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OPERATION AND MAINTENANCE REPORT
SECOND QUARTER 2015

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) was selected by the Louisiana Department of Environmental Quality (LDEQ) for the continued Operations and Maintenance (O&M) of the Delatte Metals Superfund Site in Tangipahoa Parish, Ponchatoula, Louisiana. The Delatte Metals Superfund Site is currently under periodic O&M, including groundwater and surface water sampling to determine if constituents of concern (COCs) remediated at the site are in a declining condition and to ensure that COCs are not migrating horizontally past the permeable reactive barrier (PRB) or vertically into lower water bearing zones. This report summarizes SEMS' performance of site activities associated with the onsite and offsite water supply wells during the current quarter. A map showing the locations of the onsite and offsite water supply wells is presented as **Figure 1**. A brief status and history of the site are provided below.

The physical location of the site is approximately 5.5 miles south-southeast of Hammond, Louisiana, 1.5 miles southeast of Ponchatoula, Louisiana, and adjacent to the new Delatte Recycling, LLC (19113 Weinberger Road, Ponchatoula, Louisiana). The site lies to the north of Weinberger Road, in a rural area with numerous residences within a one-mile radius of the site. 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 followed by residences, to the north and east by drainage ditches and residences, and to the west by Selser's Creek and residences.

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.

Remedial action (RA) operations were implemented at the site between November of 2002 and September of 2003. 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 confirm 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. This report summarizes the current quarterly site activities pertaining to the onsite and offsite water supply wells only. Data collected by SEMS from the 39 monitor wells and five (5) surface water sample locations included in the O&M Program is reported to the LDEQ semi-annually and is not included in this quarterly report.

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 22 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.

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 and a summary of the water supply well characteristics is provided as Table 1.

2.0 CHRONOLOGY OF EVENTS

A chronology of events is as follows:

- 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 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 and the results are included in the semi-annual reports. Surface water is sampled and reported on a semi-annual basis. The onsite and offsite water supply wells are sampled and reported on a quarterly basis. Only the data concerning the onsite and offsite water supply wells is included in this quarterly report. The sampling and reporting schedule for each sample location is provided in **Table 2**.

On May 11th through 14th, 2015, SEMS mobilized to the site and performed operation and maintenance activities, including the quarterly sampling of the five (5) onsite and offsite water supply wells. Inspection of the 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

Each well was cleared as needed to provide access prior to sampling.

3.2 WELL INSPECTION

The water supply wells were inspected during the groundwater sampling event for damage. **Table 1** includes a listing of the water supply 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 grass cover of the PRB was mowed by the LDEQ Clearing Contractor prior to the previous 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 condition of 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

The two (2) onsite and three (3) offsite water supply wells were sampled during the quarterly groundwater sampling event. The locations of the water supply wells are shown on **Figure 1**.

Groundwater was purged from each water supply wells by opening the valve and allowing the water to flow for a period of 20 minutes. After 20 minutes elapsed, a sample was collected for laboratory analysis. All samples were collected in laboratory-supplied, pre-preserved containers and placed in a cooler with ice. Instantaneous water quality parameters were measured in the field and recorded on the field forms. The water quality parameters are summarized on **Table 3**. The

samples were transported to Pace Analytical Services (Pace) in St. Rose, Louisiana for analysis. The samples were shipped accompanied by proper chain-of-custody documentation.

Quality Assurance/Quality Control (QA/QC) samples were collected during the quarterly sampling event in accordance with the O&M Manual. A summary of QA/QC samples collected during the current quarter is included in the field data sheets presented in **Attachment A**.

Groundwater samples were analyzed for Total Metals including arsenic, cadmium, lead, manganese, nickel, and zinc via method SW6020 or SW6010. Summaries of groundwater analytical data are provided in **Table 4** and are further discussed in Section 4.0. A copy of the laboratory reports and chain-of-custody documentation are included in **Attachment B**.

The personal protective equipment and other disposable material that contacted the site groundwater are contained in a 55-gallon metal drum and stored onsite at a holding location south of the "North Well" water supply well. Copies of drum disposal manifests for this quarter, 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.

4.0 ANALYTICAL DATA REVIEW

4.1 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 the EPA acceptable range for drinking water, 6.5-8.5 s.u., be utilized as a practicable alternative pH compliance standard for the water supply wells. According to the LDEQ, the LDEQ RECAP Screening Standards (SS) should be used for comparison to the other site COCs.

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

The following onsite and offsite water supply wells were outside their EPA acceptable pH range:

- Samples from the 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.

No onsite or offsite water supply wells exhibited arsenic, cadmium, lead, manganese, nickel, or zinc concentrations above RECAP SS or EPA Site Cleanup levels during the current sampling event.

Analytical results for this quarter are summarized in **Table 4**. Concentration Maps prepared for the onsite and offsite water supply wells are presented as **Figures 2** through **8**. Following a review of the water supply well Concentration Maps, all COCs except pH were found to be horizontally delineated to their applicable limiting standard.

4.2 HISTORICAL GROUNDWATER MONITORING TRENDS

A historical summary of the groundwater analytical data from the past eight quarters is presented in **Table 5**. 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.

Those onsite and offsite water supply wells exhibiting constituent concentrations above the site cleanup levels or RECAP SS for at least two of the previous eight quarters are reviewed in the trend evaluation. The concentration graphs and linear regression analyses for the water supply wells indicate the following trends:

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

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

Offsite Water Supply Well Long-Term Trends

Three offsite water supply wells, WW-04, WW-09 and the (b) (6) Well, have at some time in their history demonstrated pH measurements exceeding site cleanup maximum level of 8.5 s.u.; therefore, a trend evaluation was conducted using the complete historical pH data set for these wells. The available data evaluated for water wells WW-04 and WW-09 range from 2006 to present. The available data evaluated for the (b) (6) Well ranges from 2008 to present. These additional graphs are presented in **Attachment C**.

The trend analysis for water supply well WW-04 shows an overall increasing trend for the historical data since 2006 but a decreasing trend over the most recent eight quarters. Water well WW-09 shows a decreasing pH trend over the historical data set since 2006 with 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.

4.3 QUALITY ASSURANCE/QUALITY CONTROL AND UNUSUAL FINDINGS

A summary of QA/QC samples collected during the current quarter is included in the field data sheets presented in Attachment A. QA/QC samples include at least one duplicate for every 10 samples, one matrix spike for every 20 samples, and one matrix spike duplicate for every 20 samples. One duplicate sample, (Duplicate at (b) (6) Well), was collected during the current quarter. 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 from Pace are included in **Attachment B**. Each laboratory analytical report includes laboratory QA/QC documentation.

The Pace analytical data was reviewed by Environmental Data Professional, LLC (eDATApro), a third party data validator. eDATApro reviewed ten percent of the samples analyzed including the

North Well sample. The following changes were made to this report as a result of the data validation:

- 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.

No major discrepancies were found in the data validation report, which is included in Attachment D. The Pace Level IV analytical report is attached to this report with a compact disk (CD) in an electronic format as requested by LDEQ.

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 quarterly O&M of the onsite and offsite water supply wells.

TABLES

TABLE 1
WATER SUPPLY WELL DATA
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328

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

Notes: Water Well
*Designations for water wells WW-04 and WW-09 were obtained from the Delatte Metals Remedial Investigation Report (Tetra Tech 2000)
**Designation was named in field based on current owner's name.

TABLE 2
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 2
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 second-half semi-annual reports.

TABLE 3
GROUNDWATER SAMPLING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUISIANA
AGENCY INTEREST NO. 2328
(Past 8 Quarters)

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									
June-13	NA	NA	NA	23.70	0.287	2.17	9.30	-235	1.4
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									
June-13	NA	NA	NA	24.50	0.292	1.70	9.84	-281	0.7
August-13	NA	NA	NA	22.28	0.306	3.03	8.50	-193	0.0
December-13	NA	NA	NA		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									
June-13	NA	NA	NA	23.99	0.288	4.64	8.87	-236	0.6
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									
June-13	NA	NA	NA	23.05	0.285	1.94	9.00	-246	0.3
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									
June-13	NA	NA	NA	23.77	0.294	2.63	9.06	-231	0.8
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	2.0	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

Notes: 1) 'Top-of-casing (TOC) elevation - (depth to fluid) = Corrected GROUNDWATER (GW) elevation
2) Additional quarters will be added as sampling events continue

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

TABLE 4
CURRENT QUARTER GROUNDWATER ANALYTICAL SUMMARY
TOTAL METALS

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

Line #	COC/CAS	Method	Sample ID	Media	Lab Sample Identification	Sample Date	Option Used	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	WW-09	Groundwater	2019932044	5/14/2015	RECAP SS	0.01	0.001	<0.0010		No
2	Total Cadmium/7440-43-9	EPA 6020	WW-09	Groundwater	2019932044	5/14/2015	RECAP SS	0.005	0.001	<0.0010		No
3	Total Lead/7439-92-1	EPA 6020	WW-09	Groundwater	2019932044	5/14/2015	EPA Site Cleanup	0.015	0.001	<0.0010		No
4	Total Manganese/7439-96-5	EPA 6020	WW-09	Groundwater	2019932044	5/14/2015	RECAP SS	0.51	0.001	0.0191		No
5	Total Nickel/7440-02-0	EPA 6020	WW-09	Groundwater	2019932044	5/14/2015	RECAP SS	0.073	0.001	<0.0010		No
6	Total Zinc/7440-66-6	EPA 6020	WW-09	Groundwater	2019932044	5/14/2015	RECAP SS	1.1	0.005	<0.0050		No
7	Total Arsenic/7440-38-2	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	RECAP SS	0.01	0.001	<0.0010		No
8	Total Cadmium/7440-43-9	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	RECAP SS	0.005	0.001	<0.0010		No
9	Total Lead/7439-92-1	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	EPA Site Cleanup	0.015	0.001	<0.0010		No
10	Total Manganese/7439-96-5	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	RECAP SS	0.51	0.001	0.0044		No
11	Total Nickel/7440-02-0	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	RECAP SS	0.073	0.001	<0.0010		No
12	Total Zinc/7440-66-6	EPA 6020	SOUTH WELL	Groundwater	2019932018	5/12/2015	RECAP SS	1.1	0.005	0.0089		No
13	Total Arsenic/7440-38-2	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	RECAP SS	0.01	0.001	<0.0010		No
14	Total Cadmium/7440-43-9	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	RECAP SS	0.005	0.001	<0.0010		No
15	Total Lead/7439-92-1	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	EPA Site Cleanup	0.015	0.001	<0.0010		No
16	Total Manganese/7439-96-5	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	RECAP SS	0.51	0.001	0.0032		No
17	Total Nickel/7440-02-0	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	RECAP SS	0.073	0.001	<0.0010		No
18	Total Zinc/7440-66-6	EPA 6020	WW-04	Groundwater	2019932003	5/11/2015	RECAP SS	1.1	0.005	<0.0050		No
19	Total Arsenic/7440-38-2	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	RECAP SS	0.01	0.001	<0.0010		No
20	Total Cadmium/7440-43-9	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	RECAP SS	0.005	0.001	<0.0010		No
21	Total Lead/7439-92-1	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	EPA Site Cleanup	0.015	0.001	<0.0010		No
22	Total Manganese/7439-96-5	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	RECAP SS	0.51	0.001	0.0053	J	No
23	Total Nickel/7440-02-0	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	RECAP SS	0.073	0.001	<0.0010	J	No
24	Total Zinc/7440-66-6	EPA 6020	NORTH WELL	Groundwater	2019932020	5/12/2015	RECAP SS	1.1	0.005	<0.0050	J	No
25	Total Arsenic/7440-38-2	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	RECAP SS	0.01	0.001	0.0015		No
26	Total Cadmium/7440-43-9	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	RECAP SS	0.005	0.001	<0.0010		No
27	Total Lead/7439-92-1	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	EPA Site Cleanup	0.015	0.001	<0.0010		No
28	Total Manganese/7439-96-5	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	RECAP SS	0.51	0.001	0.0231		No
29	Total Nickel/7440-02-0	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	RECAP SS	0.073	0.001	<0.0010		No
30	Total Zinc/7440-66-6	EPA 6020	(b) (6) WELL	Groundwater	2019932002	5/11/2015	RECAP SS	1.1	0.005	<0.0050		No

TABLE 5
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Monitoring/Sampling Period: Past 8 Quarters

	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 Unit	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																
(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	NA	NA	NA	NA	NA	NA
December-13	NA	NA	NA	7.87	0.00157 J	< 0.001	0.00145	0.0233	< 0.001 J	< 0.005 J	NA	NA	NA	NA	NA	NA
March-14	NA	NA	NA	8.21	0.0016	< 0.001	0.0013	0.0218	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
June-14	NA	NA	NA	7.02	0.0015	< 0.0010	0.0011	0.0416	< 0.0010	< 0.005	NA	NA	NA	NA	NA	NA
August-14	NA	NA	NA	8.22	0.0017	< 0.0010	< 0.0010	0.0243	< 0.0010	0.0063	NA	NA	NA	NA	NA	NA
October-14	NA	NA	NA	7.80	0.0016	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
January-15	NA	NA	NA	8.13	0.0015	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
May-15	NA	NA	NA	8.27	0.0015	<0.0010	<0.0010	0.0231	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
WW-04																
August-13	NA	NA	NA	8.50	0.0062	< 0.00053	< 0.00017	0.0035 J	< 0.00098	0.006 J	NA	NA	NA	NA	NA	NA
December-13	NA	NA	NA	**9.09**	< 0.001	< 0.001	< 0.001	0.00315	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
March-14	NA	NA	NA	**8.59**	< 0.001	< 0.001	< 0.001	0.0018	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
June-14	NA	NA	NA	8.29	< 0.0010	< 0.0010	< 0.0010	0.0031	< 0.0010	< 0.005	NA	NA	NA	NA	NA	NA
August-14	NA	NA	NA	8.47	< 0.0010	< 0.0010	< 0.0010	0.0062	< 0.0010	< 0.0050	NA	NA	NA	NA	NA	NA
October-14	NA	NA	NA	**8.61**	<0.0010	<0.0010	<0.0010	0.0028	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
January-15	NA	NA	NA	**8.67**	<0.0010	<0.0010	<0.0010	0.0032	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
May-15	NA	NA	NA	8.35	<0.0010	<0.0010	<0.0010	0.0032	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
WW-09																
August-13	NA	NA	NA	7.62	0.00054 J	< 0.00053	< 0.00017	0.0182	< 0.00098	< 0.004	NA	NA	NA	NA	NA	NA
December-13	NA	NA	NA	7.98	< 0.001	< 0.001	< 0.001	0.0178	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
March-14	NA	NA	NA	8.17	< 0.001	< 0.001	< 0.001	0.0165	0.0041	< 0.005	NA	NA	NA	NA	NA	NA
June-14	NA	NA	NA	7.49	< 0.0010	< 0.0010	< 0.0010	0.0181	< 0.0010	< 0.005	NA	NA	NA	NA	NA	NA
August-14	NA	NA	NA	8.36	< 0.0010	< 0.0010	< 0.0010	0.0203	< 0.0010	< 0.0050	NA	NA	NA	NA	NA	NA
October-14	NA	NA	NA	7.65	<0.0010	<0.0010	<0.0010	0.0188	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
January-15	NA	NA	NA	**8.61**	<0.0010	<0.0010	<0.0010	0.0189	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
May-15	NA	NA	NA	8.41	<0.0010	<0.0010	<0.0010	0.0191	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
North Well																
August-13	NA	NA	NA	8.20	0.0004 J	< 0.00011	0.00091 J	0.0039	< 0.0002	0.0058	NA	NA	NA	NA	NA	NA
December-13	NA	NA	NA	**8.82**	< 0.001	< 0.001	< 0.001	0.00366	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
March-14	NA	NA	NA	**9.10**	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
June-14	NA	NA	NA	**8.61**	< 0.0010	< 0.0010	< 0.0010	0.0033	< 0.0010	< 0.005	NA	NA	NA	NA	NA	NA
August-14	NA	NA	NA	8.37	< 0.0010	< 0.0010	0.004	0.0085	< 0.0010	0.0079	NA	NA	NA	NA	NA	NA
October-14	NA	NA	NA	**8.54**	<0.0010	<0.0010	<0.0010	0.0034	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
January-15	NA	NA	NA	**8.86**	<0.0010	<0.0010	<0.0010	0.0027	<0.0010	<0.0050	NA	NA	NA	NA	NA	NA
May-15	NA	NA	NA	**8.91**	<0.0010	<0.0010	<0.0010	0.0053 J	<0.0010 J	<0.0050 J	NA	NA	NA	NA	NA	NA
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**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 5
HISTORICAL GROUNDWATER MONITORING SUMMARY
DELATTE METALS SUPERFUND SITE
PONCHATOULA, LOUSISANA
AGENCY INTEREST NO. 2328

Monitoring/Sampling Period: Past 8 Quarters

	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 Unit	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																
South Well																
August-13	NA	NA	NA	**8.93**	0.00026 J	< 0.00011	< 0.000033	0.0041	0.00024 J	0.0084	NA	NA	NA	NA	NA	NA
December-13	NA	NA	NA	**9.60**	< 0.001	< 0.001	< 0.001	0.00385	< 0.001	0.0144	NA	NA	NA	NA	NA	NA
March-14	NA	NA	NA	8.37	< 0.001	< 0.001	< 0.001	0.0026	< 0.001	< 0.005	NA	NA	NA	NA	NA	NA
June-14	NA	NA	NA	**8.62**	< 0.0010	< 0.0010	< 0.0010	0.0037	< 0.0010	< 0.005	NA	NA	NA	NA	NA	NA
August-14	NA	NA	NA	8.31	< 0.0010	< 0.0010	< 0.0010	0.0042	< 0.0010	0.0199	NA	NA	NA	NA	NA	NA
October-14	NA	NA	NA	**8.94**	<0.0010	<0.0010	<0.0010	0.0035	<0.0010	0.0168	NA	NA	NA	NA	NA	NA
January-15	NA	NA	NA	**9.08**	<0.0010	<0.0010	<0.0010	0.0040	<0.0010	0.0099	NA	NA	NA	NA	NA	NA
May-15	NA	NA	NA	**8.86**	<0.0010	<0.0010	<0.0010	0.0044	<0.0010	0.0089	NA	NA	NA	NA	NA	NA
SITE CLEANUP or LDEQ RECAP SS				**6.5-8.5**	**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 screening standards are from the LDEQ RECAP Screening Standards (SS), which were provided by the LDEQ.
3) The Site Cleanup Standard for pH = 7.0 s.u.; however EPA Drinking Water Standards for pH = 6.5-8.5 s.u. and the EPA Storm Water Discharge Standards for pH=6.0-9.0 s.u are being used for comparison purposes.
4) Bold Values Exceed Site Cleanup or RECAP SS
5) Reporting Limits from the analytical reports are used for non-detect results

