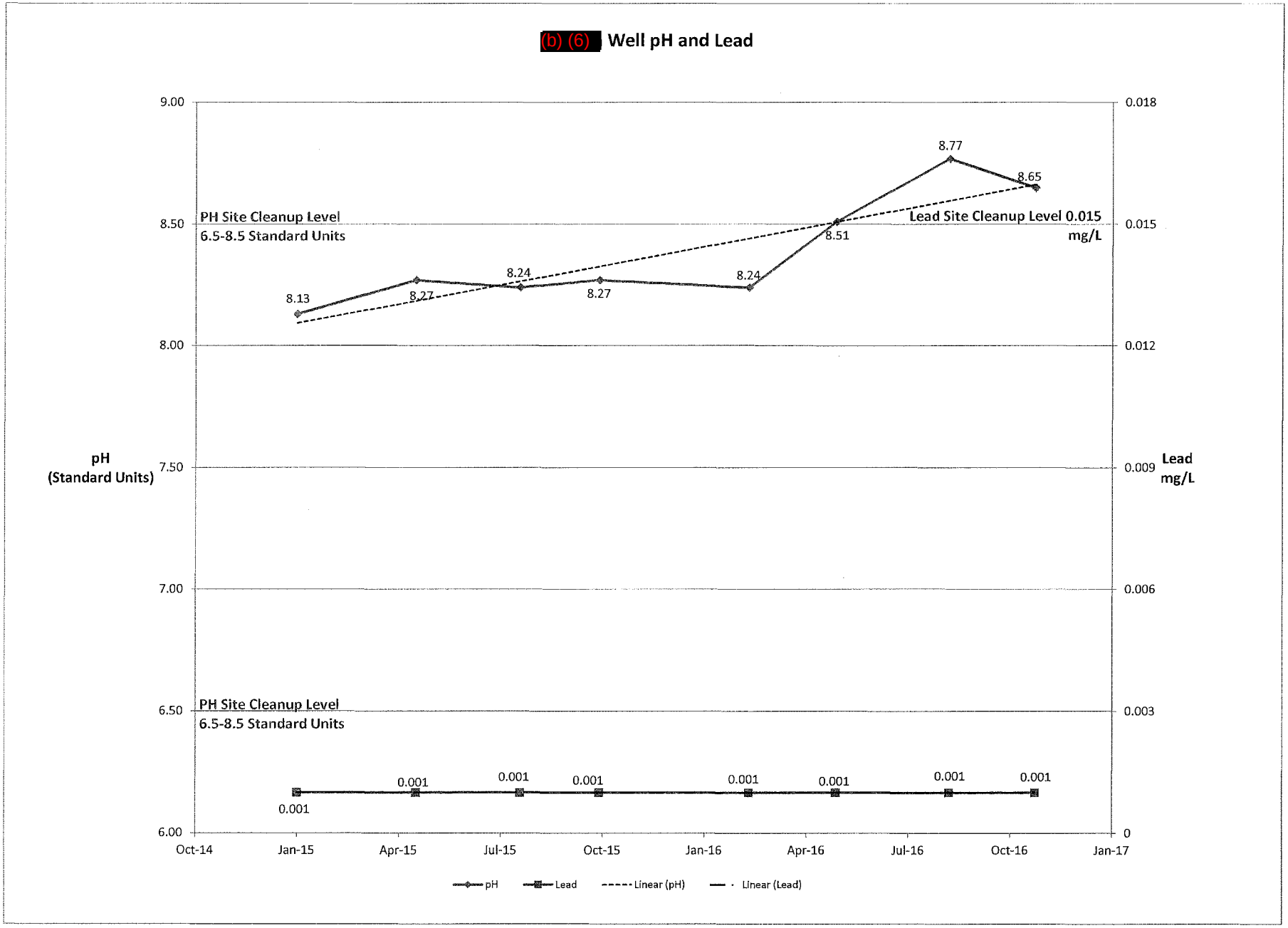

North Well Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.005
0.005
0.005
0.005
0.005
0.005
0.0081
0.0058
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

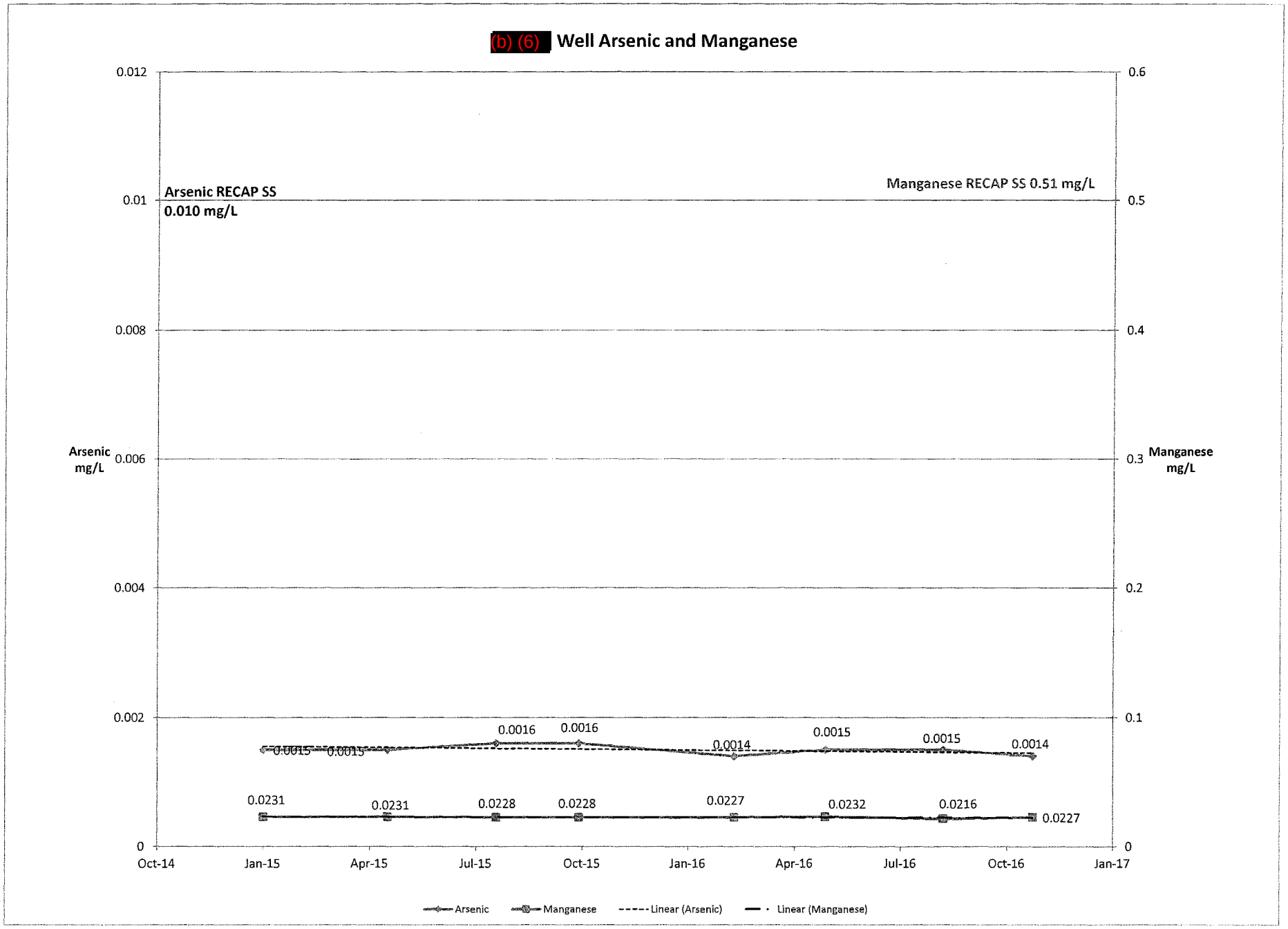

South Well pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH (Standard Units)
Lead mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
9.08
8.86
8.87
8.93
8.82
8.84
8.14
8.62
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)

