February 14, 2018

Dr. Montague McPherson
Hazardous Site Response Program
Georgia Department of Natural Resources
2 Martin Luther King Jr. Drive
Suite 1462, East Floyd Tower
Atlanta, Georgia 30334

Re: VRP Tenth Progress Report (PR-10)
Metalplate Galvanizing Facility
505 Selig Drive SW
Atlanta, Georgia
HSI No. 10204
VRP No. VRP770490616
Tax Parcel 14F-0082-LL-0346
PPM Project No. 494501-PR10

Dear Dr. McPherson:

Enclosed please find one copy of the VRP Tenth Progress Report for the referenced site. Also enclosed and included as appendices to the progress report, are the surface water and groundwater sampling report.

If you have any questions or need additional information please do not hesitate to contact me at (205) 836-5650.

Sincerely,
PPM Consultants, Inc.

Michael W. Dillon, P.G.
Project Manager/Senior Geologist

c: Adam Brown, Metalplate Galvanizing, L.P.
Ernest Cain, Metalplate Galvanizing, L.P.
Paul Lynes, Paul Lynes, LLC
Bob Mowrey, KMCL – Kazmerek, Mowrey, Cloud, Laseter, LLP
Max Zygmont, KMCL – Kazmerek, Mowrey, Cloud, Laseter, LLP
Tom Schmittou, Applied Aquaculture and Environmental Technologies, LLC

VRP Tenth Progress Report

(PR-10)

Metalplate Galvanizing Facility
505 Selig Drive, SW
Atlanta, Fulton County, Georgia 30336

HSI No. 10204

Tax Parcel 14F-0082-LL-0346

Submitted:

February 14, 2018

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CERTIFICATION

I certify that I am a qualified ground-water scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.

Michael W. Dillon, P.G.
Senior Geologist

2-14-18
Date

1.0 INTRODUCTION

This Progress Report (PR-10) addresses surface and groundwater sampling occurring since PR-9, and the initiation of the implementation of the Final Remediation and Implementation Plan (FRIP) following EPD's August 31, 2017 comment letter and approval.

Surface water sampling continues to show a substantial reduction of zinc concentrations since Metalplate began treating its stormwater with its electrocoagulator for NPDES permitting purposes. More specifically, average concentrations in the October 2017 sampling were approximately only 46% of the zinc concentrations observed in the May 2014 baseline surface water sampling event that occurred before the electrocoagulator was operational.

At the same time, a well-by-well statistical analysis of groundwater zinc concentrations shows a clear and continuing downward trend in each sampled well. MW-1 and MW-4 remain below Type 1 concentrations. MW-2, MW-5, and MW-7 continued to decrease, remain significantly below Type 4 concentrations, and are approaching Type 2 concentrations. And MW-13D's continued fluctuation does not detract from the fact, overall and on a statistical basis, the concentration in that well is also declining.

With respect to FRIP implementation, Metalplate has successfully implemented the aspects of the FRIP that it can—namely three baseline sampling events. As described in the FRIP, prior to commencing remedial activity, Metalplate must obtain access rights from Aston Investment and CSX to perform that work on their property. Following EPA's approval of the FRIP (so that Metalplate knew what it would be presenting to Aston and CSX) Metalplate has persistently worked with Aston and CSX to obtain those access rights. As described more fully in Section 4 below, those efforts have not yet come to fruition, but Metalplate hopes that it will obtain access soon enough for the company to meet its goal of completing FRIP implementation work by December 2018. It currently appears possible, however, that access issues may force Metalplate to request a reasonable extension of the relevant time frames under Paragraph 1 of the company's Consent Order with EPD (No. EPD-VRP-010).

The background of the site, including site location, surrounding area, site description, and site history are documented in the groundwater monitoring report, Appendix A.

2.0 ACTIONS TAKEN SINCE LAST SUBMITTAL

2.1 Surface Water and Groundwater Sampling

Surface Water and Groundwater Sampling Report, dated February 14, 2018, is included as Appendix A. Conclusions of the surface water and groundwater sampling report are:

- During the October 2017 groundwater sampling event, the zinc concentrations in groundwater at MW-2, MW-5, and MW-7 continued to decrease, remain significantly below Type 4 concentrations, and are approaching Type 2 concentrations. Statistical analyses of zinc results from these wells show the continuing downward trend.

- Although the zinc concentration at the deeper well MW-13D continued its pattern of fluctuation, a statistical analysis of that well's zinc results since

2010 shows that the detected zinc concentrations are declining, even considering the most recent result.

- The dramatic reductions in surface water average dissolved zinc concentrations following installation of the electrocoagulator for NPDES permitting purposes were observed again. More specifically, average concentrations in the October 2017 sampling were approximately only 54% of the baseline. Although the electrocoagulator is successfully reducing stormwater discharge to below the NPDES permit limit before discharge (a concentration significantly below 1 mg/L), it appears that the downstream surface water zinc concentration reduction resulting from that treatment may be approaching its limit.

- The general direction of groundwater flow at the site is toward the southeast. The hydraulic gradient between monitoring wells MW-1 and MW-4 is estimated at 0.035 ft/ft and flow velocity is estimated at 60.8 ft/year.

- The Lower South Ditch functions as a groundwater divide and the Selig Pond functions as a surface impoundment. Both of these features impact the pattern of groundwater flow in the immediate vicinity as has been reflected in **Figure 3**.

2.2 Final Remediation and Implementation Plan (FRIP)

- The FRIP was presented as Appendix C of the VRP Ninth Progress Report submitted April 14, 2017.

- Metalplate received written notice of plan approval in a comment letter dated August 31, 2017. PPM submitted a letter of clarification to the above referenced comment letter on September 25, 2017. Since submission of that response, Metalplate has understood itself to have EPD's complete approval of the FRIP and began implementation of the work in accordance with the FRIP.

- FRIP Baseline Sampling: As of the date of this VRP Progress Report, Metalplate has completed three Baseline Sampling events and ordered and received reagents to complete both Phase I and Phase II activities. A fourth baseline sampling event is scheduled to occur in the next two weeks. The results of the baseline sampling events to-date support the selected remedy. The baseline sampling results to-date are not included here because the dataset is not complete and, as a result, any conclusions that could be drawn from those results would be tentative. However, the results to-date are available and will be provided upon EPD request.

- FRIP Remedial Activity: All remediation activities described in the FRIP (Phases I and II) are contingent on CSX and Aston granting access to their properties for the performance of remedial activities. Despite Metalplate's best efforts, neither CSX nor Aston have yet granted that access. However, Metalplate is hopeful that the access issues will be resolved in the relatively near future. If they are not, Metalplate may be forced to submit a reasonable request under Consent Order Paragraph 1 for an extension of relevant timelines. Additional detail regarding the status of access request efforts is included below in Section 4. In any event, as soon as access for remedial activity is gained for a property, Metalplate will promptly proceed with all activities associated with that property. Metalplate will consider whether it may be prudent to combine Phase I and II activities to compress the schedule of implementation as described in the FRIP. It remains

Metalplate's goal to complete the work described in the FRIP by the end of December 2018.

3.0 RESPONSE TO CONDITIONS IN THE APPROVAL LETTER, FEBRUARY 14, 2011

As first described in PR-6, progress reports will omit comments that have been resolved or completed.

3.1 Outstanding Items from EPD Comment Letter dated February 14, 2011 (Condition 2)

The following addresses outstanding items contained in EPD's comment letter of February 14, 2011.

3.1.1 Conceptual Site Model, Impact of contaminated groundwater on surface water concentrations (Item 3) – Surface water concentrations potentially resulting from sediment concentrations are Metalplate's focus in the FRIP, which continues to be implemented. With respect to groundwater, Metalplate still expects O.C.G.A. 12-8-107(g)(2) to apply.

3.1.2 Soil, continuation with corrective action on tax parcel ID 14-0059-LL-017, Aston Investment Property (Item 4) – Metalplate has reengaged with Aston to ensure that Metalplate's access rights are adequate for implementation of the FRIP. Because of the trend of declining groundwater zinc concentrations, it remains unclear whether additional commitments regarding the Aston parcel will be needed to support a compliance status report.

3.2 Payment of Fees (Condition 4)

Metalplate has paid all outstanding fees within sixty days of receipt of an invoice with itemized detail for any costs to the division in reviewing the application or subsequent document that exceeds the initial application fee. The last invoice was paid on November 24, 2017 for the amount of $450.00.

3.3 Investigation of Aston property (Condition 5) – *See* Section 3.1.2.

4.0 PROJECT SCHEDULE

A copy of the current project schedule is included in Table 3. Despite engaging with Aston and CSX following EPD's approval of the FRIP, Metalplate has not yet received access agreements from those parties allowing Metalplate to perform the remedial activities described in the FRIP. In the meantime, Metalplate has nevertheless performed as much of the FRIP as possible (baseline sampling activity) without additional access agreements in order to maintain the schedule included in the FRIP to the extent possible. If access is not resolved in the near future, Metalplate's completion of the FRIP and compliance certification may be forced to occur after the current February 14, 2019 timeline operative under the Consent Order. As a result, Metalplate may be forced to request a reasonable extension of the relevant timelines under Consent Order Paragraph 1.

A summary of the current status of access efforts with CSX: Metalplate reengaged with CSX at or about the time of receiving EPD's August 31, 2017 comment letter on

the FRIP. Over several months, Metalplate reached apparent agreement with CSX's environmental personnel regarding terms of an acceptable access agreement in December 2017. That individual then passed the agreement to CSX's legal department for review and, presumably, approval. However, Metalplate confirmed by phone with CSX last week that their legal department has not yet taken action on the agreement.

A summary of the current status of access efforts with Aston: Metalplate reengaged with Aston in early September 2017, after receiving EPD's August 31, 2017 comment letter. Metalplate contacted Aston's counsel Jim Levine to confirm that he would still be the primary point of contact for Aston despite the fact that he had changed firms. In the ensuing months, Mr. Levine eventually confirmed that he would be the point of contact, indicated that he would not be able to engage with Metalplate further on the matter until he obtained his files from his former firm, and ultimately obtained those files such that Metalplate representatives were able to meet with him in January 2018 to present the current site status and FRIP to him. In advance of that meeting and following it, the company provided a draft access agreement for his consideration, the FRIP, and additional information that he requested. As of last week, we understand that Aston is still actively reviewing the request for access and that they intend for their consultant to complete its review of the FRIP and site status before they can make an agreement.

5.0 COST SUMMARY

5.1 VRP Cost

Table 1 summarizes the monthly invoiced services related to the VRP as follows:

VRP effort prior to approval (pre February 2011)	$ 46,321.07
VRP project since approval (post February 2011)	$ 526,221,36
Total VRP-related Cost	$ 572,542.43

5.2 Total Project Cost

The total project cost to date (Initial HSI listing through January 31, 2016)	$ 1,212,461.61

TABLES

TABLE 1

SUMMARY OF INVOICED SERVICES

Table 1
Metalplate Galvanizing Facility
Cost Summary as of January 31, 2018

Month/Yr	Engineering/ Testing	Legal	Administrative (EPD)
February-10	$270.00	$0.00	$0.00
March-10	$0.00	$1,827.50	$0.00
April-10	$0.00	$127.50	$0.00
May-10	$0.00	$297.50	$0.00
June-10	$0.00	$1,105.00	$0.00
July-10	$13,792.75	$7,737.50	$0.00
August-10	$2,012.84	$7,225.00	$761.72
September-10	$598.03	$319.17	$761.72
October-10	$598.03	$319.17	$761.72
November-10	$598.03	$319.17	$761.72
December-10	$733.03	$2,550.00	$761.72
January-11	$598.03	$722.50	$761.72
February-11	$4,511.36	$3,976.25	$761.72
March-11	$11,788.22	$3,976.25	$761.72
April-11	$32,289.66	$5,716.46	$0.00
May-11	$19,003.59	$10,322.50	$0.00
June-11	$2,010.00	$3,488.75	$0.00
July-11	$2,160.00	$0.00	$0.00
August-11	$15,638.23	$4,707.50	$0.00
September-11	$2,913.51	$7,052.24	$75.00
October-11	$4,399.51	$9,980.95	$225.00
November-11	$10,182.56	$6,552.50	$225.00
December-11	$2,621.82	$0.00	$225.00
January-12	$1,302.50	$430.00	$28.13
February-12	$2,101.03	$632.50	$28.13
March-12	$945.00	$1,310.00	$28.13
April-12	$12,260.35	$2,177.50	$28.13
May-12	$3,078.60	$82.50	$581.25
June-12	$8,595.00	$4,231.35	$581.25
July-12	$10,650.00	$4,231.35	$581.25
August-12	$17,828.71	$5,458.55	$581.25
September-12	$2,222.50	$0.00	$305.77
October-12	$25.00	$0.00	$305.77
November-12	$0.00	$0.00	$305.77
December-12	$0.00	$330.00	$305.77
January-13	$1,244.33	$275.00	$305.77
February-13	$21,794.86	$7,135.00	$305.77
March-13	$4,995.00	$0.00	$305.77
April-13	$0.00	$0.00	$305.77
May-13	$270.00	$0.00	$305.77
June-13	$135.00	$0.00	$305.77
July-13	$0.00	$2,197.50	$305.77
August-13	$1,147.50	$860.00	$305.77
September-13	$7,482.40	$5,345.00	$305.77
October-13	$1,012.50	$226.47	$912.50
November-13	$135.00	$2,590.00	$912.50
December-13	$4,737.50	$1,077.50	$912.50

VRP application (pre-approval)	**TOTAL**
February 2010 - January 2011	**$46,321.07**

Table 1
Metalplate Galvanizing Facility
Cost Summary as of January 31, 2018

Month/Yr	Engineering/ Testing	Legal	Administrative (EPD)
January-14	$337.50	$4,340.00	$212.50
February-14	$10,082.43	$1,677.00	$212.50
March-14	$0.00	$0.00	$212.50
April-14	$0.00	$192.50	$212.50
May-14	$0.00	$2,508.50	$212.50
June-14	$0.00	$2,171.50	$212.50
July-14	$0.00	$532.50	$25.00
August-14	$0.00	$0.00	$25.00
September-14	$3,511.19	$349.00	$25.00
October-14	$0.00	$0.00	$43.75
November-14	$0.00	$0.00	$43.75
December-14	$0.00	$88.50	$43.75
January-15	$405.00	$984.00	$43.75
February-15	$0.00	$2,611.50	$43.75
March-15	$11,244.66	$0.00	$43.75
April-15	$0.00	$0.00	$37.50
May-15	$0.00	$0.00	$37.50
June-15	$0.00	$0.00	$37.50
July-15	$0.00	$0.00	$100.00
August-15	$0.00	$0.00	$100.00
September-15	$0.00	$0.00	$100.00
October-15	$0.00	$206.50	$84.38
November-15	$0.00	$0.00	$84.38
December-15	$5,861.04	$0.00	$84.38
January-16	$1,872.37	$7,350.50	$84.38
February-16	$0.00	$4,538.50	$84.38
March-16	$19,368.58	$1,587.50	$84.38
April-16	$0.00	$109.50	$84.38
May-16	$0.00	$0.00	$84.38
June-16	$5,265.00	$5,342.50	$806.25
July-16	$135.00	$365.00	$806.25
August-16	$0.00	$571.00	$0.00
September-16	$810.00	$0.00	$0.00
October-16	$135.00	$3,279.00	$0.00
November-16	$135.00	$766.50	$0.00
December-16	$5,839.75	$0.00	$0.00
January-17	$1,314.48	$2,367.00	$0.00
February-17	$3,624.48	$6,248.00	$0.00
March-17	$19,649.73	$16,253.04	$0.00
April-17	$6,164.48	$10,845.00	$0.00
May-17	$4,284.48	$0.00	$0.00
June-17	$1,314.48	$0.00	$0.00
July-17	$1,314.48	$0.00	$150.00
August-17	$1,381.98	$1,025.00	$150.00
September-17	$6,579.48	$5,822.50	$150.00
October-17	$4,590.48	$328.00	$250.00
November-17	$2,402.48	$1,115.50	$250.00

Table 1
Metalplate Galvanizing Facility
Cost Summary as of January 31, 2018

Month/Yr	Engineering/ Testing	Legal	Administrative (EPD)
December-17	$1,314.48	$2,387.00	$250.00
January-18	$540.00	$0.00	$0.00

VRP Project (post-approval)	**TOTAL**
February 2011 - January 2018	**$526,221.36**

Total VRP-Related Cost	**$572,542.43**

Project Cost From Initial	**TOTAL**
HSI Listing (1994) thru Jan '18	**$1,212,461.61**

TABLE 2

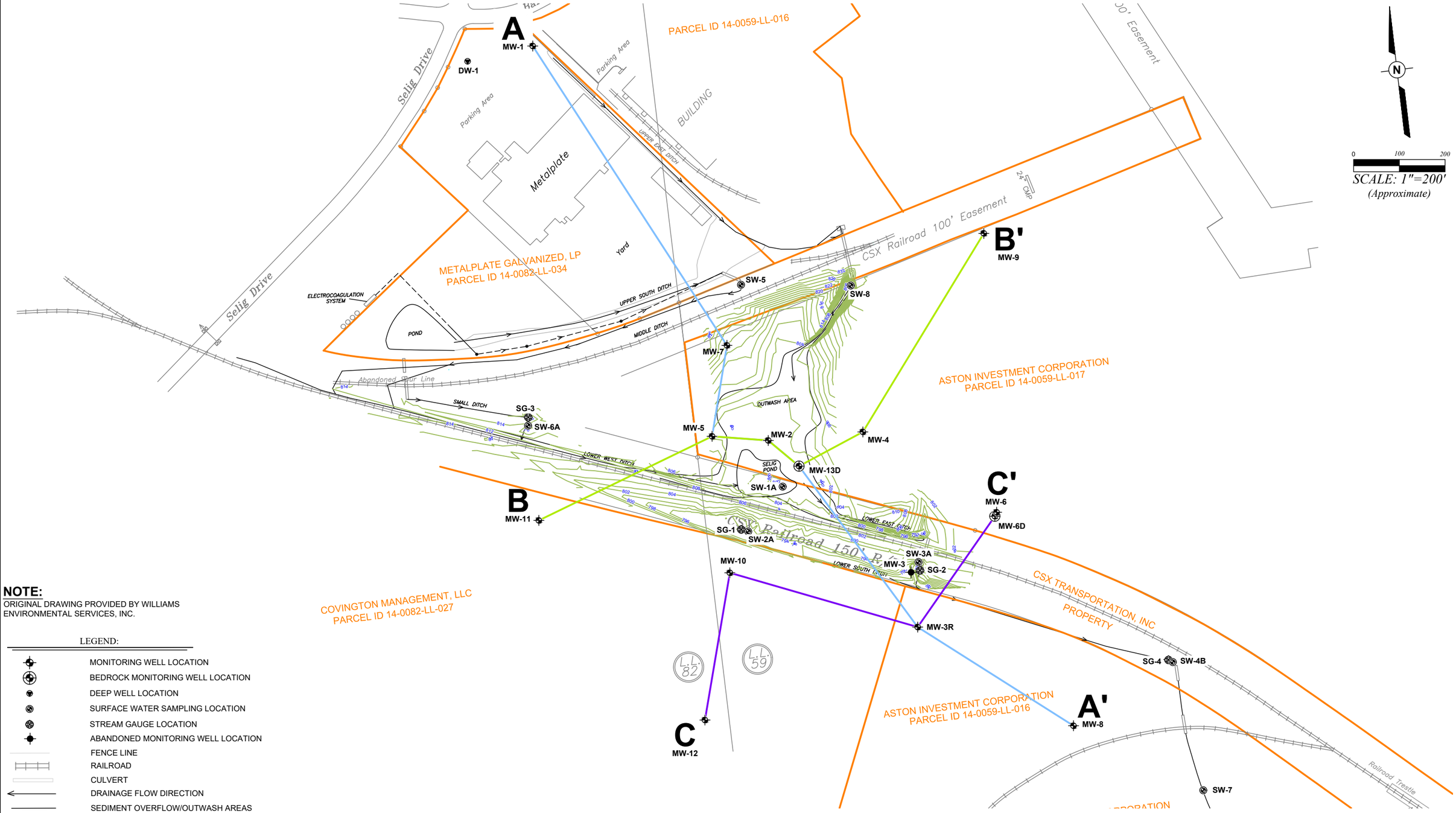
PROJECT SCHEDULE

Attachment A
Updated VIRP Milestone Schedule
Metalplate Galvanizing Facility, HSI 10204
May 13, 2014

Projected Date	Area	Action
May 2014	Sampling	Limited sampling; surface water sampling and surface water / groundwater elevation measurements (No groundwater sampling).
October 2014	Sampling	Groundwater and surface water sampling with groundwater / surface water elevation measurements. (Final groundwater and surface water sampling event before start-up date of storm water treatment system.)
February 14, 2015	VRP	Progress Report (PR-7). Should include May and October 2014 sampling events.
April 2015	VRP	Sediment evaluation as per CSM in PR-4.
August 22, 2015	SW	IGP SW Effluent limit requirements effective.
October 2015	Sampling	Post Implementation Sampling Event #1 (groundwater and surface water sampling with elevation measurements).
February 14, 2016	VRP	(PR-8). Should include results of sediment evaluation.
October 2016	Sampling	Post Implementation Sampling Event #2 (groundwater and surface water sampling with elevation measurements).
February 14, 2017	VRP	(PR-9). Should include and evaluation of Corrective Action and submittal of Final Remediation and Implementation Plan.
October 2017	Sampling	Post Implementation Sampling Event #3 (groundwater and surface water sampling with elevation measurements).
February 14, 2018	VRP	(PR-10). Should include and evaluation of Corrective Action progress.
October 2018	Sampling	Post Implementation Sampling Event #4.
February 14, 2019	VRP-CSR	Submittal of VRP CSR certifying compliance with applicable VRP standards.

- Post-Implementation sampling and reporting schedule subject to the effectiveness of the stormwater treatment system and sediment / groundwater evaluation results. If, prior to February 2017, the data clearly and convincingly shows that additional corrective action will be necessary, the Final Remedial Plan submittal date shall be moved up accordingly.

