

May 2019

Mr. Paul Ruesch
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U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

**Subject: Time Critical Removal Action Letter Report – Allied Paper Inc./Portage
Creek/Kalamazoo River Site OU5 – Area 3 RV - Revision 2
EPA Contract No. EP-S5-13-01
Technical Direction Document No. S05-0001-1506-003
Document Tracking No. 2391**

Dear Mr. Ruesch:

Under Technical Direction Document (TDD) No. S05-0001-1506-003, the United States Environmental Protection Agency (U.S. EPA) tasked Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) to conduct oversight and split-sampling activities at the Otsego Township Dam Time Critical Removal Action (TCRA) for OU 5, Area 3 of the Allied Paper Inc./Portage Creek/Kalamazoo River site (the Site). The TCRA activities are located in Otsego Township, Allegan County, Michigan. This letter report summarizes time critical removal action activities conducted from July 11, 2016, through August 31, 2018.

If you have any questions regarding this report, please call me at (262) 227-1049.

Sincerely,



Karl Schultz
Project Manager

Enclosure

cc: Kevin Scott, Tetra Tech Program Manager
TDD File

**OTSEGO TOWNSHIP DAM AREA TIME CRITICAL REMOVAL ACTION
LETTER REPORT**

**ALLIED PAPER INC./PORTAGE CREEK/KALAMAZOO RIVER SITE OU5 – AREA 3 RV
OTSEGO, ALLEGAN COUNTY, MICHIGAN**

Prepared for

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Prepared by		Approved by
		
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1.0 INTRODUCTION

Under Technical Direction Document No. S05-0001-1506-003, the United States Environmental Protection Agency (U.S. EPA) tasked Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) to conduct oversight, environmental monitoring, and split-sampling activities at the Otsego Township Dam Area Time Critical Removal Action (TCRA) in Operating Unit (OU) 5, Area 3 of the Allied Paper Inc./Portage Creek/Kalamazoo River site (the Site). The TCRA activities took place in Otsego Township, Allegan County, Michigan.

This letter report summarizes the following START activities conducted from July 11, 2016, through August 31, 2018 at the Site:

- Technical support in project development;
- Oversight and split sampling during pre-design investigation sampling activities;
- Technical review of remedial investigation reports, historical data, work plans, designs, restoration plans, and technical memorandums;
- Maintain logbook and photographic documentation of field activities;
- Assist in conducting and sign off on excavation and sampling grid confirmation checklists;
- Facilitate development and coordinate stakeholder input on staging area restoration plans;
- Sampling and analysis of soil pile at command center;
- Perimeter particulate (dust) monitoring;
- Wastewater treatment plant (WWTP) discharge monitoring/sampling;
- Water quality monitoring;
- GIS/mapping support;
- Pre- and post-construction structural assessments; and
- Collection and laboratory analysis of sediment, soil, and water split samples collected by the potentially responsible party (PRP) contractors (Wood Group (Wood) and Envirocon).

START personnel also assisted the U.S. EPA On Scene Coordinator (OSC) with planning, oversight and weekly construction meetings as well as support during community liaison/outreach activities throughout the project. This support continues into the post-construction monitoring and maintenance phase of the project, which is expected to continue until September of 2019. A separate report summarizing monitoring and maintenance activities will be prepared at the end of the required 1-year post-construction period.

2.0 SITE BACKGROUND

2.1 Site Location

The TCRA project is located within and along the Kalamazoo River between the M-89 (Lincoln Road) bridge (approximate RM 51.5) and the former Otsego Township Dam (approximate RM 49.5). This area is located in Otsego Township, Allegan County, Michigan. The project command center was located at 2063 Covault Lane, Otsego, Michigan 49078. Site location is depicted in Figure 1 in Appendix A.

2.2 Site Description

Three PRPs responded to a Unilateral Administrative Order (UAO) issued by U.S. EPA (April 14, 2016) requiring a TCRA to address polychlorinated biphenyls (PCBs) in riverbank soils and sediments in Area 3 of OU5 of the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Figure 2, Appendix A). PCB contamination originated from wastewater discharged from historical paper mills located along the Kalamazoo River. U.S. EPA determined that the conditions at the Otsego Township Dam Area constituted an “imminent and substantial” danger to public health and/or the environment, and therefore ordered that a TCRA be completed at the Site to address the risks posed by the erosion of riverbank soils and in-stream sediment deposits containing PCBs. The Otsego Township Dam was also deteriorating, and its stability was questioned in dam inspection reports. To relieve stress on the dam, in 2015 and early 2016, the Michigan Department of Natural Resources (Michigan DNR) installed a temporary water control structure (WCS) at the location of the Otsego Township Dam.

Response actions for the TCRA focused on stabilizing the riverbanks and removing riverbank soils with concentrations exceeding 5 mg/kg for total PCBs. These activities also included the removal of impacted sediments such that surface weighted average concentrations (SWACs) of total PCBs in sediments were less than or equal to 1 mg/kg in the TCRA area. Sediment areas with elevated total PCB concentrations or ‘hot spots’ were also removed even if SWACs were less than 1 mg/kg for total PCBs.

The Site was subdivided into 9 riverbank removal/stabilization areas (BRSAs) (Figure 2, Appendix A). A detailed, comprehensive description of the TCRA project can be found in the *Removal Work Plan for Otsego Township Dam Area Time Critical Removal Action* (AMEC, 2016). All project documents, work plans, technical memorandums, reports, official correspondence, and progress reports (PolReps) referenced in this letter report can be found on the project website at <https://response.epa.gov/otsegodam>.

2.3 Description of Threat

The Site was listed on the National Priorities List (NPL) in 1990 due to the presence of PCBs in fish, sediments, and surface water. Remedial investigations over the years have found levels of PCBs present in in-stream sediments, riverbank soils/sediments, and floodplain soils which exceed risk-based cleanup criteria for both human health and the environment. U.S. EPA presented a detailed description of the threat posed by the Otsego Township Dam Area in an *Action Memorandum* dated April 6, 2016 (U.S. EPA, 2016).

2.4 Preliminary Removal Assessment/Removal Site Inspection Results

Previous investigations in Area 3 of OU5 were conducted as part of a *Supplemental Remedial Investigation (SRI)* finalized in April 2016 (AMEC FW, 2016). The SRI found levels of total PCBs as high as 156 milligrams/kilogram (mg/kg) in riverbank/floodplain soil and as high as 120 mg/kg in in-stream sediments.

3.0 SUMMARY OF REMOVAL ACTIONS

From July 11, 2016 to August 31, 2018, U.S. EPA, START and PRP contractors conducted the TCRA activities. U.S. EPA OSC Paul Ruesch was the primary Site contact. The START contractors were Tetra Tech, Inc. and Mannik Smith Group. The technical contractor for the PRPs was Wood Group (also referred to as ‘AMEC’ in this report), and the general contractor was Envirocon.

The Site was divided into 9 BRSA, shown in Figure 2 of Appendix A. A summary of removal, restoration, and sampling activities conducted within each BRSA are included in Sections 3.1 through 3.9. All sampling activities were conducted in compliance with an approved Field Sampling, Data Management, and Quality Management plans (Tetra Tech, 2016, AMEC, 2016).

Additional work completed as part of the TCRA included: pre-design investigation sampling (discussed in Section 4.1), removal and restoration work at the Pine Creek confluence, pilot channel dredging, removal and restoration of the auxiliary spillway, and removal of the WCS. This work is highlighted in Sections 3.10 through 3.13.

As stated in Section 1.0, START support continues into the post-construction monitoring and maintenance phase of the project, which is expected to continue until September 2019. A separate report summarizing monitoring and maintenance activities will be prepared at the end of the required 1-year post-construction period.

3.1 BRSA 1

BRSA 1 was comprised of 58 riverbank grids (50-foot lengths) and no stream tube grids (Figures 3 & 4, Appendix A). A total of 6,022 tons of non-TSCA (< 50 ppm total PCBs, not subject to Toxic Substances Control Act requirements) soil and 113.02 tons of TSCA (> 50ppm total PCBs, subject to Toxic Substances Control Act requirements) soil was removed and disposed of off-Site during the BRSA 1 TCRA activities. The volume of contact water treated in the on-Site WWTP from BRSA 1 was 303,075 gallons. Specific details regarding removal and restoration activities in BRSA 1 can be found in *Otsego Township Dam Area TCRA Technical Memorandum No. 1* (AMEC, 2016).

A total of 120 five-point composite confirmation soil samples were collected from BRSA 1 riverbank grids. Wood collected 109 confirmation soil samples, with START collecting 11 split samples. Of the 120 confirmation soil samples collected, 4 samples exceeded the riverbank soil cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in grids with analytical results indicating PCB levels exceeding the riverbank soil cleanup criteria. Table 1 in Appendix B summarizes the BRSA 1 confirmation soil analytical results, indicating which analytical results initially exceeded the riverbank soil cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

3.2 BRSA 2

There was minimal excavation in BRSA 2 as it was located along a high riverbank and pre-design sampling results did not show PCB contamination, except in one grid located immediately adjacent to BRSA 1. This grid was excavated and reported as part of BRSA 1 (see Section 3.1). Specific details regarding this area can be found in *Otsego Township Dam Area TCRA Technical Memorandum No. 1* (AMEC, 2016).

3.3 BRSA 3

BRSA 3 was comprised of 18 riverbank grids and no stream tube grids (Figure 3, Appendix A). As part of the restoration, a mid-channel bar was removed in BRSA 3 & 4. This rocky material was utilized as

part of the riverbank restoration on the right descending bank in BRSA 4. As part of the BRSA 3 restoration, two ‘J-hooks’ were installed as engineering controls to protect the left descending riverbank. A total of 3,543 tons of non-TSCA soil was removed and disposed of off-Site from BRSA 3. The volume of contact water treated in the on-Site WWTP from BRSA 3 was 68,300 gallons. Specific details regarding removal and restoration in BRSA 3 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 2 & 3* (AMEC, 2016).

A total of 24 five-point composite confirmation soil samples were collected from BRSA 3. Wood collected 19 riverbank grid samples, with START collecting 5 split samples. Of the 24 confirmation soil samples collected, 2 samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in grids with analytical results indicating PCB levels exceeding the riverbank soil cleanup criteria. Table 2 in Appendix B summarizes the BRSA 3 confirmation soil analytical results, indicating which analytical results initially exceeded the riverbank soil cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

3.4 BRSA 4

BRSA 4 was comprised of 51 riverbank grids and 17 stream tube grids (Figure 3, Appendix A). A total of 7,803 tons of non-TSCA soil was removed from BRSA 4. The volume of contact water treated in the on-Site WWTP from BRSA 4 was 633,922 gallons. Specific details regarding removal and restoration in BRSA 4 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 4, 5, 6, and 9* (AMEC, 2017).

A total of 117 five-point composite confirmation soil samples were collected from BRSA 4 riverbank grids. Wood collected 98 samples, with START collecting 19 split samples. Of the 117 confirmation soil samples collected, 2 samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in riverbank grids with analytical results indicating PCB levels exceeding the riverbank soil cleanup criteria. Table 3 in Appendix B summarizes the BRSA 4 confirmation soil analytical results, indicating which analytical results initially exceeded the riverbank soil cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

A total of 25 five-point composite confirmation sediment samples were collected from BRSA 4 stream tube grids. Wood collected 23 samples, with START collecting 2 split samples. Of the 25 confirmation sediment samples collected, 4 samples exceeded the cleanup criteria of 1.0 mg/kg for PCBs. One sample was exactly 1.0 mg/kg for PCBs. Additional excavation was completed in stream tube grids with

analytical results indicating PCB levels at, or exceeding, the sediment cleanup criteria. Table 3 in Appendix B summarizes the BRSA 4 confirmation sediment sample analytical results, indicating which analytical results initially exceeded the sediment cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

3.5 BRSA 5

BRSA 5 was located along a steep riverbank area which resulted in access and slope stability issues. BRSA 5 initially contained 3 stream tube grids that extended from the furthest downstream stream tube in BRSA 4 (Figure 4, Appendix A). These 3 stream tube grids were sampled to determine if removal was required. Of the 3 confirmation sediment samples collected, 1 sample exceeded the cleanup criteria of 1.0 mg/kg for PCBs. Excavation was completed in that stream tube grid. Table 3 in Appendix B includes the confirmation sample analytical information for this stream tube grid along with the BRSA 4 confirmation sample analytical summary. Specific details regarding removal and restoration in BRSA 5 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 4, 5, 6, and 9* (AMEC, 2017).

3.6 BRSA 6

BRSA 6 was comprised of 54 riverbank grids and 28 stream tube grids (Figure 4, Appendix A). A total of 10,750 tons of non-TSCA soil was removed and disposed of off-Site from BRSA 6. The volume of contact water treated in the on-Site WWTP from BRSA 6 was 363,100 gallons. Specific details regarding removal and restoration in BRSA 6 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 4, 5, 6, and 9* (AMEC, 2017).

A total of 123 five-point composite confirmation soil samples were collected from BRSA 6 riverbank grids. Wood collected 111 samples, with START collecting 12 split samples. Of the 123 confirmation soil samples collected, 19 samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in riverbank grids with analytical results indicating PCB levels exceeding the sediment cleanup criteria. Table 4 in Appendix B summarizes the BRSA 6 confirmation soil sample analytical results, indicating which analytical results initially exceeded the riverbank cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

A total of 31 five-point composite confirmation sediment samples were collected from BRSA 6 stream tube grids. Wood collected 28 samples, with START collecting 3 split samples. Of the 31 confirmation sediment samples collected, no samples exceeded the cleanup criteria of 1.0 mg/kg for PCBs. Table 4 in Appendix B summarizes the BRSA 6 analytical results.

3.7 BRSA 7

BRSA 7 was comprised of 62 riverbank grids and 12 stream tube grids (Figure 5, Appendix A). A total of 9,358 tons of non-TSCA soil was removed and disposed of off-Site from BRSA 7. The volume of contact water treated in the on-Site WWTP or shipped off-Site for treatment at an approved facility from BRSA 7 was 238,600 gallons. No excavation was completed in grids 51 - 62 based on additional pre-design sampling completed and slope stability issues along the riverbank in these grids. Due to the irregular shape of grid 1, it was included with grid 54 in BRSA 6, thus there was no grid 1 for BRSA 7. Specific details regarding removal and restoration in BRSA 7 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 7 & 8* (AMEC, 2017).

A total of 87 five-point composite confirmation soil samples were collected from BRSA 7 riverbank grids. Wood collected 74 samples, with START collecting 13 split samples. Of the 87 confirmation soil samples collected, 8 samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in riverbank grids with analytical results indicating PCB levels exceeding the riverbank soil cleanup criteria. Table 5 in Appendix B summarizes the BRSA 7 confirmation soil analytical results, indicating which analytical results initially exceeded the riverbank soil cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

A total of 22 five-point composite confirmation sediment samples were collected from BRSA 7 stream tube grids. Wood collected 22 samples, with START collecting no split samples. Of the 22 confirmation sediment samples collected, three samples exceeded the cleanup criteria of 1.0 mg/kg for PCBs. Additional excavation was completed in stream tube grids with analytical results indicating PCB levels exceeding the sediment cleanup criteria. Table 5 in Appendix B summarizes the BRSA 7 analytical results.

3.8 BRSA 8

BRSA 8 was comprised of 63 riverbank grids and 19 stream tube grids (Figure 5, Appendix A). A total of 8,730 tons of non-TSCA soil was removed and disposed of off-Site from BRSA 8. The volume of

contact water treated in the on-Site WWTP from BRSA 8 was 70,670 gallons. Specific details regarding removal and restoration in BRSA 8 can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 7 & 8* (AMEC, 2017).

A total of 100 five-point composite confirmation soil samples were collected from BRSA 8 riverbank grids. Wood collected 88 samples, with START collecting 12 split samples. Of the 100 confirmation soil samples collected, 4 samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Additional excavation was completed in riverbank grids with analytical results indicating PCB levels exceeding the riverbank soil cleanup criteria. Table 6 in Appendix B summarizes the BRSA 8 confirmation soil analytical results, indicating which analytical results initially exceeded the riverbank soil cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

A total of 19 five-point composite confirmation sediment samples were collected from BRSA 8 stream tube grids. There were no split samples collected by START from the BRSA 8 stream tube grids. Of the 19 confirmation sediment samples collected, no samples exceeded the cleanup criteria of 1.0 mg/kg for PCBs. Table 6 in Appendix B summarizes the BRSA 8 analytical results.

3.9 BRSA 9

BRSA 9 was comprised of 38 riverbank grids and 15 stream tube grids (Figure 4, Appendix A). A total of 8,312 tons of non-TSCA soil was removed and disposed of off-Site from BRSA 9. The volume of contact water treated in the on-Site WWTP from BRSA 9 was 371,978 gallons. Specific details regarding removal and restoration in BRSA 9 can be found in the *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 4, 5, 6, and 9* (AMEC, 2017).

A total of 93 five-point composite confirmation soil samples were collected from BRSA 9 riverbank grids. Wood collected 82 samples, with START collecting 11 split samples. Of the 93 confirmation soil samples collected, no samples exceeded the cleanup criteria of 5.0 mg/kg for PCBs. Table 7 in Appendix B summarizes the BRSA 9 analytical results.

A total of 21 five-point composite confirmation sediment samples were collected from BRSA 9 stream tube grids. Wood collected 19 samples, with START collecting 2 split samples. Of the 21 confirmation sediment samples collected, 5 samples exceeded the cleanup criteria of 1.0 mg/kg for PCBs. Additional excavation was completed in stream tube grids with analytical results indicating PCB levels exceeding the sediment cleanup criteria. Table 7 in Appendix B summarizes the BRSA 9 confirmation sediment sample

analytical results, indicating which analytical results initially exceeded the sediment cleanup criteria, the final remedial excavation depth completed in these grids, and the final analytical results for grids that were re-sampled.

3.10 Pine Creek Confluence

Pine Creek is a confluence to the Kalamazoo River, entering the river between BRSA 1 and BRSA 9 on the left descending riverbank (Figure 4, Appendix A). The excavation work in this area was conducted as part of BRSA 9 removal work and was summarized in the in the *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 4, 5, 6, and 9* (AMEC, 2017). There were 7 stream tube grids that required removal in the Pine Creek confluence. To complete the removal work in Pine Creek confluence, a phased approach was required. Work was completed in conjunction with the lowering/drainage of Pine Creek Lake, which was performed by the Allegan County Drain Commission. Wood collected 9 confirmation sediment samples from the stream tube grids in Pine Creek; analytical data for these samples can be found in the Table 7 of Appendix B.

3.11 Pilot Channel

A pilot channel was dredged in the mid-channel area between BRSA7 and BRSA 8 to facilitate construction of BRSA 7 and BRSA 8 riverbanks and control development of the river thalweg as the WCS was lowered and ultimately removed. Dredging of the pilot channel by a subcontractor to Envirocon began on September 18, 2017 and was completed on October 31, 2018. The 2,100' pilot channel was dredged from the WCS downstream to upstream (approximately river station 26+40) by a hydraulic dredge. Dredged sediment was discharged to the plunge pool area downstream of the auxiliary spillway. During dredging of the pilot channel, water quality parameters were monitored weekly. Additional information regarding water quality monitoring can be found in Section 5.2. Specific details regarding the pilot channel can be found in the *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 7 & 8 and Water Control Structure Removal* (AMEC, 2017).

3.12 Temporary Water Control Structure Removal

In late 2015 and early 2016, Michigan DNR installed a temporary WCS to relieve stress on the Otsego Township Dam. The temporary WCS was in place during removal and restoration work completed in BRSAs 1, 3, 4, 5, 6, & 9 as well as the pilot channel construction. Upon completion of the pilot channel, temporary WCS stop logs were removed to drawdown the water level in the river. The lower water

elevation allowed riverbank soil grids and stream tube grid excavation in BRSA 7 & 8 to be completed in dryer conditions. Specific details regarding removal and restoration of the WCS can be found in the *Post Removal Site Control Plan, Appendix A, Water Control Structure Removal and Corridor Restoration* (AMEC, 2018).

3.13 Auxiliary Spillway and Plunge Pool

The auxiliary spillway on the left descending bank at the former Otsego Township Dam location was a failing and unstable structure. A contractor to Michigan DNR rubblized and incorporated the broken concrete into the restoration of the plunge pool area. Dredged material from pilot channel construction was deposited into the plunge pool area downstream of the auxiliary spillway as part of the restoration design. Specific details regarding the auxiliary spillway and plunge pool can be found in the *Post Removal Site Control Plan, Appendix A, Water Control Structure Removal and Corridor Restoration* (AMEC, 2018) and *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 7 & 8* (AMEC, 2017).

4.0 ENVIRONMENTAL SAMPLING

4.1 Pre-Design Sampling

As part of the pre-design investigation, in-stream sediment and riverbank soil samples were collected along 26 transects to assist with the proposed removal footprint and construction design. Pre-design sampling of riverbank soil and in-stream sediments was conducted over a 2-week period in July 2016. In accordance with the Draft Field Sampling Plan (AMEC, 2016) START conducted oversight and split sampling during the pre-design sampling conducted by Wood. Analytical results of the pre-design samples are presented in the BRSA-specific tech memos referenced throughout this report. Pre-design riverbank soil data was combined with historic sampling data from the *Supplemental Remedial Investigation Report* (AMEC, 2016), and evaluated using the natural neighbor interpolation method to identify removal excavation depths.

4.2 Soil Pile Sampling

In October 2016, U.S. EPA tasked START with sampling an approximate 15,000 square foot area of existing Site soil on the command center property. START developed a *Soil Pile Sampling & Analysis Plan* (TetraTech, 2016) in coordination with Michigan DNR and the PRPs (available upon request). The

purpose of this sampling was to determine if the soil was suitable as backfill for Site restoration. This area was also designated to be the staging area for work completed in BRSA 7, so the soil was to be excavated and moved to create the stabilization pad. The results of this sampling indicated that the soil was suitable for reuse on Site in restoration activities. A letter report with the work plan and analytical results are available upon request.

4.3 Soil and Sediment Confirmation Split Sampling

START collected split samples with a frequency of at least 1 of every 10 samples collected by Wood. Split sampling information for each BRSA can be found in Sections 3.1 - 3.9 of this report and in the corresponding tables in Appendix B.

4.4 Water Treatment Split Sampling

Envirocon was responsible for collecting influent and effluent water treatment samples weekly from all active WWTPs. The WWTPs were utilized to treat both contact water from active excavation areas as well as water accumulating on staging pads where contaminated soils and sediments were stored prior to loading out for transport to approved landfill facilities. START was tasked with collecting split water treatment samples once per month per active WWTP. None of the split water treatment samples collected had detections for PCBs. Analytical reports for the split water treatment samples are available upon request.

5.0 ENVIRONMENTAL MONITORING

5.1 Particulate Monitoring

Perimeter particulate monitoring was conducted by START during all TCRA operations at the Site to monitor fugitive dust levels generated by construction activities. START utilized TSI DustTrak DRX model 8533EP particulate monitors provided by U.S. EPA. U.S. EPA ERT's Viper Software was utilized to collect real-time data, display the information in the command trailer, and alert Site personnel to any exceedances via text message throughout the project. Two to three monitoring locations (typically 1 upwind and 2 downwind monitors) were set up during removal operations with monitoring stations adjusted based on prevailing wind direction(s) and active work zone locations. Throughout the duration of the project, there was only one particulate exceedance of the 1.5 mg/m³ action level recorded, which was associated with a resident burning paper and cardboard within 100' of the particulate monitoring station.

Table 8 in Appendix B below shows the dates that each particulate monitoring station was deployed. Figure 6 in Appendix A contains all perimeter particulate monitoring station locations.

5.2 Water Quality Monitoring

During pilot channel dredge operations, START was tasked with collecting weekly water quality measurements. Water quality measurements were collected at the 3 existing stationary turbidity monitoring locations using a hand-held TSI Model 556 MPS (see Figure 6 in Appendix A for monitoring locations). Water quality parameters recorded were turbidity, dissolved oxygen (DO), pH, temperature, and oxidation reduction potential (ORP). Specific details regarding the water quality monitoring can be found in *Otsego Township Dam Area TCRA Technical Memorandum Riverbank Removal Stabilization Areas 7 & 8 and Water Control Structure Removal* (AMEC, 2017). Table 9 in Appendix B summarizes water quality measurement data. There were no sustained exceedances for turbidity above the 50NTU limit established by Michigan DEQ during the project.

5.3 Stream Velocity Monitoring

At the request of Michigan DNR, U.S. EPA and START conducted stream velocity monitoring at 9 transects upstream, within, and downstream of the TCRA footprint (see Figure 7 in Appendix A for locations). Stream velocity monitoring locations can be found in Appendix C. An initial round of stream velocity measurements was collected on September 7, 12 & 19, 2017. A follow-up round of stream velocity measurements was collected at the same transect locations after project completion on October 22-23, 2018. Velocity measurement data from both dates is provided in Appendix C. This information was provided to Michigan DNR and Michigan DEQ.

5.4 Wetland Impact Map

At the request of Michigan DNR, START utilized survey data collected by PRP contractors to delineate the entire TCRA work area footprint in the floodplain (Figure 8 in Appendix A). The purpose of the map was to document potential impact on wetland areas, especially where access roads or staging areas remained in place after the TCRA was completed. These map layers were provided to Michigan DNR and Michigan DEQ.

6.0 PRE/POST CONSTRUCTION STRUCTURAL SURVEYS

6.1 BRSA 4 Residential Survey

Pre- and post-construction structural surveys were conducted at a private residence located within BRSA 4 to address concerns expressed by the owner of potential impacts on the structure(s) located on the property due to heavy equipment movement (i.e., bulldozers, excavators, vibratory hammer, track dumps). The pre-construction structural survey was completed prior to removal activities and a post-construction structural survey was completed once restoration was completed by a licensed professional structural engineer. The post-construction structural survey indicated that there were no significant structural changes observed at the private residence between the pre and post-construction surveys. The pre- and post-construction structural surveys completed for the BRSA 4 residence were provided directly to the property owner and are available upon request.

6.2 BRSA 7 Residential Survey

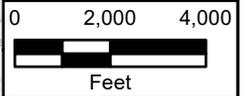
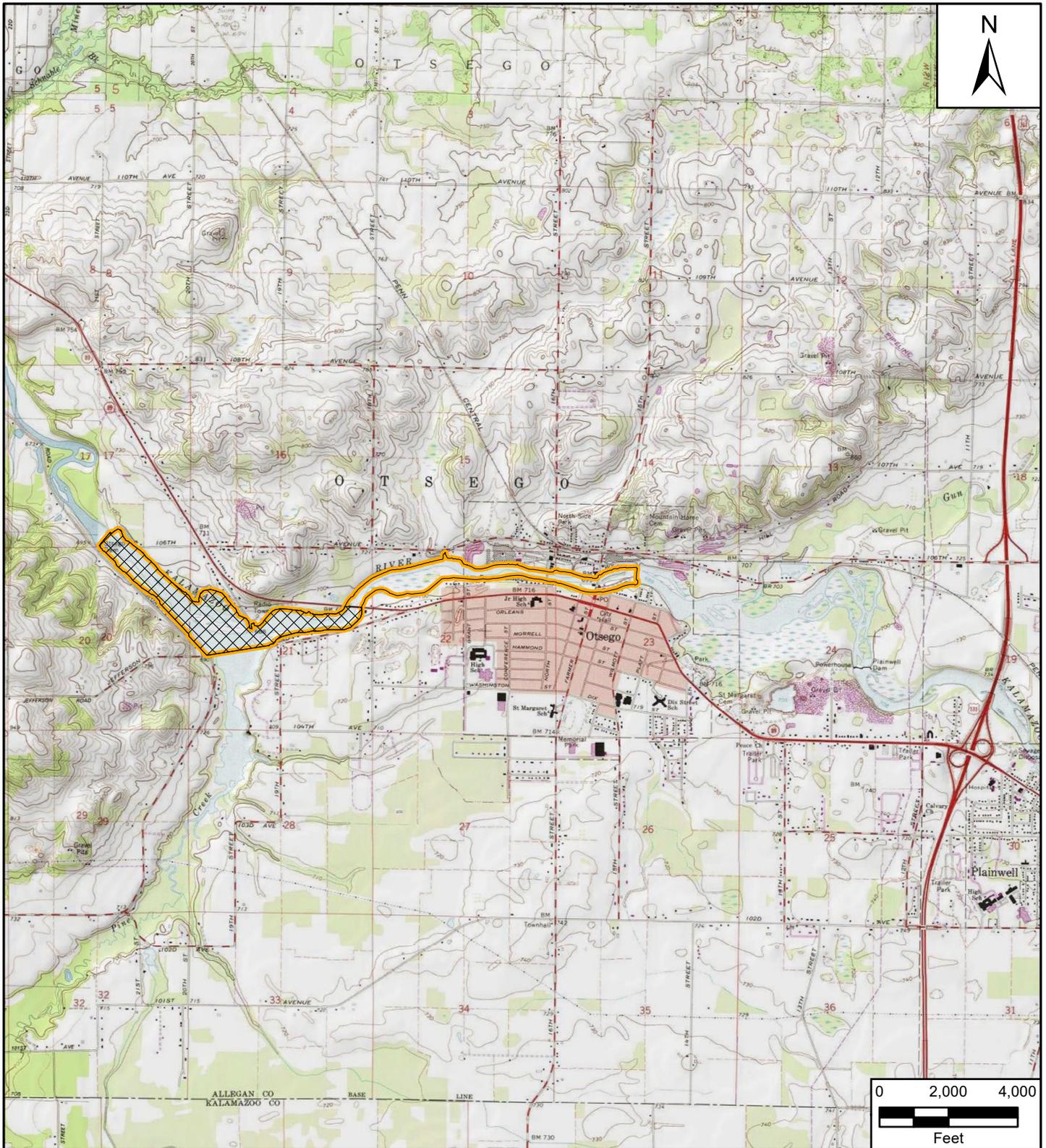
Pre- and post-construction structural surveys were conducted at a private residence located within BRSA7 to address concerns expressed by the owner of potential impacts on the structure(s) located on the property due to heavy equipment movement (i.e., bulldozers, excavators, vibratory hammer, track dumps). The pre-construction structural survey was completed prior to removal activities and a post-construction structural survey was completed once restoration was completed by a licensed professional structural engineer. The post-construction structural survey indicated that there were no significant structural changes observed at the private residence between the pre and post-construction surveys. The pre- and post-construction structural surveys completed for the BRSA 7 residence were provided directly to the property owner and are available upon request.

7.0 REFERENCES

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- Amec Foster Wheeler. 2016. Draft BRSA 2 and 3 TM (Revision 1), December 9, 2016.
- Tetra Tech, Inc. 2017. Draft Sampling Activities Report for the Soil Piling Sampling at Allied Paper OU-5, Area 3 TCRA Site, January 20, 2017.
- Mannik Smith Group. 2017. BRSA 4 Residential Pre-Construction Inspection Report, March 27, 2017.
- Amec Foster Wheeler. 2017. Draft BRSAs 4, 5, 6, and 9 TM (Revision 2), May 24, 2017.
- Mannik Smith Group. 2017. BRSA 4 Residential Post-Construction Inspection Report, September 22, 2017.
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- Mannik Smith Group. 2018. Covault Lane Pre-Construction Inspection Report, March 29, 2018.
- Mannik Smith Group. 2018. Covault Lane Post-Construction Inspection Report, August 10, 2018.
- Wood Environment and Infrastructure Solutions, Inc. 2019. Otsego Township Dam Area Time Critical Removal Action Operable Unit 5, Area 3.