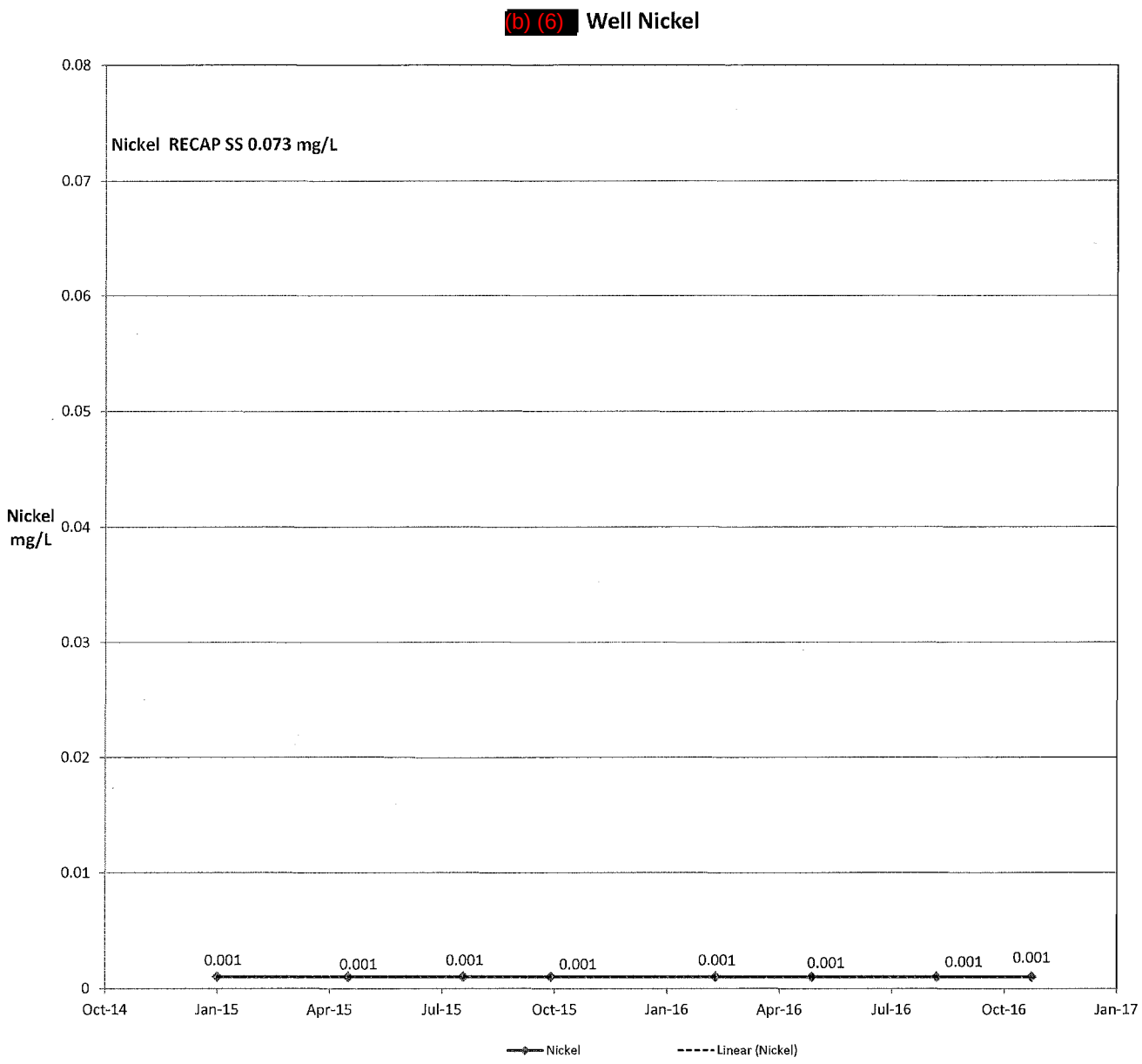

South Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.004
0.0044
0.0041
0.0035
0.0042
0.0042
0.0035
0.0043
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


South Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

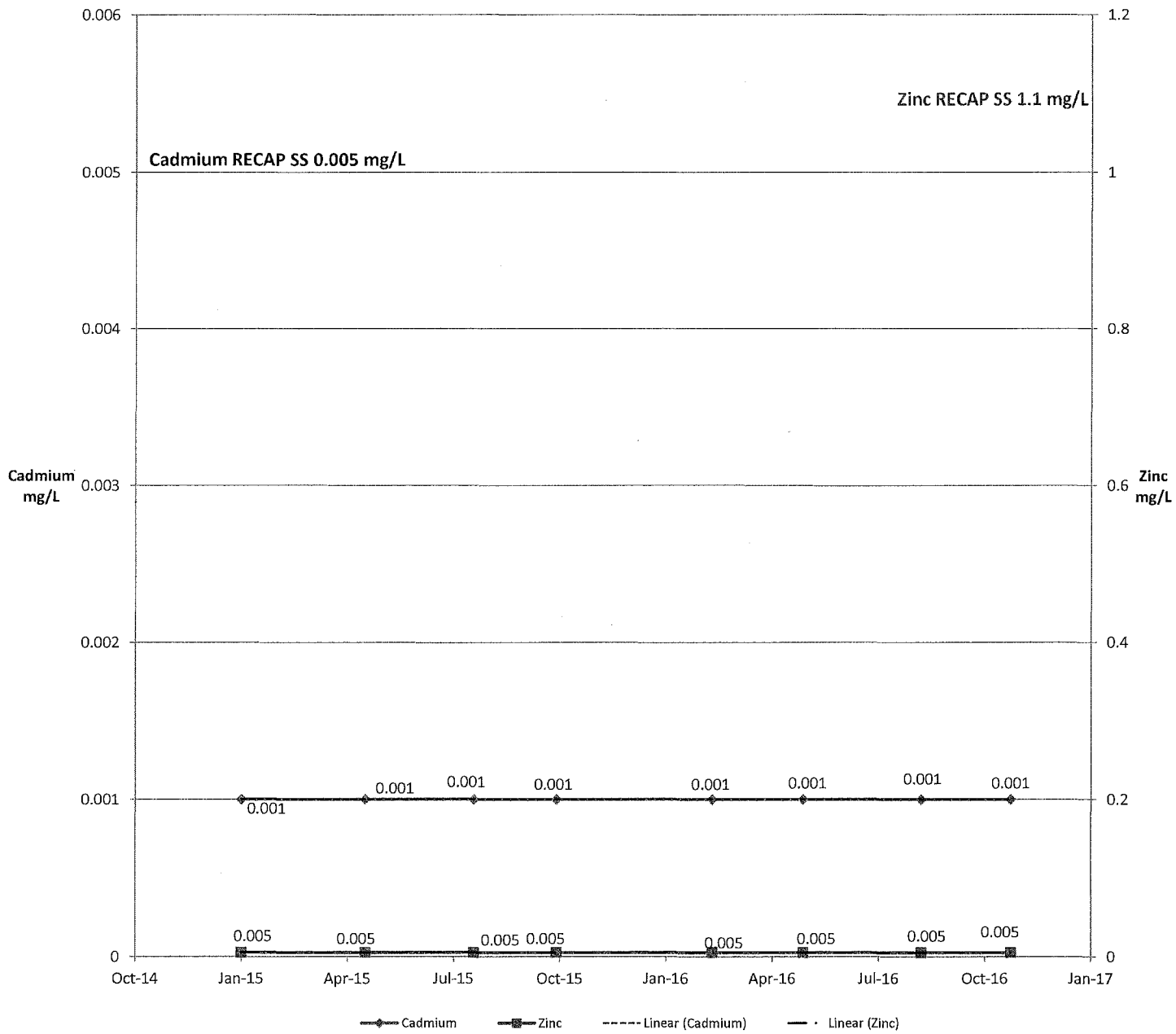

South Well Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0099
0.0089
0.006
0.0077
0.0137
0.0079
0.0098
0.048
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


(b) (6) Well pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015
mg/L
8.13
8.27
8.24
8.27
8.24
8.51
8.77
8.65
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
pH
Lead
Linear (pH)
Linear (Lead)


(b) (6) Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0015
0.0015
0.0016
0.0016
0.0014
0.0015
0.0015
0.0014
0.0231
0.0231
0.0228
0.0228
0.0227
0.0232
0.0216
0.0227
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


(b) (6) Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Oct-14
Jan-15
Apr-15
Jul-15
Oct-15
Jan-16
Apr-16
Jul-16
Oct-16
Jan-17
Nickel
Linear (Nickel)