FIGURES



NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

- MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP WELL LOCATION
- SURFACE WATER SAMPLING LOCATION
- STREAM GAUGE LOCATION
- ABANDONED MONITORING WELL LOCATION
- FENCE LINE
- RAILROAD
- CULVERT
- DRAINAGE FLOW DIRECTION
- SEDIMENT OVERFLOW/OUTWASH AREAS

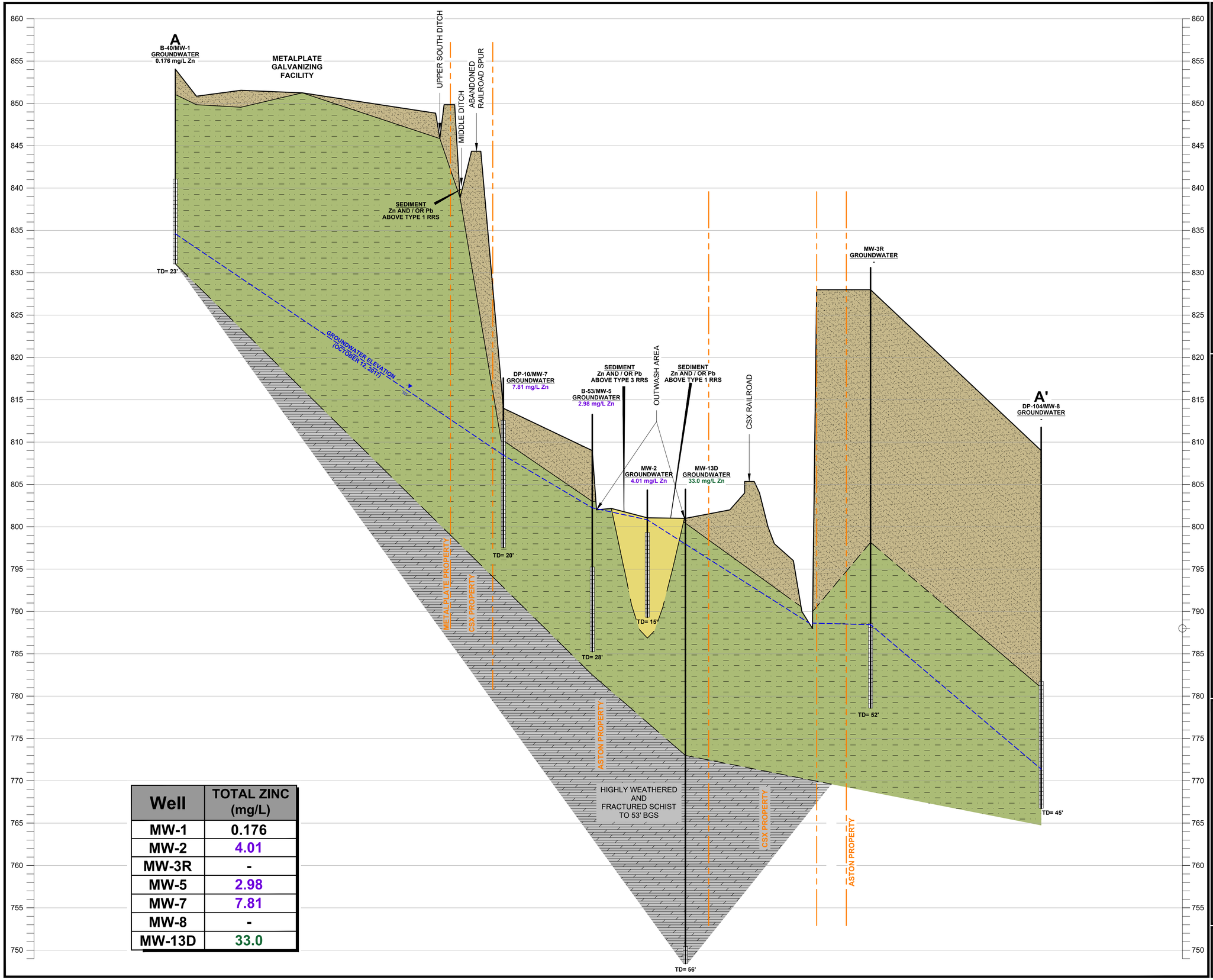
PPM CONSULTANTS, INC.
www.ppmco.com

DRAWN BY:	DRAWN DATE:
BWH	02/12/18
PROJECT NUMBER:	BILLING GROUP:
494501	PR10

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

SITE MAP

FIGURE NUMBER
1



Well	TOTAL ZINC (mg/L)
MW-1	0.176
MW-2	4.01
MW-3R	-
MW-5	2.98
MW-7	7.81
MW-8	-
MW-13D	33.0

Notes:

1. UPPER CONTACT LINES SHOW GENERALIZED SURFACE TOPOGRAPHY.
2. REFER TO FIGURE 1 FOR LOCATION OF CROSS-SECTION LINES.

LEGEND:

B-40/MW-1	SOIL BORING/MONITORING WELL LOCATION
	SEDIMENT
	NATURAL UNCONSOLIDATED SOIL OR FILL MATERIAL
	CLAYEY SILT SAPROLITE
	BEDROCK
TD= 23'	TOTAL DEPTH (ft.)
4.01 mg/L Zn	PURPLE CONCENTRATION INDICATES ABOVE TYPE 3 RRS
33.0 mg/L Zn	GREEN CONCENTRATION INDICATES ABOVE TYPE 4 RRS
	SCREENED INTERVAL
RRS	RISK REDUCTION STANDARD

HORIZ. SCALE: 1"=100'
VERT. SCALE: 1"=5'
VERT. EXAGERATION: x20

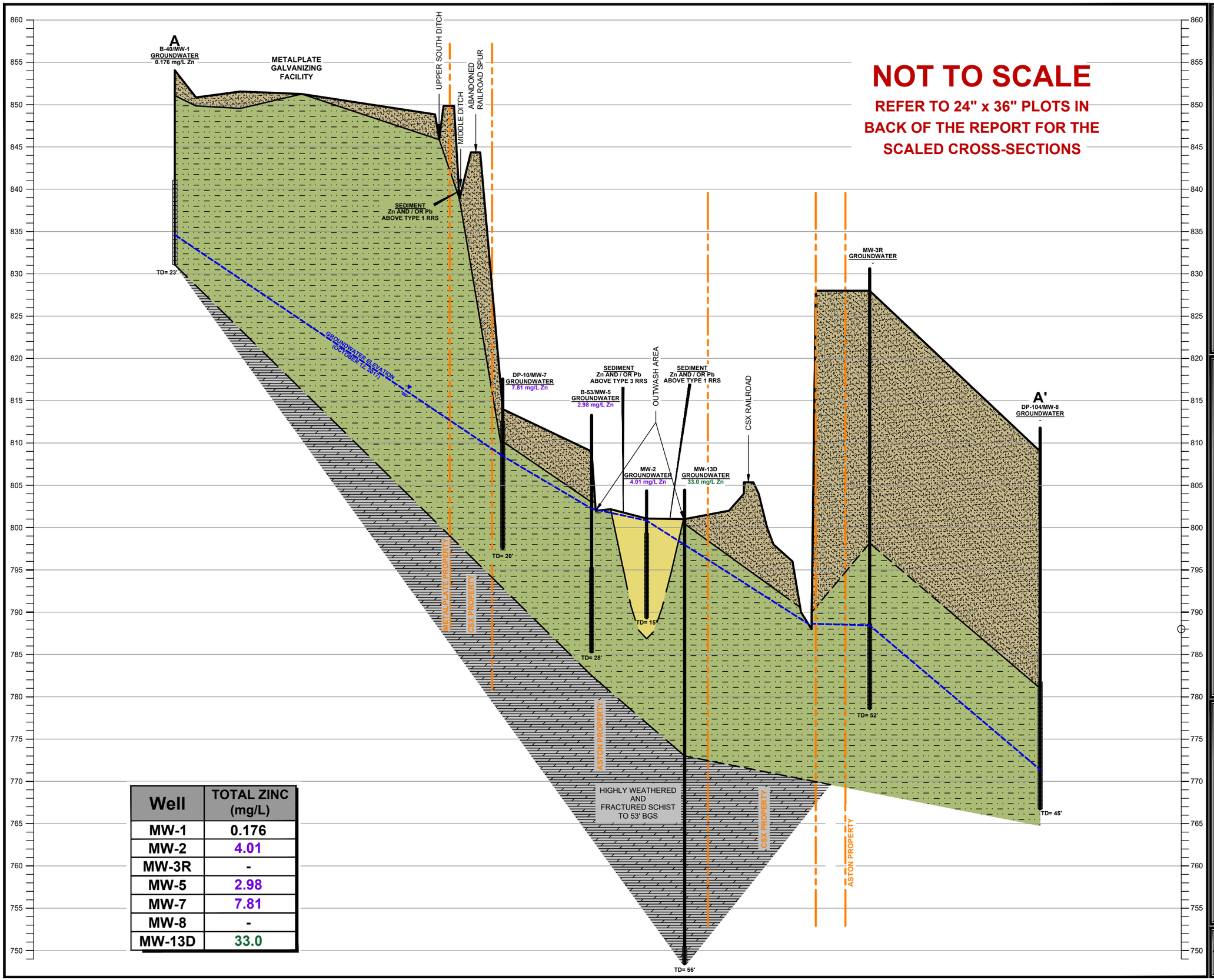
METALPLATE GALVANIZING, L.P.

METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

CONCEPTUAL SITE MODEL - CROSS-SECTION A-A'

PPM CONSULTANTS, INC.
www.ppmco.com

PROJECT NUMBER:	BILLING GROUP:	FIGURE NUMBER:
494501	PR10	2



NOT TO SCALE

REFER TO 24" x 36" PLOTS IN BACK OF THE REPORT FOR THE SCALED CROSS-SECTIONS

Well	TOTAL ZINC (mg/L)
MW-1	0.176
MW-2	4.01
MW-3R	-
MW-5	2.98
MW-7	7.81
MW-8	-
MW-13D	33.0

Notes:
1. UPPER CONTACT LINES SHOW GENERALIZED SURFACE TOPOGRAPHY.
2. REFER TO FIGURE 1 FOR LOCATION OF CROSS-SECTION LINES..

LEGEND:

B-40/MW-1	SOIL BORING/MONITORING WELL LOCATION
	SEDIMENT
	NATURAL UNCONSOLIDATED SOIL OR FILL MATERIAL
	CLAYEY SILT SAPROLITE
	BEDROCK
TD= 23'	TOTAL DEPTH (ft.)
4.01 mg/L Zn	PURPLE CONCENTRATION INDICATES ABOVE TYPE 3 RRS
33.0 mg/L Zn	GREEN CONCENTRATION INDICATES ABOVE TYPE 4 RRS
	SCREENED INTERVAL
RRS	RISK REDUCTION STANDARD

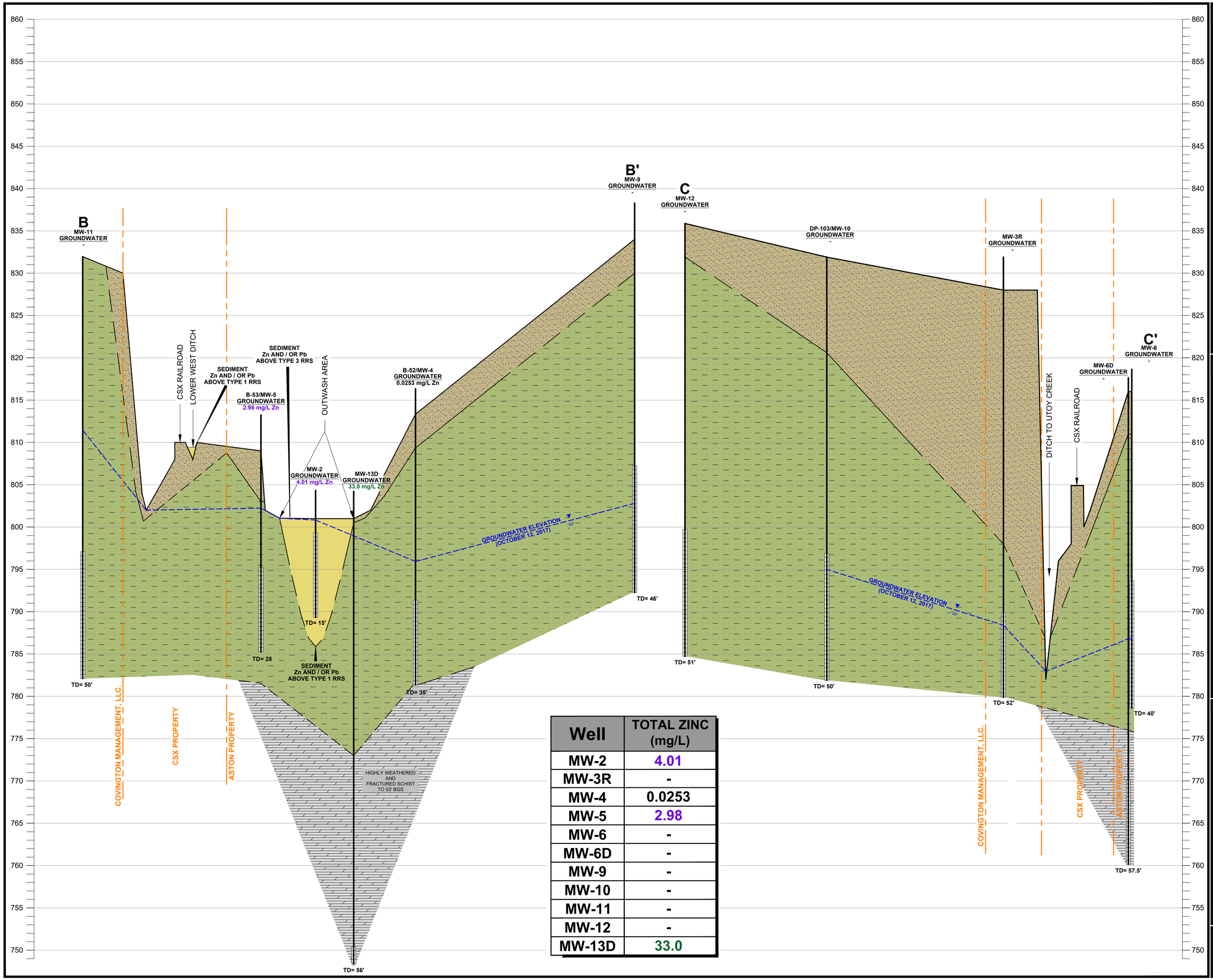
HORIZ. SCALE: 1"=100'
VERT. SCALE: 1"=5'
VERT. EXAGERATION: x20

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

CONCEPTUAL SITE MODEL - CROSS-SECTION A-A'

PPM CONSULTANTS, INC.
www.ppmco.com

PROJECT NUMBER:	BILLING GROUP:	FIGURE NUMBER:
494501	PR10	2



Well	TOTAL ZINC (mg/L)
MW-2	4.01
MW-3R	-
MW-4	0.0253
MW-5	2.98
MW-6	-
MW-6D	-
MW-9	-
MW-10	-
MW-11	-
MW-12	-
MW-13D	33.0

Notes:
1. UPPER CONTACT LINES SHOW GENERALIZED SURFACE TOPOGRAPHY.
2. REFER TO FIGURE 1 FOR LOCATION OF CROSS-SECTION LINES.

LEGEND:

MW-11	MONITORING WELL LOCATION
	SEDIMENT
	NATURAL UNCONSOLIDATED SOIL OR FILL MATERIAL
	CLAYEY SILT SAPROLITE
	BEDROCK
TD= 50'	TOTAL DEPTH (ft.)
4.01 mg/L Zn	PURPLE CONCENTRATION INDICATES ABOVE TYPE 3 RRS
33.0 mg/L Zn	GREEN CONCENTRATION INDICATES ABOVE TYPE 4 RRS
	SCREENED INTERVAL
RRS	RISK REDUCTION STANDARD

HORIZ. SCALE: 1"=100'
VERT. SCALE: 1"=5'
VERT. EXAGERATION: x20

METALPLATE GALVANIZING, L.P.

METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

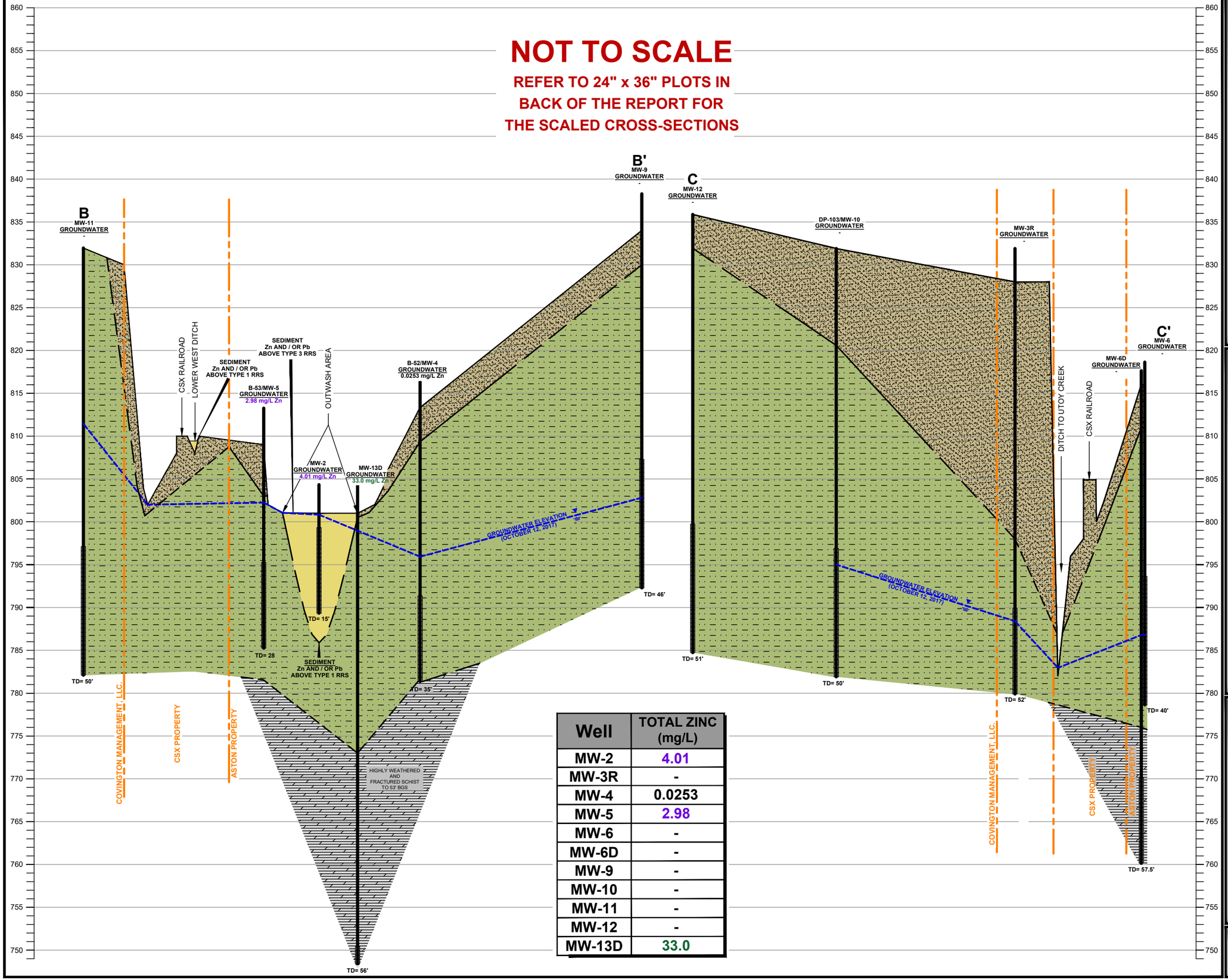
CONCEPTUAL SITE MODEL - CROSS-SECTION B-B' AND C-C'

PPM CONSULTANTS, INC.
www.ppmco.com

PROJECT NUMBER:	BILLING GROUP:	FIGURE NUMBER:
494501	PR10	3

NOT TO SCALE

REFER TO 24" x 36" PLOTS IN BACK OF THE REPORT FOR THE SCALED CROSS-SECTIONS



Well	TOTAL ZINC (mg/L)
MW-2	4.01
MW-3R	-
MW-4	0.0253
MW-5	2.98
MW-6	-
MW-6D	-
MW-9	-
MW-10	-
MW-11	-
MW-12	-
MW-13D	33.0

Notes:
1. UPPER CONTACT LINES SHOW GENERALIZED SURFACE TOPOGRAPHY.
2. REFER TO FIGURE 1 FOR LOCATION OF CROSS-SECTION LINES..

