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ATTACHMENT NOT INCLUDED

FIRST SEMI-ANNUAL 2015
OPERATION AND MAINTENANCE REPORT

DELATTE METALS SUPERFUND SITE
AGENCY INTEREST NO. 2328

DATE SUBMITTED:
JULY 17, 2015

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PREPARED FOR

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JULY 17, 2015

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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 First Semi-Annual 2015 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 on its sides 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 appears 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 appears 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:

- January 23, 2015 – SEMS submitted the Operation and Maintenance Report – Second Half 2014 to the LDEQ for approval.
- January 26, 2015 – SEMS mobilized to the site and performed first quarter 2015 O&M activities.
- January 26, 2015 – SEMS submitted correspondence requesting LDEQ approval to utilize the services of EDATAPRO as third party data validator. The request was approved by LDEQ via email correspondence on January 27, 2015.
- January 30, 2015 – SEMS submitted the Operation and Maintenance Report – Fourth Quarter 2014 to the LDEQ for approval.
- April 29, 2015 – SEMS submitted the Operation and Maintenance Report – First Quarter 2015 to the LDEQ for approval.

- May 11 - 14, 2014 – SEMS mobilized to the site and performed second quarter / first semi-annual 2015 O&M activities.
- May 26, 2014 – SEMS mobilized to the site to supervise disposal activities for waste materials related to the O&M Program. Three drums of purge water and one drum of sampling debris were transported by STRANCO under manifest to Waste Management Woodside Landfill in Walker, LA for disposal.

3.0 OPERATION AND MAINTENANCE ACTIVITIES

Operation and Maintenance activities are performed in accordance with the 2013 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 May 11th through 14th, 2015, SEMS mobilized to the site and performed first semi-annual 2015 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**. New padlocks were placed on four wells that had newly installed protective casings. No other 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.
- Very little evidence of subsidence is apparent in the PRB following the placement of fill material in March of 2014.

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 first semi-annual 2015 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 BA-01, GSGP-03, MW-04, NWGS-03, NWGS-05, and TEPA-P7D, 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**.

It should be noted that additional drums and investigation-derived waste that are generated by the United States Geological Survey (USGS) are located adjacent to the drum storage area. The

USGS will maintain their drums from their groundwater sampling events.

3.6 SURFACE WATER MONITORING, SAMPLING, AND ANALYTICAL PROCEDURES

During the first semi-annual 2015 sampling event a total of four (4) 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 embankment of the creek at the vertical midpoint. A surface water sample from Tributary 1 (CL-19) were collected at the horizontal and vertical midpoint of the tributary. At Tributary 1, sample location CL-05 was found to be dry and no sample was collected. 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 and Second WBZ. The wells screened in the Third WBZ are monitored annually during the second semi-annual period and are not evaluated in the first Semi-annual Report. The First and Second WBZ potentiometric maps are presented as Figures 2A and 2B respectively. Potentiometric maps show that the groundwater flow direction for this period as described below:

First WBZ: At the north perimeter of the site, the groundwater flow direction appears to be generally north toward the unnamed tributary to Selser's Creek. Along the western perimeter of the site south of the confluence of the two streams, groundwater flows generally northwest toward Selser's Creek.

Second WBZ:
The groundwater flow direction appears to be generally northwest towards Selser's Creek.

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.; pH readings ranged from 2.93 to 5.98 std. units.
- **Second WBZ Monitor Wells**: Monitor wells BA-01 and BA-05 were below the EPA acceptable pH range of 6.5-8.5 s.u. with a minimum pH reading of 5.17 s.u. in monitor well BA-01.
- **Water Supply Wells**: Water supply wells North Well and South Well were above the EPA acceptable pH range of 6.5-8.5 s.u. with a maximum pH reading of 8.91 s.u. at the North Well.
- **Surface Water**: All samples were within the EPA acceptable pH range of 6.0-9.0 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, GSGP-22, NWGS-03, and NWGS-04 were above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.332 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 0.0032 mg/L in monitor well BA-01.
- **Water Supply Wells**: No water wells sampled were reported above the arsenic RECAP SS; the highest arsenic concentration was reported to be 0.0015 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 concentration was reported to be 0.0028 mg/L at both the CA-41 and CA-51.

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-01, DW-02, MW-02, MW-06, BA-03, GSGP-18, GSGP-19, TEPA-P7D, NWGS-01, NWGS-02, NWGS-04, and NWGS-06 were reported above the cadmium RECAP SS. The highest cadmium concentration was reported to be 0.256 mg/L in monitor well NWGS-02.
- **Second WBZ Monitor Wells**: No monitor wells sampled were reported above the cadmium RECAP SS. The highest cadmium concentration was reported to be 0.0011 mg/L in monitor well BC-17.
- **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 BA-03, GSGP-18, GSGP-19, NWG-01, and NWGS-02 were reported above the site cleanup level for lead; the highest lead concentration was reported to be 0.095 mg/L in monitor well NWGS-02.
- **Second WBZ Monitor Wells**: Monitor well BC-17 was reported above the site cleanup level for lead with a lead concentration of 0.0223 mg/L.
- **Water Supply Wells**: No water wells sampled were reported above the site cleanup level for lead; all concentrations of total lead were reported non-detect.
- **Surface Water**: No concentrations of total or dissolved lead in surface water were reported above the site cleanup level for lead; the highest lead concentration was reported to be 0.0013 mg/L at the Bridge.

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**: Twenty of 22 monitor wells were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 15.4 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 9.69 mg/L in monitor well BA-05.
- **Water Supply Wells**: No water wells sampled were reported above the manganese RECAP SS; the highest manganese concentration was reported to be 0.0231 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 0.116 mg/L at sample location CA-51.

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, DW-03, MW-01, BA-09, GSGP-06, and GSGP-22 were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.261 mg/L in monitor well GSGP-22.
- **Second WBZ Monitor Wells**: No monitor wells sampled were reported above the nickel RECAP SS; the highest nickel concentration was reported to be 0.0484 mg/L in monitor well BA-01.
- **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 0.0021 mg/L at sample locations CA-41 and the 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 0.527 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 0.0683 mg/L in monitor well BA-01.
- **Water Supply Wells:** No water wells sampled were reported above the zinc RECAP SS; the highest zinc concentration was reported to be 0.0089 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 0.0099 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-03, MW-01, MW-02, BA-09, GSGP-22, TEPA-P7D, NWGS-01, NWGS-02, NWGS-03, and NWGS-04 were reported above the EPA Secondary MCL; the highest sulfate concentration was reported to be 12,700 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. The highest sulfide concentration was reported to be 4 mg/L at monitor well GSGP-22.

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, lead, and manganese
- 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: Decreasing: DW-02, MW-02, and BA-03

Arsenic: Decreasing: DW-01, DW-02, DW-03, MW-01, BA-03, and BA-09

Manganese: Increasing: DW-03, MW-02, PW-04, and BA-09

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

Nickel: Increasing: DW-03

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

Cadmium: Increasing: DW-01,

Decreasing: MW-01, MW-02, MW-06, and BA-03

Stable: DW-02

Zinc: Decreasing: DW-02

pH: Below 6.0 s.u. and increasing: MW-01, MW-02, and BA-03

Below 6.0 s.u. and decreasing: DW-03

Below 6.0 s.u. and stable: DW-01, DW-02, MW-06, PW-04, and BA-09

Second WBZ Trends

Exceeding constituent concentration trends were observed in the following wells:

Lead: Decreasing: BC-17

Manganese: Increasing: MW-03, BA-01, and BC-21R

Decreasing: BA-05

Arsenic, Cadmium, and Zinc:

No exceedances observed for any two of the previous eight sample periods.

pH: Below 6.5 s.u. and decreasing: BA-01, and BC-17

Below 6.5 s.u. and stable: MW-03, and BC-21R

Below 6.5 s.u. and increasing: MW-04, and BA-05

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 sample periods.

pH: Above 8.5 s.u. and decreasing: WW-04, and South Well

Above 8.5 s.u. and increasing: WW-09, and 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**.

- At water well WW-04, the data from 2006 to present shows an overall increasing pH trend. However, a decreasing trend is evident over 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 ((b) (6) Duplicate #2 (DW-02), Duplicate #3 (MW-A), Duplicate #4 (NWGS-01), and Duplicate #5 (BA-09). 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 BC-07, MW-01, North Well, NWGS-04, and GSGP-19. The following changes were made to this report as a result of the data validation:

- Pace reported the monitor well BC-07 zinc result as <0.0050 mg/L and the validated result was <0.0050 mg/L with a J flag.
- Pace reported the monitor well GSGP-19 arsenic result as 0.0026 mg/L and the validated result was 0.0026 mg/L with a J flag.
- Pace reported the monitor well GSGP-19 zinc result as mg/L and the validated result was 0.166 mg/L with a J flag.
- Pace reported the monitor well NWGS-04 arsenic result as 0.332 mg/L and the validated result was 0.332 mg/L with a J flag.

- Pace reported the monitor well NWGS-04 manganese result as 3.880 mg/L and the validated result was 3.880 mg/L with a J flag.
- Pace reported the monitor well NWGS-04 nickel result as 0.0165 mg/L and the validated result was 0.0165 mg/L with a J flag.
- Pace reported the monitor well NWGS-04 zinc result as 0.0174 mg/L and the validated result was 0.0174 mg/L with a J flag.
- Pace reported the monitor well NWGS-04 sulfate result as 1.120 mg/L and the validated result was 1.120 mg/L with a J flag.
- Pace reported the monitor well MW-01 arsenic result as 0.012 mg/L and the validated result was 0.012 mg/L with a J flag.
- Pace reported the monitor well MW-01 manganese result as 4.420 mg/L and the validated result was 4.420 mg/L with a J flag.
- Pace reported the monitor well MW-01 nickel result as 0.113 mg/L and the validated result was 0.113 mg/L with a J flag.
- Pace reported the monitor well MW-01 zinc result as 0.112 mg/L and the validated result was 0.112 mg/L with a J flag.
- Pace reported the monitor well MW-01 sulfate result as 4.660 mg/L and the validated result was 4.660 mg/L with a J flag.
- Pace reported the water well sample North Well manganese result as 0.0053 mg/L and the validated result was 0.0053 mg/L with a J flag.
- Pace reported the water well sample North Well nickel result as <0.0010 mg/L and the validated result was <0.0010 mg/L with a J flag.
- Pace reported the water well sample North Well zinc result as <0.0050 mg/L and the validated result was <0.0050 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 2013 LDEQ bid specification and subsequent Change Order.

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° 25' 30"	90° 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° 25' 28"	90° 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° 25' 29"	90° 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° 25' 30"	90° 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° 25' 27"	90° 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° 25' 26"	90° 24' 42"	2	16.5	16.77	15.17	NA	NA
MW-7*	701240.79	3571056.2	30° 25' 30"	90° 24' 45"	2	15	8.21	6.01	NA	NA
PW-4	701018.61	3571950.1	30° 25' 28"	90° 24' 35"	2	19.5	12.22	8.96	NA	NA
BA-03	701018.61	3571248.6	30° 25' 28"	90° 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° 25' 31"	90° 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° 25' 31"	90° 24' 48"	2	16	11.36	8.75	3.25 to -6.75	5.5 to 15.5
GSGP-3	NA	NA	30° 25' 30"	90° 24' 47"	0.75	13.1	7.935	NA	-0.31 to -5.41	8.1 to 13.1
GSGP-6	NA	NA	30° 25' 31"	90° 24' 42"	0.75	14.3	11.725	NA	-0.66 to -5.76	9.3 to 14.3
GSGP-15	NA	NA	30° 25' 29"	90° 24' 37"	0.75	15.3	13.483	NA	1.07 to -4.03	10.3 to 15.3
GSGP-18	NA	NA	30° 25' 27"	90° 24' 43"	0.75	11.5	15.284	NA	8.88 to 3.78	6.5 to 11.5
GSGP-19	NA	NA	30° 25' 27"	90° 24' 45"	0.75	13.5	13.463	NA	3.56 to -1.54	8.5 to 13.5
GSGP-22	NA	NA	30° 25' 30"	90° 24' 39"	0.75	14.85	8.382	NA	-1.37 to -6.47	9.8 to 14.8
NWGS-01	NA	NA	30° 25' 27"	90° 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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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° 25' 27"	90° 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° 25' 29"	90° 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° 25' 30"	90° 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° 25' 30"	90° 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° 25' 27"	90° 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° 25' 27"	90° 24' 46"	1	NA	NA	NA	NA	NA
Second Water-Bearing Zone										
DW-4	7000081.4	3571557.4	30° 25' 19"	90° 24' 39"	2	38	14.21	13	-14.5 to -24.5	27.5 to 37.5
MW-A	701114.99	3571481.7	30° 25' 29"	90° 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° 25' 26"	90° 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° 25' 30"	90° 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° 25' 33"	90° 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° 25' 27"	90° 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° 25' 29"	90° 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° 25' 31"	90° 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° 25' 13"	90° 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° 25' 15"	90° 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° 25' 16"	90° 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° 25' 18"	90° 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° 25' 20"	90° 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
2) ID = Identification
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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									
August-13	13.36	11.05	2.31	23.85	1.190	0.33	5.15	-132	9.5
December-13	13.36	11.56	1.80	21.45	1.037	0.21	5.37	-89	9.5
June-14	13.36	8.92	4.44	19.97	1.77	0.23	4.80	200	5.0
October-14	13.36	11.52	1.84	23.27	0.795	0.26	5.98	-62	4.8
May-15	13.36	10.19	3.17	20.06	0.786	0.18	5.81	138	2.5
DW-02									
August-13	14.12	5.59	8.53	28.76	5.70	0.22	2.53	28	0.6
December-13	14.12	6.29	7.83	19.17	5.73	1.54	2.61	230	1.6
June-14	14.12	3.28	10.84	24.27	4.66	0.18	2.76	3	0.0
October-14	14.12	5.61	8.51	25.94	5.91	0.80	2.05	65	0.6
May-15	14.12	4.48	9.64	23.02	5.49	0.24	2.93	212	0.5
DW-03									
August-13	11.59	6.65	4.94	23.94	2.23	0.16	3.27	-30	0.6
December-13	11.59	7.09	4.50	20.52	1.044	0.24	4.14	-84	7.7
June-14	11.59	5.55	6.04	19.86	3.17	0.54	3.26	-66	2.6
October-14	11.59	6.77	4.82	22.91	3.04	0.22	2.71	-28	2.7
May-15	11.59	5.88	5.71	19.70	3.91	0.14	3.38	13	1.0
MW-01									
August-13	15.08	13.00	2.08	21.31	5.33	0.25	3.09	-21	0.0
December-13	15.08	13.83	1.25	21.05	5.42	0.18	3.01	66	1.6
June-14	15.08	11.73	3.35	19.85	4.89	0.17	3.20	-79	0.0
October-14	15.08	13.70	1.38	21.35	5.02	0.15	3.49	70	1.0
May-15	15.08	13.27	1.81	20.30	4.45	0.24	3.43	124	1.9
MW-02									
August-13	14.23	8.09	6.14	27.29	0.891	0.17	2.91	238	0.0
December-13	14.23	8.99	5.24	19.97	0.887	1.68	3.01	441	4.8
June-14	14.23	6.40	7.83	22.78	1.174	0.14	3.05	344	0.4
October-14	14.23	8.07	6.16	25.81	0.887	0.17	3.33	289	1.4
May-15	14.23	6.96	7.27	21.28	0.873	0.12	3.32	418	8.1
MW-06									
August-13	16.77	9.55	7.22	21.75	0.699	1.52	3.35	259	2.7
December-13	16.77	10.60	6.17	18.77	0.813	0.36	3.38	341	8.1
June-14	16.77	6.20	10.57	18.78	0.381	1.57	3.81	1.66	6.1
October-14	16.77	9.60	7.17	21.30	0.563	0.44	3.05	274	8.0
May-15	16.77	8.00	8.77	18.43	0.396	2.50	3.75	398	5.0
PW-04									
August-13	12.22	6.70	5.52	22.91	0.838	0.12	3.64	218	0.0
December-13	12.22	7.07	5.15	19.50	0.779	0.16	3.61	110	2.4
June-14	12.22	3.90	8.32	20.45	1.217	0.19	3.80	-34	3.0
October-14	12.22	6.57	5.65	22.54	1.103	0.12	3.22	5	1.6
May-15	12.22	4.93	7.29	19.66	1.095	0.13	3.94	121	2.7
BA-03									
August-13	14.57	7.88	6.69	26.78	2.16	0.20	2.92	405	1.1
December-13	14.57	8.90	5.67	20.62	1.197	0.72	3.05	455	2.3
June-14	14.57	5.80	8.77	24.57	0.483	3.17	4.18	209	14.4
October-14	14.57	7.82	6.75	25.60	1.97	0.35	3.35	419	2.7
May-15	14.57	6.46	8.11	22.96	0.513	3.16	4.39	352	4.2
BA-09									
August-13	9.46	8.48	0.98	22.50	3.15	0.18	3.31	-69	0.0
December-13	9.46	8.88	0.58	20.56	2.12	0.22	3.23	58	2.3
June-14	9.46	6.83	2.63	19.81	1.94	0.12	3.30	-64	1.8
October-14	9.46	8.85	0.61	22.16	3.03	0.13	3.76	23	3.3
May-15	9.46	7.99	1.47	19.42	3.98	0.12	3.53	1	1.8
GSGP-03									
December-13	9.59	7.50	2.09	21.44	0.229	0.15	5.57	-69	9.9
June-14	9.59	6.49	3.10	19.86	0.249	0.90	5.48	-168	6.6
October-14	7.94	5.95	1.99	23.41	0.245	0.11	5.32	-112	9.8
May-15	7.94	5.10	2.84	20.12	0.240	0.14	5.71	-37	16.9

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)
FIRST WATER-BEARING ZONE (continued)									
GSGP-06									
December-13	8.60	7.12	1.48	19.76	3.48	0.43	3.07	-1	1.9
June-14	8.60	7.44	1.16	19.69	2.85	0.40	3.37	-105	8.7
October-14	11.73	9.24	2.49	22.17	2.61	0.45	3.63	29	2.4
May-15	11.73	8.57	3.16	19.03	2.51	0.29	3.55	-34	9.0
GSGP-15									
December-13	13.27	9.17	4.10	20.78	0.646	0.31	3.07	247	13.5
June-14	13.27	7.41	5.86	20.45	0.446	0.30	3.38	4	4.9
October-14	13.48	9.10	4.38	23.97	0.289	6.14	2.93	185	770
May-15	13.48	8.06	5.42	21.34	0.328	1.39	3.55	426	4.9
GSGP-18									
December-13	18.78	13.42	5.36	15.02	1.500	7.32	3.17	387	9.5
June-14	18.78	8.59	10.19	19.85	0.463	4.20	3.23	417	0.8
October-14	15.28	11.35	3.93	21.31	1.020	5.60	2.52	376	56.5
May-15	15.28	9.82	5.46	18.93	0.594	1.17	3.34	468	3.7
GSGP-19									
December-13	13.46	8.90	4.56	18.65	1.078	0.44	3.42	297	6.6
June-14	13.46	6.85	6.61	18.47	1.294	0.27	3.48	274	2.2
October-14	13.46	8.93	4.53	21.32	1.181	0.36	2.94	237	9.8
May-15	13.46	7.88	5.58	18.32	1.51	0.16	3.63	290	6.4
GSGP-22									
December-13	11.03	7.29	3.74	21.12	9.23	0.64	3.13	-29	3.5
June-14	11.03	6.08	4.95	20.20	10.58	0.48	3.20	-89	0.0
October-14	8.38	7.00	1.38	22.77	10.43	0.35	2.62	-58	1.5
May-15	8.38	6.29	2.09	19.99	10.30	0.17	3.39	-62	0.4
TEPA-P6									
December-13	12.02	10.53	1.49	19.71	1.59	0.26	2.97	446	9.8
June-14	12.02	8.58	3.44	18.94	1.147	0.36	3.24	248	2.2
TEPA-P7D									
December-13	NM	9.46	NA	18.94	1.117	5.59	5.41	235	1141
June-14	NM	8.09	NA	20.20	1.444	5.28	4.16	196	26.7
October-14	NM	9.82	NA	21.71	0.856	8.35	6.54	118	85.3
May-15	NM	9.19	NA	21.17	1.216	4.40	5.64	154	31.1
TEPA-P9									
December-13	NM	8.89	NA	18.82	1.223	5.24	2.92	467	5.3
June-14	NM	6.48	NA	19.26	1.299	0.41	3.09	408	1.1
TEPA-P10									
December-13	12.07	6.60	5.47	18.69	1.72	0.98	2.94	430	4.9
June-14	12.07	3.89	8.18	20.90	2.05	2.37	3.12	133	5.2
TEPA-1H									
December-13	14.16	12.65	1.51	21.85	2.16	0.31	6.06	-148	5.9
June-14	14.16	10.77	3.39	20.34	1.92	1.47	5.98	-256	3.9
TEPA-6H									
December-13	12.77	11.28	1.49	21.68	2.51	0.35	6.04	-170	5.2
June-14	12.77	9.25	3.52	20.60	2.92	0.56	5.94	-214	2.1
TEPA-9H (9G)**									
December-13	NM	6.98	NA	21.99	7.51	0.17	3.01	-37	0.6
June-14	NM	3.00	NA	21.15	9.25	0.26	3.17	-112	9.8
NWGS-01									
October-14	12.94	7.40	5.54	23.82	1.309	0.43	3.32	405	5.3
May-15	12.94	6.17	6.77	20.37	1.34	0.09	3.31	468	3.4
NWGS-02									
October-14	12.76	11.50	1.26	21.83	1.174	0.49	3.52	393	12.7
May-15	12.76	10.80	1.96	19.34	1.024	0.17	3.47	447	9.9
NWGS-03									
October-14	13.36	12.38	0.98	23.03	1.92	0.45	6.41	-142	10.4
May-15	13.36	12.11	1.25	20.67	2.00	0.09	6.26	-130	25.9

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)
FIRST WATER-BEARING ZONE (continued)									
NWGS-04									
October-14	11.91	10.12	1.79	24.80	2.79	0.23	6.23	-107	58.0
May-15	11.91	9.32	2.59	21.25	2.91	0.13	6.12	-110	8.8
NWGS-05									
October-14	11.06	9.85	1.21	23.60	0.137	5.27	3.10	311	273
May-15	11.06	8.16	2.90	21.68	0.146	5.21	3.90	405	131
NWGS-06									
October-14	11.73	10.87	0.86	21.13	0.913	0.40	2.72	378	7.8
May-15	11.73	10.31	1.42	18.78	0.788	0.59	3.54	383	9.8
SECOND WATER-BEARING ZONE									
DW-04									
August-13	14.21	5.63	8.58	21.86	1.253	0.20	6.86	-4	0.0
December-13	14.21	6.93	7.28	20.58	1.180	0.63	7.16	264	0.8
June-14	14.21	4.72	9.49	20.80	1.240	0.14	6.85	98	0.1
October-14	14.21	5.69	8.52	21.28	1.146	0.14	6.74	61	0.9
May-15	14.21	4.36	9.85	20.52	1.276	0.47	7.08	49	1.2
MW-A									
August-13	15.12	10.46	4.66	23.15	0.798	0.18	6.68	-55	3.4
December-13	15.12	11.74	3.38	21.67	0.786	0.40	6.92	8	3.2
June-14	15.12	9.10	6.02	21.43	0.822	0.20	6.81	-67	3.7
October-14	15.12	10.75	4.37	23.02	0.831	0.29	7.07	-61	2.0
May-15	15.12	9.55	5.57	21.21	0.846	0.24	7.11	-60	2.5
MW-03									
August-13	14.80	8.89	5.91	21.77	1.97	0.24	6.34	-226	3.5
December-13	14.80	10.26	4.54	19.49	1.97	0.46	6.60	-147	0.3
June-14	14.80	6.41	8.39	19.99	2.02	0.18	6.22	140	2.3
October-14	14.80	8.35	6.45	20.79	2.01	0.12	6.24	-123	1.2
May-15	14.80	5.94	8.86	19.65	2.09	0.17	6.56	102	3.3
MW-04									
August-13	17.38	14.73	2.65	20.86	0.377	1.47	6.42	-60	13.4
December-13	17.38	15.82	1.56	19.61	0.366	1.69	6.55	-42	23.9
June-14	17.38	12.87	4.51	19.84	0.383	2.18	6.16	-73	33.4
October-14	17.38	14.68	2.70	20.62	0.405	1.75	6.67	-53	8.8
May-15	17.38	13.21	4.17	19.61	0.409	2.55	6.59	69	13.9
BA-01									
August-13	14.57	7.77	6.80	24.51	2.34	0.19	5.56	-6.3	19.0
December-13	14.57	9.82	4.75	21.57	2.02	0.58	5.90	74	9.6
June-14	14.57	6.47	8.10	21.46	2.54	0.20	5.38	59	5.3
October-14	14.57	8.00	6.57	22.41	1.85	0.10	5.63	54	15.8
May-15	14.57	6.08	8.49	21.31	2.93	0.14	5.17	99	21.2
BA-05									
August-13	14.20	8.28	5.92	24.61	5.21	0.29	5.83	-22	1.1
December-13	14.20	9.76	4.44	21.36	5.86	0.27	6.01	39	9.6
June-14	14.20	7.25	6.95	21.89	6.41	0.33	5.81	-71	5.8
October-14	14.20	8.43	5.77	23.38	5.85	0.44	5.69	-16	2.6
May-15	14.20	7.29	6.91	20.75	5.62	0.27	6.12	-21	9.9
BA-09A									
August-13	11.10	1.15	9.95	21.60	0.266	0.16	6.59	-169	0.0
December-13	11.10	1.52	9.58	19.74	0.265	0.25	6.92	-66	1.9
June-14	11.10	0.97	10.13	20.63	0.269	0.21	6.68	-141	0.0
October-14	11.10	1.43	9.67	20.75	0.273	0.18	7.02	-75	1.9
May-15	11.10	0.88	10.22	20.14	0.280	0.11	6.99	-86	1.8

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									
August-13	16.32	7.19	9.13	23.85	3.35	0.26	6.70	17	0.0
December-13	16.32	8.95	7.37	21.53	3.36	1.47	7.10	155	0.7
June-14	16.32	4.99	11.33	21.99	3.48	0.21	6.68	87	0.0
October-14	16.32	6.94	9.38	23.58	3.46	0.16	6.76	-99	0.1
May-15	16.32	4.81	11.51	21.58	3.41	0.21	7.02	21	1.4
BC-07									
August-13	11.37	4.60	6.77	21.59	2.41	0.89	6.88	121	0.0
December-13	11.37	6.07	5.30	20.01	2.43	0.90	7.07	350	1.2
June-14	11.37	2.66	8.71	18.91	2.53	0.50	6.71	232	0.7
October-14	11.37	4.48	6.89	21.74	2.43	0.30	6.68	111	0.1
May-15	11.37	3.16	8.21	19.38	2.60	1.09	7.02	270	1.1
BC-17									
August-13	15.18	6.38	8.80	24.70	2.38	0.66	6.50	257	0.0
December-13	15.18	7.65	7.53	21.73	2.42	1.77	6.81	519	2.3
June-14	15.18	5.12	10.06	21.85	2.57	0.20	6.42	200	1.3
October-14	15.18	6.54	8.64	23.20	2.64	0.67	6.33	263	9.3
May-15	15.18	5.02	10.16	21.79	2.72	0.18	6.65	140	2.6
BC-19									
August-13	13.85	6.67	7.18	22.77	2.84	0.23	6.63	-13	0.0
December-13	13.85	8.08	5.77	20.67	2.86	0.86	6.93	331	0.8
June-14	13.85	5.11	8.74	19.93	2.90	0.20	6.61	87	0.3
October-14	13.85	6.51	7.34	21.72	2.92	0.19	6.52	-39	1.1
May-15	13.85	4.65	9.20	19.81	2.98	0.19	6.82	120	1.0
BC-21R									
August-13	15.28	8.13	7.15	22.78	1.322	0.16	6.50	-187	0.0
December-13	15.28	10.34	4.94	21.04	1.282	4.50	7.14	573	2.7
June-14	15.28	5.80	9.48	20.56	1.095	0.37	6.52	-100	1.1
October-14	15.28	8.61	6.67	22.39	1.324	0.13	6.40	-171	1.5
May-15	15.28	5.68	9.60	20.52	1.133	0.14	6.86	21	3.0
BC-25									
August-13	15.73	8.92	6.81	21.56	0.785	0.20	6.67	-68	1.6
December-13	15.73	10.96	4.77	19.38	0.768	0.28	6.83	156	1.2
June-14	15.73	6.90	8.83	19.94	0.788	0.13	6.59	119	0.8
October-14	15.73	9.24	6.49	20.57	0.786	0.13	6.60	16	0.0
May-15	15.73	6.56	9.17	19.87	0.849	0.15	6.81	105	1.3
THIRD WATER-BEARING ZONE									
BA-03A									
August-13	14.76	1.91	12.85	22.47	0.314	0.11	7.82	155	0.0
December-13	14.76	1.92	12.84	19.11	0.314	0.30	8.14	-99	2.3
October-14	14.76	1.92	12.84	22.76	0.322	0.14	8.02	-96	1.6
BA-05A									
August-13	14.42	3.38	11.04	23.26	0.276	0.20	7.06	-4	0.0
December-13	14.42	3.63	10.79	20.51	0.274	0.22	7.32	-27	1.5
October-14	14.42	3.55	10.87	21.74	0.285	0.45	6.91	-52	3.8
BB-01									
August-13	15.75	3.02	12.73	23.09	0.309	1.21	9.48	-126	2.8
December-13	15.75	3.07	12.68	20.07	0.308	0.33	10.03	-53	3.8
October-14	15.75	3.02	12.73	22.21	0.315	0.10	9.64	-35	3.9
BA-01A									
August-13	15.03	4.63	10.40	23.92	0.274	0.20	6.89	-151	1.3
December-13	15.03	5.12	9.91	20.78	0.274	0.20	7.40	-19	1.7
October-14	15.03	4.89	10.14	22.56	0.283	0.10	6.83	-128	2.3

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									
August-13	NA	NA	NA	21.11	0.291	2.87	8.20	-173	0.0
December-13	NA	NA	NA	18.88	0.292	2.19	7.87	-175	2.5
March-14	NA	NA	NA	21.54	0.295	2.89	8.21	-62	2.0
June-14	NA	NA	NA	22.33	0.289	2.06	7.02	-143	1.3
August-14	NA	NA	NA	25.18	0.078	2.69	8.22	-48	0.9
October-14	NA	NA	NA	20.99	0.298	5.30	7.80	-109	0.0
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
WW-04									
August-13	NA	NA	NA	22.28	0.306	3.03	8.50	-193	0.0
December-13	NA	NA	NA	17.84	0.297	3.99	9.09	-239	1.5
March-14	NA	NA	NA	20.90	0.300	2.21	8.59	-114	2.7
June-14	NA	NA	NA	21.01	0.300	5.82	8.29	-223	0.6
August-14	NA	NA	NA	24.48	0.302	2.26	8.47	-156	0.8
October-14	NA	NA	NA	20.75	0.304	5.38	8.61	-171	0.1
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
WW-09									
August-13	NA	NA	NA	22.08	0.281	6.22	7.62	-162	0.0
December-13	NA	NA	NA	16.19	0.184	4.85	7.98	-68	4.0
March-14	NA	NA	NA	19.99	0.297	4.25	8.17	-57	1.6
June-14	NA	NA	NA	22.31	0.297	5.93	7.49	-148	1.2
August-14	NA	NA	NA	23.54	0.300	1.59	8.36	-72	2.6
October-14	NA	NA	NA	20.66	0.298	7.96	7.65	-77	1.9
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
North Well									
August-13	NA	NA	NA	23.05	0.290	2.11	8.20	14	0.0
December-13	NA	NA	NA	20.44	0.293	1.00	8.82	242	1.8
March-14	NA	NA	NA	22.90	0.316	1.83	9.10	-77	3.5
June-14	NA	NA	NA	22.77	0.293	1.77	8.61	-232	0.0
August-14	NA	NA	NA	25.38	0.294	1.10	8.37	-101	0.2
October-14	NA	NA	NA	23.66	0.303	1.87	8.54	212	0.7
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
South Well									
August-13	NA	NA	NA	21.95	0.292	2.14	8.93	-176	0.0
December-13	NA	NA	NA	19.37	0.294	2.39	9.60	-156	1.9
March-14	NA	NA	NA	21.09	0.297	1.81	8.37	-80	2.1
June-14	NA	NA	NA	22.40	0.301	3.17	8.62	67	0.1
August-14	NA	NA	NA	22.04	0.312	2.00	8.31	-151	0.8
October-14	NA	NA	NA	21.92	0.302	2.28	8.94	-132	1.0
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

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						
December-13	11.99	0.211	8.79	7.20	123	118
June-14	24.71	0.076	8.01	6.27	109	51.4
October-14	20.35	0.268	6.21	6.82	70	26.3
May-15	25.86	0.283	4.84	7.07	82	24.8
CA-51						
December-13	12.27	0.232	9.15	6.64	151	116
June-14	25.27	0.073	8.15	6.11	69	51.9
October-14	19.49	0.298	5.15	6.13	70	26.2
May-15	25.25	0.283	4.85	7.11	4	1477
CL-05						
December-13	12.12	0.133	6.68	6.41	134	69.4
June-14	23.49	0.044	4.76	5.88	165	41.9
October-14	NS	NS	NS	NS	NS	NS
May-15	NS	NS	NS	NS	NS	NS
CL-19						
December-13	13.02	0.261	5.76	7.17	81	14.3
June-14	24.93	0.065	6.59	5.79	144	35.3
October-14	22.51	0.294	5.83	7.41	44	15.1
May-15	27.03	0.271	6.91	7.93	-21	15.4
Bridge						
December-13	12.11	0.153	8.86	7.31	125	120
June-14	24.22	0.078	8.49	6.62	132	53.3
October-14	20.18	0.330	7.88	7.19	90	18.0
May-15	25.54	0.296	5.97	7.30	84	19.9

NS = No Sample, dry

TABLE 6
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Delatte Metals Superfund Site
Ponchatoula, Louisiana
Agency Interest No. 2328

Line #	COC/CAS	Method	Sample ID	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	CA-51	2019932011	5/11/2015	0.01	0.001	0.0028		No
2	Total Cadmium/7440-43-9	EPA 6020	CA-51	2019932011	5/11/2015	0.005	0.001	<0.0010		No
3	Total Lead/7439-92-1	EPA 6020	CA-51	2019932011	5/11/2015	0.015	0.001	0.0014		No
4	Total Manganese/7439-96-5	EPA 6020	CA-51	2019932011	5/11/2015	0.51	0.001	0.113		No
5	Total Nickel/7440-02-0	EPA 6020	CA-51	2019932011	5/11/2015	0.073	0.001	0.0022		No
6	Total Zinc/7440-66-6	EPA 6020	CA-51	2019932011	5/11/2015	1.1	0.005	0.0088		No
7	Dissolved Arsenic/7440-38-2	EPA 6020	CA-51	2019932011	5/11/2015	0.01	0.001	0.0022		No
8	Dissolved Cadmium/7440-43-9	EPA 6020	CA-51	2019932011	5/11/2015	0.005	0.001	<0.0010		No
9	Dissolved Lead/7439-92-1	EPA 6020	CA-51	2019932011	5/11/2015	0.015	0.001	<0.0010		No
10	Dissolved Manganese/7439-96-5	EPA 6020	CA-51	2019932011	5/11/2015	0.51	0.001	0.0976		No
11	Dissolved Nickel/7440-02-0	EPA 6020	CA-51	2019932011	5/11/2015	0.073	0.001	0.0019		No
12	Dissolved Zinc/7440-66-6	EPA 6020	CA-51	2019932011	5/11/2015	1.1	0.005	0.0099		No
13	Total Arsenic/7440-38-2	EPA 6020	CA-41	2019932012	5/11/2015	0.01	0.001	0.0028		No
14	Total Cadmium/7440-43-9	EPA 6020	CA-41	2019932012	5/11/2015	0.005	0.001	<0.0010		No
15	Total Lead/7439-92-1	EPA 6020	CA-41	2019932012	5/11/2015	0.015	0.001	0.0019		No
16	Total Manganese/7439-96-5	EPA 6020	CA-41	2019932012	5/11/2015	0.51	0.001	0.163		No
17	Total Nickel/7440-02-0	EPA 6020	CA-41	2019932012	5/11/2015	0.073	0.001	0.0022		No
18	Total Zinc/7440-66-6	EPA 6020	CA-41	2019932012	5/11/2015	1.1	0.005	0.0083		No
19	Dissolved Arsenic/7440-38-2	EPA 6020	CA-41	2019932012	5/11/2015	0.01	0.001	0.0021		No
20	Dissolved Cadmium/7440-43-9	EPA 6020	CA-41	2019932012	5/11/2015	0.005	0.001	<0.0010		No
21	Dissolved Lead/7439-92-1	EPA 6020	CA-41	2019932012	5/11/2015	0.015	0.001	<0.0010		No
22	Dissolved Manganese/7439-96-5	EPA 6020	CA-41	2019932012	5/11/2015	0.51	0.001	0.116		No
23	Dissolved Nickel/7440-02-0	EPA 6020	CA-41	2019932012	5/11/2015	0.073	0.001	0.0021		No
24	Dissolved Zinc/7440-66-6	EPA 6020	CA-41	2019932012	5/11/2015	1.1	0.005	0.0067		No
25	Total Arsenic/7440-38-2	EPA 6020	BRIDGE	2019932010	5/11/2015	0.01	0.001	0.0023		No
26	Total Cadmium/7440-43-9	EPA 6020	BRIDGE	2019932010	5/11/2015	0.005	0.001	<0.0010		No
27	Total Lead/7439-92-1	EPA 6020	BRIDGE	2019932010	5/11/2015	0.015	0.001	<0.0010		No
28	Total Manganese/7439-96-5	EPA 6020	BRIDGE	2019932010	5/11/2015	0.51	0.001	0.0628		No
29	Total Nickel/7440-02-0	EPA 6020	BRIDGE	2019932010	5/11/2015	0.073	0.001	0.0019		No
30	Total Zinc/7440-66-6	EPA 6020	BRIDGE	2019932010	5/11/2015	1.1	0.005	0.0082		No
31	Dissolved Arsenic/7440-38-2	EPA 6020	BRIDGE	2019932010	5/11/2015	0.01	0.001	0.0029		No
32	Dissolved Cadmium/7440-43-9	EPA 6020	BRIDGE	2019932010	5/11/2015	0.005	0.001	<0.0010		No
33	Dissolved Lead/7439-92-1	EPA 6020	BRIDGE	2019932010	5/11/2015	0.015	0.001	0.0013		No
34	Dissolved Manganese/7439-96-5	EPA 6020	BRIDGE	2019932010	5/11/2015	0.51	0.001	0.0888		No
35	Dissolved Nickel/7440-02-0	EPA 6020	BRIDGE	2019932010	5/11/2015	0.073	0.001	0.0021		No
36	Dissolved Zinc/7440-66-6	EPA 6020	BRIDGE	2019932010	5/11/2015	1.1	0.005	0.0082		No

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37	Total Arsenic/7440-38-2	EPA 6020	CL-19	2019932013	5/11/2015	0.01	0.001	<0.0010		No
38	Total Cadmium/7440-43-9	EPA 6020	CL-19	2019932013	5/11/2015	0.005	0.001	<0.0010		No
39	Total Lead/7439-92-1	EPA 6020	CL-19	2019932013	5/11/2015	0.015	0.001	0.0014		No
40	Total Manganese/7439-96-5	EPA 6020	CL-19	2019932013	5/11/2015	0.51	0.001	0.0891		No
41	Total Nickel/7440-02-0	EPA 6020	CL-19	2019932013	5/11/2015	0.073	0.001	<0.0010		No
42	Total Zinc/7440-66-6	EPA 6020	CL-19	2019932013	5/11/2015	1.1	0.005	<0.0050		No
43	Dissolved Arsenic/7440-38-2	EPA 6020	CL-19	2019932013	5/11/2015	0.01	0.001	<0.0010		No
44	Dissolved Cadmium/7440-43-9	EPA 6020	CL-19	2019932013	5/11/2015	0.005	0.001	<0.0010		No
45	Dissolved Lead/7439-92-1	EPA 6020	CL-19	2019932013	5/11/2015	0.015	0.001	0.001		No
46	Dissolved Manganese/7439-96-5	EPA 6020	CL-19	2019932013	5/11/2015	0.51	0.001	0.0538		No
47	Dissolved Nickel/7440-02-0	EPA 6020	CL-19	2019932013	5/11/2015	0.073	0.001	<0.0010		No
48	Dissolved Zinc/7440-66-6	EPA 6020	CL-19	2019932013	5/11/2015	1.1	0.005	0.0089		No
49	Total Arsenic/7440-38-2	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	0.01	0.001	0.0015		No
50	Total Cadmium/7440-43-9	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	0.005	0.001	<0.0010		No
51	Total Lead/7439-92-1	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	0.015	0.001	<0.0010		No
52	Total Manganese/7439-96-5	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	0.51	0.001	0.0231		No
53	Total Nickel/7440-02-0	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	0.073	0.001	<0.0010		No
54	Total Zinc/7440-66-6	EPA 6020	(b) (6) WELL	2019932002	5/11/2015	1.1	0.005	<0.0050		No
55	Total Arsenic/7440-38-2	EPA 6020	WW-04	2019932003	5/11/2015	0.01	0.001	<0.0010		No
56	Total Cadmium/7440-43-9	EPA 6020	WW-04	2019932003	5/11/2015	0.005	0.001	<0.0010		No
57	Total Lead/7439-92-1	EPA 6020	WW-04	2019932003	5/11/2015	0.015	0.001	<0.0010		No
58	Total Manganese/7439-96-5	EPA 6020	WW-04	2019932003	5/11/2015	0.51	0.001	0.0032		No
59	Total Nickel/7440-02-0	EPA 6020	WW-04	2019932003	5/11/2015	0.073	0.001	<0.0010		No
60	Total Zinc/7440-66-6	EPA 6020	WW-04	2019932003	5/11/2015	1.1	0.005	<0.0050		No
61	Total Arsenic/7440-38-2	EPA 6020	BC-07	2019932005	5/11/2015	0.01	0.001	0.0013		No
62	Total Cadmium/7440-43-9	EPA 6020	BC-07	2019932005	5/11/2015	0.005	0.001	<0.0010		No
63	Total Lead/7439-92-1	EPA 6020	BC-07	2019932005	5/11/2015	0.015	0.001	<0.0010		No
64	Total Manganese/7439-96-5	EPA 6020	BC-07	2019932005	5/11/2015	0.51	0.001	0.0291		No
65	Total Nickel/7440-02-0	EPA 6020	BC-07	2019932005	5/11/2015	0.073	0.001	0.0014		No
66	Total Zinc/7440-66-6	EPA 6020	BC-07	2019932005	5/11/2015	1.1	0.005	<0.0050		No
67	Total Arsenic/7440-38-2	EPA 6020	BC-19	2019932015	5/12/2015	0.01	0.001	<0.0010		No
68	Total Cadmium/7440-43-9	EPA 6020	BC-19	2019932015	5/12/2015	0.005	0.001	<0.0010		No
69	Total Lead/7439-92-1	EPA 6020	BC-19	2019932015	5/12/2015	0.015	0.001	<0.0010		No
70	Total Manganese/7439-96-5	EPA 6020	BC-19	2019932015	5/12/2015	0.51	0.001	0.0179		No
71	Total Nickel/7440-02-0	EPA 6020	BC-19	2019932015	5/12/2015	0.073	0.001	<0.0010		No
72	Total Zinc/7440-66-6	EPA 6020	BC-19	2019932015	5/12/2015	1.1	0.005	<0.0050		No

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73	Total Arsenic/7440-38-2	EPA 6020	SOUTH WELL	2019932018	5/12/2015	0.01	0.001	<0.0010		No
74	Total Cadmium/7440-43-9	EPA 6020	SOUTH WELL	2019932018	5/12/2015	0.005	0.001	<0.0010		No
75	Total Lead/7439-92-1	EPA 6020	SOUTH WELL	2019932018	5/12/2015	0.015	0.001	<0.0010		No
76	Total Manganese/7439-96-5	EPA 6020	SOUTH WELL	2019932018	5/12/2015	0.51	0.001	0.0044		No
77	Total Nickel/7440-02-0	EPA 6020	SOUTH WELL	2019932018	5/12/2015	0.073	0.001	<0.0010		No
78	Total Zinc/7440-66-6	EPA 6020	SOUTH WELL	2019932018	5/12/2015	1.1	0.005	0.0089		No
79	Total Arsenic/7440-38-2	EPA 6020	BC-17	2019932019	5/12/2015	0.01	0.001	0.0015		No
80	Total Cadmium/7440-43-9	EPA 6020	BC-17	2019932019	5/12/2015	0.005	0.001	0.0011		No
81	**Total Lead/7439-92-1**	**EPA 6020**	**BC-17**	**2019932019**	**5/12/2015**	**0.015**	**0.001**	**0.0223**		**Yes**
82	Total Manganese/7439-96-5	EPA 6020	BC-17	2019932019	5/12/2015	0.51	0.001	0.235		No
83	Total Nickel/7440-02-0	EPA 6020	BC-17	2019932019	5/12/2015	0.073	0.001	0.0016		No
84	Total Zinc/7440-66-6	EPA 6020	BC-17	2019932019	5/12/2015	1.1	0.005	0.0122		No
85	Total Arsenic/7440-38-2	EPA 6020	NORTH WELL	2019932020	5/12/2015	0.01	0.001	<0.0010		No
86	Total Cadmium/7440-43-9	EPA 6020	NORTH WELL	2019932020	5/12/2015	0.005	0.001	<0.0010		No
87	Total Lead/7439-92-1	EPA 6020	NORTH WELL	2019932020	5/12/2015	0.015	0.001	<0.0010		No
88	Total Manganese/7439-96-5	EPA 6020	NORTH WELL	2019932020	5/12/2015	0.51	0.001	0.0053		No
89	Total Nickel/7440-02-0	EPA 6020	NORTH WELL	2019932020	5/12/2015	0.073	0.001	<0.0010		No
90	Total Zinc/7440-66-6	EPA 6020	NORTH WELL	2019932020	5/12/2015	1.1	0.005	<0.0050		No
91	Total Arsenic/7440-38-2	EPA 6020	BC-21R	2019932021	5/12/2015	0.01	0.001	<0.0010		No
92	Total Cadmium/7440-43-9	EPA 6020	BC-21R	2019932021	5/12/2015	0.005	0.001	<0.0010		No
93	Total Lead/7439-92-1	EPA 6020	BC-21R	2019932021	5/12/2015	0.015	0.001	<0.0010		No
94	Total Manganese/7439-96-5	EPA 6020	BC-21R	2019932021	5/12/2015	0.51	0.001	0.247		No
95	Total Nickel/7440-02-0	EPA 6020	BC-21R	2019932021	5/12/2015	0.073	0.001	0.0014		No
96	Total Zinc/7440-66-6	EPA 6020	BC-21R	2019932021	5/12/2015	1.1	0.005	<0.0050		No
97	Total Arsenic/7440-38-2	EPA 6020	BC-25	2019932016	5/12/2015	0.01	0.001	<0.0010		No
98	Total Cadmium/7440-43-9	EPA 6020	BC-25	2019932016	5/12/2015	0.005	0.001	<0.0010		No
99	Total Lead/7439-92-1	EPA 6020	BC-25	2019932016	5/12/2015	0.015	0.001	<0.0010		No
100	Total Manganese/7439-96-5	EPA 6020	BC-25	2019932016	5/12/2015	0.51	0.001	0.109		No
101	Total Nickel/7440-02-0	EPA 6020	BC-25	2019932016	5/12/2015	0.073	0.001	<0.0010		No
102	Total Zinc/7440-66-6	EPA 6020	BC-25	2019932016	5/12/2015	1.1	0.005	<0.0050		No

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103	Total Arsenic/7440-38-2	EPA 6020	MW-03	2019932017	5/12/2015	0.01	0.001	<0.0010		No
104	Total Cadmium/7440-43-9	EPA 6020	MW-03	2019932017	5/12/2015	0.005	0.001	<0.0010		No
105	Total Lead/7439-92-1	EPA 6020	MW-03	2019932017	5/12/2015	0.015	0.001	0.0016		No
106	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-03**	**2019932017**	**5/12/2015**	**0.51**	**0.001**	**1.32**		**Yes**
107	Total Nickel/7440-02-0	EPA 6020	MW-03	2019932017	5/12/2015	0.073	0.001	0.0012		No
108	Total Zinc/7440-66-6	EPA 6020	MW-03	2019932017	5/12/2015	1.1	0.005	<0.0050		No
109	Total Arsenic/7440-38-2	EPA 6020	MW-06	2019932006	5/11/2015	0.01	0.001	<0.0010		No
110	**Total Cadmium/7440-43-9**	**EPA 6020**	**MW-06**	**2019932006**	**5/11/2015**	**0.005**	**0.001**	**0.0185**		**Yes**
111	Total Lead/7439-92-1	EPA 6020	MW-06	2019932006	5/11/2015	0.015	0.001	<0.0010		No
112	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-06**	**2019932006**	**5/11/2015**	**0.51**	**0.001**	**1.42**		**Yes**
113	Total Nickel/7440-02-0	EPA 6020	MW-06	2019932006	5/11/2015	0.073	0.001	0.0129		No
114	Total Zinc/7440-66-6	EPA 6020	MW-06	2019932006	5/11/2015	1.1	0.005	0.0451		No
115	Total Arsenic/7440-38-2	EPA 6020	GSGP-18	2019932007	5/11/2015	0.01	0.001	<0.0010		No
116	**Total Cadmium/7440-43-9**	**EPA 6020**	**GSGP-18**	**2019932007**	**5/11/2015**	**0.005**	**0.001**	**0.142**		**Yes**
117	Total Lead/7439-92-1	EPA 6020	GSGP-18	2019932007	5/11/2015	0.015	0.001	<0.0010		No
118	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-18**	**2019932007**	**5/11/2015**	**0.51**	**0.001**	**0.687**		**Yes**
119	Total Nickel/7440-02-0	EPA 6020	GSGP-18	2019932007	5/11/2015	0.073	0.001	0.0236		No
120	Total Zinc/7440-66-6	EPA 6020	GSGP-18	2019932007	5/11/2015	1.1	0.005	0.2		No
121	Dissolved Arsenic/7440-38-2	EPA 6020	GSGP-18	2019932007	5/11/2015	0.01	0.001	<0.0010		No
122	**Dissolved Cadmium/7440-43-9**	**EPA 6020**	**GSGP-18**	**2019932007**	**5/11/2015**	**0.005**	**0.001**	**0.142**		**Yes**
123	Dissolved Lead/7439-92-1	EPA 6020	GSGP-18	2019932007	5/11/2015	0.015	0.001	<0.0010		No
124	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**GSGP-18**	**2019932007**	**5/11/2015**	**0.51**	**0.001**	**0.687**		**Yes**
125	Dissolved Nickel/7440-02-0	EPA 6020	GSGP-18	2019932007	5/11/2015	0.073	0.001	0.0236		No
126	Dissolved Zinc/7440-66-6	EPA 6020	GSGP-18	2019932007	5/11/2015	1.1	0.005	0.2		No
127	Total Arsenic/7440-38-2	EPA 6020	GSGP-19	2019932008	5/11/2015	0.01	0.001	0.0026		No
128	**Total Cadmium/7440-43-9**	**EPA 6020**	**GSGP-19**	**2019932008**	**5/11/2015**	**0.005**	**0.001**	**0.0698**		**Yes**
129	Total Lead/7439-92-1	EPA 6020	GSGP-19	2019932008	5/11/2015	0.015	0.001	0.0022		No
130	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-19**	**2019932008**	**5/11/2015**	**0.51**	**0.001**	**3.28**		**Yes**
131	Total Nickel/7440-02-0	EPA 6020	GSGP-19	2019932008	5/11/2015	0.073	0.001	0.0547		No
132	Total Zinc/7440-66-6	EPA 6020	GSGP-19	2019932008	5/11/2015	1.1	0.005	0.166		No
133	Total Arsenic/7440-38-2	EPA 6020	PW-04	2019932024	5/12/2015	0.01	0.001	0.0019	M1	No
134	Total Cadmium/7440-43-9	EPA 6020	PW-04	2019932024	5/12/2015	0.005	0.001	0.0012		No
135	Total Lead/7439-92-1	EPA 6020	PW-04	2019932024	5/12/2015	0.015	0.001	0.0013		No
136	**Total Manganese/7439-96-5**	**EPA 6020**	**PW-04**	**2019932024**	**5/12/2015**	**0.51**	**0.001**	**1.23**	**M1**	**Yes**
137	Total Nickel/7440-02-0	EPA 6020	PW-04	2019932024	5/12/2015	0.073	0.001	0.0221		No
138	Total Zinc/7440-66-6	EPA 6020	PW-04	2019932024	5/12/2015	1.1	0.005	0.0558	M1	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	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
139	Total Arsenic/7440-38-2	EPA 6020	NWGS-01	2019932036	5/13/2015	0.01	0.001	0.0027		No
140	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-01**	**2019932036**	**5/13/2015**	**0.005**	**0.001**	**0.116**		**Yes**
141	Total Lead/7439-92-1	EPA 6020	NWGS-01	2019932036	5/13/2015	0.015	0.001	0.0204		Yes
142	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-01**	**2019932036**	**5/13/2015**	**0.51**	**0.001**	**3.62**		**Yes**
143	Total Nickel/7440-02-0	EPA 6020	NWGS-01	2019932036	5/13/2015	0.073	0.001	0.055		No
144	Total Zinc/7440-66-6	EPA 6020	NWGS-01	2019932036	5/13/2015	1.1	0.005	0.212		No
145	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-01**	**2019932036**	**5/13/2015**	**250**	**10**	**1480**		**Yes**
146	Sulfide/18496-25-8	EPA 9034	NWGS-01	2019932036	5/13/2015	NA	0.02	<1.0		No
147	Total Arsenic/7440-38-2	EPA 6020	NWGS-02	2019932037	5/13/2015	0.01	0.001	0.002	M1	No
148	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-02**	**2019932037**	**5/13/2015**	**0.005**	**0.001**	**0.256**		**Yes**
149	**Total Lead/7439-92-1**	**EPA 6020**	**NWGS-02**	**2019932037**	**5/13/2015**	**0.015**	**0.001**	**0.0985**		**Yes**
150	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-02**	**2019932037**	**5/13/2015**	**0.51**	**0.001**	**2.08**	**M1**	**Yes**
151	Total Nickel/7440-02-0	EPA 6020	NWGS-02	2019932037	5/13/2015	0.073	0.001	0.0505		No
152	Total Zinc/7440-66-6	EPA 6020	NWGS-02	2019932037	5/13/2015	1.1	0.005	0.248	M1	No
153	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-02**	**2019932037**	**5/13/2015**	**250**	**10**	**914**		**Yes**
154	Sulfide/18496-25-8	EPA 9034	NWGS-02	2019932037	5/13/2015	NA	0.02	<1.0		No
155	**Total Arsenic/7440-38-2**	**EPA 6020**	**NWGS-03**	**2019932038**	**5/13/2015**	**0.01**	**0.001**	**0.0204**		**Yes**
156	Total Cadmium/7440-43-9	EPA 6020	NWGS-03	2019932038	5/13/2015	0.005	0.001	<0.0010		No
157	Total Lead/7439-92-1	EPA 6020	NWGS-03	2019932038	5/13/2015	0.015	0.001	<0.0010		No
158	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-03**	**2019932038**	**5/13/2015**	**0.51**	**0.001**	**1.65**		**Yes**
159	Total Nickel/7440-02-0	EPA 6020	NWGS-03	2019932038	5/13/2015	0.073	0.001	0.0024		No
160	Total Zinc/7440-66-6	EPA 6020	NWGS-03	2019932038	5/13/2015	1.1	0.005	0.0134		No
161	**Dissolved Arsenic/7440-38-2**	**EPA 6020**	**NWGS-03**	**2019932038**	**5/13/2015**	**0.01**	**0.001**	**0.0187**		**Yes**
162	Dissolved Cadmium/7440-43-9	EPA 6020	NWGS-03	2019932038	5/13/2015	0.005	0.001	<0.0010		No
163	Dissolved Lead/7439-92-1	EPA 6020	NWGS-03	2019932038	5/13/2015	0.015	0.001	<0.0010		No
164	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**NWGS-03**	**2019932038**	**5/13/2015**	**0.51**	**0.001**	**1.62**		**Yes**
165	Dissolved Nickel/7440-02-0	EPA 6020	NWGS-03	2019932038	5/13/2015	0.073	0.001	0.0022		No
166	Dissolved Zinc/7440-66-6	EPA 6020	NWGS-03	2019932038	5/13/2015	1.1	0.005	<0.0050		No
167	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-03**	**2019932038**	**5/13/2015**	**250**	**10**	**398**		**Yes**
168	Sulfide/18496-25-8	EPA 9034	NWGS-03	2019932038	5/13/2015	NA	0.02	<1.0		No
169	**Total Arsenic/7440-38-2**	**EPA 6020**	**NWGS-04**	**2019932032**	**5/13/2015**	**0.01**	**0.001**	**0.332**		**Yes**
170	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-04**	**2019932032**	**5/13/2015**	**0.005**	**0.001**	**0.0079**		**Yes**
171	Total Lead/7439-92-1	EPA 6020	NWGS-04	2019932032	5/13/2015	0.015	0.001	0.0053		No
172	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-04**	**2019932032**	**5/13/2015**	**0.51**	**0.001**	**3.88**		**Yes**
173	Total Nickel/7440-02-0	EPA 6020	NWGS-04	2019932032	5/13/2015	0.073	0.001	0.0165		No
174	Total Zinc/7440-66-6	EPA 6020	NWGS-04	2019932032	5/13/2015	1.1	0.005	0.0174		No
175	**Sulfate/18785-72-3**	**EPA 9056**	**NWGS-04**	**2019932032**	**5/13/2015**	**250**	**10**	**1120**	**M1**	**Yes**
176	Sulfide/18496-25-8	EPA 9034	NWGS-04	2019932032	5/13/2015	NA	0.02	<1.0		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	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
177	Total Arsenic/7440-38-2	EPA 6020	NWGS-05	2019932026	5/12/2015	0.01	0.001	<0.0010		No
178	Total Cadmium/7440-43-9	EPA 6020	NWGS-05	2019932026	5/12/2015	0.005	0.001	0.0018		No
179	Total Lead/7439-92-1	EPA 6020	NWGS-05	2019932026	5/12/2015	0.015	0.001	0.0105		No
180	Total Manganese/7439-96-5	EPA 6020	NWGS-05	2019932026	5/12/2015	0.51	0.001	0.129		No
181	Total Nickel/7440-02-0	EPA 6020	NWGS-05	2019932026	5/12/2015	0.073	0.001	0.0086		No
182	Total Zinc/7440-66-6	EPA 6020	NWGS-05	2019932026	5/12/2015	1.1	0.005	0.0248		No
183	Dissolved Arsenic/7440-38-2	EPA 6020	NWGS-05	2019932026	5/12/2015	0.01	0.001	<0.0010		No
184	Dissolved Cadmium/7440-43-9	EPA 6020	NWGS-05	2019932026	5/12/2015	0.005	0.001	0.0016		No
185	Dissolved Lead/7439-92-1	EPA 6020	NWGS-05	2019932026	5/12/2015	0.015	0.001	0.0078		No
186	Dissolved Manganese/7439-96-5	EPA 6020	NWGS-05	2019932026	5/12/2015	0.51	0.001	0.13		No
187	Dissolved Nickel/7440-02-0	EPA 6020	NWGS-05	2019932026	5/12/2015	0.073	0.001	0.0074		No
188	Dissolved Zinc/7440-66-6	EPA 6020	NWGS-05	2019932026	5/12/2015	1.1	0.005	0.0236		No
189	Sulfate/18785-72-3	EPA 9056	NWGS-05	2019932026	5/12/2015	250	10	67.8		No
190	Sulfide/18496-25-8	EPA 9034	NWGS-05	2019932026	5/12/2015	NA	0.02	<1.0		No
191	Total Arsenic/7440-38-2	EPA 6020	NWGS-06	2019932009	5/11/2015	0.01	0.001	0.002		No
192	**Total Cadmium/7440-43-9**	**EPA 6020**	**NWGS-06**	**2019932009**	**5/11/2015**	**0.005**	**0.001**	**0.069**		**Yes**
193	Total Lead/7439-92-1	EPA 6020	NWGS-06	2019932009	5/11/2015	0.015	0.001	<0.0010		No
194	**Total Manganese/7439-96-5**	**EPA 6020**	**NWGS-06**	**2019932009**	**5/11/2015**	**0.51**	**0.001**	**1.46**		**Yes**
195	Total Nickel/7440-02-0	EPA 6020	NWGS-06	2019932009	5/11/2015	0.073	0.001	0.034		No
196	Total Zinc/7440-66-6	EPA 6020	NWGS-06	2019932009	5/11/2015	1.1	0.005	0.142		No
197	Total Arsenic/7440-38-2	EPA 6020	BC-03	2019932004	5/11/2015	0.01	0.001	<0.0010		No
198	Total Cadmium/7440-43-9	EPA 6020	BC-03	2019932004	5/11/2015	0.005	0.001	<0.0010		No
199	Total Lead/7439-92-1	EPA 6020	BC-03	2019932004	5/11/2015	0.015	0.001	<0.0010		No
200	Total Manganese/7439-96-5	EPA 6020	BC-03	2019932004	5/11/2015	0.51	0.001	0.0176		No
201	Total Nickel/7440-02-0	EPA 6020	BC-03	2019932004	5/11/2015	0.073	0.001	<0.0010		No
202	Total Zinc/7440-66-6	EPA 6020	BC-03	2019932004	5/11/2015	1.1	0.005	<0.0050		No
203	Total Arsenic/7440-38-2	EPA 6020	BA-01	2019932023	5/12/2015	0.01	0.001	0.0032		No
204	Total Cadmium/7440-43-9	EPA 6020	BA-01	2019932023	5/12/2015	0.005	0.001	<0.0010		No
205	Total Lead/7439-92-1	EPA 6020	BA-01	2019932023	5/12/2015	0.015	0.001	0.0016		No
206	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-01**	**2019932023**	**5/12/2015**	**0.51**	**0.001**	**1.49**		**Yes**
207	Total Nickel/7440-02-0	EPA 6020	BA-01	2019932023	5/12/2015	0.073	0.001	0.0499		No
208	Total Zinc/7440-66-6	EPA 6020	BA-01	2019932023	5/12/2015	1.1	0.005	0.0749		No
209	Dissolved Arsenic/7440-38-2	EPA 6020	BA-01	2019932023	5/12/2015	0.01	0.001	0.0032		No
210	Dissolved Cadmium/7440-43-9	EPA 6020	BA-01	2019932023	5/12/2015	0.005	0.001	<0.0010		No
211	Dissolved Lead/7439-92-1	EPA 6020	BA-01	2019932023	5/12/2015	0.015	0.001	0.0012		No
212	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**BA-01**	**2019932023**	**5/12/2015**	**0.51**	**0.001**	**1.43**		**Yes**
213	Dissolved Nickel/7440-02-0	EPA 6020	BA-01	2019932023	5/12/2015	0.073	0.001	0.0484		No
214	Dissolved Zinc/7440-66-6	EPA 6020	BA-01	2019932023	5/12/2015	1.1	0.005	0.0683		No

TABLE 6
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Delatte Metals Superfund Site
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Line #	COC/CAS	Method	Sample ID	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
215	Total Arsenic/7440-38-2	EPA 6020	GSGP-15	2019932025	5/12/2015	0.01	0.001	0.0011		No
216	Total Cadmium/7440-43-9	EPA 6020	GSGP-15	2019932025	5/12/2015	0.005	0.001	0.0035		No
217	Total Lead/7439-92-1	EPA 6020	GSGP-15	2019932025	5/12/2015	0.015	0.001	0.002		No
218	Total Manganese/7439-96-5	EPA 6020	GSGP-15	2019932025	5/12/2015	0.51	0.001	0.287		No
219	Total Nickel/7440-02-0	EPA 6020	GSGP-15	2019932025	5/12/2015	0.073	0.001	0.0126		No
220	Total Zinc/7440-66-6	EPA 6020	GSGP-15	2019932025	5/12/2015	1.1	0.005	0.026		No
221	Total Arsenic/7440-38-2	EPA 6020	BA-05	2019932030	5/13/2015	0.01	0.001	0.002		No
222	Total Cadmium/7440-43-9	EPA 6020	BA-05	2019932030	5/13/2015	0.005	0.001	<0.0010		No
223	Total Lead/7439-92-1	EPA 6020	BA-05	2019932030	5/13/2015	0.015	0.001	<0.0010		No
224	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-05**	**2019932030**	**5/13/2015**	**0.51**	**0.001**	**9.69**		**Yes**
225	Total Nickel/7440-02-0	EPA 6020	BA-05	2019932030	5/13/2015	0.073	0.001	0.0304		No
226	Total Zinc/7440-66-6	EPA 6020	BA-05	2019932030	5/13/2015	1.1	0.005	<0.0050		No
227	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-02**	**2019932022**	**5/12/2015**	**0.01**	**0.001**	**0.0108**		**Yes**
228	**Total Cadmium/7440-43-9**	**EPA 6020**	**DW-02**	**2019932022**	**5/12/2015**	**0.005**	**0.001**	**0.0176**		**Yes**
229	Total Lead/7439-92-1	EPA 6020	DW-02	2019932022	5/12/2015	0.015	0.001	0.0126		No
230	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-02**	**2019932022**	**5/12/2015**	**0.51**	**0.001**	**8.22**		**Yes**
231	**Total Nickel/7440-02-0**	**EPA 6020**	**DW-02**	**2019932022**	**5/12/2015**	**0.073**	**0.001**	**0.26**		**Yes**
232	Total Zinc/7440-66-6	EPA 6020	DW-02	2019932022	5/12/2015	1.1	0.005	0.527		No
233	Total Arsenic/7440-38-2	EPA 6020	MW-A	2019932031	5/13/2015	0.01	0.001	<0.0010		No
234	Total Cadmium/7440-43-9	EPA 6020	MW-A	2019932031	5/13/2015	0.005	0.001	<0.0010		No
235	Total Lead/7439-92-1	EPA 6020	MW-A	2019932031	5/13/2015	0.015	0.001	<0.0010		No
236	Total Manganese/7439-96-5	EPA 6020	MW-A	2019932031	5/13/2015	0.51	0.001	0.0039		No
237	Total Nickel/7440-02-0	EPA 6020	MW-A	2019932031	5/13/2015	0.073	0.001	<0.0010		No
238	Total Zinc/7440-66-6	EPA 6020	MW-A	2019932031	5/13/2015	1.1	0.005	<0.0050		No
239	Total Arsenic/7440-38-2	EPA 6020	BA-03	2019932033	5/13/2015	0.01	0.001	0.0017		No
240	**Total Cadmium/7440-43-9**	**EPA 6020**	**BA-03**	**2019932033**	**5/13/2015**	**0.005**	**0.001**	**0.0488**		**Yes**
241	**Total Lead/7439-92-1**	**EPA 6020**	**BA-03**	**2019932033**	**5/13/2015**	**0.015**	**0.001**	**0.0364**		**Yes**
242	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-03**	**2019932033**	**5/13/2015**	**0.51**	**0.001**	**1.16**		**Yes**
243	Total Nickel/7440-02-0	EPA 6020	BA-03	2019932033	5/13/2015	0.073	0.001	0.0252		No
244	Total Zinc/7440-66-6	EPA 6020	BA-03	2019932033	5/13/2015	1.1	0.005	0.106		No
245	Total Arsenic/7440-38-2	EPA 6020	BA-09A	2019932041	5/14/2015	0.01	0.001	0.0024		No
246	Total Cadmium/7440-43-9	EPA 6020	BA-09A	2019932041	5/14/2015	0.005	0.001	<0.0010		No
247	Total Lead/7439-92-1	EPA 6020	BA-09A	2019932041	5/14/2015	0.015	0.001	<0.0010		No
248	Total Manganese/7439-96-5	EPA 6020	BA-09A	2019932041	5/14/2015	0.51	0.001	0.036		No
249	Total Nickel/7440-02-0	EPA 6020	BA-09A	2019932041	5/14/2015	0.073	0.001	<0.0010		No
250	Total Zinc/7440-66-6	EPA 6020	BA-09A	2019932041	5/14/2015	1.1	0.005	<0.0050		No

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

Delatte Metals Superfund Site
Ponchatoula, Louisiana
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Line #	COC/CAS	Method	Sample ID	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
251	Total Arsenic/7440-38-2	EPA 6020	GSGP-06	2019932042	5/14/2015	0.01	0.001	0.0057	M1	No
252	Total Cadmium/7440-43-9	EPA 6020	GSGP-06	2019932042	5/14/2015	0.005	0.001	<0.0010		No
253	Total Lead/7439-92-1	EPA 6020	GSGP-06	2019932042	5/14/2015	0.015	0.001	0.0015		No
254	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-06**	**2019932042**	**5/14/2015**	**0.51**	**0.001**	**2.59**	**M1**	**Yes**
255	**Total Nickel/7440-02-0**	**EPA 6020**	**GSGP-06**	**2019932042**	**5/14/2015**	**0.073**	**0.001**	**0.209**		**Yes**
256	Total Zinc/7440-66-6	EPA 6020	GSGP-06	2019932042	5/14/2015	1.1	0.005	0.0548	M1	No
257	Total Arsenic/7440-38-2	EPA 6020	MW-04	2019932043	5/14/2015	0.01	0.001	<0.0010		No
258	Total Cadmium/7440-43-9	EPA 6020	MW-04	2019932043	5/14/2015	0.005	0.001	<0.0010		No
259	Total Lead/7439-92-1	EPA 6020	MW-04	2019932043	5/14/2015	0.015	0.001	0.0012		No
260	Total Manganese/7439-96-5	EPA 6020	MW-04	2019932043	5/14/2015	0.51	0.001	0.0189		No
261	Total Nickel/7440-02-0	EPA 6020	MW-04	2019932043	5/14/2015	0.073	0.001	<0.0010		No
262	Total Zinc/7440-66-6	EPA 6020	MW-04	2019932043	5/14/2015	1.1	0.005	<0.0050		No
263	Dissolved Arsenic/7440-38-2	EPA 6020	MW-04	2019932043	5/14/2015	0.01	0.001	<0.0010		No
264	Dissolved Cadmium/7440-43-9	EPA 6020	MW-04	2019932043	5/14/2015	0.005	0.001	<0.0010		No
265	Dissolved Lead/7439-92-1	EPA 6020	MW-04	2019932043	5/14/2015	0.015	0.001	<0.0010		No
266	Dissolved Manganese/7439-96-5	EPA 6020	MW-04	2019932043	5/14/2015	0.51	0.001	<0.0010		No
267	Dissolved Nickel/7440-02-0	EPA 6020	MW-04	2019932043	5/14/2015	0.073	0.001	<0.0010		No
268	Dissolved Zinc/7440-66-6	EPA 6020	MW-04	2019932043	5/14/2015	1.1	0.005	<0.0050		No
269	Total Arsenic/7440-38-2	EPA 6020	WW-09	2019932044	5/14/2015	0.01	0.001	<0.0010		No
270	Total Cadmium/7440-43-9	EPA 6020	WW-09	2019932044	5/14/2015	0.005	0.001	<0.0010		No
271	Total Lead/7439-92-1	EPA 6020	WW-09	2019932044	5/14/2015	0.015	0.001	<0.0010		No
272	Total Manganese/7439-96-5	EPA 6020	WW-09	2019932044	5/14/2015	0.51	0.001	0.0191		No
273	Total Nickel/7440-02-0	EPA 6020	WW-09	2019932044	5/14/2015	0.073	0.001	<0.0010		No
274	Total Zinc/7440-66-6	EPA 6020	WW-09	2019932044	5/14/2015	1.1	0.005	<0.0050		No
275	Total Arsenic/7440-38-2	EPA 6020	GSGP-03	2019932001	5/11/2015	0.01	0.001	0.0035		No
276	Total Cadmium/7440-43-9	EPA 6020	GSGP-03	2011404001	5/11/2015	0.005	0.001	<0.0010		No
277	Total Lead/7439-92-1	EPA 6020	GSGP-03	2011404001	5/11/2015	0.015	0.001	<0.0010		No
278	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-03**	**2011404001**	**5/11/2015**	**0.51**	**0.001**	**0.89**		**Yes**
279	Total Nickel/7440-02-0	EPA 6020	GSGP-03	2011404001	5/11/2015	0.073	0.001	<0.0010		No
280	Total Zinc/7440-66-6	EPA 6020	GSGP-03	2011404001	5/11/2015	1.1	0.005	0.0053		No
281	Dissolved Arsenic/7440-38-2	EPA 6020	GSGP-03	2011404001	5/11/2015	0.01	0.001	0.0034		No
282	**Dissolved Cadmium/7440-43-9**	**EPA 6020**	GSGP-03	2011404001	5/11/2015	0.005	0.001	<0.0010		No
283	Dissolved Lead/7439-92-1	EPA 6020	GSGP-03	2011404001	5/11/2015	**0.015**	**0.001**	<0.0010		No
284	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**GSGP-03**	**2011404001**	**5/11/2015**	**0.51**	**0.001**	**0.832**	**M1**	**Yes**
285	Dissolved Nickel/7440-02-0	EPA 6020	GSGP-03	2011404001	5/11/2015	0.073	0.001	<0.0010		No
286	Dissolved Zinc/7440-66-6	EPA 6020	GSGP-03	2011404001	5/11/2015	1.1	0.005	<0.0050		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	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
287	Total Arsenic/7440-38-2	EPA 6020	DW-04	2019932014	5/12/2015	0.01	0.001	0.0024		No
288	Total Cadmium/7440-43-9	EPA 6020	DW-04	2019932014	5/12/2015	0.005	0.001	<0.0010		No
289	Total Lead/7439-92-1	EPA 6020	DW-04	2019932014	5/12/2015	0.015	0.001	<0.0010		No
290	Total Manganese/7439-96-5	EPA 6020	DW-04	2019932014	5/12/2015	0.51	0.001	0.0463		No
291	Total Nickel/7440-02-0	EPA 6020	DW-04	2019932014	5/12/2015	0.073	0.001	<0.0010		No
292	Total Zinc/7440-66-6	EPA 6020	DW-04	2019932014	5/12/2015	1.1	0.005	<0.0050		No
293	Total Arsenic/7440-38-2	EPA 6020	MW-02	2019932034	5/13/2015	0.01	0.001	0.0012		No
294	**Total Cadmium/7440-43-9**	**EPA 6020**	**MW-02**	**2019932034**	**5/13/2015**	**0.005**	**0.001**	**0.0637**		**Yes**
295	Total Lead/7439-92-1	EPA 6020	MW-02	2019932034	5/13/2015	0.015	0.001	0.0041		No
296	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-02**	**2019932034**	**5/13/2015**	**0.51**	**0.001**	**0.914**		**Yes**
297	Total Nickel/7440-02-0	EPA 6020	MW-02	2019932034	5/13/2015	0.073	0.001	0.0345		No
298	Total Zinc/7440-66-6	EPA 6020	MW-02	2019932034	5/13/2015	1.1	0.005	0.145		No
299	**Sulfate/18785-72-3**	**EPA 9056**	**MW-02**	**2019932034**	**5/13/2015**	**250**	**10**	**556**		**Yes**
300	Sulfide/18496-25-8	EPA 9034	MW-02	2019932034	5/13/2015	NA	0.02	<1.0		No
301	Total Arsenic/7440-38-2	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.01	0.001	0.0024		No
302	**Total Cadmium/7440-43-9**	**EPA 6020**	**TEPA-P7D**	**2019932035**	**5/13/2015**	**0.005**	**0.001**	**0.0801**		**Yes**
303	Total Lead/7439-92-1	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.015	0.001	0.0131		No
304	**Total Manganese/7439-96-5**	**EPA 6020**	**TEPA-P7D**	**2019932035**	**5/13/2015**	**0.51**	**0.001**	**2.07**		**Yes**
305	Total Nickel/7440-02-0	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.073	0.001	0.0353		No
306	Total Zinc/7440-66-6	EPA 6020	TEPA-P7D	2019932035	5/13/2015	1.1	0.005	0.127		No
307	Dissolved Arsenic/7440-38-2	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.01	0.001	<0.0010		No
308	**Dissolved Cadmium/7440-43-9**	**EPA 6020**	**TEPA-P7D**	**2019932035**	**5/13/2015**	**0.005**	**0.001**	**0.0828**		**Yes**
309	Dissolved Lead/7439-92-1	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.015	0.001	0.0056		No
310	**Dissolved Manganese/7439-96-5**	**EPA 6020**	**TEPA-P7D**	**2019932035**	**5/13/2015**	**0.51**	**0.001**	**2.11**		**Yes**
311	Dissolved Nickel/7440-02-0	EPA 6020	TEPA-P7D	2019932035	5/13/2015	0.073	0.001	0.0358		No
312	Dissolved Zinc/7440-66-6	EPA 6020	TEPA-P7D	2019932035	5/13/2015	1.1	0.005	0.141		No
313	**Sulfate/18785-72-3**	**EPA 9056**	**TEPA-P7D**	**2019932035**	**5/13/2015**	**250**	**50**	**457**		**Yes**
314	Sulfide/18496-25-8	EPA 9034	TEPA-P7D	2019932035	5/13/2015	NA	0.02	<1.0		No
315	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-01**	**2019932029**	**5/12/2015**	**0.01**	**0.001**	**0.167**		**Yes**
316	**Total Cadmium/7440-43-9**	**EPA 6020**	**DW-01**	**2019932029**	**5/12/2015**	**0.005**	**0.001**	**0.0456**		**Yes**
317	Total Lead/7439-92-1	EPA 6020	DW-01	2019932029	5/12/2015	0.015	0.001	<0.0010		No
318	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-01**	**2019932029**	**5/12/2015**	**0.51**	**0.001**	**0.674**		**Yes**
319	Total Nickel/7440-02-0	EPA 6020	DW-01	2019932029	5/12/2015	0.073	0.001	0.0067		No
320	Total Zinc/7440-66-6	EPA 6020	DW-01	2019932029	5/12/2015	1.1	0.005	0.0824		No
321	Sulfate/18785-72-3	EPA 9056	DW-01	2019932029	5/12/2015	250	50	194		No
322	Sulfide/18496-25-8	EPA 9034	DW-01	2019932029	5/12/2015	NA	0.02	<1.0		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	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
323	**Total Arsenic/7440-38-2**	**EPA 6020**	**MW-01**	**2019932039**	**5/13/2015**	**0.01**	**0.001**	**0.012**		Yes
324	Total Cadmium/7440-43-9	EPA 6020	MW-01	2019932039	5/13/2015	0.005	0.001	0.0022		No
325	Total Lead/7439-92-1	EPA 6020	MW-01	2019932039	5/13/2015	0.015	0.001	0.003		No
326	**Total Manganese/7439-96-5**	**EPA 6020**	**MW-01**	**2019932039**	**5/13/2015**	**0.51**	**0.001**	**4.42**		Yes
327	**Total Nickel/7440-02-0**	**EPA 6020**	**MW-01**	**2019932039**	**5/13/2015**	**0.073**	**0.001**	**0.113**		Yes
328	Total Zinc/7440-66-6	EPA 6020	MW-01	2019932039	5/13/2015	1.1	0.005	0.112		No
329	**Sulfate/18785-72-3**	**EPA 9056**	**MW-01**	**2019932039**	**5/13/2015**	**250**	**100**	**4660**		Yes
330	Sulfide/18496-25-8	EPA 9034	MW-01	2019932039	5/13/2015	NA	0.02	<1.0		No
331	**Total Arsenic/7440-38-2**	**EPA 6020**	**GSGP-22**	**2019932028**	**5/12/2015**	**0.01**	**0.001**	**0.0104**		Yes
332	Total Cadmium/7440-43-9	EPA 6020	GSGP-22	2019932028	5/12/2015	0.005	0.001	<0.0010		No
333	Total Lead/7439-92-1	EPA 6020	GSGP-22	2019932028	5/12/2015	0.015	0.001	<0.0010		No
334	**Total Manganese/7439-96-5**	**EPA 6020**	**GSGP-22**	**2019932028**	**5/12/2015**	**0.51**	**0.01**	**15.4**		Yes
335	**Total Nickel/7440-02-0**	**EPA 6020**	**GSGP-22**	**2019932028**	**5/12/2015**	**0.073**	**0.001**	**0.261**		Yes
336	Total Zinc/7440-66-6	EPA 6020	GSGP-22	2019932028	5/12/2015	1.1	0.005	0.049		No
337	**Sulfate/18785-72-3**	**EPA 9056**	**GSGP-22**	**2019932028**	**5/12/2015**	**250**	**500**	**12700**		Yes
338	Sulfide/18496-25-8	EPA 9034	GSGP-22	2019932028	5/12/2015	NA	0.02	4		No
339	**Total Arsenic/7440-38-2**	**EPA 6020**	**DW-03**	**2019932027**	**5/12/2015**	**0.01**	**0.001**	**0.0143**		Yes
340	Total Cadmium/7440-43-9	EPA 6020	DW-03	2019932027	5/12/2015	0.005	0.001	0.0021		No
341	Total Lead/7439-92-1	EPA 6020	DW-03	2019932027	5/12/2015	0.015	0.001	0.0077		No
342	**Total Manganese/7439-96-5**	**EPA 6020**	**DW-03**	**2019932027**	**5/12/2015**	**0.51**	**0.001**	**4.21**		Yes
343	**Total Nickel/7440-02-0**	**EPA 6020**	**DW-03**	**2019932027**	**5/12/2015**	**0.073**	**0.001**	**0.127**		Yes
344	Total Zinc/7440-66-6	EPA 6020	DW-03	2019932027	5/12/2015	1.1	0.005	0.156		No
345	**Sulfate/18785-72-3**	**EPA 9056**	**DW-03**	**2019932027**	**5/12/2015**	**250**	**50**	**4000**	**M1**	Yes
346	Sulfide/18496-25-8	EPA 9034	DW-03	2019932027	5/12/2015	NA	0.1	<1.0		No
347	Total Arsenic/7440-38-2	EPA 6020	BA-09	2019932040	5/14/2015	0.01	0.001	0.0066		No
348	Total Cadmium/7440-43-9	EPA 6020	BA-09	2019932040	5/14/2015	0.005	0.001	<0.0010		No
349	Total Lead/7439-92-1	EPA 6020	BA-09	2019932040	5/14/2015	0.015	0.001	<0.0010		No
350	**Total Manganese/7439-96-5**	**EPA 6020**	**BA-09**	**2019932040**	**5/14/2015**	**0.51**	**0.001**	**3.7**		Yes
351	**Total Nickel/7440-02-0**	**EPA 6020**	**BA-09**	**2019932040**	**5/14/2015**	**0.073**	**0.001**	**0.101**		Yes
352	Total Zinc/7440-66-6	EPA 6020	BA-09	2019932040	5/14/2015	1.1	0.005	0.113		No
353	**Sulfate/18785-72-3**	**EPA 9056**	**BA-09**	**2019932040**	**5/14/2015**	**250**	**50**	**7560**		Yes
354	Sulfide/18496-25-8	EPA 9034	BA-09	2019932040	5/14/2015	NA	0.1	<1.0		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	Lab Sample Identification	Sample Date	Limiting Standard mg/L	Reporting Limit mg/L	Sample Result mg/L	QA/QC Flag	Exceed Limiting Standard
355	Total Arsenic/7440-38-2	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	0.01	0.001	0.0015		No
356	Total Cadmium/7440-43-9	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	0.005	0.001	<0.0010		No
357	Total Lead/7439-92-1	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	0.015	0.001	<0.0010		No
358	Total Manganese/7439-96-5	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	0.51	0.001	0.0234		No
359	Total Nickel/7440-02-0	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	0.073	0.001	<0.0010		No
360	Total Zinc/7440-66-6	EPA 6020	DUPLICATE #1	2019932045	5/11/2015	1.1	0.005	<0.0050		No
361	**Total Arsenic/7440-38-2**	**EPA 6020**	**DUPLICATE #2**	**2019932046**	**5/12/2015**	**0.01**	**0.001**	**0.0106**		**Yes**
362	**Total Cadmium/7440-43-9**	**EPA 6020**	**DUPLICATE #2**	**2019932046**	**5/12/2015**	**0.005**	**0.001**	**0.018**		**Yes**
363	Total Lead/7439-92-1	EPA 6020	DUPLICATE #2	2019932046	5/12/2015	0.015	0.001	0.0127		No
364	**Total Manganese/7439-96-5**	**EPA 6020**	**DUPLICATE #2**	**2019932046**	**5/12/2015**	**0.51**	**0.001**	**8.56**		**Yes**
365	**Total Nickel/7440-02-0**	**EPA 6020**	**DUPLICATE #2**	**2019932046**	**5/12/2015**	**0.073**	**0.001**	**0.263**		**Yes**
366	Total Zinc/7440-66-6	EPA 6020	DUPLICATE #2	2019932046	5/12/2015	1.1	0.005	0.533		No
367	Total Arsenic/7440-38-2	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	0.01	0.001	<0.0010		No
368	Total Cadmium/7440-43-9	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	0.005	0.001	<0.0010		No
369	Total Lead/7439-92-1	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	0.015	0.001	0.0023		No
370	Total Manganese/7439-96-5	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	0.51	0.001	0.004		No
371	Total Nickel/7440-02-0	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	0.073	0.001	<0.0010		No
372	Total Zinc/7440-66-6	EPA 6020	DUPLICATE #3	2019932047	5/13/2015	1.1	0.005	0.0111		No
373	Total Arsenic/7440-38-2	EPA 6020	DUPLICATE #4	2019932048	5/13/2015	0.01	0.001	0.0027		No
374	Total Cadmium/7440-43-9	EPA 6020	DUPLICATE #4	2019932048	5/13/2015	0.005	0.001	0.116		Yes
375	Total Lead/7439-92-1	EPA 6020	DUPLICATE #4	2019932048	5/13/2015	0.015	0.001	0.0205		Yes
376	**Total Manganese/7439-96-5**	**EPA 6020**	**DUPLICATE #4**	**2019932048**	**5/13/2015**	**0.51**	**0.001**	**3.63**		**Yes**
377	Total Nickel/7440-02-0	EPA 6020	DUPLICATE #4	2019932048	5/13/2015	0.073	0.001	0.0545		No
378	Total Zinc/7440-66-6	EPA 6020	DUPLICATE #4	2019932048	5/13/2015	1.1	0.005	0.212		No
379	**Sulfate/18785-72-3**	**EPA 9056**	**DUPLICATE #4**	**2019932048**	**5/13/2015**	**250**	**500**	**1440**		**Yes**
380	Sulfide/18496-25-8	EPA 9034	DUPLICATE #4	2019932048	5/13/2015	NA	0.02	<1.0		No
381	Total Arsenic/7440-38-2	EPA 6020	DUPLICATE #5	2019932049	5/14/2015	0.01	0.001	0.0064		No
382	Total Cadmium/7440-43-9	EPA 6020	DUPLICATE #5	2019932049	5/14/2015	0.005	0.001	<0.0010		No
383	Total Lead/7439-92-1	EPA 6020	DUPLICATE #5	2019932049	5/14/2015	0.015	0.001	<0.0010		No
384	**Total Manganese/7439-96-5**	**EPA 6020**	**DUPLICATE #5**	**2019932049**	**5/14/2015**	**0.51**	**0.001**	**3.6**		**Yes**
385	**Total Nickel/7440-02-0**	**EPA 6020**	**DUPLICATE #5**	**2019932049**	**5/14/2015**	**0.073**	**0.001**	**0.0975**		**Yes**
386	Total Zinc/7440-66-6	EPA 6020	DUPLICATE #5	2019932049	5/14/2015	1.1	0.005	0.106		No
387	**Sulfate/18785-72-3**	**EPA 9056**	**DUPLICATE #5**	**2019932049**	**5/14/2015**	**250**	**500**	**7500**		**Yes**
388	Sulfide/18496-25-8	EPA 9034	DUPLICATE #5	2019932049	5/14/2015	NA	0.02	<1.0		No