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

FIGURES

REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕ WATER SUPPLY WELL

N

330 0 330

APPROXIMATE SCALE IN FEET

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

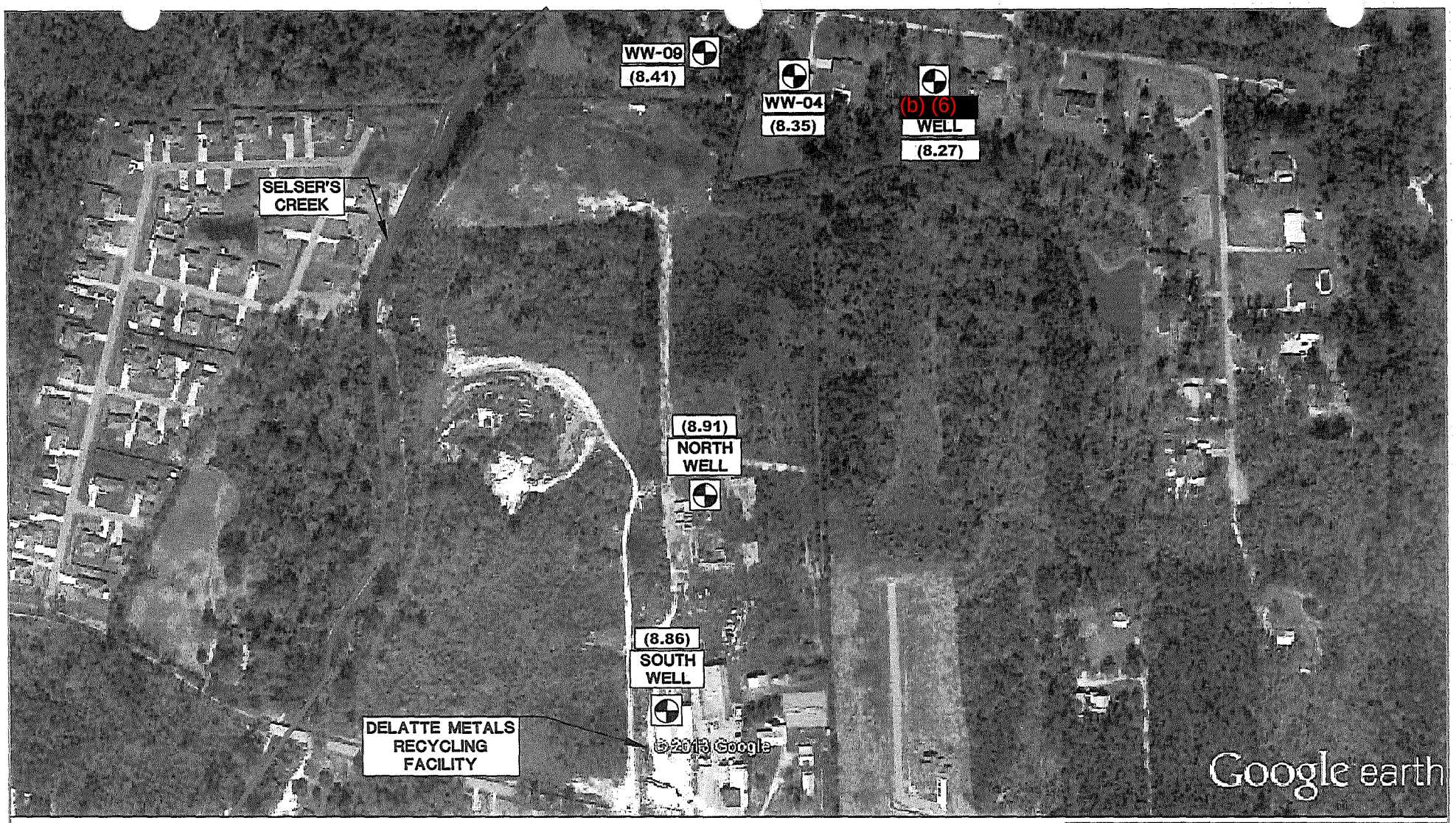
FIGURE 1

WATER WELL LOCATION MAP

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.001)	LEAD CONCENTRATION IN mg/L

NOTE:
THE EPA CLEANUP LEVEL FOR pH IS 7.0 S.U..
THE EPA ACCEPTABLE RANGE FOR DRINKING WATER, 6.5-8.5 S.U. IS USED HERE.

N

330 0 330
APPROXIMATE SCALE IN FEET

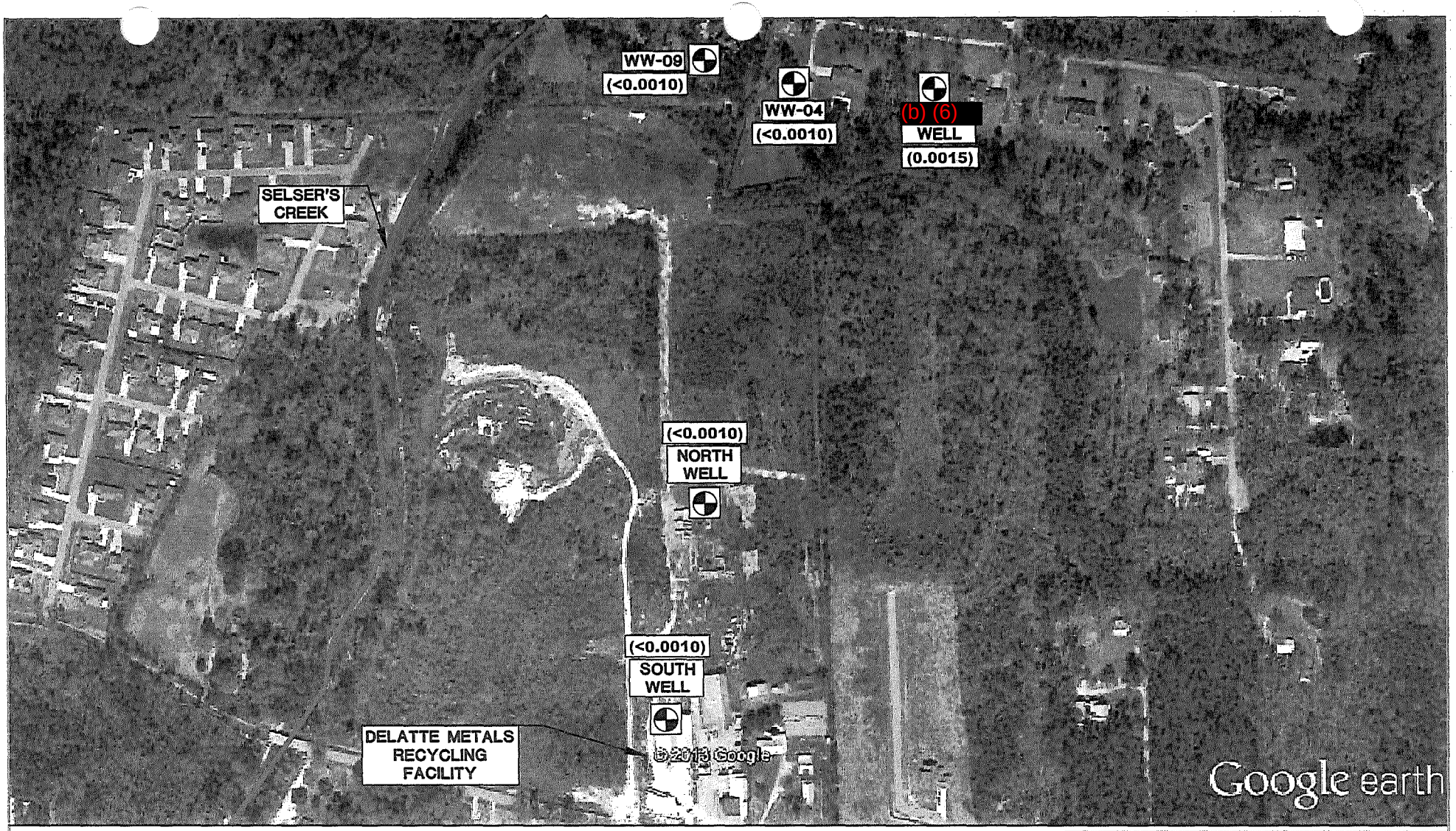
DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	6/05/15	APPROVED BY		QTR/001

FIGURE 2
WATER WELL
pH CONCENTRATION MAP
(SECOND QUARTER 2015)

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.001)	ARSENIC CONCENTRATION IN mg/L

NOTES:

1) NO SITE CLEANUP STANDARDS WERE FOUND FOR ARSENIC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.01 mg/L.
2) NO WELLS SAMPLED EXCEEDED LDEQ RECAP SCREENING STANDARD FOR ARSENIC.

N

330 0 330
APPROXIMATE SCALE IN FEET

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/002

FIGURE 3

WATER WELL ARSENIC CONCENTRATION MAP (SECOND QUARTER 2015)

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.

REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.001)	CADMIUM CONCENTRATION IN mg/L

330 0 330
APPROXIMATE SCALE IN FEET

NOTES:
1) NO SITE CLEANUP STANDARDS WERE FOUND FOR CADMIUM. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.005 mg/L.
2) NO WELLS SAMPLED EXCEEDED LDEQ RECAP SCREENING STANDARD FOR CADMIUM.

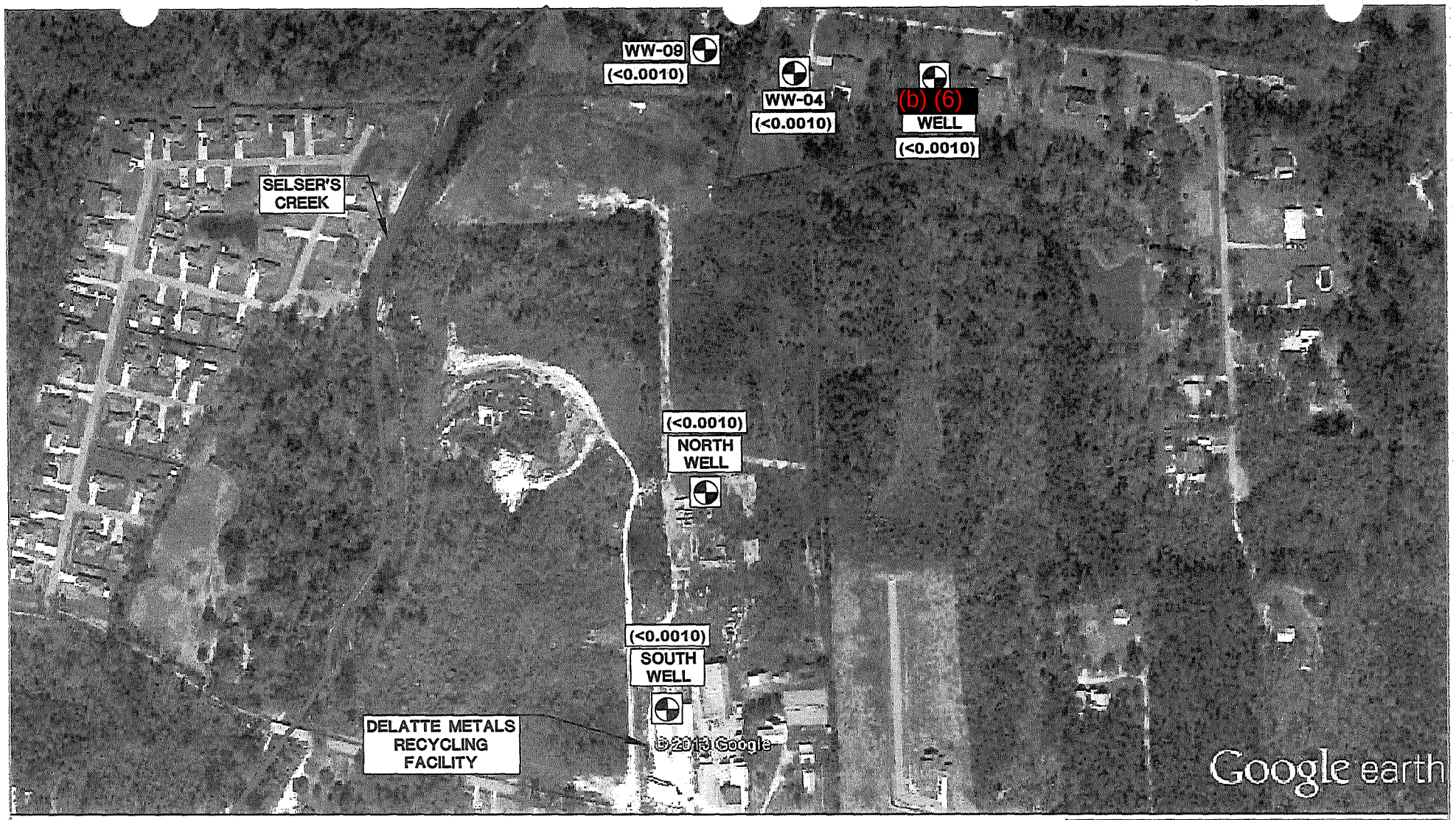
N

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/003

FIGURE 4
WATER WELL CADMIUM CONCENTRATION MAP (SECOND QUARTER 2015)

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

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.001)	LEAD CONCENTRATION IN mg/L

330 0 330
APPROXIMATE SCALE IN FEET

NOTES:
1) THE EPA SITE CLEANUP STANDARD FOR LEAD IS 0.015 mg/L.
2) NO WELLS SAMPLED EXCEEDED THE EPA SITE CLEANUP STANDARD.

N

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/004

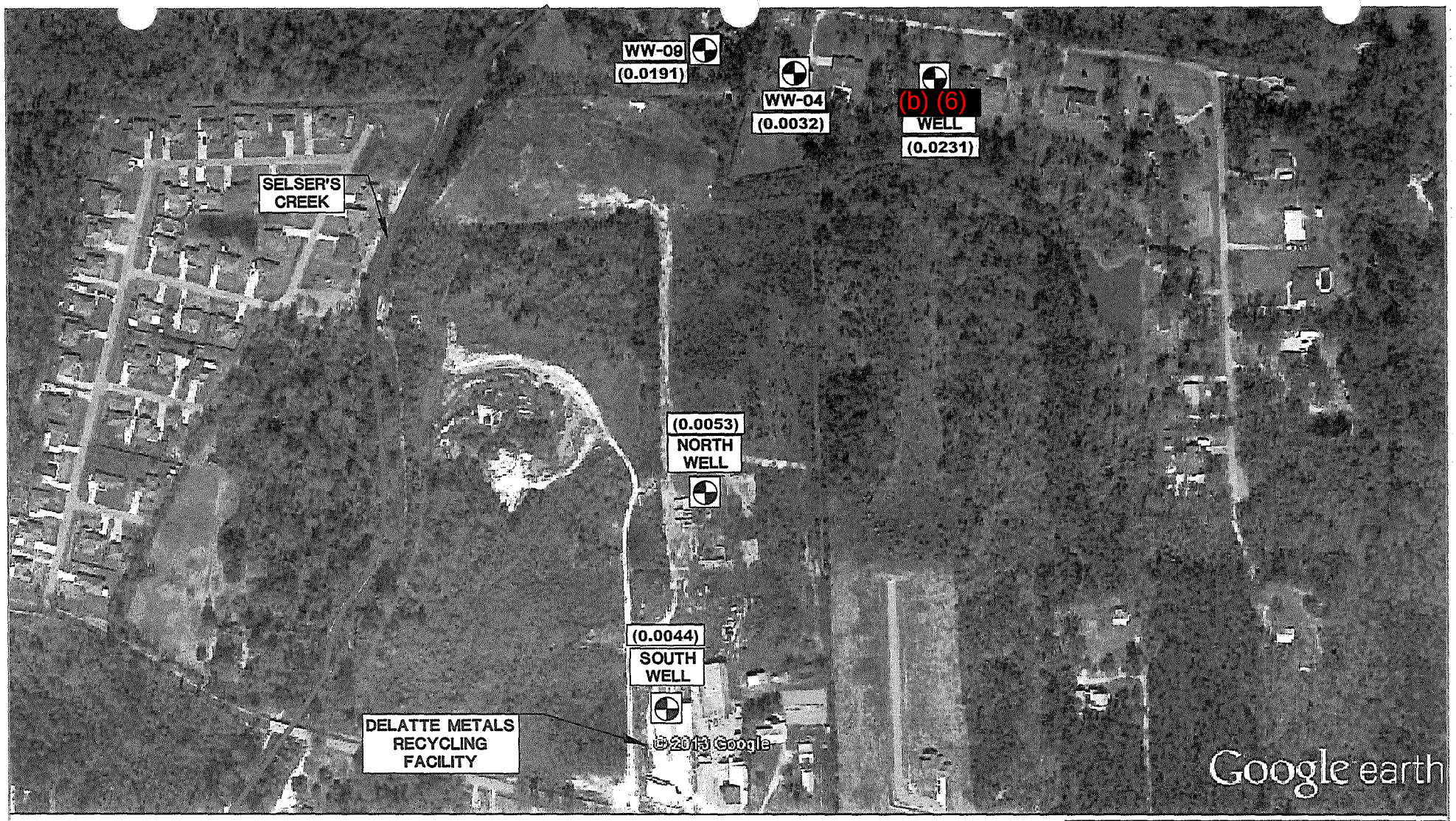
FIGURE 5

WATER WELL LEAD CONCENTRATION MAP (SECOND QUARTER 2015)

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(0.0181)	MANGANESE CONCENTRATION IN mg/L

330 0 330
APPROXIMATE SCALE IN FEET

NOTES:
1) NO SITE CLEANUP STANDARDS WERE FOUND FOR MANGANESE. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.51 mg/L.
2) NO WELLS SAMPLED EXCEEDED LDEQ RECAP SCREENING STANDARD FOR MANGANESE.