LEGEND:

MW-11	MONITORING WELL LOCATION
	SEDIMENT
	NATURAL UNCONSOLIDATED SOIL OR FILL MATERIAL
	CLAYEY SILT SAPROLITE
	BEDROCK
TD= 50'	TOTAL DEPTH (ft.)
4.01 mg/L Zn	PURPLE CONCENTRATION INDICATES ABOVE TYPE 3 RRS
33.0 mg/L Zn	GREEN CONCENTRATION INDICATES ABOVE TYPE 4 RRS
	SCREENED INTERVAL
RRS	RISK REDUCTION STANDARD

HORIZ. SCALE: 1"=100'
VERT. SCALE: 1"=5'
VERT. EXAGERATION: x20

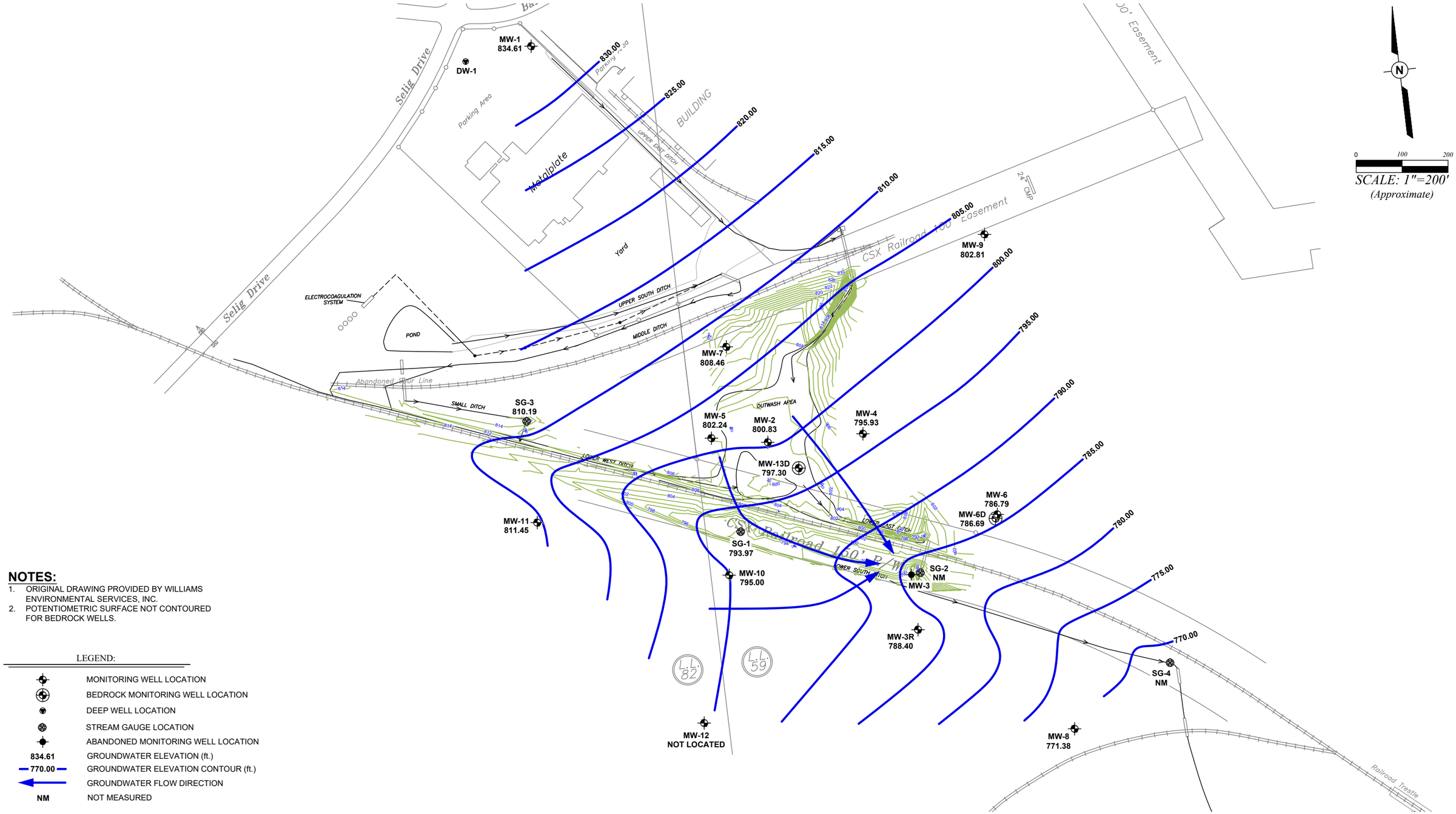
METALPLATE GALVANIZING, L.P.

METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

CONCEPTUAL SITE MODEL - CROSS-SECTION B-B' AND C-C'

PPM CONSULTANTS, INC.
www.ppmcon.com

PROJECT NUMBER:	BILLING GROUP:	FIGURE NUMBER:
494501	PR10	3



NOTES:

1. ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.
2. POTENTIOMETRIC SURFACE NOT CONTOURED FOR BEDROCK WELLS.

LEGEND:

	MONITORING WELL LOCATION
	BEDROCK MONITORING WELL LOCATION
	DEEP WELL LOCATION
	STREAM GAUGE LOCATION
	ABANDONED MONITORING WELL LOCATION
834.61	GROUNDWATER ELEVATION (ft.)
770.00	GROUNDWATER ELEVATION CONTOUR (ft.)
	GROUNDWATER FLOW DIRECTION
NM	NOT MEASURED

PPM CONSULTANTS, INC.
www.ppmco.com

DRAWN BY:	DRAWN DATE:
BWH	02/12/18
PROJECT NUMBER:	BILLING GROUP:
494501	PR10

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

GROUNDWATER / SURFACE WATER ELEVATION MAP (OCTOBER 12, 2017)

FIGURE NUMBER
4

NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

⌖	MONITORING WELL LOCATION
◎	BEDROCK MONITORING WELL LOCATION
●	DEEP WELL LOCATION
⊙	SURFACE WATER SAMPLING LOCATION
✱	ABANDONED MONITORING WELL LOCATION
0.176	TOTAL ZINC CONCENTRATION (mg/L)
2	ESTIMATED HORIZONTAL EXTENT OF ZINC IN GROUNDWATER EXCEEDING THE TYPE 1 RRS (2 mg/L)
NS	NOT SAMPLED

PPM CONSULTANTS, INC.
www.ppmco.com

DRAWN BY:	DRAWN DATE:
BWH	02/12/18
PROJECT NUMBER:	BILLING GROUP:
494501	PR10

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

TOTAL ZINC ISOCONCENTRATION MAP - GROUNDWATER (OCTOBER 12, 2017)

FIGURE NUMBER
5

NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

- MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP WELL LOCATION
- SURFACE WATER SAMPLING LOCATION
- ABANDONED MONITORING WELL LOCATION
- 42.8 DISSOLVED ZINC CONCENTRATION (mg/L)

PPM CONSULTANTS, INC. www.ppmco.com	
DRAWN BY: BWH	DRAWN DATE: 02/12/18
PROJECT NUMBER: 494501	BILLING GROUP: PR10

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

DISSOLVED ZINC CONCENTRATION MAP - SURFACE WATER (OCTOBER 12, 2017)

FIGURE NUMBER
6

APPENDICES

APPENDIX A

SURFACE WATER AND GROUNDWATER SAMPLING REPORT

FEBRUARY 14, 2018

ANNUAL GROUNDWATER AND SURFACE WATER MONITORING/ CORRECTIVE ACTION EFFECTIVENESS REPORT

METALPLATE GALVANIZING, L.P.
METALPLATE GALVANIZING FACILITY
505 SELIG DRIVE SW
ATLANTA, GEORGIA 30336

HSI NO. 10204

PPM PROJECT NO. 494501-GWM17

FEBRUARY 14, 2018

PPM CONSULTANTS

ANNUAL GROUNDWATER AND SURFACE WATER MONITORING/CORRECTIVE ACTION EFFECTIVENESS REPORT

FOR

METALPLATE GALVANIZING FACILITY
505 SELIG DRIVE SW
ATLANTA, GEORGIA 30336

HSI NO. 10204

PREPARED FOR:

METALPLATE GALVANIZING, L.P.
505 SELIG DRIVE SW
ATLANTA, GEORGIA 30336

PPM PROJECT NO. 494501-GWM17

FEBRUARY 14, 2018

PREPARED BY:

MICHAEL W. DILLON, P.G.
SENIOR GEOLOGIST/
PROJECT MANAGER

REVIEWED BY:

WALTER B. HENLEY, JR., P.G.
SENIOR GEOLOGIST

PPM CONSULTANTS, INC.
5555 BANKHEAD HIGHWAY
BIRMINGHAM, ALABAMA 35210
(205) 836-5650

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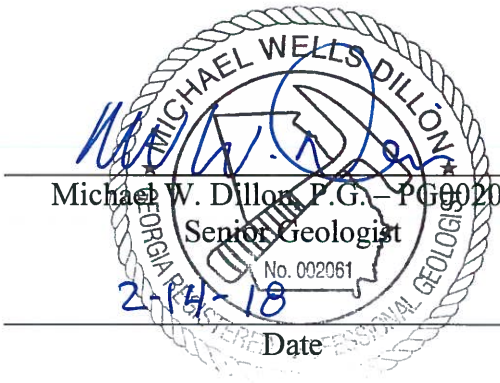
Appendix B – Groundwater Sampling Field Logs
Appendix C – Tables
Appendix D – Groundwater/Surface Water Analytical Results
Appendix E – Groundwater Concentration Trends

CERTIFICATION

I certify that I am a qualified groundwater scientist who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this report was prepared by myself or by a subordinate working under my direction.



Michael W. Dillon, P.G.– PG002061
Senior Geologist

2-14-18
Date

1.0 INTRODUCTION

PPM Consultants, Inc. (PPM) was retained by Metalplate Galvanizing, L.P. (Metalplate) to conduct annual groundwater and surface water sampling. The purpose of the sampling is two-fold. First, it is to gauge the effectiveness of corrective action performed at the Selig Site (Georgia Hazardous Site Inventory Number 10204) in accordance with the Georgia Environmental Protection Division (EPD) approved corrective action plan (CAP) dated August 27, 2007.

Second, Metalplate installed for NPDES permitting purposes an electrocoagulation system to treat zinc concentrations in its storm water, and that system has been operating since October 2014. The sampling is also to assess the effect of that storm water treatment.

This report provides a description of the site, summarizes the results of previous investigations, describes conducted field activities, and presents analytical results and findings from the October 2017 groundwater/surface water sampling event. The constituent of interest (COI) for the site groundwater and surface water is zinc.

2.0 BACKGROUND

2.1 SITE LOCATION

The Metalplate facility is located at 505 Selig Drive Southwest in Atlanta, Fulton County, Georgia. The geographic coordinates of the site are 33° 44’ 43” north latitude and 84° 32’ 44” west longitude (**Figure 1, Site Location Map, Appendix A, Figures**).

2.2 SURROUNDING AREA

The facility is surrounded entirely by property that has been either developed for industrial or commercial purposes, or is undeveloped. The properties located to the north of the facility are industrial and undeveloped. The property west of the facility is industrial. Property to the east of the facility is commercial/industrial. The properties to the south of the facility are railroad property, undeveloped property, and commercial/industrial property. The site includes the property where the Metalplate facility is located and portions of adjacent properties to the south, southeast, and east owned by Aston Investment

Corporation (Aston), Commercial Development, Stonehenge Management Company, and CSX Transportation, Inc. (CSXT).

2.3 SITE DESCRIPTION

The site is mostly comprised of the drainage area just south of the facility and includes several ditches/drainages and a pond (**Figure 2, Site Map**). These include portions of the drainage ditches located near the eastern and southern property boundaries of the Metalplate property (Upper East Ditch and Upper South Ditch), portions of the drainage ditches on CSXT property (Middle Ditch, Small Ditch, Lower West Ditch, and Lower East Ditch), portions of the drainage ditch on Aston property (Outwash Ditch), and an alluvial fan depositional area (Outwash Area) located on Aston property. The site also includes Selig Pond that is approximately 30,000-square feet in area and is located on both Aston and CSXT properties (**Figure 2**). According to the topographic map of the area, elevations at the site generally range from 800 to 880 feet above mean sea level (amsl) (**Figure 1**).

2.4 SITE HISTORY

Following is a brief summary of the site's recent history:

2.4.1 Compliance Status Investigation – February 2000 through May 2008

A Compliance Status Investigation (CSI) was performed between February 28, 2000, and May 28, 2004, by Williams Environmental Services, Inc. (Williams) and continued by PPM between March 12, 2007 and May 16, 2008. The investigation was prompted by the site being placed on the state hazardous site inventory list based on an exceedance of the Reportable Quantities Screening Method (RQSM) threshold score for soil. The RQSM threshold was not exceeded for groundwater.

During the investigation, soil was evaluated by collection and analysis of soil samples from 147 soil borings advanced during and prior to the CSI. A total of 12 shallow Type II monitoring wells (MW-1 through MW-12) and two bedrock Type III monitoring wells (MW-6D and MW-13D) were installed for the evaluation of groundwater. Surface water was evaluated by collection and analysis of surface water samples from 16 locations.

The horizontal and vertical extent of COI concentrations in soil and groundwater above upper background limits (UBLs) was defined in all directions at the site during the CSI. At certain locations, lead and/or zinc concentrations in soil and concentrations of zinc in

groundwater exceeded Type 1, 2, 3, and 4 risk reduction standards (RRSs). The results of the CSI can be found in the revised CSR, May 29, 2008.

2.4.2 Soil Removal – August 11, 2008 through August 20, 2008

During the soil removal, a total of approximately 1,555 tons (estimated 1,037 cubic yards) of soil was excavated from the facility property, transported, and disposed. Soil with visible impact (discoloration) was excavated from the entire length of both the Upper East Ditch and the Upper South Ditch located on the facility property. Confirmation samples confirmed that soil with concentrations of COI above Type 4 RRSs was removed from the excavations. The excavations were a minimum of 1 foot deep and a maximum of approximately 7 feet deep.

Site restoration activities were performed by Metalplate following the soil removal. The Upper East Ditch and Upper South Ditch were reconstructed and a detention basin was constructed connecting the two ditches. The restoration was part of the Best Management Practice (BMP) for the facility's Storm Water Pollution Prevention Plan (SWPPP). These measures are expected to decrease sediment loads leaving the property and decrease COI concentrations in storm water, surface water, and groundwater.

2.4.3 Voluntary Investigation and Remediation Plan and Application

A Voluntary Investigation and Remediation Plan and Application was prepared by MACTEC and submitted to the EPD on August 9, 2010. In response, the EPD in letter dated February 14, 2011, accepted the Metalplate Galvanizing Facility property as a participant in the Voluntary Remediation Program (VRP).

2.4.4 Screening Level Ecological Risk Assessment

By a June 29, 2012, letter, EPD concurred that ecological considerations would not require corrective action on sediments.

2.4.5 Groundwater Monitoring

Baseline groundwater monitoring was conducted at the site between September 8, 2008 and September 10, 2008, shortly after the soil removal corrective action activities were complete. The sampling was conducted to establish baseline concentrations for the

purpose of determining corrective action effectiveness. The results of the baseline groundwater sampling were presented in the Soil Removal Report.

Periodic groundwater monitoring events have been conducted to monitor plume stability and effectiveness of the corrective action. The results of these events have been presented in groundwater monitoring/corrective action effectiveness reports and VRP progress reports.

In correspondence dated November 8, 2013, the EPD provided a proposed VRP schedule after meeting with Metalplate representatives on October 21, 2013. The schedule (EPD Proposed Milestone Dates for Project Implementation, November 8, 2013) requested surface water sampling and collection of water elevation data to be conducted in April 2014. The schedule requested annual groundwater sampling, surface water sampling, and water elevation data collection to be conducted in October each year through 2018. Annual VRP Progress Reports were required to be submitted to the EPD in February each year following the October sampling events; with the exception of February 2019 in which a Compliance Status Report should be submitted. The schedule was adopted in the 2014 Consent Order discussed in **Section 2.4.8**. Results of the groundwater and surface water sampling activities conducted during each previous period are included in the annual progress reports. During the annual groundwater sampling events, groundwater from monitoring wells MW-1, MW-2, MW-4, MW-5, MW-7, and MW-13D are sampled and analyzed.

2.4.6 2014 Consent Order and New Storm Water Treatment Plan

As a result of discussions between EPD and Metalplate regarding the company's commitment to install a state-of-the-art electrocoagulation storm water treatment system, and that system's potential impact on the appropriate timing of VRP-related obligations, Metalplate and EPD entered a Consent Order revising and extending VRP milestones through February 14, 2019. The Consent Order became effective on September 4, 2014. The facility installed the electrocoagulation system in the fall of 2014, and it began operating in October 2014. As a result, the facility has seen significant reductions of zinc in its discharged storm water, consistently below applicable thresholds.

2.4.7 Solubility & Treatability Studies

Solubility and treatability studies were conducted by Applied Aquaculture and Environmental Technologies, LLC (A2E) together with PPM.

The solubility study was conducted to test the reasonable assumption that elevated zinc concentrations in Site surface waters are the result of, in whole or in part, existing zinc in sediments dissolving into slightly, to moderately acidic surface waters. The results of the study confirmed the assumption, and are consistent with current and historical field observations.

The treatability study was conducted to determine the effectiveness of certain stabilization reagents at stabilizing zinc existing in the environment and, therefore, reducing zinc loading in surface waters. The study also evaluated potential application methodologies, to the extent possible. The Solubility & Treatability Studies Report was submitted to the EPD on April 14, 2017.

2.4.8 Final Remediation and Implementation Plan

The Final Remediation and Implementation Plan was submitted to the EPD on April 14, 2017. The Plan details the selected remedial approach of in-situ stabilization and treatment of zinc in sediments. The selected approach is focused on addressing to the extent practicable the HSRA cleanup essential feature related to surface water concentrations and was based on the evaluation of corrective action alternatives and the results of the solubility and treatability studies. The Plan details the field application of the tested reagents EnviroBlend 80/20 Coarse [80% MgO; 20% (Ca)TSP], EnviroBlend CS [MgO/$Mg(OH)_2$] Blend, and agricultural lime [$CaCO_3$ (<300 mesh)] in a phased approach that allows an ongoing evaluation of the relative beneficial effect of the various reagents, applications rates and application approaches in the field. In correspondence dated August 31, 2017, the EPD approved implementation of the Plan.

3.0 INVESTIGATIVE METHODOLOGY

3.1 GROUNDWATER/SURFACE WATER ELEVATION SURVEY

Site groundwater flow direction was estimated through groundwater and surface water elevation surveys conducted on October 12, 2017. Depth to groundwater measurements within the wells were accomplished with the use of a water level indicator capable of measuring the water depth to within +/- 0.01 feet. The indicator probe was cleaned prior to use at each well location by means of a phosphate-free soap rinse and a rinse with distilled water. The well casing elevations and groundwater depths were used to calculate groundwater elevations for the purpose of determining groundwater flow direction.

Surface water elevations were measured at select locations of the site with the aid of stream gauges.

3.2 GROUNDWATER SAMPLING

Groundwater samples were collected from monitoring wells MW-1, MW-2, MW-4, MW-5, MW-7, and MW-13D on October 12 and 13, 2017. The wells were sampled in general accordance with Region 4 Environmental Protection Agency (EPA) Science and Ecosystem Support Division operating procedure No. SESDPROC-301-R1.

Groundwater samples were collected using low flow/low volume groundwater sampling techniques. Depths to groundwater were measured in the monitoring wells using a water level indicator. Depths to water, well diameter, and total well depths from the monitoring wells were used to calculate well volumes. Purging and sampling was accomplished using a variable speed submersible pump or peristaltic pump and dedicated polyethylene tubing and silicone tubing. The intake of the polyethylene tubing for the peristaltic pump or intake of the submersible pump was placed at an approximate depth that correlated to the center of the monitoring well screened interval. In some cases, the top of water within the well could be below the top of screen. In these cases, the intake was placed approximately at the center of the screened water column. Purging rates were less than or equal to 0.1 gallons per minute (gpm).

Temperature, pH, specific conductivity, and oxidation-reduction potential (ORP) were measured during purging using an YSI 556 multiprobe system and a flow-through cell. Turbidity was measured separately using a Hach® 2100Q portable turbidity meter. The wells were purged until these field parameters had equilibrated and an attempt was made to collect samples when the turbidity was less than 10 nephelometric turbidity units (NTUs). Field measurements were recorded on groundwater sampling field logs found in **Appendix B, Groundwater Sampling Field Logs** and are summarized in **Table 1, Intrinsic Groundwater Parameters, Appendix C, Tables**.

Groundwater samples were obtained through dedicated polyethylene tubing prior to reaching the flow-through cell and were placed in polyethylene containers, one containing nitric acid (HNO_3) for analysis of total zinc and one with no preservative for analysis of dissolved zinc. Each container was filled with the sample, promptly capped, and appropriately labeled to indicate the sample origin. Containers were subsequently placed in an iced cooler for preservation during shipment to the laboratory. Disposable, nitrile

gloves were worn during the sample collection and changed between each sample acquisition.

3.3 SURFACE WATER SAMPLING

Surface water samples were collected from sample locations SW-1A, SW-2A, SW-3A, SW-4B, SW-5, SW-6A, SW-7, and SW-8 on October 12, 2017. Surface water was sampled in general accordance with Region 4 EPA Science and Ecosystem Support Division operating procedure No. SESDPROC-201-R3.

Surface water samples were collected from downstream to upstream locations by directly dipping the sample container into the water at each sampling location. The sample containers were dipped into the stream in the upstream direction of sampling personnel. Precautions were made to ensure that bottom sediment was not disturbed and that samples collected were representative of the surface water body. The weather condition during the time of sampling was partly cloudy and 70 °F.

3.4 LABORATORY ANALYSIS

Analytical Environmental Services, Inc. (AES) of Atlanta, Georgia analyzed the groundwater and surface water samples. Samples were submitted using chain-of-custody protocol. Groundwater samples were analyzed for total zinc and dissolved zinc per EPA Method 6010D. Surface water samples were analyzed for dissolved zinc per EPA Method E200.7 and total hardness per EPA Method SM2340B.

4.0 FINDINGS

4.1 GROUNDWATER/SURFACE ELEVATIONS

Groundwater elevations, surface water elevations, and known ground surface elevations were utilized to contour the top of groundwater and determine groundwater flow direction. The elevations and groundwater flow are shown on **Figure 3, Groundwater/Surface Water Elevation Map (October 12, 2017)**. The groundwater flow on October 12, 2017, was to the southeast at an average gradient of 0.035 feet per foot (ft/ft) (measured from MW-1 to MW-4). Groundwater elevations are provided in the **Table 2, Groundwater/Surface Water Elevation Summary**, and shown on **Figure 3**.

The groundwater flow velocity (V) can be determined using the horizontal hydraulic conductivity, hydraulic gradient, and effective porosity. Site values for horizontal hydraulic conductivity and hydraulic gradient were determined from the data collected during the CSI, and groundwater monitoring events, respectively. Effective porosity can be estimated from published literature based on the presence of silt and sand.

The groundwater flow velocity (V) is calculated from the equation:

$$V = k * \frac{i}{n_e}$$

Where:

- k = hydraulic conductivity = 9.25E-04 ft/min (average from slug tests in soil)
- i = hydraulic gradient = 0.035 (average from monitoring well MW-1 to MW-4 on October 12, 2017)
- ne = effective porosity = 0.28 (combination of silt and sand from Groundwater Hydrology and Hydraulics, D. B. McWhorter and D. K. Sunada, 1977).