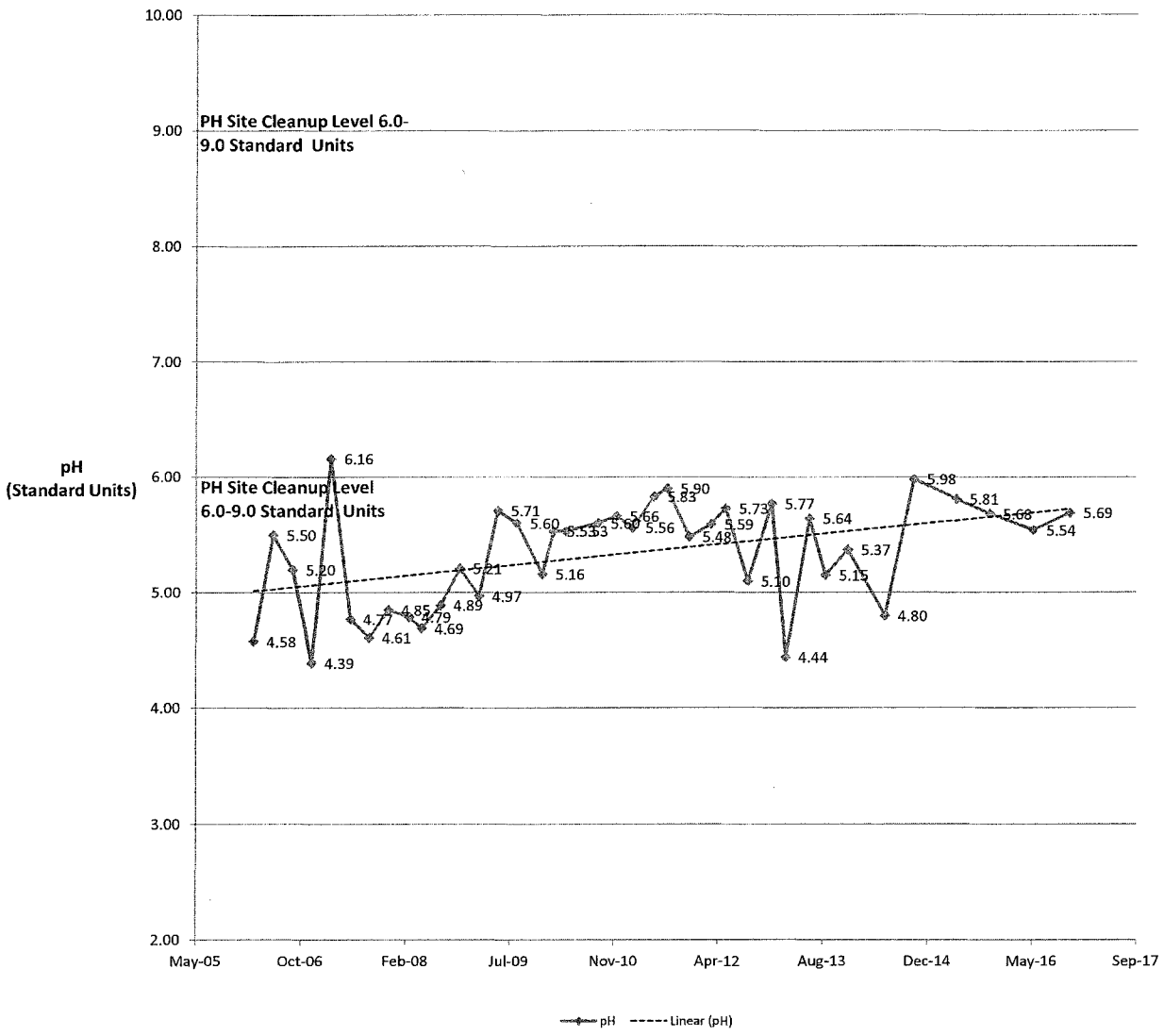
(b) (6) Well Cadmium and Zinc

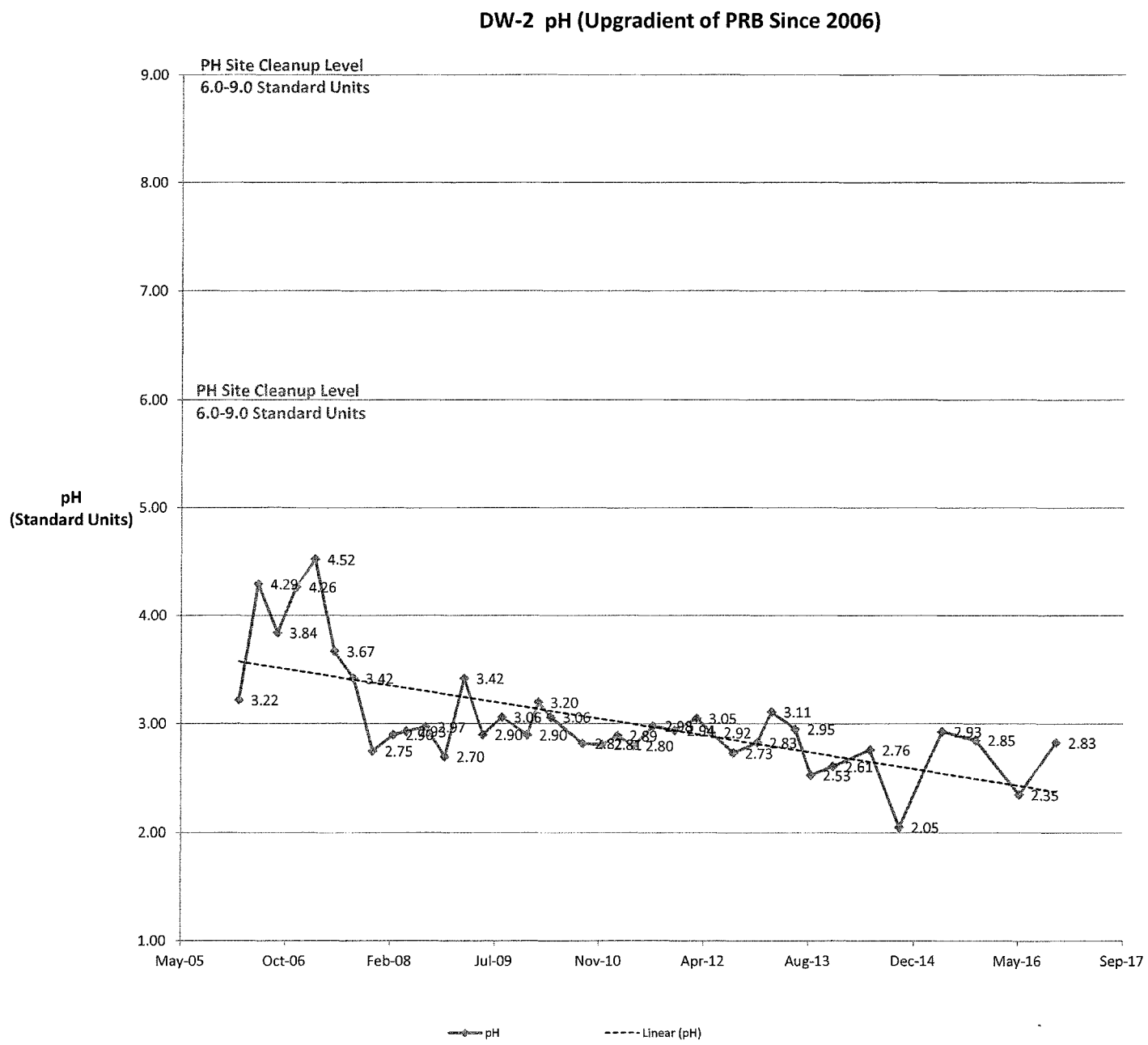


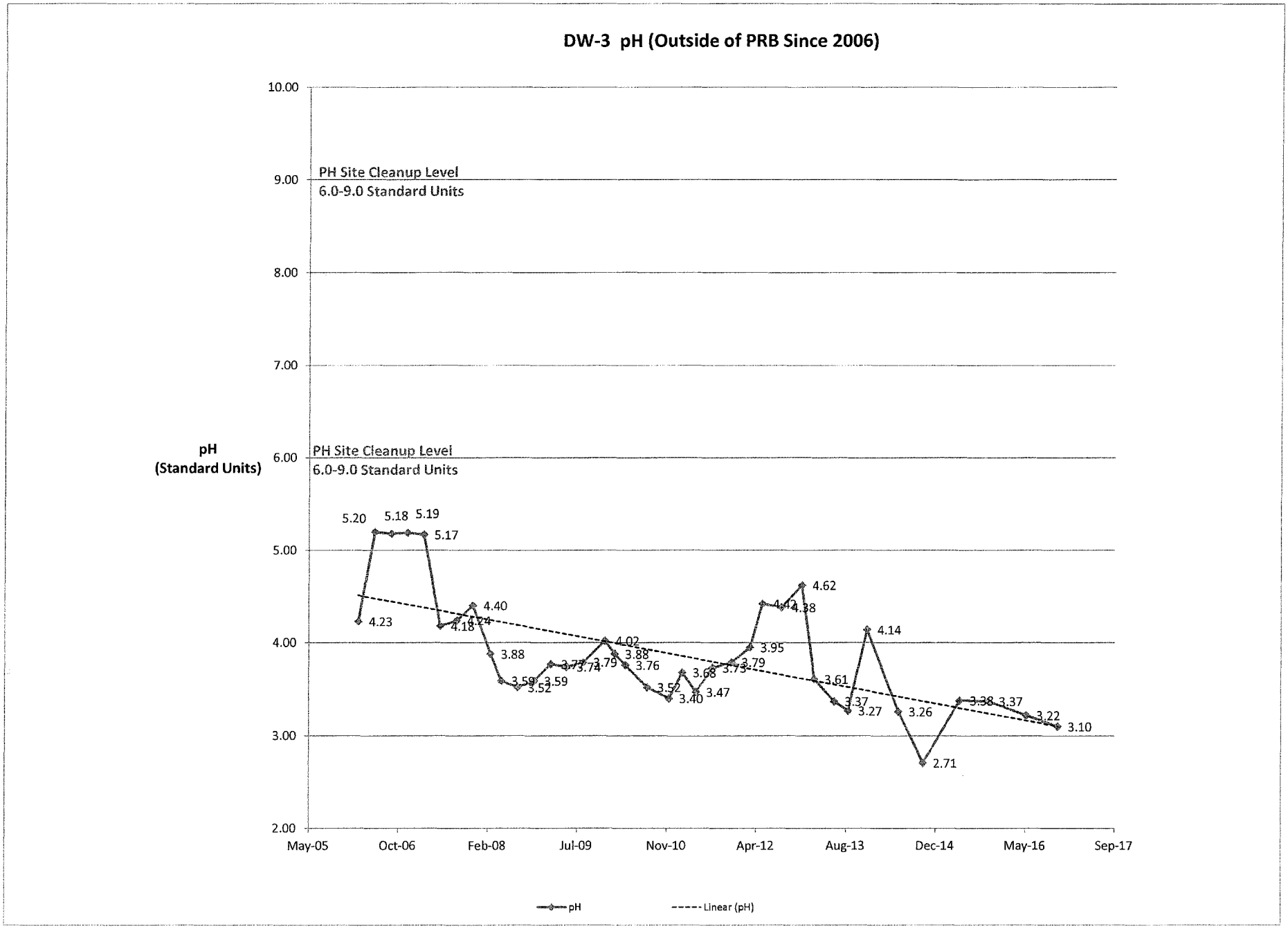