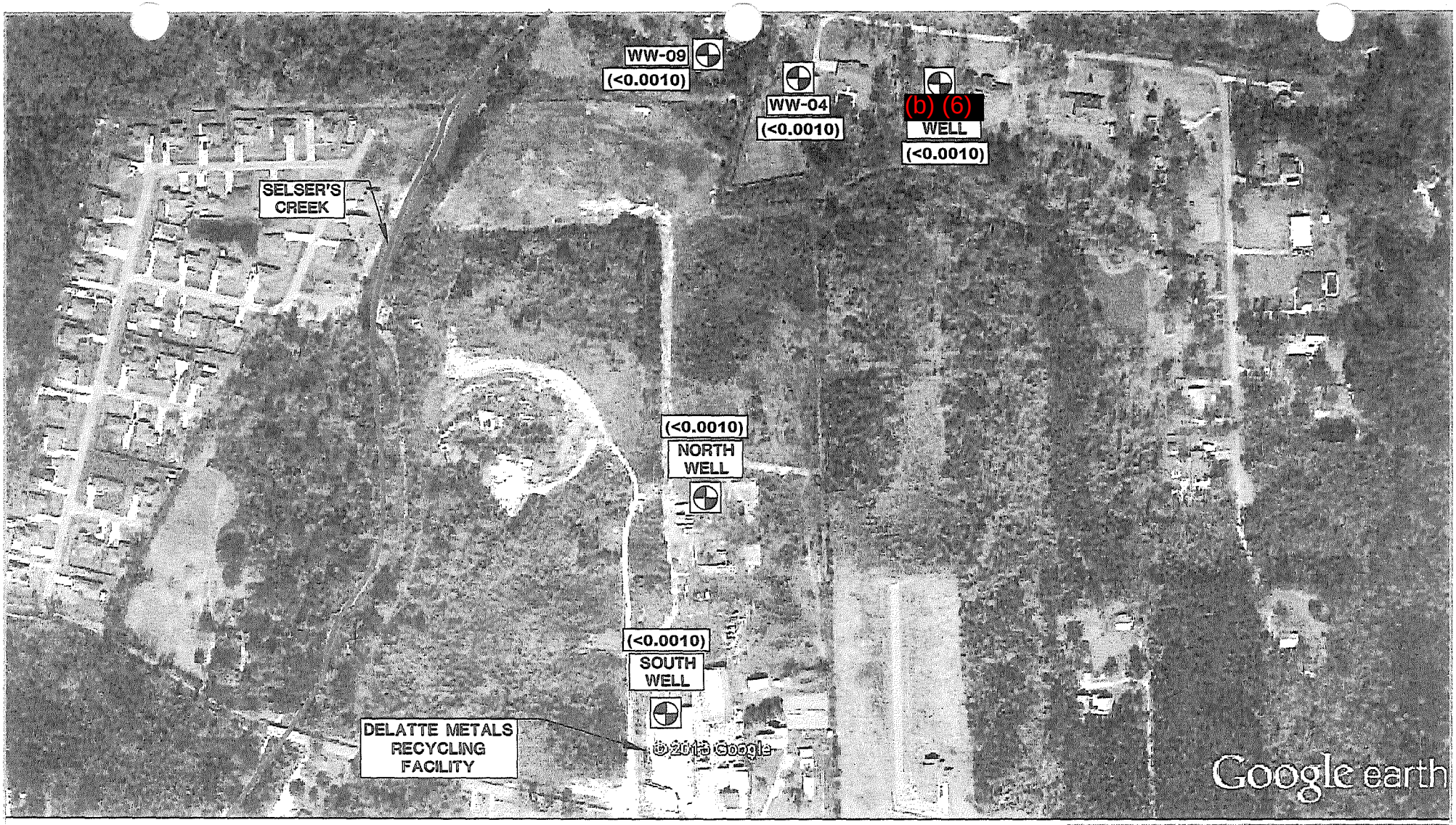
N

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/005

FIGURE 6
WATER WELL MANGANESE CONCENTRATION MAP (SECOND QUARTER 2015)

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

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.001)	NICKEL CONCENTRATION IN mg/L

330 0 330

APPROXIMATE SCALE IN FEET

NOTES:

1) NO SITE CLEANUP STANDARDS WERE FOUND FOR NICKEL. SEMS USED LDEQ RECAP SCREENING STANDARD OF 0.073 mg/L.
2) NO WELLS SAMPLED EXCEEDED LDEQ RECAP SCREENING STANDARD FOR NICKEL.

N

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/006

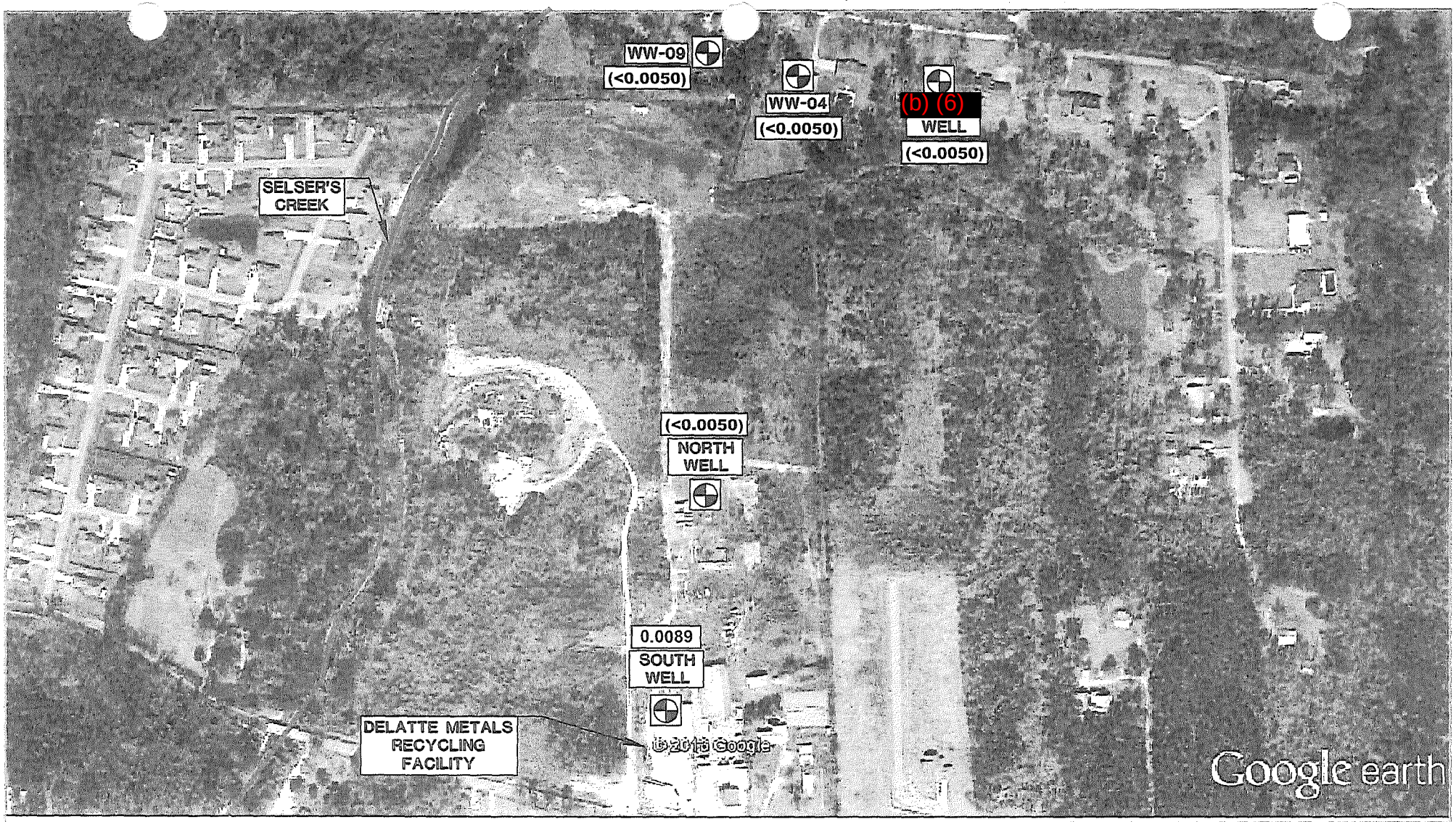
FIGURE 7

WATER WELL NICKEL CONCENTRATION MAP (SECOND QUARTER 2015)

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

PREPARED FOR:
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

SEMS Inc.



REFERENCE: MAP TAKEN FROM GOOGLE EARTH

LEGEND

⊕	WATER SUPPLY WELL
mg/L	MILLIGRAMS PER LITER
(<0.005)	ZINC CONCENTRATION IN mg/L

330 0 330

APPROXIMATE SCALE IN FEET

NOTES:

1) NO SITE CLEANUP STANDARDS WERE FOUND FOR ZINC. SEMS USED LDEQ RECAP SCREENING STANDARD OF 1.1 mg/L.
2) NO WELLS SAMPLED EXCEEDED LDEQ RECAP SCREENING STANDARD FOR ZINC.

N

DRAWN BY:	LDG/LB	CHECKED BY		DRAWING NO.
	7/6/15	APPROVED BY		QTR/007

FIGURE 8

WATER WELL ZINC CONCENTRATION 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
Departed : (Various)	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.

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 Pratchorst

Employee Signature: [signature]

SEMS, Inc.

DELATTE METALS SUPERFUND SITE OPERATION AND MAINTENANCE ACTIVITY LOG

SEMS EQUIPMENT & MATERIALS USED

'ask	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	

yee Name: Nick Rodehorst Employee Signature:

SEMS, Inc.

Delatte Metals O&M QA/QC Checklist

SEMS Project #: 207-0029
Field Crew: Nick Rodehorst
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
Harry 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 Rodehorst
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
GSGP-03	5/11/15	✓	✓	✓	X	✓	✓	X	X	X	X	X	X	
(b) (6) Well		NA	NA	NA	NA	NA	✓	X	X	X	X	X	X	
WW-04		NA	NA	NA	NA	NA	✓	X	X	X	X	X	✓	
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 Bodehost
Harry Brown

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 Rodeheaver
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 Rosehorst
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	

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/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 @ 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	8.35	-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.: South 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@1039 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.: 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.: 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

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

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]~~ 750 NR
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
Facility's Phone: (225-667-6160)
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 Rodehorston behalf of LDEQ
Signature:
Month 5 Day 26 Year 15

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

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

GENERATOR
TRANSPORTER
DESIGNATED FACILITY

WASTE MANAGEMENT

29340 Woodside Drive
Walker, LA, 70785
PH# (225) 563-9225

Original
Ticket# 1501079

Customer Name SEMBINC SEMS, 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 149-DELATTEMETALS DELATTE METALS SUPERFUND SITE-SEMS

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 lbs
Out	05/26/2015 15:14:32	Outbound	JUSTIN		Tare	30945 lbs
					Net	1200 lb
			* Manual Weight		Tons	0.60

Comments

	Product	LOS	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# 1501050

Customer Name SENSING SEMS, 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 951195LA (SAMPLING DEBRIS)
Generator 149-DELATTEMETALS DELATTE METALS SUPERFUND SITE-SEMS

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

Grid 3048349 9082349 L3

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

Comments

	Product	LDF	Qty	UOM	Rate	Tax	Amount	Origin
1	DRUMS-SAMPLING DEB	100	1	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 8558

404WM

ATTACHMENT B

LABORATORY ANALYTICAL REPORT

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www.pacelabs.com

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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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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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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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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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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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.

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TNI - The Nelac Institute

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City
PASI-N	Pace Analytical Services - New Orleans

ANALYTE QUALIFIERS

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Delatte Metals
Pace Project No.: 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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Pace Analytical Services, Inc.
1000 Riverbend Blvd - Suite F
St. Rose, LA 70087
(504)469-0333

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

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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:	Larry Brand
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:	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	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-03	W	G			5/14/15	0848		2			2						X	X				
2	(b) (6) [redacted] Well						1030		1			1						X	X				
3	WW-04						1040		1			1						X					
4	BC-03						1105		1			1						X					
5	BC-07						1144		1			1						X					
6	NK ~~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	Alli Murphy	5-15-15	11:06	
As, Cd, Mn, Ni, Pb, Zn	Alli Murphy	5/15/15	1143	[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

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-CUST Y / 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- Fax: 2340
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 (9036)	Sulfide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CL-19	WW	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	Colin MacPhee	5-15-15	11:66	1.8
Ar, Cd, Mn, Ni, Pb, Zn	Colin MacPhee	5-15-15	1146	[illegible]	5-15-15	1145	1.5 2.0 2.5
- Dissolved Metals are field filtered.							

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

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

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.

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Page: 3 of 5

1617507

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 Brand.	Company Name:
		Address:
Email To: nrodehorst@semsinc.net	Purchase Order No.:	Pace Quote Reference:
Phone: 504-342-2340 Fax:	Project Name: Delatte 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	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	NR ~~[illegible]~~ DW-01					1702	~~[illegible]~~		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	NR ~~[illegible]~~ TEPA-P7D						1120		4 NR	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	[signature]	5-15-15	11:00
Ar, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	5-15-15	1145
- Dissolved Metals are						
field filtered.						

SAMPLE CONDITIONS

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): 5/15/2015

*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: 504-342-2340 Fax:
Requested Due Date/TAT: STD

Section B Required Project Information:

Report To: Nick Rodehorst
Copy To: Larry Breaux
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	[illegible]	5-15-15	11:00	
As, Cd, Mn, Ni, Pb, Zn	[illegible]	5-15-15	1145	[illegible]	5-15-15	1145	
- Dissolved Metals are field filtered.							

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

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

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.

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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 Braud	Company Name:
		Address:
Email To: nrodehorst@semsinc.net	Purchase Order No.:	Pace Quote Reference:
Phone: 504-342-2340 Fax:	Project Name: Delitte 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	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	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	~~1050~~ NA		918			1							X					
5	GSGP-6MSD					↓	~~1050~~ NA		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: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	[signature]	5-15-15	11:00	1.0			
Ar, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	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: 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

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

REPORT OF LABORATORY ANALYSIS

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(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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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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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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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.

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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: PASI 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 Clyne Date: 05/19/2015

Chain of Custody

Pace Analytical®
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

Sicily Date 19056

60194389

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved																		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
9	NWGS-02	RQS	5/13/2015 10:50	2019932037	Water	3						X		(3)	BP3U									008
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

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	[illegible]	5-18-15 1700	FedEx		Level IV
2	FedEx		[illegible]	5/19 0820	
3					

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

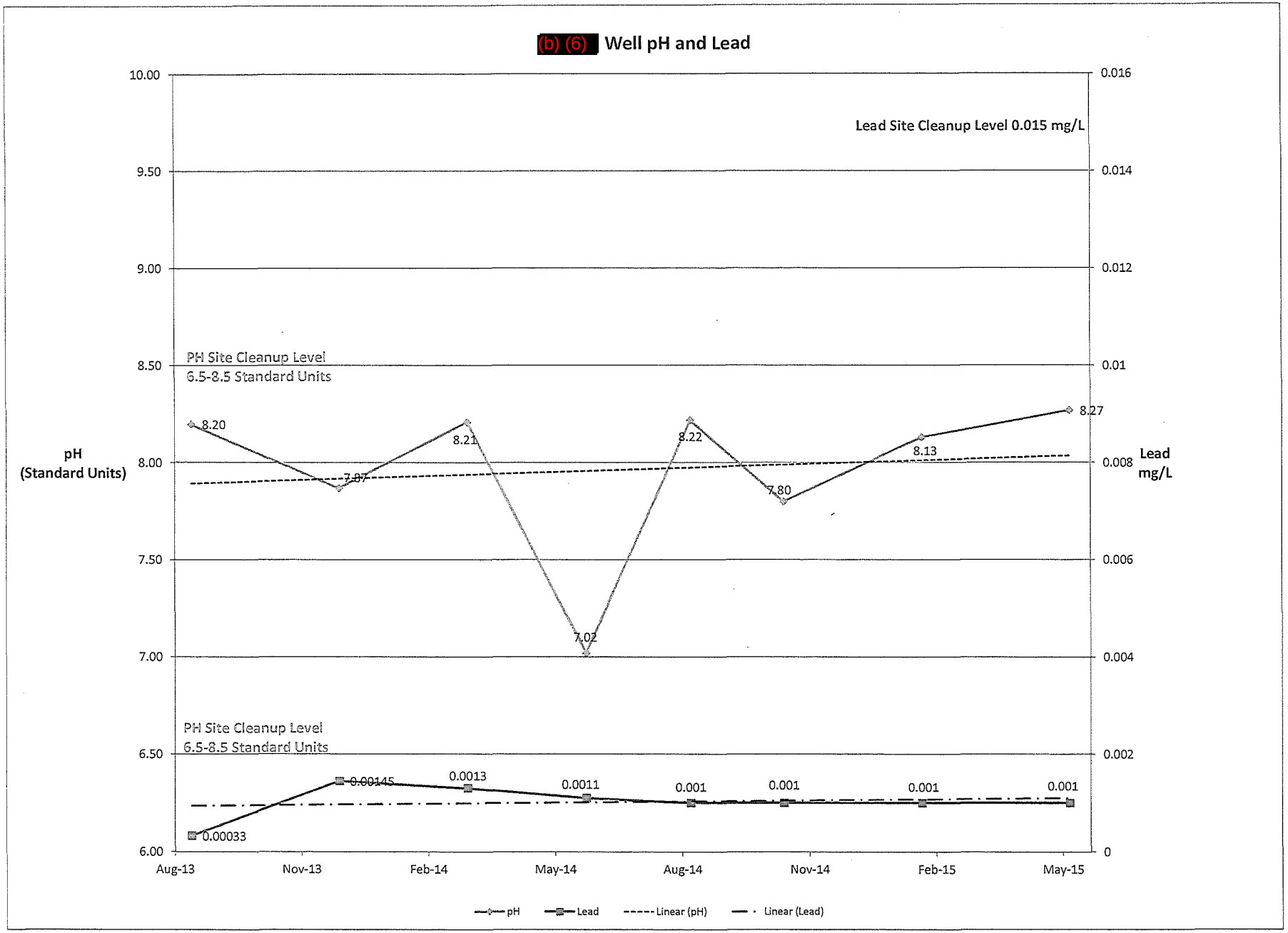
***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