Using the assumptions listed above, the average groundwater flow velocity at the site is approximately 0.167 feet per day (ft/day) or 60.8 feet per year (ft/year).

4.2 TOTAL ZINC CONCENTRATIONS IN GROUNDWATER

Total zinc concentrations for the baseline groundwater sampling event conducted at the time of the Soil Removal (September 2008) and the two latest groundwater sampling events are summarized below and included in **Table 3, Groundwater Analytical Summary**. Groundwater analytical reports are included in **Appendix D, Groundwater/Surface Water Analytical Results**.

Total Zinc Concentrations in Groundwater for Baseline and Current Sampling Events (mg/L)

Well I.D.	September 2008 (Baseline)	October 2016	October 2017
MW-1	0.372	<0.020	0.176
MW-2	11.0	8.13	4.01
MW-3*	**62.5**	--	--
MW-3R	--	--	--
MW-4	<0.020	<0.020	0.0253
MW-5	14.1	3.11	2.98

MW-6	0.028	--	--
MW-6D	0.0493	--	--
MW-7	**48.8**	8.58	7.81
MW-8	<0.020	--	--
MW-9	<0.020	--	--
MW-10	<0.020	--	--
MW-11	<0.020	--	--
MW-12	<0.020	--	--
MW-13D	9.12	12.8	**33.0**

Bold – indicates above a Type 4 RRS [31 milligrams per liter (mg/L)]
* -- indicates well abandoned due to integrity concerns.

The zinc concentration results for MW-1 and MW-4 remained below Type 1 concentrations. Zinc results for MW-2, MW-5, and MW-7 continued to decrease, remain significantly below Type 4 concentrations, and are approaching Type 2 concentrations. The zinc concentration at the deeper well MW-13D continued to fluctuate, in this instance with a result just above the Type 4 RRS. As shown in **Appendix E, Groundwater Concentration Trends**, statistical analyses of zinc results from these wells shows a continuing downward trend in all wells from 2010 through October 2017, including MW-13D.

The plume extends from the facility toward the southeast and is horizontally defined to the northwest by monitoring well MW-1, to the northeast by MW-4, and to the west by MW-5. The Lower South Ditch also appears to function as a hydraulic divide (or barrier) to the southeast, south, and southwest.

Total zinc concentrations in groundwater for the October 2017 event are shown on **Figure 4, Total Zinc Isoconcentration Map - Groundwater (October 12, 2017)**. A graph showing total zinc concentrations versus time is shown on **Figure 5, Total Zinc Concentration vs. Time - Groundwater**.

4.3 DISSOLVED ZINC CONCENTRATIONS IN SURFACE WATER

Dissolved zinc concentrations for surface water sampling events conducted on October 5, 2016, and October 12, 2017, are provided below and are included in **Table 4, Surface Water Analytical Summary**. Analytical reports are included in **Appendix D, Groundwater/Surface Water Analytical Results**.

Dissolved Zinc Concentrations in Surface Water for Baseline and Current Sampling Events (mg/L)

Sample I.D.	May 2014 (Baseline)	October 2016	October 2017
SW-1A	211	41.1	42.8
SW-2A	180	120	99.9
SW-3A	36.2	14.0	15.8
SW-4A	78.8	--	--
SW-4B	--	37.8	18.5
SW-5	128	5.53	12.4
SW-6	235	--	--
SW-6A	--	127	198
SW-7	38.4	34.5	37.5
SW-8	--	--	3.38

As seen in this table, the major reductions in surface water average dissolved zinc concentrations following installation of the electrocoagulator for NPDES permitting purposes were observed again. The average zinc concentration observed in October 2017 was 60.7 mg/L, approximately 46% of the 130 mg/L baseline. Although the electrocoagulator is successfully reducing stormwater discharge to below the NPDES permit limit before discharge (a concentration significantly below 1 mg/L), the similarity between the October 2016 and October 2017 sampling results indicates that the downstream surface water zinc concentration reduction resulting from that treatment may be, on average, approaching its limit. Dissolved zinc concentrations for the surface water sampling events are shown on **Figure 6, Dissolved Zinc Concentration Map – Surface Water (October 12, 2017)**. A graph showing dissolved zinc concentrations versus time is shown on **Figure 7, Dissolved Zinc Concentration vs. Time – Surface Water**.

5.0 CONCLUSIONS

During the October 2017 groundwater sampling event, zinc concentration results for MW-1, MW-3R, and MW-4 remained below Type 1 concentrations. Zinc results for MW-2, MW-5, and MW-7 continued to decrease, remain significantly below Type 4 concentrations, and are approaching Type 2 concentrations. The zinc concentration at the deeper well MW-13D continued to fluctuate, in this instance with a result just above the Type 4 RRS. As shown in **Appendix E, Groundwater Concentration Trends**, statistical analyses of zinc results from these wells shows a continuing downward trend in all wells from 2010 through October 2017, including MW-13D.

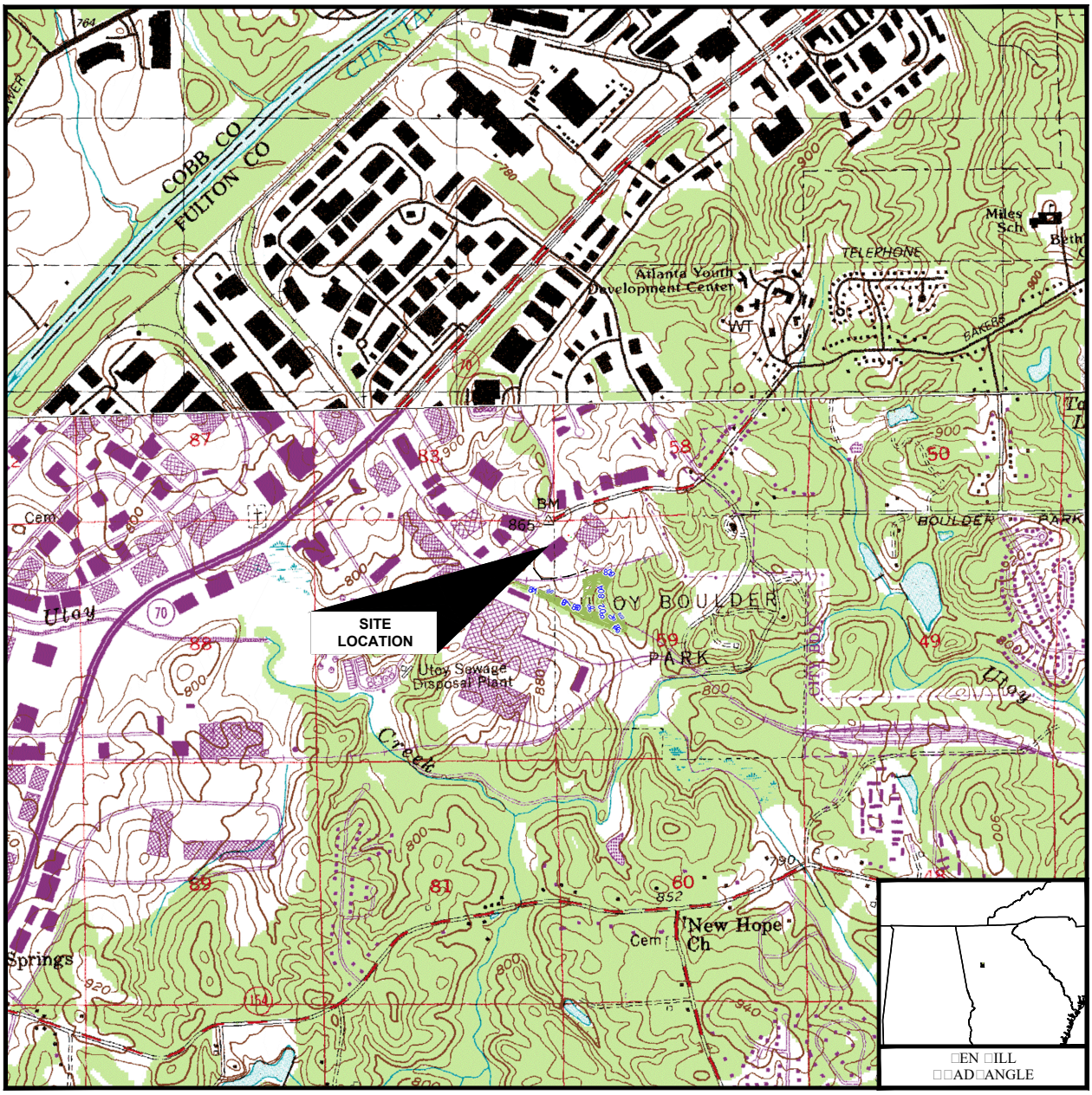
Following the soil removal conducted in August 2008, the concentration of total zinc at the upgradient portion of the plume (MW-7) decreased and has been significantly below the Type 4 RRS since June 2009. The zinc concentrations in the central portion of the plume, at MW-2 and MW-5, fluctuated following the soil removal in 2008 until 2013 when the concentration decreased and has since remained significantly below the Type 4 RRS. The zinc concentration at MW-2 has been below the Type 4 RRS since April 2012. The zinc concentration in the deep well MW-13D increased following the soil removal, but since 2010, a statistically observed reduction in zinc concentrations has occurred.

The major reductions in surface water average dissolved zinc concentrations following installation of the electrocoagulator for NPDES permitting purposes were observed again. The average zinc concentration observed in October 2017 was 60.7 mg/L, approximately 46% of the 130 mg/L baseline.

The general direction of groundwater flow at the site is toward the southeast. The hydraulic gradient between monitoring wells MW-1 and MW-4 is estimated at 0.035 ft/ft and flow velocity is estimated at 60.8 ft/year. The Lower South Ditch functions as a groundwater divide and the Selig Pond functions as a surface impoundment. Both of these features impact the pattern of groundwater flow in the immediate vicinity as has been reflected in **Figure 3**.

APPENDICES

APPENDIX A – FIGURES



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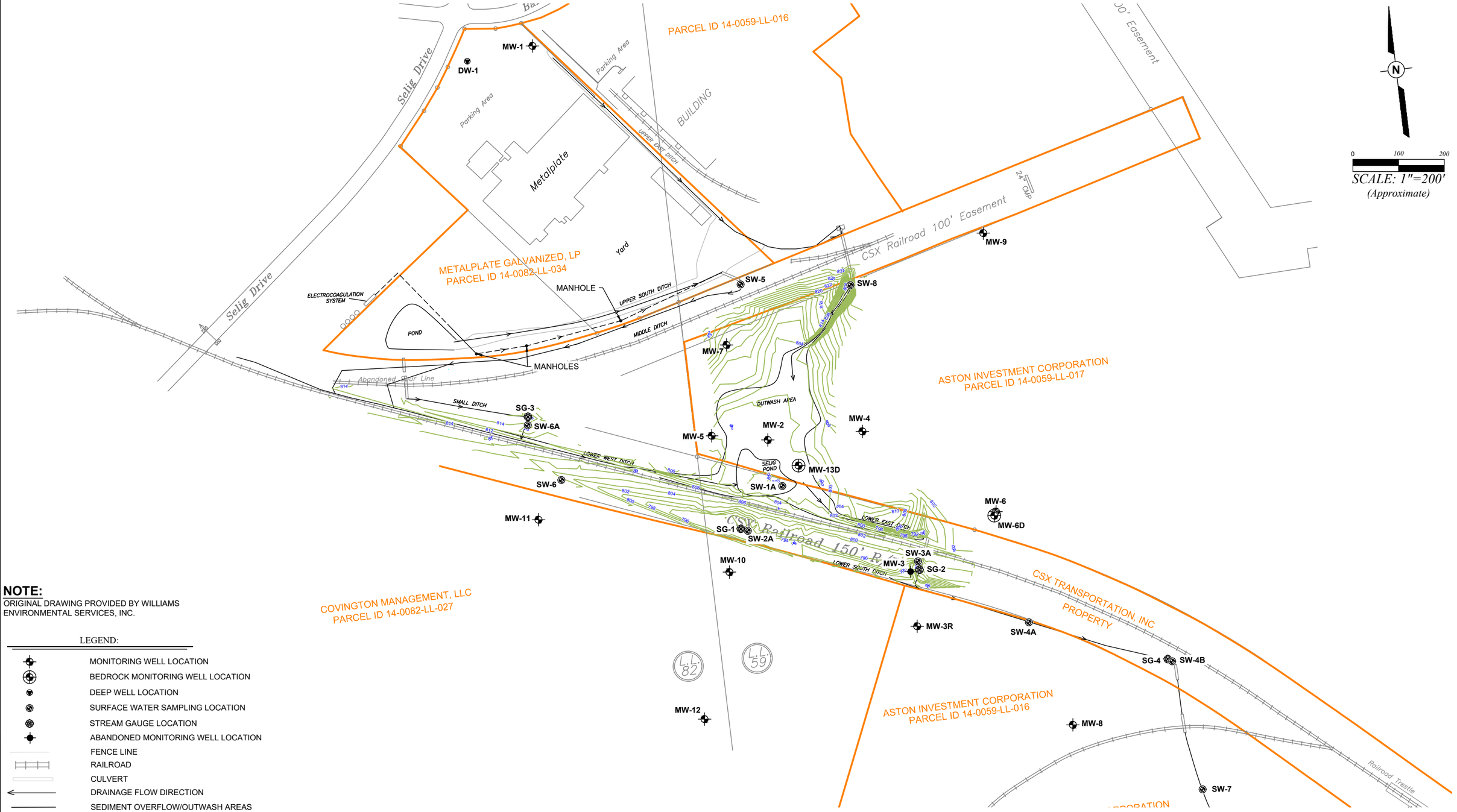
DRAWN BY: BWH	DRAWN DATE: 11/07/17
PROJECT NUMBER: 494501	BILLING GROUP: GWM17

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

SITE LOCATION MAP

FIGURE NUMBER
1



NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

- MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP WELL LOCATION
- SURFACE WATER SAMPLING LOCATION
- STREAM GAUGE LOCATION
- ABANDONED MONITORING WELL LOCATION
- FENCE LINE
- RAILROAD
- CULVERT
- DRAINAGE FLOW DIRECTION
- SEDIMENT OVERFLOW/OUTWASH AREAS

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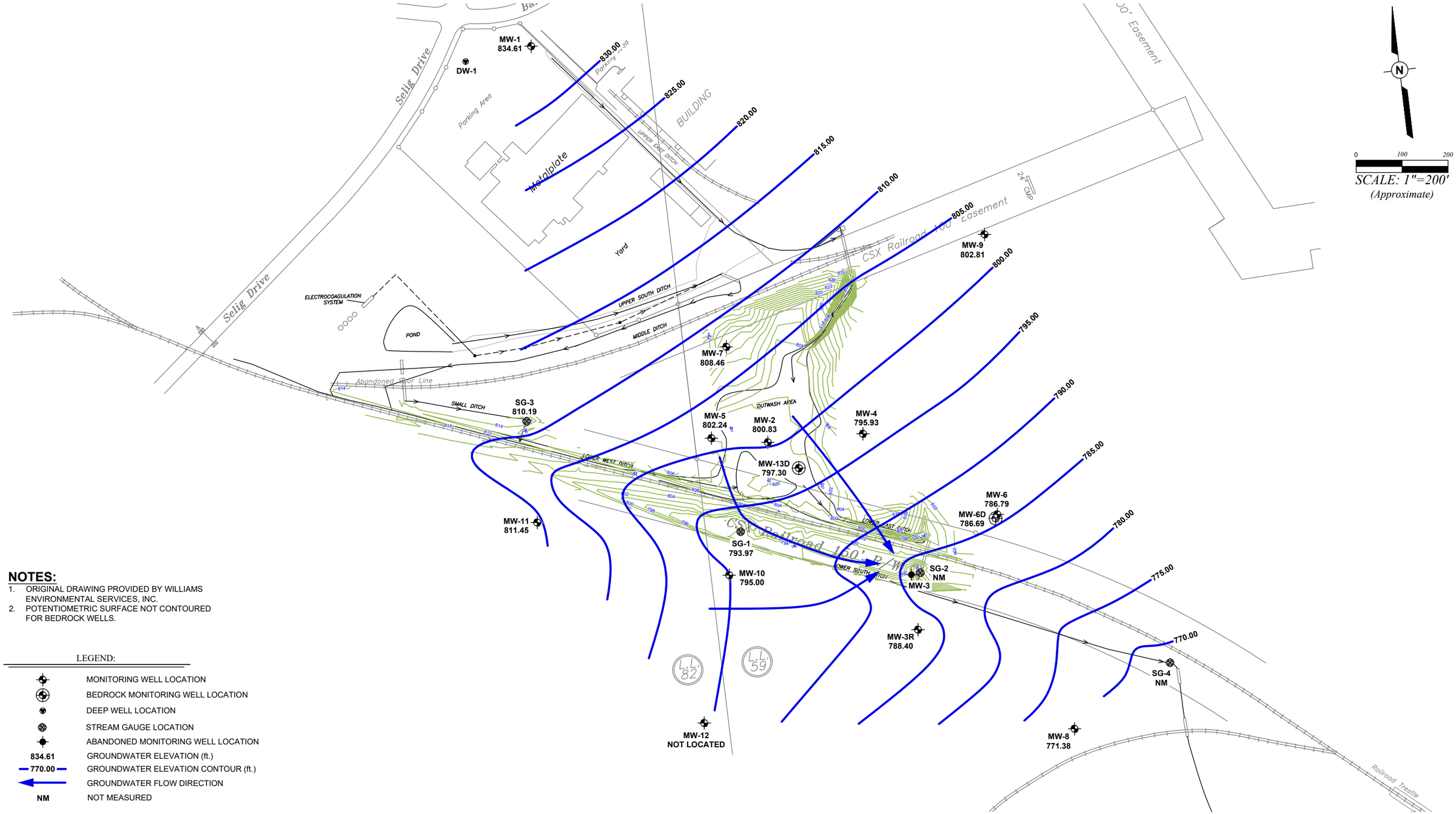
BWH	11/07/17
PROJECT NUMBER:	BILLING GROUP:
494501	GWM17

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

SITE MAP

FIGURE NUMBER
2



NOTES:

1. ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.
2. POTENTIOMETRIC SURFACE NOT CONTOURED FOR BEDROCK WELLS.

LEGEND:

⌖	MONITORING WELL LOCATION
◉	BEDROCK MONITORING WELL LOCATION
●	DEEP WELL LOCATION
⊗	STREAM GAUGE LOCATION
✱	ABANDONED MONITORING WELL LOCATION
834.61	GROUNDWATER ELEVATION (ft.)
770.00	GROUNDWATER ELEVATION CONTOUR (ft.)
←	GROUNDWATER FLOW DIRECTION
NM	NOT MEASURED

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DRAWN BY:	DRAWN DATE:
BWH	11/07/17
PROJECT NUMBER:	BILLING GROUP:
494501	GWM17

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

GROUNDWATER / SURFACE WATER ELEVATION MAP
(OCTOBER 12, 2017)

FIGURE NUMBER
3

NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

⌖	MONITORING WELL LOCATION
◎	BEDROCK MONITORING WELL LOCATION
●	DEEP WELL LOCATION
⊙	SURFACE WATER SAMPLING LOCATION
✱	ABANDONED MONITORING WELL LOCATION
0.176	TOTAL ZINC CONCENTRATION (mg/L)
2	ESTIMATED HORIZONTAL EXTENT OF ZINC IN GROUNDWATER EXCEEDING THE TYPE 1 RRS (2 mg/L)
NS	NOT SAMPLED

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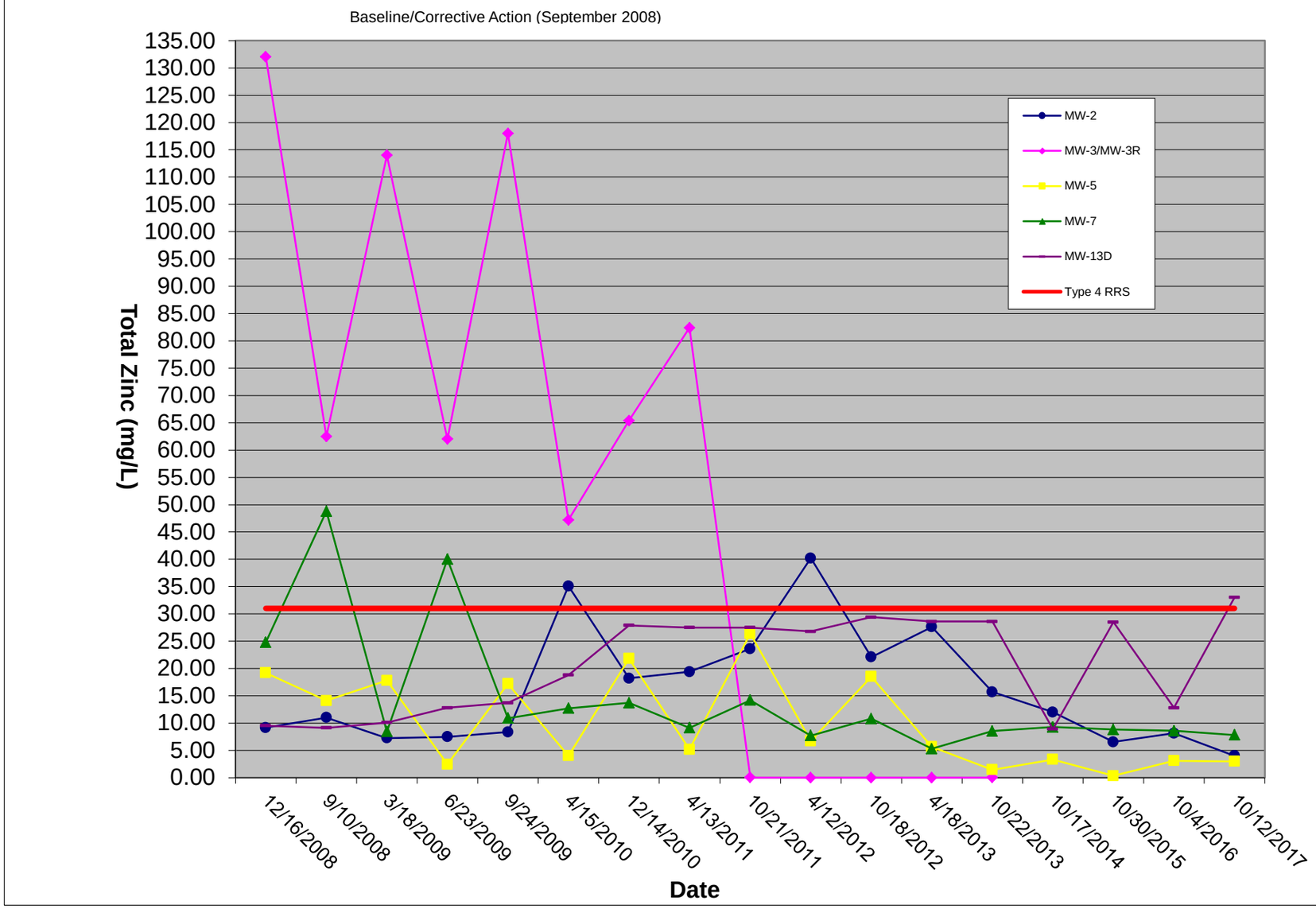
DRAWN BY:	DRAWN DATE:
BWH	11/07/17
PROJECT NUMBER:	BILLING GROUP:
494501	GWM17

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

TOTAL ZINC ISOCONCENTRATION MAP - GROUNDWATER (OCTOBER 12, 2017)

FIGURE NUMBER
4

FIGURE 5
Total Zinc Concentration vs Time - Groundwater



	Baseline																
	Dec-08	Sep-08	Mar-09	Jun-09	Sep-09	Apr-10	Dec-10	Apr-11	Oct-11	Apr-12	Oct-12	Apr-13	Oct-13	Oct-14	Oct-15	Oct-16	Oct-17
MW-2	9.17	11.0	7.25	7.48	8.36	35.1	18.2	19.4	23.6	40.2	22.1	27.6	15.7	12.0	6.55	8.13	4.01
MW-3/MW-3R	132	62.5	114	62.0	118	47.2	65.4	82.4	0.0387	<0.020	<0.020	<0.020	0.0251				
MW-5	19.2	14.1	17.8	2.44	17.2	4.00	21.8	5.19	26.4	6.71	18.5	5.7	1.44	3.33	0.357	3.11	2.98
MW-7	24.8	48.8	8.46	40.0	10.9	12.7	13.7	9.13	14.2	7.70	10.8	5.3	8.54	9.26	8.82	8.58	7.81
MW-13D	9.53	9.12	10.1	12.8	13.7	18.8	27.9	27.5	27.5	26.8	29.4	28.6	28.6	8.90	28.5	12.8	33.0
Type 4 RRS	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31

Not Applicable

NOTE:
ORIGINAL DRAWING PROVIDED BY WILLIAMS ENVIRONMENTAL SERVICES, INC.