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

TABLE 7
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISANA
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																		
August-13	13.36	11.05	2.31	**5.15**	--	--	**0.422**	0.002 J	0.0026 J	**1.37**	0.0116	0.0422	--	--	--	--	--	--
December-13	13.36	11.05	2.31	**5.37**	< 0.02	**571**	**0.128**	0.00333	0.00113	**1.33**	0.0114	0.0401	--	--	--	--	--	--
June-14	13.36	8.92	4.44	**4.80**	<25.0	**1,210**	**0.109**	**0.0668**	0.0037	**3.44**	0.0325	0.213	--	--	--	--	--	--
October-14	13.36	11.52	1.84	**5.98**	<1.0	**270**	**0.14**	0.0037	<0.0010	**0.704**	0.0065	0.0367	--	--	--	--	--	--
May-15	13.36	11.52	1.84	**5.81**	<1.0	194	**0.167**	**0.0456**	<0.0010	**0.674**	0.0067	0.0824	--	--	--	--	--	--
DW-02																		
August-13	14.12	5.59	8.53	**2.53**	--	--	**0.0645**	**0.0314**	**0.0201**	**14.2**	**0.587**	**1.57**	--	--	--	--	--	--
December-13	14.12	6.29	7.83	**2.61**	--	--	**0.0144 J**	**0.0184**	**0.0154**	**7.57**	**0.292 J**	0.598 J	--	--	--	--	--	--
June-14	14.12	3.28	10.84	**2.76**	--	--	**0.0174**	**0.0274**	**0.0366**	**9.36**	**0.307**	0.571	--	--	--	--	--	--
October-14	14.12	5.61	8.51	**2.05**	--	--	**0.0147**	**0.042**	**0.0184**	**14**	**0.319**	**1.19**	--	--	--	--	--	--
May-15	14.12	4.48	9.64	**2.93**	--	--	**0.0108**	**0.0176**	0.0126	**8.22**	**0.260**	0.527	--	--	--	--	--	--
DW-03																		
August-13	11.59	6.65	4.94	**3.27**	--	--	**0.0401**	0.0018 J	0.0071	**3.08**	**0.128**	0.182	--	--	--	--	--	--
December-13	11.59	7.09	4.50	**4.14**	0.897	**481**	**0.0110**	< 0.001	0.00764	**1.41**	0.0429	0.0566	--	--	--	--	--	--
June-14	11.59	5.55	6.04	**3.26**	<25.0	**4,580**	**0.0138**	0.0014	0.0053	**3.62**	**0.119**	0.148	--	--	--	--	--	--
October-14	11.59	6.77	4.82	**2.71**	<1.0	**3,410**	**0.0190**	0.0024	0.0118	**3.94**	**0.134**	0.15	--	--	--	--	--	--
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	--	--	--	--	--	--
MW-01																		
August-13	15.08	13.00	2.08	**3.09**	--	--	**0.0552**	0.0031 J	0.0027 J	**7.83**	**0.284**	0.309	--	--	--	--	--	--
December-13	15.08	13.83	1.25	**3.01**	< 0.02	**3,660**	**0.0180**	**0.00979**	0.0123	**4.87**	**0.155**	0.146	--	--	--	--	--	--
June-14	15.08	11.73	3.35	**3.20**	<25.0	**12,300**	**0.0122**	0.0015	0.0022	**4.85**	**0.133**	0.122	--	--	--	--	--	--
October-14	15.08	13.70	1.38	**3.49**	<1.0	**8,060**	**0.0117**	0.0024	0.0022	**6.16**	**0.143**	0.123	--	--	--	--	--	--
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	--	--	--	--	--	--
MW-02																		
August-13	14.23	8.09	6.14	**2.91**	--	--	0.002 J	**0.0621**	0.002 J	**0.999**	0.0461	0.197	--	--	--	--	--	--
December-13	14.23	8.99	5.24	**3.01**	< 0.02	**332**	< 0.001 J	**0.51**	**0.0316**	**0.663**	**0.0987 J**	0.447 J	--	--	--	--	--	--
June-14	14.23	6.40	7.83	**3.05**	<25.0	**1,600**	0.0015	**0.0994**	0.0086	**1.47**	0.0564	0.204	--	--	--	--	--	--
October-14	14.23	8.07	6.16	**3.33**	<1.0	**609**	<0.0010	**0.0612**	0.0033	**1.24**	0.0396	0.160	--	--	--	--	--	--
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	--	--	--	--	--	--
MW-06																		
August-13	16.77	9.55	7.22	**3.35**	--	--	0.0038	**0.044**	0.0007 J	**3.19**	0.0293	0.0902	--	--	--	--	--	--
December-13	16.77	10.60	6.17	**3.38**	--	--	0.00212	**0.0527**	< 0.001	**2.58**	0.0260	0.0856	--	--	--	--	--	--
June-14	16.77	6.20	10.57	**3.81**	--	--	0.0016	**0.0193**	<0.0010	**1.47**	0.0120	0.0382	--	--	--	--	--	--
October-14	16.77	9.60	7.17	**3.05**	--	--	0.0014	**0.0411**	<0.0010	**2.44**	0.0209	0.0708	--	--	--	--	--	--
May-15	16.77	8.00	8.77	**3.75**	--	--	<0.0010	**0.0185**	<0.0010	**1.42**	0.0129	0.0451	--	--	--	--	--	--
PW-04																		
August-13	12.22	6.70	5.52	**3.64**	--	--	0.0039 J	0.0022 J	0.0012 J	**0.887**	0.0216	0.0723	--	--	--	--	--	--
December-13	12.22	7.07	5.15	**3.61**	--	--	0.00308	0.00125	< 0.001	**0.987**	0.0202	0.0528	--	--	--	--	--	--
June-14	12.22	3.90	8.32	**3.80**	--	--	0.0026	0.0014	0.0012	**1.58**	0.0290	0.0656	--	--	--	--	--	--
October-14	12.22	6.57	5.65	**3.22**	--	--	0.0033	<0.0010	0.0011	**1.53**	0.0291	0.0716	--	--	--	--	--	--
May-15	12.22	4.93	7.29	**3.94**	--	--	0.0019	0.0012	0.0013	**1.23**	0.0221	0.0558	--	--	--	--	--	--
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																		
August-13	14.57	7.88	6.69	**2.92**	--	--	**0.0709**	**0.251 J**	**0.268**	**6.74**	**0.179**	0.783	--	--	--	--	--	--
December-13	14.57	8.90	5.67	**3.05**	--	--	0.00208	**0.108**	**0.104**	**2.39**	0.0618	0.253	--	--	--	--	--	--
June-14	14.57	5.80	8.77	**4.18**	--	--	0.0020	**0.0531**	**0.0394**	**1.03**	0.0314	0.123	0.0014	**0.0522**	**0.0350**	**1.02**	0.0303	0.123
October-14	14.57	7.82	6.75	**3.35**	--	--	0.0022	**0.228**	**0.244**	**6.44**	**0.116**	0.419	--	--	--	--	--	--
May-15	14.57	6.46	8.11	**4.39**	--	--	0.0017	**0.0488**	**0.0364**	**1.16**	0.0252	0.106	--	--	--	--	--	--
BA-09																		
August-13	9.46	8.48	0.98	**3.31**	--	--	**0.0305**	< 0.00053	< 0.00017	**4.32**	**0.182**	0.256	--	--	--	--	--	--
December-13	9.46	8.88	0.58	**3.23**	0.544	**1,220**	**0.0119**	< 0.001	< 0.001	**1.67**	**0.0827**	0.109	--	--	--	--	--	--
June-14	9.46	6.83	2.63	**3.30**	<25.0	**6,450**	0.0098 J	<0.0010 J	<0.0010	**1.51 J**	**0.0737 J**	0.0904 J	--	--	--	--	--	--
October-14	9.46	8.85	0.61	**3.76**	<1.0	**4,080**	0.0091	<0.0010	<0.0010	**3.09**	**0.0948**	0.101	--	--	--	--	--	--
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	--	--	--	--	--	--
GSGP-03																		
December-13	9.59	7.50	2.09	**5.57**	--	--	0.00325	< 0.001	< 0.001	**0.747**	< 0.001	0.00597	--	--	--	--	--	--
June-14	9.59	6.49	3.10	**5.48**	--	--	0.0033	<0.0010	<0.0010	**0.830**	<0.0010	<0.0050	--	--	--	--	--	--
October-14	9.59	5.95	3.64	**5.32**	--	--	0.0051	0.0011	**0.0612**	**1.04**	0.0088	0.121	--	--	--	--	--	--
May-15	9.59	5.10	4.49	**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
GSGP-06																		
December-13	8.60	7.12	1.48	**3.07**	--	--	0.00564	< 0.001	< 0.001	**3.52**	**0.374**	0.124	--	--	--	--	--	--
June-14	8.60	7.44	1.16	**3.37**	--	--	0.0075	<0.0010	<0.0010	**2.79**	**0.234**	0.0575	--	--	--	--	--	--
October-14	8.60	9.24	-0.64	**3.63**	--	--	0.0040	<0.0010	0.0016	**2.99**	**0.352**	0.0892	--	--	--	--	--	--
May-15	8.60	8.57	0.03	**3.55**	--	--	0.0057	<0.0010	0.0015	**2.59**	**0.209**	0.0548	--	--	--	--	--	--
GSGP-15																		
December-13	13.27	9.17	4.10	**3.07**	--	--	0.00832	**0.0066**	0.00264	**0.808**	0.0294	0.0628	0.00810	**0.00628**	0.00214	**0.786**	0.0286	0.0626
June-14	13.27	7.41	5.86	**3.38**	--	--	0.0017	0.0045	0.0065	**0.491**	0.0180	0.0376	--	--	--	--	--	--
October-14	13.27	9.10	4.17	**2.93**	--	--	0.0026	0.0044	**0.0277**	0.343	0.0175	0.0707	0.0018	0.0048	0.0070	0.383	0.0182	0.0902
May-15	13.27	8.06	5.21	**3.55**	--	--	0.0011	0.0035	0.0020	0.287	0.0126	0.0260	--	--	--	--	--	--
GSGP-18																		
December-13	18.78	13.42	5.36	**3.17**	--	--	0.00918	**0.0441**	**0.0703**	**6.00**	**0.116**	0.320	0.00183	**0.117**	0.0104	**2.46**	0.0616	0.267
June-14	18.78	8.59	10.19	**3.23**	--	--	<0.0010	**0.0954**	0.0011	**0.572**	0.0207	0.151	--	--	--	--	--	--
October-14	18.78	11.35	7.43	**2.52**	--	--	0.0039	**0.212**	0.0085	**1.51**	0.0458	0.355	<0.0010	**0.198**	0.0011	**1.44**	0.0442	0.333
May-15	18.78	9.82	8.96	**3.34**	--	--	<0.0010	**0.142**	<0.0010	**0.687**	0.0236	0.200	--	--	--	--	--	--
GSGP-19																		
December-13	13.46	8.90	4.56	**3.42**	--	--	0.00626	**0.0553**	0.00175	**2.1**	0.0462	0.149	--	--	--	--	--	--
June-14	13.46	6.85	6.61	**3.48**	--	--	0.0043	**0.0656**	0.0023	**2.71**	0.0504	0.172	--	--	--	--	--	--
October-14	13.46	8.93	4.53	**2.94**	--	--	0.0068	**0.0555**	0.0021	**2.85**	0.0494	0.155	--	--	--	--	--	--
May-15	13.46	7.88	5.58	**3.63**	--	--	0.0026 J	**0.0698**	0.0022	**3.28**	0.0547	0.166 J	--	--	--	--	--	--
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																		
December-13	11.03	7.29	3.74	**3.13**	< 0.02	**5,880**	**0.0146**	< 0.001	< 0.001	**16.8**	**0.296**	0.07	--	--	--	--	--	--
June-14	11.03	6.08	4.95	**3.20**	<25.0	**29100 J**	**0.0141 J**	<0.0010 J	<0.0010	**15.0 J**	**0.345 J**	0.0534 J	--	--	--	--	--	--
October-14	11.03	7.00	4.03	**2.62**	<1.0	**23,400**	**0.0115**	<0.0010	<0.0010	**24.1**	**0.318**	0.0637	--	--	--	--	--	--
May-15	11.03	6.29	4.74	**3.39**	4.0	**12,700**	**0.0104**	<0.0010	<0.0010	**15.4**	**0.261**	0.0490	--	--	--	--	--	--
TEPA-P6*																		
December-13	12.02	10.53	1.49	**2.97**	< 0.02	**783**	0.00698	**0.171**	**0.0805**	**2.66**	0.069	0.333	--	--	--	--	--	--
June-14	12.02	8.58	3.44	**3.24**	<25.0	**1,570**	0.0046	**0.194**	**0.0798**	**2.52**	0.0500	0.278	--	--	--	--	--	--
TEPA-P7D																		
December-13	NM	9.46	NA	**5.41**	< 0.02	**694**	0.00384	**0.0376**	0.0135	**1.34**	0.0253	0.0804	< 0.001	**0.113**	0.00355	**1.91**	0.0445	0.187
June-14	NM	8.09	NA	**4.16**	<25.0	**1,260**	0.0010	**0.114**	**0.0179**	**2.57**	0.0504	0.193	0.0020	**0.113**	**0.0201**	**2.57**	0.0499	0.192
October-14	NM	9.82	NA	6.54	<1.0	**524**	0.0038	**0.0882**	**0.0192**	**2.21**	0.0404	0.144	0.0024	**0.0768**	0.0024	**1.89**	0.0355	0.127
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
TEPA-P9*																		
December-13	NM	8.89	NA	**2.92**	< 0.02	**530**	0.00237	**0.136**	0.0029	**2.18**	0.0491	0.214	--	--	--	--	--	--
June-14	NM	6.48	NA	**3.09**	<25.0	**1,800**	0.0021	**0.125**	0.0064	**2.80**	0.0533	0.219	--	--	--	--	--	--
TEPA-P10*																		
December-13	12.07	6.60	5.47	**2.94**	< 0.02	**1,040**	0.00363	**0.151**	**0.134**	**3.34**	**0.0784**	0.311	--	--	--	--	--	--
June-14	12.07	3.89	8.18	**3.12**	<25.0	**2,130**	0.0043	**0.191**	**0.0890**	**5.02**	**0.0857**	0.328	--	--	--	--	--	--
TEPA-1H*																		
December-13	14.16	12.65	1.51	6.06	< 0.02	**365**	**0.0201 J**	< 0.001	< 0.001	**3.2**	0.00467 J	< 0.005 J	--	--	--	--	--	--
June-14	14.16	10.77	3.39	**5.98**	<25.0	**408**	**0.0125**	<0.0010	<0.0010	**2.86**	0.0021	<0.0050	--	--	--	--	--	--
TEPA-6H*																		
December-13	12.77	11.28	1.49	6.04	< 0.1	**997**	**0.0116**	< 0.001	< 0.001	**3.6**	< 0.001	< 0.005	--	--	--	--	--	--
June-14	12.77	9.25	3.52	**5.94**	<25.0	**1,110**	0.0086	<0.0010	<0.0010	**4.92**	<0.0010	<0.0050	--	--	--	--	--	--
TEPA-9H (9G)*																		
December-13	NM	6.98	NA	**3.01**	< 0.02	**6,420**	**0.0189**	< 0.001	< 0.001	**7.38**	**0.113**	0.185	--	--	--	--	--	--
June-14	NM	3.00	NA	**3.17**	28.0	**11,200**	**0.0210**	<0.0010	<0.0010	**7.74**	**0.142**	0.109	--	--	--	--	--	--
NWGS-01																		
October-14	12.94	7.40	5.54	**3.32**	<1.0	**1,030**	0.0030	**0.126**	**0.0275**	**3.98**	0.0579	0.240	--	--	--	--	--	--
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	--	--	--	--	--	--
NWGS-02																		
October-14	12.76	11.50	1.26	**3.52**	<1.0	**1,130**	0.0030	**0.137**	**0.154**	**2.51**	0.0599	0.299	0.0031	**0.127**	**0.124**	**2.29**	0.0561	0.286
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	--	--	--	--	--	--
NWGS-03																		
October-14	13.36	12.38	0.98	6.41	<1.0	**441**	**0.0294**	<0.0010	<0.0010	**1.82**	0.0016	0.0140	**0.462**	<0.0010	<0.0010	**4.59**	0.0167	0.0125
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
NWGS-04																		
October-14	11.91	10.12	1.79	6.23	<1.0	**1,220**	**0.485**	0.0019	0.0031	**4.87**	0.0181	0.0126	**0.462**	<0.0010	<0.0010	**4.59**	0.0167	0.0125
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	--	--	--	--	--	--
NWGS-05																		
October-14	11.06	9.85	1.21	**3.10**	<1.0	39.8	<0.0010	0.0015	0.0137	0.274	0.0104	0.0401	<0.0010	0.0013	0.0067	0.244	0.0079	0.0319
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
NWGS-06																		
October-14	11.73	10.87	0.86	**2.72**	<1.0	**907**	0.0025	**0.114**	<0.0010	**1.90**	0.0434	0.210	--	--	--	--	--	--
May-15	11.73	10.31	1.42	**3.54**	--	--	0.0020	**0.0690**	<0.0010	**1.46**	0.0340	0.142	--	--	--	--	--	--
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																		
August-13	14.21	5.63	8.58	6.86	--	--	0.0032 J	< 0.00053	0.00048 J	0.0571	< 0.00098	0.005 J	--	--	--	--	--	--
December-13	14.21	6.93	7.28	7.16	< 0.02	6.88	0.00268	< 0.001	< 0.001	0.0517	< 0.001	0.00549	--	--	--	--	--	--
June-14	14.21	4.72	9.49	6.85	--	--	0.0023	<0.0010	<0.0010	0.101	<0.0010	<0.0050	--	--	--	--	--	--
October-14	14.21	5.69	8.52	6.74	--	--	0.0030	<0.0010	<0.0010	0.0494	<0.0010	<0.0050	--	--	--	--	--	--
May-15	14.21	4.36	9.85	7.08	--	--	0.0024	<0.0010	<0.0010	0.0463	<0.0010	<0.0050	--	--	--	--	--	--
MW-A																		
August-13	15.12	10.46	4.66	6.68	--	--	< 0.00042	< 0.00053	0.00079 J	0.0089 J	< 0.00098	0.0079 J	--	--	--	--	--	--
December-13	15.12	11.74	3.38	6.92	--	--	< 0.001	< 0.001	< 0.001	0.00879	< 0.001	< 0.005	--	--	--	--	--	--
June-14	15.12	9.10	6.02	6.81	--	--	<0.0010	<0.0010	<0.0010	0.0072	<0.0010	<0.0050	--	--	--	--	--	--
October-14	15.12	10.75	4.37	7.07	--	--	<0.0010	<0.0010	<0.0010	0.0030	<0.0010	<0.0050	--	--	--	--	--	--
May-15	15.12	9.55	5.57	7.11	--	--	<0.0010	<0.0010	<0.0010	0.0039	<0.0010	<0.0050	--	--	--	--	--	--
MW-03																		
August-13	14.80	8.89	5.91	**6.34**	--	--	0.00082 J	< 0.00011	0.00063 J	**0.947**	0.0015 J	0.0025 J	--	--	--	--	--	--
December-13	14.80	10.26	4.54	6.60	--	--	< 0.001	< 0.001	< 0.001	**0.816**	0.00128	< 0.005	--	--	--	--	--	--
June-14	14.80	6.41	8.39	**6.22**	--	--	<0.0010	<0.0010	0.0014	**0.994**	0.0014	<0.0050	--	--	--	--	--	--
October-14	14.80	8.35	6.45	**6.24**	--	--	<0.0010	<0.0010	0.0016	**1.06**	0.0011	<0.0050	--	--	--	--	--	--
May-15	14.80	5.94	8.86	6.56	--	--	<0.0010	<0.0010	0.0016	**1.32**	0.0012	<0.0050	--	--	--	--	--	--
MW-04																		
August-13	17.38	14.73	2.65	**6.42**	--	--	0.001 J	< 0.00053	0.002 J	0.0405	0.0013 J	0.0135 J	0.00083 J	< 0.00053	< 0.00017	0.0031 J	< 0.00098	0.0041 J
December-13	17.38	15.82	1.56	6.55	--	--	< 0.001	< 0.001	0.00142	0.0199	< 0.001	0.00575	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005
June-14	17.38	12.87	4.51	**6.16**	--	--	<0.0010	<0.0010	0.0034	0.0587	0.0018	<0.0050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050
October-14	17.38	14.68	2.70	6.67	--	--	<0.0010	<0.0010	<0.0010	0.0175	<0.0010	<0.0050	--	--	--	--	--	--
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
BA-01																		
August-13	14.57	7.77	6.80	**5.56**	--	--	0.0072	< 0.00053	0.00046 J	**1.31**	0.0411	0.066	0.0035 J	< 0.00053	< 0.00017	**1.28**	0.0431	0.0659
December-13	14.57	6.47	8.10	**5.38**	--	--	0.00138	< 0.001	< 0.001	**1.03**	0.0215	0.0232	--	--	--	--	--	--
June-14	14.57	6.47	8.10	**5.38**	--	--	0.0030	<0.0010	<0.0010	**1.28**	0.0414	0.0500	--	--	--	--	--	--
October-14	14.57	8.00	6.57	**5.63**	--	--	0.0014	<0.0010	<0.0010	**1.15**	0.0240	0.0273	0.0011	<0.0010	<0.0010	**1.06**	0.0226	0.0274
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
BA-05																		
August-13	14.20	8.28	5.92	**5.83**	--	--	0.0029 J	< 0.00053	0.0003 J	**11.1**	0.0354	0.0159	--	--	--	--	--	--
December-13	14.20	9.76	4.44	**6.01**	--	--	0.00162	< 0.001	< 0.001	**13.3 E**	0.0393	0.00640	--	--	--	--	--	--
June-14	14.20	7.25	6.95	**5.81**	--	--	0.0018	<0.0010	<0.0010	**13.3**	0.0466	<0.0050	--	--	--	--	--	--
October-14	14.20	8.43	5.77	**5.69**	--	--	0.0018	<0.0010	<0.0010	**12.5**	0.0380	<0.0050	--	--	--	--	--	--
May-15	14.20	7.29	6.91	**6.12**	--	--	0.0020	<0.0010	<0.0010	**9.69**	0.0304	<0.0050	--	--	--	--	--	--
BA-09A																		
August-13	11.10	1.15	9.95	6.59	--	--	0.0037 J	< 0.00053	< 0.00017	0.0414	< 0.00098	0.0144 J	--	--	--	--	--	--
December-13	11.10	1.52	9.58	6.92	--	--	0.00228	< 0.001	< 0.001	0.0335	< 0.001	< 0.005	--	--	--	--	--	--
June-14	11.10	0.97	10.13	6.68	--	--	0.0022	<0.0010	<0.0010	0.0351	<0.0010	<0.0050	--	--	--	--	--	--
October-14	11.10	1.43	9.67	7.02	--	--	0.0025	<0.0010	<0.0010	0.0357	<0.0010	<0.0050	--	--	--	--	--	--
May-15	11.10	0.88	10.22	6.99	--	--	0.0024	<0.0010	<0.0010	0.0360	<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																		
August-13	16.32	7.19	9.13	6.70	--	--	0.00061 J	< 0.00053	< 0.00017	0.0149	< 0.00098	< 0.004	--	--	--	--	--	--
December-13	16.32	8.95	7.37	7.10	--	--	< 0.001	< 0.001	< 0.001	0.0166	< 0.001	< 0.005	--	--	--	--	--	--
June-14	16.32	4.99	11.33	6.68	--	--	<0.0010	<0.0010	<0.0010	0.0155	<0.0010	<0.0050	--	--	--	--	--	--
October-14	16.32	6.94	9.38	6.76	--	--	<0.0010	<0.0010	<0.0010	0.0272	<0.0010	<0.0050	--	--	--	--	--	--
May-15	16.32	4.81	11.51	7.02	--	--	<0.0010	<0.0010	<0.0010	0.0176	<0.0010	<0.0050	--	--	--	--	--	--
BC-07																		
August-13	11.37	4.60	6.77	6.88	--	--	0.0013 J	< 0.00053	< 0.00017	0.0735	< 0.00098	< 0.004	--	--	--	--	--	--
December-13	11.37	6.07	5.30	7.07	--	--	0.00108	< 0.001	< 0.001	0.0387	< 0.001	< 0.005	--	--	--	--	--	--
June-14	11.37	2.66	8.71	6.71	--	--	0.0011	<0.0010	<0.0010	0.0430	0.0012	<0.0050	--	--	--	--	--	--
October-14	11.37	4.48	6.89	6.68	--	--	0.0015	<0.0010	<0.0010	0.104	0.0019	<0.0050	--	--	--	--	--	--
May-15	11.37	3.16	8.21	7.02	--	--	0.0013	<0.0010	<0.0010	0.0291	0.0014	<0.0050 J	--	--	--	--	--	--
BC-17																		
August-13	15.18	6.38	8.80	6.50	--	--	0.0021	0.00081 J	**0.0346**	0.237	0.00098 J	0.0037 J	--	--	--	--	--	--
December-13	15.18	7.65	7.53	6.81	--	--	0.00183	< 0.001	**0.0663**	0.288	0.00116	0.00636	--	--	--	--	--	--
June-14	15.18	5.12	10.06	**6.42**	--	--	0.0012	<0.0010	**0.0237**	0.306	0.0014	<0.0050	--	--	--	--	--	--
October-14	15.18	6.54	8.64	**6.33**	--	--	0.0021	0.0012	**0.0393**	0.347	0.0017	<0.0050	--	--	--	--	--	--
May-15	15.18	5.02	10.16	6.65	--	--	0.0015	0.0011	**0.0223**	0.235	0.0016	0.0122	--	--	--	--	--	--
BC-19																		
August-13	13.85	6.67	7.18	6.63	--	--	0.00064 J	< 0.00053	< 0.00017	0.0262	< 0.00098	0.0053 J	--	--	--	--	--	--
December-13	13.85	8.08	5.77	6.93	--	--	< 0.001	< 0.001	< 0.001	0.0226	< 0.001	< 0.005	--	--	--	--	--	--
June-14	13.85	5.11	8.74	6.61	--	--	<0.0010	<0.0010	<0.0010	0.146	0.0017	0.0098	--	--	--	--	--	--
October-14	13.85	6.51	7.34	6.52	--	--	<0.0010	<0.0010	<0.0010	0.0418	<0.0010	<0.0050	--	--	--	--	--	--
May-15	13.85	4.65	9.20	6.82	--	--	<0.0010	<0.0010	<0.0010	0.0179	<0.0010	<0.0050	--	--	--	--	--	--
BC-21R																		
August-13	15.28	8.13	7.15	6.50	--	--	0.0015	< 0.00011	< 0.000033	0.184	0.0017 J	0.0015 J	--	--	--	--	--	--
December-13	15.28	10.34	4.94	7.14	--	--	< 0.001	< 0.001	<0.001	0.0726	0.00138	0.00528	--	--	--	--	--	--
June-14	15.28	5.80	9.48	6.52	--	--	<0.0010 J	<0.0010 J	<0.0010	**0.672 J**	0.0019 J	<0.0050 J	--	--	--	--	--	--
October-14	15.28	8.61	6.67	**6.40**	--	--	<0.0010	<0.0010	<0.0010	0.222	0.0017	<0.0050	--	--	--	--	--	--
May-15	15.28	5.68	9.60	6.86	--	--	<0.0010	<0.0010	<0.0010	0.247	0.0014	<0.0050	--	--	--	--	--	--
BC-25																		
August-13	15.73	8.92	6.81	6.67	--	--	0.002 J	< 0.00053	< 0.00017	0.198	0.0013 J	0.0095 J	--	--	--	--	--	--
December-13	15.73	10.96	4.77	6.83	--	--	< 0.001 J	< 0.001	< 0.001	0.183	< 0.001 J	< 0.005 J	--	--	--	--	--	--
June-14	15.73	6.90	8.83	6.59	--	--	0.0010	<0.0010	0.0069	0.205	0.0021	<0.0050	--	--	--	--	--	--
October-14	15.73	9.24	6.49	6.60	--	--	0.0011	<0.0010	<0.0010	0.193	<0.0010	<0.0050	--	--	--	--	--	--
May-15	15.73	6.56	9.17	6.81	--	--	<0.0010	<0.0010	<0.0010	0.109	<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, LOUISIANA
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																		
August-13	14.76	1.91	12.85	7.82	--	--	0.0017 J	< 0.00053	0.0012 J	0.0196	< 0.00098	0.0105 J	--	--	--	--	--	--
December-13	14.76	1.92	12.84	8.14	--	--	0.00114	< 0.001	0.00133	0.0527	< 0.001	0.00640	--	--	--	--	--	--
October-14	14.76	1.92	12.84	8.02			0.0013	<0.0010	<0.0010	0.0126	<0.0010	<0.0050	--	--	--	--	--	--
BA-05A																		
August-13	14.42	3.38	11.04	7.06	--	--	0.0017 J	< 0.00053	0.00019 J	0.0113	< 0.00098	0.0087 J	--	--	--	--	--	--
December-13	14.42	3.63	10.79	7.32	--	--	0.00190	< 0.001	< 0.001	0.0234	< 0.001	0.00799	--	--	--	--	--	--
October-14	14.42	3.55	10.87	6.91			0.0024	<0.0010	<0.0010	0.0345	<0.0010	<0.0050	--	--	--	--	--	--
BB-01																		
August-13	15.75	3.02	12.73	**9.48**	--	--	0.0045	0.00017 J	0.0057	0.0047	0.0013 J	0.0033 J	--	--	--	--	--	--
December-13	15.75	3.07	12.68	**10.03**	--	--	0.00473	< 0.001	0.00531	0.00314	< 0.001	< 0.005	--	--	--	--	--	--
October-14	15.75	3.02	12.73	**9.64**	--	--	0.0048	<0.0010	0.0051	0.0035	<0.0010	<0.0050	--	--	--	--	--	--
BA-01A																		
August-13	15.03	4.63	10.40	6.89	--	--	0.0086	< 0.00053	0.0003 J	0.036	< 0.00098	0.0067 J	--	--	--	--	--	--
December-13	15.03	5.12	9.91	7.40	--	--	0.00793	< 0.001	< 0.001	0.0243	< 0.001	< 0.005	--	--	--	--	--	--
October-14	15.03	4.89	10.14	6.83	--	--	0.0086	<0.0010	<0.0010	0.0244	<0.0010	<0.0050	--	--	--	--	--	--
WATER WELLS																		
(b) (6) **Well**																		
August-13	NA	NA	NA	8.20	--	--	0.002 J	< 0.00053	0.00033 J	0.0259	< 0.00098	0.0085 J	--	--	--	--	--	--
December-13	NA	NA	NA	7.87	--	--	0.00157 J	< 0.001	0.00145	0.0233	< 0.001 J	< 0.005 J	--	--	--	--	--	--
March-14	NA	NA	NA	8.21	--	--	0.0016	< 0.001	0.0013	0.0218	< 0.001	< 0.005	--	--	--	--	--	--
June-14	NA	NA	NA	7.02	--	--	0.0015	<0.0010	0.0011	0.0416	<0.0010	<0.0050	--	--	--	--	--	--
August-14	NA	NA	NA	8.22	--	--	0.0017	< 0.0010	< 0.0010	0.0243	< 0.0010	0.0063	--	--	--	--	--	--
October-14	NA	NA	NA	7.80	--	--	0.0016	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	--	--	--	--	--	--
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	--	--	--	--	--	--
WW-04																		
August-13	NA	NA	NA	8.50	--	--	0.0062	< 0.00053	< 0.00017	0.0035 J	< 0.00098	0.006 J	--	--	--	--	--	--
December-13	NA	NA	NA	**9.09**	--	--	< 0.001	< 0.001	< 0.001	0.00315	< 0.001	< 0.005	--	--	--	--	--	--
March-14	NA	NA	NA	**8.59**	--	--	< 0.001	< 0.001	< 0.001	0.0018	< 0.001	< 0.005	--	--	--	--	--	--
June-14	NA	NA	NA	8.29	--	--	<0.0010	<0.0010	<0.0010	0.0031	<0.0010	<0.0050	--	--	--	--	--	--
August-14	NA	NA	NA	8.47	--	--	< 0.0010	< 0.0010	< 0.0010	0.0062	< 0.0010	< 0.0050	--	--	--	--	--	--
October-14	NA	NA	NA	**8.61**	--	--	<0.0010	<0.0010	<0.0010	0.0028	<0.0010	<0.0050	--	--	--	--	--	--
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	--	--	--	--	--	--
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																		
August-13	NA	NA	NA	7.62	--	--	0.00054 J	< 0.00053	< 0.00017	0.0182	< 0.00098	< 0.004	--	--	--	--	--	--
December-13	NA	NA	NA	7.98	--	--	< 0.001	< 0.001	< 0.001	0.0178	< 0.001	< 0.005	--	--	--	--	--	--
March-14	NA	NA	NA	7.98	--	--	< 0.001	< 0.001	< 0.001	0.0165	0.0041	< 0.005	--	--	--	--	--	--
June-14	NA	NA	NA	7.49	--	--	<0.0010 J	<0.0010 J	<0.0010	0.0181 J	<0.0010 J	<0.0050 J	--	--	--	--	--	--
August-14	NA	NA	NA	8.36	--	--	< 0.0010	< 0.0010	< 0.0010	0.0203	< 0.0010	< 0.0050	--	--	--	--	--	--
October-14	NA	NA	NA	7.65	--	--	<0.0010	<0.0010	<0.0010	0.0188	<0.0010	<0.0050	--	--	--	--	--	--
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	--	--	--	--	--	--
North Well																		
August-13	NA	NA	NA	8.20	--	--	0.0004 J	< 0.00011	0.00091 J	0.0039	< 0.0002	0.0058	--	--	--	--	--	--
December-13	NA	NA	NA	**8.82**	--	--	< 0.001	< 0.001	< 0.001	0.00366	< 0.001	< 0.005	--	--	--	--	--	--
March-14	NA	NA	NA	**8.82**	--	--	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.005	--	--	--	--	--	--
June-14	NA	NA	NA	**8.61**	--	--	<0.0010	<0.0010	<0.0010	0.0033	<0.0010	<0.0050	--	--	--	--	--	--
August-14	NA	NA	NA	8.37	--	--	< 0.0010	< 0.0010	0.004	0.0085	< 0.0010	0.0079	--	--	--	--	--	--
October-14	NA	NA	NA	**8.54**	--	--	<0.0010	<0.0010	<0.0010	0.0034	<0.0010	<0.0050	--	--	--	--	--	--
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	--	--	--	--	--	--
South Well																		
August-13	NA	NA	NA	**8.93**	--	--	0.00026 J	< 0.00011	< 0.000033	0.0041	0.00024 J	0.0084	--	--	--	--	--	--
December-13	NA	NA	NA	**9.60**	--	--	< 0.001	< 0.001	< 0.001	0.00385	< 0.001	0.0144	--	--	--	--	--	--
March-14	NA	NA	NA	**9.60**	--	--	< 0.001	< 0.001	< 0.001	0.0026	< 0.001	< 0.005	--	--	--	--	--	--
June-14	NA	NA	NA	**8.62**	--	--	<0.0010	<0.0010	<0.0010	0.0037	<0.0010	0.0115	--	--	--	--	--	--
August-14	NA	NA	NA	**8.31**	--	--	< 0.0010	< 0.0010	< 0.0010	0.0042	< 0.0010	0.0199	--	--	--	--	--	--
October-14	NA	NA	NA	**8.94**	--	--	<0.0010	<0.0010	<0.0010	0.0035	<0.0010	0.0168	--	--	--	--	--	--
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	--	--	--	--	--	--
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

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
BC-25
DW-04
BC-19
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
BC-03
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
GSGP-19
TEPA-P7D
TEPA-P6
NWGS-06
NWGS-02
TEPA-1H
BC-31
MW-07
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 / APPROVED BY	DRAWING NO. NEW FAC

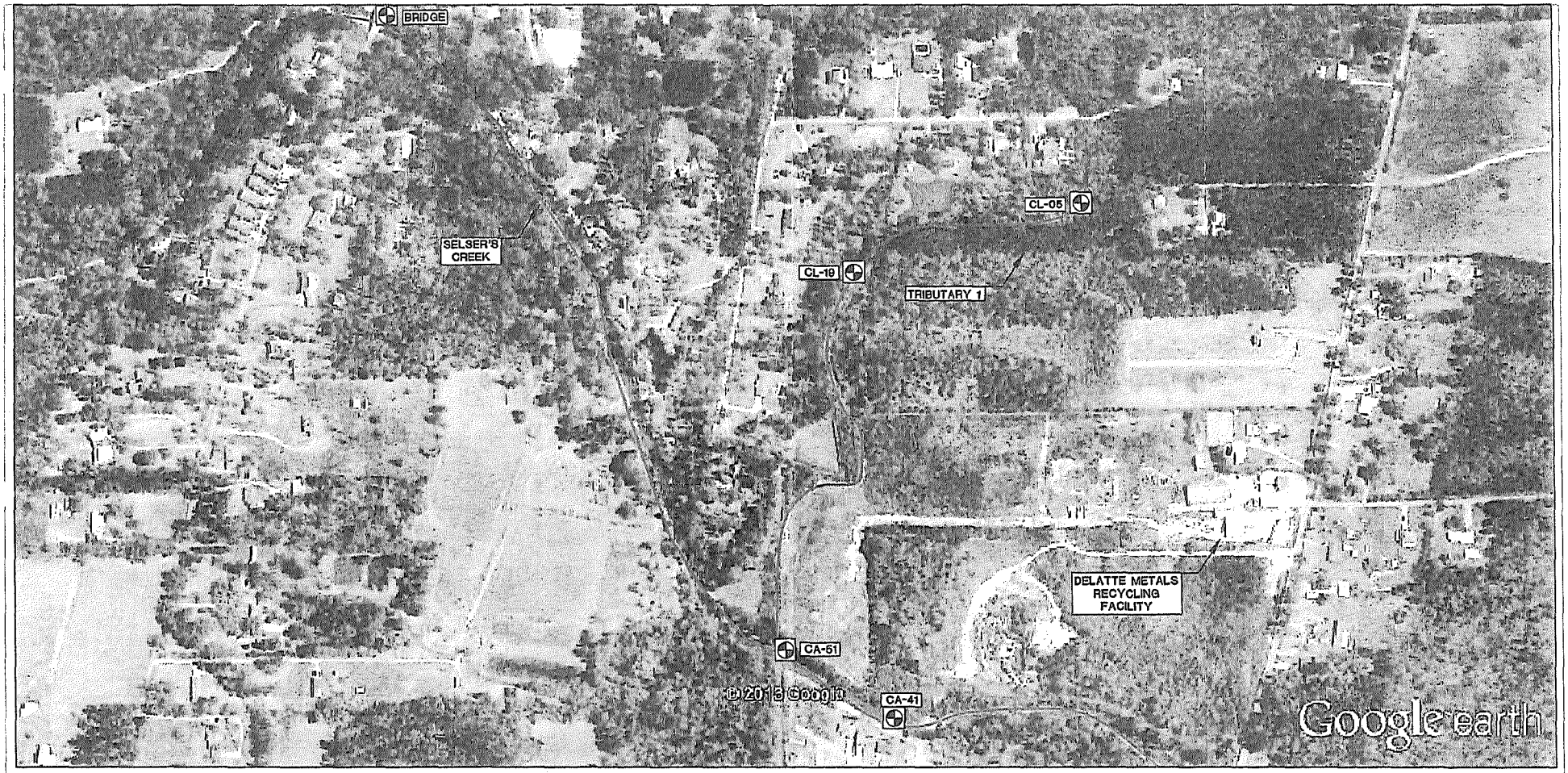
FIGURE 1

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: APPROVED BY:	DRAWING NO. OM

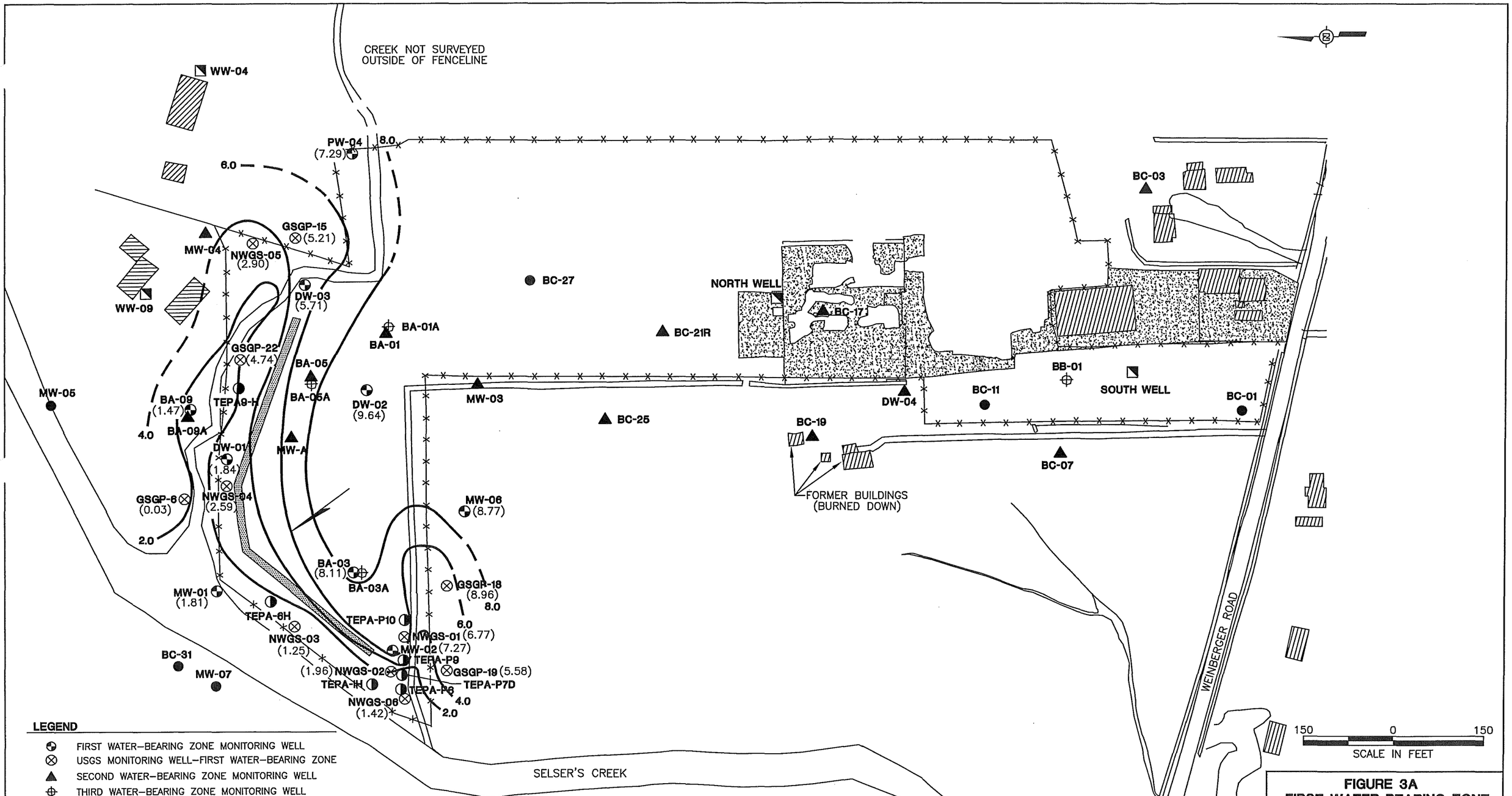
FIGURE 2

SURFACE WATER SAMPLE LOCATIONS

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



LEGEND

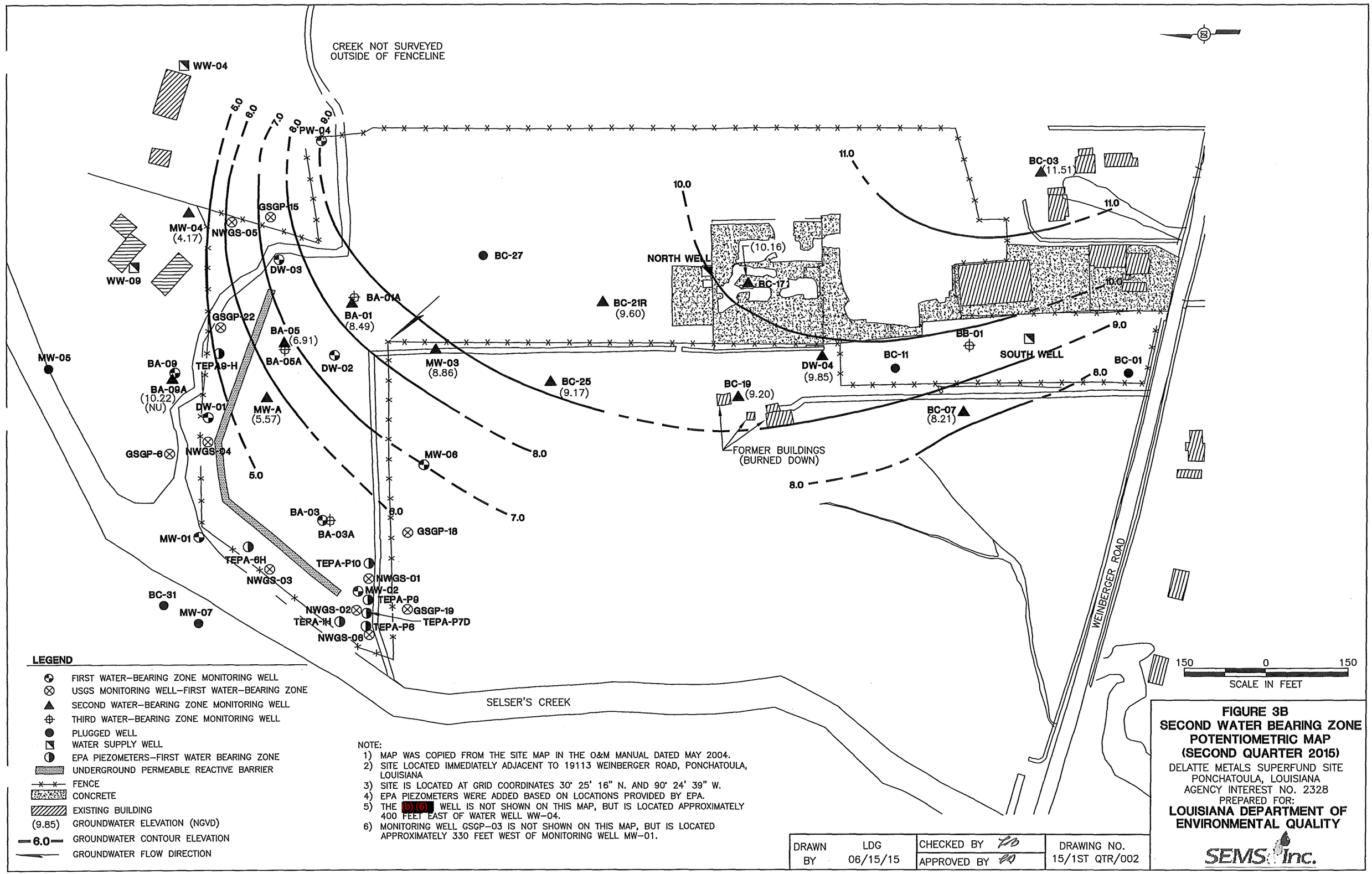
- FIRST WATER-BEARING ZONE MONITORING WELL
- USGS MONITORING WELL-FIRST WATER-BEARING ZONE
- SECOND WATER-BEARING ZONE MONITORING WELL
- THIRD WATER-BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS-FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (1.84) GROUNDWATER ELEVATION (NGVD)
- 6.0 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 (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 06/10/15	CHECKED BY	DRAWING NO. 15/1ST QTR/001
		APPROVED BY	

FIGURE 3A
FIRST WATER BEARING ZONE POTENTIOMETRIC MAP (SECOND QUARTER 2015)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



LEGEND

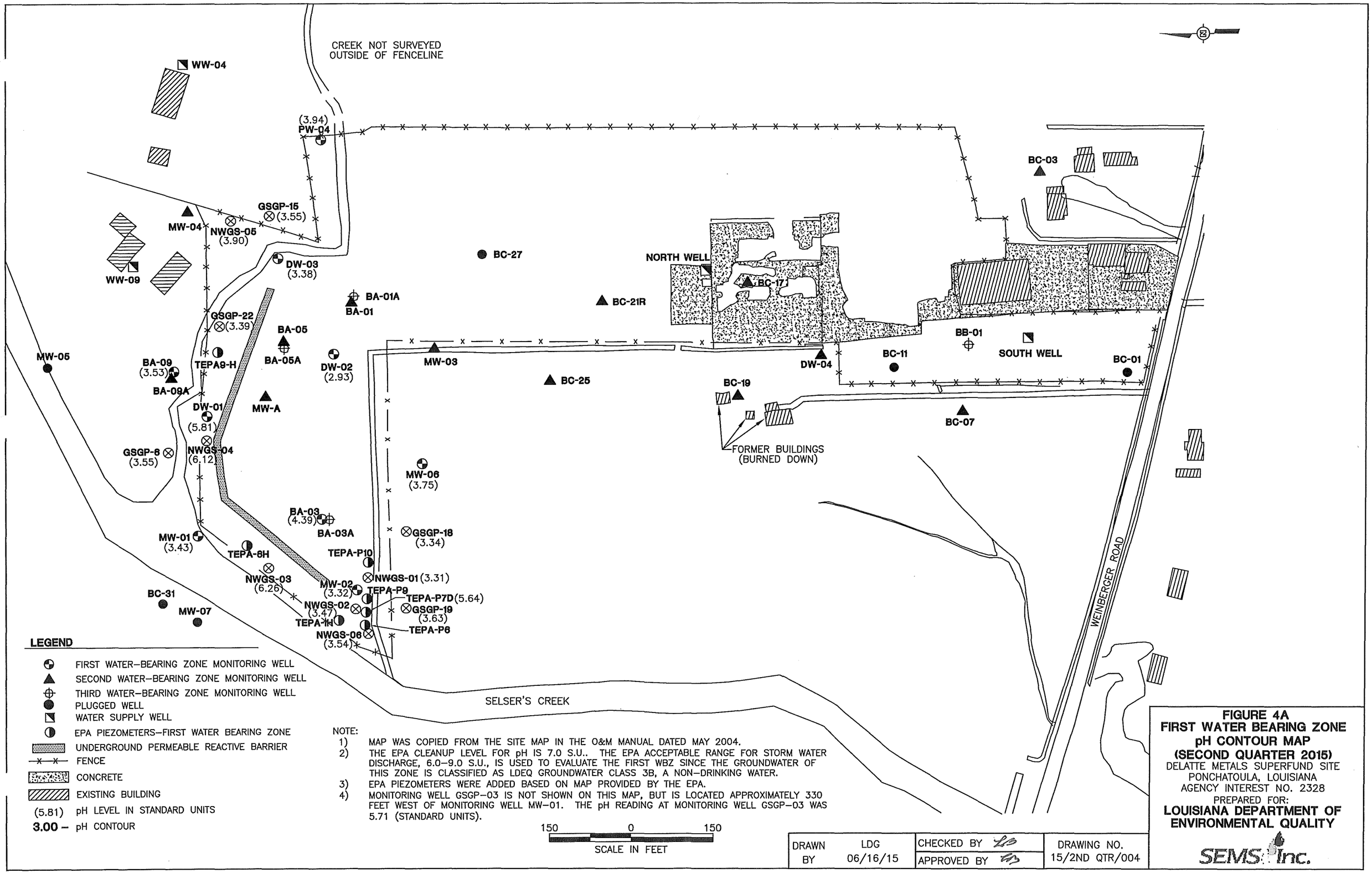
- FIRST WATER–BEARING ZONE MONITORING WELL
- USGS MONITORING WELL–FIRST WATER–BEARING ZONE
- SECOND WATER–BEARING ZONE MONITORING WELL
- THIRD WATER–BEARING ZONE MONITORING WELL
- PLUGGED WELL
- WATER SUPPLY WELL
- EPA PIEZOMETERS–FIRST WATER BEARING ZONE
- UNDERGROUND PERMEABLE REACTIVE BARRIER
- FENCE
- CONCRETE
- EXISTING BUILDING
- (9.85) GROUNDWATER ELEVATION (NGVD)
- 6.0 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 (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 06/15/15	CHECKED BY	DRAWING NO. 15/1ST QTR/002
		APPROVED BY	

FIGURE 3B
SECOND WATER BEARING ZONE POTENTIOMETRIC MAP (SECOND 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
(3.94)
PW-04
GSGP-15
(3.55)
MW-04
NWGS-05
(3.90)
WW-09
DW-03
(3.38)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
GSGP-22
(3.39)
BA-05
BA-05A
DW-02
(2.93)
MW-05
BA-09
(3.53)
TEPA9-H
BA-09A
DW-01
(5.81)
MW-A
GSGP-6
(3.55)
NWGS-04
(6.12)
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
(3.75)
BA-03
(4.39)
BA-03A
GSGP-18
(3.34)
MW-01
(3.43)
TEPA-8H
TEPA-P10
NWGS-03
(6.26)
MW-02
(3.32)
NWGS-01 (3.31)
TEPA-P9
TEPA-P7D (5.64)
BC-31
MW-07
NWGS-02
(3.47)
GSGP-19
(3.63)
TEPA-1H
TEPA-P6
NWGS-06
(3.54)
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
(5.81) 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 5.71 (STANDARD UNITS).
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/16/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/004
FIGURE 4A
FIRST WATER BEARING ZONE
pH CONTOUR MAP
(SECOND 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
WW-09
PW-04
MW-04
(6.59)
DW-03
BA-01A
BA-01
(5.17)
(6.12)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(6.99)
DW-01
MW-A
(7.11)
MW-03
(6.56)
BC-27
BC-21R
(6.86)
BC-25
(6.81)
NORTH WELL
BC-17
(6.65)
(6.82)
BC-19
DW-04
(7.08)
BC-11
BB-01
SOUTH WELL
BC-01
BC-07
(7.02)
(7.02)
BC-03
FORMER BUILDINGS
(BURNED DOWN)
MW-06
BA-03
BA-03A
MW-01
MW-02
BC-31
MW-07
SELSER'S CREEK
WEINBERGER ROAD
6.5
6.0
5.5
7.0

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
- (7.08) pH LEVEL IN STANDARD UNITS
- pH CONTOUR

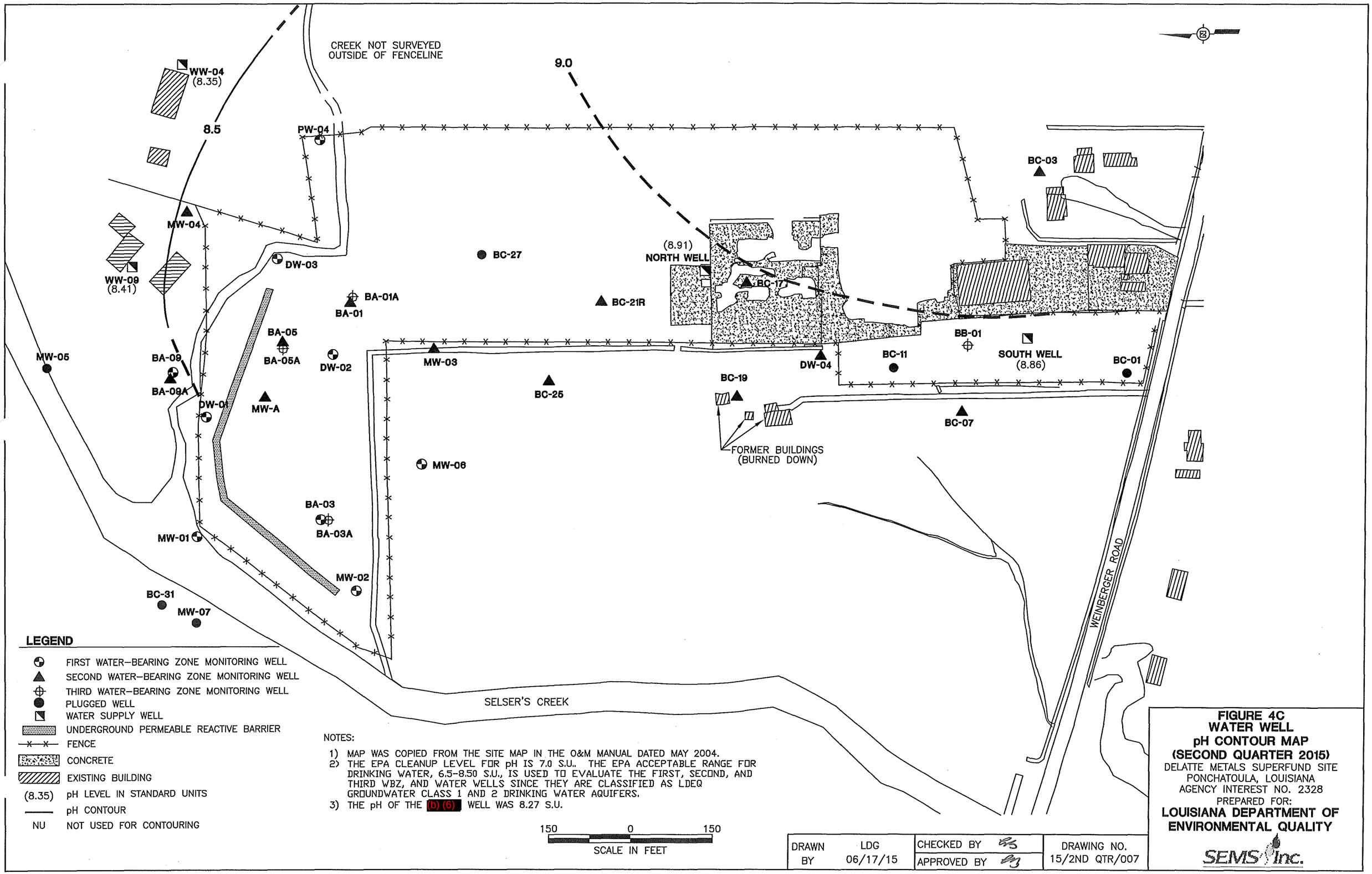
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) THE EPA CLEANUP LEVEL FOR pH IS 7.0 S.U.. THE EPA ACCEPTABLE RANGE FOR DRINKING WATER, 6.5-8.50 S.U., IS USED TO EVALUATE THE FIRST, SECOND, AND THIRD WBZ, AND WATER WELLS SINCE THEY ARE CLASSIFIED AS LDEQ GROUNDWATER CLASS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

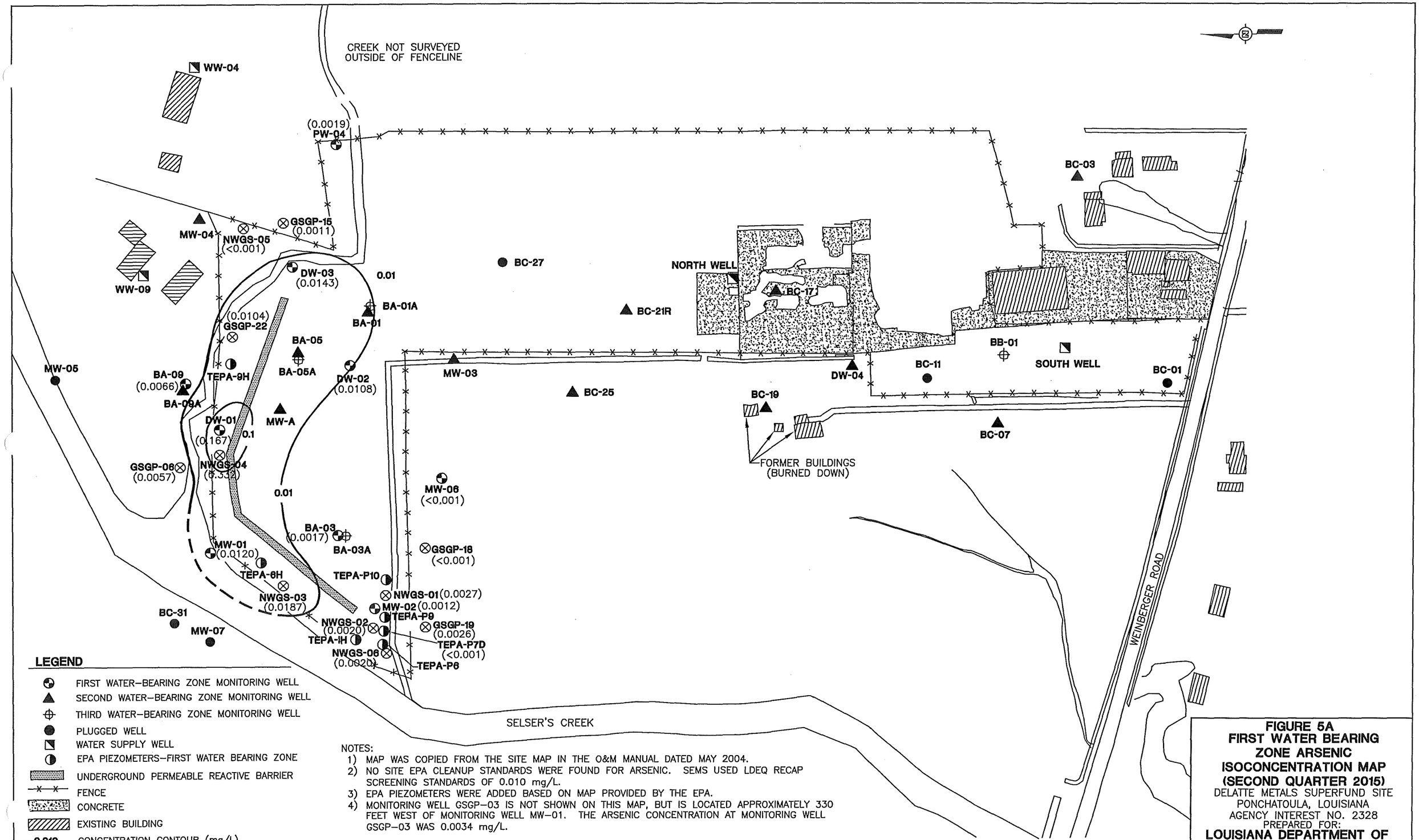
150 0 150
SCALE IN FEET

DRAWN BY	LDG 06/17/15	CHECKED BY / APPROVED BY	DRAWING NO. 15/2ND QTR/005

FIGURE 4B
SECOND WATER BEARING ZONE pH COUNTOUR MAP (SECOND 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
9.0
8.5
WW-04
(8.35)
PW-04
MW-04
WW-09
(8.41)
DW-03
BC-27
(8.91)
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
BA-05
BA-05A
DW-02
BA-09
BA-09A
DW-01
MW-A
MW-05
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
(8.86)
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
(8.35) pH LEVEL IN STANDARD UNITS
pH CONTOUR
NU NOT USED FOR CONTOURING
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 8.27 S.U.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/17/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/007
FIGURE 4C
WATER WELL
pH CONTOUR MAP
(SECOND 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
(0.0019)
PW-04
MW-04
NWGS-05
(<0.001)
GSGP-15
(0.0011)
WW-09
DW-03
(0.0143)
0.01
BA-01A
BA-01
(0.0104)
GSGP-22
BA-05
BA-05A
MW-05
BA-09
(0.0066)
TEPA-9H
BA-09A
DW-02
(0.0108)
DW-01
(0.167)
0.1
MW-A
GSGP-06
(0.0057)
NWGS-04
(0.333)
0.01
BA-03
(0.0017)
BA-03A
MW-01
(0.0120)
TEPA-6H
NWGS-03
(0.0187)
BC-31
MW-07
BC-27
BC-21R
NORTH WELL
BC-17
MW-03
BC-25
DW-04
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
BC-07
MW-06
(<0.001)
GSGP-18
(<0.001)
TEPA-P10
NWGS-01(0.0027)
MW-02(0.0012)
TEPA-P9
GSGP-19
(0.0026)
TEPA-P7D
(<0.001)
NWGS-02
(0.0020)
TEPA-1H
NWGS-06
(0.0020)
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
0.010 CONCENTRATION CONTOUR (mg/L)
mg/L MILLIGRAMS PER LITER
(0.167) 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 0.0034 mg/L.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/17/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/011
FIGURE 5A
FIRST WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (SECOND 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
(<0.001)

WW-09

DW-03

BA-01A

BA-01
(0.0032)

(0.0020)
BA-05

BA-05A

DW-02

BC-27

NORTH WELL

BC-17
(0.0015)

BC-21R
(<0.001)

(<0.001)
BC-03

BB-01

SOUTH WELL

BC-11

BC-01

MW-05

BA-09

BA-09A
(0.0024)

DW-01

MW-A
(<0.001)

MW-03
(<0.001)

BC-25
(<0.001)

(<0.001)
BC-19

DW-04
(0.0024)

BC-07
(0.0013)

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
- (0.0024) — 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

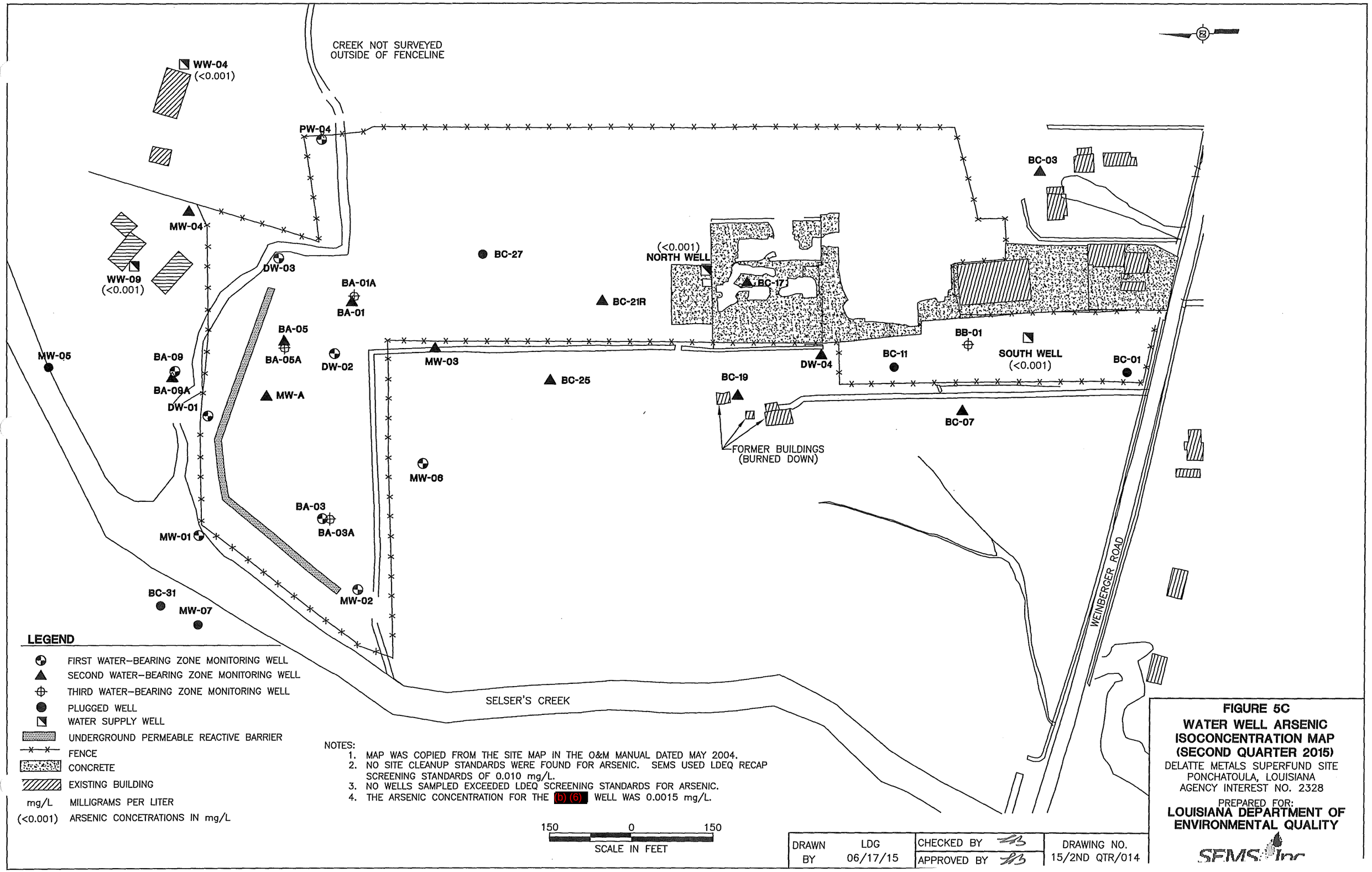
DRAWN BY	LDG 06/17/15	CHECKED BY	DRAWING NO. 15/2ND QTR/012
		APPROVED BY	

FIGURE 5B

SECOND WATER BEARING ZONE ARSENIC ISOCONCENTRATION MAP (SECOND QUARTER 2015)

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
- 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 0.0015 mg/L.

DRAWN BY	LDG 06/17/15	CHECKED BY	DRAWING NO. 15/2ND QTR/014
		APPROVED BY	

FIGURE 5C
WATER WELL ARSENIC ISOCONCENTRATION MAP (SECOND 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
(0.0012)
PW-04
GSGP-15
(0.0035)
MW-04
NWGS-05
(<0.001)
WW-09
DW-03
(0.0021)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
(<0.001)
GSGP-22
BA-05
BA-05A
DW-02
(0.0176)
MW-05
BA-09
(<0.001)
BA-09A
TEPA-9H
(<0.001)
DW-01
(0.0456)
MW-A
MW-03
BC-25
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-03
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-07
NWGS-04
(0.0079)
GSGP-06
(<0.001)
0.005
MW-06
(0.0185)
BA-03
(0.0488)
BA-03A
GSGP-18
(0.142)
MW-01
(0.0022)
TEPA-6H
TEPA-P10
NWGS-01
(0.116)
0.05
NWGS-03
(<0.001)
MW-02 (0.0637)
TEPA-P9
BC-31
MW-07
NWGS-02
(0.256)
GSGP-19 (0.0698)
TEPA-1H
TEPA-P7D (0.0828)
NWGS-06
(0.0690)
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
- (0.0828) 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 06/22/15	CHECKED BY	DRAWING NO. 15/2ND QTR/032
		APPROVED BY	

FIGURE 6A
FIRST WATER BEARING ZONE CADMIUM CONTOUR MAP (SECOND 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
(<0.001)

WW-09

DW-03

BC-27

NORTH WELL

BC-17
(0.0011)

(<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

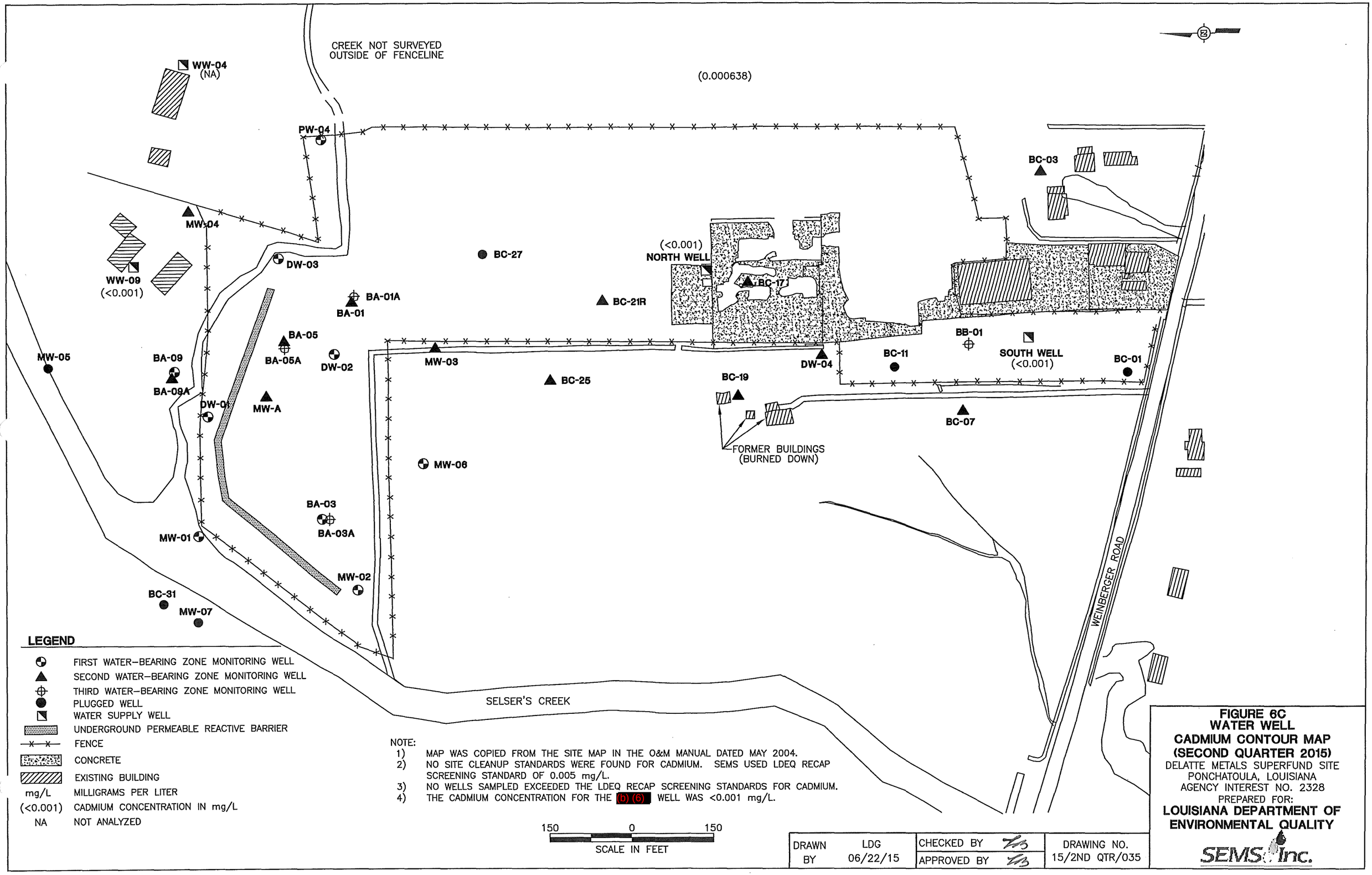
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.005 mg/L.
3) NO WELLS EXCEEDED THE LDEQ RECAP SCREEING STANDARD FOR CADMIUM.

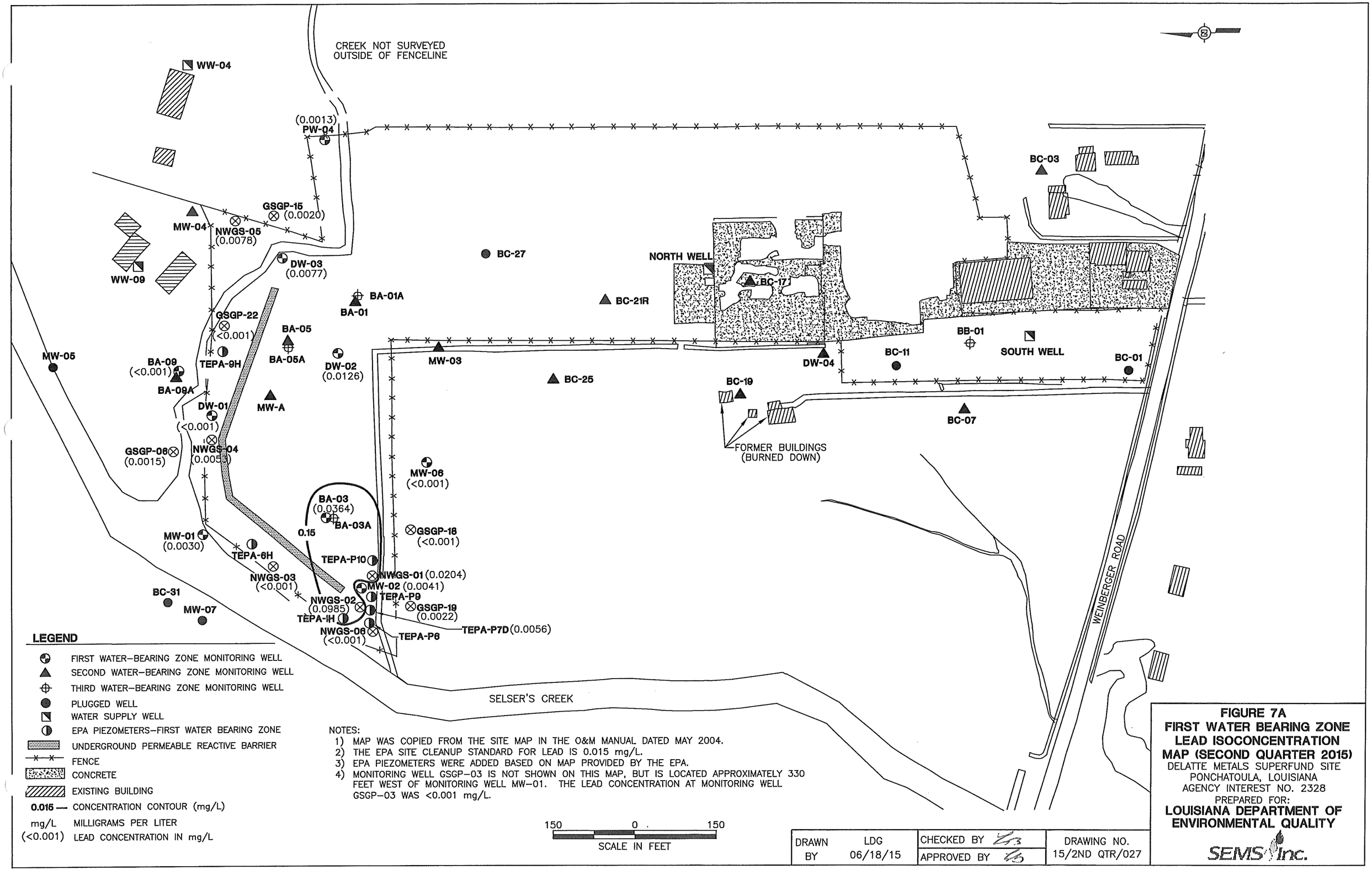
150 0 150
SCALE IN FEET

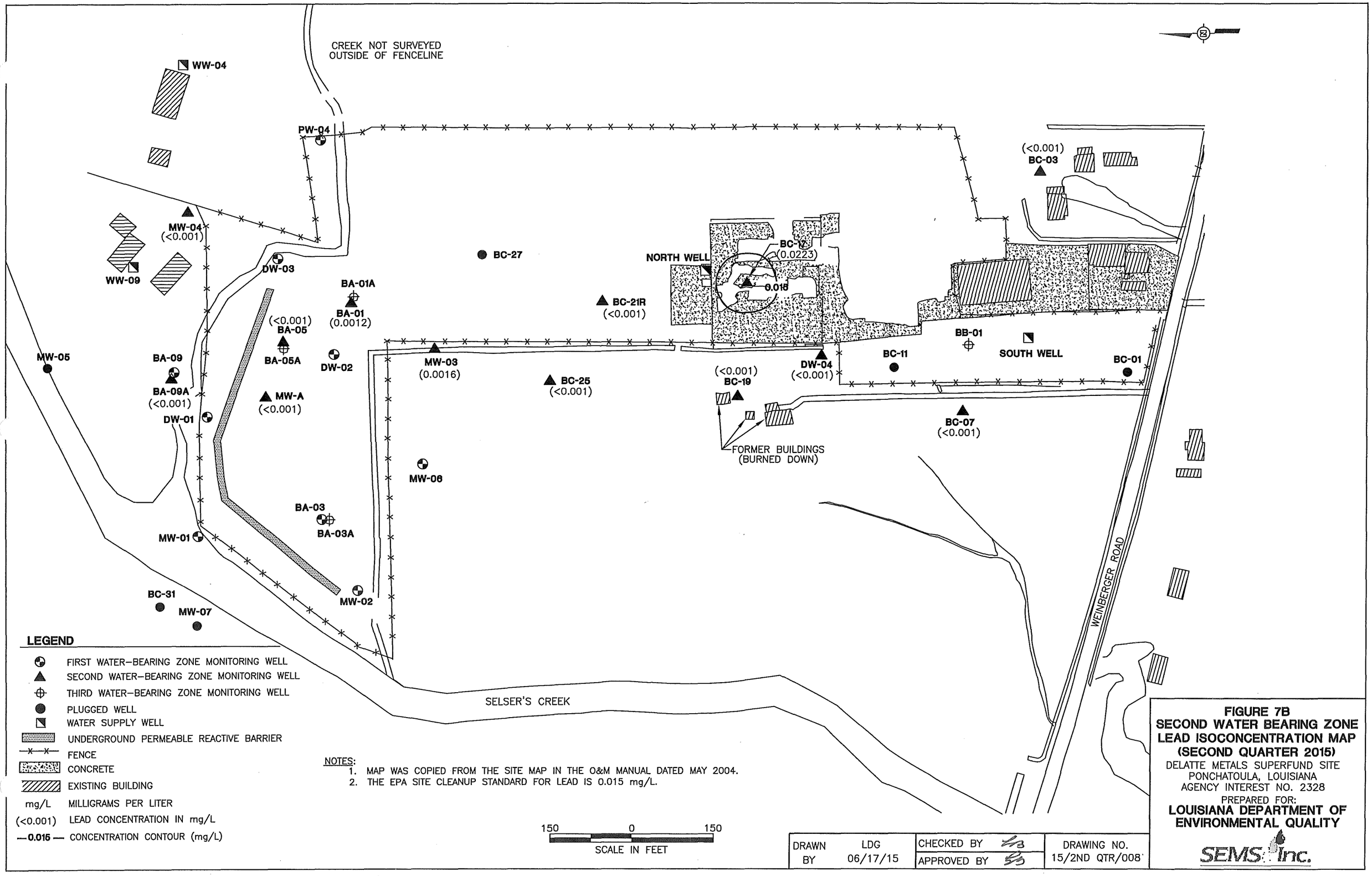
DRAWN BY	LDG 06/22/15	CHECKED BY / APPROVED BY	DRAWING NO. 15/2ND QTR/033

FIGURE 6B
SECOND WATER BEARING ZONE CADMIUM COUNTOUR MAP (SECOND 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
(0.000638)
WW-04
(NA)
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 06/22/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/035
FIGURE 6C
WATER WELL
CADMIUM CONTOUR MAP
(SECOND 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
(0.0013)
PW-04
GSGP-15
(0.0020)
MW-04
NWGS-05
(0.0078)
WW-09
DW-03
(0.0077)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
GSGP-22
(<0.001)
BA-05
BA-05A
DW-02
(0.0126)
MW-05
BA-09
(<0.001)
TEPA-9H
BA-09A
DW-01
(<0.001)
MW-A
GSGP-06
(0.0015)
NWGS-04
(0.0055)
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
(0.0364)
BA-03A
0.15
GSGP-18
(<0.001)
MW-01
(0.0030)
TEPA-6H
TEPA-P10
NWGS-03
(<0.001)
NWGS-01 (0.0204)
MW-02 (0.0041)
TEPA-P9
BC-31
MW-07
NWGS-02
(0.0985)
GSGP-19
(0.0022)
TEPA-1H
NWGS-06
(<0.001)
TEPA-P6
TEPA-P7D (0.0056)
SELSER'S CREEK
WEINBERGER ROAD
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 06/18/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/027
FIGURE 7A
FIRST WATER BEARING ZONE
LEAD ISOCONCENTRATION
MAP (SECOND 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
(<0.001)
WW-09
DW-03
BA-01A
BA-01
(0.0012)
(<0.001)
BA-05
BA-05A
DW-02
BC-27
BC-21R
(<0.001)
NORTH WELL
BC-12
(0.0223)
0.018
(<0.001)
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
MW-05
BA-09
BA-09A
(<0.001)
DW-01
MW-A
(<0.001)
MW-03
(0.0016)
BC-25
(<0.001)
(<0.001)
BC-19
DW-04
(<0.001)
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.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/17/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/008
FIGURE 7B
SECOND WATER BEARING ZONE
LEAD ISOCONCENTRATION MAP
(SECOND 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
(<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

DW-04

BC-19

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

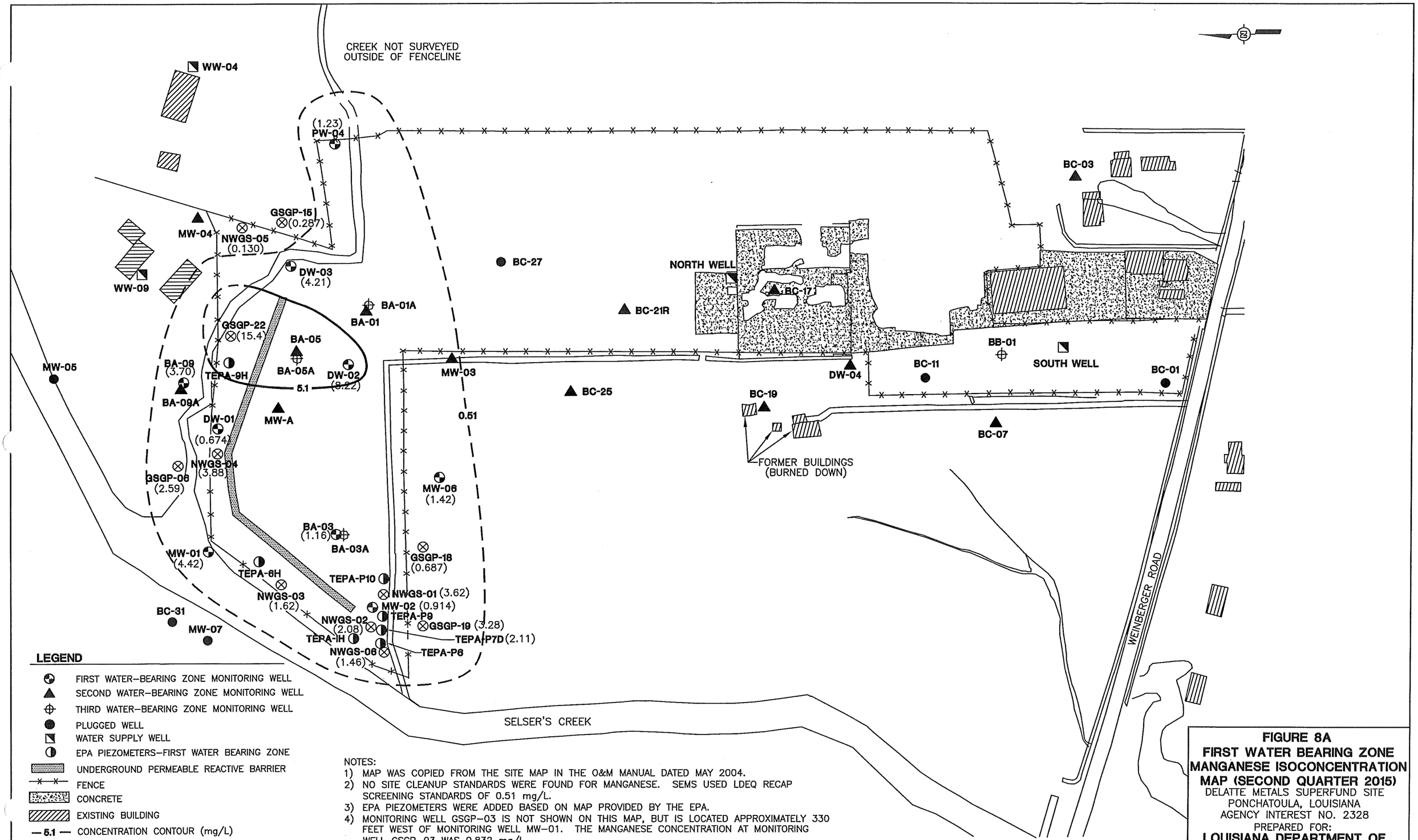
NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
3. NO WELLS SAMPLED EXCEEDED THE SITE CLEANUP STANDARDS FOR LEAD.
4. THE LEAD CONCENTRATION FOR THE (b) (6) WELL WAS 0.0011 mg/L.

150 0 150
SCALE IN FEET

DRAWN BY	LDG 06/17/15	CHECKED BY	DRAWING NO. 15/2ND QTR/010
		APPROVED BY	

FIGURE 7C
WATER WELL
LEAD ISOCONCENTRATION MAP
(SECOND QUARTER 2015)
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 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 0.832 mg/L.

DRAWN BY	LDG 06/17/15	CHECKED BY		DRAWING NO. 15/2ND QTR/015
		APPROVED BY		

FIGURE 8A
FIRST WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (SECOND 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
(<0.001)
WW-09
DW-03
BA-01A
5.1
BA-01
(1.43)
0.51
(9.69)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(0.0360)
DW-01
MW-A
(0.0039)
MW-03
(1.32)
BC-27
(0.247)
BC-21R
NORTH WELL
BC-17
(0.235)
(0.0176)
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
(0.0179)
BC-19
DW-04
(0.0463)
BC-25
(0.109)
BC-07
(0.0291)
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
- (0.0463) MANGANESE CONCETRATION IN mg/L

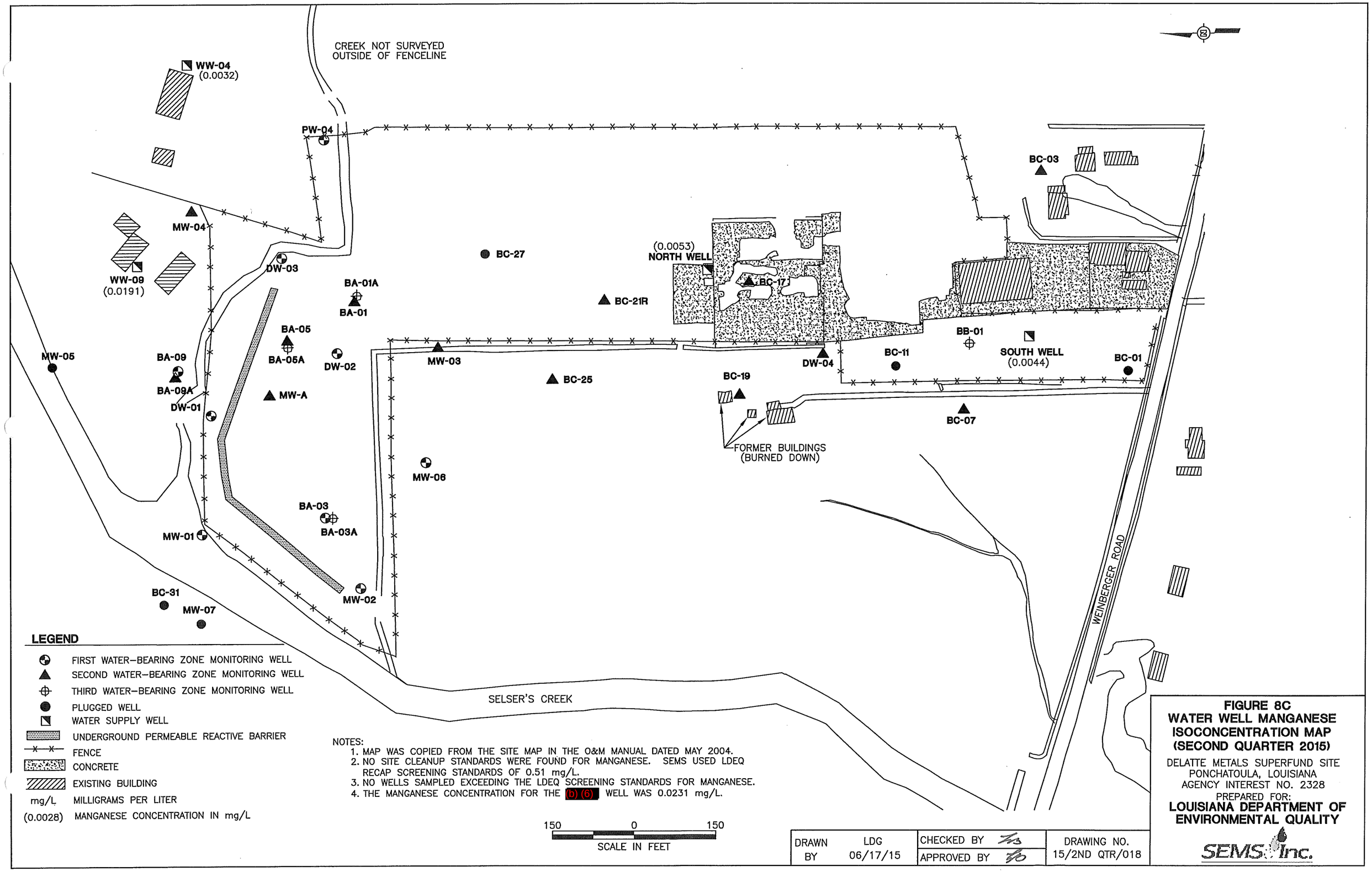
NOTES:
1. MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2. NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L

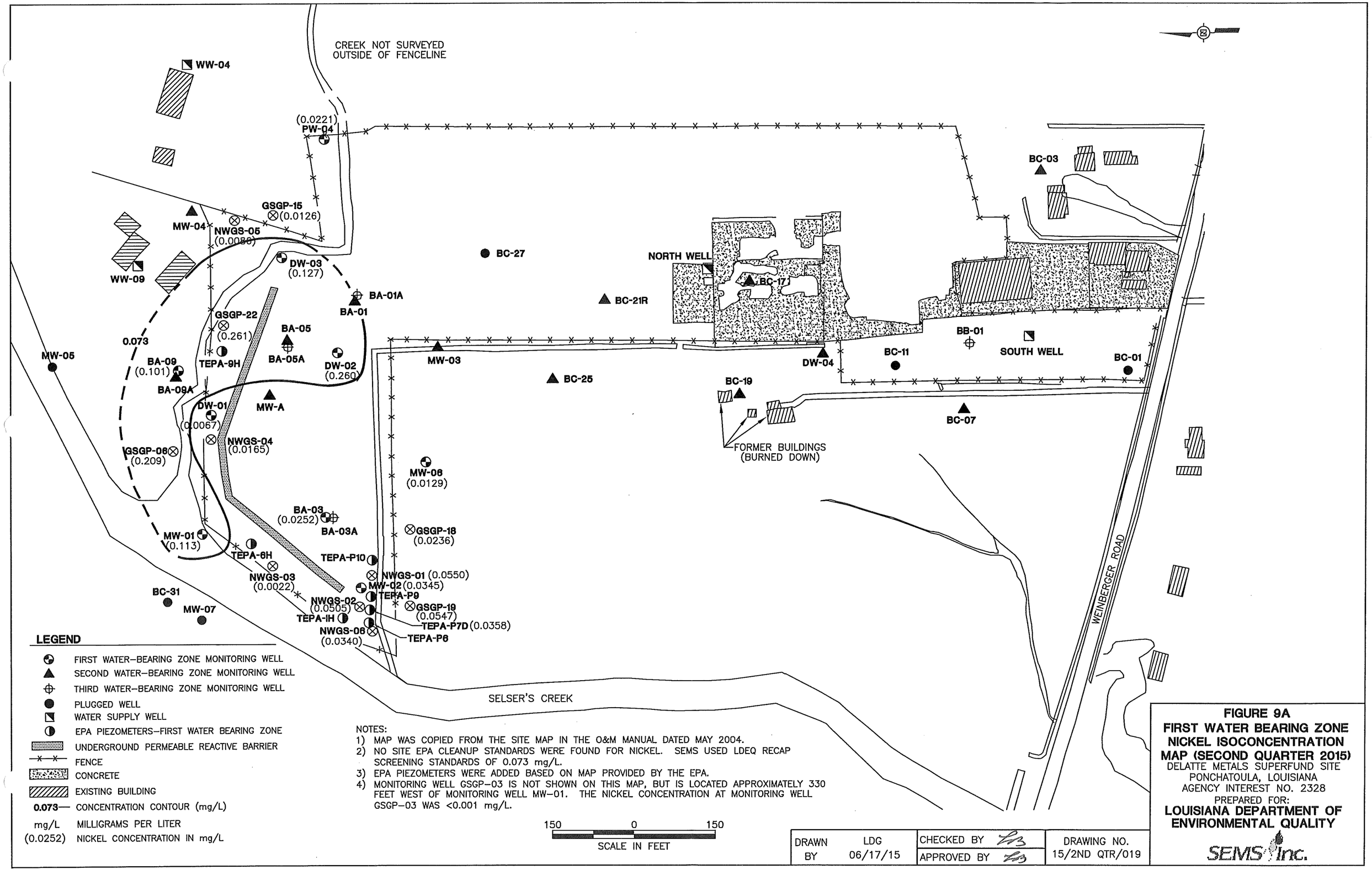
150 0 150
SCALE IN FEET

DRAWN BY	LDG 06/17/15	CHECKED BY	DRAWING NO. 15/2ND QTR/016
		APPROVED BY	

FIGURE 8B
SECOND WATER BEARING ZONE MANGANESE ISOCONCENTRATION MAP (SECOND 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
(0.0032)
PW-04
MW-04
WW-09
(0.0191)
DW-03
BA-01A
BA-01
BC-27
(0.0053)
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
(0.0044)
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
(0.0028) 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 0.0231 mg/L.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/17/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/018
FIGURE 8C
WATER WELL MANGANESE
ISOCONCENTRATION MAP
(SECOND 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
(0.0221)
PW-04
GSGP-15
(0.0126)
MW-04
NWGS-05
(0.0080)
WW-09
DW-03
(0.127)
BA-01A
BA-01
GSGP-22
(0.261)
BA-05
BA-05A
0.073
MW-05
BA-09
(0.101)
TEPA-9H
DW-02
(0.260)
BA-09A
DW-01
(0.0067)
MW-A
GSGP-06
(0.209)
NWGS-04
(0.0165)
BA-03
(0.0252)
BA-03A
MW-01
(0.113)
TEPA-6H
NWGS-03
(0.0022)
BC-31
MW-07
BC-27
NORTH WELL
BC-17
BC-21R
MW-03
BC-25
DW-04
BC-19
FORMER BUILDINGS
(BURNED DOWN)
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
BC-07
MW-06
(0.0129)
GSGP-18
(0.0236)
TEPA-P10
NWGS-01 (0.0550)
MW-02 (0.0345)
TEPA-P9
NWGS-02
(0.0505)
GSGP-19
(0.0547)
TEPA-1H
TEPA-P7D (0.0358)
NWGS-06
(0.0340)
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
0.073 CONCENTRATION CONTOUR (mg/L)
mg/L MILLIGRAMS PER LITER
(0.0252) 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 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 <0.001 mg/L.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/17/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/019
FIGURE 9A
FIRST WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (SECOND 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
(<0.001)

WW-09

DW-03

BA-01A

BA-01
(0.0484)

(0.0304)
BA-05

BA-05A

DW-02

BA-09

BA-09A
(<0.001)

DW-01

MW-05

MW-A
(<0.001)

MW-03
(0.0012)

BC-27

BC-21R
(0.0014)

NORTH WELL

BC-17
(0.0016)

BC-25
(<0.001)

(<0.001)
BC-19

DW-04
(<0.001)

BC-11

BB-01

SOUTH WELL

BC-01

(<0.001)
BC-03

BC-07
(0.0014)

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 06/17/15	CHECKED BY / APPROVED BY	DRAWING NO. 15/2ND QTR/020

FIGURE 9B
SECOND WATER BEARING ZONE NICKEL ISOCONCENTRATION MAP (SECOND 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
(<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
- 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.

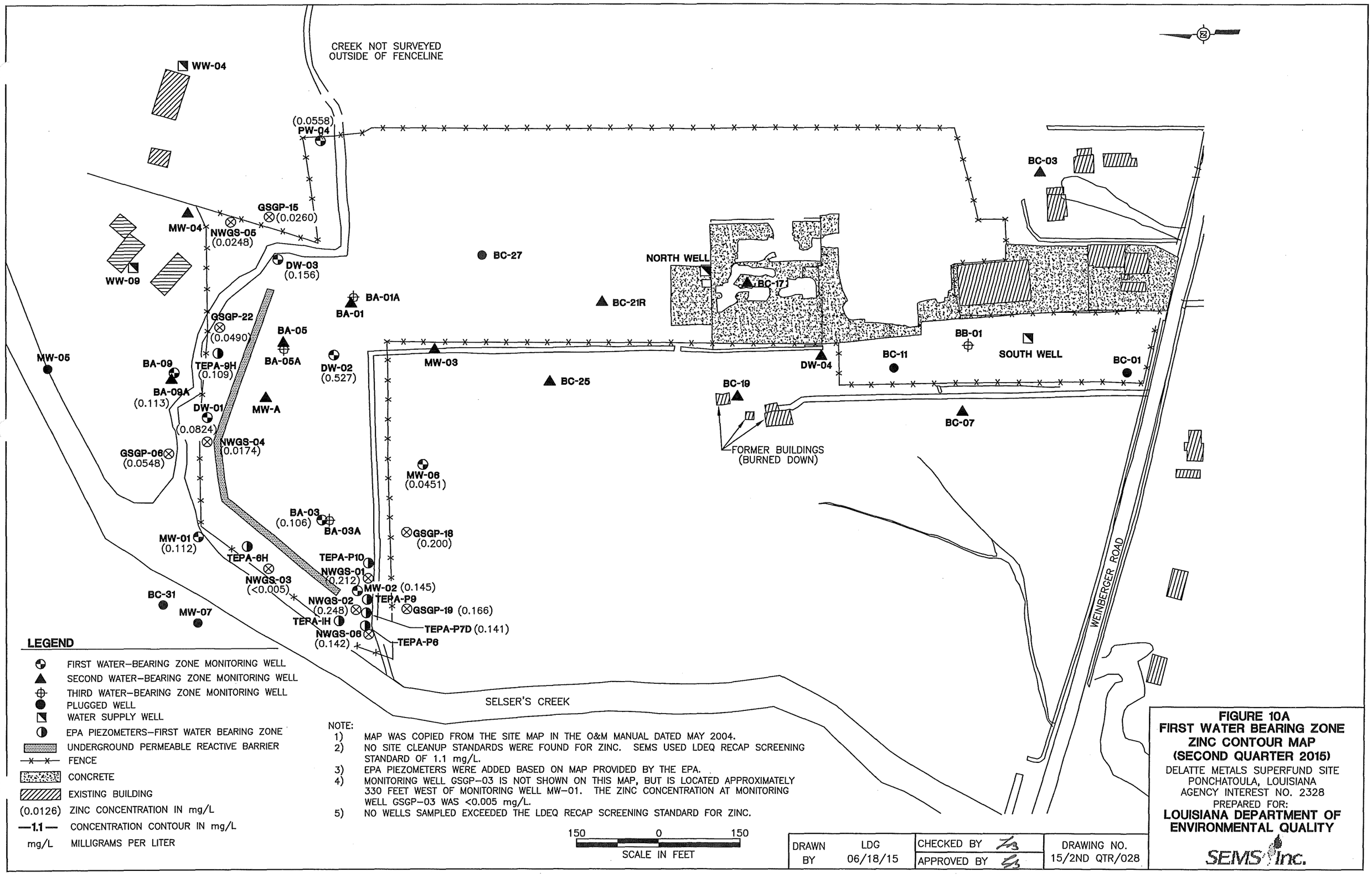
150 0 150
SCALE IN FEET

DRAWN BY	LDG 06/17/15	CHECKED BY	DRAWING NO. 15/2ND QTR/022
		APPROVED BY	

FIGURE 9C
WATER WELL
NICKEL ISOCONCENTRATION MAP
(SECOND 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
(0.0558)
PW-04
GSGP-15
(0.0260)
MW-04
NWGS-05
(0.0248)
WW-09
DW-03
(0.156)
BC-27
NORTH WELL
BC-17
BC-21R
BA-01A
BA-01
GSGP-22
(0.0490)
BA-05
BA-05A
MW-05
BA-09
TEPA-9H
(0.109)
BA-09A
(0.113)
DW-01
(0.0824)
MW-A
DW-02
(0.527)
MW-03
BC-25
BC-19
DW-04
BC-11
BB-01
SOUTH WELL
BC-01
BC-03
BC-07
FORMER BUILDINGS
(BURNED DOWN)
GSGP-06
(0.0548)
NWGS-04
(0.0174)
MW-06
(0.0451)
BA-03
(0.106)
BA-03A
GSGP-18
(0.200)
MW-01
(0.112)
TEPA-6H
TEPA-P10
NWGS-01
(0.212)
NWGS-03
(<0.005)
MW-02 (0.145)
TEPA-P9
BC-31
MW-07
NWGS-02
(0.248)
GSGP-19 (0.166)
TEPA-IH
TEPA-P7D (0.141)
NWGS-06
(0.142)
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
(0.0126) 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.
150 0 150
SCALE IN FEET
DRAWN BY LDG 06/18/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/028
FIGURE 10A
FIRST WATER BEARING ZONE
ZINC CONTOUR MAP
(SECOND 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
(<0.005)
WW-09
DW-03
BC-27
NORTH WELL
BC-17
(0.0122)
(<0.005)
BC-03
BA-01A
BA-01
(0.0683)
BC-21R
(<0.005)
(<0.005)
BA-05
BA-05A
DW-02
MW-05
BA-09
BA-09A
(<0.005)
DW-01
MW-A
(<0.005)
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

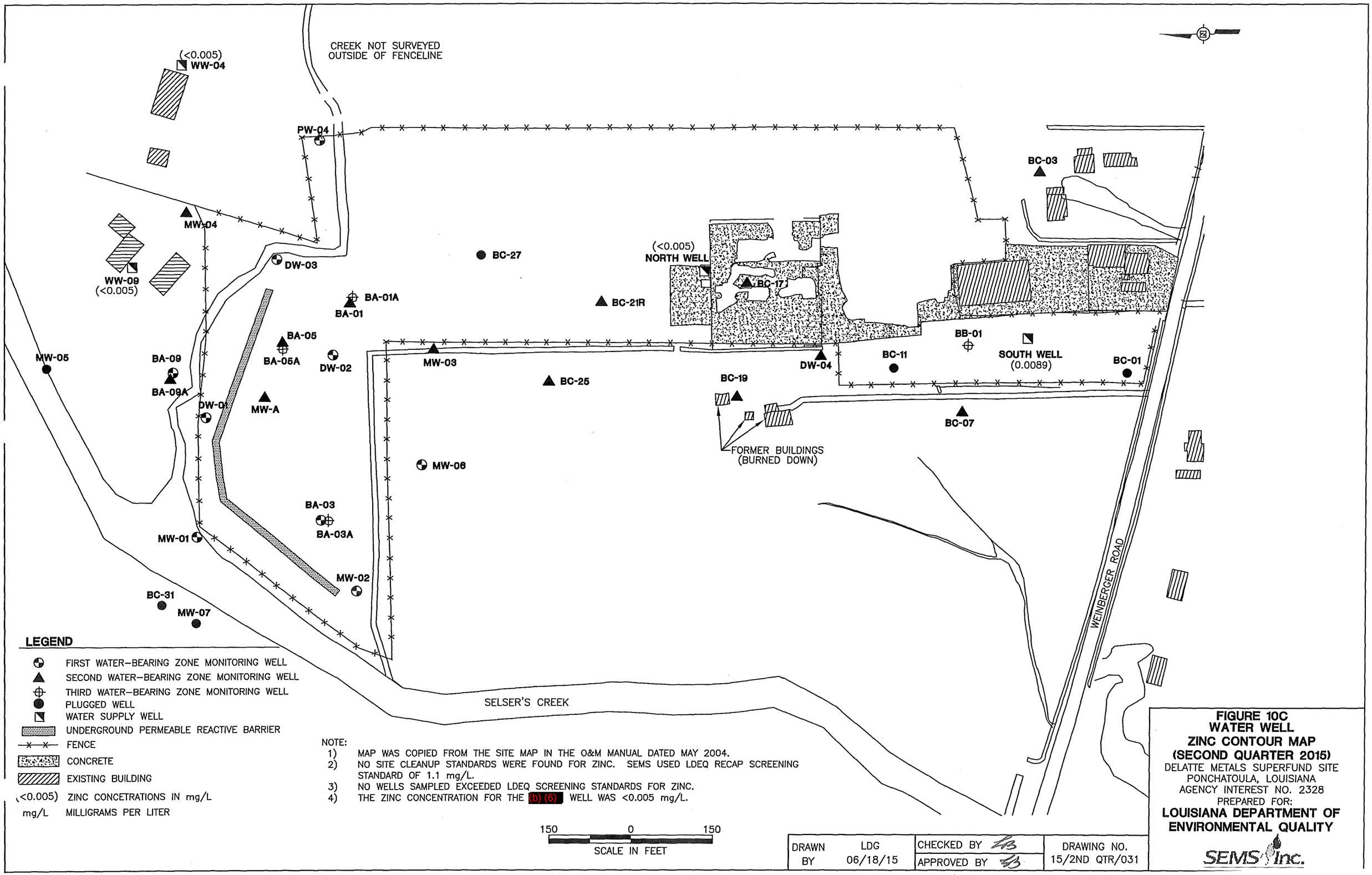
NOTE:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
3) NO WELLS SAMPLED EXCEEDED THE LDEQ RECAP SCREENING STANDARD FOR ZINC.

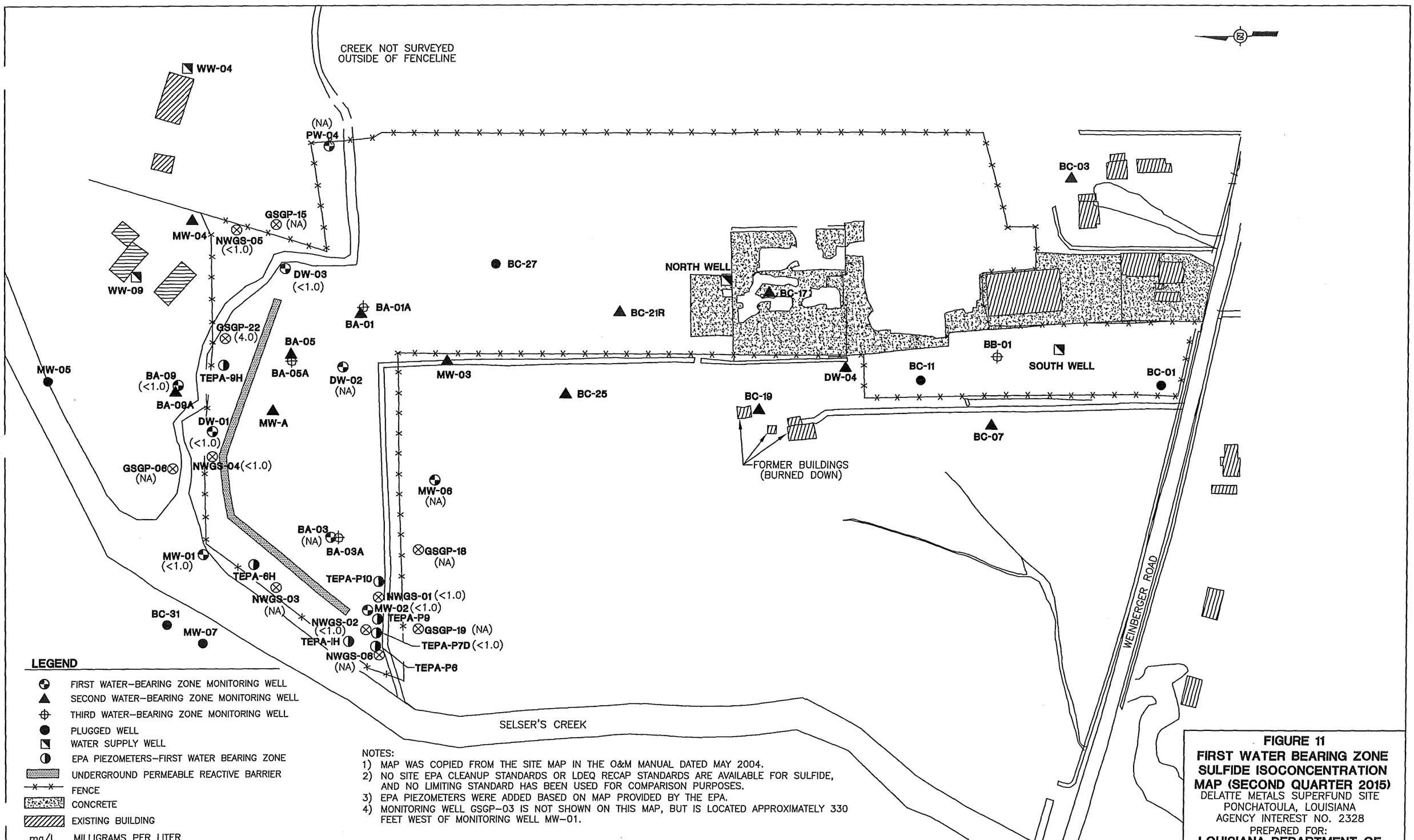
150 0 150
SCALE IN FEET

DRAWN BY	LDG 06/18/15	CHECKED BY	DRAWING NO. 15/2ND QTR/029
		APPROVED BY	

FIGURE 10B
SECOND WATER BEARING ZONE ZINC COUNTOUR MAP (SECOND QUARTER 2014)
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
(<0.005)
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
(0.0089)
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
(<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 06/18/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/031
FIGURE 10C
WATER WELL
ZINC CONTOUR MAP
(SECOND QUARTER 2015)
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
SEMS Inc.

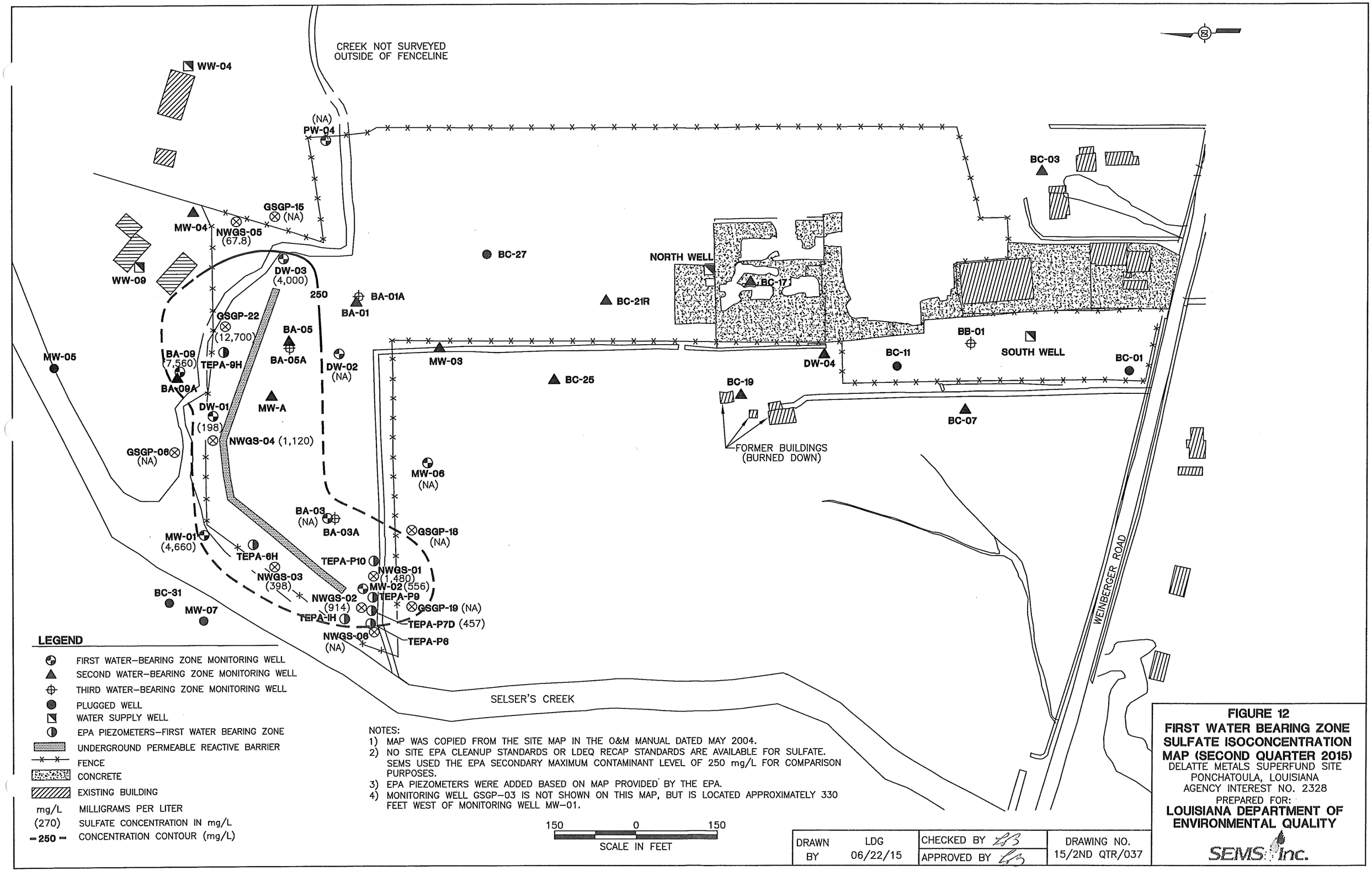


NOTES:
1) MAP WAS COPIED FROM THE SITE MAP IN THE O&M MANUAL DATED MAY 2004.
2) NO SITE EPA CLEANUP STANDARDS OR LDEQ RECAP STANDARDS ARE AVAILABLE FOR SULFIDE, AND NO LIMITING STANDARD HAS BEEN USED FOR COMPARISON PURPOSES.
3) EPA PIEZOMETERS WERE ADDED BASED ON MAP PROVIDED BY THE EPA.
4) MONITORING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

DRAWN BY	LDG 06/22/15	CHECKED BY / APPROVED BY	DRAWING NO. 15/2ND QTR/036

FIGURE 11
FIRST WATER BEARING ZONE SULFIDE ISOCONCENTRATION MAP (SECOND 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
(NA)
PW-04
GSGP-15
(NA)
MW-04
NWGS-05
(67.8)
WW-09
DW-03
(4,000)
250
BA-01A
BA-01
GSGP-22
(12,700)
BA-05
BA-05A
MW-05
BA-09
(7,560)
TEPA-9H
BA-09A
DW-02
(NA)
DW-01
(198)
MW-A
NWGS-04 (1,120)
GSGP-06
(NA)
BC-27
BC-21R
NORTH WELL
BC-17
BC-03
BB-01
SOUTH WELL
BC-11
BC-01
MW-03
DW-04
BC-25
BC-19
BC-07
FORMER BUILDINGS
(BURNED DOWN)
MW-06
(NA)
BA-03
(NA)
BA-03A
GSGP-18
(NA)
MW-01
(4,660)
TEPA-6H
TEPA-P10
NWGS-01
(1,480)
NWGS-03
(398)
MW-02 (556)
TEPA-P9
BC-31
NWGS-02
(914)
GSGP-19 (NA)
MW-07
TEPA-1H
TEPA-P7D (457)
NWGS-06
(NA)
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
mg/L MILLIGRAMS PER LITER
(270) SULFATE CONCENTRATION IN mg/L
250 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 06/22/15
CHECKED BY
APPROVED BY
DRAWING NO. 15/2ND QTR/037
FIGURE 12
FIRST WATER BEARING ZONE SULFATE ISOCONCENTRATION MAP (SECOND QUARTER 2015)
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: 5/11/15 – 5/14/15

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 #: 207-0029

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 : (Varied)	

SEMS EQUIPMENT & MATERIALS USED

Task	Description	Accounting Code	Unit	Quantity
03	Operation, maintenance and related activities per well.		well	40
04	Surface Water sampling activities per well		well	4
09	Well Labels		each	—
10	Well Locks		each	4
11	Concrete Pad		each	—
12	Well cover		each	—
13	Repainting		each (well)	—
14	Post Replacement		each	—
15	Clearing Access to wells		each (clearing event)	1

SEMS PERSONNEL INFORMATION

Employee Name: Nick Rabelhorst

Employee Signature: [signature]

SEMS, Inc.

DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG

SEMS EQUIPMENT & MATERIALS USED

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

oyee Name: Nick Prodehorst Employee Signature:

SEMS, Inc.

Delatte Metals O&M QA/QC Checklist

SEMS Project #: 207-0029
Field Crew: Nick Rodchorst
Larry Braud

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	(b) (6) Well	5/11/15	1030	
	X	Duplicate #2	DW-02	5/12/15	1258	
X		PW-04 MS	PW-04	5/12/15	1432	
X		PW-04 MSD	PW-04	5/12/15	1432	
	X	Duplicate #3	MW-A	5/13/15	900	
	X	Duplicate #4	NWGS-01	5/13/15	959	S&S
X		NWGS-02 MS	NWGS-02	5/13/15	1050	S&S
X		NWGS-02 MSD	NWGS-02	5/13/15	1050	S&S
	X	Duplicate #5	BA-09	5/14/15	944	S&S
X		GSGP-6MS	GSGP-6	5/14/15	918	
X		GSGP-6MSD	GSGP-6	5/14/15	918	

Delatte Metals O&M PRB Inspection Checklist

SEMS Project #: 207-0029
Field Crew: Nick Rodehorst
Larry Braud

Date Inspected 5/13/15

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	No – clearing contractor indicated on 5/12/14 that field was too wet to cut.
PRB Accessible	Yes
PRB Cracks Identified	None Identified.
PRB Erosion Identified	None.
Photos Taken	No.
NOTES: No cracks or erosion identified. An area of standing water is present east of BA-05 due to recent heavy rain.	