FIRST WATER BEARING ZONE

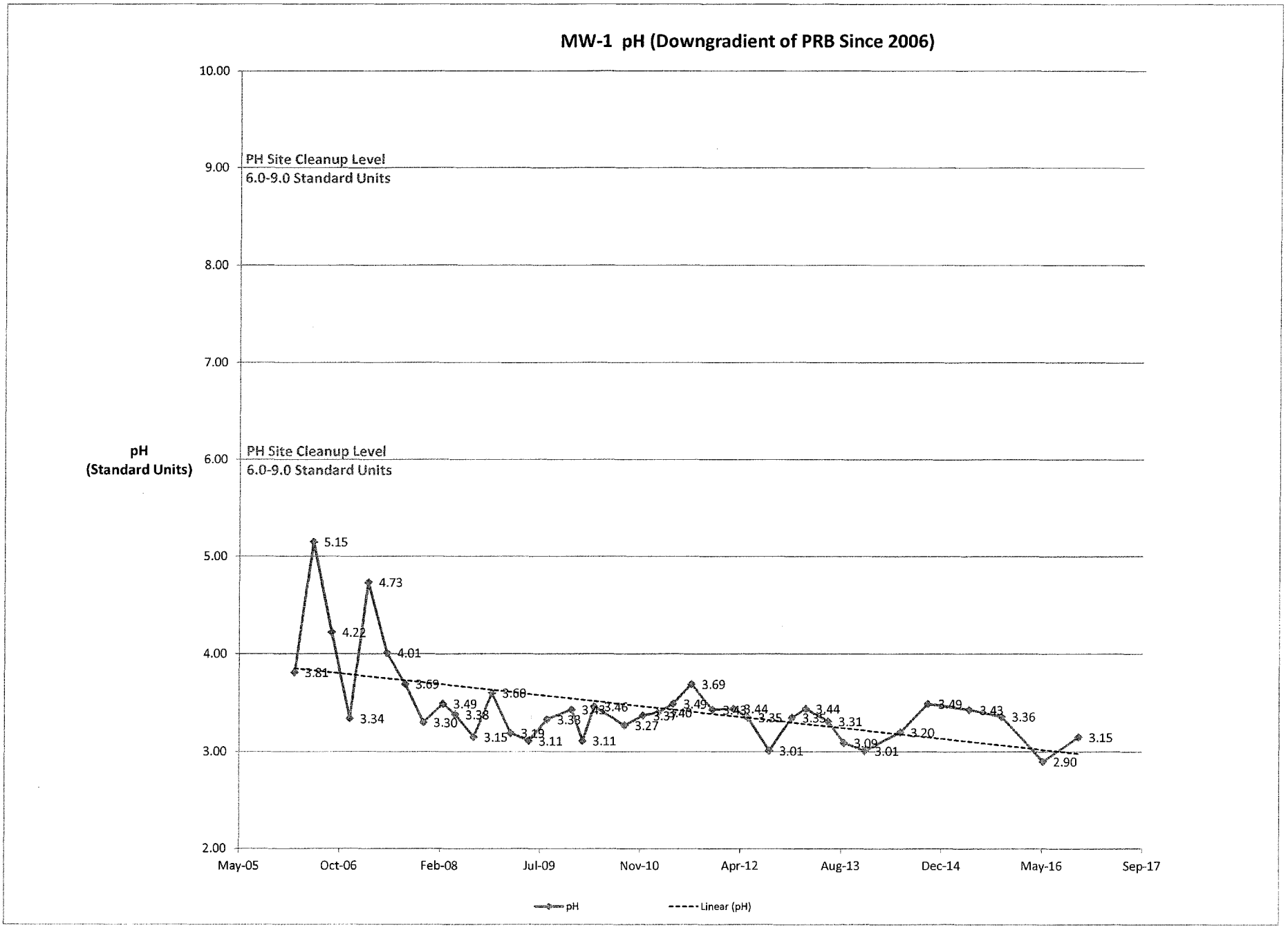
(SINCE 2006)

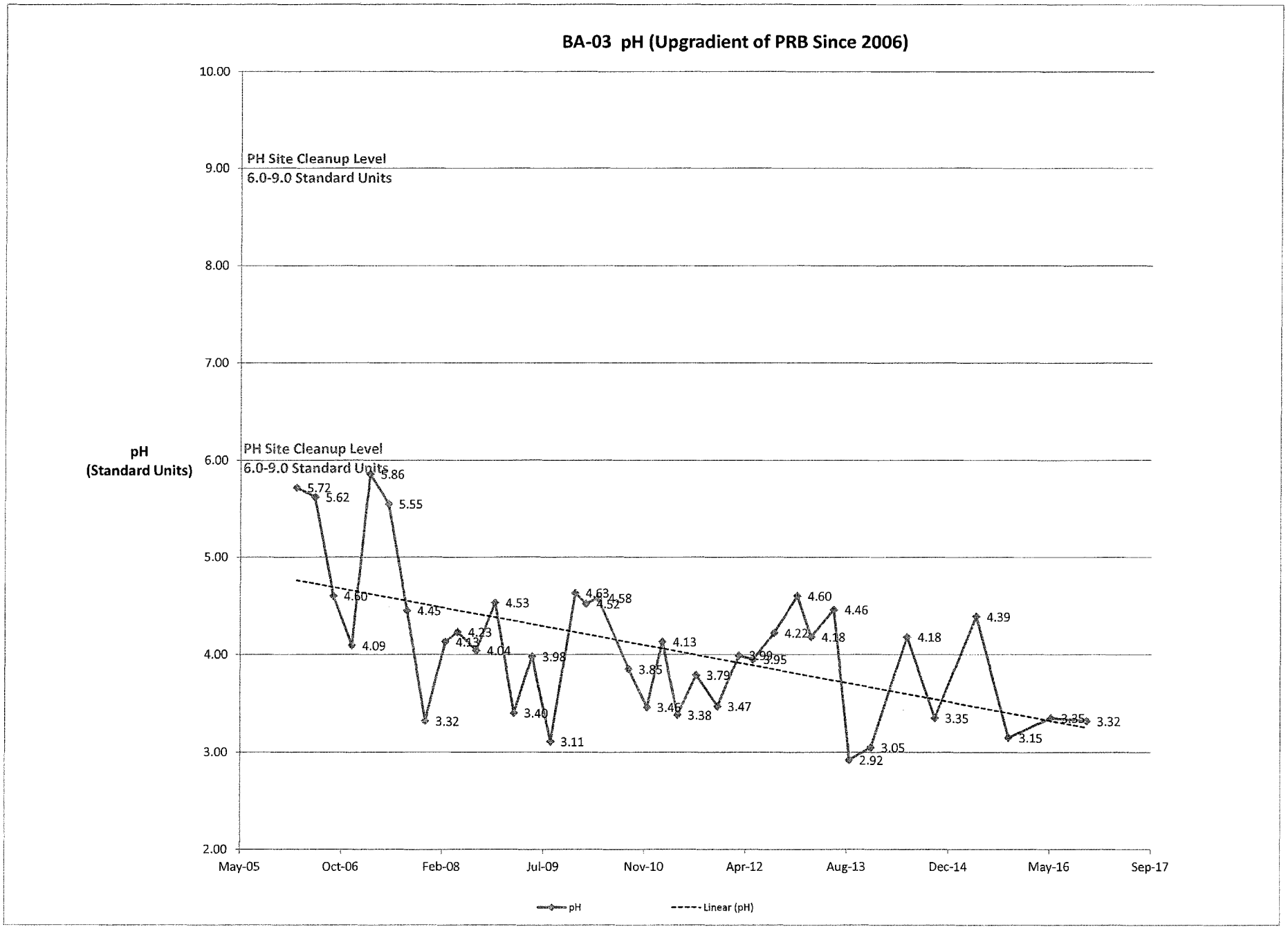
DW-1 pH (Downgradient of PRB Since 2006)




