

**RAW WATER AND  
SEDIMENT STUDY REPORT  
KANAWHA RIVER  
CHARLESTON, WEST VIRGINIA**

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**POTESTA**

# EXECUTIVE SUMMARY

## BACKGROUND

Historically, the 72-mile segment (Zone 1) of the Kanawha River that runs from Diamond, West Virginia to its confluence with the Ohio River at Point Pleasant, West Virginia has been exempt from the West Virginia Public Water Supply (Category A) water quality standards. Category A standards establish discharge limits considered to protect waters that are used for human consumption following conventional treatment and have not been applied to this stretch of the river for many years due to concerns over the quality of the water, particularly due to industrial discharges.

In 2014, the West Virginia Legislature passed Senate Bill 373 requiring water utilities to evaluate alternate water sources of supply for each of their water treatment facilities. The Legislature also removed the Category A exemption for Zone 1 of the Kanawha River, as recommended by the West Virginia Department of Environmental Protection (WVDEP).<sup>1</sup> The re-designation establishes protection of this river segment for drinking water, but that alone is not sufficient for determining suitability for a water supply source. West Virginia American Water (WVAW) determined that, in order to include the Kanawha River near Charleston in its evaluation of potential alternate sources for its Kanawha Valley Water Treatment Plant (KVVWTP), it would need additional information regarding the water quality for that section of the Kanawha River.

This study, just one of a number of considerations, provides raw water quality and sediment data to assist WVAW in evaluating whether this section of the Kanawha River is of such a quality that it could be considered suitable to serve as a drinking water source of supply. WVAW worked closely with state regulators to ensure the work completed was comprehensive, such that the company could rely on the final data - see methodology section below. WVAW intends to provide the study to the West Virginia Department of Health and Human Resources (WVDHHR) as a supplement to its recently submitted Source Water Protection Plan (SWPP), share the study data with WVDEP and WVDHHR, and make information on the study available to the public via WVAW's website.

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<sup>1</sup> In 2015, WVDEP indicated that Zone 1 of the Kanawha River is suitable for drinking water use and has modified the Water Quality Standards (WQS) to remove the Category A exemption. The West Virginia Legislature approved the modification to the WQS on March 12, 2015 via House Bill 2283 and the Governor approved the bill on March 18, 2015. Changes to West Virginia's WQS still have to be approved by the United States Environmental Protection Agency (USEPA) before the WQS can be used in permitting actions; however, it is anticipated that the USEPA will approve the Category A change.



## METHODOLOGY

Potesta & Associates, Inc. (POTESTA) and WVAW developed a study plan that was presented to the WVDHHR and WVDEP prior to its implementation to get their input and agreement on the approach. The plan generally consisted of sampling Kanawha River water and sediment for an extensive list of parameters at locations between Charleston and Montgomery. The study plan was revised to address comments from the agencies and the study commenced in June 2015. WVAW, POTESTA, WVDEP and WVDHHR met twice during the course of the work to discuss the study and its findings.

### *Water Quality Sampling*

Water quality samples were collected during 24 sampling events over a 12-month period from four different locations. There were three locations in the Charleston area: near the Moose Lodge, close to Elizabeth Street and near Court Street. The fourth location was upstream of the former WVAW intake at Montgomery. At each of these sample locations, a transect was established, with sampling points located at positions 20 feet and 60 feet from the bank. Two sampling points were established at different depths of approximately 1 foot and 10 feet from the stream bottom for each of these two points, resulting in four sampling points for each location. Samples were collected from the four points along each transect and mixed as a composite sample in a decontaminated stainless steel bucket prior to being placed into lab containers. Samples specifically for volatile parameters were collected as individual grab samples at each of the four points on each transect to minimize the potential for evaporative loss.

Additional samples were collected over the course of the study for quality control purposes. These included field blank samples prepared from ultra-pure reagent water and duplicate samples collected in the field at the same time the original samples were collected. Both the field blanks and the field duplicates were submitted to the laboratories for blind analysis, meaning that the labs were not told that the samples were blanks or duplicates. Field blanks are used to determine if samples have been contaminated during collection or handling and analysis, while field duplicates are used to check the laboratory's accuracy.

Samples were collected across a range of flow conditions and analyzed by certified or approved laboratories for more than 150 parameters. The parameters included the Federal Safe Drinking Water Act (SDWA) primary and secondary drinking water standards, West Virginia's Category A Water Quality Standards (WQS), several general chemistry parameters, and parameters on the Unregulated Contaminant Monitoring Rule 3 (UCMR3) list. The UCMR list is a group of unregulated contaminants selected by the USEPA to be measured in public water systems once every five years to provide a basis for future regulatory action to protect public health. These parameters are intended to be measured in finished drinking water, which is water that has been treated and is ready for distribution and human consumption rather than raw water, which is untreated water like the water collected from the river. Because the water analyzed throughout this study was raw water, it is likely to contain materials, like dirt or plant matter, that could affect the laboratory analysis. Thus, the results reported are not suitable for UCMR3 compliance

purposes, but may provide some indication of whether or not these contaminants could be present in the Kanawha River.

During the course of the study, 392 grab samples were analyzed for 32 volatile parameters, and 104 composite samples were analyzed for 121 other parameters, resulting in more than 25,000 data points. This level of sampling and analysis far exceeds the typical requirements for the evaluation of a drinking water supply. The laboratory results were then compared to the primary and secondary drinking water standards and the Category A WQS.

### *Sediment Sampling*

Sediment from the Kanawha River was also studied due to the past industrial, chemical and mining use of the Kanawha River and its tributaries downstream of Mile Point 72. The sediment study was conducted to identify contaminants in river bottom sediments that could potentially be released back into the Kanawha River and affect water quality over time. The sediment study provided data from two sediment sampling events – one during low flow and one following a high flow event. Seven sampling sites located on the Kanawha River between Charleston and Cabin Creek were selected, including three water quality sampling locations in the Charleston area and four additional upstream locations near the major tributaries discharging into the Kanawha River. The four additional locations included the Campbell's Creek Tributary, the Rush Creek/Burning Springs Branch Tributary, the DuPont Plant/Simmons & Lens Creek Tributaries and the Cabin Creek Tributary. Detailed geophysical and bathymetric data were collected at each location to evaluate sediment accumulation, thickness, and general gradation for selecting the sediment sampling points.

POTESTA collected sediment samples from a boat deployed on the river. Samples of accumulated sediment were collected at two locations from each of the targeted sample locations (one on each side of the river) once during a normal or low flow period and a second following a high flow event. Two discreet samples were obtained from the top foot of sediment; based on a previous study of the Kanawha River in the Nitro area, it was determined that "Finest-grained deposit along both banks of the River exhibit lower resuspension rates due to lower shear stresses being generated by lower velocities of flow in those areas." (Conestoga-Rovers & Associates, 2015). This resulted in a total of 8 samples from each sampling location, for 56 total samples. Analytical laboratory and classification soils testing was completed by certified laboratories. Analytical tests included total organic carbon, metals, polychlorinated biphenyls, volatile organic compounds, semi-volatile organic compounds, and dioxin.

Currently, West Virginia does not have a screening method or regulatory standard for the evaluation of sediment with respect to a potential drinking water source. POTESTA utilized the findings and screening method in a United States Geological Survey study (Ingersoll et al., 2000) to compare the sediment analytical results to "probable effect concentrations" above which adverse aquatic toxicity effects are expected to occur.

## RESULTS

The water sampling data showed no appreciable differences in the water quality between the four sampling locations. Of the more than 25,000 data points, there were 2,494 values (9.74 %) found above the laboratory minimum detection level, which is the lowest concentration at which the lab can detect a particular parameter, or the minimum reporting level, which is the lowest concentration set by the USEPA for reporting UCMR3 parameters.

The following parameters were measured at levels above the Federal SDWA primary or secondary drinking water standards:

- Bacteria (301 of 376 samples or 80 %)
- Aluminum (19 of 96 samples or 20 %)
- Iron (37 of 96 samples or 39 %)
- Manganese (18 of 96 samples or 19 %)
- Bis(2-ethylhexyl)phthalate (6 of 96 samples or 6 %)

As these results are for raw water, additional treatability studies would be necessary to determine if the water can be treated to meet the primary and secondary water quality standards for these parameters.

Of the UCMR3 parameters, only 1,4-dioxane was measured above USEPA's draft reference concentration (12 of 96 samples or 13%). As noted in the USEPA's UCMR3 Data Summary (USEPA, 2016c), "The draft reference concentration does not represent an 'action level' (EPA requires no particular action based simply on the fact that UCMR monitoring results exceed draft reference concentrations), nor should the draft reference concentration be interpreted as any indication of an Agency intent to establish a future drinking water regulation for the contaminant at this or any other level. Decisions as to whether or not to regulate the contaminant in drinking water will continue to be made following the Agency's Regulatory Determination process."

While the parameter was measured above the draft reference concentration at the three Charleston-area sampling locations, there are reasons to question the reliability of these results. First, this parameter is commonly used as a solvent and found in laboratory reagents. Further, the parameter was detected in four of the five field blank samples, which indicates that the samples may have been contaminated in the field or in the laboratory. Additionally, the analytical method for this parameter was developed for use on treated finished water and the raw water samples from the river may contain materials that could affect the analysis in unknown ways. Should WVAW pursue an alternate intake on the Kanawha River, this parameter should be included in treatability studies where it could be more appropriately analyzed in finished water following treatment.

The sediment analytical data show that the concentrations in the sediments sampled are all below the identified probable effect concentrations, except for copper and nickel at the location below the DuPont Belle Plant at Rush Creek. Additional treatability studies would be necessary to determine if the sediment can be treated to meet the water quality standards for these parameters.

Importantly copper and nickel were not detected in any of the water samples above the applicable drinking water standards.

The combined results of this study indicate that only ten (10) of over 150 parameters were detected in raw water or sediment above the associated water quality standards, UCMR3 draft reference concentrations, or probable effect concentrations. These detections represent less than 2 % of the total number of samples collected. The data obtained from this study will be provided to WVDEP and WVDHHR.



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## LIST OF ACRONYMS

CAWQS	Category A Water Quality Standard
CH	Courthouse
CDC	Centers for Disease Control and Prevention
COC	Chain-of-custody
DGPS	Digital Global Positioning System
DuPont	DuPont Belle Works
EDL	Estimated Detection Limit
ES	Elizabeth Street
GPS	Global Positioning System
HPC	Heterotrophic Plate Count
KVWTP	Kanawha Valley Water Treatment Plant
LDB	Left Descending Bank
M	Moose Lodge
MCHM	4-methylcyclohexanemethanol
MDC	Minimum Detectable Concentration
MDL	Method Detection Level
MNT	Montgomery Intake
MRL	Minimum Reporting Level
NELAP	National Environmental Laboratory Accreditation Program
OCPSF	Organic Chemical, Plastics, and Synthetic Fibers
ORP	Oxidation Reduction Potential
PCBs	Polychlorinated Biphenyls
PDWS	Primary Drinking Water Standard
PEC	Probable Effect Concentrations
POTESTA	Potesta & Associates, Inc.
QA/QC	Quality Assurance and Quality Control
RC	Draft UCMR3 Reference Concentration
RDB	Right Descending Bank

RPD	Relative Percent Difference
SDWS	Secondary Drinking Water Standard
SOP	Standard Operating Procedures
SVOCs	Semi-Volatile Organic Compounds
TTHM	Total Trihalomethanes
UCMR3	Unregulated Contaminant Monitoring Rule 3
USEPA	United States Environmental Protection Agency
USGS	United States Geological Service
VOA	Volatile Organic Analyte
VOCs	Volatile Organic Compounds
WQS	Water Quality Standard
WVAW	West Virginia American Water
WVDEP	West Virginia Department of Environmental Protection
WVDHHR	West Virginia Department of Health and Human Resources



# RAW WATER AND SEDIMENT STUDY REPORT KANAWHA RIVER, CHARLESTON, WEST VIRGINIA

## 1.0 INTRODUCTION

The purpose of the study was to develop information to assist West Virginia American Water (WVAW) in evaluating water quality of the Kanawha River.

Historically, the 72-mile segment (Zone 1) of the Kanawha River that runs from Diamond, West Virginia to its confluence with the Ohio River at Point Pleasant, West Virginia has been exempt from the West Virginia Public Water Supply (Category A) water quality standards. Category A standards establish discharge limits considered to protect waters that are used for human consumption following conventional treatment and have not been applied to this stretch of the river for many years due to concerns over the quality of the water, particularly due to industrial discharges.

In 2014, the West Virginia Legislature passed Senate Bill 373 requiring water utilities to evaluate alternate water sources of supply for each of their water treatment facilities. The Legislature also removed the Category A exemption for Zone 1 of the Kanawha River, as recommended by the West Virginia Department of Environmental Protection<sup>1</sup> (WVDEP). The re-designation establishes protection of this river segment for drinking water, but that alone is not sufficient for determining suitability for a water supply source. WVAW determined that in order to include the Kanawha River near Charleston in its evaluation of potential alternate sources for its Kanawha Valley Water Treatment Plant (KVVWTP), it would need additional information regarding the water quality for that section of the Kanawha River.

POTESTA and WVAW developed a detailed water quality and sediment study plan that was presented to West Virginia Department of Health and Human Resources (WVDHHR) and WVDEP prior to implementation to get their input and agreement on approach. Based on comments from the agencies, the study plan was revised to include one additional water sampling location on the Kanawha River upstream of the existing WVAW Montgomery intake, and add the Unregulated Contaminant Monitoring Rule 3 (UCMR3) and *Cryptosporidium* analytes to the list of water quality parameters to be analyzed. The study commenced in June 2015. WVAW and POTESTA met with WVDHHR and WVDEP staff twice during the sampling/data collection to review the status of the project and to discuss the preliminary findings. No methodology changes were suggested by the agencies at these meetings.

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<sup>1</sup> In 2015, WVDEP indicated that Zone 1 of the Kanawha River is suitable for drinking water use and has modified the Water Quality Standards (WQS) to remove the Category A exemption. The West Virginia Legislature approved the modification to the WQS on March 12, 2015 via House Bill 2283 and the Governor approved the bill on March 18, 2015. Changes to West Virginia's WQS still have to be approved by the United States Environmental Protection Agency (USEPA) before the WQS can be used in permitting actions; however, it is anticipated that the USEPA will approve the Category A change.

This report describes the procedures, sampling processes, data collection, reporting, protocols, and results of the study. The results section includes comparison of the raw (untreated) river water samples to treated drinking water standards as an indication of what may be above or below the standards prior to treatment. The report also includes the results of the sediment analysis compared with guidelines utilized by the USGS report titled, "Prediction of Sediment Toxicity using Consensus-Based Freshwater Sediment Quality Guidelines" (Ingersoll et al., 2000).

## 2.0 WATER QUALITY

### 2.1 Methods

#### 2.1.1 Sample Locations

Four sampling locations were selected for this study, including three Charleston locations referred to within this report as the Courthouse (CH) sample location, the Elizabeth Street (ES) sample location and the Moose Lodge (M) sample location. The fourth sampling location was upstream of the former WVAW Montgomery Intake (MNT) (see **Figure 1** in **Appendix A**). At each of these sample locations, a transect was established perpendicular to the river, with sampling points located at positions 20 feet and 60 feet from the bank and depths of approximately 1 foot and 10 feet from the stream bottom.

A summary of the sample points is presented in Table 2.1 below and are shown on **Figure 1** in **Appendix A**.

**Table 2.1**  
*Sampling Points*

Site ID	Site Description
CH-1-B	Courthouse location, 20 feet from right descending bank (RDB), 1 foot above river bottom.
CH-1-T	Courthouse location, 20 feet from RDB, 10 feet above river bottom.
CH-2-B	Courthouse location, 60 feet from RDB, 1 foot above river bottom.
CH-2-T	Courthouse location, 60 feet from RDB, 10 feet above river bottom.
ES-1-B	Elizabeth Street location, 20 feet from RDB, 1 foot above river bottom.
ES-1-T	Elizabeth Street location, 20 feet from RDB, 10 feet above river bottom.
ES-2-B	Elizabeth Street location, 60 feet from RDB, 1 foot above river bottom.
ES-2-T	Elizabeth Street location, 60 feet from RDB, 10 feet above river bottom.
M-1-B	Moose location, 20 feet from RDB, 1 foot above river bottom.
M-1-T	Moose location, 20 feet from RDB, 10 feet above river bottom.
M-2-B	Moose location, 60 feet from RDB, 1 foot above river bottom.

Site ID	Site Description
M-2-T	Moose location, 60 feet from RDB, 10 feet above river bottom.
MNT-1-B	Montgomery location, 20 feet from left descending bank (LDB), 1 foot above river bottom.
MNT-1-T	Montgomery location, 20 feet from LDB, 10 feet above river bottom.
MNT-2-B	Montgomery location, 60 feet from LDB, 1 foot above river bottom.
MNT-2-T	Montgomery location, 60 feet from LDB, 10 feet above river bottom.

The coordinates of each sample point were measured using a hand-held global positioning system (GPS) unit and recorded during the first sampling event. A GPS unit was used during subsequent sampling events so that samples were consistently obtained from the same general locations.

### 2.1.2 Sampling Frequency and Duration

Twenty-four sampling events were conducted over a 12-month period, with a minimum of one week between events. Samples were collected during low flow, normal and high flow conditions of the Kanawha River. The level of the river was monitored as part of this study, with river flow and gage height values being obtained for each sampling event using the United States Geological Service (USGS) gauging station for the Kanawha River located at Kanawha Falls (USGS 03193000) (2016). Precipitation in the 72 hours and 24 hours preceding each sampling event was obtained from Accuweather.com (2016) and recorded.

### 2.1.3 Sample Collection

One composite sample and four individual grab samples were collected from the four sampling points on each transect using a dedicated decontaminated stainless steel bomb sampler (**Photo 1**). Individual grab samples for volatile analysis were collected from each of the four points and placed directly into pre-preserved vials provided by the contract laboratories. These samples were identified based on the sample point, as well as the sample location; for example, the lower sample nearest the riverbank at the Courthouse sample location was identified as CH-1-B. Additional samples were collected from the four points on the transect and composited in dedicated decontaminated stainless steel buckets prior to being transferred to pre-preserved containers provided by the laboratories for analyses of the parameters that could be analyzed from a composite sample. Samples for microbial analysis (e.g., fecal coliform) were collected from the location farthest from the riverbank at a depth of approximately 4 feet below the water surface using a SteriWare® LiquiThief sterile disposable sampler (**Photo 2**) at each sample location. Samples for *Cryptosporidium* and *Giardia lamblia* were collected from the sample point farthest from the bank using a pump and disposable plastic tubing and lowered to a depth of approximately 8 feet. Disposable plastic tubing was replaced between sample events and rinsed between sample locations. The samples were pumped directly into a single-use sample container. Conductivity, pH, dissolved oxygen, turbidity, temperature, and oxidation-reduction potential (ORP) of the composite sample were measured in the field using a hand-held meter. Total chlorine was measured in the field using a HACH Pocket Colorimeter™ II.



#### 2.1.4 Sample Handling and Custody

Pre-preserved sample containers provided by the laboratories were labeled in the office with pre-printed water-resistant labels containing information including laboratory name, project identification, sample number, sampler's initials, sample type (grab or composite), container type, preservative used, and analysis requested. Sample date and time were added to each sampling container in the field with permanent marker at the time of sample collection. Following collection, samples were stored on ice and/or refrigerated to 4° C from the time they were collected until delivery to the laboratory.

Coolers containing samples that were directly shipped to laboratories for analysis were sealed with strapping tape and custody seals. The custody seals were placed such that the signature section of the seal would be broken when the cooler was opened. Chain-of-custody (COC) forms (described in further detail in Section 2.1.7) accompanied the coolers.

#### 2.1.5 Analytical Methods

Prior to beginning sampling, the project was discussed with the WVDEP and the WVDHHR to help determine an appropriate parameter list for analysis of the water samples. Based upon these discussions, the Surface Water Parameter List in **Appendix B** of this report was developed. The list includes the following types of parameters:

- West Virginia Category A Water Quality Standards (2014);
- Primary and Secondary Drinking Water Standards (USEPA, 2016b), with the exception of those typically analyzed only on finished water in dedicated equipment;
- General chemistry (e.g., alkalinity);
- Indicator parameters (e.g., total organic carbon);
- Unregulated Contaminant Monitoring Rule 3 (UCMR3) (USEPA, 2016a) parameters except for the viruses; and
- Dioxin (2,3,7,8-TCDD).

There are additional primary drinking water parameters and microorganisms not included on this list that are typically analyzed only on finished water using drinking water analytical methods in dedicated analytical equipment. These were not analyzed because we were unable to find certified laboratories willing to run raw water through analytical equipment dedicated to analysis of finished drinking water due to the potential for cross-contamination (see List of Primary Drinking Water Parameters not analyzed in **Appendix B**). The viruses on the UCMR3 list were not included for the same reason.

Additional potential parameter lists were reviewed including a list of parameters reported to be present in the discharge from the DuPont process water outlet (Outlet 062) in a pending National Pollutant Discharge Elimination System permit reissuance application (WVDEP-ESS, 2015), and the list of parameters found in the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) Effluent Limitations Guidelines (2016). The DuPont and OCPSF lists were compared



to the Surface Water Parameter List and the parameters that did not already appear on the analyses list were included, with the exception of ammonia nitrogen, 5-day biochemical oxygen demand, and chemical oxygen demand. These parameters were not included because they are not regulated in drinking water and are more applicable to surface water quality associated with wastewater discharges.

### **2.1.6 Quality Assurance**

With the exception of the UCMR3 parameters, the samples were analyzed by WVDEP-certified laboratories using USEPA promulgated methods approved by Title 40, Part 136 of the Code of Federal Regulations (2016). These methods specify quality assurance and quality control (QA/QC) procedures to be followed by the laboratory performing the analysis, as well as guidelines regarding detection capabilities and limits of sample quantification. Data failing to meet method objectives were noted by the laboratories.

Due to the potential presence of solids and other contaminants, drinking water laboratories are typically not willing to analyze raw water samples in equipment dedicated to drinking water analysis. Thus, the methods approved by the federal drinking water regulations (2016) were not used and 40 CFR 136 methods were used, where possible, for primary and secondary drinking water contaminant analysis.

The UCMR3 parameters were analyzed by USEPA-approved laboratories utilizing UCMR3-approved methods. Sampling, collection and analysis for these parameters were done solely to screen for these parameters in the river water and should not be considered UCMR3 compliant. Compliant UCMR3 sampling and analysis can only be conducted on finished water.

Various blank samples were collected and analyzed during the study to verify the quality of the data. Volatile organic analyte (VOA) trip blanks were provided by the laboratories for coolers containing samples for volatile analyses. The VOA trip blank vials were kept unopened in the coolers throughout sampling and delivery/shipment back to the laboratory. A bottle and preservative for the preparation of a low-level mercury blank for coolers containing low-level mercury samples were provided by the laboratory and prepared in the field. Cooler temperature blanks were provided with each cooler and/or the temperature of sample bottles were measured by the laboratory upon receipt of samples. During each sampling event, additional water was collected to allow the laboratory to perform matrix spike and matrix spike duplicate analyses for USEPA Methods 604, 608, 610, and 625.

Field blank samples were prepared using ASTM Reagent Type II deionized, bacterial-filtered water and lab-provided pre-preserved bottles. These samples were exposed to field conditions and generally treated as a normal sample and submitted to the laboratories for blind analysis. The QC criteria used for evaluation of field blanks was a result less than the reporting limit (minimum reporting level [MRL] for UCMR3 parameters and method detection level [MDL] for other parameters) or less than 30 percent of the lowest sample collected on that day, up to two times the reporting limit. Field blank values were considered non-representative when the results were qualified as estimated, rejected, or suspected of blank contamination. In accordance with

the WVDEP's *Watershed Assessment Branch 2014 Standard Operating Procedures* (SOP) (WVDEP, 2014), field blanks were collected at a rate of 5 percent of the total samples, resulting in five complete blanks and one partial blank (TSS and metals only) being collected during the study.

Field duplicate samples were prepared by dividing aliquots of water from the grab samples and the composited samples into separate bottles at the same time as the original sample was collected. These samples were also submitted to the laboratories for blind analysis. The relative percent difference (RPD) between the two results was calculated for the data pairs. The QC criteria used for evaluation of field duplicates was a RPD of less than 30. RPD values were considered non-representative when: (1) both results were less than five times the reporting limit; (2) one or both results were qualified as estimated, rejected, or suspected of blank contamination; or (3) both results were not detected at the parameter's reporting limit. When a data pair had an RPD of greater than 30 percent, an outlier analysis ( $\alpha=0.05$ ) was run on the data for the river sample location to determine if the specific river sample was outside of the normal range. In accordance with the WVDEP's SOP (WVDEP, 2014), field blanks were collected at a rate of 2.5 percent of the total samples, resulting in three field duplicates being collected during the study.

During the course of the study, deviations from the sampling and analytical protocols were noted, and changes were made as needed. Upon receipt of data, analytical results of blanks and duplicates were reviewed to discover possible discrepancies, contamination or faults in the sampling methods and techniques. The results section of this report provides additional information on the review of quality assurance samples.

### **2.1.7 Data Management**

Dedicated field notebooks were kept to document USGS station river flow, gage height, field meter calibration information, field readings, weather conditions, field observations, and deviations from the sampling protocol. COC forms were generated and maintained with the samples. The COC forms contained information including project identification information, laboratory name, sampler's initials, method of sample shipment/transfer, sample numbers, date and time of sample collection, sample matrix, sample type (grab or composite), preservatives used, analysis requested, turn-around time requested, date and time samples were relinquished, and signature of persons relinquishing and receiving samples. Corrections or revisions to field sample documents such as COC forms and field notebooks were made by lining through the original entry, initialing, and dating changes.

As data were collected and received from the contract laboratories, they were entered into dedicated Microsoft Excel<sup>®</sup> spreadsheets. Some data were manually entered, while others were received electronically and converted from text to numeric formats. Once entered into the spreadsheet, the data were subjected to a QA/QC review where the data entered were checked against the laboratory data or the field notebook. The spreadsheets were maintained in a single location on a backed-up server and locked for further editing upon completion of data entry and

review for each sampling event. Field notebooks were retained by the field sampling personnel through the study and completed COC forms were maintained in a dedicated paper file.

## **2.2 Results and Discussion**

A summary of the data for each of the parameters monitored can be found in **Appendix C** of this report. **Appendix C** also contains summaries of the quality control samples analyzed during the study.

### **2.2.1 Flow**

Average flow during the 24 sampling events ranged from 1,575 cubic feet per second (cfs) to 35,150 cfs. **Figure 3.1** shows the flows on the sampling dates throughout the study. For the purposes of this study, low flow was considered a flow of 5,000 cfs or less, while high flow was considered a flow of 10,000 cfs or more. Based on scheduling, weather, and river conditions, four low flow events were sampled and nine high flow events were sampled.

### **2.2.2 Field Parameters**

#### **Conductivity**

- MNT-C: Field readings ranged from 86.8  $\mu\text{S}/\text{cm}$  to 239.1  $\mu\text{S}/\text{cm}$ .
- M-C: Field readings ranged from 92.1  $\mu\text{S}/\text{cm}$  to 270.3  $\mu\text{S}/\text{cm}$ .
- ES-C: Field readings ranged from 91.9  $\mu\text{S}/\text{cm}$  to 275.8  $\mu\text{S}/\text{cm}$ .
- CH-C: Field readings ranged from 92.0  $\mu\text{S}/\text{cm}$  to 281.9  $\mu\text{S}/\text{cm}$ .

#### **Specific Conductance**

- MNT-C: Field readings ranged from 111  $\mu\text{S}/\text{cm}$  to 237.3  $\mu\text{S}/\text{cm}$ .
- M-C: Field readings ranged from 121  $\mu\text{S}/\text{cm}$  to 274.9  $\mu\text{S}/\text{cm}$ .
- ES-C: Field readings ranged from 118  $\mu\text{S}/\text{cm}$  to 278.5  $\mu\text{S}/\text{cm}$ .
- CH-C: Field readings ranged from 123  $\mu\text{S}/\text{cm}$  to 280.8  $\mu\text{S}/\text{cm}$ .

#### **Dissolved Oxygen**

- MNT-C: Field readings ranged from 6.3 mg/L to 14.5 mg/L.
- M-C: Field readings ranged from 5.7 mg/L to 13.83 mg/L.
- ES-C: Field readings ranged from 6.16 mg/L to 13.8 mg/L.
- CH-C: Field readings ranged from 6.32 mg/L to 13.8 mg/L.

#### **Oxidation Reduction Potential**

- MNT-C: Field readings ranged from -404.6 mV to -69.0 mV.
- M-C: Field readings ranged from -457.0 mV to -72.5 mV.

- ES-C: Field readings ranged from -398.0 mV to -67.7 mV.
- CH-C: Field readings ranged from -421.0 mV to -32.6 mV.

## **pH**

- MNT-C: Field readings ranged from 7.00 S.U. to 8.38 S.U.
- M-C: Field readings ranged from 6.76 S.U. to 8.41 S.U.
- ES-C: Field readings ranged from 6.90 S.U. to 8.67 S.U.
- CH-C: Field readings ranged from 6.98 S.U. to 8.53 S.U.

## **Temperature**

Readings ranged from 4.4°C to 30.0°C throughout the study with expected seasonal variations.

## **Total Residual Chlorine**

Measurements were non-detectable at the field meter detection level of 0.02 mg/L and below applicable water quality criteria throughout the study.

### **2.2.3 General Chemistry Parameters**

A variety of general water chemistry parameters were monitored during the course of the study. Most of these parameters do not have applicable surface water or drinking water standards, but were measured to help characterize the stream.

## **Alkalinity**

- MNT-C: Results were above the MDL for 24 samples and ranged from 30.2 mg/L to 67.6 mg/L.
- M-C: Results were above the MDL for 24 samples and ranged from 30.0 mg/L to 66.8 mg/L.
- ES-C: Results were above the MDL for 24 samples and ranged from 30.5 mg/L to 65.2 mg/L.
- CH-C: Results were above the MDL for 24 samples and ranged from 30.3 mg/L to 64.3 mg/L.

## **Hardness**

- MNT-C: Results were above the MDL for 24 samples and ranged from 53.7 mg/L to 96.0 mg/L.
- M-C: Results were above the MDL for 24 samples and ranged from 52.8 mg/L to 102 mg/L.
- ES-C: Results were above the MDL for 24 samples and ranged from 51.9 mg/L to 102 mg/L.



- CH-C: Results were above the MDL for 24 samples and ranged from 53.1 mg/L to 102 mg/L.

### **Surfactants (Foaming Agents)**

- MNT-C: Results were above the MDL for five samples but below the SDWS of 0.5 mg/L. Three of the detected results were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for five samples but below the SDWS of 0.5 mg/L. Four of the detected results were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for four samples but below the SDWS of 0.5 mg/L. Two of the detected results were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for five samples but below the SDWS of 0.5 mg/L. Three of the detected results were flagged as estimated because they were below the PQL.

### **Total Organic Carbon**

- MNT-C: Results were above the MDL for 24 samples and ranged from 1.41 mg/L to 3.03 mg/L.
- M-C: Results were above the MDL for 24 samples and ranged from 1.12 mg/L to 3.16 mg/L.
- ES-C: Results were above the MDL for 24 samples and ranged from 1.14 mg/L to 3.14 mg/L.
- CH-C: Results were above the MDL for 24 samples and ranged from 1.22 mg/L to 2.98 mg/L.

### **Total Suspended Solids**

- MNT-C: Results were above the MDL for 24 samples and ranged from 2.0 mg/L to 25.5 mg/L. Eight of the detected results were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for 22 samples and ranged from 3.0 mg/L to 18.0 mg/L. Six of the detected results were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for 24 samples and ranged from 2.5 mg/L to 22.5 mg/L. Eight of the detected results were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for 24 samples and ranged from 2.5 mg/L to 24.0 mg/L. Nine of the detected results were flagged as estimated because they were below the PQL.

The RPD for the August 3, 2015 and November 9, 2015 field duplicates exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river samples were not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical. Total suspended solids were detected at a concentration of 8.5 mg/L in the July 20, 2015 field blank, which indicates that the samples collected on this date may have been contaminated in the field or the laboratory. Decisions made based on these data should consider this uncertainty.

### **Total Dissolved Solids**

- MNT-C: Results were above the MDL for 24 samples but below the SDWS of 500 mg/L.
- M-C: Results were above the MDL for 24 samples but below the SDWS of 500 mg/L.
- ES-C: Results were above the MDL for 24 samples but below the SDWS of 500 mg/L.
- CH-C: Results were above the MDL for 24 samples but below the SDWS of 500 mg/L. One detected result was flagged as estimated because it was below the PQL.

### **2.2.4 Inorganic Ions**

#### **Bromide**

Bromide was non-detectable at the MDL throughout the study.

#### **Chloride**

- MNT-C: Results were above the MDL for 24 samples but below the Category A Water Quality Standard (CAWQS) and SDWS of 250 mg/L.
- M-C: Results were above the MDL for 24 samples but below the Category A Water Quality Standard (CAWQS) and SDWS of 250 mg/L.
- ES-C: Results were above the MDL for 24 samples but below the Category A Water Quality Standard (CAWQS) and SDWS of 250 mg/L.
- CH-C: Results were above the MDL for 24 samples but below the Category A Water Quality Standard (CAWQS) and SDWS of 250 mg/L.

#### **Fluoride**

- MNT-C: Results were above the MDL for nine samples but below the CAWQS of 1.4 mg/L, the PDWS of 4.0 mg/L, and the SDWS of 2 mg/L. The nine detected results were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for eight samples but below the CAWQS of 1.4 mg/L, the PDWS of 4.0 mg/L, and the SDWS of 2 mg/L. The eight detected results were flagged as estimated because they were below the PQL.

- ES-C: Results were above the MDL for nine samples but below the CAWQS of 1.4 mg/L, the PDWS of 4.0 mg/L, and the SDWS of 2 mg/L. The nine detected results were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for ten samples but below the CAWQS of 1.4 mg/L, the PDWS of 4.0 mg/L, and the SDWS of 2 mg/L. The ten detected results were flagged as estimated because they were below the PQL.

### **Nitrate Nitrogen**

- MNT-C: Results were above the MDL for 24 samples but below the CAWQS or PDWS of 10 mg/L.
- M-C: Results were above the MDL for 24 samples but below the CAWQS or PDWS of 10 mg/L.
- ES-C: Results were above the MDL for 24 samples but below the CAWQS or PDWS of 10 mg/L.
- CH-C: Results were above the MDL for 24 samples but below the CAWQS or PDWS of 10 mg/L.

The RPD for nitrate nitrogen the June 1, 2016 field duplicate exceeded 30 percent, and the result for the paired river sample was a statistical outlier ( $\alpha=0.050$ ) in the data set for the sample location. This indicates that the MNT-C data for June 1, 2016 is not representative. However, given that the reported result was 0.90 mg/L and the applicable CAWQS and PDWS are both 10 mg/L, this may not be crucial for decision-making purposes.