APPENDIX A

FIGURES



-  TCRA Sub-Area
-  Area 3 Study Boundary

Kalamazoo River OU-5 Area 3
Otsego, MI

Figure 1
Site Location Map

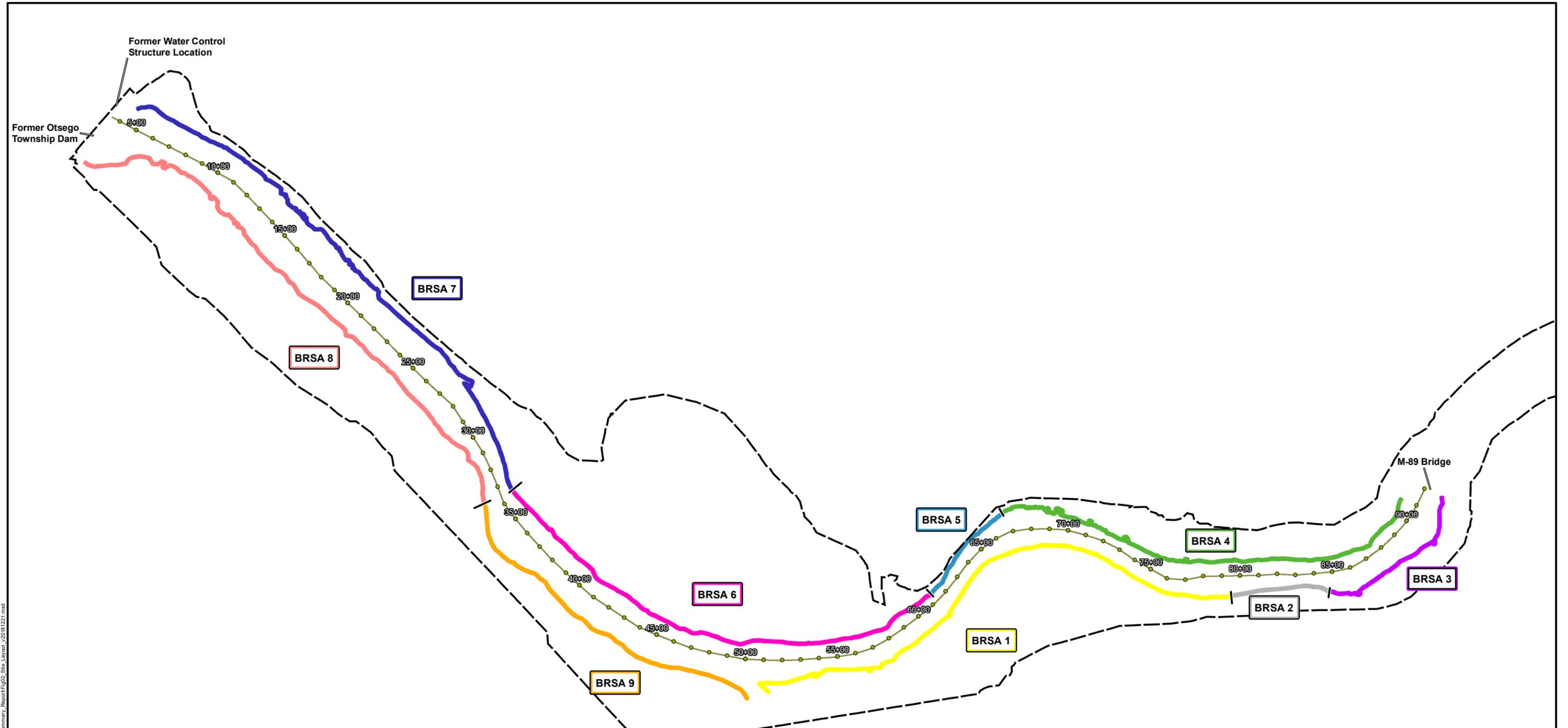


Base Map Source: ESRI USA Topo Maps map service

EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

Prepared By: MSG - KRB



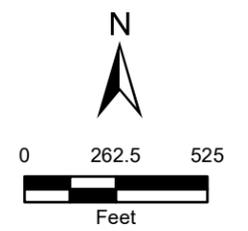
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Map Extent

● River Stations	BRSA Boundaries	■ BRSA 5
— River Centerline	■ BRSA 1	■ BRSA 6
--- Area 3 Study Boundary	■ BRSA 2	■ BRSA 7
	■ BRSA 3	■ BRSA 8
	■ BRSA 4	■ BRSA 9

EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003



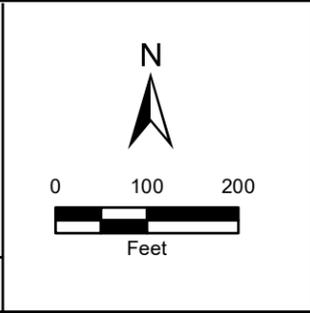
Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 2
Site Layout

Prepared For: U



<ul style="list-style-type: none"> ● River Stations River Centerline BRSA Border Access Roads Staging Areas Area 3 Study Boundary 	<p>Excavation Grid - Final Cut Depth (feet)</p> <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0 	<p>Stream Tube - Final Cut Depth (feet)</p> <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0
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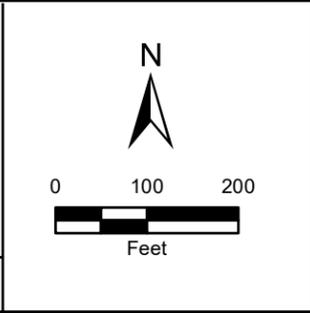
Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 3
BRSA 1 (Partial), BRSA 2, BRSA 3 and BRSA 4

Prepared For: U.S. EPA Prepared By: MSG - KRB
Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int



<ul style="list-style-type: none"> River Stations River Centerline BRSA Border Access Roads Staging Areas Area 3 Study Boundary 	Excavation Grid - Final Cut Depth (feet) <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0 	Stream Tube - Final Cut Depth (feet) <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0
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Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

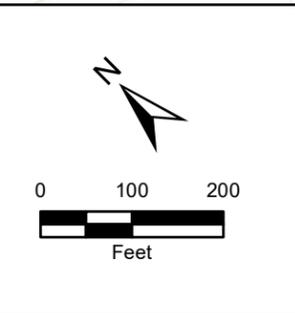
Figure 4
BRSA 1 (Partial), BRSA 5, BRSA 6 and BRSA 9

TETRA TECH

Prepared For: U.S. EPA
Prepared By: MSG - KRB
Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int



<ul style="list-style-type: none"> ● River Stations River Centerline BRSA Border Access Roads Staging Areas Area 3 Study Boundary 	<p>Excavation Grid - Final Cut Depth (feet)</p> <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0 	<p>Stream Tube - Final Cut Depth (feet)</p> <ul style="list-style-type: none"> 0.0 0.1 - 1.0 1.0 - 2.0 2.0 - 3.0 3.0 - 4.0 4.0 - 5.0
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Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 5
BRSA 7 and BRSA 8

TETRA TECH

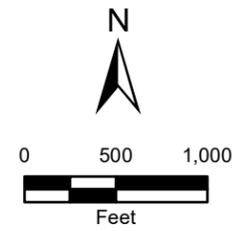
Prepared For: U.S. EPA Prepared By: MSG - KRB
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- October 2018 - Flow Velocity Measurement Transect
- River Stations
- Stream Centerline



Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 7
Velocity Transects

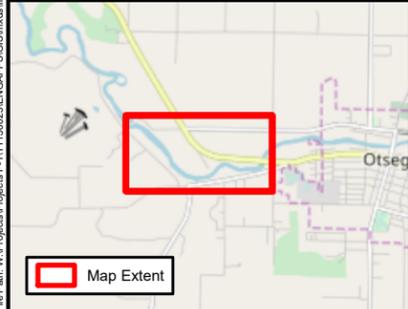


EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003

Aerial Imagery Source: USEPA October 18, 2018 and
ESRI World Imagery Map Service - NAIP2016

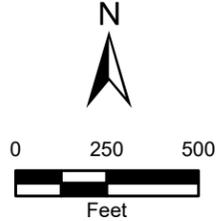
Prepared For: U.S. EPA
Prepared By: MSG - KRB
Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

Total Area of Wetlands within Area 3 TCRA:	74.3 acres
Area of Disturbed Wetlands:	17.2 acres
Area of Disturbed Wetlands Restored:	11.6 acres
Area of Newly Added Wetlands:	8.1 acres



- Area 3 Study Boundary
- Staging Areas
- Access Roads

- Wetlands within Area 3 TCRA**
- Not Disturbed (57 acres)
 - Disturbed and Not Restored (5.6 acres)
 - Disturbed and Restored (11.6 acres)
 - Newly Created Wetlands (8.1 acres)



Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 8
AREA 3 TCRA - WETLANDS STATUS



EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003

Date of Aerial Imagery: 18-October-2018

File Path: W:\Projects\Projects\111130023\GIS\Map\Information_Request\Wetlands\Fig_8_Area 3 TCRA Wetland Status_v20190328.mxd

APPENDIX B

TABLES

Table 1
 Allied Paper, inc./Portage Creek/Kalamazoo River Superfund Site
 Otsego Township Dam Area TCRA
 BRSA 1 Confirmation Sample Tracking

Updated: 11/27/16
 10:00 AM

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (ms/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (inches)	Sample Description
1	1	A3-SO-BRSA1-01-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	13.70	No	N/A	48	Initial surface soil sample exceeded cleanup goal
		A3-SO-BRSA1-01-C-0-6-B-0916	6	Soil	9/21/2016	9/26/2016	9/26/2016	0.036	Yes	N/A		Second surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-01-C-0-24-A-0916	24	Soil	9/16/2016	9/21/2016	9/21/2016	3.10	Yes	No		Subsurface soil sample met cleanup goal, but exceeded re-use goal, therefore was excavated to restoration depth and backfilled with clean material
1	2	A3-SO-BRSA1-02-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	2.30	Yes	N/A	14	Initial surface soil sample met cleanup goal but exceeded re-use goal
		A3-SO-BRSA1-02-C-0-6-B-0916	6	Soil	9/21/2016	9/26/2016	9/26/2016	0.032	Yes	N/A		Second surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-02-C-0-27-A-0916	27	Soil	9/16/2016	9/21/2016	9/21/2016	0.65	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	3	A3-SO-BRSA1-03-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	0.17	Yes	N/A	30	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-3-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	< 0.027	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-04-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	0.18	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	4	A3-SO-BRSA1-04-C-0-6-A-0916-SP	6	Soil	9/15/2016	9/30/2016	9/30/2016	0.027	Yes	N/A	13	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-4-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	0.065	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-4-C-0-60-A-0916-SP	60	Soil	9/23/2016	9/30/2016	9/30/2016	0.240	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	5	A3-SO-BRSA1-05-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	< 0.028	Yes	N/A	16	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-5-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	< 0.029	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	6	A3-SO-BRSA1-06-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	0.49	Yes	N/A	21	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-6-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	< 0.028	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	7	A3-SO-BRSA1-07-C-0-6-A-0916	6	Soil	9/15/2016	9/19/2016	9/19/2016	0.34	Yes	N/A	21	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-7-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	0.32	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	8	A3-SO-BRSA1-08-C-0-6-A-0916	6	Soil	9/16/2016	9/21/2016	9/21/2016	0.51	Yes	N/A	12	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-8-C-0-60-A-0916	60	Soil	9/23/2016	9/28/2016	9/27/2016	< 0.028	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	9	A3-SO-BRSA1-09-C-0-6-A-0916	6	Soil	9/22/2016	9/27/2016	9/26/2016	0.14	Yes	N/A	13	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-9-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.028	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	10	A3-SO-BRSA1-10-C-0-6-A-0916	6	Soil	9/22/2016	9/27/2016	9/26/2016	0.24	Yes	N/A	12	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-10-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.028	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-10-C-0-60-A-0916-SP	60	Soil	9/27/2016	9/30/2016	9/30/2016	< 0.026	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	11	A3-SO-BRSA1-11-C-0-6-A-0916	6	Soil	9/22/2016	9/27/2016	9/26/2016	0.064	Yes	N/A	8	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-11-C-0-6-A-0916-SP	6	Soil	9/22/2016	9/30/2016	9/30/2016	0.190	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-11-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.031	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	12	A3-SO-BRSA1-12-C-0-6-A-0916	6	Soil	9/22/2016	9/27/2016	9/26/2016	0.032	Yes	N/A	11	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-12-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.027	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-13-C-0-6-A-0916	6	Soil	9/26/2016	9/28/2016	9/28/2016	0.16	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	13	A3-SO-BRSA1-13-C-0-6-B-1016	6	Soil	10/7/2016	10/12/2016	10/12/2016	< 0.027	Yes	N/A	19	Grid re-sampled due to field staking error; second surface soil sample also met cleanup goal and re-use goal
		A3-SO-BRSA1-13-C-0-36-A-0916	36	Soil	9/26/2016	9/28/2016	9/29/2016	0.40	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-13-C-0-36-B-1016	36	Soil	10/7/2016	10/12/2016	10/12/2016	< 0.027	Yes	Yes		Grid re-sampled due to field staking error; second subsurface soil sample also met cleanup goal and re-use goal
1	14	A3-SO-BRSA1-14-C-0-6-A-0916	6	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.029	Yes	N/A	14	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-14-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.031	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	15	A3-SO-BRSA1-15-C-0-6-A-0916	6	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.03	Yes	N/A	18	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-15-C-0-60-A-0916	60	Soil	9/27/2016	9/29/2016	9/29/2016	0.11	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	16	A3-SO-BRSA1-16-C-0-6-A-0916	6	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.031	Yes	N/A	11	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-16-C-0-18-A-0916	18	Soil	9/27/2016	9/29/2016	9/29/2016	< 0.031	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	17	A3-SO-BRSA1-17-C-0-6-A-0916	6	Soil	9/28/2016	10/3/2016	9/30/2016	0.22	Yes	N/A	9	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-17-C-0-30-A-0916	30	Soil	9/28/2016	10/3/2016	9/30/2016	0.09	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	18	A3-SO-BRSA1-18-C-0-6-A-0916	6	Soil	9/29/2016	10/3/2016	10/4/2016	0.27	Yes	N/A	17	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-18-C-0-6-A-0916-SP	6	Soil	9/29/2016	10/4/2016	10/4/2016	0.62	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	19	A3-SO-BRSA1-19-C-0-6-A-0916	6	Soil	9/29/2016	10/3/2016	10/4/2016	< 0.037	Yes	N/A	36	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-19-C-0-6-A-0916-SP	6	Soil	9/29/2016	10/4/2016	10/4/2016	< 0.034	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	20	A3-SO-BRSA1-20-C-0-6-A-0916	6	Soil	9/29/2016	10/3/2016	10/4/2016	0.17	Yes	N/A	41	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-20-C-0-6-A-0916-SP	6	Soil	9/29/2016	10/4/2016	10/4/2016	0.21	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	21	A3-SO-BRSA1-21-C-0-8-A-1016	8	Soil	10/7/2016	10/12/2016	10/12/2016	< 0.027	Yes	N/A	36	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-21-C-0-60-A-1016	60	Soil	10/7/2016	10/12/2016	10/12/2016	< 0.027	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	22	A3-SO-BRSA1-22-C-0-6-A-1016	6	Soil	10/6/2016	10/10/2016	10/10/2016	0.50	Yes	N/A	36	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-23-C-0-6-A-1016	6	Soil	10/6/2016	10/10/2016	10/10/2016	0.15	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	24	A3-SO-BRSA1-24-C-0-6-A-1016	6	Soil	10/6/2016	10/10/2016	10/10/2016	0.17	Yes	N/A	37	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-25-C-0-6-A-1016	6	Soil	10/6/2016	10/10/2016	10/10/2016	< 0.035	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	26	A3-SO-BRSA1-26-C-0-6-A-1016	6	Soil	10/10/2016	10/13/2016	10/12/2016	0.083	Yes	N/A	42	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-27-C-0-6-A-1016	6	Soil	10/10/2016	10/13/2016	10/12/2016	0.11	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	28	A3-SO-BRSA1-28-C-0-6-A-1016	6	Soil	10/10/2016	10/13/2016	10/12/2016	< 0.050	Yes	N/A	35	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-29-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	< 0.066	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	29	A3-SO-BRSA1-29-C-0-36-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	< 0.037	Yes	Yes	40	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-30-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	0.33	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	30	A3-SO-BRSA1-30-C-0-36-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	0.052 J	Yes	Yes	39	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-31-C-0-6-A-1016	6	Soil	10/12/2016	10/14/2016	10/14/2016	0.25	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	31	A3-SO-BRSA1-31-C-0-30-A-1016	30	Soil	10/17/2016	10/19/2016	10/19/2016	0.12 J	Yes	Yes	38	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-32-C-0-6-A-1016	6	Soil	10/12/2016	10/14/2016	10/14/2016	0.22	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	32	A3-SO-BRSA1-32-C-0-30-A-1016	30	Soil	10/17/2016	10/19/2016	10/19/2016	0.25	Yes	Yes	41	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-33-C-0-6-A-1016	6	Soil	10/12/2016	10/14/2016	10/14/2016	0.58	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	33	A3-SO-BRSA1-33-C-0-30-A-1016	30	Soil	10/17/2016	10/19/2016	10/19/2016	0.073 J	Yes	Yes	42	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-34-C-0-6-A-1016	6	Soil	10/12/2016	10/14/2016	10/14/2016	2.10	Yes	N/A		Surface soil sample met cleanup goal, but exceeded re-use goal
1	35	A3-SO-BRSA1-35-C-0-6-A-1016	6	Soil	10/21/2016	10/24/2016	10/25/2016	1.30	Yes	N/A	43	Surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-36-C-0-6-A-1016	6	Soil	10/21/2016	10/24/2016	10/25/2016	3.10	Yes	N/A		Surface soil sample met cleanup goal, but exceeded re-use goal
1	37	A3-SO-BRSA1-37-C-0-6-A-1016	6	Soil	10/24/2016	10/27/2016	10/26/2016	6.50	No	N/A	55	Initial surface soil sample exceeded cleanup goal
		A3-SO-BRSA1-37-C-0-6-B-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	0.38	Yes	N/A		Second surface soil sample met cleanup goal and re-use goal
1	38	A3-SO-BRSA1-38-C-0-6-A-1016	6	Soil	10/24/2016	10/27/2016	10/26/2016	2.10	Yes	N/A	40	Surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-39-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	0.78	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	39	A3-SO-BRSA1-39-C-0-24-A-1116	24	Soil	11/1/2016	11/3/2016	11/3/2016	0.23	Yes	Yes	42	Subsurface soil sample met cleanup goal and re-use goal

Table 1
Allied Paper, inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 1 Confirmation Sample Tracking

BRSA	Grid	Sample ID	(inches)	(Soil/Sediment)	Collected	Expected	Reported	(mg/kg)	Criteria ¹	for Reuse ²	Depth ³ (inches)	Sample Description
1	40	A3-SO-BRSA1-40-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	2.70	Yes	N/A	37	Surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-40-C-0-6-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	0.24	Yes	No		Subsurface soil sample met cleanup goal and re-use goal
1	41	A3-SO-BRSA1-41-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	0.75	Yes	N/A	42	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-41-C-0-6-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	0.13 J	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	41/42 ⁴	A3-SO-BRSA1-41/42-C-0-6-A-1116	6	Soil	11/9/2016	11/14/2016	11/14/2016	<0.059	Yes	N/A	42	Surface soil sample met cleanup goal
		A3-SO-BRSA1-42-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	3.10	No	N/A		Initial surface soil sample exceeded cleanup goal
1	42	A3-SO-BRSA1-42-C-0-6-B-1116	6	Soil	11/4/2016	11/8/2016	11/8/2016	1.60	Yes	N/A	42	Second surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-42-C-0-6-B-1116-SP	6	Soil	11/4/2016	11/8/2016	11/8/2016	1.38	Yes	N/A		Subsurface soil sample met cleanup goal, but exceeded re-use goal, therefore was excavated to restoration depth and backfilled with clean material
1	43	A3-SO-BRSA1-43-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	1.70	Yes	No	42	Surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-43-C-0-6-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	1.10	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	44	A3-SO-BRSA1-44-C-0-6-A-1116	6	Soil	11/1/2016	11/3/2016	11/3/2016	0.96	Yes	No	42	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-44-C-0-6-A-1116	36	Soil	11/1/2016	11/3/2016	11/3/2016	<0.029	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	45	A3-SO-BRSA1-45-C-0-6-A-1016	6	Soil	10/27/2016	10/31/2016	10/31/2016	0.048 J	Yes	Yes	39	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-45-C-0-30-A-1016	30	Soil	10/27/2016	10/31/2016	10/31/2016	<0.033	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	46	A3-SO-BRSA1-46-C-0-6-A-1016	6	Soil	10/27/2016	10/31/2016	10/31/2016	0.12	Yes	N/A	40	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-46-C-0-30-A-1016	30	Soil	10/27/2016	10/31/2016	10/31/2016	<0.031	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	47	A3-SO-BRSA1-47-C-0-6-A-1016	6	Soil	10/24/2016	10/26/2016	10/26/2016	< 0.028	Yes	N/A	36	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-47-C-0-18-A-1016	18	Soil	10/24/2016	10/26/2016	10/26/2016	< 0.029	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	48	A3-SO-BRSA1-48-C-0-6-A-1016	6	Soil	10/24/2016	10/26/2016	10/26/2016	< 0.030	Yes	N/A	38	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-48-C-0-24-A-1016	24	Soil	10/24/2016	10/26/2016	10/26/2016	0.08	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	49	A3-SO-BRSA1-49-C-0-6-A-1016	6	Soil	10/27/2016	10/31/2016	10/31/2016	0.071	Yes	N/A	35	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-49-C-0-30-A-1016	30	Soil	10/27/2016	10/31/2016	10/31/2016	0.13	Yes	Yes		Subsurface soil sample met cleanup goal and re-use goal
1	50	A3-SO-BRSA1-50-C-0-6-A-1016	6	Soil	10/27/2016	10/31/2016	10/31/2016	0.084	Yes	N/A	35	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-50-C-0-6-A-1016-SP	6	Soil	10/27/2016	10/31/2016	10/31/2016	0.067	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	51	A3-SO-BRSA1-51-C-0-24-A-1016	24	Soil	10/27/2016	10/31/2016	10/31/2016	<0.031	Yes	Yes	34	Surface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-51-C-0-6-A-1016	6	Soil	10/25/2016	10/27/2016	10/27/2016	0.12	Yes	N/A		Subsurface soil sample met cleanup goal and re-use goal
1	52	A3-SO-BRSA1-52-C-0-6-A-1016	6	Soil	10/26/2016	10/26/2016	10/26/2016	0.42	Yes	N/A	28	Surface soil sample met cleanup goal, but exceeded re-use goal
		A3-SO-BRSA1-53-C-0-6-A-1016	6	Soil	10/26/2016	10/26/2016	10/26/2016	0.42	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	53	A3-SO-BRSA1-53-C-0-30-A-1016	30	Soil	10/14/2016	10/18/2016	10/18/2016	1.10	Yes	No	28	Subsurface soil sample met cleanup goal, but exceeded re-use goal, therefore was excavated to restoration depth and backfilled with clean material
		A3-SO-BRSA1-54-C-0-6-A-1016	6	Soil	10/14/2016	10/18/2016	10/18/2016	0.54	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	54	A3-SO-BRSA1-54-C-0-30-A-1016	30	Soil	10/14/2016	10/18/2016	10/18/2016	0.33	Yes	Yes	17	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-55-C-0-6-A-1016	6	Soil	10/14/2016	10/18/2016	10/18/2016	0.87	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	55	A3-SO-BRSA1-55-C-0-30-A-1016	30	Soil	10/14/2016	10/18/2016	10/18/2016	0.58	Yes	Yes	18	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-56-C-0-6-A-1016	6	Soil	10/14/2016	10/18/2016	10/18/2016	0.54	Yes	N/A		Surface soil sample met cleanup goal and re-use goal
1	56	A3-SO-BRSA1-56-C-0-6-A-1016-SP	6	Soil	10/14/2016	10/18/2016	10/18/2016	1.01	Yes	N/A	15	Subsurface soil sample met cleanup goal and re-use goal
		A3-SO-BRSA1-56-C-0-30-A-1016	30	Soil	10/14/2016	10/18/2016	10/18/2016	0.59	Yes	Yes		Surface soil sample met cleanup goal, but exceeded re-use goal, therefore was excavated to restoration depth and backfilled with clean material
1	57	A3-SO-BRSA1-57-C-0-6-A-1016	6	Soil	10/13/2016	10/17/2016	10/17/2016	3.60	Yes	N/A	8	Initial surface soil sample exceeded cleanup goal
		A3-SO-BRSA1-57-C-0-30-A-1016	30	Soil	10/13/2016	10/17/2016	10/17/2016	4.80	Yes	No		Second surface soil sample met cleanup goal and re-use goal
1	58	A3-SO-BRSA1-58-C-0-6-A-1016	6	Soil	10/13/2016	10/17/2016	10/17/2016	5.80	No	N/A	22	Subsurface soil sample met cleanup goal and re-use goal; however, additional soil was excavated so a second subsurface soil sample was collected
		A3-SO-BRSA1-58-C-0-30-A-1016	30	Soil	10/13/2016	10/17/2016	10/17/2016	0.88	Yes	No		Second subsurface soil sample met cleanup goal and re-use goal
1	T1	A3-SO-BRSA1-T1-C-0-6-A-1016	6	Soil	10/20/2016	11/2/2016	11/3/2016	0.14	Yes	N/A	50	Surface soil sample met cleanup goal and re-use goal

Notes:

1. Bank soil is below criteria (i.e. below the cleanup goal) if it is less than 5 mg/kg
2. Material is approved for reuse if the total PCB concentration is less than 1 mg/kg. Only subsurface soil will be slated for reuse.
3. Represents the total remediation cut depth or the depth of material removed to achieve confirmation sample result < 5 mg/kg. Confirmation samples collected to demonstrate achievement of the clean-up goal were collected from the surface of the excavation (0-6 inches)
4. Confirmation sample 4142 was collected following re-excavation of a portion of both grids 41 and 42 due to some housekeeping issues along the upland edge of the grids. The confirmation sample was a surface (0-6 inch) sample.