DW-2 pH (Upgradient of PRB Since 2006)
PH Site Cleanup Level
6.0-9.0 Standard Units
PH Site Cleanup Level
6.0-9.0 Standard Units
pH
(Standard Units)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)

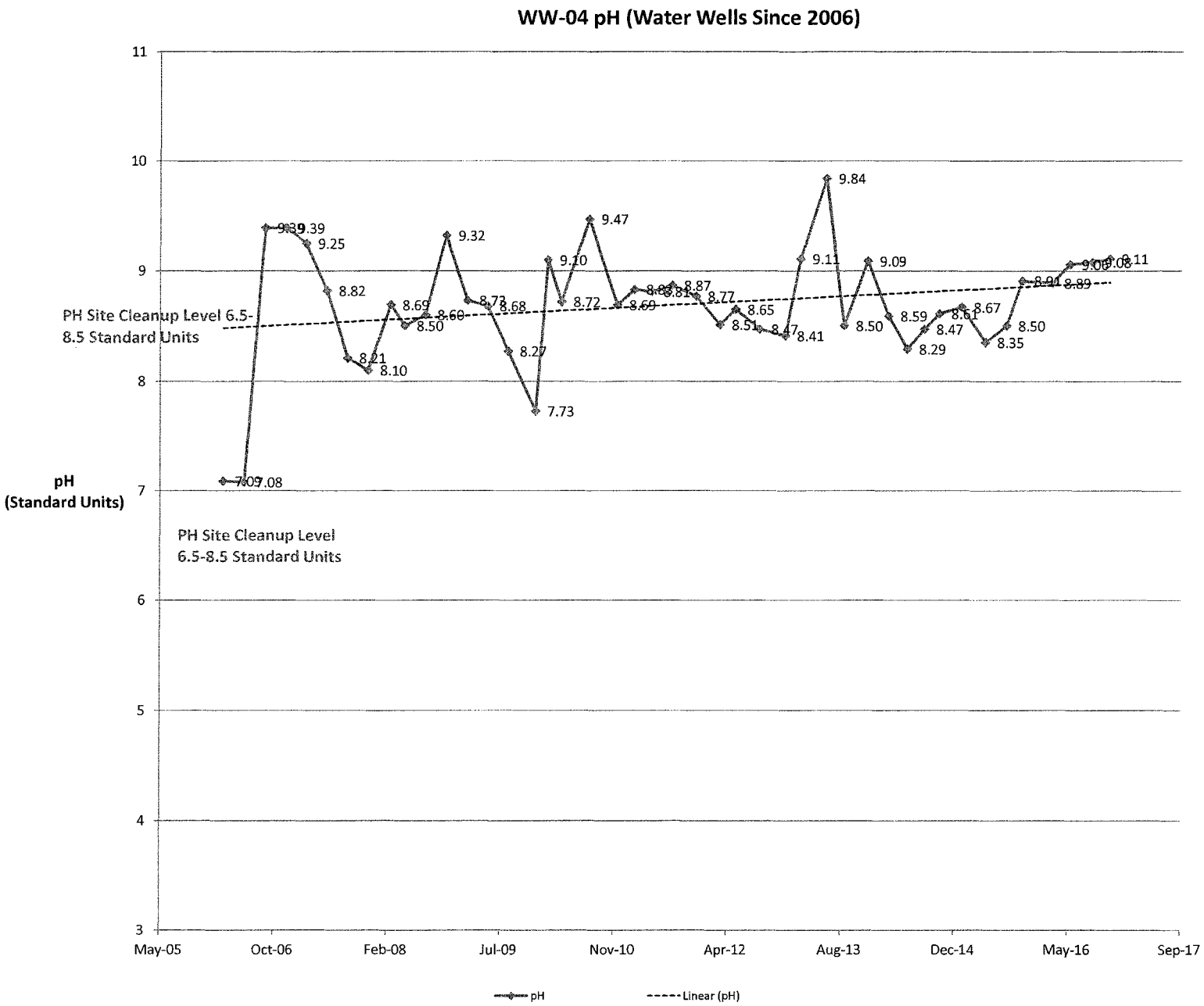

DW-3 pH (Outside of PRB Since 2006)
pH
(Standard Units)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
PH Site Cleanup Level
6.0-9.0 Standard Units
PH Site Cleanup Level
6.0-9.0 Standard Units
5.20
5.18
5.19
5.17
4.23
4.18
4.24
4.40
3.88
3.59
3.52
3.59
3.73
3.74
3.79
4.02
3.88
3.76
3.52
3.40
3.68
3.47
3.73
3.79
3.95
4.42
4.38
4.62
3.61
3.37
3.27
4.14
3.26
2.71
3.38
3.37
3.22
3.10
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)

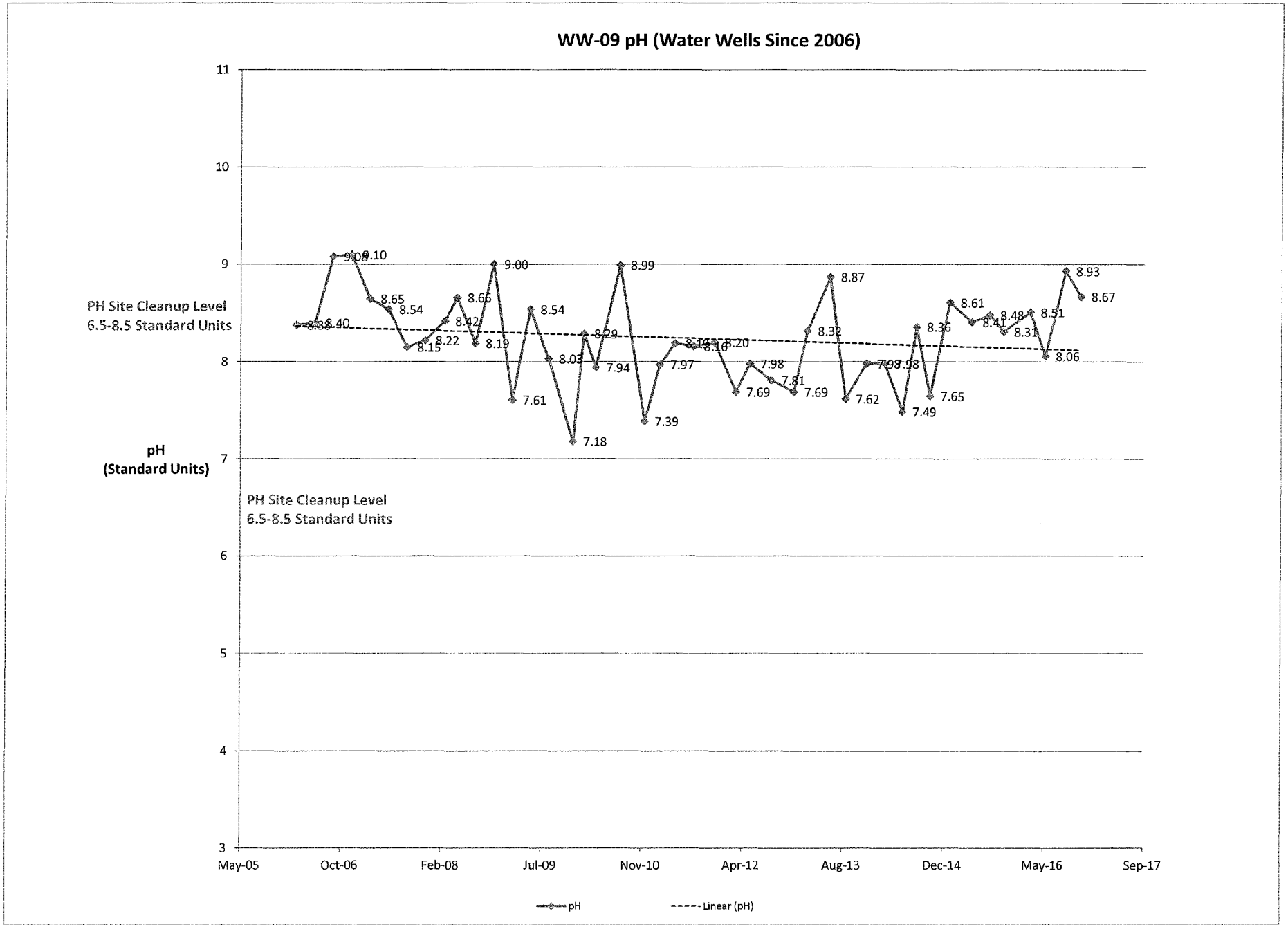

MW-1 pH (Downgradient of PRB Since 2006)
pH
(Standard Units)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
PH Site Cleanup Level
6.0-9.0 Standard Units
PH Site Cleanup Level
6.0-9.0 Standard Units
5.15
4.73
4.22
4.01
3.81
3.69
3.69
3.68
3.49
3.49
3.46
3.44
3.44
3.43
3.40
3.38
3.37
3.36
3.35
3.35
3.34
3.33
3.31
3.30
3.27
3.20
3.19
3.15
3.15
3.11
3.11
3.09
3.01
3.01
2.90
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)