### **Nitrite Nitrogen**

- MNT-C: A result was above the MDL for one sample but was below the CAWQS of 1 mg/L. The detected result was flagged as estimated because it was below the PQL.
- M-C: A result was above the MDL for one sample but was below the CAWQS of 1 mg/L. The detected result was flagged as estimated because it was below the PQL.
- ES-C: No results were above the MDL.
- CH-C: A result was above the MDL for one sample but was below the CAWQS of 1 mg/L. The detected result was flagged as estimated because it was below the PQL.

### **Sulfate**

- MNT-C: Results were above the MDL for 24 samples but below the SDWS of 250 mg/L.
- M-C: Results were above the MDL for 24 samples but below the SDWS of 250 mg/L.
- ES-C: Results were above the MDL for 24 samples but below the SDWS of 250 mg/L.

- CH-C: Results were above the MDL for 24 samples but below the SDWS of 250 mg/L.

### 2.2.5 Cyanide

#### Free Cyanide

Free cyanide was not detected at the MDL throughout the study. The MDL of 0.005 mg/L was equal to the CAWQS of 0.005 mg/L and below the PDWS of 0.2 mg/L.

#### Total Cyanide

Total cyanide was not detected at the MDL of 0.005 mg/L throughout the study.

### 2.2.6 Microorganisms

#### Cryptosporidium

Cryptosporidium was not detected throughout the study.

#### Giardia Lamblia

Giardia lamblia was detected at two sample locations during the study.

- ES-S: A concentration of 0.18 cysts/L was measured in the March 29, 2016 sample. The volume of sample examined in this test was approximately 11 liters so this indicates that two cysts were observed.
- CH-C: A concentration of 0.10 cysts/L was measured in the December 15, 2015 samples and a concentration of 0.09 cysts/L was measured in the May 11, 2016 sample. The volume of sample examined in these tests was approximately 10 liters so this indicates that one cyst was observed in each of these two samples.

According to the USEPA publication, *Giardia: Drinking Water Health Advisory* (USEPA, 1999), the dose at which human sources of Giardia cysts cause infection in humans is ingestion of 10 cysts, which is higher than the observed concentrations. *Giardia* cysts can also be removed by filtration or rendered inactive by certain types of disinfection.

#### *E. coli*

The results were above the MDL throughout the study. The PDWS is zero, so a detectable result exceeds the standard, resulting in 24 exceedances at each sample location. The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than



improper storage and handling, thus the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the July 20, 2015 samples, bacteriological samples were taken to a different laboratory.

The RPD for *E. coli* for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

### **Fecal Coliform**

- MNT-C: Results for 24 samples were above the MDL and the PDWS of zero col/100 mL, but below the CAWQS of 400 col/100 mL.
- M-C: Results for 24 samples were above the MDL and the PDWS of zero col/100 mL, and two results were above the CAWQS of 400 col/100 mL.
- ES-C: Results for 24 samples were above the MDL and the PDWS of zero col/100 mL, and one result was above the CAWQS of 400 col/100 mL.
- CH-C: Results for 24 samples were above the MDL and the PDWS of zero col/100 mL, and three results were above the CAWQS of 400 col/100 mL.

The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than improper storage and handling, thus the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the July 20, 2015 samples, bacteriological samples were taken to a different laboratory.

The RPD for fecal coliform for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

### **Bacteria by Heterotrophic Plate Count**

- MNT-C: Results were above the MDL for 22 samples and three results were above the PDWS of 500 MPN/100 mL.

- M-C: Results were above the MDL for 22 samples and three results were above the PDWS of 500 MPN/100 mL.
- ES-C: Results were above the MDL for 22 samples and three results were above the PDWS of 500 MPN/100 mL.
- CH-C: Results were above the MDL for 22 samples and four results were above the PDWS of 500 MPN/100 mL.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the July 20, 2015 samples, bacteriological samples were taken to a different laboratory.

The RPD for bacteria by heterotrophic plate count for the November 19, 2015 and June 1, 2016 field duplicates exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

### **Total Coliform**

- MNT-C: Results for 24 samples were above the MDL and the PDWS of zero.
- M-C: Results for 24 samples were above the MDL and the PDWS of zero.
- ES-C: Results for 24 samples were above the MDL and the PDWS of zero.
- CH-C: Results for 24 samples were above the MDL and the PDWS of zero.

The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than improper storage and handling thus, the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the July 20, 2015 samples, bacteriological samples were taken to a different laboratory.

The RPD for total coliform for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

**Figures 3.2 and 3.3** illustrate the levels of *E. coli* and fecal coliform measured at the four stations during the study. It is believed that the observed peaks at the Courthouse location may be due to sanitary bypass during storm events. **Figures 3.4 and 3.5** are simple regressions of

bacterial concentration versus the amount of precipitation during the previous 24 hours that lend support to this theory and show a relationship between precipitation and E. coli and fecal coliform concentrations, particularly at the Charleston-area sampling locations.

The levels of bacteria as measured by heterotrophic plate count (HPC) and total coliform are shown in **Figures 3.6 and 3.7** and do not show the same pattern of occurrence as E. coli and fecal coliform and their precipitation regressions (**Figures 3.8 and 3.9**) do not show a relationship with precipitation. This is likely because analyses of bacteria by HPC and total coliform measure a greater number of bacteria that are present under normal conditions.

Conventional water treatment plants are designed to kill bacteria, thus the observed levels of bacteria should not present a concern from a treatment standpoint. A treatability study should be conducted to confirm adequate removal/destruction of bacteria.

## 2.2.7 Metals

### Aluminum

- MNT-C: Results were above the MDL for 24 samples, 23 results were above the 0.05 mg/L lower end of the SDWs and seven results were above the 0.2 mg/L upper end of the SDWS. Seven of the detected results were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for 24 samples, 24 results were above the 0.05 mg/L lower end of the SDWs and five results were above the 0.2 mg/L upper end of the SDWS. Four of the detected results were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for 24 samples, 23 results were above the 0.05 mg/L lower end of the SDWs and two results were above the 0.2 mg/L upper end of the SDWS. Six of the detected results were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for 24 samples, 22 results were above the 0.05 mg/L lower end of the SDWs and five results were above the 0.2 mg/L upper end of the SDWS. Seven of the detected results were flagged as estimated because they were below the PQL.

Aluminum has a SDWS of 0.05 to 0.2 mg/L. The lower value of 0.05 mg/L is the concentration at which aluminum can contribute to colored water. The USEPA has established the upper concentration of 0.2 mg/L as a level that should be attainable by a properly operated water treatment system.

**Figure 3.10** shows the aluminum concentrations measured during the study. A treatability study would need to be conducted to determine whether aluminum would be present in finished water at levels greater than the SDWS following treatment. As the standard is a secondary water quality standard, the WVDHHR would need to be consulted to determine if the residual levels would be of regulatory concern.

### **Antimony**

- MNT-C: No results were detected at the MDL.
- M-C: One result was above the MDL, but below the CAWQS of 0.014 mg/L and the PDWS of 0.006 mg/L. The detected result was flagged as estimated because it was below the PQL.
- ES-C: No results were detected at the MDL.
- CH-C: Two results were above the MDL, but below the CAWQS of 0.014 mg/L and the PDWS of 0.006 mg/L. The detected results were flagged as estimated because they were below the PQL.

### **Arsenic**

- MNT-C: A result was above the MDL for one sample but was below the CAWQS and PDWS of 0.010 mg/L. The detected result was flagged as estimated because it was below the PQL.
- M-C: No results were detected at the MDL.
- ES-C: No results were detected at the MDL.
- CH-C: No results were detected at the MDL.

### **Barium**

- MNT-C: Results were above the MDL for 24 samples but below the CAWQS of 1.0 mg/L or the PDWS of 2 mg/L.
- M-C: Results were above the MDL for 24 samples but below the CAWQS of 1.0 mg/L or the PDWS of 2 mg/L.
- ES-C: Results were above the MDL for 24 samples but below the CAWQS of 1.0 mg/L or the PDWS of 2 mg/L.
- CH-C: Results were above the MDL for 24 samples but below the CAWQS of 1.0 mg/L or the PDWS of 2 mg/L.

### **Beryllium**

Beryllium was non-detectable at the MDL of 0.0002 mg/L and below the CAWQS and PDWS of 0.004 mg/L throughout the study.

### **Cadmium**

- MNT-C: No results were detected at the MDL.
- M-C: No results were detected at the MDL.
- ES-C: No results were detected at the MDL.
- CH-C: A result was detected at the MDL for one sample but was below the CAWQS of 0.002 mg/L and the PDWS of 0.005 mg/L. The detected result was flagged as estimated because it was below the PQL.



### **Hexavalent Chromium**

- MNT-C: Results were above the MDL for 24 samples but below the CAWQS of 50 µg/L.
- M-C: Results were above the MDL for 22 samples but below the CAWQS of 50 µg/L.
- ES-C: Results were above the MDL for 21 samples but below the CAWQS of 50 µg/L.
- CH-C: Results were above the MDL for 22 samples but below the CAWQS of 50 µg/L.

The RPD for hexavalent chromium for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

The hexavalent chromium results as they relate to UCMR3 are discussed later in Section 2.2.18.3.

### **Total Chromium**

- MNT-C: Results were above the MDL for 24 samples but below the CAWQS of 50 µg/L.
- M-C: Results were above the MDL for 24 samples but below the CAWQS of 50 µg/L.
- ES-C: Results were above the MDL for 24 samples but below the CAWQS of 50 µg/L.
- CH-C: Results were above the MDL for 24 samples but below the CAWQS of 50 µg/L.

Total chromium was detected in three of the field blanks, indicating that the samples were contaminated in the field or the laboratory, but the associated river samples were still below the water quality standard. Given that the reported results were below the CAWQS of 50 µg/L, this may not be crucial for decision-making purposes.

The RPD for total chromium for the November 19, 2015 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

Total chromium results as they relate to UCMR3 are discussed later in Section 2.2.18.3.

## Copper

- MNT-C: Results were above the MDL for 20 samples but below the CAWQS and SDWS of 1.0 mg/L and the PDWS of 1.3 mg/L. The detected samples were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for 17 samples but below the CAWQS and SDWS of 1.0 mg/L and the PDWS of 1.3 mg/L. The detected samples were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for 18 samples but below the CAWQS and SDWS of 1.0 mg/L and the PDWS of 1.3 mg/L. The detected samples were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for 19 samples but below the CAWQS and SDWS of 1.0 mg/L and the PDWS of 1.3 mg/L. The detected samples were flagged as estimated because they were below the PQL.

## Iron

- MNT-C: Results were above the MDL for 24 samples but below the CAWQS of 1.5 mg/L. Results from 12 samples were above the SDWS of 0.3 mg/L.
- M-C: Results were above the MDL for 24 samples but below the CAWQS of 1.5 mg/L. Results from nine samples were above the SDWS of 0.3 mg/L and one of the detected results was flagged as estimated because it was below the PQL.
- ES-C: Results were above the MDL for 24 samples but below the CAWQS of 1.5 mg/L. Results from nine samples were above the SDWS of 0.3 mg/L.
- CH-C: Results were above the MDL for 24 samples but below the CAWQS of 1.5 mg/L. Results from seven samples were above the SDWS of 0.3 mg/L.

The RPD for iron for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

**Figure 3.11** shows the iron concentrations measured during the study. There are no appreciable differences between the stations with regard to iron concentrations. A treatability study would need to be conducted to determine whether iron would be present in the finished water at levels greater than the SDWS following treatment. As the standard is a secondary water quality standard, the WVDHHR would need to be consulted to determine if the residual levels would be of regulatory concern.

## Lead

- MNT-C: Results were above the MDL for 23 samples but below CAWQS of 0.050 mg/L and the PDWS of 0.015 mg/L. Of the detected results, 21 were flagged as estimated because they were below the PQL.

- M-C: Results were above the MDL for 24 samples but below CAWQS of 0.050 mg/L and the PDWS of 0.015 mg/L. Of the detected results, 21 were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for 22 samples but below CAWQS of 0.050 mg/L and the PDWS of 0.015 mg/L. Of the detected results, 21 were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for 23 samples but below CAWQS of 0.050 mg/L and the PDWS of 0.015 mg/L. Of the detected results, 22 were flagged as estimated because they were below the PQL.

### Mercury

- MNT-C: No results were above the MDL of 1.80 ng/L.
- M-C: One result was above the MDL and was flagged as estimated because it was below the PQL. This result was less than the CAWQS of 140 ng/L and the PDWS of 2,000 ng/L.
- ES-C: One result was above the MDL and was flagged as estimated because it was below the PQL. This result was less than the CAWQS of 140 ng/L and the PDWS of 2,000 ng/L.
- CH-C: One result was above the MDL and was flagged as estimated because it was below the PQL. This result was less than the CAWQS of 140 ng/L and the PDWS of 2,000 ng/L.

The mercury blanks collected during the study were non-detectable at the MDL.

### Manganese

- MNT-C: Results were above the MDL for 24 samples but below CAWQS of 1.0 mg/L. Of the detected results, 21 were flagged as estimated because they were below the PQL and six were above the SDWS of 0.05 mg/L.
- M-C: Results were above the MDL for 24 samples but below CAWQS of 1.0 mg/L. The detected results were flagged as estimated because they were below the PQL and four were above the SDWS of 0.05 mg/L.
- ES-C: Results were above the MDL for 24 samples but below CAWQS of 1.0 mg/L. The detected results were flagged as estimated because they were below the PQL and five were above the SDWS of 0.05 mg/L.
- CH-C: Results were above the MDL for 24 samples but below CAWQS of 1.0 mg/L. The detected results were flagged as estimated because they were below the PQL and three were above the SDWS of 0.05 mg/L.

**Figure 3.12** shows the manganese concentrations measured during the study. There are no appreciable differences between the stations with regard to manganese concentrations. A treatability study would need to be conducted to determine whether manganese would be present in the finished water at levels greater than the SDWS following treatment. As the standard is a

secondary water quality standard, the WVDHHR would need to be consulted to determine if the residual levels would be of regulatory concern.

### **Nickel**

- MNT-C: Results were above the MDL for six samples but below the CAWQS of 0.51 mg/L. The detected results were flagged as estimated because they were below the PQL.
- M-C: Results were above the MDL for four samples but below the CAWQS of 0.51 mg/L. The detected results were flagged as estimated because they were below the PQL.
- ES-C: Results were above the MDL for six samples but below the CAWQS of 0.51 mg/L. The detected results were flagged as estimated because they were below the PQL.
- CH-C: Results were above the MDL for five samples but below the CAWQS of 0.51 mg/L. The detected results were flagged as estimated because they were below the PQL.

### **Selenium**

Selenium was non-detectable at the MDL of 0.0010 mg/L and below the CAWQS and PDWS of 0.05 mg/L throughout the study.

### **Silver**

Silver was non-detectable at the MDL of 0.0010 mg/L and below the CAWQS of 0.004 mg/L and the SDWS of 0.10 mg/L throughout the study.

### **Thallium**

Thallium was non-detectable at the MDL of 0.0010 mg/L and below the CAWQS of 0.0017 mg/L and the PDWS of 0.002 mg/L throughout the study.

### **Zinc**

- MNT-C: 20 results were above the MDL and 17 of those were flagged as estimated because they were below the PQL. No results were above the SDWS of 5 mg/L.
- M-C: 22 results were above the MDL and 21 of those were flagged as estimated because they were below the PQL. No results were above the SDWS of 5 mg/L.
- ES-C: 20 results were above the MDL and 12 of those were flagged as estimated because they were below the PQL. No results were above the SDWS of 5 mg/L.
- CH-C: 21 results were above the MDL and 18 of those were flagged as estimated because they were below the PQL. No results were above the SDWS of 5 mg/L.



### 2.2.8 Semi-Volatile Organic Compounds

The following semi-volatile organic compounds were non-detectable at the MDL and below applicable water quality throughout the study:

- 2-Chloronaphthalene (CAWQS – 1 mg/L)
- 4,6-Dinitro-2-methylphenol (CAWQS – 0.0134 mg/L)

The results for 2,4-dinitrotoluene and hexachlorobenzene were non-detectable at the MDL throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the 2,4-dinitrotoluene and hexachlorobenzene analyses. However, the available analytical method cannot achieve a reporting level lower than the CAWQS of 0.00011 mg/L for 2,4-dinitrotoluene or the CAWQS of 0.00000072 mg/L and PDWS of 0.001 mg/L for hexachlorobenzene.

### Bis(2-ethylhexyl)phthalate

- MNT-C: Three results were above the MDL and two of these results were above the PDWS of 0.006 mg/L. One of the results above the PDWS was reported as estimated because they were below the PQL.
- M-C: Three results were above the MDL and two results above the PDWS of 0.006 mg/L. These three results were reported as estimated because they were below the PQL.
- ES-C: Three results were above the MDL and two of these results were above the PDWS of 0.006 mg/L. These three results were reported as estimated because they were below the PQL.
- CH-C: One result was above the MDL and above the PDWS of 0.006 mg/L. This result was also reported as estimated because it was below the PQL.

Although bis(2-ethylhexyl)phthalate was not detected in the field blank samples, it is a common laboratory contaminant. Furthermore, results were near the laboratory PQL and considered estimated values. A treatability study would need to be conducted to determine whether bis(2-ethylhexyl)phthalate would be present in the treated finished water at levels above the PDWS.

### 2.2.9 Phenolic Compounds

The following phenolic compounds were non-detectable at the MDL and below applicable water quality criteria throughout the study:

- 2,4,6-Trichlorophenol (CAWQS – 0.0021 mg/L)
- 2,4-Dichlorophenol (CAWQS – 0.093 mg/L)
- 2,4-Dimethylphenol (CAWQS – 0.54 mg/L)
- 2,4-Dinitrophenol (CAWQS – 0.07 mg/L)
- 2-Chlorophenol (CAWQS – 0.12 mg/L)

The results for pentachlorophenol were non-detectable at the MDL and below the PDWS of 0.0021 mg/L throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS of 0.00028 mg/L.

Phenol was detected at station M-C during one sampling event with a result of 0.0013 mg/L. This result is below the CAWQS of 0.021 mg/L. The rest of the samples were non-detectable at the MDL.

### **2.2.10 Polycyclic Aromatic Hydrocarbons**

The following polycyclic aromatic hydrocarbons were non-detectable at the MDL and below applicable CAWQS throughout the study:

- Acenaphthene (CAWQS – 0.67 mg/L)
- Anthracene (CAWQS – 8.3 mg/L)
- Fluoranthene (CAWQS – 0.3 mg/L)
- Fluorene (CAWQS – 1.1 mg/L)
- Pyrene (CAWQS – 0.83 mg/L)

The results for benzo(a)pyrene were non-detectable at the MDL of 0.0001 mg/L throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS of 0.0000038 mg/L. The MDL for benzo(a)pyrene is below the PDWS of 0.0002 mg/L throughout the study, with exception of the December 1, 2015 sampling event. The MDLs were elevated on December 1, 2015 at the Courthouse location for many of the parameters, possibly due to matrix interference or interference from particles suspended in the raw water. The MDL of 0.0013 mg/L reported on December 1, 2015 exceeded the PDWS of 0.0002 mg/L for benzo(a)pyrene. The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL as observed on December 1, 2015 is anticipated and acceptable.

The results for benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were non-detectable at the MDL throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS of 0.0000038 mg/L for these parameters.

### **2.2.11 Volatile Organic Compounds**

VOCs were sampled as grab samples with four grab sample points at each transect location. The following VOCs were non-detectable at the MDL and below the applicable water quality criteria throughout the study:

- 1,1,1-Trichloroethane (CAWQS – 12,000 µg/L, PDWS – 200 µg/L)
- 1,1,2-Trichloroethane (PDWS – 5.00 µg/L)
- 1,1-Dichloroethene (CAWQS – 0.03 µg/L, PDWS – 7 µg/L)
- 1,2-Dichlorobenzene (CAWQS – 2,700 µg/L, PDWS – 600 µg/L)
- 1,2-Dichloropropane (PDWS – 5 µg/L)
- 1,3-Dichlorobenzene (CAWQS – 400 µg/L)
- 1,4-Dichlorobenzene (CAWQS – 400 µg/L, PDWS 5 µg/L)
- Benzene (CAWQS – 0.66 µg/L, PDWS 5 µg/L)
- Bromodichloromethane (CAWQS – 0.55 µg/L, PDWS 80 µg/L as part of total trihalomethanes (TTHM))
- Bromoform (CAWQS – 4.3 µg/L, PDWS 80 µg/L as part of TTHM)
- Chlorobenzene (CAWQS – 680 µg/L, PDWS 100 µg/L)
- Chloroform (CAWQS – 5.7 µg/L, PDWS 80 µg/L as part of TTHM)
- Dibromochloromethane (PDWS 80 µg/L as part of TTHM)
- Ethylbenzene (CAWQS – 3,100 µg/L, PDWS 700 µg/L)
- Methyl bromide (CAWQS – 47 µg/L)
- Methylene chloride (CAWQS – 4.6 µg/L, PDWS – 5 µg/L)
- Tetrachloroethene (CAWQS – 0.8 µg/L, PDWS – 5 µg/L)
- Trichloroethene (CAWQS – 2.7 µg/L, PDWS – 5 µg/L)
- Vinyl Chloride (CAWQS – 2 µg/L, PDWS – 2 µg/L)
- m,p-Xylene (PDWS – 10 µg/L)
- o-Xylene (PDWS – 10 µg/L)

The results for 1,2-dichloroethane (CAWQS – 0.035 µg/L, PDWS – 5 µg/L) and carbon tetrachloride (CAWQS – 0.25 µg/L, PDWS – 5 µg/L) were non-detectable at the MDLs of 0.500 µg/L and below the PDWS throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS for these parameters.

The results for 1,1,2,2-tetrachloroethane (CAWQS – 0.17 µg/L) and acrylonitrile (CAWQS – 0.059 µg/L) were non-detectable at the MDLs of 0.500 µg/L and 7.500 µg/L, respectively throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS.

Toluene was detected above the MDL of 0.500 µg/L at nine of the 16 sampling points during the June 2016 sampling event. Seven of the detected values were flagged as estimated because they were below the PQL. Toluene is a common lab contaminant and was only detected during the June 2016 sampling event, which could potentially indicate sample contamination. The maximum toluene concentration measured was 1.18 µg/L, which is below the CAWQS of 6,800 µg/L and the PDWS of 1,000 µg/L.

Bromomethane (methyl bromide) was measured at a concentration of 0.12 µg/L at sample point M-2-T during the September 15, 2015 sampling event. This value is less than the CAWQS of 47 µg/L. The other 383 results for this parameter were below the MDL.

Bromomethane was also detected in the May 11, 2016 field blank at a level of 0.73 µg/L, which indicates that the samples collected on this date may have been contaminated in the field or the laboratory. However, bromomethane was not detected in the corresponding river samples. Bromomethane is discussed further in Section 2.2.18.1.

#### **2.2.12 4-Methylcyclohexanemethanol**

CAWQS or PDWS have not been established for 4-MCHM. The Centers for Disease Control and Prevention (CDC) issued a letter to the WVDHHR on January 15, 2014 recommending a screening level of 1 mg/L of MCHM in drinking water. The results for 4-MCHM were non-detectable at the MDL of 0.002 mg/L (2 µg/L) throughout the study.

#### **2.2.13 Pesticides**

The following pesticides were non-detectable at the MDL and below the PDWS, if applicable, throughout the study:

- Heptachlor epoxide (PDWS – 0.0002 mg/L)
- Aldrin (CAWQS – 0.000000071 mg/L)
- Alpha-BHC (CAWQS – 0.0000039 mg/L)
- Beta-BHC (CAWQS – 0.000014 mg/L)
- Chlordane (CAWQS – 0.00000046 mg/L, PDWS 0.02 mg/L)
- DDT (dichlorodiphenyltrichloroethane) (CAWQS – 0.000000024 mg/L)
- Dieldrin (CAWQS – 0.000000071 mg/L)
- Endrin (CAWQS – 0.0000023 mg/L, PDWS – 0.002 mg/L)
- Heptachlor (CAWQS – 0.00000021 mg/L, PDWS – 0.0004 mg/L)
- Lindane (gamma-BHC) (CAWQS – 0.000019 mg/L, PDWS – 0.0002 mg/L)
- Methoxychlor (CAWQS – 0.00000003 mg/L, PDWS – 0.04 mg/L)
- Toxaphene (CAWQS – 0.00000073 mg/L, PDWS 0.003 mg/L)

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analyses. However, the available analytical method cannot achieve a reporting level lower than the CAWQS for aldrin, alpha-BHC, beta-BHC, chlordane, DDT, dieldrin, endrin, heptachlor, lindane, methoxychlor, and toxaphene.

#### **2.2.14 Polychlorinated Biphenyls**

The tested polychlorinated biphenyls (PCBs) were non-detectable at the MDL and below the PDWS of 0.0005 mg/L throughout the study. These PCBs include:



- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analyses. However, the available analytical method cannot achieve a reporting level lower than the CAWQS for the tested PCBs.

### 2.2.15 Dioxin

The results for 2,3,7,8-tetrachlorodibenzodioxin (2,3,7,8 TCDD) (Dioxin) were non-detectable at the estimated detection limit (EDL) and below the PDWS throughout the study. Analytical methods providing the lowest EDL available from WVDEP-certified lab for raw water were used for the analyses. However, the available analytical method cannot achieve a reporting level lower than the CAWQS for dioxin.

### 2.2.16 Radiochemistry

The following radiochemical parameters were non-detectable at the minimum detectable concentration (MDC) and below the applicable water quality criteria throughout the study:

- Strontium-90 (dissolved) (CAWQS – 10 pCi/L)
- Dissolved alpha emitters (CAWQS – 3 pCi/L)

The following radiochemical parameters were measured above MDC during at least one sampling event, but the results were less than the applicable water quality criteria:

- Gross alpha: Maximum detectable result of 1.49 pCi/L with CAWQS and PDWS of 15 pCi/L.
- Gross beta: Maximum detectable result of 3.17 pCi/L with CAWQS of 1,000 pCi/L.
- Radium-226: Maximum detectable result of 1.15 pCi/L with CAWQS and PDWS of 5 pCi/L.
- Radium-228: Maximum detectable result of 3.06 pCi/L with CAWQS and PDWS of 5 pCi/L.
- Tritium: Maximum detectable result of 1,750 pCi/L with a PDWS of 20,000 pCi/L.
- Uranium: Maximum detectable result of 10.9 pCi/L with a PDWS of 20 pCi/L.

Radium-226 and radium-228 were non-detectable at the MDC at ES-C and CH-C on September 15, 2015, but the MDCs for these parameters on this date were higher than the

CAWQS and PDWS. Analytical methods providing the lowest MDC available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method could not achieve a reporting level lower than the CAWQS or the PDWS for the September 15, 2015 samples.

Dissolved alpha emitters were non-detectable at the MDC at M-C and ES-C on October 13, 2015, but the MDC reported for this date is also higher than the applicable CAWQS. As discussed above, the analytical method could not achieve a reporting level lower than the CAWQS for dissolved alpha emitters at M-C and ES-C on October 13, 2015.

The sensitivity of the MDC is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDC throughout the sampling period is anticipated and acceptable. Due to interferences, equipment calibration, etc., the MDC may be elevated to report non-detectable values at concentrations greater than other detected results. This is not indicative of a presence of radiochemistry, but rather indicative of a sample with increased interferences.

#### **2.2.17 Asbestos**

The results for asbestos fibers were non-detectable at the MDL throughout the study. Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analyses. However, the available analytical method could not consistently achieve a reporting level lower than the PDWS possibly due to matrix interference or interference from particles suspended in the raw water. The MDL reported by the laboratory was above the PDWS for asbestos during two sampling events (November 2015 and May 2016). The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.

#### **2.2.18 Unregulated Contaminant Monitoring Rule (UCMR3) Parameters**

The UCMR3 parameters are a list of analytes developed by the USEPA in accordance with the SWDA amendments to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the SDWA. Every five years the USEPA publishes a list of not more than 30 unregulated contaminants to be measured in public water systems. The UCMR3 list was published in 2012 for monitoring to be conducted between 2013 and 2015. This monitoring provides a basis for future regulatory action to protect public health. These parameters are intended to be measured in treated finished water, rather than raw water, therefore, the sampling procedures and analysis used for the study are not suitable for UCMR3 compliance purposes; however, they do provide an indication of whether or not these contaminants may be expected to be present within the Kanawha River.

The USEPA's UCMR3 Data Summary (USEPA, 2016c) states:

“Under the current cycle of the Unregulated Contaminant Monitoring Rule (UCMR#), chemicals are being studied at levels that are often significantly below those in prior UCMR cycles. Importantly, UCMR3 minimum reporting levels (MRLs) were established based on the capability of the analytical method, not based on a level established as “significant” or “harmful.” In fact, the UCMR3 MRLs are often below current “health reference levels” (to the extent that MRLs have been established). Results of UCMR3 measurements should be interpreted accordingly. The detection of a UCMR3 contaminant above the MRL does not represent cause for concern, in and of itself. Rather, the implications of the detection should be judged considering health effects information (which is often still under development or being refined for unregulated contaminants).

The intent of the following table [Draft Reference Concentration Table] is to identify draft UCMR reference concentrations, where possible, to provide context around the detection of a particular UCMR contaminant above the MRL. The draft reference concentration does not represent an “action level” (EPA requires no particular action based simply on the fact that UCMR monitoring results exceed draft reference concentrations), nor should the draft reference concentration be interpreted as any indication of an Agency intent to establish a future drinking water regulation for the contaminant at this or any other level. Decisions as to whether or not to regulate the contaminant in drinking water will continue to be made following the Agency's Regulatory Determination process.”

Where UCMR3 parameters were detected above the MRL, they were compared to the USEPA's draft reference concentration (RC) to help put the observed results into context.

### 2.2.18.1 Organics

The samples collected for analysis of organic compounds were collected as grab samples at each of the four points at each of the four sample locations. The following organic parameters were non-detectable at the MDL and were below the UCMR3 MRL and RC throughout the study:

- 1,1-Dichloroethane (MRL – 0.03 µg/L, RC – 6.14 to 614 µg/L)
- 1,2,3-Trichloropropane (MRL – 0.03 µg/L, RC – 0.0004 to 0.04 µg/L)
- 1,3-Butadiene (MRL – 0.1 µg/L, RC – 0.0103 to 1.03 µg/L)
- Bromochloromethane (Halon 1011) (MRL – 0.06 µg/L, RC – 90 µg/L)
- Chlorodifluoromethane (HCFC-22) (MRL – 0.08 µg/L, RC – Not applicable)

The USEPA UCMR3-approved analytical method was used for the analysis of 1,2,3-trichloropropane and 1,3-butadiene. However, the analytical method cannot achieve a reporting level as low as the lower end of the RC range. To be reported as an exceedence, values were above both the MRL and the RC.

Bromomethane (methyl bromide) was measured at a concentration of 0.12 µg/L at sample point M-2-T during the September 15, 2015 sampling event. This value is less than the MRL of 0.2 µg/L and the RC of 140 µg/L. The other 383 results for this parameter were below the MDL of 0.10 µg/L.

Bromomethane was detected in the May 11, 2016 field blank at a level of 0.73 µg/L, which indicates that the samples collected on this date may have been contaminated in the field or the laboratory. As this concentration is less than the MRL, it is unlikely to affect decision-making made based on these data.

Chloromethane (methyl chloride) was measured at a concentration of 0.14 µg/L at sample point M-2-T during the September 15, 2015 sampling event and at a concentration of 0.10 µg/L at sample point ES-2-T during the February 2, 2016 sampling event. These results are below the MRL of 0.2 µg/L and the RC of 2.69 to 269 µg/L. The other 382 results for this parameter were below the MDL of 0.10 µg/L.

#### 2.2.18.2 1,4-Dioxane

- MNT-C: Results were above the MDL for five samples, one result was above the MRL of 0.07 µg/L, and below the lower end of the RC range of 0.35 µg/L.
- M-C: Results were above the MDL for 18 samples, 13 results were above the MRL of 0.07 µg/L, four results were above the lower end of the RC range of 0.35 µg/L, but below the 35 µg/L upper end of the RC range.
- ES-C: Results were above the MDL for 20 samples, 14 results were above the MRL of 0.07 µg/L, four results were above the lower end of the RC range of 0.35 µg/L, but below the 35 µg/L upper end of the RC range.
- CH-C: Results were above the MDL for 19 samples, 15 results were above the MRL of 0.07 µg/L four results were above the lower end of the RC range of 0.35 µg/L, but below the 35 µg/L upper end of the RC range.

This parameter was also detected in four of the five field blanks:

- July 20, 2015 at 0.048 µg/L
- September 1, 2015 at 0.064 µg/L
- February 29, 2016 at 0.23 µg/L
- May 11, 2016 at 0.063 µg/L

Detection of the material in the field blanks indicates that the samples on these dates were contaminated during sampling, handling or analysis.

1,4-dioxane is an unregulated synthetic organic compound used as a solvent and as a laboratory reagent, and is found in cosmetics, detergents, soaps and shampoo. The RC for this parameter is 0.35 to 35 µg/L. The maximum concentrations at M-C, ES-C, and CH-C were above the lower threshold of 0.35 µg/L, but the average concentrations were below this level.



The high percentage of contamination of field blanks introduces uncertainty with regard to the validity of the data, particularly since the material is a common laboratory reagent. Additionally, the laboratory that conducted the analysis does not maintain National Environmental Laboratory Accreditation Program (NELAP) accreditation for USEPA Method 522, rather they were approved by the USEPA to report 1,4-dioxane for the UCMR3 program. Further, the analytical method was designed for use on treated finished drinking water samples and a variety of compounds that could be present in the raw water can interfere with its reliability.

In order to determine if 1,4-dioxane would be present in an alternative water source, a treatability study would need to be conducted and the resulting finished water would need to be analyzed by a NELAP-certified laboratory. Since 1,4-dioxane is an unregulated contaminant, the WVDHHR would need to be consulted if it was found in the finished water.

### **2.2.18.3 Metals**

#### **Hexavalent Chromium**

- MNT-C: Results were above the MDL for 22 samples and 14 results were above UCMR3 MRL of 0.03 µg/L.
- M-C: Results were above the MDL for 22 samples and 16 results were above UCMR3 MRL of 0.03 µg/L.
- ES-C: Results were above the MDL for 21 samples and 18 results were above UCMR3 MRL of 0.03 µg/L.
- CH-C: Results were above the MDL for 22 samples and 14 results were above UCMR3 MRL of 0.03 µg/L.

The RPD for hexavalent chromium for the June 1, 2016 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

There is currently no RC for this parameter. According to the UCMR3 Data Summary, hexavalent chromium is on the Integrated Risk Information System's 2012 agenda for either a new assessment or an updated assessment.