PRB=Permeable reactive barrier

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0029
Field Crew: Nick Radchorst
Larry Broud

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	5/11/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
[redacted] Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
WW-04		NA	NA	NA	NA	NA	✓	X	X	X	X	X	✓	
BC-03		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
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	Installed Lock
GSGP-19		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Installed Lock

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0029
Field Crew: Nick Bodkhost
Harry Brouck

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	5/12/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
South Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
BC-17		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
North Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
BC-21R		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
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		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
GSGP-22		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-05	5/13/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	

Delatte Metals O&M Well Inspection Checklist

SEMS Project #: 207-0029
Field Crew: Nick Rodehorst
Larry Brand

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	5/13/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
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	✓	✓	✓	✓	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 #: 207-0029
Field Crew: Nick Rolehorst
Larry Broad

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	5/13/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
NWGS-06	5/12/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	Installed Lock
MW-01	5/13/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
BA-09	5/14/15	✓	✓	✓	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	Installed Lock
MW-4		✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
WW-09		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-03
Date Purged/Sampled: 5/11/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 15.0 ft.
Static Depth to Groundwater (DTW): 5.10 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: 5/11/15 @ 848 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
829	250	–	–	–	–	–	–	5.10
833		20.22	0.237	0.26	5.67	-16	25.6	
836		20.16	0.239	0.21	5.70	-21	21.2	
839		20.10	0.238	0.17	5.71	-26	15.6	
842		20.19	0.239	0.16	5.70	-29	23.9	
845		20.28	0.238	0.15	5.70	-34	21.1	
848		20.12	0.240	0.14	5.71	-37	16.9	

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	X	Sulfates Collected		Sulfides Collected	

SHEET 1 OF 1

Duplicate #1

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: (b) (6) Well
Date Purged/Sampled: 5/11/2015 **Sampled By:** NR/CB

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: 5/11/15 @ 1030 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
1030	—	21.45	0.291	5.91	8.27	-96	0.9	—

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

(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: 5/11/2015 **Sampled By:** NR/LB

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: 5/11/15 @1040 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
1040	—	21.26	0.294	3.28	8.85	-166	2.5	—

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.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-03
Date Purged/Sampled: 5/11/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 28.0 ft.
Static Depth to Groundwater (**DTW**): 4.81 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/11/15 @ 1105 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
10:53	—	—	—	—	—	—	—	4.81
10:59	250	21.74	3.40	0.55	7.02	11	1.7	7.25
11:02	"	21.71	3.41	0.37	7.02	15	1.8	7.99
11:05	"	21.58	3.41	0.21	7.02	21	1.4	8.84

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: 5/11/15 **Sampled By:** NP / LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18.5 ft.
Static Depth to Groundwater (**DTW**): 3.16 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/11/15 @ 1144 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
1124	200	—	—	—	—	—	—	3.16
1129	200	19.27	2.60	1.85	7.08	152	1.3	5.88
1132	"	19.28	2.60	2.08	7.11	157	1.1	6.78
1135	"	19.34	2.60	1.80	7.08	213	1.0	7.45
1138	180	19.44	2.60	1.10	7.03	232	1.3	7.90
1141	"	19.43	2.60	1.14	7.02	248	1.4	8.15
1144	"	19.38	2.60	1.09	7.02	270	1.1	8.29

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: 5/11/15 **Sampled By:** NR / LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 16.5 ft.
Static Depth to Groundwater (DTW): 8.00 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: 5/11/15@1448 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
1432	300	—	—	—	—	—	—	8.00
1437	"	18.42	0.312	3.31	3.79	428	126	8.97
1442	"	18.43	0.384	2.63	3.75	434	20.5	8.88
1445	250	18.40	0.392	2.49	3.75	399	9.5	8.86
1448	"	18.43	0.396	2.50	3.75	398	5.0	8.84

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-18
Date Purged/Sampled: 5/11/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 15.0 ft.
Static Depth to Groundwater (DTW): 9.82 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: 5/11/15 @ 1425 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
14:14	200							9.82
14:19	"	18.98	0.587	1.43	3.37	443	14.1	—
14:22	"	18.95	0.584	1.26	3.34	459	5.7	—
14:25	"	18.93	0.594	1.17	3.34	468	3.7	—

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.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-19
Date Purged/Sampled: 5/11/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 15.0 ft.
Static Depth to Groundwater (DTW): 7.88 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: 5/11/15 @ 1406 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
1356 1350	200							7.88
1400		18.34	1.51	0.27	3.65	306	10.8	—
1403		18.39	1.51	0.21	3.63	297	6.1	—
1406		18.32	1.51	0.16	3.63	290	6.4	—

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		Dissolved Metals Collected		Sulfates Collected		Sulfides Collected	

SHEET _____ OF _____

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: NWGS-06
Date Purged/Sampled: 5/11/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 14.7 ft.
Static Depth to Groundwater (**DTW**): 10.31 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/11/15 @1341 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
13:22								10.31
13:26	200	18.97	0.862	0.80	3.52	387	29.6	10.58
13:29		18.92	0.823	0.71	3.51	391	19.3	10.60
13:32		18.84	0.803	0.60	3.52	386	21.6	10.60
13 35		18.79	0.780	0.56	3.54	383	18.8	10.60
13 38		18.79	0.776	0.57	3.53	383	14.2	10.60
1341		1878	0.789	0.59	3.54	383	9.8	10.60

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: 5/12/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 38 ft.
Static Depth to Groundwater (**DTW**): 4.36 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: 5/12/15 @1001 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
950	275	—	—	—	—	—	—	4.36
955	225	20.34	1.291	0.49	7.09	39	0.9	6.08
958	"	20.47	1.287	0.49	7.08	49	1.1	5.90
1001	"	20.52	1.276	0.47	7.08	49	1.2	5.86

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

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: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 22.5 ft.
Static Depth to Groundwater (**DTW**): 4.65 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @929 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
9:19								4.65
9:23	200	19.70	2.98	0.61	6.82	127	1.9	6.69
9:26	"	19.81	2.98	0.24	6.81	123	2.6	7.08
9:29	"	19.81	2.98	0.19	6.82	120	1.0	7.26

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: 5/12/2015 **Sampled By:** NR/LR

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 32.0 ft.
Static Depth to Groundwater (DTW): 6.56 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @903 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
849	200	—	—	—	—	—	—	6.56
854	"	19.76	0.850	0.26	6.81	83	1.7	7.00
857	"	19.80	0.842	0.20	6.81	95	1.9	7.00
900	"	19.87	0.854	0.18	6.79	103	1.4	7.01
903	"	19.87	0.849	0.15	6.81	105	1.3	7.01

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-03
Date Purged/Sampled: 5/12/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 27.5 ft.
Static Depth to Groundwater (**DTW**): 5.94 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/2015 @ 841 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
830	200	—	—	-	—	—	—	5.94
835	"	19.55	2.09	0.32	6.57	92	2.8	7.67
838	"	19.63	2.10	0.22	6.56	98	3.4	8.08
841	"	19.65	2.09	0.17	6.56	102	3.3	8.29

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.: South Well
Date Purged/Sampled: 5/12/15 **Sampled By:** NA/LB

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: 5/12/15@1030 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
1030	—	22.03	0.309	4.34	8.86	-79	2.7	—

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.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-17
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 28.0 ft.
Static Depth to Groundwater (**DTW**): 5.02 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**): ____ ft.

Purge Flow Rate: ____ mL/min
Volume Purged: ____ gallons
Date/Time of Sample: 5/12/15@1059 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
1045	—	—	—	—	—	—	—	5.02
1050	200	21.85	2.72	0.44	6.65	175	3.0	7.65
1053	"	21.89	2.72	0.28	6.66	155	2.9	8.79
1056	"	21.86	2.73	0.21	6.66	145	3.1	9.71
1059	"	21.79	2.72	0.18	6.65	140	2.6	10.53

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.: North Well
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

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: 5/12/15 @ 1005 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
1005	—	22.75	0.307	1.77	8.91	-99	1.4	—

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.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BC-21R
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 17.5 ft.
Static Depth to Groundwater (**DTW**): 5.68 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @ 1141 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
1119		—	—	—	—	—	—	5.68
1123	200	21.30	1.089	0.44	6.87	261	35	7.58
1126		21.08	1.103	0.23	6.87	240	2.9	8.15
1129		21.06	1.124	0.20	6.86	59	2.3	8.22
1132		20.86	1.132	0.17	6.87	39	2.1	8.29
1135		20.64	1.134	0.14	6.86	33	2.5	8.37
1138		20.53	1.131	0.17	6.86	34	2.6	8.49
1141		20.52	1.133	0.14	6.86	21	3.0	8.48

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

Duplicate #2

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-02
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 11 ft.
Static Depth to Groundwater (DTW): 4.48 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: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @ 1258 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
1243	250	—	—	—	—	—	—	4.48
1248	"	23.17	6.00	0.37	2.92	106	0.8	4.65
1251	"	23.08	5.56	0.26	2.93	175	0.1	4.65
1255	"	23.01	5.52	0.24	2.93	204	0.1	4.65
1258		23.02	5.49	0.24	2.93	212	0.5	4.65

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.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-01
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 26.0 ft.
Static Depth to Groundwater (DTW): 6.08 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @1337 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
1308	250	—	—	—	—	—	—	6.08
1312	"	21.17	3.04	0.54	4.87	111	178	7.45
1315	200	21.57	3.42	0.55	4.80	142	85.9	7.63
1318	"	21.56	3.37	0.37	4.83	141	63.1	7.68
1323	"	21.49	3.26	0.28	4.90	131	42.4	7.79
1328	"	21.40	3.11	0.20	5.01	117	25.3	7.97
1331	"	21.35	3.01	0.15	5.09	104	21.0	8.02
1334	"	21.31	2.97	0.15	5.11	103	23.1	8.06
1337	"	21.31	2.93	0.14	5.17	99	21.2	8.10

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

MS/MSD

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: PW-04
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 19.5 ft.
Static Depth to Groundwater (DTW): 4.93 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: 5/12/15 @1432 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
1422	200	—	—	—	—	—	—	4.93
1426	"	19.80	1.090	0.24	3.95	112	4.0	5.24
1429	"	19.65	1.092	0.15	3.94	117	1.9	5.27
1432	"	19.66	1.095	0.13	3.94	121	2.7	5.29

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-15
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 17.3 ft.
Static Depth to Groundwater (DTW): 8.06 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: 5/12/15 @ 1539 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
1519	200	—	—	—	—	—	—	8.06
1524	"	21.22	0.239	2.52	3.66	414	16.8	—
1527	"	21.10	0.283	1.96	3.61	420	9.2	—
1530	"	21.17	0.307	1.66	3.58	423	6.9	—
1533	"	21.26	0.318	1.54	3.57	422	6.1	—
1536	"	21.45	0.325	1.45	3.56	424	5.7	—
1539	"	21.34	0.328	1.39	3.55	426	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.: NWGS-05
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 12.65 ft.
Static Depth to Groundwater (**DTW**): 8 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @1505 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
1445	200	—	—	—	—	—	—	8.16
1449		20.64	0.142	2.02	3.87	352	30.1	10.28
1452		20.74	0.140	1.83	3.88	371	50.1	11.03
1455		20.55	0.142	1.71	3.88	338	131	11.64
	—	Purged Dry @ 14:56			—			
1505	—	21.68	0.146	5.21	3.90	405	131	—

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	X	Sulfides Collected	X

SHEET 1 OF _____

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-03
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 16 ft.
Static Depth to Groundwater (DTW): 5.88 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @ 1410 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
1350	200	—	—	—	—	—	—	5.88
1355	"	20.21	1.98	0.56	3.89	-27	6.9	6.25
1358	"	19.88	5.81	0.29	3.41	30	1.8	6.25
1401	"	19.80	4.92	0.17	3.39	30	1.9	"
1404	"	19.75	4.56	0.15	3.38	23	1.2	6.23
1407	"	19.73	4.19	0.14	3.38	18	0.6	6.22
1410	"	19.70	3.91	0.14	3.38	13	1.0	

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 _____

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-22
Date Purged/Sampled: 5/12/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 17.5 ft.
Static Depth to Groundwater (DTW): 6.29 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @1611 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
1554	200	—	—	—	—	—	—	6.29
1559	"	20.20	10.61	0.88	3.40	-25	0.0	—
1602	"	20.03	10.48	0.24	3.40	-47	0.6	—
1605	"	20.00	10.41	0.22	3.40	-55	0.9	—
1608	"	20.04	10.34	0.18	3.39	-61	0.8	—
1611	"	19.99	10.30	0.17	3.39	-62	0.4	—

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.: DW-01
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 19 ft.
Static Depth to Groundwater (DTW): 10.19 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15@ 1702 Time

WELL CASING VOLUME CALCULATIONS

☒ 2" Well (H x 0.163 gal/ft) 1.5 gal. (1 well volume) 4.5 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
1619	225	—	—	—	—	—	—	10.19
1624	"	20.10	0.524	0.29	6.00	-58	31.9	11.06
1627		20.13	0.525	0.23	6.00	-55	21.7	11.06
1630		20.08	0.536	0.20	5.97	-44	11.6	11.06
1633		20.02	0.543	0.17	5.96	-30	8.4	11.11
1636		20.02	0.573	0.16	5.94	6	5.3	11.16
1639		20.00	0.610	0.16	5.91	34	4.1	11.19
1643	↓	19.94	0.656	0.16	5.89	62	4.3	
1647	"	19.93	0.680	0.16	5.87	75	3.9	

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 2

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: DW-01
Date Purged/Sampled: 5/12/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 19 ft.
Static Depth to Groundwater (DTW): 10.19 ft.
Screen Length (SL) from Boring Logs: 10 ft.
Depth to Top of Well Screen (TD-SL): 8.81 ft.
Height of Water Column (H=TD-DTW): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/12/15 @ 1702 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
1650	225	19.99	0.701	0.16	5.86	95	3.1	
1653	"	20.06	0.719	0.18	5.85	104	3.1	
1656	"	20.06	0.762	0.18	5.83	120	2.8	
1659	"	20.06	0.773	0.17	5.81	130	2.8	
1702	"	20.06	0.786	0.18	5.81	138	2.5	

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	X	Sulfides Collected	X

SHEET 2 OF 2

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-05
Date Purged/Sampled: 5/13/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 18.5 ft.
Static Depth to Groundwater (DTW): 7.29 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/13/15 @ 8:41 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
8:14	250	—	—	—	—	—	—	7.29
8:19	"	21.06	6.20	0.45	6.09	21	69.0	9.90
8:22	225	20.41	6.22	0.29	6.07	12	36.1	10.34
8:25	"	20.81	6.22	0.30	6.07	1	34.7	10.80
8:29	"	20.79	6.45	0.27	6.10	-4	18.9	11.05
8:32	"	20.79	6.37	0.27	6.10	-12	17.2	11.32
8:35	"	20.77	6.19	0.26	6.10	-18	13.5	11.49
8:38	"	20.74	5.97	0.27	6.11	-21	12.8	11.64
8:41	"	20.75	5.62	0.27	6.12	-21	9.9	

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

Duplicate # 2

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: MW-A
Date Purged/Sampled: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 27 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): 16.5 ft.
Height of Water Column (H=TD-DTW): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/13/15 @ 900 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
8:50	250	—	—	—	—	—	—	9.55
8:54	"	21.14	0.843	0.37	7.13	-70	2.7	10.64
8:57	"	21.24	0.845	0.28	7.12	-64	2.8	10.78
9:00	"	21.21	0.846	0.24	7.11	-60	2.5	10.82

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.: NWGS-04
Date Purged/Sampled: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 14.3 ft.
Static Depth to Groundwater (DTW): 9.32 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/13/15@1330 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
1313	250	—	—	—	—	-	—	9.32
1318	"	21.35	2.96	0.27	6.14	-77	73.7	9.60
1321	"	21.18	2.92	0.17	6.13	-93	27.7	9.60
1324	"	21.18	2.91	0.15	6.12	-101	16.0	"
1327	"	21.29	2.91	0.14	6.12	-106	11.3	"
1330	"	21.25	2.91	0.13	6.12	-110	8.8	"

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	X	Sulfides Collected	X

SHEET 1 OF 1

MS/MSD

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-03
Date Purged/Sampled: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 13.5 ft.
Static Depth to Groundwater (DTW): 6.46 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/13/15 @928 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
9:11	250	—	—	—	—	—	—	6.46
9:16	"	22.18	0.352	2.75	4.56	278	28.7	6.53
9:19	"	22.46	0.390	3.10	4.52	305	19.9	6.54
9:22	"	22.69	0.419	3.26	4.47	320	12.6	6.54
9:25	"	22.88	0.434	3.29	4.48	340	5.7	6.55
9:28	"	22.96	0.513	3.16	4.39	352	4.2	6.55

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-02
Date Purged/Sampled: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 10.5 ft.
Static Depth to Groundwater (DTW): 6.96 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): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/13/15 @ 1028 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
1012	250	—	—	—	—	—	—	6.96
1016	"	21.30	0.743	0.28	3.42	370	5.2	8.40
1019	200	21.33	0.824	0.17	3.33	402	4.9	8.29
1022	"	21.28	0.852	0.15	3.31	415	4.4	8.17
1025	"	21.28	0.860	0.13	3.31	417	3.6	8.20
1028	"	21.28	0.873	0.12	3.32	418	8.1	8.20

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: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): UNK ft.
Static Depth to Groundwater (**DTW**): 9.19 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: 5/13/15 @ 1120 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
1106	250	—	—	—	—	—	—	9.19
1111	200	19.07	0.743	0.56	6.43	206	51.0	—
1114	"	—	Purged	Dry				—
1120		21.17	1.216	4.40	5.64	154	31.1	

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	X	Sulfides Collected	X

SHEET 1 OF 1

Duplicate #4

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: 5/13/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 13.5 ft.
Static Depth to Groundwater (DTW): 6.17 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: 5/13/15 @ 959 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
940	200	—	—	—	—	-	-	6.17
944	"	20.57	1.67	0.39	3.30	456	16.3	6.63
947	"	20.41	1.51	0.17	3.32	465	6.1	6.66
950	"	20.37	1.416	0.12	3.33	467	4.1	6.68
953	"	20.41	1.382	0.10	3.33	469	3.7	6.69
956	"	20.41	1.368	0.10	3.31	469	3.2	6.69
959	"	20.37	1.340	0.09	3.31	468	3.4	6.70

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

MS/MSD

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: 5/13/15 **Sampled By:** NK/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 15.7 ft.
Static Depth to Groundwater (**DTW**): 12.80 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: 5/13/15 @ 1050 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
1037	200	—	—	—	—	—	—	10.80
1041	"	19.24	1.008	0.25	3.49	446	10.3	11.70
1044	"	19.19	1.025	0.21	3.47	450	250	11.75
1047	"	19.28	1.038	0.16	3.47	447	13.3	11.77
1050	"	19.34	1.024	0.17	3.47	447	9.9	11.78

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: 5/13/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 17.2 ft.
Static Depth to Groundwater (**DTW**): 12.11 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: 5/13/15 @ 1149 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
1127	200	—	—	—	—	—	—	12.11
1132	"	20.79	2.00	0.21	6.30	-95	120	12.23
1137	"	20.63	2.03	0.14	6.30	-113	52.5	12.30
1140	"	20.58	2.02	0.11	6.29	-122	30.3	
1143	"	20.63	2.03	0.11	6.28	-125	25.6	
1146	"	20.60	2.00	0.10	6.28	-126	26.2	
1149	"	20.67	2.00	0.09	6.26	-130	25.9	

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	X	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: 5/13/2015 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 28.5 ft.
Static Depth to Groundwater (**DTW**): 13.27 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: 5/13/15@1357 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
1341	225	—	—	—	—	—	—	13.27
1345	"	20.26	4.23	0.84	3.47	200	2.4	13.35
1348	"	20.16	4.32	0.27	3.47	161	2.3	13.35
1351	"	20.12	4.38	0.24	3.45	139	2.4	"
1354	"	20.17	4.42	0.22	3.44	130	2.4	"
1357	"	20.30	4.45	0.24	3.43	124	1.9	"

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

Duplicate #5

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: BA-09
Date Purged/Sampled: 5/14/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (**TD**): 18 ft.
Static Depth to Groundwater (**DTW**): 7.99 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**): _____ ft.

Purge Flow Rate: _____ mL/min
Volume Purged: _____ gallons
Date/Time of Sample: 5/14/15@944 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
923	250	—	—	—	—	—	—	7.99
932	"	19.50	4.30	0.25	3.54	47	2.1	8.33
935	"	19.44	4.30	0.17	3.54	19	1.4	8.35
938	"	19.40	4.24	0.13	3.53	10	1.7	"
941	"	19.41	4.10	0.12	3.53	2	1.7	"
944	"	19.42	3.98	0.12	3.53	1	1.8	"

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	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.: BA-09A
Date Purged/Sampled: 5/14/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 42.0 ft.
Static Depth to Groundwater (DTW): 0.88 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: 5/14/15 @ 1009 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
954	250	—	—	—	—	—	—	0.88
959	"	20.19	0.278	0.16	6.99	-96	1.9	3.35
1003	"	20.19	0.279	0.12	6.98	-91	1.6	4.58
1006	"	20.15	0.281	0.12	6.99	-88	1.9	5.10
1009	"	20.14	0.280	0.11	6.99	-86	1.8	

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 MS/MSD

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: GSGP-06
Date Purged/Sampled: 5/14/15 **Sampled By:** NR/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 14.36 ft.
Static Depth to Groundwater (DTW): 8.57 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: 5/14/15 @918 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
901	200	—	—	—	—	—	—	8.57
905	"	19.00	2.32	0.48	3.61	5	11.4	—
909	"	18.87	2.52	0.33	3.61	-5	7.3	—
912	"	18.86	2.53	0.29	3.59	-12	7.5	—
915	"	18.85	2.57	0.28	3.56	-31	8.5	—
918	175	19.03	2.51	0.29	3.55	-34	9.0	—

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-04
Date Purged/Sampled: 5/14/15 **Sampled By:** NB/LB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 24 ft.
Static Depth to Groundwater (DTW): 13.21 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: 5/14/15 @1045 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
1015	250	—	—	—	—	—	—	13.21
1019	"	19.45	0.407	4.56	6.57	33	5.5	15.32
1023	"	19.43	0.407	3.47	6.55	50	19.1	16.03
1026	225	19.64	0.404	3.03	6.58	56	35.1	16.06
1029	"	19.71	0.406	2.86	6.59	58	33.0	"
1032	"	19.64	0.405	2.79	6.59	61	21.3	"
1035	"	19.69	0.403	3.82	6.64	56	18.3	"
1039	"	19.64	0.403	2.85	6.61	63	15.6	"
1042	"	19.58	0.409	2.74	6.58	66	14.0	"

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 2

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: 5/14/15 **Sampled By:** NR/CB

MONITOR WELL INFORMATION

Total Depth of Monitor Well (TD): 24 ft.
Static Depth to Groundwater (DTW): 13.21 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: 5/14/15 @ 1045 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
1045	225	19.61	0.409	2.55	6.59	69	13.9	"

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 2 OF 2

LOW-FLOW GROUNDWATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Monitor Well No.: WW-09
Date Purged/Sampled: 5/14/15 **Sampled By:** NR/CB

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: 5/14/15 @ 1100 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
1100	—	21.40	0.309	6.48	8.41	-63	2.6	—

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

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: Bridge
Date/Time 5/11/15 947 **Sampled By:** NR/LB

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' upstream from the site at Esterbrook Road Bridge.

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point:

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

D. FIELD MEASUREMENT

Weather Conditions: Overcast, high 80s

Temperature (°C): 25.54
Specific Conductivity (mS/cm): 0.296
Dissolved Oxygen (mg/L): 5.97
pH (std. units): 7.30
ORP (mV): 84
Turbidity (NTU): 19.9

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☒ Dissolved Metals ☒ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CA-41
Date/Time 5/11/15 @ 920 **Sampled By:** NA/LB

A. TYPE OF MONITORING POINT

☒ Stream ☐ Road Ditch ☐ Drainage Ditch ☐ Tributary ☐ Other

Description: Selsers Creek

B. PURPOSE OF MONITORING POINT

☒ Downstream ☐ Upstream ☐ Other

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

C. MONITORING POINT CONDITIONS

General description/ condition of monitoring point:

Water is relatively cloudy.

Was monitoring point dry? ☐ Yes ☒ No

Too little water to sample? ☐ Yes ☒ No

Was water flowing? ☒ Yes ☐ No

Description: Gentle Current.

D. FIELD MEASUREMENT

Weather Conditions: Overcast, high 80s

Temperature (°C): 25.86

Specific Conductivity (mS/cm): 0.283

Dissolved Oxygen (mg/L): 4.84

pH (std. units): 7.07

ORP (mV): 82

Turbidity (NTU): 24.8

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates

☒ Dissolved Metals ☒ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CA-51
Date/Time 5/11/2015 @ 903 **Sampled By:** NR/LB

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:

Water is relatively cloudy.

Was monitoring point dry? ☐ Yes ☒ No

Too little water to sample? ☐ Yes ☒ No

Was water flowing? ☒ Yes ☐ No

Description: Gentle Current.

D. FIELD MEASUREMENT

Weather Conditions: Overcast, High 80s

Temperature (°C): 25.25

Specific Conductivity (mS/cm): 0.283

Dissolved Oxygen (mg/L): 4.85

pH (std. units): 7.11

ORP (mV): 4

Turbidity (NTU): 1477

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates

☑ Dissolved Metals ☑ Total Metals

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CL-05
Date/Time 5/11/15 @ 10:00 **Sampled By:** NA/LB

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:

Dry.

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

D. FIELD MEASUREMENT

Weather Conditions:

Temperature (°C): N/A
Specific Conductivity (mS/cm):
Dissolved Oxygen (mg/L):
pH (std. units):
ORP (mV):
Turbidity (NTU):

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals N/A

SURFACE WATER SAMPLING LOG

Project: Delatte Metals Superfund Site
Project No.: 207-0029
Site Location: Ponchatoula, Louisiana
Surface Monitoring Point No.: CL-19
Date/Time 5/11/15 @ 10:15 **Sampled By:** NB/LB

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:
Very little water

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

D. FIELD MEASUREMENT

Weather Conditions: Overcast - high 80s

Temperature (°C): 27.03
Specific Conductivity (mS/cm): 0.271
Dissolved Oxygen (mg/L): 6.91
pH (std. units): 7.93
ORP (mV): -21
Turbidity (NTU): 15.4

E. SAMPLE PARAMETERS

Sample analysis requested:

☐ Sulfides ☐ Sulfates
☑ Dissolved Metals ☑ Total Metals

Please print or type. AI# 2328

NON HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. WM - 130797

GENERATOR

5. Generator's Name and Mailing Address
Delatte Metals Superfund Site
LDEQ, 602 North Fifth Street
Baton Rouge, LA 70802
Generator's Phone: 225-219-3689

Generator's Site Address (If different than mailing address)
Delatte Metals Superfund Site
19113 Weinberger Rd.
Ponchatoula, LA 70454

6. Transporter 1 Company Name
STRANCO - Truck No. ~~[illegible]~~ NR 750
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Woodside RDF
29340 Woodside Dr.
Walker, LA 70785 (225-667-6160)
Facility's Phone:
U.S. EPA ID Number

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste No.
	1. Purgewater (Profile # 951190LA) 75%	—	Drum	3	55gal	
A	2. Sampling Debris (Profile # 951195LA) 25%	—	Drum	1	55gal	
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable and national governmental regulations and is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Generator's/Offeror's Printed/Typed Name: Nick Rodchorston behalf of LDEQ
Signature:
Month 5 Day 26 Year 15

TRANSPORTER

Transporter Acknowledgement of Receipt of Materials

16. Transporter 1 Printed/Typed Name: Ray Thomas
Signature:
Month 05 Day 26 Year 15

17. Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy Comments

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest ReferenceNumber:

19. Management Method Codes

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: K Cole
Signature:
Month 5 Day 26 Year 15

WASTE MANAGEMENT

29340 Woodside Drive
Walker, LA, 70785
Ph# (225) 665-5225

Original
Ticket# 1501079

Customer Name SENSINC SENS, INC.
Ticket Date 05/26/2015
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code 902
Manifest 130797
Destination
PO
Profile 951190LA (PURGE WATER)
Generator 148-DELATTEMETALS DELATTE METALS SUPERFUND SITE-SENS

Carrier STRANCO STRANCO
Vehicle# 750 Volume
Container
Driver
Check#
Billing # 0066093
Gen EPA ID NA

Grid 3048349 9082349 L3

	Time	Scale	Operator	Inbound		
In	05/26/2015 14:41:09	Inbound	JARRED		Gross	32145 lb*
Out	05/26/2015 15:14:32	Outbound	JUSTIN		Tare	30945 lb*
					Net	1200 lb
			* Manual Weight		Tons	0.60

Comments

	Product	LDS	Qty	UOM	Rate	Tax	Amount	Origin
1	DRUM-SOLIDIFICATIO	100	3	Each				LA
2	FUEL-Fuel Surcharg	100		%				LA
3	ENF-P-Standard Env	100		%				LA
4	RCR-P-Regulatory C	100		%				LA

Total Fee
Total Ticket

Driver's Signature

404WM

WASTE MANAGEMENT

29340 Woodside Drive
Walker, LA, 70785
Ph: (225) 665-8225

Original
Ticket# 1501080

Customer Name SENSINC SENS, INC.
Ticket Date 05/26/2015
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code 902
Manifest 130797
Destination
PO 207-0020
Profile 951185LA (SAMPLING DEBRIS)
Generator 149-DELATTEMETALS DELATTE METALS SUPERFUND SITE-SENS

Carrier STRANCO STRANCO
Vehicle# 750A
Container
Driver
Check#
Billing # 0066093
Gen EPA ID NA

Grid 3048349 9062349 L3

	Time	Scale	Operator	Inbound		
In	05/26/2015 14:41:50	Inbound	JARRED		Gross	10700 lb*
Out	05/26/2015 15:14:53	Outbound	JUSTIN		Tare	10315 lb*
					Net	385 lb
			* Manual Weight		Tons	0.19

Comments

	Product	LB%	Qty	UOM	Rate	Tax	Amount	Origin
1	DRUMS-SAMPLING DEB	100	1	Each				LA
2	FUEL-Fuel Surcharg	100		%				LA
3	EVF-P-Standard Env	100		%				LA
4	RCR-P-Regulatory C	100		%				LA

Total Fee
Total Ticket

Driver's Signature #37 5558

404WM

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

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

June 09, 2015

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

RE: Project: Delatte Metals
Pace Project No.: 2019932

Dear Nick Rodehorst:
Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2015. 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,

Melissa MacNaughton

Melissa MacNaughton for
William Shackelford
william.shackelford@pacelabs.com
Project Manager

Enclosures

cc: Larry Braud, SEMS
Lab Data, SEMS, Inc.
Brian Sullivan, SEMS

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

CERTIFICATIONS

Project: Delatte Metals
Pace Project No.: 2019932

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

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
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

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

SAMPLE SUMMARY

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2019932001	GSGP-03	Water	05/11/15 08:48	05/15/15 11:45
2019932002	(b) (6) [redacted] WELL	Water	05/11/15 10:30	05/15/15 11:45
2019932003	WW-04	Water	05/11/15 10:40	05/15/15 11:45
2019932004	BC-03	Water	05/11/15 11:05	05/15/15 11:45
2019932005	BC-07	Water	05/11/15 11:44	05/15/15 11:45
2019932006	MW-06	Water	05/11/15 14:48	05/15/15 11:45
2019932007	GSGP-18	Water	05/11/15 14:25	05/15/15 11:45
2019932008	GSGP-19	Water	05/11/15 14:06	05/15/15 11:45
2019932009	NWGS-06	Water	05/11/15 13:41	05/15/15 11:45
2019932010	BRIDGE	Water	05/11/15 09:47	05/15/15 11:45
2019932011	CA-51	Water	05/11/15 09:03	05/15/15 11:45
2019932012	CA-41	Water	05/11/15 09:20	05/15/15 11:45
2019932013	CL-19	Water	05/11/15 10:15	05/15/15 11:45
2019932014	DW-04	Water	05/12/15 10:01	05/15/15 11:45
2019932015	BC-19	Water	05/12/15 09:29	05/15/15 11:45
2019932016	BC-25	Water	05/12/15 09:03	05/15/15 11:45
2019932017	MW-03	Water	05/12/15 08:41	05/15/15 11:45
2019932018	SOUTH WELL	Water	05/12/15 10:30	05/15/15 11:45
2019932019	BC-17	Water	05/12/15 10:59	05/15/15 11:45
2019932020	NORTH WELL	Water	05/12/15 10:05	05/15/15 11:45
2019932021	BC-21R	Water	05/12/15 11:41	05/15/15 11:45
2019932022	DW-02	Water	05/12/15 12:58	05/15/15 11:45
2019932023	BA-01	Water	05/12/15 13:37	05/15/15 11:45
2019932024	PW-04	Water	05/12/15 14:32	05/15/15 11:45
2019932025	GSGP-15	Water	05/12/15 15:39	05/15/15 11:45
2019932026	NWGS-05	Water	05/12/15 15:05	05/15/15 11:45
2019932027	DW-03	Water	05/12/15 14:10	05/15/15 11:45
2019932028	GSGP-22	Water	05/12/15 16:11	05/15/15 11:45
2019932029	DW-01	Water	05/12/15 17:02	05/15/15 11:45
2019932030	BA-05	Water	05/13/15 08:41	05/15/15 11:45
2019932031	MW-A	Water	05/13/15 09:00	05/15/15 11:45
2019932032	NWGS-04	Water	05/13/15 13:30	05/15/15 11:45
2019932033	BA-03	Water	05/13/15 09:28	05/15/15 11:45
2019932034	MW-02	Water	05/13/15 10:28	05/15/15 11:45
2019932035	TEPA-P7D	Water	05/13/15 11:20	05/15/15 11:45
2019932036	NWGS-01	Water	05/13/15 09:59	05/15/15 11:45
2019932037	NWGS-02	Water	05/13/15 10:50	05/15/15 11:45

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

SAMPLE SUMMARY

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2019932038	NWGS-03	Water	05/13/15 11:49	05/15/15 11:45
2019932039	MW-01	Water	05/13/15 13:57	05/15/15 11:45
2019932040	BA-09	Water	05/14/15 09:44	05/15/15 11:45
2019932041	BA-09A	Water	05/14/15 10:09	05/15/15 11:45
2019932042	GSGP-6	Water	05/14/15 09:18	05/15/15 11:45
2019932043	MW-04	Water	05/14/15 10:45	05/15/15 11:45
2019932044	WW-09	Water	05/14/15 11:00	05/15/15 11:45
2019932045	DUPLICATE # 1	Water	05/11/15 10:30	05/15/15 11:45
2019932046	DUPLICATE # 2	Water	05/12/15 12:58	05/15/15 11:45
2019932047	DUPLICATE # 3	Water	05/13/15 09:00	05/15/15 11:45
2019932048	DUPLICATE # 4	Water	05/13/15 09:59	05/15/15 11:45
2019932049	DUPLICATE # 5	Water	05/14/15 09:44	05/15/15 11:45

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2019932001	GSGP-03	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932002	(b) (6) [redacted] WELL	EPA 6020	KJR	6	PASI-N
2019932003	WW-04	EPA 6020	KJR	6	PASI-N
2019932004	BC-03	EPA 6020	KJR	6	PASI-N
2019932005	BC-07	EPA 6020	KJR	6	PASI-N
2019932006	MW-06	EPA 6020	KJR	6	PASI-N
2019932007	GSGP-18	EPA 6020	KJR	6	PASI-N
2019932008	GSGP-19	EPA 6020	KJR	6	PASI-N
2019932009	NWGS-06	EPA 6020	KJR	6	PASI-N
2019932010	BRIDGE	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932011	CA-51	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932012	CA-41	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932013	CL-19	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932014	DW-04	EPA 6020	KJR	6	PASI-N
2019932015	BC-19	EPA 6020	KJR	6	PASI-N
2019932016	BC-25	EPA 6020	KJR	6	PASI-N
2019932017	MW-03	EPA 6020	KJR	6	PASI-N
2019932018	SOUTH WELL	EPA 6020	KJR	6	PASI-N
2019932019	BC-17	EPA 6020	KJR	6	PASI-N
2019932020	NORTH WELL	EPA 6020	KJR	6	PASI-N
2019932021	BC-21R	EPA 6020	KJR	6	PASI-N
2019932022	DW-02	EPA 6020	KJR	6	PASI-N
2019932023	BA-01	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932024	PW-04	EPA 6020	KJR	6	PASI-N
2019932025	GSGP-15	EPA 6020	KJR	6	PASI-N
2019932026	NWGS-05	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932027	DW-03	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9056	OL	1	PASI-K
2019932028	GSGP-22	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932029	DW-01	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932030	BA-05	EPA 6020	KJR	6	PASI-N
2019932031	MW-A	EPA 6020	KJR	6	PASI-N
2019932032	NWGS-04	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932033	BA-03	EPA 6020	KJR	6	PASI-N
2019932034	MW-02	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932035	TEPA-P7D	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932036	NWGS-01	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932037	NWGS-02	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932038	NWGS-03	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932039	MW-01	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932040	BA-09	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932041	BA-09A	EPA 6020	KJR	6	PASI-N

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SAMPLE ANALYTE COUNT

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2019932042	GSGP-6	EPA 6020	KJR	6	PASI-N
2019932043	MW-04	EPA 6020	KJR	6	PASI-N
		EPA 6020	KJR	6	PASI-N
2019932044	WW-09	EPA 6020	KJR	6	PASI-N
2019932045	DUPLICATE # 1	EPA 6020	KJR	6	PASI-N
2019932046	DUPLICATE # 2	EPA 6020	KJR	6	PASI-N
2019932047	DUPLICATE # 3	EPA 6020	KJR	6	PASI-N
2019932048	DUPLICATE # 4	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K
2019932049	DUPLICATE # 5	EPA 6020	KJR	6	PASI-N
		EPA 9034	LVA	1	PASI-N
		EPA 9056	OL	1	PASI-K

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-03 **Lab ID: 2019932001** Collected: 05/11/15 08:48 Received: 05/15/15 11:45 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	**3.5**	ug/L	1.0	1	05/19/15 08:50	05/20/15 12:27	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 12:27	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 12:27	7439-92-1	
Manganese	**890**	ug/L	1.0	1	05/19/15 08:50	05/20/15 12:27	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 12:27	7440-02-0	
Zinc	**5.3**	ug/L	5.0	1	05/19/15 08:50	05/20/15 12:27	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**3.4**	ug/L	1.0	1	05/19/15 11:29	05/20/15 12:31	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 12:31	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 12:31	7439-92-1	
Manganese, Dissolved	**832**	ug/L	1.0	1	05/19/15 11:29	05/20/15 12:31	7439-96-5	M1
Nickel, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 12:31	7440-02-0	
Zinc, Dissolved	ND	ug/L	5.0	1	05/19/15 11:29	05/20/15 12:31	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: (b) (6) **WELL** **Lab ID: 2019932002** Collected: 05/11/15 10:30 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:20	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:20	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:20	7439-92-1	
Manganese	**23.1**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:20	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:20	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:20	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: WW-04 **Lab ID: 2019932003** Collected: 05/11/15 10:40 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:24	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:24	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:24	7439-92-1	
Manganese	**3.2**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:24	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:24	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:24	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-03 **Lab ID: 2019932004** Collected: 05/11/15 11:05 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:28	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:28	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:28	7439-92-1	
Manganese	**17.6**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:28	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:28	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:28	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-07 **Lab ID: 2019932005** Collected: 05/11/15 11:44 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:32	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:32	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:32	7439-92-1	
Manganese	**29.1**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:32	7439-96-5	
Nickel	**1.4**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:32	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:32	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-06 **Lab ID: 2019932006** Collected: 05/11/15 14:48 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:36	7440-38-2	
Cadmium	**18.5**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:36	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:36	7439-92-1	
Manganese	**1420**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:36	7439-96-5	
Nickel	**12.9**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:36	7440-02-0	
Zinc	**45.1**	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:36	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-18 **Lab ID: 2019932007** Collected: 05/11/15 14:25 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:40	7440-38-2	
Cadmium	**142**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:40	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:40	7439-92-1	
Manganese	**687**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:40	7439-96-5	
Nickel	**23.6**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:40	7440-02-0	
Zinc	**200**	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:40	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-19 **Lab ID: 2019932008** Collected: 05/11/15 14:06 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:44	7440-38-2	
Cadmium	**69.8**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:44	7440-43-9	
Lead	**2.2**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:44	7439-92-1	
Manganese	**3280**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:44	7439-96-5	
Nickel	**54.7**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:44	7440-02-0	
Zinc	**166**	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:44	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-06 **Lab ID: 2019932009** Collected: 05/11/15 13:41 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:48	7440-38-2	
Cadmium	**69.0**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:48	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:48	7439-92-1	
Manganese	**1460**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:48	7439-96-5	
Nickel	**34.0**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:48	7440-02-0	
Zinc	**142**	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:48	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BRIDGE **Lab ID: 2019932010** Collected: 05/11/15 09:47 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 16:52	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:52	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:52	7439-92-1	
Manganese	**62.8**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:52	7439-96-5	
Nickel	**1.9**	ug/L	1.0	1	05/19/15 08:50	05/20/15 16:52	7440-02-0	
Zinc	**8.2**	ug/L	5.0	1	05/19/15 08:50	05/20/15 16:52	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**2.9**	ug/L	1.0	1	05/19/15 11:29	05/20/15 16:56	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 16:56	7440-43-9	
Lead, Dissolved	**1.3**	ug/L	1.0	1	05/19/15 11:29	05/20/15 16:56	7439-92-1	
Manganese, Dissolved	**88.8**	ug/L	1.0	1	05/19/15 11:29	05/20/15 16:56	7439-96-5	
Nickel, Dissolved	**2.1**	ug/L	1.0	1	05/19/15 11:29	05/20/15 16:56	7440-02-0	
Zinc, Dissolved	**8.2**	ug/L	5.0	1	05/19/15 11:29	05/20/15 16:56	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: CA-51 **Lab ID: 2019932011** Collected: 05/11/15 09:03 Received: 05/15/15 11:45 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	**2.8**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:08	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:08	7440-43-9	
Lead	**1.4**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:08	7439-92-1	
Manganese	**113**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:08	7439-96-5	
Nickel	**2.2**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:08	7440-02-0	
Zinc	**8.8**	ug/L	5.0	1	05/19/15 08:50	05/20/15 17:08	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**2.2**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:12	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:12	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:12	7439-92-1	
Manganese, Dissolved	**97.6**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:12	7439-96-5	
Nickel, Dissolved	**1.9**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:12	7440-02-0	
Zinc, Dissolved	**9.9**	ug/L	5.0	1	05/19/15 11:29	05/20/15 17:12	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: CA-41 **Lab ID: 2019932012** Collected: 05/11/15 09:20 Received: 05/15/15 11:45 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	**2.8**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:15	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:15	7440-43-9	
Lead	**1.9**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:15	7439-92-1	
Manganese	**163**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:15	7439-96-5	
Nickel	**2.2**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:15	7440-02-0	
Zinc	**8.3**	ug/L	5.0	1	05/19/15 08:50	05/20/15 17:15	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**2.1**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:19	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:19	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:19	7439-92-1	
Manganese, Dissolved	**116**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:19	7439-96-5	
Nickel, Dissolved	**2.1**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:19	7440-02-0	
Zinc, Dissolved	**6.7**	ug/L	5.0	1	05/19/15 11:29	05/20/15 17:19	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: CL-19 **Lab ID: 2019932013** Collected: 05/11/15 10:15 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 17:23	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:23	7440-43-9	
Lead	**1.4**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:23	7439-92-1	
Manganese	**89.1**	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:23	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:50	05/20/15 17:23	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:50	05/20/15 17:23	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:27	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:27	7440-43-9	
Lead, Dissolved	**1.0**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:27	7439-92-1	
Manganese, Dissolved	**53.8**	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:27	7439-96-5	
Nickel, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 17:27	7440-02-0	
Zinc, Dissolved	**8.9**	ug/L	5.0	1	05/19/15 11:29	05/20/15 17:27	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DW-04 **Lab ID: 2019932014** Collected: 05/12/15 10:01 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:31	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:31	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:31	7439-92-1	
Manganese	**46.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:31	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:31	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:31	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-19 **Lab ID: 2019932015** Collected: 05/12/15 09:29 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:35	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:35	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:35	7439-92-1	
Manganese	**17.9**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:35	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:35	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:35	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-25 **Lab ID: 2019932016** Collected: 05/12/15 09:03 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:39	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:39	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:39	7439-92-1	
Manganese	**109**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:39	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:39	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:39	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-03 **Lab ID: 2019932017** Collected: 05/12/15 08:41 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:43	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:43	7440-43-9	
Lead	**1.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:43	7439-92-1	
Manganese	**1320**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:43	7439-96-5	
Nickel	**1.2**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:43	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:43	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: SOUTH WELL **Lab ID: 2019932018** Collected: 05/12/15 10:30 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:55	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:55	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:55	7439-92-1	
Manganese	**4.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:55	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:55	7440-02-0	
Zinc	**8.9**	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:55	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-17 **Lab ID: 2019932019** Collected: 05/12/15 10:59 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 17:59	7440-38-2	
Cadmium	**1.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:59	7440-43-9	
Lead	**22.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:59	7439-92-1	
Manganese	**235**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:59	7439-96-5	
Nickel	**1.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 17:59	7440-02-0	
Zinc	**12.2**	ug/L	5.0	1	05/19/15 09:21	05/20/15 17:59	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NORTH WELL **Lab ID: 2019932020** Collected: 05/12/15 10:05 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 18:03	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:03	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:03	7439-92-1	
Manganese	**5.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:03	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:03	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:03	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BC-21R **Lab ID: 2019932021** Collected: 05/12/15 11:41 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 18:07	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:07	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:07	7439-92-1	
Manganese	**247**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:07	7439-96-5	
Nickel	**1.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:07	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:07	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DW-02 **Lab ID: 2019932022** Collected: 05/12/15 12:58 Received: 05/15/15 11:45 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	**10.8**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:11	7440-38-2	
Cadmium	**17.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:11	7440-43-9	
Lead	**12.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:11	7439-92-1	
Manganese	**8220**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:11	7439-96-5	
Nickel	**260**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:11	7440-02-0	
Zinc	**527**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:11	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BA-01 **Lab ID: 2019932023** Collected: 05/12/15 13:37 Received: 05/15/15 11:45 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	**3.2**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:14	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:14	7440-43-9	
Lead	**1.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:14	7439-92-1	
Manganese	**1490**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:14	7439-96-5	
Nickel	**49.9**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:14	7440-02-0	
Zinc	**74.9**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:14	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**3.2**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:18	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:18	7440-43-9	
Lead, Dissolved	**1.2**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:18	7439-92-1	
Manganese, Dissolved	**1430**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:18	7439-96-5	
Nickel, Dissolved	**48.4**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:18	7440-02-0	
Zinc, Dissolved	**68.3**	ug/L	5.0	1	05/19/15 11:29	05/20/15 18:18	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: PW-04 **Lab ID: 2019932024** Collected: 05/12/15 14:32 Received: 05/15/15 11:45 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	05/19/15 08:50	05/20/15 13:31	7440-38-2	M1
Cadmium	**1.2**	ug/L	1.0	1	05/19/15 08:50	05/20/15 13:31	7440-43-9	
Lead	**1.3**	ug/L	1.0	1	05/19/15 08:50	05/20/15 13:31	7439-92-1	
Manganese	**1230**	ug/L	1.0	1	05/19/15 08:50	05/20/15 13:31	7439-96-5	M1
Nickel	**22.1**	ug/L	1.0	1	05/19/15 08:50	05/20/15 13:31	7440-02-0	
Zinc	**55.8**	ug/L	5.0	1	05/19/15 08:50	05/20/15 13:31	7440-66-6	M1

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-15 **Lab ID: 2019932025** Collected: 05/12/15 15:39 Received: 05/15/15 11:45 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	**1.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:22	7440-38-2	
Cadmium	**3.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:22	7440-43-9	
Lead	**2.0**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:22	7439-92-1	
Manganese	**287**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:22	7439-96-5	
Nickel	**12.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:22	7440-02-0	
Zinc	**26.0**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:22	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-05 **Lab ID: 2019932026** Collected: 05/12/15 15:05 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 18:26	7440-38-2	
Cadmium	**1.8**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:26	7440-43-9	
Lead	**10.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:26	7439-92-1	
Manganese	**129**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:26	7439-96-5	
Nickel	**8.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:26	7440-02-0	
Zinc	**24.8**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:26	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:30	7440-38-2	
Cadmium, Dissolved	**1.6**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:30	7440-43-9	
Lead, Dissolved	**7.8**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:30	7439-92-1	
Manganese, Dissolved	**130**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:30	7439-96-5	
Nickel, Dissolved	**7.4**	ug/L	1.0	1	05/19/15 11:29	05/20/15 18:30	7440-02-0	
Zinc, Dissolved	**23.6**	ug/L	5.0	1	05/19/15 11:29	05/20/15 18:30	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**67.8**	mg/L	5.0	5		05/26/15 14:58	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DW-03 **Lab ID: 2019932027** Collected: 05/12/15 14:10 Received: 05/15/15 11:45 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	**14.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:42	7440-38-2	
Cadmium	**2.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:42	7440-43-9	
Lead	**7.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:42	7439-92-1	
Manganese	**4210**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:42	7439-96-5	
Nickel	**127**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:42	7440-02-0	
Zinc	**156**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:42	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**4000**	mg/L	500	500		05/29/15 09:24	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-22 **Lab ID: 2019932028** Collected: 05/12/15 16:11 Received: 05/15/15 11:45 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	**10.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:46	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:46	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:46	7439-92-1	
Manganese	**15400**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:46	7439-96-5	
Nickel	**261**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:46	7440-02-0	
Zinc	**49.0**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:46	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	**4.0**	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**12700**	mg/L	2000	2000		05/29/15 10:07	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DW-01 **Lab ID: 2019932029** Collected: 05/12/15 17:02 Received: 05/15/15 11:45 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	**167**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:50	7440-38-2	
Cadmium	**45.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:50	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:50	7439-92-1	
Manganese	**674**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:50	7439-96-5	
Nickel	**6.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:50	7440-02-0	
Zinc	**82.4**	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:50	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**194**	mg/L	10.0	10		05/26/15 16:12	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BA-05 **Lab ID: 2019932030** Collected: 05/13/15 08:41 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 18:54	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:54	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:54	7439-92-1	
Manganese	**9690**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:54	7439-96-5	
Nickel	**30.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:54	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:54	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-A **Lab ID: 2019932031** Collected: 05/13/15 09:00 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 18:58	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:58	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:58	7439-92-1	
Manganese	**3.9**	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:58	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 18:58	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 18:58	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-04 **Lab ID: 2019932032** Collected: 05/13/15 13:30 Received: 05/15/15 11:45 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	**332**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:02	7440-38-2	
Cadmium	**7.9**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:02	7440-43-9	
Lead	**5.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:02	7439-92-1	
Manganese	**3880**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:02	7439-96-5	
Nickel	**16.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:02	7440-02-0	
Zinc	**17.4**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:02	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1120**	mg/L	100	100		05/26/15 16:27	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BA-03 **Lab ID: 2019932033** Collected: 05/13/15 09:28 Received: 05/15/15 11:45 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	**1.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:06	7440-38-2	
Cadmium	**48.8**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:06	7440-43-9	
Lead	**36.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:06	7439-92-1	
Manganese	**1160**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:06	7439-96-5	
Nickel	**25.2**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:06	7440-02-0	
Zinc	**106**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:06	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-02 **Lab ID: 2019932034** Collected: 05/13/15 10:28 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 19:10	7440-38-2	
Cadmium	**63.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:10	7440-43-9	
Lead	**4.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:10	7439-92-1	
Manganese	**914**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:10	7439-96-5	
Nickel	**34.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:10	7440-02-0	
Zinc	**145**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:10	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**556**	mg/L	50.0	50		05/26/15 16:42	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: TEPA-P7D **Lab ID: 2019932035** Collected: 05/13/15 11:20 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 19:14	7440-38-2	
Cadmium	**80.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:14	7440-43-9	
Lead	**13.1**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:14	7439-92-1	
Manganese	**2070**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:14	7439-96-5	
Nickel	**35.3**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:14	7440-02-0	
Zinc	**127**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:14	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:17	7440-38-2	
Cadmium, Dissolved	**82.8**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:17	7440-43-9	
Lead, Dissolved	**5.6**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:17	7439-92-1	
Manganese, Dissolved	**2110**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:17	7439-96-5	
Nickel, Dissolved	**35.8**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:17	7440-02-0	
Zinc, Dissolved	**141**	ug/L	5.0	1	05/19/15 11:29	05/20/15 19:17	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**457**	mg/L	50.0	50		05/26/15 16:57	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-01 **Lab ID: 2019932036** Collected: 05/13/15 09:59 Received: 05/15/15 11:45 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	**2.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:30	7440-38-2	
Cadmium	**116**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:30	7440-43-9	
Lead	**20.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:30	7439-92-1	
Manganese	**3620**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:30	7439-96-5	
Nickel	**55.0**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:30	7440-02-0	
Zinc	**212**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:30	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1480**	mg/L	100	100		05/27/15 12:15	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-02 **Lab ID: 2019932037** Collected: 05/13/15 10:50 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 15:41	7440-38-2	M1
Cadmium	**256**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:41	7440-43-9	
Lead	**98.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:41	7439-92-1	
Manganese	**2080**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:41	7439-96-5	M1
Nickel	**50.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:41	7440-02-0	
Zinc	**248**	ug/L	5.0	1	05/19/15 09:21	05/20/15 15:41	7440-66-6	M1
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**914**	mg/L	50.0	50		05/26/15 17:57	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: NWGS-03 **Lab ID: 2019932038** Collected: 05/13/15 11:49 Received: 05/15/15 11:45 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	**20.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:33	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:33	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:33	7439-92-1	
Manganese	**1650**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:33	7439-96-5	
Nickel	**2.4**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:33	7440-02-0	
Zinc	**13.4**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:33	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	**18.7**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:37	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:37	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:37	7439-92-1	
Manganese, Dissolved	**1620**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:37	7439-96-5	
Nickel, Dissolved	**2.2**	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:37	7440-02-0	
Zinc, Dissolved	ND	ug/L	5.0	1	05/19/15 11:29	05/20/15 19:37	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**398**	mg/L	50.0	50		05/26/15 18:27	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-01 **Lab ID: 2019932039** Collected: 05/13/15 13:57 Received: 05/15/15 11:45 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	**12.0**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:41	7440-38-2	
Cadmium	**2.2**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:41	7440-43-9	
Lead	**3.0**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:41	7439-92-1	
Manganese	**4420**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:41	7439-96-5	
Nickel	**113**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:41	7440-02-0	
Zinc	**112**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:41	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**4660**	mg/L	500	500		05/29/15 10:35	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BA-09 **Lab ID: 2019932040** Collected: 05/14/15 09:44 Received: 05/15/15 11:45 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	**6.6**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:45	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:45	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:45	7439-92-1	
Manganese	**3700**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:45	7439-96-5	
Nickel	**101**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:45	7440-02-0	
Zinc	**113**	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:45	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**7560**	mg/L	500	500		05/27/15 12:44	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: BA-09A **Lab ID: 2019932041** Collected: 05/14/15 10:09 Received: 05/15/15 11:45 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	05/19/15 09:21	05/20/15 19:49	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:49	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:49	7439-92-1	
Manganese	**36.0**	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:49	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 19:49	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 09:21	05/20/15 19:49	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: GSGP-6 **Lab ID: 2019932042** Collected: 05/14/15 09:18 Received: 05/15/15 11:45 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	**5.7**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:56	7440-38-2	M1
Cadmium	ND	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:56	7440-43-9	
Lead	**1.5**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:56	7439-92-1	
Manganese	**2590**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:56	7439-96-5	M1
Nickel	**209**	ug/L	1.0	1	05/19/15 09:21	05/20/15 15:56	7440-02-0	
Zinc	**54.8**	ug/L	5.0	1	05/19/15 09:21	05/20/15 15:56	7440-66-6	M1

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: MW-04 **Lab ID: 2019932043** Collected: 05/14/15 10:45 Received: 05/15/15 11:45 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	05/19/15 08:45	05/20/15 19:53	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 19:53	7440-43-9	
Lead	**1.2**	ug/L	1.0	1	05/19/15 08:45	05/20/15 19:53	7439-92-1	
Manganese	**18.9**	ug/L	1.0	1	05/19/15 08:45	05/20/15 19:53	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 19:53	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:45	05/20/15 19:53	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 3005A							
Arsenic, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:57	7440-38-2	
Cadmium, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:57	7440-43-9	
Lead, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:57	7439-92-1	
Manganese, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:57	7439-96-5	
Nickel, Dissolved	ND	ug/L	1.0	1	05/19/15 11:29	05/20/15 19:57	7440-02-0	
Zinc, Dissolved	ND	ug/L	5.0	1	05/19/15 11:29	05/20/15 19:57	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: WW-09 **Lab ID: 2019932044** Collected: 05/14/15 11:00 Received: 05/15/15 11:45 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	05/19/15 08:45	05/20/15 20:01	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:01	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:01	7439-92-1	
Manganese	**19.1**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:01	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:01	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:01	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DUPLICATE # 1 **Lab ID: 2019932045** Collected: 05/11/15 10:30 Received: 05/15/15 11:45 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	05/19/15 08:45	05/20/15 20:05	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:05	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:05	7439-92-1	
Manganese	**23.4**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:05	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:05	7440-02-0	
Zinc	ND	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:05	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DUPLICATE # 2 **Lab ID: 2019932046** Collected: 05/12/15 12:58 Received: 05/15/15 11:45 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	**10.6**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:17	7440-38-2	
Cadmium	**18.0**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:17	7440-43-9	
Lead	**12.7**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:17	7439-92-1	
Manganese	**8560**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:17	7439-96-5	
Nickel	**263**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:17	7440-02-0	
Zinc	**533**	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:17	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DUPLICATE # 3 **Lab ID: 2019932047** Collected: 05/13/15 09:00 Received: 05/15/15 11:45 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	05/19/15 08:45	05/20/15 20:21	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:21	7440-43-9	
Lead	**2.3**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:21	7439-92-1	
Manganese	**4.0**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:21	7439-96-5	
Nickel	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:21	7440-02-0	
Zinc	**11.1**	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:21	7440-66-6	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DUPLICATE # 4 **Lab ID: 2019932048** Collected: 05/13/15 09:59 Received: 05/15/15 11:45 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	**2.7**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:25	7440-38-2	
Cadmium	**116**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:25	7440-43-9	
Lead	**20.5**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:25	7439-92-1	
Manganese	**3630**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:25	7439-96-5	
Nickel	**54.5**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:25	7440-02-0	
Zinc	**212**	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:25	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1440**	mg/L	100	100		05/27/15 12:59	14808-79-8	

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ANALYTICAL RESULTS

Project: Delatte Metals
Pace Project No.: 2019932

Sample: DUPLICATE # 5 **Lab ID: 2019932049** Collected: 05/14/15 09:44 Received: 05/15/15 11:45 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	**6.4**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:29	7440-38-2	
Cadmium	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:29	7440-43-9	
Lead	ND	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:29	7439-92-1	
Manganese	**3600**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:29	7439-96-5	
Nickel	**97.5**	ug/L	1.0	1	05/19/15 08:45	05/20/15 20:29	7440-02-0	
Zinc	**106**	ug/L	5.0	1	05/19/15 08:45	05/20/15 20:29	7440-66-6	
9034 Sulfide, Titration	Analytical Method: EPA 9034							
Sulfide	ND	mg/L	1.0	1		05/19/15 15:33		
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**7500**	mg/L	500	500		05/27/15 13:14	14808-79-8	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: MPRP/2708 | Analysis Method: EPA 6020
QC Batch Method: EPA 3010 | Analysis Description: 6020 MET
Associated Lab Samples: 2019932043, 2019932044, 2019932045, 2019932046, 2019932047, 2019932048, 2019932049

METHOD BLANK: 121117 | Matrix: Water
Associated Lab Samples: 2019932043, 2019932044, 2019932045, 2019932046, 2019932047, 2019932048, 2019932049

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	05/20/15 11:48	
Cadmium	ug/L	ND	1.0	05/20/15 11:48	
Lead	ug/L	ND	1.0	05/20/15 11:48	
Manganese	ug/L	ND	1.0	05/20/15 11:48	
Nickel	ug/L	ND	1.0	05/20/15 11:48	
Zinc	ug/L	ND	5.0	05/20/15 11:48	

LABORATORY CONTROL SAMPLE: 121118

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	21.4	107	85-115	
Nickel	ug/L	20	20.9	105	80-118	
Zinc	ug/L	20	21.3	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 121119 121120

Parameter	Units	2019843001 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	20.1	20.4	97	99	80-120	1	20	
Cadmium	ug/L	ND	20	20	19.8	19.9	98	99	80-120	1	20	
Lead	ug/L	0.0026 mg/L	20	20	23.4	23.5	104	105	80-120	1	20	
Manganese	ug/L	0.35 mg/L	20	20	371	372	103	105	80-120	0	20	
Nickel	ug/L	0.0020 mg/L	20	20	20.4	20.3	92	91	80-120	0	20	
Zinc	ug/L	0.082 mg/L	20	20	100	100	91	91	80-120	0	20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: MPRP/2709 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 2019932001, 2019932002, 2019932003, 2019932004, 2019932005, 2019932006, 2019932007, 2019932008, 2019932009, 2019932010, 2019932011, 2019932012, 2019932013, 2019932024

METHOD BLANK: 121124 Matrix: Water
Associated Lab Samples: 2019932001, 2019932002, 2019932003, 2019932004, 2019932005, 2019932006, 2019932007, 2019932008, 2019932009, 2019932010, 2019932011, 2019932012, 2019932013, 2019932024

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	05/20/15 11:56	
Cadmium	ug/L	ND	1.0	05/20/15 11:56	
Lead	ug/L	ND	1.0	05/20/15 11:56	
Manganese	ug/L	ND	1.0	05/20/15 11:56	
Nickel	ug/L	ND	1.0	05/20/15 11:56	
Zinc	ug/L	ND	5.0	05/20/15 11:56	

LABORATORY CONTROL SAMPLE: 121125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	21.0	105	83-115	
Cadmium	ug/L	20	21.1	106	85-115	
Lead	ug/L	20	19.9	99	84-115	
Manganese	ug/L	20	21.0	105	85-115	
Nickel	ug/L	20	21.3	106	80-118	
Zinc	ug/L	20	22.5	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 121126 121127

Parameter	Units	2019932024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.9	20	20	16.2	16.0	71	71	80-120	1	20	M1
Cadmium	ug/L	1.2	20	20	19.8	19.8	93	93	80-120	0	20	
Lead	ug/L	1.3	20	20	21.9	21.8	103	103	80-120	0	20	
Manganese	ug/L	1230	20	20	1240	1230	80	10	80-120	1	20	M1
Nickel	ug/L	22.1	20	20	38.4	38.1	82	80	80-120	1	20	
Zinc	ug/L	55.8	20	20	71.5	71.5	79	78	80-120	0	20	M1

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: MPRP/2710 — Analysis Method: EPA 6020
QC Batch Method: EPA 3010 — Analysis Description: 6020 MET
Associated Lab Samples: 2019932014, 2019932015, 2019932016, 2019932017, 2019932018, 2019932019, 2019932020, 2019932021, 2019932022, 2019932023, 2019932025, 2019932026, 2019932027, 2019932037

METHOD BLANK: 121129 — Matrix: Water
Associated Lab Samples: 2019932014, 2019932015, 2019932016, 2019932017, 2019932018, 2019932019, 2019932020, 2019932021, 2019932022, 2019932023, 2019932025, 2019932026, 2019932027, 2019932037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	05/20/15 12:04	
Cadmium	ug/L	ND	1.0	05/20/15 12:04	
Lead	ug/L	ND	1.0	05/20/15 12:04	
Manganese	ug/L	ND	1.0	05/20/15 12:04	
Nickel	ug/L	ND	1.0	05/20/15 12:04	
Zinc	ug/L	ND	5.0	05/20/15 12:04	

LABORATORY CONTROL SAMPLE: 121130

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	20.6	103	83-115	
Cadmium	ug/L	20	20.6	103	85-115	
Lead	ug/L	20	19.5	98	84-115	
Manganese	ug/L	20	21.0	105	85-115	
Nickel	ug/L	20	20.8	104	80-118	
Zinc	ug/L	20	22.1	111	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 121131 121132

Parameter	Units	2019932037 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	2.0	20	20	16.2	16.3	71	71	80-120	1	20	M1
Cadmium	ug/L	256	20	20	274	272	94	84	80-120	1	20	
Lead	ug/L	98.5	20	20	122	122	117	117	80-120	0	20	
Manganese	ug/L	2080	20	20	2090	2090	70	40	80-120	0	20	M1
Nickel	ug/L	50.5	20	20	66.8	66.5	82	80	80-120	0	20	
Zinc	ug/L	248	20	20	261	259	62	54	80-120	1	20	M1

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: MPRP/2711 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 2019932028, 2019932029, 2019932030, 2019932031, 2019932032, 2019932033, 2019932034, 2019932035, 2019932036, 2019932038, 2019932039, 2019932040, 2019932041, 2019932042

METHOD BLANK: 121135 Matrix: Water
Associated Lab Samples: 2019932028, 2019932029, 2019932030, 2019932031, 2019932032, 2019932033, 2019932034, 2019932035, 2019932036, 2019932038, 2019932039, 2019932040, 2019932041, 2019932042

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	ND	1.0	05/20/15 12:20	
Cadmium	ug/L	ND	1.0	05/20/15 12:20	
Lead	ug/L	ND	1.0	05/20/15 12:20	
Manganese	ug/L	ND	1.0	05/20/15 12:20	
Nickel	ug/L	ND	1.0	05/20/15 12:20	
Zinc	ug/L	ND	5.0	05/20/15 12:20	

LABORATORY CONTROL SAMPLE: 121136

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	20	20.6	103	83-115	
Cadmium	ug/L	20	20.9	104	85-115	
Lead	ug/L	20	19.6	98	84-115	
Manganese	ug/L	20	20.8	104	85-115	
Nickel	ug/L	20	20.7	104	80-118	
Zinc	ug/L	20	21.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 121137 121138

Parameter	Units	2019932042 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	5.7	20	20	13.6	13.7	39	40	80-120	1	20	M1
Cadmium	ug/L	ND	20	20	16.8	16.8	83	83	80-120	0	20	
Lead	ug/L	1.5	20	20	22.8	23.2	107	109	80-120	2	20	
Manganese	ug/L	2590	20	20	2660	2740	385	780	80-120	3	20	M1
Nickel	ug/L	209	20	20	226	232	88	118	80-120	3	20	
Zinc	ug/L	54.8	20	20	66.5	67.5	58	63	80-120	1	20	M1

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

QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: MPRP/2706 | Analysis Method: EPA 6020
QC Batch Method: EPA 3005A | Analysis Description: 6020 MET Dissolved
Associated Lab Samples: 2019932001, 2019932010, 2019932011, 2019932012, 2019932013, 2019932023, 2019932026, 2019932035, 2019932038, 2019932043

METHOD BLANK: 121107 | Matrix: Water
Associated Lab Samples: 2019932001, 2019932010, 2019932011, 2019932012, 2019932013, 2019932023, 2019932026, 2019932035, 2019932038, 2019932043

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	ND	1.0	05/20/15 11:32	
Cadmium, Dissolved	ug/L	ND	1.0	05/20/15 11:32	
Lead, Dissolved	ug/L	ND	1.0	05/20/15 11:32	
Manganese, Dissolved	ug/L	ND	1.0	05/20/15 11:32	
Nickel, Dissolved	ug/L	ND	1.0	05/20/15 11:32	
Zinc, Dissolved	ug/L	ND	5.0	05/20/15 11:32	

LABORATORY CONTROL SAMPLE: 121108

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	20	20.2	101	80-120	
Cadmium, Dissolved	ug/L	20	20.4	102	80-120	
Lead, Dissolved	ug/L	20	19.0	95	80-120	
Manganese, Dissolved	ug/L	20	20.2	101	80-120	
Nickel, Dissolved	ug/L	20	20.3	102	80-120	
Zinc, Dissolved	ug/L	20	20.5	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 121687 121688

Parameter	Units	2019932001 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	3.4	20	20	22.1	22.2	93	94	75-125	1	20	
Cadmium, Dissolved	ug/L	ND	20	20	19.4	19.5	97	98	75-125	1	20	
Lead, Dissolved	ug/L	ND	20	20	19.1	19.3	96	97	75-125	1	20	
Manganese, Dissolved	ug/L	832	20	20	832	831	0	-6	75-125	0	20	M1
Nickel, Dissolved	ug/L	ND	20	20	19.2	19.3	94	94	75-125	0	20	
Zinc, Dissolved	ug/L	ND	20	20	19.6	19.7	95	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: WET/6760 Analysis Method: EPA 9034
QC Batch Method: EPA 9034 Analysis Description: 9034 Sulfide Waste Water
Associated Lab Samples: 2019932026, 2019932027, 2019932028, 2019932029, 2019932032, 2019932034, 2019932035, 2019932036, 2019932037, 2019932038, 2019932039, 2019932040, 2019932048, 2019932049

METHOD BLANK: 121492 Matrix: Water
Associated Lab Samples: 2019932026, 2019932027, 2019932028, 2019932029, 2019932032, 2019932034, 2019932035, 2019932036, 2019932037, 2019932038, 2019932039, 2019932040, 2019932048, 2019932049

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	ND	1.0	05/19/15 15:33	

LABORATORY CONTROL SAMPLE: 121493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	20	16.0	80	80-120	

MATRIX SPIKE SAMPLE: 121495

Parameter	Units	2019932037 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	ND	20	16.0	80	75-125	

SAMPLE DUPLICATE: 121494

Parameter	Units	2019932037 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide	mg/L	ND	ND		20	

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(504)469-0333

QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: WETA/34277 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 2019932026, 2019932029, 2019932032, 2019932034, 2019932035, 2019932037, 2019932038

METHOD BLANK: 1573996 Matrix: Water
Associated Lab Samples: 2019932026, 2019932029, 2019932032, 2019932034, 2019932035, 2019932037, 2019932038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/26/15 13:58	

LABORATORY CONTROL SAMPLE: 1573997

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1573998 1573999

Parameter	Units	2019932026 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	67.8	25	25	80.0	79.0	49	45	80-120	1	15	M1

SAMPLE DUPLICATE: 1574000

Parameter	Units	2019932037 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	914	956	4	15	

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QUALITY CONTROL DATA

Project: Delatte Metals
Pace Project No.: 2019932

QC Batch: WETA/34307 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 2019932027, 2019932028, 2019932036, 2019932039, 2019932040, 2019932048, 2019932049

METHOD BLANK: 1574827 Matrix: Water
Associated Lab Samples: 2019932036, 2019932040, 2019932048, 2019932049

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/27/15 09:14	

METHOD BLANK: 1576347 Matrix: Water
Associated Lab Samples: 2019932027, 2019932028, 2019932039

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/29/15 08:56	

LABORATORY CONTROL SAMPLE: 1574828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	99	80-120	

LABORATORY CONTROL SAMPLE: 1576348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1574829 1574830

Parameter	Units	2019932027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	4000	2500	2500	5440	5440	58	58	80-120	0	15	M1

SAMPLE DUPLICATE: 1574831

Parameter	Units	2019932028 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	12700	14700	15	15	

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QUALIFIERS

Project: Delatte Metals
Pace Project No.: 2019932

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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1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2019932001	GSGP-03	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932002	(b) (6) [redacted] WELL	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932003	WW-04	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932004	BC-03	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932005	BC-07	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932006	MW-06	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932007	GSGP-18	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932008	GSGP-19	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932009	NWGS-06	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932010	BRIDGE	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932011	CA-51	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932012	CA-41	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932013	CL-19	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932014	DW-04	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932015	BC-19	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932016	BC-25	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932017	MW-03	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932018	SOUTH WELL	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932019	BC-17	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932020	NORTH WELL	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932021	BC-21R	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932022	DW-02	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932023	BA-01	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932024	PW-04	EPA 3010	MPRP/2709	EPA 6020	ICPM/1441
2019932025	GSGP-15	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932026	NWGS-05	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932027	DW-03	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932028	GSGP-22	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932029	DW-01	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932030	BA-05	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932031	MW-A	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932032	NWGS-04	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932033	BA-03	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932034	MW-02	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932035	TEPA-P7D	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932036	NWGS-01	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932037	NWGS-02	EPA 3010	MPRP/2710	EPA 6020	ICPM/1442
2019932038	NWGS-03	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932039	MW-01	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932040	BA-09	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932041	BA-09A	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932042	GSGP-6	EPA 3010	MPRP/2711	EPA 6020	ICPM/1443
2019932043	MW-04	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932044	WW-09	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932045	DUPLICATE # 1	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 2019932

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2019932046	DUPLICATE # 2	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932047	DUPLICATE # 3	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932048	DUPLICATE # 4	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932049	DUPLICATE # 5	EPA 3010	MPRP/2708	EPA 6020	ICPM/1440
2019932001	GSGP-03	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932010	BRIDGE	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932011	CA-51	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932012	CA-41	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932013	CL-19	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932023	BA-01	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932026	NWGS-05	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932035	TEPA-P7D	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932038	NWGS-03	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932043	MW-04	EPA 3005A	MPRP/2706	EPA 6020	ICPM/1438
2019932026	NWGS-05	EPA 9034	WET/6760		
2019932027	DW-03	EPA 9034	WET/6760		
2019932028	GSGP-22	EPA 9034	WET/6760		
2019932029	DW-01	EPA 9034	WET/6760		
2019932032	NWGS-04	EPA 9034	WET/6760		
2019932034	MW-02	EPA 9034	WET/6760		
2019932035	TEPA-P7D	EPA 9034	WET/6760		
2019932036	NWGS-01	EPA 9034	WET/6760		
2019932037	NWGS-02	EPA 9034	WET/6760		
2019932038	NWGS-03	EPA 9034	WET/6760		
2019932039	MW-01	EPA 9034	WET/6760		
2019932040	BA-09	EPA 9034	WET/6760		
2019932048	DUPLICATE # 4	EPA 9034	WET/6760		
2019932049	DUPLICATE # 5	EPA 9034	WET/6760		
2019932026	NWGS-05	EPA 9056	WETA/34277		
2019932027	DW-03	EPA 9056	WETA/34307		
2019932028	GSGP-22	EPA 9056	WETA/34307		
2019932029	DW-01	EPA 9056	WETA/34277		
2019932032	NWGS-04	EPA 9056	WETA/34277		
2019932034	MW-02	EPA 9056	WETA/34277		
2019932035	TEPA-P7D	EPA 9056	WETA/34277		
2019932036	NWGS-01	EPA 9056	WETA/34307		
2019932037	NWGS-02	EPA 9056	WETA/34277		
2019932038	NWGS-03	EPA 9056	WETA/34277		
2019932039	MW-01	EPA 9056	WETA/34307		
2019932040	BA-09	EPA 9056	WETA/34307		
2019932048	DUPLICATE # 4	EPA 9056	WETA/34307		
2019932049	DUPLICATE # 5	EPA 9056	WETA/34307		

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WO#: 2019932

2019932

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 5

1387754

Section A Required Client Information:

Company: SEMS Inc.
Address: 3801 N. Causeway Blvd. STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342-2340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Brand
Purchase Order No.:
Project Name: Delarte Metals
Project Number: 207-0129-03

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: Randy Shackelford
Pace Profile #: 6306 Line 1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GSGP-03	W	G			5/14/15	848		2			2							X	X				
2	(b) (6) [redacted] Well						1030		1			1							X					
3	WW-04						1040		1			1							X					
4	BC-03						1105		1			1							X					
5	BC-07						1144		1			1							X					
6	NR ~~Del-04~~ MW-06						1448		1			1							X					
7	GSGP-18						1425		1			1							X					
8	GSGP-19						1406		1			1							X					
9	NWGS-06						1341		1			1							X					
10	Bridge						947		2			2							X	X				
11	CA-51						903		2			2							X	X				
12	CA-41						920		2			2							X	X				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals by method 6020	Nick Rodehorst / SEMS Inc	5/15/15	800	[signature]	5-15-15	11:06	
As, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	5-15-15	1145	
- Dissolved Metals are field filtered.							

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.0 / 1.5 / 2.0 / 2.5	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Rodehorst

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/15/15

*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

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CHAIN-OF-CUSTC / Analytical Request Document

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1641885

Section A Required Client Information:

Company: SEMS Inc.
Address: 3301 N. Causeway Blvd. STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342- Fax: 2340
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Brauch.
Purchase Order No.:
Project Name: Delaste Metals
Project Number: 207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

Requested Analysis Filtered (Y/N)

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	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Total Metals	Dissolved Metals	Sulfate (9036)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CL-19	W	G			5/11/15	1015		2			2							X	X				
2	DW-04					5/12/15	1001		1			1							X					
3	BC-19						929		1			1							X					
4	BC-25						903		1			1							X					
5	MW-03						841		1			1							X					
6	South Well						1030		1			1							X					
7	BC-17						1059		1			1							X					
8	North Well						1005		1			1							X					
9	BC-21R						1141		1			1							X					
10	DW-02						1258		1			1							X					
11	BA-01						1337		2			2							X	X				
12	PW-04						1432		1			1							X					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals by method 6020	Nick Rodehorst / SEMS Inc.	5/15/15	860	[illegible]	5-15-15	11:00	1.8			
As, Cd, Mn, Ni, Pb, Zn	[illegible]	5-15-15	1146	[illegible]	5-15-15	1145	1.5 2.0 2.5	Y	N	Y
- Dissolved Metals are field filtered.										

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:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

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CHAIN-OF-CUST(/ / Analytical Request Document

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Page: 3 of 5

1617507

Section A Required Client Information:

Company: SEMS Inc.
Address: 3801 N. Causeway Blvd STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342-2340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Brand.
Purchase Order No.:
Project Name: Delatte Metals
Project Number: 207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER ____

Site Location STATE: LA

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

Requested Analysis Filtered (Y/N)

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	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	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): Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GSGP-15	W	G			5/12/15	1539		1			1						X					
2	NWGS-05						1505		4	1		2					1	X	X	X	X		
3	DW-03						1410		3	1		1					1	X		X	X		
4	GSGP-22						1611		3	1		1					1	X		X	X		
5	~~BA-05 Dup~~ 2 DW-01						1702 ~~0841~~		3	1		1					1	X		X	X		
6	BA-05					5/13/15	841		1			1						X					
7	MW-A						900		1			1						X					
8	NWGS-04						1330		3	1		1					1	X		X	X		
9	BA-03						928		1			1						X					
10	MW-02						1028		3	1		1					1	X		X	X		
11	~~TEPA-P7D~~ TEPA-P7D						1120		4	1		2					1	X	X	X	X		
12	NWGS-01						959		3	1		1					1	X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Alan Pace	5-15-15	11:00	
As, Cd, Mn, Ni, Pb, Zn	Alan Pace	5-15-15	1145	[illegible]	5-15-15	1145	
- Dissolved Metals are field filtered.							

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1.0 1.5 2.0 2.5	Y	N	Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Rodehorst
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/15/2015

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Page: 4 of 5

1617508

Section A Required Client Information:

Company: SEMS Inc.
Address: 3801 N. Causeway STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342-2340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Brand.
Purchase Order No.:
Project Name: Delatte Metals
Project Number: 207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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)	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	NWGS-02	W	G			5/13/15	1050		3	1		1					1		X		X	X		
2	NWGS-03	↓	↓			↓	1149		4	1		2					1		X	X	X	X		
3	MW-01						1357		3	1		1					1		X		X	X		
4	BA-09					5/14/15	944		3	1		1					1		X		X	X		
5	BA-09A					↓	1009		1			1							X					
6	GSGP-6						918		1			1							X					
7	MW-04						1045		2			2							X	X				
8	WW-09					↓	1100		1			1							X					
9	Duplicate #1					5/11/15	1030		1			1							X					
10	Duplicate #2					5/12/15	1258		1			1							X					
11	Duplicate #3					5/13/15	900		1			1							X					
12	Duplicate #4	↓	↓			↓	959		3	1		1					1		X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
* Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Chris Sharpack	5-15-15	1100	1.0		
As, Cd, Mn, Ni, Pb, Zn	Chris Sharpack	5-15-15	1145	[illegible]	5-15-15	1145	1.5	Y	N	Y
- Dissolved Metals							2.5		
are field filtered.							2.5		

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

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Page: 5 of 5

1643259

Section A Required Client Information:

Company: SEMS Inc.
Address: 3801 N. Causeway Blvd STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342-3340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Broad
Purchase Order No.:
Project Name: Dehtie Metals
Project Number: 207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	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	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Duplicate #5					5/14/15	944		3	1		1					1		X		X	X		
2	PW-04 MS					5/12/15	1432		1			1							X					
3	PW-04 MSD					↓	1432		1			1							X					
4	GSGP-6MS					5/14/15	~~1030~~ HA 910		1			1							X					
5	GSGP-6MSD					↓	~~1030~~ HA 918		1			1							X					
6	NWGS-02 MS					5/13/15	1050		3	1		1					1		X		X	X		
7	NWGS-02 MSD					↓	1050		3	1		1					1		X		X	X		
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Abi Murphy	5-15-15	11:00	1.0			
As, Cd, Mn, Ni, Pb, Zn	Abi Murphy 5-15-15		1145	[illegible]	5-15-15	1145	1.5 2.0 2.5	4	N	Y
-Dissolved Metals are field filtered.										

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Rodehorst

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/15/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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#: 2019932

PM: WRS Due Date: 06/01/15
CLIENT: 20-sems Met

Pace Analytical

1000 Riverbend. Blvd., Suite F
St. Rose, LA 70087

Sample Condition Upon Recei

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: 5-15-15

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: _____

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

May 29, 2015

Project Manager
Pace Analytical New Orleans
1000 Riverbend Blvd
Suite F
St. Rose, LA 70087

RE: Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Dear Project Manager:
Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2015. 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,

Colleen Clyne
colleen.clyne@pacelabs.com
Project Manager

Enclosures

cc: Karen Brown, PASI New Orleans
Ellen Isbell, Pace Analytical Services, Inc.
Melissa MacNaughton, PASI NOLA
Craig McCollum, PASI New Orleans
"Randy" William Shacleford, PASI New Orleans
Justin Stock, PASI New Orleans

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Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
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

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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2019932026	NWGS-05	Water	05/12/15 15:05	05/19/15 08:20
2019932027	DW-03	Water	05/12/15 14:10	05/19/15 08:20
2019932028	GSGP-22	Water	05/12/15 16:11	05/19/15 08:20
2019932029	DW-01	Water	05/12/15 17:02	05/19/15 08:20
2019932032	NWGS-04	Water	05/13/15 13:30	05/19/15 08:20
2019932034	MW-02	Water	05/13/15 10:28	05/19/15 08:20
2019932035	TEPA-P7D	Water	05/13/15 11:20	05/19/15 08:20
2019932036	NWGS-01	Water	05/13/15 09:59	05/19/15 08:20
2019932037	NWGS-02	Water	05/13/15 10:50	05/19/15 08:20
2019932038	NWGS-03	Water	05/13/15 11:49	05/19/15 08:20
2019932039	MW-01	Water	05/13/15 13:57	05/19/15 08:20
2019932040	BA-09	Water	05/14/15 09:44	05/19/15 08:20
2019932048	DUPLICATE # 4	Water	05/13/15 09:59	05/19/15 08:20
2019932049	DUPLICATE # 5	Water	05/14/15 09:44	05/19/15 08:20

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SAMPLE ANALYTE COUNT

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Lab ID	Sample ID	Method	Analysts	Analytes Reported
2019932026	NWGS-05	EPA 9056	OL	1
2019932027	DW-03	EPA 9056	OL	1
2019932028	GSGP-22	EPA 9056	OL	1
2019932029	DW-01	EPA 9056	OL	1
2019932032	NWGS-04	EPA 9056	OL	1
2019932034	MW-02	EPA 9056	OL	1
2019932035	TEPA-P7D	EPA 9056	OL	1
2019932036	NWGS-01	EPA 9056	OL	1
2019932037	NWGS-02	EPA 9056	OL	1
2019932038	NWGS-03	EPA 9056	OL	1
2019932039	MW-01	EPA 9056	OL	1
2019932040	BA-09	EPA 9056	OL	1
2019932048	DUPLICATE # 4	EPA 9056	OL	1
2019932049	DUPLICATE # 5	EPA 9056	OL	1

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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Sample: NWGS-05 **Lab ID: 2019932026** Collected: 05/12/15 15:05 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**67.8**	mg/L	5.0	5		05/26/15 14:58	14808-79-8	M1

Sample: DW-03 **Lab ID: 2019932027** Collected: 05/12/15 14:10 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**4000**	mg/L	500	500		05/29/15 09:24	14808-79-8	M1

Sample: GSGP-22 **Lab ID: 2019932028** Collected: 05/12/15 16:11 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**12700**	mg/L	2000	2000		05/29/15 10:07	14808-79-8	

Sample: DW-01 **Lab ID: 2019932029** Collected: 05/12/15 17:02 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**194**	mg/L	10.0	10		05/26/15 16:12	14808-79-8	

Sample: NWGS-04 **Lab ID: 2019932032** Collected: 05/13/15 13:30 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1120**	mg/L	100	100		05/26/15 16:27	14808-79-8	

Sample: MW-02 **Lab ID: 2019932034** Collected: 05/13/15 10:28 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**556**	mg/L	50.0	50		05/26/15 16:42	14808-79-8	

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Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Sample: TEPA-P7D **Lab ID: 2019932035** Collected: 05/13/15 11:20 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**457**	mg/L	50.0	50		05/26/15 16:57	14808-79-8	

Sample: NWGS-01 **Lab ID: 2019932036** Collected: 05/13/15 09:59 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1480**	mg/L	100	100		05/27/15 12:15	14808-79-8	

Sample: NWGS-02 **Lab ID: 2019932037** Collected: 05/13/15 10:50 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**914**	mg/L	50.0	50		05/26/15 17:57	14808-79-8	

Sample: NWGS-03 **Lab ID: 2019932038** Collected: 05/13/15 11:49 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**398**	mg/L	50.0	50		05/26/15 18:27	14808-79-8	

Sample: MW-01 **Lab ID: 2019932039** Collected: 05/13/15 13:57 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**4660**	mg/L	500	500		05/29/15 10:35	14808-79-8	

Sample: BA-09 **Lab ID: 2019932040** Collected: 05/14/15 09:44 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**7560**	mg/L	500	500		05/27/15 12:44	14808-79-8	

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ANALYTICAL RESULTS

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

Sample: DUPLICATE # 4 **Lab ID: 2019932048** Collected: 05/13/15 09:59 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**1440**	mg/L	100	100		05/27/15 12:59	14808-79-8	

Sample: DUPLICATE # 5 **Lab ID: 2019932049** Collected: 05/14/15 09:44 Received: 05/19/15 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056							
Sulfate	**7500**	mg/L	500	500		05/27/15 13:14	14808-79-8	

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QUALITY CONTROL DATA

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

QC Batch: WETA/34277 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 2019932026, 2019932029, 2019932032, 2019932034, 2019932035, 2019932037, 2019932038

METHOD BLANK: 1573996 Matrix: Water
Associated Lab Samples: 2019932026, 2019932029, 2019932032, 2019932034, 2019932035, 2019932037, 2019932038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/26/15 13:58	

LABORATORY CONTROL SAMPLE: 1573997

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1573998 1573999

Parameter	Units	2019932026 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	67.8	25	25	80.0	79.0	49	45	80-120	1	15	M1

SAMPLE DUPLICATE: 1574000

Parameter	Units	2019932037 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	914	956	4	15	

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.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

QC Batch: WETA/34307 Analysis Method: EPA 9056
QC Batch Method: EPA 9056 Analysis Description: 9056 IC Anions
Associated Lab Samples: 2019932027, 2019932028, 2019932036, 2019932039, 2019932040, 2019932048, 2019932049

METHOD BLANK: 1574827 Matrix: Water
Associated Lab Samples: 2019932036, 2019932040, 2019932048, 2019932049

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/27/15 09:14	

METHOD BLANK: 1576347 Matrix: Water
Associated Lab Samples: 2019932027, 2019932028, 2019932039

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	05/29/15 08:56	

LABORATORY CONTROL SAMPLE: 1574828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.9	99	80-120	

LABORATORY CONTROL SAMPLE: 1576348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	5	4.8	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1574829 1574830

Parameter	Units	2019932027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	4000	2500	2500	5440	5440	58	58	80-120	0	15	M1

SAMPLE DUPLICATE: 1574831

Parameter	Units	2019932028 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfate	mg/L	12700	14700	15	15	

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.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2019932 DELATTE METALS
Pace Project No.: 60194389

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: 2019932 DELATTE METALS
Pace Project No.: 60194389

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2019932026	NWGS-05	EPA 9056	WETA/34277		
2019932027	DW-03	EPA 9056	WETA/34307		
2019932028	GSGP-22	EPA 9056	WETA/34307		
2019932029	DW-01	EPA 9056	WETA/34277		
2019932032	NWGS-04	EPA 9056	WETA/34277		
2019932034	MW-02	EPA 9056	WETA/34277		
2019932035	TEPA-P7D	EPA 9056	WETA/34277		
2019932036	NWGS-01	EPA 9056	WETA/34307		
2019932037	NWGS-02	EPA 9056	WETA/34277		
2019932038	NWGS-03	EPA 9056	WETA/34277		
2019932039	MW-01	EPA 9056	WETA/34307		
2019932040	BA-09	EPA 9056	WETA/34307		
2019932048	DUPLICATE # 4	EPA 9056	WETA/34307		
2019932049	DUPLICATE # 5	EPA 9056	WETA/34307		

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Sample Condition Upon Receipt

WO#: 60194389

60194389

CBK

Client Name: PASE NOLA

Optional
Proj Due Date:
Proj Name:

Courier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Other ☐ Client ☐

Tracking #: 6344 4045 0266 Pace Shipping Label Used? Yes ☐ No ☐

Custody Seal on Cooler/Box Present: Yes ☒ No ☐ Seals intact: Yes ☒ No ☐

Packing Material: Bubble Wrap ☐ Bubble Bags ☐ Foam ☐ None ☒ Other ☐

Thermometer Used: CF -0.1 T-239 / CF -0.5 T-262 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 2.1

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JB 5/19

Chain of Custody present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☐Yes ☒No ☐N/A	4.	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	6.	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.	
Sufficient volume:	☒Yes ☐No ☐N/A	8.	
Correct containers used:	☒Yes ☐No ☐N/A		
Pace containers used:	☒Yes ☐No ☐N/A	9.	
Containers intact:	☒Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.	
Sample labels match COC:	☒Yes ☐No ☐N/A		
Includes date/time/ID/analyses Matrix:	WT	13.	
All containers needing preservation have been checked.	☐Yes ☐No ☒N/A		
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☒N/A	14.	
Exceptions: VOA, Coliform, O&G, WI-DRO (water)	☐Yes ☒No	Initial when completed	Lot # of added preservative
Trip Blank present:	☐Yes ☐No ☒N/A		
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials (>6mm):	☐Yes ☐No ☒N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Colleen Clayre Date: 05/19/2015

Chain of Custody

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www.pacelabs.com

Workorder: 2019932 Workorder Name: Delatte Metals Owner Received Date: 5/15/2015 Results Requested By: 6/1/2015

Report To	Subcontract To
William Shackelford Pace Analytical Services, Inc. 1000 Riverbend Blvd. Suite F St. Rose, LA 70087 Phone (504) 469-0333 Fax (504) 469-0555	Pace Analytical Kansas 9608 Loiret Blvd Kansas, KS 66219 Phone (913)599-5665

Requested Analysis: Sulfate (905.6)

Preserved Containers: Unpreserved

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved	Sulfate (905.6)			LAB USE ONLY
1	NWGS-05	PS	5/12/2015 15:05	2019932026	Water	1	X		BP3U	001
2	DW-03	PS	5/12/2015 14:10	2019932027	Water	1	X			002
3	GSGP-22	PS	5/12/2015 16:11	2019932028	Water	1	X			003
4	DW-01	PS	5/12/2015 17:02	2019932029	Water	1	X			004
5	NWGS-04	PS	5/13/2015 13:30	2019932032	Water	1	X			005
6	MW-02	PS	5/13/2015 10:28	2019932034	Water	1	X			006
7	TEPA-P7D	PS	5/13/2015 11:20	2019932035	Water	1	X			007
8	NWGS-01	PS	5/13/2015 09:59	2019932036	Water	1	X			RQS 008
9	NWGS-02	RQS	5/13/2015 10:50	2019932037	Water	3	X	(3)	BP3U	009
10	NWGS-03	PS	5/13/2015 11:49	2019932038	Water	1	X		BP3U	010
11	MW-01	PS	5/13/2015 13:57	2019932039	Water	1	X			011
12	BA-09	PS	5/14/2015 09:44	2019932040	Water	1	X			012
13	DUPLICATE # 4	PS	5/13/2015 09:59	2019932048	Water	1	X			013
14	DUPLICATE # 5	PS	5/14/2015 09:44	2019932049	Water	1	X			014

60194389

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[illegible]	5-18-15 1700	Fed Ex		Level IV
2	[illegible] Fed Ex		[illegible]	5/19 0800	
3					

Cooler Temperature on Receipt 2.1 °C	Custody Seal (Y) or N	Received on Ice (Y) or N	Samples Intact (Y) or N

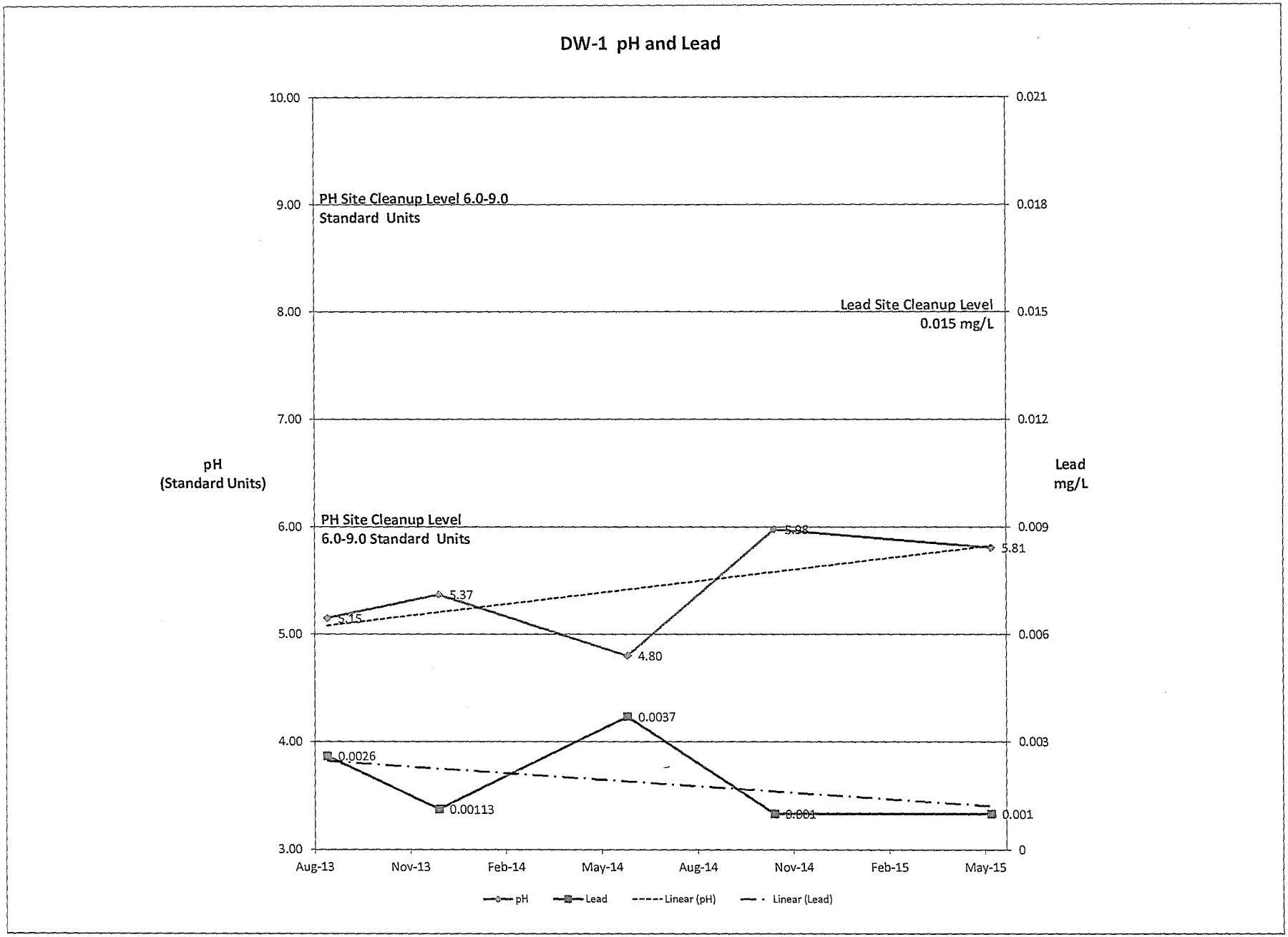
***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.*

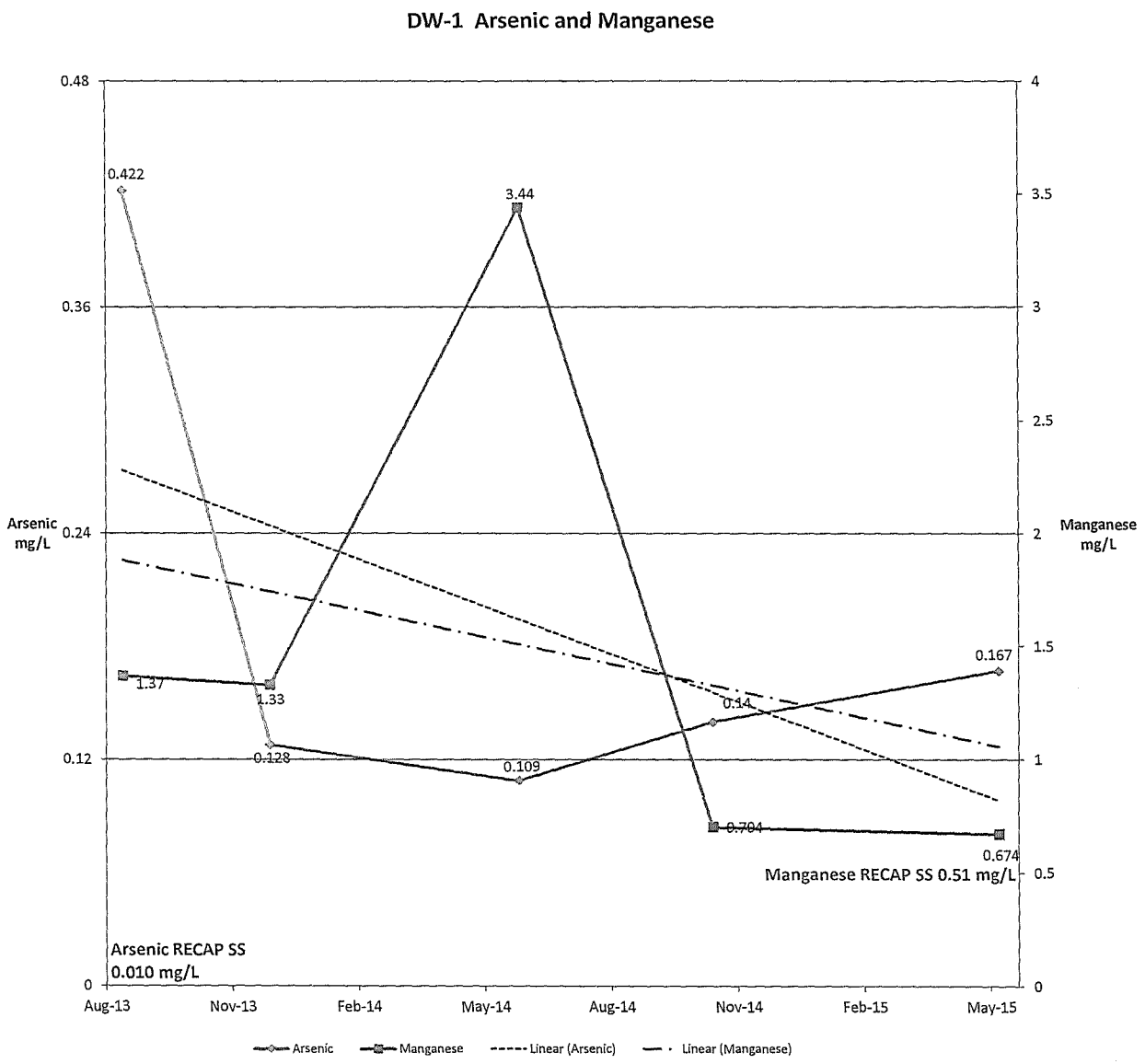
ATTACHMENT C

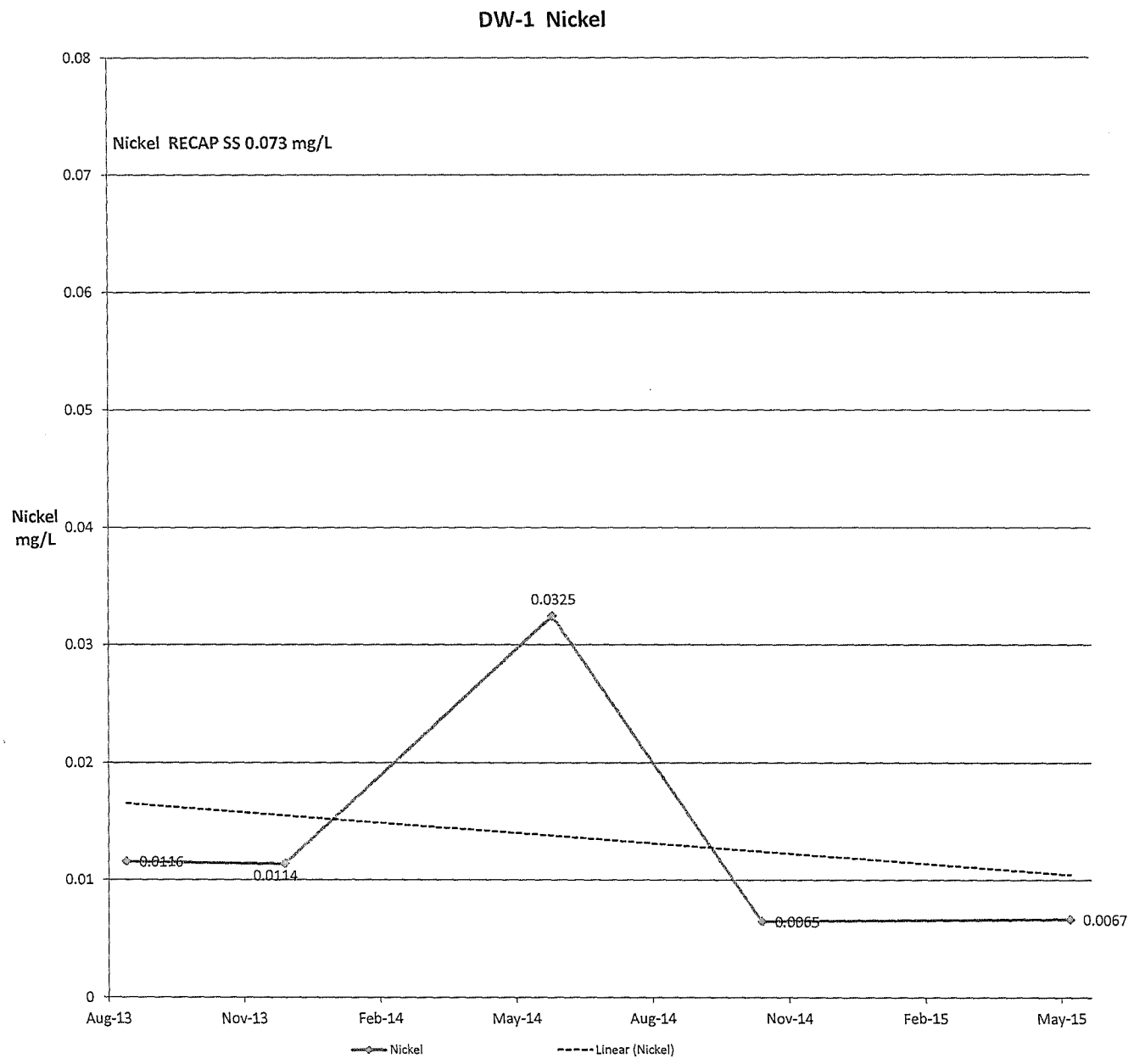
HISTORICAL CONCENTRATION
VS.
TIME GRAPHS