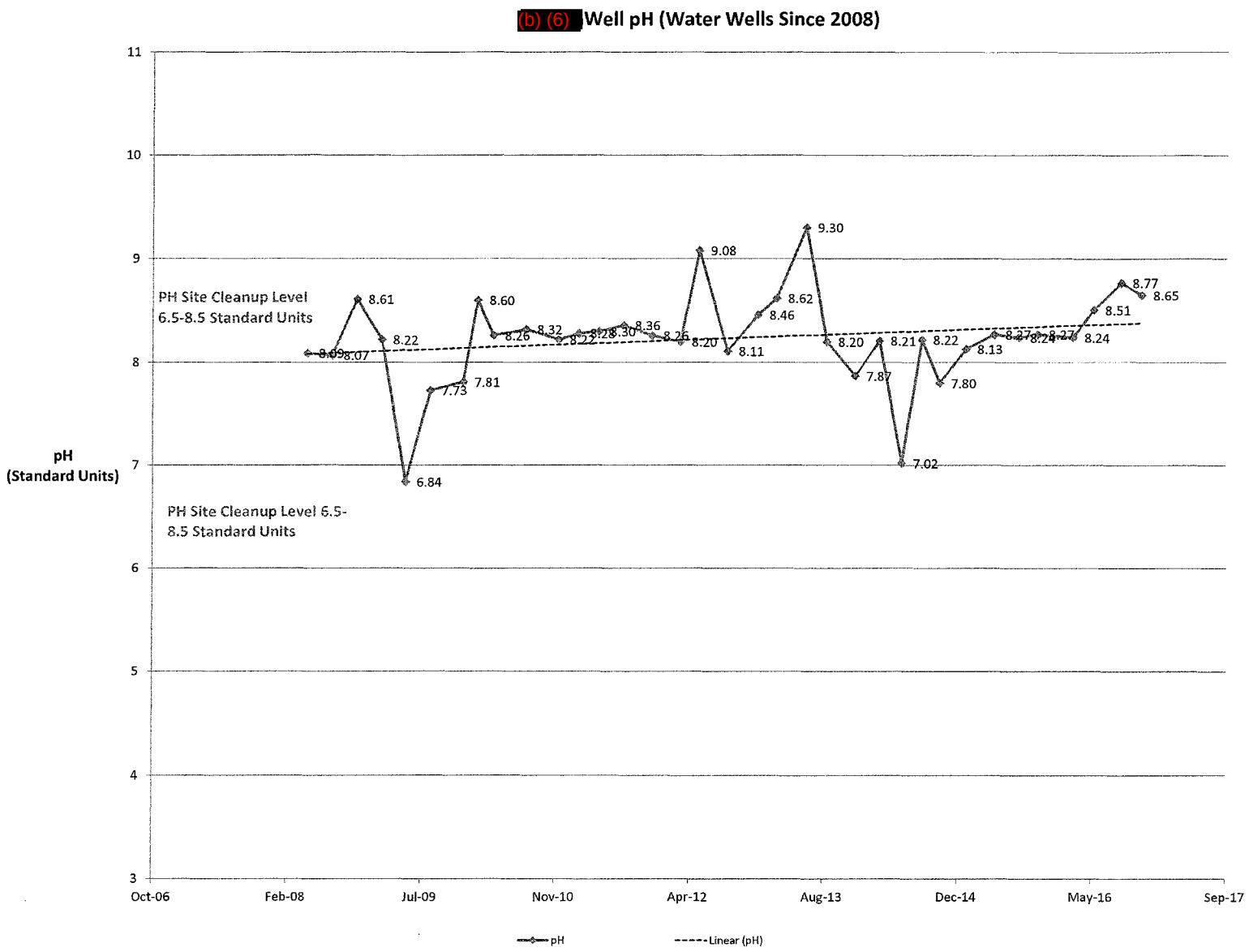

BA-03 pH (Upgradient of PRB Since 2006)
pH
(Standard Units)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
PH Site Cleanup Level
6.0-9.0 Standard Units
PH Site Cleanup Level
6.0-9.0 Standard Units
5.72
5.62
4.60
4.09
5.86
5.55
4.45
3.32
4.23
4.13
4.04
4.53
3.40
3.98
3.11
4.63
4.58
4.52
3.85
3.46
4.13
3.38
3.79
3.47
3.98
3.95
4.22
4.60
4.18
4.46
2.92
3.05
4.18
3.35
4.39
3.15
3.35
3.32
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)

WATER WELLS

(SINCE 2006)


WW-04 pH (Water Wells Since 2006)
pH
(Standard Units)
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
11
10
9
8
7
6
5
4
3
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)


WW-09 pH (Water Wells Since 2006)
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
PH Site Cleanup Level
6.5-8.5 Standard Units
11
10
9
8
7
6
5
4
3
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
9.00
8.99
8.87
8.93
8.67
8.65
8.54
8.66
8.54
8.42
8.22
8.15
8.19
7.61
8.03
7.18
8.29
7.94
7.39
7.97
8.20
7.69
7.98
7.81
7.69
8.32
7.62
7.49
8.36
7.65
8.61
8.41
8.48
8.31
8.51
8.06
pH
Linear (pH)


(b) (6) Well pH (Water Wells Since 2008)
pH
(Standard Units)
11
10
9
8
7
6
5
4
3
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
8.09
8.07
8.61
8.22
6.84
7.73
7.81
8.60
8.26
8.32
8.22
8.28
8.30
8.36
8.26
8.20
9.08
8.11
8.46
8.62
9.30
8.20
7.87
8.21
7.02
8.22
7.80
8.13
8.27
8.24
8.27
8.24
8.51
8.77
8.65
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
pH
Linear (pH)

ATTACHMENT D

DATA VALIDATION PACKAGE

Data Validation Report

Project: Delatte Metals

Client: SEMS, Inc.

SDG: 2045754 Date: January 3, 2017

eDATApro

Environmental Data Professional, LLC
1432 Watkins Street • Lake Charles, LA 70601 • phone: 337-540-0036 • fax: 337-478-6061

Disclaimer:

The validation performed and reported herein is based on specifications and procedures presented to eDATApro with the associated data package. Any qualifications or review not specified with package requirements was based on USEPA National Functional Guidelines for Inorganic and Organic Data Review.

Information contained in this report is based solely on the hardcopy and/or electronic deliverables that were submitted to eDATApro. eDATApro reserves the rights to modify or change the validation report if new information is presented or if this report is determined to be inaccurate or incomplete.

eDATApro

Cover Letter

Validation Report Date: January 3, 2017

Sample Delivery Group: 2045754

Project Name: Delatte Metals

Data Deliverables Included:

Validation Report:

✓ Introduction

✓ Sample Identification Cross- Reference Table

✓ Data Validation Components

✓ Data Validation Findings Summary

✓ Table 1-1, Summary of Qualified Data

✓ Table 1-2, Data Qualifier Reference Table

✓ Appendix I, Form I Data (qualified)

✓ Appendix II, Chain of Custody

Approval Signature: Anthony Gluhar Date: January 3, 2017

INTRODUCTION:

SDG: 2045754
Project Name: Delatte Metals
Laboratory: Pace Analytical
Laboratory Package No.: 2045754
Matrix: Water

Environmental Data Professional, LLC (eDATApro) received one data package containing the results for five field samples. Data validation was performed according to guidance from *USEPA National Functional Guidelines for Organic Data Review, USEPA National Functional Guidelines for Inorganic Data Review,* the project-specific Quality Assurance Project Plan and the analytical methods.

The following samples were reviewed:

Sample ID	Lab ID	Collection Date	Analyses
GSGP-18	2045754013	11/09/2016 03:31 PM	[1]
BA-05	2045754025	11/14/2016 10:24 AM	[1]
DW-02	2045754026	11/11/2016 04:20 PM	[1]
NWGS-06	2045754035	11/09/2016 03:03 PM	[1-3]
WW-09	2045754042	11/10/2016 09:26 AM	[1]

Analyses Performed Codes:

[1] ICP/MS Metals (EPA 6020)
[2] Sulfate (EPA 9056)
[3] Sulfide (EPA 9034)

DATA VALIDATION COMPONENTS

The data presented in this validation report was reviewed using a systematic process for evaluating performance and compliance of a set of data when compared to a set of standards to ascertain its completeness, correctness, and consistency using the methods and/or project defined criteria. The following components, as applicable to each analytical method, were reviewed in conducting the data validation:

- Data Completeness and Deliverables
- Sample Receipt (Chain of Custody Record)
  - Sample ID
  - Collection Date/Time
  - Matrix
  - Analysis Requests
- Chemical/Temperature Preservation
- Holding Times
- Analytical/Method Performance
  - Instrument Performance Checks
  - Instrument Calibrations
    - Stability of Analyte Response (Average Response Factor)
    - Linearity of Analytical Response (Correlation Coefficient)
    - Initial Calibration (multi-point)
    - Calibration Verification
  - Method Quality Control
    - Instrument/Method Blank
    - Laboratory Control Sample
    - Laboratory Duplicate/Replicate
    - Surrogates
    - Internal Standards
    - Interference Check Sample
    - ICP Serial Dilution
  - Preparation Batch Quality Control
    - Preparation Blank
    - Laboratory Control Sample
    - Matrix Spikes
- Field Quality Controls
  - Field Duplicate
  - Field/Equipment Rinsate/Trip Blanks
- Compound Identification and Quantitation

Unless specifically stated otherwise in the method summary sections of this report, all components evaluated and data presented by the laboratory met the applicable acceptance criteria and are considered fully usable.