#### **Total Chromium**

- MNT-C: Results for 24 samples were above the MDL of 0.03 µg/L, which was equal to the MRL of 0.03 µg/L. Results were below the RC of 100 µg/L.
- M-C: Results for 24 samples were above the MDL of 0.03 µg/L, which was equal to the MRL of 0.03 µg/L. Results were below the RC of 100 µg/L.
- ES-C: Results for 24 samples were above the MDL of 0.03 µg/L, which was equal to the MRL of 0.03 µg/L. Results were below the RC of 100 µg/L.
- CH-C: Results for 24 samples were above the MDL of 0.03 µg/L, which was equal to the MRL of 0.03 µg/L. Results were below the RC of 100 µg/L.

A different laboratory analyzed the samples for the last two events because the UCMR3 study period established by the USEPA ended and the original laboratory no longer offered the applicable analytical method. Use of a different laboratory resulted in different MDLs for the last two sampling events.

Total chromium was detected in three of the field blanks, indicating that the samples were contaminated in the field or the laboratory. The concentration in the field blanks, when compared to the river sample results, is not high enough to affect the determination of whether or not the data exceed the MRL. Therefore, this may not be crucial for decision-making purposes.

The RPD for total chromium for the November 19, 2015 field duplicate exceeded 30 percent, which calls into question the accuracy of the data for this date. However, the associated river sample was not outside of the normal range of the data for the sample location, which indicates that the differences may not be critical to decision-making based on the data.

### **Cobalt**

- MNT-C: Results were above the MDL for two samples but below the MRL of 1 µg/L and the RC of 70 µg/L
- M-C: Results were above the MDL for seven samples but below the MRL of 1 µg/L and the RC of 70 µg/L.
- ES-C: Results were above the MDL for eight samples but below the MRL of 1 µg/L and the RC of 70 µg/L.
- CH-C: Results were above the MDL for six samples but below the MRL of 1 µg/L and the RC of 70 µg/L.

A different laboratory analyzed these samples for the last two events because the UCMR3 study period established by the USEPA ended and the original laboratory no longer offered the applicable analytical method. Use of a different laboratory resulted in different MDLs for the last two sampling events.

### **Molybdenum**

- MNT-C: One result was above the MDL but below the MRL of 1 µg/L and the RC of 40 µg/L. The rest of the samples were below the MRL and the RC.
- M-C: One result was above the MDL but below the MRL of 1 µg/L and the RC of 40 µg/L. The rest of the samples were below the MRL and the RC.
- ES-C: Results were below the MDL, the MRL of 1 µg/L and the RC of 40 µg/L throughout the study.
- CH-C: Results were below the MDL, the MRL of 1 µg/L and the RC of 40 µg/L throughout the study.

A different laboratory analyzed these samples for the last two events because the UCMR3 study period established by the USEPA ended and the original laboratory no longer offered the

applicable analytical method. Use of a different laboratory resulted in different MDLs for the last two sampling events.

### **Strontium**

- MNT-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 1,500 µg/L.
- M-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 1,500 µg/L.
- ES-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 1,500 µg/L.
- CH-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 1,500 µg/L.

### **Vanadium**

- MNT-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 21 µg/L.
- M-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 21 µg/L.
- ES-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 21 µg/L.
- CH-C: Results for 24 samples were above the MRL of 0.3 µg/L but below the RC of 21 µg/L.

#### **2.2.18.4 Chlorate**

- MNT-C: Results were above the MDL for 22 samples but below the MRL of 20 µg/L and the RC of 210 µg/L.
- M-C: Results were above the MDL for 17 samples and one result was above the MRL of 20 µg/L but below the RC of 210 µg/L.
- ES-C: Results were above the MDL for 16 samples but below the MRL of 20 µg/L and the RC of 210 µg/L.
- CH-C: Results were above the MDL for 18 samples but below the MRL of 20 µg/L and the RC of 210 µg/L.

#### **2.2.18.5 Perfluorinated Compounds**

The following perfluorinated compounds were measured below their respective MDLs and MRLs throughout the study. These parameters do not have RCs:

- Perfluorobutanesulfonic acid (PFBS) (MRL – 0.09 µg/L, RC – Not applicable)
- Perfluoroheptanoic acid (PFHpA) (MRL – 0.01 µg/L, RC – Not applicable)
- Perfluorohexylsulfonic acid (PFHxS) (MRL – 0.03 µg/L, RC – Not applicable)
- Perfluorononanoic acid (PFNA) (MRL – 0.02 µg/L, RC – Not applicable)

- Pefluorooctylsulfonic acid (PFOS) (MRL – 0.04 µg/L, RC – Not applicable)

Perfluorooctanoic acid (PFOA) was detected on one occasion above the MDL of 0.0018 µg/L, but below the MRL of 0.02 µg/L and the RC of 0.07 µg/L. The remaining results were below the MDL.

PFOS was detected in the May 11, 2016 field blank at a concentration of 0.0077 µg/L, indicating that the sample was contaminated in the field or the laboratory. However, it was not detected in the corresponding river samples at the MDL of 0.0045 µg/L, indicating that this may not be crucial for decision-making purposes.

#### **2.2.18.6 Hormones**

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

The following hormones were measured below their MDLs, MRLs and RCs throughout the study:

- 16- $\alpha$ -Hydroxyestradiol (Estriol) (MRL – 0.0008 µg/L, RC – 0.35 µg/L)
- 17- $\alpha$ -Ethinylestradiol (MRL – 0.0009 µg/L, RC – 0.035 µg/L)
- 17- $\beta$ -Estradiol (MRL – 0.0004 µg/L, RC – 0.0009 to 0.09 µg/L)
- Equilin (MRL – 0.0004 µg/L, RC – 0.35 µg/L )
- Estrone (MRL – 0.002 µg/L, RC – 0.35 µg/L)

4-Androstene-3,17-dione was measured above the MRL of 0.0003 µg/L on December 1, 2015 at sampling sample locations ES-C and CH-C. The observed concentrations were 0.00054 and 0.00053 µg/L, respectively. This parameter does not have an established RC.

Testosterone was measured above the MRL of 0.0001 µg/L on December 1, 2015 at sampling sample locations ES-C and CH-C. The observed concentrations were 0.00014 and 0.00016 µg/L, respectively. This parameter does not have an established RC.

17- $\alpha$ -Ethinylestradiol was detected at a concentration of 0.0012 µg/L in the February 29, 2016 field blank, indicating that the sample was contaminated in the field or the laboratory. However, it was not detected in the corresponding river samples at the MDL of 0.00090 µg/L, indicating that this may not be crucial for decision-making purposes.

### **3.0 RIVER BED – SEDIMENT SAMPLING AND ANALYSIS**

Sediment from the Kanawha River was studied due to the past industrial, chemical, and mining use of the Kanawha River and its tributaries downstream of Mile Point 72. The sediment study



was conducted to identify contaminants in river bottom sediments that could potentially be released back into the Kanawha River and affect water quality over time.

The Kanawha River is a tributary of the Ohio River, approximately 97 miles in length. It is the largest inland waterway in West Virginia and commonly used for barge transportation. The Kanawha River is routinely dredged by the United States Army Corps of Engineers (USACE) to maintain a minimum draft depth for private and commercial watercraft. The USACE also maintains and operates a series of lock and dam structures on the Kanawha River for navigation purposes. The sediment study limits were specifically located within an approximate 16-mile reach of the Kanawha River between river mile 58.2 (near Charleston, West Virginia) and river mile 74.1 (near Cabin Creek, West Virginia).

Initial evaluation of each of the sediment sample collection site areas included the collection of geophysical and bathymetry data using a single beam hydrograph, side scan sonar, and a sonar sub-bottom profiler. Following the collection of this suite of remote sensing data, representative soil core grab samples were obtained from riverbed sediment at each designated sample site. The results of the geophysical and bathymetry study were then reviewed to refine and select actual sample locations for analytical testing of sediment. Final sediment sampling events included the collection of two individual samples, one along the left descending bank (LDB) and a second from the right descending bank (RDB) from each site during high and low flow conditions in the river.

### **3.1 Sediment Sampling Locations**

A total of seven individual sediment sampling locations were selected for this study. These included three around and upstream of Charleston and an additional four sites upstream that were located in close proximity to upstream tributaries of the Kanawha River. These tributaries were selected based on the history of development and industrial activity along the streams and their potential for contaminant inflow. The individual sediment sample locations extended approximately 500 feet along both banks and included the full width of the river as indicated on **Figure 1 in Appendix A**.

The Winfield locks and dam structure is situated downstream of Charleston at MP 31.1 and Marmet locks and dam structure is located upstream of Charleston at MP 67.7. SED01 through SED05 sampling locations are situated within the Winfield pool, which is reported to have a normal pool elevation of 566 feet. SED06 and SED07 sample locations are upstream and within the Marmet pool with a maintained normal pool elevation of 590 feet.

#### *SED01 Location (Winfield Pool @ MP 58.22) – Court Street*

Lat.: 38.34935923680<sup>0</sup> Long.: 81.64069287570<sup>0</sup>

This sampling location was near the lower end of Charleston's Haddad River Front Park levee structure, adjacent to the southern terminus of Court Street along the RDB. The study section was situated approximately 1,750 feet downstream from the South Side Bridge. This sampling location was consistent with the surface water sampling location denoted as CH.

SED02 Location (Winfield Pool @ MP 59.69) – Elizabeth Street

Lat.: 38.33603344120<sup>0</sup> Long.: 81.62000897660<sup>0</sup>

This sampling location was situated adjacent to the southern terminus of Elizabeth Street along the RDB. South Ruffner Branch enters the river via a culvert along the LDB below the center of this study area along with three individual storm water culvert outfalls associated with the University of Charleston also along the LDB at and just above the center of the study area. This sampling location was consistent with the surface water sampling location denoted as ES.

SED03 Location (Winfield Pool @ MP 61.51) – Moose Lodge

Lat.: 38.33075222860<sup>0</sup> Long.: 81.58773673430<sup>0</sup>

This sampling location was situated immediately south of East Point Drive and the Charleston Moose Lodge which are located along the RDB. This study area was also consistent with the surface water sampling location denoted as M.

SED04 Location (Winfield Pool @ MP 63.17) – Campbells Creek Tributary

Lat.: 36.31664004960<sup>0</sup> Long.: 81.56326096910<sup>0</sup>

This sampling location was consistent with the stream discharge from a major tributary, Campbells Creek, which enters the Kanawha River along the RDB after crossing under several bridge structures associated with US Route 60, the WV Turnpike, Piedmont Road, and Norfolk Southern Railroad.

This tributary was included in the sediment sampling study due to the presence of historic (both active and reclaimed) mining operations within the Campbells Creek watershed, as well as the presence of a former salvage yard (Raleigh Junk).

SED05 Location (Winfield Pool @ MP 67.54) – Rush Creek/Burning Springs Branch Tributary

Lat.: 38.26189888980<sup>0</sup> Long.: 81.57262727440<sup>0</sup>

This sampling location was situated downstream of the Marmet locks and dam structure and is consistent with the entrance of a redirected tributary (Burning Springs Branch) located along the RDB, as well as the entrance of Rush Creek along the LDB. The main entrance channel of Burning Springs Branch was redirected and configured with riprap for stabilization during the Marmet locks and dam upgrades, which were completed in the early 2000s.

These tributaries were included in the sediment sampling study given the past disturbance and potential for urban runoff from DuPont City and Rand within Burning Springs Branch and the presence of historic and active mining operations within the Rush Creek watershed.

SED06 Location (Marmet Pool @ MP 68.23) – DuPont  
Plant/Simmons and Lens Creek Tributaries

Lat.: 38.24696928110<sup>0</sup> Long.: 81.56290456160<sup>0</sup>

This sampling location was located upstream of the Marmet locks and dam structure and downstream of the DuPont chemical facility. The DuPont facility is situated along the RDB with several industrial outfalls that enter the river along this bank, and several urban storm water outfalls enter the river from the Town of Marmet along the LDB. The DuPont plant maintains an industrial landfill facility within the Simmons Creek watershed, which is located north of the

main production plant facility. Simmons Creek has been channelized through the DuPont plant property and enters the river along the RDB upstream of the SED06 location.

This sampling location was also situated downstream from the entrance of the Lens Creek tributary along the LDB. This tributary watershed contained numerous historic and active mining sites, and active coal load-outs and dock facilities within the Kanawha River upstream of the SED06 location along the LDB.

SED07 Location (Marmet Pool @ MP 74.10) – Cabin Creek Tributary

Lat.: 38.20003036900<sup>0</sup> Long.: 81.48407007280<sup>0</sup>

This sampling location was immediately downstream of the river's confluence with Cabin Creek, which enters along the LDB. The Cabin Creek watershed contained several legacy environmental sites including the Pure Oil Company Cabin Creek Refinery, an American Electric Power generating facility, and numerous active and reclaimed mining operations. Several active coal stockpiles, load-outs, and dock facilities also exist along the RDB and LDB of the Kanawha River upstream of this sampling location.

### **3.2 Geophysical and Bathymetry Background Description**

W.J. Castle was retained by POTESTA to perform a subsurface exploration of the seven sediment sampling locations along the Kanawha River using geophysical methods to characterize the riverbed and map the distribution of sediment accumulation, thickness, and general gradation. Four levels of study were performed from a boat within each of the study areas to assemble the geophysical and bathymetry data, which included the following:

- Single Beam Hydrographic Survey – This survey was performed by deploying the Single Beam Echosounder to make continuous, accurate (+/- 1 cm) measurements of the depth of water from the river's water surface to the underlying sediment surface of the riverbed. The data was corrected for elevation based on the recorded lock pool elevations which were obtained daily during the data collection field work from the USACE lockmaster at the Winfield and Marmet lock and dam facilities.
- Side Scan Sonar Study – The Side Scan Sonar was deployed to determine a three dimensional surface of the riverbed. Sonar responses from the apparatus are capable of locating objects such as pipeline crossings or debris on the riverbed.
- Sonar Sub-Bottom Profiler Mapping – The Sonar Sub-Bottom Profiler Unit utilizes acoustic sound waves to determine changes in the density of the underlying riverbed sediments and soils. This information was post-processed to determine the thickness and general sediment type and gradation. The findings were used to identify bedforms along the mapped sediment surface (i.e., sand waves/ripples) which are characteristically found in areas of sediment accumulation and deposition.



- Core and Grab Samples of the Channel Bottom – Representative sediment core grab samples were collected by W.J. Castle and documented by type and particle size/distribution. The results of the W.J. Castle sediment sample observations were paired with the signal response from the Sub-Bottom Profiler unit to correlate the type of sediment with a specific response (Seismic Facies Analysis). Core samples were collected using a 2-inch diameter core sampler affixed to the boat. The core sampler was advanced using a vibratory hammer and the length of recovered core varied from approximately 1 foot to 7 feet deep, depending on the soil type and depth to hard-pan or bedrock. Several of the sample areas contained gravel or riprap boulders and the sediment core unit was unsuccessful in retrieving a sample. In these areas, grab samples were collected by hand using a W.J. Castle scuba diver.

Representative photographs of the geophysical equipment utilized on this project including the sidescan sonar, echosounder, and sub-bottom profile units are provided in **Appendix D**.

A copy of the final summary report prepared by W.J. Castle following the geophysical work entitled “The Sediment Study for Seven Sites on the Kanawha River, Charleston, West Virginia” is presented in **Appendix D**. The W.J. Castle study includes findings that are presented in a series of graphics, which include a contour plan map of the riverbed, a sediment map plan of the riverbed, and various isopach maps depicting changes in sediment thickness and type with corresponding boring records for each of the sediment sampling study areas. These results provide a snapshot view of the riverbed and the type of sediment contained therein.

The riverbed contour maps identify the 500-foot survey limits for reference including 1-foot contour lines, channel bottom elevation references, and the locations of the collected sediment cores. The sediment maps for each designated area were developed by correlating side scan sonar and the sediment core data. The borings were collected by W.J. Castle and delivered to POTESTA for logging. The side scan sonar imaging indicates coarseness and types of sediment by the differing reflectivity responses received. Similar reflectivity or imaging in an area where a sediment core was collected indicates that the sediment collected in the core sampler is distributed in those areas with similar imaging responses. Based on this methodology, outlines were placed on the sediment maps with labels indicating the most likely and relevant types of sediment for each delineated area. The recovered surface sediment samples were generally silty sands, coal fragments and gravel, which are typical of alluvial deposition found in this river basin. It should be noted that fine coal fragments and silts commonly appear as the finest sediments in the side scan survey imaging.

### **3.2.1 Geophysical and Bathymetry Characteristics**

Bathymetry maps were produced at each of the sampling locations along the Kanawha River from the hydrographic survey. Each site had a study area that spanned the full width of the river and approximately 500 feet of the riverbanks. Further details related to the procedure and devices used to produce the mapping are discussed in the W.J. Castle report.



### **3.2.1.1 Overview of SED01 Location**

The SED01 location was characterized by four distinct gradation changes in the river sediment across the width of the study area. Two core samples and a single gradation sample were collected at SED01. River sediments were noted to be composed of a silty sand, coarse-grained sand with scattered rocks and debris, coal fines with fine to medium-grained silty sand, and sandstone gravel and cobble with silty sands. Sediment depths were determined using the EdgeTech X-star Chirp Sub-bottom Profiler and reported sediment depths that ranged from 1.5 to 4.5 feet in thickness.

### **3.2.1.2 Overview of SED02 Location**

At the SED02 location, three sediment cores were collected along the LDB. Sediment types encountered during the study revealed coarse gravel, fine sand and silt, coarse gravel with sand, fine to medium-grained silty sand, and fine sand and coarse gravel. Sediment depths in this study area were estimated to range from 3 to 9 feet.

### **3.2.1.3 Overview of SED03 Location**

At the SED03 location, two core samples were advanced on the RDB and one additional core sample was collected near the LDB. Sediment types encountered at this location were silty sand and clay, silty sand and coarse gravel with coal fines, coarse gravel with some silty sands, and silty sands with sparse larger rock with coal fines. Sediment depths were estimated to be approximately 1 to 10 feet thick in this study area.

Bathymetry maps were produced for the four upstream sampling locations, which were consistent with major tributaries to the Kanawha River in this stream segment. These tributaries are known to contain environmental legacy sites or historic mining development.

### **3.2.1.4 Overview of SED04 Location**

Sediment depths at the SED04 sampling location were estimated to range from 1.5 to 8 feet in thickness. Three core samples were obtained at this location, two along the LDB and one along the RDB. Types of sediments encountered included silty sands, very rocky sediment with sand, coarse sediment with sand, fine sediment, fine sand and organics, coarse-grained sand, gravel and coal fines.

### **3.2.1.5 Overview of SED05 Location**

A single core sample was obtained at sampling location SED05 along the RDB along with two additional core samples that were collected near the LDB. Observed sediment types from this location were noted to be composed predominantly of gravel and cobble with a trace of sand. Silty sands were found along the RDB. Sands and gravels were predominant along the LDB.

### **3.2.1.6 Overview of SED06 Location**

Three core samples were collected at the SED06 sampling location: RDB, center of river, and LDB. Predominant sediments encountered were fine-grained silty sand, and clay with coal fines. Medium-grained sand and coal fines were encountered along the RDB and coarse-grained sediments and debris with silty sands along with fine grained silty sand and clay was encountered along the LDB.

### **3.2.1.7 Overview of SED07 Location**

Three sediment core samples were taken at SED07 location, two situated along the RDB and a third along the LDB. The predominant sediment found in the center of the channel was a silty sand and some coal fines. Silty, clayey sand with some coal fines along with coarse gravel and silty sand was encountered along the RDB. The LDB consisted of silty sands with some organics and coal fines.

## **3.3 Sediment Samples Overview**

POTESTA reviewed the geophysical and bathymetry findings presented in the W.J. Castle study to select the location of sampling points within the designated sampling reaches to provide representative sediment samples for chemical and physical sediment characteristic tests. The results of the W.J. Castle - Sonar Sub-Bottom profile study were reviewed to lend insight into the depth, distribution, and gradation of the existing river sediments. Considering these findings, POTESTA selected areas within each of the study sections consistent with the accumulation of alluvial sediment and deposition had occurred. These sampling points were deemed consistent with depositional areas that could be eroded during high flow and flooding events, which would result in the entrainment of fine sediment within the water column. The collection of these individual sediment samples was performed by POTESTA staff from a boat deployed on the river. It was assumed that accumulated contaminated sediments would be concentrated, if present, along the banks of the river rather than the center due to dredging performed by the USACE. Therefore, samples were collected at two points within the designated sampling locations, which include the LDB and the RDB.

The initial sampling event took place during a low-flow period in October 2015 while the second collection event was completed following an elevated or high-flow event occurring in May 2016. The high-flow event was defined as a storm event that resulted in flows greater than 10,000 cfs and the low-flow event was defined as an event resulting in flow less than 5,000 cfs. The river levels were monitored from information collected from the USGS's gauging for the Kanawha River at the Kanawha Falls (USGS 03193000) (2016). The high-flow sampling event was carried out following a return of the river stage to normal flow conditions. The locations of the sample points were documented using a Trimble 6000 series Digital Global Positioning System (DGPS) to closely approximate the locations during the two sampling events. Each sampling point was designated with the prefix SS1r1 indicating Sediment Site 1 (SS1), right descending bank (r), and first (1) sample taken in low flow.

The sediment samples were analyzed for parameters that were approved as part of the study plan provided to the WVDEP and WVDHHR prior to the beginning of sampling. The parameters and their respective analytical methods are shown on **Table 3.3**.

**TABLE 3.3**  
*Summary of Laboratory Tests for Sediment Samples*

Classification Tests		Analytical Tests	
Test	Method	Test	Method
Particle Size	ASTM D422	TOC	USEPA 9060A
		Metals	USEPA 6010B
		PCBs	USEPA 8082A
		VOCs	USEPA 8260B
		SVOCs	USEPA 8270D
		Dioxin	USEPA 8290

### 3.3.1 Sample Collection and Preparation

The initial sampling event took place during a low flow period on October 22, 2015 and concluded on October 23, 2015. This sampling took place when the minimum flow averaged 3,480 cfs according to the USGS gauging for the Kanawha River at the Kanawha Falls (USGS 03193000) (2016). Sampling activities were initiated by navigating to the seven sediment sampling locations using a DGPS.

Due to the variation of sediment types, two types of sample collection equipment were utilized to collect the sediment samples during this event. Initially, an AMS Multi-Stage Sludge and Sediment Sampler (**Photo 3, Appendix F**) was deployed for discrete sediment sampling. The AMS Multi-Sludge and Sediment Sampler has a maximum sample depth of 36 inches; however, during the sampling event the typical depth varied from 1 inch to 18 inches due to site conditions. When the sampling crew encountered rocky conditions, making use of the AMS Multi-Stage Sludge and Sediment Sampler ineffective, a Petite Ponar (**Photo 4, Appendix F**) sample collection device was employed to obtain samples. The Petite Ponar generally sampled sediment depths from 1-12 inches. Therefore, both sampling methods targeted the upper 10-12 inches of sediment. Based on a previous study of the Kanawha River in the Nitro area, it was determined that “Finest-grained deposit along both banks of the River exhibit lower resuspension rates due to lower shear stresses being generated by lower velocities of flow in those areas.” (Conestoga-Rovers & Associates, 2015).

Each sample was transferred from the sampler to a decontaminated metal bucket or can (**Photo 5, Appendix F**). The decontaminated containers were new and were not reused. The decontamination of steel cans occurred the day prior to sampling and consisted of spraying a Liquinox<sup>®</sup> detergent and water solution on the steel cans, then rinsing the cans twice with distilled water. Once in the decontaminated cans, the individual sediment samples were immediately collected and placed into three wide-mouth, 8-ounce glass soil jars. The samples



were labeled by sample location and a custody seal was placed on each of the jars. Upon containerization of project samples, the 8-ounce glass soil jars were placed in rigid coolers, maintained under ice, and subject to appropriate COC protocols until delivered to the analytical laboratory (REI Consultants, Inc.), in Beaver, West Virginia. The remaining sediment in each steel can was sealed and delivered to CTL Engineering, Inc. of South Charleston, West Virginia for soil classification and particle gradation testing. Pace Analytical Services, Inc., of Minneapolis, Minnesota was sub-contracted by REI Consultants, Inc. (REIC) to complete Method 8290 testing for dioxin.

The second sampling event took place on May 11 and 12, 2016 following a high flow event. The high flow was a result of spring rains that caused flows to reach 50,000 cfs in the days leading up to the sampling event according to the gauging for the Kanawha River at Kanawha Falls (USGS 03193000) (2016). The sample locations were the same general locations as the sites previously sampled during the aforementioned low flow event. The AMS Multi-Sludge and Sediment Sampler was not used during the second sampling event as the Petite Ponar was proven to be more efficient.

Sediment samples were collected using the Petite Ponar (**Photos 6 and 7, Appendix F**) which was decontaminated prior to sampling at each location using a spray Liquinox<sup>®</sup> detergent and water solution. The sediment samples collected using the Petite Ponar were transferred to a steel bucket or placed directly into the steel cans (**Photos 8-11, Appendix F**). The steel cans were decontaminated the day prior and the steel bucket was decontaminated (**Photos 12-14, Appendix F**) between sampling locations using spray detergent solution.

Upon collection of sufficient sample quantity to fill the sample containers, three Closed-System Purge-and-Trap samples were taken directly from the recovered material, prior to mixing/homogenizing, for VOC analysis using Terra Core™ sampler per USEPA Method 5035A (USEPA, 2002). The TerraCore™ samplers are single-use sampling tools that collect approximately 5 grams of soil. The 5 grams of collected soil were transferred to 40-milliliter (mL) vials. Each of the filled vials was capped and custody sealed before being placed in a cooler on ice (**Photos 15-18, Appendix F**). Three wide-mouth 8-ounce jar samples (**Photos 19-21, Appendix F**) were also collected. After sediment was placed in the jars and vials, they were custody sealed, bagged, and placed in a cooler on ice (**Photos 22-25, Appendix F**).

Sediment samples along with appropriate COC were sent to REIC. REIC sub-contracted with Pace Analytical Services, Inc., of Minneapolis, Minnesota to complete Method 8290 testing for dioxin. The steel cans were sent to GeoMechanics, Inc. of Elizabeth, Pennsylvania for soil classification testing.

### 3.3.2 Sediment Sample Results

The analytical results from the collected river sediment sample are summarized in **Appendix E**. Currently, West Virginia does not have a screening method or regulatory standard for the evaluation of sediment with respect to a potential drinking water source. Following a review of



relevant studies and available information, POTESTA utilized the findings and screening methods published in a USGS report (Ingersoll et al., 2000) to interpret the data obtained from the sediment analysis. Sediment analytical results were compared to the “probable effect concentrations” identified in this study, above which adverse aquatic toxicity effects are expected to occur. Physical classification tests were also completed on representative samples by performing gradation analysis.

### **3.3.2.1 Physical Classification Results**

Samples collected during the sampling events were subjected to sieve analysis gradation testing. A total of 14 samples were analyzed during each sampling event; two for each sample area which were obtained from each side of the river at each of the seven sediment sampling locations.

#### **Low Flow Event**

Sediments sampled during the low flow event were consistent across each of the sampling locations. Many of the sample gradation results indicated that the sediment was poorly graded with the particle sizes of the gravel, sand, or silts being similar.

- SED01 - Sediments were characterized by poorly-graded, coarse gravel with fine to medium-grained sand along the LDB and a non-plastic silty sand near the RDB.
- SED02 - Sediments were characterized by a poorly-graded, fine sand with non-plastic silt near the LDB and a poorly-graded, coarse gravel with fine to medium-grained sand along the RDB.
- SED03 - Sediments were characterized by a poorly-graded, fine sand with non-plastic silt near the LDB and silty, fine sand near the RDB.
- SED04 - Sediments were characterized by poorly-graded, fine to medium-grained sand with fine to coarse gravel near the LDB and rocky material with sand near the RDB.
- SED05 - Sediments were characterized by silty sand with coarse gravel near the LDB and poorly-graded, fine sand near the RDB.
- SED06 - Sediments were characterized by silty, fine sands near the LDB and silty, coarse gravel with fine to coarse-grained sand near the RDB.
- SED07 - Sediments were characterized by silty, fine-grained sand near the LDB and fine-grained sandy silt near the RDB.

#### **High Flow Event**

- SED01 - Sediments were characterized by a poorly-graded, fine-grained silty sand along both banks.
- SED02 - Sediments were characterized by poorly-graded, fine-grained silty sand with some fine gravel along the LDB and poorly-graded, fine gravel with some silts and sand near the RDB.

- SED03 - Sediments were characterized as primarily composed of a poorly-graded, fine sand with some silts and clay on both the LDB and RDB.
- SED04 - Sediments were characterized by a poorly-graded, fine-grained sand in both samples.
- SED05 - Sediments were characterized by silty, fine-grained sand with trace gravel along the LDB and poorly-graded, fine-grained sand near the RDB.
- SED06 - Sediments were characterized by a fine-grained sandy silt near the LDB and poorly-graded, fine gravel near the RDB.
- SED07 - Sediments at both points were characterized by a fine-grained sandy silt.

The accumulation, gradation, and type of sediments documented through testing and geophysical study within the seven sediment study areas were consistent with typical alluvial deposition within a major river course. Entrained sediment entering the river from the tributaries during and following major storm events accumulates in sediment deposition areas immediately downstream from the tributary confluence. These accumulation areas were noted to be linear features which were oriented parallel to the river flow direction. Several areas of the study documented manmade features such as docks, mooring cells, riprap stream bank protection, etc. which all serve to alter and direct the natural flow in localized areas along the riverbank in many areas. These features enhance deposition of sediment in some areas and the concentration of erosive flow velocities in other areas resulting in scour and sediment erosion. Since the Kanawha River is maintained as a navigable waterway for commercial and recreational watercraft, the Corps of Engineers regularly dredges the Kanawha River to prevent the accumulation of sediment to maintain a minimum operational draft depth along the main channel. This activity serves to remove accumulated sediment and routinely disturbs and re-entrains the sediment within the water course. In summary, the physical characteristics of the Kanawha River sediments are such that they may be entrained into the water column due to high flow events, manmade structures, and routine maintenance dredging of the main channel. The gradation and particle size of these potential entrained sediments are consistent with typical standard conventional clarification and filtration treatment processes, which are routinely utilized in potable water treatment processes for TSS removal.

### 3.3.2.2 Chemical Analytical Results

Analytical laboratory testing of the sediment samples included analysis of total metals, PCBs, semi-volatile organic compounds, volatile compounds and 2,3,7,8-Tetrachlorodibenzodioxin. A summary of the results from these analyses can be found attached in **Appendix E**. Due to the lack of screening methods and standards related to sediment as an indicator for water quality, the methods and screening levels provided in the USGS report (Ingersoll et al., 2000) were utilized by POTESTA to interpret and evaluate the data. This study presents a set of sediment quality guidelines, which are utilized to predict toxicity for a freshwater database for the Great Lakes basin. Supportive information collected during the preparation of USGS report (Ingersoll et al., 2000) included a review of 92 published reports that contained the results of 1,657 sediment samples. The report concludes with “probable effect concentrations” (PEC) of individual chemicals above which adverse effects in sediments are expected to occur. While POTESTA tested for more substances than the referenced report, the report does represent a concentration

against which the various chemicals in the report can be compared, providing a means of evaluating the data obtained from the analysis of the sediment samples.

The results of the sediment sample metals analysis did not appear to follow a distinct pattern with the varied river flow from the low flow to high flow event. The majority of the parameter concentrations were similar between the low and high flow events. The results from the metal analyses were typically a fraction of what was considered the toxic effect threshold referenced in the USGS report (Ingersoll et al. 2000). The only noted exception to these results was for copper and nickel, which exceeded the recommended PEC concentrations from the USGS report (Ingersoll et al. 2000). This sample was obtained during the May 2016 high flow sampling event from the sampling location along the RDB (Sample Location SS06) which is situated downstream from DuPont. The consensus based PEC from the USGS report (Ingersoll et al. 2000) for copper was 149 mg/kg with a result of 193 mg/kg. Nickel had a consensus based PEC of 48.6 mg/kg with a result of 74.20 mg/kg.

The semi-volatile compounds and volatile compounds were sampled differently from the low flow event to high flow event. USEPA Method 5035A (USEPA, 2002) was used during the high flow event and was not during the low flow event. The majority of the results had similar concentrations from the high to low flow event and were less than 10 percent of the minimum toxic effect threshold determined in the USGS report (Ingersoll et al. 2000).

#### 4.0 CONCLUSIONS

The surface water sampling activities involved the collection and analysis of 25,605 samples. Of these, 2,494 or 9.74 percent of the parameters were detectable at the analytical MDLs, or UCMR3 MRLs. Of these results, 339 or 1.50 percent were above applicable drinking water standards or UCMR3 draft reference concentrations.

The surface water quality sampling data show that bacteria and bis(2-ethyhexyl)phthalate (BEHP) were the only parameters detected above primary drinking water standards at one or more of the sample locations. *Giardia lamblia* was detected at two of the sampling locations. Aluminum, manganese, and iron were detected above secondary drinking water standards at the four sampling locations.

Conventional water treatment plants are designed to kill bacteria, thus the observed levels of bacteria should not present a concern from a treatment standpoint. With regard to the remaining parameters, a treatability study would need to be conducted to determine the concentration of these parameters remaining in the finished water relative to applicable drinking water standards following treatment. Since aluminum, manganese, and iron are subject to secondary drinking water standards, the WVDHHR would need to be consulted to determine if the residual levels would be of regulatory concern.

Of the UCMR3 chemicals, only 1,4-dioxane was measured above the MRL and the USEPA's draft reference concentration (where one exists). The parameter 1,4-dioxane is an unregulated



contaminant that is used as a solvent and a laboratory reagent, and is found in cosmetics, detergents, soaps and shampoo. A treatability study would need to be conducted and the resulting finished water would need to be analyzed by a NELAP-certified laboratory to evaluate 1,4-dioxane levels following treatment. Since 1,4-dioxane is an unregulated contaminant, the WVDHHR would need to be consulted if it was found in the treated finished water.

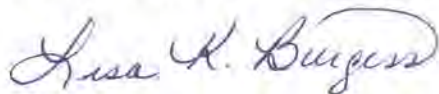
The sediment analytical data show that the concentrations in the sediments sampled are all below the identified probable effect concentrations, except for copper and nickel at the SS06 location below the DuPont Belle Plant at Rush Creek. It is important to note that copper and nickel were not detected in any of the water samples above the applicable drinking water standards. Additional treatability studies would be necessary to determine if entrained sediment can be treated to meet the water quality standards for these parameters.

## 5.0 CLOSING

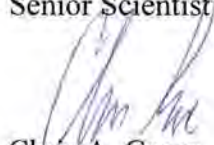
This report has been prepared on behalf of West Virginia America Water to provide a summary of the findings obtained from the surface water and sediment sampling activities completed by POTESTA in the Kanawha River between Montgomery and Charleston, West Virginia. The report's scope is limited to the specific project and locations described herein and represents our understanding of the factors as presented in this report. If these factors change as additional data concerning this study is obtained, we should be informed so that we may examine the data and, if necessary, modify or revise the conclusions presented in this report.