BRSA = Bank Removal Stabilization Area

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

mg/kg = Milligrams per kilogram

N/A = Not applicable

Table 2
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 3 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)	Sample Description
3	1	A3-SO-BRSA3-01-C-0-6-A-0517	6	Soil	5/8/17	5/10/17	5/10/17	0.57	Yes	N/A	1.69	Split sample collected by EPA START
		A3-SO-BRSA3-01-C-0-6-A-0517-SP	6	Soil	5/8/17	5/10/17	5/10/17	1.98	Yes	N/A		
3	2	A3-SO-BRSA3-02-C-0-6-A-0517	6	Soil	5/8/17	5/10/17	5/10/17	0.59	yes	N/A	1.63	
3	3	A3-SO-BRSA3-03-C-0-6-A-0517	6	Soil	5/8/17	5/10/17	5/10/17	0.44	yes	N/A	1.55	
3	4	A3-SO-BRSA3-04-C-0-6-A-0517	6	Soil	5/9/17	5/11/17	5/11/17	0.69	Yes	N/A	1.80	
3	5	A3-SO-BRSA3-05-C-0-6-A-0517	6	Soil	5/9/17	5/11/17	5/11/17	1.2	Yes	N/A	1.93	
3	6	A3-SO-BRSA3-06-C-0-6-A-0517	6	Soil	5/9/17	5/11/17	5/11/17	0.44	Yes	N/A	2.01	
3	7	A3-SO-BRSA3-07-C-0-6-A-0517	6	Soil	5/10/17	5/12/17	5/12/17	0.18	Yes	N/A	1.90	
3	8	A3-SO-BRSA3-08-C-0-6-A-0517	6	Soil	5/10/17	5/12/17	5/12/17	0.043J	Yes	N/A	1.99	
3	9	A3-SO-BRSA3-09-C-0-6-A-0517	6	Soil	5/10/17	5/12/17	5/12/17	< 0.035	Yes	N/A	2.15	
3	10	A3-SO-BRSA3-10-C-0-6-A-0517	6	Soil	5/11/17	5/15/17	5/15/17	< 0.034	Yes	N/A	2.83	Split sample collected by EPA START
		A3-SO-BRSA3-10-C-0-6-A-0517-SP	6	Soil	5/11/17	5/15/17	5/15/17	0.081	Yes	N/A		
3	11	A3-SO-BRSA3-11-C-0-6-A-0517	6	Soil	5/11/17	5/15/17	5/15/17	< 0.044	Yes	N/A	2.93	
3	12	A3-SO-BRSA3-12-C-0-6-A-0517	6	Soil	5/12/17	5/16/17	5/16/17	< 0.039	Yes	N/A	2.99	
3	13	A3-SO-BRSA3-13-C-0-6-A-0517	6	Soil	5/12/17	5/16/17	5/16/17	< 0.055	Yes	N/A	3.08	
3	14	A3-SO-BRSA3-14-C-0-6-A-0517	6	Soil	5/15/17	5/17/17	5/17/17	0.067J	Yes	N/A	3.45	Split sample collected by EPA START
		A3-SO-BRSA3-14-C-0-6-A-0517 - SP	6	Soil	5/15/17	5/17/17	5/17/17	0.45	Yes	N/A		
3	15	A3-SO-BRSA3-15-C-0-6-A-0517	6	Soil	5/17/17	5/19/17	5/19/17	3.8	Yes	N/A	4.40	
3	16	A3-SO-BRSA3-16-C-0-6-A-0517	6	Soil	5/24/17	5/26/17	5/26/17	4.5	Yes	N/A	3.96	
3	17	A3-SO-BRSA3-17-C-0-6-A-0517	6	Soil	5/19/17	5/23/17	5/23/17	13.8	No	N/A	4.51	Split sample collected by EPA START
		A3-SO-BRSA3-17-C-0-6-A-0517-SP	6	Soil	5/19/17	5/23/17	5/23/17	23.0	No	N/A		
		A3-SO-BRSA3-17-C-0-6-B-0517	6	Soil	5/23/17	5/25/17	5/25/17	0.76	Yes	N/A		
		A3-SO-BRSA3-17-C-0-6-B-0517-SP	6	Soil	5/23/17	5/25/17	5/25/17	1.9	Yes	N/A		
3	18	A3-SO-BRSA3-18-C-0-6-A-0517	6	Soil	5/15/17	5/17/17	5/17/17	2.1	Yes	N/A	3.67	

Notes:

1. Bank soil is below criteria (i.e. below the cleanup goal) if it less than 5 mg/kg
2. Material is approved for reuse if the total PCB concentration is less than 1 mg/kg. Only subsurface soil will be slated for reuse.
3. Represents the total remediation cut depth or the depth of material removed to achieve confirmation sample result < 5 mg/kg. Confirmation samples collected to demonstrate achievement of the clean-up goal were collected from the surface of the excavation (0-6 inches)

BRSA = Bank Removal Stabilization Area

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

mg/kg = Milligrams per kilogram

N/A = Not applicable

Table 3
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 4 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)	Sample Description
4	1	A3-SO-BRSA4-01-C-0-6-A-0617	6	Soil	6/7/2017	6/9/2017	6/12/2017	< 0.032	Yes	N/A	1.94	
		A3-SO-BRSA4-01-C-0-18-A-0617	18	Soil	6/7/2017	6/9/2017	6/12/2017	< 0.031	Yes	Yes		
4	2	A3-SO-BRSA4-02-C-0-6-A-0617	6	Soil	6/8/2017	6/12/2017	6/12/2017	0.25	Yes	N/A	1.91	Split sample collected by EPA/START
		A3-SO-BRSA4-02-C-0-6-A-0617-SP	6	Soil	6/8/2017	6/12/2017	6/12/2017	0.53	Yes	N/A		
4	3	A3-SO-BRSA4-02-C-0-18-A-0617	18	Soil	6/8/2017	6/12/2017	6/12/2017	0.15	Yes	Yes	1.93	
		A3-SO-BRSA4-03-C-0-6-A-0617	6	Soil	6/8/2017	6/12/2017	6/12/2017	< 0.041	Yes	N/A		
4	4	A3-SO-BRSA4-03-C-0-18-A-0617	18	Soil	6/8/2017	6/12/2017	6/12/2017	< 0.050	Yes	Yes	1.91	Split sample collected by EPA/START
		A3-SO-BRSA4-04-C-0-6-A-0617	6	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.053	Yes	N/A		
4	5	A3-SO-BRSA4-04-C-0-18-A-0617	18	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.053	Yes	Yes	1.79	Split sample collected by EPA/START
		A3-SO-BRSA4-04-C-0-18-A-0617-SP	18	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.51	Yes	Yes		
4	6	A3-SO-BRSA4-05-C-0-6-A-0617	6	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.046	Yes	N/A	1.67	
		A3-SO-BRSA4-05-C-0-18-A-0617	18	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.044	Yes	Yes		
4	7	A3-SO-BRSA4-06-C-0-6-A-0617	6	Soil	6/9/2017	6/13/2017	6/13/2017	0.082	Yes	N/A	1.80	Split sample collected by EPA/START
		A3-SO-BRSA4-06-C-0-18-A-0617	18	Soil	6/9/2017	6/13/2017	6/13/2017	< 0.034	Yes	Yes		
4	8	A3-SO-BRSA4-07-C-0-6-A-0617	6	Soil	6/12/2017	6/14/2017	6/14/2017	0.44	Yes	N/A	1.57	
		A3-SO-BRSA4-07-C-0-6-A-0617-SP	6	Soil	6/12/2017	6/14/2017	6/14/2017	1.30	Yes	N/A		
4	9	A3-SO-BRSA4-07-C-0-15-A-0617	15	Soil	6/12/2017	6/14/2017	6/14/2017	0.24	Yes	Yes	1.63	Split sample collected by EPA/START
		A3-SO-BRSA4-08-C-0-6-A-0617	6	Soil	6/12/2017	6/14/2017	6/14/2017	0.91	Yes	N/A		
4	10	A3-SO-BRSA4-08-C-0-12-A-0617	12	Soil	6/12/2017	6/14/2017	6/14/2017	0.11	Yes	Yes	1.49	Duplicate of split sample collected by EPA/START
		A3-SO-BRSA4-09-C-0-6-A-0617	6	Soil	6/12/2017	6/14/2017	6/14/2017	0.15	Yes	N/A		
4	11	A3-SO-BRSA4-09-C-0-18-A-0617	18	Soil	6/12/2017	6/14/2017	6/14/2017	0.19	Yes	Yes	2.57	Split sample collected by EPA/START
		A3-SO-BRSA4-09-C-0-18-A-0617-SP	18	Soil	6/12/2017	6/14/2017	6/14/2017	0.51	Yes	Yes		
4	12	A3-SO-BRSA4-09-C-0-18-A-0617-SP-D	18	Soil	6/12/2017	6/14/2017	6/14/2017	0.68	Yes	Yes	1.69	Duplicate of split sample collected by EPA/START
		A3-SO-BRSA4-10-C-0-6-A-0617	6	Soil	6/12/2017	6/14/2017	6/14/2017	0.48	Yes	N/A		
4	13	A3-SO-BRSA4-10-C-0-18-A-0617	18	Soil	6/13/2017	6/15/2017	6/16/2017	0.54	Yes	Yes	1.49	
		A3-SO-BRSA4-11-C-0-6-A-0617	6	Soil	6/13/2017	6/15/2017	6/16/2017	3.5	Yes	N/A		
4	14	A3-SO-BRSA4-11-C-0-18-A-0617	18	Soil	6/13/2017	6/15/2017	6/16/2017	2.8	Yes	No	2.50	
		A3-SO-BRSA4-12-C-0-6-A-0617	6	Soil	6/13/2017	6/15/2017	6/16/2017	< 0.046	Yes	N/A		
4	15	A3-SO-BRSA4-12-C-0-18-A-0617	18	Soil	6/13/2017	6/15/2017	6/16/2017	< 0.044	Yes	Yes	1.32	
		A3-SO-BRSA4-13-C-0-6-A-0617	6	Soil	6/13/2017	6/15/2017	6/16/2017	0.90	Yes	N/A		
4	16	A3-SO-BRSA4-13-C-0-18-A-0617	18	Soil	6/13/2017	6/15/2017	6/16/2017	0.42	Yes	Yes	3.32	
		A3-SO-BRSA4-14-C-0-6-A-0617	6	Soil	6/14/2017	6/16/2017	6/16/2017	2.00	Yes	N/A		
4	17	A3-SO-BRSA4-14-C-0-6-A-0617-SP	6	Soil	6/14/2017	6/16/2017	6/16/2017	5.10	No	N/A	2.88	Excavation to restoration grade based on sample results. Split sample collected by EPA/START
		A3-SO-BRSA4-14-C-0-18-A-0617	18	Soil	6/14/2017	6/16/2017	6/16/2017	0.84	Yes	Yes		
4	18	A3-SO-BRSA4-14-C-0-18-A-0617-SP	18	Soil	6/14/2017	6/16/2017	6/16/2017	2.10	Yes	No	1.16	Split sample collected by EPA/START
		A3-SED-BRSA4-15-C-0-6-A-0617	6	Sediment	6/16/2017	6/20/2017	6/20/2017	< 0.040	Yes	N/A		
4	19	A3-SO-BRSA4-15-C-0-6-A-0617	6	Soil	6/16/2017	6/20/2017	6/20/2017	0.32	Yes	N/A	3.00	
		A3-SO-BRSA4-15-C-0-18-A-0617	18	Soil	6/16/2017	6/20/2017	6/20/2017	< 0.063	Yes	Yes		
4	20	A3-SED-BRSA4-16-C-0-6-A-0617	6	Sediment	6/19/2017	6/21/2017	6/21/2017	0.78	Yes	N/A	1.16	
		A3-SO-BRSA4-16-C-0-6-A-0617	6	Soil	6/19/2017	6/21/2017	6/21/2017	< 0.060	Yes	N/A		
4	21	A3-SO-BRSA4-16-C-0-18-A-0617	18	Soil	6/19/2017	6/21/2017	6/21/2017	< 0.064	Yes	Yes	3.35	
		A3-SED-BRSA4-17-C-0-6-A-0617	6	Sediment	6/19/2017	6/21/2017	6/21/2017	< 0.033	Yes	N/A		
4	22	A3-SO-BRSA4-17-C-0-6-A-0617	6	Soil	6/19/2017	6/21/2017	6/21/2017	< 0.072	Yes	N/A	1.08	
		A3-SO-BRSA4-17-C-0-18-A-0617	18	Soil	6/19/2017	6/21/2017	6/21/2017	< 0.067	Yes	Yes		
4	23	A3-SED-BRSA4-18-C-0-6-A-0617	6	Sediment	6/20/2017	6/22/2017	6/22/2017	0.29	Yes	N/A	3.42	Split sample collected by EPA/START
		A3-SO-BRSA4-18-C-0-6-A-0617	6	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.071	Yes	N/A		
4	24	A3-SO-BRSA4-18-C-0-6-A-0617-SP	6	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.062	Yes	N/A	0.95	Split sample collected by EPA/START
		A3-SO-BRSA4-18-C-0-16-A-0617	16	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.072	Yes	Yes		
4	25	A3-SED-BRSA4-19-C-0-6-A-0617	6	Sediment	6/20/2017	6/22/2017	6/22/2017	0.29	Yes	N/A	3.55	Split sample collected by EPA/START
		A3-SO-BRSA4-19-C-0-6-A-0617	6	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.051	Yes	N/A		
4	26	A3-SO-BRSA4-19-C-0-15-A-0617	15	Soil	6/20/2017	6/22/2017	6/22/2017	0.14	Yes	Yes	1.12	Duplicate of split sample collected by EPA/START
		A3-SO-BRSA4-19-C-0-15-A-0617-SP	15	Soil	6/20/2017	6/22/2017	6/22/2017	1.3	Yes	No		
4	27	A3-SO-BRSA4-19-C-0-15-A-0617-SP-D	15	Soil	6/20/2017	6/22/2017	6/22/2017	0.6	Yes	Yes	3.54	Split sample collected by EPA/START
		A3-SED-BRSA4-20-C-0-6-A-0617	6	Sediment	6/20/2017	6/22/2017	6/22/2017	0.17	Yes	N/A		
4	28	A3-SO-BRSA4-20-C-0-6-A-0617	6	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.068	Yes	N/A	1.02	
		A3-SO-BRSA4-20-C-0-6-A-0617-SP	6	Soil	6/20/2017	6/22/2017	6/22/2017	< 0.059	Yes	N/A		
4	29	A3-SO-BRSA4-20-C-0-18-A-0617	18	Soil	6/21/2017	6/23/2017	6/23/2017	< 0.061	Yes	Yes	3.66	
		A3-SED-BRSA4-21-C-0-6-A-0617	6	Sediment	6/21/2017	6/23/2017	6/23/2017	0.20	Yes	N/A		
4	30	A3-SO-BRSA4-21-C-0-6-A-0617	6	Soil	6/21/2017	6/23/2017	6/23/2017	0.93	Yes	N/A	1.02	
		A3-SO-BRSA4-21-C-0-17-A-0617	17	Soil	6/21/2017	6/23/2017	6/23/2017	< 0.056	Yes	Yes		

Table 3
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 4 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)	Sample Description
4	22	A3-SED-BRSA4-22-C-0-6-A-0617	6	Sediment	6/24/2017	6/29/2017	6/29/2017	0.19	Yes	N/A	1.05	
		A3-SO-BRSA4-22-C-0-6-A-0617	6	Soil	6/24/2017	6/29/2017	6/29/2017	< 0.042	Yes	N/A	3.43	Split sample collected by EPA/START
		A3-SO-BRSA4-22-C-0-6-A-0617-SP	6	Soil	6/24/2017	6/27/2017	6/28/2017	< 0.036	Yes	N/A		
4	23	A3-SO-BRSA4-22-C-0-18-A-0617	18	Soil	6/24/2017	6/29/2017	6/29/2017	0.0461	Yes	Yes	0.88	Scrape and re-sample 0-6 for reuse of deep material.
		A3-SED-BRSA4-23-C-0-6-A-0617	6	Sediment	6/24/2017	6/29/2017	6/29/2017	0.78	Yes	N/A		
		A3-SO-BRSA4-23-C-0-6-A-0617	6	Soil	6/24/2017	6/29/2017	6/29/2017	2.6	Yes	N/A		
		A3-SO-BRSA4-23-C-0-18-A-0617	18	Soil	6/24/2017	6/29/2017	6/29/2017	< 0.054	Yes	Yes		
4	24	A3-SO-BRSA4-23-C-0-18-A-0617-SP	18	Soil	6/24/2017	6/27/2017	6/28/2017	0.077	Yes	Yes	1.36	Based on split sample, scrape and resample 0-6"
		A3-SED-BRSA4-24-C-0-6-A-0617	6	Sediment	6/24/2017	6/29/2017	6/29/2017	0.30	Yes	N/A		
		A3-SED-BRSA4-24-C-0-6-B-0617	6	Sediment	6/29/2017	7/3/2017	7/3/2017	0.32	Yes	N/A		
		A3-SED-BRSA4-24-C-0-6-A-0617-SP	6	Sediment	6/24/2017	6/28/2017	6/28/2017	1.7	No	N/A		
4	25	A3-SO-BRSA4-24-C-0-6-A-0617	6	Soil	6/24/2017	6/29/2017	6/29/2017	0.0821	Yes	N/A	4.26	
		A3-SO-BRSA4-24-C-0-18-A-0617	18	Soil	6/24/2017	6/29/2017	6/29/2017	0.0701	Yes	Yes		
		A3-SO-BRSA4-25-C-0-6-A-0717	6	Soil	7/7/2017	7/11/2017	7/11/2017	0.24	Yes	N/A		
4	26	A3-SO-BRSA4-25-C-0-18-A-0717	18	Soil	7/7/2017	7/11/2017	7/11/2017	< 0.057	Yes	Yes	3.90	
		A3-SO-BRSA4-26-C-0-6-A-0717	6	Soil	7/7/2017	7/11/2017	7/11/2017	< 0.060	Yes	N/A		
4	27	A3-SO-BRSA4-26-C-0-18-A-0717	18	Soil	7/7/2017	7/11/2017	7/11/2017	< 0.062	Yes	Yes	4.15	
		A3-SO-BRSA4-27-C-0-6-A-0717	6	Soil	7/7/2017	7/11/2017	7/11/2017	< 0.045	Yes	N/A		
4	28	A3-SO-BRSA4-27-C-0-18-A-0717	18	Soil	7/7/2017	7/11/2017	7/11/2017	0.18	Yes	Yes	4.25	
		A3-SO-BRSA4-28-C-0-6-A-0717	6	Soil	7/11/2017	7/13/2017	7/13/2017	0.23	Yes	N/A		
		A3-SO-BRSA4-28-C-0-6-A-0717-SP	6	Soil	7/11/2017	7/13/2017	7/13/2017	0.57	Yes	N/A		
4	29	A3-SO-BRSA4-28-C-0-18-A-0717	18	Soil	7/11/2017	7/13/2017	7/13/2017	0.0831	Yes	Yes	4.06	Split sample collected by EPA/START
		A3-SO-BRSA4-29-C-0-6-A-0717	6	Soil	7/11/2017	7/13/2017	7/13/2017	0.3	Yes	N/A		
		A3-SO-BRSA4-29-C-0-6-A-0717-SP	6	Soil	7/11/2017	7/13/2017	7/13/2017	0.72	Yes	N/A		
4	30	A3-SO-BRSA4-29-C-0-18-A-0717	18	Soil	7/11/2017	7/13/2017	7/13/2017	< 0.054	Yes	Yes	3.72	Split sample collected by EPA/START
		A3-SO-BRSA4-30-C-0-6-A-0717	6	Soil	7/11/2017	7/13/2017	7/13/2017	0.28	Yes	N/A		
		A3-SO-BRSA4-30-C-0-18-A-0717	18	Soil	7/11/2017	7/13/2017	7/13/2017	< 0.037	Yes	Yes		
4	31	A3-SO-BRSA4-30-C-0-18-A-0717-SP	18	Soil	7/11/2017	7/13/2017	7/13/2017	0.27	Yes	Yes	3.75	Split sample collected by EPA/START
		A3-SO-BRSA4-31-C-0-6-A-0717	6	Soil	7/11/2017	7/13/2017	7/13/2017	< 0.069	Yes	N/A		
		A3-SO-BRSA4-31-C-0-18-A-0717	18	Soil	7/11/2017	7/13/2017	7/13/2017	< 0.047	Yes	Yes		
4	32	A3-SO-BRSA4-32-C-0-6-A-0717	6	Soil	7/12/2017	7/14/2017	7/14/2017	0.61	Yes	N/A	2.80	
		A3-SO-BRSA4-32-C-0-18-A-0717	18	Soil	7/12/2017	7/14/2017	7/14/2017	< 0.057	Yes	Yes		
4	33	A3-SO-BRSA4-33-C-0-6-A-0717	6	Soil	7/12/2017	7/14/2017	7/14/2017	< 0.060	Yes	N/A	2.94	
		A3-SO-BRSA4-33-C-0-18-A-0717	18	Soil	7/12/2017	7/14/2017	7/14/2017	< 0.066	Yes	Yes		
4	34	A3-SO-BRSA4-34-C-0-6-A-0717	6	Soil	7/14/2017	7/18/2017	7/18/2017	< 0.067	Yes	N/A	2.57	
		A3-SO-BRSA4-34-C-0-18-A-0717	18	Soil	7/14/2017	7/18/2017	7/18/2017	< 0.068	Yes	Yes		
4	35	A3-SO-BRSA4-35-C-0-6-A-0717	6	Soil	7/14/2017	7/18/2017	7/18/2017	0.0851	Yes	N/A	2.90	
		A3-SO-BRSA4-35-C-0-18-A-0717	18	Soil	7/14/2017	7/18/2017	7/18/2017	< 0.071	Yes	Yes		
4	36	A3-SO-BRSA4-36-C-0-6-A-0717	6	Soil	7/14/2017	7/18/2017	7/18/2017	0.0711	Yes	N/A	2.78	
		A3-SO-BRSA4-36-C-0-18-A-0717	18	Soil	7/14/2017	7/18/2017	7/18/2017	< 0.067	Yes	Yes		
		A3-SO-BRSA4-37-C-0-6-A-0717	6	Soil	7/17/2017	7/19/2017	7/19/2017	< 0.069	Yes	N/A		
4	37	A3-SO-BRSA4-37-C-0-18-A-0717	18	Soil	7/17/2017	7/19/2017	7/19/2017	< 0.068	Yes	Yes	2.71	Split sample collected by EPA/START
		A3-SO-BRSA4-37-C-0-18-A-0717-SP	18	Soil	7/17/2017	7/19/2017	7/19/2017	< 0.060	Yes	Yes		
		A3-SO-BRSA4-38-C-0-6-A-0717	6	Soil	7/17/2017	7/19/2017	7/19/2017	0.16	Yes	N/A		
4	38	A3-SO-BRSA4-38-C-0-18-A-0717	18	Soil	7/17/2017	7/19/2017	7/19/2017	< 0.065	Yes	Yes	1.69	Split sample collected by EPA/START Duplicate of split sample collected by EPA/START
		A3-SO-BRSA4-38-C-0-18-A-0717-SP	18	Soil	7/17/2017	7/19/2017	7/19/2017	0.37	Yes	Yes		
		A3-SO-BRSA4-38-C-0-18-A-0717-SP-D	18	Soil	7/17/2017	7/19/2017	7/19/2017	0.48	Yes	Yes		
4	39	A3-SO-BRSA4-39-C-0-6-A-0717	6	Soil	7/17/2017	7/19/2017	7/19/2017	0.72	Yes	N/A	1.79	Split sample collected by EPA/START
		A3-SO-BRSA4-39-C-0-18-A-0717	18	Soil	7/17/2017	7/19/2017	7/19/2017	< 0.066	Yes	Yes		
		A3-SO-BRSA4-39-C-0-18-A-0717-SP	18	Soil	7/17/2017	7/19/2017	7/19/2017	2.4	Yes	No		
4	40	A3-SO-BRSA4-40-C-0-6-A-0717	6	Soil	7/19/2017	7/21/2017	7/21/2017	< 0.072	Yes	N/A	4.31	
		A3-SO-BRSA4-40-C-0-18-A-0717	18	Soil	7/19/2017	7/21/2017	7/21/2017	< 0.054	Yes	Yes		
4	41	A3-SO-BRSA4-41-C-0-6-A-0717	6	Soil	7/20/2017	7/24/2017	7/24/2017	0.0801	Yes	N/A	4.23	
4	42	A3-SO-BRSA4-42-C-0-6-A-0717	6	Soil	7/20/2017	7/24/2017	7/24/2017	< 0.058	Yes	N/A	4.14	
4	43	A3-SO-BRSA4-43-C-0-6-A-0717	6	Soil	7/21/2017	7/25/2017	7/25/2017	< 0.072	Yes	N/A	2.86	
4	44	A3-SED-BRSA4-44-C-0-6-A-0817	6	Sediment	8/21/2017	8/22/2017	8/23/2017	1.0	No	N/A	1.97	Re-sampling required after additional excavation.
		A3-SED-BRSA4-44-C-0-6-B-0817	6	Sediment	8/24/2017	8/25/2017	8/28/2017	0.19	Yes	N/A		
		A3-SO-BRSA4-44-C-0-6-A-0817	6	Soil	8/21/2017	8/22/2017	8/23/2017	0.0651	Yes	N/A		
		A3-SO-BRSA4-44-C-0-18-A-0817	18	Soil	8/21/2017	8/22/2017	8/23/2017	< 0.057	Yes	Yes		
4	45	A3-SED-BRSA4-45-C-0-6-A-0817	6	Sediment	8/21/2017	8/22/2017	8/23/2017	4.8	No	N/A	1.41	Re-sampling required after additional excavation.
		A3-SED-BRSA4-45-C-0-6-B-0817	6	Sediment	8/24/2017	8/25/2017	8/28/2017	0.0741	Yes	N/A		
		A3-SO-BRSA4-45-C-0-6-A-0817	6	Soil	8/21/2017	8/22/2017	8/23/2017	0.39	Yes	N/A		
		A3-SO-BRSA4-45-C-0-18-A-0817	18	Soil	8/21/2017	8/22/2017	8/23/2017	< 0.045	Yes	Yes		
4	46	A3-SED-BRSA4-46-C-0-6-A-0817	6	Sediment	8/18/2017	8/22/2017	8/22/2017	2.3	No	N/A	1.45	Re-sampling required after additional excavation.
		A3-SED-BRSA4-46-C-0-6-B-0817	6	Sediment	8/24/2017	8/25/2017	8/28/2017	0.13	Yes	N/A		
		A3-SO-BRSA4-46-C-0-6-A-0817	6	Soil	8/18/2017	8/22/2017	8/22/2017	0.36	Yes	N/A		
		A3-SO-BRSA4-46-C-0-18-A-0817	18	Soil	8/18/2017	8/22/2017	8/22/2017	0.16	Yes	Yes		

Table 3
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 4 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)	Sample Description
4	47	A3-SED-BRSA4-47-C-0-6-A-0717	6	Sediment	7/28/2017	7/31/2017	8/1/2017	0.72	Yes	N/A	1.73	Split sample collected by EPA/START Duplicate of split sample collected by EPA/START
		A3-SED-BRSA4-47-C-0-6-A-0717-SP	6	Sediment	7/28/2017	7/31/2017	8/1/2017	0.59	Yes	N/A		
		A3-SED-BRSA4-47-C-0-6-A-0717-SP-D	6	Sediment	7/28/2017	7/31/2017	8/1/2017	0.69	Yes	N/A		
		A3-SO-BRSA4-47-C-0-6-A-0717	6	Soil	7/28/2017	7/31/2017	8/1/2017	< 0.039	Yes	N/A	3.73	Split sample collected by EPA/START
		A3-SO-BRSA4-47-C-0-6-A-0717-SP	6	Soil	7/28/2017	7/31/2017	8/1/2017	< 0.18	Yes	N/A		
		A3-SO-BRSA4-47-C-0-18-A-0717	18	Soil	7/28/2017	7/31/2017	8/1/2017	< 0.046	Yes	Yes		
		A3-SO-BRSA4-47-C-0-18-A-0717-SP	18	Soil	7/28/2017	7/31/2017	8/1/2017	< 0.18	Yes	Yes		
4	48	A3-SED-BRSA4-48-C-0-6-A-0717	6	Sediment	7/26/2017	7/27/2017	7/27/2017	0.14	Yes	N/A	1.58	
		A3-SO-BRSA4-48-C-0-6-A-0717	6	Soil	7/26/2017	7/27/2017	7/27/2017	7.3	No	N/A	3.33	Re-sampling required after additional excavation.
		A3-SO-BRSA4-48-C-0-6-B-0817	6	Soil	8/2/2017	8/3/2017	8/3/2017	0.091	Yes	N/A		
4	49	A3-SED-BRSA4-49-C-0-6-A-0717	6	Sediment	7/19/2017	7/21/2017	7/21/2017	2.0	No	N/A	1.54	Re-sampling required after additional excavation.
		A3-SED-BRSA4-49-C-0-6-B-0717	6	Sediment	7/25/2017	7/26/2017	7/26/2017	0.0661	Yes	N/A		
		A3-SO-BRSA4-49-C-0-6-A-0717	6	Soil	7/25/2017	7/26/2017	7/26/2017	< 0.034	Yes	N/A	2.45	
		A3-SO-BRSA4-49-C-0-18-A-0717	18	Soil	7/25/2017	7/26/2017	7/26/2017	< 0.033	Yes	Yes		
		A3-SO-BRSA4-49-C-0-18-A-0717	18	Soil	7/25/2017	7/26/2017	7/26/2017	< 0.033	Yes	Yes		
4	50	A3-SED-BRSA4-50-C-0-6-A-0717	6	Sediment	7/19/2017	7/21/2017	7/21/2017	0.26	Yes	N/A	0.89	
		A3-SO-BRSA4-50-C-0-6-A-0717	6	Soil	7/24/2017	7/26/2017	7/26/2017	< 0.036	Yes	N/A	2.99	
		A3-SO-BRSA4-50-C-0-18-A-0717	18	Soil	7/24/2017	7/26/2017	7/26/2017	0.18	Yes	Yes		
4	51	A3-SO-BRSA4-51-C-0-6-A-0717	6	Soil	7/27/2017	7/31/2017	8/1/2017	< 0.042	Yes	N/A		
5	1	A3-SED-BRSA5-01-C-0-6-A-0717	6	Sediment	7/18/2017	7/20/2017	7/21/2017	0.14	Yes	N/A		Sample from BRSA 5 stream tube

Notes:

1. Bank soil is below criteria (i.e. below the cleanup goal) if it less than 5 mg/kg. Stream tube sediment is below criteria if it is less than 1 mg/kg.
2. Material is approved for reuse if the total PCB concentration is less than 1 mg/kg. Only subsurface soil will be slated for reuse.
3. Represents the approximate remediation cut depth or the depth of material removed to achieve confirmation sample result < 5 mg/kg (soil) and <1 mg/kg (sediment). Confirmation samples collected to demonstrate achievement of the clean-up goal were collected from the surface of the excavation (0-6 inches)

BRSA = Bank Removal Stabilization Area

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

mg/kg = Milligrams per kilogram

N/A = Not applicable

Table 4
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 6 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)
6	1	A3-SO-BRSA6-01-C-0-6-A-0817	6	Soil	8/7/2017	8/10/2017	8/10/2017	0.035J	Yes	N/A	2.61
		A3-SO-BRSA6-01-C-0-18-A-0817	18	Soil	8/7/2017	8/10/2017	8/10/2017	< 0.030	Yes	Yes	
6	2	A3-SO-BRSA6-02-C-0-6-A-0817	6	Soil	8/9/2017	8/11/2017	8/11/2017	0.68	Yes	N/A	2.43
		A3-SO-BRSA6-02-C-0-18-A-0817	18	Soil	8/9/2017	8/11/2017	8/11/2017	0.075J	Yes	Yes	
6	3	A3-SO-BRSA6-03-C-0-6-A-0817	6	Soil	8/10/2017	8/14/2017	8/14/2017	< 0.052	Yes	N/A	2.03
		A3-SO-BRSA6-03-C-0-18-A-0817	18	Soil	8/10/2017	8/14/2017	8/14/2017	< 0.042	Yes	Yes	
6	4	A3-SO-BRSA6-04-C-0-6-A-0817	6	Soil	8/14/2017	8/16/2017	8/16/2017	0.090	Yes	N/A	3.56
		A3-SO-BRSA6-04-C-0-18-A-0817	18	Soil	8/14/2017	8/16/2017	8/16/2017	0.052J	Yes	Yes	
6	5	A3-SO-BRSA6-05-C-0-6-A-0817	6	Soil	8/14/2017	8/16/2017	8/16/2017	< 0.044	Yes	N/A	3.30
		A3-SO-BRSA6-05-C-0-18-A-0817	18	Soil	8/14/2017	8/16/2017	8/16/2017	< 0.035	Yes	Yes	
6	6	A3-SO-BRSA6-06-C-0-6-A-0817	6	Soil	8/17/2017	8/21/2017	8/21/2017	0.46	Yes	N/A	3.60
		A3-SO-BRSA6-06-C-0-6-A-0817-SP	6	Soil	8/17/2017	8/21/2017	8/21/2017	1.90	Yes	N/A	
		A3-SO-BRSA6-06-C-0-18-A-0817	18	Soil	8/17/2017	8/21/2017	8/21/2017	0.039J	Yes	Yes	
6	7	A3-SO-BRSA6-06-C-0-18-A-0817-SP	6	Soil	8/17/2017	8/21/2017	8/21/2017	0.098J	Yes	Yes	6.10
		A3-SO-BRSA6-07-C-0-6-A-0817	6	Soil	8/21/2017	8/23/2017	8/23/2017	< 0.032	Yes	N/A	
6	8	A3-SO-BRSA6-07-C-0-18-A-0817	18	Soil	8/21/2017	8/23/2017	8/23/2017	< 0.031	Yes	Yes	2.64
		A3-SO-BRSA6-08-C-0-6-A-0817	6	Soil	8/23/2017	8/25/2017	8/28/2017	1.00	Yes	N/A	
6	9	A3-SO-BRSA6-08-C-0-18-A-0817	18	Soil	8/23/2017	8/25/2017	8/28/2017	1.10	Yes	No	3.88
		A3-SO-BRSA6-09-C-0-6-A-0817	6	Soil	8/25/2017	8/29/2017	8/29/2017	8.70	No	N/A	
6	10	A3-SO-BRSA6-09-C-0-6-B-0917	6	Soil	9/6/2017	9/8/2017	9/8/2017	0.47	Yes	N/A	4.85
		A3-SO-BRSA6-09-C-0-18-A-0817	18	Soil	8/25/2017	8/29/2017	8/29/2017	7.10	No	No	
		A3-SO-BRSA6-10-C-0-6-A-0817	6	Soil	8/25/2017	8/29/2017	8/29/2017	7.10	No	N/A	
6	11	A3-SO-BRSA6-10-C-0-6-B-0917	6	Soil	9/6/2017	9/8/2017	9/8/2017	0.32	Yes	N/A	3.41
		A3-SO-BRSA6-10-C-0-18-A-0817	18	Soil	8/25/2017	8/29/2017	8/29/2017	47.0	No	No	
		A3-SO-BRSA6-11-C-0-6-A-0817	6	Soil	8/21/2017	8/23/2017	8/23/2017	17.4	No	N/A	
6	12	AS-SO-BRSA6-11-C-0-6-B-0817	6	Soil	8/29/2017	8/31/2017	8/31/2017	2.6	Yes	N/A	3.49
		A3-SO-BRSA6-11-C-0-18-A-0817	18	Soil	8/21/2017	8/23/2017	8/23/2017	7.5	No	No	
		A3-SO-BRSA6-12-C-0-6-A-0817	6	Soil	8/21/2017	8/23/2017	8/23/2017	17.2	No	N/A	
6	13	A3-SO-BRSA6-12-C-0-6-B-0917	6	Soil	9/7/2017	9/11/2017	9/11/2017	0.64	Yes	N/A	2.83
		A3-SO-BRSA6-12-C-0-18-A-0817	18	Soil	8/21/2017	8/23/2017	8/23/2017	5.3	No	No	
		A3-SO-BRSA6-13-C-0-6-A-0817	6	Soil	8/22/2017	8/24/2017	8/24/2017	6.2	No	N/A	
6	14	A3-SO-BRSA6-13-C-0-6-B-0917	6	Soil	9/7/2017	9/11/2017	9/11/2017	0.61	Yes	N/A	2.40
		A3-SO-BRSA6-13-C-0-18-A-0817	18	Soil	8/22/2017	8/24/2017	8/24/2017	4.7	No	No	
		A3-SO-BRSA6-14-C-0-6-A-0817	6	Soil	8/23/2017	8/25/2017	8/28/2017	0.63	Yes	N/A	
6	15	A3-SO-BRSA6-14-C-0-18-A-0817	18	Soil	8/23/2017	8/25/2017	8/28/2017	0.080J	Yes	Yes	2.69
		A3-SO-BRSA6-15-C-0-6-A-0817	6	Soil	8/23/2017	8/28/2017	8/28/2017	4.2	Yes	N/A	
6	15	A3-SO-BRSA6-15-C-0-18-A-0817	18	Soil	8/23/2017	8/28/2017	8/28/2017	2.6	Yes	No	2.69