DATA VALIDATION FINDINGS SUMMARY

I. General Package:

A laboratory data package compliant for Level IV data validation was received on December 16, 2016. No resubmissions were necessary.

Of the field samples were listed on the chain of custody (COC) record, per client request, data validation was performed in consideration of samples DW-02, BA-05, NWGS-06, WW-09 and GSGP-18.

II. Method 6020 – ICP/MS Metals:

Recoveries of Arsenic and Manganese in the matrix spikes analyses (MS/MSD) analyses associated with the analysis of sample GSGP-18 exceeded acceptance criteria; however, the concentrations of these analytes in the parent sample were significantly greater (>4x) than the spike amounts. Recovery of Zinc in the MS analysis exceeded lower acceptance criteria. Acceptable recoveries of this analyte were achieved in the MSD and laboratory control samples analyses (LCS/LCSD). No data qualifications were necessary.

The percent differences (%D) between measurements of Arsenic, Cadmium and Nickel in a sample from this project (not included in the data validation) and a serial dilution analysis of this sample exceeded upper acceptance criteria. These analyses were applicable to sample WW-09. The results for these analytes in sample WW-09 were qualified as non-detect estimate (UJ).

All other quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria.

III. Method 9056 – Sulfate:

All quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria. No data qualifications were necessary.

IV. Method 9034 – Sulfide:

All quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria. No data qualifications were necessary.

Table 1-1

SUMMARY OF QUALIFIED DATA

Target Compound	Sample(s) Affected	Lab Result	Lab Qual	Val Result	Val Qual	Units	Reason for Qualification
Arsenic		1	U	1	UJ	ug/L	
Cadmium	WW-09	1	U	1	UJ	ug/L	High serial dilution %D.
Nickel		1	U	1	UJ	ug/L	

Table 1-2

DATA QUALIFIER REFERENCE

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified: the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
J-	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.
UJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limits of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet the quality control criteria. The presence or absence of the analyte cannot be verified.	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet the quality control criteria. The presence or absence of the analyte cannot be verified.

Appendix I
Form 1 Data (Qualified)

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2045754

COC Sample ID: **GSGP-18**
Location ID: **NA**
Lab Sample ID: **2045754013**
Sample Type: **Site Sample**

Sample Matrix : **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units
Method: EPA 6020									
Arsenic	11/09/2016 15:31	12/05/2016 3:57	1	1	1.5		1.5		ug/L
Cadmium	11/09/2016 15:31	12/05/2016 3:57	1	1	126		126		ug/L
Lead	11/09/2016 15:31	12/05/2016 3:57	1	1	2.4		2.4		ug/L
Manganese	11/09/2016 15:31	12/05/2016 3:57	1	1	1570		1570		ug/L
Nickel	11/09/2016 15:31	12/05/2016 3:57	1	1	47.4		47.4		ug/L
Zinc	11/09/2016 15:31	12/05/2016 3:57	1	5	344		344		ug/L

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2045754

COC Sample ID: **BA-05**
Location ID: **NA**
Lab Sample ID: **2045754025**
Sample Type: **Site Sample**

Sample Matrix: **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units
Method: EPA 6020									
Arsenic	11/14/2016 10:24	12/05/2016 5:16	1	1	2		2		ug/L
Cadmium	11/14/2016 10:24	12/05/2016 5:16	1	1	1	U	1	U	ug/L
Lead	11/14/2016 10:24	12/05/2016 5:16	1	1	1	U	1	U	ug/L
Manganese	11/14/2016 10:24	12/05/2016 5:16	1	1	10600		10600		ug/L
Nickel	11/14/2016 10:24	12/05/2016 5:16	1	1	32.1		32.1		ug/L
Zinc	11/14/2016 10:24	12/05/2016 5:16	1	5	5	U	5	U	ug/L

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2045754

COC Sample ID: **DW-02**
Location ID: **NA**
Lab Sample ID: **2045754026**
Sample Type: **Site Sample**

Sample Matrix : **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units
Method: EPA 6020									
Arsenic	11/11/2016 16:20	12/05/2016 5:20	1	1	13.2		13.2		ug/L
Cadmium	11/11/2016 16:20	12/05/2016 5:20	1	1	18.3		18.3		ug/L
Lead	11/11/2016 16:20	12/05/2016 5:20	1	1	23.8		23.8		ug/L
Manganese	11/11/2016 16:20	12/05/2016 5:20	1	1	7500		7500		ug/L
Nickel	11/11/2016 16:20	12/05/2016 5:20	1	1	257		257		ug/L
Zinc	11/11/2016 16:20	12/05/2016 5:20	1	5	513		513		ug/L

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2045754

COC Sample ID: **NWGS-06**
Location ID: **NA**
Lab Sample ID: **2045754035**
Sample Type: **Site Sample**

Sample Matrix : **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units
Method: EPA 6020									
Arsenic	11/09/2016 15:03	12/05/2016 5:51	1	1	2.1		2.1		ug/L
Cadmium	11/09/2016 15:03	12/05/2016 5:51	1	1	92.6		92.6		ug/L
Lead	11/09/2016 15:03	12/05/2016 5:51	1	1	2.1		2.1		ug/L
Manganese	11/09/2016 15:03	12/05/2016 5:51	1	1	1310		1310		ug/L
Nickel	11/09/2016 15:03	12/05/2016 5:51	1	1	34		34		ug/L
Zinc	11/09/2016 15:03	12/05/2016 5:51	1	5	177		177		ug/L

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2045754

COC Sample ID: **WW-09**
Location ID: **NA**
Lab Sample ID: **2045754042**
Sample Type: **Site Sample**

Sample Matrix : **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units	
Method: EPA 6020										
Arsenic	11/10/2016 9:26	12/05/2016 4:33	1	1	1	U	1	UJ	ug/L	*
Cadmium	11/10/2016 9:26	12/05/2016 4:33	1	1	1	U	1	UJ	ug/L	*
Lead	11/10/2016 9:26	12/05/2016 4:33	1	1	1	U	1	U	ug/L	
Manganese	11/10/2016 9:26	12/05/2016 4:33	1	1	19		19		ug/L	
Nickel	11/10/2016 9:26	12/05/2016 4:33	1	1	1	U	1	UJ	ug/L	*
Zinc	11/10/2016 9:26	12/05/2016 4:33	1	5	5	U	5	U	ug/L	

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Form 1 Data Sheet - Conventionals

SEMS
DELATTE METALS
SDG: 2045754

COC Sample ID: **NWGS-06**
Location ID: **NA**
Lab Sample ID: **2045754035**
Sample Type: **Site Sample**

Sample Matrix : **Water**
Lab Code: **PACE**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units
Method: EPA 9034									
Sulfide	11/09/2016 15:03	11/16/2016 10:01	1	1	1	U	1	U	mg/L
Method: EPA 9056									
Sulfate	11/09/2016 15:03	11/30/2016 4:19	50	50	925		925		mg/L

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Appendix II
Chain of Custody

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Requ

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fi

WO# : 2045754

2045754

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency:

State / Location: LA

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
1	CA-41	WT		11/8/16	0940														X	X				
2	CA-51	WT		11/8/16	0917														X	X				
3	GSGP-03	WT		11/8/16	0852														X					
4	BRIDGE	WT		11/8/16	1000														X	X				
5	CL-05	WT		11/8/16	1020														X	X				
6	CL-19	WT		11/8/16	1040														X	X				
7	(b) (6) WELL	WT		11/10/16	0955														X					
8	WW-04	WT		11/10/16	0905														X					
9	BC-03	WT		11/9/16	1016														X					
10	DW-04	WT		11/9/16	1146														X					
11	BC-25	WT		11/9/16	1221														X					
12	MW-03	WT		11/9/16	1412														X					

MATRIX CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sulfides go to Pace KS Method 9056		11/14/16	1320		11/14/16	1320	4.5
Sulfate		11/14/16	1535		11/14/16	1535	4.3
							2.9
							1.0

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Durel

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency	State / Location
	LA

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
13	MW-06	WT		11/11/16	1002														X					
14	GSGP-18	WT		11/9/16	1531														X					
15	GSGP-19	WT		11/9/16	1559														X					
16	SOUTH WELL	WT		11/9/16	1700														X					
17	BC-17	WT		11/10/16	1134														X					
18	NORTH WELL	WT		11/9/16	1630														X					
19	BC-21R	WT		11/10/16	1301														X					
20	BA-01	WT		11/10/16	1330														X					
21	PW-04	WT		11/10/16	1533														X					
22	GSGP-15	WT		11/10/16	1508														X					
23	NWGS-05	WT		11/10/16	1436														X		X	X		
24	DW-03	WT		11/10/16	1556														X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Sulfides go to Pace KS Method 9056		11/14/16	1320		11/14/16	1320	4.5			
Sulfate		11/14/16	1535		11/14/16	1535	4.3	Y	N	Y
							29			
							1.0			