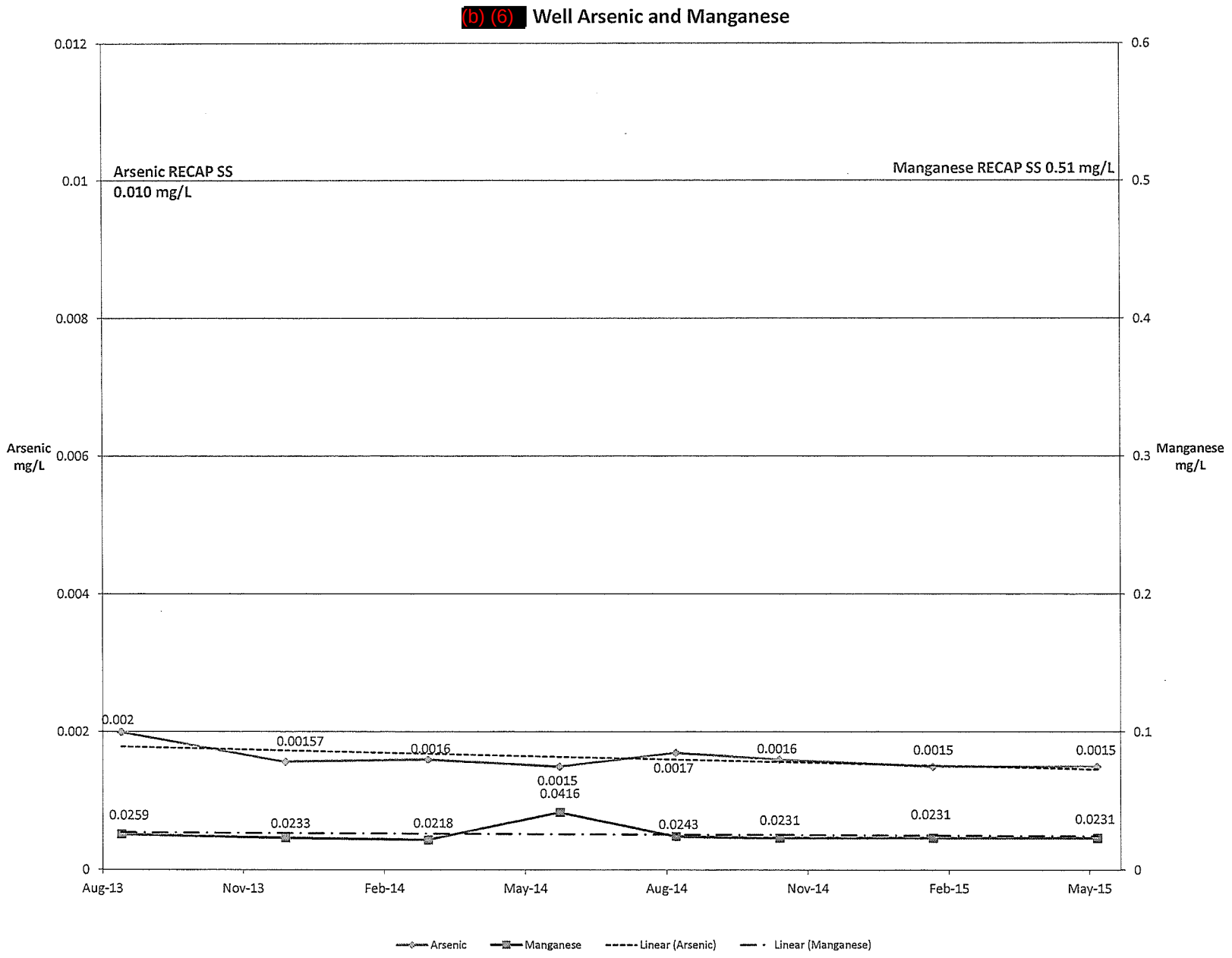
ATTACHMENT C

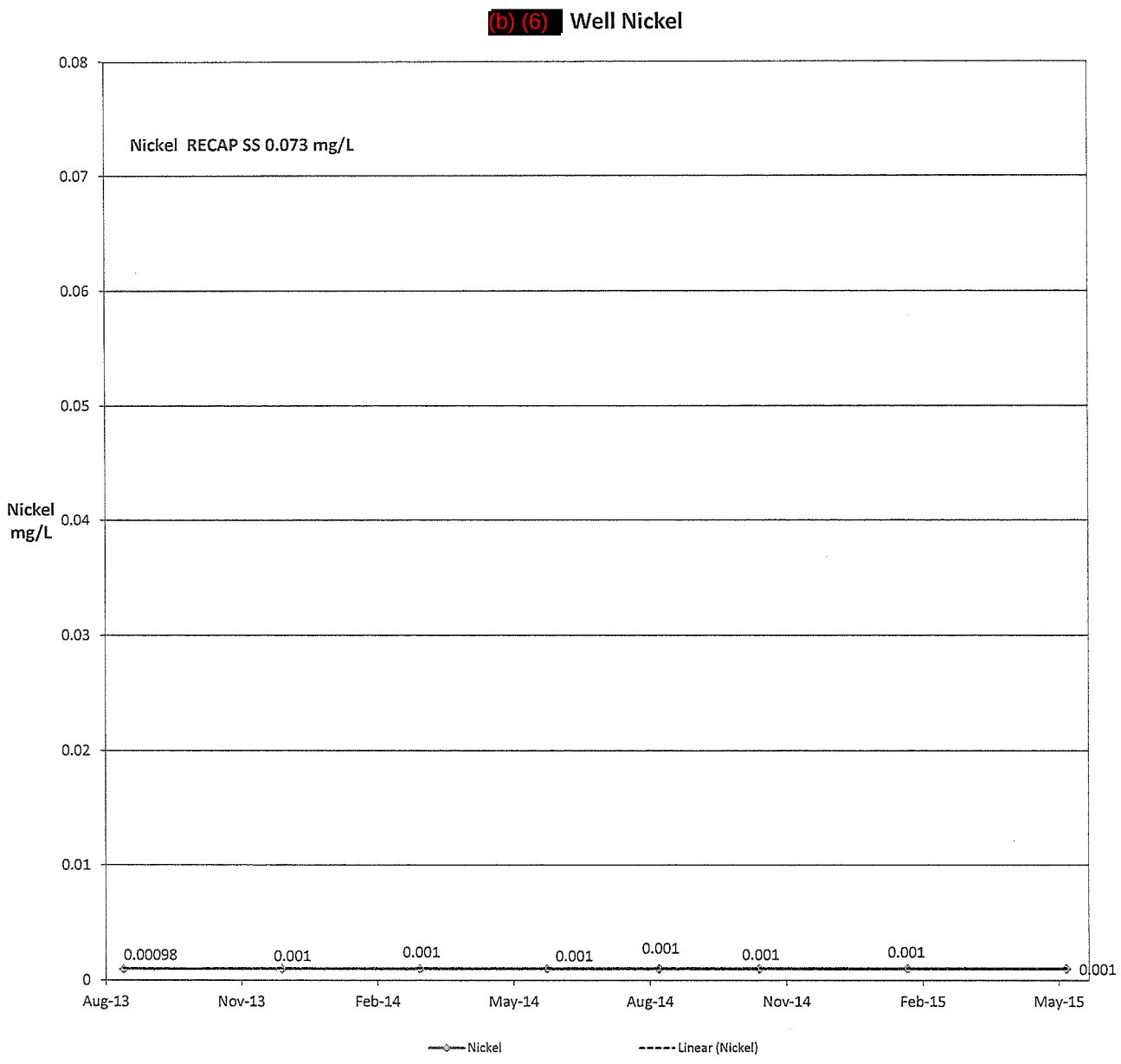
HISTORICAL CONCENTRATION
VS.
TIME GRAPHS

WATER WELLS

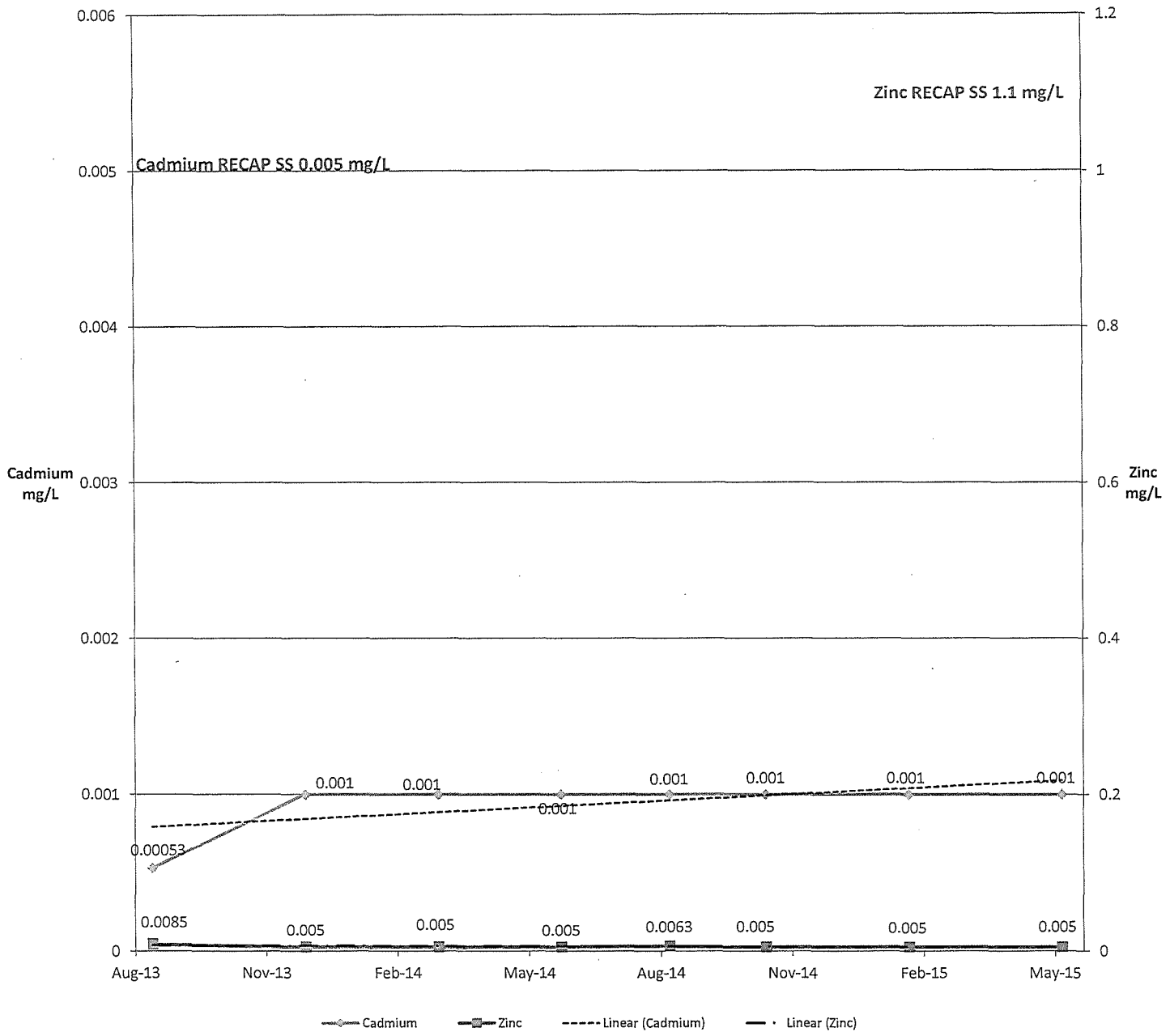
(PAST EIGHT QUARTERS)

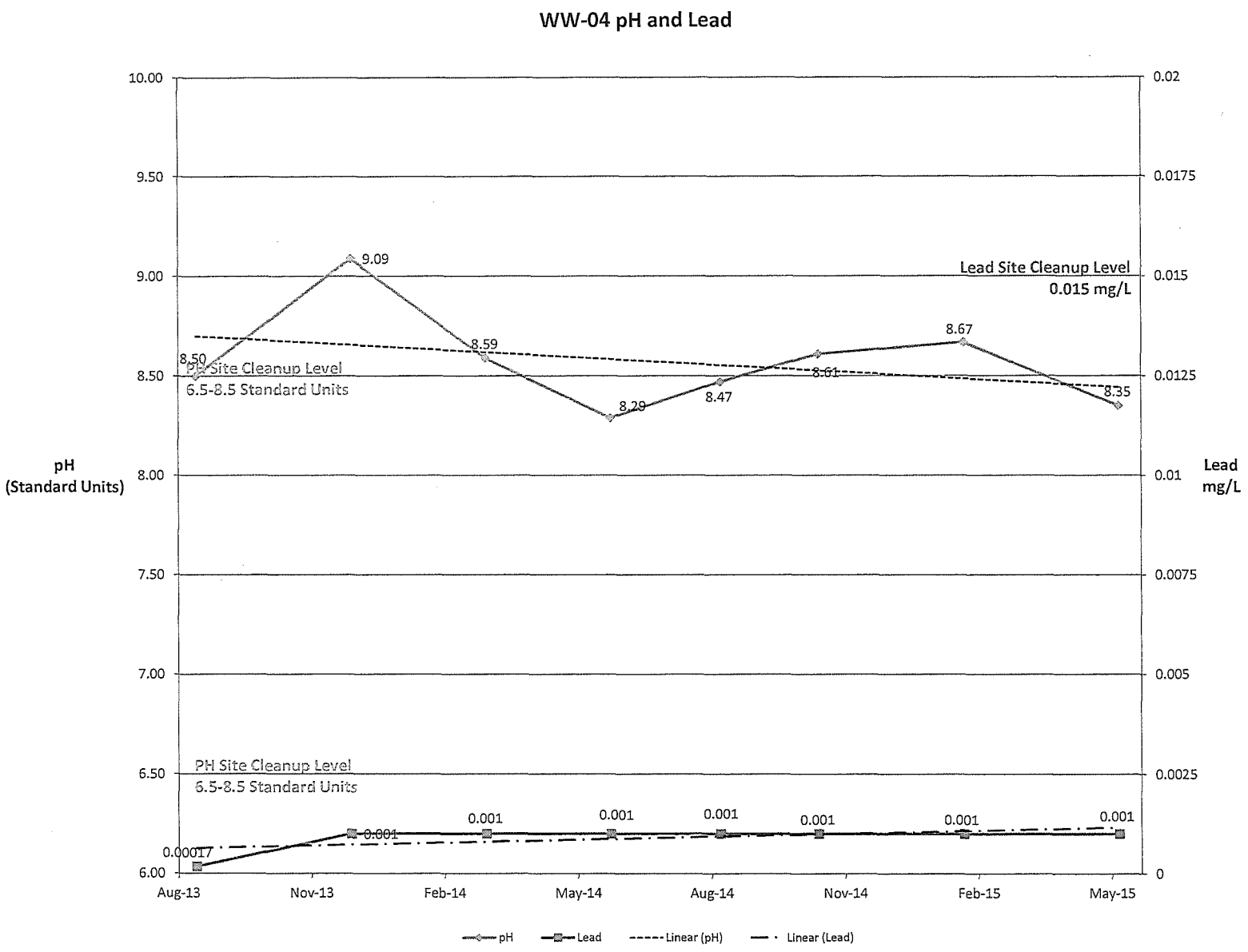

(b) (6) Well pH and Lead
Lead Site Cleanup Level 0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
8.20
7.87
8.21
7.02
8.22
7.80
8.13
8.27
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)

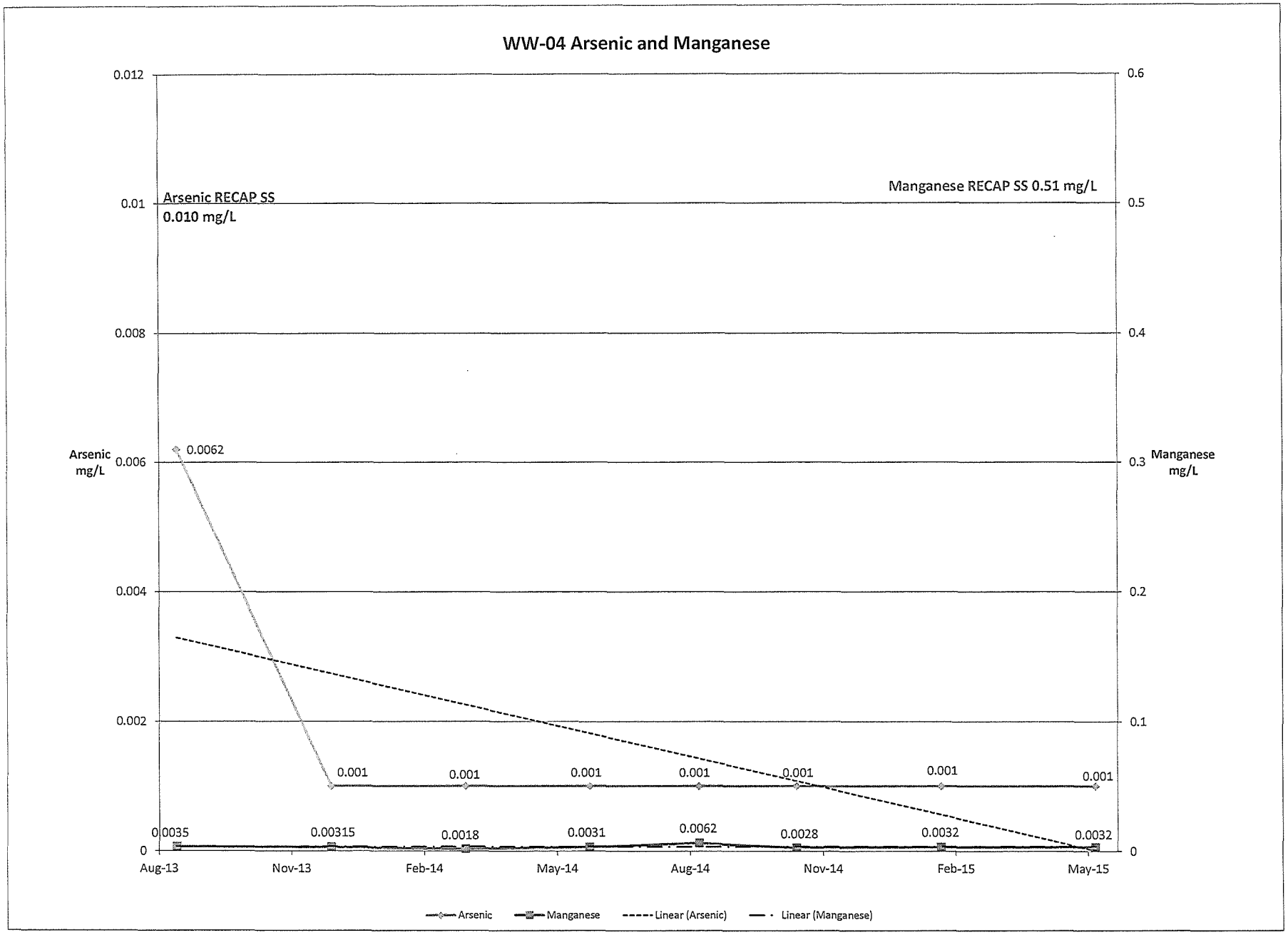

(b) (6) Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.002
0.00157
0.0016
0.0015
0.0017
0.0016
0.0015
0.0015
0.0259
0.0233
0.0218
0.0416
0.0243
0.0231
0.0231
0.0231
Aug-13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