Table 4
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 6 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)
6	16	A3-SO-BRSA6-16-C-0-6-A-0817	6	Soil	8/23/2017	8/28/2017	8/28/2017	5.8	No	N/A	3.41
		A3-SO-BRSA6-16-C-0-6-B-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.41	Yes	N/A	
		A3-SO-BRSA6-16-C-0-18-A-0817	18	Soil	8/23/2017	8/28/2017	8/28/2017	3.9	Yes	No	
6	17	A3-SO-BRSA6-17-C-0-6-A-0817	6	Soil	8/23/2017	8/28/2017	8/28/2017	4.6	Yes	N/A	2.66
		A3-SO-BRSA6-17-C-0-18-A-0817	18	Soil	8/23/2017	8/28/2017	8/28/2017	2.1	Yes	No	
6	18	A3-SO-BRSA6-18-C-0-6-A-0817	6	Soil	8/25/2017	8/29/2017	8/29/2017	3.9	Yes	N/A	2.75
		A3-SO-BRSA6-18-C-0-18-A-0817	18	Soil	8/25/2017	8/29/2017	8/29/2017	3.6	Yes	No	
6	19	A3-SO-BRSA6-19-C-0-6-A-0817	6	Soil	8/25/2017	8/29/2017	8/29/2017	4.5	Yes	N/A	2.62
		A3-SO-BRSA6-19-C-0-18-A-0817	18	Soil	8/25/2017	8/29/2017	8/29/2017	4.1	Yes	No	
6	20	A3-SO-BRSA6-20-C-0-6-A-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.35	Yes	N/A	3.67
		A3-SO-BRSA6-20-C-0-6-A-0917-SP	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.71	Yes	N/A	
6	21	A3-SO-BRSA6-21-C-0-6-A-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.57	Yes	N/A	3.85
		A3-SO-BRSA6-21-C-0-6-A-0917-SP	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.93	Yes	N/A	
6	22	A3-SO-BRSA6-22-C-0-6-A-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.69	Yes	N/A	1.76
6	23	A3-SO-BRSA6-23-C-0-6-A-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.14	Yes	N/A	1.30
		A3-SO-BRSA6-23-C-0-6-A-0917-SP	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.27	Yes	N/A	
6	24	A3-SO-BRSA6-24-C-0-6-A-0917	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.22	Yes	N/A	1.64
		A3-SO-BRSA6-24-C-0-6-A-0917-SP	6	Soil	9/12/2017	9/14/2017	9/19/2017	0.38	Yes	N/A	
6	25	A3-SO-BRSA6-25-C-0-6-A-0917	6	Soil	9/14/2017	9/18/2017	9/18/2017	1.0	Yes	N/A	1.36
		A3-SO-BRSA6-25-C-0-18-A-0917	18	Soil	9/14/2017	9/18/2017	9/18/2017	0.78	Yes	No	
6	26	A3-SO-BRSA6-26-C-0-6-A-0917	6	Soil	9/14/2017	9/18/2017	9/18/2017	1.9	Yes	N/A	2.14
6	27	A3-SO-BRSA6-27-C-0-6-A-0917	6	Soil	9/14/2017	9/18/2017	9/18/2017	0.097	Yes	N/A	2.91
6	28	A3-SO-BRSA6-28-C-0-6-A-0917	6	Soil	9/18/2017	9/20/2017	9/20/2017	< 0.028		N/A	3.24
6	29	A3-SO-BRSA6-29-C-0-6-A-0917	6	Soil	9/8/2017	9/12/2017	9/12/2017	< 0.029	Yes	N/A	3.33
6	30	A3-SO-BRSA6-30-C-0-6-A-0917	6	Soil	9/8/2017	9/12/2017	9/12/2017	0.047J	Yes	N/A	3.08
6	31	A3-SO-BRSA6-31-C-0-6-A-0917	6	Soil	9/8/2017	9/12/2017	9/12/2017	< 0.029	Yes	N/A	3.13
6	32	A3-SO-BRSA6-32-C-0-6-A-0917	6	Soil	9/8/2017	9/12/2017	9/12/2017	< 0.035	Yes	N/A	3.83
6	33	A3-SO-BRSA6-33-C-0-6-A-0917	6	Soil	9/16/2017	9/20/2017	9/20/2017	10.1	No	N/A	4.58
		A3-SO-BRSA6-33-C-0-6-B-0917	6	Soil	9/27/2017	9/29/2017	9/29/2017	0.69	Yes	N/A	
		A3-SO-BRSA6-33-C-0-6-B-0917-SP	6	Soil	9/27/2017	9/29/2017	9/29/2017	2.2	Yes	N/A	
6	34	A3-SO-BRSA6-34-C-0-6-A-0917	6	Soil	9/16/2017	9/20/2017	9/20/2017	0.23	Yes	N/A	3.22
6	35	A3-SO-BRSA6-35-C-0-6-A-0917	6	Soil	9/18/2017	9/20/2017	9/20/2017	< 0.061	Yes	N/A	3.02
6	36	A3-SO-BRSA6-36-C-0-6-A-0917	6	Soil	9/18/2017	9/20/2017	9/20/2017	6.7	No	N/A	3.15
		A3-SO-BRSA6-36-C-0-6-B-0917	6	Soil	9/27/2017	9/29/2017	9/29/2017	0.30	Yes	N/A	
		A3-SO-BRSA6-36-C-0-6-B-0917-SP	6	Soil	9/27/2017	9/29/2017	9/29/2017	0.7	Yes	N/A	

Table 4
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BRSA 6 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)
6	37	A3-SO-BRSA6-37-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.24	Yes	N/A	2.52
		A3-SO-BRSA6-37-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	0.13	Yes	Yes	
6	38	A3-SO-BRSA6-38-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	1.6	Yes	N/A	2.51
		A3-SO-BRSA6-38-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	0.74	Yes	No	
6	39	A3-SO-BRSA6-39-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	4.8	Yes	N/A	1.98
		A3-SO-BRSA6-39-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	0.063J	Yes	No	
6	40	A3-SO-BRSA6-40-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.054	Yes	N/A	2.00
		A3-SO-BRSA6-40-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.056	Yes	Yes	
6	41	A3-SO-BRSA6-41-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.25	Yes	N/A	2.23
		A3-SO-BRSA6-41-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.056	Yes	Yes	
6	42	A3-SO-BRSA6-42-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.57	Yes	N/A	2.10
		A3-SO-BRSA6-42-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.055	Yes	Yes	
6	43	A3-SO-BRSA6-43-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.28	Yes	N/A	2.62
		A3-SO-BRSA6-43-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.056	Yes	Yes	
6	44	A3-SO-BRSA6-44-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.49	Yes	N/A	2.22
		A3-SO-BRSA6-44-C-0-6-A-0917-SP	6	Soil	9/21/2017	9/25/2017	9/25/2017	3.20	Yes	N/A	
		A3-SO-BRSA6-44-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.16	Yes	Yes	
6	45	A3-SO-BRSA6-44-C-0-18-A-0917-SP	18	Soil	9/21/2017	9/25/2017	9/25/2017	0.65	Yes	N/A	2.69
		A3-SO-BRSA6-45-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	1.10	Yes	N/A	
6	46	A3-SO-BRSA6-45-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.24	Yes	No	2.81
		A3-SO-BRSA6-46-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	2.80	Yes	N/A	
6	47	A3-SO-BRSA6-46-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.24	Yes	No	3.22
		AS-SO-BRSA6-47-C-0-6-A-0917	6	Soil	9/27/2017	9/29/2017	9/29/2017	2.3	Yes	N/A	
		AS-SO-BRSA6-47-C-0-6-A-0917-SP	6	Soil	9/27/2017	9/29/2017	9/29/2017	5.4	No	N/A	
		AS-SO-BRSA6-47-C-0-6-B-1017	6	Soil	10/11/2017	10/16/2017	10/16/2017	0.63	Yes	N/A	
		AS-SO-BRSA6-47-C-0-6-C-1017	6	Soil	10/20/2017	10/25/2017	10/25/2017	0.22	Yes	N/A	
6	48	AS-SO-BRSA6-47-C-0-18-B-1017	18	Soil	10/11/2017	10/16/2017	10/16/2017	10.4	No	No	3.64
		AS-SO-BRSA6-47-C-0-18-C-1017	18	Soil	10/20/2017	10/25/2017	10/25/2017	0.11J	Yes	Yes	
		A3-SO-BRSA6-48-C-0-6-A-1017	6	Soil	10/10/2017	10/13/2017	10/12/2017	2.8	Yes	N/A	
		A3-SO-BRSA6-48-C-0-6-A-1017-SP	6	Soil	10/10/2017	10/12/2017	10/12/2017	2.0	Yes	N/A	
		A3-SO-BRSA6-48-C-0-18-A-1017	18	Soil	10/10/2017	10/13/2017	10/12/2017	0.86	Yes	No	
6	49	A3-SO-BRSA6-49-C-0-6-A-1017	6	Soil	10/2/2017	10/5/2017	10/5/2017	2.9	Yes	N/A	3.88
		A3-SO-BRSA6-49-C-0-6-B-1017	6	Soil	10/9/2017	10/12/2017	10/12/2017	0.50	Yes	N/A	
		A3-SO-BRSA6-49-C-0-18-A-1017	18	Soil	10/2/2017	10/5/2017	10/5/2017	0.33	Yes	No	
		A3-SO-BRSA6-49-C-0-18-B-1017	18	Soil	10/9/2017	10/12/2017	10/12/2017	0.097J	Yes	Yes	

Table 4
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BRSA 6 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)
6	50	A3-SO-BRSA6-50-C-0-6-A-1017	6	Soil	10/2/2017	10/5/2017	10/5/2017	5.7	No	N/A	4.15
		A3-SO-BRSA6-50-C-0-6-B-1017	6	Soil	10/9/2017	10/12/2017	10/12/2017	< 0.056	Yes	N/A	
		A3-SO-BRSA6-50-C-0-18-A-1017	18	Soil	10/2/2017	10/5/2017	10/5/2017	0.48	Yes	No	
		A3-SO-BRSA6-50-C-0-18-B-1017	18	Soil	10/9/2017	10/12/2017	10/12/2017	0.16	Yes	Yes	
6	51	A3-SO-BRSA6-51-C-0-6-A-1017	6	Soil	10/6/2017	10/11/2017	10/10/2017	< 0.065	Yes	N/A	3.70
		A3-SO-BRSA6-51-C-0-18-A-1017	18	Soil	10/6/2017	10/11/2017	10/10/2017	< 0.060	Yes	Yes	
6	52	A3-SO-BRSA6-52-C-0-6-A-1017	6	Soil	10/6/2017	10/11/2017	10/10/2017	1.1	Yes	N/A	3.17
		A3-SO-BRSA6-52-C-0-6-B-1017	6	Soil	10/23/2017	10/25/2017	10/25/2017	0.33	Yes	N/A	
		A3-SO-BRSA6-52-C-0-18-A-1017	18	Soil	10/6/2017	10/11/2017	10/10/2017	0.29	Yes	No	
		A3-SO-BRSA6-52-C-0-18-B-1017	18	Soil	10/23/2017	10/25/2017	10/25/2017	0.29	Yes	Yes	
6	53	A3-SO-BRSA6-53-C-0-6-A-1017	6	Soil	10/6/2017	10/11/2017	10/10/2017	0.24	Yes	N/A	3.35
		A3-SO-BRSA6-53-C-0-18-A-1017	18	Soil	10/6/2017	10/11/2017	10/10/2017	< 0.062	Yes	Yes	
6	54*	A3-SO-BRSA6-54-C-0-6-A-1017	6	Soil	10/6/2017	10/11/2017	10/10/2017	21.8	No	N/A	5.83
		A3-SO-BRSA6-54-C-0-6-B-1017	6	Soil	10/23/2017	10/25/2017	10/25/2017	13.5	No	N/A	
		A3-SO-BRSA6-54-C-0-6-C-1017	6	Soil	10/27/2017	10/31/2017	10/31/2017	1.1	Yes	N/A	
		A3-SO-BRSA6-54-C-0-18-A-1017	18	Soil	10/6/2017	10/11/2017	10/10/2017	9.8	No	No	
		A3-SO-BRSA6-54-C-0-18-B-1017	18	Soil	10/23/2017	10/25/2017	10/25/2017	0.79	Yes	No	

Notes:

1. Bank soil is below criteria (i.e. below the cleanup goal) if it less than 5 mg/kg. Stream tube sediment is below criteria if it is less than 1 mg/kg.
2. Material is approved for reuse if the total PCB concentration is less than 1 mg/kg. Only subsurface soil will be slated for reuse.
3. Represents the total remediation cut depth or the depth of material removed to achieve confirmation sample result < 5 mg/kg (soil) and < 1 mg/kg (sediment).

BRSA = Bank Removal Stabilization Area

J = Estimated concentration is above the adjusted method detection limit and below the adjusted reporting limit

mg/kg = Milligrams per kilogram

N/A = Not applicable

* Grid 54 includes area from former Grid 1 of BRSA 7 (which therefore no longer exists), due to irregular grid shape.

Table 5
BRSA 7 Confirmation Sample Tracking

BRSA	Grid	Sample ID	End Depth (inches)	Media (Soil/Sediment)	Sample Collected	Results Expected	Results Reported	Total PCBs (mg/kg)	Below Criteria ¹	Approved for Reuse ²	Remediation Depth ³ (feet)	Notes/Sample Description
7	1	N/A	--	--	--	--	--	--	--	--	--	Grid 1 no longer exists as it's area is included in BRSA 6 - Grid 54, due to its irregular grid shape.
7	2	A3-SO-BRSA7-2-C-0-6-A-1217	6	Soil	12/4/2017	12/7/2017	12/7/2017	1.3	Yes	N/A		
		A3-SO-BRSA7-2-C-0-6-A-1217-SP	6	Soil	12/4/2017	12/7/2017	12/7/2017	2.6	Yes	N/A		Split Sample collected by START
		A3-SO-BRSA7-2-C-0-18-A-1217	18	Soil	12/4/2017	12/7/2017	12/7/2017	0.91	Yes	No		Additional excavation required for reuse.
7	3	A3-SO-BRSA7-2-C-0-18-A-1217-SP	18	Soil	12/4/2017	12/7/2017	12/7/2017	0.43	Yes	No		Split Sample collected by START
		A3-SO-BRSA7-3-C-0-6-A-1217	6	Soil	12/4/2017	12/7/2017	12/7/2017	0.35	Yes	N/A		
		A3-SO-BRSA7-3-C-0-6-A-1217-SP	6	Soil	12/4/2017	12/7/2017	12/7/2017	0.064	Yes	N/A		Split Sample collected by START
		A3-SO-BRSA7-3-C-0-14-A-1217	14	Soil	12/4/2017	12/7/2017	12/7/2017	<0.069	Yes	Yes		
		A3-SO-BRSA7-3-C-0-14-A-1217-SP	14	Soil	12/4/2017	12/7/2017	12/7/2017	0.089	Yes	Yes		Split Sample collected by START
7	4	A3-SO-BRSA7-4-C-0-6-A-1217	6	Soil	12/4/2017	12/7/2017	12/7/2017	<0.071	Yes	N/A		
		A3-SO-BRSA7-4-C-0-16-A-1217	16	Soil	12/4/2017	12/7/2017	12/7/2017	<0.069	Yes	Yes		
7	5	A3-SO-BRSA7-5-C-0-6-A-1217	6	Soil	12/4/2017	12/7/2017	12/7/2017	<0.067	Yes	N/A		
		A3-SO-BRSA7-5-C-0-17-A-1217	17	Soil	12/4/2017	12/7/2017	12/7/2017	0.098J	Yes	Yes		
7	6	A3-SO-BRSA7-6-C-0-6-A-1217	6	Soil	12/6/2017	12/11/2017	12/11/2017	0.20	Yes	N/A		
		A3-SO-BRSA7-6-C-0-12-A-1217	12	Soil	12/6/2017	12/11/2017	12/11/2017	<0.067	Yes	Yes		
7	7	A3-SO-BRSA7-7-C-0-6-A-1217	6	Soil	12/6/2017	12/11/2017	12/11/2017	0.14	Yes	N/A		
		A3-SO-BRSA7-7-C-0-12-A-1217	12	Soil	12/6/2017	12/11/2017	12/11/2017	0.34	Yes	Yes		
7	8	A3-SED-BRSA7-8-C-0-6-A-1217	6	Sediment	12/11/2017	12/13/2017	12/13/2017	0.21	Yes	N/A		
		A3-SO-BRSA7-8-C-0-6-A-1217	6	Soil	12/19/2017	12/22/2017	12/22/2017	0.20	Yes	N/A		
		A3-SO-BRSA7-8-C-0-24-A-1217	24	Soil	12/19/2017	12/22/2017	12/22/2017	<0.072	Yes	Yes		
7	9	A3-SED-BRSA7-9-C-0-6-A-1217	6	Sediment	12/12/2017	12/14/2017	12/14/2017	2.6	No	N/A		Further remediation excavation followed, followed by re-sampling.
		A3-SED-BRSA7-9-C-0-6-B-0118	6	Sediment	1/9/2018	1/11/2018	1/11/2018	0.33	Yes	N/A		
		A3-SO-BRSA7-9-C-0-6-A-1217	6	Soil	12/19/2017	12/22/2017	12/22/2017	0.40	Yes	N/A		
		A3-SO-BRSA7-9-C-0-20-A-1217	20	Soil	12/19/2017	12/22/2017	12/22/2017	0.18	Yes	Yes		
7	10	A3-SED-BRSA7-10-C-0-6-A-0118	6	Sediment	1/10/2018	1/12/2018	1/12/2018	<0.091	Yes	N/A		
		A3-SO-BRSA7-10-C-0-6-A-0118	6	Soil	1/15/2018	1/18/2018	1/19/2018	3.5	Yes	N/A		
		A3-SO-BRSA7-10-C-0-6-A-0118-SP	6	Soil	1/15/2018	1/17/2018	1/17/2018	3.2	Yes	N/A		Split Sample collected by START
		A3-SO-BRSA7-10-C-0-18-A-0118	18	Soil	1/15/2018	1/18/2018	1/19/2018	1.8	Yes	No		Additional excavation required for reuse.
7	11	A3-SO-BRSA7-10-C-0-18-A-0118-SP	18	Soil	1/15/2018	1/17/2018	1/17/2018	1.7	Yes	No		Split Sample collected by START
		A3-SED-BRSA7-11-C-0-6-A-0118	6	Sediment	1/10/2018	1/12/2018	1/12/2018	<0.065	Yes	N/A		
		A3-SO-BRSA7-11-C-0-6-A-0118	6	Soil	1/16/2018	1/22/2018	1/19/2018	2.4	Yes	N/A		
		A3-SO-BRSA7-11-C-0-24-A-0118	24	Soil	1/16/2018	1/22/2018	1/19/2018	1.1	Yes	No		Additional excavation required for reuse.
		A3-SED-BRSA7-12-C-0-6-A-0118	6	Sediment	1/12/2018	1/16/2018	1/16/2018	<0.067	Yes	N/A		
7	12	A3-SO-BRSA7-12-C-0-6-A-0118	6	Soil	1/30/2018	2/2/2018	2/5/2018	6.0	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-12-C-0-6-B-0218	6	Soil	2/6/2018	2/9/2018	2/8/2018	0.54	Yes	N/A		
		A3-SO-BRSA7-12-C-0-24-A-0118	24	Soil	1/30/2018	2/2/2018	2/5/2018	4.1	Yes	No		Additional excavation required for reuse.
7	13	A3-SED-BRSA7-13-C-0-6-A-0118	6	Sediment	1/29/2018	1/31/2018	1/31/2018	0.12	Yes	N/A		
		A3-SO-BRSA7-13-C-0-6-A-0118	6	Soil	1/18/2018	1/22/2018	1/22/2018	3.8	Yes	N/A		
		A3-SO-BRSA7-13-C-0-24-A-0118	24	Soil	1/18/2018	1/22/2018	1/22/2018	0.73	Yes	No		Additional excavation required for reuse.
7	14	A3-SO-BRSA7-14-C-0-6-A-0118	6	Soil	1/17/2018	1/18/2018	1/19/2018	5.6	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-14-C-0-24-A-0118	24	Soil	1/17/2018	1/18/2018	1/19/2018	6.5	No	No		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-14-C-0-6-B-0118	6	Soil	1/19/2018	1/22/2018	1/22/2018	0.34	Yes	N/A		
		A3-SO-BRSA7-14-C-0-18-B-0118	18	Soil	1/19/2018	1/22/2018	1/22/2018	0.25	Yes	Yes		
7	15	A3-SO-BRSA7-15-C-0-6-A-0318	6	Soil	3/28/2018	4/2/2018	4/2/2018	0.27	Yes	N/A		Excavation depth incorrect due to modelling issues on excavator; requires re-sampling after excavation depth is corrected.
		A3-SO-BRSA7-15-C-0-6-B-0418	6	Soil	4/17/2018	4/19/2018	4/19/2018	0.57	Yes	N/A		Sample collected after corrected excavation depth.
		A3-SO-BRSA7-15-C-0-6-C-0418	6	Soil	4/19/2018	4/20/2018	4/20/2018	0.28	Yes	N/A		Sample collected after receiving Grids 16 & 17 results. Anticipated high results, & re-sampled before receiving results on 4/19.
		A3-SO-BRSA7-15-C-0-18-A-0318	18	Soil	3/28/2018	4/2/2018	4/2/2018	0.50	Yes	Yes		Excavation depth incorrect due to modelling issues on excavator; requires re-sampling after excavation depth is corrected.
		A3-SO-BRSA7-15-C-0-24-A-0418	24	Soil	4/17/2018	4/19/2018	4/19/2018	0.34	Yes	Yes		Sample collected after corrected excavation depth.
7	16	A3-SO-BRSA7-16-C-0-6-A-0418	6	Soil	4/16/2018	4/18/2018	4/18/2018	2.40	Yes	N/A		
		A3-SO-BRSA7-16-C-0-6-B-0418	6	Soil	4/19/2018	4/20/2018	4/20/2018	5.5	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-16-C-0-6-C-0418	6	Soil	4/21/2018	4/23/2018	4/23/2018	0.10J	Yes	N/A		
		A3-SO-BRSA7-16-C-0-24-A-0418	24	Soil	4/17/2018	4/19/2018	4/19/2018	4.10	Yes	No		Additional excavation required for reuse.
7	17	A3-SO-BRSA7-17-C-0-6-A-0418	6	Soil	4/16/2018	4/18/2018	4/18/2018	4.10	Yes	N/A		
		A3-SO-BRSA7-17-C-0-6-B-0418	6	Soil	4/19/2018	4/20/2018	4/20/2018	0.30	Yes	N/A		
		A3-SO-BRSA7-17-C-0-36-A-0418	36	Soil	4/17/2018	4/19/2018	4/19/2018	2.80	Yes	No		Additional excavation required for reuse.
7	18	A3-SO-BRSA7-18-C-0-6-A-0418	6	Soil	4/16/2018	4/18/2018	4/18/2018	0.44	Yes	N/A		
7	26	A3-SO-BRSA7-26-C-0-6-A-0618	6	Soil	6/15/2018	6/19/2018	6/19/2018	0.54	Yes	N/A		
7	27	A3-SO-BRSA7-27-C-0-6-A-0618	6	Soil	6/15/2018	6/19/2018	6/19/2018	13.0	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-27-C-0-6-B-0618	6	Soil	6/20/2018	6/22/2018	6/22/2018	2.0	Yes	N/A		
7	28	A3-SO-BRSA7-28-C-0-6-A-0618	6	Soil	6/13/2018	6/15/2018	6/15/2018	0.86	Yes	N/A		
		A3-SED-BRSA7-28-C-0-6-A-0618	6	Sediment	6/15/2018	6/19/2018	6/19/2018	0.80	Yes	N/A		
7	29	A3-SO-BRSA7-29-C-0-6-A-0618	6	Soil	6/13/2018	6/15/2018	6/15/2018	0.30	Yes	N/A		
		A3-SED-BRSA7-29-C-0-6-A-0618	6	Sediment	6/15/2018	6/19/2018	6/19/2018	0.95	Yes	N/A		
7	30	A3-SO-BRSA7-30-C-0-6-A-0618	6	Soil	6/13/2018	6/15/2018	6/15/2018	1.90	Yes	N/A		
		A3-SED-BRSA7-30-C-0-6-A-0618	6	Sediment	6/15/2018	6/19/2018	6/19/2018	0.26	Yes	N/A		
7	31	A3-SO-BRSA7-31-C-0-6-A-0618	6	Soil	6/15/2018	6/19/2018	6/19/2018	2.4	Yes	N/A		
		A3-SED-BRSA7-31-C-0-6-A-0618	6	Sediment	6/15/2018	6/19/2018	6/19/2018	0.18	Yes	N/A		
7	37	A3-SO-BRSA7-32-C-0-6-A-0618	6	Soil	6/14/2018	6/18/2018	6/18/2018	2.9	Yes	N/A		

Table 5
BRSA 7 Confirmation Sample Tracking

BRSA	Grid	Sample ID	(inches)	(Soil/Sediment)	Collected	Expected	Reported	(mg/kg)	Criteria ¹	for Reuse ²	Depth ³ (feet)	Notes/Sample Description
7	33	A3-SED-BRSA7-32-C-0-6-A-0618	6	Sediment	6/14/2018	6/18/2018	6/18/2018	0.45	Yes	N/A		
		A3-SO-BRSA7-33-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	1.4	Yes	N/A		
		A3-SED-BRSA7-33-C-0-6-A-0618	6	Sediment	6/14/2018	6/18/2018	6/18/2018	2.2	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SED-BRSA7-33-C-0-6-B-0618	6	Sediment	6/18/2018	6/20/2018	6/20/2018	<0.063	Yes	N/A		
7	34	A3-SED-BRSA7-34-C-0-6-A-0618	6	Sediment	6/13/2018	6/15/2018	6/15/2018	1.3	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SED-BRSA7-34-C-0-6-B-0618	6	Sediment	6/16/2018	6/19/2018	6/19/2018	0.13J	Yes	N/A		
		A3-SO-BRSA7-34-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.18	Yes	N/A		
		A3-SO-BRSA7-34-C-0-6-A-0618-SP	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.179J	Yes	N/A		
7	35	A3-SO-BRSA7-35-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.098	Yes	N/A		
		A3-SO-BRSA7-35-C-0-6-A-0618-SP	6	soil	6/12/2018	6/14/2018	6/14/2018	0.120	Yes	N/A		
7	36	A3-SO-BRSA7-36-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.34	Yes	N/A		
		A3-SO-BRSA7-36-C-0-6-A-0618-SP	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.73	Yes	N/A		
7	37	A3-SO-BRSA7-37-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	<0.029	Yes	N/A		
		A3-SO-BRSA7-37-C-0-6-A-0618-SP	6	Soil	6/12/2018	6/14/2018	6/14/2018	<0.077	Yes	N/A		
7	38	A3-SO-BRSA7-38-C-0-6-A-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	<0.041	Yes	N/A		
		A3-SO-BRSA7-38-C-0-6-A-0618-SP	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.078J	Yes	N/A		
7	39	A3-SO-BRSA7-39-C-0-6-A-0618	6	Soil	6/8/2018	6/11/2018	6/12/2018	1.70	Yes	N/A		
7	40	A3-SO-BRSA7-40-C-0-6-A-0618	6	Soil	6/7/2018	6/11/2018	6/11/2018	2.90	Yes	N/A		
		A3-SO-BRSA7-40-C-0-6-A-0618-SP	6	Soil	6/7/2018	6/11/2018	6/11/2018	5.40	No	N/A		
7	41	A3-SO-BRSA7-41-C-0-6-A-0618	6	Soil	6/7/2018	6/11/2018	6/11/2018	7.20	No	N/A		Further remediation excavation required, followed by re-sampling.
		A3-SO-BRSA7-41-C-0-6-A-0618-SP	6	Soil	6/7/2018	6/11/2018	6/11/2018	7.40	No	N/A		
		A3-SO-BRSA7-41-C-0-6-B-0618	6	Soil	6/12/2018	6/14/2018	6/14/2018	0.078J	Yes	N/A		
7	42	A3-SO-BRSA7-42-C-0-6-A-0618	6	Soil	6/6/2018	6/8/2018	6/8/2018	0.81	Yes	N/A		
7	43	A3-SO-BRSA7-43-C-0-6-A-0618	6	Soil	6/5/2018	6/7/2018	6/7/2018	0.11J	Yes	N/A		
7	44	A3-SO-BRSA7-44-C-0-6-A-0618	6	Soil	6/5/2018	6/7/2018	6/7/2018	1.60	Yes	N/A		
7	45	A3-SO-BRSA7-45-C-0-6-A-0618	6	Soil	6/4/2018	6/6/2018	6/6/2018	0.34	Yes	N/A		
7	46	A3-SO-BRSA7-46-C-0-6-A-0618	6	Soil	6/2/2018	6/5/2018	6/5/2018	<0.032	Yes	N/A		
7	47	A3-SED-BRSA7-47-C-0-6-B-0618	6	Sediment	6/4/2018	6/6/2018	6/6/2018	0.16	Yes	N/A		
		A3-SO-BRSA7-47-C-0-6-B-0618	6	Soil	6/4/2018	6/6/2018	6/6/2018	0.34	Yes	N/A		
7	48	A3-SED-BRSA7-48-C-0-6-A-0518	6	Sediment	5/31/2018	6/4/2018	6/4/2018	0.11	Yes	N/A		
		A3-SO-BRSA7-48-C-0-6-A-0518	6	Soil	5/31/2018	6/4/2018	6/4/2018	<0.034	Yes	N/A		
7	49	A3-SED-BRSA7-49-C-0-6-A-0518	6	Sediment	5/30/2018	6/4/2018	6/4/2018	0.17	Yes	N/A		
		A3-SO-BRSA7-49-C-0-6-A-0518	6	Soil	5/30/2018	6/4/2018	6/4/2018	0.56	Yes	N/A		
7	50	A3-SED-BRSA7-50-C-0-6-A-0518	6	Sediment	5/8/2018	5/10/2018	5/10/2018	0.065J	Yes	N/A		
		A3-SO-BRSA7-50-C-0-6-A-0518	6	Soil	5/8/2018	5/10/2018	5/10/2018	2.10	Yes	N/A		
7	51W	A3-SED-BRSA7-51W-C-0-6-A-0518	6	Sediment	5/1/2018	5/2/2018	5/2/2018	0.87	Yes	N/A		Due to excavating constraints, grid has been split in half, East and West
		A3-SO-BRSA7-51W-C-0-6-A-0518	6	Soil	5/1/2018	5/2/2018	5/2/2018	0.88	Yes	N/A		Due to excavating constraints, grid has been split in half, East and West
	51E	A3-SED-BRSA7-51E-C-0-6-A-0518	6	Sediment	5/2/2018	5/4/2018	5/4/2018	0.045J	Yes	N/A		Due to excavating constraints, grid has been split in half, East and West
		A3-SO-BRSA7-51E-C-0-6-A-0518	6	Soil	5/2/2018	5/4/2018	5/4/2018	1.20	Yes	N/A		Due to excavating constraints, grid has been split in half, East and West
7	52*	A3-SO-BRSA7-52-C-0-6-A-1117										No remediation excavation will be conducted in this grid.
7	53*	A3-SO-BRSA7-53-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	54*	A3-SO-BRSA7-54-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	55*	A3-SO-BRSA7-55-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	56*	A3-SO-BRSA7-56-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	57*	A3-SO-BRSA7-57-C-0-6-A-1117										No remediation excavation will be conducted in this grid.
7	58*	A3-SO-BRSA7-58-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	59*	A3-SO-BRSA7-59-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	60*	A3-SO-BRSA7-60-C-0-6-A-0118										No remediation excavation will be conducted in this grid.
7	61*	A3-SO-BRSA7-61-C-0-6-A-1117										No remediation excavation will be conducted in this grid.
7	62	A3-SO-BRSA7-62-C-0-6-A-0118	6	Soil	1/12/2018	1/16/2018	1/16/2018	0.83	Yes	N/A		
7	63	A3-SO-BRSA7-63-C-0-5-A-0118	5	Soil	1/12/2018	1/16/2018	1/16/2018	1.5	Yes	N/A		Refusal met at depth of 5 inches.
		A3-SO-BRSA7-63-C-0-6-B-0218	6	Soil	2/19/2018	2/21/2018	2/21/2018	<0.036	Yes	Yes		

Notes:

1. Bank soil is below criteria (i.e. below the cleanup goal) if it less than 5 mg/kg. Stream tube sediment is below criteria if it is less than 1 mg/kg.
2. Material is approved for reuse if the total PCB concentration is less than 1 mg/kg. Only subsurface soil will be slated for reuse.
3. Represents the total remediation cut depth or the depth of material removed to achieve confirmation sample result < 5 mg/kg (soil) and < 1 mg/kg (sediment).