Respectfully submitted,

POTESTA & ASSOCIATES, INC.



Lisa K. Burgess  
Senior Scientist



Chris A. Grose  
Senior Engineering Associate

LKB:CAG/clr



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# *APPENDIX A*





- FIGURE 1-A COURT ST. SAMPLING LOCATION
- FIGURE 1-B ELIZABETH ST. SAMPLING LOCATION
- FIGURE 1-C MOOSE LODGE SAMPLING LOCATION
- FIGURE 1-D CAMPBELLS CK. TRIB SAMPLING LOCATION
- FIGURE 1-E RUSH CK. / BURNING SPRINGS BR. TRIB SAMPLING LOCATION
- FIGURE 1-F DUPONT / SIMMONS CK. / LENS CK. TRIB SAMPLING LOCATION
- FIGURE 1-G CABIN CK. TRIB SAMPLING LOCATION
- FIGURE 1-H MONTGOMERY SAMPLING LOCATION

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PROJECT #: 15-0018      FILENAME: B15-0018-01



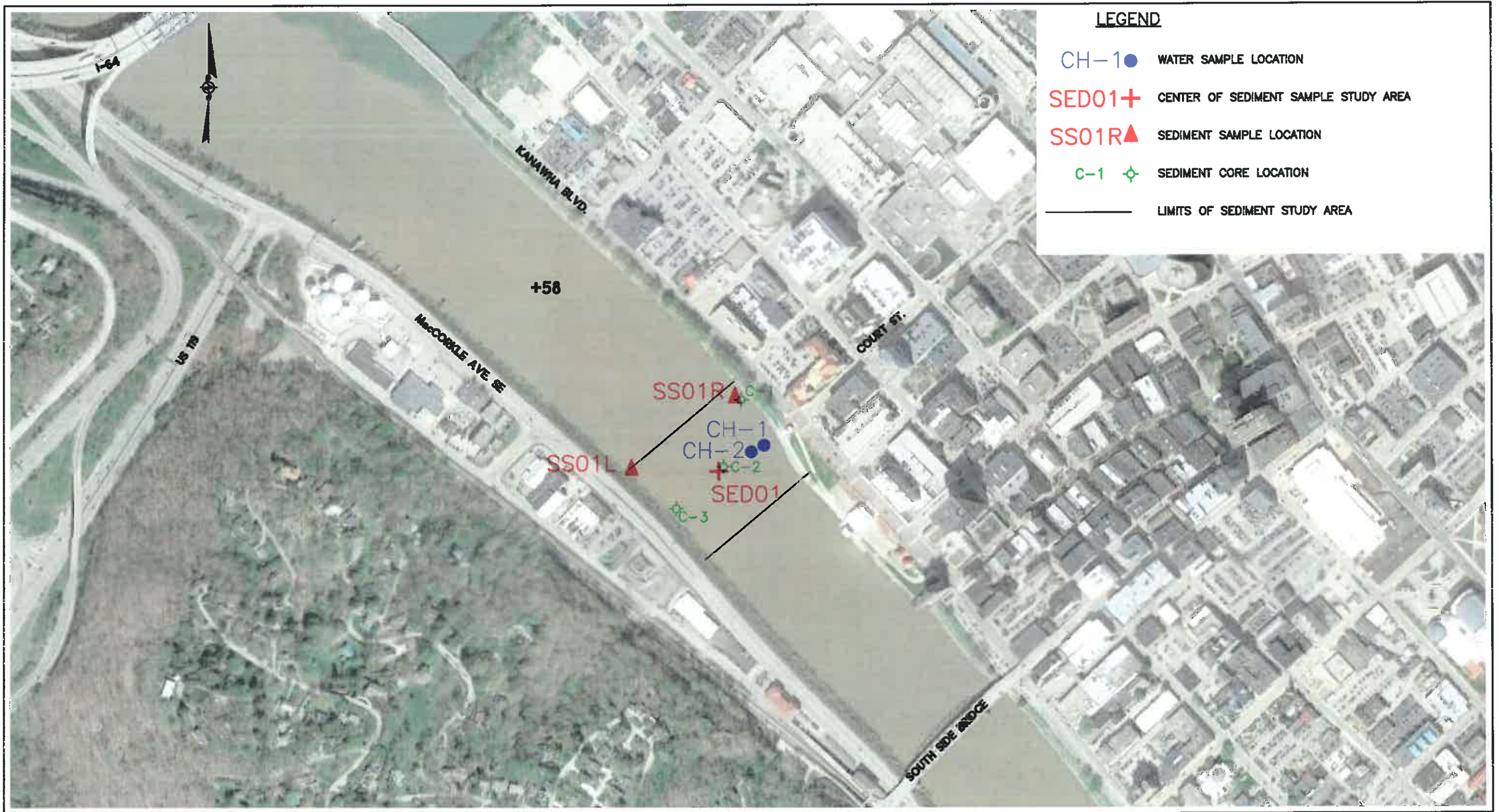
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 E-Mail Address: potesta@potesta.com

Project	
<b>KANAWHA RIVER STUDY SAMPLE AREA LOCATION MAP KANAWHA COUNTY, WV.</b>	
Scale <b>AS NOTED</b>	Dwg. No.
Date <b>JULY 2016</b>	<b>FIGURE 1</b>

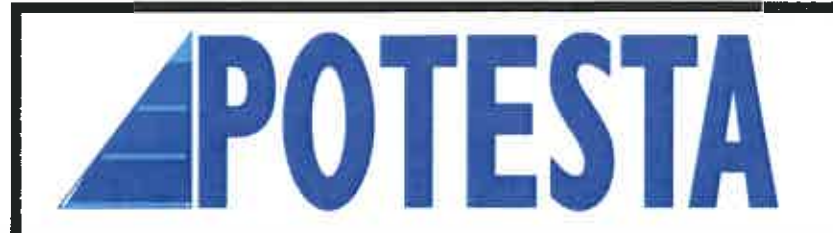


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 Plot Date/Time: Jul 29, 2016 - 1:39pm  
 Plotted By: beledy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R▲ SEDIMENT SAMPLE LOCATION
- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



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Project	
KANAWHA RIVER STUDY COURT ST. SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-A



XREF Files: Image004.jpg Image005.jpg Image006.jpg Image007.jpg Image008.jpg Image009.jpg Image010.jpg Image011.jpg Image012.jpg Image013.jpg  
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 Plot Date/Time: Jul 29, 2016 - 1:40pm  
 Plotted By: beledy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R▲ SEDIMENT SAMPLE LOCATION
- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



PROJECT #: 15-0018      FILENAME: B15-0018-01



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Project  
**KANAWHA RIVER STUDY**  
**ELIZABETH ST. SAMPLING LOCATION**  
**KANAWHA COUNTY, WV.**

Scale AS NOTED  
 Date JULY 2016

Dwg. No.  
**FIGURE 1-B**



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 Plotted By: beledy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R▲ SEDIMENT SAMPLE LOCATION
- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



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Project		KANAWHA RIVER STUDY MOOSE LODGE SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale	AS NOTED	Dwg. No.	FIGURE 1-C
Date	JULY 2016		

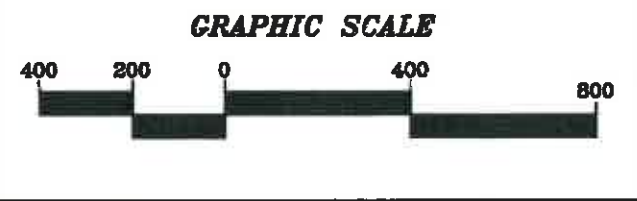


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 Plotted By: belesedy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R ▲ SEDIMENT SAMPLE LOCATION
- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



PROJECT #: 15-0018 FILENAME: B15-0018-01

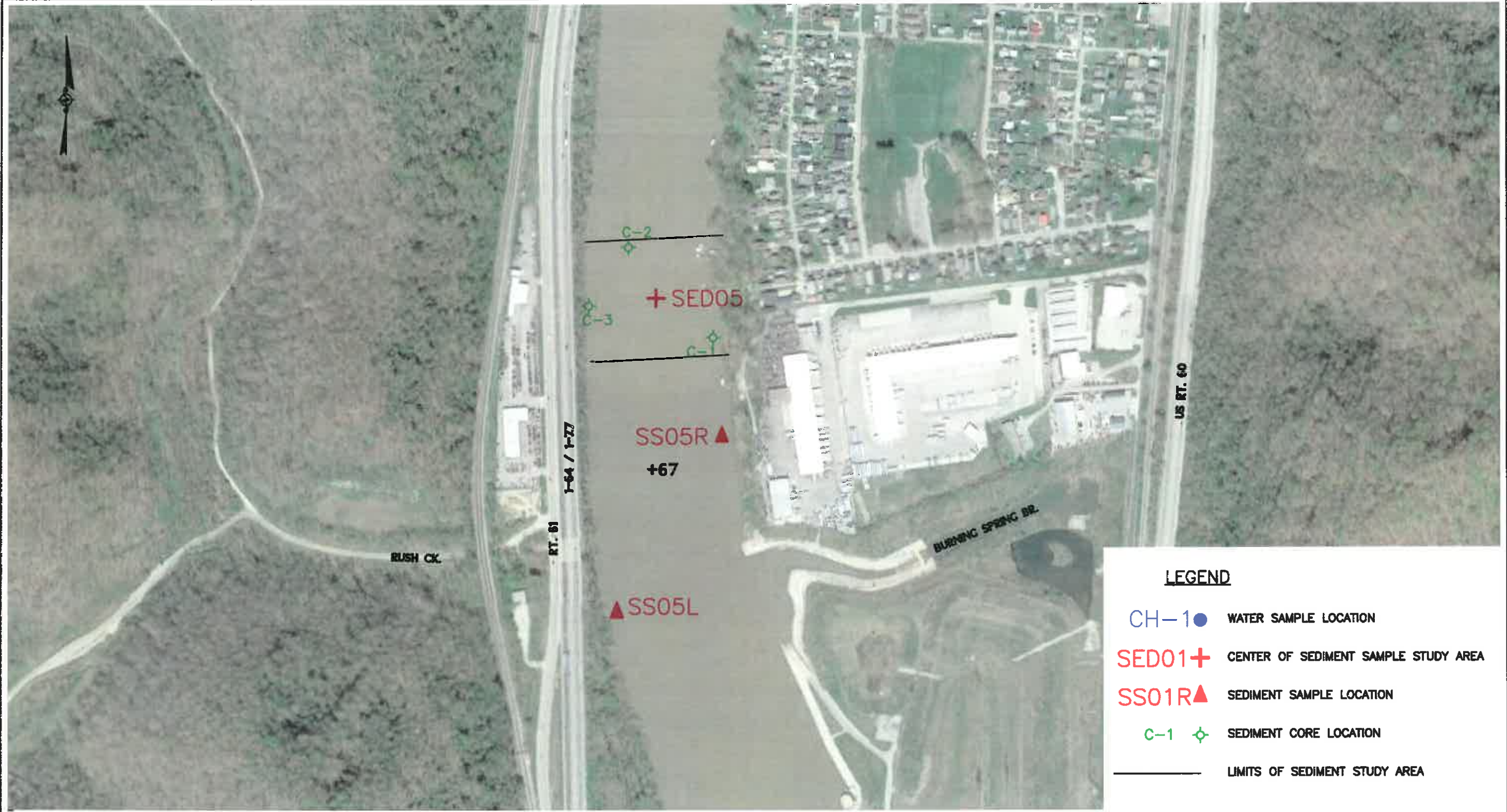


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Project	
KANAWHA RIVER STUDY CAMPBELLS CK. TRIB SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-D



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 Plotted By: belesdy



PROJECT #: 15-0018 FILENAME: B15-0018-01



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Project	
KANAWHA RIVER STUDY RUSH CK. / BURNING SPRINGS BR. TRB SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-E

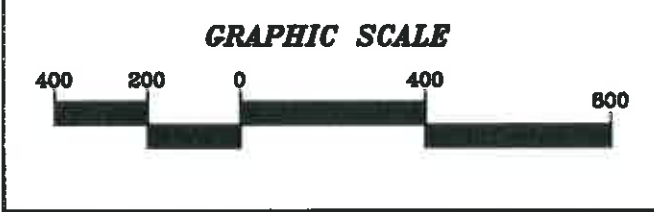


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 Plot Date/Time: Jul 29, 2016 - 1:41pm  
 Plotted By: belesdy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R▲ SEDIMENT SAMPLE LOCATION
- C-1 ◆ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



PROJECT #: 15-0018      FILENAME: B15-0018-01

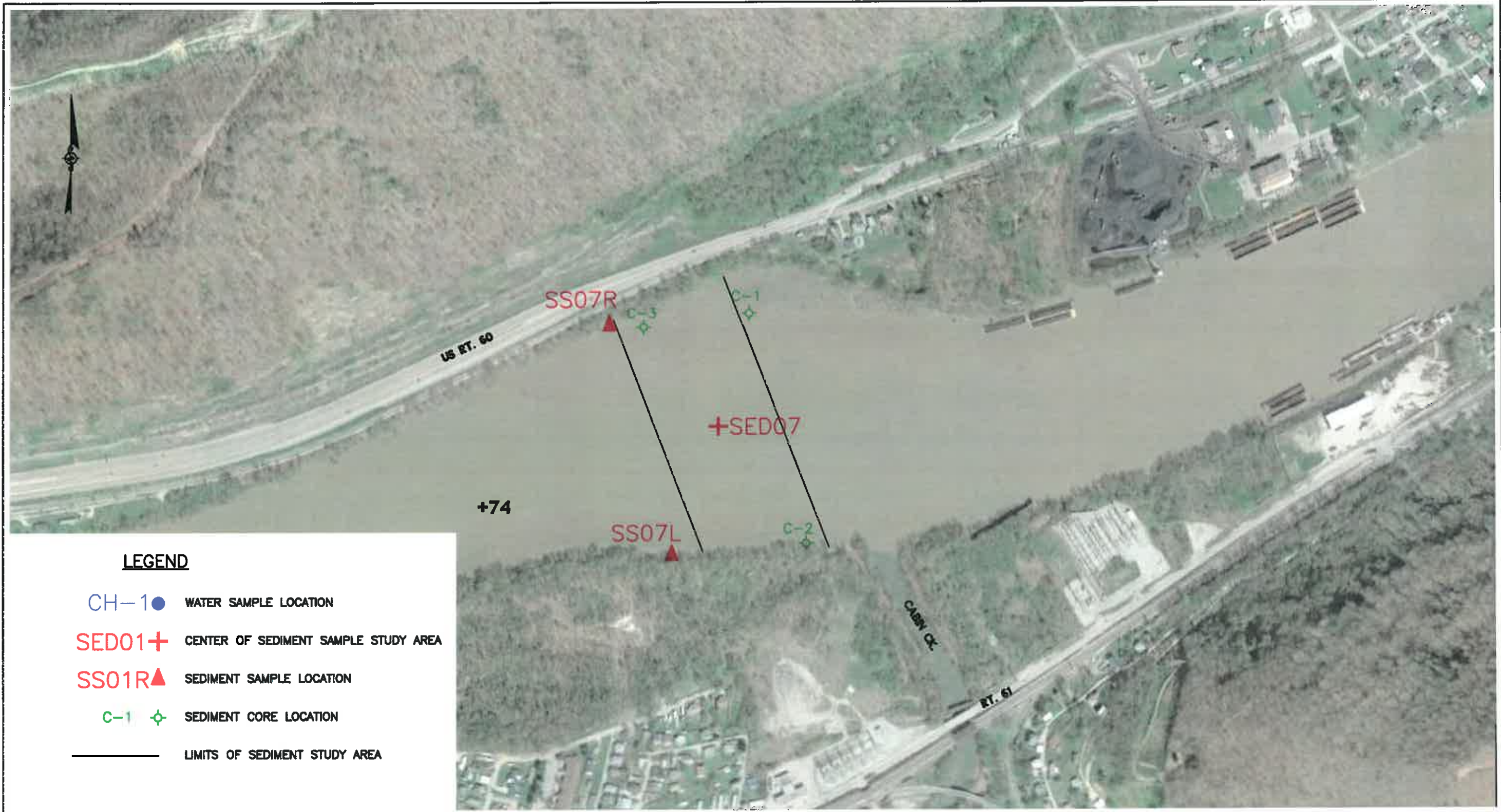


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Project	
KANAWHA RIVER STUDY DUPONT / SIMMONS CK. / LENS CK. TRIB SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-F



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 Plotted By: beledy



**LEGEND**

- CH-1 ● WATER SAMPLE LOCATION
- SED01+ CENTER OF SEDIMENT SAMPLE STUDY AREA
- SS01R▲ SEDIMENT SAMPLE LOCATION
- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA

**GRAPHIC SCALE**



PROJECT #: 15-0018

FILENAME: B15-0018-01



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Project	
KANAWHA RIVER STUDY CABIN CK. TRIB SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-G



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**LEGEND**

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- C-1 ⊕ SEDIMENT CORE LOCATION
- LIMITS OF SEDIMENT STUDY AREA



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Project	
KANAWHA RIVER STUDY MONTGOMERY SAMPLING LOCATION KANAWHA COUNTY, WV.	
Scale AS NOTED	Dwg. No.
Date JULY 2016	FIGURE 1-H