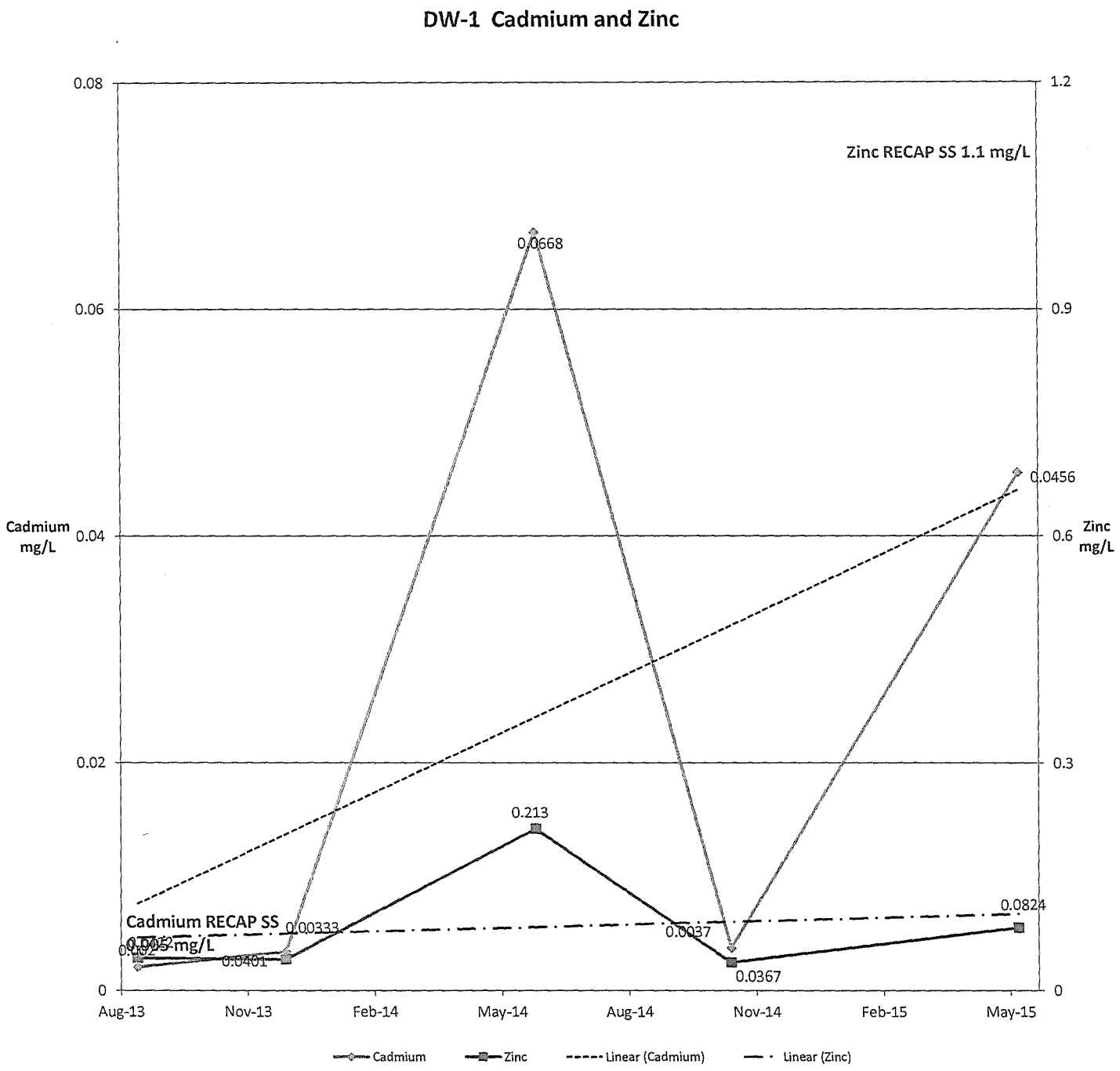
FIRST WATER BEARING ZONE

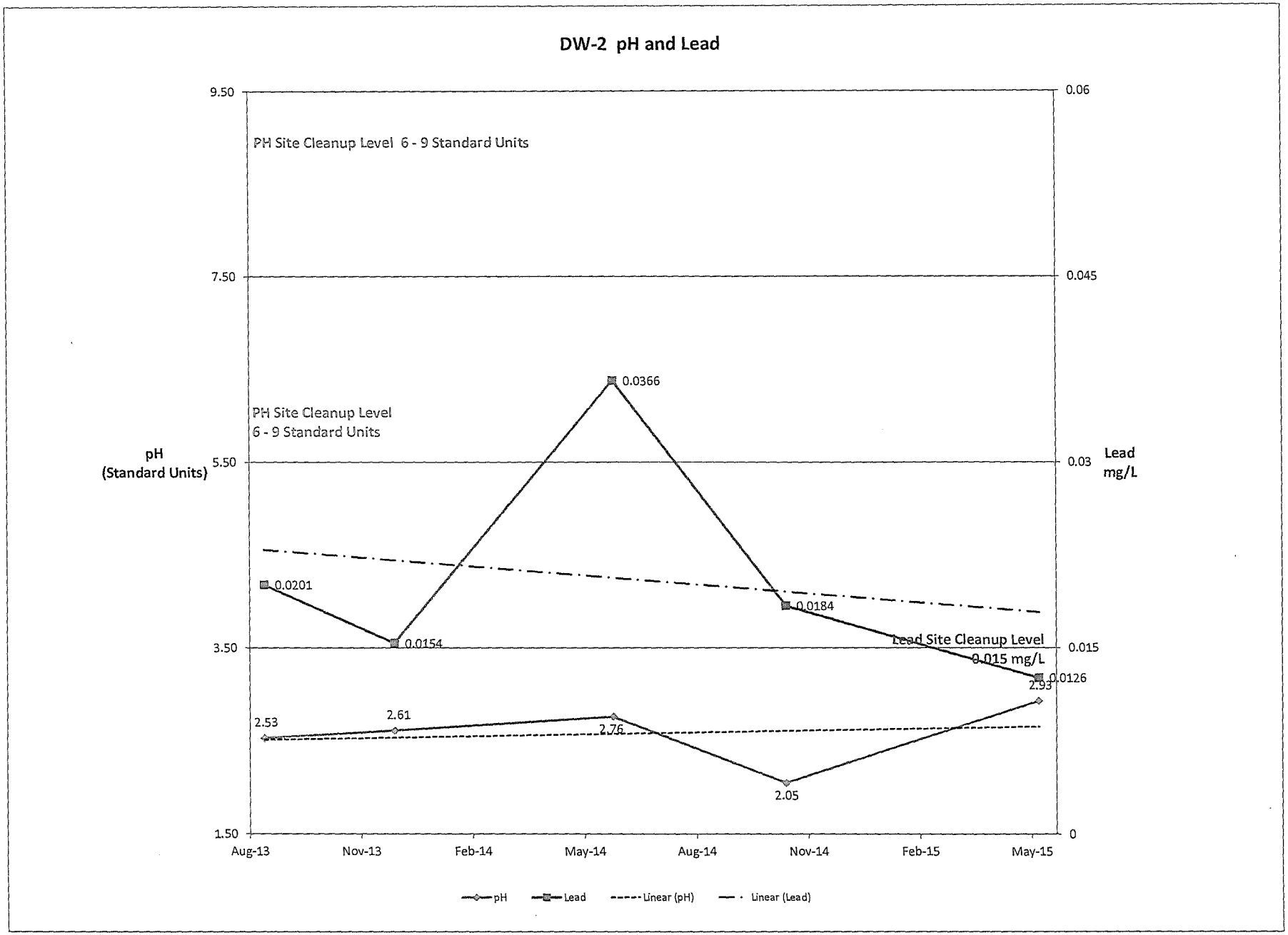
(PAST EIGHT QUARTERS)

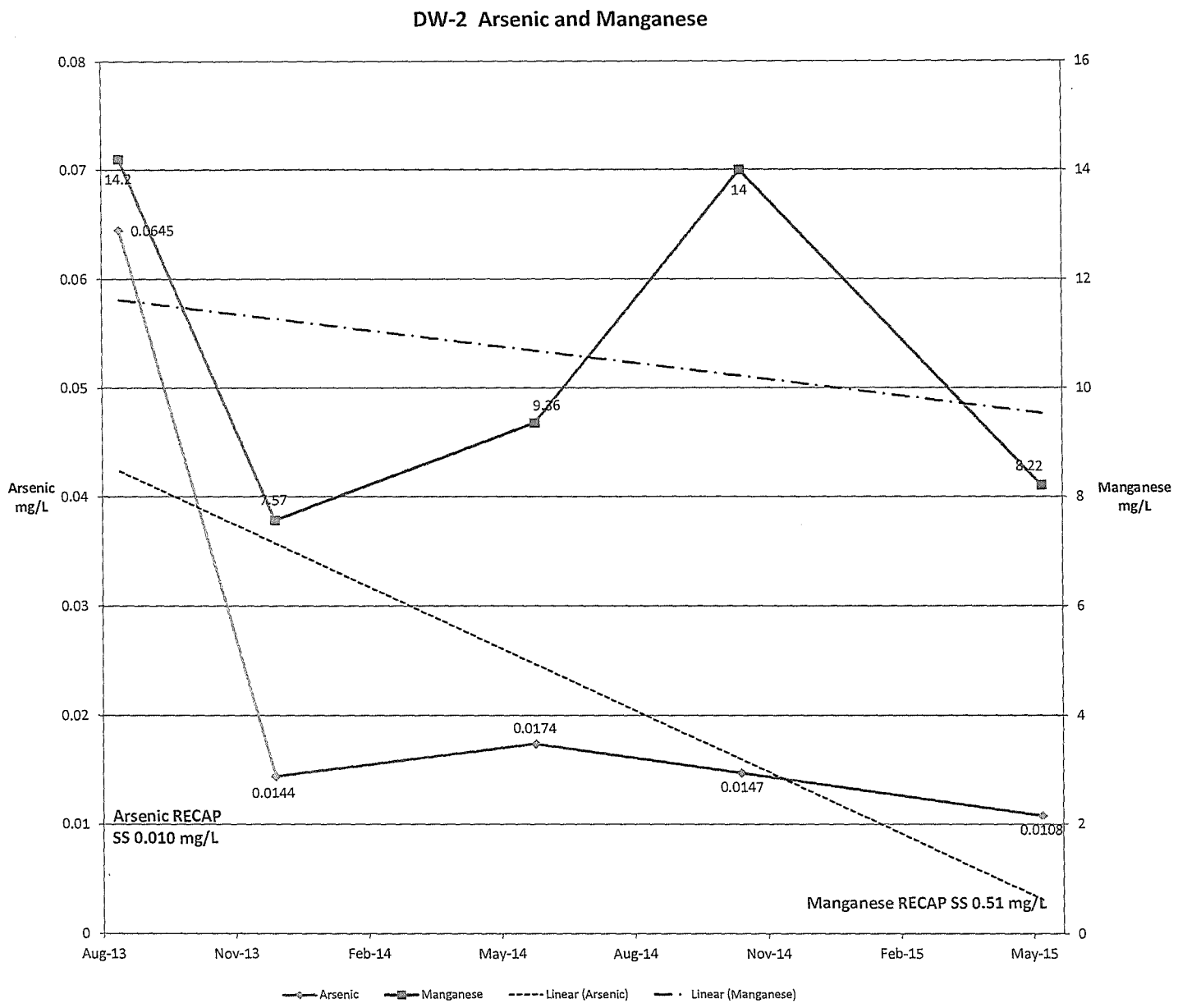

DW-1 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
0.021
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level 6.0-9.0
Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.0-9.0 Standard Units
5.15
5.37
4.80
5.98
5.81
0.0026
0.00113
0.0037
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

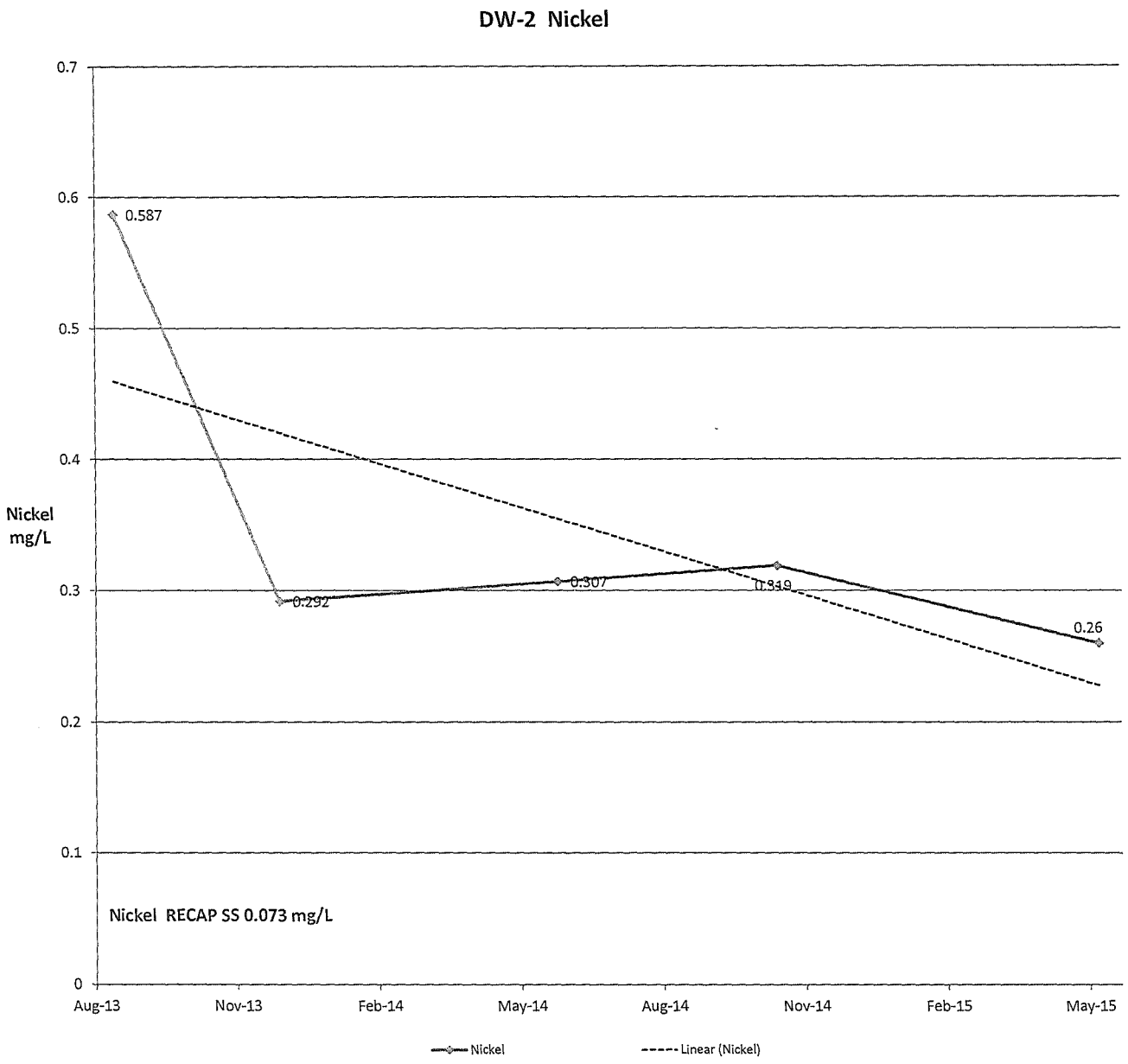

DW-1 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.48
0.36
0.24
0.12
0
4
3.5
3
2.5
2
1.5
1
0.5
0
0.422
3.44
1.37
1.33
0.128
0.109
0.14
0.167
0.704
0.674
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS
0.010 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

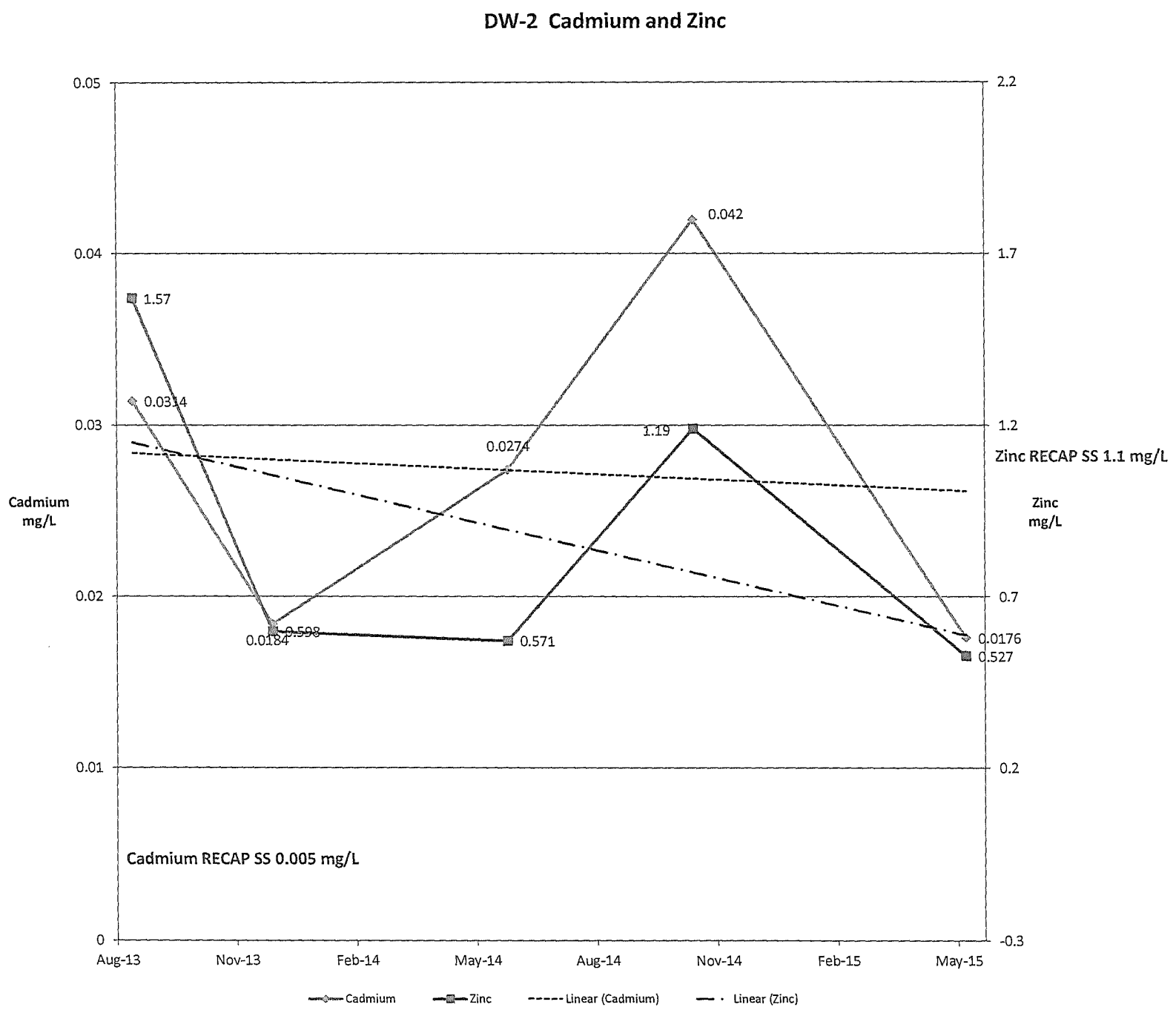

DW-1 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0116
0.0114
0.0325
0.0065
0.0067
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

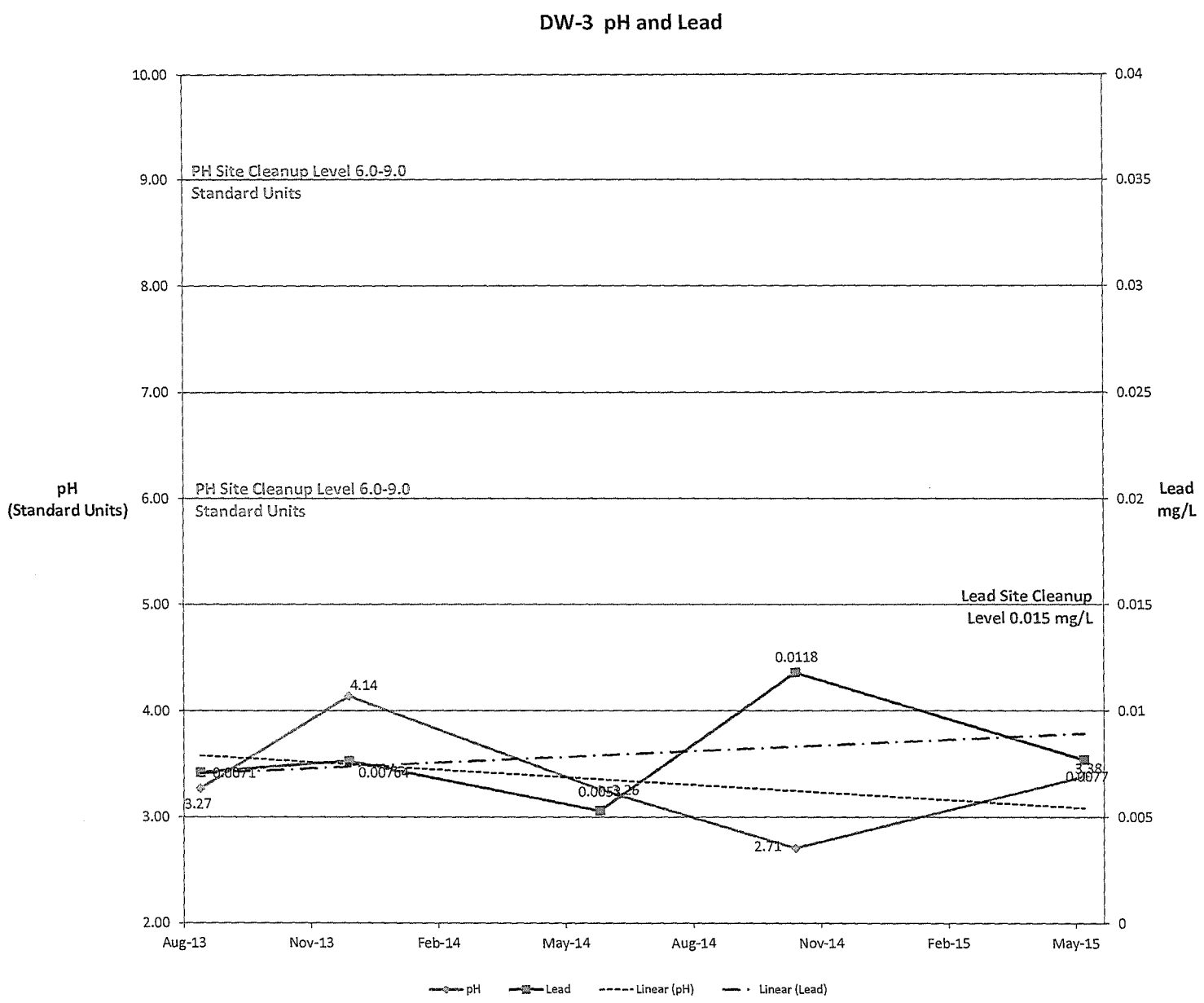

DW-1 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.08
0.06
0.04
0.02
0
1.2
0.9
0.6
0.3
0
0.0668
0.0456
0.213
0.0824
0.00333
0.0037
0.0401
0.0367
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

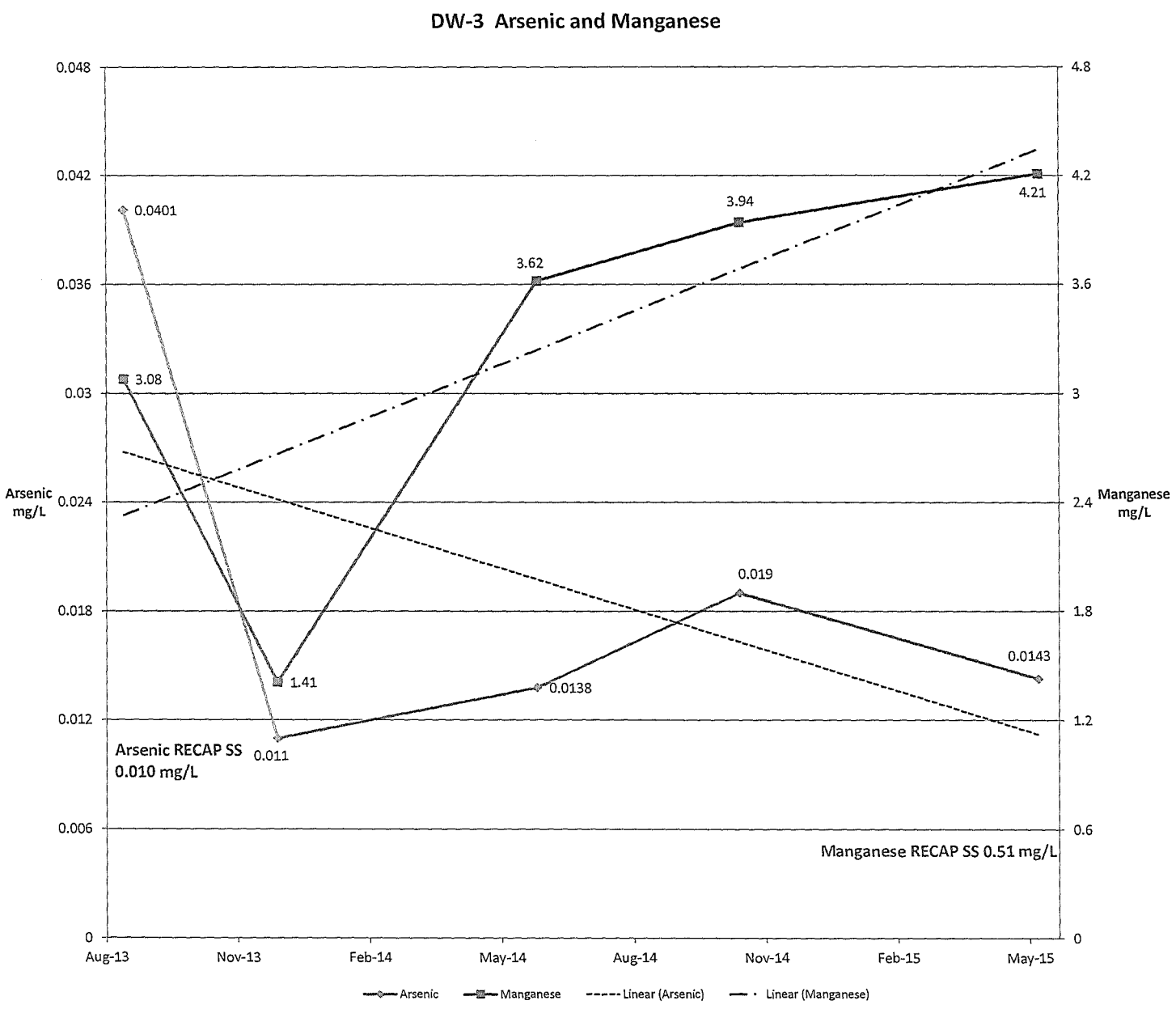

DW-2 pH and Lead
PH Site Cleanup Level 6 - 9 Standard Units
PH Site Cleanup Level
6 - 9 Standard Units
pH
(Standard Units)
Lead
mg/L
Lead Site Cleanup Level
0.015 mg/L
9.50
7.50
5.50
3.50
1.50
0.06
0.045
0.03
0.015
0
0.0201
0.0154
0.0366
0.0184
0.0126
2.53
2.61
2.76
2.05
2.93
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

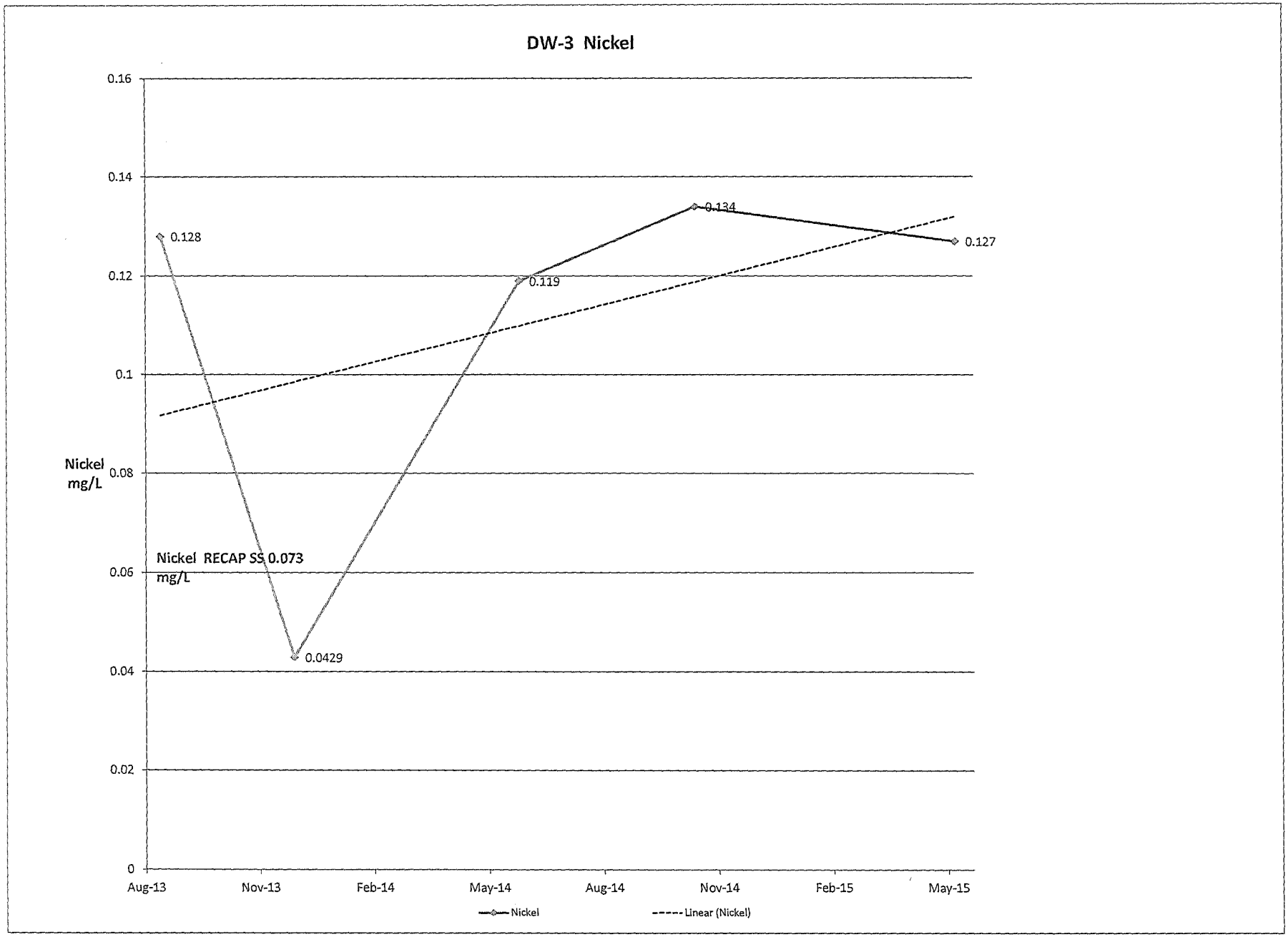

DW-2 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
16
14
12
10
8
6
4
2
0
14.2
0.0645
7.57
9.36
14
8.22
0.0144
0.0174
0.0147
0.0108
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


DW-2 Nickel
Nickel
mg/L
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0.587
0.292
0.307
0.319
0.26
Nickel RECAP SS 0.073 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

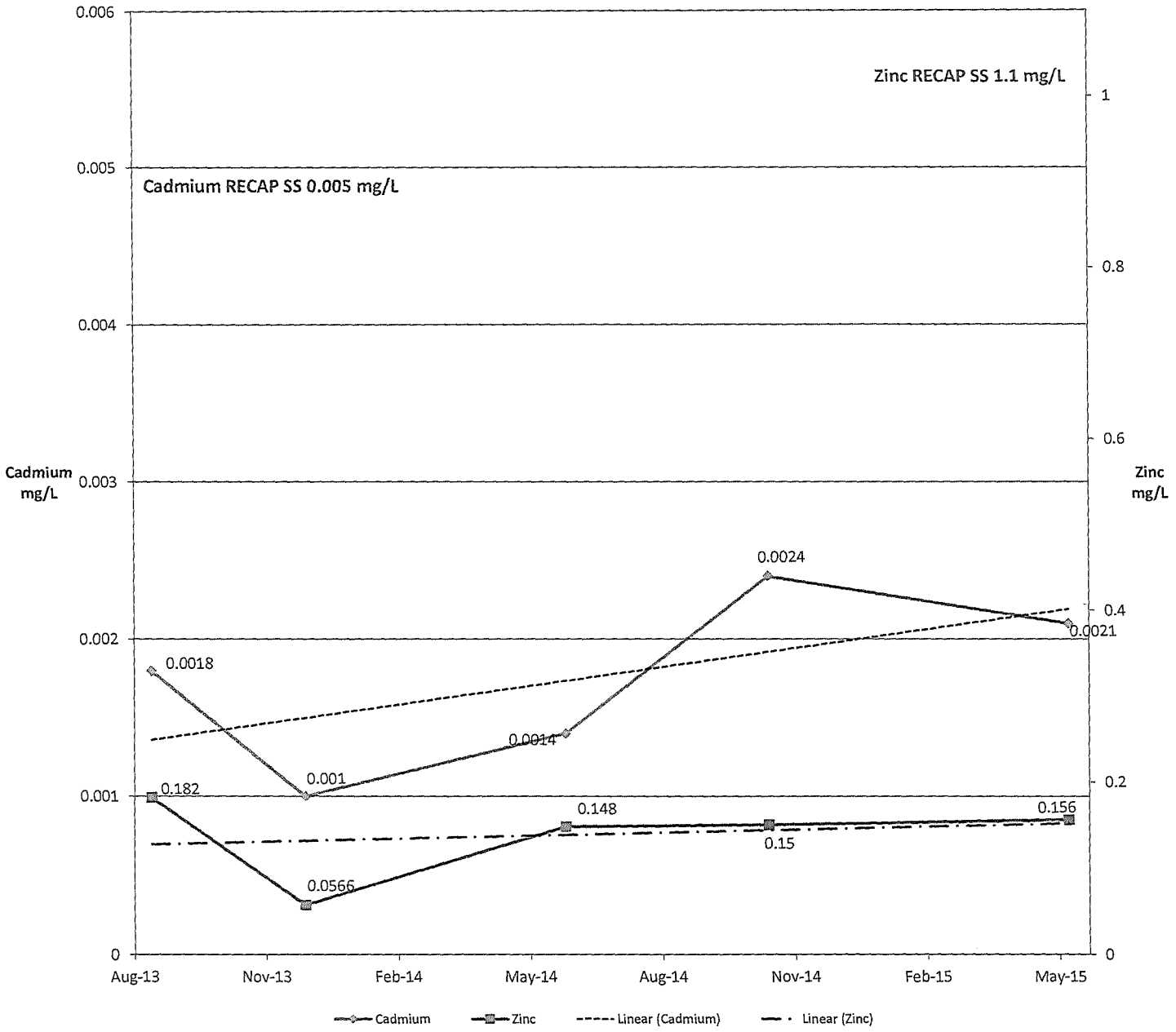

DW-2 Cadmium and Zinc
0.05
0.04
0.03
0.02
0.01
0
2.2
1.7
1.2
0.7
0.2
-0.3
Cadmium mg/L
Zinc mg/L
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
0.042
1.57
0.0314
0.0274
1.19
0.0184
0.598
0.571
0.0176
0.527
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

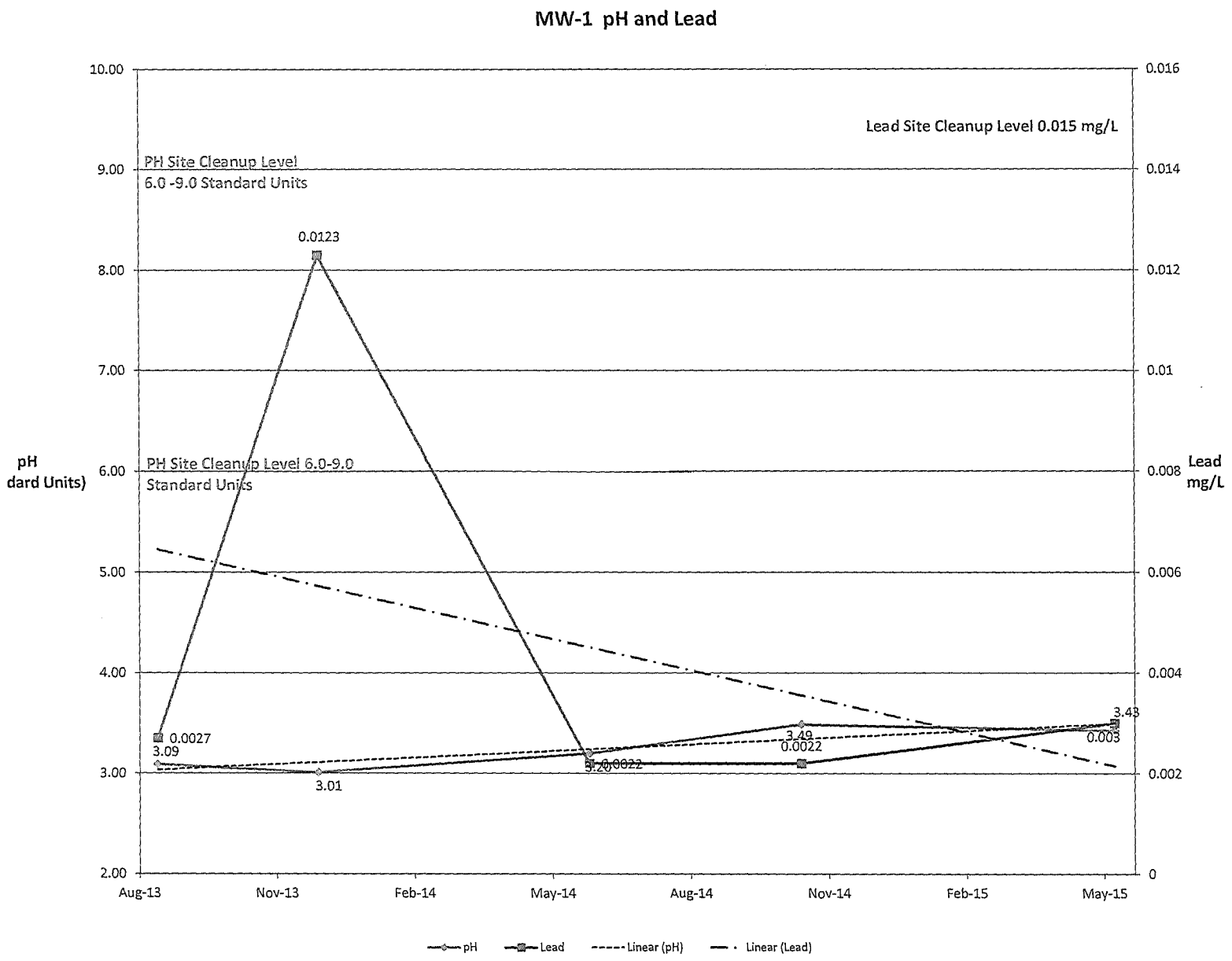

DW-3 pH and Lead
pH
(Standard Units)
Lead
mg/L
PH Site Cleanup Level 6.0-9.0
Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
Lead Site Cleanup
Level 0.015 mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
4.14
0.0118
3.27
0.0071
0.00764
0.0053
3.26
2.71
3.38
0.0077
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

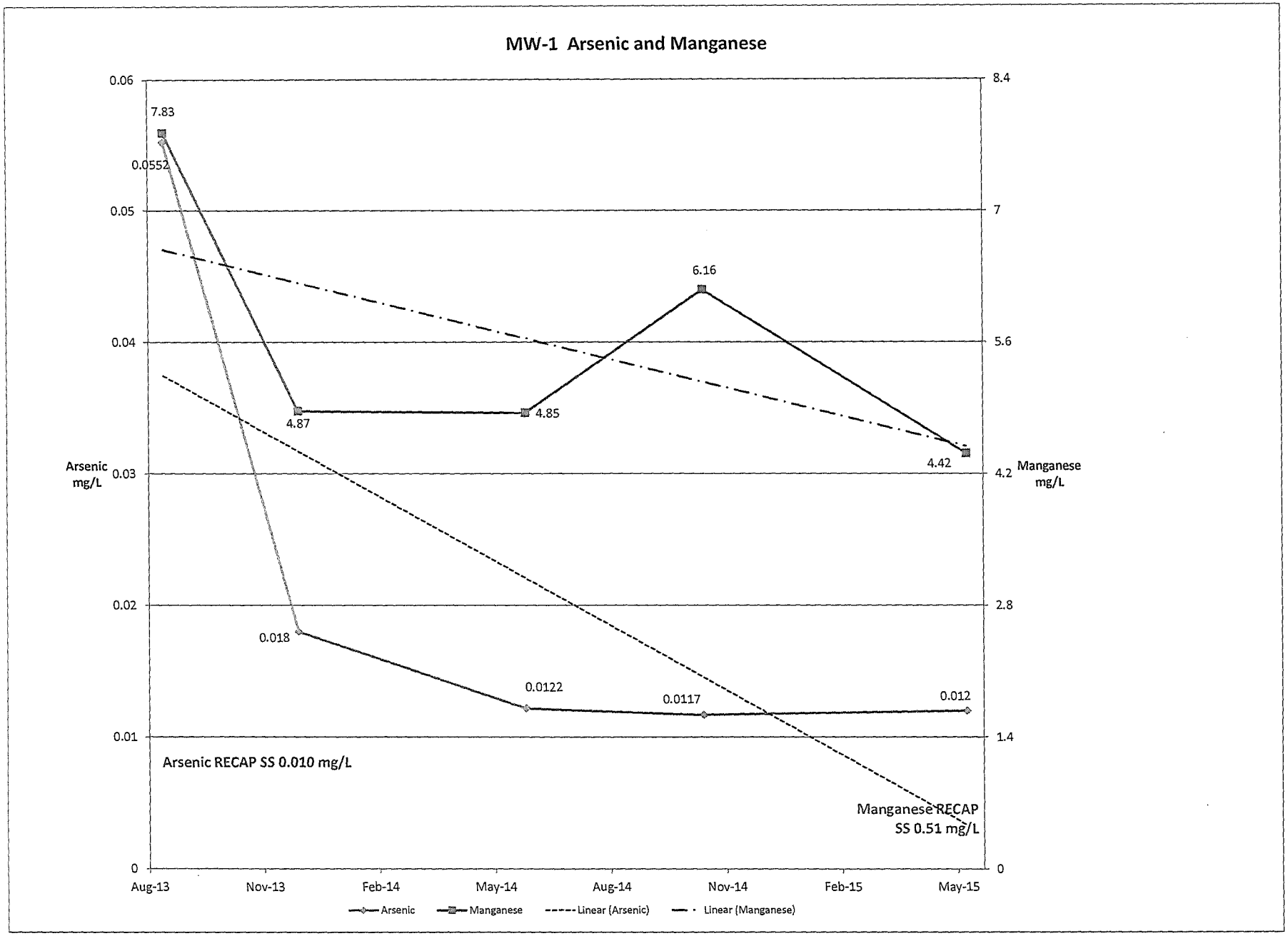

DW-3 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.048
0.042
0.036
0.03
0.024
0.018
0.012
0.006
0
4.8
4.2
3.6
3
2.4
1.8
1.2
0.6
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
0.0401
3.08
1.41
0.011
3.62
0.0138
3.94
0.019
4.21
0.0143
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

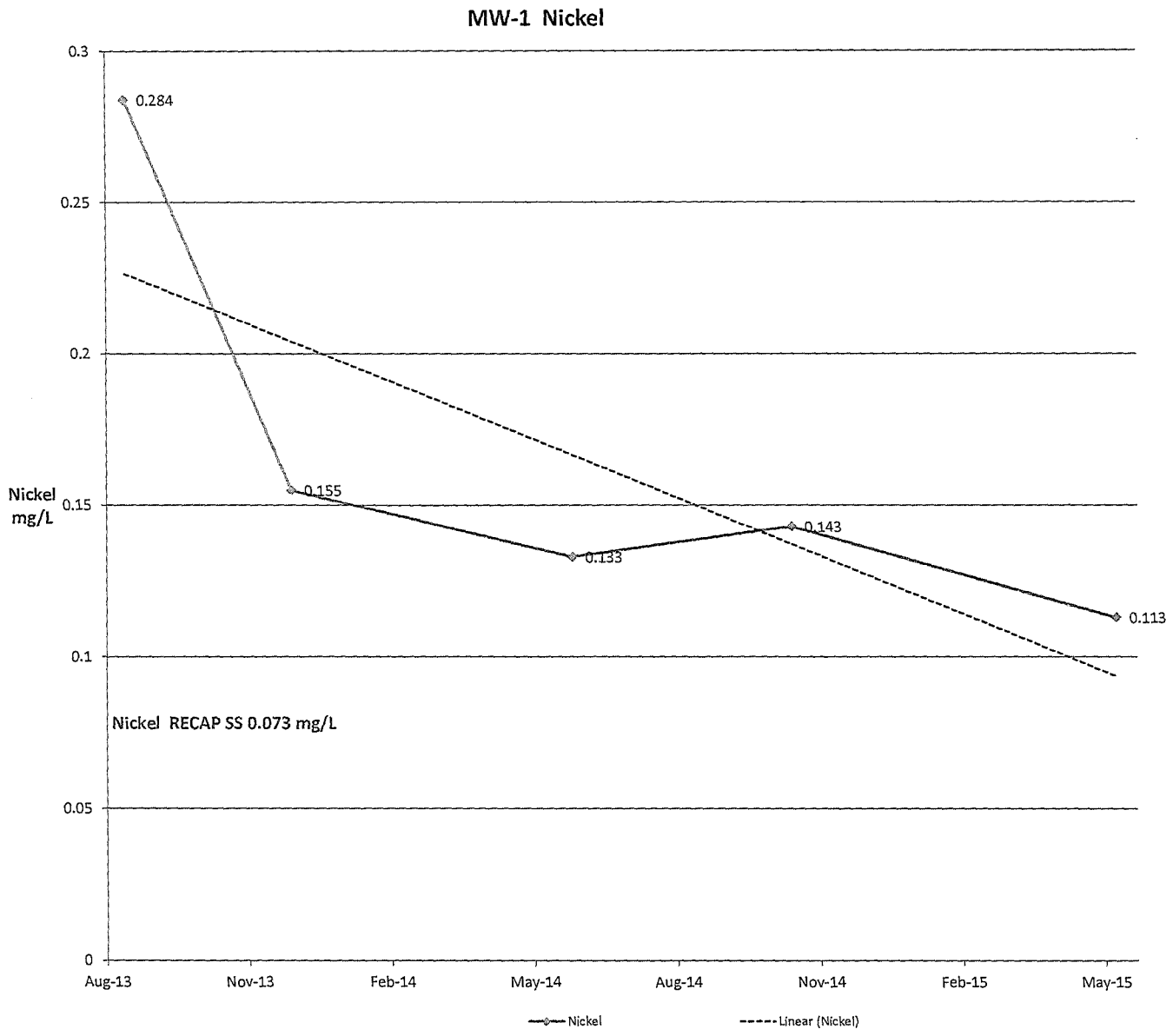

DW-3 Nickel
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Nickel mg/L
Nickel RECAP SS 0.073 mg/L
0.128
0.0429
0.119
0.134
0.127
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

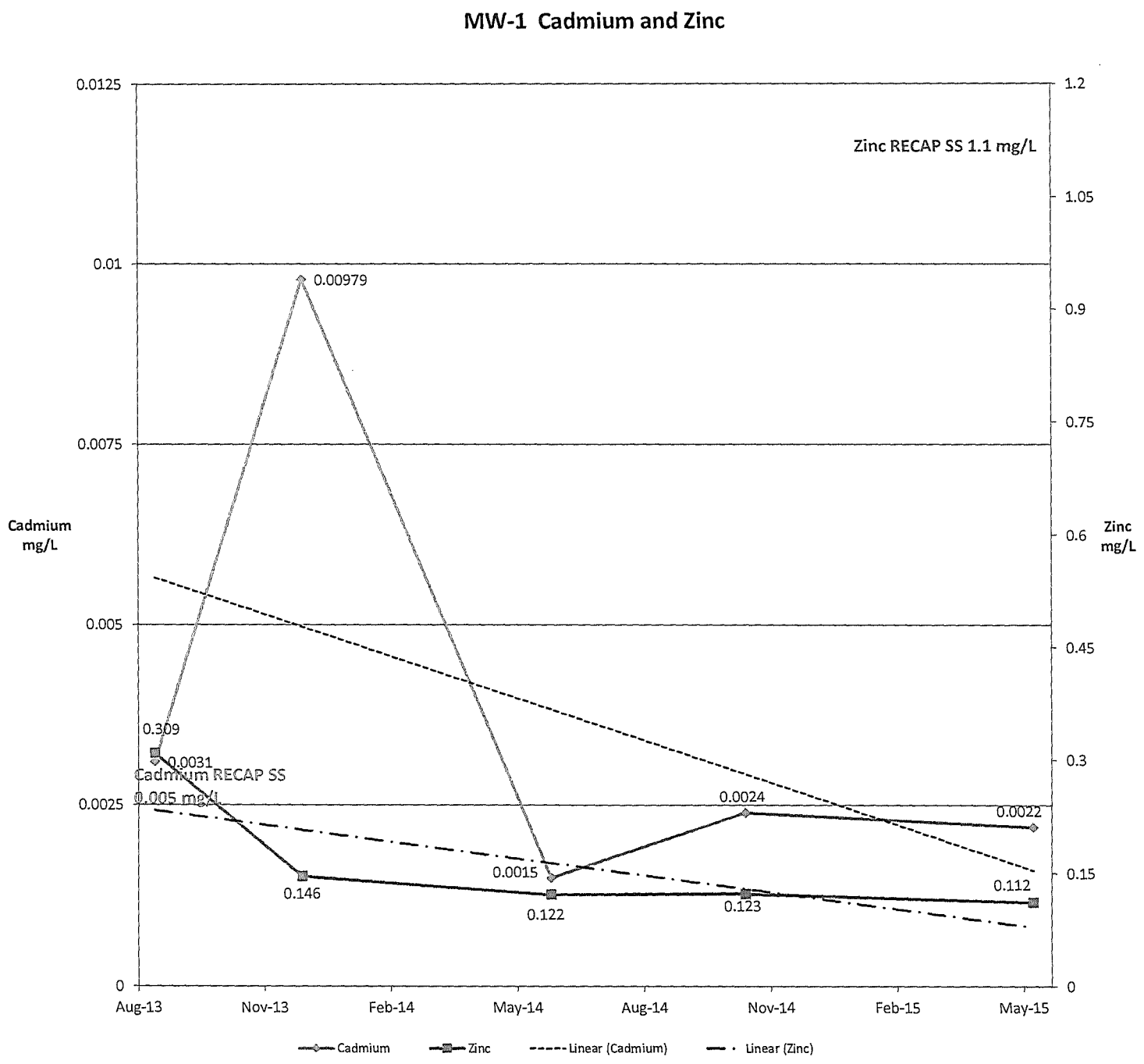
DW-3 Cadmium and Zinc

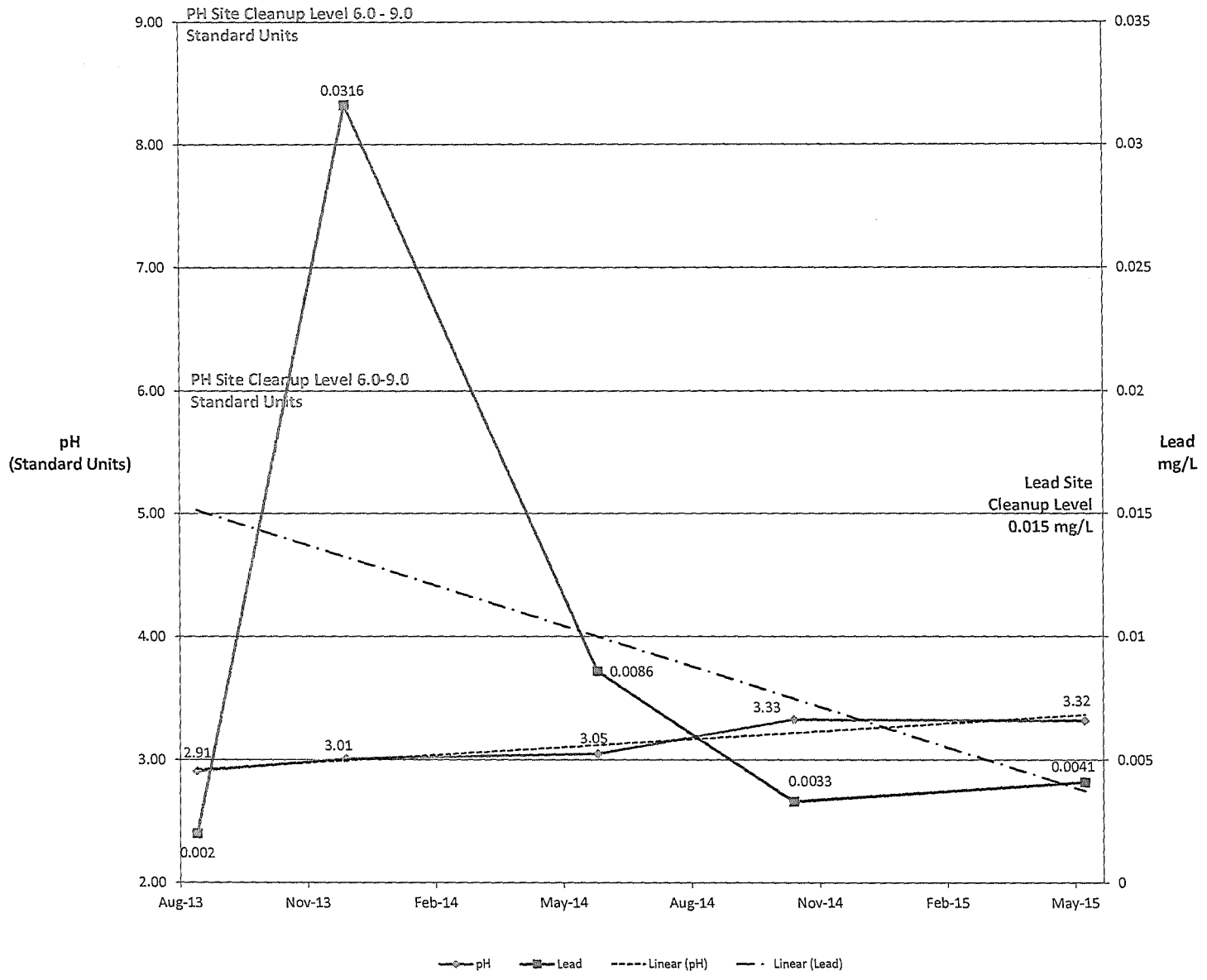


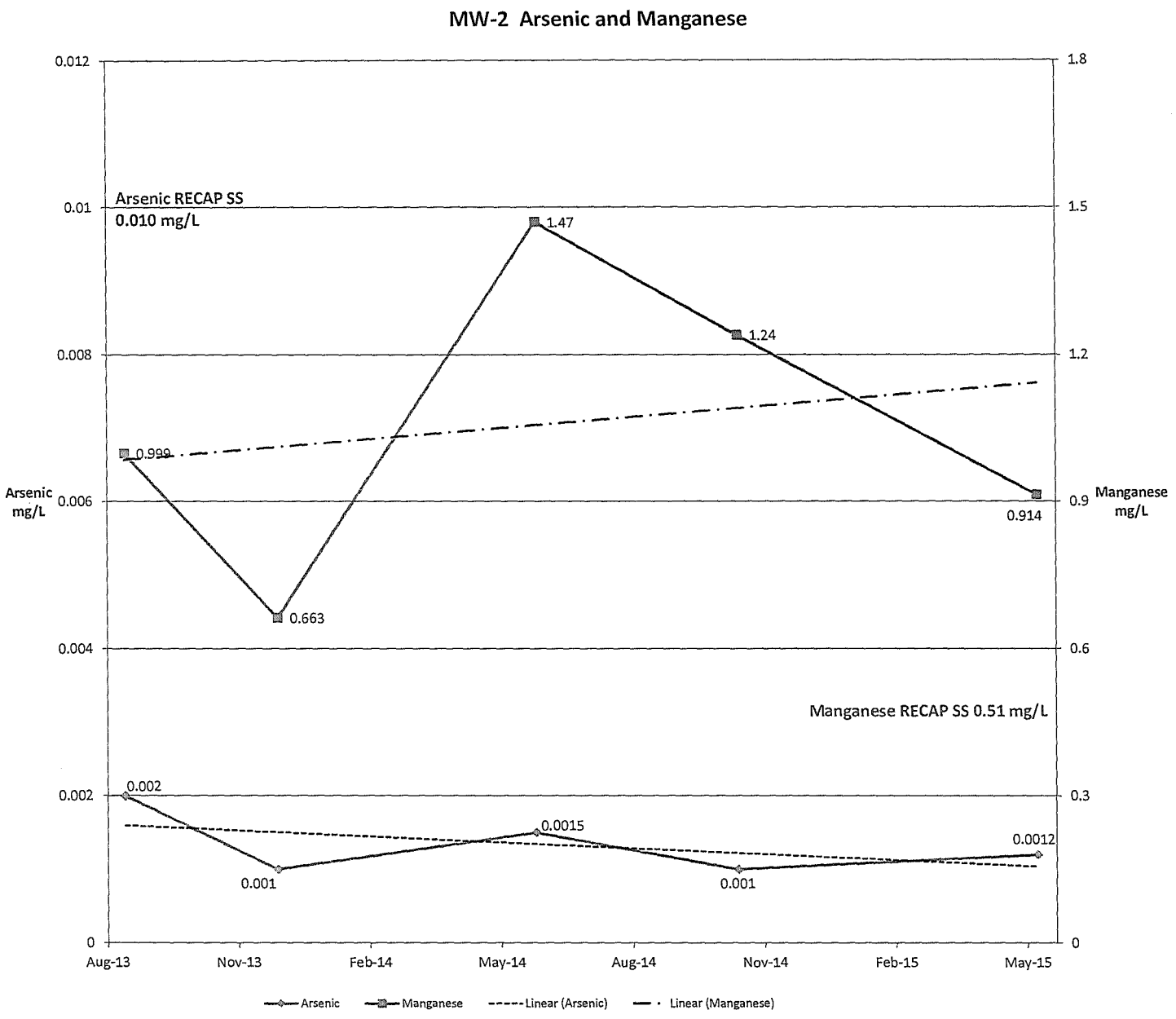

MW-1 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.0 -9.0 Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
0.0123
0.0027
3.09
3.01
3.20
0.0022
3.49
0.0022
3.43
0.003
pH
dard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

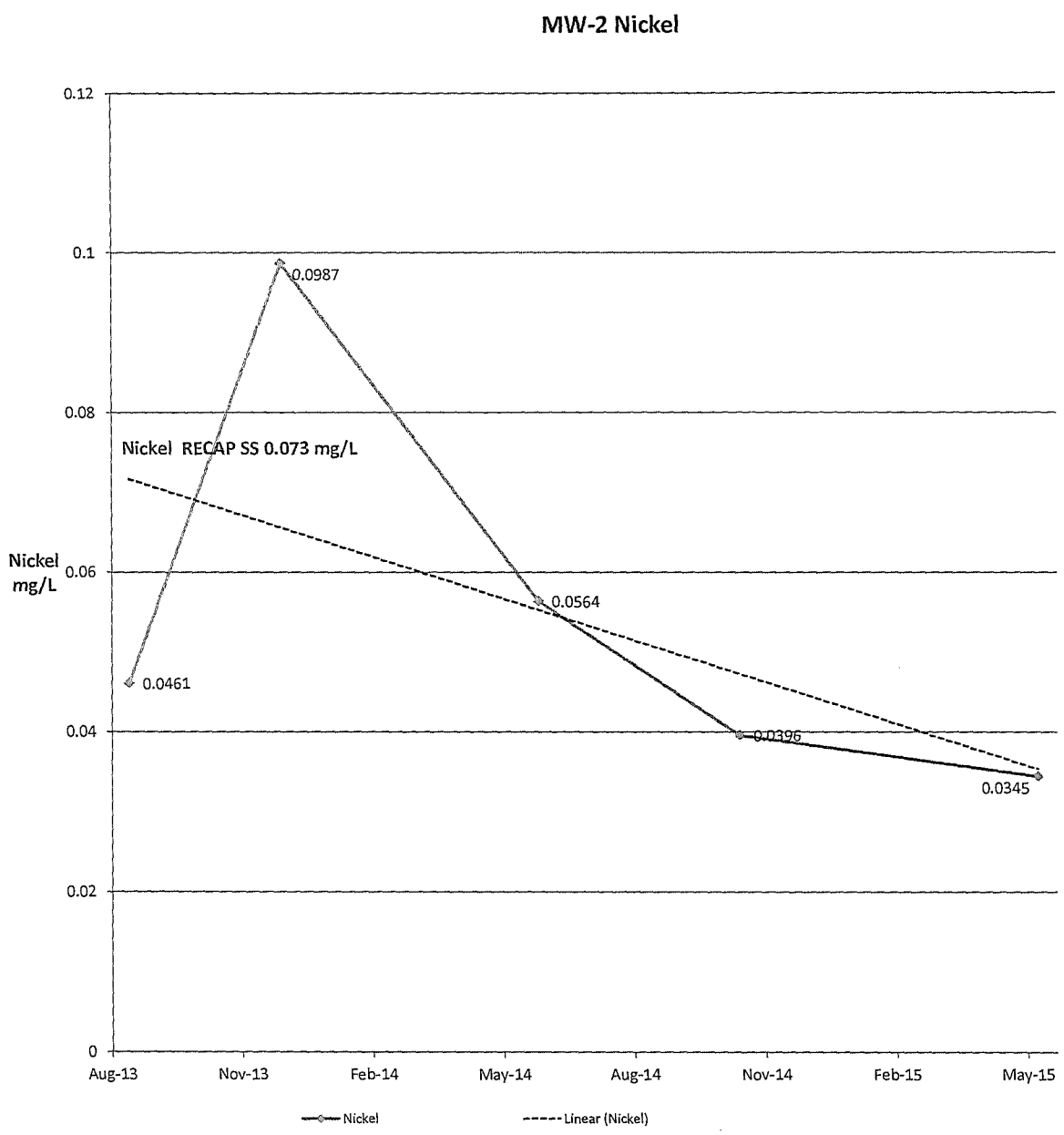

MW-1 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.06
0.05
0.04
0.03
0.02
0.01
0
8.4
7
5.6
4.2
2.8
1.4
0
7.83
0.0552
4.87
4.85
6.16
4.42
0.018
0.0122
0.0117
0.012
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)


MW-1 Nickel
Nickel mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
0.284
0.155
0.133
0.143
0.113
Nickel RECAP SS 0.073 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

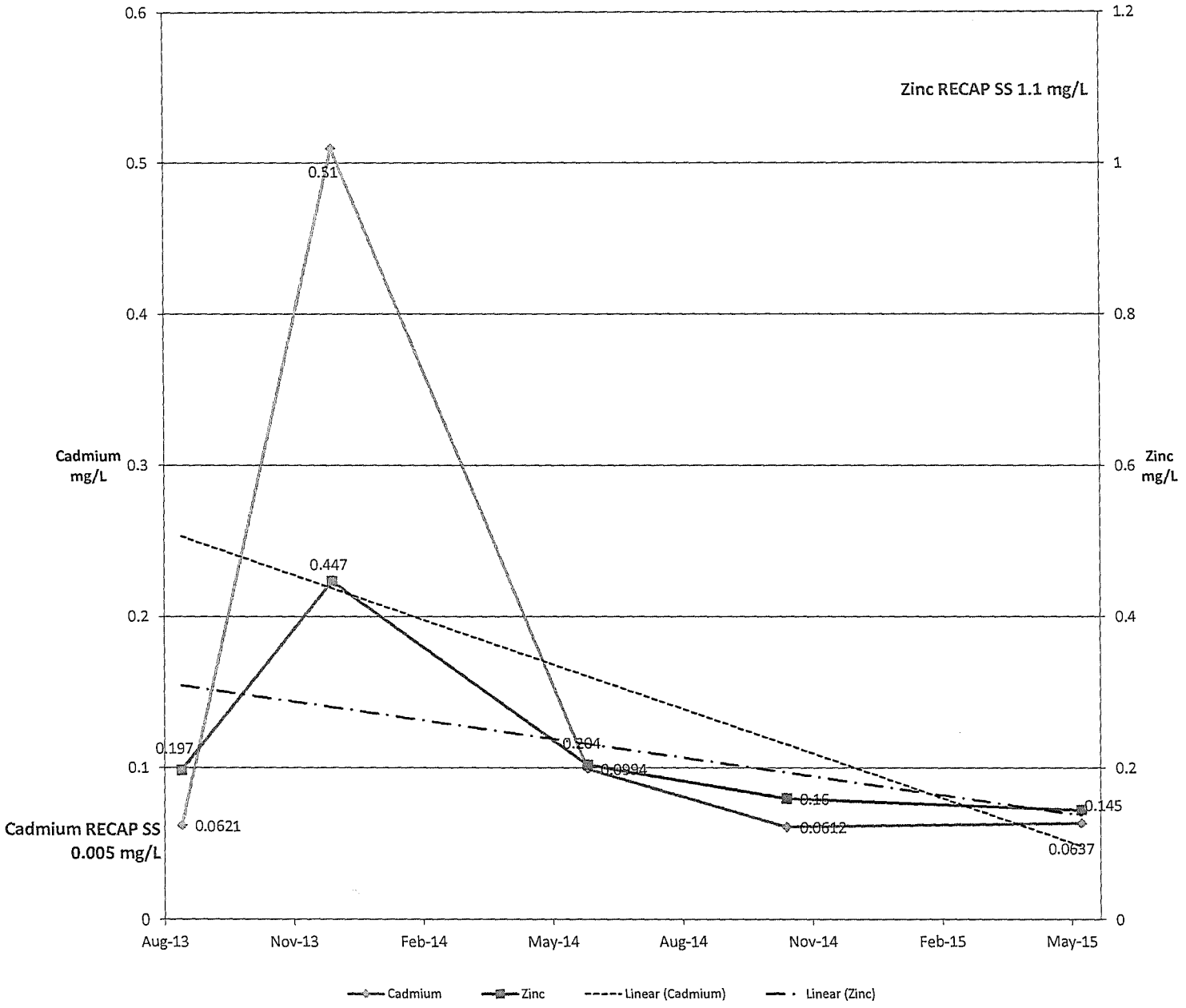

MW-1 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
0.00979
0.309
0.0031
0.0015
0.0024
0.0022
0.146
0.122
0.123
0.112
Cadmium mg/L
Zinc mg/L
0.0125
0.01
0.0075
0.005
0.0025
0
1.2
1.05
0.9
0.75
0.6
0.45
0.3
0.15
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

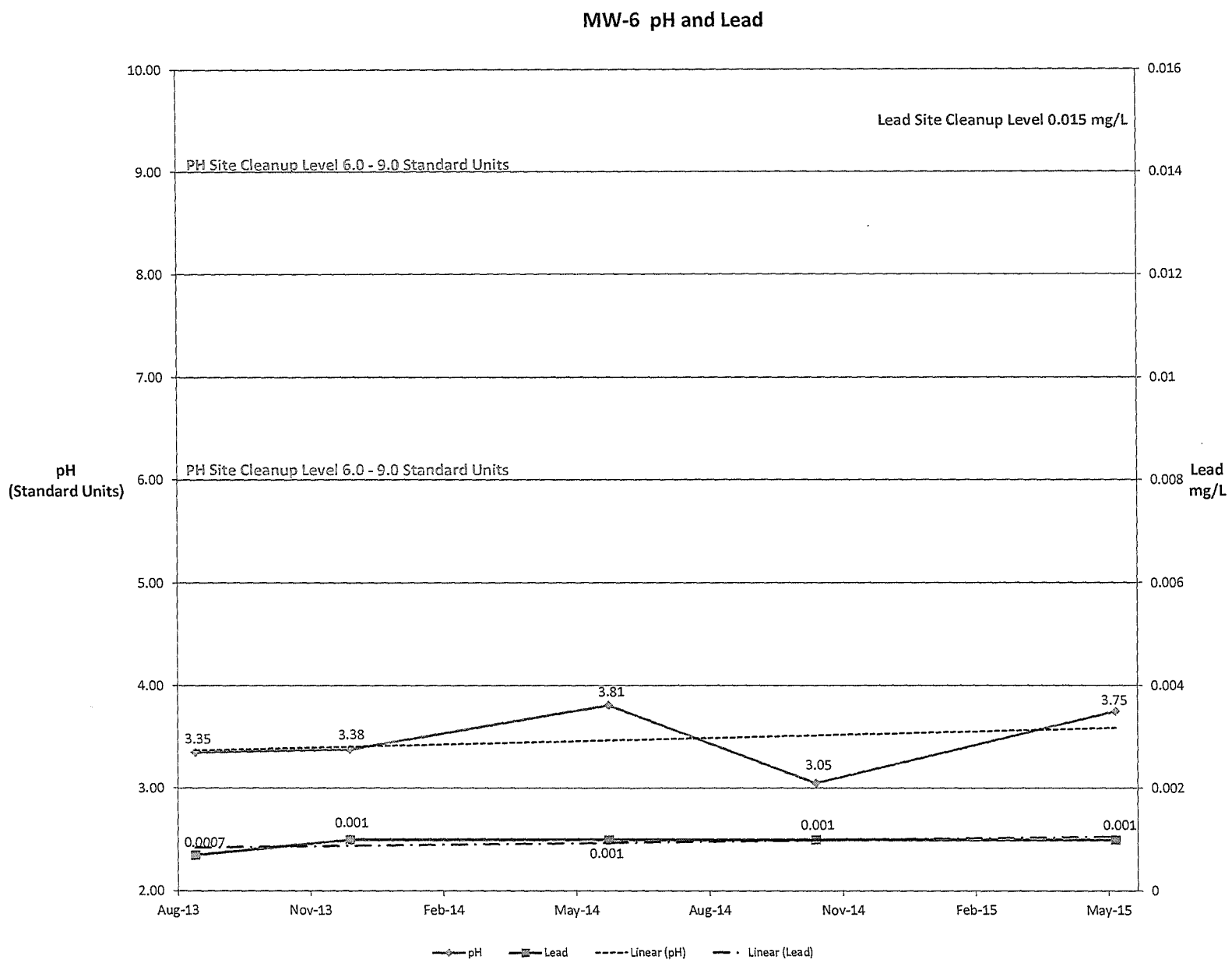

MW-2 pH and Lead
PH Site Cleanup Level 6.0 - 9.0
Standard Units
PH Site Cleanup Level 6.0-9.0
Standard Units
Lead Site
Cleanup Level
0.015 mg/L
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
0.0316
0.0086
0.0033
0.0041
0.002
2.91
3.01
3.05
3.33
3.32
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

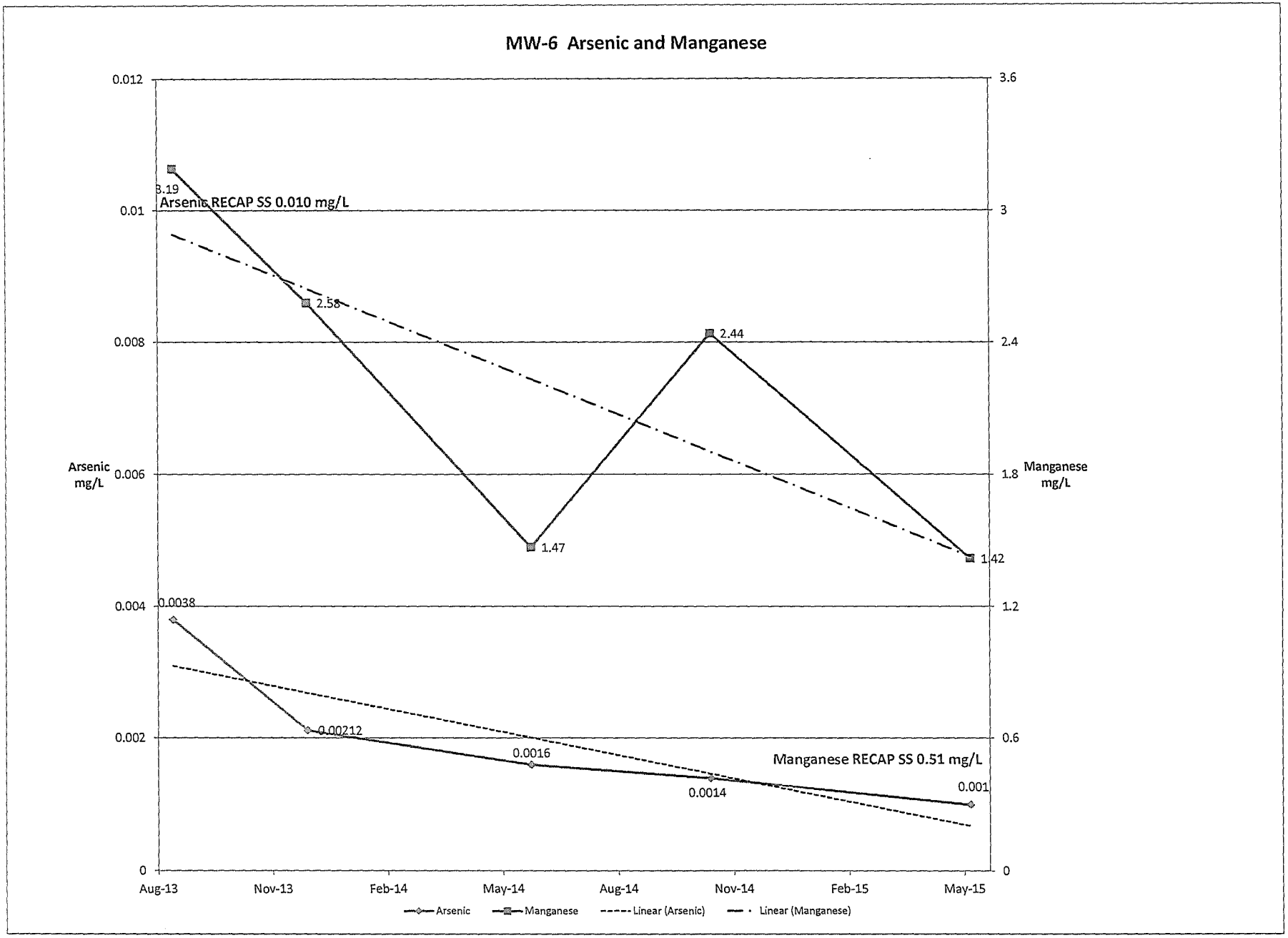

MW-2 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
0.999
0.663
1.47
1.24
0.914
0.002
0.001
0.0015
0.001
0.0012
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

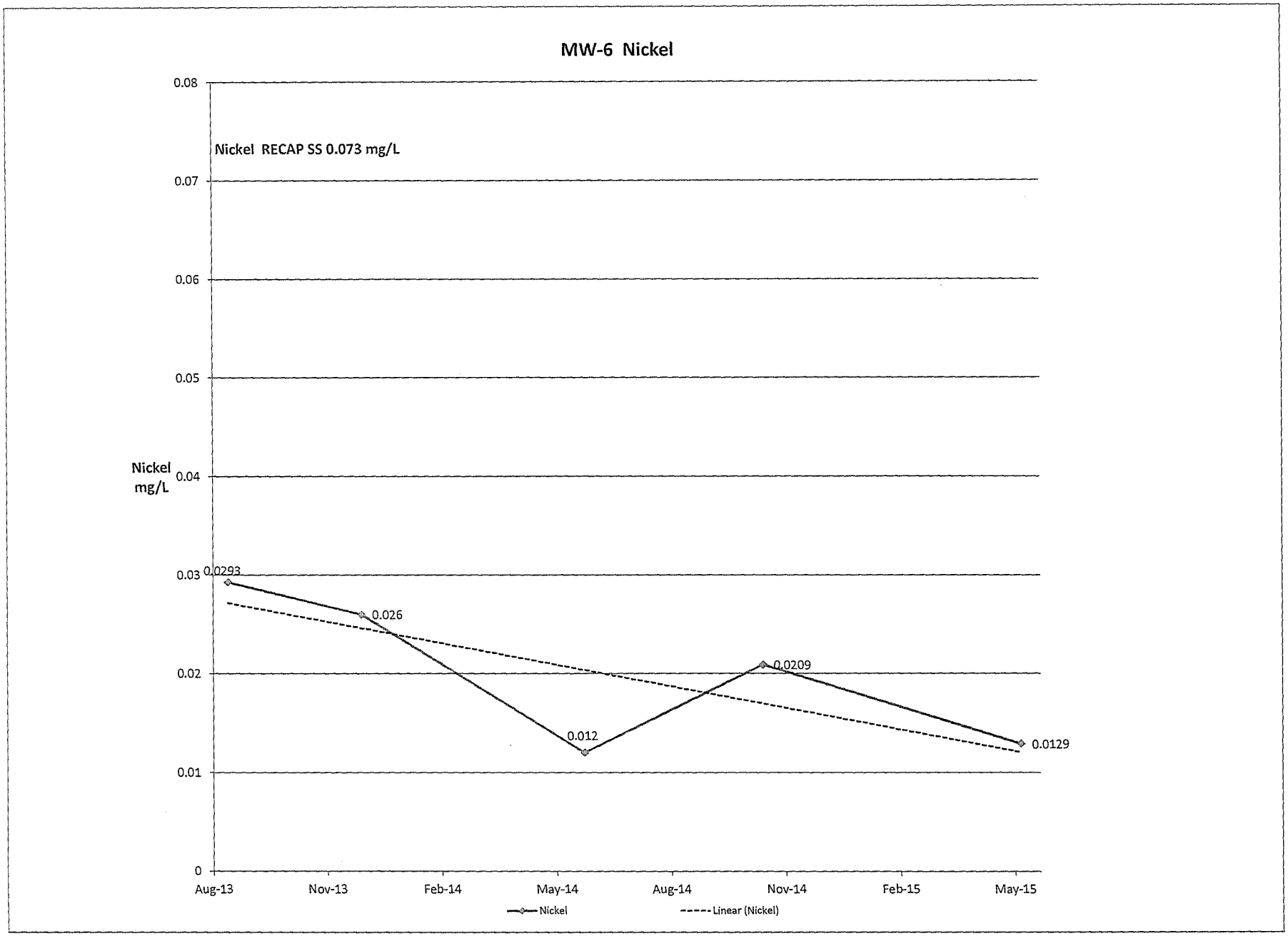

MW-2 Nickel
0.12
0.1
0.08
0.06
0.04
0.02
0
Nickel mg/L
Nickel RECAP SS 0.073 mg/L
0.0987
0.0564
0.0461
0.0396
0.0345
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

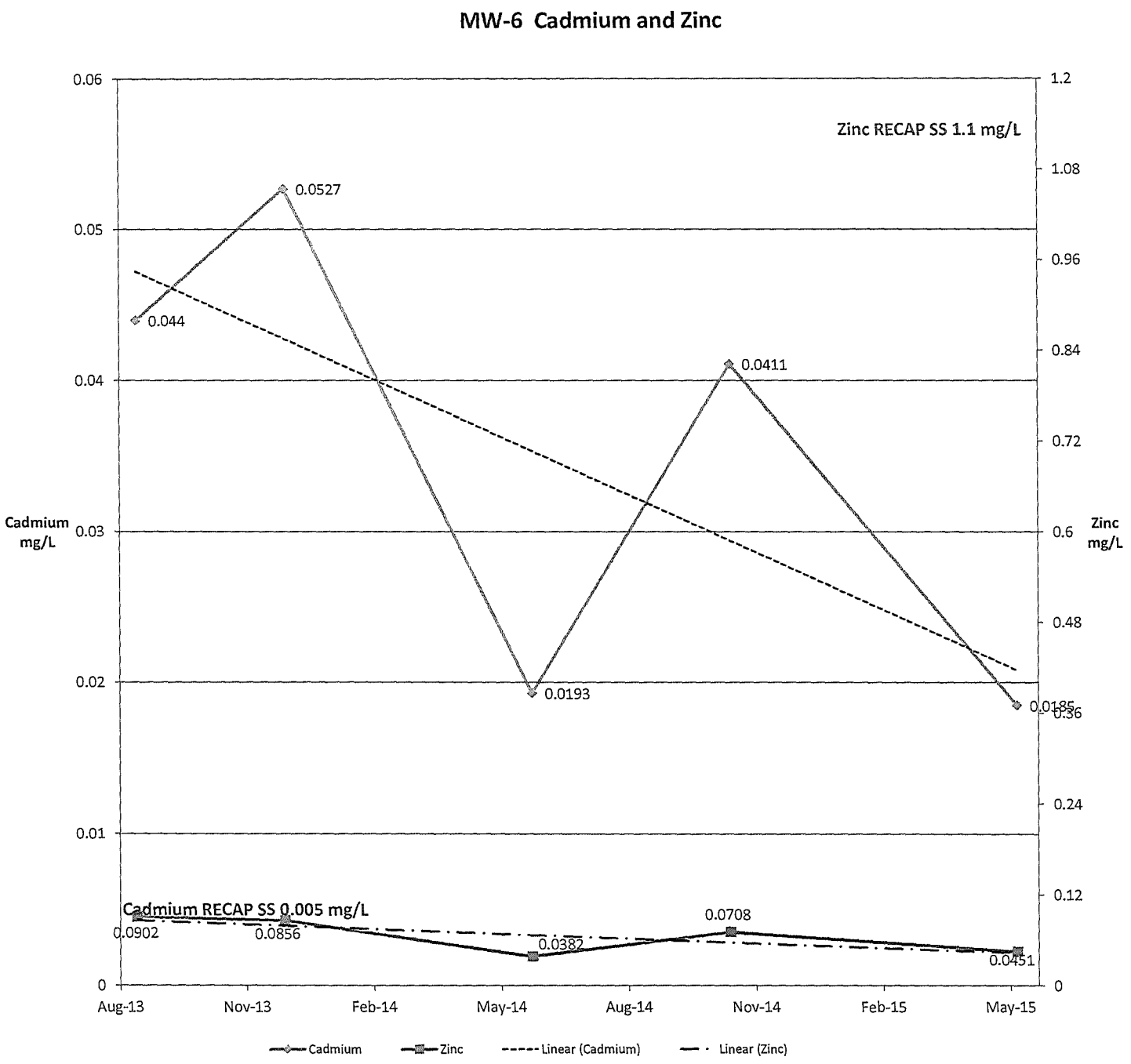
MW-2 Cadmium and Zinc

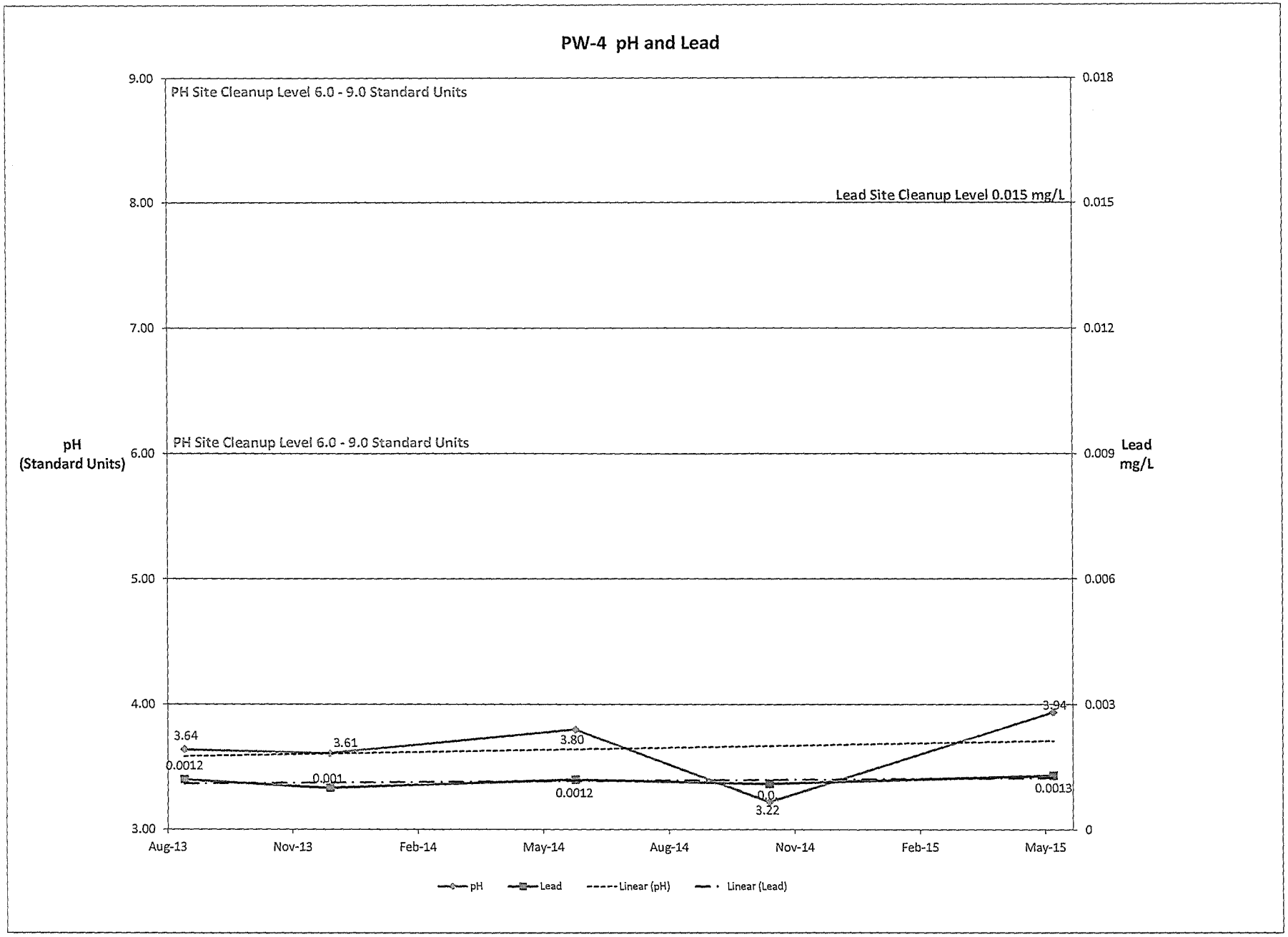


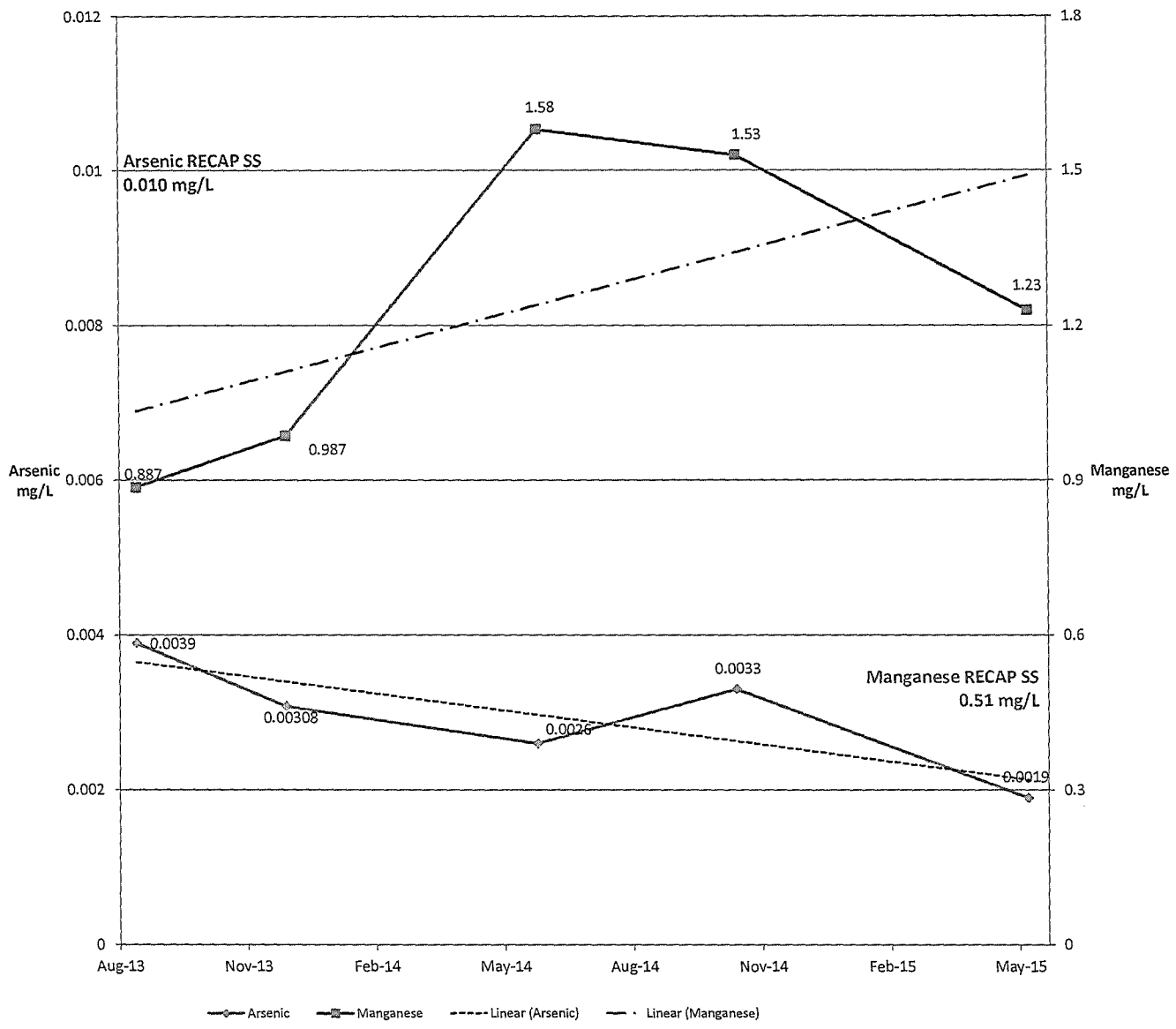

MW-6 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.0 - 9.0 Standard Units
PH Site Cleanup Level 6.0 - 9.0 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
3.35
3.38
3.81
3.05
3.75
0.0007
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

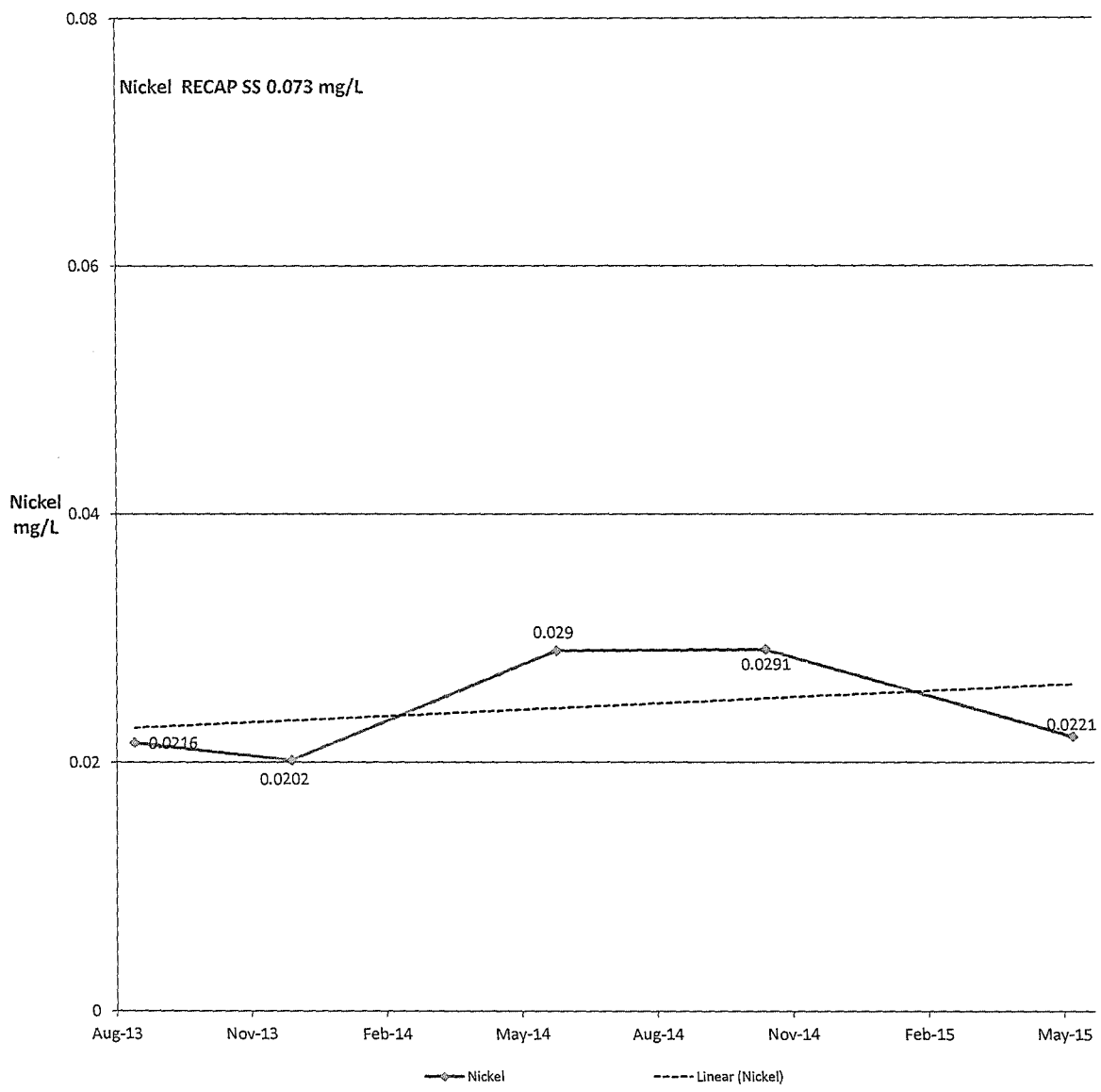

MW-6 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
3.19
2.58
1.47
2.44
1.42
0.0038
0.00212
0.0016
0.0014
0.001
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
3.6
3
2.4
1.8
1.2
0.6
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
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
0.0293
0.026
0.012
0.0209
0.0129
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

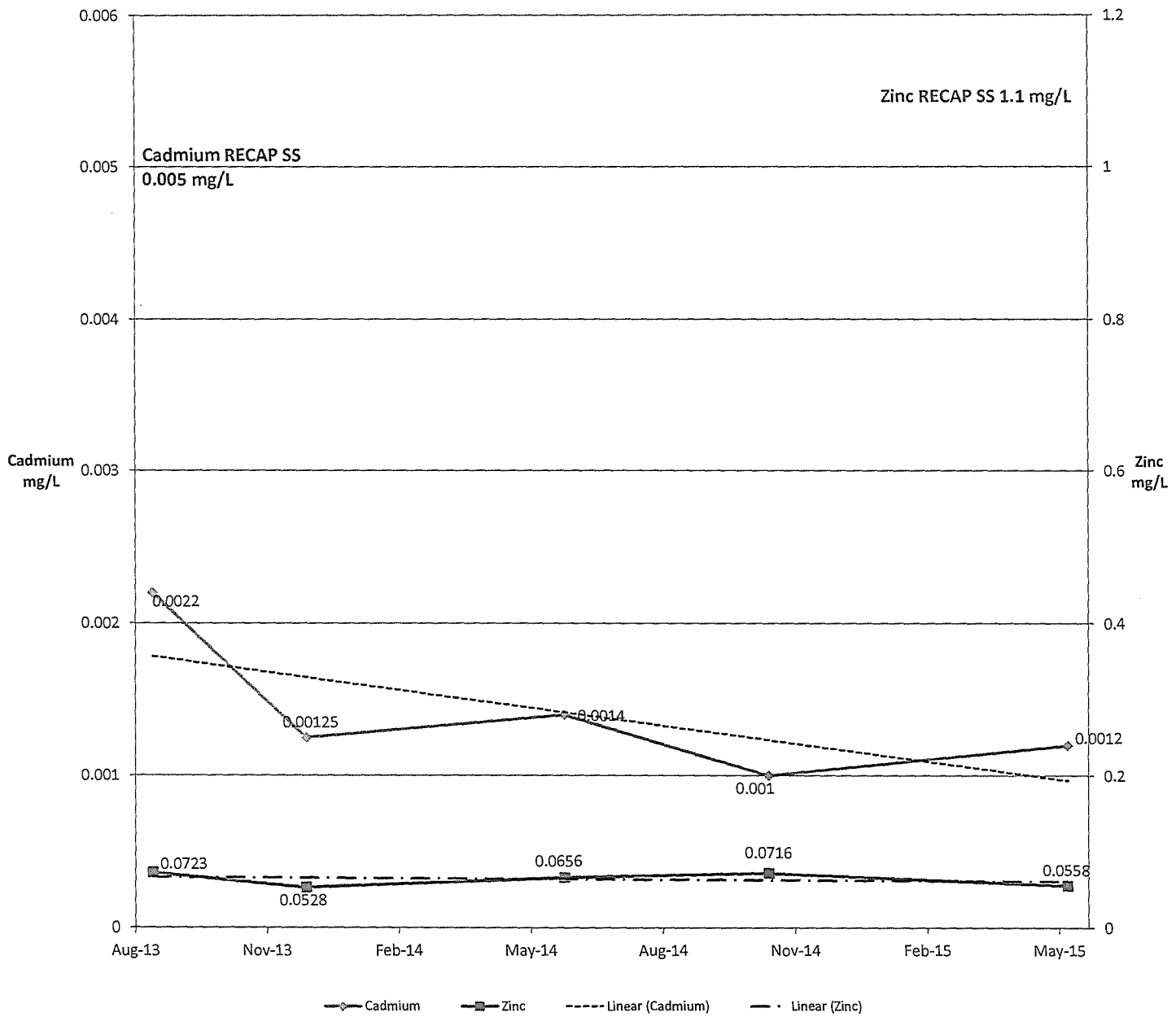

MW-6 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.06
0.05
0.04
0.03
0.02
0.01
0
1.2
1.08
0.96
0.84
0.72
0.6
0.48
0.36
0.24
0.12
0
0.044
0.0527
0.0193
0.0411
0.0185
0.0902
0.0856
0.0387
0.0708
0.0451
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

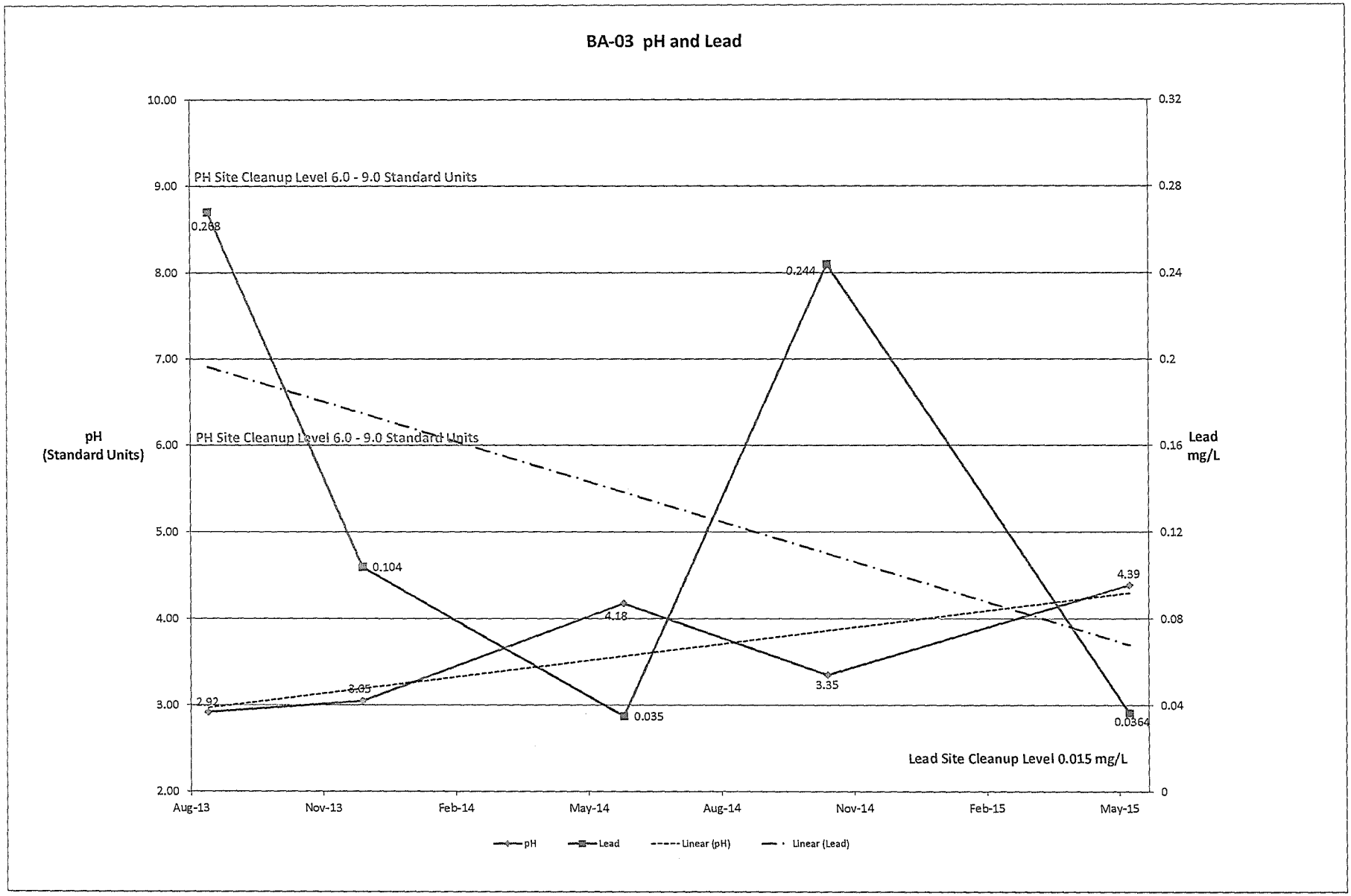

PW-4 pH and Lead
PH Site Cleanup Level 6.0 - 9.0 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.0 - 9.0 Standard Units
pH (Standard Units)
Lead mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
0.018
0.015
0.012
0.009
0.006
0.003
0
3.64
3.61
3.80
3.22
3.94
0.0012
0.001
0.0012
0.0
0.0013
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