BRSA = Bank Removal Stabilization Area

J = Estimated concentration is above the adjusted method detection limit and below the adjusted reporting limit

mg/kg = Milligrams per kilogram

N/A = Not applicable

* Results for these grid samples are listed on separate tables. No remediation excavation will be conducted in these grids.

Table 6
BRSA 8 Confirmation Sample Tracking

BRSA	Grid	Sample ID	(inches)	(Soil/Sediment)	Collected	Expected	Reported	(mg/kg)	Criteria ¹	for Reuse ²	Depth ³ (feet)	Notes/Sample Description
8	1	A3-SO-BRSA8-1-C-0-6-A-0118	6	Soil	1/18/2018	1/22/2018	1/22/2018	<0.030	Yes	N/A		
		A3-SO-BRSA8-1-C-0-11-A-0118	11	Soil	1/18/2018	1/22/2018	1/22/2018	<0.031	Yes	Yes		
8	2	A3-SO-BRSA8-2-C-0-6-A-0118	6	Soil	1/18/2018	1/22/2018	1/22/2018	<0.031	Yes	N/A		
		A3-SO-BRSA8-2-C-0-12-A-0118	12	Soil	1/18/2018	1/22/2018	1/22/2018	<0.031	Yes	Yes		
8	3	A3-SO-BRSA8-3-C-0-6-A-0118	6	Soil	1/18/2018	1/22/2018	1/22/2018	0.16	Yes	N/A		
		A3-SO-BRSA8-3-C-0-9-A-0118	9	Soil	1/18/2018	1/22/2018	1/22/2018	0.031J	Yes	Yes		
8	4	A3-SO-BRSA8-4-C-0-6-A-0118	6	Soil	1/18/2018	1/22/2018	1/22/2018	0.11	Yes	N/A		
		A3-SO-BRSA8-4-C-0-12-A-0118	12	Soil	1/18/2018	1/22/2018	1/22/2018	<0.031	Yes	Yes		
8	5	A3-SO-BRSA8-5-C-0-6-A-0118	6	Soil	1/19/2018	1/24/2018	1/24/2018	0.22	Yes	N/A		
		A3-SO-BRSA8-5-C-0-12-A-0118	12	Soil	1/19/2018	1/24/2018	1/24/2018	0.14	Yes	Yes		
8	6	A3-SO-BRSA8-6-C-0-6-A-0118	6	Soil	1/19/2018	1/24/2018	1/24/2018	0.13	Yes	N/A		
		A3-SO-BRSA8-6-C-0-12-A-0118	12	Soil	1/19/2018	1/24/2018	1/24/2018	<0.032	Yes	Yes		
8	7	A3-SO-BRSA8-7-C-0-6-A-0118	6	Soil	1/19/2018	1/24/2018	1/24/2018	0.44	Yes	N/A		
		A3-SO-BRSA8-7-C-0-18-A-0118	18	Soil	1/19/2018	1/24/2018	1/24/2018	0.18	Yes	Yes		
8	8	A3-SO-BRSA8-8-C-0-6-A-0118	6	Soil	1/19/2018	1/24/2018	1/24/2018	4.0	Yes	N/A		
		A3-SO-BRSA8-8-C-0-24-A-0118	24	Soil	1/19/2018	1/24/2018	1/24/2018	0.80	Yes	No		Further excavation required for reuse.
8	9	A3-SO-BRSA8-09-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	3.3	Yes	N/A		
		A3-SO-BRSA8-09-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	7.80	No	No		Split Sample collected by START
8	10	A3-SO-BRSA8-09-C-0-6-B-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	1.5	Yes	N/A		START split lab result did not pass criteria, therefore further excavation and resampling was required.
		A3-SO-BRSA8-10-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	0.20	Yes	N/A		
8	11	A3-SO-BRSA8-10-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	0.19	Yes	Yes		Split Sample collected by START
		A3-SO-BRSA8-11-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	0.58	Yes	N/A		
8	12	A3-SO-BRSA8-11-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	0.67	Yes	Yes		Split Sample collected by START
		A3-SO-BRSA8-12-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	<0.047	Yes	N/A		
8	13	A3-SO-BRSA8-12-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	<0.054	Yes	Yes		Split Sample collected by START
		A3-SO-BRSA8-13-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	<0.050	Yes	N/A		
8	14	A3-SO-BRSA8-13-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	0.18	Yes	Yes		Split Sample collected by START
		A3-SO-BRSA8-14-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.17	Yes	N/A		
8	15	A3-SO-BRSA8-15-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.37	Yes	N/A		
		A3-SO-BRSA8-16-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.071J	Yes	N/A		
8	16	A3-SO-BRSA8-17-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.14	Yes	N/A		
		A3-SO-BRSA8-18-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	0.26	Yes	N/A		
8	17	A3-SED-BRSA8-19-C-0-6-A-0118	6	Sediment	1/19/2018	1/24/2018	1/24/2018	<0.034	Yes	N/A		
		A3-SO-BRSA8-19-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.035	Yes	N/A		
8	18	A3-SED-BRSA8-20-C-0-6-A-0118	6	Sediment	1/19/2018	1/24/2018	1/24/2018	<0.043	Yes	N/A		
		A3-SO-BRSA8-20-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.041	Yes	N/A		
8	19	A3-SED-BRSA8-21-C-0-6-A-0118	6	Sediment	1/18/2018	1/22/2018	1/22/2018	<0.059	Yes	N/A		
		A3-SO-BRSA8-21-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.067	Yes	N/A		
8	20	A3-SED-BRSA8-22-C-0-6-A-0118	6	Sediment	1/18/2018	1/22/2018	1/22/2018	<0.061	Yes	N/A		
		A3-SO-BRSA8-22-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.066	Yes	N/A		
8	21	A3-SED-BRSA8-23-C-0-6-A-0118	6	Sediment	1/17/2018	1/22/2018	1/19/2018	<0.065	Yes	N/A		
		A3-SO-BRSA8-23-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.068	Yes	N/A		
8	22	A3-SED-BRSA8-24-C-0-6-A-0118	6	Sediment	1/16/2018	1/22/2018	1/19/2018	<0.071	Yes	N/A		
		A3-SO-BRSA8-24-C-0-6-A-0218	6	Soil	2/6/2018	2/9/2018	2/9/2018	<0.067	Yes	N/A		
8	23	A3-SED-BRSA8-25-C-0-6-A-0118	6	Sediment	1/16/2018	1/22/2018	1/19/2018	<0.072	Yes	N/A		
		A3-SO-BRSA8-25-C-0-6-A-0318	6	Soil	3/26/2018	3/27/2018	3/27/2018	0.17	Yes	N/A		
8	24	A3-SO-BRSA8-26-C-0-6-A-0318	6	Soil	3/13/2018	3/16/2018	3/15/2018	0.36	Yes	N/A		
		A3-SO-BRSA8-26-C-0-21-A-0318	21	Soil	3/13/2018	3/16/2018	3/15/2018	0.040J	Yes	Yes		
8	25	A3-SO-BRSA8-27-C-0-6-A-0318	6	Soil	3/13/2018	3/16/2018	3/15/2018	<0.033	Yes	N/A		
		A3-SO-BRSA8-27-C-0-23-A-0318	23	Soil	3/13/2018	3/16/2018	3/15/2018	<0.032	Yes	Yes		
8	26	A3-SO-BRSA8-28-C-0-6-A-0318	6	Soil	3/13/2018	3/16/2018	3/15/2018	<0.037	Yes	N/A		
		A3-SO-BRSA8-28-C-0-24-A-0318	24	Soil	3/13/2018	3/16/2018	3/15/2018	<0.035	Yes	Yes		
8	27	A3-SO-BRSA8-29-C-0-6-A-0318	6	Soil	3/13/2018	3/16/2018	3/15/2018	0.15	Yes	N/A		
		A3-SO-BRSA8-29-C-0-24-A-0318	24	Soil	3/13/2018	3/16/2018	3/15/2018	<0.046	Yes	Yes		
8	28	A3-SO-BRSA8-30-C-0-6-A-0318	6	Soil	3/13/2018	3/16/2018	3/15/2018	<0.067	Yes	N/A		
		A3-SO-BRSA8-30-C-0-24-A-0318	24	Soil	3/13/2018	3/16/2018	3/15/2018	<0.067	Yes	Yes		
8	29	A3-SO-BRSA8-31-C-0-6-A-0318	6	Soil	3/19/2018	3/23/2018	3/22/2018	<0.070	Yes	N/A		
		A3-SO-BRSA8-32-C-0-6-A-0318	6	Soil	3/19/2018	3/23/2018	3/22/2018	<0.073	Yes	N/A		

Table 6
BRSA 8 Confirmation Sample Tracking

8	33	A3-SED-BRSA8-33-C-0-6-A-0318	6	Sediment	3/13/2018	3/15/2018	3/15/2018	<0.079	Yes	N/A	
		A3-SO-BRSA8-33-C-0-6-A-0218	6	Soil	3/26/2018	3/27/2018	3/27/2018	0.15	Yes	N/A	
8	34	A3-SED-BRSA8-34-C-0-6-A-0318	6	Sediment	3/13/2018	3/15/2018	3/15/2018	<0.067	Yes	N/A	
		A3-SO-BRSA8-34-C-0-6-A-0318	6	Soil	3/26/2018	3/27/2018	3/27/2018	1.5	Yes	N/A	
8	35	A3-SED-BRSA8-35-C-0-6-A-0318	6	Sediment	3/19/2018	3/22/2018	3/22/2018	<0.081	Yes	N/A	
		A3-SO-BRSA8-35-C-0-6-A-0318	6	Soil	3/26/2018	3/27/2018	3/27/2018	2.0	Yes	N/A	
8	36	A3-SED-BRSA8-36-C-0-6-A-0318	6	Sediment	3/19/2018	3/22/2018	3/22/2018	<0.080	Yes	N/A	
		A3-SO-BRSA8-36-C-0-6-A-0118	6	Soil	1/31/2018	2/2/2018	2/5/2018	4.8	Yes	N/A	
8	37	A3-SED-BRSA8-37-C-0-6-A-0318	6	Sediment	3/16/2018	3/20/2018	3/20/2018	<0.080	Yes	N/A	
		A3-SO-BRSA8-37-C-0-6-A-0118	6	Soil	1/31/2018	2/2/2018	2/5/2018	<0.068	Yes	N/A	
8	38	A3-SED-BRSA8-38-C-0-6-A-0318	6	Sediment	3/16/2018	3/20/2018	3/20/2018	<0.078	Yes	N/A	
		A3-SO-BRSA8-38-C-0-6-A-0118	6	Soil	1/31/2018	2/2/2018	2/5/2018	<0.064	Yes	N/A	
8	39	A3-SO-BRSA8-39-C-0-6-A-0318	6	Soil	3/26/2018	3/27/2018	3/27/2018	<0.062	Yes	N/A	
8	40	A3-SO-BRSA8-40-C-0-6-A-0318	6	Soil	3/14/2018	3/20/2018	3/19/2018	<0.038	Yes	N/A	
8	41	A3-SO-BRSA8-41-C-0-6-A-0218	6	Soil	2/7/2018	2/12/2018	2/12/2018	<0.037	Yes	N/A	
		A3-SO-BRSA8-41-C-0-6-A-0218-SP	6	Soil	2/7/2018	2/12/2018	2/12/2018	<0.047	Yes	N/A	Split Sample collected by START
		A3-SO-BRSA8-41-C-0-12-A-0218	12	Soil	2/7/2018	2/12/2018	2/12/2018	<0.037	Yes	Yes	
		A3-SO-BRSA8-41-C-0-12-A-0218-SP	12	Soil	2/7/2018	2/12/2018	2/12/2018	<0.047	Yes	N/A	Split Sample collected by START
8	42	A3-SO-BRSA8-42-C-0-6-A-0218	6	Soil	2/7/2018	2/12/2018	2/12/2018	<0.061	Yes	N/A	
		A3-SO-BRSA8-42-C-0-6-A-0218-SP	6	Soil	2/7/2018	2/12/2018	2/12/2018	<0.077	Yes	N/A	Split Sample collected by START
		A3-SO-BRSA8-42-C-0-18-A-0218	18	Soil	2/7/2018	2/12/2018	2/12/2018	<0.050	Yes	Yes	
		A3-SO-BRSA8-42-C-0-18-A-0218-SP	18	Soil	2/7/2018	2/12/2018	2/12/2018	<0.066	Yes	N/A	Split Sample collected by START
		A3-SO-BRSA8-42-C-0-18-A-0218-SP-D	18	Soil	2/7/2018	2/12/2018	2/12/2018	<0.060	Yes	N/A	Duplicate of split sample collected by START
8	43	A3-SO-BRSA8-43-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.064	Yes	N/A	
		A3-SO-BRSA8-43-C-0-24-A-0218	24	Soil	2/2/2018	2/7/2018	2/6/2018	0.081J	Yes	Yes	
8	44	A3-SO-BRSA8-44-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.067	Yes	N/A	
		A3-SO-BRSA8-44-C-0-24-A-0218	24	Soil	2/2/2018	2/7/2018	2/6/2018	<0.067	Yes	Yes	
8	45	A3-SO-BRSA8-45-C-0-6-A-0118	6	Soil	1/29/2018	1/31/2018	1/31/2018	0.41	Yes	N/A	
8	46	A3-SO-BRSA8-46-C-0-6-A-0118	6	Soil	1/29/2018	1/31/2018	1/31/2018	1.4	Yes	N/A	
		A3-SO-BRSA8-46-C-0-24-A-0118	24	Soil	1/29/2018	1/31/2018	1/31/2018	0.66	Yes	No	Further excavation required for reuse.
8	47	A3-SO-BRSA8-47-C-0-6-A-0118	6	Soil	1/29/2018	1/31/2018	1/31/2018	<0.066	Yes	N/A	
		A3-SO-BRSA8-47-C-0-24-A-0118	24	Soil	1/29/2018	1/31/2018	1/31/2018	<0.063	Yes	Yes	
8	48	A3-SO-BRSA8-48-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.067	Yes	N/A	
		A3-SO-BRSA8-48-C-0-24-A-0218	24	Soil	2/2/2018	2/7/2018	2/6/2018	<0.054	Yes	Yes	
8	49	A3-SED-BRSA8-49-C-0-6-A-0118	6	Sediment	1/11/2018	1/15/2018	1/15/2018	<0.038	Yes	N/A	
		A3-SO-BRSA8-49-C-0-6-A-0118	6	Soil	1/24/2018	1/29/2018	1/29/2018	0.083J	Yes	N/A	
8	50	A3-SED-BRSA8-50-C-0-6-A-0118	6	Sediment	1/10/2018	1/12/2018	1/12/2018	<0.046	Yes	N/A	
		A3-SO-BRSA8-50-C-0-6-A-0118	6	Soil	1/24/2018	1/29/2018	1/29/2018	0.073J	Yes	N/A	

Table 6
BRSA 8 Confirmation Sample Tracking

8	51	A3-SED-BRSA8-51-C-0-6-A-0118	6	Sediment	1/10/2018	1/12/2018	1/12/2018	<0.057	Yes	N/A	
		A3-SO-BRSA8-51-C-0-6-A-0118	6	Soil	1/22/2018	1/26/2018	1/25/2018	0.089J	Yes	N/A	
8	52	A3-SED-BRSA8-52-C-0-6-A-0118	6	Sediment	1/9/2018	1/11/2018	1/11/2018	<0.068	Yes	N/A	
		A3-SO-BRSA8-52-C-0-6-A-0118	6	Soil	1/24/2018	1/29/2018	1/29/2018	2.4	Yes	N/A	
		A3-SO-BRSA8-52-C-0-6-B-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.066	Yes	N/A	Excavated another 2.5 VF to be consistent with grid cuts on either side.
		A3-SO-BRSA8-52-C-0-18-A-0118	18	Soil	1/24/2018	1/29/2018	1/29/2018	5.4	No	No	Additional excavation required.
8	53	A3-SED-BRSA8-53-C-0-6-A-0118	6	Sediment	1/8/2018	1/10/2018	1/10/2018	<0.075	Yes	N/A	
		A3-SO-BRSA8-53-C-0-6-A-0118	6	Soil	1/24/2018	1/29/2018	1/29/2018	11.9	No	N/A	Additional excavation required, followed by resampling.
		A3-SO-BRSA8-53-C-0-6-B-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.067	Yes	N/A	Excavated another 2.5 VF to be consistent with grid cuts on either side.
		A3-SO-BRSA8-53-C-0-14-A-0118	14	Soil	1/24/2018	1/29/2018	1/29/2018	11.2	No	No	Additional excavation required.
8	54	A3-SED-BRSA8-54-C-0-6-A-0118	6	Sediment	1/8/2018	1/10/2018	1/10/2018	<0.073	Yes	N/A	
		A3-SO-BRSA8-54-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.069	Yes	N/A	
8	55	A3-SO-BRSA8-55-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.098J	Yes	N/A	
8	56	A3-SO-BRSA8-56-C-0-6-A-0118	6	Soil	1/31/2018	2/5/2018	2/5/2018	0.97	Yes	N/A	
8	57	A3-SO-BRSA8-57-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	<0.073	Yes	N/A	
8	58	A3-SO-BRSA8-58-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	0.45	Yes	N/A	
8	59	A3-SO-BRSA8-59-C-0-6-A-0218	6	Soil	2/2/2018	2/7/2018	2/6/2018	0.35	Yes	N/A	
8	60	A3-SO-BRSA8-60-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	0.89	Yes	N/A	
		A3-SO-BRSA8-60-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	1.90	Yes	N/A	Split Sample collected by START
8	61	A3-SO-BRSA8-61-C-0-6-A-0118	6	Soil	1/22/2018	1/26/2018	1/25/2018	0.25	Yes	N/A	
8	62	A3-SO-BRSA8-62-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	1.9	Yes	N/A	
		A3-SO-BRSA8-62-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	2.7	Yes	N/A	Split Sample collected by START
		A3-SO-BRSA8-62-C-0-6-A-0118-SP-D	6	Soil	1/23/2018	1/26/2018	1/26/2018	1.6	Yes	N/A	Duplicate of split sample collected by START
8	63	A3-SO-BRSA8-63-C-0-6-A-0118	6	Soil	1/23/2018	1/26/2018	1/25/2018	1.9	Yes	N/A	
		A3-SO-BRSA8-63-C-0-6-A-0118-SP	6	Soil	1/23/2018	1/26/2018	1/26/2018	4.1	Yes	N/A	Split Sample collected by START

Table 7
 Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
 Otsego Township Dam Area TCRA
 BRSA 9 Confirmation Sample Tracking

BRSA	Grid	Sample ID	(inches)	(Soil/Sediment)	Collected	Expected	Reported	(mg/kg)	Criteria ¹	for Reuse ²	Depth ³ (feet)	Notes
9	1	A3-SO-BRSA9-1-C-0-6-A-1017	6	Soil	10/10/2017	10/13/2017	10/12/2017	< 0.035	Yes	N/A	-	
		A3-SO-BRSA9-1-C-0-6-A-1017-SP	6	Soil	10/10/2017	10/12/2017	10/12/2017	< 0.029	Yes	N/A		Split sample collected by START
		A3-SO-BRSA9-1-C-0-18-A-1017	18	Soil	10/10/2017	10/13/2017	10/12/2017	< 0.038	Yes	Yes		
9	2	A3-SO-BRSA9-2-C-0-6-A-1017	6	Soil	10/9/2017	10/12/2017	10/12/2017	0.42	Yes	N/A	-	
		A3-SO-BRSA9-2-C-0-18-A-1017	18	Soil	10/9/2017	10/12/2017	10/12/2017	0.72	Yes	Yes		
		A3-SO-BRSA9-3-C-0-6-A-1017	6	Soil	10/9/2017	10/12/2017	10/12/2017	2.5	Yes	N/A		
9	3	A3-SO-BRSA9-3-C-0-6-B-1017	6	Soil	10/13/2017	10/17/2017	10/18/2017	0.72	Yes	N/A	-	
		A3-SO-BRSA9-3-C-0-18-A-1017	18	Soil	10/9/2017	10/12/2017	10/12/2017	2.6	Yes	No		Additional excavation required for re-use.
		A3-SO-BRSA9-3-C-0-18-B-1017	18	Soil	10/13/2017	10/17/2017	10/18/2017	0.060J	Yes	Yes		
		A3-SO-BRSA9-4-C-0-6-A-0917	6	Soil	9/18/2017	9/20/2017	9/20/2017	0.91	Yes	N/A		
9	4	A3-SO-BRSA9-4-C-0-18-A-0917	18	Soil	9/18/2017	9/20/2017	9/20/2017	0.18	Yes	Yes	0.73	
		A3-SO-BRSA9-5-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	1.0	Yes	N/A		
		A3-SO-BRSA9-5-C-0-6-A-0917-SP	6	Soil	9/19/2017	9/22/2017	9/22/2017	2.5	Yes	N/A		Split sample collected by START
9	5	A3-SO-BRSA9-5-C-0-6-B-0917	6	Soil	9/26/2017	9/28/2017	9/28/2017	< 0.062	Yes	N/A	0.55	
		A3-SO-BRSA9-5-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.44	Yes	No		Additional excavation required for re-use.
		A3-SO-BRSA9-5-C-0-18-A-0917-SP	18	Soil	9/19/2017	9/22/2017	9/22/2017	1.90	Yes	No		Split sample collected by START
		A3-SO-BRSA9-5-C-0-18-B-0917	18	Soil	9/26/2017	9/28/2017	9/28/2017	< 0.061	Yes	Yes		
		A3-SO-BRSA9-6-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	1.0	Yes	N/A		
9	6	A3-SO-BRSA9-6-C-0-6-B-0917	6	Soil	9/26/2017	9/28/2017	9/28/2017	0.17	Yes	N/A	0.50	
		A3-SO-BRSA9-6-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.44	Yes	No		Additional excavation required for re-use.
		A3-SO-BRSA9-6-C-0-18-B-0917	18	Soil	9/26/2017	9/28/2017	9/28/2017	< 0.062	Yes	Yes		
		A3-SO-BRSA9-7-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	0.7	Yes	N/A		
9	7	A3-SO-BRSA9-7-C-0-6-A-0917-SP	6	Soil	9/19/2017	9/22/2017	9/22/2017	1.0	Yes	N/A	0.61	Split sample collected by START
		A3-SO-BRSA9-7-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.44	Yes	Yes		
		A3-SO-BRSA9-7-C-0-18-A-0917-SP	18	Soil	9/19/2017	9/22/2017	9/22/2017	1.40	Yes	No		Split sample collected by START
9	8	A3-SO-BRSA9-8-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	0.55	Yes	N/A	0.86	
		A3-SO-BRSA9-8-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.37	Yes	Yes		
9	9	A3-SO-BRSA9-9-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	2.3	Yes	N/A	0.83	
		A3-SO-BRSA9-9-C-0-6-B-0917	6	Soil	9/26/2017	9/28/2017	9/28/2017	< 0.067	Yes	N/A		
		A3-SO-BRSA9-9-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.88	Yes	No		Additional excavation required for re-use.
		A3-SO-BRSA9-9-C-0-18-B-0917	18	Soil	9/26/2017	9/28/2017	9/28/2017	< 0.066	Yes	Yes		
9	10	A3-SO-BRSA9-10-C-0-6-A-0917	6	Soil	9/19/2017	9/22/2017	9/22/2017	0.075J	Yes	N/A	1.76	
		A3-SO-BRSA9-10-C-0-18-A-0917	18	Soil	9/19/2017	9/22/2017	9/22/2017	0.17	Yes	Yes		
9	11	A3-SO-BRSA9-11-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.28	Yes	N/A	1.71	
		A3-SO-BRSA9-11-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	0.16	Yes	Yes		
9	12	A3-SO-BRSA9-12-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.075J	Yes	N/A	1.74	
		A3-SO-BRSA9-12-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.064	Yes	Yes		
9	13	A3-SO-BRSA9-13-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	0.56	Yes	N/A	1.77	
		A3-SO-BRSA9-13-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	0.46	Yes	Yes		
9	14	A3-SO-BRSA9-14-C-0-6-A-0917	6	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.030	Yes	N/A	1.71	
		A3-SO-BRSA9-14-C-0-18-A-0917	18	Soil	9/20/2017	9/22/2017	9/22/2017	< 0.031	Yes	Yes		
9	15	A3-SO-BRSA9-15-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	< 0.029	Yes	N/A	2.00	
		A3-SO-BRSA9-15-C-0-12-A-0917	12	Soil	9/21/2017	9/25/2017	9/26/2017	< 0.030	Yes	Yes		
9	16	A3-SO-BRSA9-16-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.39	Yes	N/A	0.83	
		A3-SO-BRSA9-16-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.052J	Yes	Yes		
9	17	A3-SO-BRSA9-17-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.48	Yes	N/A	0.43	
		A3-SO-BRSA9-17-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.20	Yes	Yes		
9	18	A3-SO-BRSA9-18-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.28	Yes	N/A	0.40	
		A3-SO-BRSA9-18-C-0-12-A-0917	12	Soil	9/21/2017	9/25/2017	9/26/2017	0.22	Yes	Yes		
9	19	A3-SO-BRSA9-19-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.39	Yes	N/A	0.32	
		A3-SO-BRSA9-19-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.051J	Yes	Yes		
9	20	A3-SO-BRSA9-20-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.29	Yes	N/A	0.32	
		A3-SO-BRSA9-20-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.24	Yes	Yes		
9	21	A3-SO-BRSA9-21-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.69	Yes	N/A	0.16	
		A3-SO-BRSA9-21-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.061J	Yes	Yes		
9	22	A3-SO-BRSA9-22-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.61	Yes	N/A	0.39	
		A3-SO-BRSA9-22-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.16	Yes	Yes		
9	23	A3-SO-BRSA9-23-C-0-6-A-0917	6	Soil	9/21/2017	9/25/2017	9/26/2017	0.21	Yes	N/A	0.32	
		A3-SO-BRSA9-23-C-0-18-A-0917	18	Soil	9/21/2017	9/25/2017	9/26/2017	0.096	Yes	Yes		
9	24	A3-SO-BRSA9-24-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.059J	Yes	N/A	0.50	

Table 7
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Otsego Township Dam Area TCRA
BRSA 9 Confirmation Sample Tracking