Figure 3.1 - Kanawha River Flow

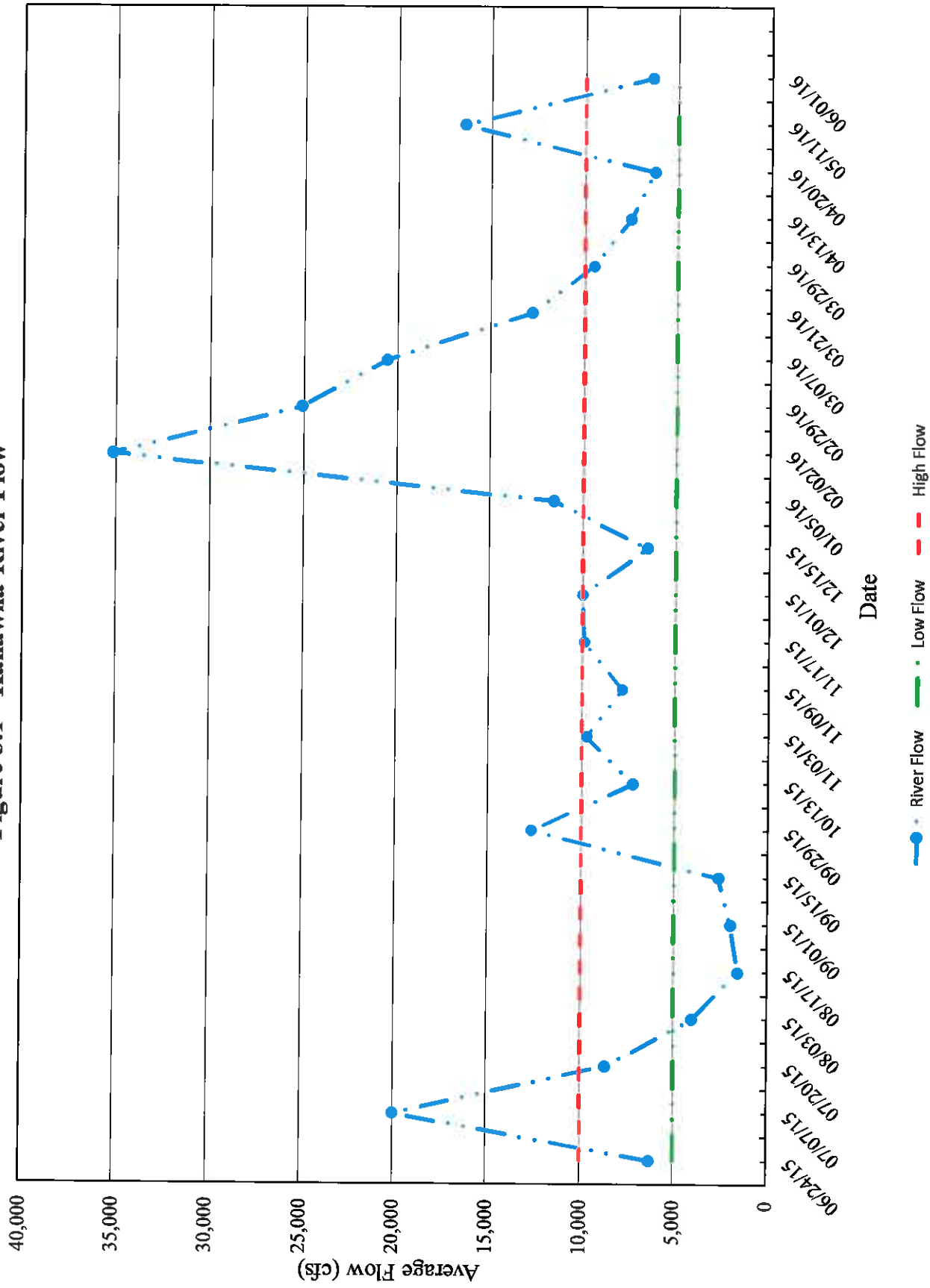


Figure 3.2 - *E. Coli* Concentrations

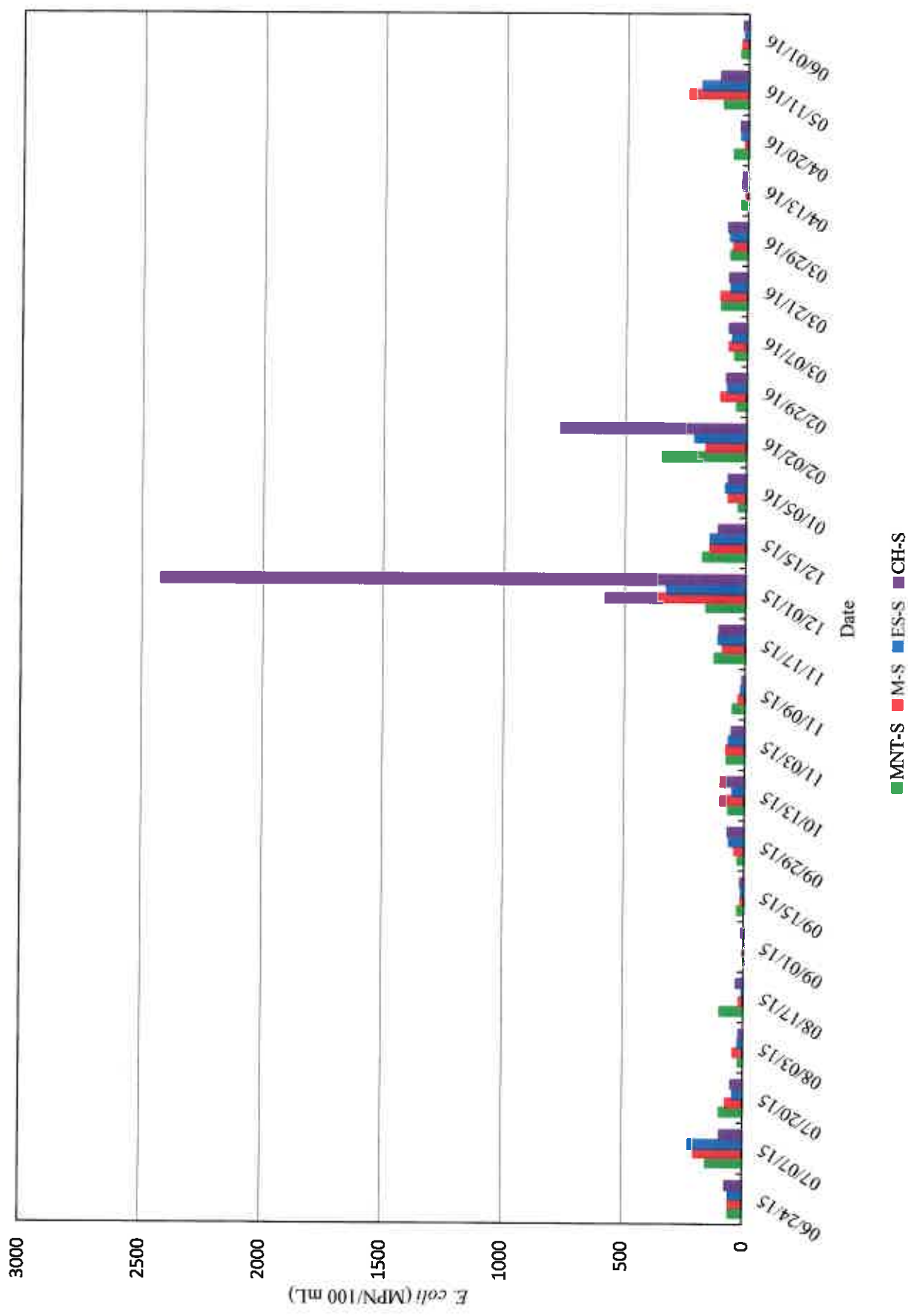


Figure 3.3 - Fecal Coliform Concentrations

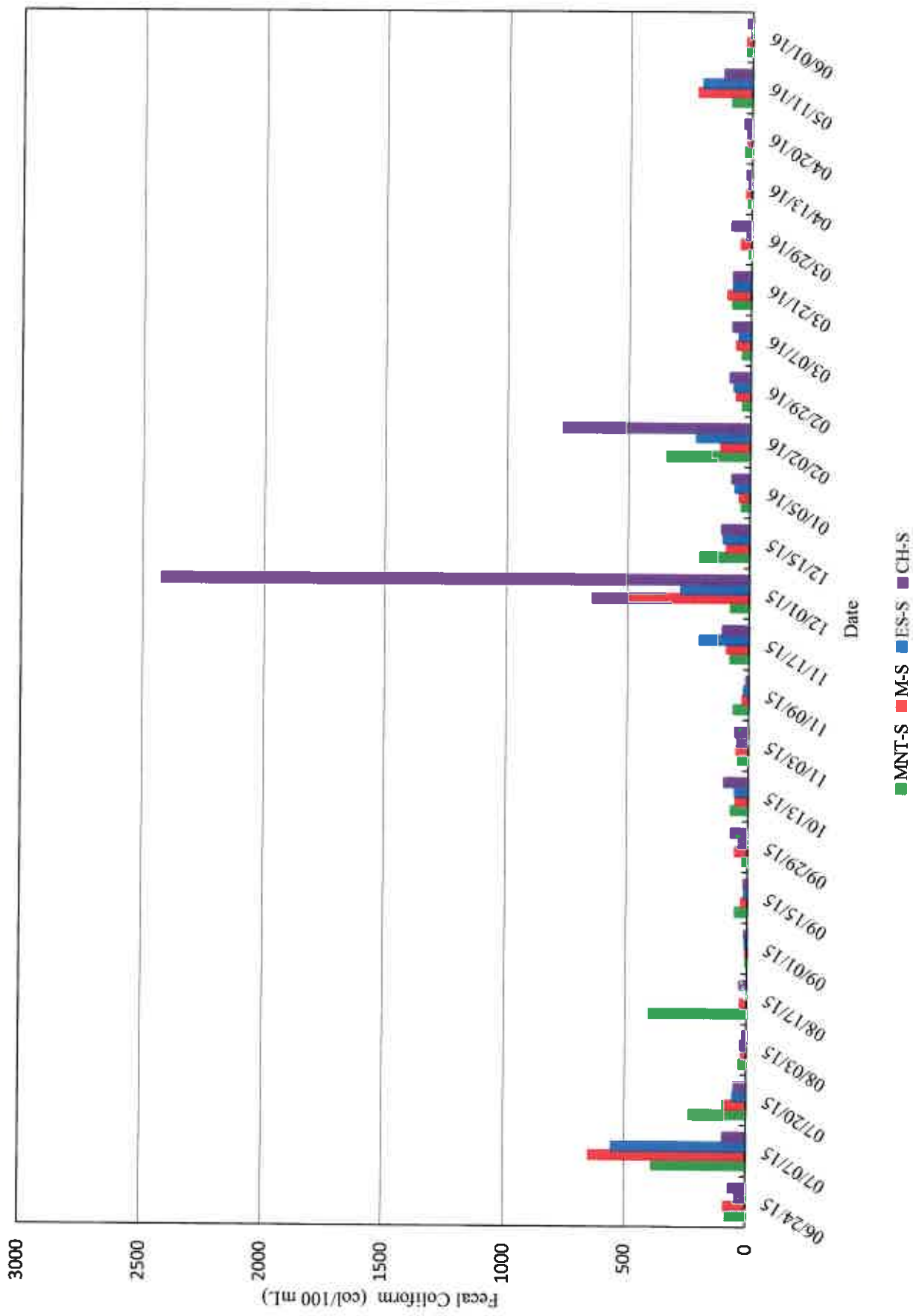








Figure 3.6 - Bacteria by Heterotrophic Plate Count Concentrations

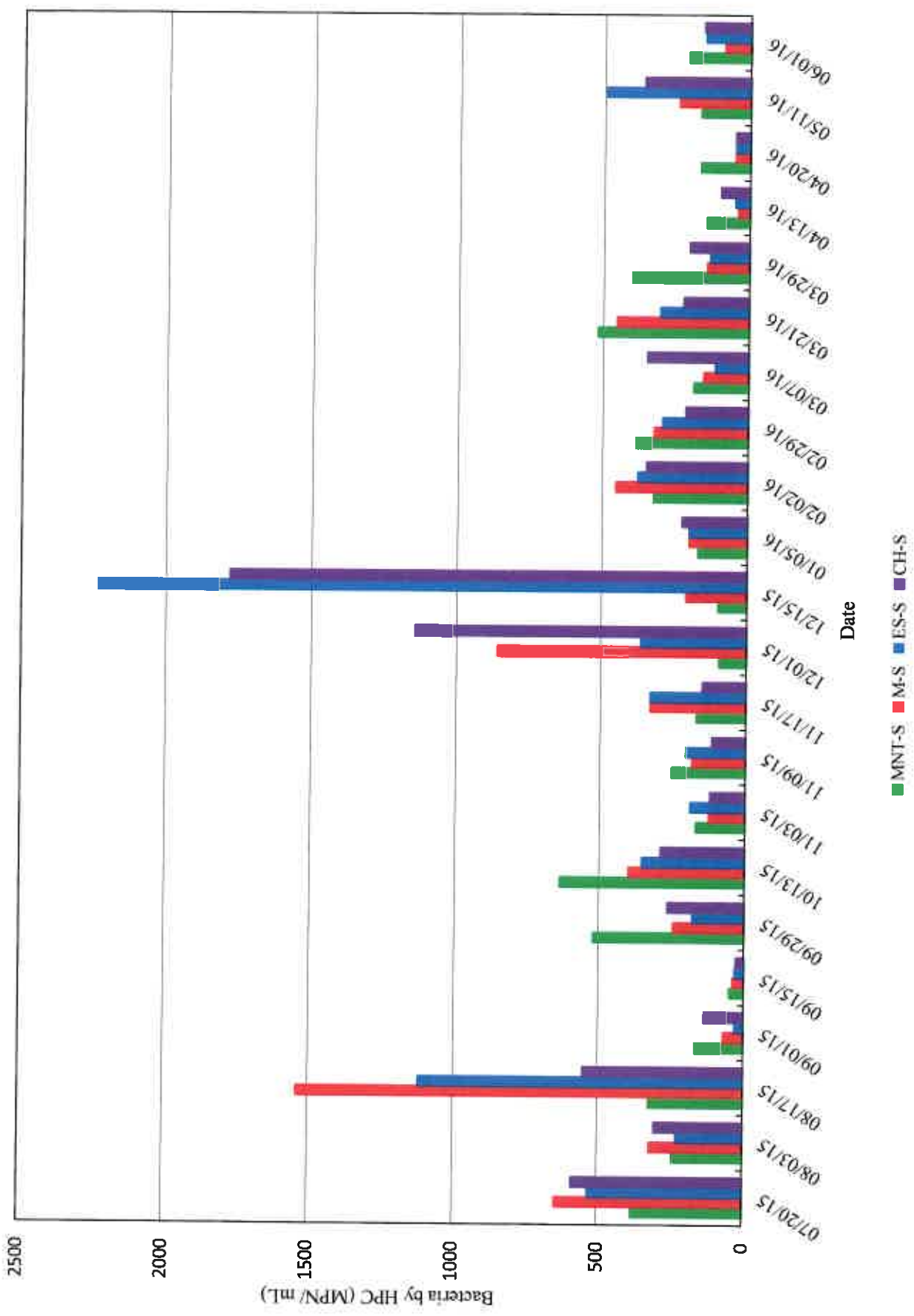


Figure 3.7 - Total Coliform Concentrations

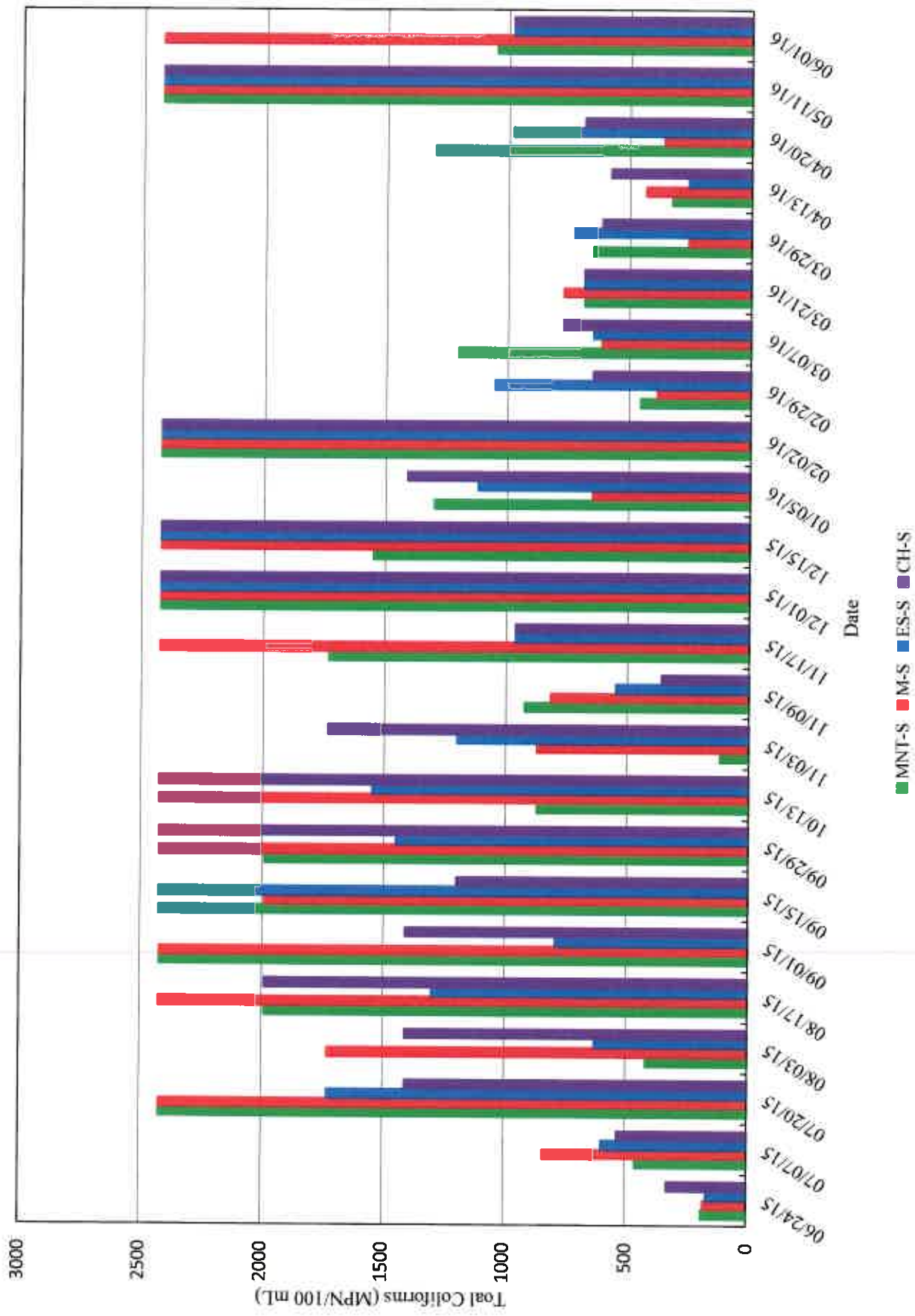


Figure 3.8 - Bacteria by HPC versus Precipitation

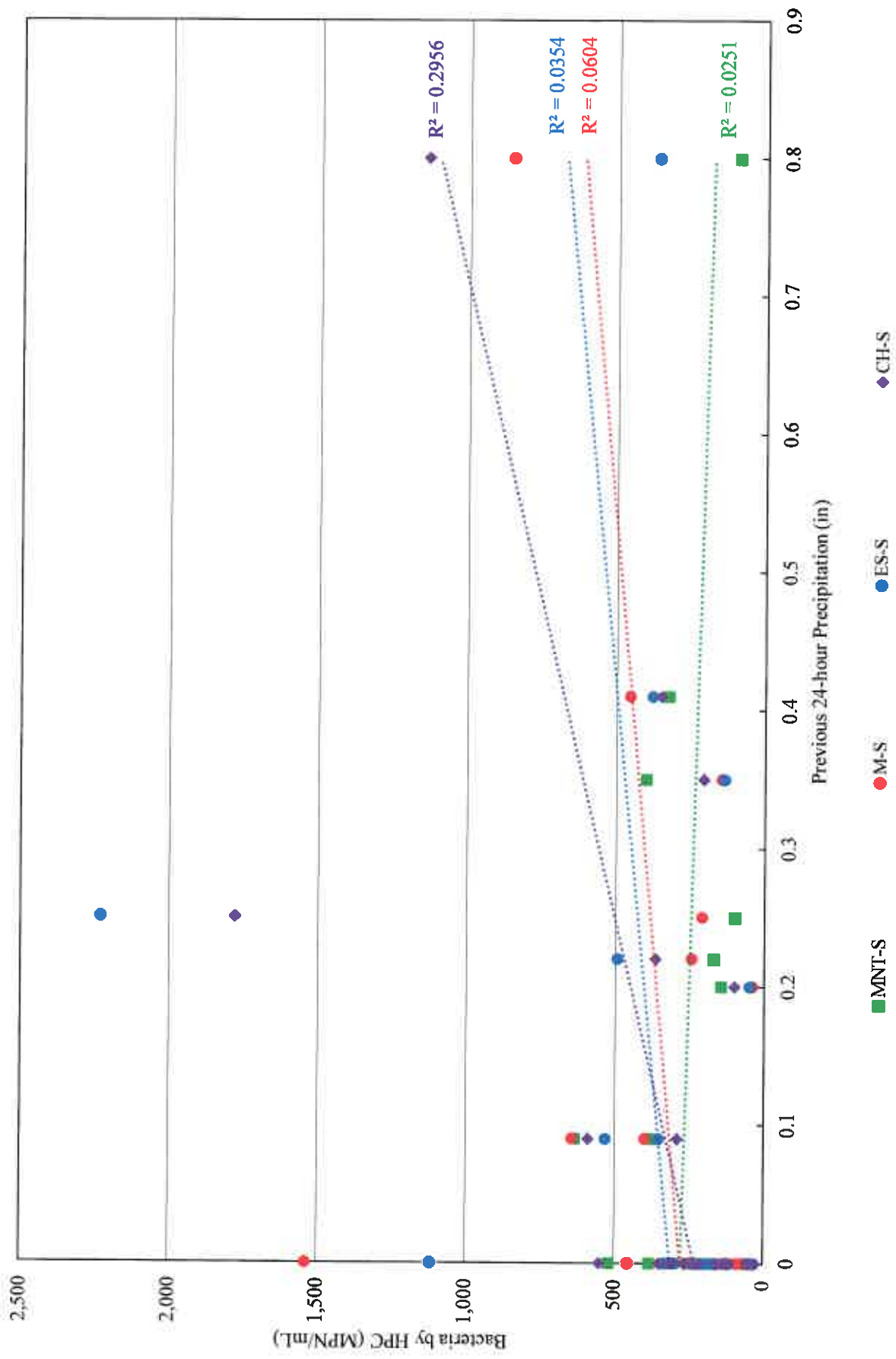




Figure 3.9 - Total Coliform versus Precipitation

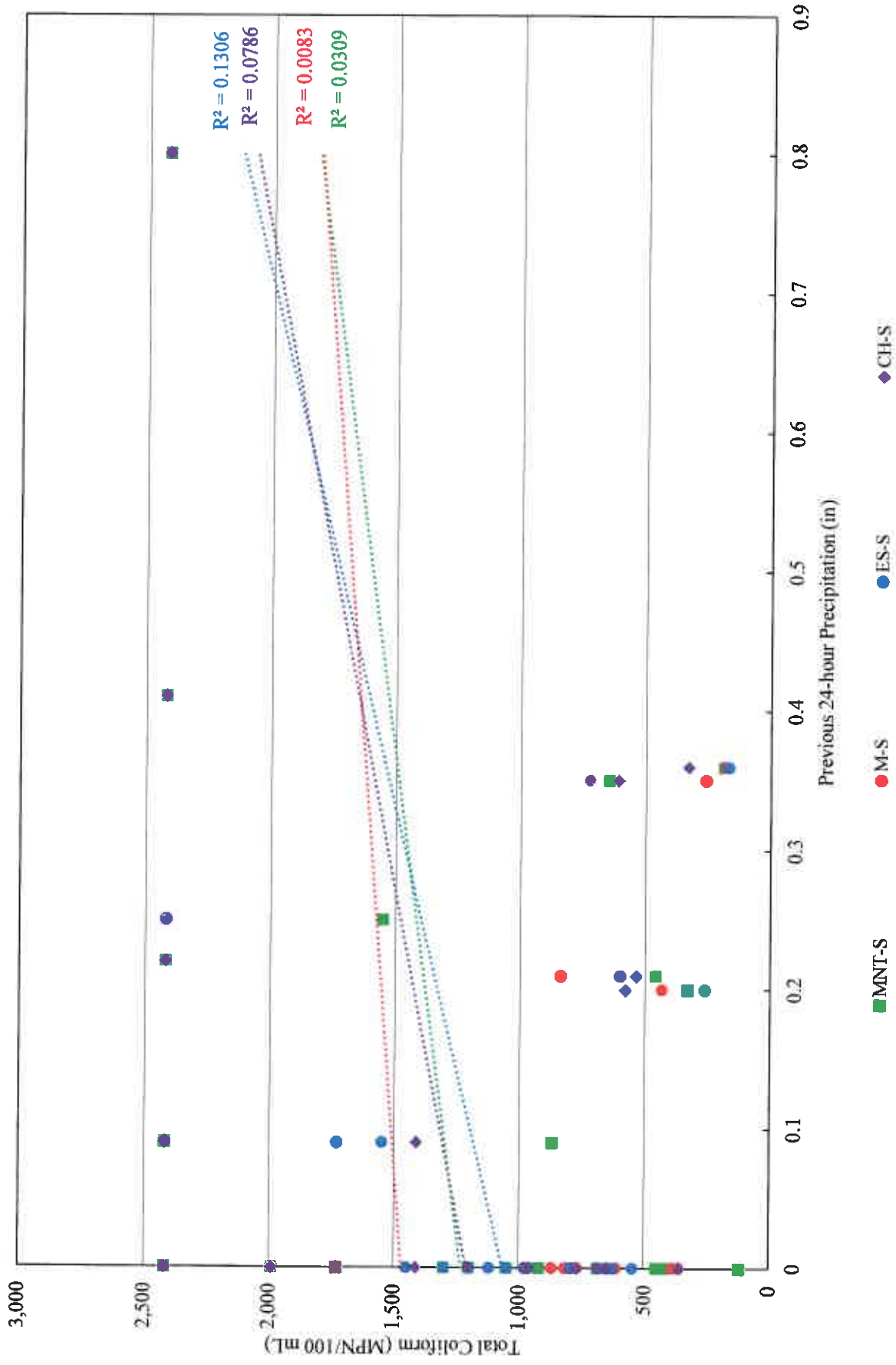


Figure 3.10 - Aluminum Concentrations

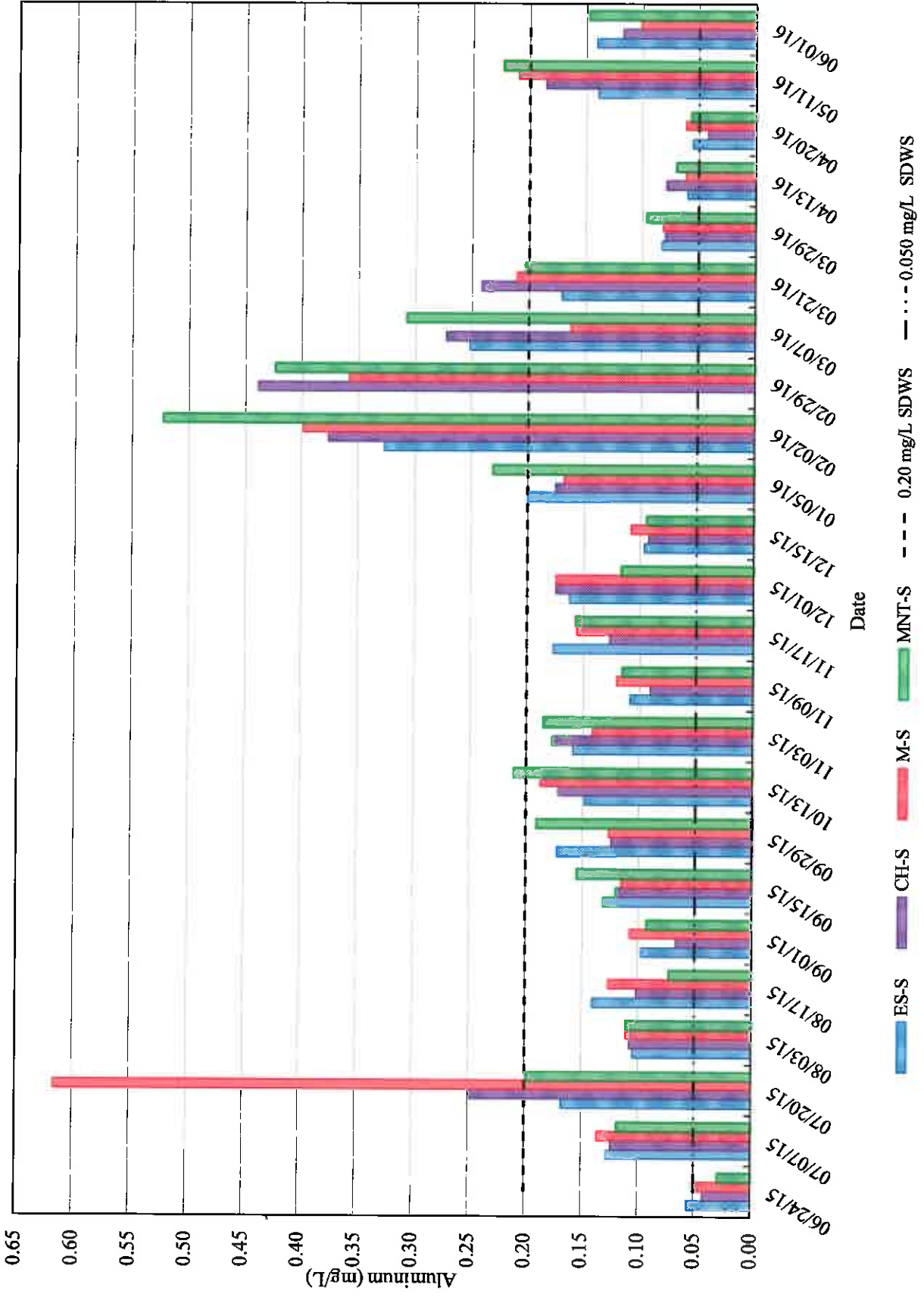


Figure 3.11- Iron Concentrations

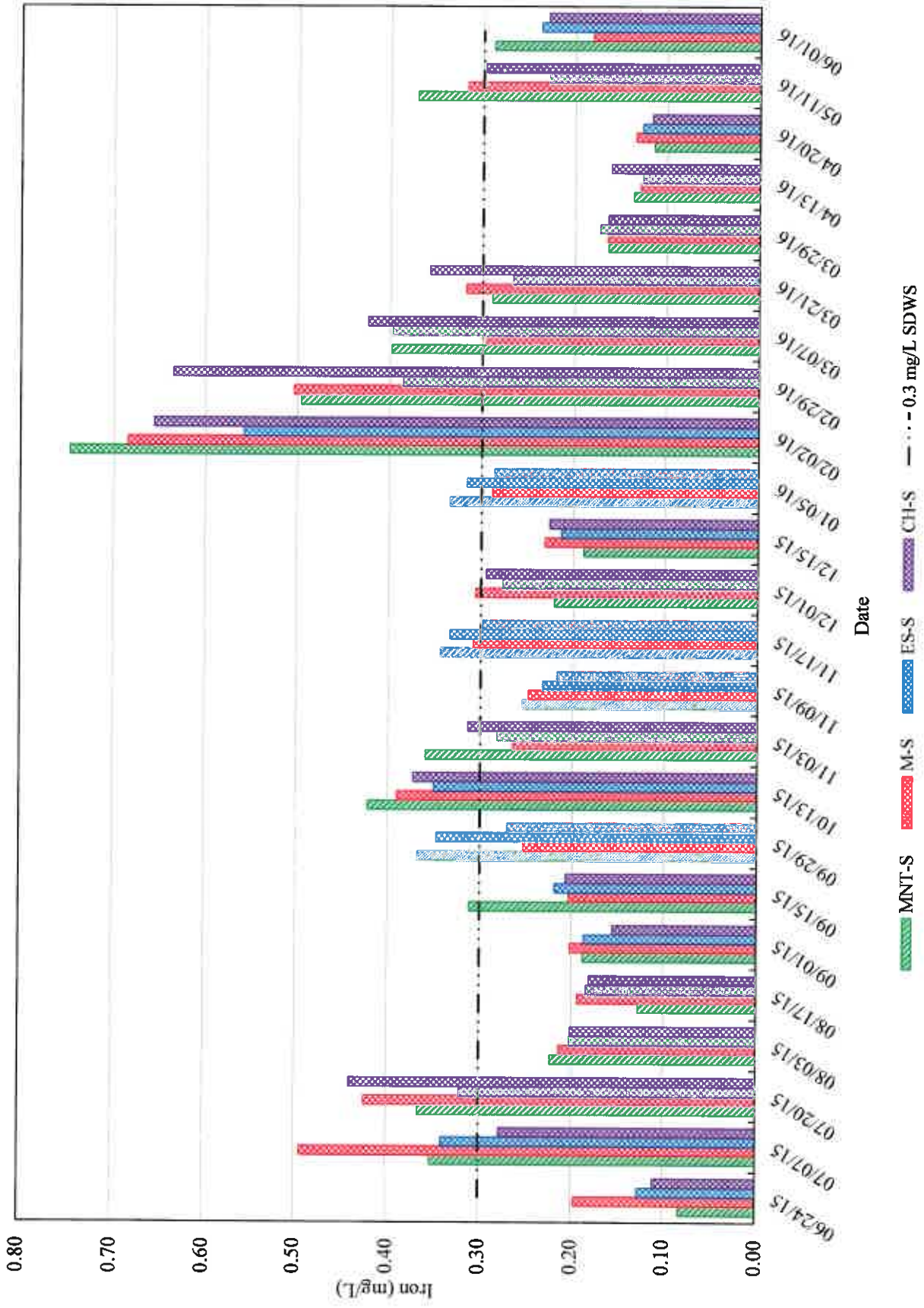
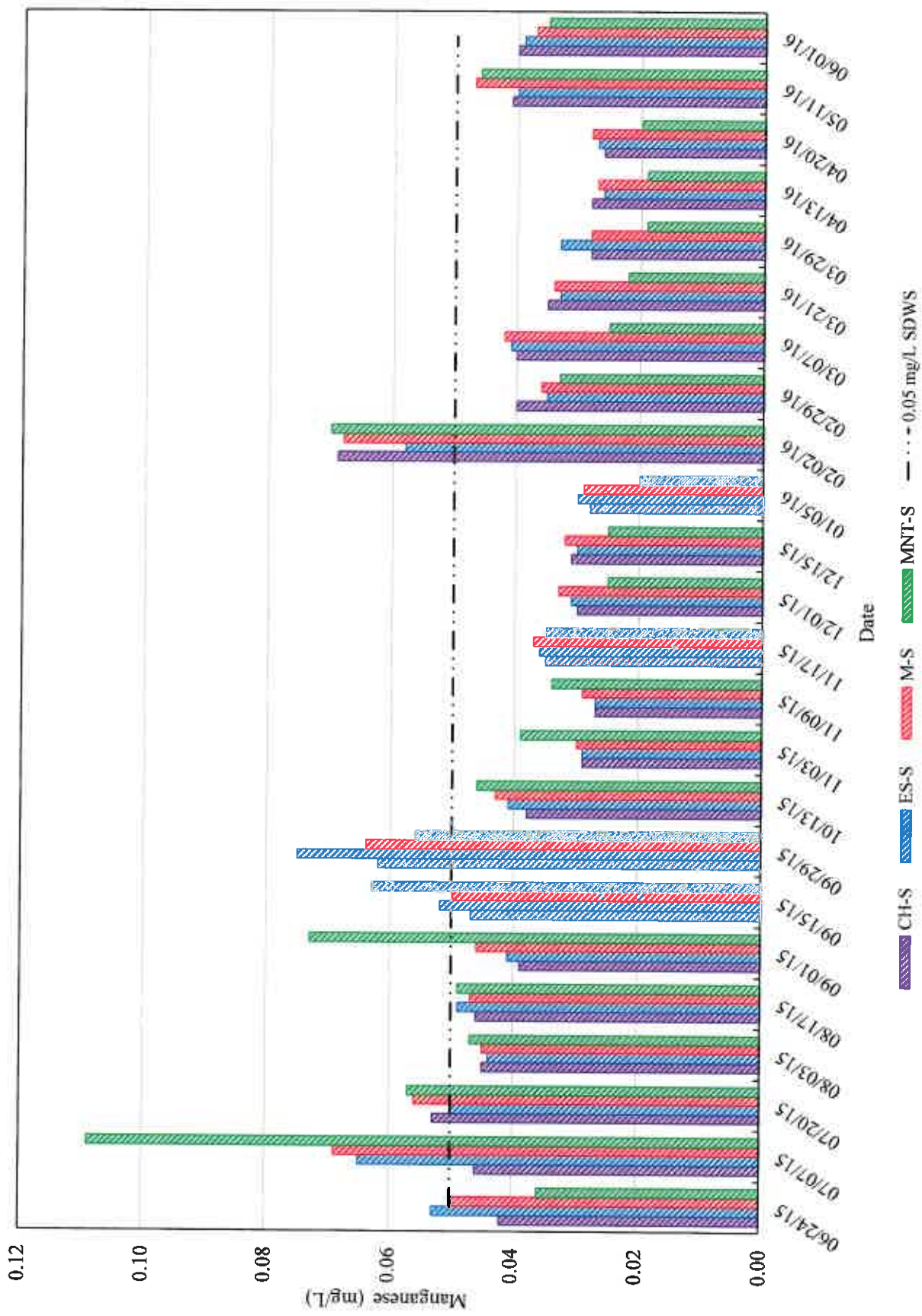


Figure 3.12- Manganese Concentrations





# *APPENDIX B*

## Surface Water Parameter List

CAS No.	Parameter	Analytical Method
<b>Field Parameters</b>		
NA	Conductivity	Field
NA	Specific Conductance	Field
NA	Dissolved Oxygen (DO)	Field
NA	Oxidation-Reduction Potential (ORP)	Field
NA	pH	Field
NA	Temperature	Field
7782-50-5	Total Residual Chlorine (as Cl <sub>2</sub> )	Field
<b>General Chemistry</b>		
NA	Alkalinity	SM2320
NA	Hardness	SM2340
NA	Surfactants (Foaming agents)	SM5540
NA	Total Organic Carbon (TOC)	SM5310
NA	Total Suspended Solids (TSS)	SM2540D
NA	Total Dissolved Solids (TDS)	SM2540
<b>Inorganic Ions</b>		
7726-95-6	Bromide	EPA 300.0
16887-00-6	Chloride	EPA 300.0
16984-48-8	Fluoride	EPA 300.0
14797-55-8	Nitrate Nitrogen	EPA 300.0
14797-65-0	Nitrite Nitrogen	EPA 300.0
18785-72-3	Sulfate	EPA 300.0
<b>Cyanide</b>		
57-12-5	Free Cyanide	EPA 335.4
57-12-5	Total Cyanide	EPA 335.4
<b>Microorganisms</b>		
NA	<i>Cryptosporidium</i>	EPA 1623
NA	<i>Giardia lamblia</i>	EPA 1623
NA	<i>E. coli</i>	SM9223B
NA	Fecal Coliform	SM9223B
NA	Heterotrophic Plate Count (Bacteria)	SM9215
NA	Total Coliform	SM9223B
<b>Metals</b>		
7429-90-5	Aluminum	EPA 200.7
7440-36-0	Antimony	EPA 200.8
7440-38-2	Arsenic	EPA 200.8
7440-39-3	Barium	EPA 200.8
7440-41-7	Beryllium	EPA 200.8
7440-43-9	Cadmium	EPA 200.8
18540-29-9	Chromium (Hexavalent, dissolved)	EPA 218.7

## Surface Water Parameter List

CAS No.	Parameter	Analytical Method
7440-47-3	Chromium (Total)	EPA 200.8
7440-50-8	Copper	EPA 200.8
7439-89-6	Iron	EPA 200.7
7439-92-1	Lead	EPA 200.8
7439-96-5	Manganese	EPA 200.7
7439-97-6	Mercury (Inorganic)	EPA 245.7
7440-02-0	Nickel	EPA 200.8
7782-49-2	Selenium	EPA 200.8
7440-22-4	Silver	EPA 200.8
7440-28-0	Thallium	EPA 200.8
7440-66-6	Zinc (Total)	EPA 200.8
<b>Semi-Volatile Organic Compounds</b>		
121-14-2	2,4-Dinitrotoluene	EPA 625
91-58-7	2-Chloronaphthalene	EPA 625
534-52-1	2-Methyl-4,6-Dinitrophenol (4,6-Dinitro-o-cresol)	EPA 625
117-81-7	Di(2-ethylhexyl) phthalate (Bis(2-ethylhexyl)phthalate)	EPA 625
118-74-1	Hexachlorobenzene	EPA 625
<b>Phenolic Compounds</b>		
88-06-2	2,4,6-Trichlorophenol	EPA 604
120-83-2	2,4-Dichlorophenol	EPA 604
105-67-9	2,4-Dimethylphenol	EPA 604
51-28-5	2,4-Dinitrophenol	EPA 604
95-57-8	2-Chlorophenol	EPA 604
87-86-5	Pentachlorophenol	EPA 604
108-95-2	Phenol	EPA 604
<b>Polycyclic Aromatic Hydrocarbons</b>		
83-32-9	Acenaphthene	EPA 610
120-12-7	Anthracene	EPA 610
56-55-3	Benzo(a)anthracene	EPA 610
50-32-8	Benzo(a)pyrene	EPA 610
205-99-2	Benzo(b)fluoranthene (3,4-Benzofluoranthene)	EPA 610
207-08-9	Benzo(k)fluoranthene	EPA 610
218-01-9	Chrysene	EPA 610
53-70-3	Dibenzo(a,h)anthracene	EPA 610
206-44-0	Fluoranthene	EPA 610
86-73-7	Fluorene	EPA 610
193-39-5	Indeno(1,2,3-cd)pyrene	EPA 610

CAS No.	Parameter	Analytical Method
129-00-0	Pyrene	EPA 610
<b>Volatile Organic Compounds</b>		
71-55-6	1,1,1-Trichloroethane	EPA 624
79-34-5	1,1,2,2-Tetrachloroethane	EPA 624
79-00-5	1,1,2-Trichloroethane	EPA 624
75-35-4	1,1-Dichloroethylene	EPA 624
120-82-1	1,2,4-Trichlorobenzene	EPA 624
95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	EPA 624
107-06-2	1,2-Dichloroethane	EPA 624
78-87-5	1,2-Dichloropropane	EPA 624
541-73-1	1,3-Dichlorobenzene	EPA 624
106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	EPA 624
107-13-1	Acrylonitrile	EPA 603
71-43-2	Benzene	EPA 624
75-27-4	Bromodichloromethane (Dichlorobromomethane)	EPA 624
75-25-2	Bromoform	EPA 624
56-23-5	Carbon tetrachloride	EPA 624
108-90-7	Chlorobenzene	EPA 624
67-66-3	Chloroform	EPA 624
124-48-1	Dibromochloromethane	EPA 624
100-41-4	Ethylbenzene	EPA 624
75-09-2	Methylene Chloride (Dichloromethane)	EPA 624
127-18-4	Tetrachloroethylene	EPA 624
108-88-3	Toluene	EPA 624
79-01-6	Trichloroethylene	EPA 624
75-01-4	Vinyl Chloride (Chloroethene)	EPA 624
1330-20-7	Xylenes (m,p,o)	EPA 624
<b>34885-03-5</b>	<b>4-Methylcyclohexanemethanol (MCHM)</b>	<b>SW8015</b>
<b>Pesticides</b>		
309-00-2	Aldrin	EPA 608
319-84-6	alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 608
319-85-7	beta-BHC	EPA 608
57-74-9	Chlordane	EPA 608
50-29-3	DDT	EPA 608



## Surface Water Parameter List

CAS No.	Parameter	Analytical Method
60-57-1	Dieldrin	EPA 608
72-20-8	Endrin	EPA 608
76-44-8	Heptachlor	EPA 608
1024-57-3	Heptachlor epoxide	EPA 608
58-89-9	Lindane (gamma-BHC)	EPA 608
72-43-5	Methoxychlor	EPA 608
8001-35-2	Toxaphene	EPA 608
1336-36-3	Polychlorinated biphenyls (PCBs)	EPA 608
<b>1746-01-6</b>	<b>Dioxin (2,3,7,8-TCDD)</b>	<b>EPA 1613B</b>
<b>Radiochemistry</b>		
NA	Gross Total Alpha Particle Activity	EPA 900
NA	Gross Beta Activity	EPA 900
NA	Dissolved Alpha Emitters	EPA 900
NA	Radium 226	EPA 903
	Radium 228	EPA 903
NA	Strontium-90 (Dissolved)	EPA 905
NA	Tritium	EPA 906
7440-61-1	Uranium	ASTM D5174
<b>1332-21-4</b>	<b>Asbestos (fiber &gt; 10 micrometers)</b>	<b>EPA 600/R-94/134</b>
<b>UCMR3 Organics</b>		
75-87-3	1,1-Dichloroethane	EPA 524.3
96-18-4	1,2,3-Trichloropropane	EPA 524.3
106-99-0	1,3-Butadiene	EPA 524.3
74-97-5	Bromochloromethane (Halon 1011)	EPA 524.3
74-83-9	Bromomethane (Methyl bromide)	EPA 524.3
75-45-6	Chlorodifluoromethane (HCFC-22)	EPA 524.3
74-87-3	Chloromethane (Methyl Chloride)	EPA 524.3
<b>123-91-1</b>	<b>1,4-Dioxane</b>	<b>EPA 522</b>
<b>UCMR3 Metals</b>		
18540-29-9	Chromium (Hexavalent, dissolved)	EPA 218.7
7440-47-3	Chromium (Total)	EPA 200.8
7440-48-4	Cobalt	EPA 200.8
7439-98-7	Molybdenum	EPA 200.8
7440-24-6	Strontium	EPA 200.8
7440-62-2	Vanadium	EPA 200.8
<b>146866-68-3</b>	<b>Chlorate</b>	<b>EPA 300.1</b>
<b>UCMR3 Perfluorinated Compounds</b>		
375-73-5	Perfluorobutanesulfonic acid (PFBS)	EPA 537 Rev 1.1
375-85-9	Perfluoroheptanoic acid (PFHpA)	EPA 537 Rev 1.1

## Surface Water Parameter List

CAS No.	Parameter	Analytical Method
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	EPA 537 Rev 1.1
375-95-1	Perfluorononanoic acid (PFNA)	EPA 537 Rev 1.1
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	EPA 537 Rev 1.1
335-67-1	Perfluorooctanoic acid (PFOA)	EPA 537 Rev 1.1
<b>UCMR 3 Hormones</b>		
50-27-1	16- $\alpha$ -Hydroxyestradiol (Estriol)	EPA 539
57-63-6	17- $\alpha$ -Ethinylestradiol	EPA 539
50-28-2	17- $\beta$ -Estradiol	EPA 539
63-05-8	4-Androstene-3,16-dione	EPA 539
474-86-2	Equilin	EPA 539
53-16-7	Estrone	EPA 539
58-22-0	Testosterone	EPA 539

**List of Primary Drinking Water  
Parameters Not Analyzed**

<b>CAS No.</b>	<b>Parameter</b>
96-12-8	Dibromochloropropane (DBCP)
94-75-7	2,4-D2
93-72-1	2,4,5-TP (Silvex)
15972-60-8	Alachlor
1912-24-9	Atrazine
15541-45-4	Bromate
1563-66-2	Carbofuran
10599-90-3	Chloramine (as Cl <sub>2</sub> )
10049-04-4	Chlorine dioxide (as ClO <sub>2</sub> )
7758-19-2	Chlorite
156-59-2	cis-1,2-Dichloroethylene
75-99-0	Dalapon
103-23-1	Di(2-ethylhexyl) adipate
88-85-7	Dinoseb
85-00-7	Diquat
145-73-3	Endothall
106-93-4	Ethylene dibromide
1071-83-6	Glyphosate
77-47-4	Hexachlorocyclopentadiene
23135-22-0	Oxamyl (Vydate)
1918-02-1	Picloram
122-34-9	Simazine
100-42-5	Styrene
156-60-5	trans-1,2-Dichloroethylene
79-06-1	Acrylamide
106-89-8	Epichlorohydrin
NA	Legionella
76-03-9	Trichloroacetic acid
79-11-8	Chloroacetic acid
631-64-1	Dibromoacetic acid
79-43-6	Dichloroacetic acid
79-08-3	Bromoacetic acid



# *APPENDIX C*

Abbreviations and Acronyms

°C	Degree(s) Celsius
cfs	Cubic feet per second
col/100 mL	Number of colonies per 100 milliliters
EDL	Estimated detection limit
MCL	Maximum contaminant level
MDC	Minimum detectable concentration
MDL	Method detection level
MFL	Million fibers per liter
mg/L	Milligrams per liter
MPN	Most probable number
MPN/mL	Most probable number per milliliter
MPN/100 ml	Most probable number per 100 milliliters
MRL	Minimum reporting level
mV	Millivolts
ng/L	Nanograms per liter
(Oo) cysts/L	Oocysts per liter
pg/L	Picograms per liter
PQL	Practical quantitation limit
RPD	Relative percent difference
S.U.	Standard units
TT	Treatment technique
WQS	Water quality standard
µg/L	Micrograms per liter
µS/cm	Microsiemens per centimeter

Data Qualifiers

—	No data; sample was either not collected or was not analyzed
B	Analyte detected in method blank
E	Result exceeded instrument calibration
G	Result reported as greater than ">" value listed
H	Sampling exceeded analytical method holding time
I	Interference present
J	Estimated value between the PQL and the MDL
S	Surrogate recovery was outside of control limits
T(-)	Sample received below method-specified temperature
T(+)	Sample received above method-specified temperature
U	Analyte not detected at the MDL or MRL

Sample Identification Key

Sample ID	Location and Sample Type
MNT-1-B	Montgomery location, 20 feet from LDB, 1 foot above river bottom, grab sample.
MNT-1-T	Montgomery location, 20 feet from LDB, 10 feet above river bottom, grab sample.
MNT-2-B	Montgomery location, 60 feet from LDB, 1 foot above river bottom, grab sample.
MNT-2-T	Montgomery location, 60 feet from LDB, 10 feet above river bottom, grab sample.
MNT-C	Montgomery location, composite sample of four sample points
MNT-S	Montgomery location, sterile sample
M-1-B	Moose location, 20 feet from RDB, 1 foot above river bottom, grab sample.
M-1-T	Moose location, 20 feet from RDB, 10 feet above river bottom, grab sample.
M-2-B	Moose location, 60 feet from RDB, 1 foot above river bottom, grab sample.
M-2-T	Moose location, 60 feet from RDB, 10 feet above river bottom, grab sample.
M-C	Moose location, composite sample of four sample points
M-S	Moose location, sterile sample
ES-1-B	Elizabeth Street location, 20 feet from RDB, 1 foot above river bottom, grab sample.
ES-1-T	Elizabeth Street location, 20 feet from RDB, 10 feet above river bottom, grab sample.
ES-2-B	Elizabeth Street location, 60 feet from RDB, 1 foot above river bottom, grab sample.
ES-2-T	Elizabeth Street location, 60 feet from RDB, 10 feet above river bottom, grab sample.
ES-C	Elizabeth Street location, composite sample of four sample points
ES-S	Elizabeth Street location, sterile sample
CH-1-B	Court Street location, 20 feet from RDB, 1 foot above river bottom, grab sample.
CH-1-T	Court Street location, 20 feet from RDB, 10 feet above river bottom, grab sample.
CH-2-B	Court Street location, 60 feet from RDB, 1 foot above river bottom, grab sample.
CH-2-T	Court Street location, 60 feet from RDB, 10 feet above river bottom, grab sample.
CH-C	Courthouse location, composite sample of four sample points
CH-S	Courthouse location, sterile sample



## Flow &amp; Precipitation

Date	River Flow			Precipitation		
	Start (cfs)	Finish (cfs)	Average (cfs)	Previous 24 hours (in)	Previous 72 hours (in)	Type
06/24/2015	6,660	5,950	6,305	0.36	0.36	Rain
07/07/2015	19,000	21,000	20,000	0.21	0.61	Rain
07/20/2015	8,950	8,430	8,690	0.09	1.82	Rain
08/03/2015	4,140	3,870	4,005	0	0	--
08/17/2015	1,690	1,460	1,575	0	0	--
09/01/2015	1,990	1,960	1,975	0	0	--
09/15/2015	2,840	2,400	2,620	0	0.16	Rain
09/29/2015	12,500	12,800	12,650	0	0.87	Rain
10/13/2015	7,400	7,160	7,280	0.09	0.09	Rain
11/03/2015	9,750	9,790	9,770	0	0.1	Rain
11/09/2015	7,840	7,910	7,875	0	0.11	Rain
11/17/2015	9,980	9,860	9,920	0	0	--
12/01/2015	10,900	9,140	10,020	0.8	0.56	Rain
12/15/2015	6,660	6,430	6,545	0.25	0.25	Rain
01/05/2016	10,400	12,800	11,600	0	0	Rain
02/02/2016	33,700	36,600	35,150	0.41	0.41	Rain <sup>1</sup>
02/29/2016	25,600	24,600	25,100	0	0	--
03/07/2016	20,600	20,500	20,550	0	0.41	Rain
03/21/2016	13,000	12,600	12,800	0	0.09	Rain
03/29/2016	13,000	9,750	11,375	0.35	0.35	Rain
04/13/2016	7,550	7,520	7,535	0.2	0.35	Rain
04/20/2016	6,230	6,320	6,275	0	0	--
05/11/2016	14,600	18,200	16,400	0.22	0.28	Rain
06/01/2016	6,430	6,350	6,390	0	0	--
<b>No. &lt; 5,000 cfs</b>			4			
<b>No. &gt; 10,000 cfs</b>			10			

<sup>1</sup>High water was primarily due to 18.6 " of snow melt from storm of 1/22/16 and 1/23/16.