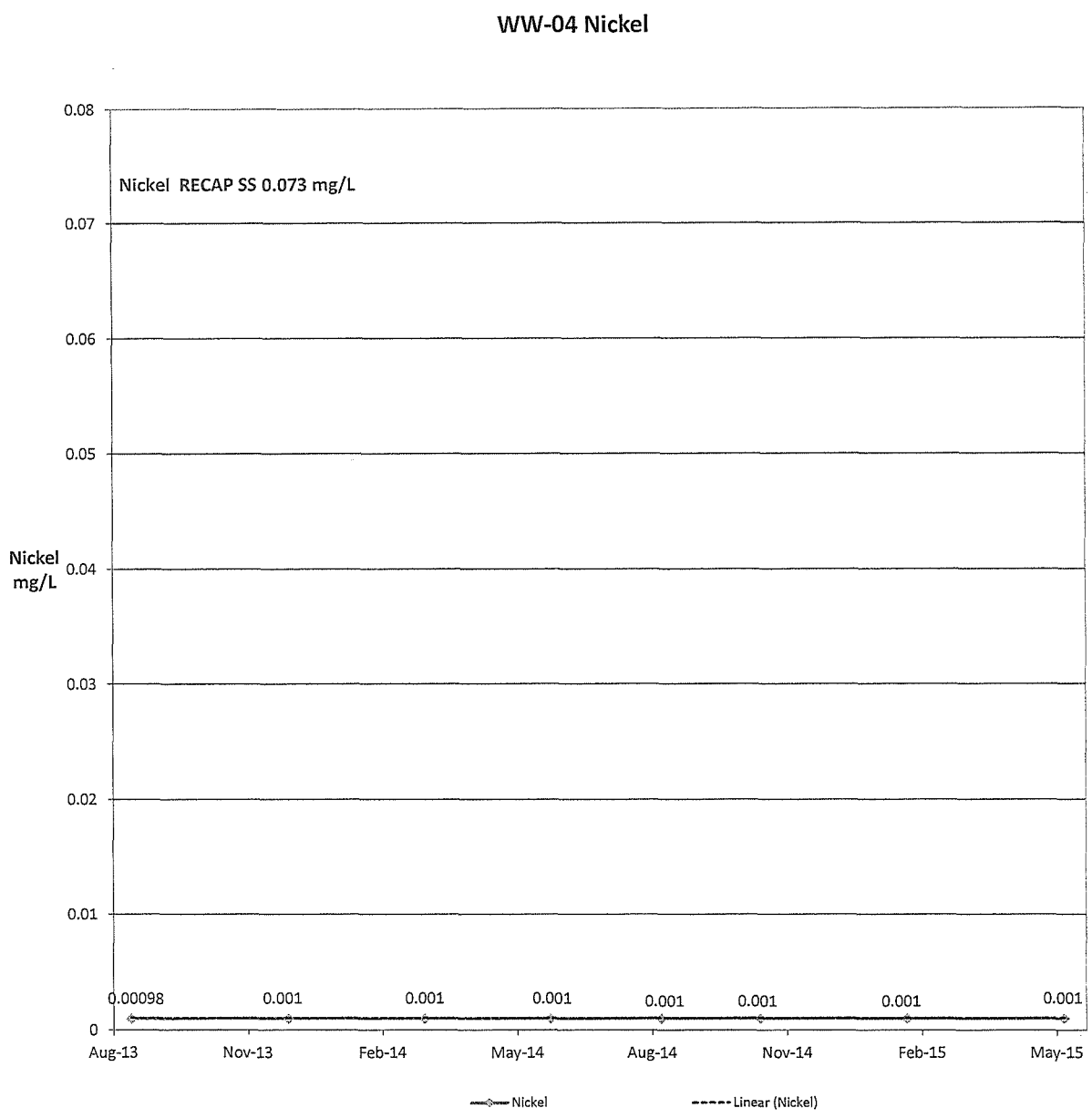

(b) (6) Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

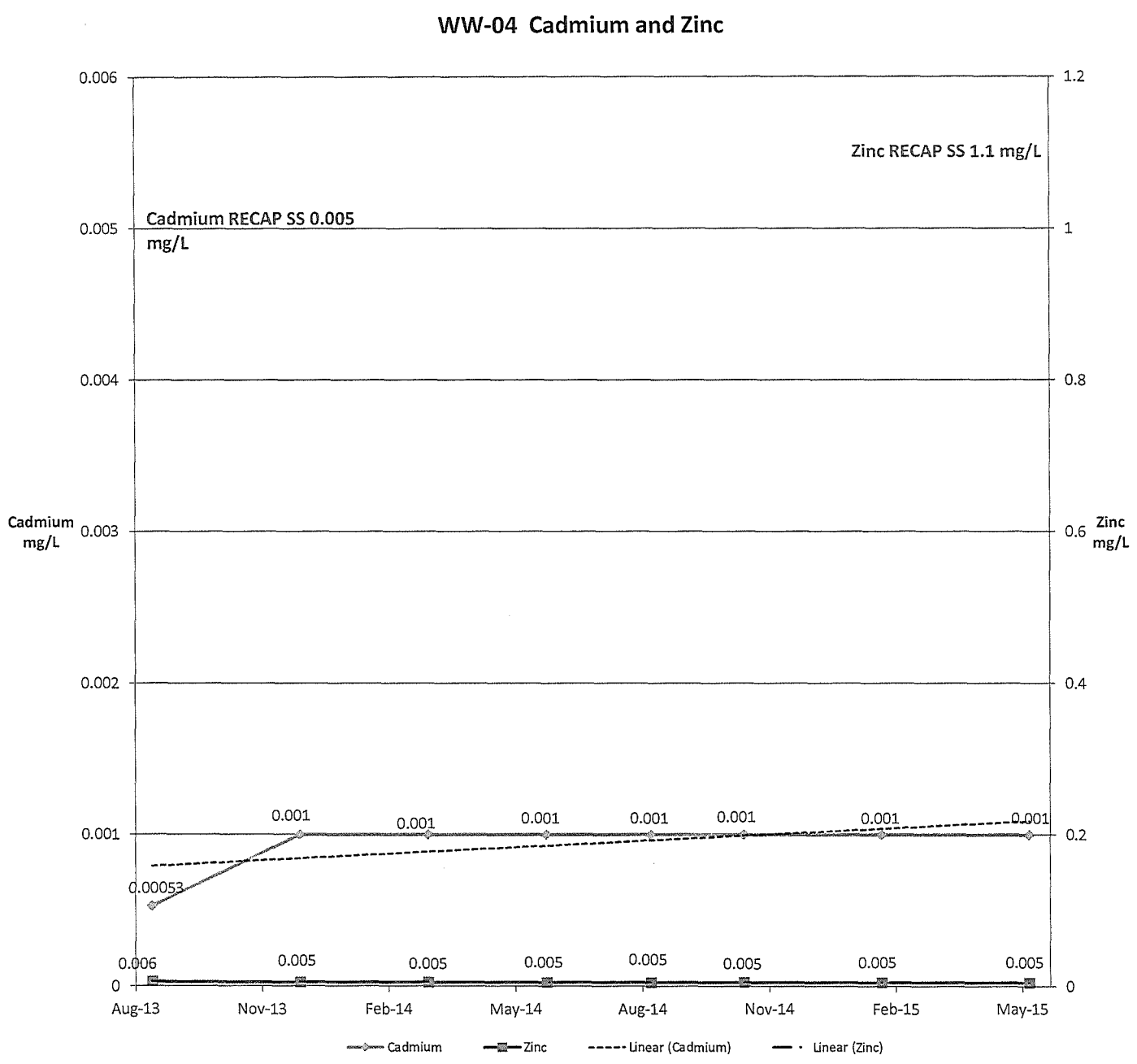
(b) (6) Well Cadmium and Zinc

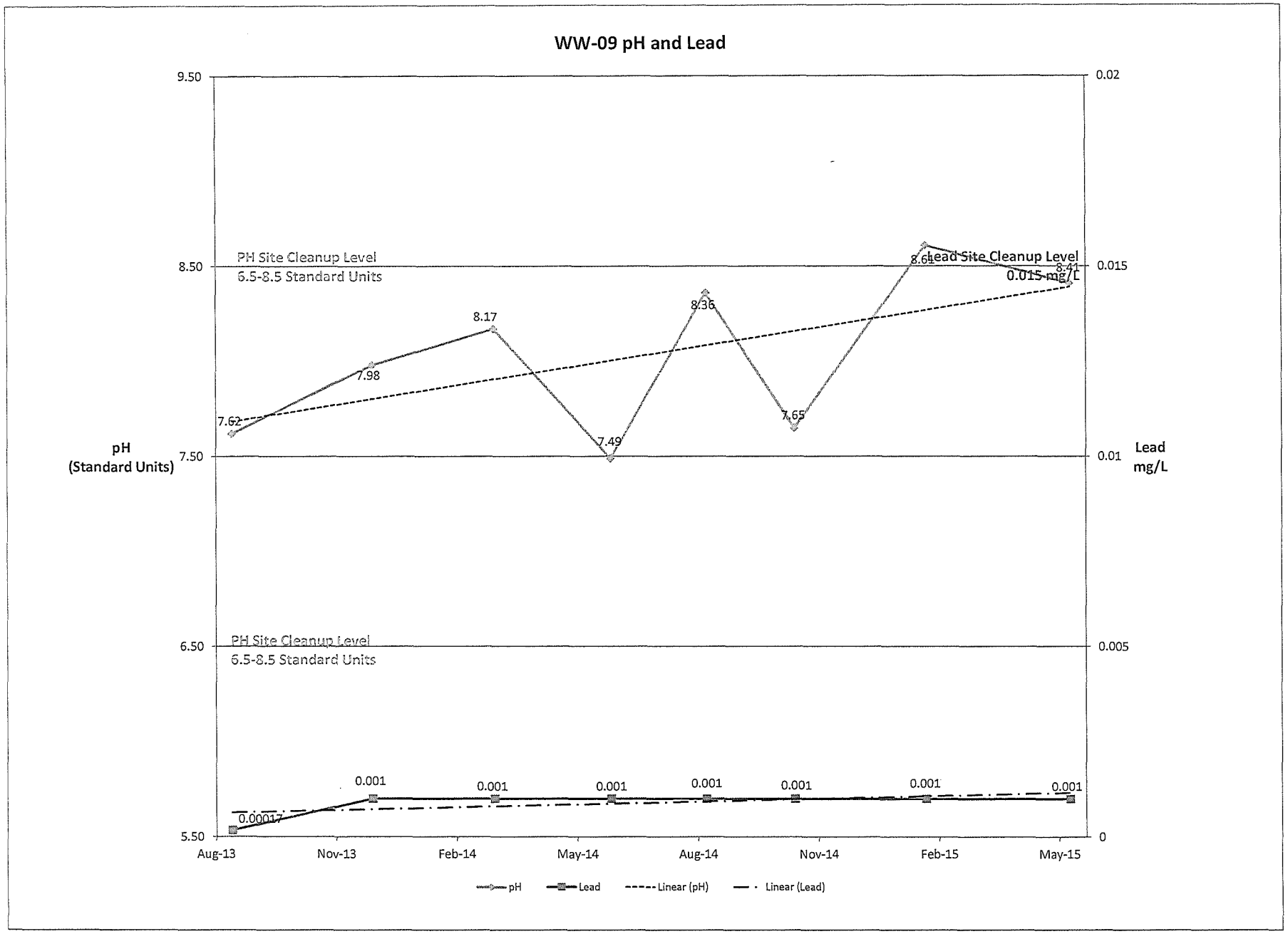


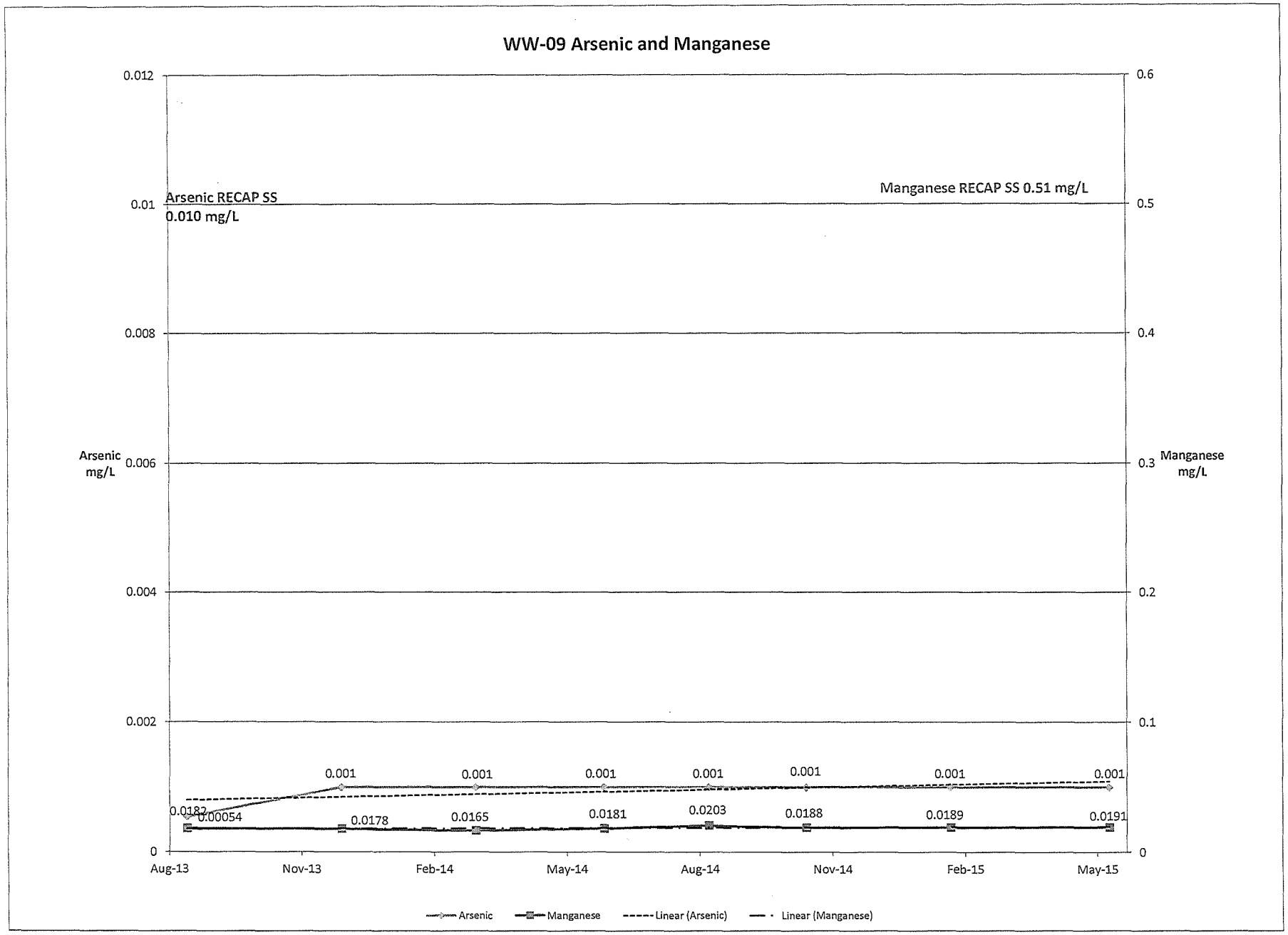

WW-04 pH and Lead
pH
(Standard Units)
Lead
mg/L
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
0.02
0.0175
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
PH Site Cleanup Level
6.5-8.5 Standard Units
8.50
9.09
8.59
8.29
8.47
8.61
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)

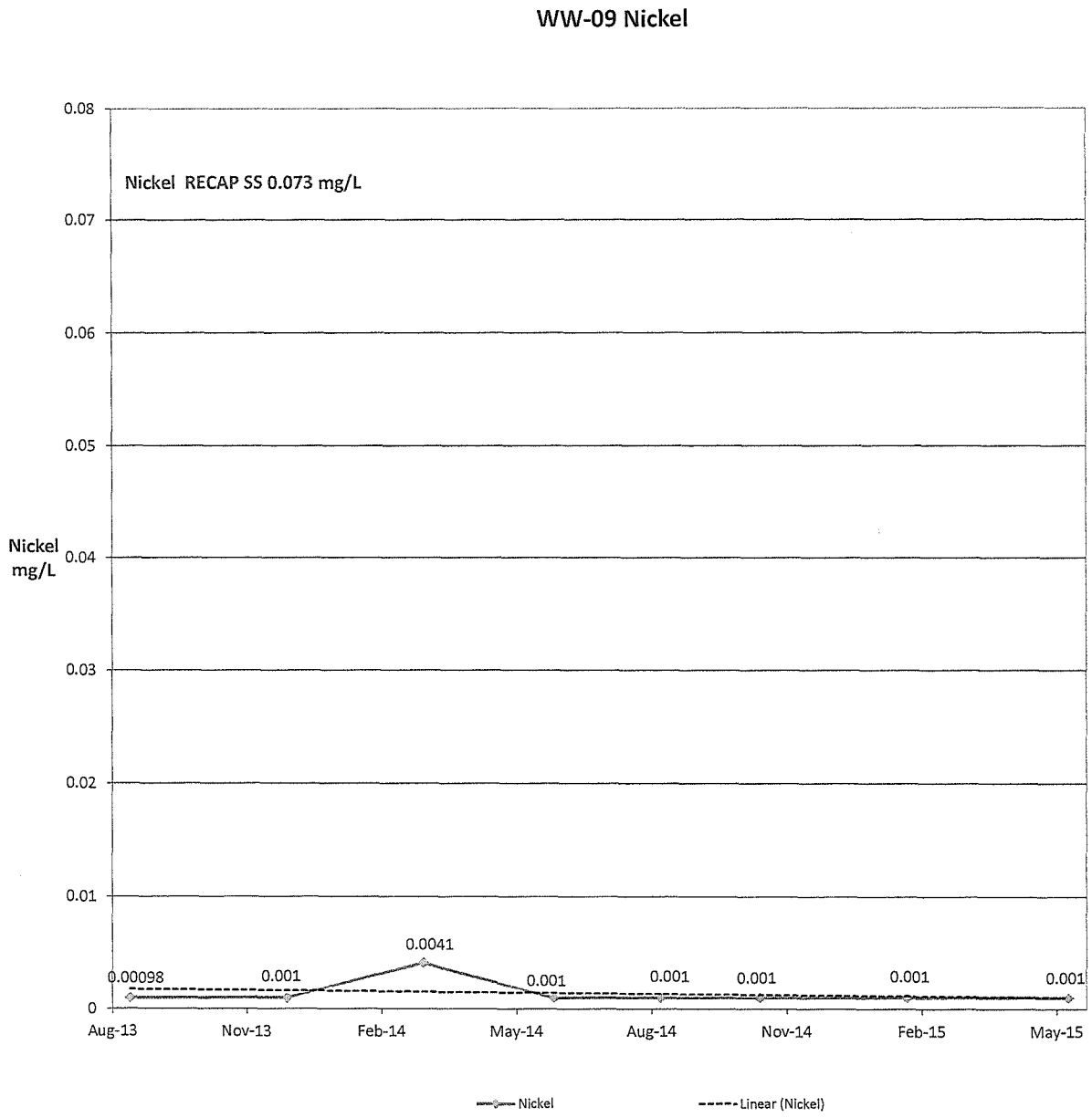

WW-04 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0062
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0035
0.00315
0.0018
0.0031
0.0062
0.0028
0.0032
0.0032
Aug-13
Nov-13
Feb-14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

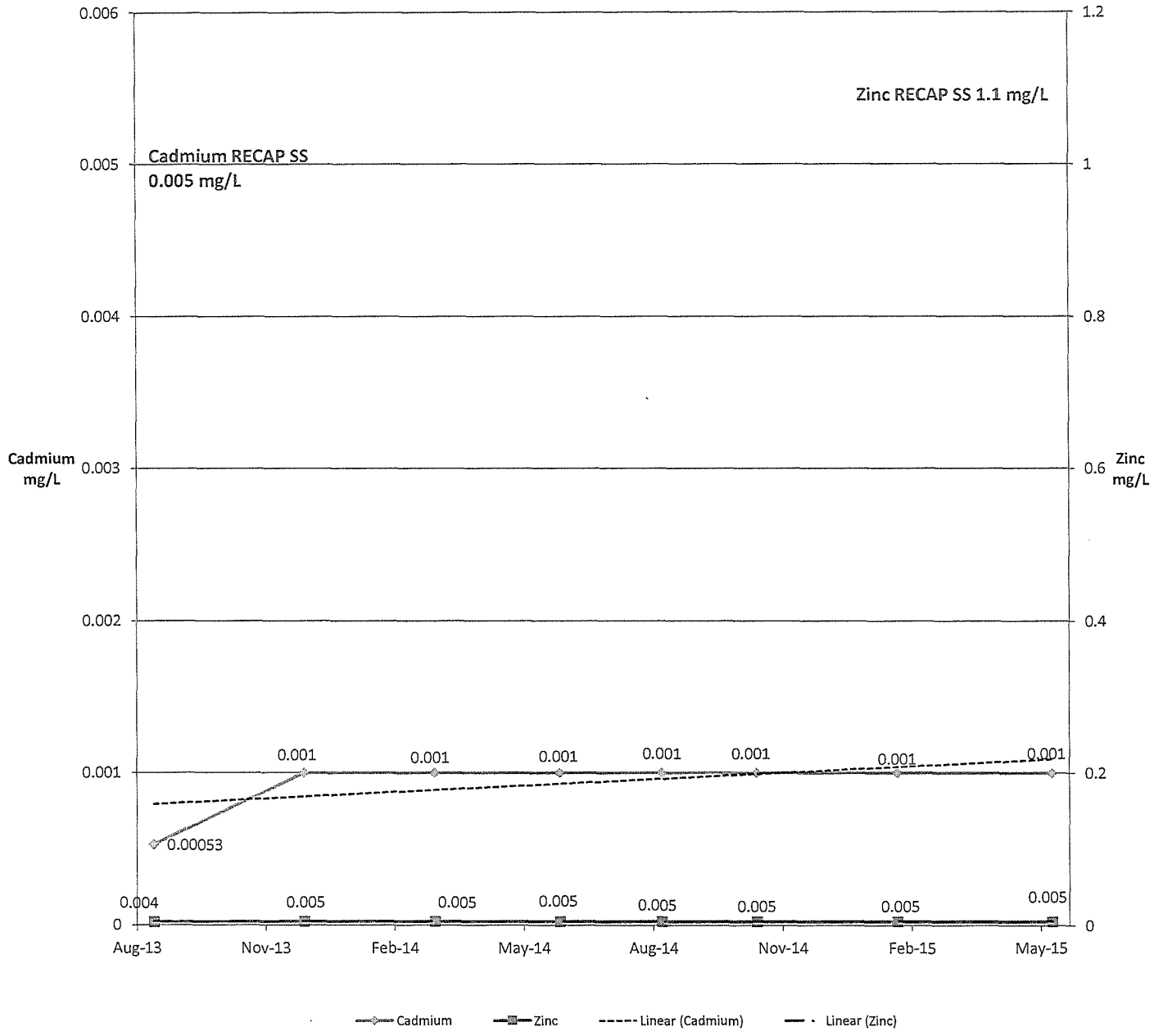

WW-04 Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00053
0.006
0.005
0.005
0.005
0.005
0.005
0.005
0.005
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