		A3-SO-BRSA9-24-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	<0.031	Yes	Yes		
9	25	A3-SO-BRSA9-25-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.18	Yes	N/A	0.48	
		A3-SO-BRSA9-25-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	0.097	Yes	Yes		
9	26	A3-SO-BRSA9-26-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.22	Yes	N/A	0.58	
		A3-SO-BRSA9-26-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	0.12	Yes	Yes		
9	27	A3-SO-BRSA9-27-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.22	Yes	N/A	0.57	
		A3-SO-BRSA9-27-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	0.15	Yes	Yes		
9	28	A3-SO-BRSA9-28-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.39	Yes	N/A	0.44	
		A3-SO-BRSA9-28-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	0.22	Yes	Yes		
9	29	A3-SO-BRSA9-29-C-0-6-A-0917	6	Soil	9/22/2017	9/26/2017	9/26/2017	0.16	Yes	N/A	0.58	
		A3-SO-BRSA9-29-C-0-18-A-0917	18	Soil	9/22/2017	9/26/2017	9/26/2017	0.085	Yes	Yes		
9	30	A3-SED-BRSA9-30-C-0-6-A-1117	6	Sediment	11/1/2017	11/3/2017	11/3/2017	< 0.037	Yes	N/A	-	
		A3-SO-BRSA9-30-C-0-6-A-1117	6	Soil	11/1/2017	11/3/2017	11/3/2017	< 0.031	Yes	N/A	1.65	
		A3-SO-BRSA9-30-C-0-12-A-1117	12	Soil	11/1/2017	11/3/2017	11/3/2017	< 0.031	Yes	Yes		
9	31	A3-SED-BRSA9-31-C-0-6-A-1217	6	Sediment	12/18/2017	12/21/2017	12/21/2017	< 0.051	Yes	N/A	-	
		A3-SO-BRSA9-31-C-0-4-A-1217	4	Soil	12/20/2017	12/22/2017	12/22/2017	< 0.030	Yes	N/A	2.06	Refusal was met at a depth of 4 inches.
		A3-SED-BRSA9-32-C-0-6-A-1217	6	Sediment	12/11/2017	12/13/2017	12/13/2017	0.26	Yes	N/A	-	
9	32	A3-SO-BRSA9-32-C-0-6-A-1217	6	Soil	12/12/2017	12/14/2017	12/14/2017	0.16	Yes	N/A	1.99	
		A3-SO-BRSA9-32-C-0-12-A-1217	12	Soil	12/12/2017	12/14/2017	12/14/2017	0.052	Yes	Yes		
		A3-SED-BRSA9-33-C-0-6-A-1217	6	Sediment	12/5/2017	12/7/2017	12/7/2017	0.94	Yes	N/A	1.94	
9	33	A3-SO-BRSA9-33-C-0-6-A-1217	6	Soil	12/5/2017	12/7/2017	12/7/2017	1.1	Yes	N/A	1.92	
		A3-SO-BRSA9-33-C-0-12-A-1217	12	Soil	12/5/2017	12/7/2017	12/7/2017	2.0	Yes	No		Additional excavation required for re-use.
		A3-SED-BRSA9-34-C-0-6-A-1017	6	Sediment	10/13/2017	10/17/2017	10/18/2017	2.1	No	N/A	2.23	Additional excavation required, followed by re-sampling.
		A3-SED-BRSA9-34-C-0-6-B-1117	6	Sediment	11/7/2017	11/9/2017	11/9/2017	< 0.079	Yes	N/A		
		A3-SO-BRSA9-34-C-0-6-A-1117	6	Soil	11/9/2017	11/13/2017	11/13/2017	2.0	Yes	N/A	2.16	
		A3-SO-BRSA9-34-C-0-12-A-1117	12	Soil	11/9/2017	11/13/2017	11/13/2017	0.26	Yes	No		Additional excavation required for re-use.
		A3-SED-BRSA9-35-C-0-6-A-0917	6	Sediment	9/27/2017	9/29/2017	9/29/2017	0.15	Yes	N/A	2.14	
9	35	A3-SED-BRSA9-35-C-0-6-A-0917-SP	6	Sediment	9/27/2017	9/29/2017	9/29/2017	0.4	Yes	N/A		Split sample collected by START
		A3-SO-BRSA9-35-C-0-3-A-1117	3	Soil	11/9/2017	11/13/2017	11/13/2017	0.12	Yes	N/A	1.87	
		A3-SED-BRSA9-36-C-0-6-A-0917	6	Sediment	9/27/2017	9/29/2017	9/29/2017	3.0	No	N/A	1.00	
		A3-SED-BRSA9-36-C-0-6-A-0917-SP	6	Sediment	9/27/2017	9/29/2017	9/29/2017	4.2	No	N/A		Split sample collected by START
		A3-SED-BRSA9-36-C-0-6-A-0917-SP-D	6	Sediment	9/27/2017	9/29/2017	9/29/2017	3.0	No	N/A		Duplicate of split sample collected by START
		A3-SED-BRSA9-36-C-0-6-B-1117	6	Sediment	11/6/2017	11/8/2017	11/8/2017	0.16	Yes	N/A		
		A3-SO-BRSA9-36-C-0-6-A-1017	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.76	Yes	N/A		
		A3-SO-BRSA9-36-C-0-6-A-1017-SP	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.63	Yes	N/A	1.83	Split sample collected by START
		A3-SO-BRSA9-36-C-0-12-A-1017	12	Soil	10/30/2017	11/1/2017	11/1/2017	0.48	Yes	Yes		
		A3-SO-BRSA9-36-C-0-12-A-1017-SP	12	Soil	10/30/2017	11/1/2017	11/1/2017	0.31	Yes	Yes		Split sample collected by START
		A3-SED-BRSA9-37-C-0-6-A-1117	6	Sediment	11/6/2017	11/8/2017	11/8/2017	< 0.038	Yes	N/A	1.77	
		A3-SO-BRSA9-37-C-0-6-A-1017	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.092	Yes	N/A		
		A3-SO-BRSA9-37-C-0-6-A-1017-SP	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.12	Yes	N/A	0.52	Split sample collected by START
		A3-SO-BRSA9-37-C-0-12-A-1017	12	Soil	10/30/2017	11/1/2017	11/1/2017	0.12	Yes	Yes		
		A3-SO-BRSA9-37-C-0-12-A-1017-SP	12	Soil	10/30/2017	11/1/2017	11/1/2017	0.13	Yes	Yes		Split sample collected by START
		A3-SO-BRSA9-38-C-0-6-A-1017	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.064	Yes	N/A	1.69	
		A3-SO-BRSA9-38-C-0-6-A-1017-SP	6	Soil	10/30/2017	11/1/2017	11/1/2017	0.12	Yes	N/A		Split sample collected by START
		A3-SO-BRSA9-38-C-0-18-A-1017	18	Soil	10/30/2017	11/1/2017	11/1/2017	0.059	Yes	Yes		
		A3-SO-BRSA9-38-C-0-18-A-1017-SP	18	Soil	10/30/2017	11/1/2017	11/1/2017	0.062	Yes	Yes		Split sample collected by START
9	39	A3-SED-BRSA9-39-C-0-6-A-0917	6	Sediment	9/18/2017	9/20/2017	9/20/2017	0.81	Yes	N/A	1.38	Pine Creek stream tube sample
9	40	A3-SED-BRSA9-40-C-0-6-A-0917	6	Sediment	9/18/2017	9/20/2017	9/20/2017	0.22	Yes	N/A	1.96	Pine Creek stream tube sample
9	41	A3-SED-BRSA9-41-C-0-6-A-0917	6	Sediment	9/18/2017	9/20/2017	9/20/2017	0.61	Yes	N/A	1.72	Pine Creek stream tube sample
9	42	A3-SED-BRSA9-42-C-0-6-A-1017	6	Sediment	10/6/2017	10/9/2017	10/10/2017	0.83	Yes	N/A	1.36	Pine Creek stream tube sample
		A3-SED-BRSA9-43-C-0-6-A-0917	6	Sediment	9/26/2017	9/27/2017	9/27/2017	5.3	No	N/A	2.23	Pine Creek stream tube sample; additional excavation required followed by re-sampling
		A3-SED-BRSA9-43-C-0-6-B-0917	6	Sediment	9/28/2017	9/29/2017	9/29/2017	< 0.031	Yes	N/A		
		A3-SED-BRSA9-44-C-0-6-A-0917	6	Sediment	9/26/2017	9/27/2017	9/27/2017	4.4	No	N/A	2.21	Pine Creek stream tube sample; additional excavation required followed by re-sampling
		A3-SED-BRSA9-44-C-0-6-B-0917	6	Sediment	9/28/2017	9/29/2017	9/29/2017	< 0.030	Yes	N/A		
9	45	A3-SED-BRSA9-45-C-0-6-A-0917	6	Sediment	9/25/2017	9/26/2017	9/26/2017	0.18	Yes	N/A	2.03	Pine Creek stream tube sample

Table 8
Particulate Monitoring Deployment

Station	Start Date	End Date
AP-001	5/3/2017	7/28/2017
AP-002	5/3/2017	7/18/2017
AP-003	5/3/2017	8/31/2017
AP-004	7/11/2017	12/16/2017
AP-005	7/31/2017	12/16/2017
AP-006	9/8/2017	12/16/2017
AP-007	12/18/2017	6/26/2018
AP-008	12/18/2017	6/26/2018

Notes:

Refer to Figure 6 in Appendix B for monitoring locations.

Table 9
Water Quality Measurements

Date	Location	Turbidity (NTUs)	DO (mg/L)	pH (SU)	Temperature (F)	ORP (mV)
9/22/2017	1	3.7	10.41	7.62	73.91	47
9/22/2017	2	9.2	10.12	7.59	73.39	80.1
9/22/2017	3	9	10.37	7.01	73.23	92.6
9/30/2017	1	1.6	11.35	6.91	61.88	163.1
9/30/2017	2	5.3	9.7	8.05	62.68	120.2
9/30/2017	3	6.6	11.41	8.16	62.72	118.4
10/7/2017	1	9.3	14.8	7.6	64.6	94.6
10/7/2017	2	12.5	14.4	7.79	64.86	107.5
10/7/2017	3	9.8	13.2	7.76	64.93	103.3
10/20/2017	1	3.5	13.07	7.89	54.95	46.8
10/20/2017	2	6.8	14.2	7.62	55.08	3.1
10/20/2017	3	5.7	14.8	7.78	55.07	24.4
10/28/2017	1	0.6	12.91	7.71	48.96	17.8
10/28/2017	2	7.6	15.65	7.1	49	2.3
10/28/2017	3	8.2	13.51	7.57	48.99	10.9
11/2/2017	1	7.75	14.56	7.17	45.82	145.6
11/2/2017	2	3.4	15.94	5.48	45.8	185.4
11/2/2017	3	4.2	14.79	6.37	45.82	153.2
11/11/2017	1	4.1	14.7	7.7	38.8	100.3
11/11/2017	2	11.1	16.9	7	38.78	78
11/11/2017	3	11	17.4	7.6	38.8	73.3
11/17/2017	1	3.8	15.6	7.7	42.8	173.6
11/17/2017	2	9.8	18.3	5.3	42.8	17.6
11/17/2017	3	11.6	15	6.3	42.8	131.3
12/1/2017	1	4.3	16.58	7.61	41.4	313.2
12/1/2017	2	6	14.5	7.8	41.59	11.1
12/1/2017	3	6.3	20.01	7.88	41.8	20.9

Notes:

Refer to Figure 6 in Appendix B for monitoring locations.

APPENDIX C

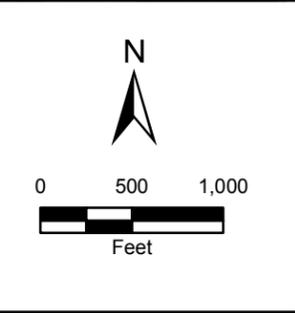
STREAM VELOCITY SURVEY MEASUREMENT LOCATIONS & DATA



File Path: C:\temp\Projects\113025\GIS\mxd\Planning\TCRA_Sampling\ST\ACT_Plan\Velocity_Transects\Fig_1_EPA_Velocity_Transect_Locations_20171127\overview.mxd



<ul style="list-style-type: none"> ● Survey Point — Flow Velocity Measurement Transect ● River Stations — Stream Centerline 	<p>EPA Contract No.: EP-S5-13-01 TDD No.: S05-0001-1506-003</p> <p>Aerial Imagery Source: ESRI World Imagery Map Service - NAIP2016</p>
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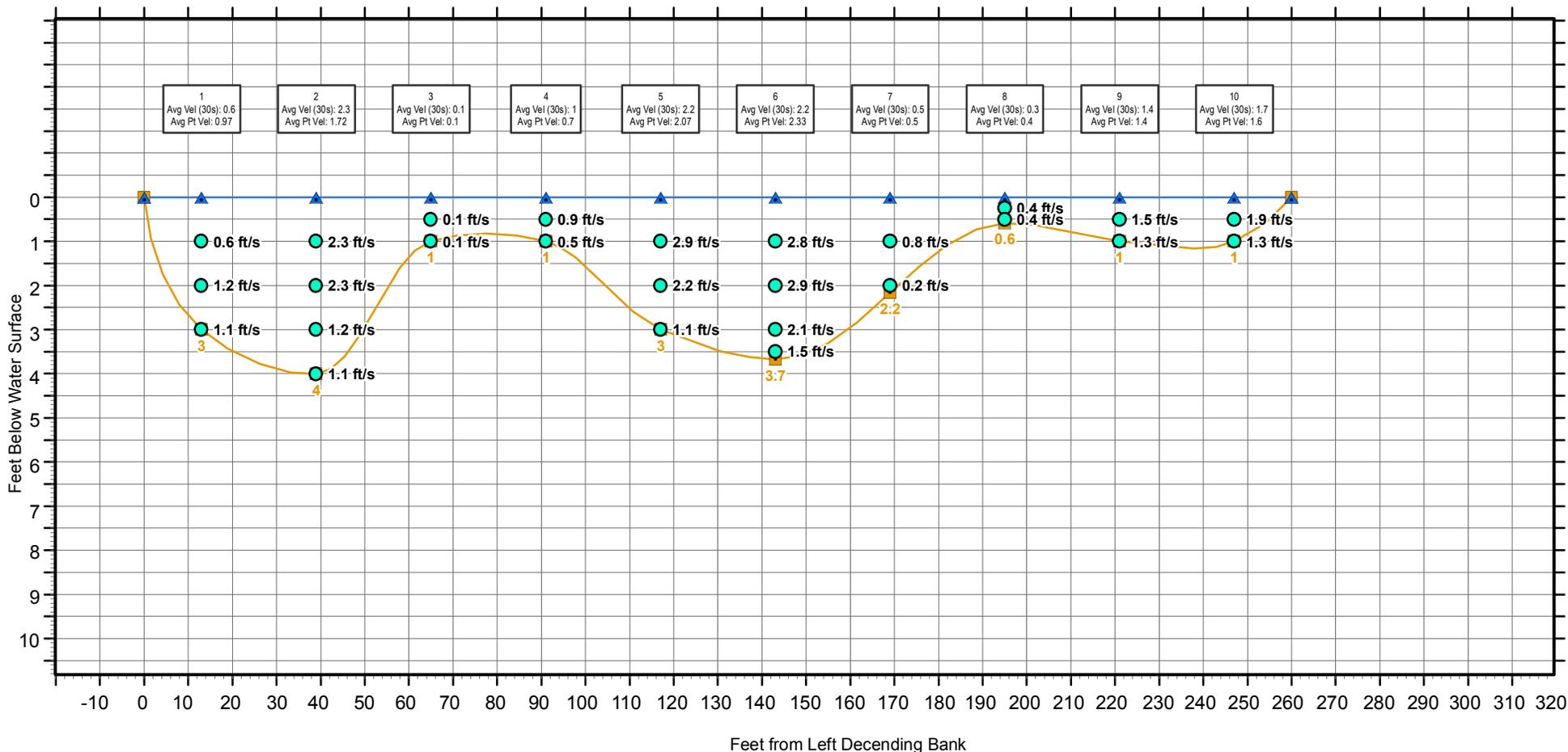
Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 1 - (overview)
EPA Flow Velocity Measurement Locations

TETRA TECH

Prepared For: U.S. EPA Prepared By: MSG - KRB
Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

Transect 1



Total Width (ft): 260
 Date/Time: 9/7/2017 13:00
 Calculated Discharge: 770.9 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.85"
 Comstock Discharge: 497 cfs



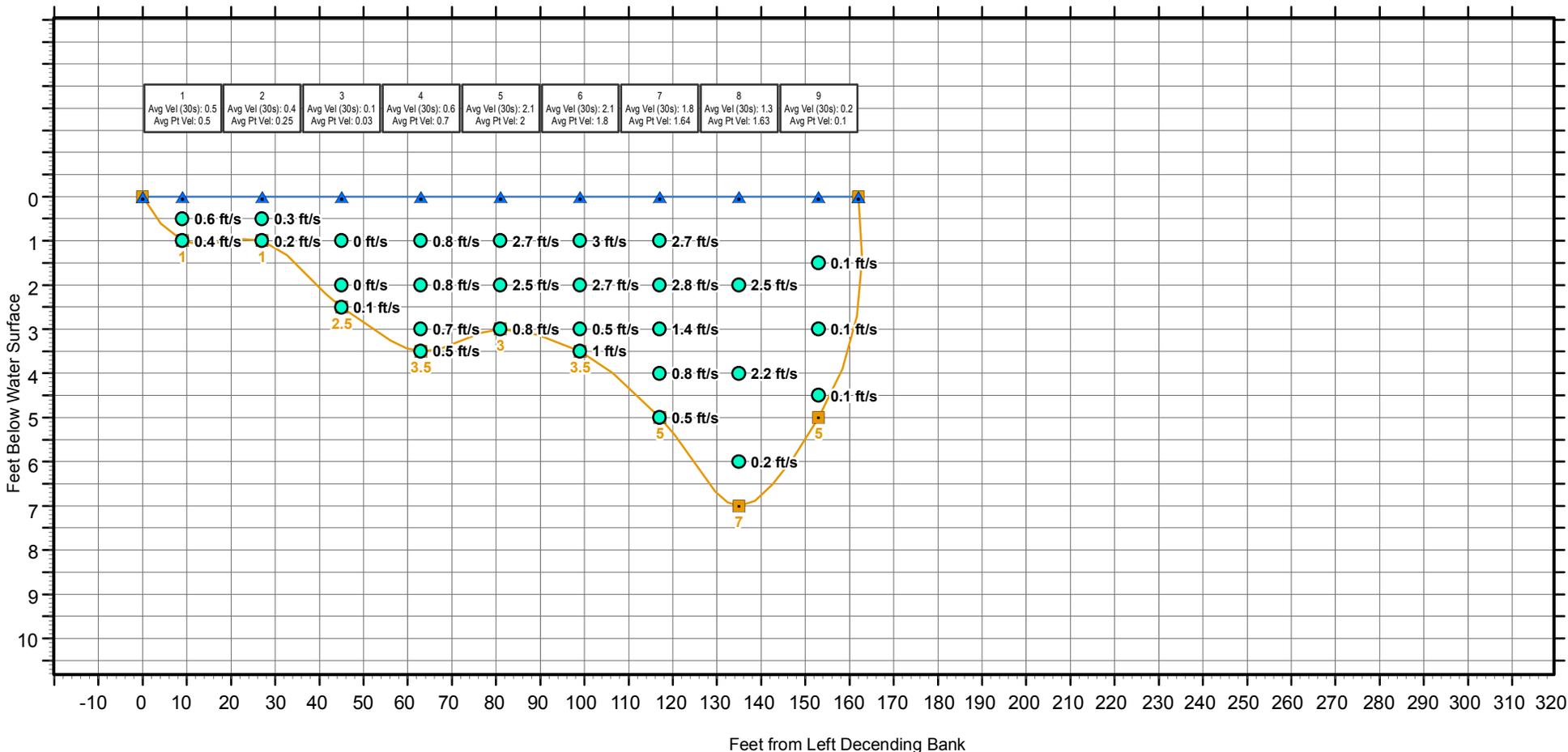
- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 2: Transect 1
 River Flow Velocity Measurements
 September 2017



Transect 2



Total Width (ft): 162
 Date/Time: 9/7/2017 14:00
 Calculated Discharge: 642.9 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.85"
 Comstock Discharge: 497 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

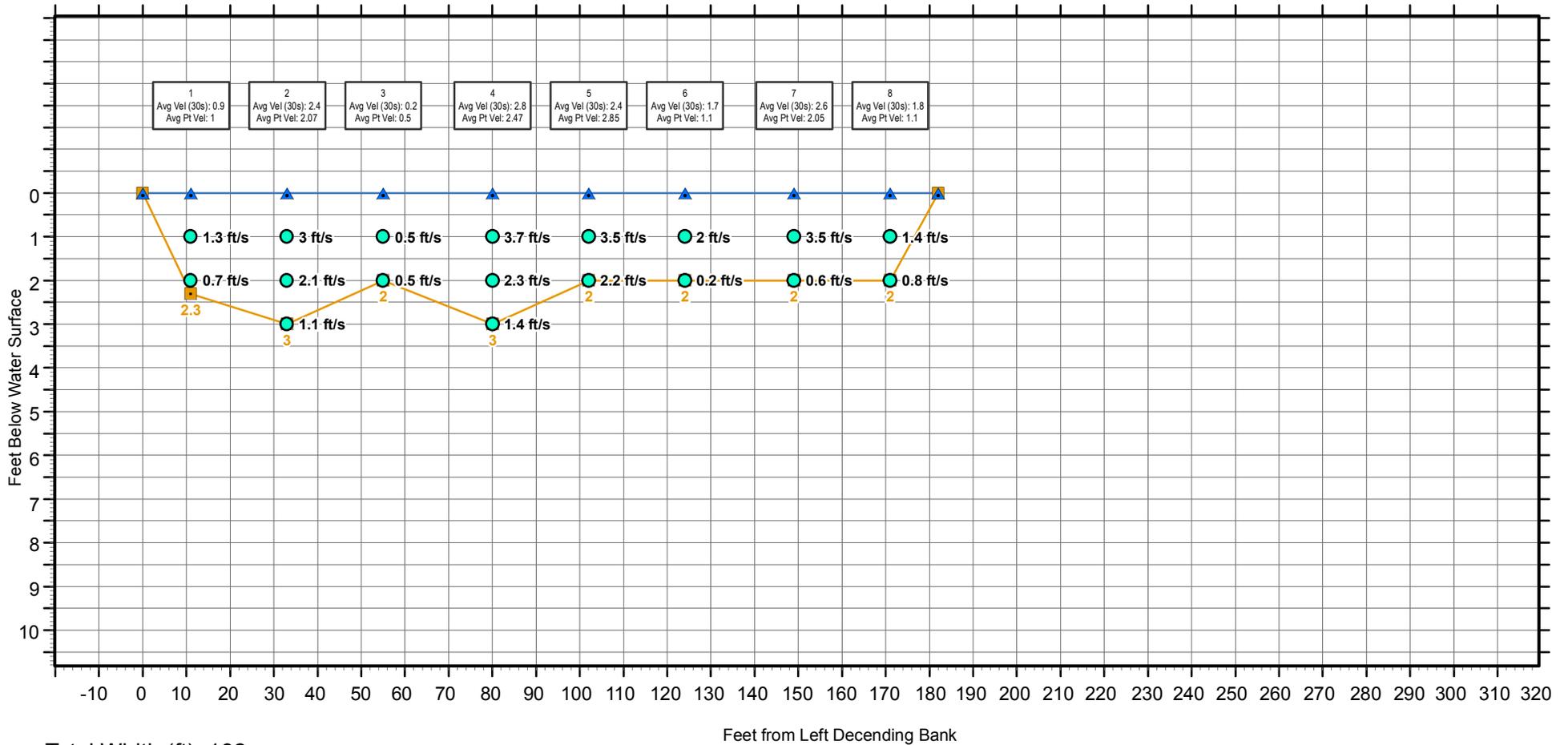
Figure 3: Transect 2
 River Flow Velocity Measurements
 September 2017



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA Prepared By: MSG - KRB

Transect 3



Total Width (ft): 182
 Date/Time: 9/7/2017 15:00
 Calculated Discharge: 693.8 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.85"
 Comstock Discharge: 497 cfs



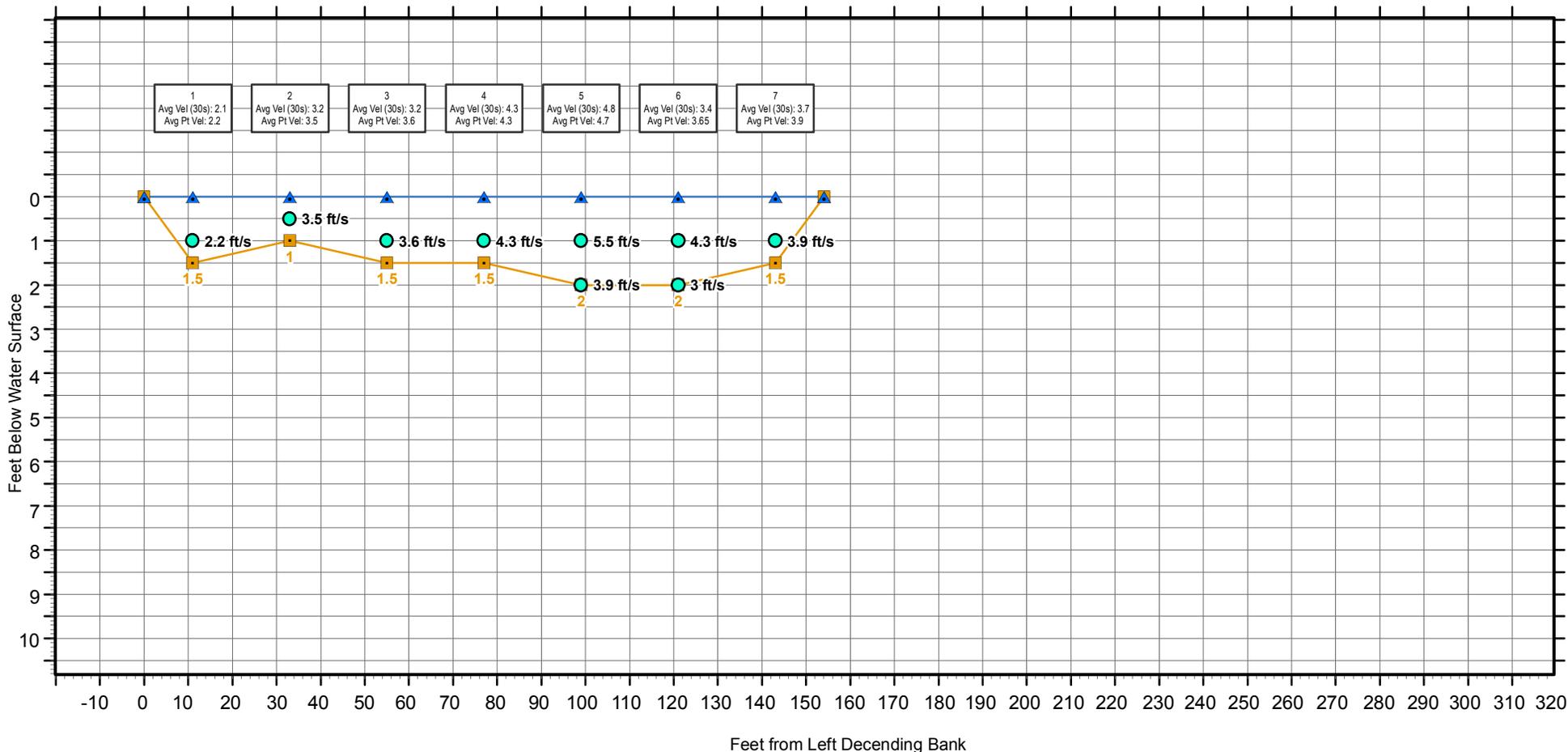
- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 4: Transect 3
 River Flow Velocity Measurements
 September 2017



Transect 4



Total Width (ft): 154

Date/Time: 9/7/2017 16:00

Calculated Discharge: 906.4 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
Comstock Height: 3.85"
Comstock Discharge: 497 cfs



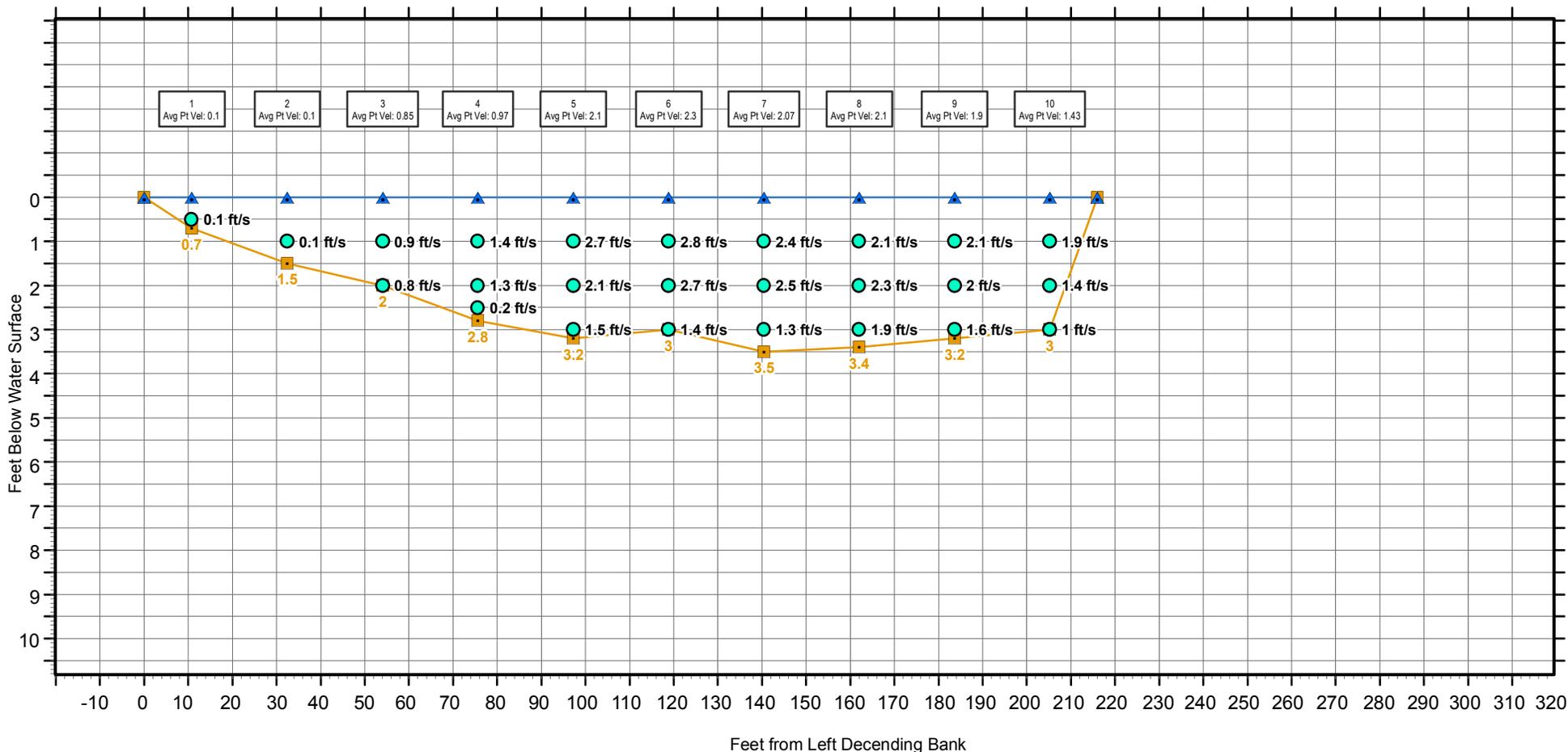
- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 5: Transect 4
River Flow Velocity Measurements
September 2017



Transect 5



Total Width (ft): 216
 Date/Time: 9/12/2017 17:00
 Calculated Discharge: 928.8 cfs