LEGEND:

- MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- DEEP WELL LOCATION
- SURFACE WATER SAMPLING LOCATION
- ABANDONED MONITORING WELL LOCATION
- 42.8 DISSOLVED ZINC CONCENTRATION (mg/L)

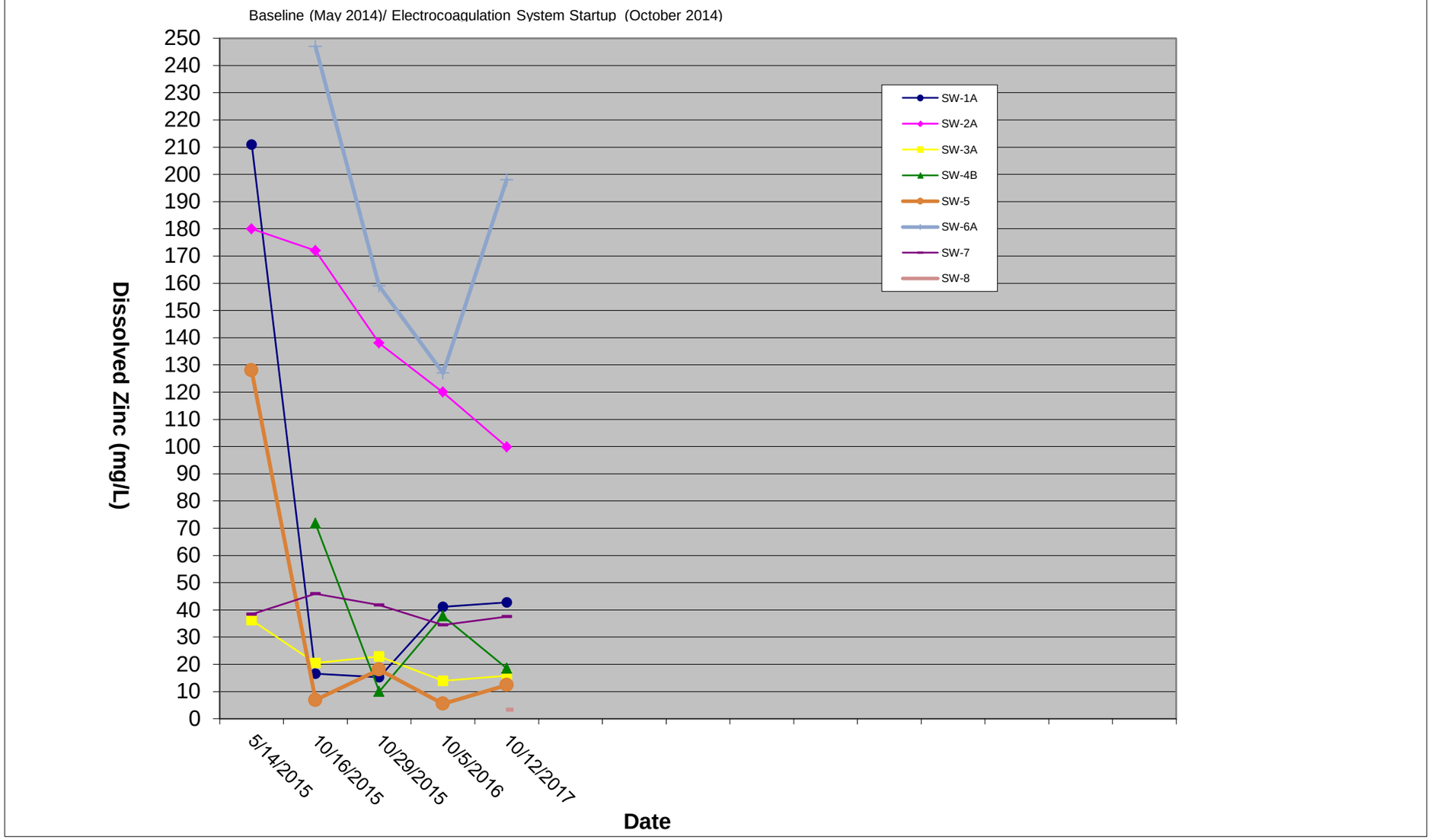
PPM CONSULTANTS, INC. www.ppmco.com	
DRAWN BY: BWH	DRAWN DATE: 11/07/17
PROJECT NUMBER: 494501	BILLING GROUP: GWM17

METALPLATE GALVANIZING, L.P.
METALPLATE FACILITY/SELIG POND
505 SELIG DRIVE SW
ATLANTA, GEORGIA

DISSOLVED ZINC CONCENTRATION MAP - SURFACE WATER (OCTOBER 12, 2017)

FIGURE NUMBER
6

FIGURE 7
Dissolved Zinc Concentration vs Time - Surface Water



	Baseline																	
	May-15	Oct-15	Oct-15	Oct-16	Oct-17													
SW-1A	211	16.6	15.3	41.1	42.8													
SW-2A	180	172	138	120	99.9													
SW-3A	36.2	20.5	22.9	14	15.8													
SW-4B		71.8	10	37.8	18.5													
SW-5	128	6.92	18.1	5.53	12.4													
SW-6A		247	159	127	198													
SW-7	38.4	45.9	41.8	34.5	37.5													
SW-8					3.38													

Not Applicable

APPENDIX B – GROUNDWATER SAMPLING FIELD LOGS

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-12-17
LOCATION:	Atlanta Georgia	WEATHER:	84° Sunny
WELL I.D.:	MW-1		
SAMPLER'S NAME:	AP/GO		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	855.16
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	19.45
Well Depth (ft-BTOC)	23.00	Well Volume (gal)	0.58
Water Column (ft)	3.55	Screened Interval (ft-BGS)	13-23

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS
Pump Type	Monsoon Pro
Tubing Type	Polyethylene
Time of Sampling	1844
Pumping Flow Rate (gpm)	0.04 GPM
Pump/Tubing depth (ft-BTOC)	21'

WATER QUALITY PARAMETERS

	Initial						
Time	1730	1746	1802	1818	1834	1842	
Depth to water (ft-BTOC)	19.60	20.68	20.91	20.91	21.05	21.06	
Amount Purged	0.320	0.96	1.60	2.24	2.88	3.20	
Temperature (°C)	22.09	21.30	22.27	21.54	21.76	21.42	
Sp. Cond. (mS/cm)	0.077	0.075	0.077	0.076	0.077	0.076	
pH (S.U.)	4.79	4.84	5.09	4.82	5.00	4.97	
ORP (mV)	168.0	166.8	156.5	173.8	170.0	181.0	
Turbidity (NTU)	839	111	175	32.0	20.1	15.0	

LABORATORY DATA

Sample I.D.	MW-1	Sample Time:	1844
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Start pumping @ 1722 - Very Turbid

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-13-17
LOCATION:	Atlanta Georgia	WEATHER:	70' Partly Sunny
WELL I.D.:	**MW-2**		
SAMPLER'S NAME:	AP/GO		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	805.55
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	3.54
Well Depth (ft-BTOC)	15.44	Well Volume (gal)	1.94
Water Column (ft)	11.90	Screened Interval (ft-BGS)	2-12

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS
Pump Type	Monsoon Pro
Tubing Type	Polyethylene
Time of Sampling	1013
Pumping Flow Rate (gpm)	0.036 GPM
Pump/Tubing depth (ft-BTOC)	7'

WATER QUALITY PARAMETERS

	Initial						
Time	952	0957	1002	1007	1012		
Depth to water (ft-BTOC)	3.74	3.78	3.69	3.69	3.70		
Amount Purged	0.180	0.360	0.540	0.720	0.900		
Temperature (°C)	21.14	21.29	21.39	21.50	21.73		
Sp. Cond. (mS/cm)	0.138	0.137	0.134	0.132	0.132		
pH (S.U.)	4.68	4.64	4.62	4.58	4.57		
ORP (mV)	205.6	209.2	212.5	212.6	221.0		
Turbidity (NTU)	32.7	23.8	20.1	8.53	4.64		

LABORATORY DATA

Sample I.D.	**MW-2**	Sample Time:	1013
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Start @ 0947

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-13-17
LOCATION:	Atlanta Georgia	WEATHER:	68° overcast
WELL I.D.:	MW-4		
SAMPLER'S NAME:	AP/GO		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	814.78
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	20.43
Well Depth (ft-BTOC)	30.21	Well Volume (gal)	1.59
Water Column (ft)	9.78	Screened Interval (ft-BGS)	18-28

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS
Pump Type	Monsoon Pro
Tubing Type	Polyethylene
Time of Sampling	0856
Pumping Flow Rate (gpm)	0.037
Pump/Tubing depth (ft-BTOC)	24'

WATER QUALITY PARAMETERS

	Initial						
Time	0824	0830	0836	0842	0848	0854	
Depth to water (ft-BTOC)	20.67	20.60	20.75	20.78	20.80	20.81	
Amount Purged	0.222	0.444	0.666	0.888	1.11	1.33	
Temperature (°C)	17.02	17.68	17.83	17.91	17.62	17.68	
Sp. Cond. (mS/cm)	0.069	0.059	0.055	0.054	0.049	0.049	
pH (S.U.)	5.11	5.40	5.31	5.36	5.36	5.34	
ORP (mV)	298.1	251.7	244.6	239.7	238.7	231.3	
Turbidity (NTU)	47.5	26.0	12.7	10.1	6.53	4.29	

LABORATORY DATA

Sample I.D.	MW-4	Sample Time:	0856
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Start Pump @0818

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-13-17
LOCATION:	Atlanta Georgia	WEATHER:	78° - Sunny
WELL I.D.:	MW-5		
SAMPLER'S NAME:	JC/HW		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	813.26
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	9.88
Well Depth (ft-BTOC)	27.86	Well Volume (gal)	2.93
Water Column (ft)	17.98	Screened Interval (ft-BGS)	15-25

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS
Pump Type	Monsoon Pro
Tubing Type	Polyethylene
Time of Sampling	1115
Pumping Flow Rate (gpm)	0.033 GPM
Pump/Tubing depth (ft-BTOC)	20' BTOC

WATER QUALITY PARAMETERS

	Initial						
Time	1042	1047	1052	1057	1102	1112	
Depth to water (ft-BTOC)	10.17	10.06	10.09	10.09	10.04	10.11	
Amount Purged	0.165	0.327	0.492	0.657	0.825	1.161	
Temperature (°C)	19.42	19.64	19.53	19.84	19.74	19.90	
Sp. Cond. (mS/cm)	1.105	1.109	1.111	1.107	1.108	1.100	
pH (S.U.)	5.19	5.24	5.29	5.30	5.32	5.34	
ORP (mV)	204.9	201.7	191.1	188.8	185.2	174.9	
Turbidity (NTU)	63.8	51.7	24.5	21.6	17.6	4.10	

LABORATORY DATA

Sample I.D.	MW-5	Sample Time:	1115
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Start Pump @ 1037

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-13-17
LOCATION:	Atlanta Georgia	WEATHER:	71° overcast
WELL I.D.:	MW-7		
SAMPLER'S NAME:	AP/GO		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	818.74
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	9.18
Well Depth (ft-BTOC)	~~7.17~~ 16.35	Well Volume (gal)	1.17
Water Column (ft)	7.17	Screened Interval (ft-BGS)	5-20

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS
Pump Type	Monsoon Pro
Tubing Type	Polyethylene
Time of Sampling	1254
Pumping Flow Rate (gpm)	0.037 GPM
Pump/Tubing depth (ft-BTOC)	15'

WATER QUALITY PARAMETERS

	Initial						
Time	1153	1203	1213	1223	1233	1243	1253
Depth to water (ft-BTOC)	9.36	9.36	9.37	9.36	9.36	9.38	9.38
Amount Purged	0.188	0.565	0.940	1.316	1.692	2.068	2.440
Temperature (°C)	20.06	20.26	20.15	20.15	20.10	20.01	19.98
Sp. Cond. (mS/cm)	1.060	1.053	1.042	1.039	1.015	1.009	1.001
pH (S.U.)	4.98	5.03	5.04	5.04	5.08	5.06	5.06
ORP (mV)	187.6	185.3	185.5	184.3	181.6	181.3	180.6
Turbidity (NTU)	410	130	73.0	144	46.7	34.4	85.2

LABORATORY DATA

Sample I.D.	MW-7	Sample Time:	1254
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Well IS Silted IN up From 20' To 16.35', Started pump @ 1148

GROUNDWATER SAMPLING FIELD LOG

SITE INFORMATION

CLIENT:	Metalplate Galvanizing	PROJECT NO.:	494501-GWM17
SITE NAME:	Metalplate	SAMPLING DATE:	10-13-17
LOCATION:	Atlanta Georgia	WEATHER:	69° Overcast
WELL I.D.:	**MW-13D**		
SAMPLER'S NAME:	AP/GO		

WELL CONSTRUCTION AND LIQUID LEVEL DATA

Casing Material	PVC	Reference Pt. (TOC)	805.55
Casing Diameter (in.)	2"	Depth to Water (ft-BTOC)	7.20
Well Depth (ft-BTOC)	56.22	Well Volume (gal)	7.99
Water Column (ft)	49.02	Screened Interval (ft-BGS)	54-56

WATER SAMPLE COLLECTION DATA

Method of Sampling	LF/LS	
Pump Type	Monsoon Pro	
Tubing Type	Polyethylene	
Time of Sampling	0931	
Pumping Flow Rate (gpm)	0.063 GPM	
Pump/Tubing depth (ft-BTOC)	55' BTOC	set at 55 feet

WATER QUALITY PARAMETERS

	Initial						
Time	0920	0925	0930				
Depth to water (ft-BTOC)	9.11	9.13	9.14				
Amount Purged	0.315	0.630	0.945				
Temperature (°C)	18.02	17.98	17.92				
Sp. Cond. (mS/cm)	1.212	1.222	1.228				
pH (S.U.)	5.22	5.21	5.22				
ORP (mV)	222.4	220.2	217.8				
Turbidity (NTU)	2.27	2.15	0.91				

LABORATORY DATA

Sample I.D.	**MW-13D**	Sample Time:	0931
Analyte	Total Zinc/Dissolved Zinc		
Containers/Preservative	250 ml (Nitric)/ 500 ml (unpreserved)		

REMARKS AND OBSERVATIONS: Start Pump @ 0915

APPENDIX C – TABLES

TABLE 1
INTRINSIC GROUNDWATER PARAMETERS
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	SAMPLE DATE	pH (S.U.)	TEMPERATURE (^{o}C)	SPECIFIC CONDUCTIVITY (µS/cm)	OXIDATION REDUCTION POTENTIAL (mV)	TURBIDITY (NTU)
MW-1	4/15/2010	5.22	18.8	94	257.7	1.63
	12/14/2010	5.10	18.8	13	-17.1	0.00
	4/12/2011	5.04	18.1	116	167.3	4.24
	10/21/2011	5.28	20.1	101	317.6	5.28
	4/12/2012	5.29	20.5	80	175.4	4.08
	10/18/2012	5.23	20.9	86	82.8	57.0
	4/18/2013	4.62	19.9	87	99.1	7.99
	10/22/2013	5.03	19.5	111	228.0	0.90
	10/17/2014	5.16	18.1	100	169.6	15.8
	10/30/2015	5.74	18.5	116	223.0	20.9
	10/4/2016	5.52	20.5	89	93.1	4.98
	10/12/2017	4.97	21.4	76	181.0	15.00
MW-2	4/15/2010	4.27	15.7	350	306.1	0.75
	12/14/2010	4.09	10.9	17	NM*	0.00
	4/12/2011	4.04	15.2	287	171.4	1.36
	10/20/2011	4.23	20.2	380	368.8	1.05
	4/12/2012	4.10	18.2	636	247.8	3.52
	10/18/2012	4.14	21.0	374	136.4	2.54
	4/18/2013	3.93	17.6	490	102.7	2.52
	10/22/2013	4.10	19.8	454	298.0	0.55
	10/17/2014	4.33	21.2	327	263.8	2.50
	10/30/2015	4.84	18.3	190	372.2	4.58
	10/4/2016	4.60	22.8	243	128.4	3.56
	10/13/2017	4.57	21.7	132	221.0	4.64
MW-3	4/15/2010	4.17	14.6	1,015	287.0	476
	12/14/2010	3.99	11.3	16	NM*	254
	4/12/2011	4.10	12.4	19	-1,314.1	2,481
MW-3R	8/26/2011	6.10	25.2	238	38.0	192
	10/20/2011	6.26	19.0	438	-13.4	238
	4/11/2012	6.42	19.4	340	-78.8	12.1
	10/17/2012	6.38	20.8	389	-77.6	64.3
	4/17/2013	6.03	20.9	369	-61.5	17.1
	10/21/2013	6.29	19.9	414	-136.0	18.1
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-4	4/15/2010	5.56	15.0	58	228.0	7.93
	12/14/2010	5.21	14.9	36	167.3	0.00
	4/12/2011	5.05	15.7	41	126.9	2.21
	10/21/2011	5.45	15.8	55	310.2	5.32
	4/12/2012	5.53	16.0	38	180.8	16.3
	10/18/2012	5.43	17.0	49	68.2	4.60
	4/18/2013	4.68	17.3	34	84.2	4.23
	10/22/2013	5.24	16.8	63	231.0	2.33
	10/17/2014	5.53	15.5	74	120.5	4.89
	10/30/2015	6.14	15.8	50	172.3	3.99
	10/4/2016	6.03	17.1	73	49.4	4.72
	10/13/2017	5.34	17.7	49	231.3	4.29

TABLE 1
INTRINSIC GROUNDWATER PARAMETERS
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	SAMPLE DATE	pH (S.U.)	TEMPERATURE (^{o}C)	SPECIFIC CONDUCTIVITY (µS/cm)	OXIDATION REDUCTION POTENTIAL (mV)	TURBIDITY (NTU)
MW-5	4/15/2010	5.19	15.8	1,415	265.0	9.23
	12/14/2010	4.85	15.3	1,207	200.8	10.3
	4/12/2011	4.99	16.0	1,452	131.4	7.98
	10/20/2011	4.55	17.0	1,403	414.4	2.95
	4/12/2012	5.13	16.0	1,183	166.9	31.4
	10/18/2012	4.56	17.6	1,085	111.8	4.99
	4/18/2013	4.74	16.1	1,129	54.6	4.99
	10/22/2013	5.07	17.6	1,590	249.0	25.8
	10/17/2014	5.22	17.4	1,406	104.5	4.67
	10/30/2015	5.80	16.7	1,207	208.2	13.20
	10/4/2016	5.49	17.9	940	105.6	5.01
	10/13/2017	5.34	19.9	1,100	174.9	4.10
MW-6	4/15/2010	5.44	16.4	47	229.0	46.4
	12/13/2010	5.34	15.2	44	199.6	1.68
	4/12/2011	5.36	17.0	56	115.9	6.35
	10/21/2011	5.74	15.8	64	187.5	3.37
	4/12/2012	5.70	16.8	47	178.1	5.63
	10/18/2012	5.56	17.5	54	92.4	9.80
	4/18/2013	5.03	17.8	51	72.2	20.0
	10/22/2013	5.32	17.0	75	230.0	3.42
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-6D	4/14/2010	5.84	16.9	80	171.2	46.1
	12/13/2010	5.73	14.8	70	146.1	40.0
	4/12/2011	5.77	16.4	90	72.7	1.16
	10/21/2011	5.65	15.5	97	189.0	5.19
	4/12/2012	6.07	15.6	74	150.4	4.14
	10/18/2012	5.84	16.7	76	55.2	4.36
	4/18/2013	5.25	17.0	85	60.2	8.42
	10/22/2013	5.72	16.6	111	201.0	1.23
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-7	4/15/2010	4.94	14.5	1,165	286.3	5.05
	12/14/2010	4.70	16.5	20	NM*	315
	4/12/2011	4.90	14.7	1,344	131.1	17.3
	10/20/2011	4.69	18.1	1,772	377.9	5.28
	4/12/2012	5.03	15.8	1,218	179.4	16.7
	10/18/2012	4.56	18.9	1,485	102.3	8.52
	4/18/2013	4.82	14.9	914	68.9	105
	10/22/2013	4.83	18.8	1,690	277.0	17.4
	10/17/2014	4.85	19.9	1,511	127.5	4.80
	10/30/2015	5.20	18.0	1,268	251.9	4.44
	10/4/2016	5.15	19.3	971	104.5	4.94
	10/13/2017	5.06	20.0	1,001	180.6	85.2