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Ben Durel		
SIGNATURE of SAMPLER:		DATE Signed:	11/14/16

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency:

State / Location: LA

Requested Analysis Filtered (Y/N):

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
25	GSGP-22	WT		11/10/16	1618													X		X	X		
26	BA-05	WT		11/10/16	1024													X					
27	DW-02	WT		11/11/16	1620													X					
28	MW-A	WT		11/11/16	1644													X					
29	DW-01	WT		11/11/16	1225													X		X	X		
30	NWGS-04	WT		11/11/16	1250													X		X	X		
31	BA-03	WT		11/11/16	1603													X					
32	MW-02	WT		11/11/16	1446													X		X	X		
33	TEPA-P7D	WT		11/11/16	1418													X		X	X		
34	NWGS-01	WT		11/11/16	1520													X		X	X		
35	NWGS-02	WT		11/11/16	1345													X		X	X		
36	NWGS-06	WT		11/9/16	1503													X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
~~Sulfide~~ go to Pace KS Method 9056	[signature]	11/14/16	1320	[signature]	11/14/16	1320	4.5			
Sulfate	[signature]	11/14/16	1535	[signature]	11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Dord

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	6306 line 1

Regulatory Agency
State / Location
LA

MATRIX CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): Metals by 6020 /CPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals	Residual Chlorine (Y/N)
37	NWGS-03	WT		11/11/16	1316														X		X	X		
38	MW-01	WT		11/11/16	1046														X		X	X		
39	BA-09	WT		11/10/16	1026														X		X	X		
40	BA-09A	WT		11/10/16	1006														X					
41	GSGP-6	WT		11/10/16	0939														X					
42	MW-4	WT		11/10/16	1056														X					
43	WW-09	WT		11/10/16	0926														X					
44	DUP #1	WT		11/10/16	–														X		X	X		
45	DUP#2	WT		11/11/16	–														X		X	X		
46	DUP#3	WT		11/10/16	–														X					
47	DUP#4	WT		11/8/16	–														X					
48	DUP#5	WT		11/4/16	–														X					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Sulfides go to Pace KS Method 9056	[signature]	11/14/16	1320	[signature]	11/14/16	1320	4.5			
Sulfate	[signature]	11/14/16	1535	[signature]	11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ben Durel

SIGNATURE of SAMPLER: [signature] DATE Signed: 11/14/16

Pace Analytical

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company:	SEMS Metairie
Address:	3801 N. Causeway Blvd
	Metairie, LA 70002
Email:	nrodehorst@semsinc.net
Phone:	NONE Fax:
Requested Due Date:	

Section B
Required Project Information:

Report To:	Nick Rodehorst
Copy To:	
Purchase Order #:	
Project Name:	Delatte Metals
Project #:	

Section C
Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote:	
Pace Project Manager:	william.shackelford@pacelabs.com,
Pace Profile #:	5306 line 1

Regulatory Agency:

State / Location: LA

Requested Analysis Filtered (Y/N):

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	Metals by 6020 ICPMS	Dissolved Metals by 6020	Sulfate 9034	Sulfide 9056 Sub to KS	Metals								Residual Chlorine (Y/N)	
49	BC-19	WT		11/11/16	0926														X														
50	MS#1	WT		11/11/16	1250														X		X	X											
51	BC-07	WT		11/9/16	1048														X														
52	MSD#1	WT		11/11/16	1250														X		X	X											
53	MS#2	WT		11/11/16	0926														X														
54	MSD#2	WT		11/11/16	0926														X														
55	MS#3	WT		11/11/16	1540														X														
56	MSD#3	WT		11/11/16	1540														X														
57	BB-01	WT		11/9/16	1718														X														
58	BA-05A	WT		11/10/16	1048														X														
59	BA-03A	WT		11/11/16	1541														X														
60																																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Sulfides go to Pace KS Method 9056	[signature]	11/14/16	1320	[signature]	11/14/16	1320	4.5			
Sulfate	[signature]	11/14/16	1535	[signature]	11/14/16	1535	4.3	Y	N	Y
							2.9			
							1.0			

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Ben Durel		
SIGNATURE of SAMPLER:	[signature]	DATE Signed:	11/14/16

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTO

The Chain-of-Custody is a LEGAL

WO#: 2045754

PM: WRS Due Date: 11/30/16

CLIENT: 20-sems Met

Page: 1 of 1

2156131

Section A Required Client Information:

Company: SEMS Metairie

Address: 3801 N. Causeway Blv
Metairie, LA 70002

Email To: nrodehorst@semsinc.net

Phone: 225-924-2002 Fax: —

Requested Due Date/TAT:

Section B Required Project Information:

Report To: Nick Rodehorst

Copy To:

Purchase Order No.:

Project Name: Delatte Metals

Project Number:

Section C Invoice Information:

Attention:

Company Name:

Address:

Pace Quote Reference:

Pace Project Manager: william.shackelford@pacelab.com

Pace Profile #: 6306 line 1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Metals (6020 ICPMS)	Sulfate 9034	Sulfide 9056 (KS)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	BC-25	WT	G	11/18/16	1129							1							✓				
2	Duplicate 3	↓	↓	↓	1049						1	1		1					✓	✓	✓		
3	Duplicate 4	↓	↓	↓	1129							1							✓				
4	Duplicate 5	↓	↓	↓	0955							1							✓				
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Sulfides go to Pace KS method 9056	[signature]	11-21-16	0945	Monica Johnson Pace	11-21-16	0945	
	Monica Johnson Pace	11-21-16	1050	[signature]	11-21-16	1130	
	[signature]	11/21/16	1430	[signature]	11-21-16	1430	

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.2	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Burnham

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/18/16

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

WO#: 2045754

PM: WRS Due Date: 11/30/16
CLIENT: 20-sems Met

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon R

Proj

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact: ☐Yes ☑No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11-15-16 WMB

Temp must be measured from Temperature blank when present

					Comments:
Temperature Blank Present"?	☐Yes	☐No	☑N/A	1	
Chain of Custody Present:	☑Yes	☐No	☐N/A	2	
Chain of Custody Complete:	☐Yes	☑No	☐N/A	3	
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4	
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5	
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6	
Sufficient Volume:	☑Yes	☐No	☐N/A	7	
Correct Containers Used:	☑Yes	☐No	☐N/A	8	
Filtered vol. Rec. for Diss. tests	☑Yes	☐No	☐N/A	9	field filtered
Sample Labels match COC:	☐Yes	☑No	☐N/A	10	
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13	If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14	
Trip Blank Present:	☐Yes	☑No		15	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

See Attachment

Per client do not log in samples: Dup 3 11/10, Dup 2 collected 11/10 not on COC, & Dup 1 11/10 did not receive MT container.

Received samples BA-01A 11/10 @ 1358 & Dup #1 11/08 not on COC per client log in

Did not receive containers for samples: BC-25, DUP #4, & DUP #5

DW-01 & BA-01 Received Dissolved MT containers not on COC login per client

NWGS-04, WW-09, & BA-03A received MS/MSD containers not specified on COC log in as RQS per client

Received MS/MSD containers for BC-19 per client disregard containers only one container for this sample no RQS.

WO#: 2045754

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Rece

PM: WRS Due Date: 11/30/16
CLIENT: 20-sems Met

Project

Courier: ☑ Pace Courier ☐ Hired Courier ☐ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC] **Custody Seals intact:** ☑Yes ☐No

Therometer Used: ☐ Therm Fisher IR 5 ☐ Therm Fisher IR 6 ☑ Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC] Temp should be above freezing to 6°C

Date and Initials of person examining contents: 11-22-16 MP

Temp must be measured from Temperature blank when present

				Comments:
Temperature Blank Present"?	☐Yes	☑No	☐N/A	1
Chain of Custody Present:	☑Yes	☐No	☐N/A	2
Chain of Custody Complete:	☑Yes	☐No	☐N/A	3
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	4
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	5
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	6
Sufficient Volume:	☑Yes	☐No	☐N/A	7
Correct Containers Used:	☑Yes	☐No	☐N/A	8
Filtered vol. Rec. for Diss. tests	☐Yes	☐No	☑N/A	9
Sample Labels match COC:	☑Yes	☐No	☐N/A	10
All containers received within manafacture's precautionary and/or expiration dates.	☑Yes	☐No	☐N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☑Yes	☐No	☐N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	13 If No, was preserative added? ☐Yes ☐No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A	14
Trip Blank Present:	☐Yes	☑No		15

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Rec. 11/21/16 * Add on samples to project

ATTACHMENT E

LEVEL IV DATA PACKAGE

(CD ATTACHED)