Nearest USGS Streamgage:
 Comstock Height: 3.85"
 Comstock Discharge: 497 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 6: Transect 5
 River Flow Velocity Measurements
 September 2017

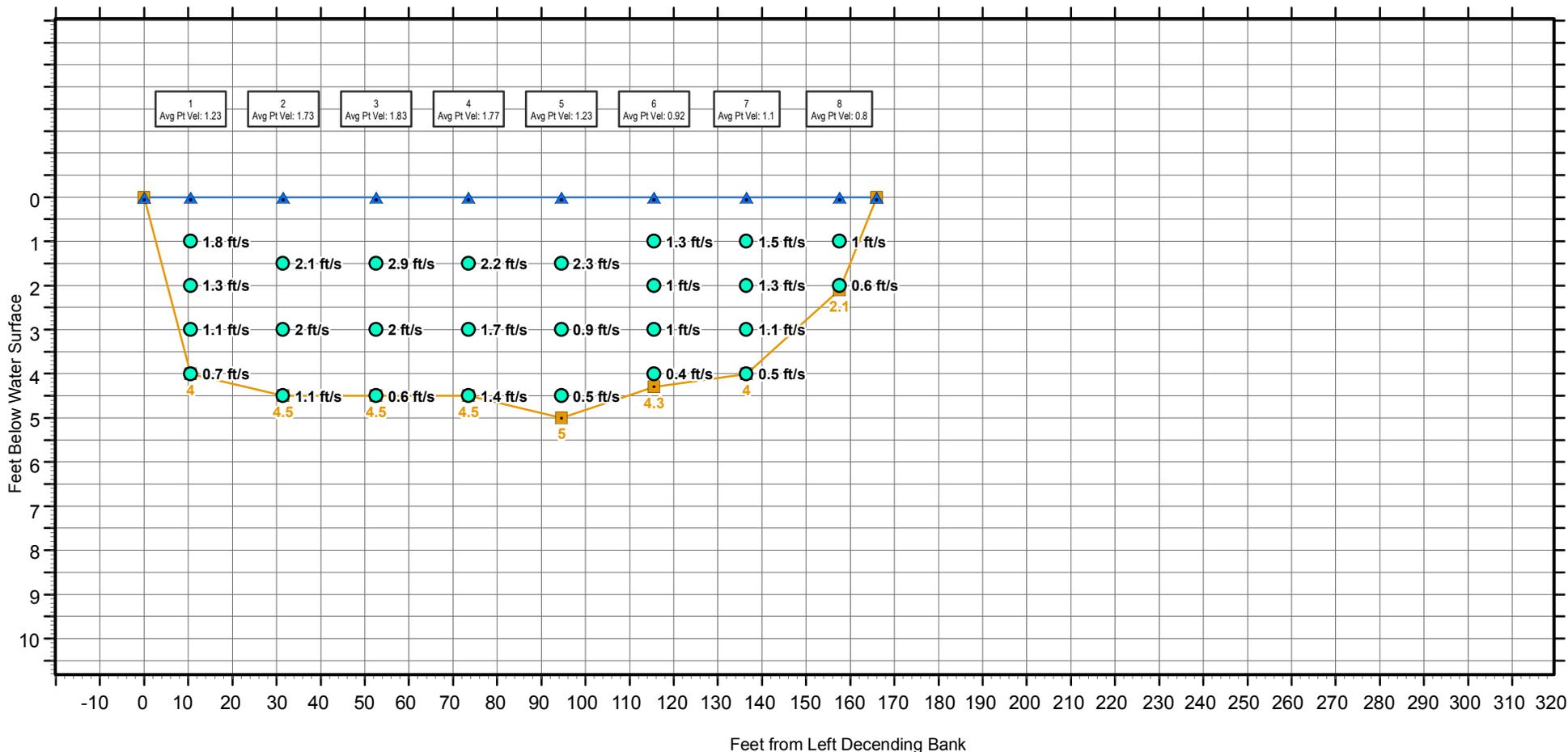


EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

Prepared By: MSG - KRB

Transect 6



Total Width (ft): 166
 Date/Time: 9/12/2017 17:30
 Calculated Discharge: 947.6 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.85"
 Comstock Discharge: 497 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

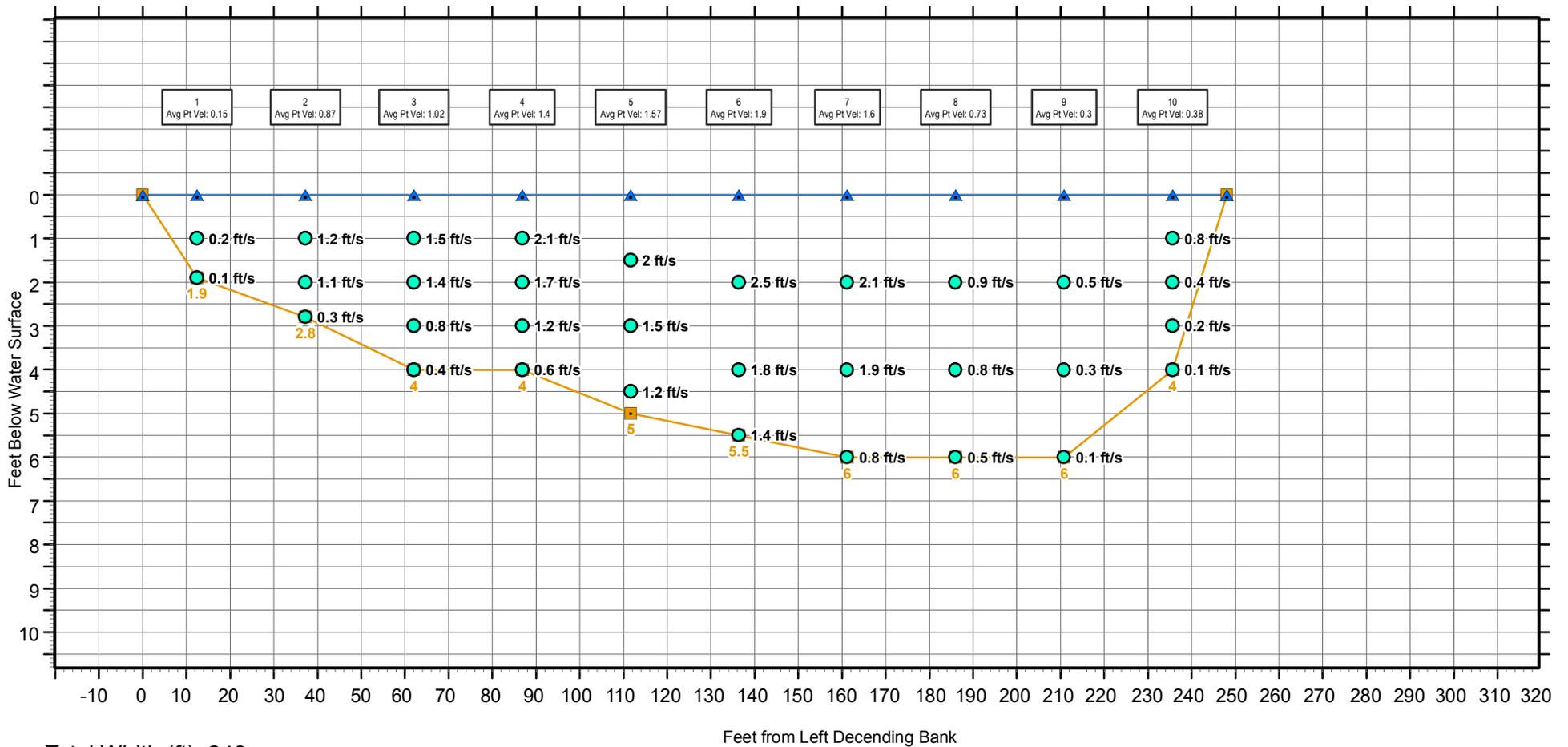
Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 7: Transect 6
 River Flow Velocity Measurements
 September 2017



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Transect 8



Total Width (ft): 248

Date/Time: 9/12/2017 18:00

Calculated Discharge: 1190.3 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
Comstock Height: 3.85"
Comstock Discharge: 497 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 8: Transect 8
River Flow Velocity Measurements
September 2017

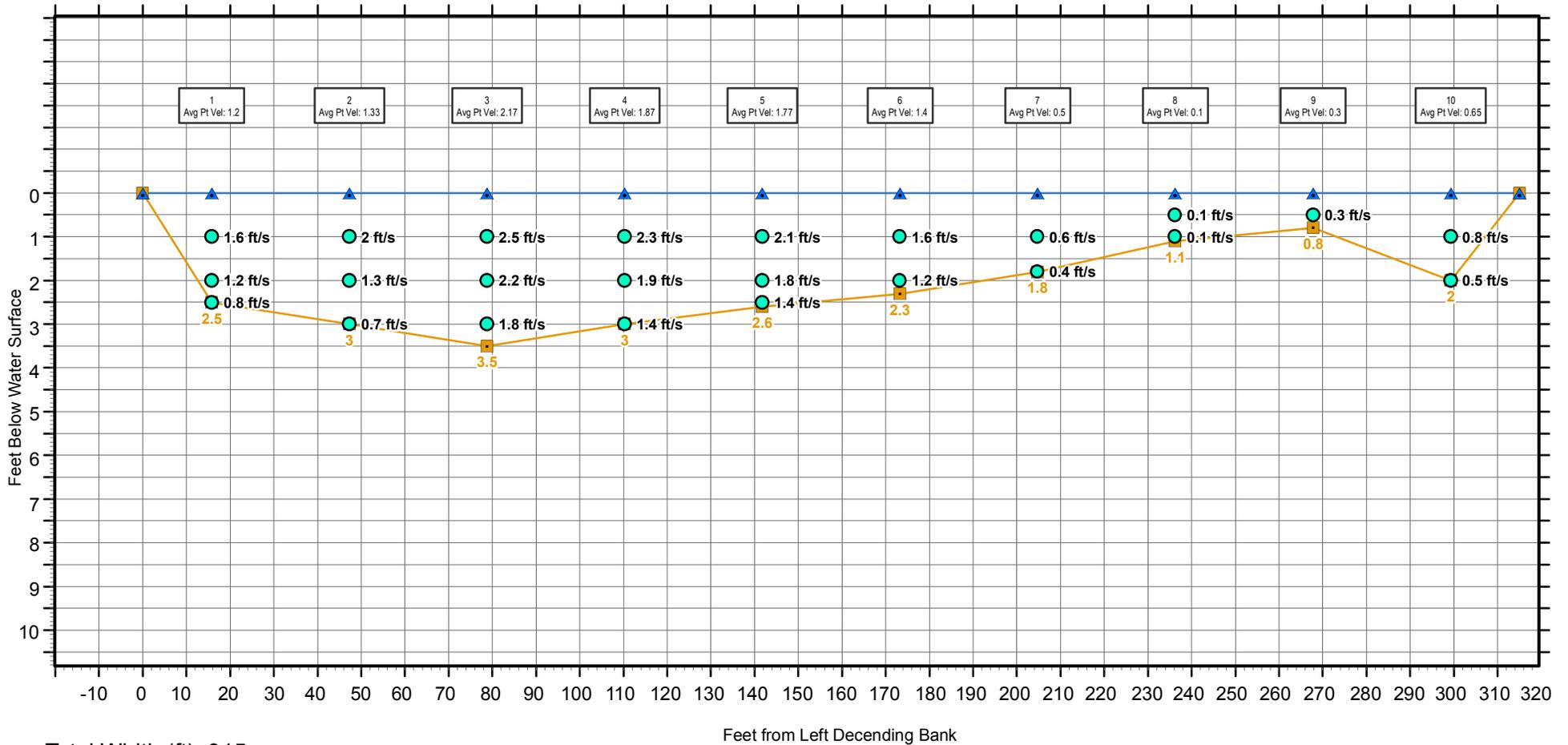


EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

Prepared By: MSG - KRB

Transect 9



Total Width (ft): 315

Date/Time: 9/12/2017 18:30

Calculated Discharge: 962.22 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:

Comstock Height: 3.85"

Comstock Discharge: 497 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 9: Transect 9
River Flow Velocity Measurements
September 2017



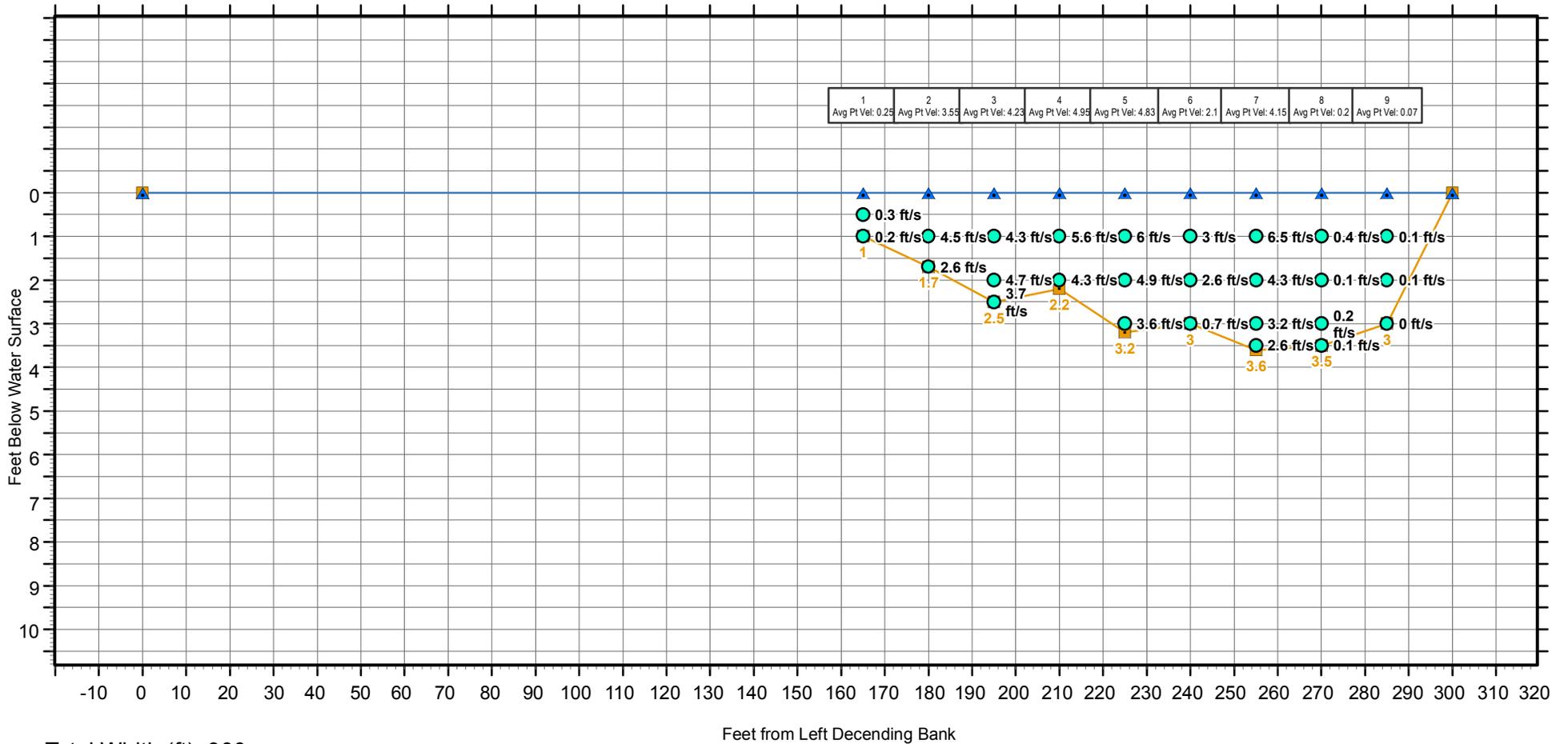
EPA Contract No.: EP-S5-13-01

TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

Prepared By: MSG - KRB

Transect 10



Total Width (ft): 300
 Date/Time: 9/19/2017 8:00
 Calculated Discharge: 980.475 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.88"
 Comstock Discharge: 522 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

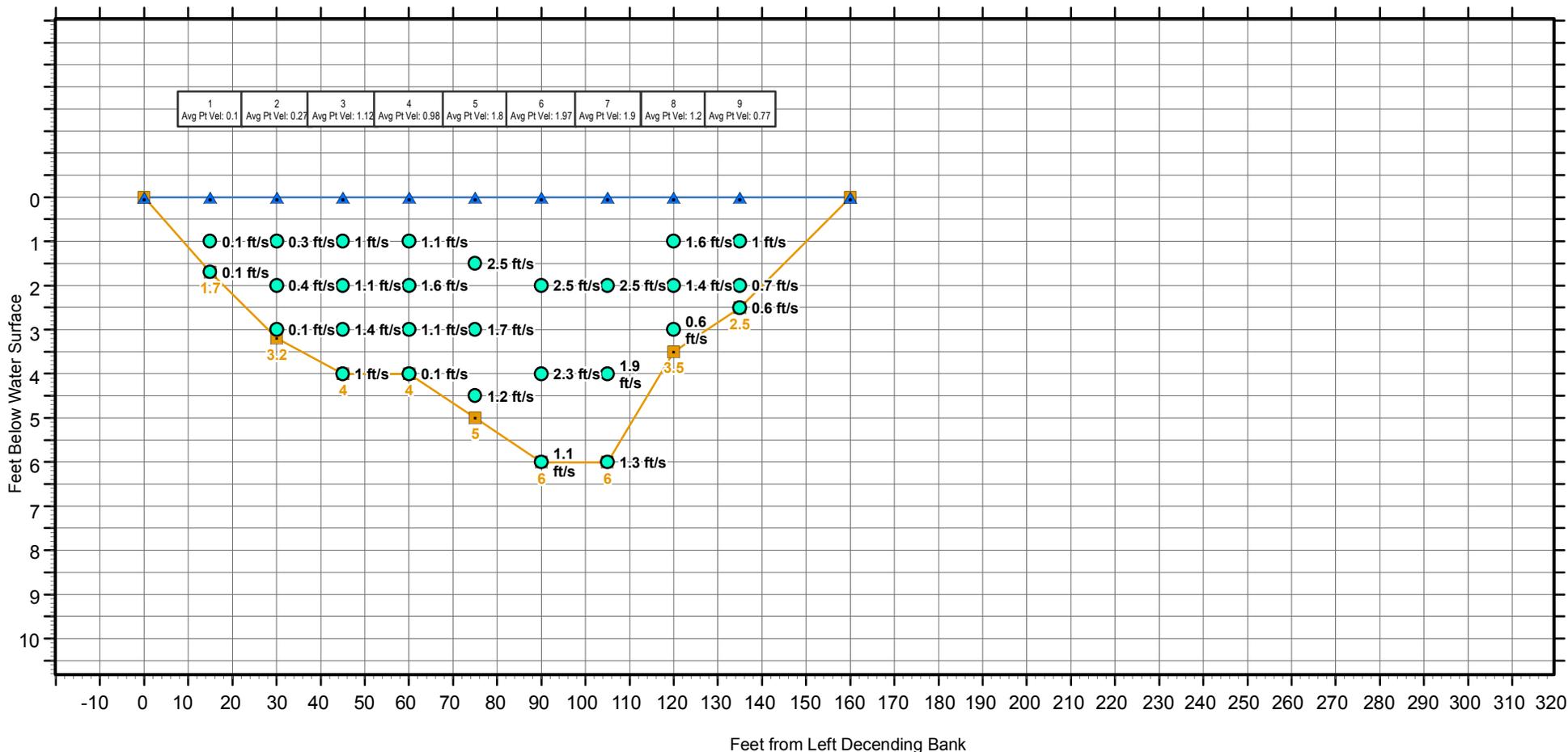
Figure 10: Transect 10
 River Flow Velocity Measurements
 September 2017



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 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA
 Prepared By: MSG - KRB

Transect 11



Total Width (ft): 160
 Date/Time: 9/19/2017 8:30
 Calculated Discharge: 716.1 cfs
 * All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 3.88"
 Comstock Discharge: 522 cfs



- River Velocity Measurement Point
- River Bottom (feet below water surface)
- ▲ River Surface

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 11: Transect 11
 River Flow Velocity Measurements
 September 2017



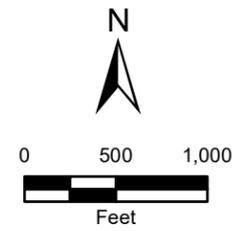
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- October 2018 - Flow Velocity Measurement Transect
- River Stations
- Stream Centerline



Kalamazoo River OU-5 Area 3 TCRA
Otsego, MI

Figure 1 - (overview)
EPA Flow Velocity Measurement Locations

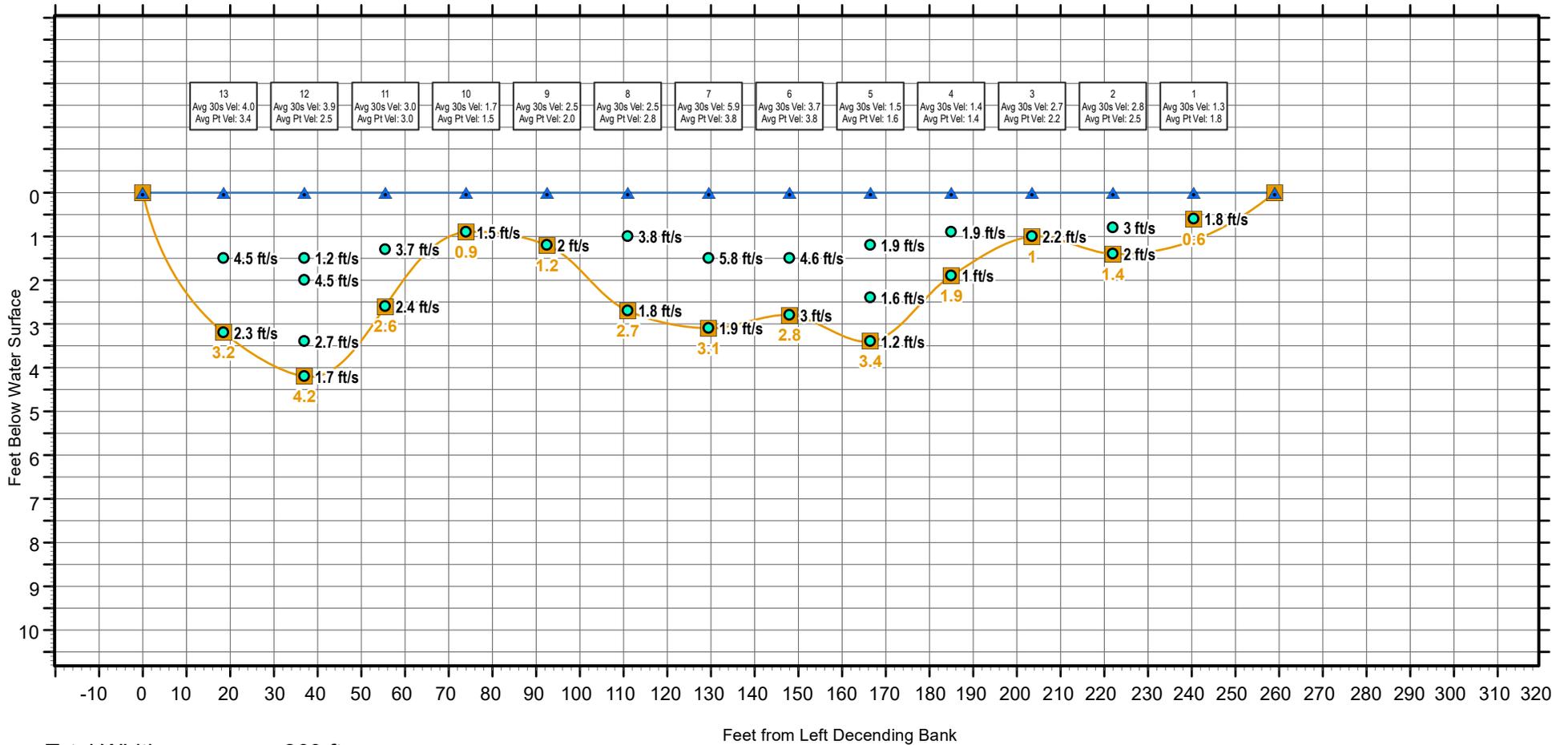


EPA Contract No.: EP-S5-13-01
TDD No.: S05-0001-1506-003

Aerial Imagery Source: USEPA October 18, 2018 and
ESRI World Imagery Map Service - NAIP2016

Prepared For: U.S. EPA
Prepared By: MSG - KRB
Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

Transect 1



Total Width: 260 ft
 Date/Time: 10/22/2018
 Calculated Discharge: 1446 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.40 ft
 Comstock Discharge: 790 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 2: Transect 1
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

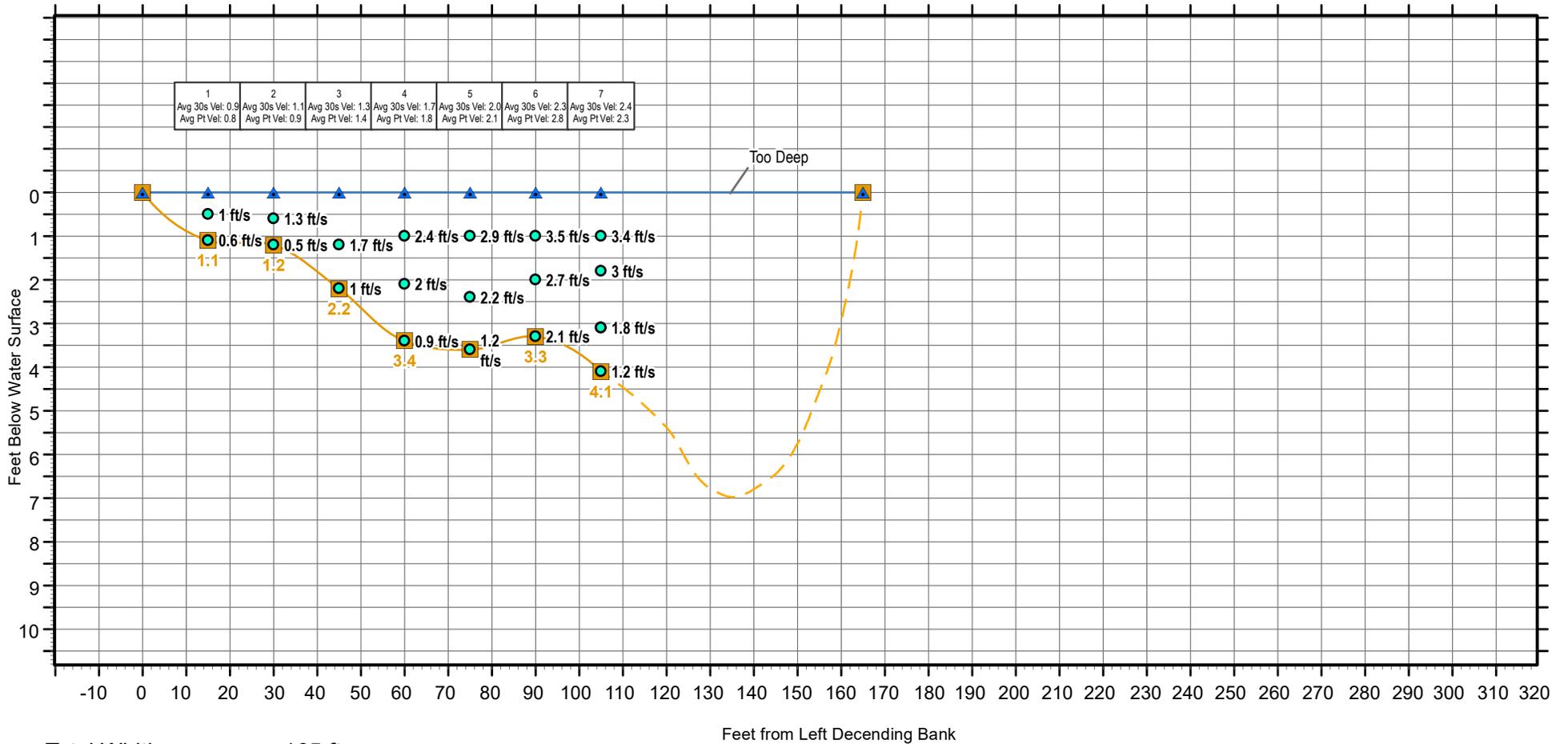
Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Intl

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Date Saved: 1/25/2019

Transect 2



Total Width: 165 ft
 Date/Time: 10/22/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.40 ft
 Comstock Discharge: 790 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 3: Transect 2
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

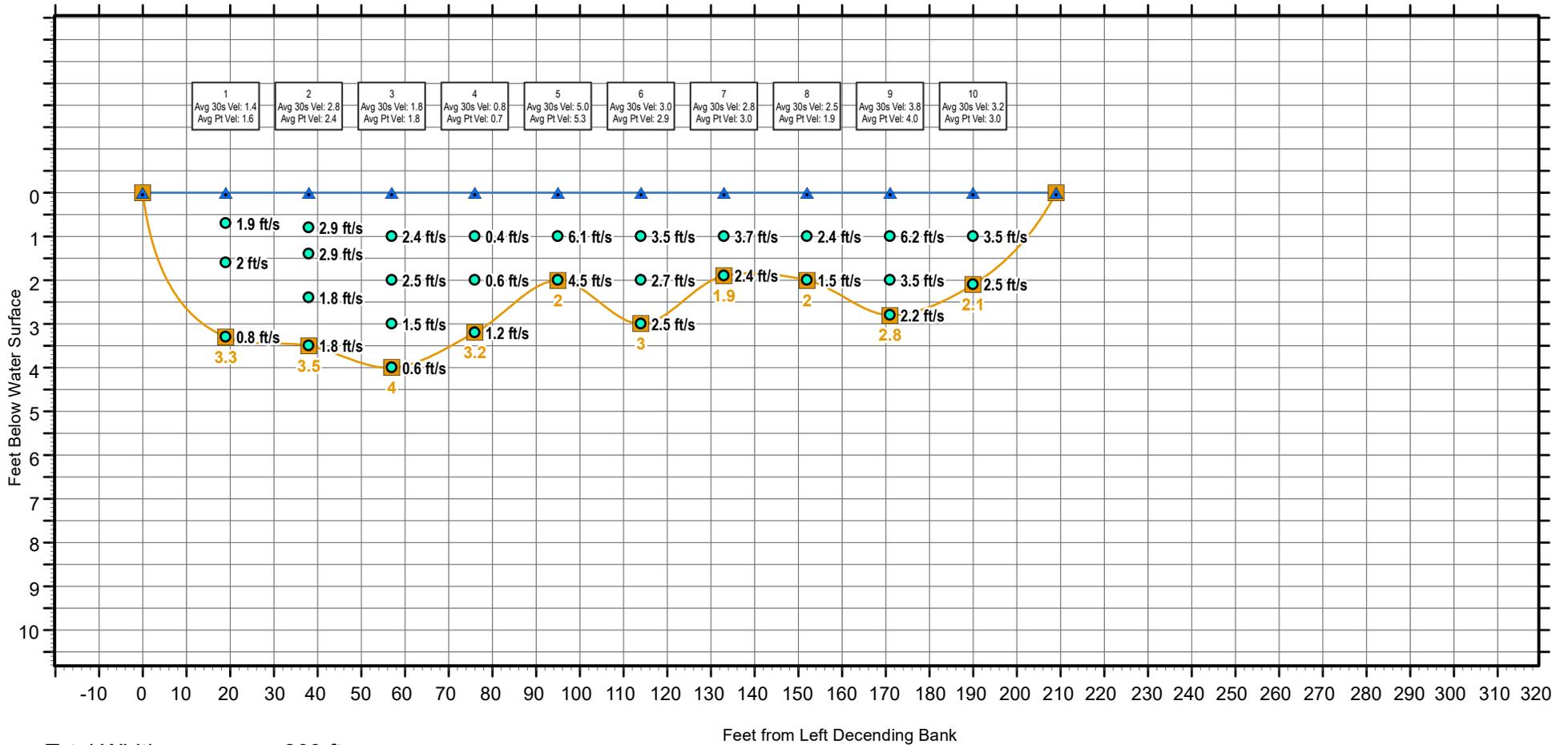
Prepared For: U.S. EPA Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