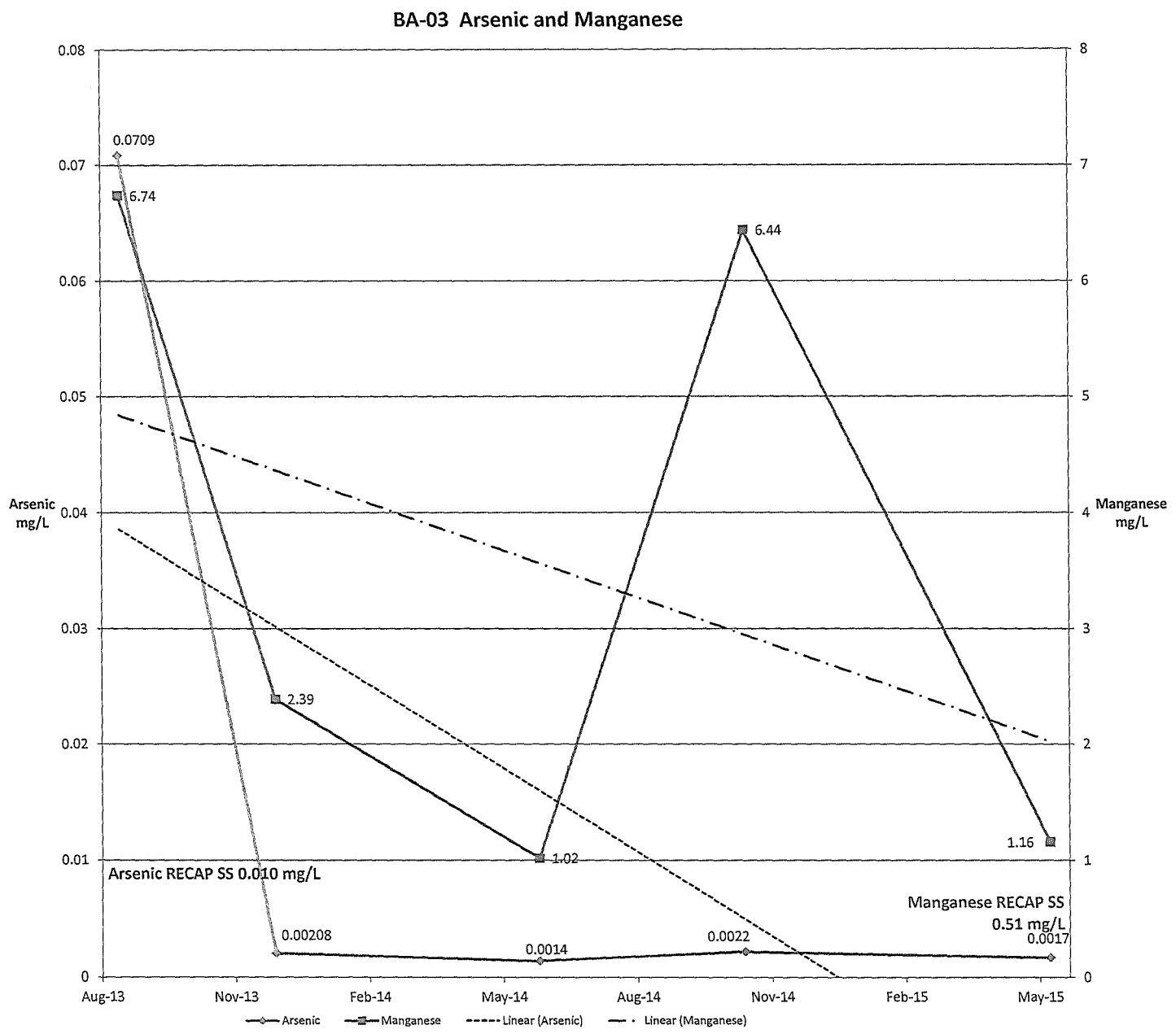

PW-4 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS
0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
1.58
1.53
1.23
0.987
0.887
0.0039
0.00308
0.0026
0.0033
0.0019
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

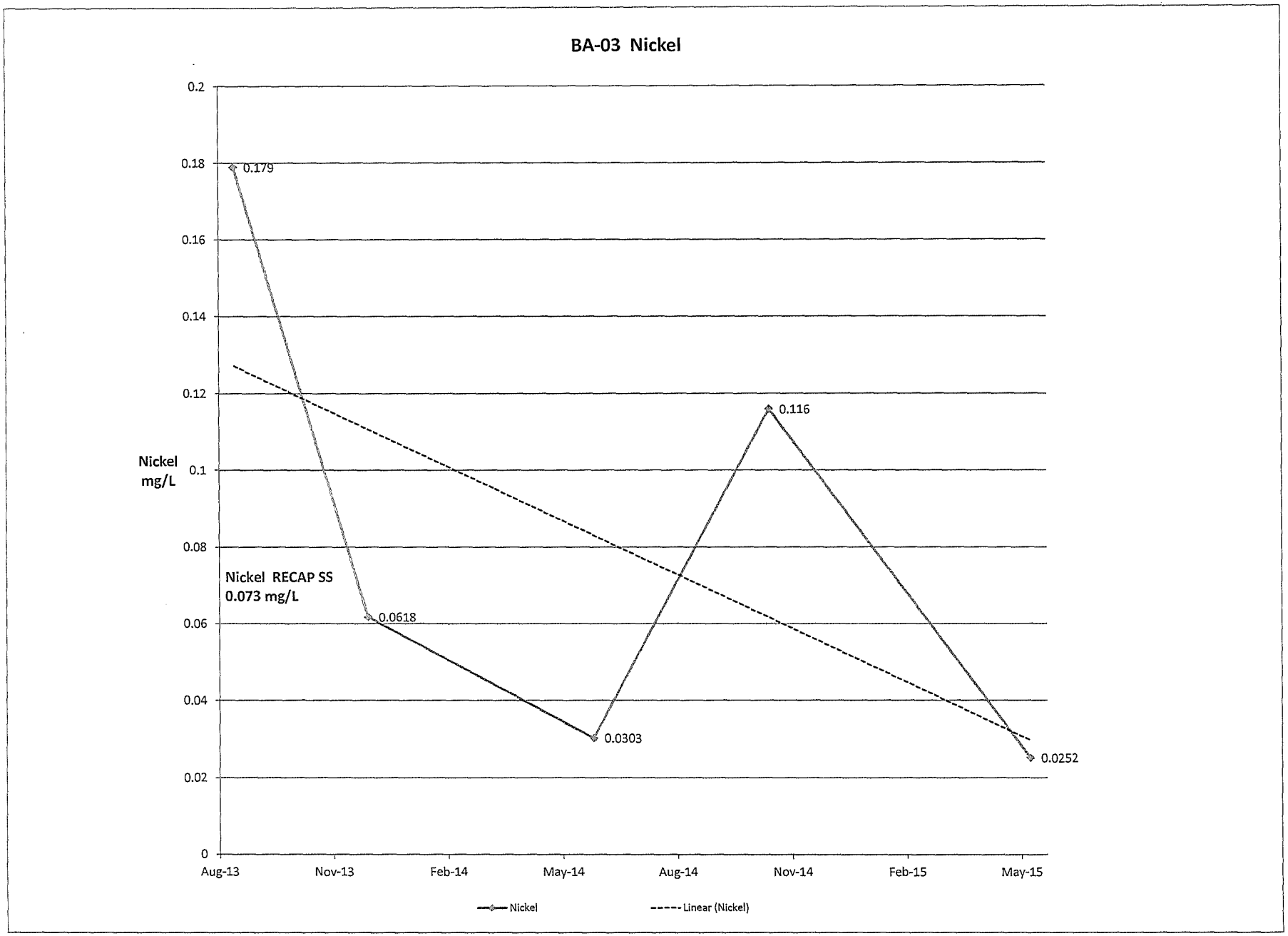

PW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.06
0.04
0.02
0
0.0216
0.0202
0.029
0.0291
0.0221
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

PW-4 Cadmium and Zinc

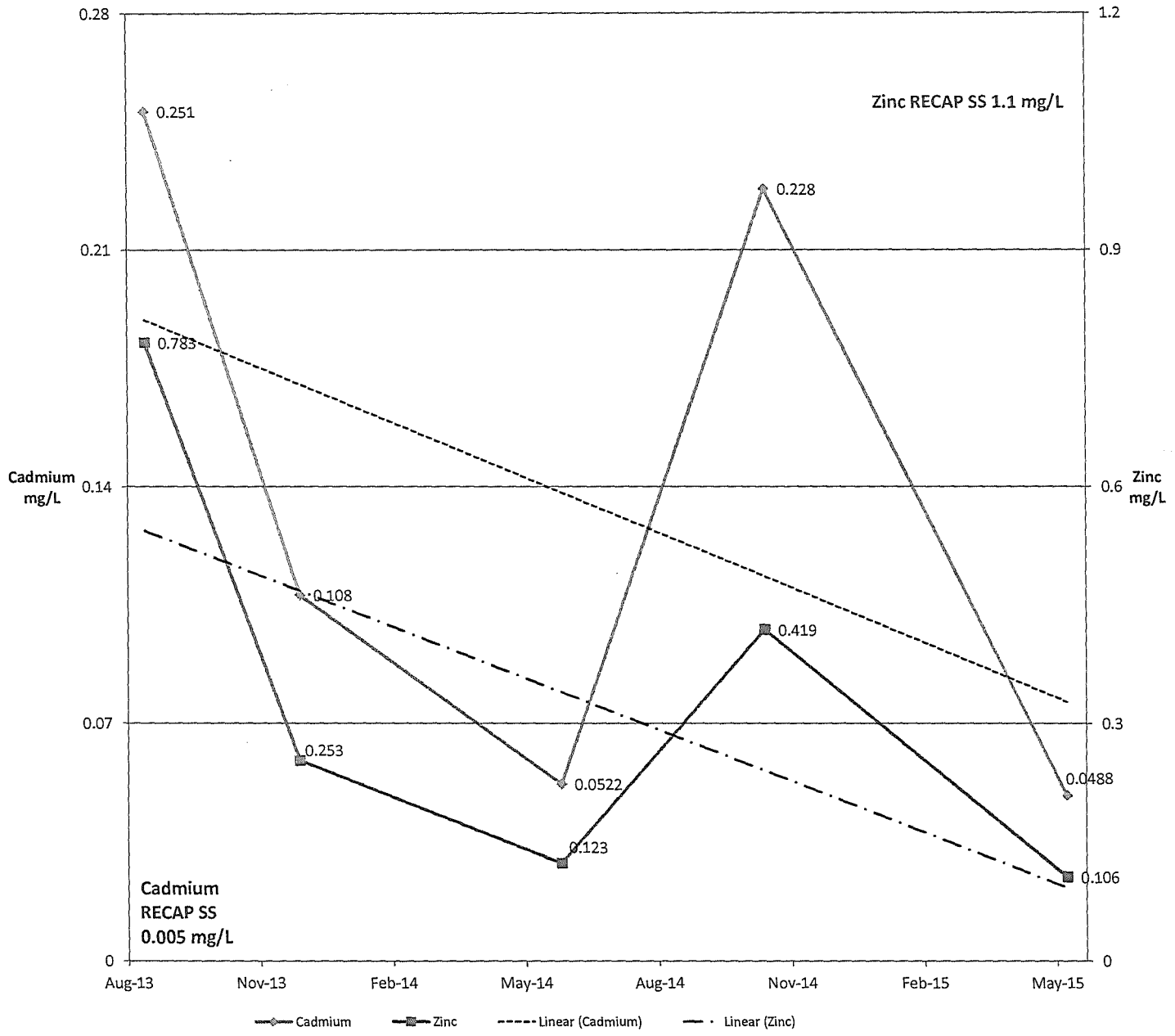


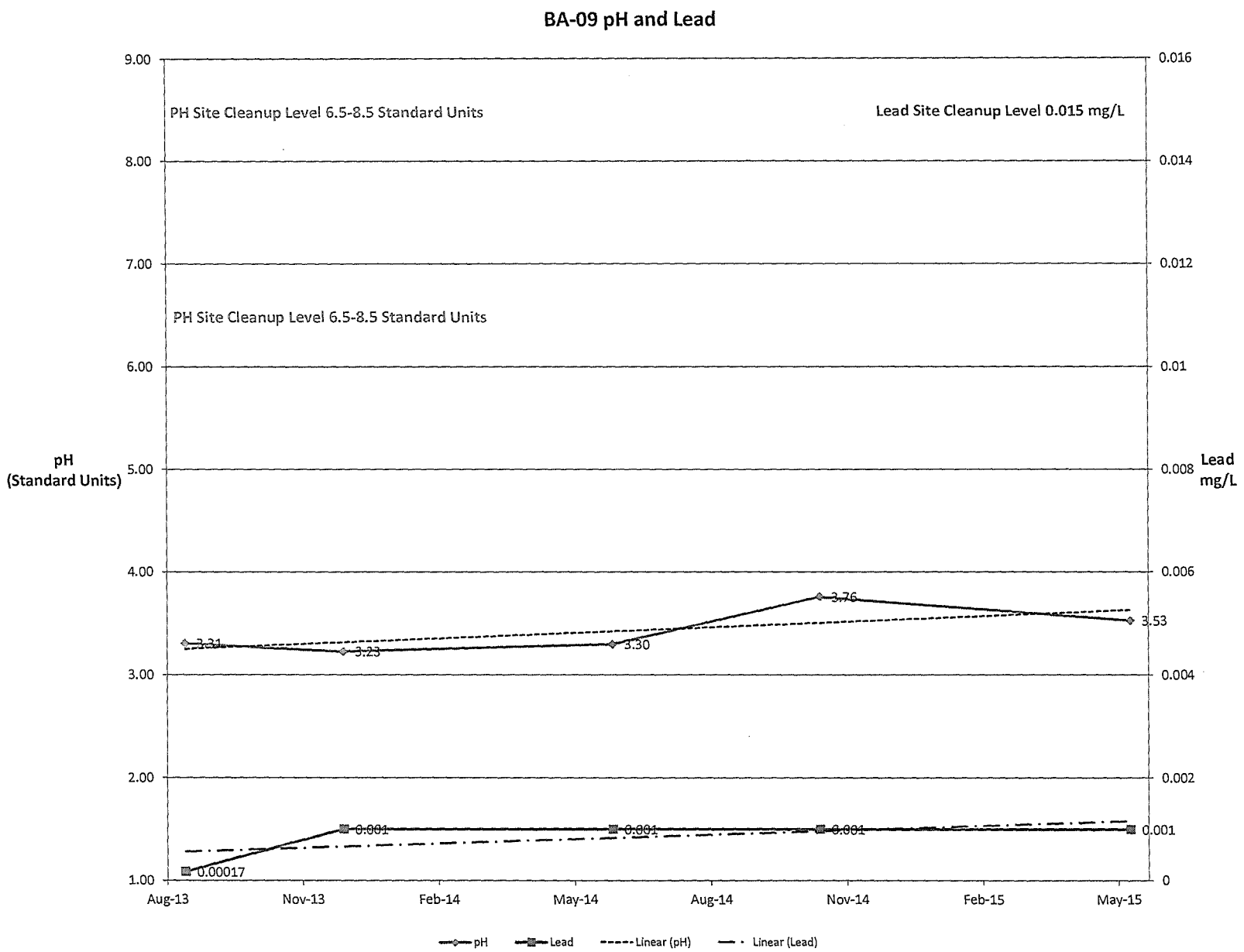

BA-03 pH and Lead
PH Site Cleanup Level 6.0 - 9.0 Standard Units
PH Site Cleanup Level 6.0 - 9.0 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
0.32
0.28
0.24
0.2
0.16
0.12
0.08
0.04
0
0.268
0.104
0.035
0.244
0.0364
2.92
3.05
4.18
3.35
4.39
Lead Site Cleanup Level 0.015 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

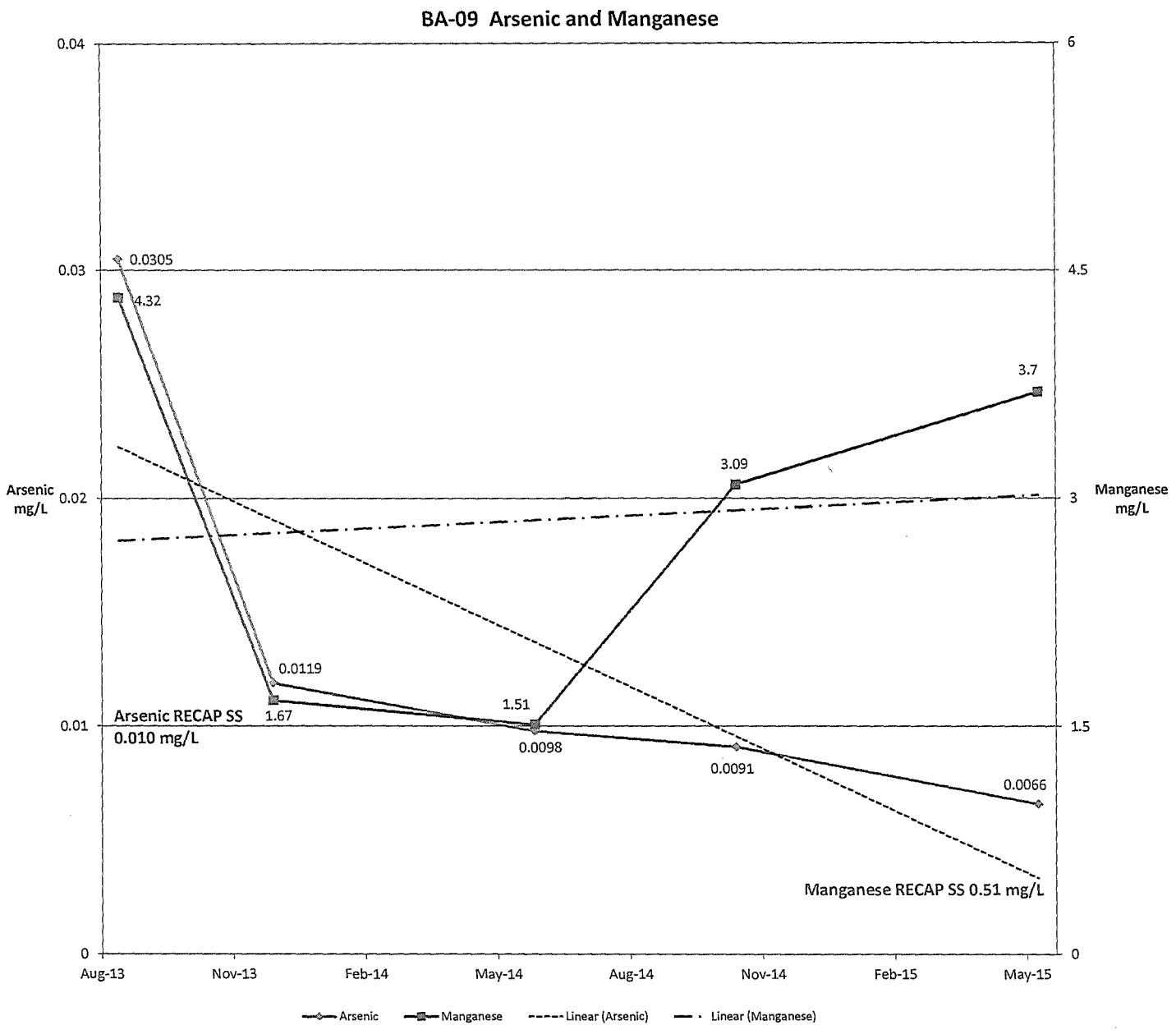

BA-03 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
8
7
6
5
4
3
2
1
0
0.0709
6.74
6.44
2.39
1.02
1.16
0.00208
0.0014
0.0022
0.0017
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS
0.51 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

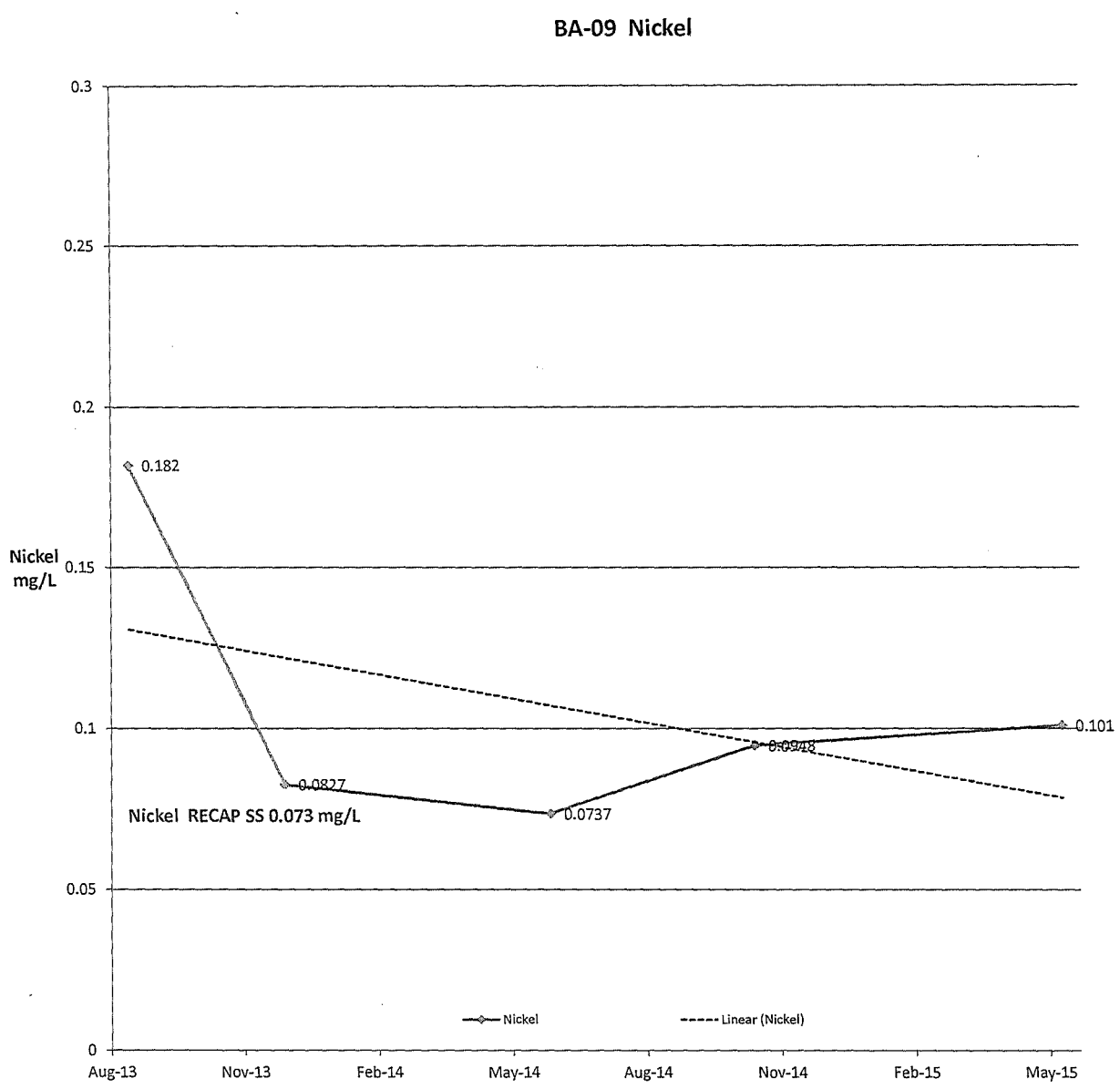

BA-03 Nickel
Nickel
mg/L
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
0.179
0.0618
0.0303
0.116
0.0252
Nickel RECAP SS
0.073 mg/L
Nickel
Linear (Nickel)

BA-03 Cadmium and Zinc

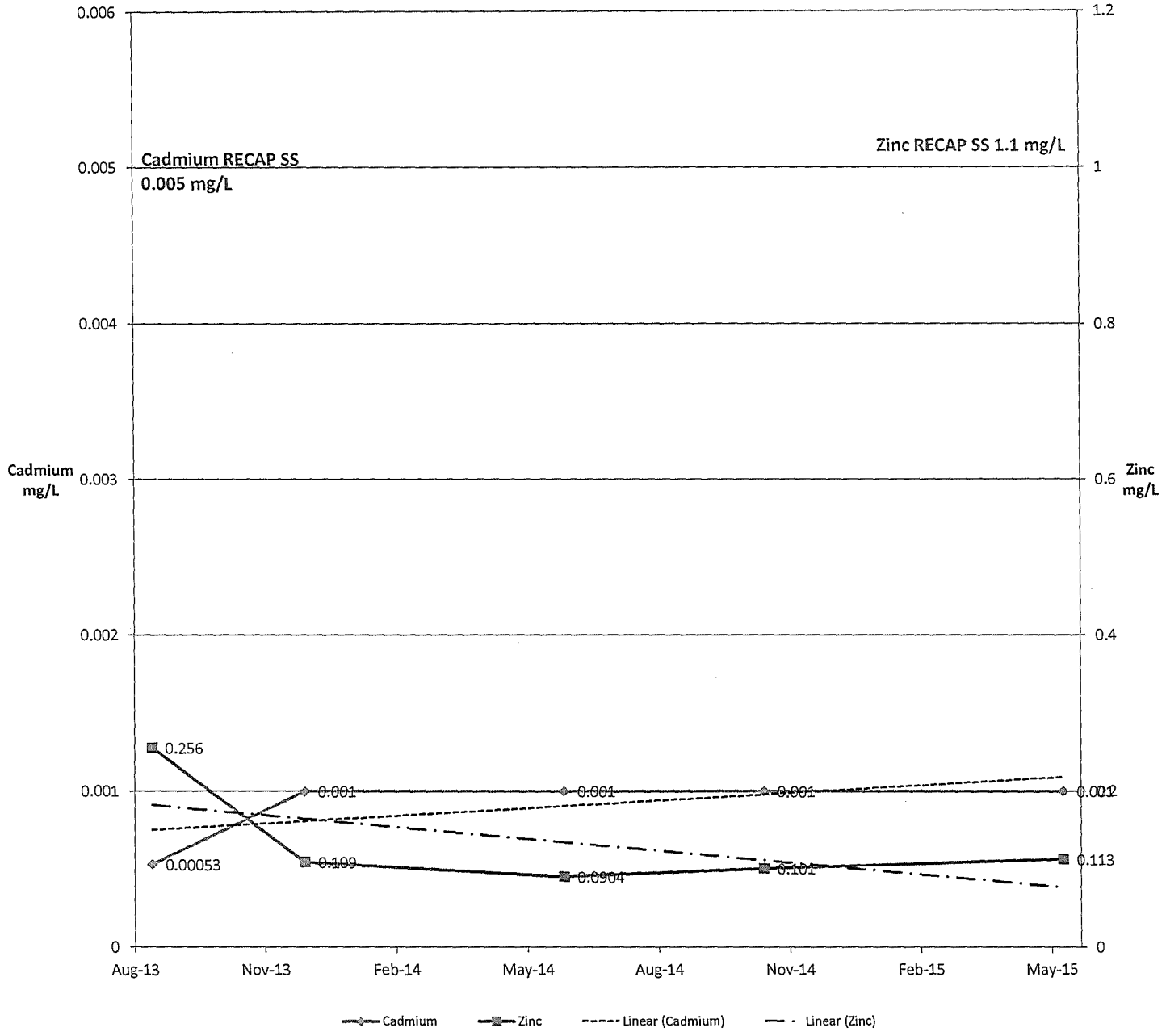



BA-09 pH and Lead
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
3.31
3.23
3.30
3.76
3.53
0.001
0.001
0.001
0.001
0.00017
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)


BA-09 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.04
0.03
0.02
0.01
0
6
4.5
3
1.5
0
0.0305
4.32
0.0119
1.67
1.51
0.0098
3.09
0.0091
3.7
0.0066
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

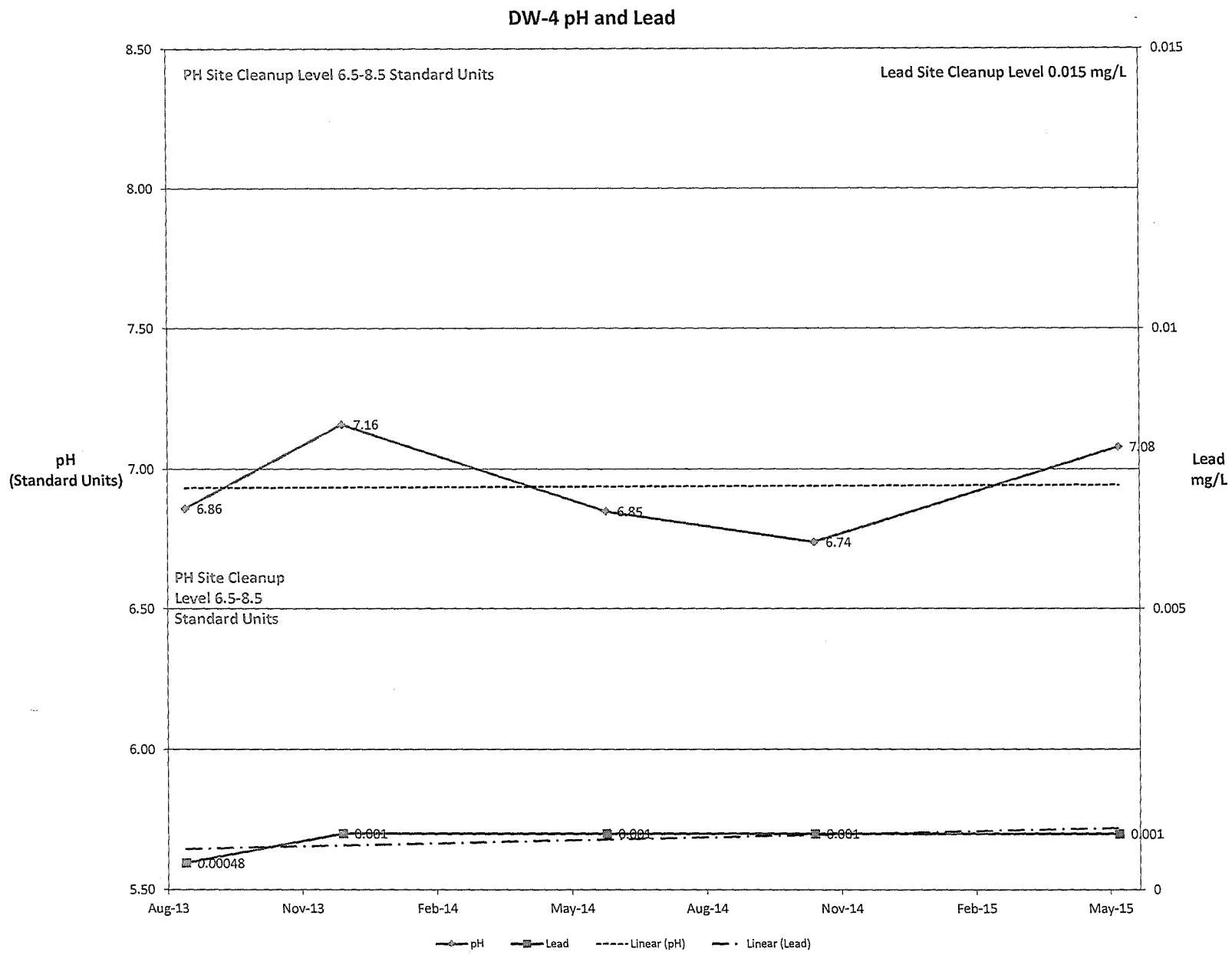

BA-09 Nickel
Nickel mg/L
0.3
0.25
0.2
0.15
0.1
0.05
0
0.182
0.0827
0.0737
0.0948
0.101
Nickel RECAP SS 0.073 mg/L
Nickel
Linear (Nickel)
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15

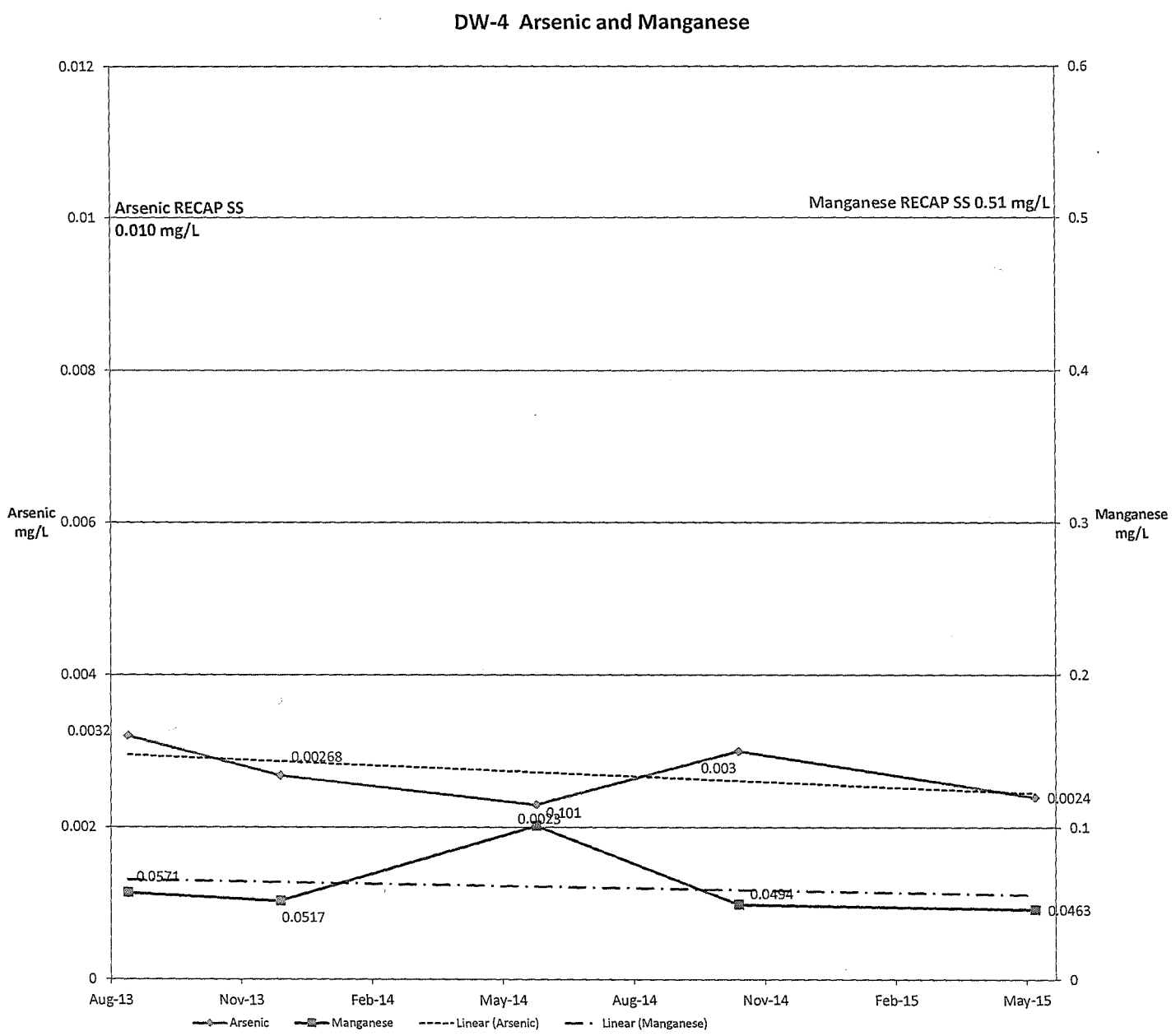
BA-09 Cadmium and Zinc

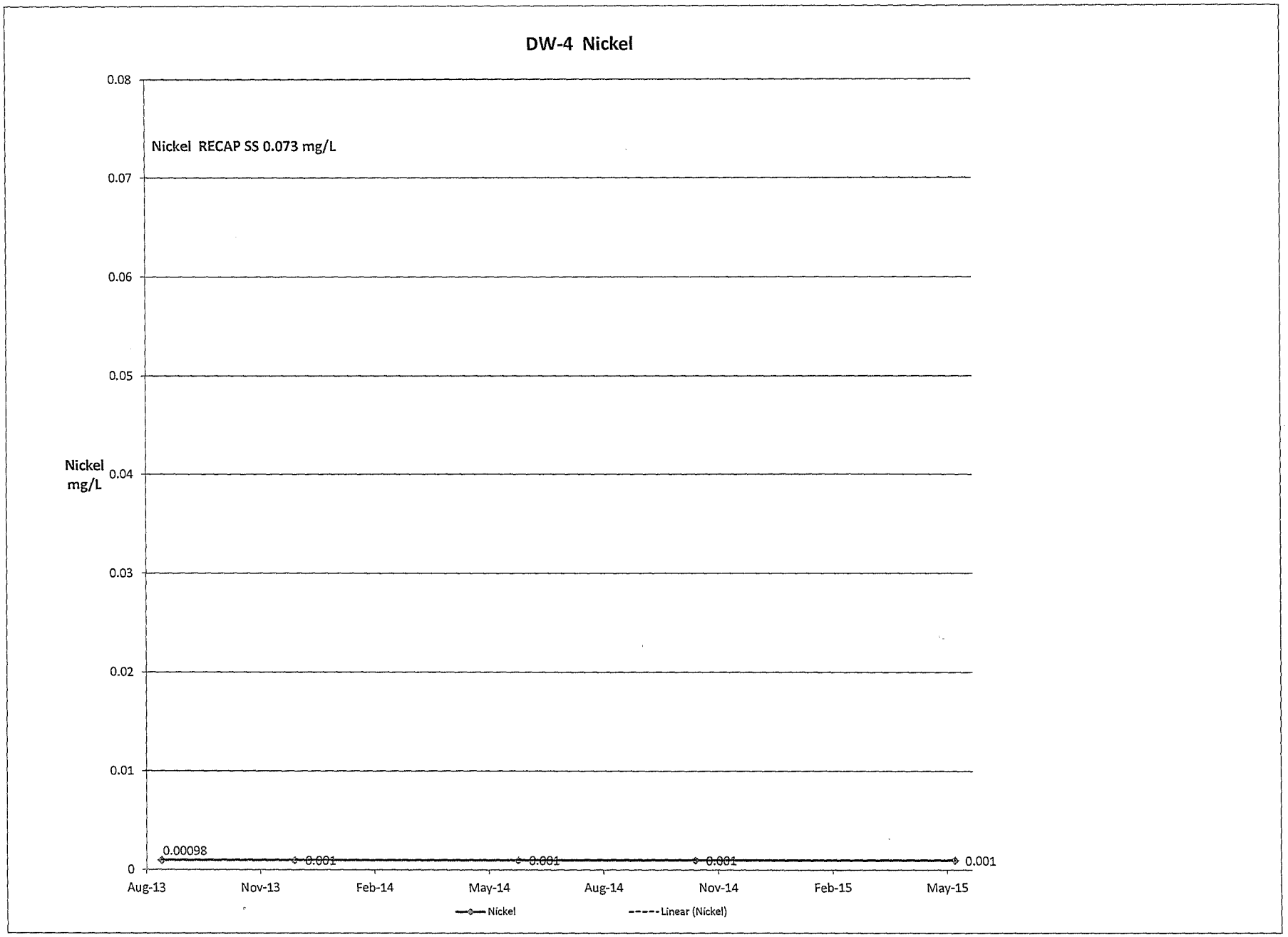


SECOND WATER BEARING ZONE

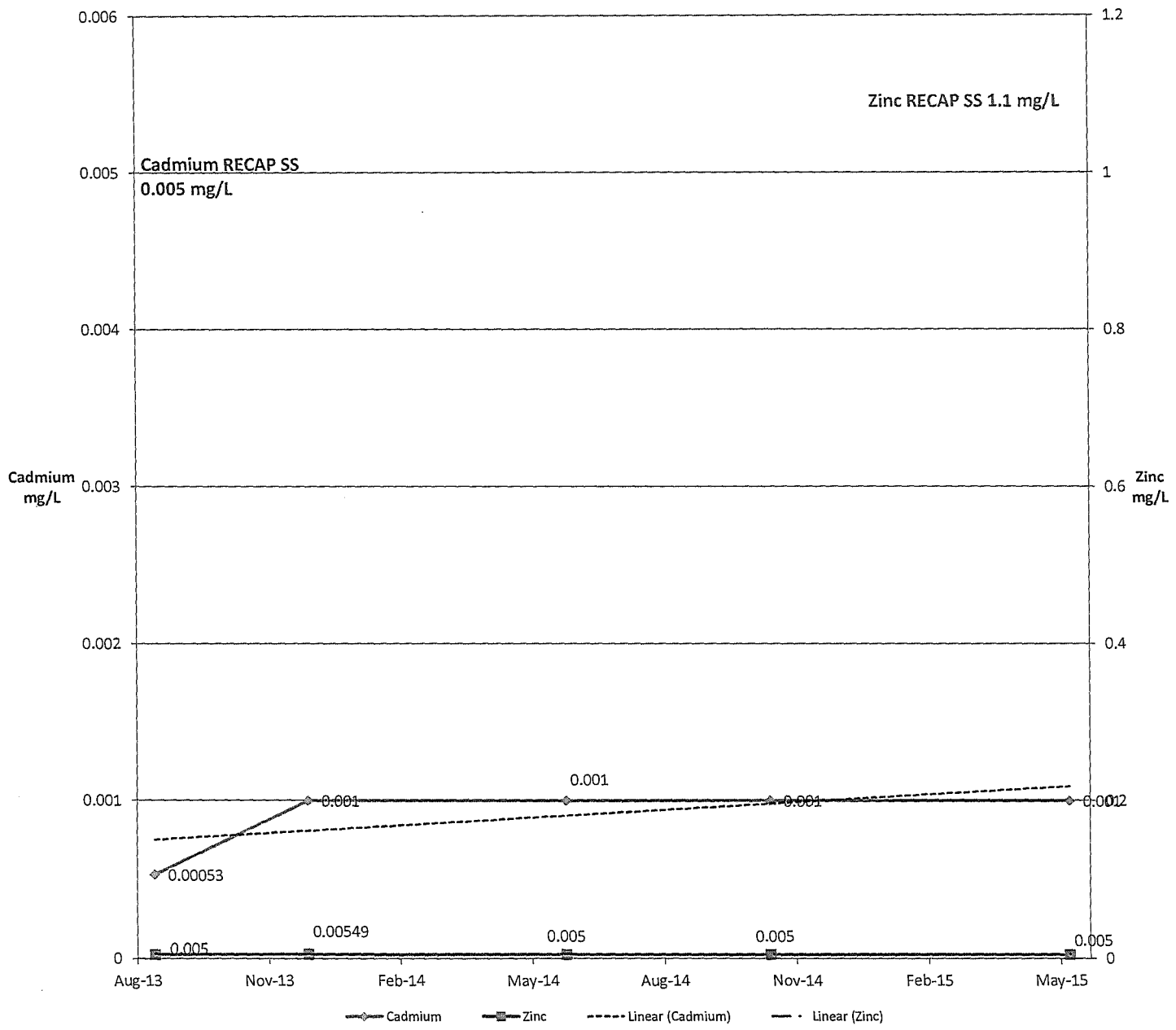
(PAST EIGHT QUARTERS)

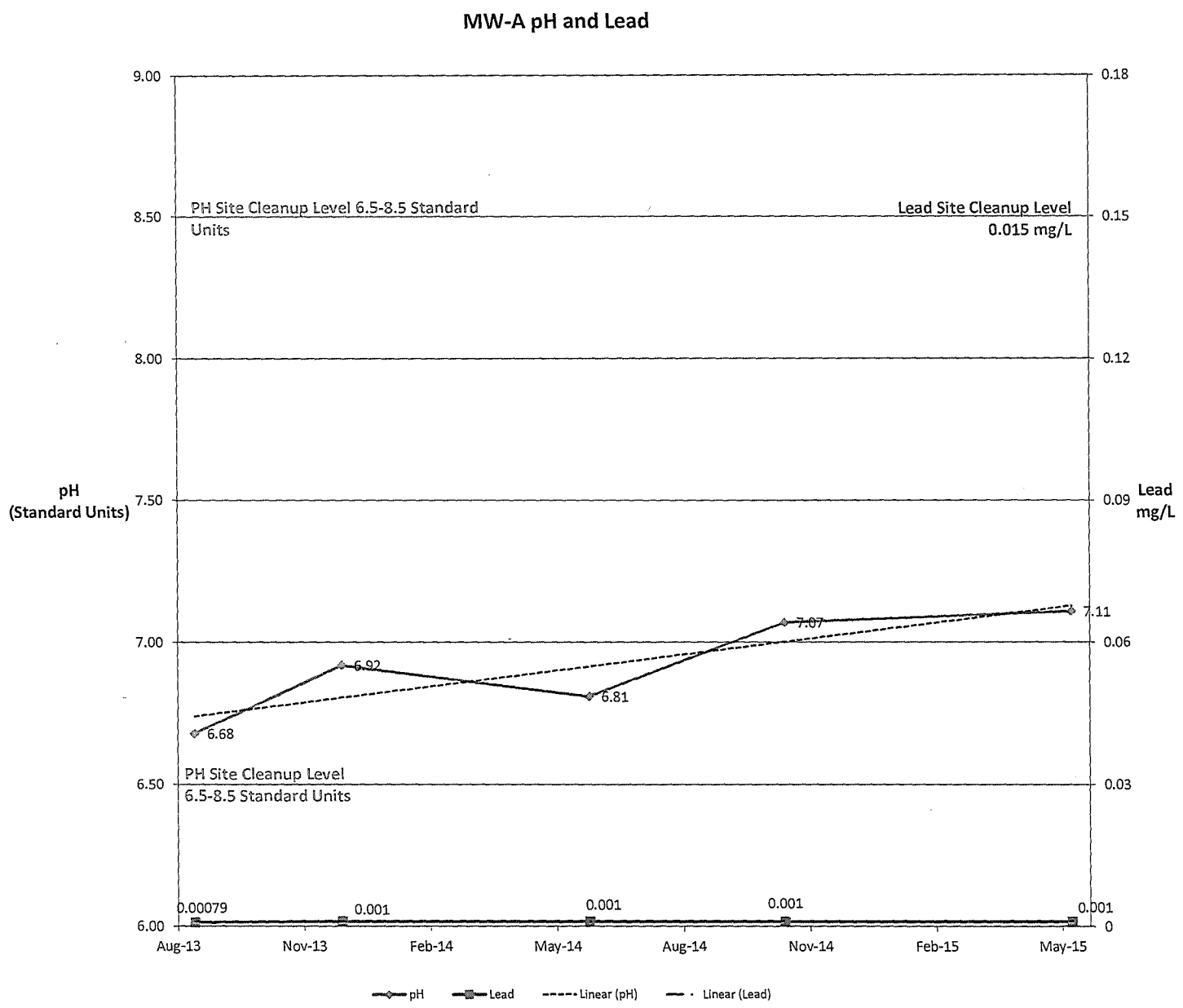

DW-4 pH and Lead
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
pH
(Standard Units)
Lead
mg/L
8.50
8.00
7.50
7.00
6.50
6.00
5.50
0.015
0.01
0.005
0
7.16
7.08
6.86
6.85
6.74
PH Site Cleanup
Level 6.5-8.5
Standard Units
0.001
0.001
0.001
0.001
0.00048
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

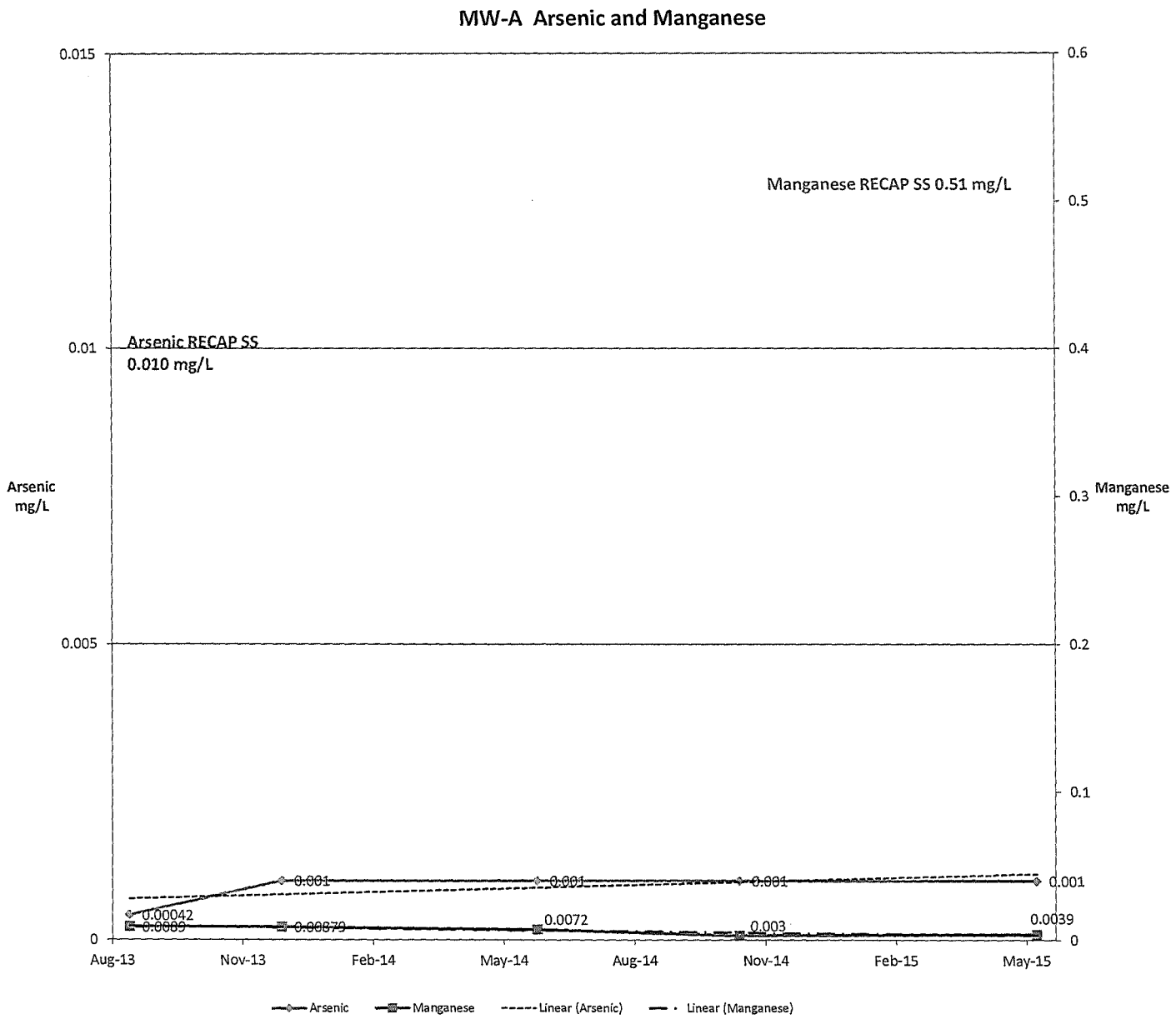

DW-4 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0032
0.00268
0.003
0.0024
0.101
0.0023
0.0571
0.0517
0.0494
0.0463
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

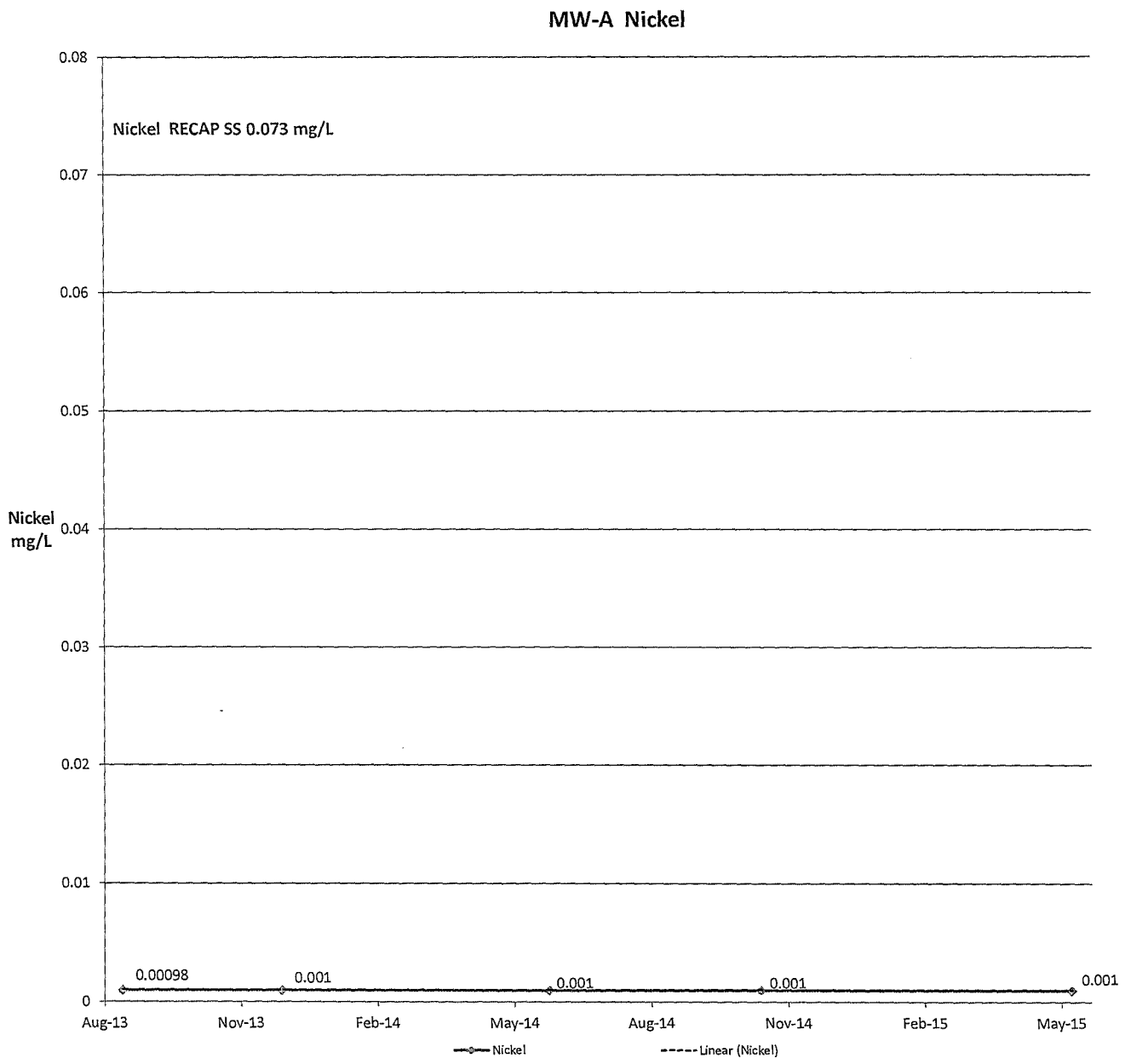

DW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

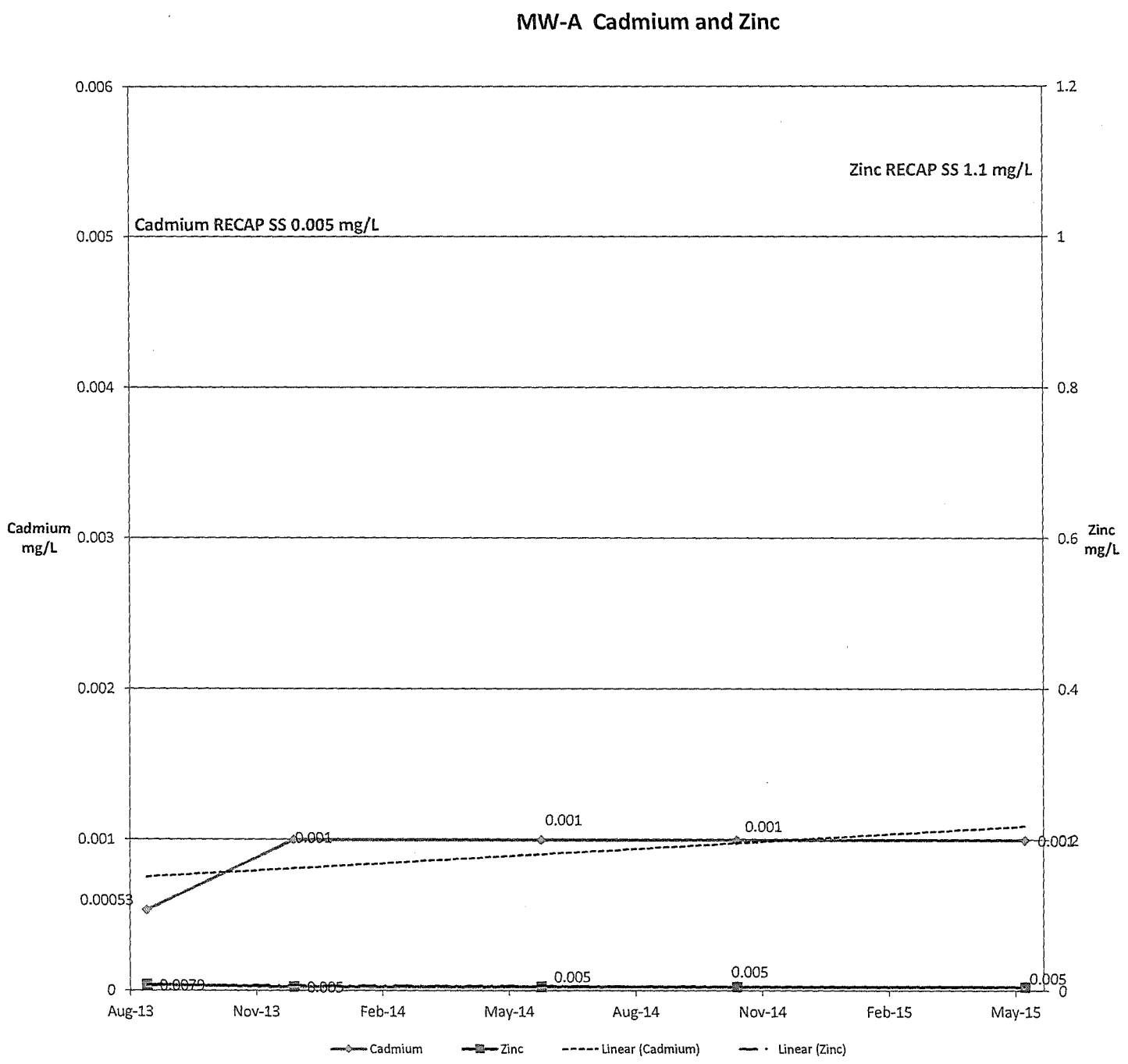
DW-4 Cadmium and Zinc

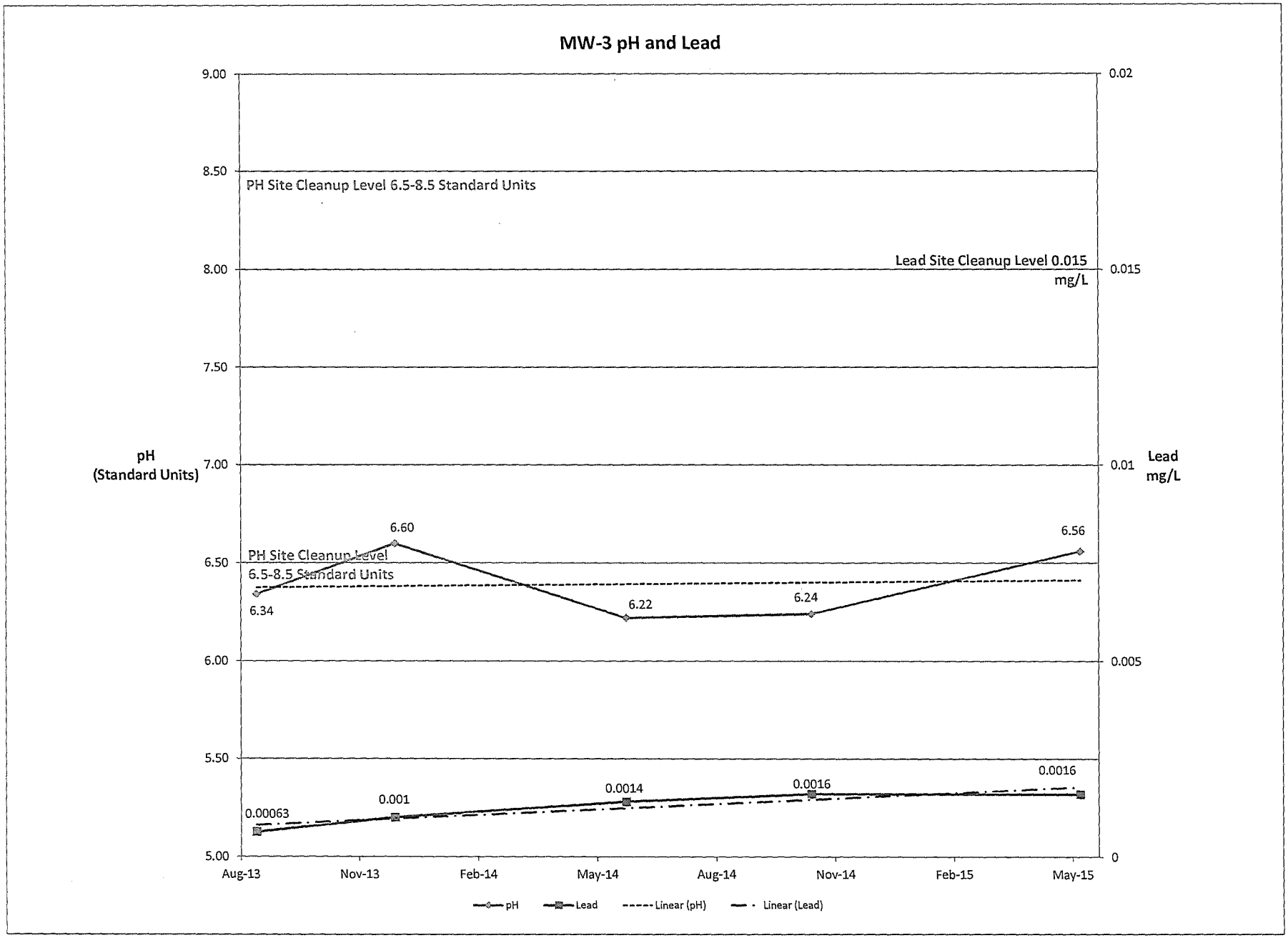


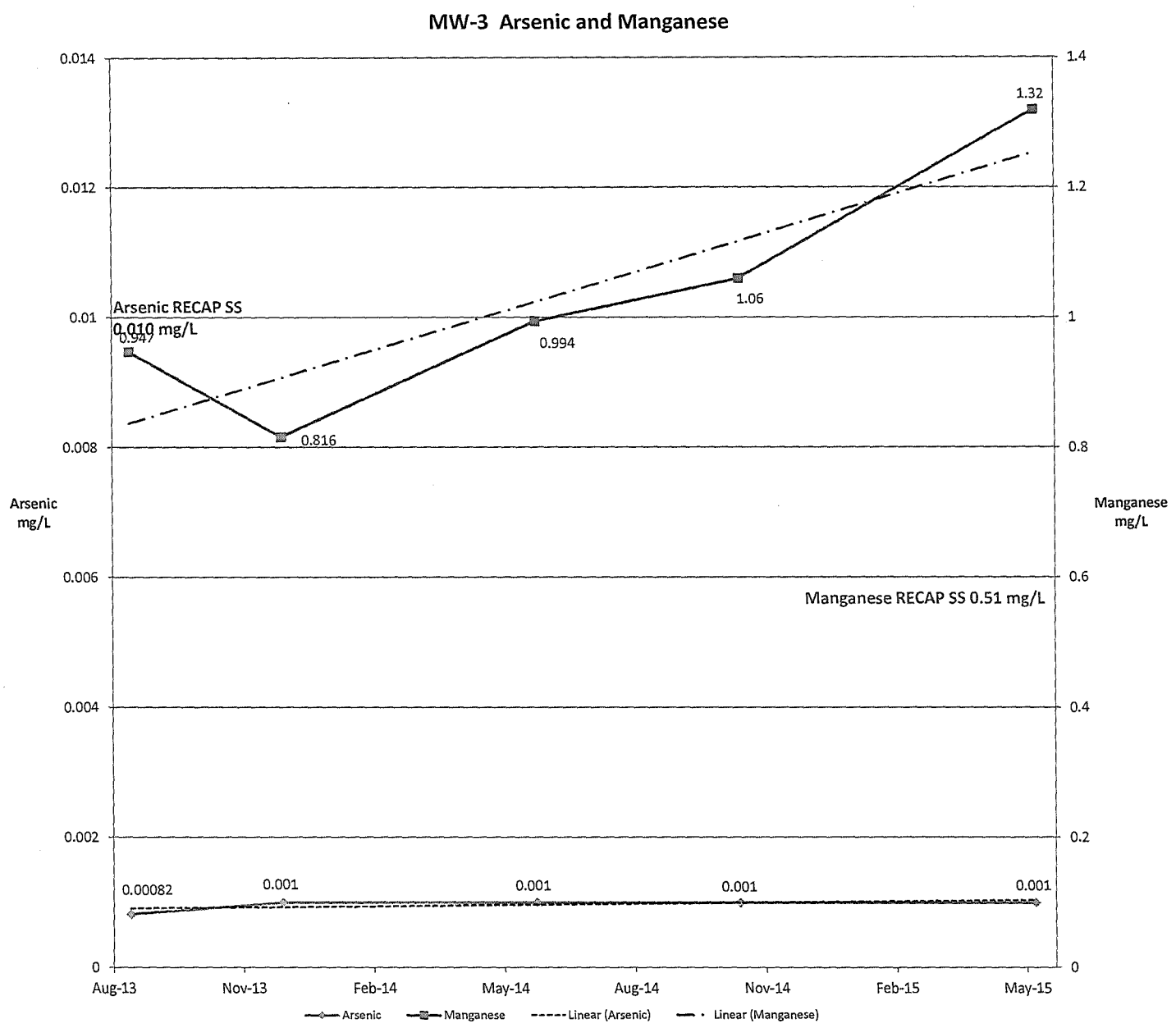

MW-A pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.18
0.15
0.12
0.09
0.06
0.03
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.68
6.92
6.81
7.07
7.11
0.00079
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

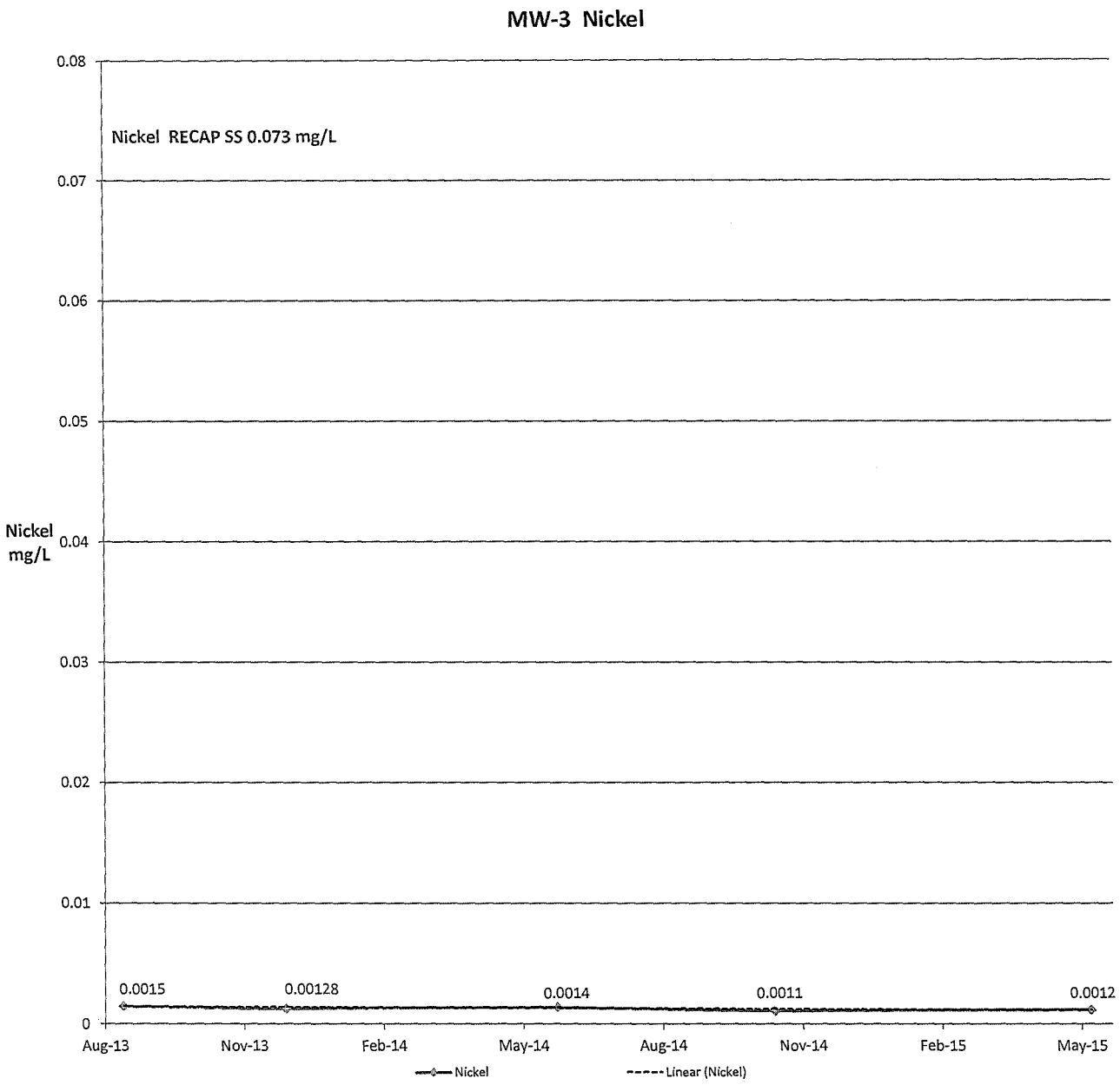

MW-A Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS
0.010 mg/L
Arsenic
mg/L
Manganese
mg/L
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.00042
0.0089
0.00879
0.0072
0.003
0.0039
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

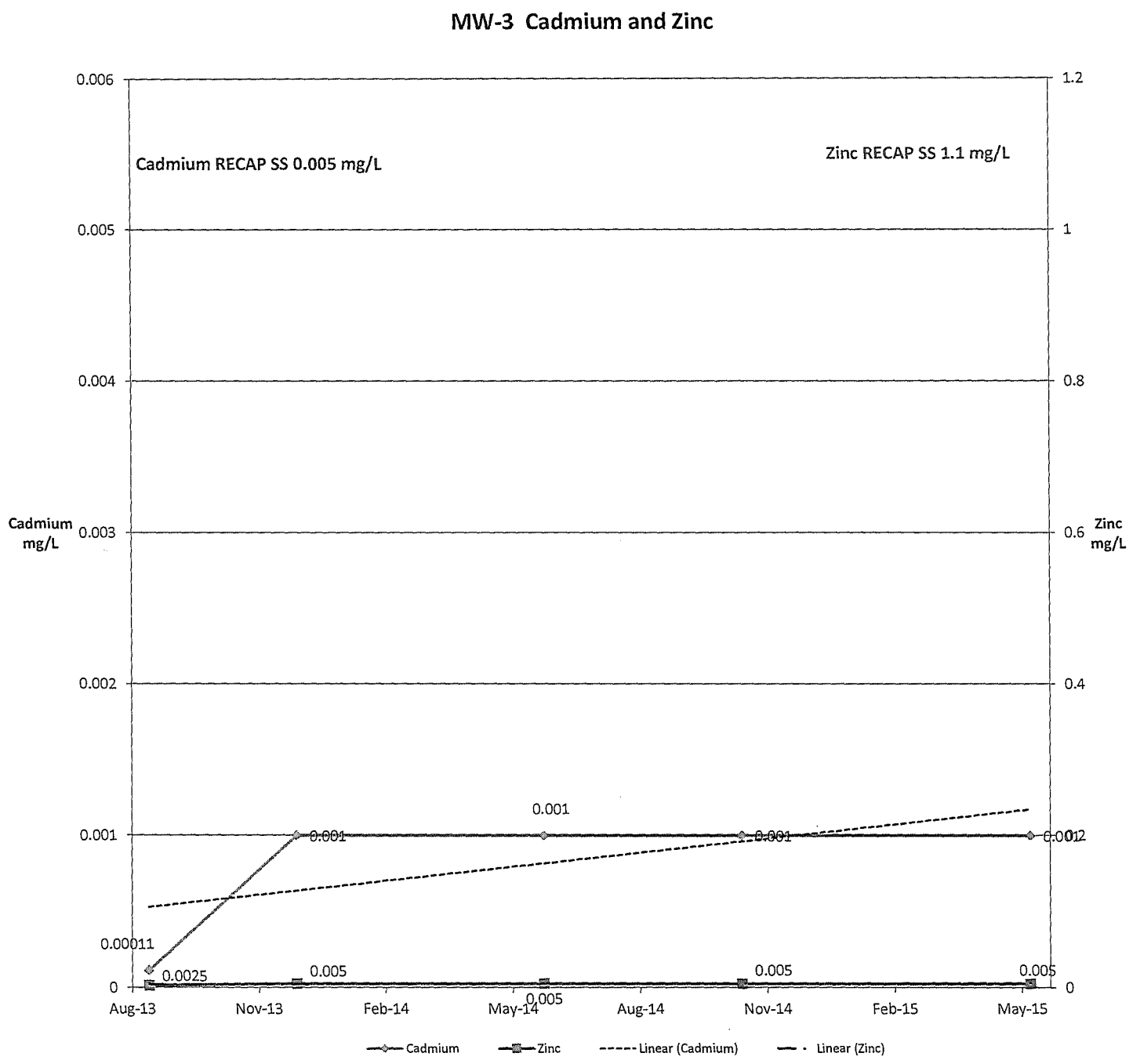

MW-A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

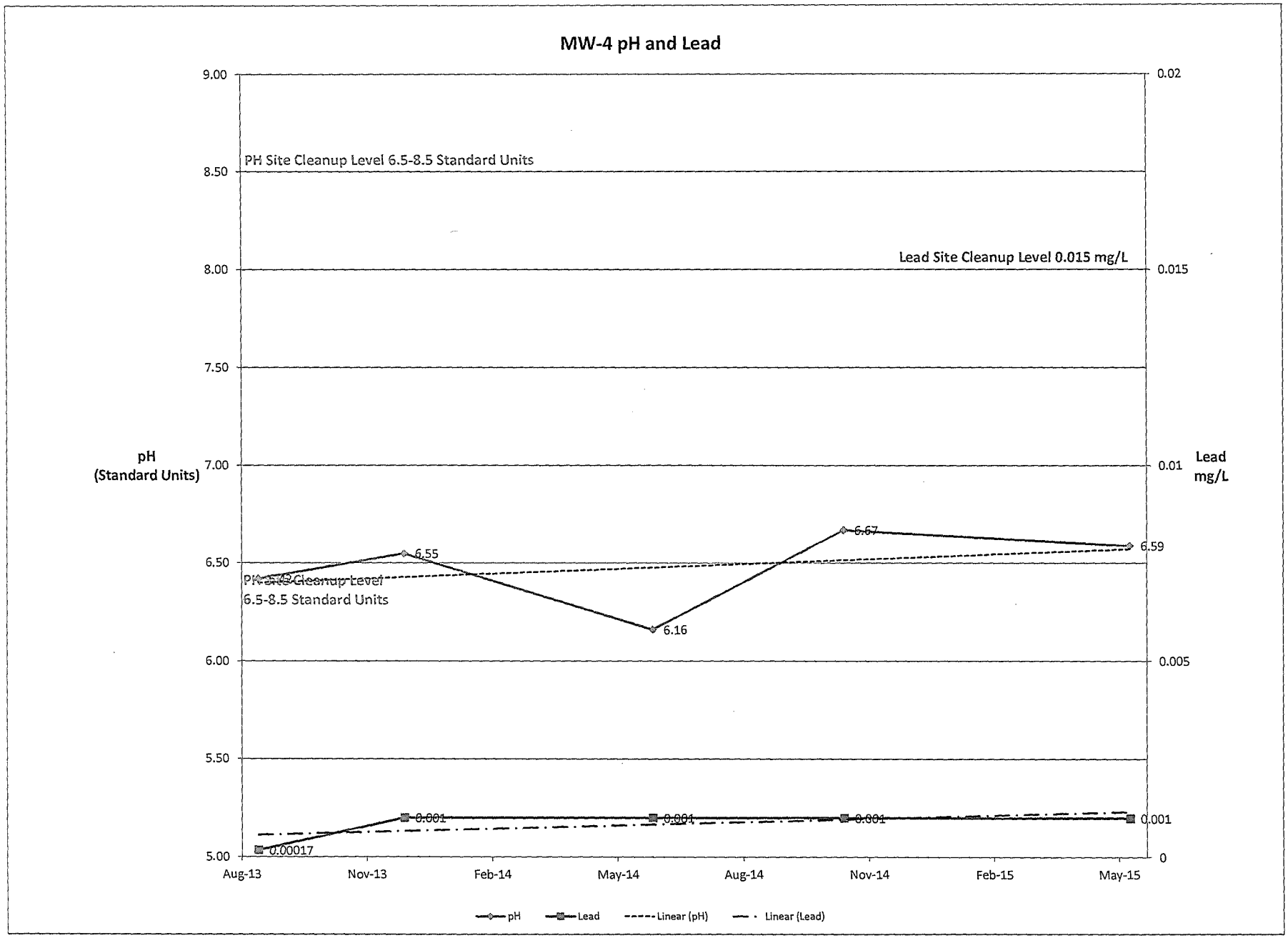

MW-A Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0
0.00053
0.001
0.001
0.001
0.001
0.0079
0.005
0.005
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

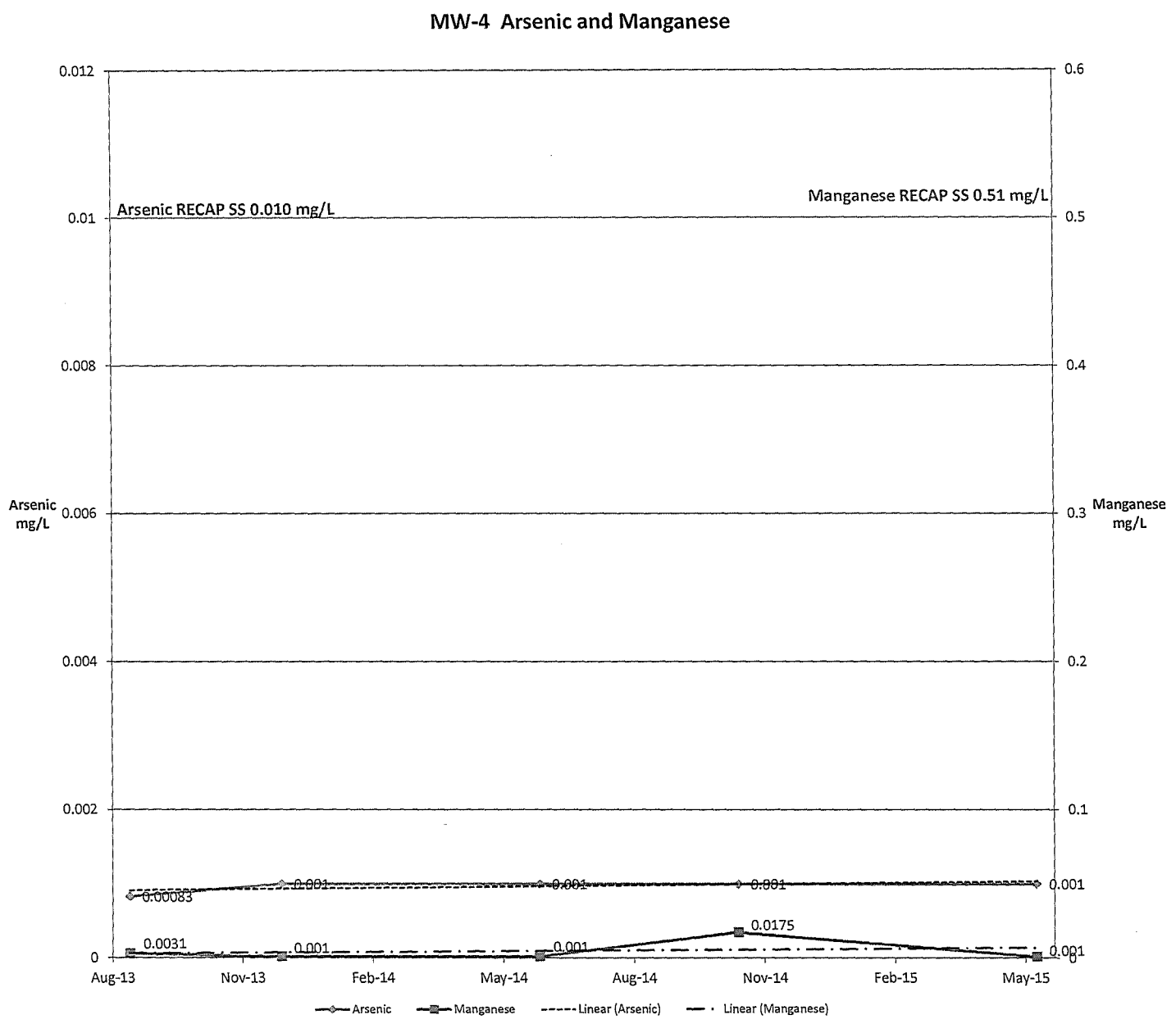

MW-3 pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
pH
(Standard Units)
0.02
0.015
0.01
0.005
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.34
6.60
6.22
6.24
6.56
0.00063
0.001
0.0014
0.0016
0.0016
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

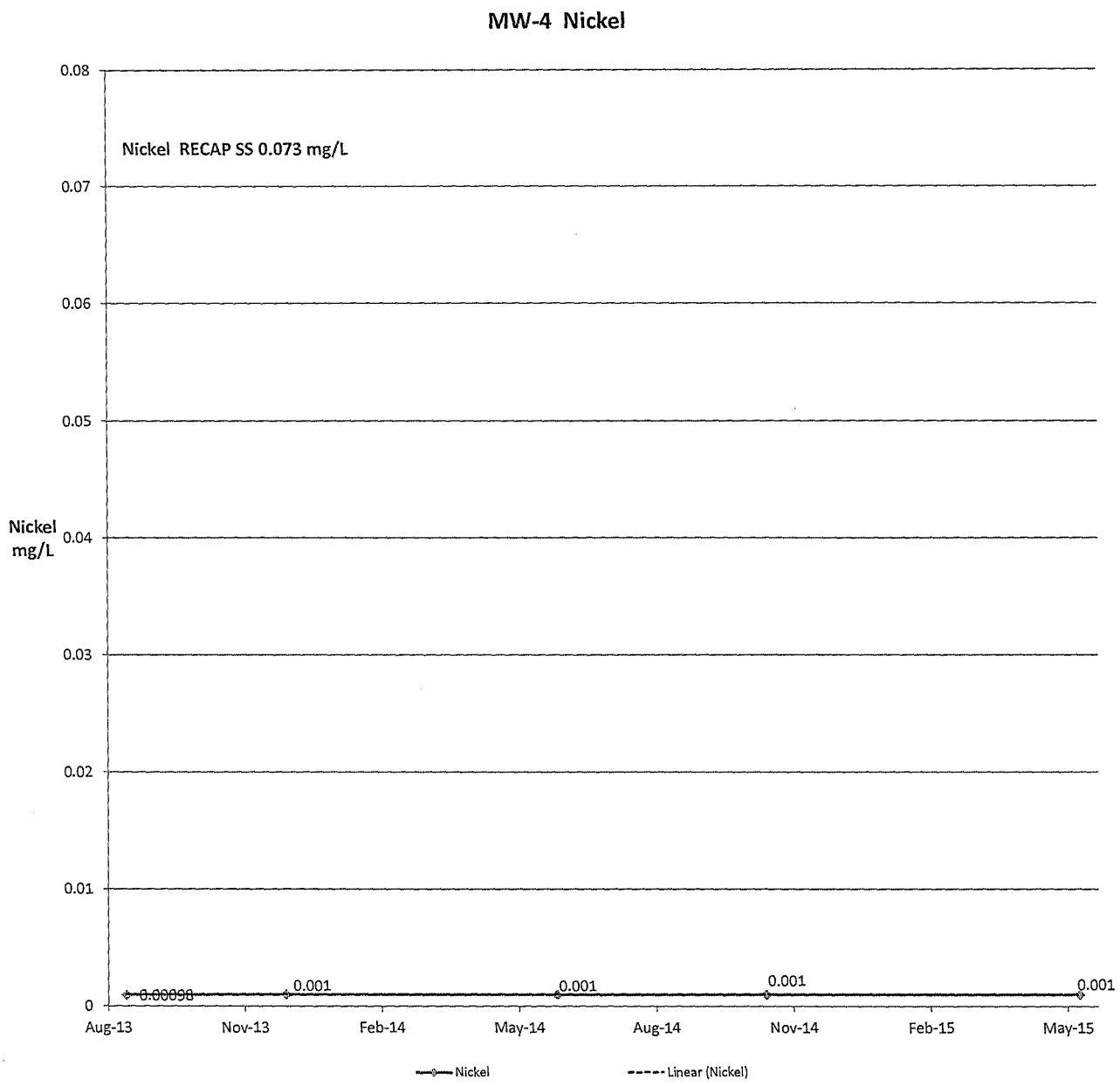

MW-3 Arsenic and Manganese
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Arsenic
mg/L
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Manganese
mg/L
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
0.947
0.816
0.994
1.06
1.32
0.00082
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
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
0.0015
0.00128
0.0014
0.0011
0.0012
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

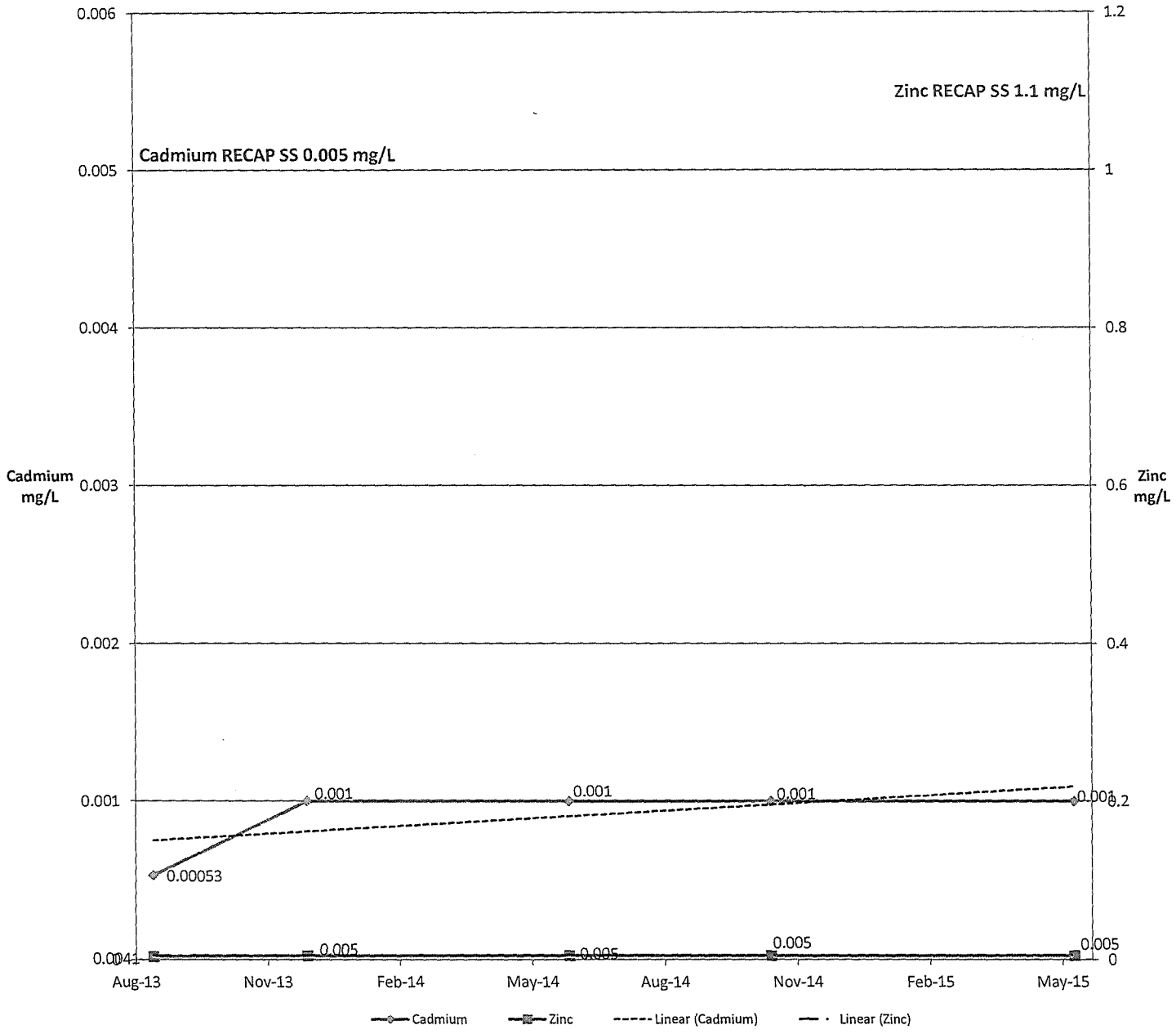

MW-3 Cadmium and Zinc
Cadmium RECAP SS 0.005 mg/L
Zinc RECAP SS 1.1 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0
0.001
0.001
0.001
0.00012
0.00011
0.0025
0.005
0.005
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

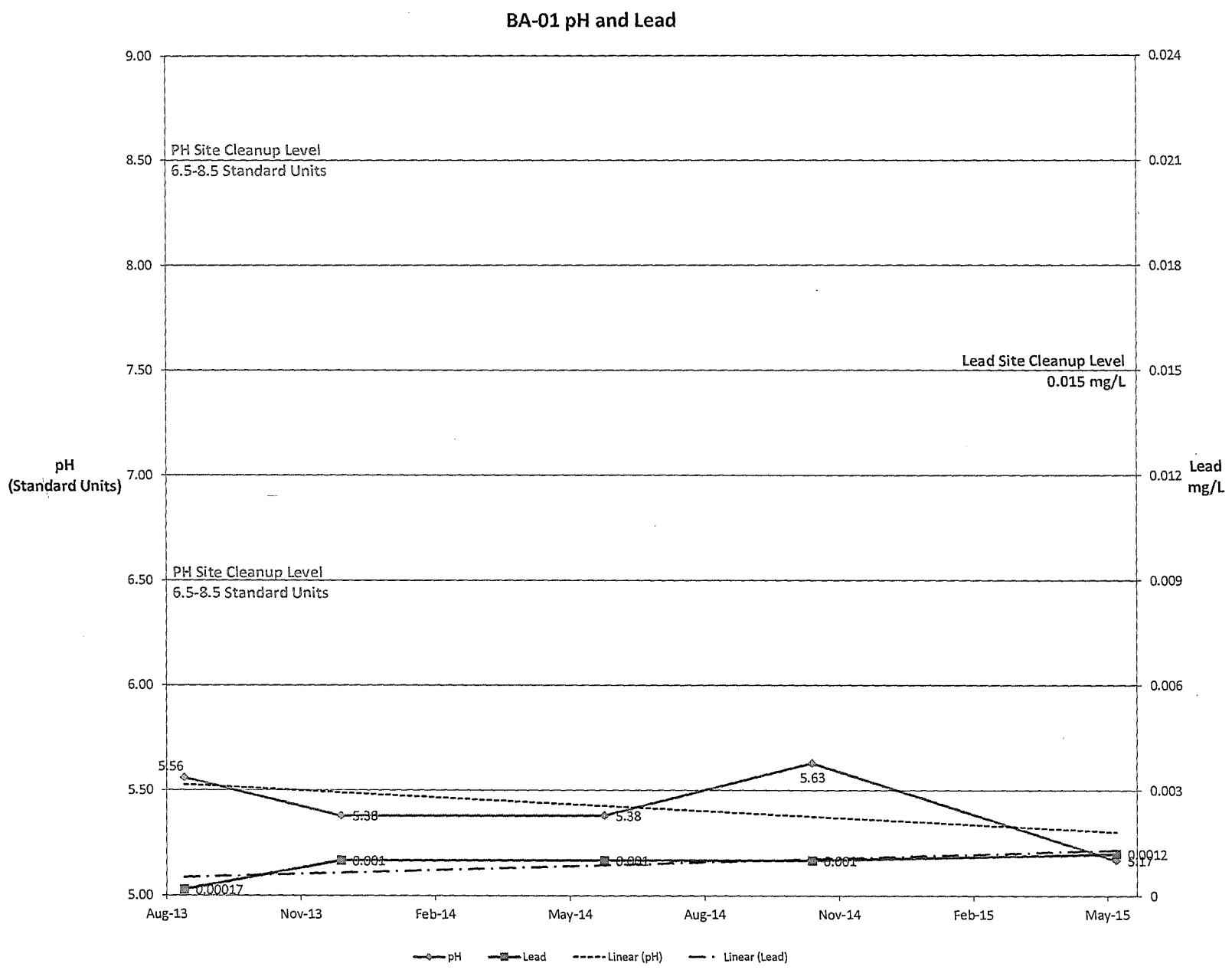

MW-4 pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
pH
(Standard Units)
0.02
0.015
0.01
0.005
0
Lead
mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.55
6.16
6.67
6.59
0.001
0.001
0.001
0.001
0.00017
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

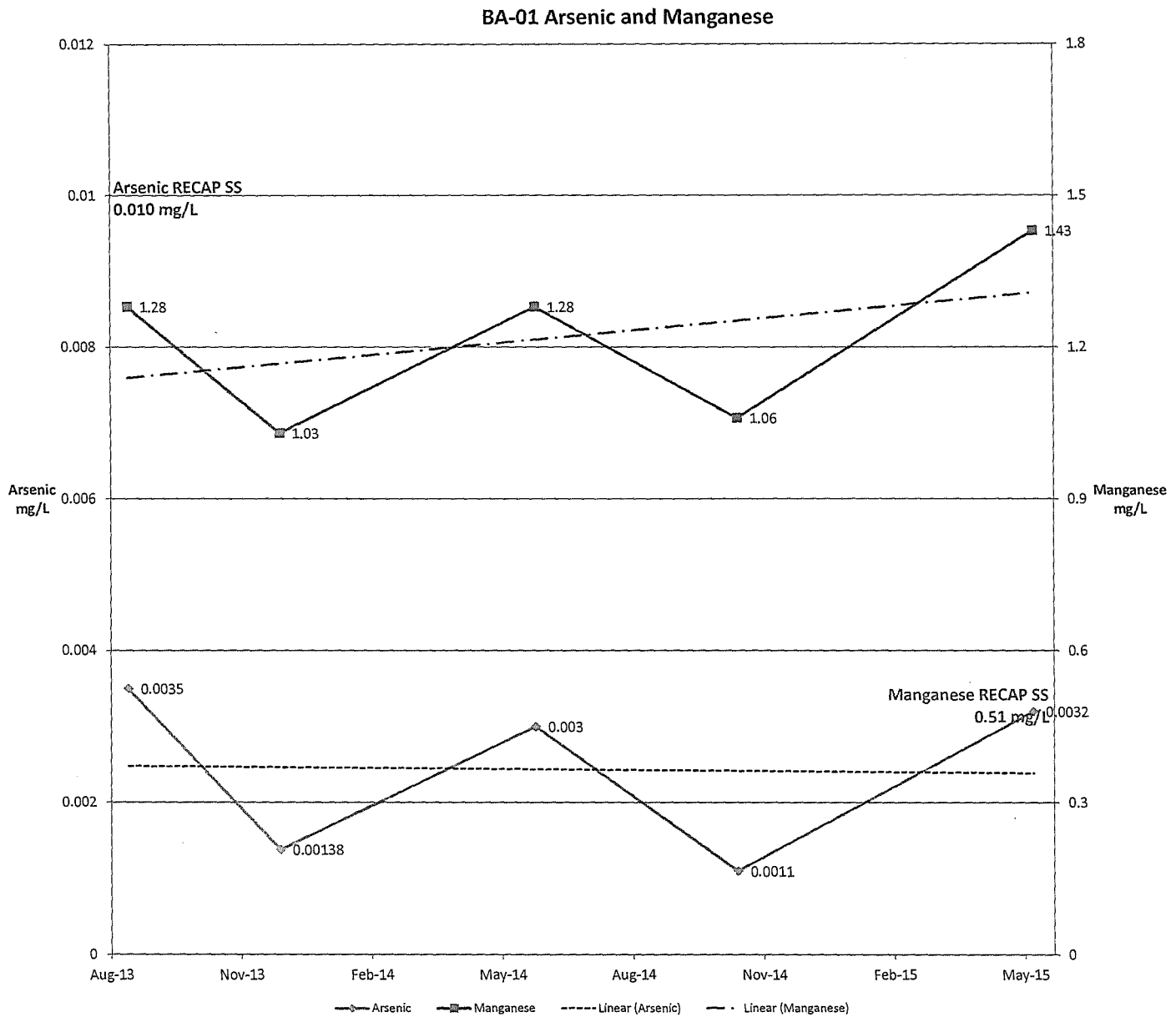

MW-4 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.00083
0.001
0.001
0.001
0.001
0.0031
0.001
0.001
0.0175
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

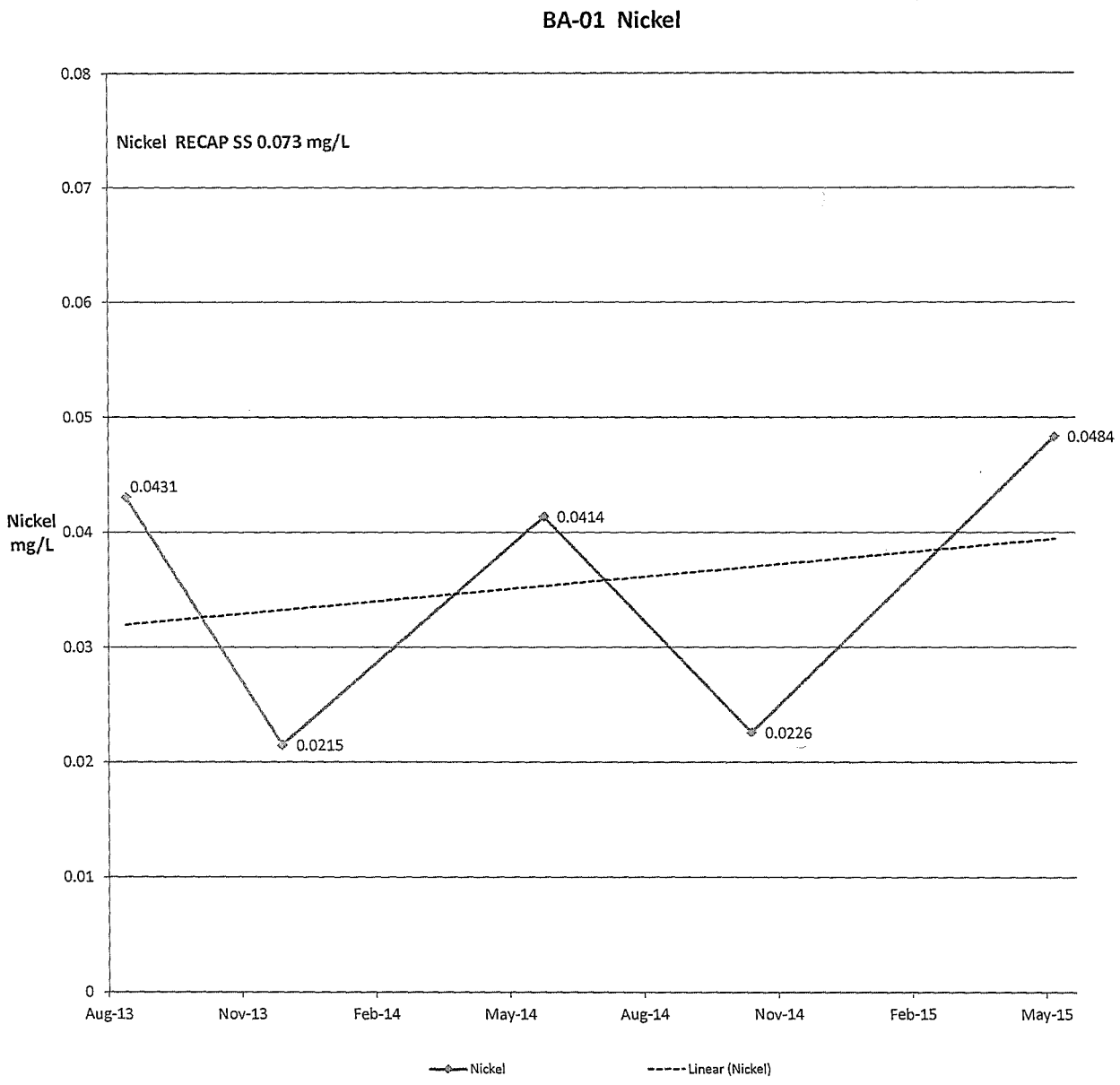

MW-4 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

MW-4 Cadmium and Zinc

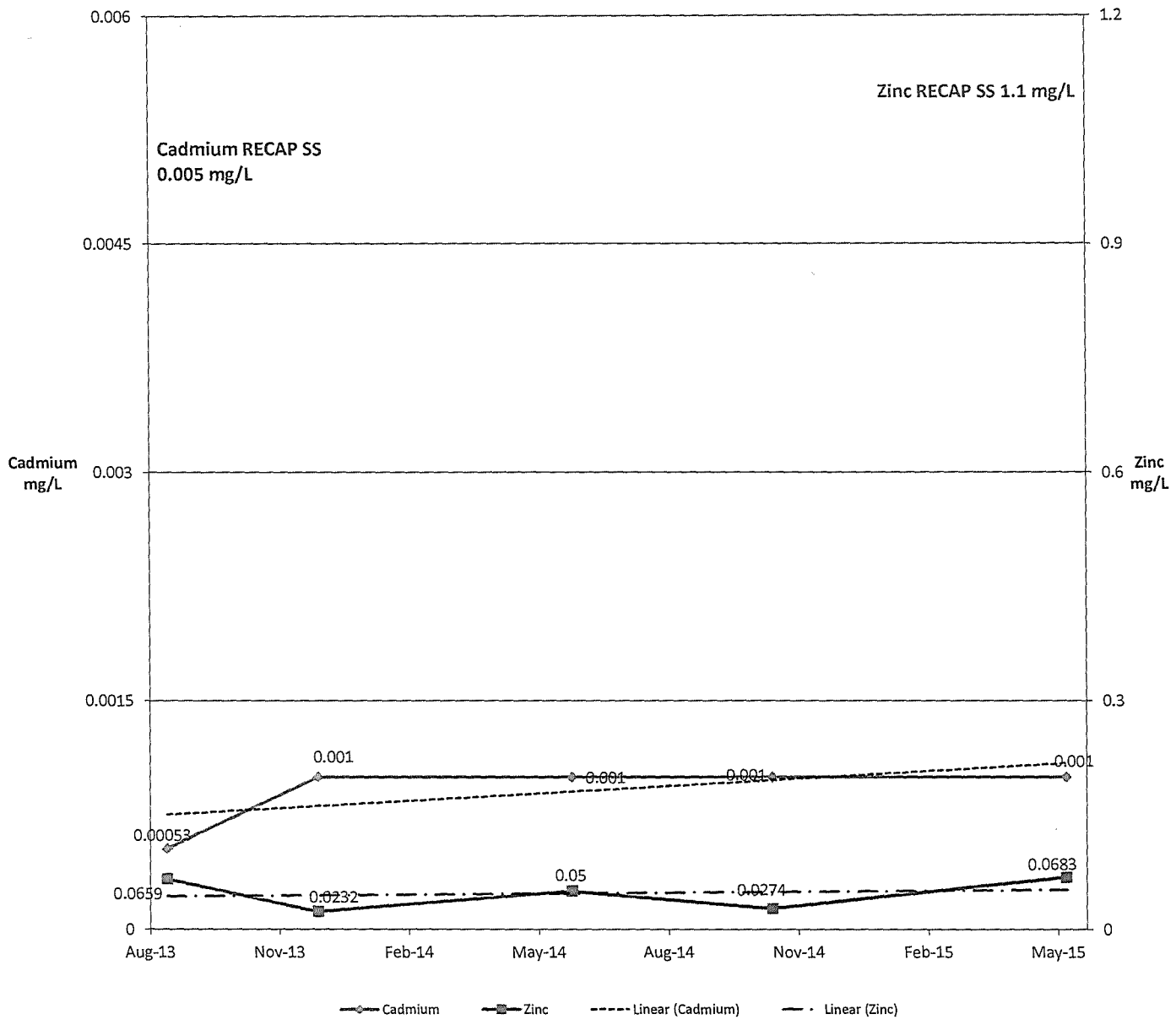


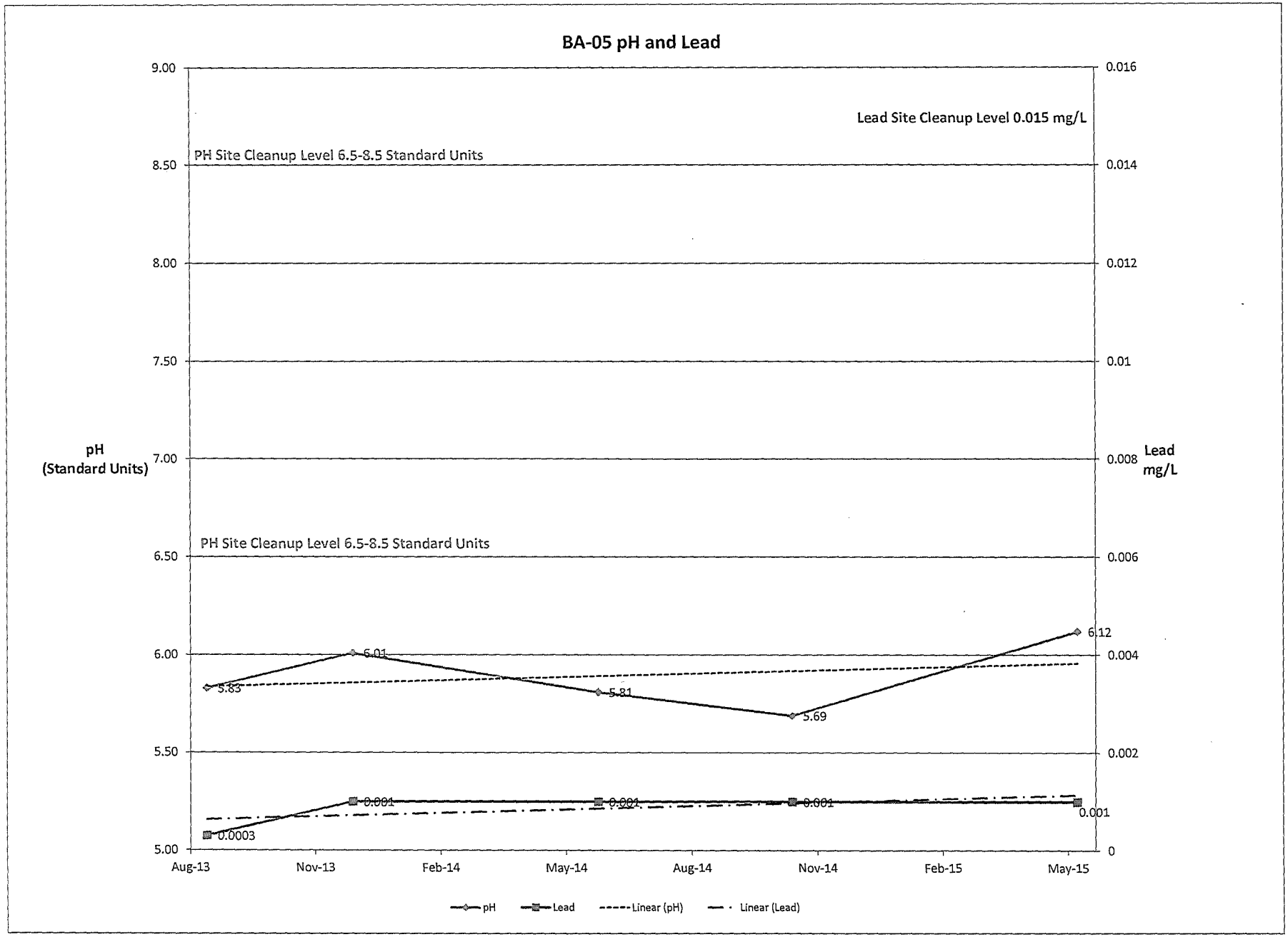

BA-01 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.024
0.021
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
5.56
5.38
5.38
5.63
5.17
0.00017
0.001
0.001
0.001
0.0012
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