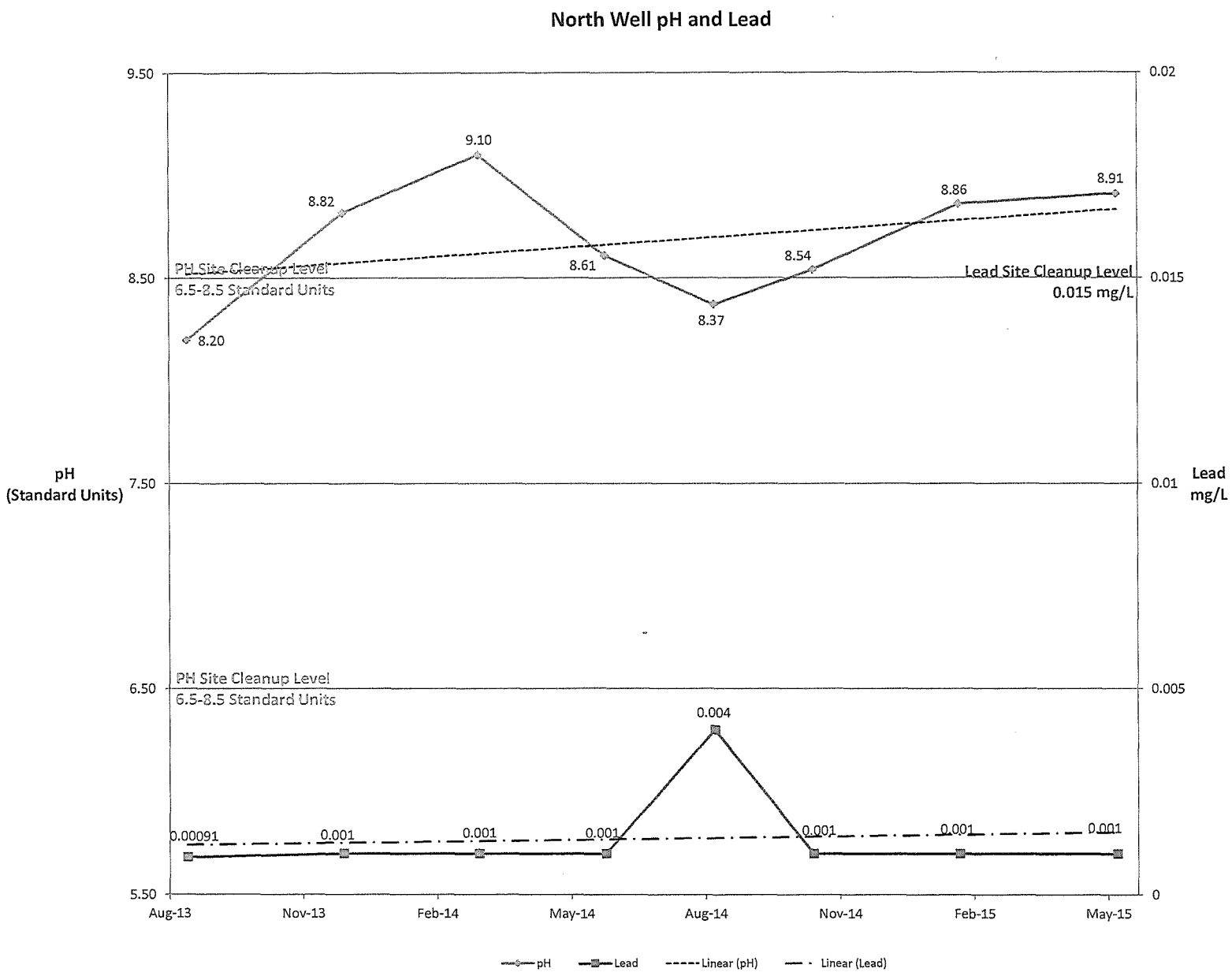

WW-09 pH and Lead
9.50
8.50
7.50
6.50
5.50
pH
(Standard Units)
0.02
0.015
0.01
0.005
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
7.62
7.98
8.17
7.49
8.36
7.65
8.61
8.41
0.00017
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
pH
Lead
Linear (pH)
Linear (Lead)

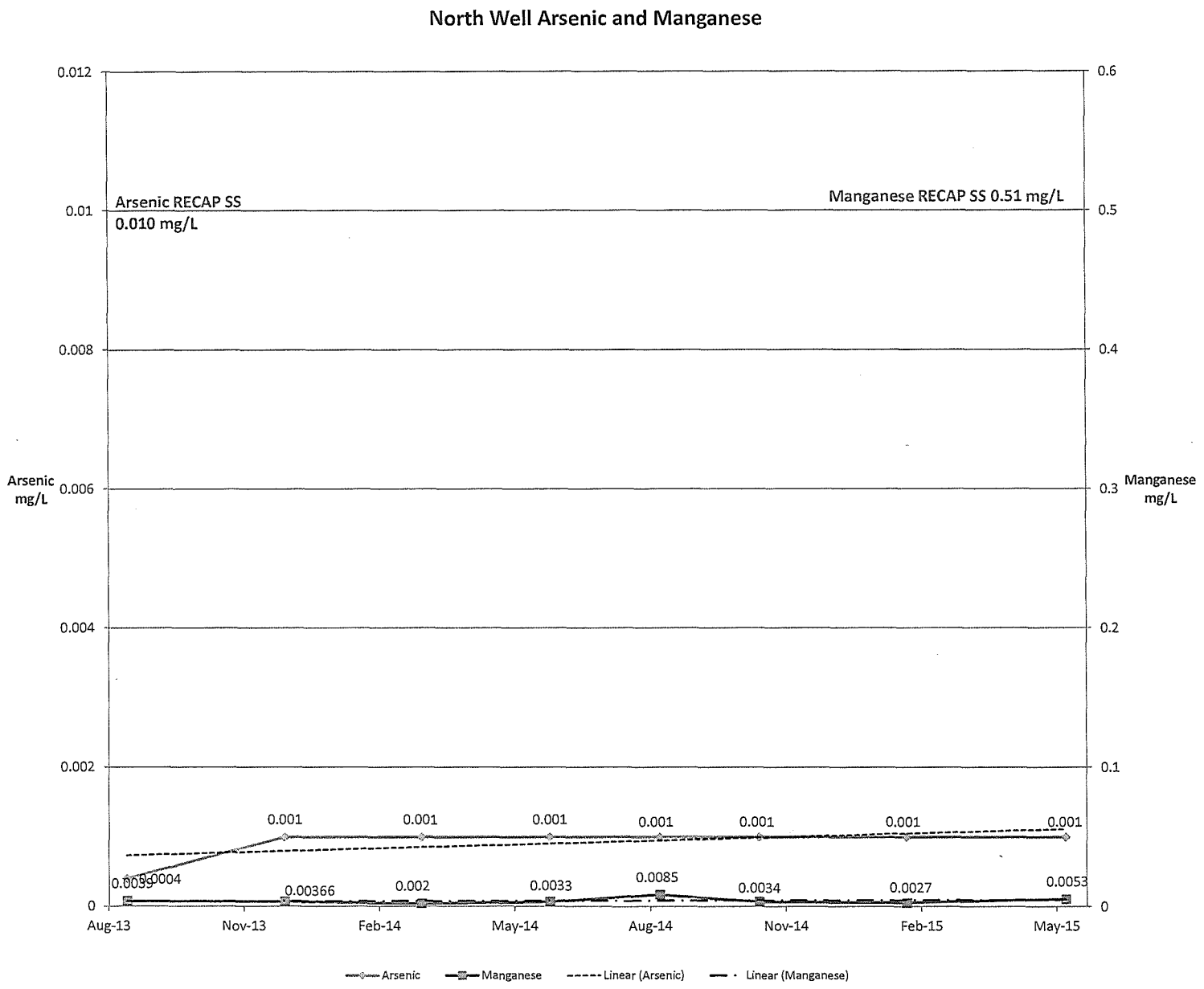

WW-09 Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.0182
0.00054
0.0178
0.0165
0.0181
0.0203
0.0188
0.0189
0.0191
Aug-13
Nov-13
Feb-14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

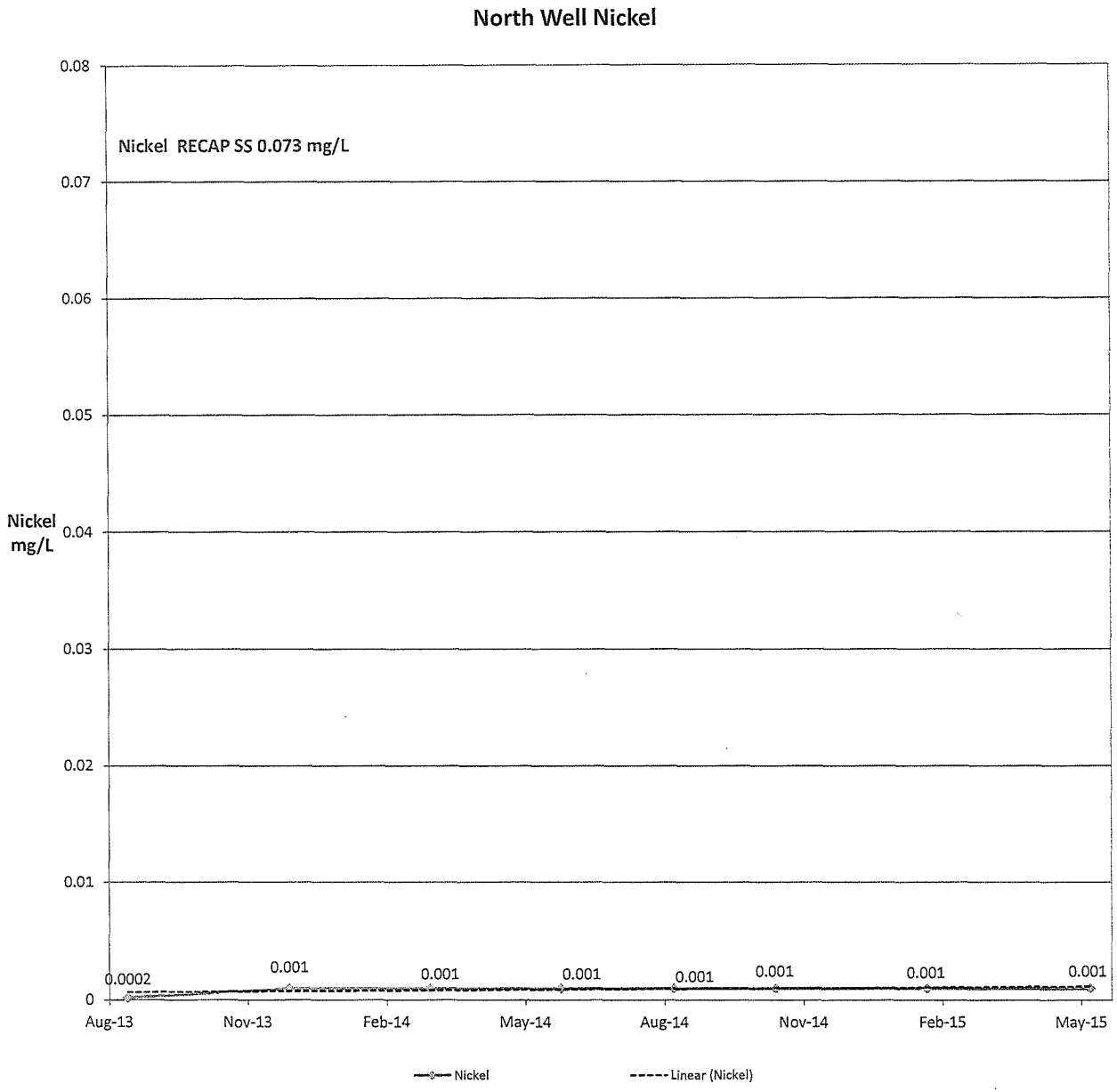

WW-09 Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00098
0.001
0.0041
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

WW-09 Cadmium and Zinc

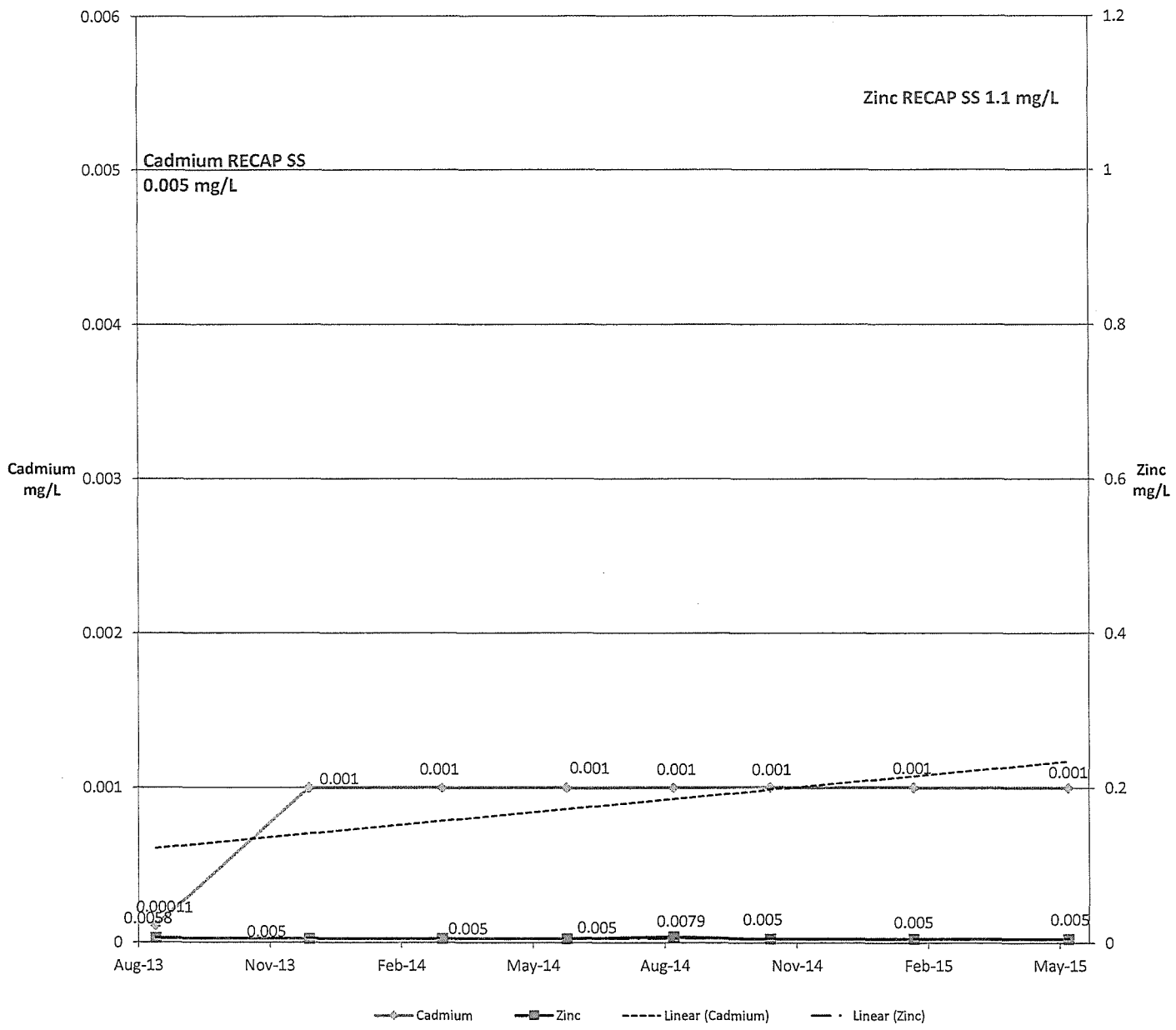


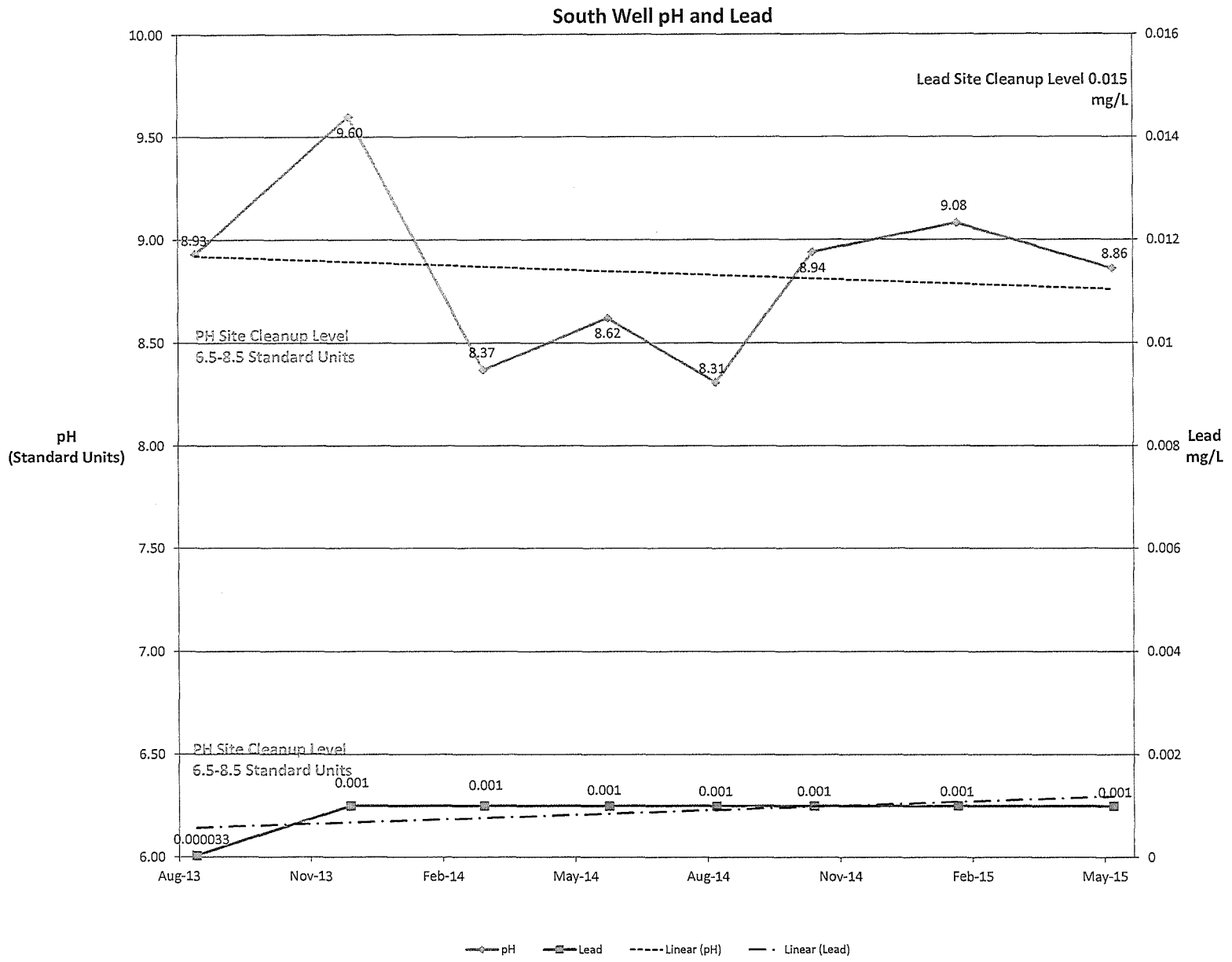

North Well pH and Lead
9.50
8.50
7.50
6.50
5.50
pH
(Standard Units)
0.02
0.015
0.01
0.005
0
Lead
mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
Lead Site Cleanup Level
0.015 mg/L
PH Site Cleanup Level
6.5-8.5 Standard Units
8.20
8.82
9.10
8.61
8.37
8.54
8.86
8.91
0.00091
0.001
0.001
0.001
0.004
0.001
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)