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Date Saved: 1/25/2019

Transect 3



Total Width: 209 ft
 Date/Time: 10/23/2018
 Calculated Discharge: 1314 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 4: Transect 3
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

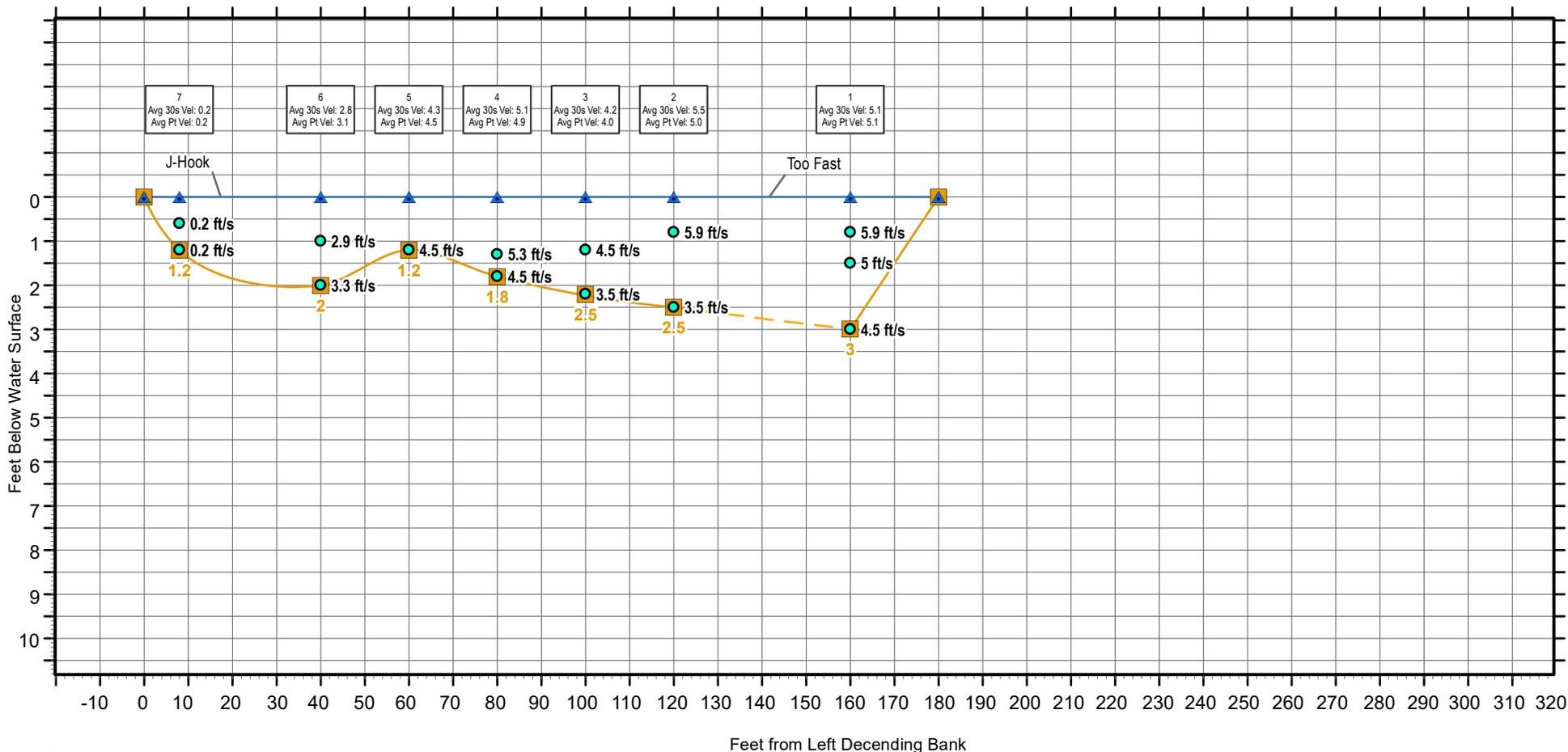
Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Intl

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Date Saved: 1/25/2019

Transect 4



Total Width: 180 ft
 Date/Time: 10/23/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 5: Transect 4
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

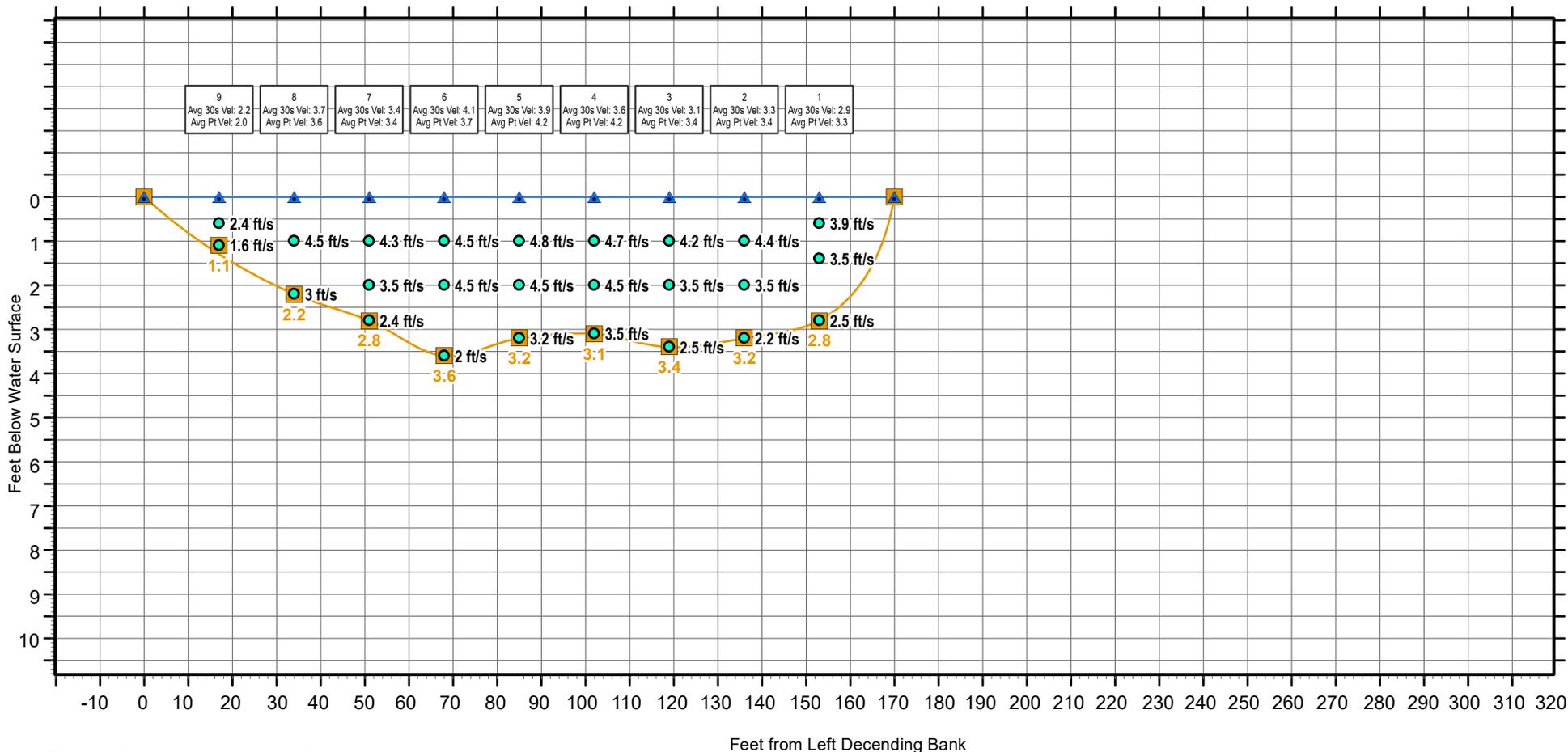
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Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

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Date Saved: 1/25/2019

Transect 5

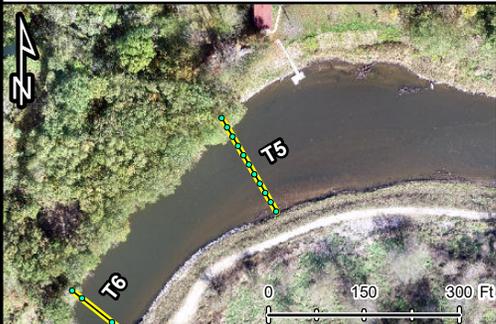


Total Width: 170 ft
 Date/Time: 10/23/2018
 Calculated Discharge: 1546 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 6: Transect 5
 River Flow Velocity Measurements
 October 2018

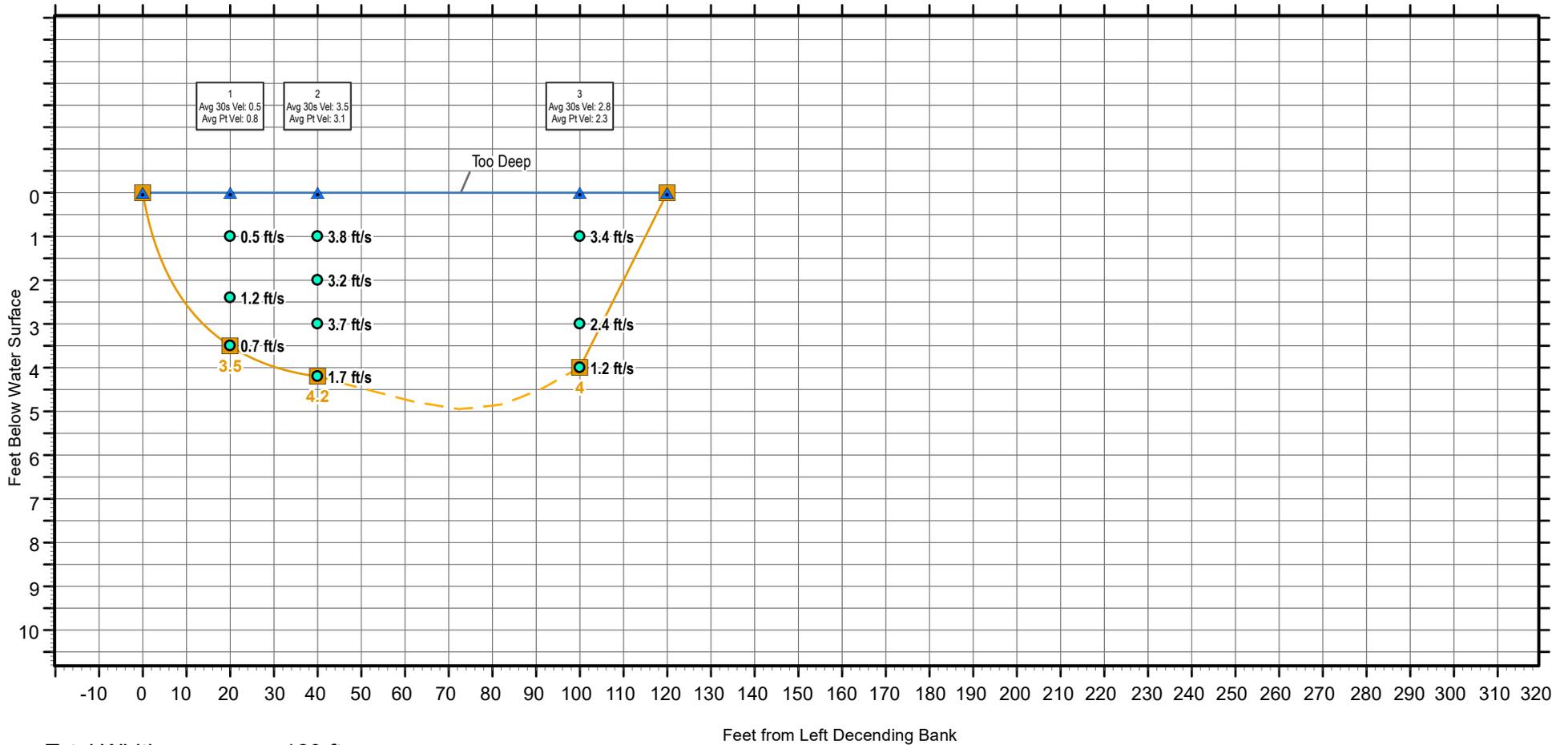


EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

Transect 6



Total Width: 120 ft
 Date/Time: 10/23/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 7: Transect 6
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

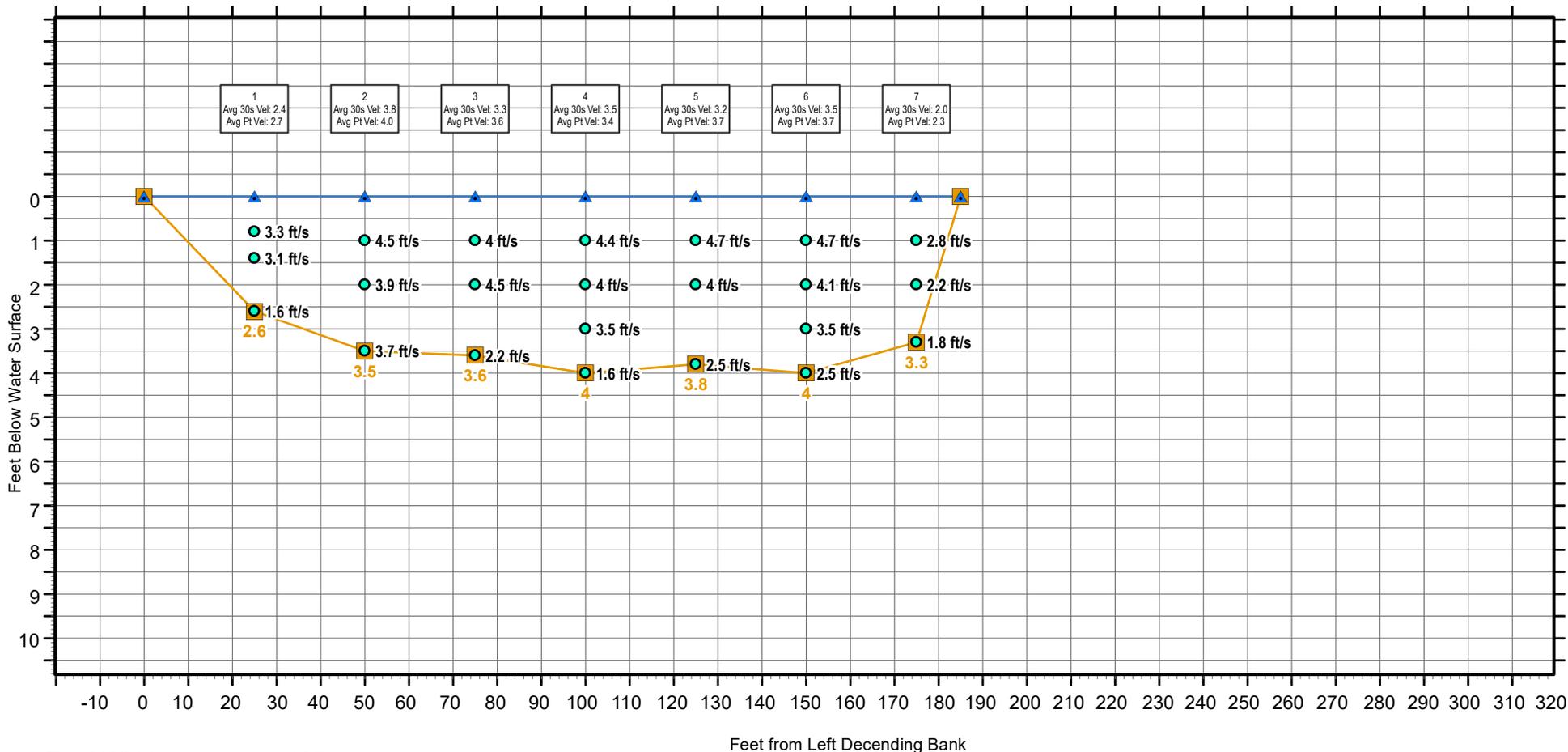
Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

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Date Saved: 1/25/2019

Transect 8

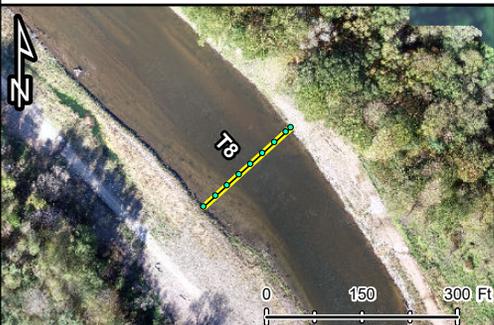


Total Width: 185 ft
 Date/Time: 10/23/2018
 Calculated Discharge: 2096 cfs

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 8: Transect 8
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

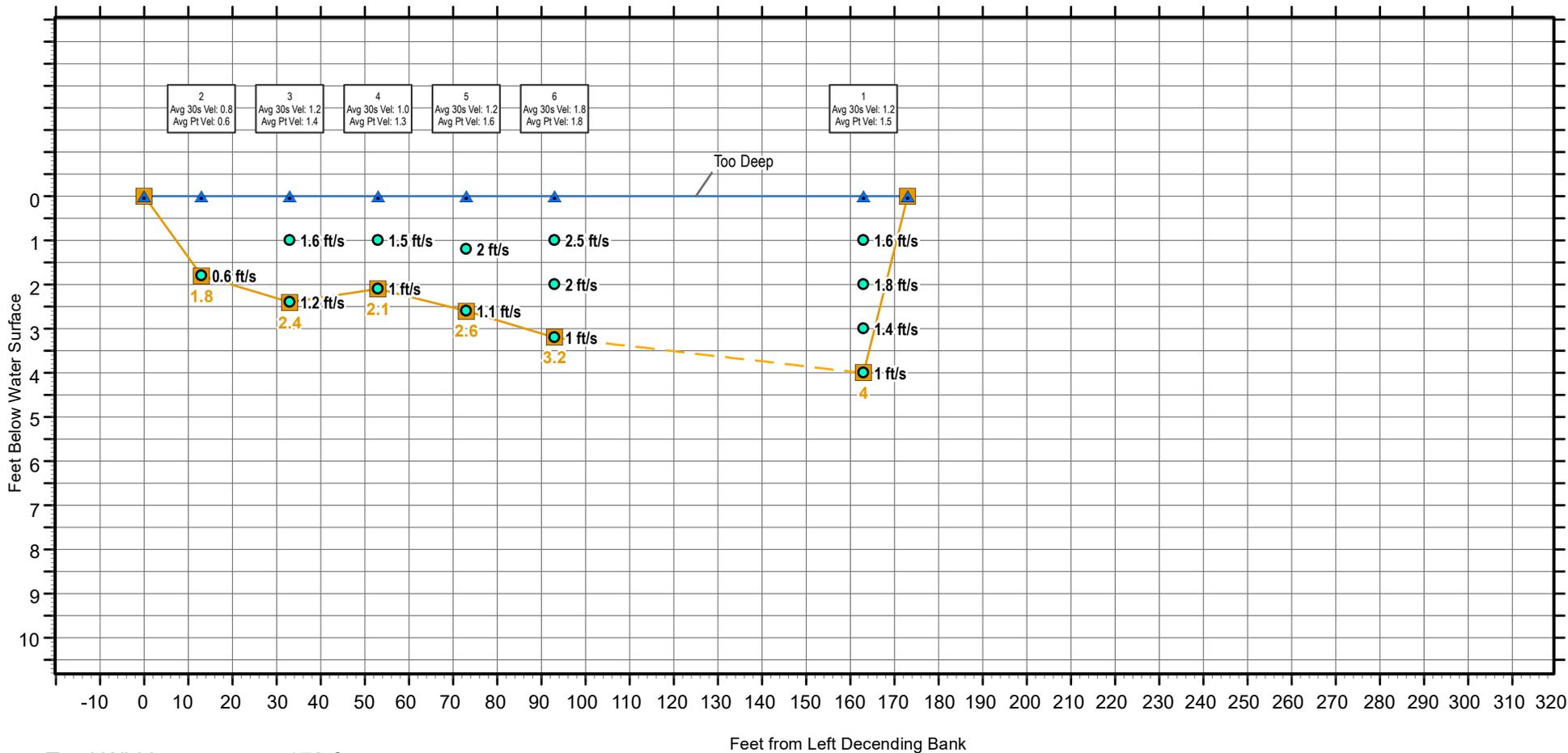
Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Intl

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Transect 9

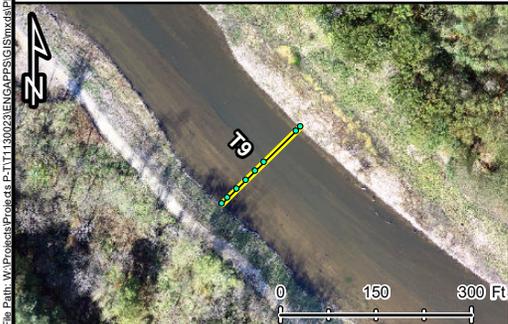


Total Width: 173 ft
 Date/Time: 10/23/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 9: Transect 9
 River Flow Velocity Measurements
 October 2018



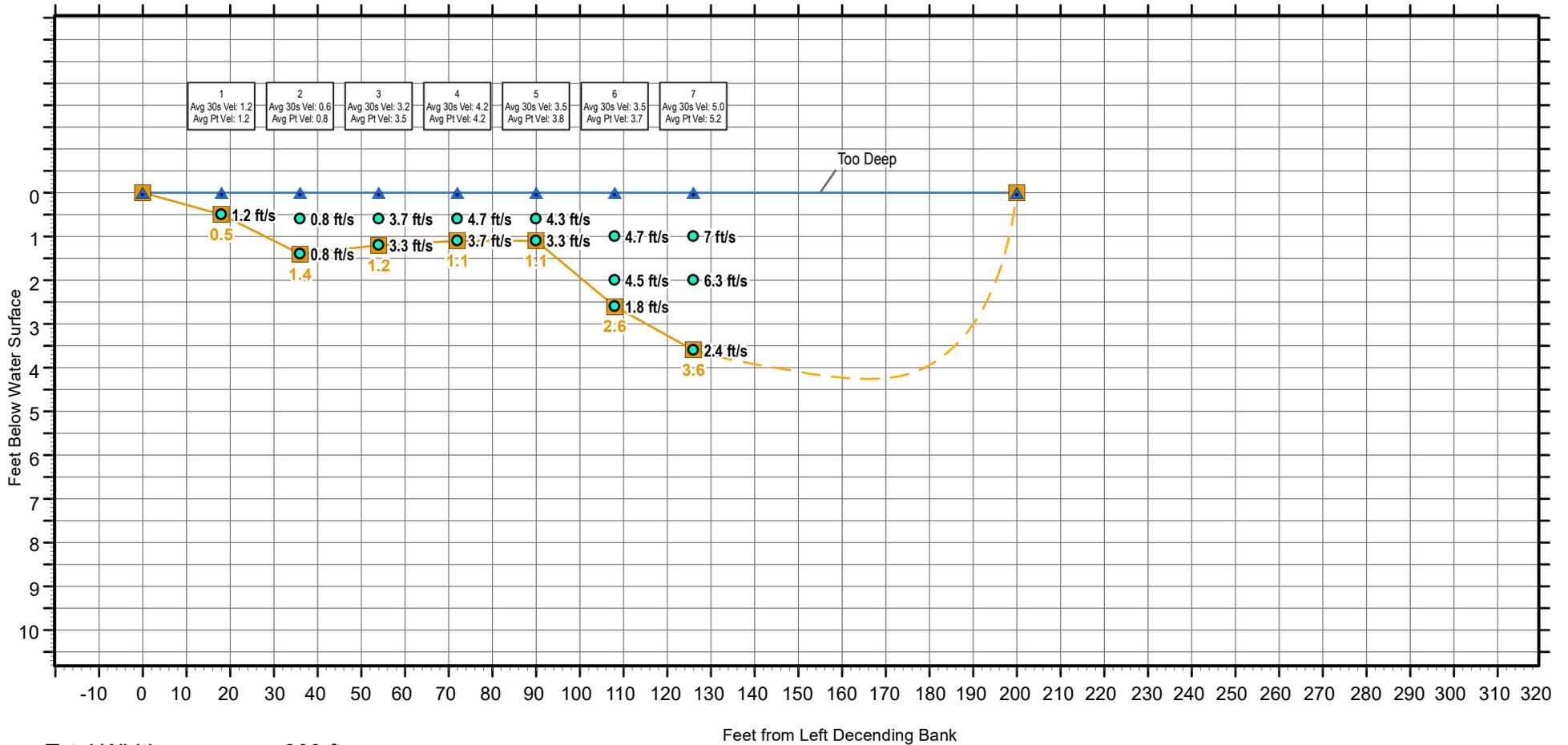
EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int

Transect 10

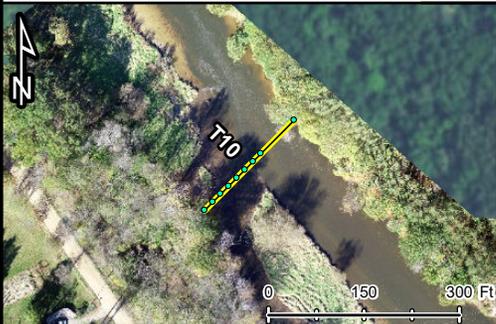


Total Width: 200 ft
 Date/Time: 10/23/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 10: Transect 10
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA

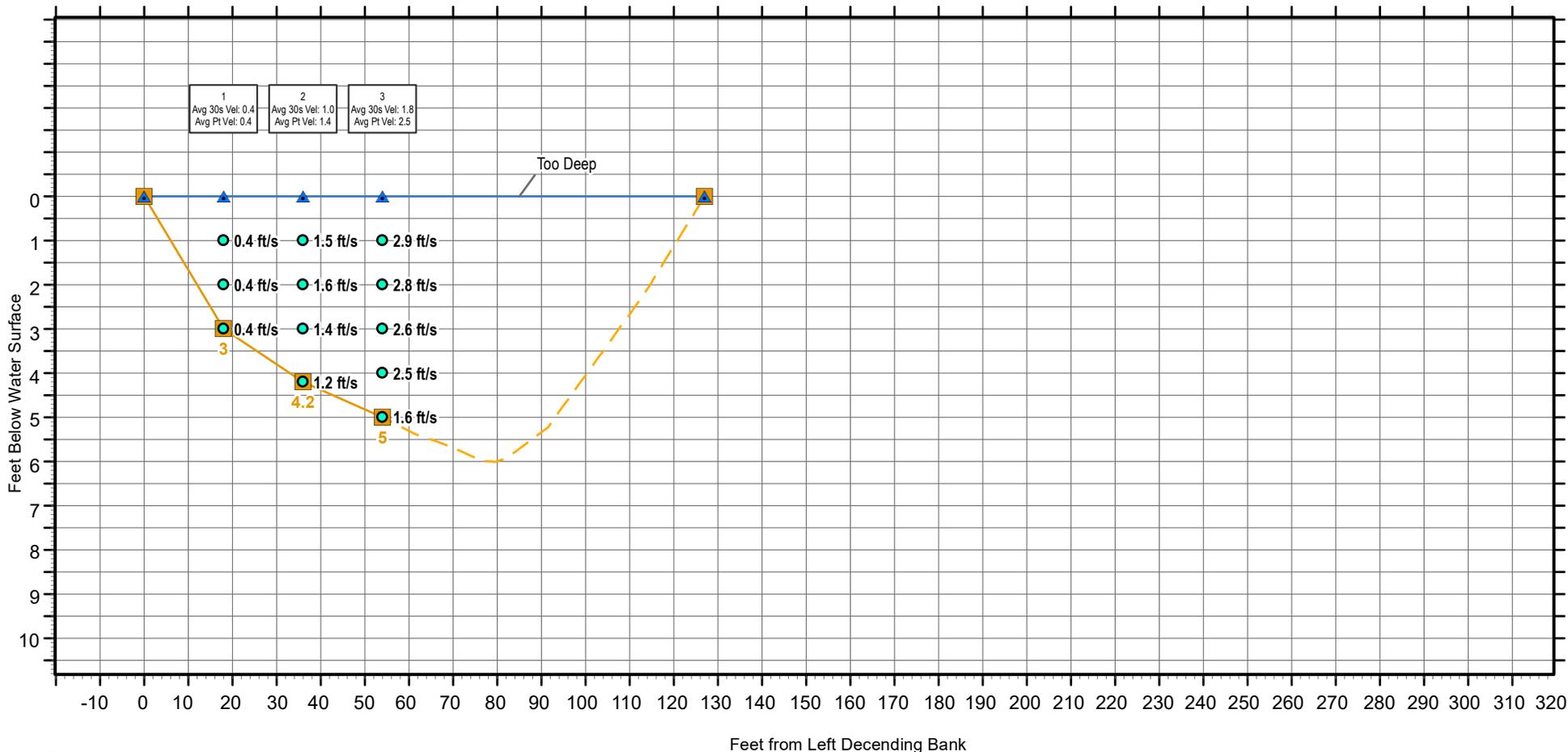
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Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Intl

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Date Saved: 1/25/2019

Transect 11



Total Width: 127 ft
 Date/Time: 10/23/2018
 Calculated Discharge: --

* All measured distances are approximate

- Avg Pt Vel = Average of point velocity measurements (ft/s)

Nearest USGS Streamgage:
 Comstock Height: 4.39 ft
 Comstock Discharge: 783 cfs



- River Velocity Measurement Point (feet/second)
- ▲ River Surface
- River Bottom (feet below water surface)
- Water Level
- River Bottom

Kalamazoo River OU-5 Area 3 TCRA
 Otsego, MI

Figure 11: Transect 11
 River Flow Velocity Measurements
 October 2018



EPA Contract No.: EP-S5-13-01
 TDD No.: S05-0001-1506-003

Prepared For: U.S. EPA Prepared By: MSG - KRB

Coordinate System: NAD_1983_StatePlane_Michigan_South_FIPS_2113_Feet_Int