**Conductivity**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	μS/cm	151.8	210.5	207.8	206.6
07/07/2015	μS/cm	133.8	130.7	131.5	132
07/20/2015	μS/cm	140.9	152.1	151.4	160.2
08/03/2015	μS/cm	189.5	230.8	227.1	225.6
08/17/2015	μS/cm	218.4	242.6	258.9	259.2
09/01/2015	μS/cm	239.1	264.7	260	264.1
09/15/2015	μS/cm	174.7	270.3	275.8	281.9
09/29/2015	μS/cm	135.8	165.8	163.2	160.5
10/13/2015	μS/cm	137.8	149	147.1	148.1
11/03/2015	μS/cm	148	158	152	152
11/09/2015	μS/cm	99.1	108.9	109	108.3
11/17/2015	μS/cm	136	136.7	168	171
12/01/2015	μS/cm	109.9	115.7	112.6	113.6
12/15/2015	μS/cm	106.4	115.4	113.1	112.4
01/05/2016	μS/cm	86.8	92.1	91.9	92
02/02/2016	μS/cm	101.4	108	111	111
02/29/2016	μS/cm	147	152	148	156
03/07/2016	μS/cm	93.2	101	100.5	101
03/21/2016	μS/cm	100.6	108.5	108.3	109.5
03/29/2016	μS/cm	127.1	136.5	135.2	134.4
04/13/2016	μS/cm	127.5	143.7	142.9	143.7
04/20/2016	μS/cm	136.1	151.1	152.3	152.4
05/11/2016	μS/cm	105.1	115.6	112.9	112.6
06/01/2016	μS/cm	138.2	153.1	153.6	153.8

## Specific Conductance

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	μS/cm	154.4	206.1	202.6	199.1
07/07/2015	μS/cm	142.7	143.5	143.5	143.4
07/20/2015	μS/cm	142.2	156.2	155.3	153.7
08/03/2015	μS/cm	186	225.7	220.3	217.5
08/17/2015	μS/cm	212.4	238.2	247.2	247.1
09/01/2015	μS/cm	237.3	256	252	252.2
09/15/2015	μS/cm	188.8	274.9	278.5	280.8
09/29/2015	μS/cm	145.3	175	172.2	169.3
10/13/2015	μS/cm	155.2	168.2	166.2	166.4
11/03/2015	μS/cm	161	172	168	167
11/09/2015	μS/cm	122.6	134.9	135	134.4
11/17/2015	μS/cm	185.5	184.5	185.0	186
12/01/2015	μS/cm	154	163.9	159.6	160.6
12/15/2015	μS/cm	147.9	163.1	159.5	157.6
01/05/2016	μS/cm	136.8	140.7	139.8	139.8
02/02/2016	μS/cm	148.2	138	149	148
02/29/2016	μS/cm	111	121	118	123
03/07/2016	μS/cm	147.1	158	157.3	157.3
03/21/2016	μS/cm	140.8	149.3	148.4	149.5
03/29/2016	μS/cm	163	179.9	177.8	175.2
04/13/2016	μS/cm	169	193.8	192.2	192.4
04/20/2016	μS/cm	159.2	180.4	180.9	179.8
05/11/2016	μS/cm	126.3	140.4	136.6	136.3
06/01/2016	μS/cm	144	161.8	162.7	163.1



**Dissolved Oxygen**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	7.1	7.1	6.37	6.93
07/07/2015	mg/L	7.9	7.8	8.2	7.51
07/20/2015	mg/L	6.32	7.11	6.81	6.64
08/03/2015	mg/L	6.43	5.7	6.27	6.94
08/17/2015	mg/L	6.3	7.68	7.24	7.35
09/01/2015	mg/L	6.4	7.28	7.6	7.29
09/15/2015	mg/L	6.84	6.01	6.16	6.77
09/29/2015	mg/L	7.03	7.29	6.81	7.68
10/13/2015	mg/L	7.31	7.17	7.26	7.78
11/03/2015	mg/L	7.7	7.7	7.74	7.7
11/09/2015	mg/L	8.81	7.25	9	8.6
11/17/2015	mg/L	8.25	7.48	7.52	7.49
12/01/2015	mg/L	7.76	7.92	9.95	9.18
12/15/2015	mg/L	7.28	7.41	7.81	8.1
01/05/2016	mg/L	14.5	13.83	13.8	13.8
02/02/2016	mg/L	12.8	13.3	12.9	12.7
02/29/2016	mg/L	10.6	10.4	10.4	10.6
03/07/2016	mg/L	12.87	12.56	12.29	12.84
03/21/2016	mg/L	10.6	10.9	10.06	10.85
03/29/2016	mg/L	8.67	8.37	8.51	7.94
04/13/2016	mg/L	7.55	8.71	8.06	7.68
04/20/2016	mg/L	8.13	7.26	6.86	8.25
05/11/2016	mg/L	7.02	6.93	6.19	6.32
06/01/2016	mg/L	6.82	6.89	6.62	6.48
<b>Number &lt; 5mg/L</b>		0	0	0	0

**WV Category A WQS = > 5 mg/L**

## Oxidation Reduction Potential

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mV	-129.8	-276.8	-347.5	-210.3
07/07/2015	mV	-380	-364.3	-389.2	-333.9
07/20/2015	mV	-404.6	-396	-398	-421
08/03/2015	mV	-307.8	-365.7	-391.7	-314.9
08/17/2015	mV	-304.2	-314	-325.4	-282.1
09/01/2015	mV	-269.1	-457	-255.8	-284
09/15/2015	mV	-171.8	-242.5	-234.6	-281.7
09/29/2015	mV	-227.9	-189.7	-261.8	-228
10/13/2015	mV	-330.7	-215.8	-289.3	-220.7
11/03/2015	mV	-266	-204	-244	-246
11/09/2015	mV	-126.6	-201	-229	-209.4
11/17/2015	mV	-201.6	-190.4	-198.0	-201
12/01/2015	mV	-167.9	-132.1	-162.3	-82.5
12/15/2015	mV	-215.4	-232.8	-111.0	-218.3
01/05/2016	mV	-202	-192.5	-157.4	-165.9
02/02/2016	mV	-236	-231	-238	-244
02/29/2016	mV	-148	-128	-131	-116
03/07/2016	mV	-104.4	-122	-67.7	-194.4
03/21/2016	mV	-105	-77.4	-152	-32.6
03/29/2016	mV	-78.6	-72.5	-91.6	-104.6
04/13/2016	mV	-69	-135.3	-82	-142
04/20/2016	mV	-149	-137.7	-110	-141.6
05/11/2016	mV	-145.1	-231.4	-255.1	-238
06/01/2016	mV	-168	-192.2	-192.7	-207.2

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	S.U.	7.15	7.35	7.23	7.73
07/07/2015	S.U.	7.84	7.72	7.68	7.69
07/20/2015	S.U.	8.07	7.73	7.71	7.69
08/03/2015	S.U.	8.30	7.91	7.99	8.00
08/17/2015	S.U.	8.26	8.38	8.45	8.34
09/01/2015	S.U.	8.33	8.41	8.67	8.53
09/15/2015	S.U.	8.38	8.01	8.05	8.25
09/29/2015	S.U.	7.98	7.83	7.84	7.83
10/13/2015	S.U.	7.84	7.68	7.73	7.76
11/03/2015	S.U.	7.8	7.5	7.6	7.62
11/09/2015	S.U.	7.61	7.64	7.7	7.67
11/17/2015	S.U.	8.02	8.31	8.0	8.1
12/01/2015	S.U.	7.0	7.12	7.23	7.28
12/15/2015	S.U.	7.57	7.35	7.49	7.62
01/05/2016	S.U.	7.26	7.43	7.56	7.63
02/02/2016	S.U.	7.12	7.3	7.21	7.28
02/29/2016	S.U.	7.28	7.31	7.28	7.3
03/07/2016	S.U.	7.21	6.76	6.9	6.98
03/21/2016	S.U.	8.3	7.99	7.95	7.97
03/29/2016	S.U.	7.65	7.47	7.59	7.68
04/13/2016	S.U.	7.93	7.68	7.83	7.87
04/20/2016	S.U.	8.26	7.82	7.72	7.91
05/11/2016	S.U.	7.65	7.13	7.28	7.41
06/01/2016	S.U.	8.3	7.78	7.62	7.7
<b>Number &lt; 6 or &gt; 9</b>		0	0	0	0

**WV Category A WQS = 6 - 9 S.U.**



## Temperature

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	°C	24.2	26.2	26.4	26.7
07/07/2015	°C	30.0	21.7	25.2	26.6
07/20/2015	°C	24.5	23.7	23.7	23.8
08/03/2015	°C	26.1	26.2	26.6	26.9
08/17/2015	°C	26.5	27.3	27.5	27.5
09/01/2015	°C	25.4	26.9	26.6	27.7
09/15/2015	°C	21.0	24.1	26.7	25.2
09/29/2015	°C	21.6	22.3	22.3	22.4
10/13/2015	°C	18.7	19.1	19.2	19.2
11/03/2015	°C	14.1	14.7	14.1	14.3
11/09/2015	°C	14.9	14.9	14.9	14.9
11/17/2015	°C	11.0	11.4	11.5	11.6
12/01/2015	°C	10.0	9.6	9.6	9.7
12/15/2015	°C	10.4	9.7	9.8	9.8
01/05/2016	°C	6.2	7.0	7.0	7.1
02/02/2016	°C	4.1	4.4	4.4	4.4
02/29/2016	°C	6.6	6.2	6.2	5.8
03/07/2016	°C	5.8	12.9	6.1	6.2
03/21/2016	°C	10.0	10.7	10.9	11.0
03/29/2016	°C	13.5	12.4	12.7	12.8
04/13/2016	°C	12.1	11.5	11.7	11.7
04/20/2016	°C	17.4	16.4	16.7	17.2
05/11/2016	°C	16.2	15.7	15.8	15.9
06/01/2016	°C	25.1	22.1	22.0	22.0

**Total Residual Chlorine**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
07/07/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
07/20/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
08/03/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
08/17/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
09/01/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
09/15/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
09/29/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
10/13/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
11/03/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
11/09/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
11/17/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
12/01/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
12/15/2015	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
01/05/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
02/02/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
02/29/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
03/07/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
03/21/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
03/29/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
04/13/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
04/20/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
05/11/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
06/01/2016	mg/L	0.02 (U)	0.02 (U)	0.02 (U)	0.02 (U)
<b>Number &gt; 4mg/L</b>		0	0	0	0

**Primary MCL or TT = 4 mg/L**

## Alkalinity

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	44.6	47.1	47.2	48.6
07/07/2015	mg/L	40.5	32.4	30.7	30.3
07/20/2015	mg/L	40.6	38.7	38.3	36.2
08/03/2015	mg/L	48.0	50.1	50.5	50.9
08/17/2015	mg/L	62.8	63.2	62.5	63.3
09/01/2015	mg/L	67.6	61.3	61.6	61.7
09/15/2015	mg/L	44.7	66.8	65.2	64.3
09/29/2015	mg/L	55.8	58.7	58.7	56.7
10/13/2015	mg/L	43.1	41.9	41.6	41.5
11/03/2015	mg/L	46.3	48.2	48.3	47.1
11/09/2015	mg/L	41.4	46.0	45.6	43.5
11/17/2015	mg/L	39.5	39.6	38.4	38.4
12/01/2015	mg/L	44.0	43.6	43.2	42.4
12/15/2015	mg/L	44.4	46.3	45.0	45.3
01/05/2016	mg/L	42.8	39.4	39.6	40.0
02/02/2016	mg/L	30.2	30.0	30.5	30.3
02/29/2016	mg/L	36.5	34.1	34.1	34.5
03/07/2016	mg/L	39.6	35.9	35.9	35.8
03/21/2016	mg/L	40.0	37.6	38.5	36.6
03/29/2016	mg/L	48.0	47.0	46.9	46.5
04/13/2016	mg/L	50.9	53.7	53.5	52.9
04/20/2016	mg/L	49.5	49.7	49.4	49.0
05/11/2016	mg/L	33.5	34.5	33.8	33.1
06/01/2016	mg/L	42.7	41.3	40.7	40.5



**Hardness**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	65.5	82.8	81.0	74.2
07/07/2015	mg/L	55.7	57.4	54.8	54.7
07/20/2015	mg/L	59.1	58.9	56.8	58.4
08/03/2015	mg/L	68.9	83.9	81.5	79.4
08/17/2015	mg/L	90.5	97.7	96.0	96.8
09/01/2015	mg/L	96.0	90.9	89.6	91.2
09/15/2015	mg/L	72.9	102	102	102
09/29/2015	mg/L	88.7	92.9	98.5	92.8
10/13/2015	mg/L	62.4	64.4	64.2	64.7
11/03/2015	mg/L	60.6	65.6	63.5	66.8
11/09/2015	mg/L	59.5	66.2	62.1	65.1
11/17/2015	mg/L	59.3	62.6	57.5	54.9
12/01/2015	mg/L	66.0	64.4	60.1	59.3
12/15/2015	mg/L	63.5	73.0	72.2	73.7
01/05/2016	mg/L	62.2	59.0	61.0	59.4
02/02/2016	mg/L	53.9	56.9	55.1	56.5
02/29/2016	mg/L	54.3	52.8	51.9	53.1
03/07/2016	mg/L	53.7	60.2	61.1	58.8
03/21/2016	mg/L	62.4	60.6	59.7	60.6
03/29/2016	mg/L	66.5	69.0	69.4	68.6
04/13/2016	mg/L	73.2	77.4	77.8	78.3
04/20/2016	mg/L	68.2	76.1	76.1	75.5
05/11/2016	mg/L	53.9	55.9	54.4	54.2
06/01/2016	mg/L	55.4	60.6	62.4	63.8

## Surfactants

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.110	0.0588	0.0422	0.0288
07/07/2015	mg/L	0.0270 (J)	0.0270 (J)	0.0298	0.0278 (J)
07/20/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
08/03/2015	mg/L	0.100 (U,H)	0.0250 (U)	0.100 (U,H)	0.0250 (U)
08/17/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
09/01/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
09/15/2015	mg/L	0.0250 (U)	0.0270 (J)	0.0250 (U)	0.0260 (J)
09/29/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
10/13/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
11/03/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
11/09/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
11/17/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
12/01/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
12/15/2015	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
01/05/2016	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
02/02/2016	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
02/29/2016	mg/L	0.0318 (J)	0.0458 (J)	0.0362 (J)	0.0288 (J)
03/07/2016	mg/L	0.0250 (U)	0.0250 (U)	0.0250 (U)	0.0250 (U)
03/21/2016	mg/L	0.0500 (U)	0.0500 (U)	0.0500 (U)	0.0500 (U)
03/29/2016	mg/L	0.0500 (U)	0.0500 (U)	0.0500 (U)	0.0500 (U)
04/13/2016	mg/L	0.0710 (J)	0.0500 (U)	0.0500 (U)	0.0500 (U)
04/20/2016	mg/L	0.126	0.0785 (J)	0.112 (J)	0.129
05/11/2016	mg/L	0.0500 (U)	0.0500 (U)	0.0500 (U)	0.0500 (U)
06/01/2016	mg/L	0.0500 (U)	0.0500 (U)	0.0500 (U)	0.0500 (U)
<b>Number &gt; 0.5 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Secondary MCL = 0.5 mg/L**

The 8/3/2015 samples for MNT-C and ES-C exceeded their holding times because the laboratory's first quality control sample failed and the samples were not re-analyzed within the holding time.

## Total Organic Carbon

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	2.11	1.91	2.10	1.96
07/07/2015	mg/L	2.44	2.29	2.23	2.40
07/20/2015	mg/L	2.61	2.48	2.60	2.63
08/03/2015	mg/L	2.37	2.07	2.07	2.27
08/17/2015	mg/L	2.40	2.39	2.51	2.67
09/01/2015	mg/L	3.03	2.46	2.41	2.38
09/15/2015	mg/L	2.46	2.20	2.09	2.05
09/29/2015	mg/L	2.53	2.62	2.34	2.37
10/13/2015	mg/L	2.88	3.16	2.88	2.98
11/03/2015	mg/L	2.73	2.39	3.14	2.78
11/09/2015	mg/L	2.83	2.23	2.17	2.23
11/17/2015	mg/L	2.87	2.24	2.51	2.29
12/01/2015	mg/L	1.88	1.95	2.19	1.99
12/15/2015	mg/L	2.07	2.12	1.68	1.77
01/05/2016	mg/L	1.50	1.98	1.67	1.82
02/02/2016	mg/L	1.54	1.65	1.71	1.76
02/29/2016	mg/L	2.05	2.07	1.98	2.11
03/07/2016	mg/L	1.41	1.44	1.51	1.64
03/21/2016	mg/L	1.75	2.00	2.00	2.07
03/29/2016	mg/L	1.48	1.20	1.14	1.22
04/13/2016	mg/L	1.59	1.12	1.41	1.58
04/20/2016	mg/L	2.12	1.80	1.42	1.56
05/11/2016	mg/L	1.97	2.23	2.04	2.13
06/01/2016	mg/L	2.35	2.21	2.08	2.12

## Total Suspended Solids

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	2.0 (J)	5.5	7.50	5.0
07/07/2015	mg/L	25.5	14.5	18.0	19.0
07/20/2015	mg/L	9.0	1.0 (U)	11.0	10
08/03/2015	mg/L	5.0	3.5 (J)	8.5	6.0
08/17/2015	mg/L	5.0	7.0	7.5	7.0
09/01/2015	mg/L	6.0	5.0	7.5	5.0
09/15/2015	mg/L	11.0	5.0 (J)	7.0 (J)	5.0 (J)
09/29/2015	mg/L	9.0	10	11.0	10
10/13/2015	mg/L	4.0 (J)	8.0 (J)	5.0 (J)	8.0 (J)
11/03/2015	mg/L	8.0	9.0	5.5	6.0
11/09/2015	mg/L	8.5	6.0	5.5	5.5
11/17/2015	mg/L	6.0	6.5	8.0	7.5
12/01/2015	mg/L	2.0 (J)	4.5 (J)	4.5 (J)	4.5 (J)
12/15/2015	mg/L	3.0 (J)	7.5	4.5 (J)	4.0 (J)
01/05/2016	mg/L	3.0 (J)	5.0	4.0 (J)	4.5 (J)
02/02/2016	mg/L	17.0	18.0	22.5	24.0
02/29/2016	mg/L	17.5	10	9.5	9.5
03/07/2016	mg/L	8.0	5.5	5.5	5.0
03/21/2016	mg/L	3.5 (J)	4.0 (J)	3.5 (J)	4.0 (J)
03/29/2016	mg/L	3.0 (J)	1.0 (U)	2.5 (J)	2.5 (J)
04/13/2016	mg/L	3.0 (J)	5.0	2.5 (J)	4.5 (J)
04/20/2016	mg/L	5.5	3.0 (J)	5.5	3.0 (J)
05/11/2016	mg/L	9.5	8.5	9.5	14.0
06/01/2016	mg/L	11.0	6.0	6.5	7.5

7/20/2015 - 8.5 mg/L detected in field blank.

08/03/2015 - MNT-C field duplicate exceeded 30 percent RPD.

11/09/2015 - MNT-C field duplicate exceeded 30 percent RPD.



**Total Dissolved Solids**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	83	115	143	109
07/07/2015	mg/L	102	104	111	105
07/20/2015	mg/L	76	91	82	82
08/03/2015	mg/L	103	139	131	123
08/17/2015	mg/L	129	159	167	162
09/01/2015	mg/L	123	133	143	131
09/15/2015	mg/L	114	159	157	157
09/29/2015	mg/L	113	131	129	127
10/13/2015	mg/L	81	87	93	87
11/03/2015	mg/L	111	125	118	115
11/09/2015	mg/L	97	120	96	105
11/17/2015	mg/L	91	87	84	90
12/01/2015	mg/L	80	86	86	86
12/15/2015	mg/L	135	130	120	116 (J)
01/05/2016	mg/L	82	81	80	79
02/02/2016	mg/L	164	87	83	79
02/29/2016	mg/L	108	77	79	79
03/07/2016	mg/L	98	110	109	99
03/21/2016	mg/L	87	109	95	97
03/29/2016	mg/L	120	128	120	129
04/13/2016	mg/L	100	108	121	124
04/20/2016	mg/L	128	143	136	129
05/11/2016	mg/L	87	116	105	101
06/01/2016	mg/L	76	84	91	110
<b>Number &gt; 500 mg/L</b>		0	0	0	0

**Secondary MCL = 500 mg/L**

## Bromide

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
07/07/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
07/20/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
08/03/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
08/17/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/01/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/15/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/29/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
10/13/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/03/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/09/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/17/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
12/01/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
12/15/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
01/05/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
02/02/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
02/29/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/07/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/21/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/29/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
04/13/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
04/20/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
05/11/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
06/01/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)

**Chloride**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	6.13	7.57	7.89	8.54
07/07/2015	mg/L	4.83	5.02	5.11	5.11
07/20/2015	mg/L	3.80	4.86	4.60	4.77
08/03/2015	mg/L	6.28	6.98	7.06	7.16
08/17/2015	mg/L	6.68	2.09	8.78	8.77
09/01/2015	mg/L	7.43	9.81	9.73	9.53
09/15/2015	mg/L	5.62	12.5	13.1	12.3
09/29/2015	mg/L	6.42	9.32	9.22	9.04
10/13/2015	mg/L	7.15	7.84	7.60	7.68
11/03/2015	mg/L	6.79	7.21	7.00	7.37
11/09/2015	mg/L	6.01	7.28	7.15	9.27
11/17/2015	mg/L	5.46	6.60	6.27	6.46
12/01/2015	mg/L	4.85	5.90	6.22	5.68
12/15/2015	mg/L	4.67	5.78	5.79	5.88
01/05/2016	mg/L	4.90	5.31	5.50	5.60
02/02/2016	mg/L	7.22	6.90	7.35	7.13
02/29/2016	mg/L	6.93	7.14	7.24	7.27
03/07/2016	mg/L	8.26	8.01	8.27	8.16
03/21/2016	mg/L	5.62	5.93	6.08	6.12
03/29/2016	mg/L	5.59	6.94	6.92	6.76
04/13/2016	mg/L	7.21	9.34	9.41	9.26
04/20/2016	mg/L	5.84	6.94	7.51	6.84
05/11/2016	mg/L	4.00	4.47	4.38	4.56
06/01/2016	mg/L	4.26	4.93	5.01	5.20
<b>Number &gt; 250 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**WV Category A WQS = 250 mg/L**  
**Secondary MCL = 250 mg/L**

## Fluoride

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.05 (J)	0.07 (J)	0.09 (J)	0.05 (U)
07/07/2015	mg/L	0.05 (J)	0.05 (U)	0.05 (U)	0.05 (U)
07/20/2015	mg/L	0.07 (J)	0.11 (J)	0.13 (J)	0.05 (U)
08/03/2015	mg/L	0.08 (J)	0.05 (J)	0.05 (U)	0.08 (J)
08/17/2015	mg/L	0.17 (J)	0.05 (U)	0.10 (J)	0.05 (U)
09/01/2015	mg/L	0.13 (J)	0.06 (J)	0.11 (J)	0.11 (J)
09/15/2015	mg/L	0.05 (U)	0.10 (J)	0.05 (U)	0.11 (J)
09/29/2015	mg/L	0.11 (J)	0.14 (J)	0.14 (J)	0.14 (J)
10/13/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/03/2015	mg/L	0.05 (U)	0.12 (J)	0.07 (J)	0.10 (J)
11/09/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/17/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
12/01/2015	mg/L	0.11 (J)	0.05 (U)	0.11 (J)	0.11 (J)
12/15/2015	mg/L	0.13 (J)	0.08 (J)	0.12 (J)	0.11 (J)
01/05/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.07 (J)
02/02/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
02/29/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/07/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/21/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/29/2016	mg/L	0.05 (U)	0.05 (U)	0.06 (J)	0.06 (J)
04/13/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
04/20/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
05/11/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
06/01/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.07 (J)
<b>Number &gt; 1.4 mg/L</b>		0	0	0	0
<b>Number &gt; 4 mg/L</b>		0	0	0	0
<b>Number &gt; 2 mg/L</b>		0	0	0	0

**WV Category A WQS = 1.4 mg/L**  
**Primary MCL or TT = 4.0 mg/L**  
**Secondary MCL = 2 mg/L**



## Nitrate Nitrogen

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.61	0.51	0.48	0.46
07/07/2015	mg/L	0.45	0.46	0.42	0.46
07/20/2015	mg/L	0.45	0.39	0.38	0.42
08/03/2015	mg/L	0.90	0.22	0.22	0.21
08/17/2015	mg/L	0.32	0.15	0.27	0.27
09/01/2015	mg/L	0.38	0.32	0.30	0.32
09/15/2015	mg/L	0.27	0.46	0.47	0.44
09/29/2015	mg/L	0.36	0.40	0.39	0.34
10/13/2015	mg/L	0.68	0.57	0.55	0.56
11/03/2015	mg/L	0.52	0.56	0.58	0.66
11/09/2015	mg/L	0.56	0.48	0.46	0.47
11/17/2015	mg/L	0.51	0.40	0.44	0.43
12/01/2015	mg/L	0.67	0.52	0.52	0.50
12/15/2015	mg/L	0.80	0.69	0.69	0.66
01/05/2016	mg/L	0.68	0.71	0.72	0.69
02/02/2016	mg/L	0.71	0.84	0.75	0.77
02/29/2016	mg/L	0.72	0.69	0.75	0.73
03/07/2016	mg/L	0.70	0.70	0.71	0.71
03/21/2016	mg/L	0.65	0.57	0.58	0.59
03/29/2016	mg/L	0.64	0.64	0.67	0.64
04/13/2016	mg/L	0.59	0.49	0.48	0.61
04/20/2016	mg/L	0.31	0.31	0.33	0.31
05/11/2016	mg/L	0.50	0.43	0.44	0.46
06/01/2016	mg/L	0.44	0.32	0.34	0.33
<b>Number &gt; 10 mg/L</b>		0	0	0	0

**WV Category A WQS = 10 mg/L**  
**Primary MCL or TT = 10 mg/L**

08/03/2015 - MNT-C field duplicate exceeded 30 percent RPD.

## Nitrite Nitrogen

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
07/07/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
07/20/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
08/03/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
08/17/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/01/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/15/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
09/29/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
10/13/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/03/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/09/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
11/17/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
12/01/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
12/15/2015	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
01/05/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
02/02/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
02/29/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/07/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/21/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
03/29/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
04/13/2016	mg/L	0.08 (J)	0.08 (J)	0.05 (U)	0.07 (J)
04/20/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
05/11/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
06/01/2016	mg/L	0.05 (U)	0.05 (U)	0.05 (U)	0.05 (U)
<b>Number &gt; 1 mg/L</b>		0	0	0	0

Primary MCL or TT = 1 mg/L

**Sulfate**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	16.2	34.5	34.2	31.8
07/07/2015	mg/L	13.7	19.9	19.9	20.0
07/20/2015	mg/L	14.3	20.2	19.7	19.8
08/03/2015	mg/L	18.6	36.1	32.5	30.8
08/17/2015	mg/L	19.9	7.51	31.1	31.1
09/01/2015	mg/L	23.4	32.0	31.1	31.3
09/15/2015	mg/L	32.0	41.0	44.3	45.0
09/29/2015	mg/L	21.1	31.0	30.5	30.2
10/13/2015	mg/L	12.9	19.0	18.8	19.4
11/03/2015	mg/L	11.4	14.9	14.4	14.3
11/09/2015	mg/L	13.8	15.6	15.1	14.9
11/17/2015	mg/L	11.9	15.5	15.1	15.1
12/01/2015	mg/L	12.9	17.6	15.5	14.7
12/15/2015	mg/L	13.3	17.3	15.8	15.5
01/05/2016	mg/L	8.86	13.2	12.8	12.9
02/02/2016	mg/L	12.9	20.9	20.9	20.7
02/29/2016	mg/L	9.89	12.1	11.9	12.9
03/07/2016	mg/L	12.3	17.8	17.6	17.6
03/21/2016	mg/L	10.7	17.3	16.8	16.8
03/29/2016	mg/L	13.5	22.0	21.4	20.5
04/13/2016	mg/L	15.7	25.7	25.2	24.7
04/20/2016	mg/L	14.5	86.8	21.1	22.0
05/11/2016	mg/L	13.3	19.2	18.4	17.9
06/01/2016	mg/L	14.4	21.9	21.9	22.0
<b>Number &gt; 250 mg/L</b>		0	0	0	0

**Secondary MCL = 250 mg/L**

**Free Cyanide**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
07/07/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
07/20/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
08/03/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
08/17/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/01/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/15/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/29/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
10/13/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/03/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/09/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/17/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
12/01/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
12/15/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
01/05/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
02/02/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
02/29/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/07/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/21/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/29/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
04/13/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
04/20/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
05/11/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
06/01/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
<b>Number &gt; 0.005 mg/L</b>		0	0	0	0
<b>Number &gt; 0.2 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.005 mg/L**  
**Primary MCL or TT = 0.2 mg/L**



## Total Cyanide

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
07/07/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
07/20/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
08/03/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
08/17/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/01/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/15/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
09/29/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
10/13/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/03/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/09/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
11/17/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
12/01/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
12/15/2015	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
01/05/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
02/02/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
02/29/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/07/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/21/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
03/29/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
04/13/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
04/20/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
05/11/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)
06/01/2016	mg/L	0.005 (U)	0.005 (U)	0.005 (U)	0.005 (U)

Date	Units	MNT-C		M-C		ES-C		CH-C	
		Result		Result		Result		Result	
06/24/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
07/07/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
07/20/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
08/03/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
08/17/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
09/01/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
09/15/2015	Oocysts/L	0.00	(U,T-)	0.00	(U,T-)	0.00	(U,T-)	0.00	(U,T-)
09/29/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
10/13/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
11/03/2015	Oocysts/L	0.00	(U,T-)	0.00	(U,T-)	0.00	(U,T-)	0.00	(U,T-)
11/09/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
11/17/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
12/01/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
12/15/2015	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
01/05/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
02/02/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
02/29/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
03/07/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
03/21/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
03/29/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
04/13/2016	Oocysts/L	--	(U)	--	(U)	--	(U)	--	(U)
04/20/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
05/11/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U)	0.00	(U)
06/01/2016	Oocysts/L	0.00	(U)	0.00	(U)	0.00	(U,T+)	0.00	(U,T+)
<b>Number &gt; 0 Oocysts/L</b>		0		0		0		0	

**Primary MCL or TT = 99 % Removal**

The April 13, 2016 samples were not analyzed because there was a laboratory incident where the samples were contaminated with a positive control (a prepared sample containing a known concentration of oocysts/cysts).

Upon receipt at the laboratory, samples for this analysis are supposed to be less than 20°C, but above freezing. A temperature of 0°C is typically frozen. The samples collected on 9/15/2015 and 11/03/2015 arrive at the laboratory at temperatures less than 0°C. However, there was no ice in the sample containers, so the lab was instructed to proceed with analysis. The samples for ES-C and CH-C on 6/1/2016 were 20.9°C and the lab was instructed to proceed with analysis.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
07/07/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
07/20/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
08/03/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
08/17/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
09/01/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
09/15/2015	cysts/L	0.00 (U,T-)	0.00 (U,T-)	0.00 (U,T-)	0.00 (U,T-)
09/29/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
10/13/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
11/03/2015	cysts/L	0.00 (U,T-)	0.00 (U,T-)	0.00 (U,T-)	0.00 (U,T-)
11/09/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
11/17/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
12/01/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
12/15/2015	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.10
01/05/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
02/02/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
02/29/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
03/07/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
03/21/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
03/29/2016	cysts/L	0.00 (U)	0.00 (U)	0.18	0.00 (U)
04/13/2016	cysts/L	--	--	--	--
04/20/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.00 (U)
05/11/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U)	0.09
06/01/2016	cysts/L	0.00 (U)	0.00 (U)	0.00 (U,T+)	0.00 (U,T+)
<b>Number &gt; 0 cysts/L</b>		0	0	1	2

**Primary MCL or TT = 99.9 % Removal or inactivation**

The April 13, 2016 samples were not analyzed because there was a laboratory incident where the samples were contaminated with a positive control (a prepared sample containing a known concentration of oocysts/cysts).

Upon receipt at the laboratory, samples for this analysis are supposed to be less than 20°C, but above freezing. A temperature of 0°C is typically frozen. The samples collected on 9/15/2015 and 11/03/2015 arrive at the laboratory at temperatures less than 0°C. However, there was no ice in the sample containers, so the lab was instructed to proceed with analysis. The samples for ES-C and CH-C on 6/1/2016 were 20.9°C and the lab was instructed to proceed with analysis.