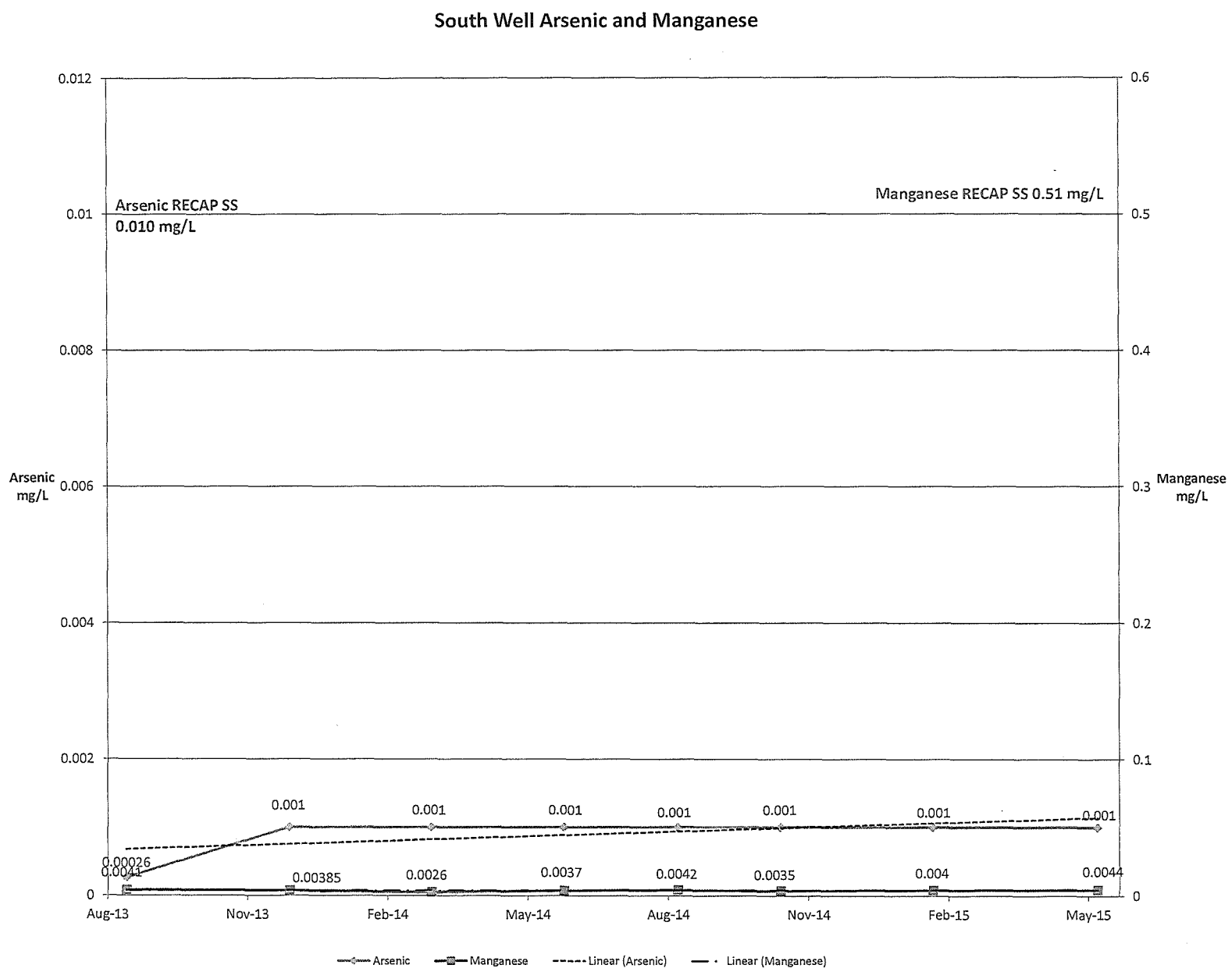

North Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.0099
0.0004
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00366
0.002
0.0033
0.0085
0.0034
0.0027
0.0053
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

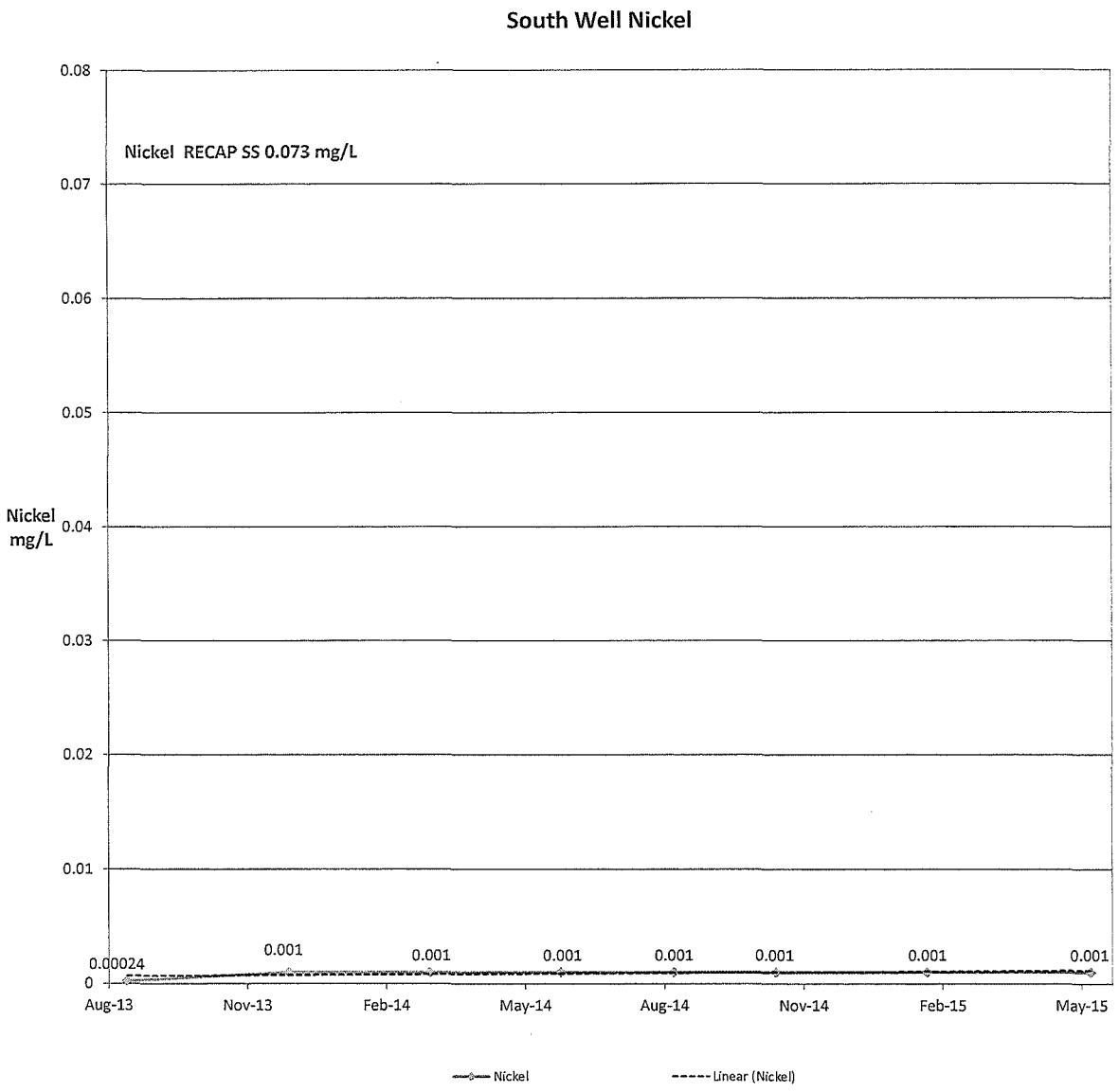

North Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.0002
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

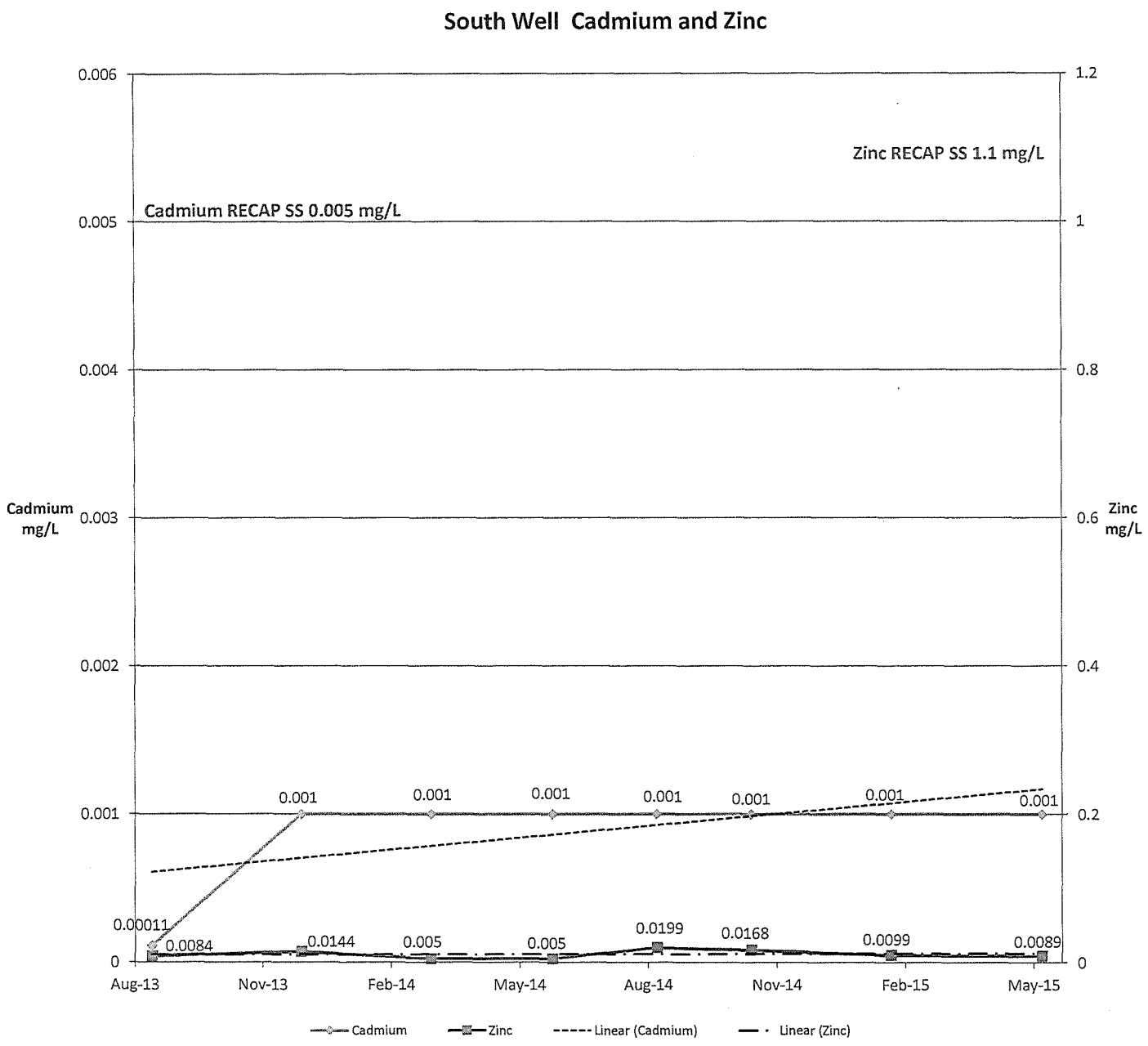
North Well Cadmium and Zinc




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
8.93
9.60
8.37
8.62
8.31
8.94
9.08
8.86
0.000033
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)

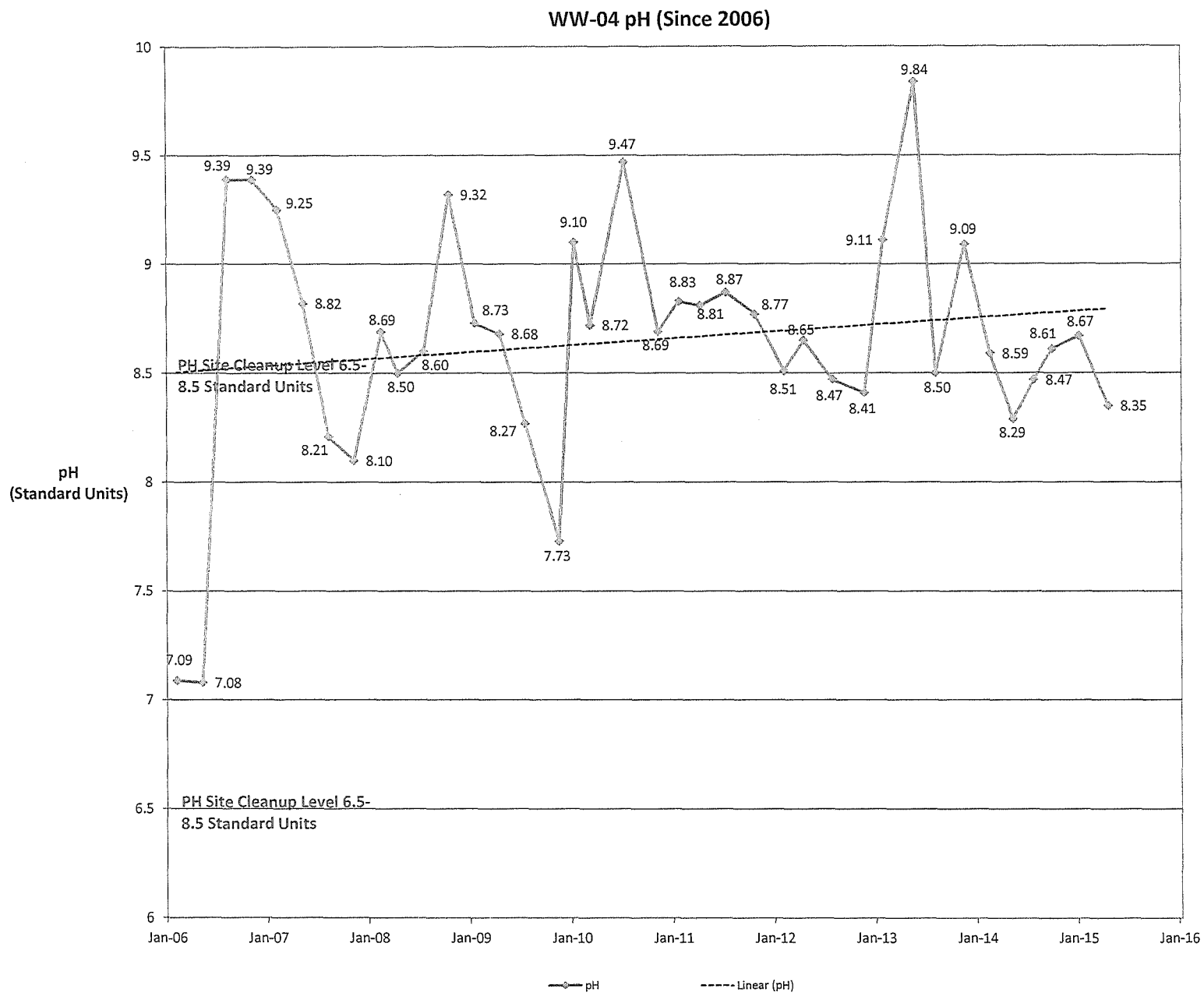

South Well Arsenic and Manganese
Arsenic RECAP SS
0.010 mg/L
Manganese RECAP SS 0.51 mg/L
Arsenic mg/L
Manganese mg/L
0.012
0.01
0.008
0.006
0.004
0.002
0
0.6
0.5
0.4
0.3
0.2
0.1
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00026
0.0041
0.00385
0.0026
0.0037
0.0042
0.0035
0.004
0.0044
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Arsenic
Manganese
Linear (Arsenic)
Linear (Manganese)