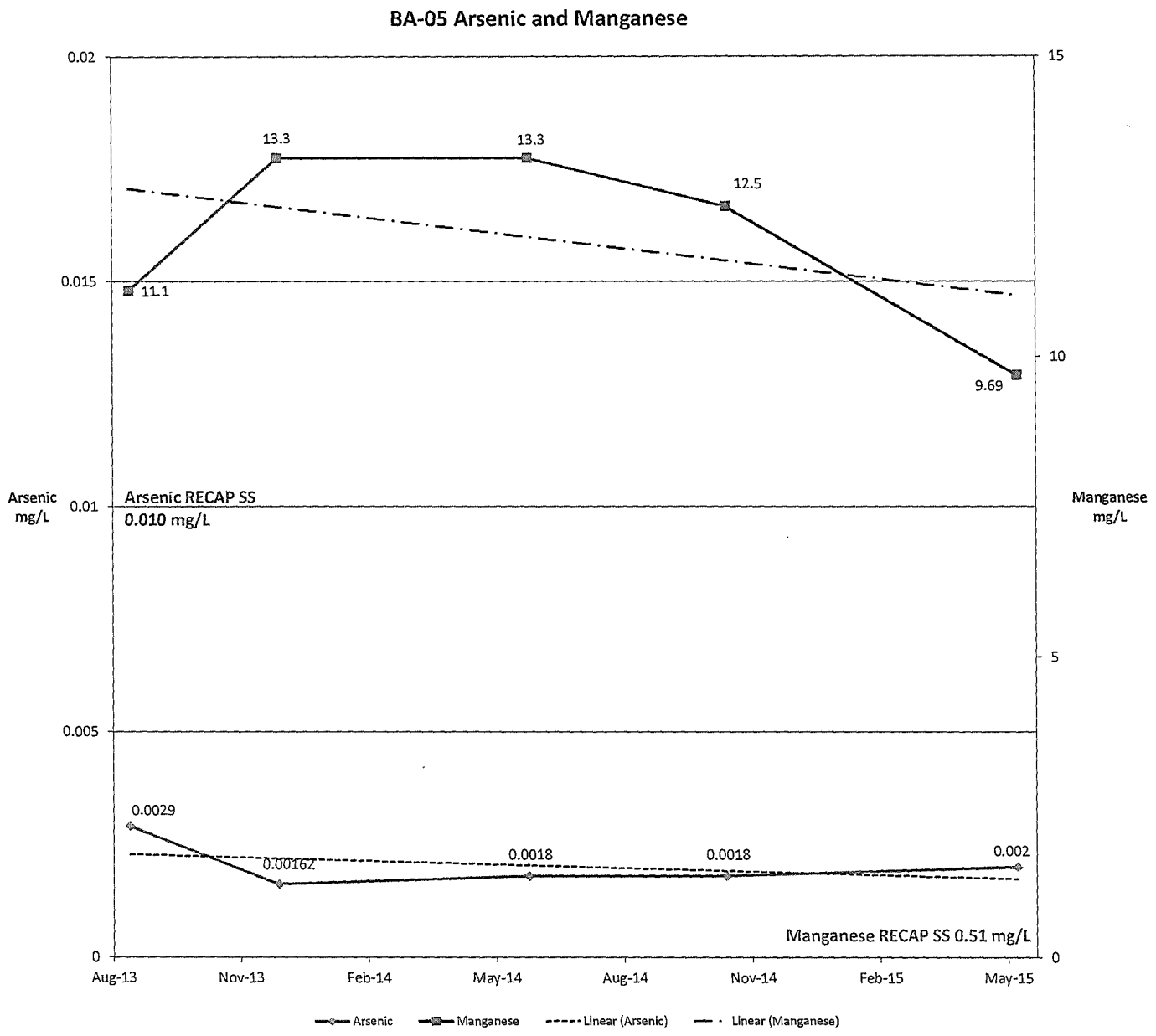

BA-01 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS
0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
1.8
1.5
1.2
0.9
0.6
0.3
0
1.28
1.03
1.28
1.06
1.43
0.0035
0.00138
0.003
0.0011
0.0032
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

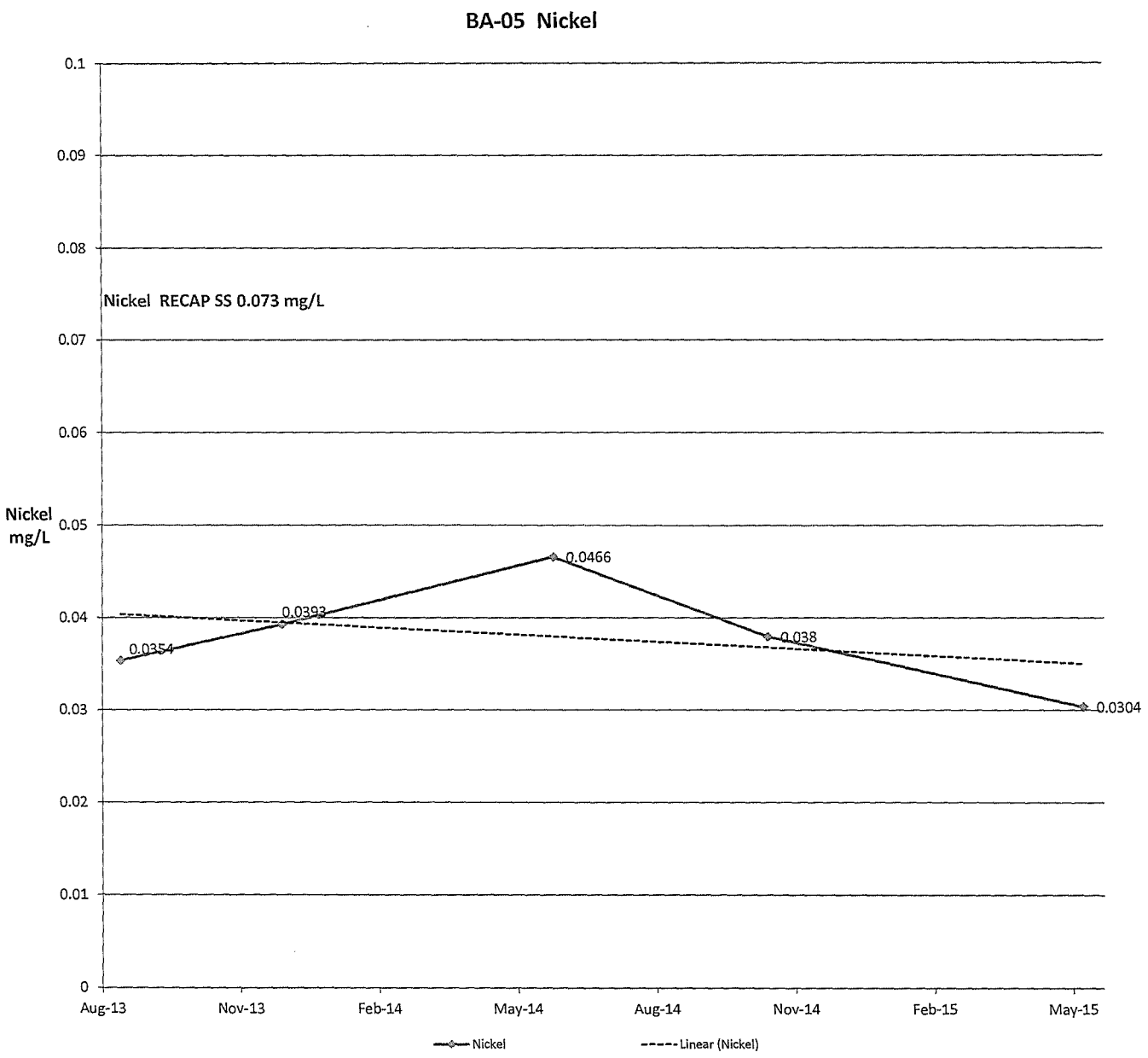

BA-01 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0431
0.0215
0.0414
0.0226
0.0484
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BA-01 Cadmium and Zinc

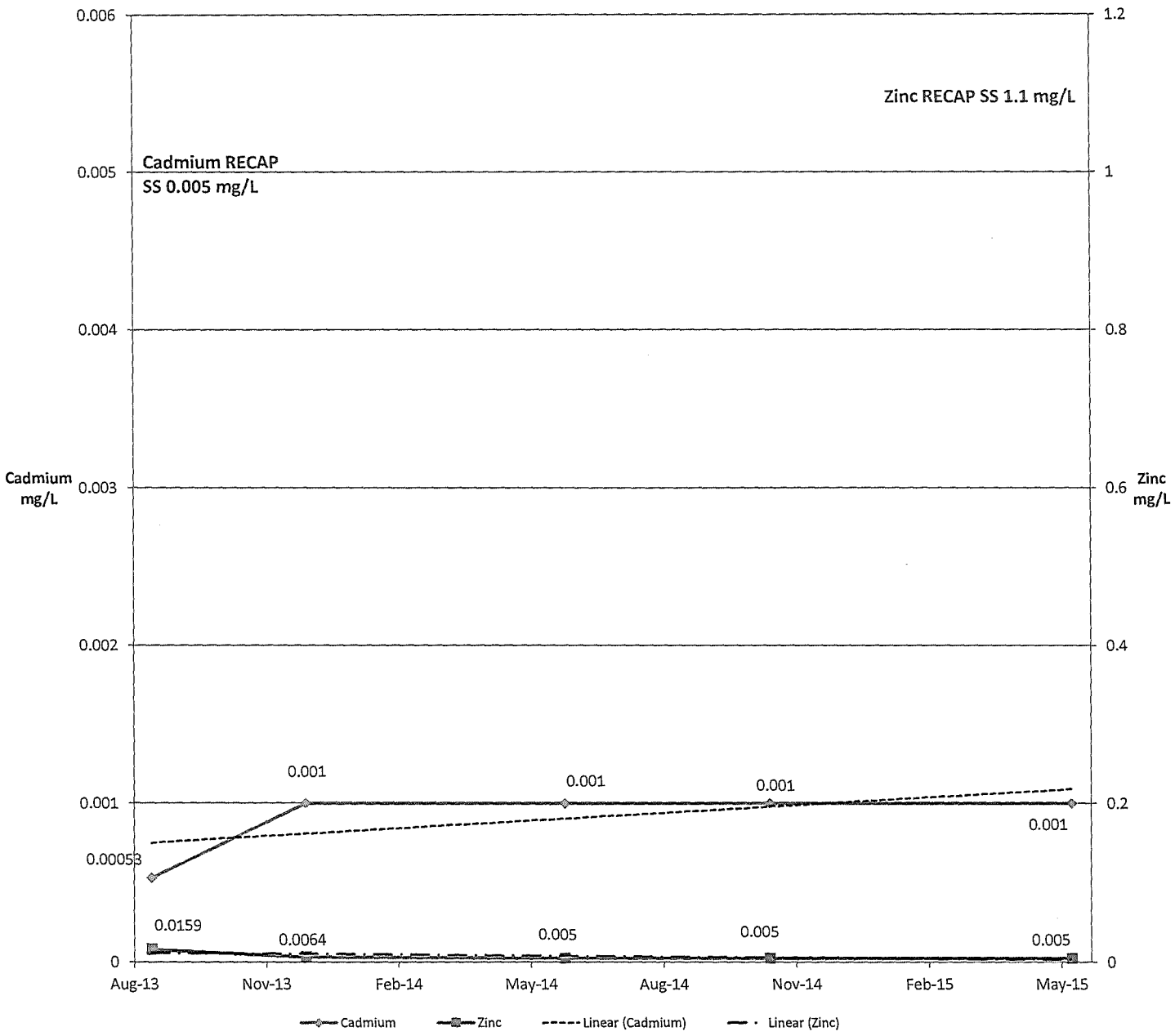


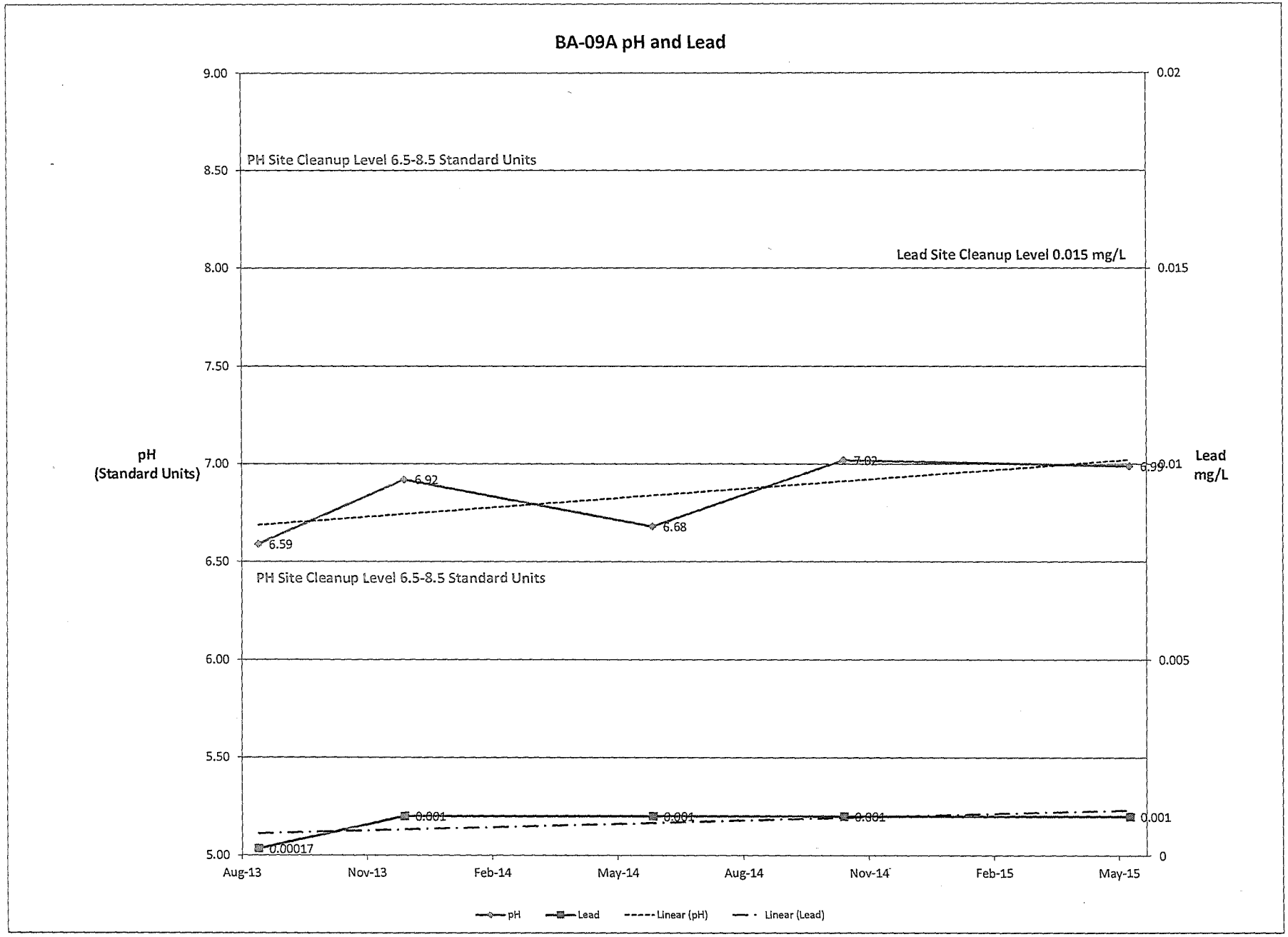

BA-05 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
5.83
6.01
5.81
5.69
6.12
0.0003
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

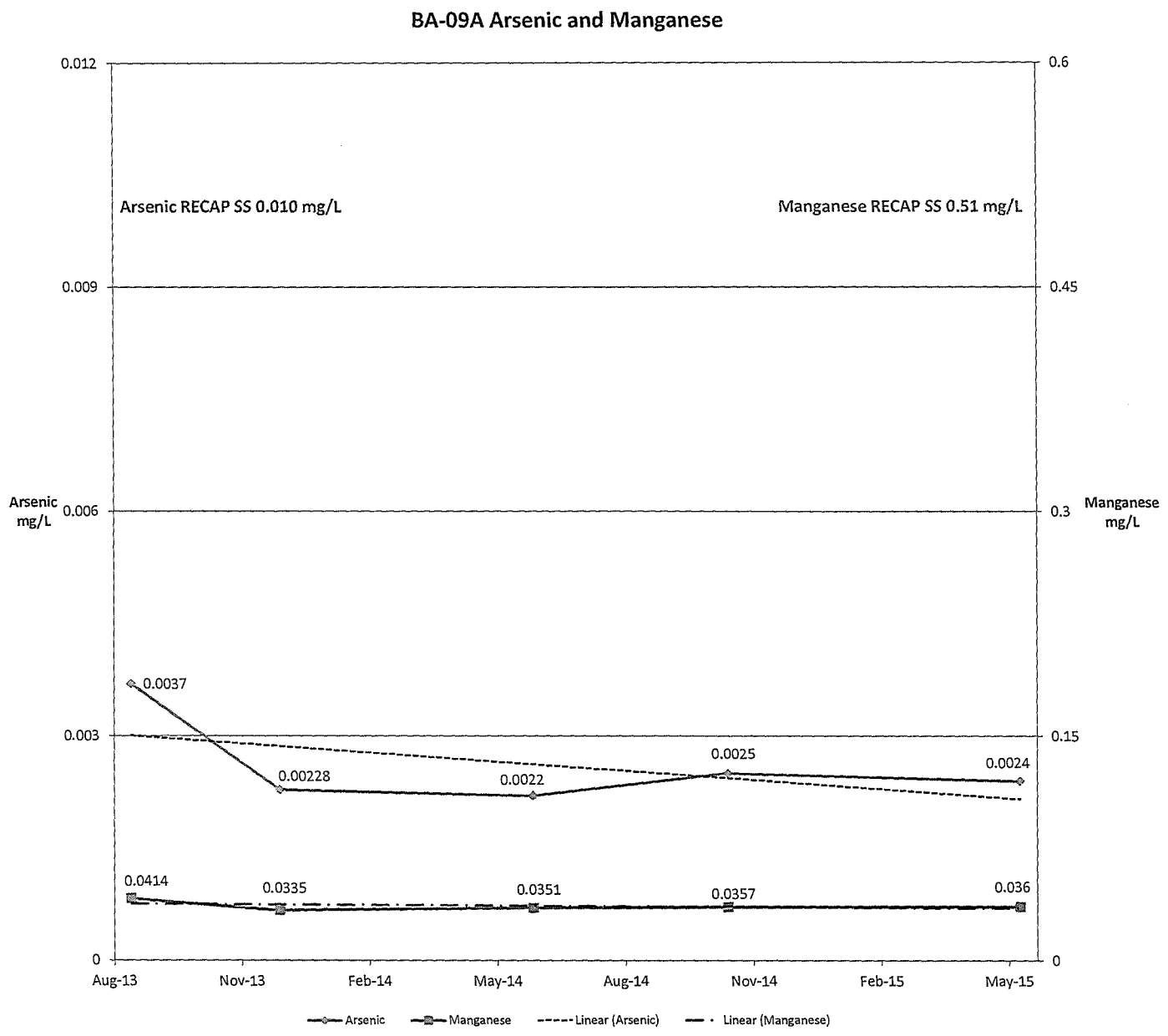

BA-05 Arsenic and Manganese
Arsenic mg/L
Manganese mg/L
0.02
0.015
0.01
0.005
0
15
10
5
0
13.3
13.3
12.5
11.1
9.69
Arsenic RECAP SS
0.010 mg/L
0.0029
0.00162
0.0018
0.0018
0.002
Manganese RECAP SS 0.51 mg/L
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

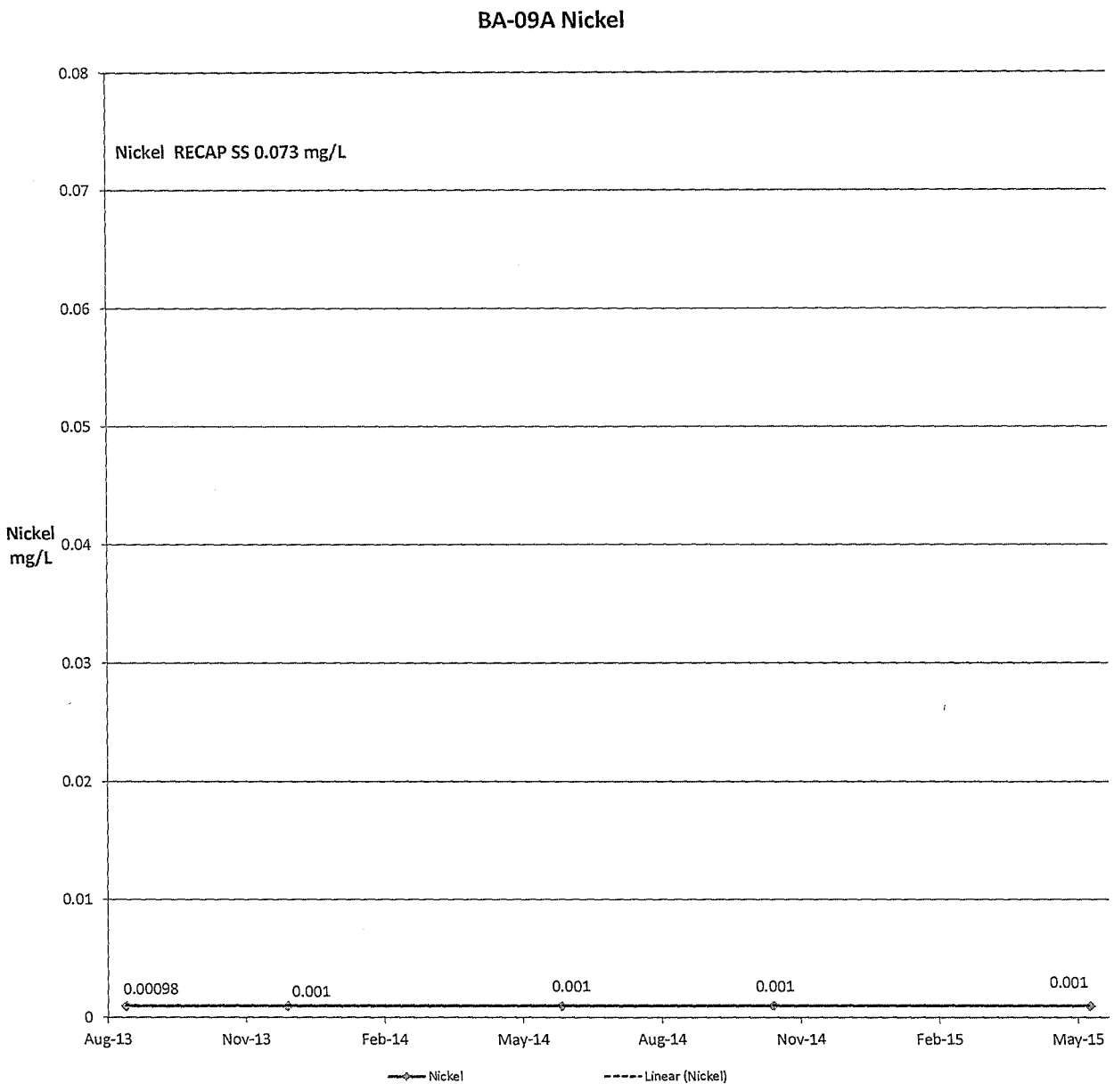

BA-05 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0354
0.0393
0.0466
0.038
0.0304
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BA-05 Cadmium and Zinc

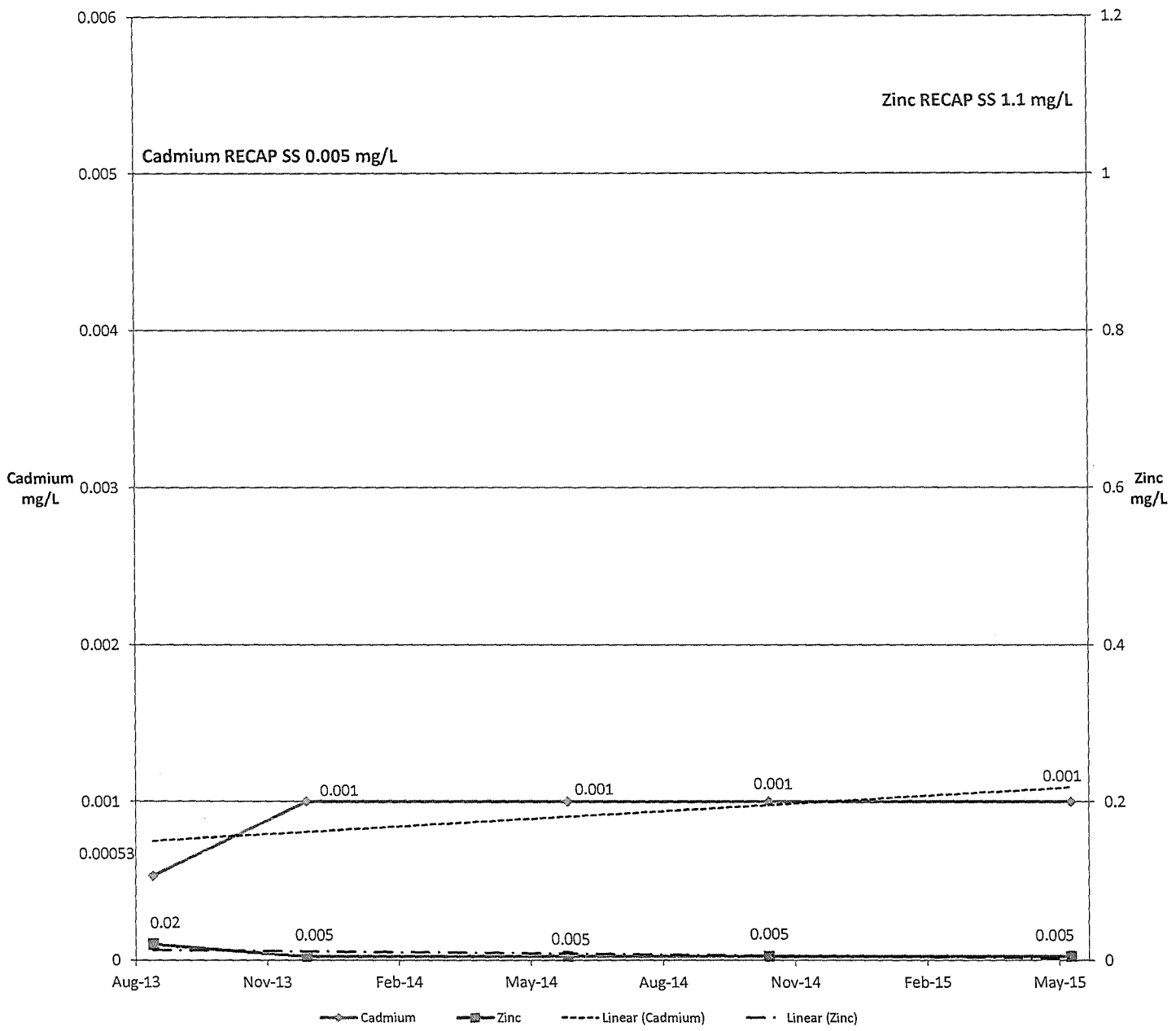


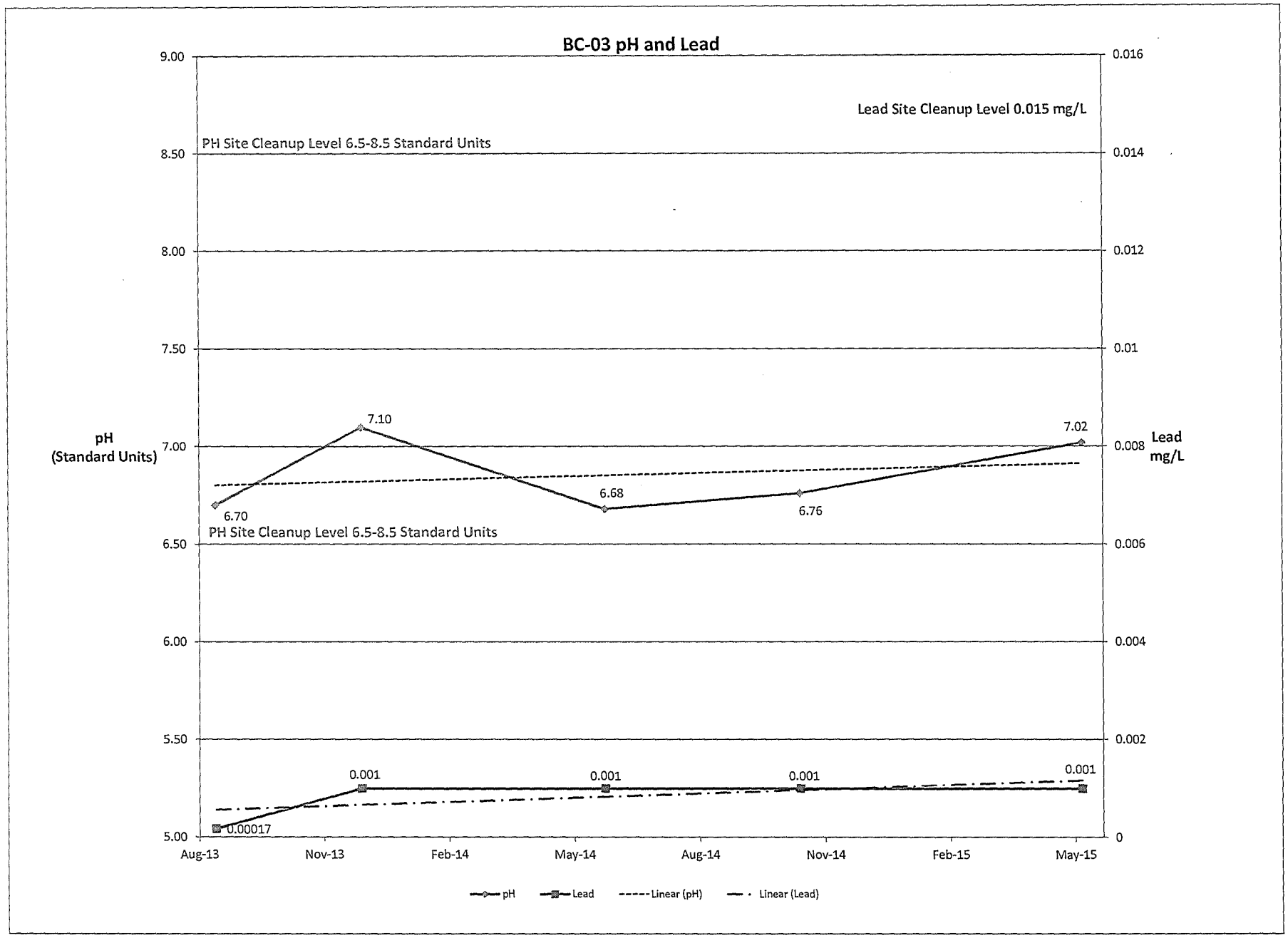

BA-09A pH and Lead
pH (Standard Units)
Lead mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.015
0.01
0.005
0.001
0
6.59
6.92
6.68
7.02
6.99
0.00017
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

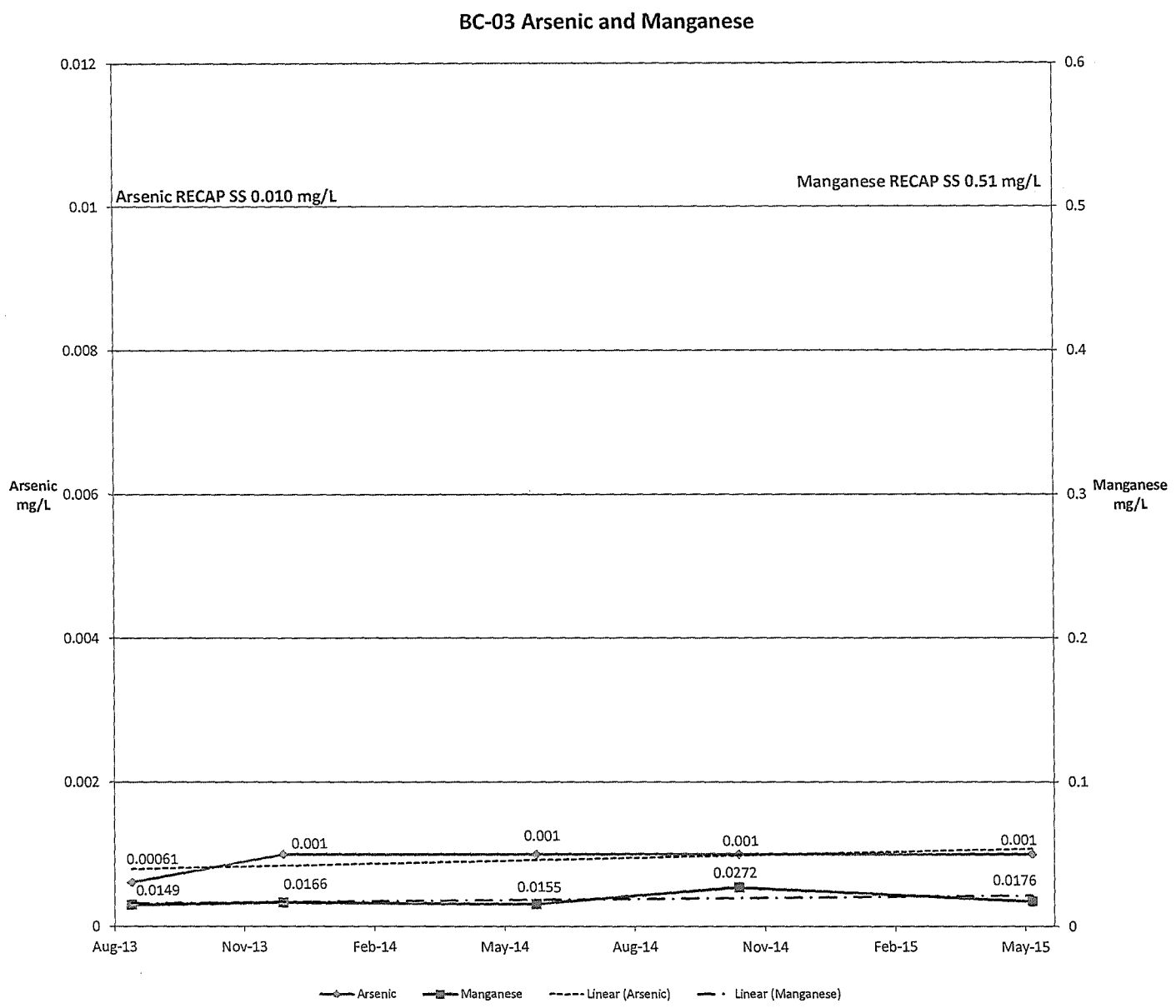

BA-09A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.009
0.006
0.003
0
0.6
0.45
0.3
0.15
0
0.0037
0.00228
0.0022
0.0025
0.0024
0.0414
0.0335
0.0351
0.0357
0.036
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

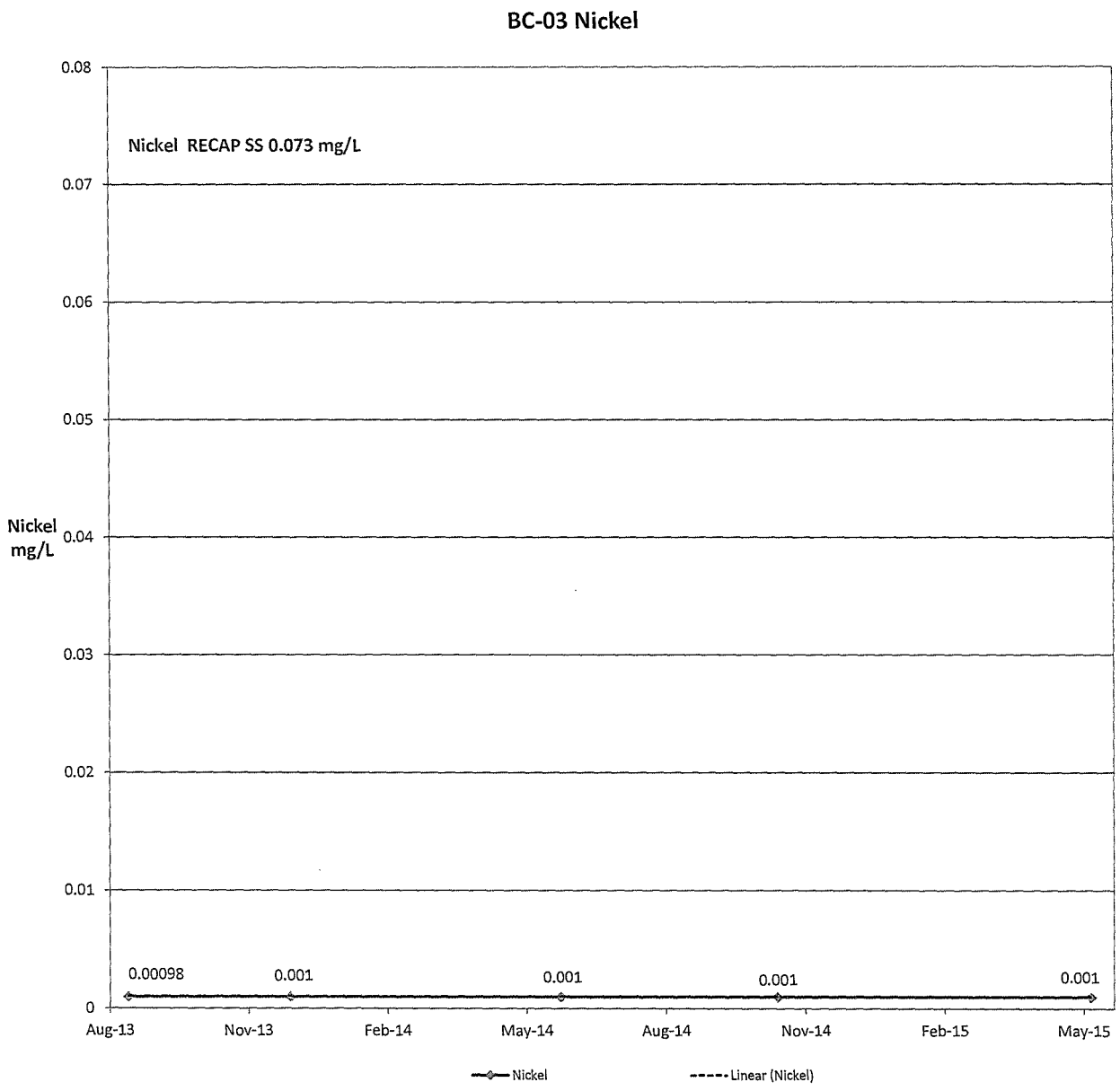

BA-09A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BA-09A Cadmium and Zinc

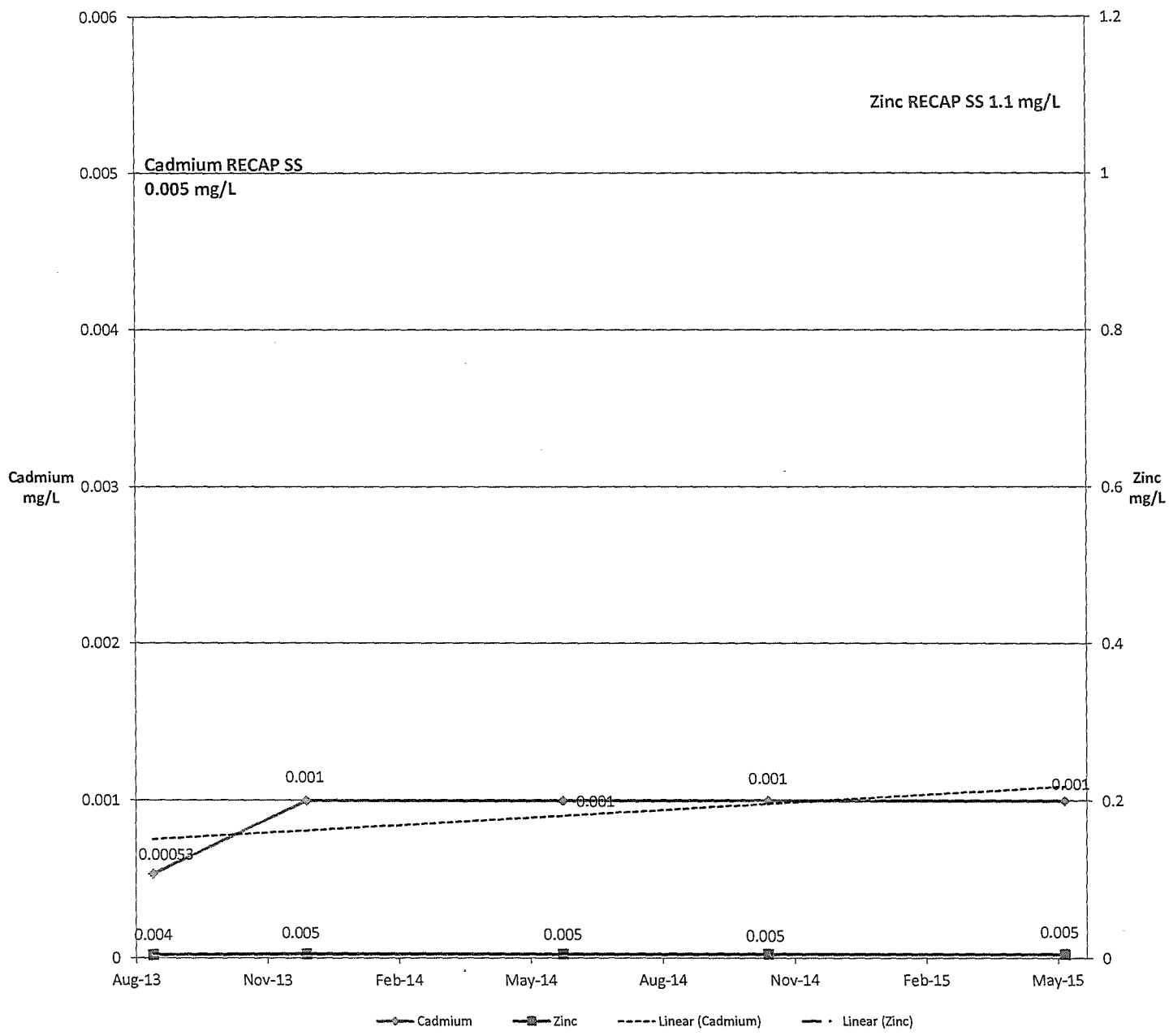


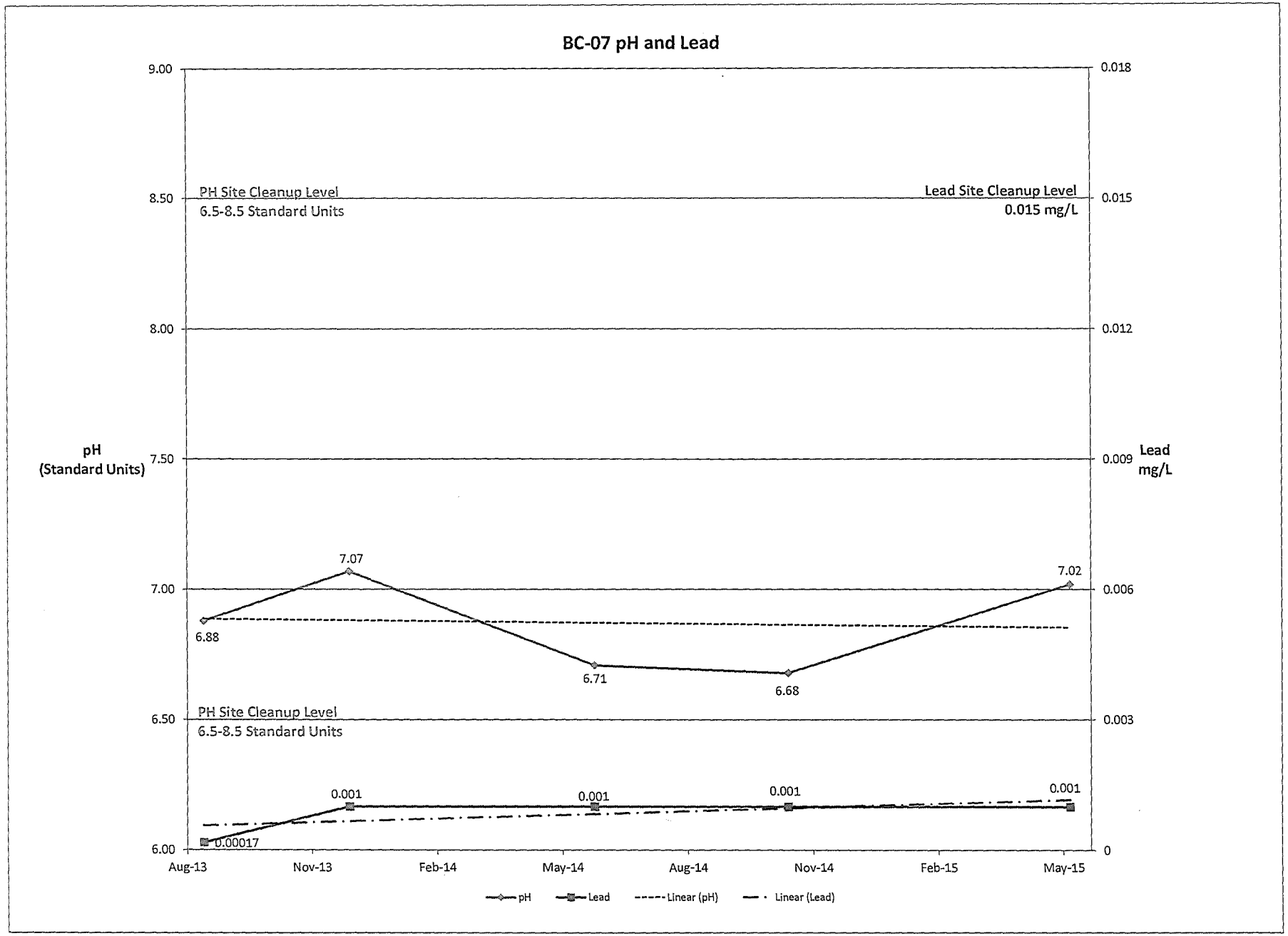

BC-03 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
7.10
7.02
6.70
6.68
6.76
0.001
0.001
0.001
0.001
0.00017
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

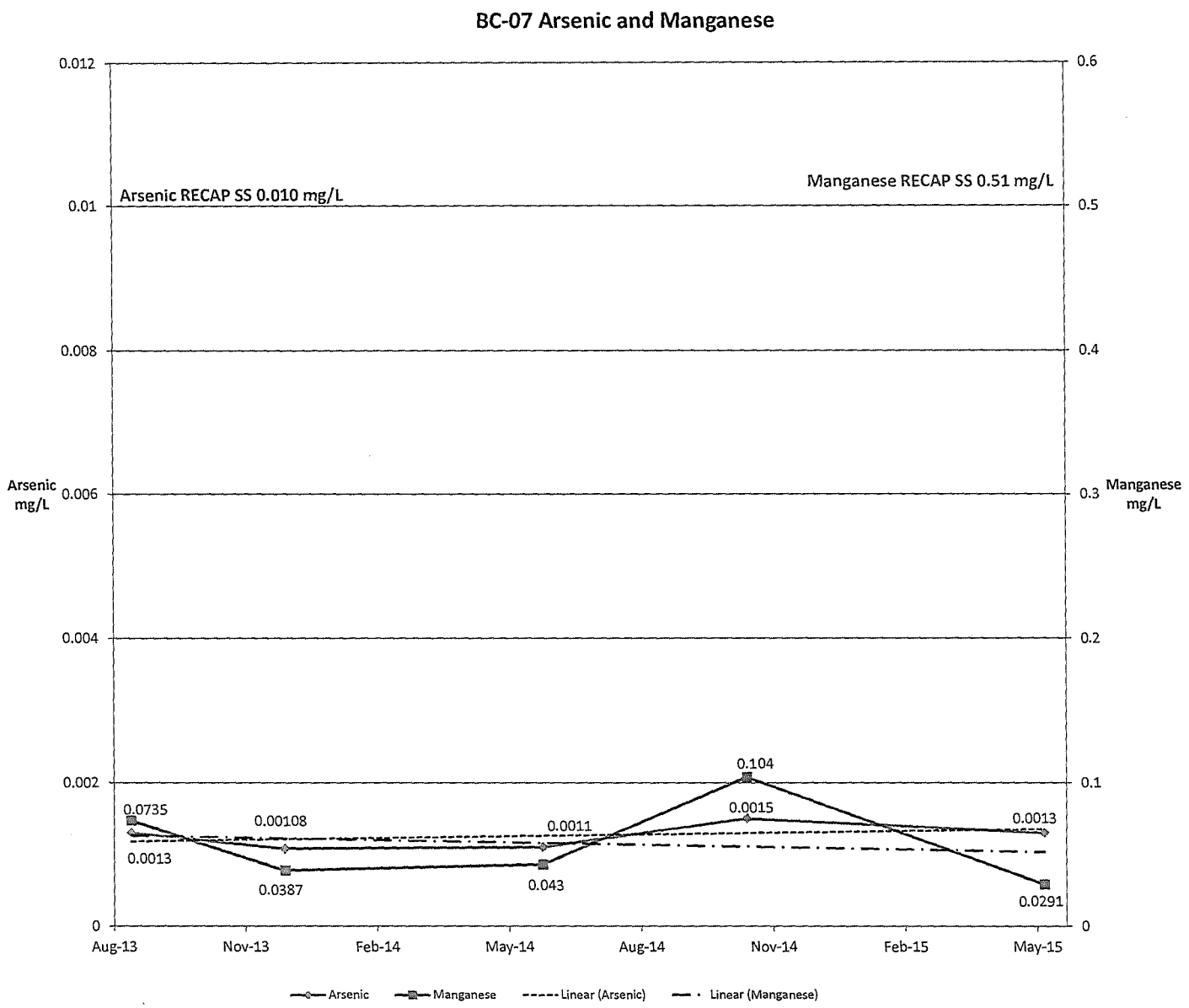

BC-03 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.00061
0.001
0.001
0.001
0.001
0.0149
0.0166
0.0155
0.0272
0.0176
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

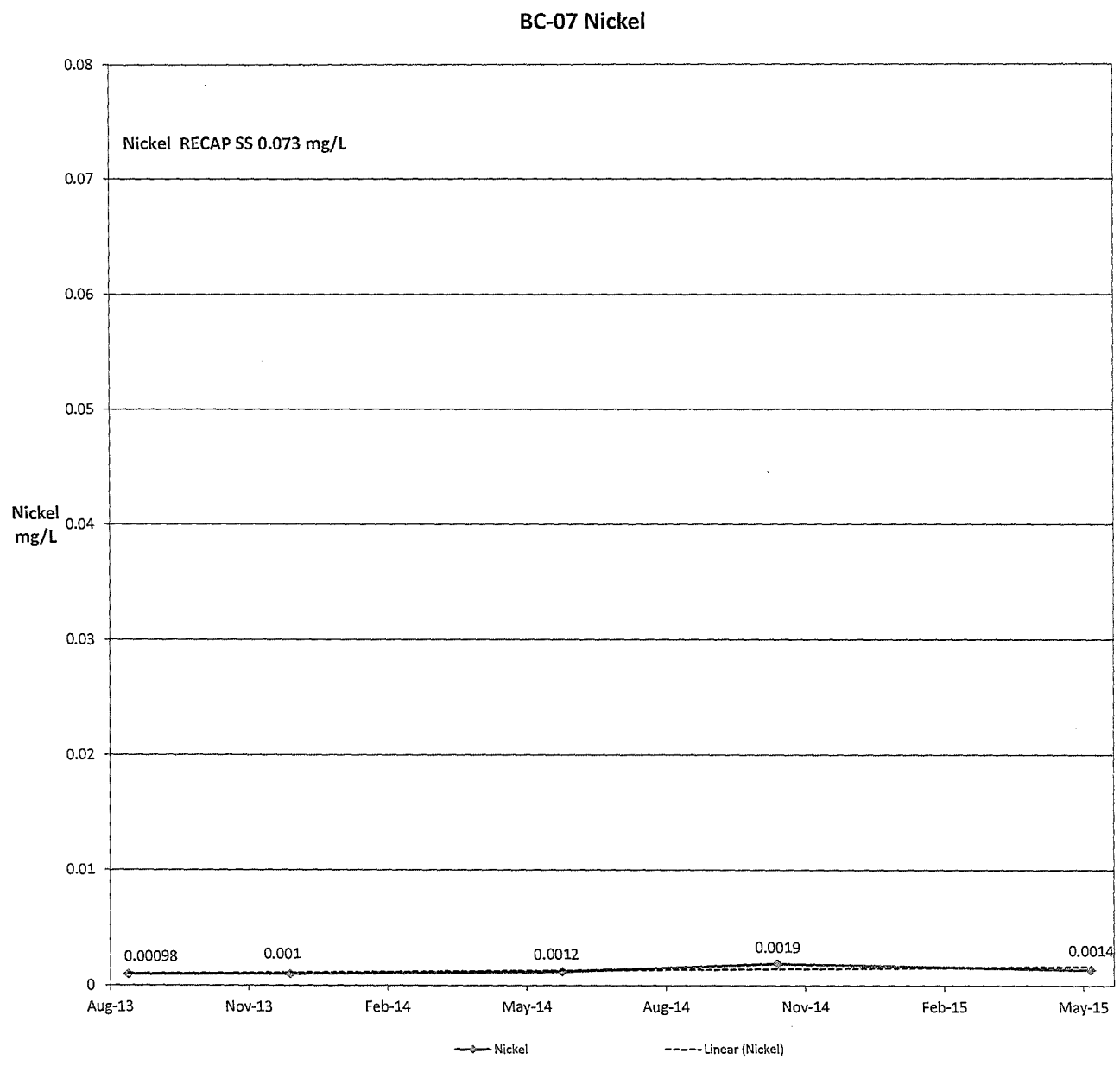

BC-03 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BC-03 Cadmium and Zinc

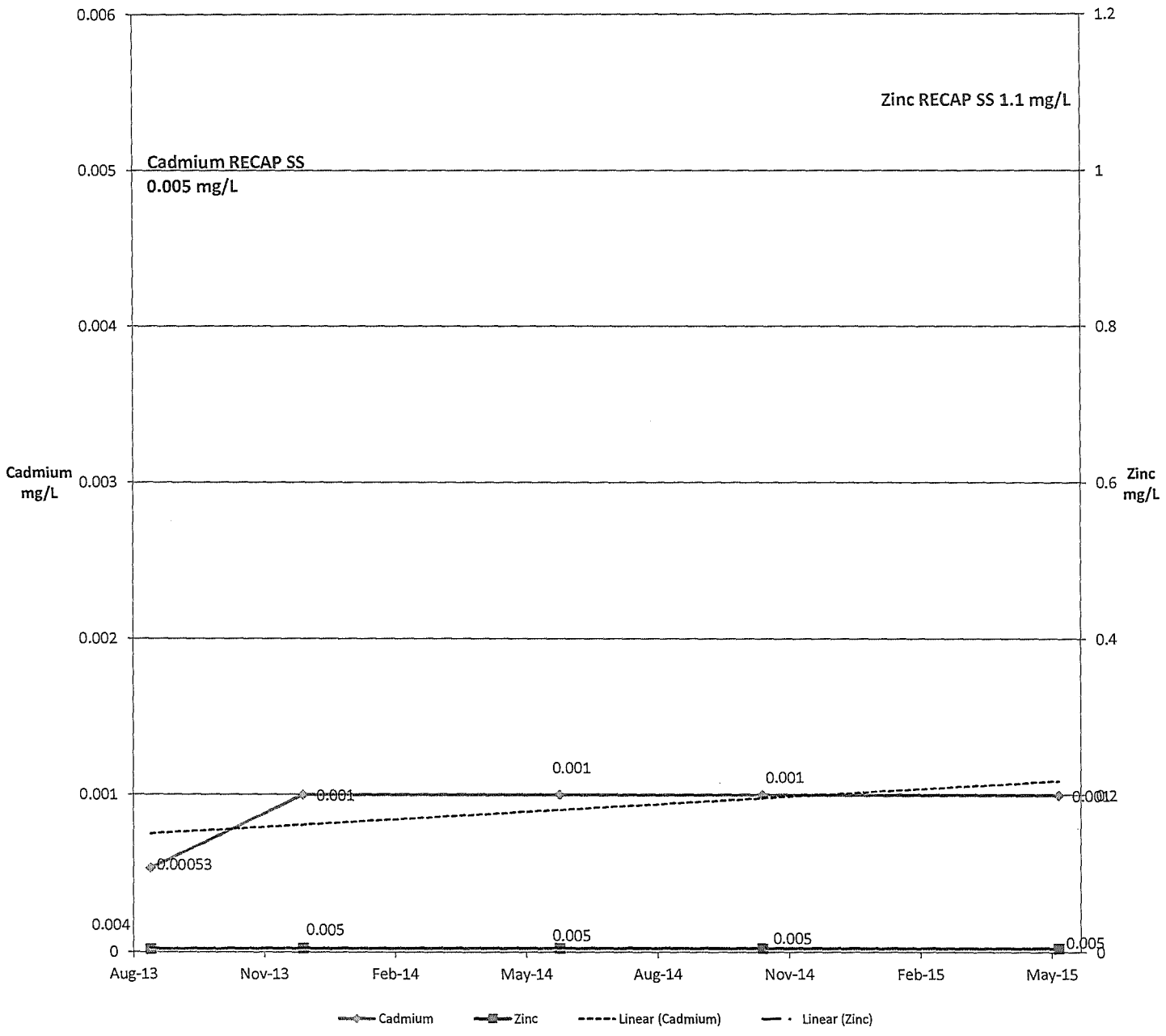


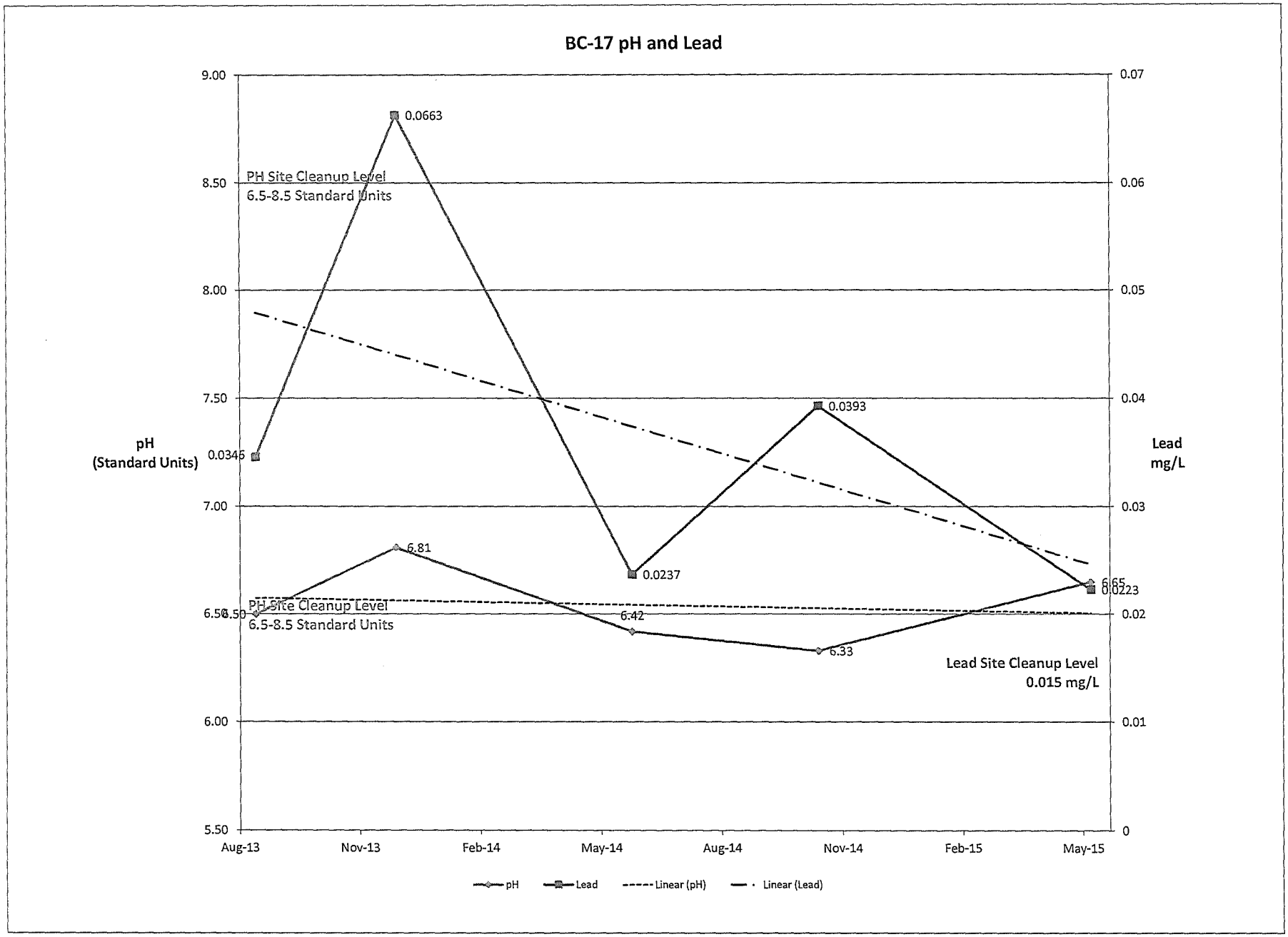

BC-07 pH and Lead
9.00
8.50
8.00
7.50
7.00
6.50
6.00
pH
(Standard Units)
0.018
0.015
0.012
0.009
0.006
0.003
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
7.07
7.02
6.88
6.71
6.68
PH Site Cleanup Level
6.5-8.5 Standard Units
0.001
0.001
0.001
0.001
0.00017
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

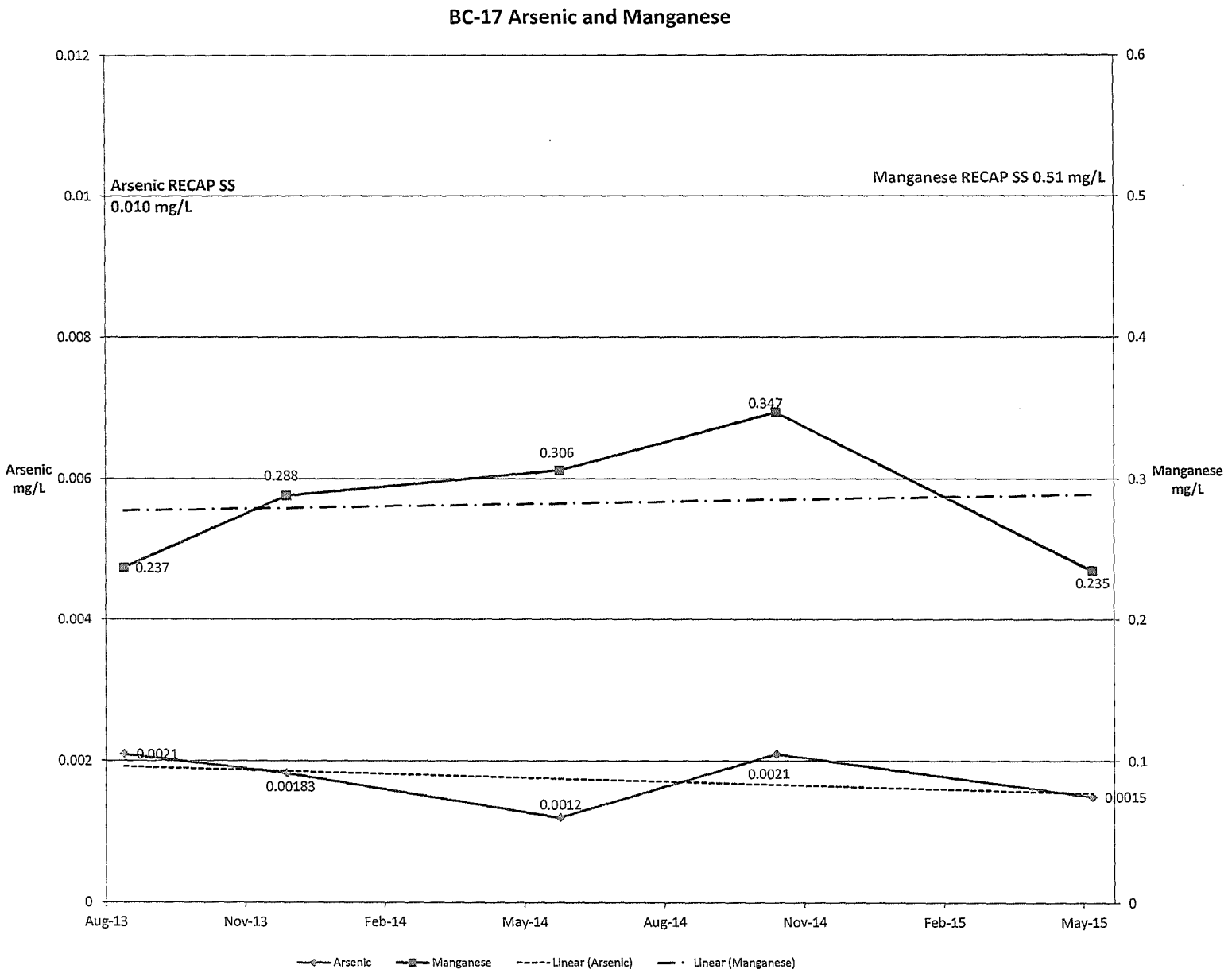

BC-07 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0735
0.00108
0.0011
0.0015
0.0013
0.0013
0.0387
0.043
0.104
0.0291
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

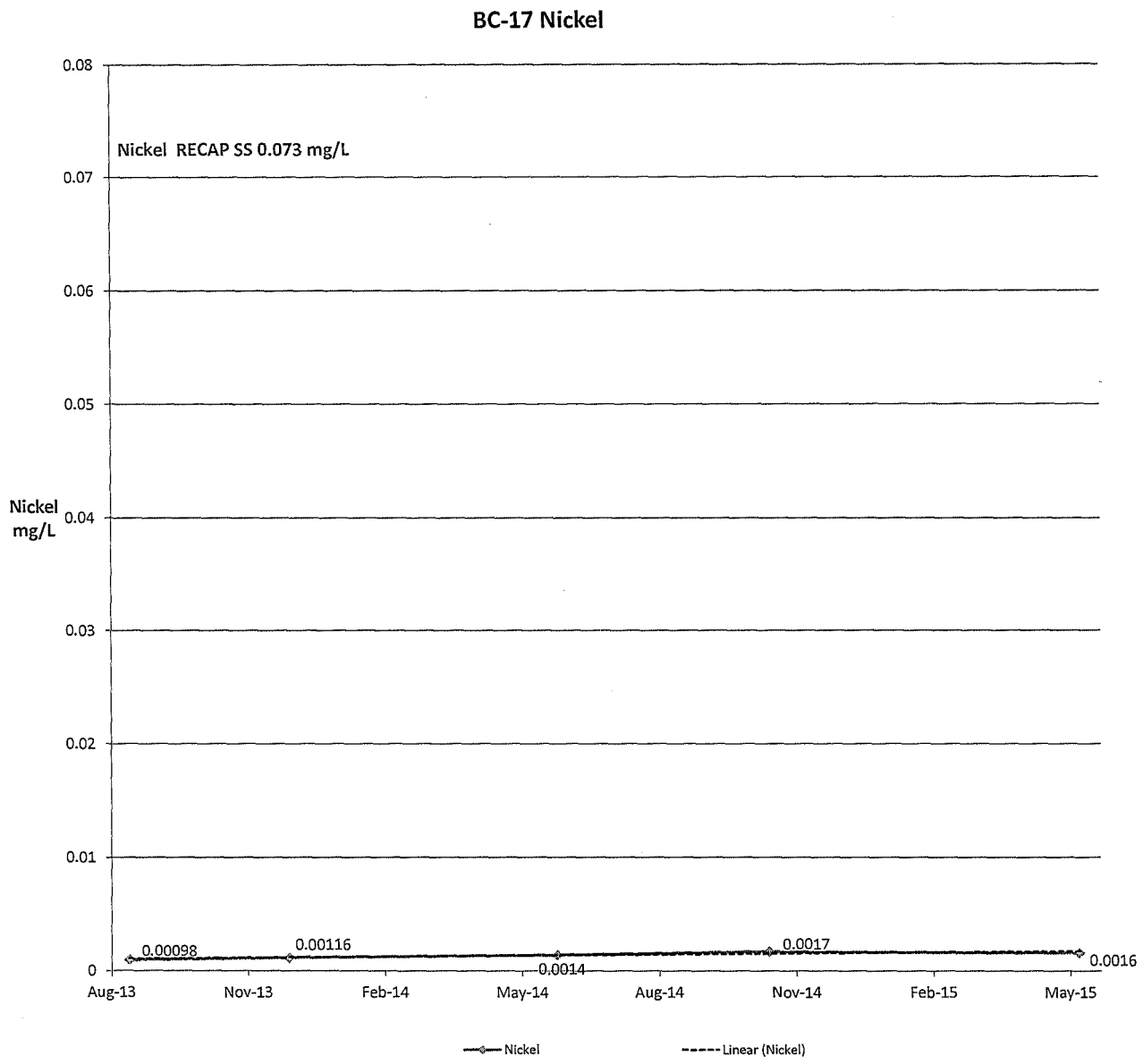

BC-07 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.0012
0.0019
0.0014
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BC-07 Cadmium and Zinc

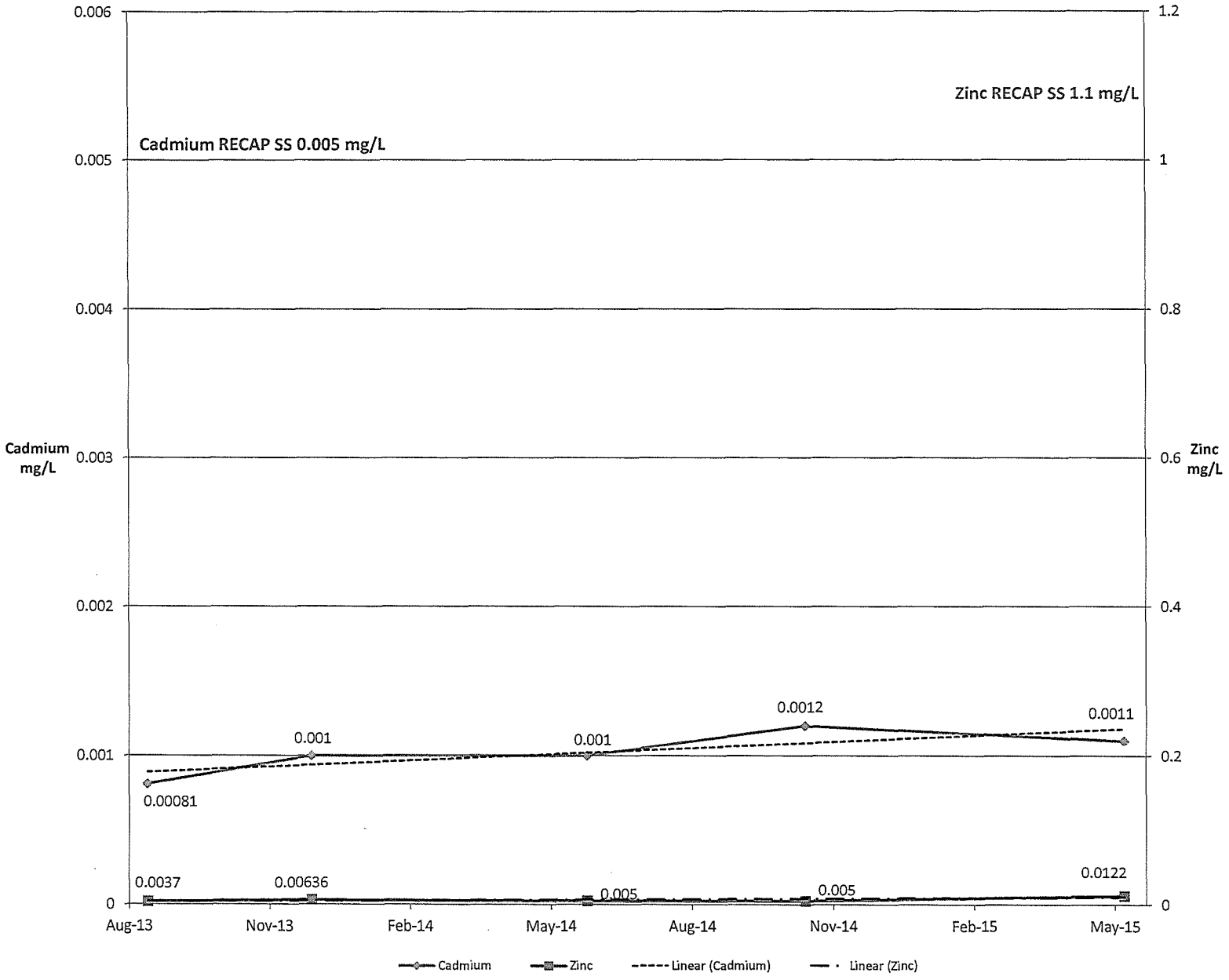


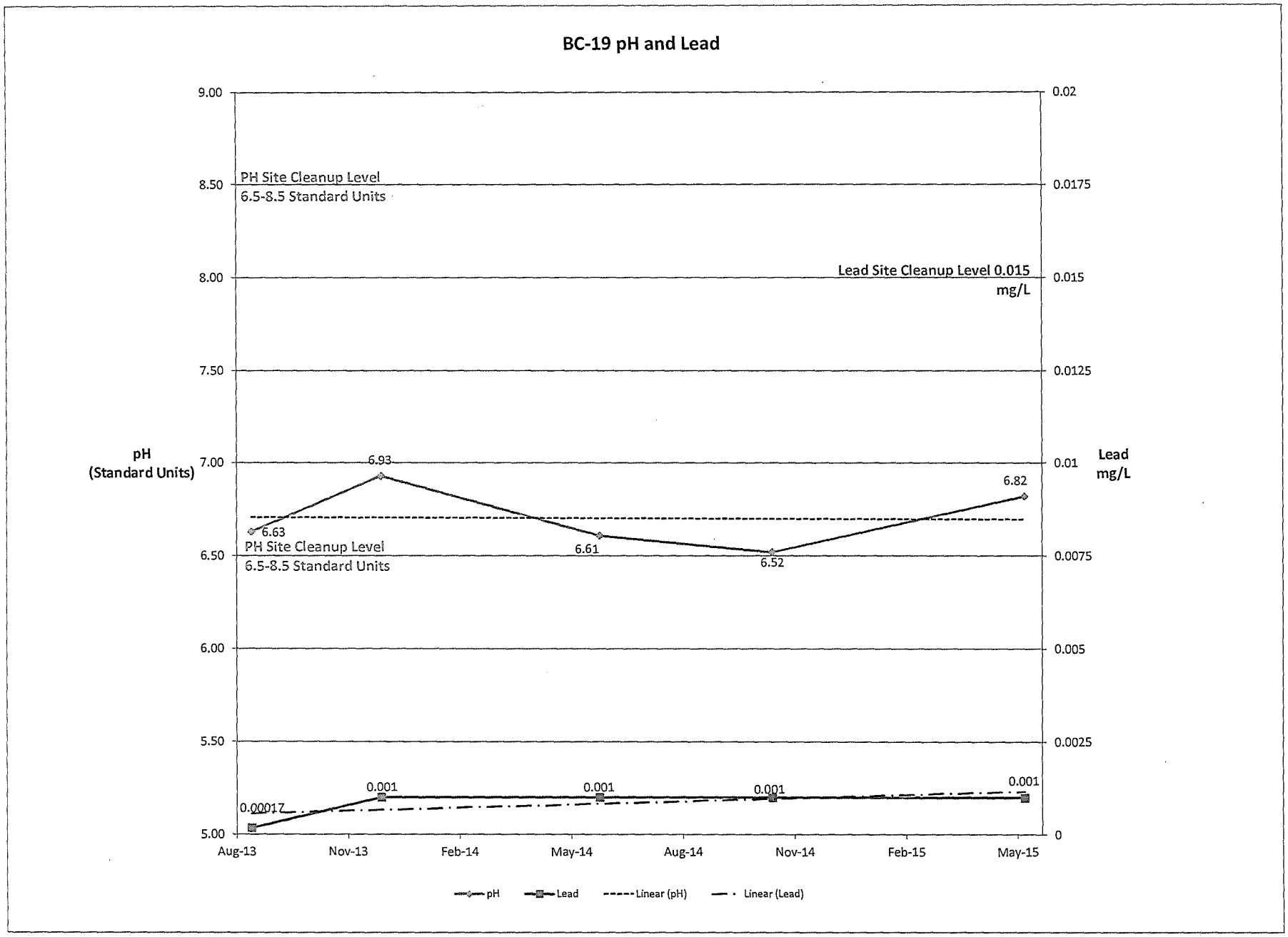

BC-17 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
0.0663
0.0345
0.0237
0.0393
0.0223
6.81
6.50
6.42
6.33
6.65
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

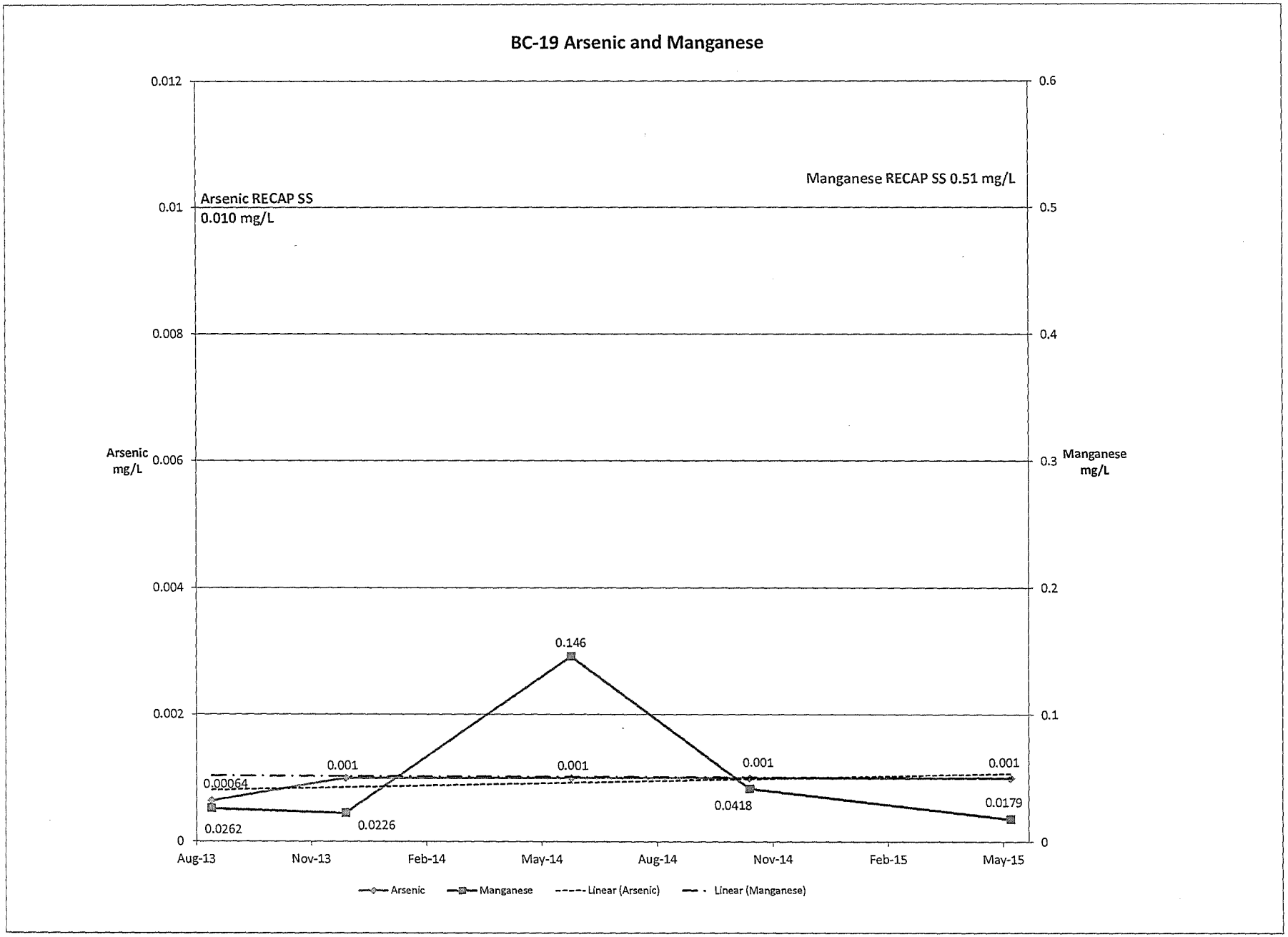

BC-17 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic
mg/L
Manganese
mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.237
0.288
0.306
0.347
0.235
0.0021
0.00183
0.0012
0.0021
0.0015
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

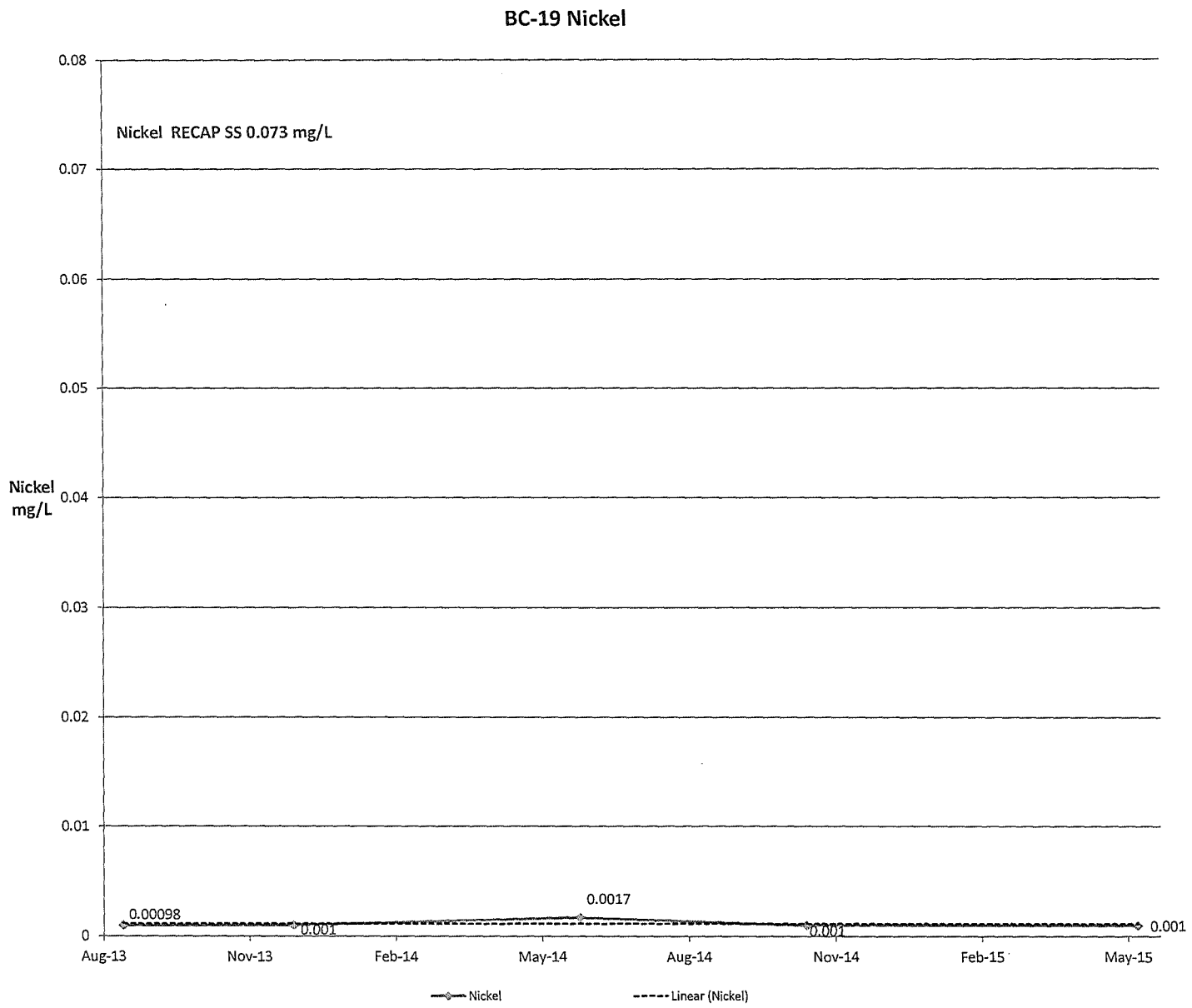

BC-17 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.00116
0.0014
0.0017
0.0016
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

BC-17 Cadmium and Zinc

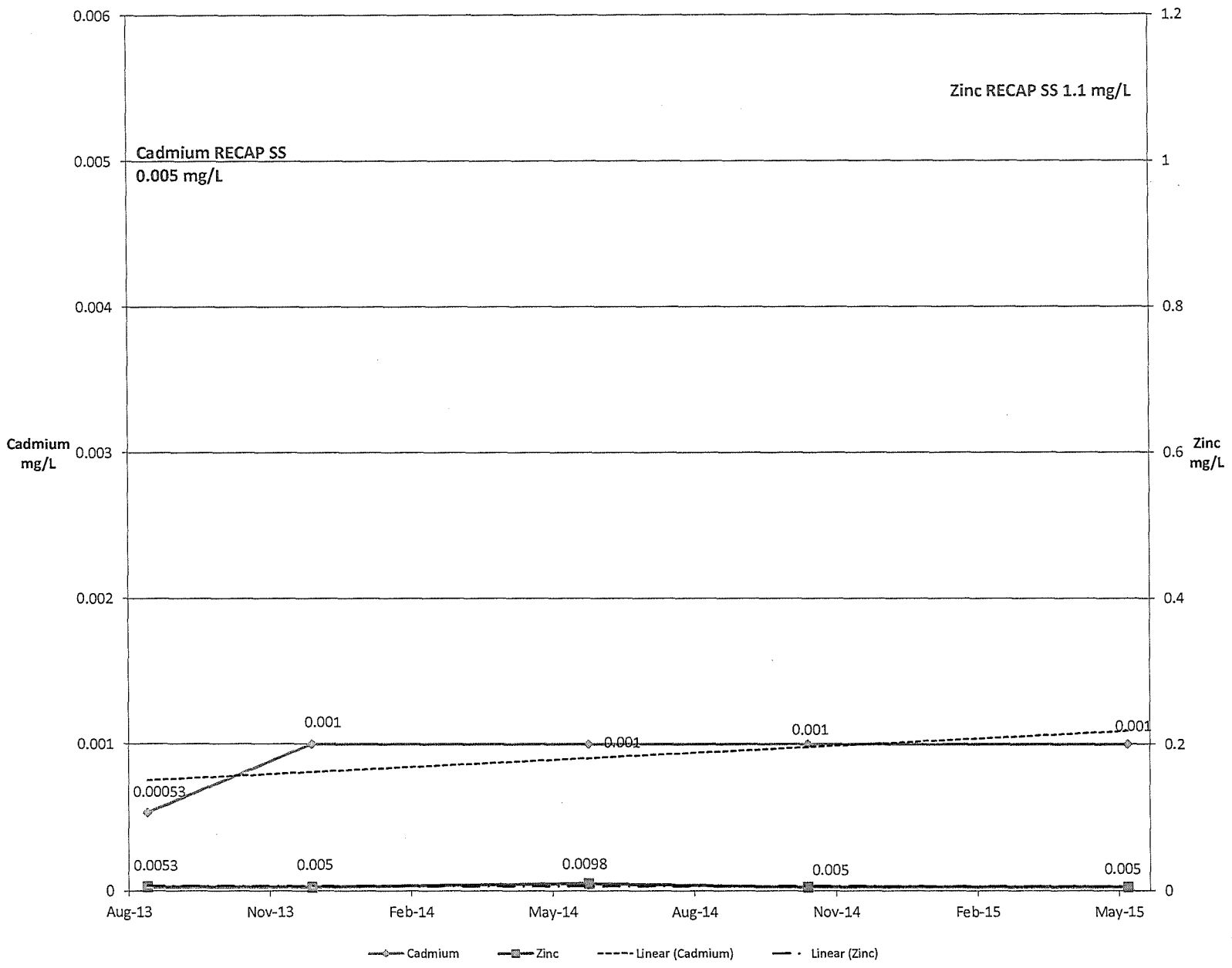


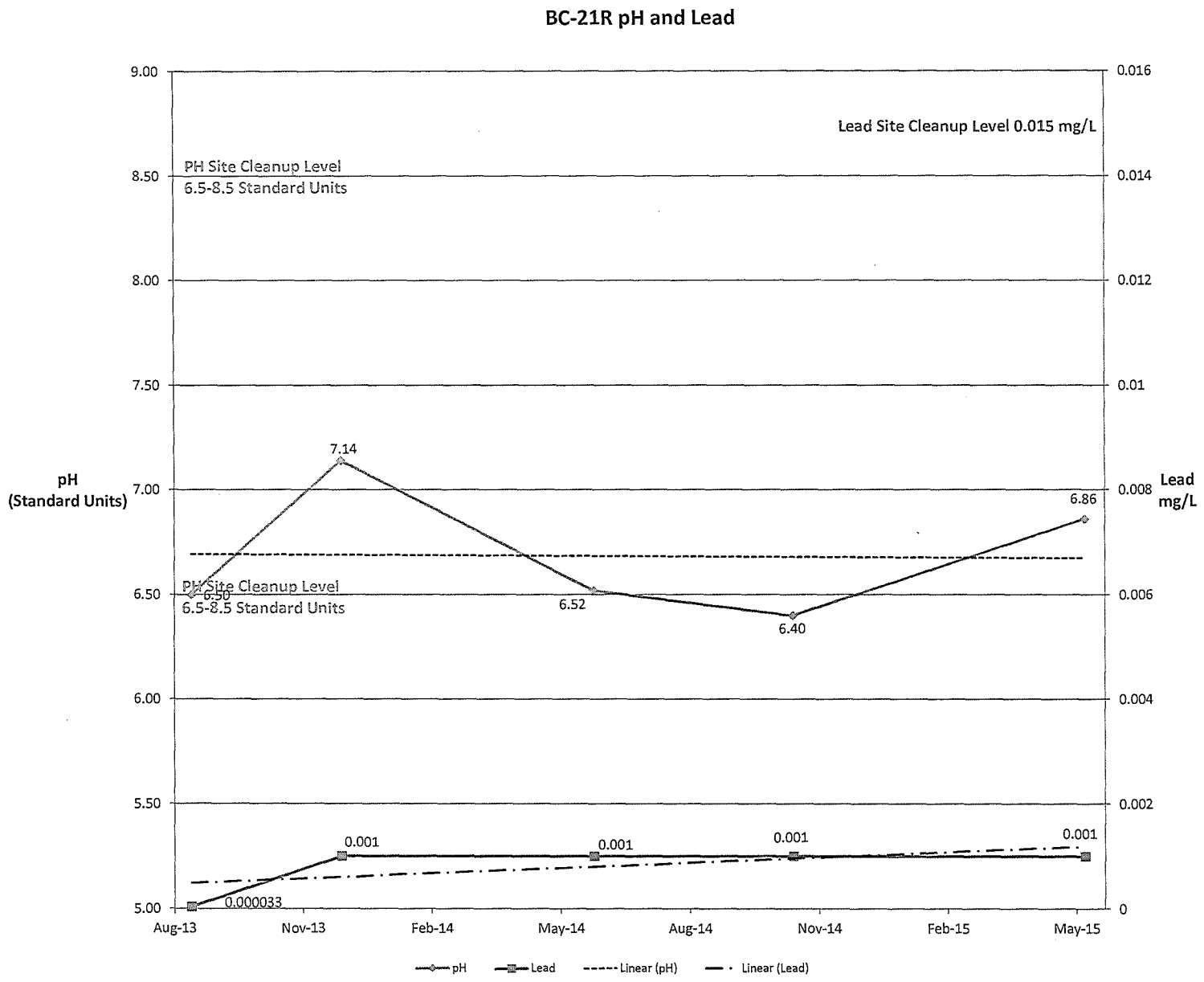

BC-19 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
6.63
6.93
6.61
6.52
6.82
0.00017
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

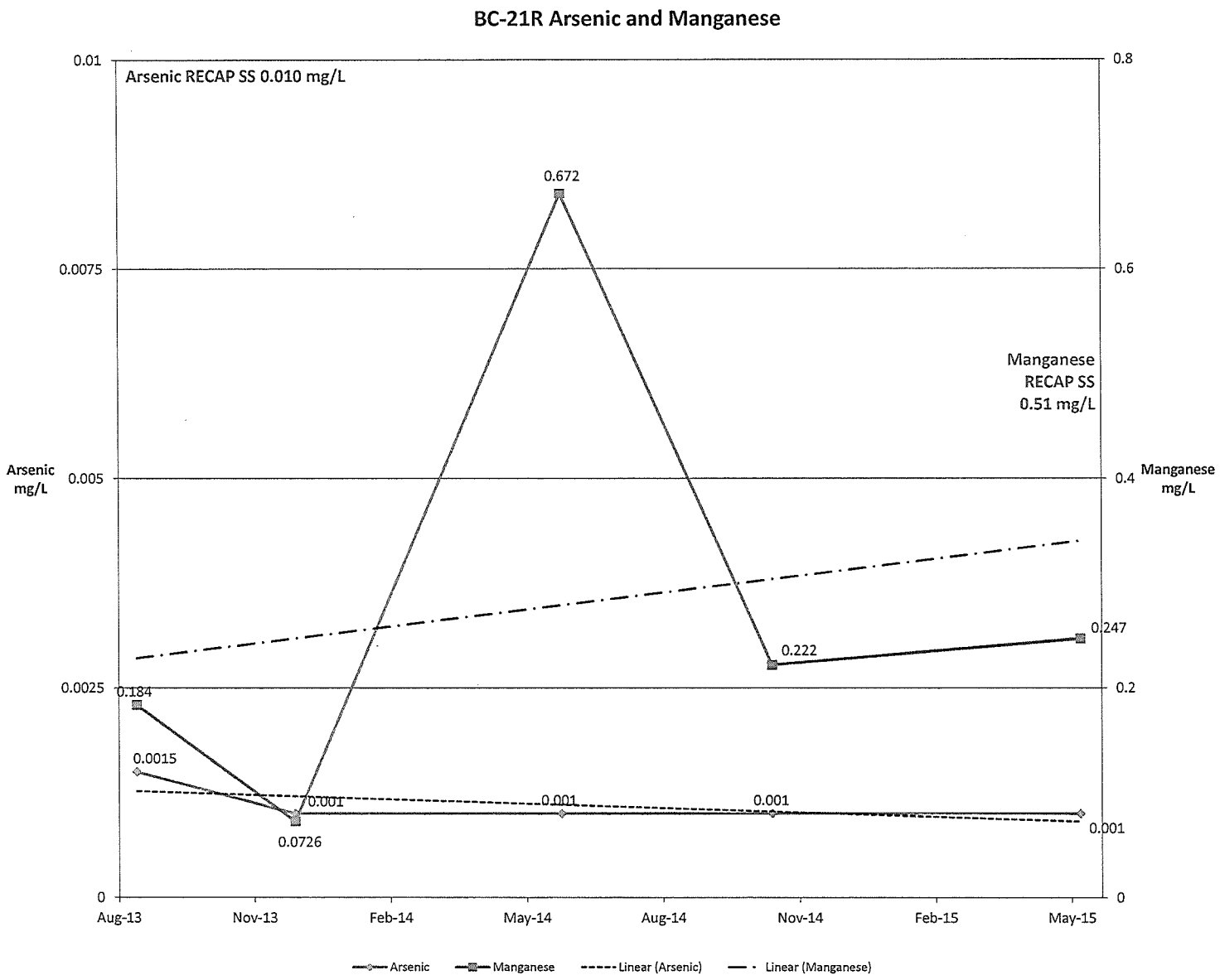

BC-19 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.146
0.001
0.001
0.001
0.001
0.00064
0.0262
0.0226
0.0418
0.0179
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

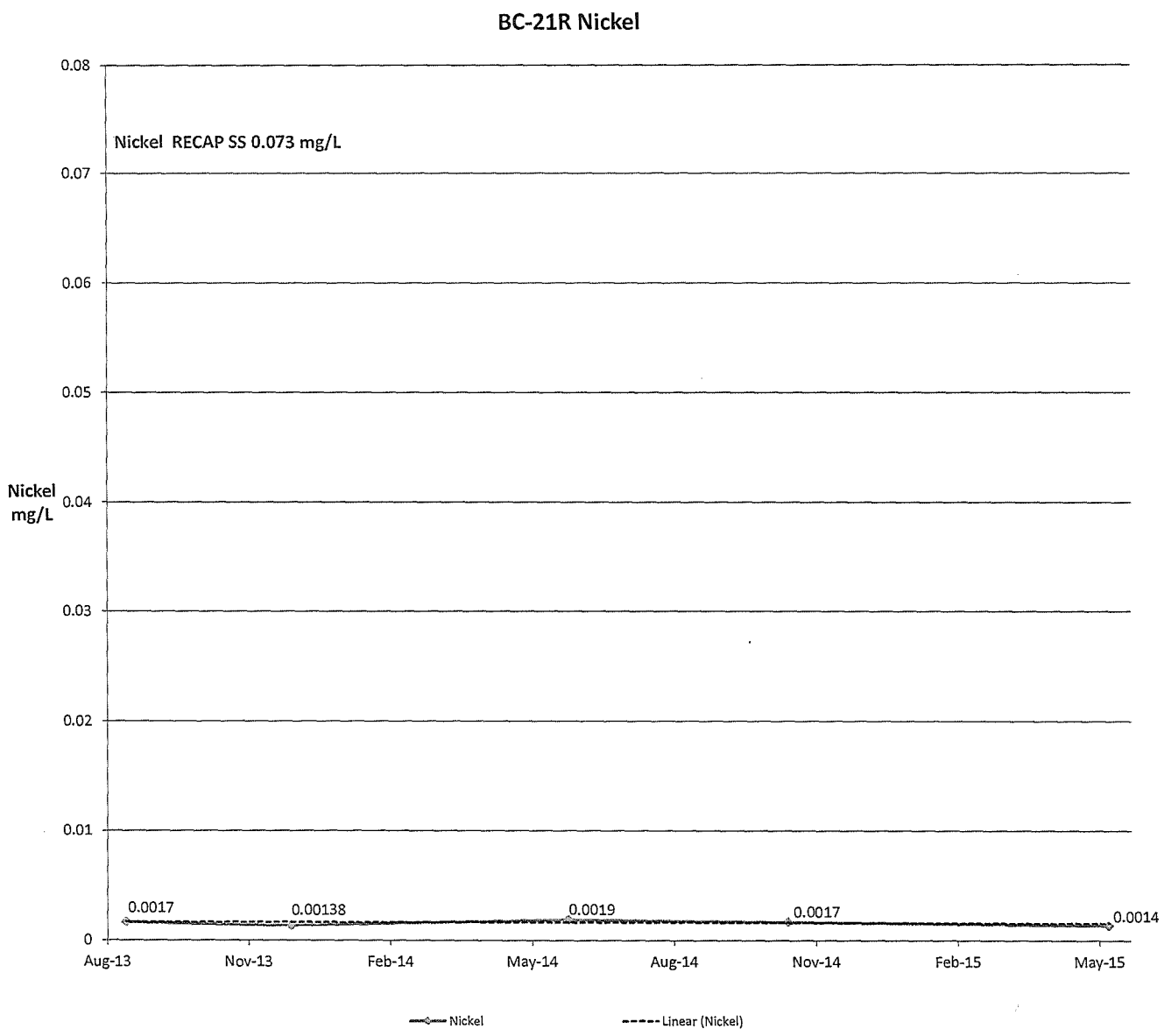

BC-19 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.0017
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