TABLE 1
INTRINSIC GROUNDWATER PARAMETERS
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	SAMPLE DATE	pH (S.U.)	TEMPERATURE (^{o}C)	SPECIFIC CONDUCTIVITY (µS/cm)	OXIDATION REDUCTION POTENTIAL (mV)	TURBIDITY (NTU)
MW-8	4/14/2010	6.55	19.3	462	-121.8	9.75
	12/13/2010	6.47	16.5	395	-107.5	0.00
	4/12/2011	6.54	18.2	458	-155.4	1.73
	10/20/2011	7.07	17.7	432	-56.6	5.05
	4/11/2012	6.67	18.6	374	-127.4	2.71
	10/17/2012	6.72	19.2	386	-124.5	2.62
	4/17/2013	6.21	19.7	420	-95.3	0.49
	10/21/2013	6.42	19.0	510	-168.0	1.51
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-9	4/15/2010	5.56	17.1	25	213.5	2.85
	12/14/2010	5.56	15.2	40	151.5	1.81
	4/12/2011	5.54	17.6	54	116.3	8.87
	10/21/2011	5.71	16.5	70	309.1	3.61
	4/12/2012	5.87	16.9	56	171.6	2.23
	10/18/2012	5.61	17.7	72	62.5	3.02
	4/18/2013	4.96	17.8	79	67.8	2.92
	10/22/2013	5.58	17.8	71	207.0	5.34
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-10	4/15/2010	6.24	20.3	225	-67.7	30.8
	12/13/2010	5.47	12.6	55	135.7	>1,100
	4/12/2011	5.87	19.2	217	-42.4	4.12
	10/20/2011	6.61	19.3	84	121.3	10.6
	4/11/2012	6.04	20.1	135	22.6	14.5
	10/17/2012	5.82	20.0	100	-4.7	40.1
	4/17/2013	5.32	20.3	105	39.8	11.4
	10/21/2013	5.43	20.8	88	107.0	6.18
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-11	4/15/2010	5.95	22.0	150	168.3	4.00
	12/13/2010	5.97	18.5	121	149.9	4.61
	4/12/2011	5.77	21.4	143	114.7	5.37
	10/20/2011	6.81	20.5	134	165.4	18.3
	4/11/2012	6.04	21.7	136	156.6	5.87
	10/17/2012	5.99	21.4	131	17.7	2.24
	4/17/2013	5.59	21.5	151	43.2	3.59
	10/21/2013	5.80	21.7	184	132.0	4.99
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS

TABLE 1
INTRINSIC GROUNDWATER PARAMETERS
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	SAMPLE DATE	pH (S.U.)	TEMPERATURE (^{o}C)	SPECIFIC CONDUCTIVITY (µS/cm)	OXIDATION REDUCTION POTENTIAL (mV)	TURBIDITY (NTU)
MW-12	4/14/2010	NL	NL	NL	NL	NL
	12/13/2010	5.67	16.9	66	163.4	3.85
	4/12/2011	5.74	19.6	78	101.8	3.65
	10/20/2011	6.74	19.5	82	179.7	2.18
	4/11/2012	6.07	20.2	65	160.9	9.51
	10/17/2012	5.87	20.4	67	53.9	4.61
	4/17/2013	5.41	20.2	69	78.3	4.82
	10/21/2013	5.79	20.6	91	157.0	4.09
	10/17/2014	NS	NS	NS	NS	NS
	10/30/2015	NS	NS	NS	NS	NS
	10/4/2016	NS	NS	NS	NS	NS
	10/12/2017	NS	NS	NS	NS	NS
MW-13D	4/15/2010	5.29	16.7	1,315	195.1	7.14
	12/14/2010	5.05	14.3	1,214	212.8	0.00
	4/12/2011	4.99	16.0	1,532	102.1	7.93
	10/20/2011	5.14	17.0	1,575	195.6	4.35
	4/12/2012	5.24	16.2	1,236	146.7	4.70
	10/18/2012	5.13	17.4	1,231	78.6	2.93
	4/18/2013	4.88	17.5	1,213	45.7	1.23
	10/22/2013	5.01	17.2	1,600	238.0	1.49
	10/17/2014	5.96	17.5	1,318	80.7	1.38
	10/30/2015	5.55	16.1	1,310	269.8	3.04
	10/4/2016	6.29	18.2	1,074	46.7	1.03
	10/13/2017	5.22	17.9	1,228	217.8	0.91

Notes: *S.U. - Standard Units*
µS/cm - microSiemens/centimeter
^{o}C - degrees Celsius
mV - millivolts
ppm - parts per million
NTU - Nephelometric Turbidity Units
NL - Not located
NM - Not measured due to equipment malfunction*

Source: *PPM Consultants, Inc.*
PPM Project No. 494501-GWM17

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-1	2/13/2003	855.16	23.0	17.81	837.35
	3/5/2003		23.0	17.52	837.64
	1/6/2004		23.0	16.68	838.48
	5/28/2004		23.0	16.50	838.66
	5/27/2007		23.0	21.93	833.23
	5/6/2008		-	-	-
	9/8/2008		23.1	22.56	832.60
	12/16/2008		23.1	22.64	832.52
	3/18/2009		23.1	22.67	832.49
	6/23/2009		23.0	21.37	833.79
	9/24/2009		23.0	21.37	833.79
	4/14/2010		23.1	16.19	838.97
	12/13/2010		23.0	18.83	836.33
	4/12/2011		23.1	18.25	836.91
	10/20/2011		23.0	19.96	835.20
	4/11/2012		23.0	19.50	835.66
	10/17/2012	854.06	23.1	21.63	832.43
	4/17/2013		23.0	19.87	834.19
	10/21/2013		23.1	17.92	836.14
	5/16/2014		23.1	16.89	837.17
	10/17/2014		23.0	17.99	836.07
	10/29/2015		23.0	18.12	835.94
	11/9/2016		23.0	18.83	835.23
	10/12/2017		23.0	19.45	834.61
MW-2	2/13/2003	805.55	15.4	3.96	801.59
	3/5/2003		15.4	3.54	802.01
	1/6/2004		15.4	3.86	801.69
	5/28/2004		15.4	6.13	799.42
	5/27/2007		15.4	3.90	801.65
	5/6/2008		-	-	-
	9/8/2008		15.5	4.60	800.95
	12/16/2008		15.5	3.45	802.10
	3/18/2009		15.5	3.16	802.39
	6/23/2009		15.5	4.27	801.28
	9/24/2009		15.5	3.20	802.35
	4/14/2010		15.5	3.19	802.36
	12/13/2010		15.5	3.36	802.19
	4/12/2011		15.4	3.23	802.32
	10/20/2011		15.4	3.91	801.64
	4/11/2012		15.5	4.18	801.37
	10/17/2012	804.33	15.5	4.59	799.74
	4/17/2013		15.4	3.25	801.08
	10/21/2013		15.4	3.38	800.95
	5/16/2014		15.4	3.10	801.23
	10/17/2014		15.4	3.32	801.01
	10/29/2015		15.4	3.05	801.28
	11/9/2016		15.4	5.75	798.58
	10/12/2017		15.4	3.50	800.83

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-3	2/13/2003	794.24	10.0	6.10	788.14
	3/5/2003		10.0	6.13	788.11
	1/6/2004		10.0	6.00	788.24
	5/28/2004		10.0	6.41	787.83
	5/27/2007		10.0	7.45	786.79
	5/6/2008		-	-	-
	9/8/2008		10.1	7.60	786.64
	12/16/2008		10.1	7.11	787.13
	3/18/2009		10.1	6.64	787.60
	6/23/2009		10.1	7.38	786.86
	9/24/2009		10.1	6.69	787.55
	4/14/2010		10.1	7.45	786.79
	12/13/2010		10.1	7.31	786.93
	4/12/2011		10.1	7.21	787.03
MW-3R	8/16/2011	831.70	52.0	42.08	789.62
	10/20/2011		52.0	42.53	789.17
	4/11/2012		50.0	42.00	789.70
	10/17/2012	830.60	50.1	42.93	787.67
	4/17/2013		52.0	41.97	788.63
	10/21/2013		52.0	40.28	790.32
	5/16/2014		52.0	40.51	790.09
	10/17/2014		52.0	41.70	788.90
	10/29/2015		52.0	42.24	788.36
	11/9/2016		52.0	42.20	788.40
	10/12/2017		52.0	42.20	788.40
MW-4	2/13/2003	817.45	29.4	17.40	800.05
	3/5/2003		29.4	16.77	800.68
	1/6/2004		29.4	16.72	800.73
	5/28/2004		29.4	17.00	800.45
	5/27/2007		29.4	18.05	799.40
	5/6/2008		-	-	-
	9/8/2008		34.6	21.53	795.92
	12/16/2008		34.6	21.08	796.37
	3/18/2009		34.6	19.65	797.80
	6/23/2009		34.6	18.76	798.69
	9/24/2009		34.6	19.39	798.06
	4/14/2010		34.4	14.39	803.06
	12/13/2010		34.4	19.28	798.17
	4/12/2011		34.5	16.98	800.47
	10/20/2011		34.6	21.73	795.72
	4/11/2012		34.5	19.11	798.34
	10/17/2012	816.35	34.6	22.23	794.12
	4/17/2013		34.5	17.87	798.48
	10/21/2013		30.4	18.59	797.76
	5/16/2014		30.4	15.61	800.74
	10/17/2014		29.3	19.35	797.00
	10/29/2015		29.3	19.00	797.35
	11/9/2016		29.3	21.42	794.93
	10/12/2017		30.2	20.42	795.93

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-5	2/13/2003	813.26	25.2	10.00	803.26
	3/5/2003		25.2	9.41	803.85
	1/6/2004		25.2	9.60	803.66
	5/28/2004		25.2	9.89	803.37
	5/27/2007		25.2	10.01	803.25
	5/6/2008		-	-	-
	9/8/2008		27.7	11.99	801.27
	12/16/2008		27.7	10.39	802.87
	3/18/2009		27.7	9.53	803.73
	6/23/2009		27.7	10.62	802.64
	9/24/2009		27.7	9.46	803.80
	4/14/2010		27.6	9.08	804.18
	12/13/2010		27.6	9.95	803.31
	4/12/2011		27.6	9.25	804.01
	10/20/2011		27.5	11.60	801.66
	4/11/2012		27.4	10.24	803.02
	10/17/2012	812.16	27.4	11.58	800.58
	4/17/2013		27.4	9.22	802.94
	10/21/2013		27.5	9.43	802.73
	5/16/2014		27.5	9.09	803.07
	10/17/2014		27.4	9.73	802.43
	10/29/2015		27.4	9.32	802.84
	11/9/2016		27.4	11.80	800.36
	10/12/2017		27.9	9.92	802.24
MW-6	5/28/2004	819.53	40.3	28.38	791.15
	5/27/2007		40.3	29.01	790.52
	5/6/2008		-	-	-
	9/8/2008		39.7	31.81	787.72
	12/16/2008		39.7	31.70	787.83
	3/18/2009		39.7	31.00	788.53
	6/23/2009		39.7	29.66	789.87
	9/24/2009		39.7	30.64	788.89
	4/14/2010		39.7	26.36	793.17
	12/13/2010		39.7	31.00	788.53
	4/12/2011		39.7	29.73	789.80
	10/20/2011		39.7	32.19	787.34
	4/11/2012		39.4	30.72	788.81
	10/17/2012	818.43	39.4	32.50	785.93
	4/17/2013		39.4	30.06	788.37
	10/21/2013		39.4	30.27	788.16
	5/16/2014		39.4	27.82	790.61
	10/17/2014		39.2	30.92	787.51
	10/29/2015		39.2	30.30	788.13
	11/9/2016		39.2	32.26	786.17
	10/12/2017		39.2	31.64	786.79

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-6D	5/28/2004	818.74	57.3	27.75	790.99
	5/27/2007		57.3	29.65	789.09
	5/6/2008		-	-	-
	9/8/2008		57.5	31.12	787.62
	12/16/2008		57.5	30.98	787.76
	3/18/2009		57.5	30.26	788.48
	6/23/2009		57.5	29.08	789.66
	9/24/2009		57.5	29.88	788.86
	4/14/2010		57.6	26.04	792.70
	12/13/2010		57.5	30.22	788.52
	4/12/2011		57.4	29.04	789.70
	10/20/2011		57.5	31.50	787.24
	4/11/2012		57.5	30.06	788.68
	10/17/2012	817.64	57.5	31.77	785.87
	4/17/2013		57.5	29.35	788.29
	10/21/2013		57.5	29.64	788.00
	5/16/2014		57.5	27.28	790.36
	10/17/2014		-	30.32	787.32
	10/29/2015		-	29.84	787.80
	11/9/2016		-	31.48	786.16
	10/12/2017		57.5	30.95	786.69
MW-7	5/27/2007	818.74	20.3	9.07	809.67
	5/6/2008		-	-	-
	9/8/2008		20.3	11.47	807.27
	12/16/2008		20.3	10.60	808.14
	3/18/2009		20.3	9.08	809.66
	6/23/2009		20.3	9.40	809.34
	9/24/2009		20.3	8.66	810.08
	4/14/2010		20.3	7.27	811.47
	12/13/2010		20.3	8.87	809.87
	4/12/2011		20.3	7.96	810.78
	10/20/2011		18.6	10.27	808.47
	4/11/2012		19.6	8.81	809.93
	10/17/2012	817.57	16.8	10.42	807.15
	4/17/2013		16.8	8.09	809.48
	10/21/2013		17.5	8.34	809.23
	5/16/2014		17.5	7.81	809.76
	10/17/2014		17.4	9.02	808.55
	10/29/2015		17.1	8.48	809.09
	11/9/2016		17.1	9.91	807.66
	10/12/2017		16.4	9.11	808.46

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-8	5/27/2007	812.85	45.8	39.99	772.86
	5/6/2008		46.1	40.16	772.69
	9/8/2008		45.7	40.62	772.23
	12/16/2008		45.7	40.48	772.37
	3/18/2009		45.7	40.24	772.61
	6/23/2009		45.7	39.99	772.86
	9/24/2009		45.7	39.40	773.45
	4/14/2010		45.7	39.10	773.75
	12/13/2010		45.6	40.30	772.55
	4/12/2011		45.6	40.05	772.80
	10/20/2011		45.7	40.66	772.19
	4/11/2012		45.6	40.30	772.55
	10/17/2012	811.75	45.6	40.67	771.08
	4/17/2013		45.7	39.92	771.83
	10/21/2013		45.7	40.00	771.75
	5/16/2014		45.7	39.41	772.34
	10/17/2014		45.5	40.28	771.47
	10/29/2015		45.5	38.60	773.15
	11/9/2016		45.5	40.67	771.08
	10/12/2017		45.6	40.37	771.38
MW-9	5/27/2007	839.39	45.0	33.45	805.94
	5/6/2008		-	-	-
	9/8/2008		46.8	36.44	802.95
	12/16/2008		46.8	37.46	801.93
	3/18/2009		46.8	37.37	802.02
	6/23/2009		46.8	34.45	804.94
	9/24/2009		46.8	35.32	804.07
	4/14/2010		46.8	26.65	812.74
	12/13/2010		46.8	32.98	806.41
	4/12/2011		46.8	33.35	806.04
	10/20/2011		46.8	35.23	804.16
	4/11/2012		46.8	35.05	804.34
	10/17/2012	838.29	46.7	37.03	801.26
	4/17/2013		46.7	35.66	802.63
	10/21/2013		46.8	32.17	806.12
	5/16/2014		46.8	29.89	808.40
	10/17/2014		46.5	32.63	805.66
	10/29/2015		46.5	31.99	806.30
	11/9/2016		46.5	33.07	805.22
	10/12/2017		46.7	35.48	802.81

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-10	5/27/2007	833.00	50.0	36.23	796.77
	5/6/2008		50.7	36.80	796.20
	9/8/2008		50.1	37.70	795.30
	12/16/2008		50.1	37.44	795.56
	3/18/2009		50.1	37.13	795.87
	6/23/2009		50.1	36.76	796.24
	9/24/2009		50.1	36.48	796.52
	4/14/2010		50.1	34.83	798.17
	12/13/2010		50.2	36.47	796.53
	4/12/2011		50.1	36.14	796.86
	10/20/2011		50.1	37.65	795.35
	4/11/2012		50.1	37.22	795.78
	10/17/2012	831.90	50.1	38.11	793.79
	4/17/2013		50.1	37.73	794.17
	10/21/2013		49.5	36.40	795.50
	5/16/2014		49.5	35.45	796.45
	10/17/2014		50.0	36.49	795.41
	10/29/2015		50.0	34.82	797.08
	11/9/2016		50.0	36.91	794.99
	10/12/2017		49.9	36.90	795.00
MW-11	5/27/2007	833.06	50.5	20.40	812.66
	5/6/2008		-	-	-
	9/8/2008		49.8	21.71	811.35
	12/16/2008		49.8	22.55	810.51
	3/18/2009		49.8	20.84	812.22
	6/23/2009		49.8	20.37	812.69
	9/24/2009		49.8	20.64	812.42
	4/14/2010		49.8	19.33	813.73
	12/13/2010		49.8	21.23	811.83
	4/12/2011		49.8	20.04	813.02
	10/20/2011		49.8	21.97	811.09
	4/11/2012		49.8	20.60	812.46
	10/17/2012	831.96	49.8	21.88	810.08
	4/17/2013		49.8	19.93	812.03
	10/21/2013		49.8	20.25	811.71
	5/16/2014		49.8	19.49	812.47
	10/17/2014		49.8	20.83	811.13
	10/29/2015		49.7	20.12	811.84
	11/9/2016		49.7	21.46	810.50
	10/12/2017		49.7	20.51	811.45

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
MW-12	5/27/2007	836.98	51.2	40.18	796.80
	5/6/2008		-	-	-
	9/8/2008		50.2	41.66	795.32
	12/16/2008		50.2	41.98	795.00
	3/18/2009		50.2	41.93	795.05
	6/23/2009		50.2	40.97	796.01
	9/24/2009		50.2	40.95	796.03
	4/14/2010		NL	NL	NL
	12/13/2010		50.2	40.10	796.88
	4/12/2011		50.2	40.46	796.52
	10/20/2011		49.9	41.23	795.75
	4/11/2012		49.9	41.39	795.59
	10/17/2012	835.88	50.0	42.02	793.86
	4/17/2013		49.9	41.62	794.26
	10/21/2013		50.0	40.63	795.25
	5/16/2014		50.0	39.98	795.90
	10/17/2014		50.0	40.53	795.35
	10/29/2015		50.0	39.04	796.84
	11/9/2016		50.0	41.29	794.59
	10/12/2017		NL	NL	NL
MW-13D	5/6/2008	805.55	57.0	6.25	799.30
	9/8/2008		56.2	8.86	796.69
	12/16/2008		56.2	7.58	797.97
	3/18/2009		56.2	6.51	799.04
	6/23/2009		56.2	7.41	798.14
	9/24/2009		56.2	6.39	799.16
	4/14/2010		56.2	4.50	801.05
	12/13/2010		56.2	6.78	798.77
	4/12/2011		56.3	5.55	800.00
	10/20/2011		56.2	8.33	797.22
	4/11/2012		56.2	7.63	797.92
	10/17/2012	804.43	56.3	9.26	795.17
	4/17/2013		56.2	6.01	798.42
	10/21/2013		56.2	6.37	798.06
	5/16/2014		56.2	4.86	799.57
	10/17/2014		56.2	6.51	797.92
	10/29/2015		56.2	6.10	798.33
	11/9/2016		56.2	9.11	795.32
	10/12/2017		56.2	7.13	797.30

TABLE 2
GROUNDWATER/SURFACE WATER ELEVATION SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

WELL I.D.	DATE	TOP OF CASING ELEVATION (ft)	WELL DEPTH (ft-BTOC)	DEPTH TO WATER (ft-BTOC)	GROUNDWATER ELEVATION (ft)
SG-1	5/16/2014	793.92	-	0.50	794.42
	10/17/2014		-	0.55	794.47
	10/29/2015	798.44	-	3.12	795.32
	11/9/2016		-	4.52	793.92
	10/12/2017		-	4.47	793.97
SG-2	5/16/2014	782.86	-	1.20	784.06
	10/17/2014		-	0.85	783.71
	10/29/2015	786.50	-	2.87	783.63
	11/9/2016		-	3.37	783.13
	10/12/2017		-	NM	NM
SG-3	10/17/2014	812.50	-	0.70	813.20
	10/29/2015	814.67	-	3.61	811.06
	11/9/2016		-	4.47	810.20
	10/12/2017		-	4.48	810.19
SG-4	10/17/2014	774.48	-	0.40	774.88
	10/29/2015	772.52	-	2.35	770.17
	11/9/2016		-	2.83	769.69
	10/12/2017		-	NM	NM

Notes: *ft-BTOC - feet below top of casing*
SG - stream gauge
NM - not measured
NL - not located

Source: *Williams Environmental Services, Inc.*
PPM Consultants, Inc.
PPM Project No. 494501-GWM17