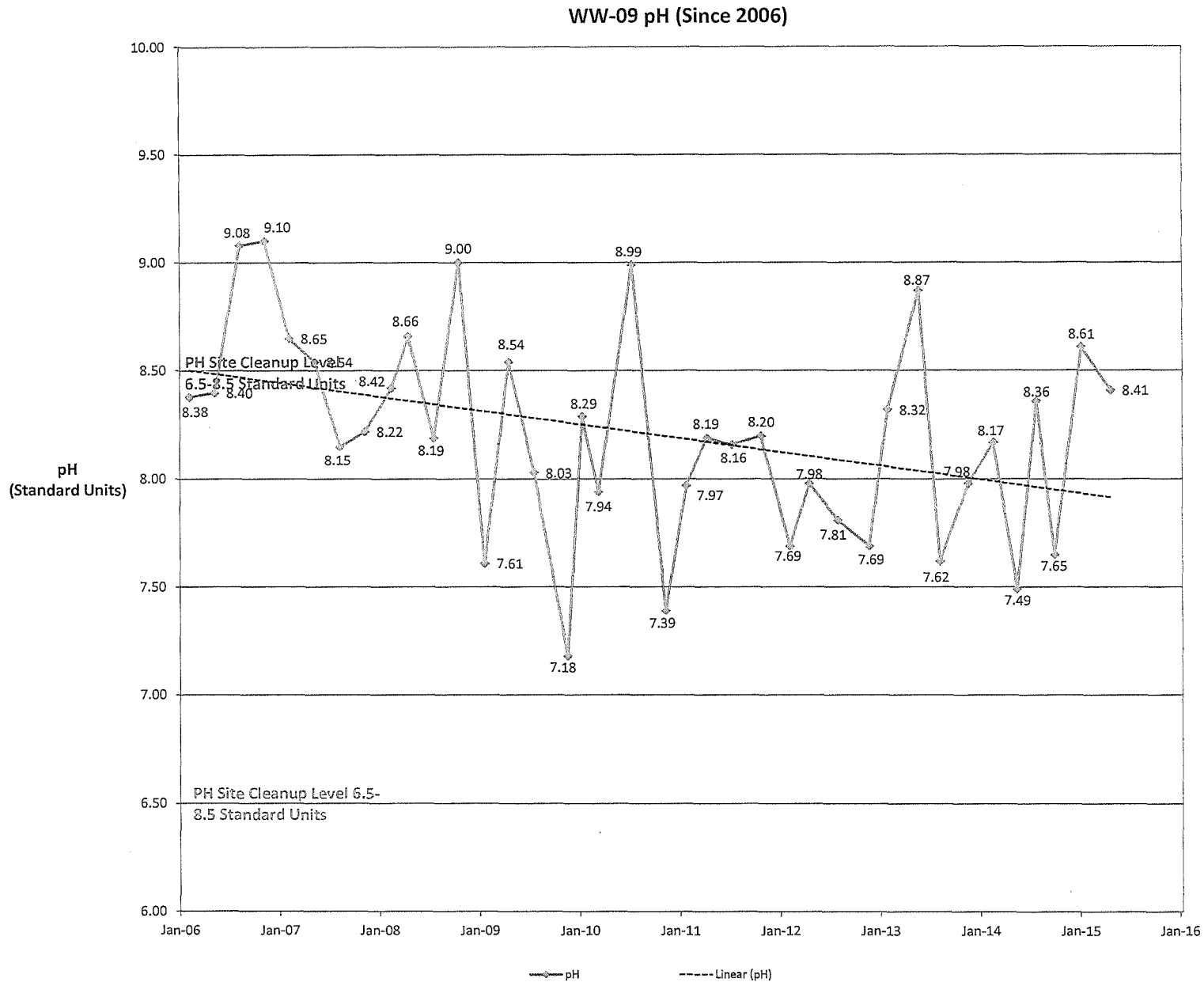

South Well Nickel
Nickel RECAP SS 0.073 mg/L
Nickel mg/L
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.00024
0.001
0.001
0.001
0.001
0.001
0.001
0.001
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Nickel
Linear (Nickel)

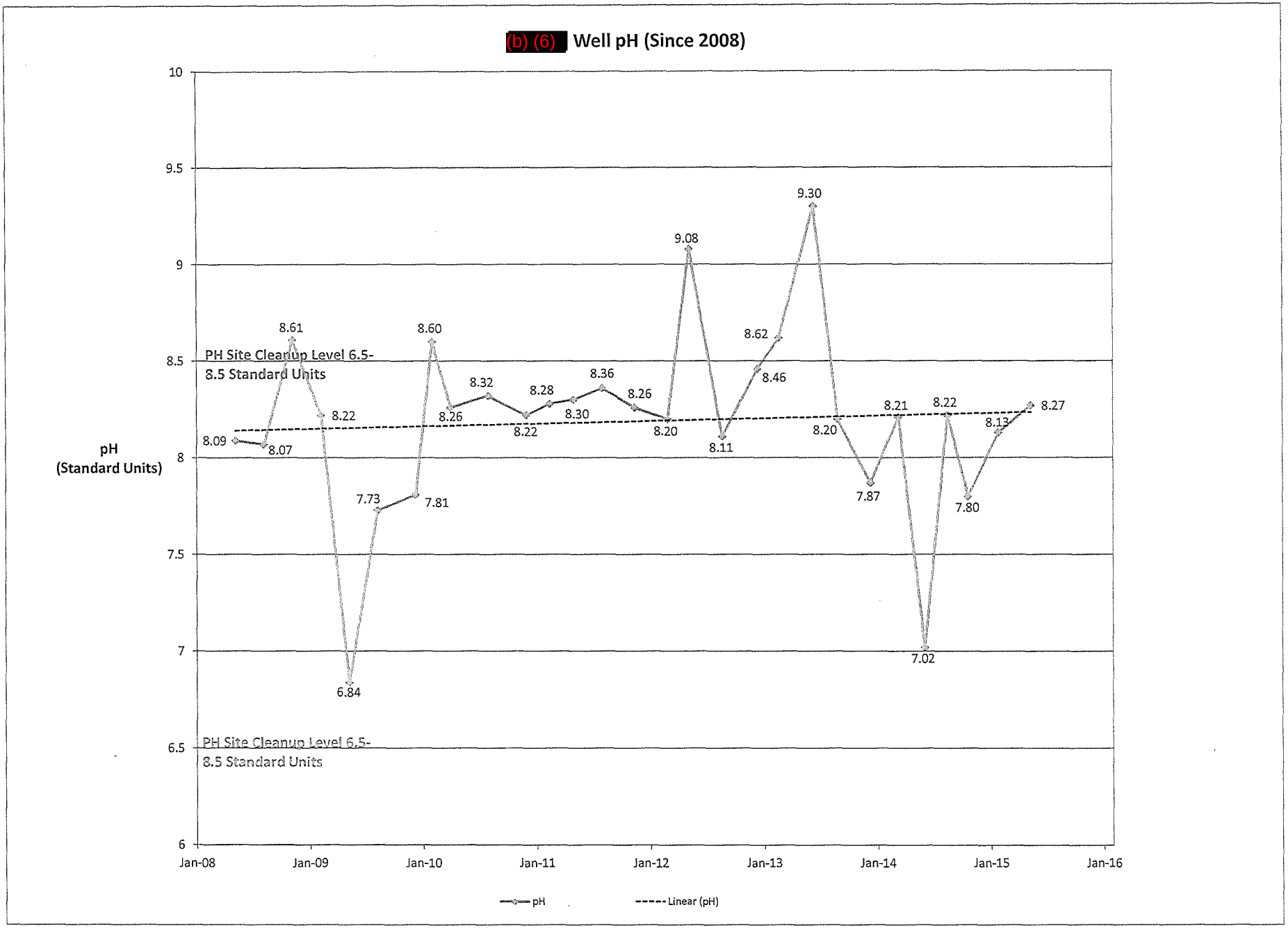

South Well Cadmium and Zinc
Zinc RECAP SS 1.1 mg/L
Cadmium RECAP SS 0.005 mg/L
Cadmium mg/L
Zinc mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1.2
1
0.8
0.6
0.4
0.2
0
0.001
0.001
0.001
0.001
0.001
0.001
0.001
0.00011
0.0084
0.0144
0.005
0.005
0.0199
0.0168
0.0099
0.0089
Aug-13
Nov-13
Feb-14
May-14
Aug-14
Nov-14
Feb-15
May-15
Cadmium
Zinc
Linear (Cadmium)
Linear (Zinc)

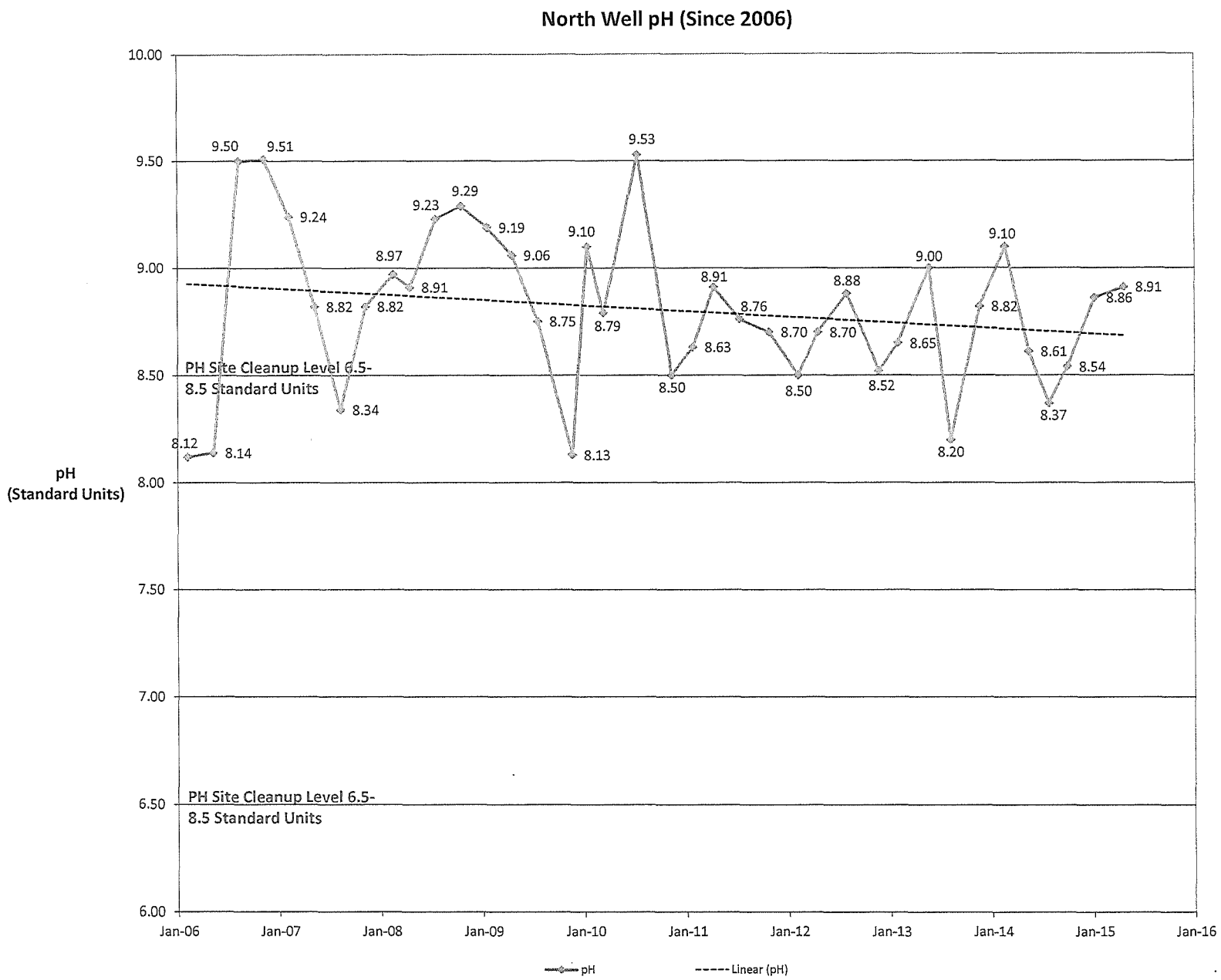
WATER WELLS

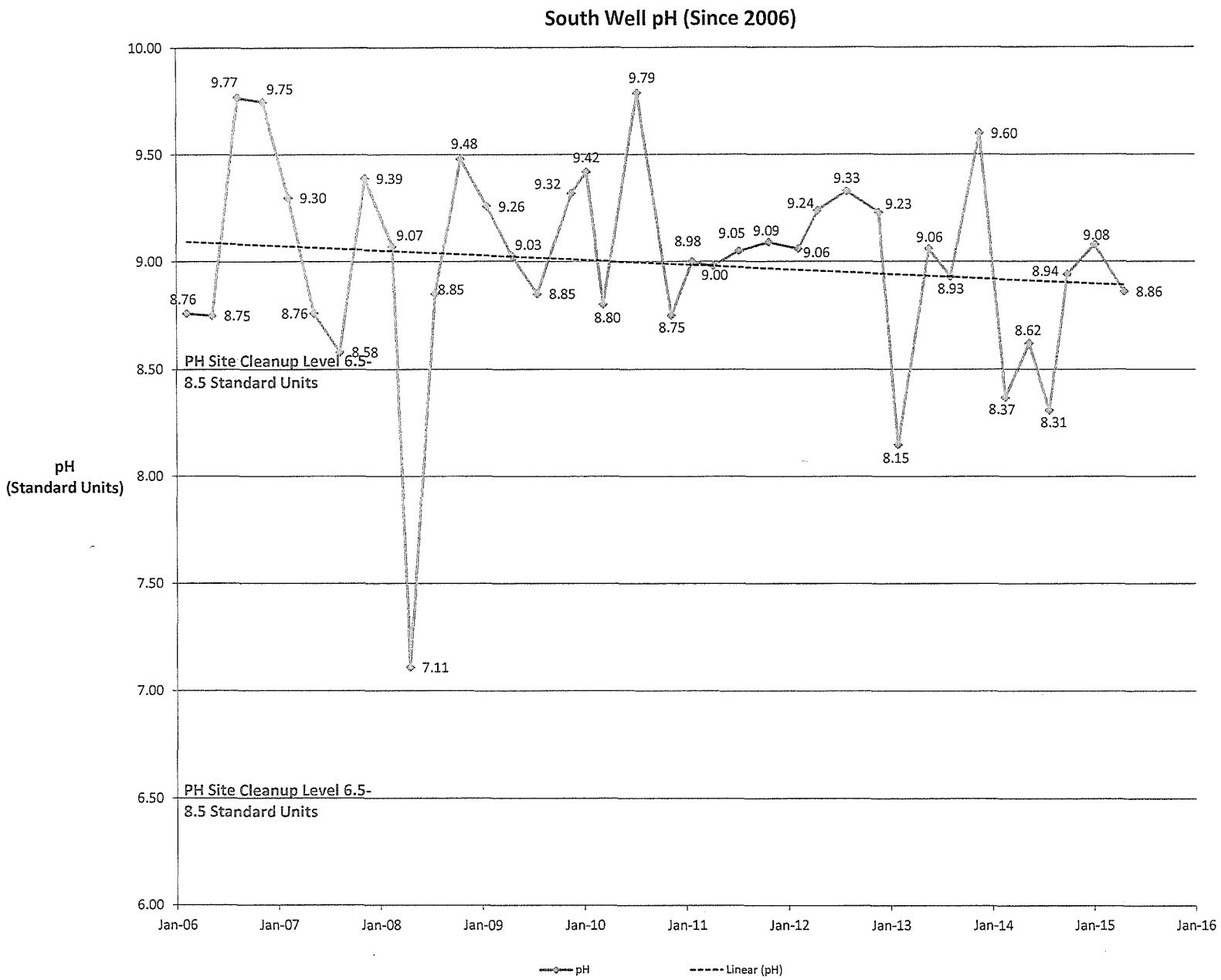
(SINCE 2006)


WW-04 pH (Since 2006)
pH
(Standard Units)
10
9.5
9
8.5
8
7.5
7
6.5
6
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 6.5-
8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
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
Linear (pH)


WW-09 pH (Since 2006)
pH
(Standard Units)
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
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 6.5-8.5 Standard Units
PH Site Cleanup Level 6.5-8.5 Standard Units
8.38
9.08
9.10
8.40
8.65
8.15
8.54
8.22
8.42
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
8.17
7.49
8.36
7.65
8.61
8.41
pH
Linear (pH)


(b) (6) Well pH (Since 2008)
pH
(Standard Units)
10
9.5
9
8.5
8
7.5
7
6.5
6
PH Site Cleanup Level 6.5-
8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
8.09
8.07
8.61
8.22
6.84
7.73
7.81
8.60
8.26
8.32
8.22
8.28
8.30
8.36
8.26
8.20
9.08
8.11
8.46
8.62
9.30
8.20
7.87
8.21
7.02
8.22
7.80
8.13
8.27
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
pH
Linear (pH)


North Well pH (Since 2006)
pH
(Standard Units)
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
PH Site Cleanup Level 6.5-
8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
8.12
8.14
9.50
9.51
9.24
8.82
8.34
8.82
8.97
8.91
9.23
9.29
9.19
9.06
8.75
8.13
9.10
8.79
9.53
8.50
8.63
8.91
8.76
8.70
8.50
8.70
8.88
8.52
8.65
9.00
8.20
8.82
9.10
8.61
8.37
8.54
8.86
8.91
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)


South Well pH (Since 2006)
pH
(Standard Units)
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
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 6.5-
8.5 Standard Units
PH Site Cleanup Level 6.5-
8.5 Standard Units
8.76
8.75
9.77
9.75
8.76
9.30
8.58
9.39
9.07
7.11
8.85
9.48
9.26
9.03
8.85
9.32
9.42
8.80
9.79
8.75
8.98
9.00
9.05
9.09
9.06
9.24
9.33
9.23
8.15
9.06
8.93
9.60
8.37
8.62
8.31
8.94
9.08
8.86
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 Fletcher 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

eDATApro

Form 1 Data Sheet - Metals

SEMS
DELATTE METALS
SDG: 2019932

COC Sample ID: **GSGP-19**
Location ID: **NA**
Lab Sample ID: **2019932008**
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 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

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **NORTH WELL** Sample Matrix : **Water**

Location ID: **NA**

Lab Sample ID: **2019932020** 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	05/12/2015 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

eDATApro

Form 1 Data Sheet - Metals

SEMS

DELATTE METALS

SDG: 2019932

COC Sample ID: **MW-01** Sample Matrix : **Water**

Location ID: **NA**

Lab Sample ID: **2019932039** 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	05/13/2015 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

eDATApro

Form 1 Data Sheet - Conventionals

SEMS
DELATTE METALS
SDG: 2019932

COC Sample ID: **NWGS-04** Sample Matrix : **Water**
Location ID: **NA**
Lab Sample ID: **2019932032** 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 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

NO#: 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.	Report To: Nick Rodehorst
Address: 3801 N. Causeway Blvd. STE 209	Copy To: Larry Braud
Email To: nrodehorst@semsinc.net	Purchase Order No.:
Phone: 504-342-2340 Fax:	Project Name: Delarte Metals
Requested Due Date/TAT: STD	Project Number: 207-0029-03

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	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-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	~~DW-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	11:00	1.0			
Ar, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	5-15-15	1145	1.5	Y	N	Y
-Dissolved Metals are							2.0			
field filtered.							2.5			

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

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www.pacelabs.com

CHAIN-OF-CUS . JDY / Analytical Request Document

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

1641885

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 Braud.
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 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

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)	Sul Aide (9056)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	CL-19	W	G			5/12/15	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	880	[illegible]	5-15-15	11-00	1.0			
Ar, 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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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 3 of 5

1617507

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 Brand.	Company Name:
		Address:
Email To: hrodehorst@semsinc.net	Purchase Order No.:	Pace Quote Reference:
Phone: 504-342-2340 Fax:	Project Name: Delatte 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	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	NR ~~[illegible]~~ DW-01					1702	~~[illegible]~~		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	NR ~~[illegible]~~ TEPA-P7D						1120		4 NR	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	[signature]	5-15-15	11:00	1.0 1.5 2.0 2.5	Y	N	Y
Ar, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	5-15-15	1145				
-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): 5/15/2015

*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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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

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:	Delaware 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
* Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	Alvin Thompson	5-15-15	11:00
Ar, Cd, Mn, Ni, Pb, Zn	Alvin Thompson	5-15-15	1145	[signature]	5-15-15	1145
- Dissolved Metals						
are field filtered.						

SAMPLE CONDITIONS: Temp in °C: 1.0, 1.5, 2.0, 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:

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

*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.

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CHAIN-OF-CUSTODY / Analytical Request Document

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

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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: Dehtie 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	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	~~1050~~ NA		918			1							X					
5	GSGP-6MSD					↓	~~1050~~ NA		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: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Metals by Method 6020	Nick Rodehorst / SEMS	5/15/15	800	[signature]	5-15-15	11:00	1.0 1.5 2.0 2.5	Y	N	Y
Ar, Cd, Mn, Ni, Pb, Zn	[signature]	5-15-15	1145	[signature]	5-15-15	1145				
- 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

*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.

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ATTACHMENT E

LEVEL IV DATA PACKAGE

(CD ATTACHED)