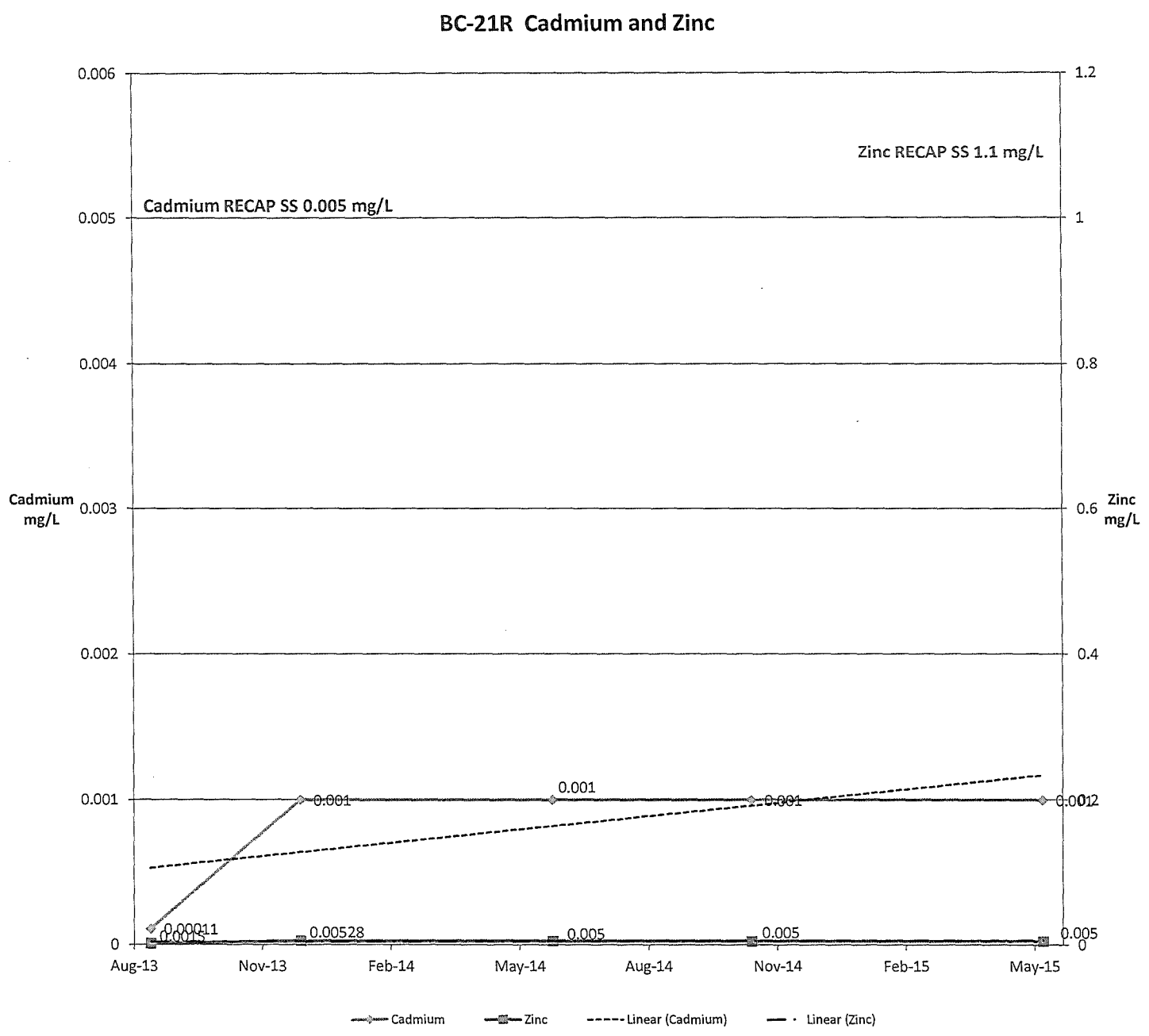
BC-19 Cadmium and Zinc

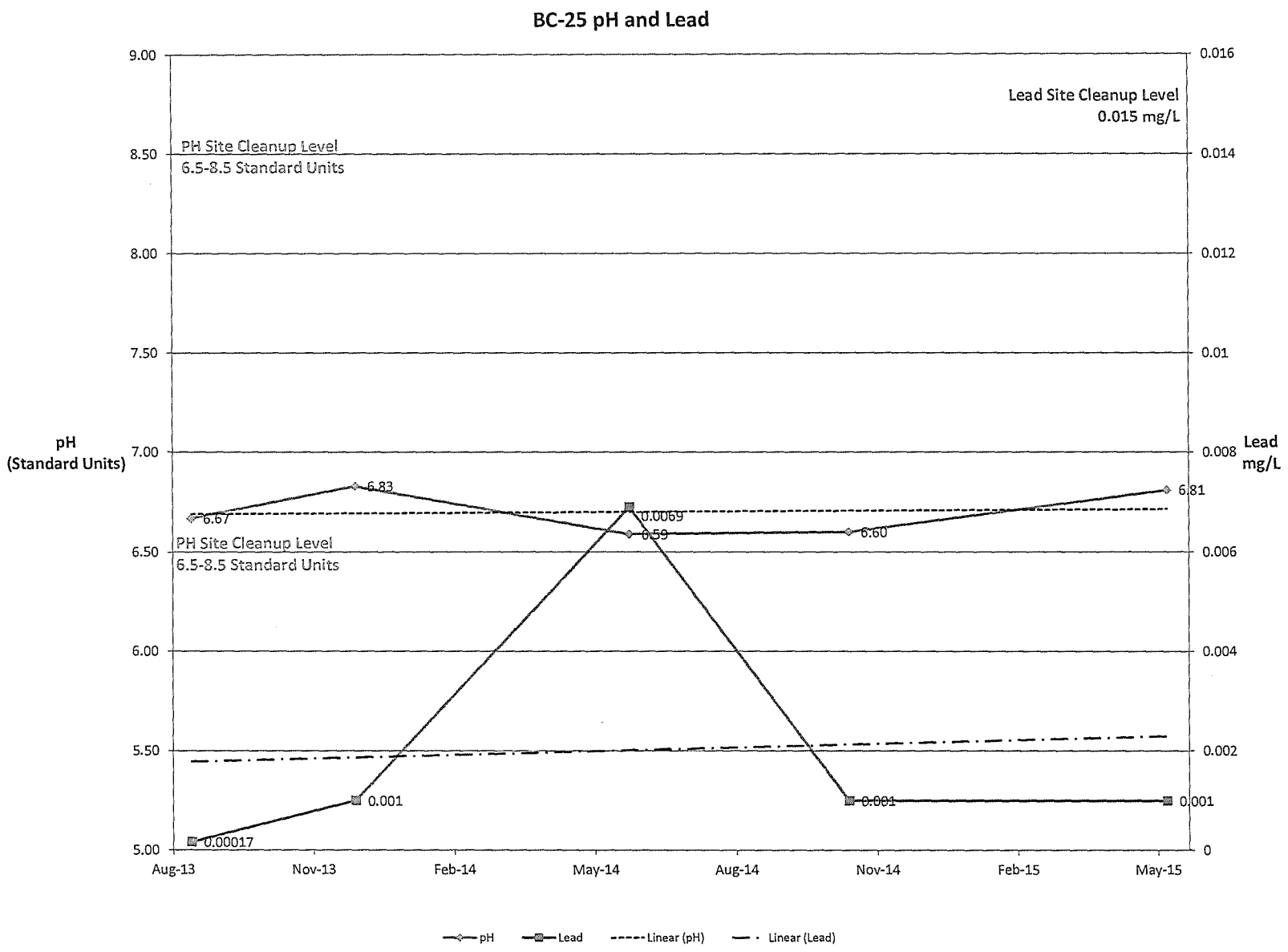


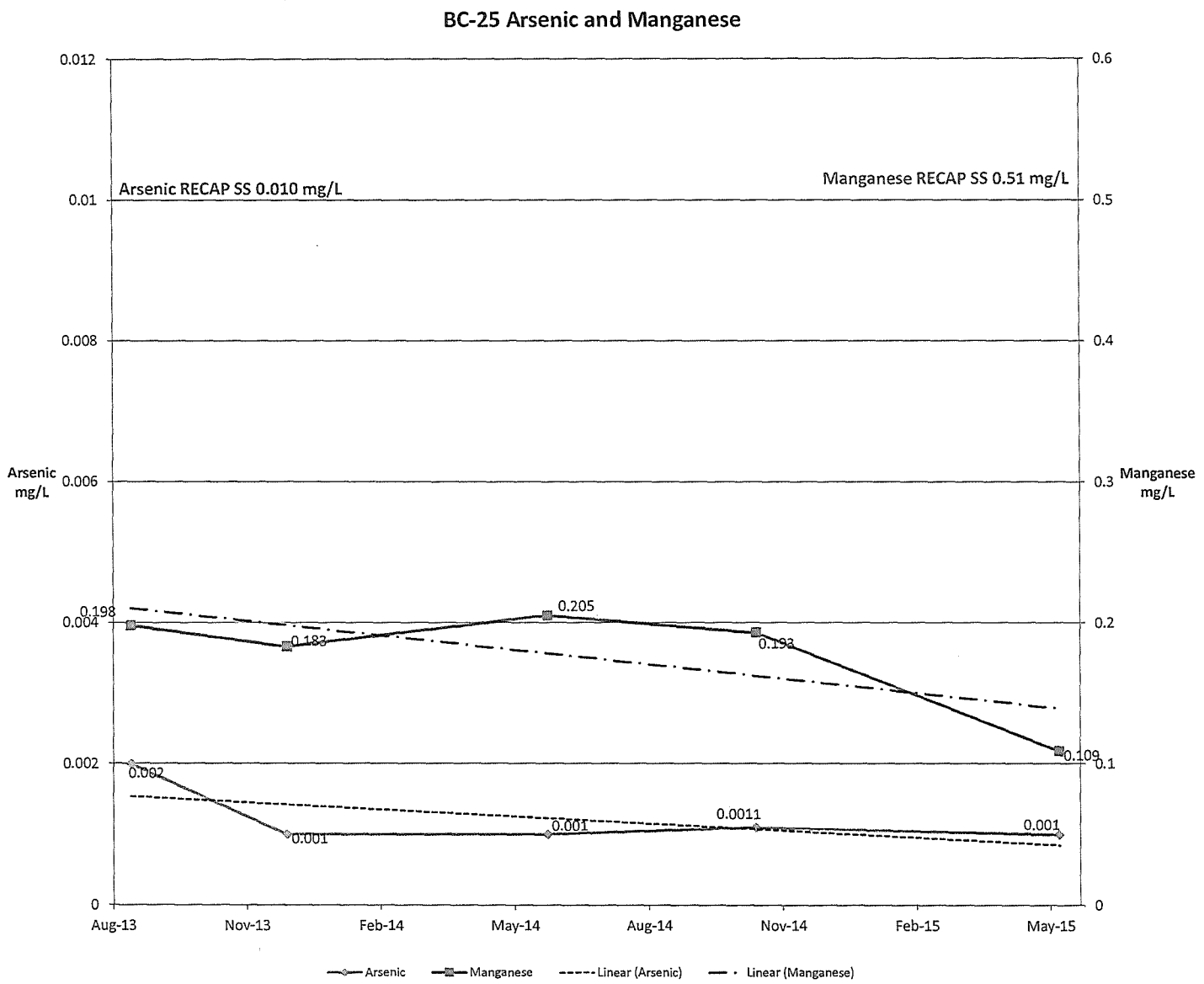

BC-21R pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
7.14
6.50
6.52
6.40
6.86
0.001
0.001
0.001
0.001
0.000033
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

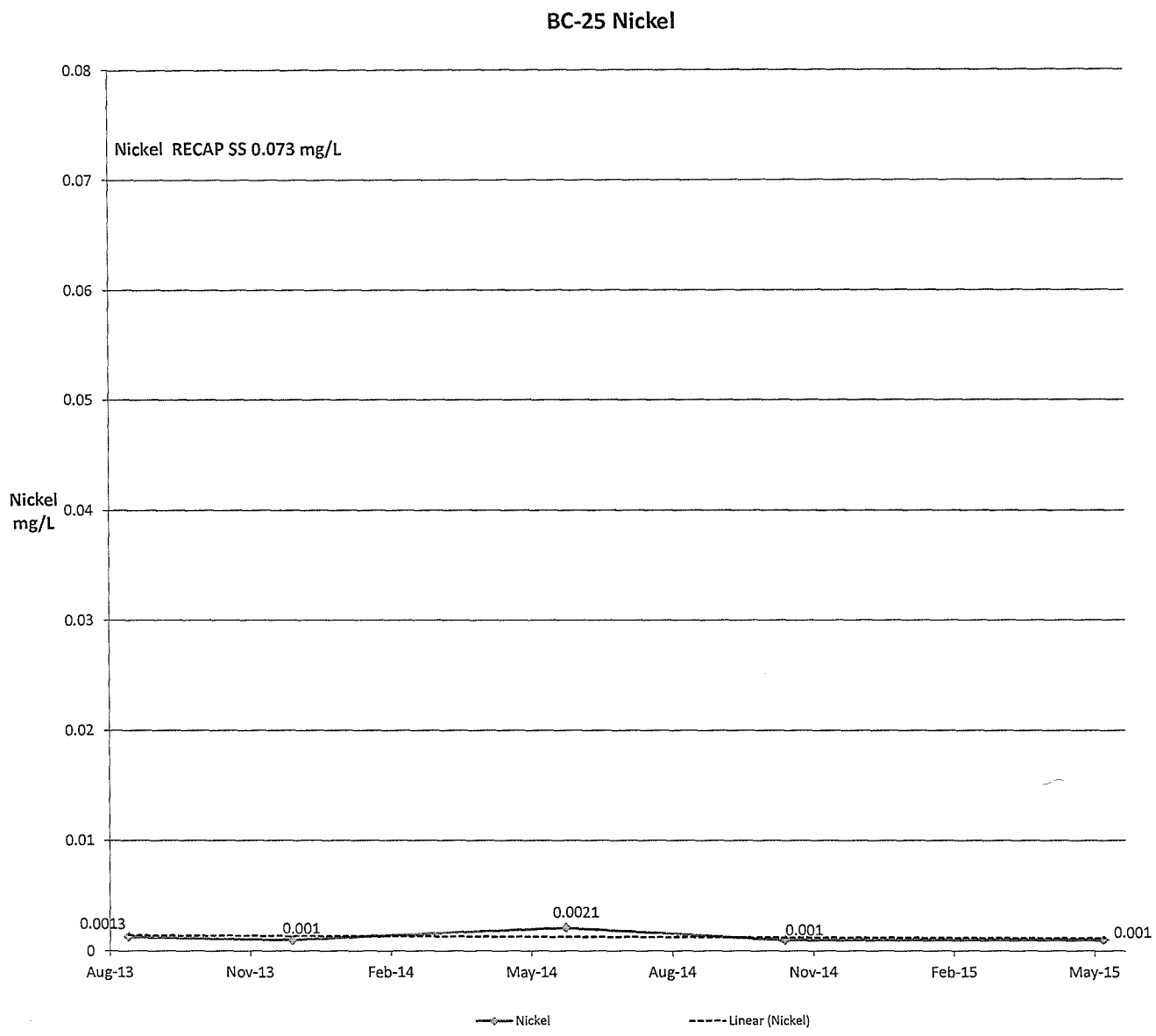

BC-21R Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese
RECAP SS
0.51 mg/L
Arsenic
mg/L
Manganese
mg/L
0.01
0.0075
0.005
0.0025
0
0.8
0.6
0.4
0.2
0
0.672
0.222
0.247
0.184
0.0015
0.001
0.001
0.001
0.0726
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

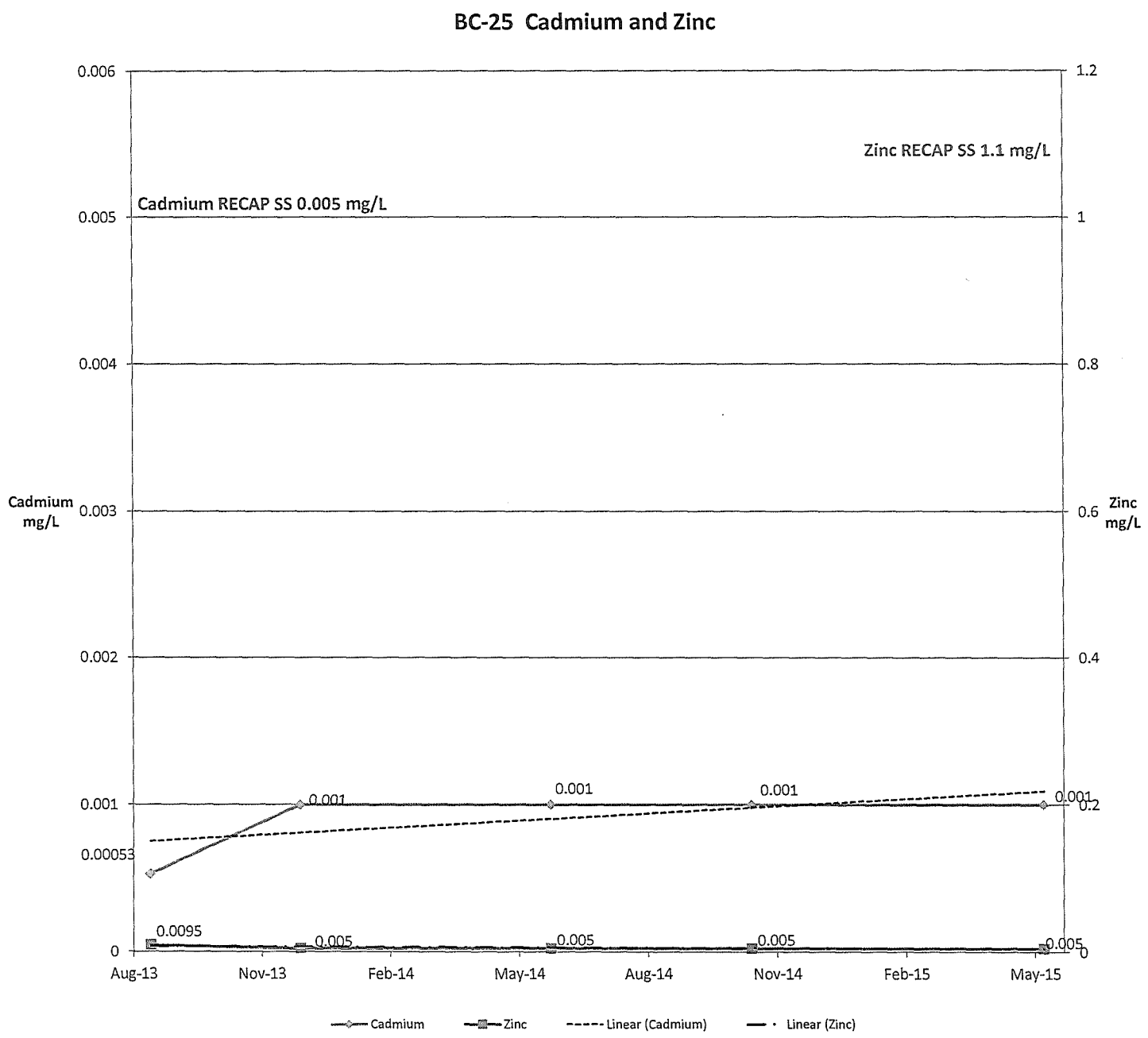

BC-21R Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0017
0.00138
0.0019
0.0017
0.0014
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)


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
0.005
0
0.001
0.001
0.001
0.001
0.00011
0.00528
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


BC-25 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
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
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
6.67
6.83
6.59
6.60
6.81
0.00017
0.001
0.0069
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

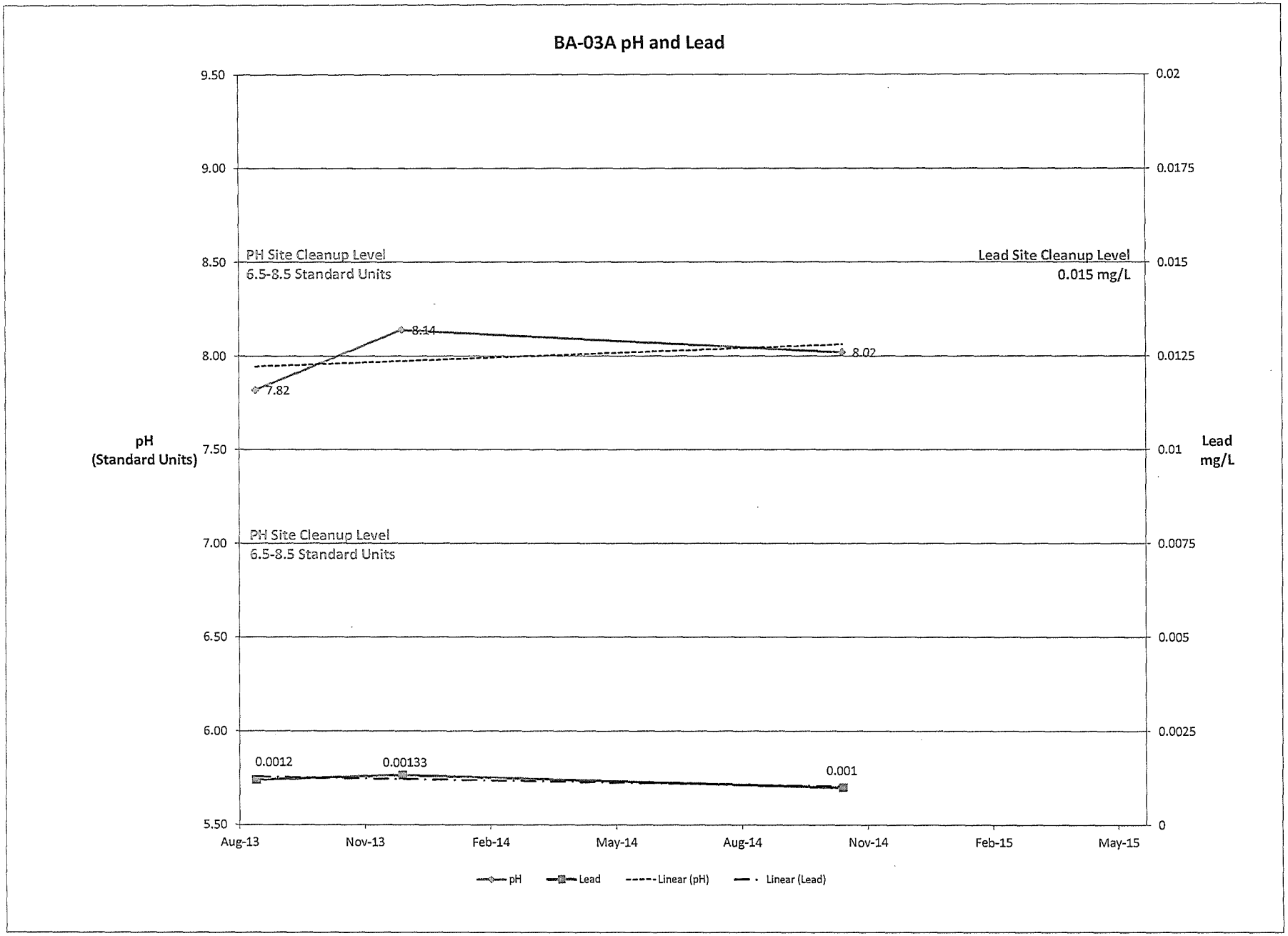

BC-25 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.198
0.183
0.205
0.193
0.109
0.002
0.001
0.001
0.0011
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

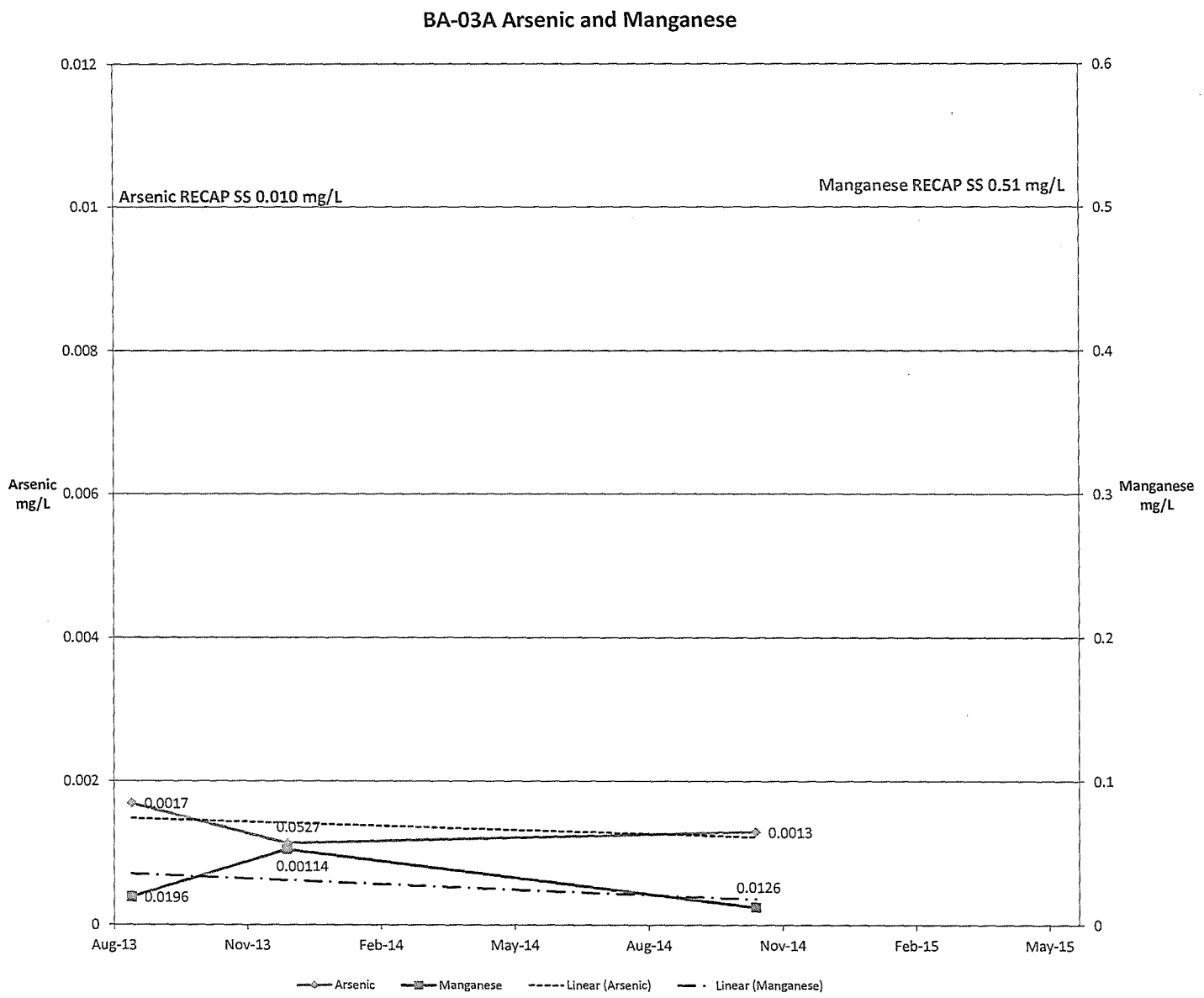

BC-25 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0013
0.001
0.0021
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

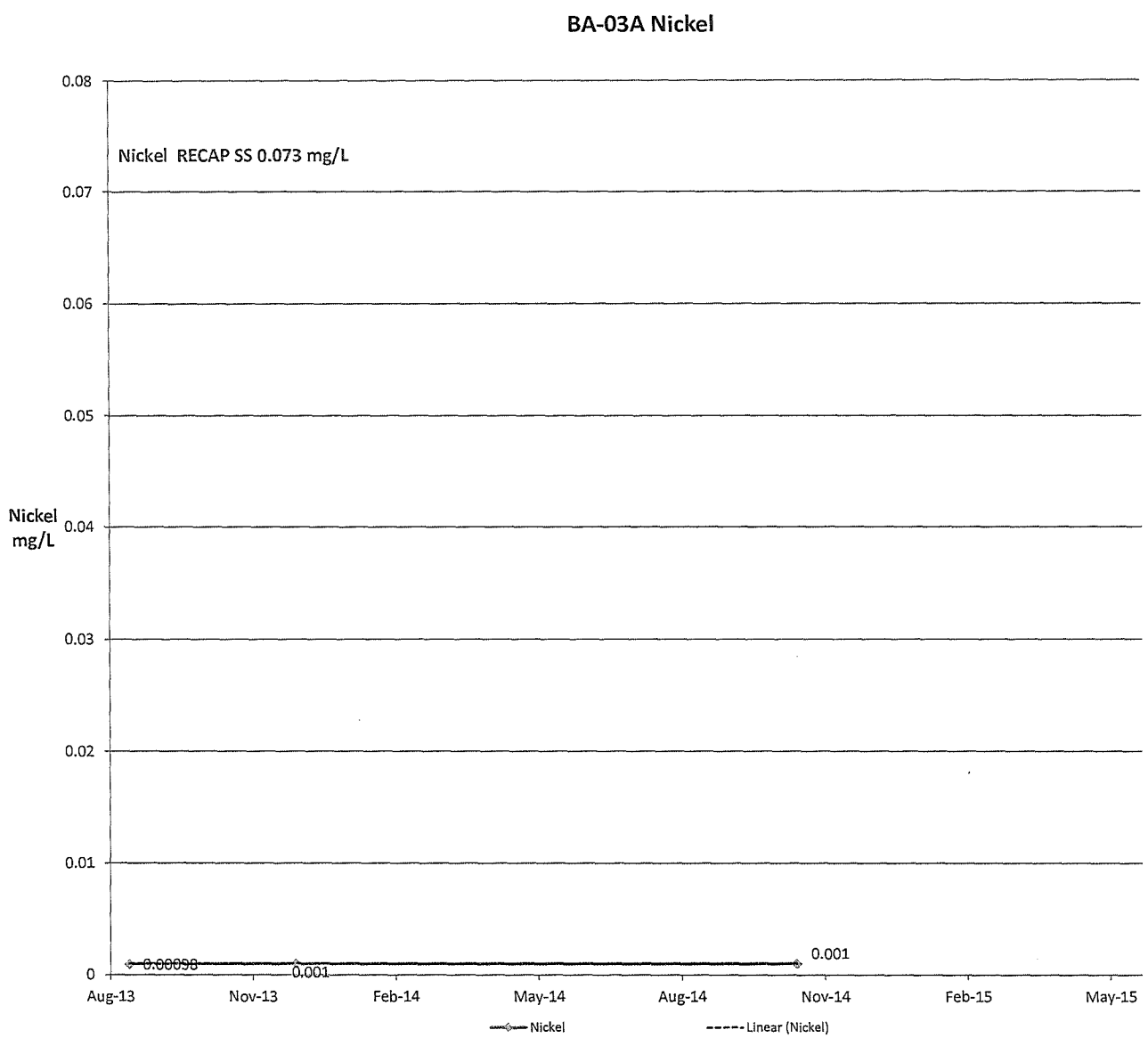

BC-25 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0.00053
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.0095
0.005
0.005
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

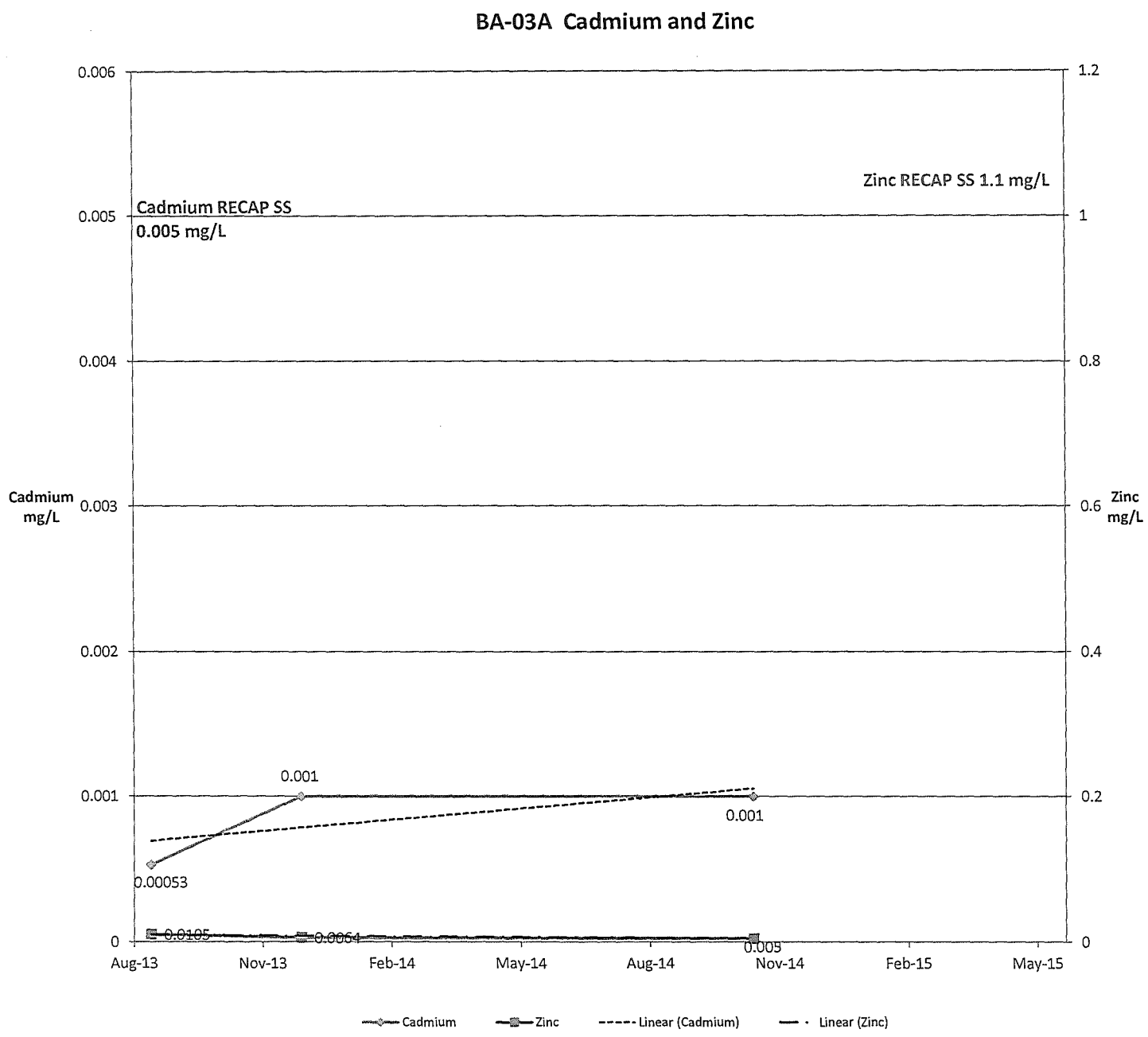
THIRD WATER BEARING ZONE

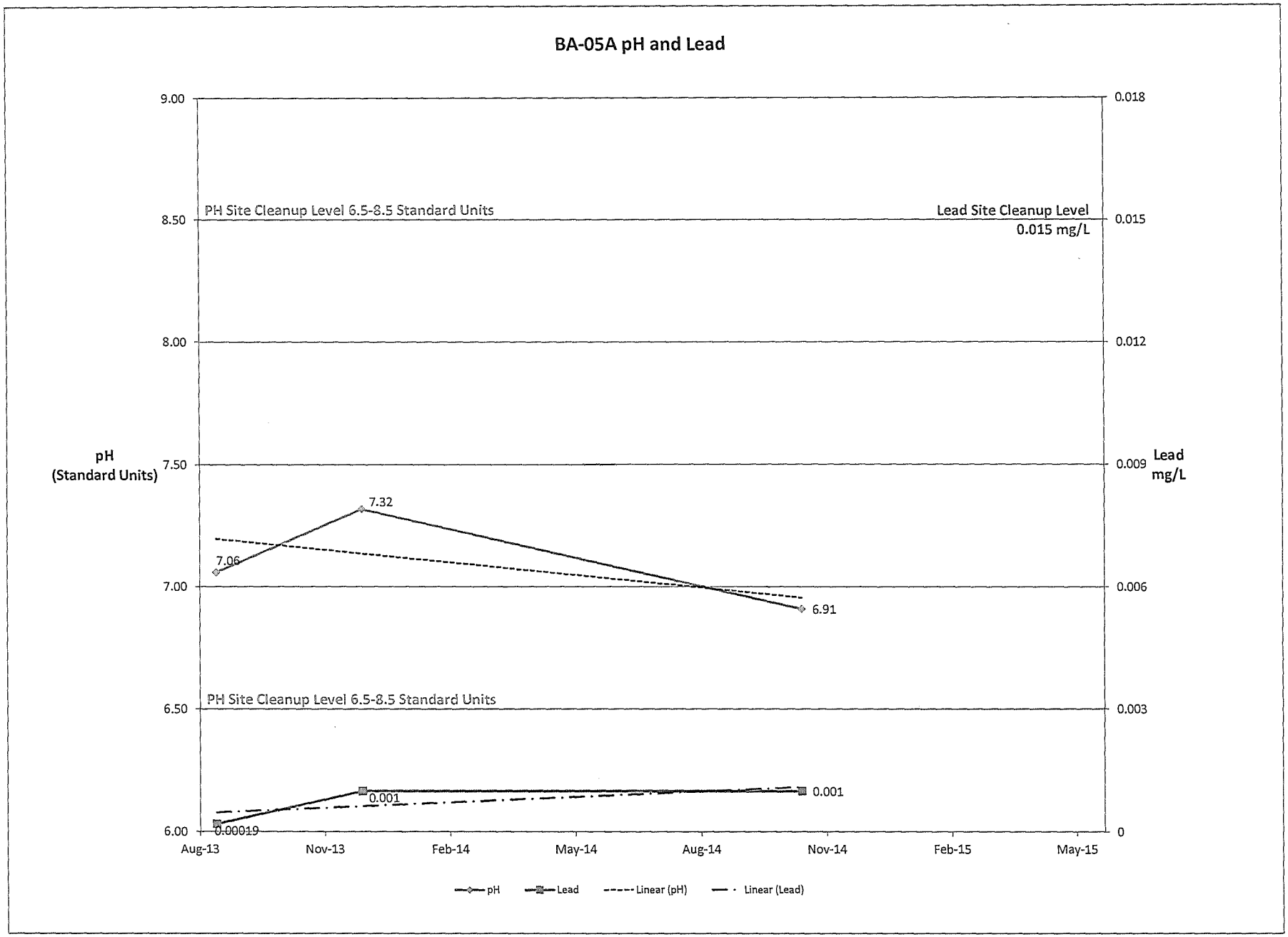
(PAST EIGHT QUARTERS)

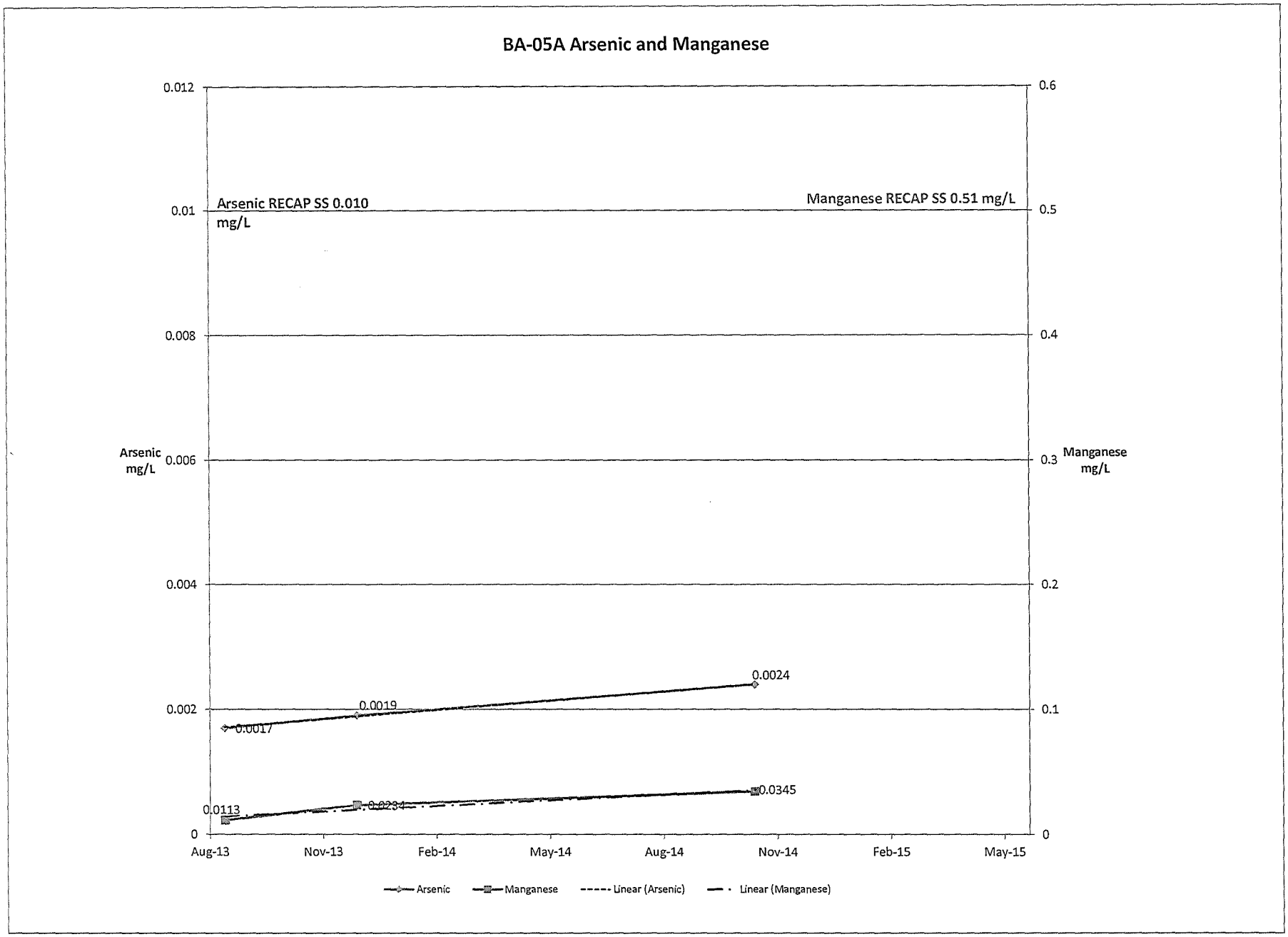

BA-03A pH and Lead
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
pH
(Standard Units)
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
7.82
8.14
8.02
0.0012
0.00133
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

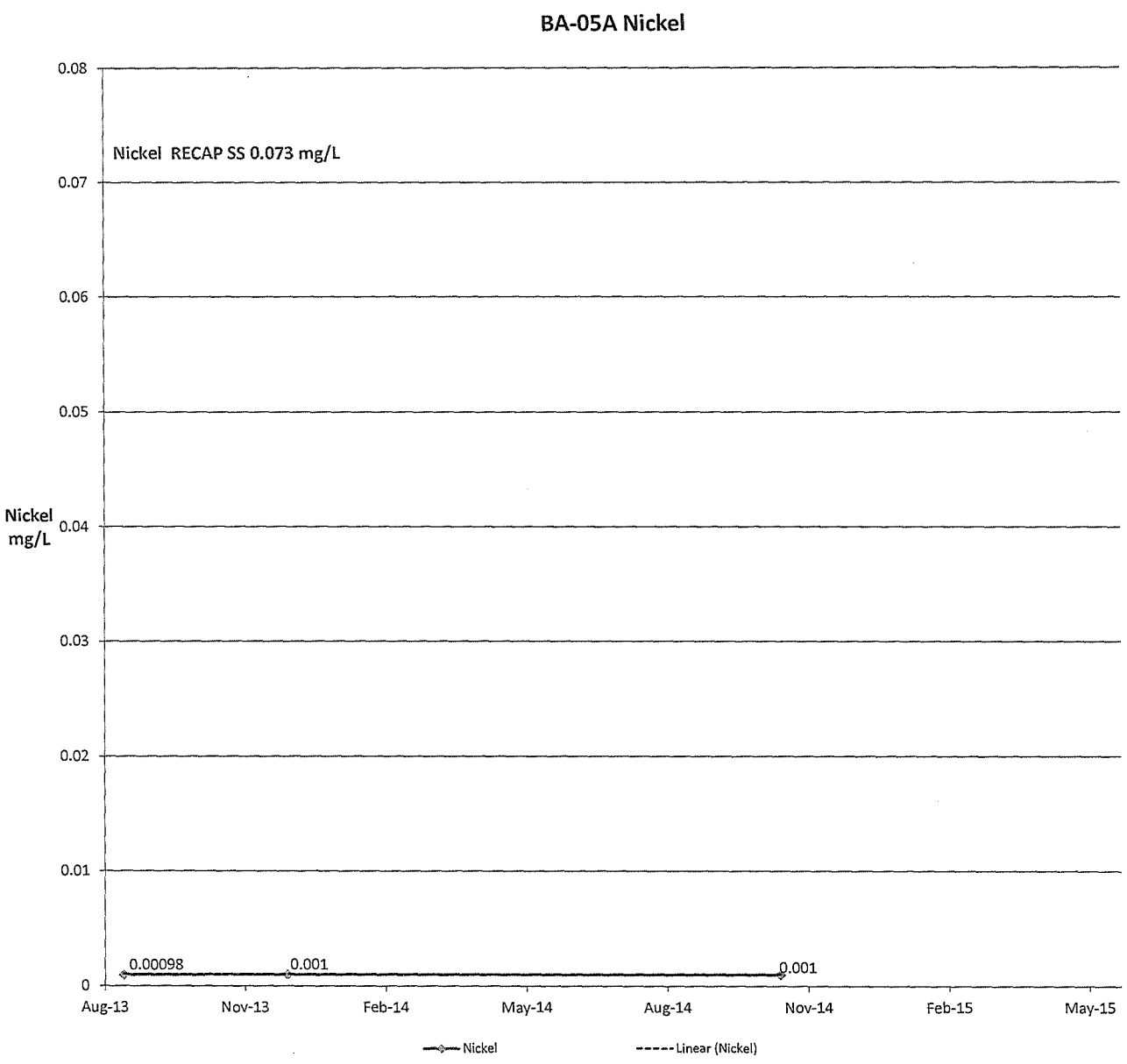

BA-03A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0017
0.0527
0.0013
0.00114
0.0126
0.0196
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (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
0.00098
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

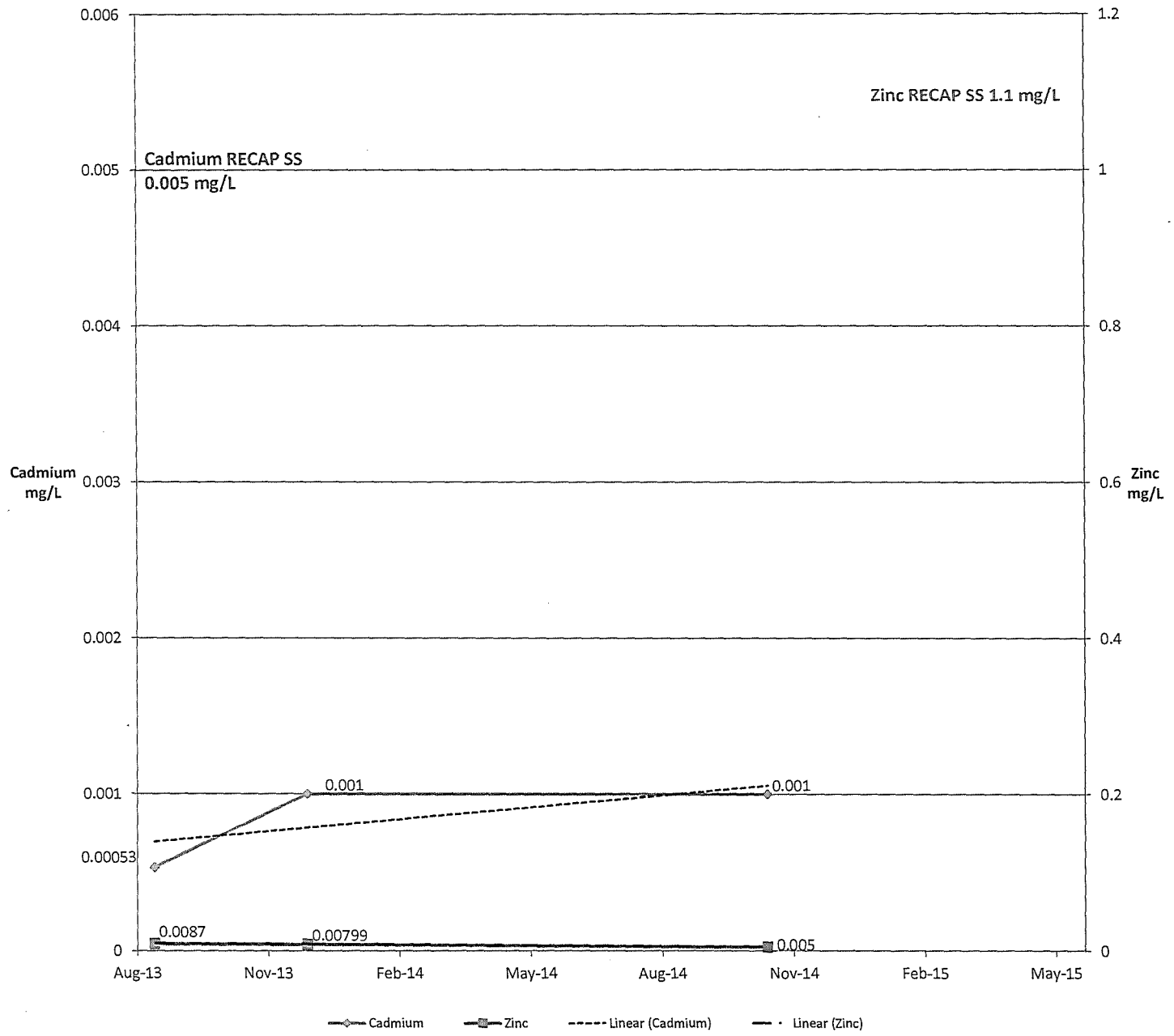

BA-03A Cadmium and Zinc
Cadmium RECAP SS
0.005 mg/L
Zinc RECAP SS 1.1 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.00053
0.0105
0.0064
0.009
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

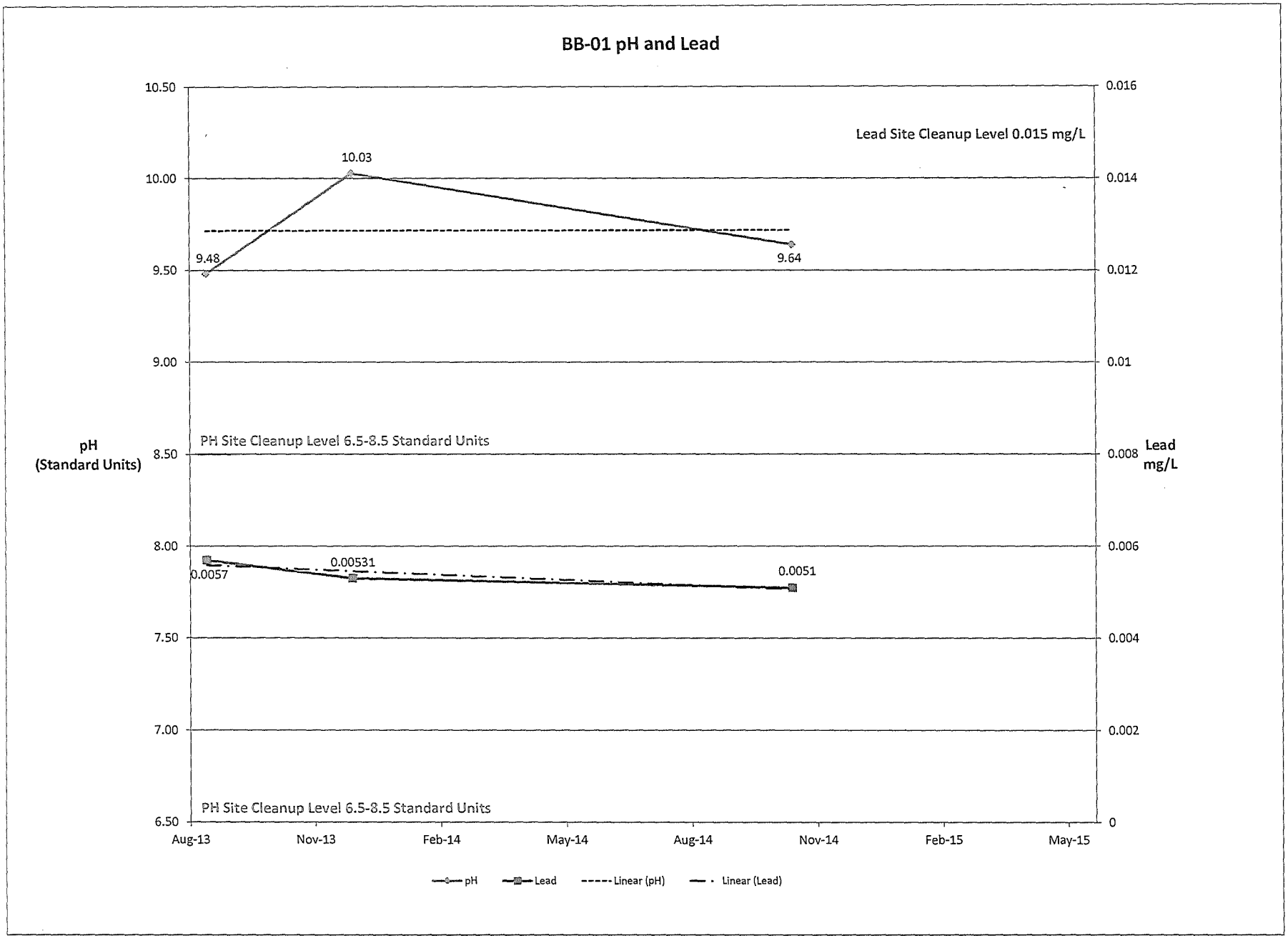

BA-05A pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level 6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
7.06
7.32
6.91
0.00019
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

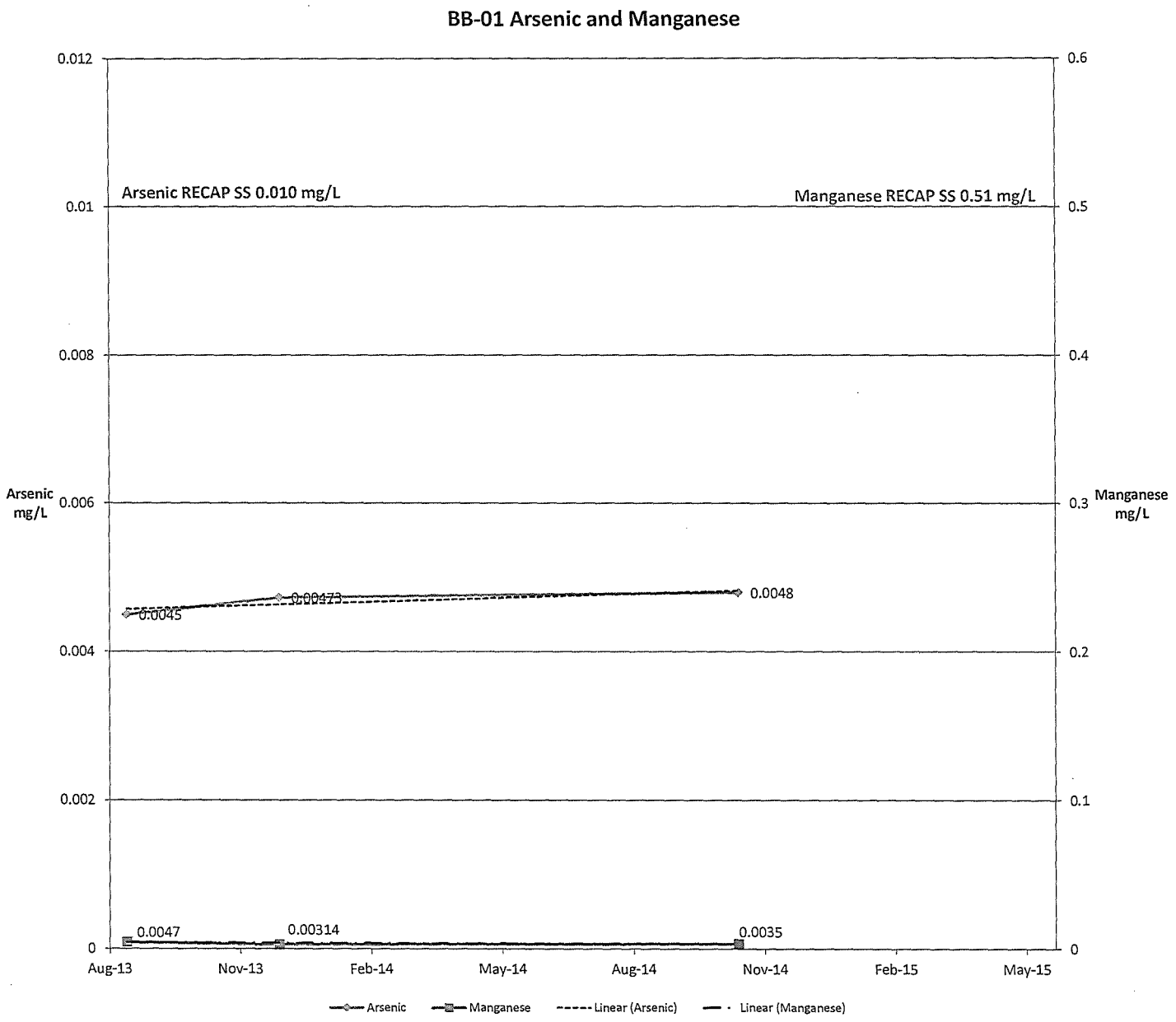

BA-05A Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0017
0.0019
0.0024
0.0113
0.0234
0.0345
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

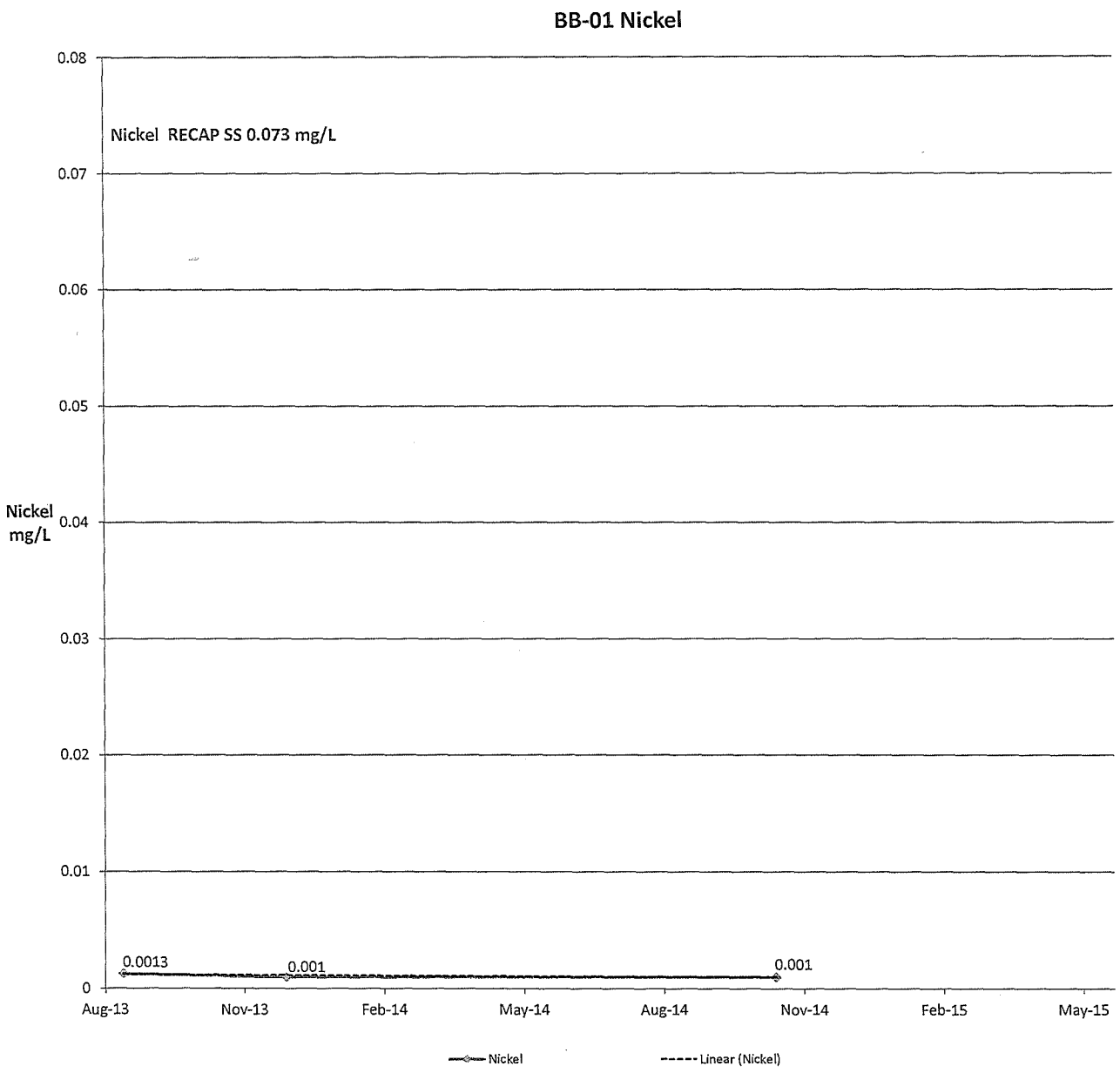

BA-05A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

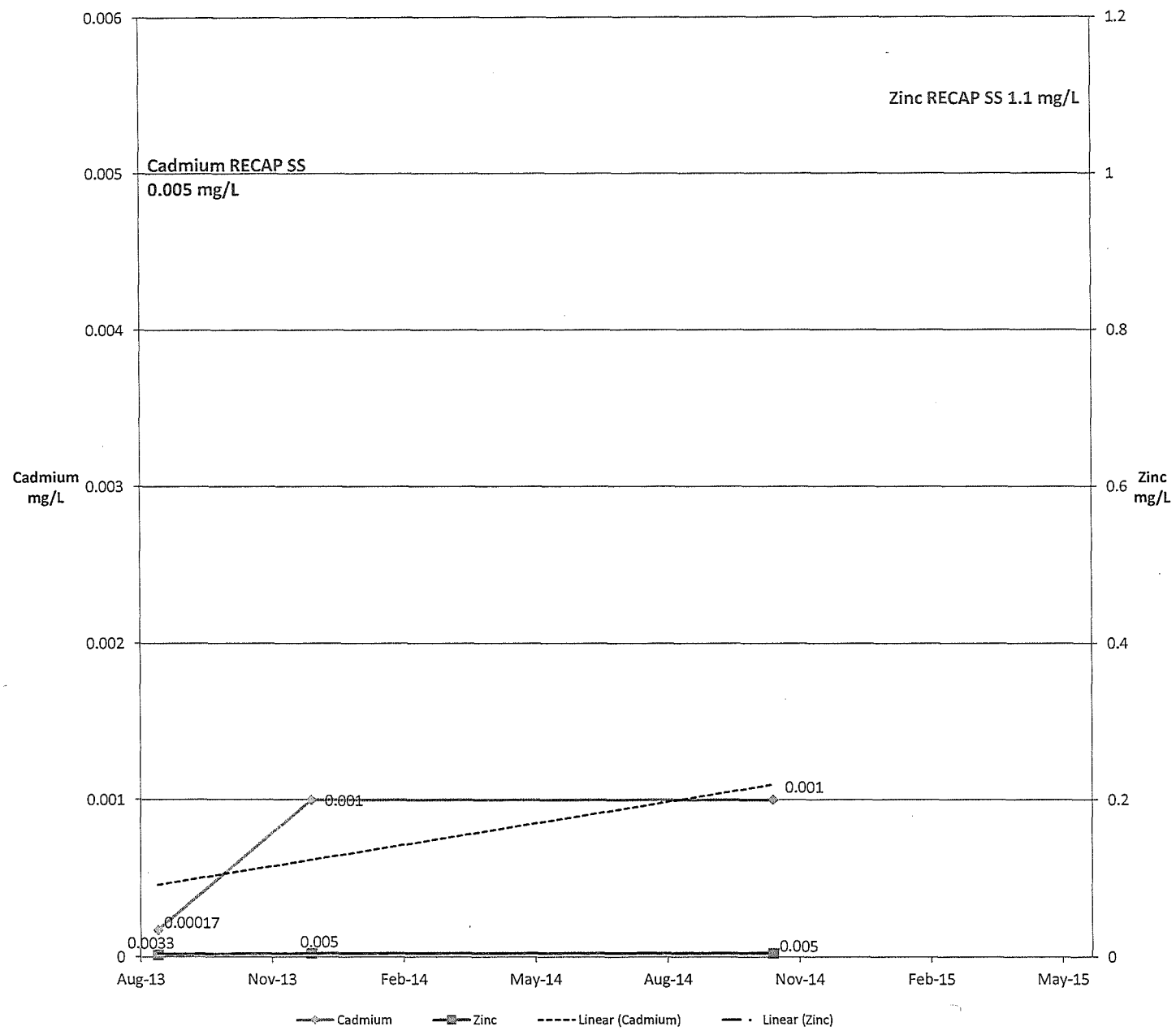
BA-05A Cadmium and Zinc

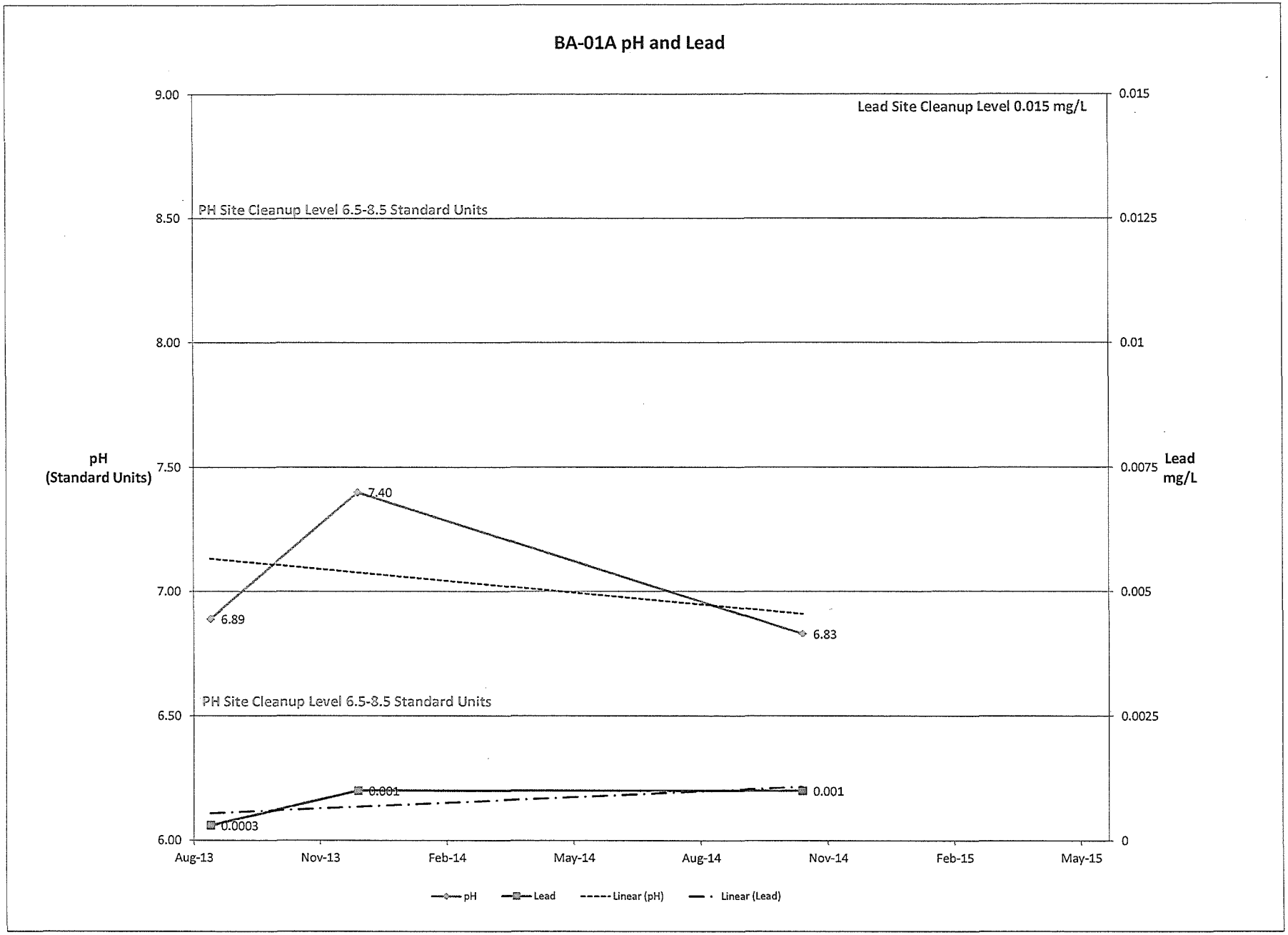


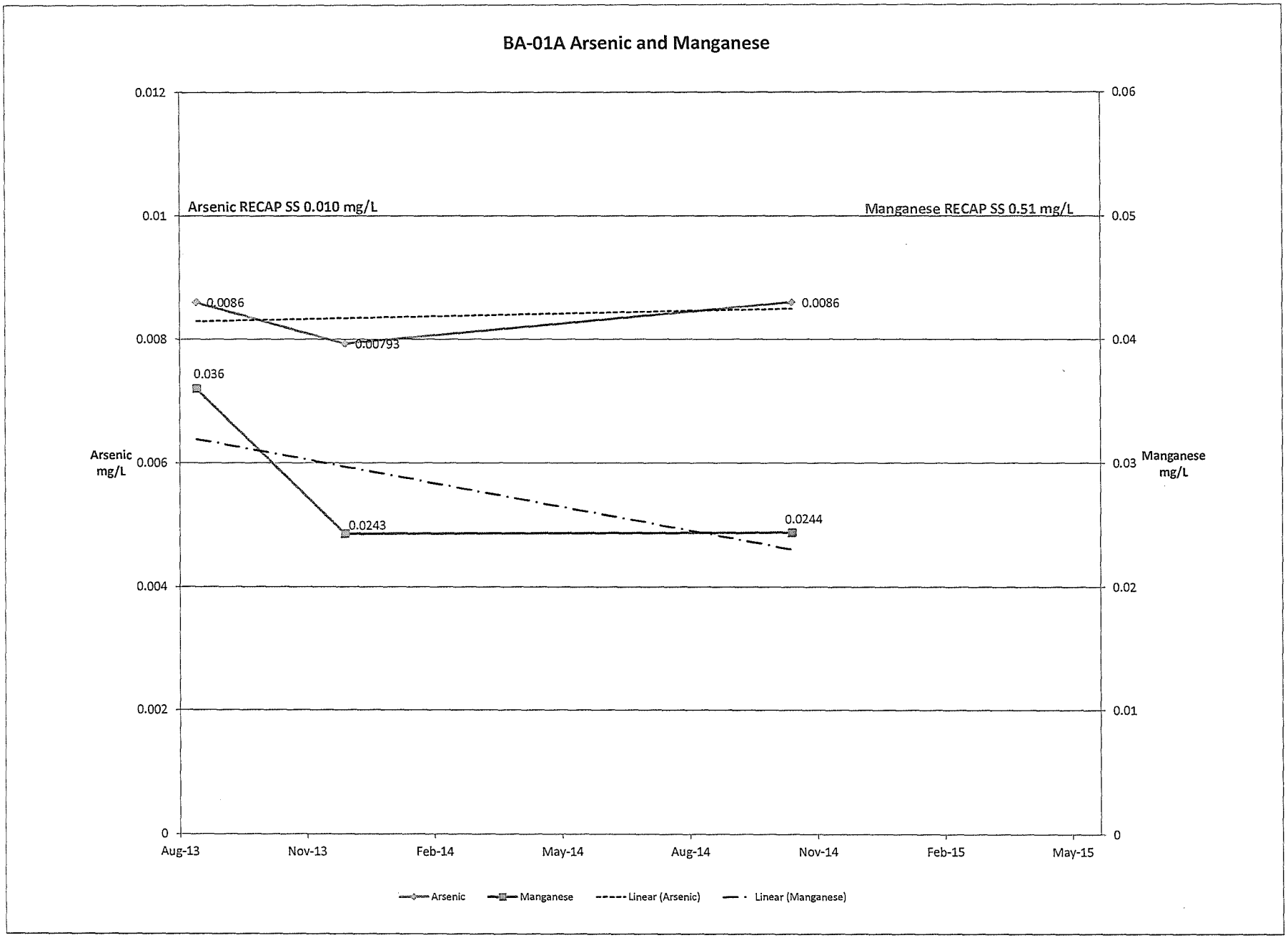

BB-01 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
10.03
9.48
9.64
0.00531
0.0057
0.0051
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

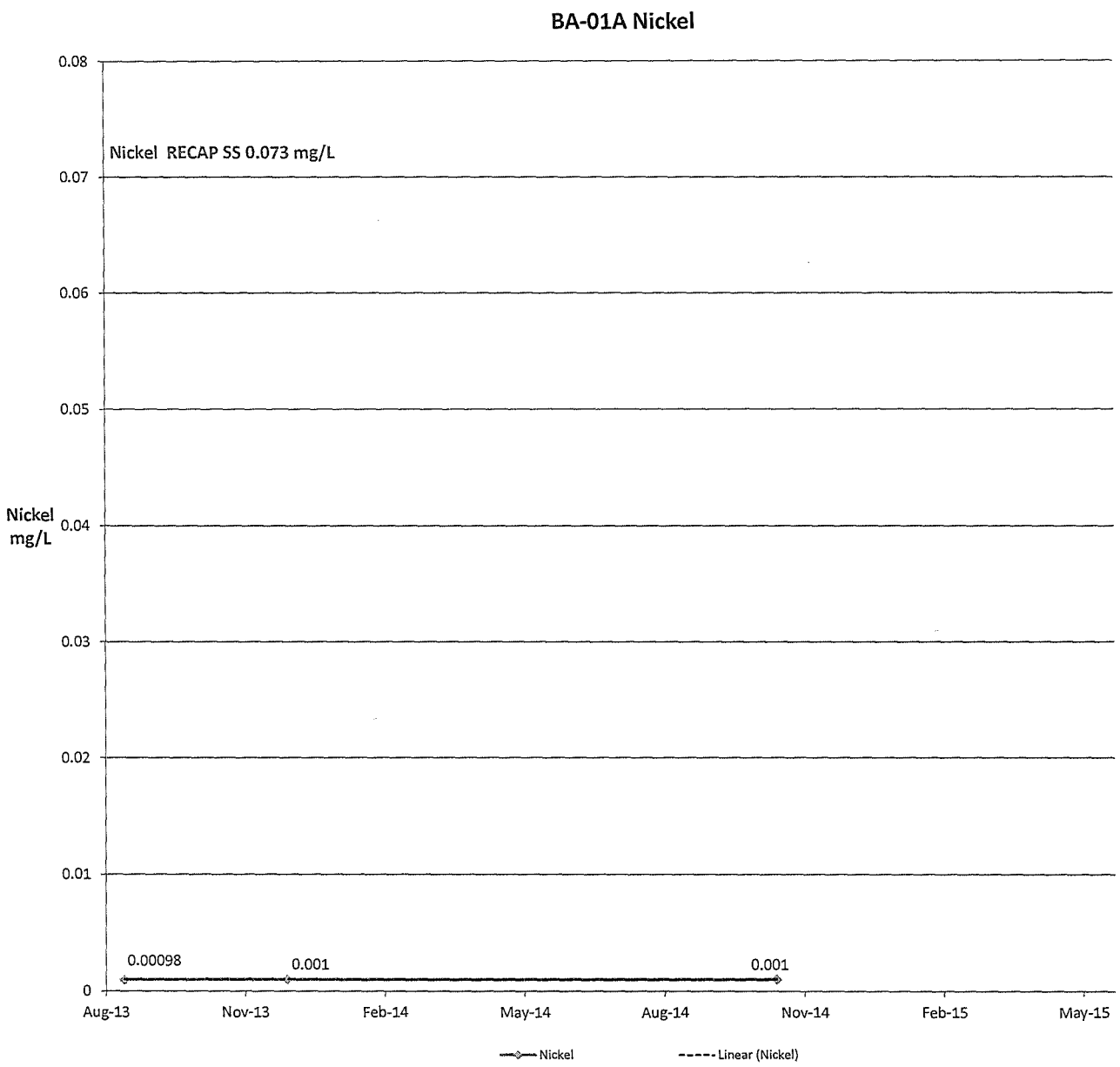

BB-01 Arsenic and Manganese
Arsenic RECAP SS 0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0045
0.00473
0.0048
0.0047
0.00314
0.0035
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (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
0.0013
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

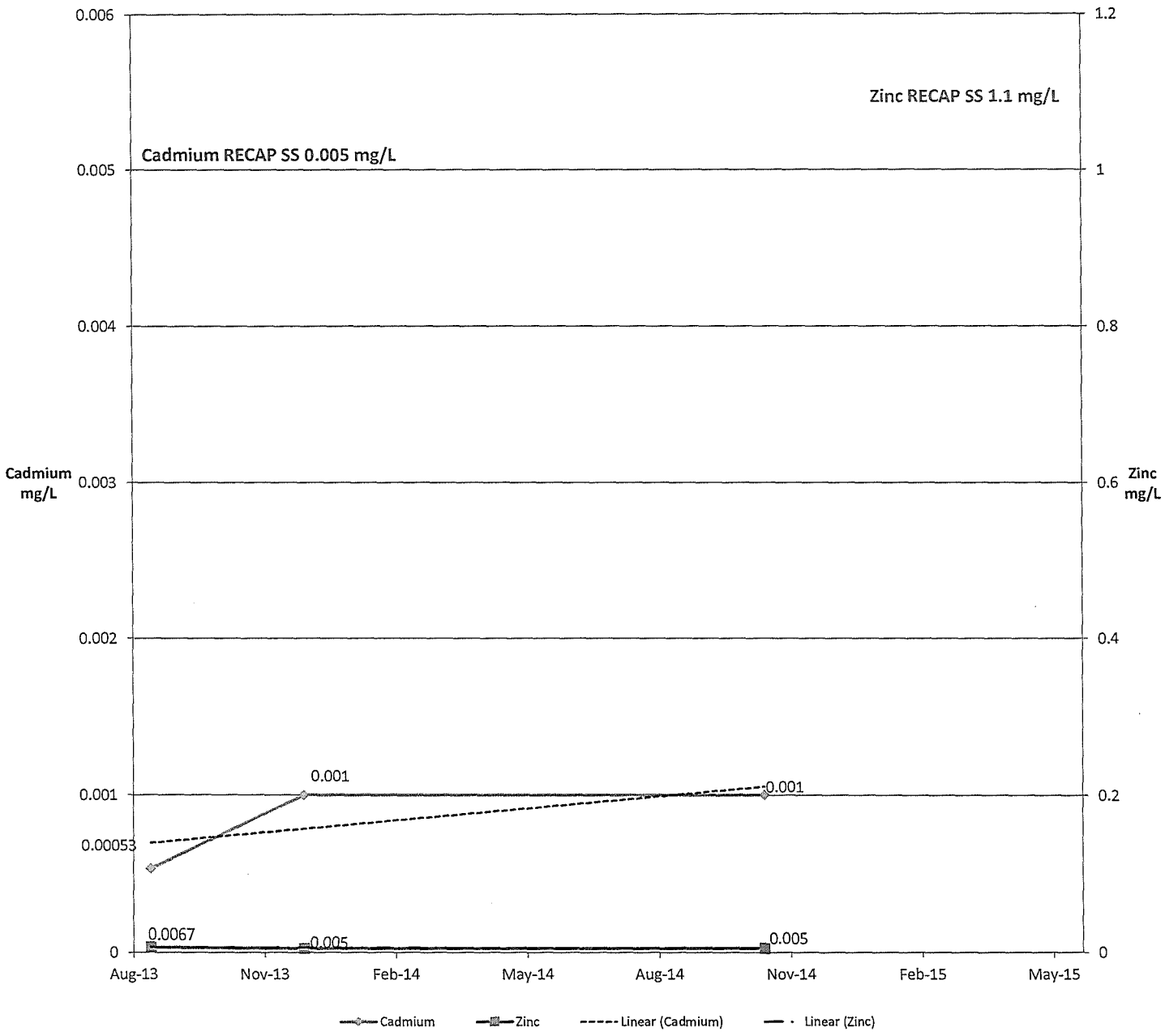

BB-01 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.00017
0.0033
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


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
7.40
6.89
6.83
0.001
0.001
0.0003
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
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
0.0086
0.00793
0.0086
0.036
0.0243
0.0244
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.06
0.05
0.04
0.03
0.02
0.01
0
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

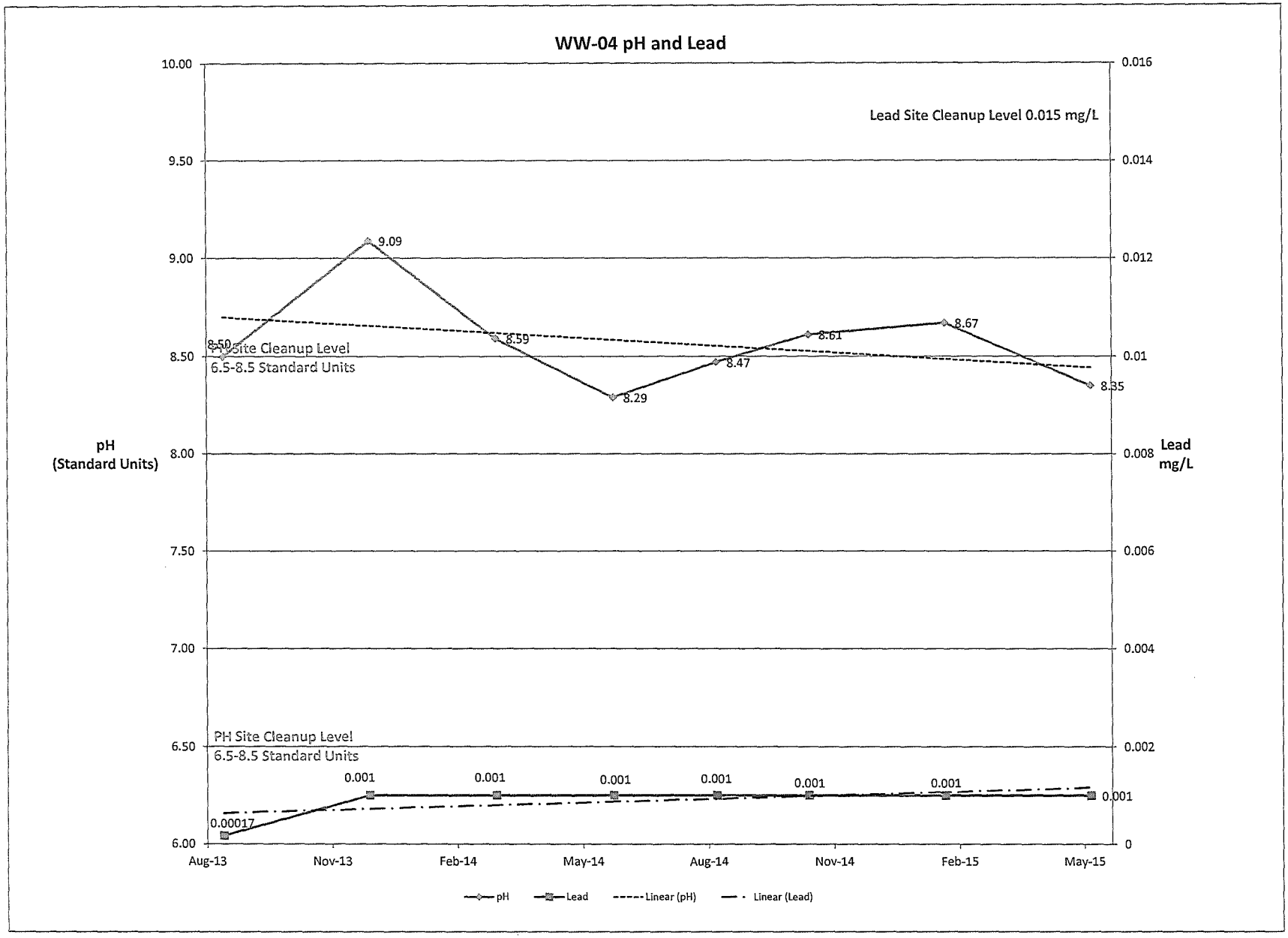

BA-01A Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

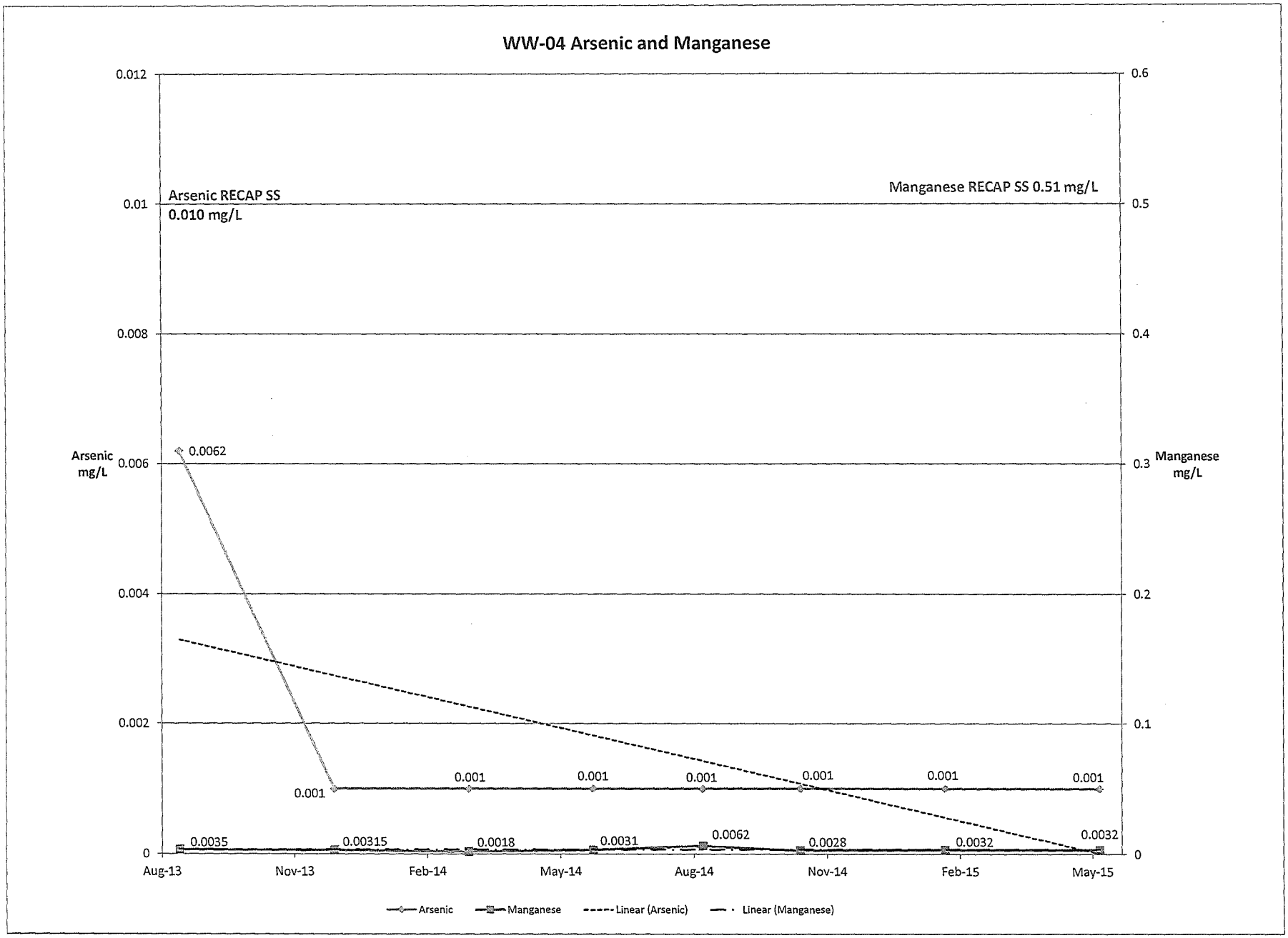
BA-01A Cadmium and Zinc

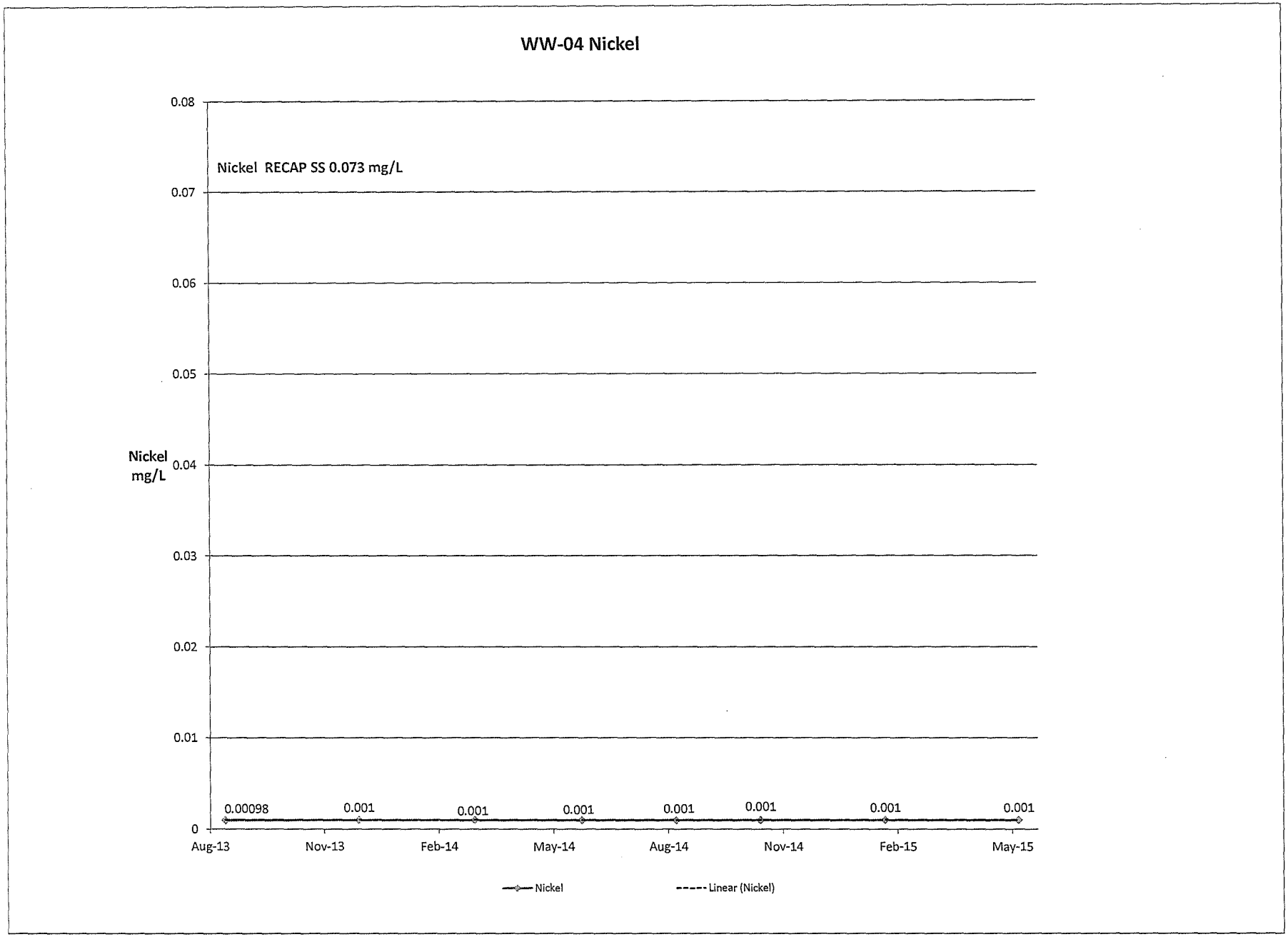


WATER WELLS

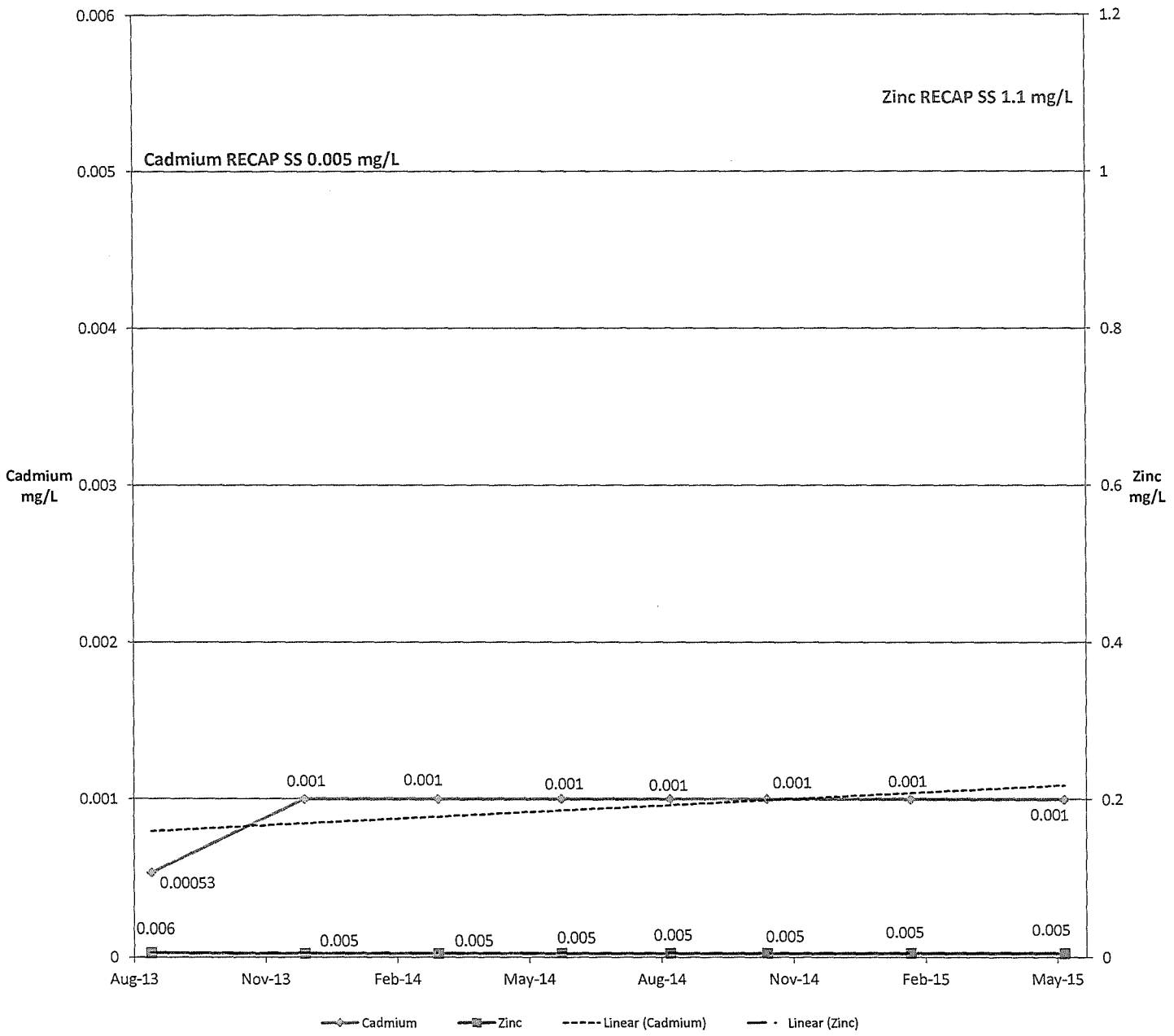
(PAST EIGHT QUARTERS)

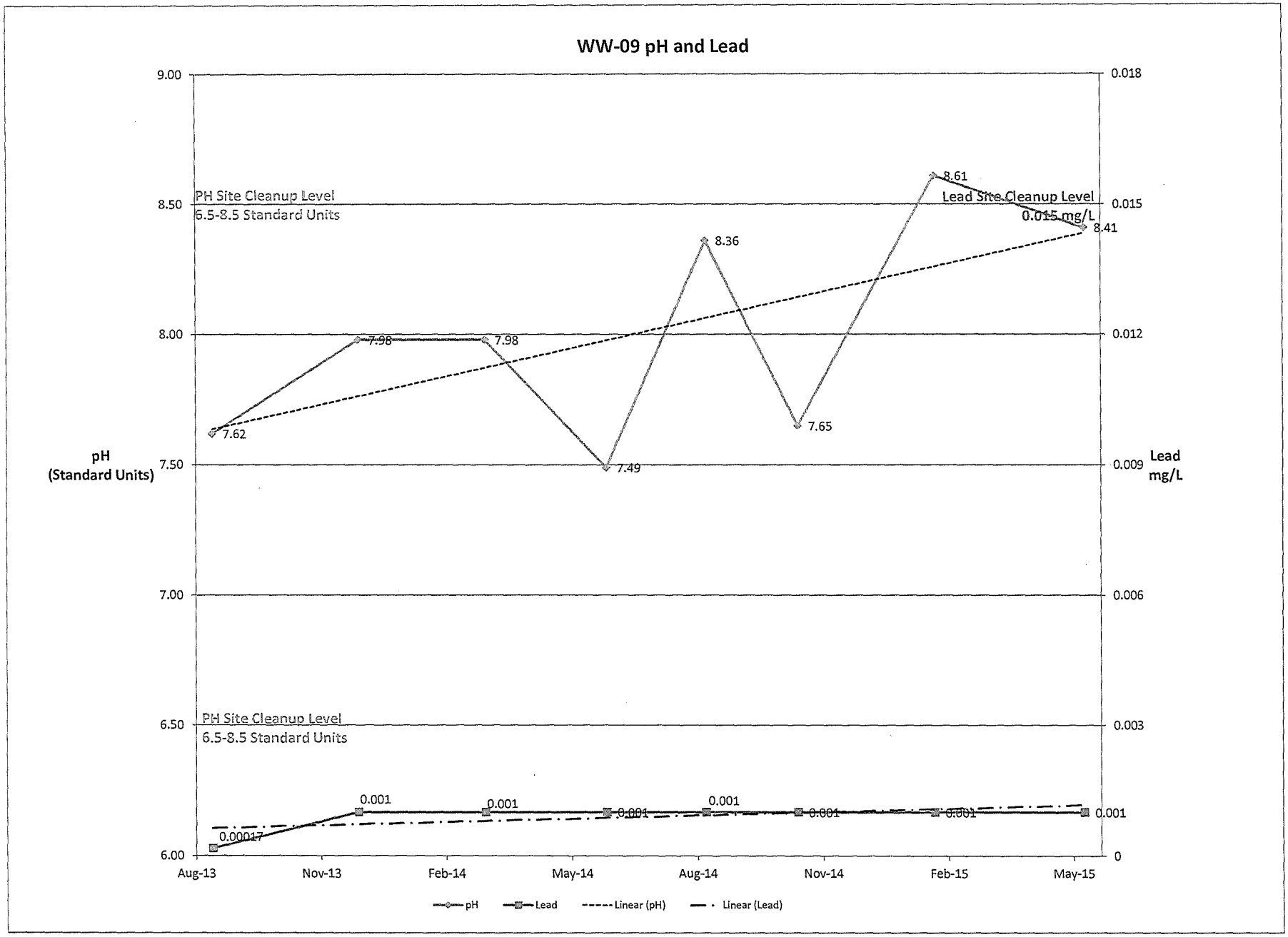

WW-04 pH and Lead
Lead Site Cleanup Level 0.015 mg/L
pH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
8.50
9.09
8.59
8.29
8.47
8.61
8.67
8.35
0.00017
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

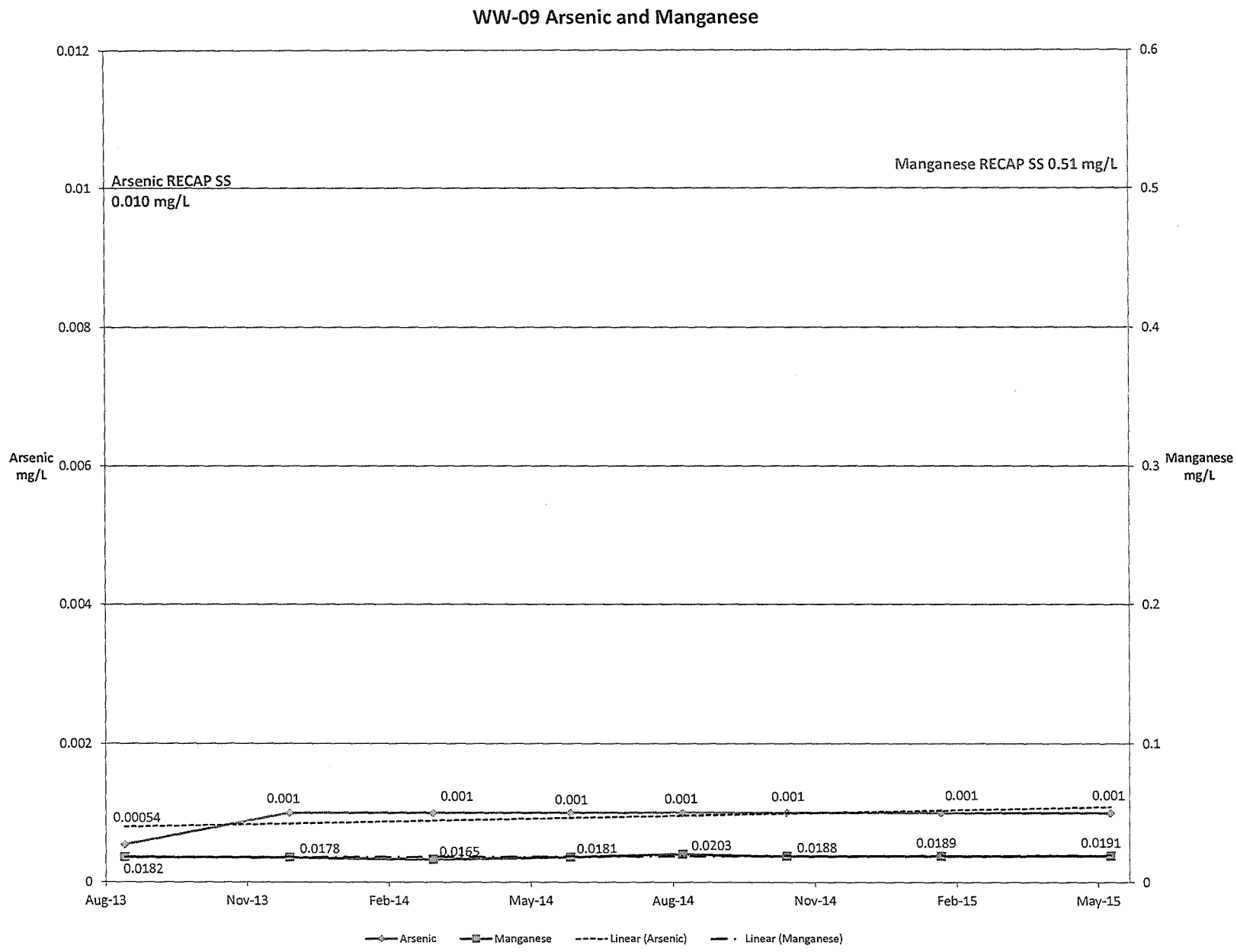

WW-04 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0062
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0035
0.00315
0.0018
0.0031
0.0062
0.0028
0.0032
0.0032
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