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-1	1/13/2003	<0.010	0.121	-	-	4.20
	3/29/2007	-	0.0789	<0.020	-	4.24
	9/10/2008	-	0.372	-	-	-
	12/16/2008	-	-	-	-	-
	3/18/2009	-	-	-	-	-
	6/24/2009	-	0.0389	0.0233	-	16.7
	9/25/2009	-	0.0210	<0.020	-	58.2
	4/15/2010	-	0.0215	<0.020	5.22	1.63
	12/14/2010	-	<0.020	<0.020	5.10	0.00
	4/13/2011	-	0.0328	<0.020	5.04	4.24
	10/21/2011	-	<0.020	<0.020	5.28	5.28
	4/12/2012	-	<0.020	0.0393	5.29	4.08
	10/18/2012	-	0.109	-	5.23	57.0
	4/18/2013	-	0.0631	<0.020	4.62	7.99
	10/22/2013	-	0.0209	<0.020	5.03	0.90
	10/17/2014	-	<0.020	<0.020	5.16	15.8
	10/30/2015	-	0.0916	0.0614	5.74	20.9
	10/4/2016	-	<0.020	<0.020	5.52	4.98
	10/12/2017	-	0.176	0.198	4.97	15.0
MW-2	1/9/2003	<0.010	20.5	-	-	4.80
	1/28/2003	-	**31.4**	-	-	0.85
	3/29/2007	-	13.4	12.1	-	1.67
	9/9/2008	-	11.0	10.7	-	0.00
	12/16/2008	-	9.17	9.56	-	0.00
	3/18/2009	-	7.25	7.06	-	0.00
	6/23/2009	-	7.48	8.66	-	0.00
	9/24/2009	-	8.36	8.52	-	3.38
	4/15/2010	-	**35.1**	**36.5**	4.27	0.75
	12/14/2010	-	18.2	18.4	4.09	0.00
	4/13/2011	-	19.4	19.8	4.04	1.36
	10/21/2011	-	23.6	25.3	4.23	1.05
	4/12/2012	-	**40.2**	**43.6**	4.10	3.52
	10/18/2012	-	22.1	22.5	4.14	2.54
	4/18/2013	-	27.6	29.3	3.93	2.52
	10/22/2013	-	15.7	16.7	4.10	0.55
	10/17/2014	-	12.0	12.2	4.33	2.50
	10/30/2015	-	6.55	6.55	4.84	4.58
	10/4/2016	-	8.13	8.27	4.60	3.56
	10/13/2017	-	4.01	5.68	4.57	4.64

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-3	2/13/2003	-	**130**	-	-	8.96
	1/7/2004	<0.010	-	-	-	-
	3/29/2007	-	**48.5**	29.0	-	16.8
	9/9/2008	-	**62.5**	**42.6**	-	15.3
	12/16/2008	-	**132**	**139**	-	13.8
	3/18/2009	-	**114**	**108**	-	53.5
	6/23/2009	-	**62.0**	**64.3**	-	3.60
	9/24/2009	-	**118**	**109**	-	91.0
	4/15/2010	-	**47.2**	-	4.17	476
	12/14/2010	-	**65.4**	-	3.99	254
	4/13/2011	-	**82.4**	-	4.10	2,481
MW-3R	8/16/2011	-	0.110	0.0675	6.10	192
	10/21/2011	-	0.0387	<0.020	6.26	238
	4/11/2012	-	<0.020	<0.020	6.42	12.1
	10/17/2012	-	<0.020	<0.020	6.38	64.3
	4/17/2013	-	<0.020	<0.020	6.03	17.1
	10/22/2013	-	0.0251	<0.020	6.29	18.1
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-
MW-4	2/12/2003	-	0.03	-	-	4.76
	1/6/2004	<0.010	-	-	-	-
	3/28/2007	-	0.0844	<0.020	-	4.70
	9/9/2008	-	<0.020	<0.020	-	10.8
	12/16/2008	-	<0.020	<0.020	-	0.97
	3/18/2009	-	<0.020	<0.020	-	0.01
	6/23/2009	-	<0.020	<0.020	-	0.00
	9/24/2009	-	<0.020	<0.020	-	0.00
	4/15/2010	-	<0.020	<0.020	5.56	7.93
	12/14/2010	-	<0.020	<0.020	5.21	0.00
	4/13/2011	-	<0.020	<0.020	5.05	2.21
	10/21/2011	-	<0.020	<0.020	5.45	5.32
	4/12/2012	-	<0.020	<0.020	5.53	16.3
	10/18/2012	-	<0.020	<0.020	5.43	4.60
	4/18/2013	-	<0.020	<0.020	4.68	4.23
	10/22/2013	-	0.0265	<0.020	5.24	2.33
	10/17/2014	-	<0.020	<0.020	5.53	4.89
	10/30/2015	-	0.0206	<0.020	6.14	3.99
	10/4/2016	-	<0.020	<0.020	6.03	4.72
	10/13/2017	-	0.0253	<0.020	5.34	4.29

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-5	2/13/2003	-	5.9	-	-	24.70
	1/6/2004	<0.010	-	-	-	-
	3/29/2007	-	6.59	5.52	-	4.01
	9/9/2008	-	14.1	13.3	-	31.2
	12/16/2008	-	19.2	19.9	-	2.56
	3/19/2009	-	17.8	18.0	-	0.00
	6/23/2009	-	2.44	2.75	-	1.74
	9/24/2009	-	17.2	16.9	-	0.00
	4/15/2010	-	4.00	3.73	5.19	9.23
	12/14/2010	-	21.8	14.90	4.85	10.3
	4/13/2011	-	5.19	4.36	4.99	7.98
	10/21/2011	-	26.4	27.1	4.55	2.95
	4/12/2012	-	6.71	7.02	5.13	31.4
	10/18/2012	-	18.5	19.5	4.56	4.99
	4/18/2013	-	5.67	5.60	4.74	4.99
	10/22/2013	-	1.44	1.67	5.07	25.8
	10/17/2014	-	3.33	3.81	5.22	4.67
	10/30/2015	-	0.357	0.252	5.80	13.20
	10/4/2016	-	3.11	2.91	5.49	5.01
	10/13/2017	-	2.98	3.26	5.34	4.10
MW-6	5/28/2004	<0.010	<0.020	-	-	4.26
	3/28/2007	-	0.048	<0.020	-	4.21
	9/9/2008	-	0.028	<0.020	-	9.64
	12/17/2008	-	<0.020	<0.020	-	5.36
	3/18/2009	-	0.0235	<0.020	-	14.6
	6/23/2009	-	<0.020	<0.020	-	5.86
	9/25/2009	-	<0.020	<0.020	-	3.85
	4/15/2010	-	0.0580	<0.020	5.44	46.4
	12/13/2010	-	<0.020	<0.020	5.34	1.68
	4/13/2011	-	<0.020	<0.020	5.36	6.35
	10/21/2011	-	0.0242	<0.020	5.74	3.37
	4/12/2012	-	<0.020	<0.020	5.70	5.63
	10/18/2012	-	0.0272	<0.020	5.56	9.80
	4/18/2013	-	<0.020	<0.020	5.03	20.0
	10/22/2013	-	<0.020	<0.020	5.32	3.42
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-6D	5/28/2004	<0.010	0.04	-	-	31.4
	3/28/2007	-	0.056	<0.020	-	31.2
	9/9/2008	-	0.0493	<0.020	-	9.23
	12/17/2008	-	<0.020	<0.020	-	0.00
	3/18/2009	-	<0.020	<0.020	-	0.00
	6/23/2009	-	0.0453	<0.020	-	0.00
	9/25/2009	-	<0.020	<0.020	-	1.64
	4/14/2010	-	<0.020	<0.020	5.84	46.1
	12/13/2010	-	<0.020	<0.020	5.73	40.1
	4/13/2011	-	<0.020	<0.020	5.77	1.16
	10/21/2011	-	<0.020	<0.020	5.65	5.19
	4/12/2012	-	<0.020	<0.020	6.07	4.14
	10/18/2012	-	<0.020	<0.020	5.84	4.36
	4/18/2013	-	<0.020	<0.020	5.25	8.42
	10/22/2013	-	<0.020	<0.020	5.72	1.23
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/13/2017	-	-	-	-	-
MW-7	3/27/2007	-	**37.1**	29.7	-	4.79
	9/8/2008	-	**48.8**	**48.0**	-	11.5
	12/17/2008	-	24.8	23.2	-	10.9
	3/19/2009	-	8.46	8.49	-	15.1
	6/23/2009	-	**40.0**	**39.5**	-	9.17
	9/24/2009	-	10.9	11.6	-	11.6
	4/15/2010	-	12.7	12.2	4.94	5.05
	12/14/2010	-	13.7	13.8	4.70	315
	4/13/2011	-	9.13	8.55	4.90	17.3
	10/21/2011	-	14.2	15.3	4.69	5.28
	4/12/2012	-	7.70	11.2	5.03	16.7
	10/18/2012	-	10.8	10.4	4.56	8.52
	4/18/2013	-	5.33	5.36	4.82	105
	10/22/2013	-	8.54	8.79	4.83	17.4
	10/17/2014	-	9.26	9.58	4.85	4.80
	10/30/2015	-	8.82	9.02	5.20	4.44
	10/4/2016	-	8.58	9.43	5.15	4.94
	10/13/2017	-	7.81	8.52	5.06	85.2

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-8	3/30/2007	-	<0.020	<0.020	-	19.4
	3/10/2008	<0.010	-	-	-	65.6
	9/10/2008	-	<0.020	<0.020	-	4.61
	12/17/2008	-	<0.020	<0.020	-	6.32
	3/19/2009	-	<0.020	<0.020	-	9.09
	6/24/2009	-	<0.020	<0.020	-	4.06
	9/25/2009	-	<0.020	<0.020	-	3.65
	4/14/2010	-	<0.020	<0.020	6.55	9.75
	12/13/2010	-	<0.020	<0.020	6.47	0.00
	4/13/2011	-	<0.020	<0.020	6.54	1.73
	10/20/2011	-	<0.020	<0.020	7.07	5.05
	4/11/2012	-	<0.020	<0.020	6.67	2.71
	10/17/2012	-	<0.020	<0.020	6.72	2.62
	4/17/2013	-	0.0228	<0.020	6.21	0.49
	10/22/2013	-	0.0230	<0.020	6.42	1.51
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-
MW-9	3/30/2007	-	<0.020	<0.020	-	0.61
	9/9/2008	-	<0.020	<0.020	-	13.9
	12/17/2008	-	<0.020	<0.020	-	26.2
	3/18/2009	-	0.0211	<0.020	-	19.3
	6/23/2009	-	<0.020	<0.020	-	0.28
	9/25/2009	-	<0.020	<0.020	-	0.00
	4/15/2010	-	<0.020	<0.020	5.56	2.85
	12/14/2010	-	<0.020	<0.020	5.56	1.81
	4/13/2011	-	0.0296	<0.020	5.54	8.87
	10/21/2011	-	<0.020	<0.020	5.71	3.61
	4/12/2012	-	<0.020	<0.020	5.87	2.23
	10/18/2012	-	<0.020	<0.020	5.61	3.02
	4/18/2013	-	<0.020	<0.020	4.96	2.92
	10/22/2013	-	<0.020	<0.020	5.58	5.34
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-10	3/30/2007	-	<0.020	<0.020	-	10.8
	3/6/2008	<0.010	-	-	-	11.9
	9/8/2008	-	<0.020	<0.020	-	14.4
	12/17/2008	-	<0.020	<0.020	-	28.2
	3/19/2009	-	<0.020	<0.020	-	6.84
	6/24/2009	-	<0.020	<0.020	-	2.92
	9/25/2009	-	<0.020	<0.020	-	15.9
	4/15/2010	-	<0.020	<0.020	6.24	30.8
	12/13/2010	-	0.0768	<0.020	5.47	>1,100
	4/12/2011	-	<0.020	<0.020	5.87	4.12
	10/20/2011	-	<0.020	<0.020	6.61	10.6
	4/11/2012	-	<0.020	<0.020	6.04	14.5
	10/17/2012	-	<0.020	<0.020	5.82	40.1
	4/17/2013	-	<0.020	<0.020	5.32	11.4
	10/22/2013	-	<0.020	<0.020	5.43	6.18
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-
MW-11	3/30/2007	-	<0.020	<0.020	-	3.55
	9/10/2008	-	<0.020	<0.020	-	2.35
	12/17/2008	-	<0.020	<0.020	-	0.00
	3/19/2009	-	<0.020	<0.020	-	0.00
	6/24/2009	-	<0.020	<0.020	-	0.00
	9/25/2009	-	0.175	0.0964	-	0.00
	4/15/2010	-	<0.020	0.0210	5.95	4.00
	12/13/2010	-	<0.020	<0.020	5.97	4.61
	4/12/2011	-	0.0229	<0.020	5.77	5.37
	10/20/2011	-	<0.020	<0.020	6.81	18.3
	4/11/2012	-	<0.020	<0.020	6.04	5.87
	10/17/2012	-	0.0344	0.0224	5.99	2.24
	4/17/2013	-	0.0293	<0.020	5.59	3.59
	10/22/2013	-	0.0246	<0.020	5.80	4.99
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-

TABLE 3
GROUNDWATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	TOTAL LEAD (mg/L)	TOTAL ZINC (mg/L)	DISSOLVED ZINC (mg/L)	pH (S.U.)	TURBIDITY (NTUs)
Type 4 RRS		**-**	**31**	**31**		-
MW-12	3/30/2007	-	0.0759	<0.020	-	151
	9/10/2008	-	<0.020	<0.020	-	8.38
	12/17/2008	-	0.044	<0.020	-	116
	3/19/2009	-	0.0214	<0.020	-	41.1
	6/24/2009	-	<0.020	<0.020	-	0.00
	9/25/2009	-	<0.020	<0.020	-	0.00
	4/15/2010	-	NL	NL	NL	NL
	12/13/2010	-	<0.020	<0.020	5.67	3.85
	4/12/2011	-	<0.020	<0.020	5.74	3.65
	10/20/2011	-	<0.020	<0.020	6.74	2.18
	4/11/2012	-	<0.020	<0.020	6.07	9.51
	10/17/2012	-	0.0230	<0.020	5.87	46.1
	4/17/2013	-	<0.020	<0.020	5.41	4.82
	10/22/2013	-	<0.020	<0.020	5.79	4.09
	10/17/2014	-	-	-	-	-
	10/30/2015	-	-	-	-	-
	10/4/2016	-	-	-	-	-
	10/13/2017	-	-	-	-	-
MW-13D	3/10/2008	<0.010	9.80	8.83	-	11.4
	9/9/2008	-	9.12	8.60	-	1.34
	12/16/2008	-	9.53	9.53	-	4.77
	3/18/2009	-	10.1	10.0	-	0.00
	6/23/2009	-	12.8	13.7	-	0.00
	9/24/2009	-	13.7	13.9	-	10.10
	4/15/2010	-	18.8	18.5	5.29	7.14
	12/14/2010	-	27.9	26.8	5.05	0.00
	4/13/2011	-	27.5	26.5	4.99	7.93
	10/21/2011	-	27.5	29.3	5.14	4.35
	4/12/2012	-	26.8	29.0	5.24	4.70
	10/18/2012	-	29.4	29.4	5.13	2.93
	4/18/2013	-	28.6	28.7	4.88	1.23
	10/22/2013	-	28.6	31.3	5.01	1.49
	10/17/2014	-	8.90	9.18	5.96	1.38
	10/30/2015	-	28.5	27.3	5.55	3.04
	10/4/2016	-	12.8	13.0	6.29	1.03
	10/13/2017	-	**33.0**	**36.4**	5.22	0.91
DUPLICATE RESULTS						
DUP (MW-2)	10/18/2012	-	22.0	23.0	4.14	2.54
DUP (MW-2)	4/18/2013	-	28.6	28.6	3.93	2.52
DUP (MW-2)	10/22/2013	-	16.0	16.8	4.10	0.55
DUP (MW-5)	10/17/2014	-	3.21	3.83	5.22	4.67
DUP (MW-2)	10/30/2015	-	6.55	6.56	5.80	13.20
DUP (MW-5)	10/13/2017	-	3.24	3.27	5.34	4.10

Notes: *RRS - Risk reduction standard*
NTUs - Nephelometric Turbidity Units
mg/L - milligrams per liter
Bold *- Concentration above a Type 4 RRS*

Source(s): *Williams Environmental Services, Inc.*
PPM Consultants, Inc.
PPM Project No. 494501-GWM17

TABLE 4
SURFACE WATER ANALYTICAL SUMMARY
METALPLATE GALVANIZING FACILITY
ATLANTA, GEORGIA

SAMPLE I.D.	DATE	DISSOLVED ZINC (mg/L)	TOTAL HARDNESS (mg/L)	pH (S.U.)
SW-1A	5/5/2014	211	805	-
	10/16/2014	16.6	107	-
	10/29/2015	15.3	117	-
	10/5/2016	41.1	213	-
	10/12/2017	42.8	191	3.34
SW-2A	5/5/2014	180	841	-
	10/16/2014	172	873	-
	10/29/2015	138	652	-
	10/5/2016	120	743	-
	10/12/2017	99.9	575	3.08
SW-3A	5/5/2014	36.2	260	-
	10/16/2014	20.5	156	-
	10/29/2015	22.9	149	-
	10/5/2016	14.0	296	-
	10/12/2017	15.8	209	5.29
SW-4A	5/5/2014	78.8	493	-
SW-4B	10/16/2014	71.8	459	-
	10/29/2015	10.0	132	-
	10/5/2016	37.8	326	-
	10/12/2017	18.5	139	5.17
SW-5	5/5/2014	128	221	-
	10/16/2014	6.92	60.8	-
	10/29/2015	18.1	81.7	-
	10/5/2016	5.53	60.1	-
	10/12/2017	12.4	58	5.67
SW-6	5/5/2014	235	902	-
SW-6A	10/16/2014	247	862	-
	10/29/2015	159	511	-
	10/5/2016	127	579	-
	10/12/2017	198	488	2.70
SW-7	5/5/2014	38.4	233	-
	10/16/2014	45.9	286	-
	10/29/2015	41.8	227	-
	10/5/2016	34.5	364	-
	10/12/2017	37.5	229	5.05
SW-8	10/12/2017	3.38	29.2	5.71

Notes: *mg/L - milligrams per liter*
During the October 2017 samplign event, SW-3A was inadvertently recorded as SW-3 on the chain of custody.

Source(s): *PPM Consultants, Inc.*
PPM Project No. 494501-GWM17

APPENDIX D – GROUNDWATER/SURFACE WATER ANALYTICAL RESULTS

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 23, 2017

Mike Dillon
Metal Plate Galvanizing

505 Selig Dr.
Atlanta GA 30336

RE: Metalplate

Dear Mike Dillon: Order No: 1710D96

Analytical Environmental Services, Inc. received 15 samples on 10/13/2017 3:25:00 PM
for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES's accreditations are as follows:
-NELAP/State of Florida Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, Air & Emissions Volatile Organics, and Drinking Water Microbiology & Metals, effective 07/01/17-06/30/18.
State of Georgia, Department of Natural Resources ID #800 for analysis of Drinking Water Metals, effective 07/01/17-06/30/18 and Total Coliforms/ E. coli, effective 04/25/17-04/24/20.
-NELAP/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/17-06/30/18.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 11/01/17.
These results relate only to the items tested. This report may only be reproduced in full.

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

Sincerely,

Paris Masoudi

Paris Masoudi
Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
AES Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1710096

Date: 10-13-17 Page 2 of 2

COMPANY: PPM Consultants
ADDRESS: 5555 Bankhead HWY Birmingham AL 35210
PHONE: 205 836 5650
EMAIL: Mike.dillon@PPMCO.COM
SAMPLED BY: Andrew Parodis / Garrett Owen
SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	GRAB	COMPOSITE	MATRIX (see codes)	Total Zinc	Dissolved Zinc	Hardness, Total	REMARKS	Number of Containers
							PRESERVATION (see codes)				
							N	Na	N		
1	SW-1A	10-12-17	11:58	G		SW		X	X		2
2	SW-2A		11:41			SW		X	X		2
3	SW-3		11:33			SW		X	X		2
4	SW-4B		11:22			SW		X	X		2
5	SW-5		12:30			SW		X	X		2
6	SW-6A		12:07			SW		X	X		2
7	SW-7		11:11			SW		X	X		2
8	SW-8		12:35			SW		X	X		2
9	MW-1	"	18:44			GW	X		X		2
10	MW-4	10-13-17	08:56			GW	X		X		2
11	MW-13D		931			GW	X		X		2
12	MW-2		1013			GW	X		X		2
13	MW-5		1115			GW	X		X		2
14	MW-7	"	1254			GW	X		X		2

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY: DATE/TIME:
1. 10-13-17 AP 320
2. 10-13-17 1420
3.

RECEIVED BY: DATE/TIME:
1. 10-13-17 Czenyng 2:20
2. Paul Morandi 10/13/17
3. 3:25

PROJECT INFORMATION
PROJECT NAME: Metal Plate
PROJECT #: 494501 - GWM 17
SITE ADDRESS: 505 Selig drive SW Atl GA
SEND REPORT TO: Mike.dillon@PPMCO.COM
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 28

Turnaround Time (TAT) Request
- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [ ] Other

STATE PROGRAM (if any):
E-mail? [x] Fax? [ ]
DATA PACKAGE: I ○ II ○ III ○ IV ○

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier Greyhound
other:

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC.
3080 Presidential Drive Atlanta, GA 30340-3704
Phone: (770) 457-8177 / Toll-Free: (800) 972-4889 / Fax: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1710096

Date: 10-13-17 Page 2 of 2

COMPANY: PPM Consultants
ADDRESS: 5555 Bankhead HWY Bham AL 35210
PHONE: 205 836 5650
EMAIL: Mike.dillon@PPMCo.com
SAMPLED BY: Andrew Parodis/Garrett Owen
SIGNATURE:

#	SAMPLE ID	SAMPLED: DATE	SAMPLED: TIME	GRAB	COMPOSITE	MATRIX (see codes)	Dissolved Zinc	Total Zinc	REMARKS	Number of Containers
							PRESERVATION (see codes): N/A	N		
1	Duplicate	10-13-17	—	X		GW	X	X		2
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										

ANALYSIS REQUESTED

Visit our website www.aesatlanta.com for downloadable COCs and to log in to your AESAccess account.