Date	Units	MNT-S	M-S	ES-S	CH-S
		Result	Result	Result	Result
06/24/2015	col/100 mL	56 T(+)	56 T(+)	56 T(+)	69 T(+)
07/07/2015	col/100 mL	150	200 T(+)	220 T(+)	94 T(+)
07/20/2015	MPN/100 mL	96	69	40	49
08/03/2015	MPN/100 mL	18	41	20	16
08/17/2015	MPN/100 mL	96	17	6	28
09/01/2015	MPN/100 mL	1	3	3	11
09/15/2015	MPN/100 mL	27	12	11	15
09/29/2015	MPN/100 mL	26	41	62	67
10/13/2015	MPN/100 mL	66	98	48	98
11/03/2015	MPN/100 mL	73	75	66	55
11/09/2015	MPN/100 mL	50	26	16	11
11/17/2015	MPN/100 mL	126	93	111	108
12/01/2015	MPN/100 mL	162	579	326	2,419.6 (G)
12/15/2015	MPN/100 mL	178	147	147	114
01/05/2016	MPN/100 mL	32	73	86	73
02/02/2016	MPN/100 mL	345	167	214	770
02/29/2016	MPN/100 mL	42	107	79	84
03/07/2016	MPN/100 mL	50	74	61	74
03/21/2016	MPN/100 mL	108	110	68	73
03/29/2016	MPN/100 mL	69	59	72	79
04/13/2016	MPN/100 mL	25	8	23	21
04/20/2016	MPN/100 mL	59	12	28	30
05/11/2016	MPN/100 mL	101	238	189	114
06/01/2016	MPN/100 mL	30	27	17	20
<b>Number &gt; 0 MPN/100 mL</b>		24	24	24	24

**Primary MCL or TT = 0 MPN/100 mL**

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than improper storage and handling, thus the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the 7/20/2015 samples, bacteriological samples were taken to a different laboratory.



Date	Units	MNT-S		M-S		ES-S		CH-S	
		Result		Result		Result		Result	
06/24/2015	cfu/100 mL	81	T(+)	88	T(+)	44	T(+)	200	T(+)
07/07/2015	cfu/100 mL	387		647	T(+)	553	T(+)	553	T(+)
07/20/2015	col/100 mL	230		94		54		77	
08/03/2015	col/100 mL	30		21		25		34	
08/17/2015	col/100 mL	400		26		4		35	
09/01/2015	col/100 mL	6		7		8		26	
09/15/2015	col/100 mL	50		24		12		44	
09/29/2015	col/100 mL	20		53		36		53	
10/13/2015	col/100 mL	70		50		54		86	
11/03/2015	col/100 mL	40		49		47		44	
11/09/2015	col/100 mL	62		24		20		30	
11/17/2015	col/100 mL	76		91		200		50	
12/01/2015	col/100 mL	76		645		280		5,800	
12/15/2015	col/100 mL	200		94		108		121	
01/05/2016	col/100 mL	35		42		60		35	
02/02/2016	col/100 mL	340		120		220		636	
02/29/2016	col/100 mL	32		59		67		52	
03/07/2016	col/100 mL	35		59		49		60	
03/21/2016	col/100 mL	76		95		74		71	
03/29/2016	col/100 mL	10		42		21		39	
04/13/2016	col/100 mL	14		21		13		20	
04/20/2016	col/100 mL	28		17		20		13	
05/11/2016	col/100 mL	82		220		200		220	
06/01/2016	col/100 mL	22		22		6		21	
<b>Number &gt; 400 col/100 mL</b>		0		2		1		3	
<b>Number &gt; 0 col/100 mL</b>		24		24		24		24	

WV Category A WQS = 400 col/100 mL  
 Primary MCL or TT = 0 col/100 mL

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than improper storage and handling, thus the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the 7/20/2015 samples, bacteriological samples were taken to a different laboratory.

Date	Units	MNT-S	M-S	ES-S	CH-S
		Result	Result	Result	Result
06/24/2015	MPN/100 mL	--	--	--	--
07/07/2015	MPN/100 mL	--	--	--	--
07/20/2015	MPN/100 mL	382	646	532	589
08/03/2015	MPN/100 mL	244	321	231	306
08/17/2015	MPN/100 mL	325	1,540	1,120	550
09/01/2015	MPN/100 mL	165	70.0	30.0	135
09/15/2015	MPN/100 mL	50.5	39.0	32.5	28.0
09/29/2015	MPN/100 mL	520	245	180	265
10/13/2015	MPN/100 mL	635	400	355	290
11/03/2015	MPN/100 mL	170	125	190	120
11/09/2015	MPN/100 mL	252	185	206	116
11/17/2015	MPN/100 mL	170	330	330	150
12/01/2015	MPN/100 mL	95.0	855	365	1,140
12/15/2015	MPN/100 mL	100	210	2,230	1,780
01/05/2016	MPN/100 mL	170	200	200	225
02/02/2016	MPN/100 mL	325	455	380	350
02/29/2016	MPN/100 mL	384	325	295	215
03/07/2016	MPN/100 mL	190	155	115	350
03/21/2016	MPN/100 mL	520	455	305	225
03/29/2016	MPN/100 mL	400	145	135	205
04/13/2016	MPN/100 mL	145	40.0	50.0	100
04/20/2016	MPN/100 mL	170	50.0	50.0	50.0
05/11/2016	MPN/100 mL	170	245	495	365
06/01/2016	MPN/100 mL	210	90.0	155	160
<b>Number &gt; 500 MPN/100 mL</b>		3	3	3	4

**Primary MCL or TT = 500 MPN/100 mL**

11/19/2015 - MNT-C field duplicate exceeded 30 percent RPD.

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the 7/20/2015 samples, bacteriological samples were taken to a different laboratory.

## Total Coliform

Date	Units	MNT-S	M-S	ES-S	CH-S
		Result	Result	Result	Result
06/24/2015	cfu/100mL	188 T(+)	181 T(+)	169 T(+)	330 T(+)
07/07/2015	cfu/100mL	460 T(+)	838 T(+)	600 T(+)	536 T(+)
07/20/2015	MPN/100mL	2,419.6 (G)	2,419.6 (G)	1,730	1,410
08/03/2015	MPN/100mL	420	1,730	629	1,410
08/17/2015	MPN/100mL	1,990	2,420	1,300	1,990
09/01/2015	MPN/100mL	2,420	2,419.6 (G)	792	1,410
09/15/2015	MPN/100mL	2,420	1,990	2,419.6 (G)	1,200
09/29/2015	MPN/100mL	1,990	2,420	1,450	2,420 (G)
10/13/2015	MPN/100mL	870	2,420	1,550	2,419.6 (G)
11/03/2015	MPN/100mL	120	870	1,200	1,730
11/09/2015	MPN/100mL	921	816	548	361
11/17/2015	MPN/100mL	1,730	2419.6 (G)	961	961
12/01/2015	MPN/100mL	2,419.6 (G)	2,419.6 (G)	2,419.6 (G)	2,419.6 (G)
12/15/2015	MPN/100mL	1,550	2,420	2,420	2,419.6 (G)
01/05/2016	MPN/100mL	1,300	649	1,120	1,410
02/02/2016	MPN/100mL	2,419.6 (G)	2,419.6 (G)	2,420	2,419.6 (G)
02/29/2016	MPN/100mL	454	387	1,050	649
03/07/2016	MPN/100mL	1,200	613	649	770
03/21/2016	MPN/100mL	687	770	687	687
03/29/2016	MPN/100mL	649	260	727	613
04/13/2016	MPN/100mL	328	435	261	579
04/20/2016	MPN/100mL	1,300	361	980	687
05/11/2016	MPN/100mL	2,419.6 (G)	2,419.6 (G)	2,419.6 (G)	2,420
06/01/2016	MPN/100mL	1,050	2,419.6 (G)	980	980
<b>Number &gt; 0 MPN/100 mL</b>		24	24	24	24

Primary MCL or TT = 0 MPN/100 mL

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

The samples for the first two sampling events were received by the lab above the method-specified temperatures because the samples were submitted to the laboratory before they had the opportunity to cool. While temperature is a critical issue for bacteriological analysis, the observed temperatures are believed to be reflective of the river temperatures at the time of sample collection rather than improper storage and handling, thus the quality of the samples is not believed to have been affected.

The laboratory that was used to analyze samples for the first two sampling events was unable to perform analysis of *E. coli* by the method requested and was unable to analyze bacteria by HPC within the method-specified holding time. Beginning with the 7/20/2015 samples, bacteriological samples were taken to a different laboratory.

## Aluminum

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.029 (J)	0.052 (J)	0.056 (J)	0.042 (J)
07/07/2015	mg/L	0.119	0.136	0.128	0.124
07/20/2015	mg/L	0.199	0.617	0.168	0.249
08/03/2015	mg/L	0.111	0.111	0.105	0.108
08/17/2015	mg/L	0.073 (J)	0.127	0.141	0.102
09/01/2015	mg/L	0.093 (J)	0.108	0.098 (J)	0.067 (J)
09/15/2015	mg/L	0.155	0.116	0.132	0.121
09/29/2015	mg/L	0.191	0.127	0.173	0.125
10/13/2015	mg/L	0.211	0.188	0.149	0.172
11/03/2015	mg/L	0.185	0.142	0.159	0.177
11/09/2015	mg/L	0.116	0.121	0.109	0.091 (J)
11/17/2015	mg/L	0.157	0.156	0.177	0.127
12/01/2015	mg/L	0.117	0.175	0.163	0.175
12/15/2015	mg/L	0.095 (J)	0.109	0.097 (J)	0.093 (J)
01/05/2016	mg/L	0.231	0.168	0.200	0.176
02/02/2016	mg/L	0.523	0.399	0.327	0.377
02/29/2016	mg/L	0.424	0.359	0.269	0.439
03/07/2016	mg/L	0.308	0.163	0.252	0.273
03/21/2016	mg/L	0.203	0.211	0.171	0.242
03/29/2016	mg/L	0.096 (J)	0.082 (J)	0.083 (J)	0.080 (J)
04/13/2016	mg/L	0.070 (J)	0.062 (J)	0.060 (J)	0.079 (J)
04/20/2016	mg/L	0.057 (J)	0.062 (J)	0.056 (J)	0.042 (J)
05/11/2016	mg/L	0.223	0.210	0.140	0.186
06/01/2016	mg/L	0.148	0.102	0.141	0.118
<b>Number &gt; 0.05 mg/L</b>		23	24	23	22
<b>Number &gt; 0.2 mg/L</b>		7	5	2	5

Secondary MCL = 0.05 to 0.2 mg/L



## Antimony

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/07/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/20/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/29/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0003 (J)
10/13/2015	mg/L	0.0002 (U)	0.0003 (J)	0.0002 (U)	0.0002 (U)
11/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/09/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0005 (J)
12/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
01/05/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/02/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/07/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/21/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/13/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/20/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
05/11/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
06/01/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
<b>Number &gt; 0.014 mg/L</b>		0	0	0	0
<b>Number &gt; 0.006 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.014 mg/L**  
**Primary MCL or TT = 0.006 mg/L**

## Arsenic

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/07/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/20/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/03/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/29/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
10/13/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/03/2015	mg/L	0.0014 (J)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/09/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
01/05/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/02/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/07/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/21/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/13/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/20/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
05/11/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
06/01/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
<b>Number &gt; 0.01 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**WV Category A WQS = 0.010 mg/L**  
**Primary MCL or TT = 0.010 mg/L**

## Barium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0310	0.0365	0.0355	0.0357
07/07/2015	mg/L	0.0397	0.0370	0.0366	0.0334
07/20/2015	mg/L	0.0320	0.0343	0.0326	0.0326
08/03/2015	mg/L	0.0328	0.0378	0.0349	0.0367
08/17/2015	mg/L	0.0361	0.0393	0.0357	0.0356
09/01/2015	mg/L	0.0372	0.0405	0.0397	0.0434
09/15/2015	mg/L	0.0345	0.0414	0.0425	0.0424
09/29/2015	mg/L	0.0382	0.0440	0.0435	0.0421
10/13/2015	mg/L	0.0308	0.0308	0.0313	0.0305
11/03/2015	mg/L	0.0282	0.0310	0.0306	0.0299
11/09/2015	mg/L	0.0268	0.0292	0.0283	0.0276
11/17/2015	mg/L	0.0257	0.0267	0.0287	0.0280
12/01/2015	mg/L	0.0283	0.0290	0.0279	0.0276
12/15/2015	mg/L	0.0248	0.0275	0.0258	0.0279
01/05/2016	mg/L	0.0220	0.0266	0.0256	0.0263
02/02/2016	mg/L	0.0302	0.0326	0.0310	0.0320
02/29/2016	mg/L	0.0255	0.0269	0.0228	0.0268
03/07/2016	mg/L	0.0260	0.0289	0.0275	0.0292
03/21/2016	mg/L	0.0250	0.0277	0.0273	0.0279
03/29/2016	mg/L	0.0265	0.0285	0.0289	0.0289
04/13/2016	mg/L	0.0252	0.0269	0.0274	0.0272
04/20/2016	mg/L	0.0256	0.0286	0.0285	0.0272
05/11/2016	mg/L	0.0268	0.0259	0.0261	0.0253
06/01/2016	mg/L	0.0303	0.0300	0.0296	0.0290
Number > 1 mg/L		0	0	0	0
Number > 2 mg/L		0	0	0	0

**WV Category A WQS = 1.0 mg/L**  
**Primary MCL or TT = 2 mg/L**

**Beryllium**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/07/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/20/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/29/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
10/13/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/09/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
01/05/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/02/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/07/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/21/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/13/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/20/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
05/11/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
06/01/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
<b>Number &gt; 0.004 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**WV Category A WQS = 0.004 mg/L**  
**Primary MCL or TT = 0.004 mg/L**



**Cadmium**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/07/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/20/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/29/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (J)
10/13/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/09/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
01/05/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/02/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/07/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/21/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/13/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/20/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
05/11/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
06/01/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
<b>Number &gt; 0.002 mg/L</b>		0	0	0	0
<b>Number &gt; 0.005 mg/L</b>		0	0	0	0

**WV Category A WQS<sup>1</sup> = 0.002 mg/L**  
**Primary MCL or TT = 0.005 mg/L**

<sup>1</sup> Based on a hardness of 69 mg/L CaCO<sub>3</sub>, which is the average measured across all stations.

## Hexavalent Chromium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.024	0.035	0.030	0.030
07/07/2015	µg/L	0.028	0.033	0.039	0.038
07/20/2015	µg/L	0.062	0.073	0.072	0.068
08/03/2015	µg/L	0.0060 (U)	0.0060 (U)	0.0060 (U)	0.0060 (U)
08/17/2015	µg/L	0.049	0.038	0.044	0.038
09/01/2015	µg/L	0.038	0.044	0.046	0.041
09/15/2015	µg/L	0.029	0.035	0.037	0.032
09/29/2015	µg/L	0.036	0.043	0.047	0.034
10/13/2015	µg/L	0.038	0.047	0.049	0.029
11/03/2015	µg/L	0.011	0.045	0.037	0.032
11/09/2015	µg/L	0.025	0.027	0.0060 (U)	0.017
11/17/2015	µg/L	0.0060 (U)	0.0060 (U)	0.0060 (U)	0.0060 (U)
12/01/2015	µg/L	0.039	0.028	0.044	0.055
12/15/2015	µg/L	0.046	0.026	0.030	0.025
01/05/2016	µg/L	0.023	0.021	0.026	0.025
02/02/2016	µg/L	0.050	0.053	0.063	0.058
02/29/2016	µg/L	0.072	0.061	0.047	0.060
03/07/2016	µg/L	0.060	0.043	0.035	0.066
03/21/2016	µg/L	0.038	0.034	0.033	0.037
03/29/2016	µg/L	0.016	0.025	0.015	0.021
04/13/2016	µg/L	0.028	0.041	0.025	0.029
04/20/2016	µg/L	0.041	0.029	0.033	0.025
05/11/2016	µg/L	0.037	0.035	0.058	0.055
06/01/2016	µg/L	<del>0.044</del>	0.032	0.037	0.027
Number > 50 µg/L		0	0	0	0

WV Category A WQS = 50 µg/L

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

## Total Chromium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.35	0.25	0.30	0.29
07/07/2015	µg/L	0.33	0.34	0.31	0.32
07/20/2015	µg/L	0.25	0.39	0.26	0.24
08/03/2015	µg/L	0.39	0.36	0.36	0.39
08/17/2015	µg/L	0.33	0.31	0.31	0.34
09/01/2015	µg/L	0.44	0.37	0.42	0.44
09/15/2015	µg/L	0.35	0.33	0.34	0.32
09/29/2015	µg/L	0.31	0.30	0.34	0.33
10/13/2015	µg/L	0.47	0.45	0.45	0.48
11/03/2015	µg/L	0.21	0.35	0.24	0.23
11/09/2015	µg/L	0.48	0.23	0.23	0.22
11/17/2015	µg/L	0.28	0.16	0.19	0.23
12/01/2015	µg/L	0.31	0.31	0.50	0.30
12/15/2015	µg/L	0.22	0.31	0.36	0.19
01/05/2016	µg/L	0.21	0.28	0.47	0.48
02/02/2016	µg/L	0.40	0.50	0.60	0.26
02/29/2016	µg/L	0.46	0.53	0.65	0.58
03/07/2016	µg/L	0.48	0.46	0.46	0.50
03/21/2016	µg/L	3.3	4.0	0.49	0.47
03/29/2016	µg/L	0.47	0.43	0.45	0.40
04/13/2016	µg/L	0.46	0.32	0.43	0.44
04/20/2016	µg/L	0.40	0.40	0.40	0.51
05/11/2016	µg/L	0.7	0.8	0.6	0.7
06/01/2016	µg/L	0.7	0.7	0.7	0.7
Number > 50 µg/L		0	0	0	0

WV Category A WQS = 50 µg/L

09/01/2015 - 0.012 µg/L detected in field blank.

11/19/2015 - MNT-C field duplicate exceeded 30 percent RPD.

02/29/2016 - 0.22 µg/L detected in field blank.

5/11/2016 = 0.4 µg/L detected in field blank.

A different laboratory did the analysis for 5/11/2016 and 6/01/2016.

## Copper

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0022 (J)	0.0021 (J)	0.0029 (J)	0.0022 (J)
07/07/2015	mg/L	0.0015 (J)	0.0016 (J)	0.0018 (J)	0.0014 (J)
07/20/2015	mg/L	0.0029 (J)	0.0023 (J)	0.0022 (J)	0.0020 (J)
08/03/2015	mg/L	0.0023 (J)	0.0026 (J)	0.0020 (J)	0.0021 (J)
08/17/2015	mg/L	0.0020 (J)	0.0018 (J)	0.0015 (J)	0.0016 (J)
09/01/2015	mg/L	0.0018 (J)	0.0017 (J)	0.0024 (J)	0.0020 (J)
09/15/2015	mg/L	0.0021 (J)	0.0022 (J)	0.0021 (J)	0.0019 (J)
09/29/2015	mg/L	0.0023 (J)	0.0024 (J)	0.0034 (J)	0.0023 (J)
10/13/2015	mg/L	0.0021 (J)	0.0024 (J)	0.0022 (J)	0.0024 (J)
11/03/2015	mg/L	0.0032 (J)	0.0022 (J)	0.0023 (J)	0.0022 (J)
11/09/2015	mg/L	0.0017 (J)	0.0017 (J)	0.0016 (J)	0.0019 (J)
11/17/2015	mg/L	0.0027 (J)	0.0017 (J)	0.0023 (J)	0.0025 (J)
12/01/2015	mg/L	0.0017 (J)	0.0018 (J)	0.0019 (J)	0.0024 (J)
12/15/2015	mg/L	0.0020 (J)	0.0021 (J)	0.0012 (J)	0.0012 (J)
01/05/2016	mg/L	0.0014 (J)	0.0016 (J)	0.0015 (J)	0.0013 (J)
02/02/2016	mg/L	0.0015 (J)	0.0020 (J)	0.0016 (J)	0.0035 (J)
02/29/2016	mg/L	0.0018 (J)	0.0014 (J)	0.0014 (J)	0.0022 (J)
03/07/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/21/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/29/2016	mg/L	0.0032 (J)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/13/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0011 (J)
04/20/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
05/11/2016	mg/L	0.0018 (J)	0.0010 (U)	0.0011 (J)	0.0010 (U)
06/01/2016	mg/L	0.0015 (J)	0.0010 (U)	0.0010 (U)	0.0012 (J)
<b>Number &gt; 1 mg/L</b>		0	0	0	0
<b>Number &gt; 1.3 mg/L</b>		0	0	0	0

**WV Category A WQS = 1.0 mg/L**  
**Primary MCL or TT = 1.3 mg/L**  
**Secondary MCL = 1.0 mg/L**



Date	Units	MNT-C		M-C	ES-C	CH-C
		Result		Result	Result	Result
06/24/2015	mg/L	0.083	(J)	0.197	0.128	0.111
07/07/2015	mg/L	0.353		0.494	0.341	0.278
07/20/2015	mg/L	0.366		0.425	0.321	0.440
08/03/2015	mg/L	0.223		0.214	0.202	0.201
08/17/2015	mg/L	0.128		0.194	0.184	0.181
09/01/2015	mg/L	0.188		0.202	0.187	0.156
09/15/2015	mg/L	0.312		0.204	0.219	0.207
09/29/2015	mg/L	0.368		0.253	0.348	0.271
10/13/2015	mg/L	0.422		0.391	0.351	0.373
11/03/2015	mg/L	0.360		0.265	0.282	0.314
11/09/2015	mg/L	0.254		0.248	0.233	0.217
11/17/2015	mg/L	0.343		0.308	0.333	0.298
12/01/2015	mg/L	0.220		0.306	0.276	0.294
12/15/2015	mg/L	0.189		0.231	0.213	0.226
01/05/2016	mg/L	0.334		0.288	0.316	0.286
02/02/2016	mg/L	0.747		0.685	0.558	0.656
02/29/2016	mg/L	0.496		0.504	0.386	0.635
03/07/2016	mg/L	0.399		0.296	0.398	0.424
03/21/2016	mg/L	0.290		0.318	0.267	0.358
03/29/2016	mg/L	0.164		0.165	0.173	0.164
04/13/2016	mg/L	0.137		0.129	0.127	0.161
04/20/2016	mg/L	0.114		0.134	0.127	0.116
05/11/2016	mg/L	0.371		0.317	0.228	0.297
06/01/2016	mg/L	0.288		0.181	0.237	0.229
Number > 1.5 mg/L		0		0	0	0
Number > 0.3 mg/L		12		9	9	7

WV Category A WQS = 1.5 mg/L  
 Secondary MCL = 0.3 mg/L

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0005 (J)	0.0004 (J)	0.0004 (J)	0.0004 (J)
07/07/2015	mg/L	0.0011	0.0008 (J)	0.0008 (J)	0.0005 (J)
07/20/2015	mg/L	0.0006 (J)	0.0004 (J)	0.0004 (J)	0.0005 (J)
08/03/2015	mg/L	0.0002 (J)	0.0003 (J)	0.0003 (J)	0.0003 (J)
08/17/2015	mg/L	0.0002 (J)	0.0003 (J)	0.0003 (J)	0.0002 (J)
09/01/2015	mg/L	0.0003 (J)	0.0003 (J)	0.0003 (J)	0.0002 (J)
09/15/2015	mg/L	0.0003 (J)	0.0003 (J)	0.0002 (J)	0.0002 (U)
09/29/2015	mg/L	0.0005 (J)	0.0007 (J)	0.0036	0.0050
10/13/2015	mg/L	0.0008 (J)	0.0007 (J)	0.0006 (J)	0.0005 (J)
11/03/2015	mg/L	0.0007 (J)	0.0004 (J)	0.0004 (J)	0.0004 (J)
11/09/2015	mg/L	0.0004 (J)	0.0005 (J)	0.0007 (J)	0.0004 (J)
11/17/2015	mg/L	0.0004 (J)	0.0004 (J)	0.0005 (J)	0.0005 (J)
12/01/2015	mg/L	0.0005 (J)	0.0005 (J)	0.0005 (J)	0.0005 (J)
12/15/2015	mg/L	0.0004 (J)	0.0004 (J)	0.0004 (J)	0.0004 (J)
01/05/2016	mg/L	0.0004 (J)	0.0005 (J)	0.0006 (J)	0.0005 (J)
02/02/2016	mg/L	0.0007 (J)	0.0008 (J)	0.0007 (J)	0.0010 (J)
02/29/2016	mg/L	0.0007 (J)	0.0009 (J)	0.0007 (J)	0.0008 (J)
03/07/2016	mg/L	0.0006 (J)	0.0018	0.0006 (J)	0.0007 (J)
03/21/2016	mg/L	0.0004 (J)	0.0005 (J)	0.0005 (J)	0.0005 (J)
03/29/2016	mg/L	0.0004 (J)	0.0003 (J)	0.0003 (J)	0.0002 (J)
04/13/2016	mg/L	0.0002 (J)	0.0002 (J)	0.0002 (U)	0.0003 (J)
04/20/2016	mg/L	0.0002 (U)	0.0002	0.0002 (U)	0.0002 (J)
05/11/2016	mg/L	0.0006 (J)	0.0004 (J)	0.0007 (J)	0.0008 (J)
06/01/2016	mg/L	0.0012	0.0048	0.0003 (J)	0.0003 (J)
<b>Number &gt; 0.05 mg/L</b>		0	0	0	0
<b>Number &gt; 0.015 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.050 mg/L**  
**Primary MCL or TT = 0.015 mg/L**

## Mercury

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
07/07/2015	ng/L	1.80 (U)	1.80 (U)	1.81 (J)	1.80 (U)
07/20/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
08/03/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
08/17/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
09/01/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
09/15/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
09/29/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
10/13/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
11/03/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
11/09/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
11/17/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
12/01/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
12/15/2015	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
01/05/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
02/02/2016	ng/L	1.80 (U)	1.95 (J)	1.80 (U)	1.84 (J)
02/29/2016	ng/L	3.60 (U)	3.60 (U)	3.60 (U)	3.60 (U)
03/07/2016	ng/L	3.60 (U)	1.80 (U)	1.80 (U)	1.80 (U)
03/21/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
03/29/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
04/13/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
04/20/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
05/11/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
06/01/2016	ng/L	1.80 (U)	1.80 (U)	1.80 (U)	1.80 (U)
<b>Number &gt; 140 ng/L</b>		0	0	0	0
<b>Number &gt; 2000 ng/L</b>		0	0	0	0

**WV Category A WQS = 140 ng/L**  
**Primary MCL or TT = 2000 ng/L**

The MDL for mercury was higher for the samples collected on 2/29/2016 and the MNT-C sample collected on 3/7/2016 due to matrix interference with the internal quality control samples run by the laboratory.

**Manganese**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.036 (J)	0.050 (J)	0.053 (J)	0.042 (J)
07/07/2015	mg/L	0.109	0.069 (J)	0.065 (J)	0.046 (J)
07/20/2015	mg/L	0.057 (J)	0.056 (J)	0.050 (J)	0.053 (J)
08/03/2015	mg/L	0.047 (J)	0.045 (J)	0.044 (J)	0.045 (J)
08/17/2015	mg/L	0.049 (J)	0.047 (J)	0.049 (J)	0.046 (J)
09/01/2015	mg/L	0.073 (J)	0.046 (J)	0.041 (J)	0.039 (J)
09/15/2015	mg/L	0.063 (J)	0.050 (J)	0.052 (J)	0.047 (J)
09/29/2015	mg/L	0.056 (J)	0.064 (J)	0.075 (J)	0.062 (J)
10/13/2015	mg/L	0.046 (J)	0.043 (J)	0.041 (J)	0.038 (J)
11/03/2015	mg/L	0.039 (J)	0.030 (J)	0.029 (J)	0.029 (J)
11/09/2015	mg/L	0.034 (J)	0.029 (J)	0.027 (J)	0.027 (J)
11/17/2015	mg/L	0.035 (J)	0.037 (J)	0.036 (J)	0.035 (J)
12/01/2015	mg/L	0.025 (J)	0.033 (J)	0.031 (J)	0.030 (J)
12/15/2015	mg/L	0.025 (J)	0.032 (J)	0.030 (J)	0.031 (J)
01/05/2016	mg/L	0.020 (J)	0.029 (J)	0.030 (J)	0.028 (J)
02/02/2016	mg/L	0.070 (J)	0.068 (J)	0.058 (J)	0.069 (J)
02/29/2016	mg/L	0.033 (J)	0.036 (J)	0.035 (J)	0.040 (J)
03/07/2016	mg/L	0.025 (J)	0.042 (J)	0.041 (J)	0.040 (J)
03/21/2016	mg/L	0.022 (J)	0.034 (J)	0.033 (J)	0.035 (J)
03/29/2016	mg/L	0.019 (J)	0.028 (J)	0.033 (J)	0.028 (J)
04/13/2016	mg/L	0.019 (J)	0.027 (J)	0.026 (J)	0.028 (J)
04/20/2016	mg/L	0.020 (J)	0.028 (J)	0.027 (J)	0.026 (J)
05/11/2016	mg/L	0.046 (J)	0.047 (J)	0.040 (J)	0.041 (J)
06/01/2016	mg/L	0.035 (J)	0.037 (J)	0.039 (J)	0.040 (J)
<b>Number &gt; 1 mg/L</b>		0	0	0	0
<b>Number &gt; 0.05 mg/L</b>		6	4	5	3

**WV Category A WQS = 1.0 mg/L**  
**Secondary MCL = 0.05 mg/L**



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
07/07/2015	mg/L	0.0022 (J)	0.0020 (U)	0.0022 (J)	0.0021 (J)
07/20/2015	mg/L	0.0020 (U)	0.0024 (J)	0.0020 (U)	0.0020 (U)
08/03/2015	mg/L	0.0020 (U)	0.0020 (J)	0.0020 (U)	0.0020 (U)
08/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
09/01/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0022 (J)	0.0020 (U)
09/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
09/29/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
10/13/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	mg/L	0.0051 (J)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	mg/L	0.0021 (J)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (J)
01/05/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
02/02/2016	mg/L	0.0027 (J)	0.0020 (U)	0.0023 (J)	0.0029 (J)
02/29/2016	mg/L	0.0020 (U)	0.0035 (J)	0.0020 (J)	0.0070 (J)
03/07/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/29/2016	mg/L	0.0024 (J)	0.0020 (U)	0.0029 (J)	0.0028 (J)
04/13/2016	mg/L	0.0020 (U)	0.0037 (J)	0.0020 (U)	0.0020 (U)
04/20/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0032 (J)	0.0020 (U)
06/01/2016	mg/L	0.0023 (J)	0.0020 (U)	0.0020 (U)	0.0020 (U)
<b>Number &gt; 0.51 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.51 mg/L**

## Selenium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/07/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/20/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/03/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/29/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
10/13/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/03/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/09/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
01/05/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/02/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/07/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/21/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/13/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/20/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
05/11/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
06/01/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
<b>Number &gt; 0.05 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**WV Category A WQS = 0.05 mg/L**  
**Primary MCL or TT = 0.05 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/07/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
07/20/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/03/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
08/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
09/29/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
10/13/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/03/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/09/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
11/17/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/01/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
12/15/2015	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
01/05/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/02/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
02/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/07/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/21/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
03/29/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/13/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/20/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
05/11/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
06/01/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
<b>Number &gt; 0.004 mg/L</b>		0	0	0	0
<b>Number &gt; 0.1 mg/L</b>		0	0	0	0

**WV Category A WQS<sup>1</sup> = 0.004 mg/L**  
**Secondary MCL = 0.10 mg/L**

<sup>1</sup> Based on a hardness of 69 mg/L CaCO<sub>3</sub>, which is the average measured across all stations.