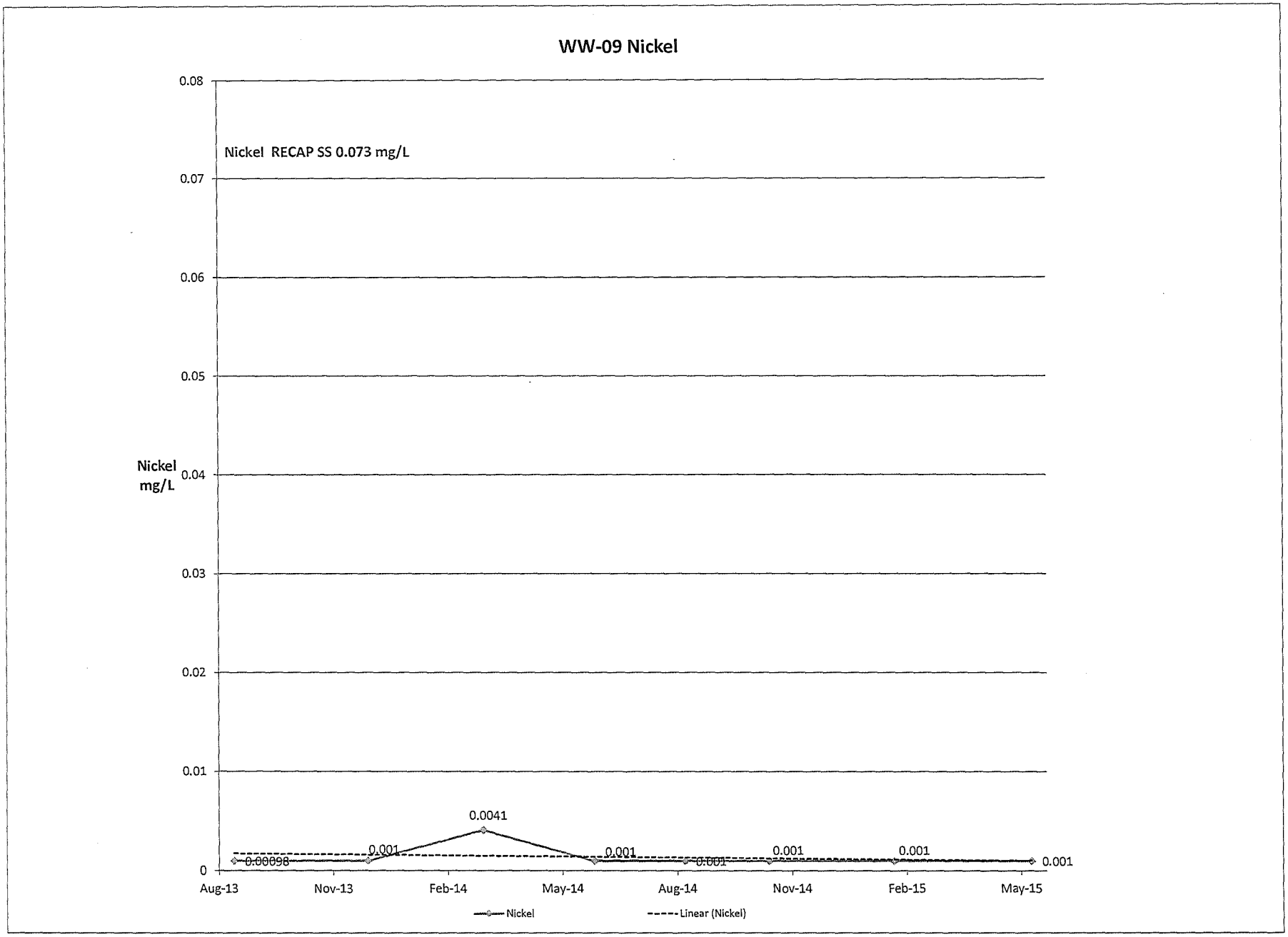

WW-04 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

WW-04 Cadmium and Zinc

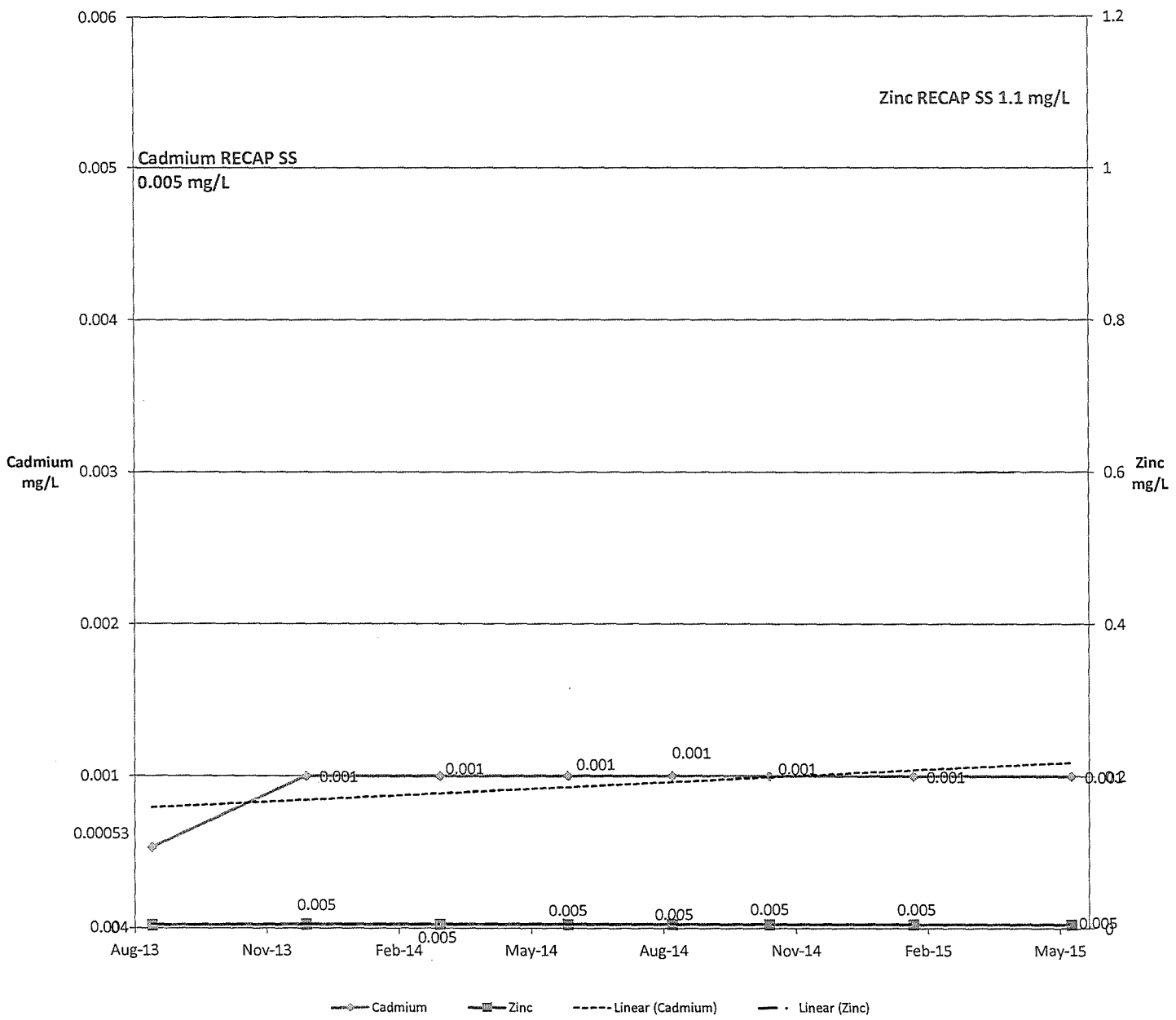


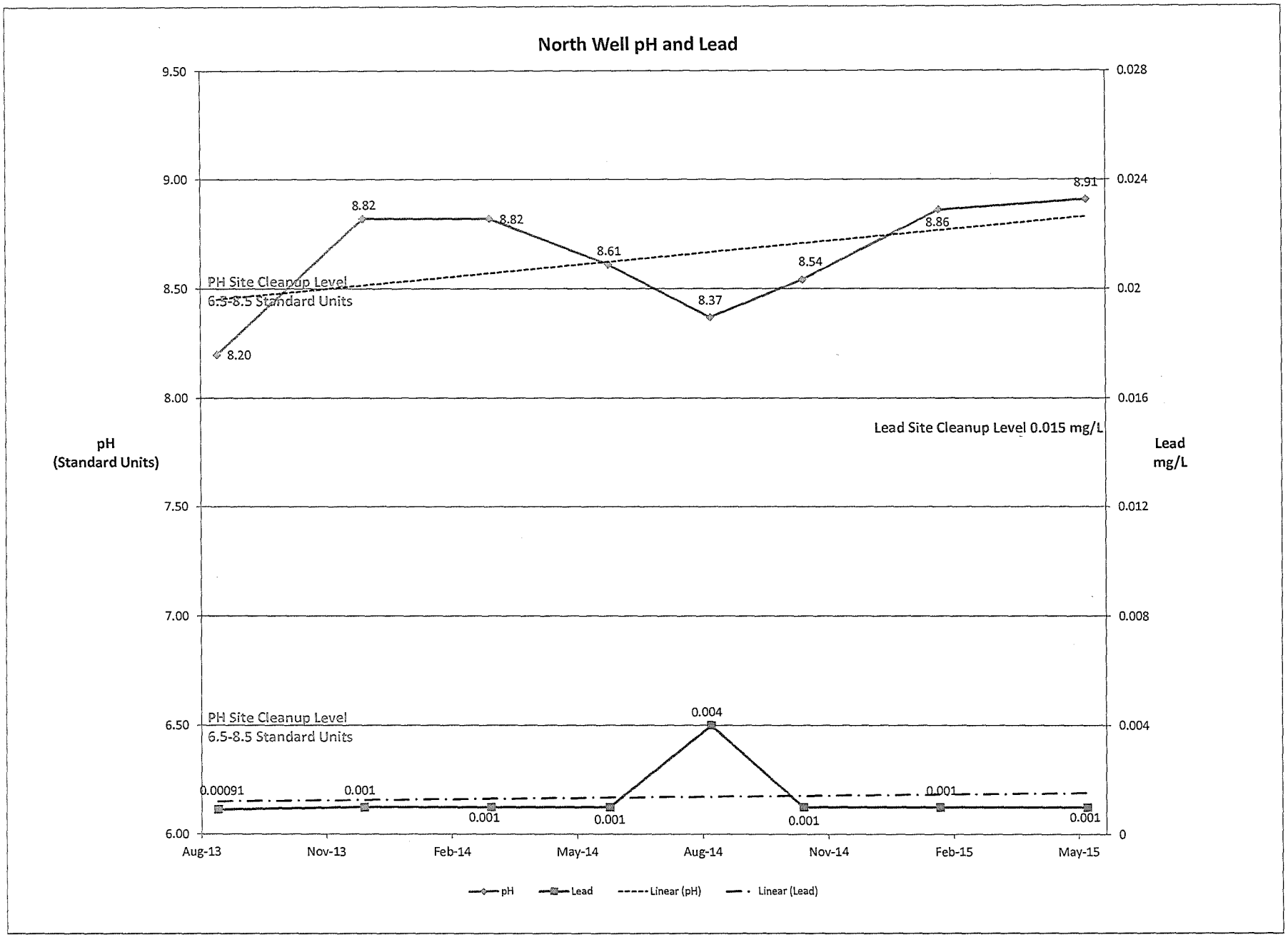

WW-09 pH and Lead
pH
(Standard Units)
Lead
mg/L
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.018
0.015
0.012
0.009
0.006
0.003
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
7.62
7.98
7.98
7.49
8.36
7.65
8.61
8.41
0.00017
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

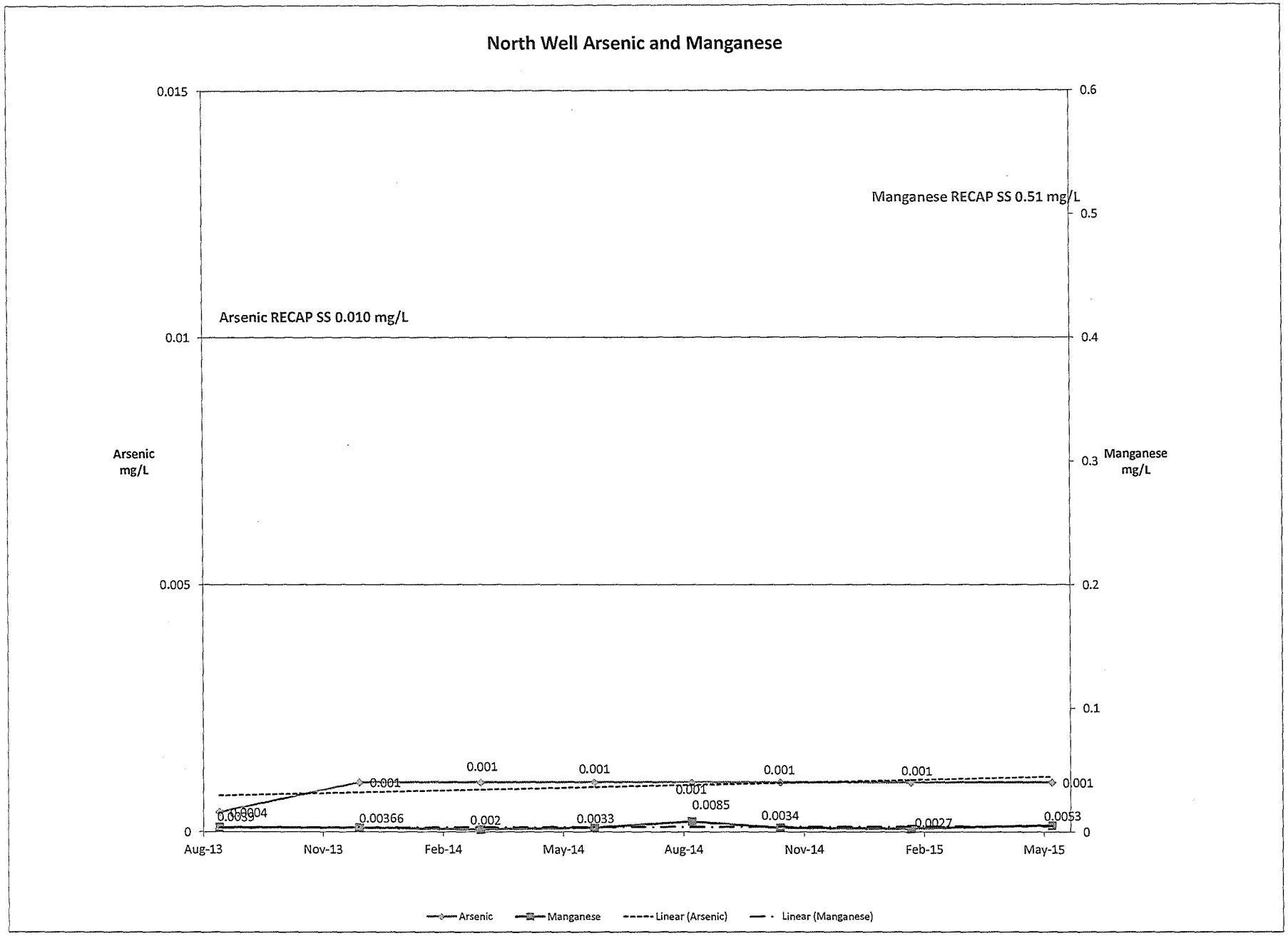

WW-09 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00054
0.0178
0.0165
0.0181
0.0203
0.0188
0.0189
0.0191
0.0182
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

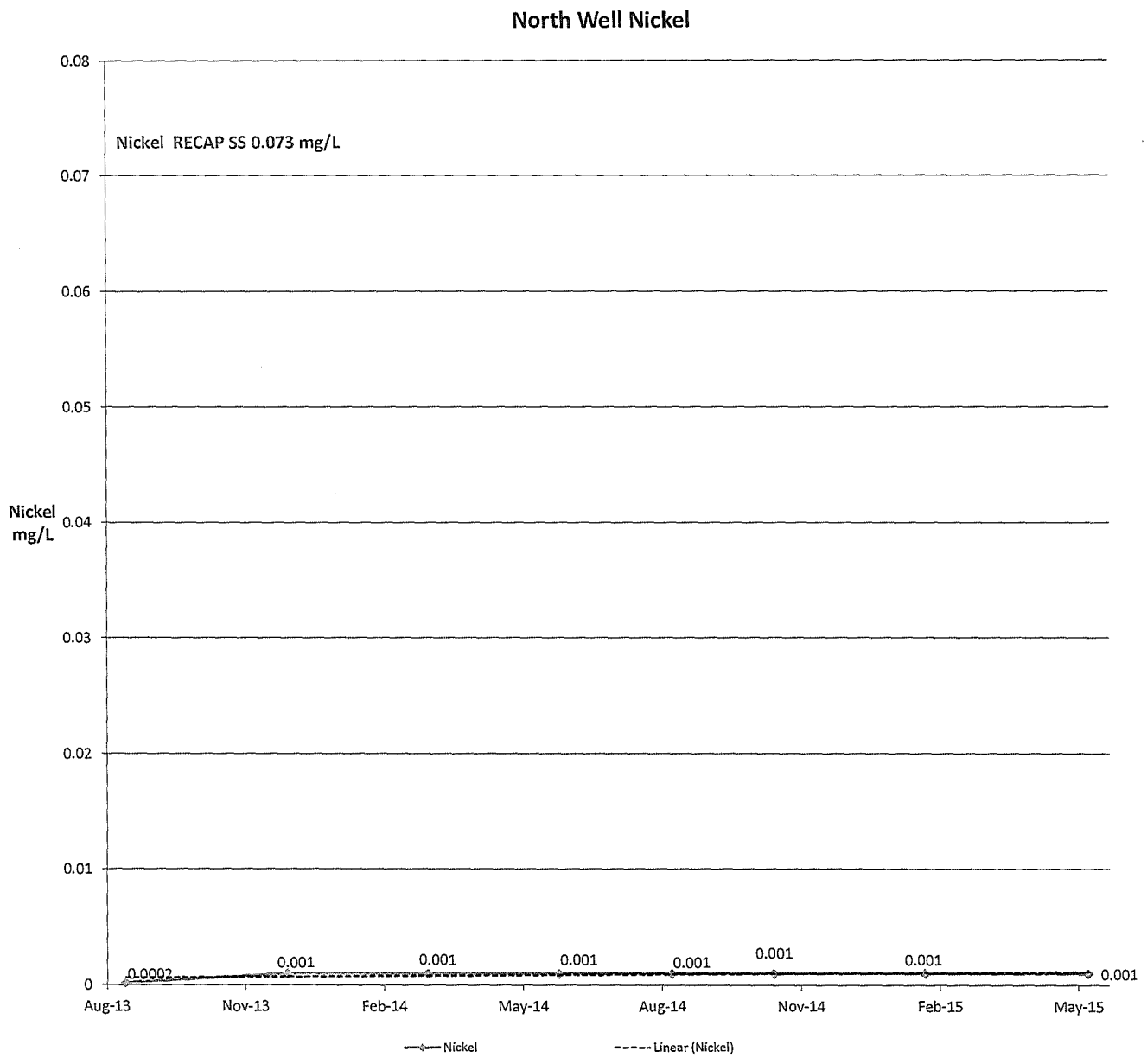

WW-09 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.0041
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

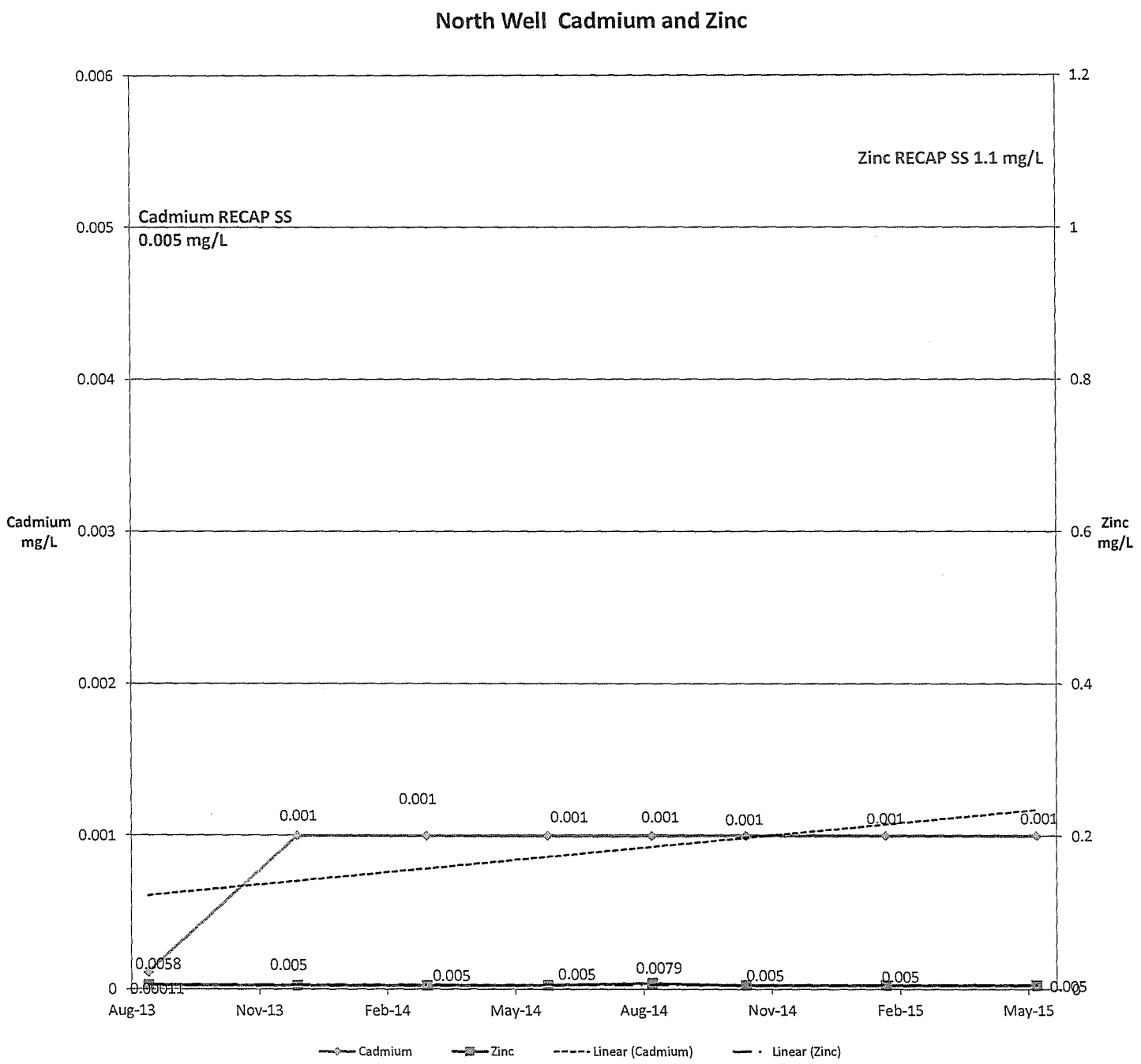
WW-09 Cadmium and Zinc

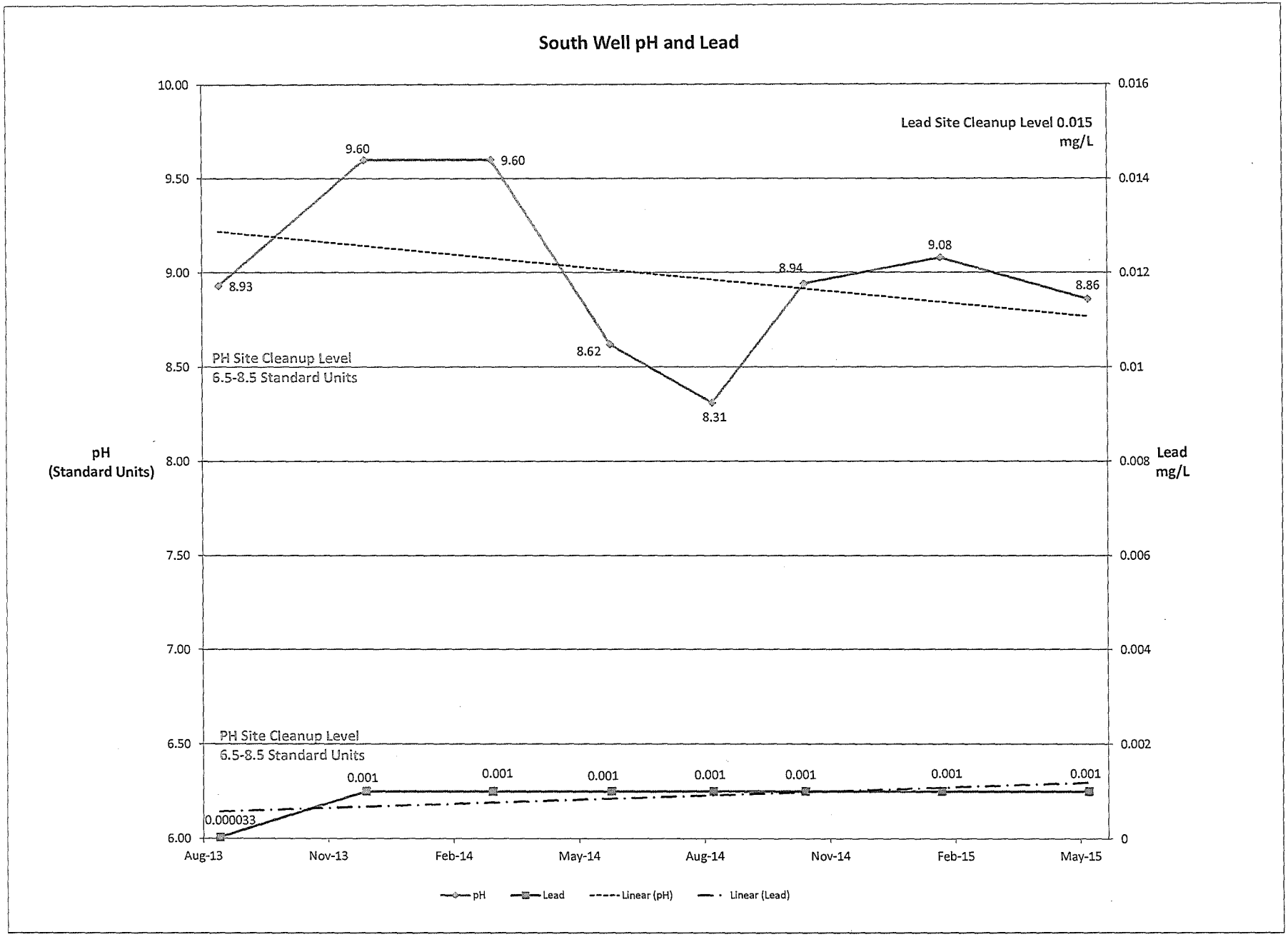


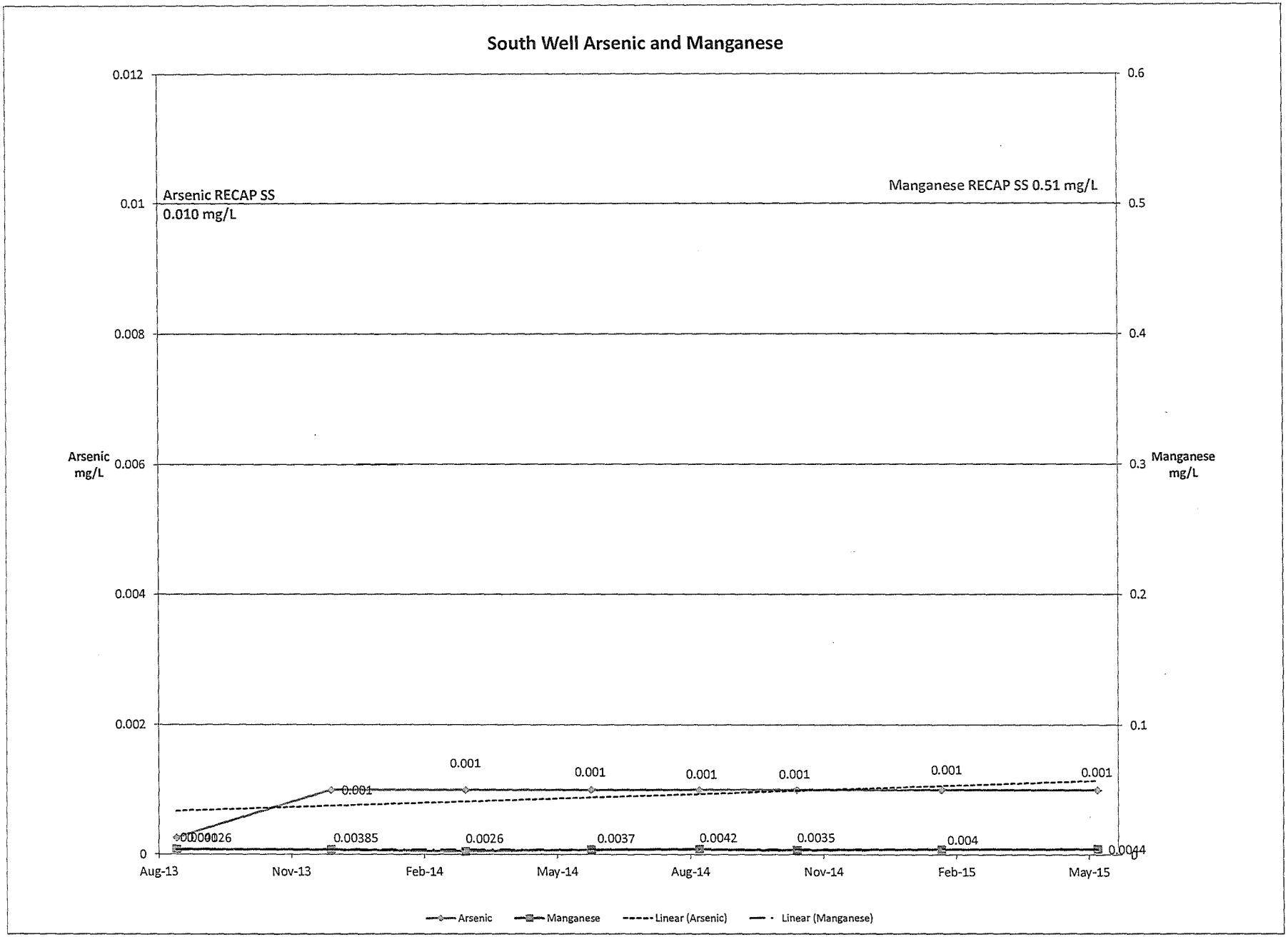

North Well pH and Lead
pH
(Standard Units)
Lead
mg/L
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.028
0.024
0.02
0.016
0.012
0.008
0.004
0
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level 0.015 mg/L
8.20
8.82
8.82
8.61
8.37
8.54
8.86
8.91
0.00091
0.001
0.001
0.001
0.004
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

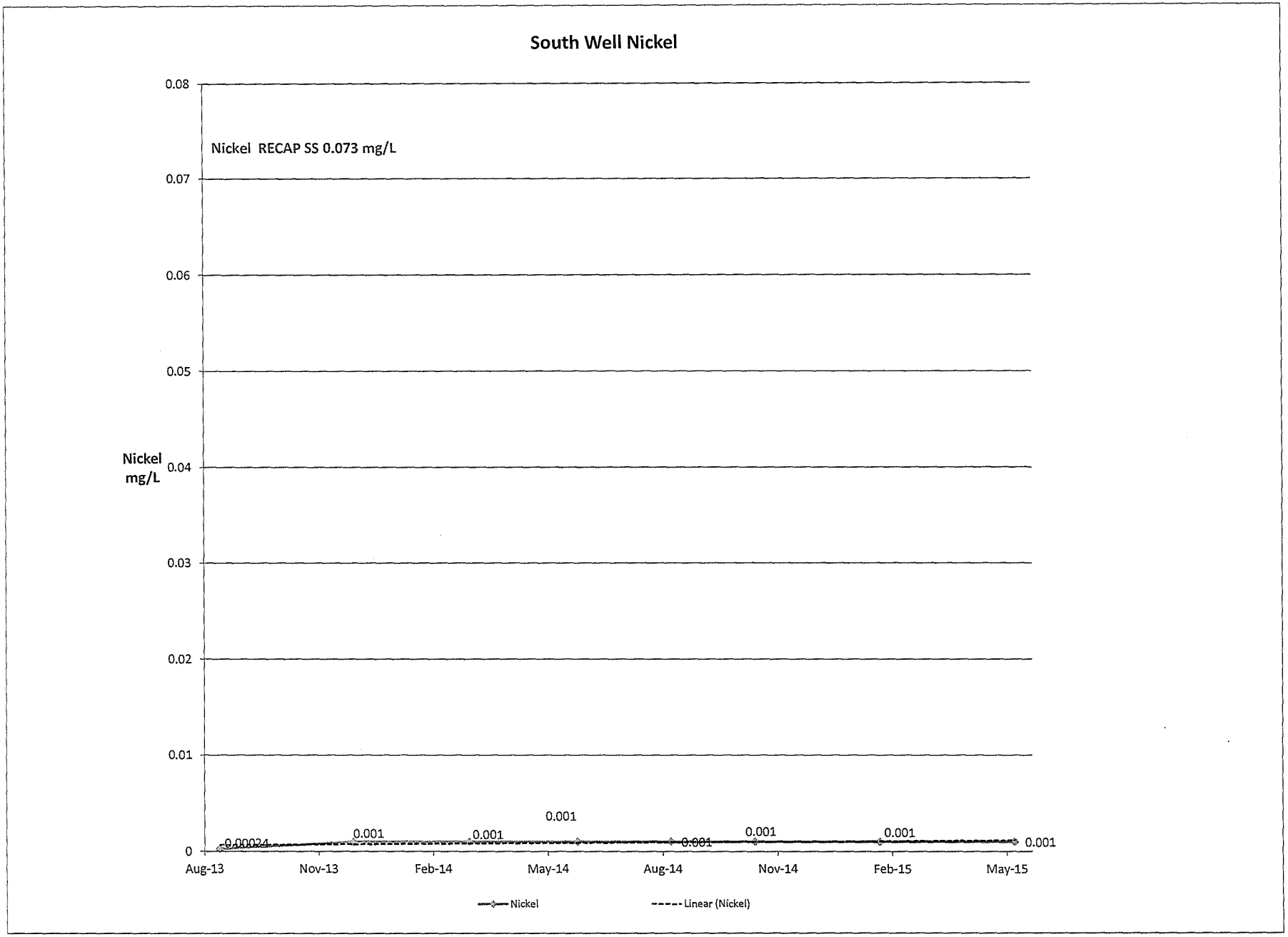

North Well Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS 0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.015
0.01
0.005
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00366
0.002
0.0033
0.0085
0.0034
0.0027
0.0053
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

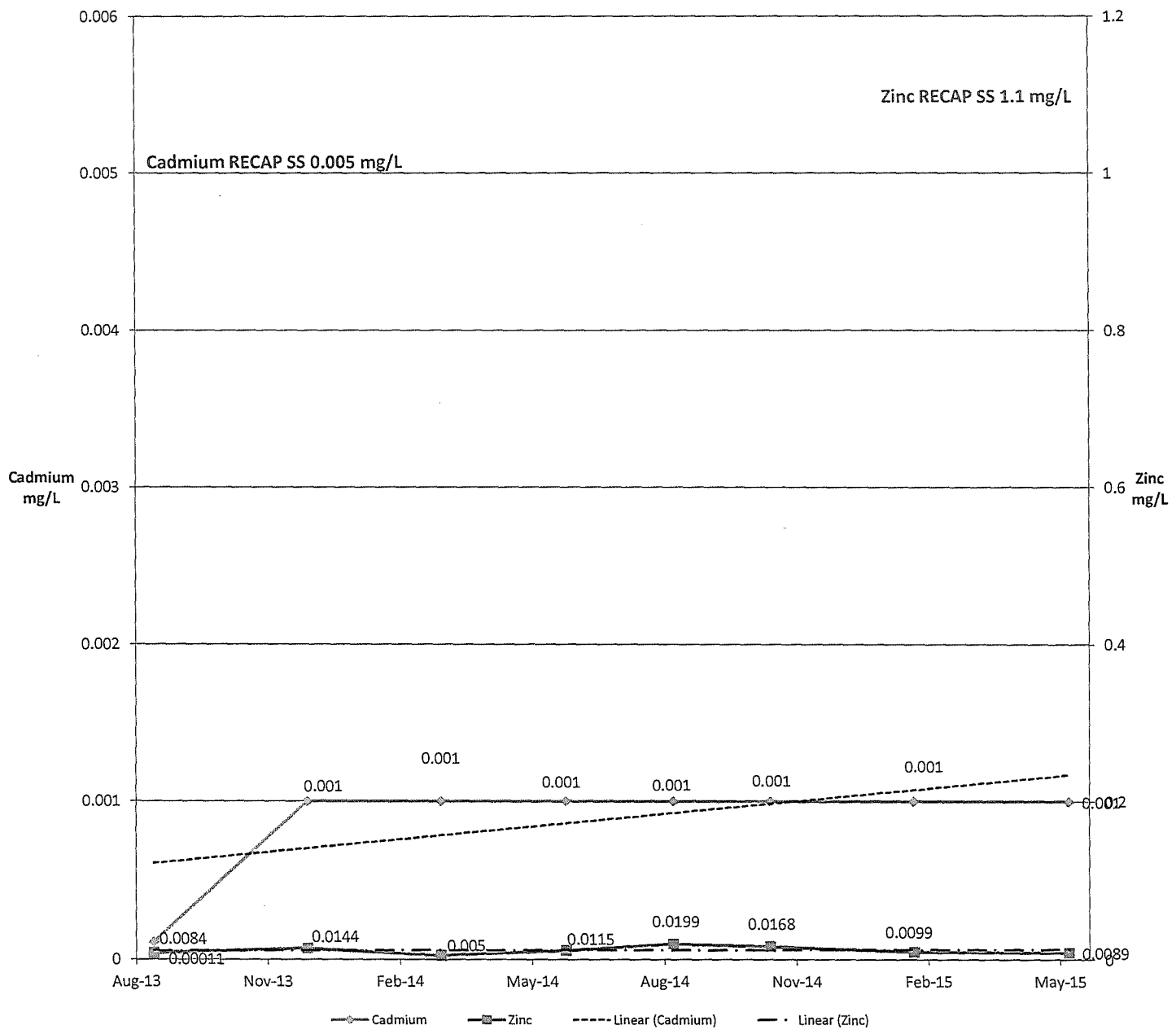

North Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0002
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

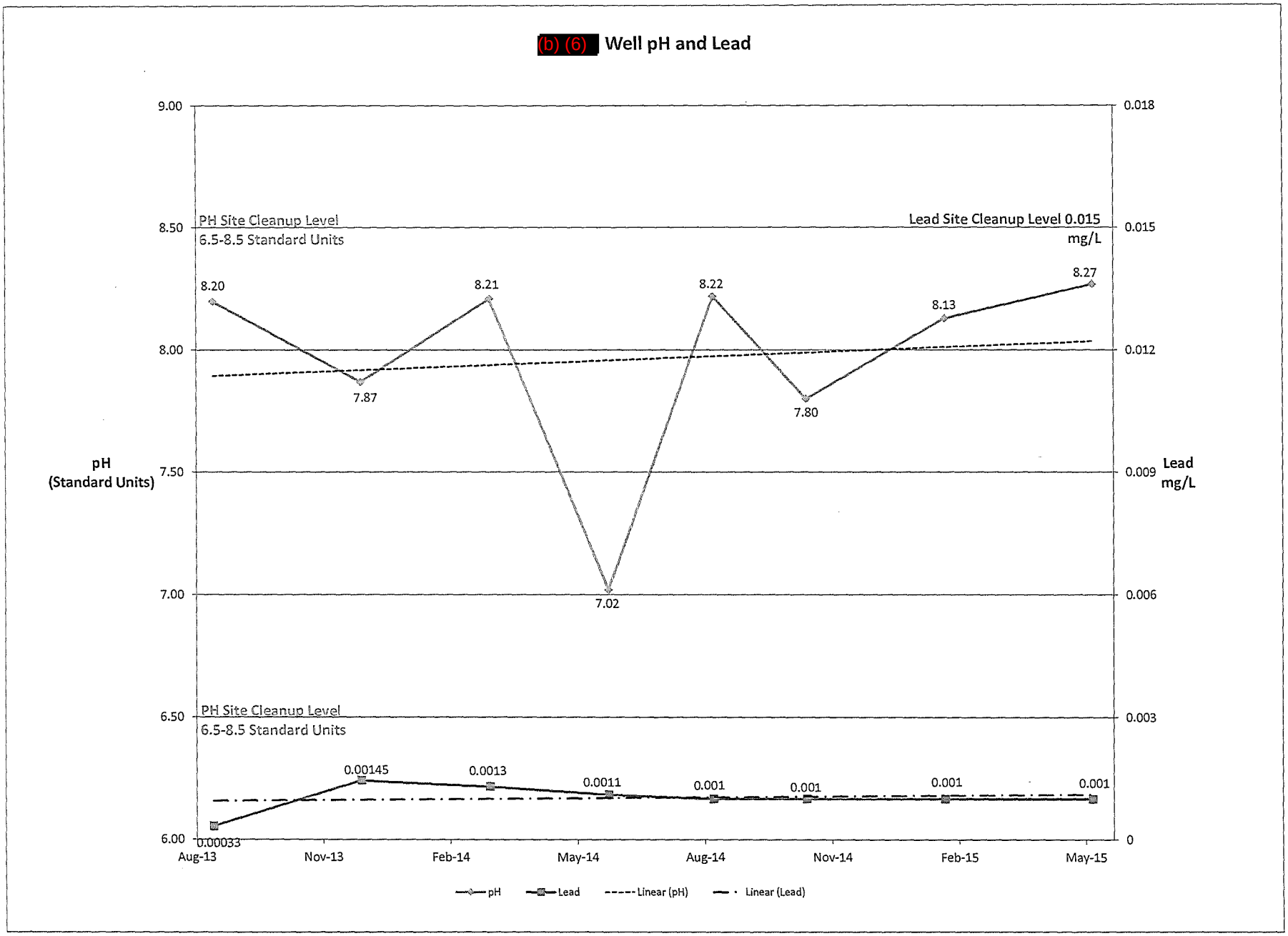

North Well Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS
0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0058
0.005
0.005
0.005
0.0079
0.005
0.005
0.00011
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

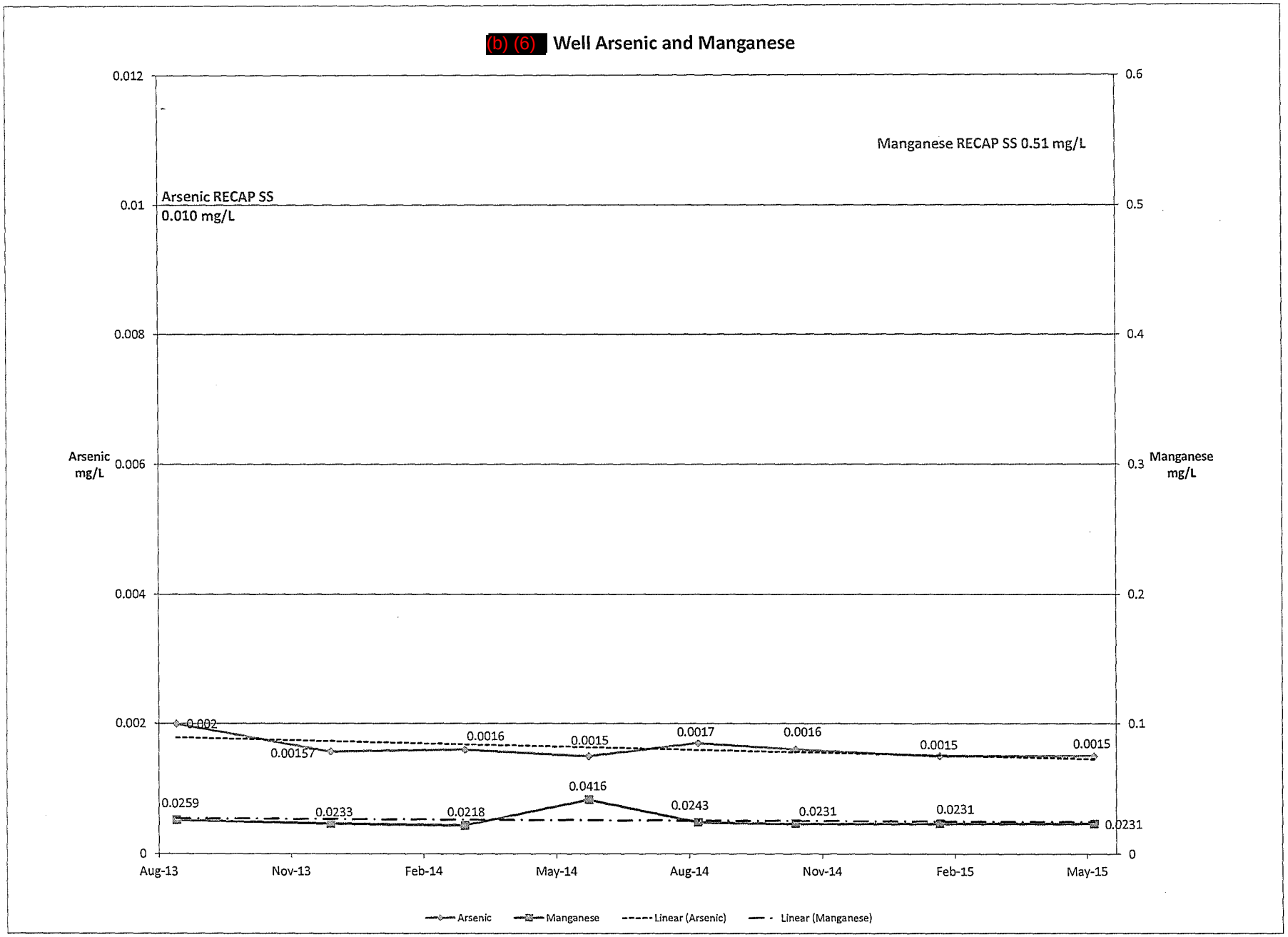

South Well pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH (Standard Units)
Lead mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
9.60
9.60
8.93
8.62
8.31
8.94
9.08
8.86
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.000033
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

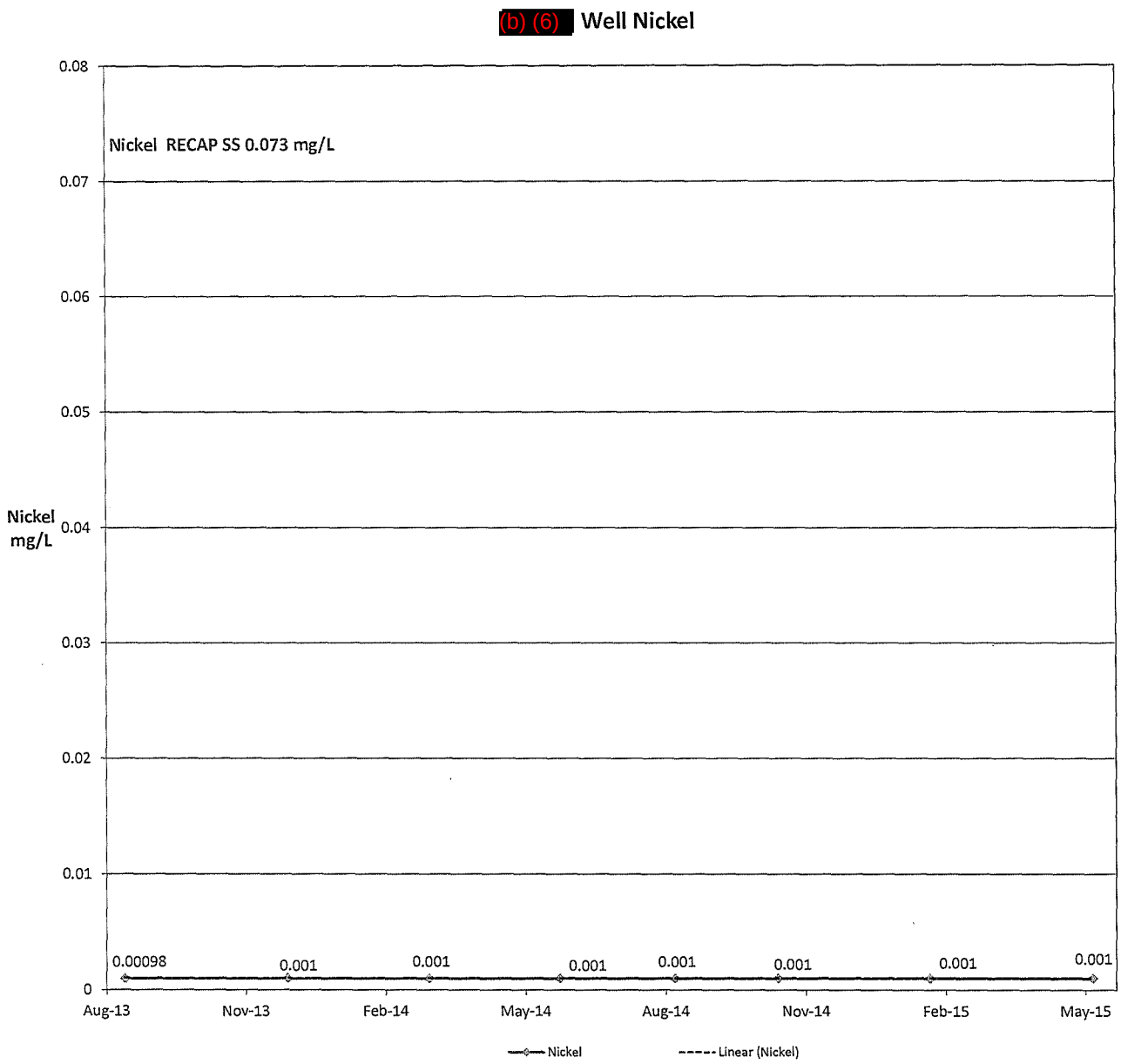

South Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00026
0.00385
0.0026
0.0037
0.0042
0.0035
0.004
0.0044
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
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
0.00024
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

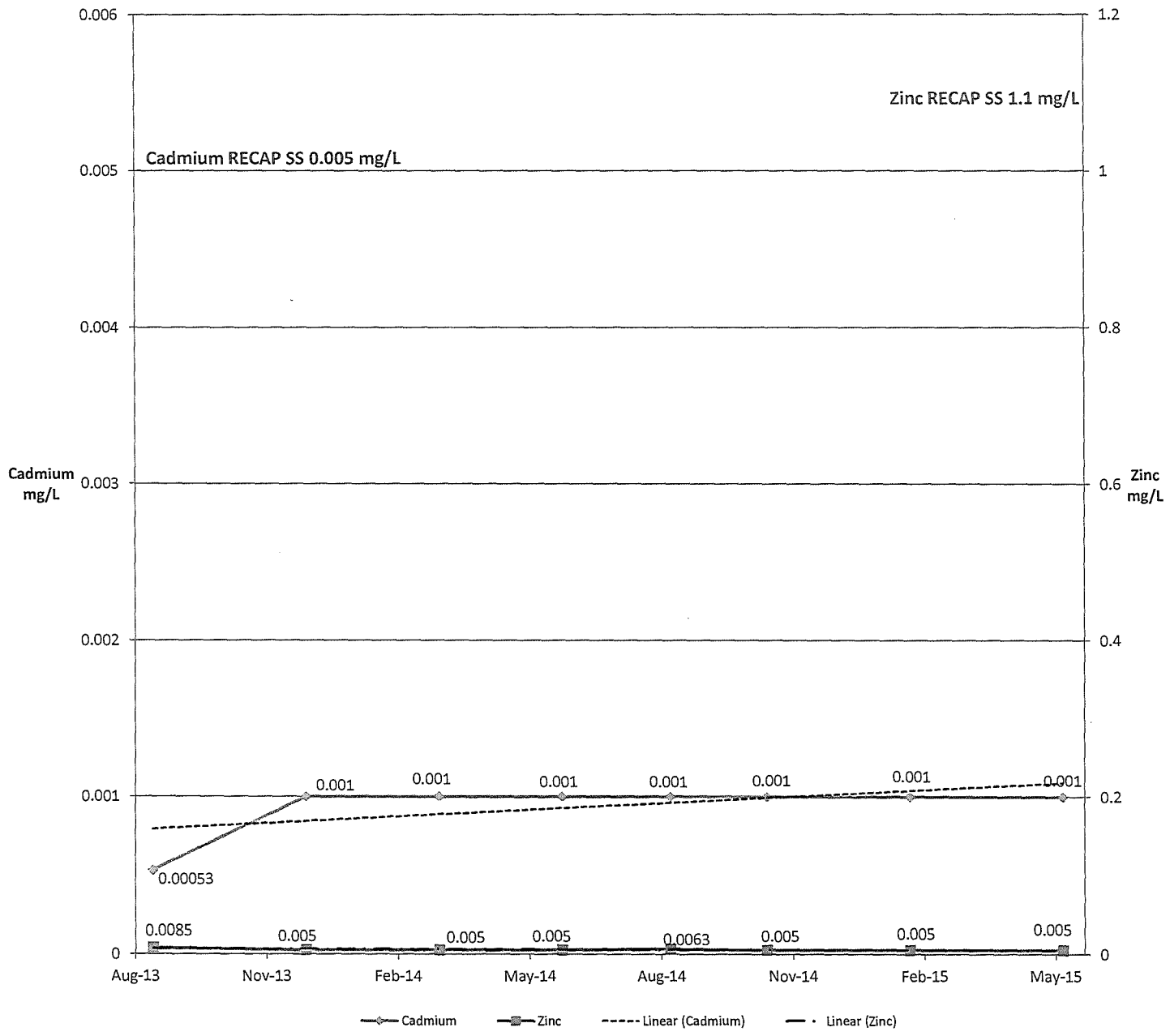

South Well Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.001
0.001
0.001
0.001
0.001
0.001
0.0012
0.0084
0.00011
0.0144
0.005
0.0115
0.0199
0.0168
0.0099
0.0089
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)


(b) (6) Well 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
8.20
7.87
8.21
7.02
8.22
7.80
8.13
8.27
PH Site Cleanup Level
6.5-8.5 Standard Units
0.00033
0.00145
0.0013
0.0011
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)


(b) (6) Well Arsenic and Manganese
Manganese RECAP SS 0.51 mg/L
Arsenic RECAP SS
0.010 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.002
0.00157
0.0016
0.0015
0.0017
0.0016
0.0015
0.0015
0.0259
0.0233
0.0218
0.0416
0.0243
0.0231
0.0231
0.0231
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

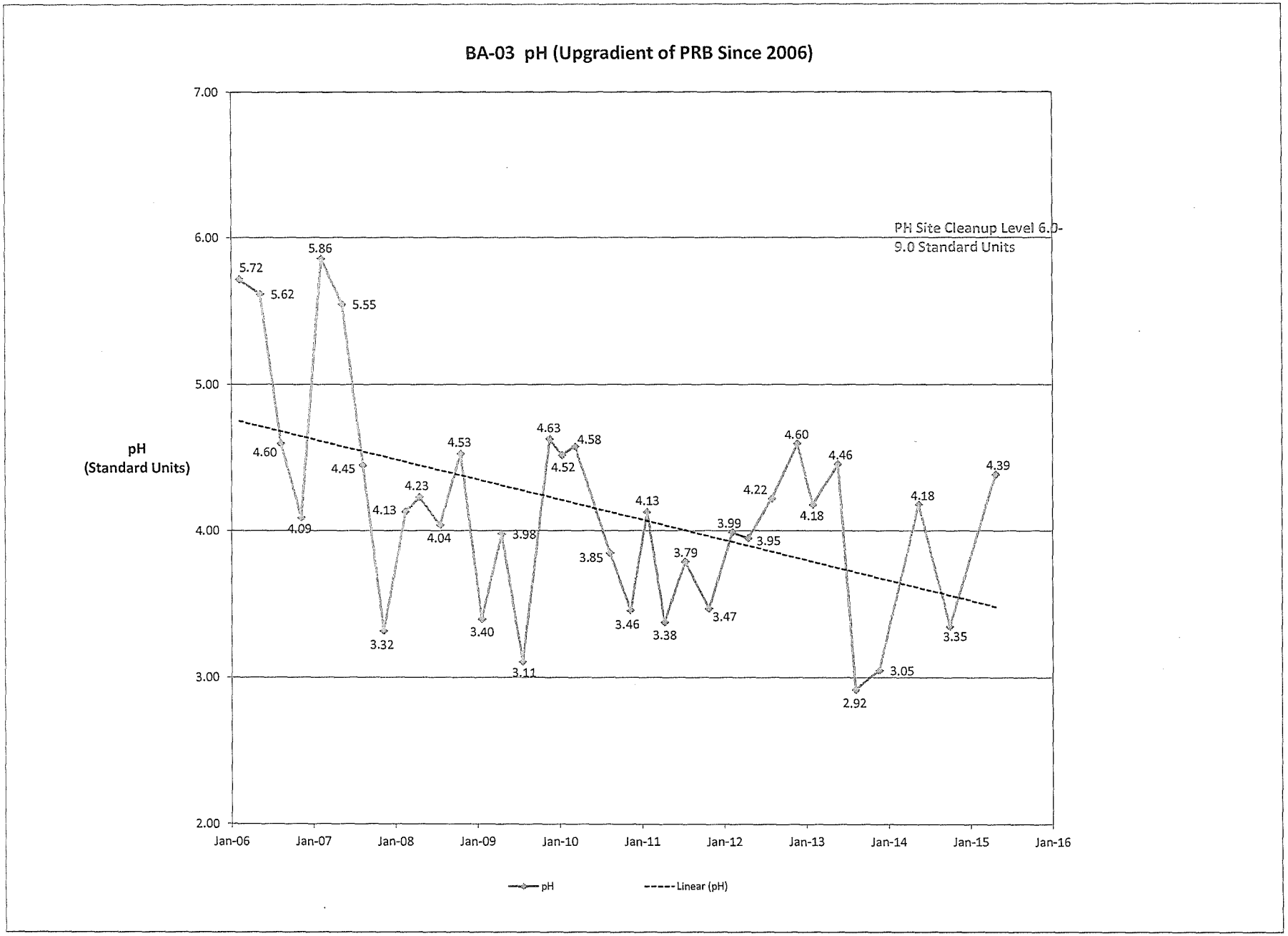

(b) (6) Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

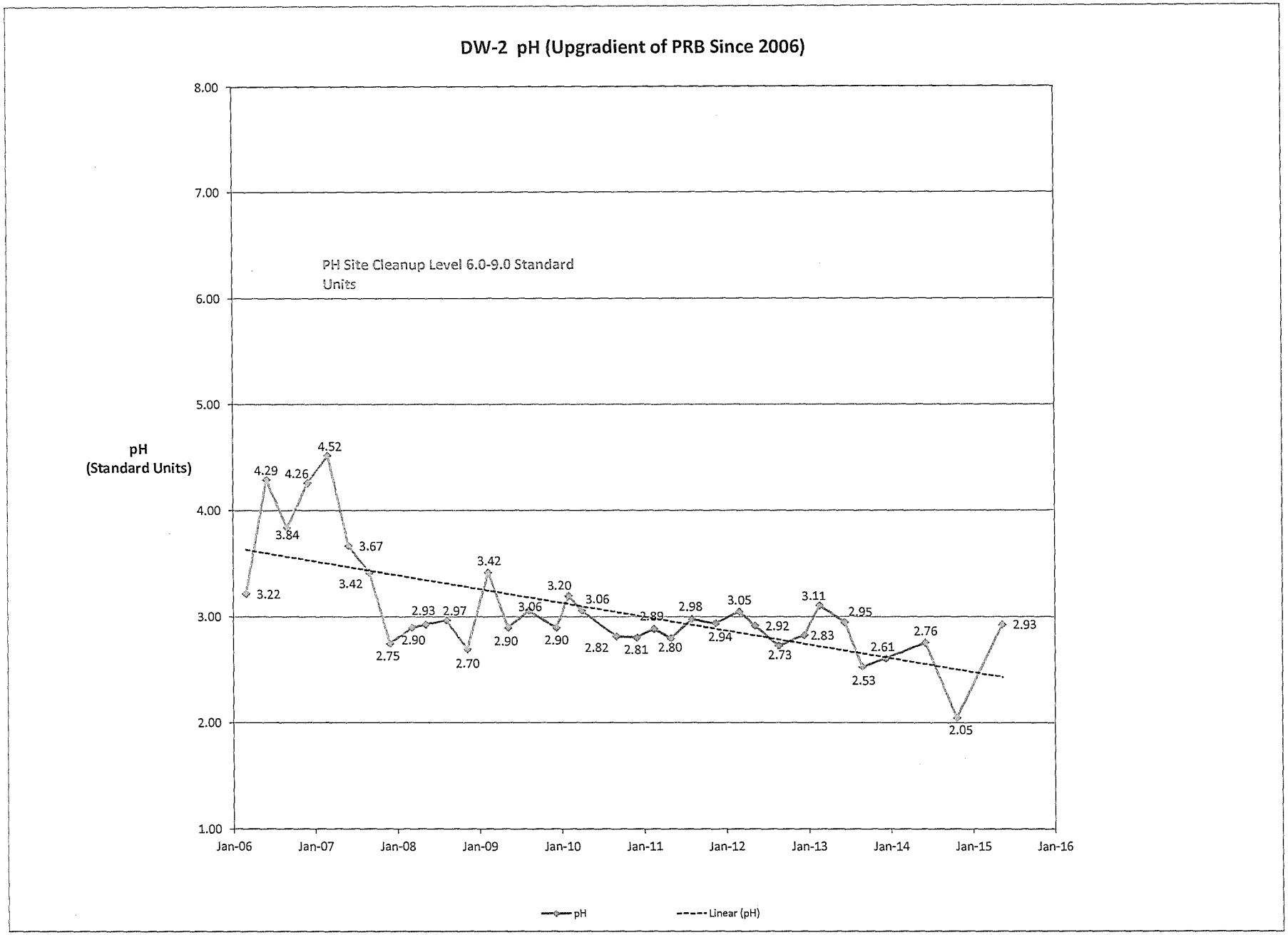
(b) (6) Well Cadmium and Zinc

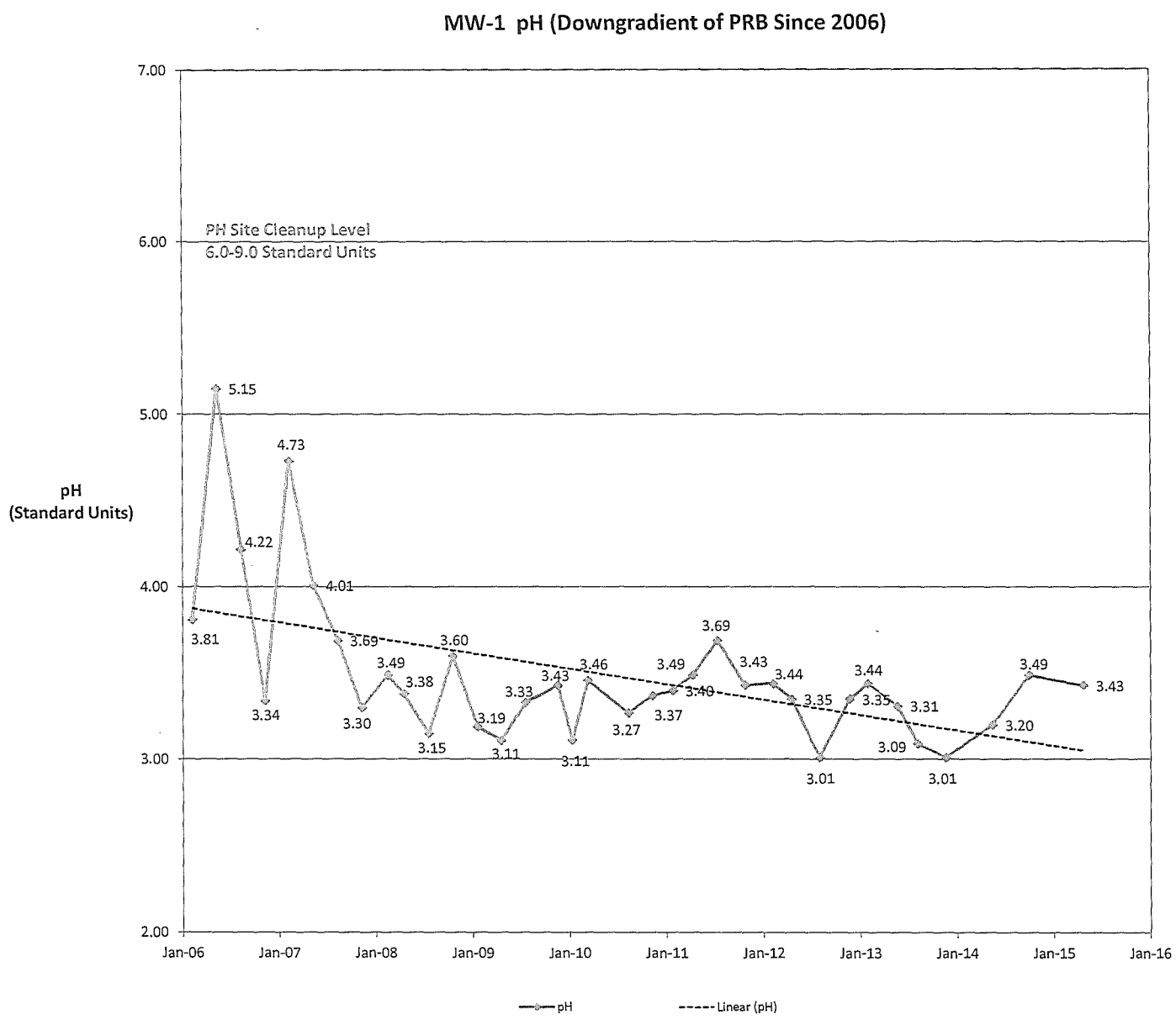


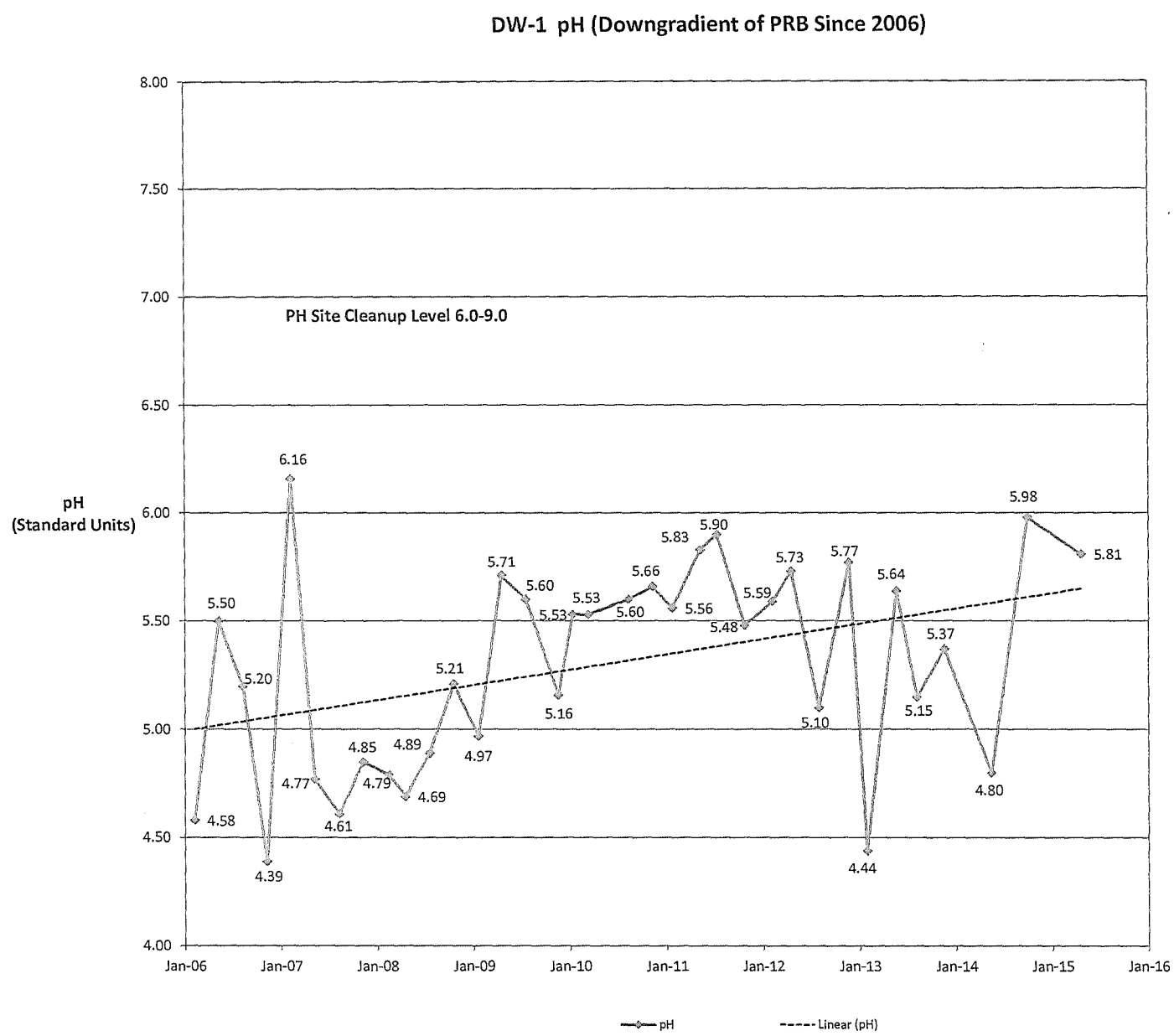
FIRST WATER BEARING ZONE

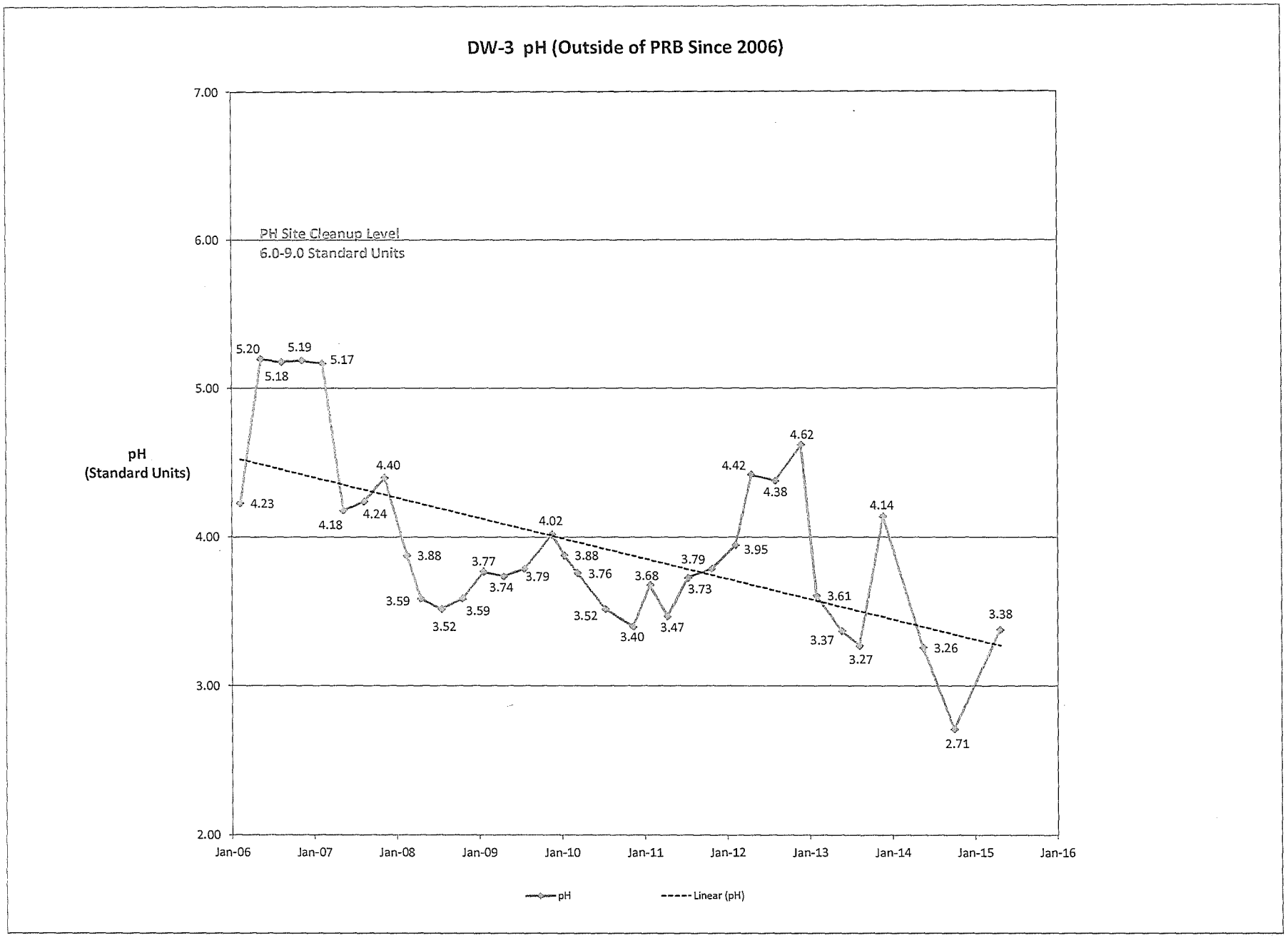
(SINCE 2006)


BA-03 pH (Upgradient of PRB Since 2006)
pH
(Standard Units)
7.00
6.00
5.00
4.00
3.00
2.00
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
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
4.13
4.23
4.04
4.53
3.40
3.98
3.11
4.63
4.52
4.58
3.85
3.46
4.13
3.38
3.79
3.47
3.99
3.95
4.22
4.60
4.18
4.46
2.92
3.05
4.18
3.35
4.39
pH
Linear (pH)


DW-2 pH (Upgradient of PRB Since 2006)
pH
(Standard Units)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
PH Site Cleanup Level 6.0-9.0 Standard Units
4.29
4.26
4.52
3.84
3.67
3.22
3.42
2.75
2.90
2.93
2.97
2.70
3.42
2.90
3.06
2.90
3.20
3.06
2.82
2.81
2.89
2.80
2.98
2.94
3.05
2.92
2.73
2.83
3.11
2.95
2.53
2.61
2.76
2.05
2.93
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
pH
Linear (pH)

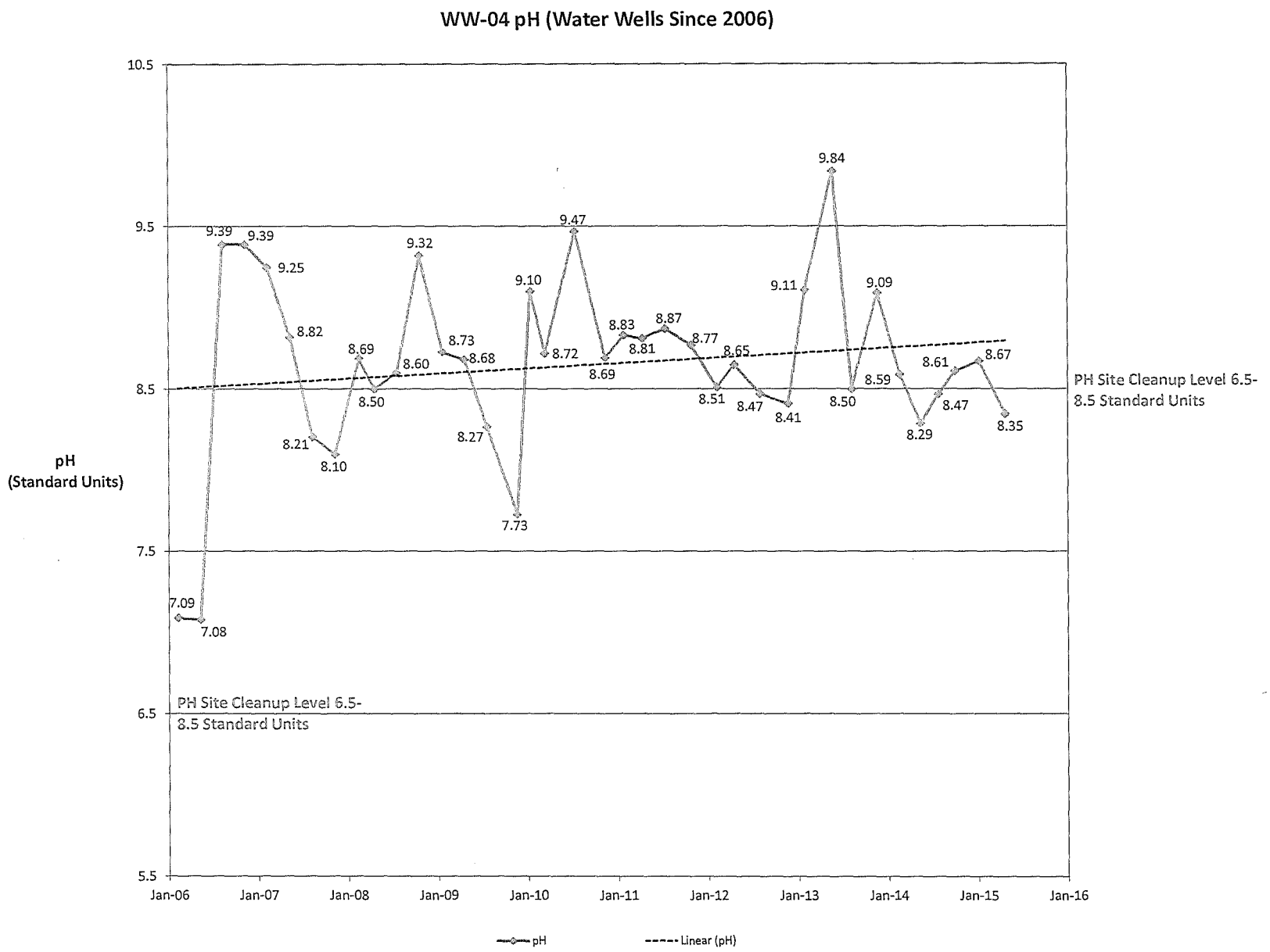

MW-1 pH (Downgradient of PRB Since 2006)
pH
(Standard Units)
7.00
6.00
5.00
4.00
3.00
2.00
PH Site Cleanup Level
6.0-9.0 Standard Units
5.15
4.22
3.34
4.73
4.01
3.30
3.69
3.49
3.38
3.15
3.60
3.19
3.11
3.33
3.43
3.11
3.46
3.27
3.37
3.49
3.40
3.69
3.43
3.44
3.35
3.01
3.44
3.35
3.31
3.09
3.01
3.20
3.49
3.43
3.81
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
pH
Linear (pH)

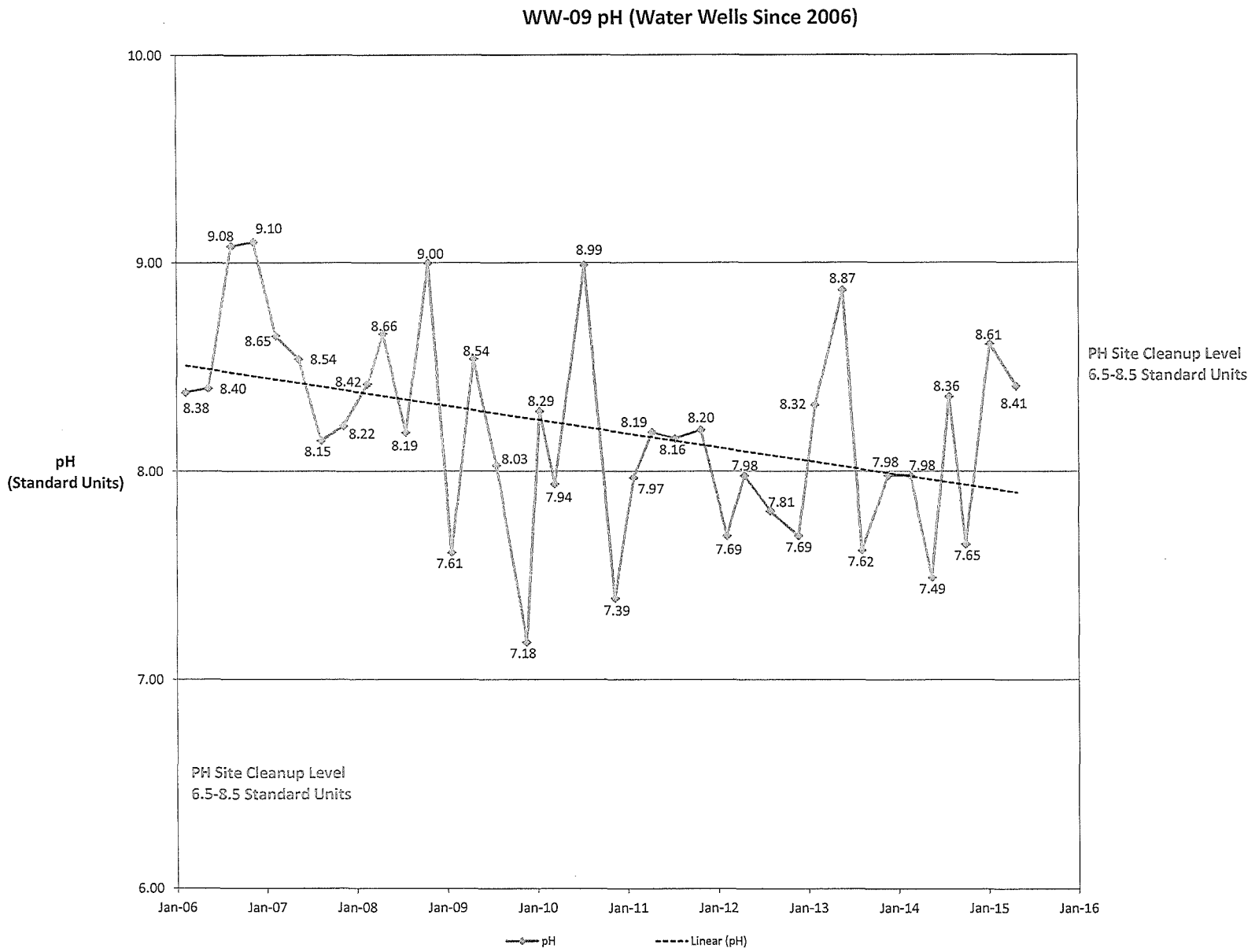

DW-1 pH (Downgradient of PRB Since 2006)
pH
(Standard Units)
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
PH Site Cleanup Level 6.0-9.0
4.58
5.50
5.20
4.39
6.16
4.77
4.61
4.85
4.79
4.89
4.69
5.21
4.97
5.71
5.60
5.16
5.53
5.53
5.60
5.66
5.83
5.56
5.90
5.48
5.59
5.73
5.10
5.77
4.44
5.64
5.15
5.37
4.80
5.98
5.81
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
pH
Linear (pH)

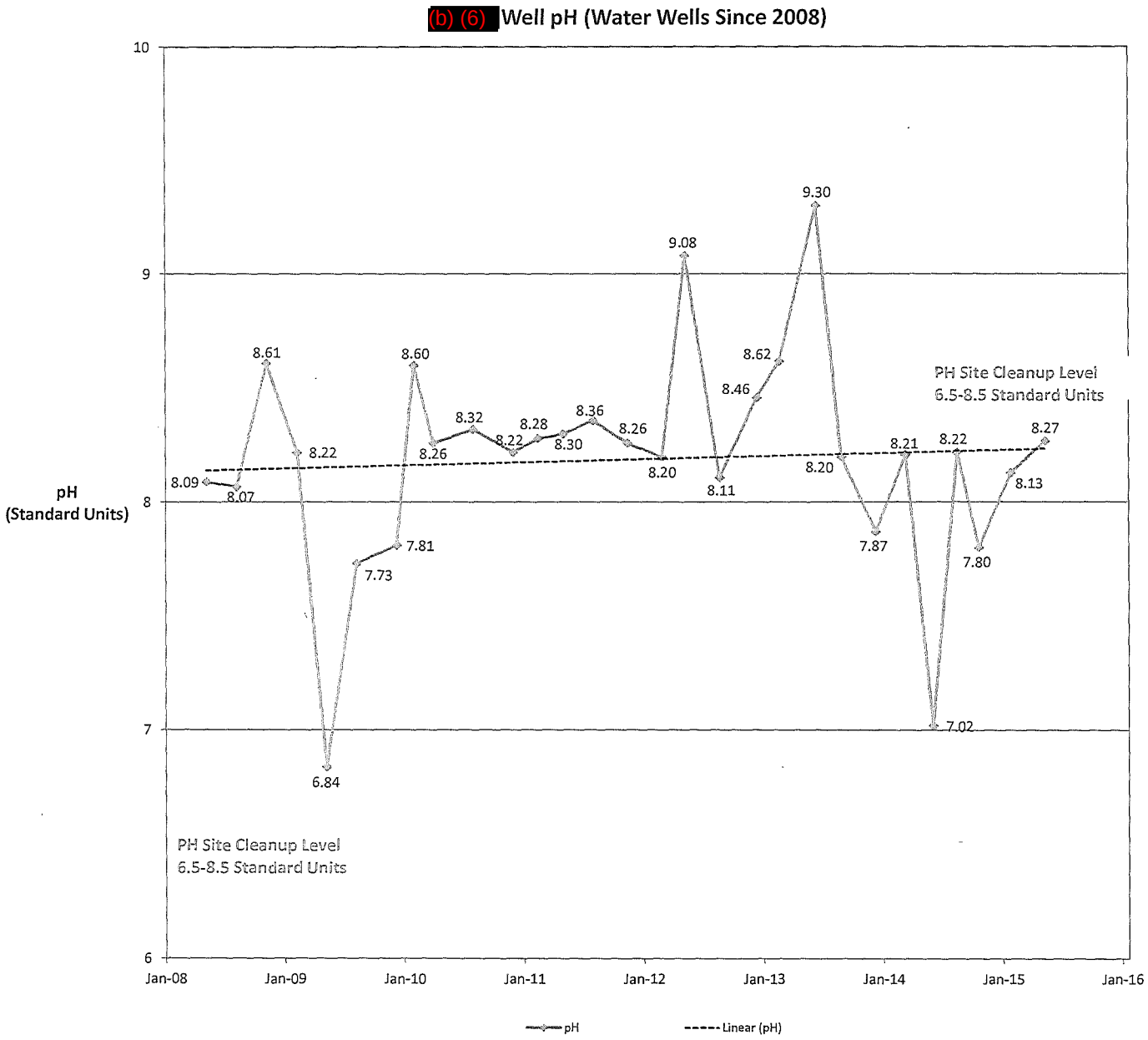

DW-3 pH (Outside of PRB Since 2006)
pH
(Standard Units)
7.00
6.00
5.00
4.00
3.00
2.00
PH Site Cleanup Level
6.0-9.0 Standard Units
5.20
5.18
5.19
5.17
4.23
4.18
4.24
4.40
3.88
3.59
3.52
3.59
3.77
3.74
3.79
4.02
3.88
3.76
3.52
3.40
3.68
3.47
3.79
3.73
4.42
3.95
4.38
4.62
3.61
3.37
3.27
4.14
3.26
2.71
3.38
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
pH
Linear (pH)

WATER WELLS

(SINCE 2006)


WW-04 pH (Water Wells Since 2006)
pH
(Standard Units)
10.5
9.5
8.5
7.5
6.5
5.5
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
7.09
7.08
9.39
9.39
9.25
8.82
8.21
8.10
8.69
8.50
8.60
9.32
8.73
8.68
8.27
7.73
9.10
8.72
9.47
8.69
8.83
8.81
8.87
8.77
8.51
8.65
8.47
8.41
9.11
9.84
8.50
9.09
8.59
8.29
8.47
8.61
8.67
8.35
PH Site Cleanup Level 6.5-
8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
pH
Linear (pH)


WW-09 pH (Water Wells Since 2006)
pH
(Standard Units)
10.00
9.00
8.00
7.00
6.00
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
8.38
8.40
9.08
9.10
8.65
8.54
8.15
8.42
8.22
8.66
8.19
9.00
7.61
8.54
8.03
7.18
8.29
7.94
8.99
7.39
8.19
7.97
8.16
8.20
7.69
7.98
7.81
7.69
8.32
8.87
7.62
7.98
7.98
7.49
8.36
7.65
8.61
8.41
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
Linear (pH)


(b) (6) Well pH (Water Wells Since 2008)
pH
(Standard Units)
10
9
8
7
6
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
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
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
Linear (pH)

ATTACHMENT D

DATA VALIDATION PACKAGE

Data Validation Report

Client: SEMS, Inc.

Project: Delatte Metals

SDG: 2019932 Date: July 10, 2015

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: July 10, 2015

Sample Delivery Group: 2019932

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 Johnson Date: July 10, 2015

INTRODUCTION:

SDG: 2019932
Project Name: Delatte Metals
Laboratory: Pace Analytical
Laboratory Package No.: 2019932
Matrix: Water

Environmental Data Professional, LLC (eDATApro) received one electronic pdf data package and one electronic data deliverable for this project. Data validation was performed according to guidance from *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
BC-07	2019932005	05/11/2015 11:44 AM	[1]
GSGP-19	2019932008	05/11/2015 02:06 PM	[1]
NORTH WELL	2019932020	05/12/2015 10:05 AM	[1]
NWGS-04	2019932032	05/13/2015 01:30 PM	[1-3]
MW-01	2019932039	05/13/2015 01:57 PM	[1-3]

Analyses Performed Codes:

[1] ICP/MS Metals (EPA 6020); As, Cd, Pb, Mn, Ni, Zn
[2] Sulfide (EPA 9034)
[3] Sulfate (EPA 9056)

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 June 24, 2015. No resubmissions were necessary.

Several field samples were listed on the chain of custody (COC) and presented in the laboratory data package; however, per client request, data validation was performed only for the samples of interest listed in the introduction of this report.

II. Method 6020 – ICP/MS Metals:

Recoveries of Arsenic and Zinc in the matrix spike/matrix spike duplicate (MS/MSD) analyses associated with samples BC-07 and GSGP-19 exceeded lower acceptance criteria. The MS/MSD parent sample was not of similar matrix to sample BC-07; therefore, no qualification of this sample was applicable. The Arsenic and Zinc results for sample GSGP-19 were modified to estimate (J).

Recoveries of Arsenic, Manganese and Zinc in the MS and MSD analyses associated with sample NORTH WELL exceeded lower acceptance criteria. The MS/MSD parent sample was not of similar matrix to the NORTH WELL sample. No data qualifications were necessary.

Recoveries of Arsenic, Manganese and Zinc in the MS and MSD analyses of samples NWGS-04 and MW-01 exceeded lower acceptance criteria. The Manganese concentration in the MS/MSD parent sample was significantly greater than the spike amount; therefore, qualification of Manganese was not applicable. The Arsenic and Zinc results for these samples were modified to estimate (J).

Arsenic was present at estimate concentrations in the continuing calibration blanks (CCB) bracketing the analyses of the samples of interest. The concentrations of Arsenic in the field samples were significantly greater than the blank contamination. No data qualifications were necessary.

Comparison between measurements of Zinc in the parent sample and serial dilution analyses associated with samples BC-07 and GSGP-19 exceeded percent difference (%D) acceptance criteria. The laboratory noted other exceedances; however, the sample concentrations were below the 50X threshold. The Zinc result in sample BC-07 was modified to non-detect estimate (UJ), and the result in sample GSGP-19 was modified to estimate (J).

Comparisons between measurements of Manganese, Nickel and Zinc in the parent sample and serial dilution analyses associated with sample NORTH WELL exceeded %D acceptance criteria. The laboratory noted other exceedances; however, the sample concentrations were below the 50X threshold. The Nickel and Zinc results were modified to non-detect estimate (UJ), and the Manganese result was modified to estimate (J).

Comparisons between measurements of Arsenic, Manganese, Nickel and Zinc in the parent sample and serial dilution analyses associated with samples NWGS-04 and MW-01 exceeded %D acceptance criteria. The results of these analytes in these samples were modified to estimate (J).

All other quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria.

III. Method 9034 – Sulfide:

All quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria; therefore, no data qualifications were necessary.

IV. Method 9056 – Sulfate:

The Method 9056 analyses were subcontracted to Pace Analytical, Kansas.

Recoveries of Sulfate in the matrix spike analyses associated with samples NWGS-04 and MW-01 exceeded lower acceptance criteria. The Sulfate concentrations in these samples were modified to estimate (J).

All other quality assurance and quality control (QA/QC) components presented by the laboratory satisfied method and data review acceptance criteria.

Table 1-1

SUMMARY OF QUALIFIED DATA

Target Compound	Sample(s) Affected	Lab Result	Lab Qual	Val Result	Val Qual	Reason for Qualification
	GSGP-19	2.6		2.6	J	Low recoveries in MS & MSD.
Arsenic	MW-01	12		12	J	Low recoveries in MS & MSD. High %D in serial dilutions.
	NWGS-04	332		332	J	
	MW-01	4420		4420	J	
Manganese	NORTH WELL	5.3		5.3	J	
	NWGS-04	3880		3880	J	High %D in serial dilutions.
	MW-01	113		113	J	
Nickel	NORTH WELL	1	U	1	UJ	
	NWGS-04	16.5		16.5	J	
	BC-07	5	U	5	UJ	High %D in serial dilutions.
	NORTH WELL	5	U	5	UJ	
Zinc	GSGP-19	166		166	J	
	MW-01	112		112	J	Low recoveries in MS & MSD. High %D in serial dilutions.
	NWGS-04	17.4		17.4	J	
Sulfate	MW-01	4660		4660	J	Low recoveries in MS & MSD.
	NWGS-04	1120		1120	J	

Table 1-2

DATA QUALIFIER REFERENCE

Qualifier	Definition
U	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.
J-	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.
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.
N	The analysis indicates the presence of an analyte for which there was presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
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.

Appendix I
Form 1 Data (Qualified)

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **BC-07**
Location ID: **NA**
Lab Sample ID: **2019932005**
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	05/11/2015 11:44	05/20/2015 16:32	1	1	1.3		1.3		ug/L	
Cadmium	05/11/2015 11:44	05/20/2015 16:32	1	1	1	U	1	U	ug/L	
Lead	05/11/2015 11:44	05/20/2015 16:32	1	1	1	U	1	U	ug/L	
Manganese	05/11/2015 11:44	05/20/2015 16:32	1	1	29.1		29.1		ug/L	
Nickel	05/11/2015 11:44	05/20/2015 16:32	1	1	1.4		1.4		ug/L	
Zinc	05/11/2015 11:44	05/20/2015 16:32	1	5	5	U	5	UJ	ug/L	*

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

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Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **GSGP-19** Sample Matrix : **Water**

Location ID: **NA**

Lab Sample ID: **2019932008** Lab Code: **PACE**

Sample Type: **Site Sample**

Parameter Name	Collection Date	Analysis Date	DF	RL	Lab Result	Lab Qualifier	Validated Result	Validated Qualifier	Units	
Method: EPA 6020										
Arsenic	05/11/2015 14:06	05/20/2015 16:44	1	1	2.6		2.6	J	ug/L	*
Cadmium	05/11/2015 14:06	05/20/2015 16:44	1	1	69.8		69.8		ug/L	
Lead	05/11/2015 14:06	05/20/2015 16:44	1	1	2.2		2.2		ug/L	
Manganese	05/11/2015 14:06	05/20/2015 16:44	1	1	3280		3280		ug/L	
Nickel	05/11/2015 14:06	05/20/2015 16:44	1	1	54.7		54.7		ug/L	
Zinc	05/11/2015 14:06	05/20/2015 16:44	1	5	166		166	J	ug/L	*

DF = Dilution Factor RL = Reporting Limit

* = Modified by Validation

U = Non-Detect J = Estimated R = Rejected

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Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **NORTH WELL**
Location ID: **NA**
Lab Sample ID: **2019932020**
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	05/12/2015 10:05	05/20/2015 18:03	1	1	1	U	1	U	ug/L	
Cadmium	05/12/2015 10:05	05/20/2015 18:03	1	1	1	U	1	U	ug/L	
Lead	05/12/2015 10:05	05/20/2015 18:03	1	1	1	U	1	U	ug/L	
Manganese	05/12/2015 10:05	05/20/2015 18:03	1	1	5.3		5.3	J	ug/L	*
Nickel	05/12/2015 10:05	05/20/2015 18:03	1	1	1	U	1	UJ	ug/L	*
Zinc	05/12/2015 10:05	05/20/2015 18:03	1	5	5	U	5	UJ	ug/L	*

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

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Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **NWGS-04**
Location ID: **NA**
Lab Sample ID: **2019932032**
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	05/13/2015 13:30	05/20/2015 19:02	1	1	332		332	J	ug/L	*
Cadmium	05/13/2015 13:30	05/20/2015 19:02	1	1	7.9		7.9		ug/L	
Lead	05/13/2015 13:30	05/20/2015 19:02	1	1	5.3		5.3		ug/L	
Manganese	05/13/2015 13:30	05/20/2015 19:02	1	1	3880		3880	J	ug/L	*
Nickel	05/13/2015 13:30	05/20/2015 19:02	1	1	16.5		16.5	J	ug/L	*
Zinc	05/13/2015 13:30	05/20/2015 19:02	1	5	17.4		17.4	J	ug/L	*

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

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Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **MW-01**
Location ID: **NA**
Lab Sample ID: **2019932039**
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	05/13/2015 13:57	05/20/2015 19:41	1	1	12		12	J	ug/L	*
Cadmium	05/13/2015 13:57	05/20/2015 19:41	1	1	2.2		2.2		ug/L	
Lead	05/13/2015 13:57	05/20/2015 19:41	1	1	3		3		ug/L	
Manganese	05/13/2015 13:57	05/20/2015 19:41	1	1	4420		4420	J	ug/L	*
Nickel	05/13/2015 13:57	05/20/2015 19:41	1	1	113		113	J	ug/L	*
Zinc	05/13/2015 13:57	05/20/2015 19:41	1	5	112		112	J	ug/L	*

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

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Form 1 Data Sheet - Conventionals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **NWGS-04**
Location ID: **NA**
Lab Sample ID: **2019932032**
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	05/13/2015 13:30	05/19/2015 15:33	1	1	1	U	1	U	mg/L	
Method: EPA 9056										
Sulfate	05/13/2015 13:30	05/26/2015 16:27	100	100	1120		1120	J	mg/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: 2019932

COC Sample ID: **MW-01**
Location ID: **NA**
Lab Sample ID: **2019932039**
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	05/13/2015 13:57	05/19/2015 15:33	1	1	1	U	1	U	mg/L	
Method: EPA 9056										
Sulfate	05/13/2015 13:57	05/29/2015 10:35	500	500	4660		4660	J	mg/L	*

DF = Dilution Factor RL = Reporting Limit
* = Modified by Validation
U = Non-Detect J = Estimated R = Rejected

eDATApro

Appendix II
Chain of Custody

Pac

O#: 2019932

2019932

CHAIN-OF-CUST / Analytical Request Document

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

Page: 1 of 5

1387754

Section A Required Client Information:

Company:	SEMS Inc.
Address:	3301 N. Causeway Blvd. STE 209
Email To:	nrodehorst@semsinc.net
Phone: / Fax:	504-342-2340
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Nick Rodehorst
Copy To:	Harry Brandt
Purchase Order No.:	
Project Name:	Delarte Metals
Project Number:	207-0029-03

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Brandy Shackelford
Pace Profile #:	6306 line 1

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	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): Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GSGP-03	W	G			5/11/15	848		2			2						X	X				
2	(b) (6) [redacted] Well						1030		1			1						X					
3	WW-04						1040		1			1						X					
4	BC-03						1105		1			1						X					
5	BC-07						1144		1			1						X					
6	~~Dup-01~~ MW-06						1448		1			1						X					
7	GSGP-18						1425		1			1						X					
8	GSGP-19						1406		1			1						X					
9	NWGS-06						1341		1			1						X					
10	Bridge						947		2			2						X	X				
11	CA-51						903		2			2						X	X				
12	CA-41						920		2			2						X	X				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals by method 6020	Nick Rodehorst / SEMS Inc	5/15/15	800	Alin Grauper	5-15-15	11:00	1.0
As, Cd, Mn, Ni, Pb, Zn	Alin Grauper	5/15/15	1145	[illegible]	5-15-15	1145	1.5
-Dissolved Metals are							2.0
field filtered.							2.5

Temp in °C | Received on Ice (Y/N): Y | Custody Sealed Cooler (Y/N): N | Samples Intact (Y/N): Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Rodehorst

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/15/15

*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

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CHAIN-OF-CUSTODY / Analytical Request Document

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1641885

Section A Required Client Information:

Company:	SEMS Inc.
Address:	3801 N. Causeway Blvd. STE 209
Email To:	nrodehorst@semsinc.net
Phone:	504-342-2340
Fax:	
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Nick Rodehorst
Copy To:	Larry Brand.
Purchase Order No.:	
Project Name:	Delatte Metals
Project Number:	207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CL-19	WG				5/11/15	1015		2			2							X	X				
2	DW-04					5/12/15	1001		1			1							X					
3	BC-19						929		1			1							X					
4	BC-25						903		1			1							X					
5	MW-03						841		1			1							X					
6	South Well						1030		1			1							X					
7	BC-17						1059		1			1							X					
8	North Well						1005		1			1							X					
9	BC-21R						1141		1			1							X					
10	DW-02						1258		1			1							X					
11	BA-01						1337		2			2							X	X				
12	PW-04						1432		1			1							X					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
* Metals by method 6020	Nick Rodehorst / SEMS Inc.	5/15/15	860	[illegible]	5-15-15	11-00	1.0			
As, Cd, Mn, Ni, Pb, Zn	[illegible]	5-15-15	1146	[illegible]	5-15-15	1145	1.5 2.0 2.5	Y	N	Y
- Dissolved Metals are field filtered.										

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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

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CHAIN-OF-CUSTODY / Analytical Request Document

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1617507

Section A Required Client Information:

Company: SEMS Inc.
Address: 3301 N. Causeway Blvd STE 209
Email To: nrodehorst@semsinc.net
Phone: 504-342-2340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Brand
Purchase Order No.:
Project Name: Delatte Metals
Project Number: 207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	GSGP-15	W	G			5/12/15	1539		1			1							X					
2	NWGS-05						1505		4	1		2					1		X	X	X	X		
3	DW-03						1410		3	1		1					1		X		X	X		
4	GSGP-22						1611		3	1		1					1		X		X	X		
5	~~BA-05 Dup 2~~ DW-01						1702 ~~1841~~		3	1		1					1		X		X	X		
6	BA-05					5/13/15	841		1			1							X					
7	MW-A						900		1			1							X					
8	NWGS-04						1330		3	1		1					1		X		X	X		
9	BA-03						928		1			1							X					
10	MW-02						1028		3	1		1					1		X		X	X		
11	~~TEPA-P7D~~ TEPA-P7D						1120		4 HK	1		2					1		X	X	X	X		
12	NWGS-01						959		3	1		1					1		X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
*Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Chris Pace / Pace	5-15-15	11:00
As, Cd, Mn, Ni, Pb, Zn	Chris Pace / Pace	5-15-15	1145	[signature]	5-15-15	1145
-Dissolved Metals are field filtered.						

SAMPLE CONDITIONS: Temp in °C 1.8, 1.5, 2.6, 2.5; Received on Ice (Y/N): Y; Custody Sealed Cooler (Y/N): N; Samples Intact (Y/N): Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Rodehorst
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/15/2015

*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

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1617508

Section A Required Client Information:

Company:	SEMS Inc.
Address:	3801 N. Causeway STE 209
Email To:	nrodehorst@semsinc.net
Phone:	504-242-2340
Fax:	
Requested Due Date/TAT:	STD

Section B Required Project Information:

Report To:	Nick Rodehorst
Copy To:	Larry Brand.
Purchase Order No.:	
Project Name:	Delatte Metals
Project Number:	207-0029-03

Section C Invoice Information:

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

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Total Metals	Dissolved Metals	Sulfate (9036)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	NWGS-02	W	G			5/13/15	1050		3	1		1					1		X		X	X		
2	NWGS-03						1149		4	1		2					1		X	X	X	X		
3	MW-01						1357		3	1		1					1		X		X	X		
4	BA-09					5/14/15	944		3	1		1					1		X		X	X		
5	BA-09A						1009		1			1							X					
6	GSGP-6						918		1			1							X					
7	MW-04						1045		2			2							X	X				
8	WW-09						1100		1			1							X					
9	Duplicate #1					5/11/15	1030		1			1							X					
10	Duplicate #2					5/12/15	1258		1			1							X					
11	Duplicate #3					5/13/15	900		1			1							X					
12	Duplicate #4						959		3	1		1					1		X		X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
* Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Allen Thompson	5-15-15	1100	1.0
Ar, Cd, Mn, Ni, Pb, Zn	Allen Thompson	5-15-15	1145	[signature]	5-15-15	1145	1.5 / 2.0 / 2.5 — Y N Y
- Dissolved Metals are field filtered.							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*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

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CHAIN-OF-CUST[illegible] / Analytical Request Document

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

Page: 5 of 5

1643259

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SEMS Inc.	Report To: Nick Rodehorst	Attention:
Address: 3801 N. Causeway Blvd STE 209	Copy To: Larry Broad	Company Name:
		Address:
Email To: nrodehorst@semsinc.net	Purchase Order No.:	Pace Quote Reference:
Phone: 504-342-2340 Fax:	Project Name: Delta Metals	Pace Project Manager: Randy Shackelford
Requested Due Date/TAT: STD	Project Number: 207-0029-03	Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☒ RCRA ☐ OTHER

Site Location STATE: LA

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

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	Total Metals	Dissolved Metals	Sulfate (9034)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Duplicate #5					5/14/15	944		3	1		1					1		X		X	X		
2	PW-04 MS					5/12/15	1432		1			1							X					
3	PW-04 MSD					↓	1432		1			1							X					
4	GSGP-6MS					5/14/15	~~[illegible]~~ HA	918	1			1							X					
5	GSGP-6MSD					↓	~~[illegible]~~ HA	918				1							X					
6	NWGS-02MS					5/13/15	1050		3	1		1					1		X		X	X		
7	NWGS-02MSD					↓	1050		3	1		1					1		X		X	X		
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Alex Mac Pherson	5-15-15	11:00				
As, Cd, Mn, Ni, Pb, Zn	Alex Mac Pherson	5-15-15	1145	[illegible]	5-15-15	1145	1.0 1.5 2.0 2.5	Y	N	Y
-Dissolved Metals are field filtered.										

SAMPLER NAME AND SIGNATURE

ORIGINAL

ATTACHMENT E

LEVEL IV DATA PACKAGE

(CD ATTACHED)