RELINQUISHED BY: / DATE/TIME:
1. Andrew Parodis 10/13/17 AP 1320
2. 10-13-17 1420
3. 3:25

RECEIVED BY: / DATE/TIME:
1. 10-13-17 2:20
2. Pavs Mesoudi 10/13/17
3. 3:25

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT: / / VIA:
IN: / / VIA:
client FedEx UPS US mail courier Greyhound
other: _____

PROJECT INFORMATION
PROJECT NAME: Metal Plate
PROJECT #: 494501 GWM 17
SITE ADDRESS: 505 Seay dr SW Atl GA
SEND REPORT TO: Mike.dillon@PPMCo.com
INVOICE TO:
(IF DIFFERENT FROM ABOVE)
QUOTE #: _____ PO#: _____

RECEIPT
Total # of Containers: 2

Turnaround Time (TAT) Request
- [x] Standard 5 Business Days
- [ ] 2 Business Day Rush
- [ ] Next Business Day Rush
- [ ] Same-Day Rush (auth req.)
- [ ] Other _____

STATE PROGRAM (if any): _____
E-mail? [x] Fax? [ ]
DATA PACKAGE: I ○ II ○ III ○ IV ○

Submission of samples to the laboratory constitutes acceptance of AES's Terms & Conditions. Samples received after 3PM or on Saturday are considered as received the following business day. If no TAT is marked on COC, AES will proceed with standard TAT. Samples are disposed of 30 days after completion of report unless other arangements are made.

Matrix Codes: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water WW = Waste Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify)

Preservative Codes: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Client: Metal Plate Galvanizing
Project: Metalplate
Lab ID: 1710D96

Case Narrative

Sample Receiving Nonconformance:

Per Mike Dillon via phone on 10/13/17, all groundwater samples were analyzed for Dissolved Zinc and Total Zinc.

Sample information on the Chain of Custody (COC) did not match that on the sample bottle labels. The sample ID for 1710D96-003 is listed as "SW-3" on the COC, but is listed as "SW-3A" on the bottle label. Samples were matched using the collection date/time. The sample collection time for -004 is listed as "11:22" on the COC, but is listed as "11:12" on the bottle label. Samples were matched using the sample ID.

Hardness Analysis by Method 6010D:

Calcium was detected in Method Blank 249909 at 0.124818 mg/L which was above the reporting limit of 0.1 mg/L resulting in "B" qualified data for all samples with final Reporting Limits less than the value detected in the Method Blank. Associated sample values were greater than approximately 10X the blank value and data was not affected.

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-1A
Project Name:	Metalplate	**Collection Date:**	10/12/2017 11:58:00 AM
Lab ID:	1710D96-001	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	42.8	0.0500		mg/L	250051	1	10/19/2017 19:44	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	191	1.00		mg/L CaCO3	249909	1	10/19/2017 13:02	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-2A
Project Name:	Metalplate	**Collection Date:**	10/12/2017 11:41:00 AM
Lab ID:	1710D96-002	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	99.9	0.0500		mg/L	250051	1	10/19/2017 19:47	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	575	1.00		mg/L CaCO3	249909	1	10/19/2017 13:22	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-3
Project Name:	Metalplate	**Collection Date:**	10/12/2017 11:33:00 AM
Lab ID:	1710D96-003	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	15.8	0.0500		mg/L	250051	1	10/19/2017 19:57	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	209	1.00		mg/L CaCO3	249909	1	10/19/2017 13:26	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-4B
Project Name:	Metalplate	**Collection Date:**	10/12/2017 11:22:00 AM
Lab ID:	1710D96-004	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	18.5	0.0500		mg/L	250051	1	10/19/2017 20:00	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	139	1.00		mg/L CaCO3	249909	1	10/19/2017 13:30	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-5
Project Name:	Metalplate	**Collection Date:**	10/12/2017 12:30:00 PM
Lab ID:	1710D96-005	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	12.4	0.0500		mg/L	250051	1	10/19/2017 20:03	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	58.0	1.00		mg/L CaCO3	249909	1	10/19/2017 13:34	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-6A
Project Name:	Metalplate	**Collection Date:**	10/12/2017 12:07:00 PM
Lab ID:	1710D96-006	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	198	5.00		mg/L	250051	100	10/20/2017 12:40	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	488	1.00		mg/L CaCO3	249909	1	10/19/2017 13:50	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-7
Project Name:	Metalplate	**Collection Date:**	10/12/2017 11:11:00 AM
Lab ID:	1710D96-007	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	37.5	0.0500		mg/L	250051	1	10/19/2017 20:10	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	229	1.00		mg/L CaCO3	249909	1	10/19/2017 13:54	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	SW-8
Project Name:	Metalplate	**Collection Date:**	10/12/2017 12:35:00 PM
Lab ID:	1710D96-008	**Matrix:**	Surface Water

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED E200.7				**(E200.7)**				
Zinc	3.38	0.0500		mg/L	250051	1	10/19/2017 19:21	JR
HARDNESS SM2340 B				**(SM2340B)**				
Hardness, Calcium/Magnesium (As CaCO3)	29.2	1.00		mg/L CaCO3	249909	1	10/19/2017 13:58	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-1
Project Name:	Metalplate	**Collection Date:**	10/12/2017 6:44:00 PM
Lab ID:	1710D96-009	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	0.198	0.0200		mg/L	250007	1	10/17/2017 11:25	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	0.176	0.0200		mg/L	249909	1	10/19/2017 14:02	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-4
Project Name:	Metalplate	**Collection Date:**	10/13/2017 8:56:00 AM
Lab ID:	1710D96-010	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	BRL	0.0200		mg/L	250007	1	10/18/2017 00:02	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	0.0253	0.0200		mg/L	249909	1	10/19/2017 14:05	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-13D
Project Name:	Metalplate	**Collection Date:**	10/13/2017 9:31:00 AM
Lab ID:	1710D96-011	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	36.4	0.200		mg/L	250007	10	10/19/2017 21:15	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	33.0	0.200		mg/L	249909	10	10/23/2017 11:07	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-2
Project Name:	Metalplate	**Collection Date:**	10/13/2017 10:13:00 AM
Lab ID:	1710D96-012	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	5.68	0.0200		mg/L	250007	1	10/18/2017 00:10	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	4.01	0.0200		mg/L	249909	1	10/19/2017 14:13	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-5
Project Name:	Metalplate	**Collection Date:**	10/13/2017 11:15:00 AM
Lab ID:	1710D96-013	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	3.26	0.0200		mg/L	250007	1	10/18/2017 00:14	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	2.98	0.0200		mg/L	249909	1	10/19/2017 14:17	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	MW-7
Project Name:	Metalplate	**Collection Date:**	10/13/2017 12:54:00 PM
Lab ID:	1710D96-014	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	8.52	0.0200		mg/L	250007	1	10/18/2017 00:18	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	7.81	0.0200		mg/L	249909	1	10/20/2017 15:07	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 23-Oct-17

Client:	Metal Plate Galvanizing	**Client Sample ID:**	DUPLICATE
Project Name:	Metalplate	**Collection Date:**	10/13/2017
Lab ID:	1710D96-015	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
METALS, DISSOLVED SW6010D (SW3005A)								
Zinc	3.27	0.0200		mg/L	250007	1	10/18/2017 00:22	IO
METALS, TOTAL SW6010D (SW3010A)								
Zinc	3.24	0.0200		mg/L	249909	1	10/19/2017 14:25	IO

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Clear Save as

ANALYTICAL ENVIRONMENTAL SERVICES, INC. AES

SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name: **METALPLATE GALVANIZING** AES Work Order Number: **1710D96**

2. Carrier: FedEx ☐ UPS ☐ USPS ☐ Client ☐ Courier ■ Other _____

		Yes	No	N/A	Details	Comments
3.	Shipping container/cooler received in good condition?	●	○	○	damaged ☐ leaking ☐ other ☐	
4.	Custody seals present on shipping container?	●	○	○		
5.	Custody seals intact on shipping container?	●	○	○		
6.	Temperature blanks present?	●	○	○		
7.	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]	●	○	○	Cooling initiated for recently collected samples / ice present ☐	
8.	Chain of Custody (COC) present?	●	○	○		
9.	Chain of Custody signed, dated, and timed when relinquished and received?	●	○	○		
10.	Sampler name and/or signature on COC?	●	○	○		
11.	Were all samples received within holding time?	●	○	○		
12.	TAT marked on the COC?	●	○	○	If no TAT indicated, proceeded with standard TAT per Terms & Conditions. ☐	

13. Cooler 1 Temperature 0.5 °C Cooler 2 Temperature 0.9 °C Cooler 3 Temperature _____ °C Cooler 4 Temperature _____ °C

14. Cooler 5 Temperature _____ °C Cooler 6 Temperature _____ °C Cooler 7 Temperature _____ °C Cooler 8 Temperature _____ °C

15. Comments: _____

I certify that I have completed sections 1-15 (dated initials). PM 10/13/17

		Yes	No	N/A	Details	Comments
16.	Were sample containers intact upon receipt?	●	○	○		
17.	Custody seals present on sample containers?	○	●	○		
18.	Custody seals intact on sample containers?	○	○	●		
19.	Do sample container labels match the COC?	○	●	○	incomplete info ☐ illegible ☐ no label ☐ other ■	
20.	Are analyses requested indicated on the COC?	●	○	○		
21.	Were all of the samples listed on the COC received?	●	○	○	samples received but not listed on COC ☐ samples listed on COC not received ☐	
22.	Was the sample collection date/time noted?	●	○	○		
23.	Did we receive sufficient sample volume for indicated analyses?	●	○	○		
24.	Were samples received in appropriate containers?	●	○	○		
25.	Were VOA samples received without headspace (< 1/4" bubble)?	○	○	●		
26.	Were trip blanks submitted?	○	○	●	listed on COC ☐ not listed on COC ☐	

27. Comments: _____

I certify that I have completed sections 16-27 (dated initials). PM 10/13/17

This section only applies to samples where pH can be checked at Sample Receipt.

		Yes	No	N/A	Details	Comments
28.	Have containers needing chemical preservation been checked? *	●	○	○		
29.	Containers meet preservation guidelines?	●	○	○		
30.	Was pH adjusted at Sample Receipt?	○	○	●		

* Note: Certain analyses require chemical preservation but must be checked in the laboratory and not upon Sample Receipt such as Coliforms, VOCs and Oil & Grease/TPH.

I certify that I have completed sections 28-30 (dated initials). PM 10/13/17

Client: Metal Plate Galvanizing
Project Name: Metalplate
Lab Order: 1710D96

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1710D96-001A	SW-1A	10/12/2017 11:58:00AM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-001B	SW-1A	10/12/2017 11:58:00AM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-002A	SW-2A	10/12/2017 11:41:00AM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-002B	SW-2A	10/12/2017 11:41:00AM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-003A	SW-3	10/12/2017 11:33:00AM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-003B	SW-3	10/12/2017 11:33:00AM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-004A	SW-4B	10/12/2017 11:22:00AM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-004B	SW-4B	10/12/2017 11:22:00AM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-005A	SW-5	10/12/2017 12:30:00PM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-005B	SW-5	10/12/2017 12:30:00PM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-006A	SW-6A	10/12/2017 12:07:00PM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-006B	SW-6A	10/12/2017 12:07:00PM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/20/2017
1710D96-007A	SW-7	10/12/2017 11:11:00AM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-007B	SW-7	10/12/2017 11:11:00AM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-008A	SW-8	10/12/2017 12:35:00PM	Surface Water	Hardness		10/17/2017 12:30:00PM	10/19/2017
1710D96-008B	SW-8	10/12/2017 12:35:00PM	Surface Water	METALS, DISSOLVED		10/18/2017 11:03:00AM	10/19/2017
1710D96-009A	MW-1	10/12/2017 6:44:00PM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/19/2017
1710D96-009B	MW-1	10/12/2017 6:44:00PM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/17/2017
1710D96-010A	MW-4	10/13/2017 8:56:00AM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/19/2017
1710D96-010B	MW-4	10/13/2017 8:56:00AM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/18/2017
1710D96-011A	MW-13D	10/13/2017 9:31:00AM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/23/2017
1710D96-011B	MW-13D	10/13/2017 9:31:00AM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/19/2017
1710D96-012A	MW-2	10/13/2017 10:13:00AM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/19/2017
1710D96-012B	MW-2	10/13/2017 10:13:00AM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/18/2017
1710D96-013A	MW-5	10/13/2017 11:15:00AM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/19/2017
1710D96-013B	MW-5	10/13/2017 11:15:00AM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/18/2017
1710D96-014A	MW-7	10/13/2017 12:54:00PM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/20/2017
1710D96-014B	MW-7	10/13/2017 12:54:00PM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/18/2017
1710D96-015A	DUPLICATE	10/13/2017 12:00:00AM	Groundwater	TOTAL METALS BY ICP		10/17/2017 12:30:00PM	10/19/2017

Client: Metal Plate Galvanizing
Project Name: Metalplate
Lab Order: 1710D96

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1710D96-015B	DUPLICATE	10/13/2017 12:00:00AM	Groundwater	DISSOLVED METALS BY ICP		10/17/2017 10:52:00AM	10/18/2017

Client: Metal Plate Galvanizing
Project Name: Metalplate
Workorder: 1710D96

ANALYTICAL QC SUMMARY REPORT

BatchID: 249909

Sample ID: **MB-249909**	Client ID:			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354873**
SampleType: **MBLK**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **249909**	Analysis Date: **10/19/2017**	Seq No: **7811566**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	BRL	0.0200									

Sample ID: **LCS-249909**	Client ID:			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354873**
SampleType: **LCS**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **249909**	Analysis Date: **10/20/2017**	Seq No: **7813046**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.9280	0.0200	1.000	0.007897	92.0	80	120				

Sample ID: **1710D96-001AMS**	Client ID: **SW-1A**			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354873**
SampleType: **MS**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **249909**	Analysis Date: **10/20/2017**	Seq No: **7813047**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	36.57	0.0200	1.000	25.65	1090	75	125				S

Sample ID: **1710D96-001AMSD**	Client ID: **SW-1A**			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354873**
SampleType: **MSD**	TestCode: **METALS, TOTAL** **SW6010D**			BatchID: **249909**	Analysis Date: **10/20/2017**	Seq No: **7813050**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	39.33	0.0200	1.000	25.65	1370	75	125	36.57	7.29	20	S

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Metal Plate Galvanizing
Project Name: Metalplate
Workorder: 1710D96

ANALYTICAL QC SUMMARY REPORT

BatchID: 250007

Sample ID: **MB-250007**	Client ID:			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354565**
SampleType: **MBLK**	TestCode: **METALS, DISSOLVED**	**SW6010D**		BatchID: **250007**	Analysis Date: **10/17/2017**	Seq No: **7803437**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	BRL	0.0200									

Sample ID: **LCS-250007**	Client ID:			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354565**
SampleType: **LCS**	TestCode: **METALS, DISSOLVED**	**SW6010D**		BatchID: **250007**	Analysis Date: **10/17/2017**	Seq No: **7803438**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	1.062	0.0200	1.000		106	80	120				

Sample ID: **1710D96-009BMS**	Client ID: **MW-1**			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354565**
SampleType: **MS**	TestCode: **METALS, DISSOLVED**	**SW6010D**		BatchID: **250007**	Analysis Date: **10/17/2017**	Seq No: **7803442**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	1.268	0.0200	1.000	0.1976	107	75	125				

Sample ID: **1710D96-009BMSD**	Client ID: **MW-1**			Units: **mg/L**	Prep Date: **10/17/2017**	Run No: **354565**
SampleType: **MSD**	TestCode: **METALS, DISSOLVED**	**SW6010D**		BatchID: **250007**	Analysis Date: **10/17/2017**	Seq No: **7803444**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	1.270	0.0200	1.000	0.1976	107	75	125	1.268	0.122	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Metal Plate Galvanizing
Project Name: Metalplate
Workorder: 1710D96

ANALYTICAL QC SUMMARY REPORT

BatchID: 250051

Sample ID: **MB-250051**	Client ID:			Units: **mg/L**	Prep Date: **10/18/2017**	Run No: **354883**
SampleType: **MBLK**	TestCode: **METALS, DISSOLVED** **E200.7**			BatchID: **250051**	Analysis Date: **10/19/2017**	Seq No: **7811503**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	BRL	0.0500									

Sample ID: **LCS-250051**	Client ID:			Units: **mg/L**	Prep Date: **10/18/2017**	Run No: **354883**
SampleType: **LCS**	TestCode: **METALS, DISSOLVED** **E200.7**			BatchID: **250051**	Analysis Date: **10/19/2017**	Seq No: **7811507**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	1.035	0.0500	1.000		103	85	115				

Sample ID: **1710D96-008BMS**	Client ID: **SW-8**			Units: **mg/L**	Prep Date: **10/18/2017**	Run No: **354883**
SampleType: **MS**	TestCode: **METALS, DISSOLVED** **E200.7**			BatchID: **250051**	Analysis Date: **10/19/2017**	Seq No: **7811514**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	4.118	0.0500	1.000	3.377	74.1	70	130				

Sample ID: **1710F10-003AMS**	Client ID:			Units: **mg/L**	Prep Date: **10/18/2017**	Run No: **354883**
SampleType: **MS**	TestCode: **METALS, DISSOLVED** **E200.7**			BatchID: **250051**	Analysis Date: **10/19/2017**	Seq No: **7811525**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	0.8820	0.0500	1.000		88.2	70	130				

Sample ID: **1710D96-008BMSD**	Client ID: **SW-8**			Units: **mg/L**	Prep Date: **10/18/2017**	Run No: **354883**
SampleType: **MSD**	TestCode: **METALS, DISSOLVED** **E200.7**			BatchID: **250051**	Analysis Date: **10/19/2017**	Seq No: **7811518**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Zinc	4.060	0.0500	1.000	3.377	68.3	70	130	4.118	1.42	20	S

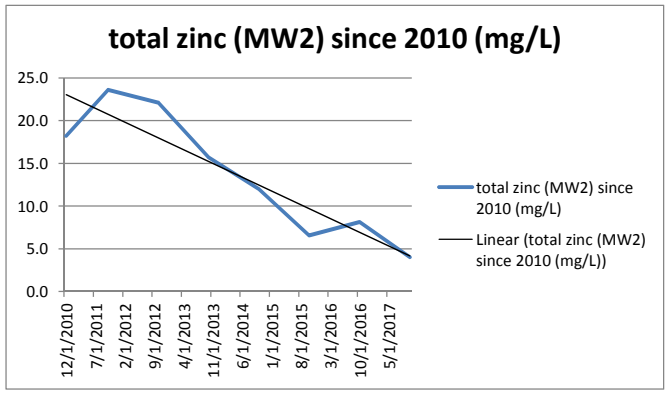
Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

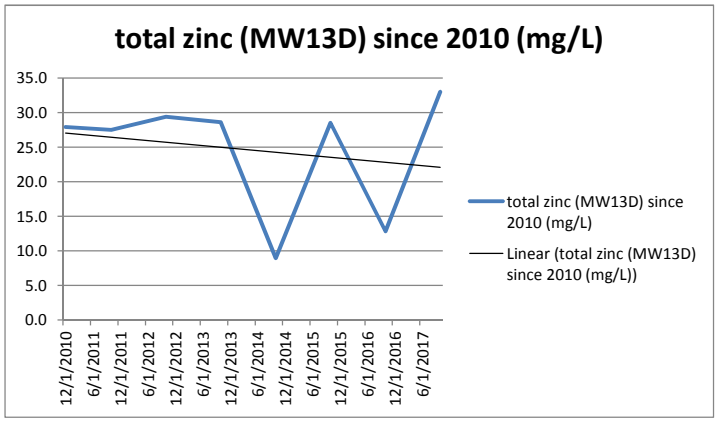
APPENDIX E – GROUNDWATER CONCENTRATION TRENDS

GROUNDWATER CONCENTRATION TRENDS
METALPLATE GALVANIZING FACILITY

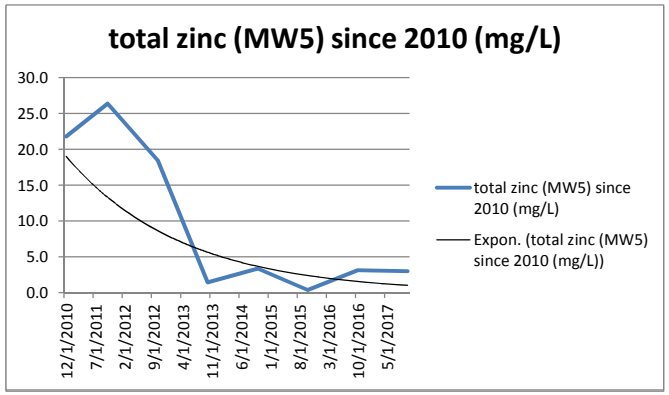
Date	total zinc (MW2) since 2010 (mg/L)
12/14/2010	18.2
10/21/2011	23.6
10/18/2012	22.1
10/22/2013	15.7
10/17/2014	12.0
10/30/2015	6.55
10/4/2016	8.13
10/13/2017	4.01



Date	total zinc (MW13D) since 2010 (mg/L)
12/14/2010	27.9
10/21/2011	27.5
10/18/2012	29.4
10/22/2013	28.6
10/17/2014	8.90
10/30/2015	28.5
10/4/2016	12.8
10/13/2017	**33.0**



Date	total zinc (MW5) since 2010 (mg/L)
12/14/2010	21.8
10/21/2011	26.4
10/18/2012	18.5
10/22/2013	1.44
10/17/2014	3.33
10/30/2015	0.357
10/4/2016	3.11
10/13/2017	2.98



Date	total zinc (MW7) since 2010 (mg/L)
12/14/2010	13.7
10/21/2011	14.2
10/18/2012	10.8
10/22/2013	8.54
10/17/2014	9.26
10/30/2015	8.82
10/4/2016	8.58
10/13/2017	7.81