**Thallium**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/07/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/20/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/29/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
10/13/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/09/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
01/05/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/02/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/07/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/21/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/13/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/20/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
05/11/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
06/01/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
<b>Number &gt; 0.0017 mg/L</b>		0	0	0	0
<b>Number &gt; 0.002 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.0017 mg/L**  
**Primary MCL or TT = 0.002 mg/L**



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0043 (J)	0.0068 (J)	0.0054 (J)	0.0037 (J)
07/07/2015	mg/L	0.0063 (J)	0.0060 (J)	0.0064	0.0042 (J)
07/20/2015	mg/L	0.0047 (J)	0.0035 (J)	0.0047 (J)	0.0044 (J)
08/03/2015	mg/L	0.0037 (J)	0.0038 (J)	0.0030 (U)	0.0039
08/17/2015	mg/L	0.0130	0.0042 (J)	0.0051 (J)	0.0056 (J)
09/01/2015	mg/L	0.0035 (J)	0.0030 (U)	0.0106	0.0039 (J)
09/15/2015	mg/L	0.0064 (J)	0.0044 (J)	0.0030 (U)	0.0034 (J)
09/29/2015	mg/L	0.0030 (U)	0.0033 (J)	0.0106	0.0042 (J)
10/13/2015	mg/L	0.0044 (J)	0.0065 (J)	0.0050 (J)	0.0061 (J)
11/03/2015	mg/L	0.0087 (J)	0.0043 (J)	0.0033 (J)	0.0043 (J)
11/09/2015	mg/L	0.0072 (J)	0.0041 (J)	0.0040 (J)	0.0033 (J)
11/17/2015	mg/L	0.0065 (J)	0.0045 (J)	0.0080 (J)	0.0054 (J)
12/01/2015	mg/L	0.0125	0.0072 (J)	0.0225	0.0075 (J)
12/15/2015	mg/L	0.0035 (J)	0.0053 (J)	0.0045 (J)	0.0030 (U)
01/05/2016	mg/L	0.0030 (U)	0.0111	0.0116	0.0107
02/02/2016	mg/L	0.0071 (J)	0.0086 (J)	0.0076 (J)	0.0110
02/29/2016	mg/L	0.0068 (J)	0.0081 (J)	0.0102	0.0089 (J)
03/07/2016	mg/L	0.0049 (J)	0.0081 (J)	0.0077 (J)	0.0061 (J)
03/21/2016	mg/L	0.0030 (U)	0.0037 (J)	0.0180	0.0033 (J)
03/29/2016	mg/L	0.0062 (J)	0.0036 (J)	0.0030 (U)	0.0030 (U)
04/13/2016	mg/L	0.0030 (U)	0.0087 (J)	0.0157	0.0062 (J)
04/20/2016	mg/L	0.0078 (J)	0.0030 (U)	0.0030 (U)	0.0030 (U)
05/11/2016	mg/L	0.0191	0.0075 (J)	0.0094 (J)	0.0070 (J)
06/01/2016	mg/L	0.0098 (J)	0.0076 (J)	0.0047 (J)	0.0085 (J)
<b>Number &gt; 5 mg/L</b>		0	0	0	0

Secondary MCL = 5 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
07/07/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0021 (U)
07/20/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
08/03/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
08/17/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/01/2015	mg/L	0.0022 (U)	0.0022 (U)	0.0022 (U)	0.0022 (U)
09/15/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/29/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
10/13/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	mg/L	0.0023 (U)	0.0023 (U)	0.0023 (U)	0.0023 (U)
12/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
01/05/2016	mg/L	0.0024 (U)	0.0024 (U)	0.0026 (U)	0.0023 (U)
02/02/2016	mg/L	0.0020 (U)	0.0022 (U)	0.0021 (U)	0.0021 (U)
02/29/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0020 (U)
03/07/2016	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0021 (U)	0.0020 (U)
03/29/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/13/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
04/20/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
06/01/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
<b>Number &gt; 0.00011 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.00011 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

**2-Chloronaphthalene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
07/07/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0021 (U)
07/20/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
08/03/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
08/17/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/01/2015	mg/L	0.0022 (U)	0.0022 (U)	0.0022 (U)	0.0022 (U)
09/15/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/29/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
10/13/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	mg/L	0.0023 (U)	0.0023 (U)	0.0023 (U)	0.0023 (U)
12/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
01/05/2016	mg/L	0.0024 (U)	0.0024 (U)	0.0026 (U)	0.0023 (U)
02/02/2016	mg/L	0.0020 (U)	0.0022 (U)	0.0021 (U)	0.0021 (U)
02/29/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0020 (U)
03/07/2016	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0021 (U)	0.0020 (U)
03/29/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/13/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
04/20/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
06/01/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
<b>Number &gt; 1 mg/L</b>		0	0	0	0

WV Category A WQS = 1 mg/L

## 4,6-Dinitro-2-methylphenol

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
07/07/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0021 (U)
07/20/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
08/03/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
08/17/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/01/2015	mg/L	0.0022 (U)	0.0022 (U)	0.0022 (U)	0.0022 (U)
09/15/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/29/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
10/13/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	mg/L	0.0023 (U)	0.0023 (U)	0.0023 (U)	0.0023 (U)
12/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
01/05/2016	mg/L	0.0024 (U)	0.0024 (U)	0.0026 (U)	0.0023 (U)
02/02/2016	mg/L	0.0020 (U)	0.0022 (U)	0.0021 (U)	0.0021 (U)
02/29/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0020 (U)
03/07/2016	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0021 (U)	0.0020 (U)
03/29/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/13/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
04/20/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
06/01/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
<b>Number &gt; 0.0134 mg/L</b>		0	0	0	0

WV Category A WQS = **0.0134 mg/L**



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0051 (U)	0.0051 (U)	0.0050 (U)	0.0050 (U)
07/07/2015	mg/L	0.0051 (U)	0.0050 (U)	0.0051 (U)	0.0051 (U)
07/20/2015	mg/L	0.0051 (U)	0.0052 (U)	0.0051 (U)	0.0052 (U)
08/03/2015	mg/L	0.0051 (U)	0.0052 (U)	0.0052 (U)	0.0051 (U)
08/17/2015	mg/L	0.0050 (U)	0.0072 (J)	0.0097 (J)	0.0098 (J)
09/01/2015	mg/L	0.0055 (U)	0.0056 (U)	0.0056 (U)	0.0056 (U)
09/15/2015	mg/L	0.0052 (U)	0.0053 (U)	0.0051 (U)	0.0052 (U)
09/29/2015	mg/L	0.0052 (U)	0.0051 (U)	0.0052 (U)	0.0053 (U)
10/13/2015	mg/L	0.0056 (J)	0.0064 (J)	0.0051 (U)	0.0051 (U)
11/03/2015	mg/L	0.0050 (U)	0.0050 (U)	0.0051 (J)	0.0050 (U)
11/09/2015	mg/L	0.0051 (U)	0.0051 (U)	0.0100 (J)	0.0051 (U)
11/17/2015	mg/L	0.0051 (U)	0.0050 (U)	0.0051 (U)	0.0051 (U)
12/01/2015	mg/L	0.0058 (U)	0.0058 (U)	0.0057 (U)	0.0057 (U)
12/15/2015	mg/L	0.0051 (U)	0.0050 (U)	0.0051 (U)	0.0051 (U)
01/05/2016	mg/L	0.0060 (U)	0.0061 (U)	0.0066 (U)	0.0057 (U)
02/02/2016	mg/L	0.0050 (U)	0.0060 (J)	0.0053 (U)	0.0052 (U)
02/29/2016	mg/L	0.0066 (J)	0.0052 (U)	0.0052 (U)	0.0051 (U)
03/07/2016	mg/L	0.0184	0.0051 (U)	0.0051 (U)	0.0051 (U)
03/21/2016	mg/L	0.0050 (U)	0.0051 (U)	0.0052 (U)	0.0051 (U)
03/29/2016	mg/L	0.0051 (U)	0.0051 (U)	0.0050 (U)	0.0051 (U)
04/13/2016	mg/L	0.0051 (U)	0.0052 (U)	0.0051 (U)	0.0051 (U)
04/20/2016	mg/L	0.0050 (U)	0.0051 (U)	0.0050 (U)	0.0050 (U)
05/11/2016	mg/L	0.0051 (U)	0.0051 (U)	0.0051 (U)	0.0051 (U)
06/01/2016	mg/L	0.0050 (U)	0.0052 (U)	0.0051 (U)	0.0052 (U)
<b>Number &gt; 0.006 mg/L</b>		2	2	2	1

**Primary DWS = 0.006 mg/L**

**Hexachlorobenzene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
07/07/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0021 (U)
07/20/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
08/03/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
08/17/2015	mg/L	0.0020 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/01/2015	mg/L	0.0022 (U)	0.0022 (U)	0.0022 (U)	0.0022 (U)
09/15/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
09/29/2015	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0021 (U)
10/13/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	mg/L	0.0023 (U)	0.0023 (U)	0.0023 (U)	0.0023 (U)
12/15/2015	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
01/05/2016	mg/L	0.0024 (U)	0.0024 (U)	0.0026 (U)	0.0023 (U)
02/02/2016	mg/L	0.0020 (U)	0.0022 (U)	0.0021 (U)	0.0021 (U)
02/29/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0021 (U)	0.0020 (U)
03/07/2016	mg/L	0.0021 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0021 (U)	0.0020 (U)
03/29/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/13/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
04/20/2016	mg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	mg/L	0.0021 (U)	0.0021 (U)	0.0020 (U)	0.0020 (U)
06/01/2016	mg/L	0.0020 (U)	0.0021 (U)	0.0020 (U)	0.0021 (U)
<b>Number &gt; 0.00000072 mg/L</b>		0	0	0	0
<b>Number &gt; 0.001 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.00000072 mg/L**  
**Primary DWS = 0.001 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS or PDWS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0005 (U)	0.0005 (U)	0.0005 (U)	0.0005 (U)
07/07/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/20/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/29/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
10/13/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/09/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
01/05/2016	mg/L	0.0005 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/02/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/07/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/21/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/13/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/20/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
05/11/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
06/01/2016	mg/L	0.0005 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
<b>Number &gt; 0.0021 mg/L</b>		0	0	0	0

WV Category A WQS = **0.0021 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0005 (U)	0.0005 (U)	0.0005 (U)	0.0005 (U)
07/07/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/20/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0005 (U)	0.0004 (U)
08/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/29/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
10/13/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/09/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
01/05/2016	mg/L	0.0005 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/02/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/07/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/21/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/13/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/20/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
05/11/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
06/01/2016	mg/L	0.0005 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
<b>Number &gt; 0.093 mg/L</b>		0	0	0	0

WV Category A WQS =

**0.093 mg/L**



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/07/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/20/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/01/2015	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/29/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
10/13/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/03/2015	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/09/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
01/05/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/02/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0003 (U)	0.0004 (U)
02/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/07/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/21/2016	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0003 (U)
03/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/13/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/20/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
05/11/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
06/01/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
<b>Number &gt; 0.54 mg/L</b>		0	0	0	0

WV Category A WQS = **0.54 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/07/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
07/20/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
08/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
09/29/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
10/13/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/03/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/09/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
11/17/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/01/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
12/15/2015	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
01/05/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/02/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
02/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/07/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/21/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
03/29/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/13/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
04/20/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
05/11/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
06/01/2016	mg/L	0.0002 (U)	0.0002 (U)	0.0002 (U)	0.0002 (U)
<b>Number &gt; 0.07 mg/L</b>		0	0	0	0

WV Category A WQS = 0.07 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/07/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
07/20/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
08/03/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
08/17/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/01/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/15/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/29/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
10/13/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/03/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/09/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/17/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
12/01/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
12/15/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
01/05/2016	mg/L	0.0004 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
02/02/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
02/29/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
03/07/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
03/21/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
03/29/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
04/13/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
04/20/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
05/11/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
06/01/2016	mg/L	0.0004 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
<b>Number &gt; 0.12 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

WV Category A WQS = 0.12 mg/L

**Pentachlorophenol**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/07/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/20/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/29/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
10/13/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/09/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
01/05/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/02/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/07/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/21/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/13/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
04/20/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
05/11/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
06/01/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
<b>Number &gt; 0.00028 mg/L</b>		0	0	0	0
<b>Number &gt; 0.001 mg/L</b>		0	0	0	0

WV Category A WQS = **0.00028 mg/L**  
 Primary DWS = **0.001 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/07/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
07/20/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/03/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
08/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/01/2015	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
09/29/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
10/13/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/03/2015	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/09/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
11/17/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/01/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
12/15/2015	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
01/05/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
02/02/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0003 (U)	0.0004 (U)
02/29/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/07/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
03/21/2016	mg/L	0.0003 (U)	0.0004 (U)	0.0004 (U)	0.0003 (U)
03/29/2016	mg/L	0.0004 (U)	0.0013	0.0004 (U)	0.0004 (U)
04/13/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
04/20/2016	mg/L	0.0010 (U)	0.0010 (U)	0.0010 (U)	0.0010 (U)
05/11/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
06/01/2016	mg/L	0.0004 (U)	0.0004 (U)	0.0004 (U)	0.0004 (U)
<b>Number &gt;21 mg/L</b>		0	0	0	0

WV Category A WQS = 21 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.000 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.67 mg/L</b>		0	0	0	0

WV Category A WQS =

0.67 mg/L

## Anthracene

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
07/07/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
07/20/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
08/03/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
08/17/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/01/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/15/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
09/29/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
10/13/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/03/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/09/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
11/17/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0002 (U)
12/01/2015	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0025 (U)
12/15/2015	mg/L	0.0003 (U)	0.0002 (U)	0.0003 (U)	0.0002 (U)
01/05/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
02/02/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
02/29/2016	mg/L	0.0003 (U)	0.0002 (U)	0.0003 (U)	0.0003 (U)
03/07/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
03/21/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
03/29/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
04/13/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
04/20/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
05/11/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
06/01/2016	mg/L	0.0003 (U)	0.0003 (U)	0.0003 (U)	0.0003 (U)
<b>Number &gt; 8.3 mg/L</b>		0	0	0	0

WV Category A WQS =

8.3 mg/L

**Benzo(a)anthracene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
07/07/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
07/20/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
08/03/2015	mg/L	0.0006 (U)	0.0007 (U)	0.0006 (U)	0.0006 (U)
08/17/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
09/01/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
09/15/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
09/29/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
10/13/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/03/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/09/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/17/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
12/01/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0063 (U)
12/15/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
01/05/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
02/02/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
02/29/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
03/07/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
03/21/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
03/29/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
04/13/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
04/20/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
05/11/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
06/01/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.0000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0002 mg/L</b>		0	0	0	0

WV Category A WQS = 0.0000038 mg/L  
 Primary DWS = 0.0002 mg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

**Benzo(b)fluoranthene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.0000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

**Benzo(k)fluoranthene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
07/07/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
07/20/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
08/03/2015	mg/L	0.0006 (U)	0.0007 (U)	0.0006 (U)	0.0006 (U)
08/17/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
09/01/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
09/15/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
09/29/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
10/13/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/03/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/09/2015	mg/L	0.0007 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
11/17/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
12/01/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0063 (U)
12/15/2015	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
01/05/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
02/02/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
02/29/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0007 (U)
03/07/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
03/21/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
03/29/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
04/13/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
04/20/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
05/11/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
06/01/2016	mg/L	0.0006 (U)	0.0006 (U)	0.0006 (U)	0.0006 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.0000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.0000038 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 0.3 mg/L</b>		0	0	0	0

WV Category A WQS =

0.3 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt; 1.1 mg/L</b>		0	0	0	0

WV Category A WQS =

1.1 mg/L

**Indeno(1,2,3-cd)pyrene**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
<b>Number &gt;0.0000038 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**WV Category A WQS = 0.0000038 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/07/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
07/20/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
08/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
09/29/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
10/13/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/03/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/09/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
11/17/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
12/01/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0013 (U)
12/15/2015	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
01/05/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/02/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
02/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/07/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/21/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
03/29/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/13/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
04/20/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
05/11/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
06/01/2016	mg/L	0.0001 (U)	0.0001 (U)	0.0001 (U)	0.0001 (U)
Number > 0.83 mg/L		0	0	0	0

WV Category A WQS =

0.83 mg/L

1,1,1-Trichloroethane

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
07/07/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
07/20/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
08/03/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
08/17/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/01/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/15/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/29/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
10/13/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/03/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/09/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/17/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
12/01/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
12/15/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
01/05/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
02/02/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
02/29/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/07/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/21/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/29/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
04/13/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
04/20/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
05/11/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
06/01/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
Number > 12000	µg/L	0		0		0		0		0		0		0		0	
Number > 200	µg/L	0		0		0		0		0		0		0		0	

WV Category A WQS = 12,000 µg/L  
 Primary DWS = 200 µg/L

1,1,1-Trichloroethane

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result	Units	Result	Units	Result	Units	Result	Units	Result	Units	Result	Units	Result	Units	Result	Units
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 12000	µg/L	0		0		0		0		0		0		0		0	
Number > 200	µg/L	0		0		0		0		0		0		0		0	

WV Category A WQS = 12,000 µg/L  
 Primary DWS = 200 µg/L



1,1,2,2-Tetrachloroethane

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 0.17		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.17 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



1,1,2,2-Tetrachloroethane

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 0.17		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.17 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

1,1,2-Trichloroethane

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 5 µg/L		0	0	0	0	0	0	0	0

Primary DWS = 5.00 µg/L





1,1-Dichloroethene

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 0.03 µg/L		0		0		0		0		0		0		0		0	
Number > 7 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.03 µg/L

Primary DWS = 7 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



1,1-Dichloroethene

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 0.03 µg/L		0		0		0		0		0		0		0		0	
Number > 7 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.03 µg/L

Primary DWS = 7 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.











1,2-Dichlorobenzene

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 2700 µg/L		0		0		0		0		0		0		0		0	
Number > 600 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 2,700 µg/L  
 Primary DWS = 600 µg/L

1,2-Dichloroethane

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
07/07/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
07/20/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
08/03/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
08/17/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/01/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/15/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
09/29/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
10/13/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/03/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/09/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
11/17/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
12/01/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
12/15/2015	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
01/05/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
02/02/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
02/29/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/07/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/21/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
03/29/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
04/13/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
04/20/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
05/11/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
06/01/2016	µg/L	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)	0.500	(U)
Number > 0.035 µg/L		0		0		0		0		0		0		0		0	
Number > 5 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.035 µg/L

Primary DWS = 5 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



1,2-Dichloroethane

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)	Result	0.500 (U)
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 0.035 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number > 5 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WV Category A WQS = 0.035 µg/L

Primary DWS = 5 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

1,2-Dichloropropane

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 5 µg/L		0	0	0	0	0	0	0	0

Primary DWS = 5 µg/L



1,2-Dichloropropane

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 5 µg/L		0		0		0		0		0		0		0		0	

Primary DWS = 5 µg/L

1,3-Dichlorobenzene

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 400 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 400 µg/L





1,4-Dichlorobenzene

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 400 µg/L		0	0	0	0	0	0	0	0
Number > 5 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 400 µg/L  
 Primary DWS = 5 µg/L



1,4-Dichlorobenzene

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 400 µg/L		0		0		0		0		0		0		0		0	
Number > 5 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 400 µg/L  
 Primary DWS = 5 µg/L





Acrylonitrile

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
07/07/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
07/20/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
08/03/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
08/17/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
09/01/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
09/15/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
09/29/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
10/13/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
11/03/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
11/09/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
11/17/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
12/01/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
12/15/2015	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
01/05/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
02/02/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
02/29/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
03/07/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
03/21/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
03/29/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
04/13/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
04/20/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
05/11/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
06/01/2016	µg/L	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)	7.500 (U)
Number > 0.059 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WV Category A WQS = 0.059 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.











Bromodichloromethane

Date	Units	ES-1-T	ES-1-B	ES-2-T	ES-2-B	CH-1-T	CH-1-B	CH-2-T	CH-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 0.55 µg/L		0	0	0	0	0	0	0	0
Number > 80 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 0.55 µg/L  
 Primary DWS = 80 µg/L  
 (as part of total trihalomethanes (TTHM))





**Bromoform**

Date	Units	ES-1-T	ES-1-B	ES-2-T	ES-2-B	CH-1-T	CH-1-B	CH-2-T	CH-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 4.3 µg/L		0	0	0	0	0	0	0	0
Number > 80 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 4.3 µg/L  
 Primary DWS = 80 µg/L  
 (as part of total trihalomethanes (TTHM))

Carbon Tetrachloride

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 0.25 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number > 5 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WV Category A WQS = 0.25 µg/L  
 Primary DWS = 5 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



Carbon Tetrachloride

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 0.25 µg/L		0		0		0		0		0		0		0		0	
Number > 5 µg/L		0		0		0		0		0		0		0		0	

WV Category A WQS = 0.25 µg/L

Primary DWS = 5 µg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

Chlorobenzene

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 680 µg/L		0	0	0	0	0	0	0	0
Number > 100 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 680 µg/L

Primary DWS = 100 µg/L





**Chloroform**

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 5.7 µg/L		0	0	0	0	0	0	0	0
Number > 80 µg/L		0	0	0	0	0	0	0	0

**WV Category A WQS = 5.7 µg/L**  
**Primary DWS = 80 µg/L**  
 (as part of total trihalomethanes (TTHM))





























**Tetrachloroethene**

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
Number > 0.8 µg/L		0	0	0	0	0	0	0	0
Number > 5 µg/L		0	0	0	0	0	0	0	0

WV Category A WQS = 0.8 µg/L

Primary DWS = 5 µg/L





**Toluene**

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/07/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
07/20/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
08/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
09/29/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
10/13/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/03/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/09/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
11/17/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/01/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
12/15/2015	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
01/05/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/02/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
02/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/07/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/21/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
03/29/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/13/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
04/20/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
05/11/2016	µg/L	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)	0.500 (U)
06/01/2016	µg/L	0.500 (U)	1.02	0.500 (U)	0.750 (J)	0.500 (U)	0.610 (J)	0.580 (J)	0.620 (J)
Number > 6800 µg/L		0	0	0	0	0	0	0	0
Number > 1000 µg/L		0	0	0	0	0	0	0	0

**WV Category A WQS =** 6,800 µg/L  
**Primary DWS =** 1,000 µg/L























**o-Xylene**

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/07/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
07/20/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
08/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
09/29/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
10/13/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/03/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/09/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
11/17/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/01/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
12/15/2015	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
01/05/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/02/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
02/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/07/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/21/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
03/29/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/13/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
04/20/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
05/11/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
06/01/2016	µg/L	0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)		0.500 (U)	
Number > 10 µg/L		0		0		0		0		0		0		0		0	

Primary DWS = 10 µg/L (as part of total xylene)





Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
07/07/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
07/20/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
08/03/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
08/17/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
09/01/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
09/15/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
09/29/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
10/13/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
11/03/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
11/09/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
11/17/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
12/01/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
12/15/2015	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
01/05/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
02/02/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
02/29/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
03/07/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
03/21/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
03/29/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
04/13/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
04/20/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
05/11/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)
06/01/2016	µg/L	2 (U)	2 (U)	2 (U)	2 (U)

## Heptachlor Epoxide

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.0002 mg/L</b>		0	0	0	0

Primary DWS = **0.0002 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000071 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000000071 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.0000039 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000039 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.6E-05 (U)
07/07/2015	mg/L	0.000026 (U)	2.5E-05 (U)	2.6E-05 (U)	2.8E-05 (U)
07/20/2015	mg/L	0.000026 (U)	2.6E-05 (U)	2.5E-05 (U)	2.6E-05 (U)
08/03/2015	mg/L	0.000025 (U)	2.6E-05 (U)	2.6E-05 (U)	2.6E-05 (U)
08/17/2015	mg/L	0.000026 (U)	2.6E-05 (U)	2.6E-05 (U)	2.5E-05 (U)
09/01/2015	mg/L	0.000029 (U)	2.8E-05 (U)	2.9E-05 (U)	2.8E-05 (U)
09/15/2015	mg/L	0.000029 (U)	2.9E-05 (U)	2.8E-05 (U)	2.9E-05 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	2.9E-05 (U)
10/13/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.6E-05 (U)	2.5E-05 (U)
11/03/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
11/09/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
11/17/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
12/01/2015	mg/L	0.000025 (U)	2.5E-05 (U)	2.6E-05 (U)	2.6E-05 (U)
12/15/2015	mg/L	0.000026 (U)	2.5E-05 (U)	2.5E-05 (U)	2.7E-05 (U)
01/05/2016	mg/L	0.000025 (U)	2.5E-05 (U)	0.000025 (U)	2.5E-05 (U)
02/02/2016	mg/L	0.000030 (U)	2.9E-05 (U)	2.8E-05 (U)	2.9E-05 (U)
02/29/2016	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
03/07/2016	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.6E-05 (U)
03/21/2016	mg/L	0.000025 (U)	2.5E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
03/29/2016	mg/L	0.000025 (U)	2.5E-05 (U)	2.6E-05 (U)	2.5E-05 (U)
04/13/2016	mg/L	0.000025 (U)	2.6E-05 (U)	0.000025 (U)	2.6E-05 (U)
04/20/2016	mg/L	0.000026 (U)	2.6E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
05/11/2016	mg/L	0.000030 (U)	2.8E-05 (U)	0.000028 (U)	2.8E-05 (U)
06/01/2016	mg/L	0.000026 (U)	2.6E-05 (U)	2.5E-05 (U)	2.5E-05 (U)
<b>Number &gt; 0.000014 mg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

WV Category A WQS = **1.4E-05 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

## Chlordane

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000248 (U)	0.000254 (U)	0.000254 (U)	0.000258 (U)
07/07/2015	mg/L	0.000257 (U)	0.000252 (U)	0.000265 (U)	0.000284 (U)
07/20/2015	mg/L	0.000255 (U)	0.000260 (U)	0.000252 (U)	0.000256 (U)
08/03/2015	mg/L	0.000251 (U)	0.000256 (U)	0.000264 (U)	0.000258 (U)
08/17/2015	mg/L	0.000257 (U)	0.000258 (U)	0.000255 (U)	0.000254 (U)
09/01/2015	mg/L	0.000286 (U)	0.000282 (U)	0.000285 (U)	0.000284 (U)
09/15/2015	mg/L	0.000289 (U)	0.000292 (U)	0.000285 (U)	0.000288 (U)
09/29/2015	mg/L	0.000292 (U)	0.000298 (U)	0.000299 (U)	0.000291 (U)
10/13/2015	mg/L	0.000250 (U)	0.000249 (U)	0.000258 (U)	0.000253 (U)
11/03/2015	mg/L	0.000252 (U)	0.000250 (U)	0.000249 (U)	0.000252 (U)
11/09/2015	mg/L	0.000253 (U)	0.000255 (U)	0.000250 (U)	0.000249 (U)
11/17/2015	mg/L	0.000250 (U)	0.000250 (U)	0.000250 (U)	0.000250 (U)
12/01/2015	mg/L	0.000250 (U)	0.000253 (U)	0.000256 (U)	0.000256 (U)
12/15/2015	mg/L	0.000261 (U)	0.000250 (U)	0.000253 (U)	0.000267 (U)
01/05/2016	mg/L	0.000250 (U)	0.000250 (U)	0.000250 (U)	0.000250 (U)
02/02/2016	mg/L	0.000298 (U)	0.000292 (U)	0.000285 (U)	0.000292 (U)
02/29/2016	mg/L	0.000255 (U)	0.000253 (U)	0.000251 (U)	0.000250 (U)
03/07/2016	mg/L	0.000251 (U)	0.000251 (U)	0.000252 (U)	0.000262 (U)
03/21/2016	mg/L	0.000249 (U)	0.000253 (U)	0.000254 (U)	0.000254 (U)
03/29/2016	mg/L	0.000255 (U)	0.000254 (U)	0.000256 (U)	0.000253 (U)
04/13/2016	mg/L	0.000250 (U)	0.000256 (U)	0.000253 (U)	0.000261 (U)
04/20/2016	mg/L	0.000258 (U)	0.000256 (U)	0.000253 (U)	0.000250 (U)
05/11/2016	mg/L	0.000296 (U)	0.000281 (U)	0.000282 (U)	0.000284 (U)
06/01/2016	mg/L	0.000261 (U)	0.000255 (U)	0.000253 (U)	0.000252 (U)
Number > 0.00000046 mg/L		0	0	0	0
Number > 0.02 mg/L		0	0	0	0

WV Category A WQS = 0.00000046 mg/L  
 Primary DWS= 0.02 mg/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000024 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000000024 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000071 mg/L</b>		0	0	0	0

WV Category A WQS =

**0.000000071 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000023 mg/L</b>		0	0	0	0
<b>Number &gt; 0.002 mg/L</b>		0	0	0	0

WV Category A WQS = **0.000023 mg/L**

Primary MCL or TT = **0.002 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.



## Heptachlor

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.00000021 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0004 mg/L</b>		0	0	0	0

WV Category A WQS = **0.00000021 mg/L**

Primary MCL or TT = **0.0004 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000019 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0002 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000019 mg/L**

**Primary MCL or TT = 0.0002 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

## Methoxychlor

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.00000003 mg/L</b>		0	0	0	0
<b>Number &gt; 0.04 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.00000003 mg/L**

**Primary MCL or TT = 0.04 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.



## Toxaphene

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000248 (U)	0.000254 (U)	0.000254 (U)	0.000258 (U)
07/07/2015	mg/L	0.000257 (U)	0.000252 (U)	0.000265 (U)	0.000284 (U)
07/20/2015	mg/L	0.000255 (U)	0.000260 (U)	0.000252 (U)	0.000256 (U)
08/03/2015	mg/L	0.000251 (U)	0.000256 (U)	0.000264 (U)	0.000258 (U)
08/17/2015	mg/L	0.000257 (U)	0.000258 (U)	0.000255 (U)	0.000254 (U)
09/01/2015	mg/L	0.000286 (U)	0.000282 (U)	0.000285 (U)	0.000284 (U)
09/15/2015	mg/L	0.000289 (U)	0.000292 (U)	0.000285 (U)	0.000288 (U)
09/29/2015	mg/L	0.000292 (U)	0.000298 (U)	0.000299 (U)	0.000291 (U)
10/13/2015	mg/L	0.000250 (U)	0.000249 (U)	0.000258 (U)	0.000253 (U)
11/03/2015	mg/L	0.000252 (U)	0.000250 (U)	0.000249 (U)	0.000252 (U)
11/09/2015	mg/L	0.000253 (U)	0.000255 (U)	0.000250 (U)	0.000249 (U)
11/17/2015	mg/L	0.000250 (U)	0.000250 (U)	0.000250 (U)	0.000250 (U)
12/01/2015	mg/L	0.000250 (U)	0.000253 (U)	0.000256 (U)	0.000256 (U)
12/15/2015	mg/L	0.000261 (U)	0.000250 (U)	0.000253 (U)	0.000267 (U)
01/05/2016	mg/L	0.000250 (U)	0.000250 (U)	0.000250 (U)	0.000250 (U)
02/02/2016	mg/L	0.000298 (U)	0.000292 (U)	0.000285 (U)	0.000292 (U)
02/29/2016	mg/L	0.000255 (U)	0.000253 (U)	0.000251 (U)	0.000250 (U)
03/07/2016	mg/L	0.000251 (U)	0.000251 (U)	0.000252 (U)	0.000026 (U)
03/21/2016	mg/L	0.000249 (U)	0.000253 (U)	0.000254 (U)	0.000254 (U)
03/29/2016	mg/L	0.000255 (U)	0.000254 (U)	0.000256 (U)	0.000253 (U)
04/13/2016	mg/L	0.000250 (U)	0.000256 (U)	0.000253 (U)	0.000261 (U)
04/20/2016	mg/L	0.000258 (U)	0.000256 (U)	0.000253 (U)	0.000250 (U)
05/11/2016	mg/L	0.000296 (U)	0.000281 (U)	0.000282 (U)	0.000284 (U)
06/01/2016	mg/L	0.000261 (U)	0.000255 (U)	0.000253 (U)	0.000252 (U)
<b>Number &gt; 0.00000073 mg/L</b>		0	0	0	0
<b>Number &gt; 0.003 mg/L</b>		0	0	0	0

WV Category A WQS = **0.00000073 mg/L**

Primary MCL or TT = **0.003 mg/L**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MDL and the applicable standard.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

WV Category A WQS =

0.000000044 mg/L

Primary MCL or TT =

0.0005 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

WV Category A WQS = 0.000000044 mg/L  
Primary MCL or TT = 0.0005 mg/L



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

WV Category A WQS =

0.000000044 mg/L

Primary MCL or TT =

0.0005 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt;0.0005 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000000044 mg/L**  
**Primary MCL or TT = 0.0005 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

WV Category A WQS =

0.000000044 mg/L

Primary MCL or TT =

0.0005 mg/L



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

WV Category A WQS =

0.000000044 mg/L

Primary MCL or TT =

0.0005 mg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
07/07/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000026 (U)	0.000028 (U)
07/20/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
08/03/2015	mg/L	0.000025 (U)	0.000026 (U)	0.000026 (U)	0.000026 (U)
08/17/2015	mg/L	0.000026 (U)	0.000026 (U)	0.000026 (U)	0.000025 (U)
09/01/2015	mg/L	0.000029 (U)	0.000028 (U)	0.000029 (U)	0.000028 (U)
09/15/2015	mg/L	0.000029 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
09/29/2015	mg/L	0.000029 (U)	0.000030 (U)	0.000030 (U)	0.000029 (U)
10/13/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
11/03/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/09/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
11/17/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
12/01/2015	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000026 (U)
12/15/2015	mg/L	0.000026 (U)	0.000025 (U)	0.000025 (U)	0.000027 (U)
01/05/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
02/02/2016	mg/L	0.000030 (U)	0.000029 (U)	0.000028 (U)	0.000029 (U)
02/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/07/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000026 (U)
03/21/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000025 (U)	0.000025 (U)
03/29/2016	mg/L	0.000025 (U)	0.000025 (U)	0.000026 (U)	0.000025 (U)
04/13/2016	mg/L	0.000025 (U)	0.000026 (U)	0.000025 (U)	0.000026 (U)
04/20/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
05/11/2016	mg/L	0.000030 (U)	0.000028 (U)	0.000028 (U)	0.000028 (U)
06/01/2016	mg/L	0.000026 (U)	0.000026 (U)	0.000025 (U)	0.000025 (U)
<b>Number &gt; 0.000000044 mg/L</b>		0	0	0	0
<b>Number &gt; 0.0005 mg/L</b>		0	0	0	0

**WV Category A WQS = 0.000000044 mg/L**  
**Primary MCL or TT = 0.0005 mg/L**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pg/L	1.20 (U)	0.94 (U)	1.60 (U)	1.80 (U)
07/07/2015	pg/L	1.50 (U)	1.30 (U)	1.00 (U)	1.10 (U)
07/20/2015	pg/L	3.4 (U)	2.8 (U)	2.20 (U)	6.5 (U)
08/03/2015	pg/L	1.30 (U)	0.86 (U)	1.30 (U)	0.80 (U)
08/17/2015	pg/L	0.57 (U)	1.10 (U)	1.50 (U)	1.40 (U)
09/01/2015	pg/L	1.00 (U)	1.10 (U)	1.30 (U)	1.30 (U)
09/15/2015	pg/L	0.95 (U)	2.3 (U)	1.40 (U)	1.60 (U)
09/29/2015	pg/L	2.8 (U)	3.30 (U)	2.80 (U)	4.1 (U)
10/13/2015	pg/L	0.92 (U)	5.00 (U)	4.00 (U)	1.10 (U)
11/03/2015	pg/L	1.90 (U)	1.50 (U)	2.10 (U)	1.70 (U)
11/09/2015	pg/L	2.50 (U)	2.7 (U)	1.60 (U)	2.40 (U)
11/17/2015	pg/L	1.70 (U)	1.20 (U)	0.72 (U)	1.50 (U)
12/01/2015	pg/L	4.10 (U)	4.7 (U)	6.5 (U)	4.40 (U)
12/15/2015	pg/L	0.59 (U)	0.85 (U)	0.57 (U)	0.60 (U)
01/05/2016	pg/L	0.59 (U)	0.70 (U)	1.5 (U)	0.68 (U)
02/02/2016	pg/L	1.80 (U)	1.50 (U)	1.40 (U)	1.70 (U)
02/29/2016	pg/L	1.40 (U)	1.20 (U)	1.30 (U)	0.98 (U)
03/07/2016	pg/L	1.30 (U)	3.70 (U)	3.60 (U)	3.40 (U)
03/21/2016	pg/L	1.80 (U)	2.10 (U)	1.8 (U)	1.6 (U)
03/29/2016	pg/L	0.81 (U)	1.90 (U)	0.83 (U)	2.10 (U)
04/13/2016	pg/L	4.90 (U)	4.10 (U)	3.60 (U)	2.70 (U)
04/20/2016	pg/L	0.51 (U)	0.50 (U)	0.47 (U)	0.43 (U)
05/11/2016	pg/L	1.70 (U)	2.20 (U)	2.50 (U)	1.90 (U)
06/01/2016	pg/L	1.20 (U)	3.6 (U)	3.6 (U)	2.90 (U)
<b>Number &gt; 0.013 pg/L</b>		0	0	0	0
<b>Number &gt; 30 pg/L</b>		0	0	0	0

WV Category A WQS = **0.013 pg/L**  
 Primary MCL or TT = **30 pg/L**

Analytical methods providing the lowest MRL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedance are both above the MRL and the applicable standard.

The sensitivity of the minimum reporting limit is dependent upon the daily calibration curve, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum reporting limit throughout the sampling period is anticipated and acceptable.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	2.26 (U)	2.37 (U)	2.39 (U)	1.56 (U)
07/07/2015	pCi/L	1.61 (U)	2.08 (U)	1.60 (U)	2.03 (U)
07/20/2015	pCi/L	2.57 (U)	0.878 (U)	2.51 (U)	1.75 (U)
08/03/2015	pCi/L	1.94 (U)	2.51 (U)	2.06 (U)	2.10 (U)
08/17/2015	pCi/L	1.86 (U)	1.85 (U)	2.77 (U)	2.02 (U)
09/01/2015	pCi/L	2.09 (U)	2.17 (U)	2.23 (U)	2.32 (U)
09/15/2015	pCi/L	2.40 (U)	1.91 (U)	2.13 (U)	2.64 (U)
09/29/2015	pCi/L	1.70 (U)	2.91 (U)	2.40 (U)	2.27 (U)
10/13/2015	pCi/L	1.57 (U)	4.05 (U)	5.40 (U)	2.71 (U)
11/03/2015	pCi/L	1.49 (U)	1.94 (U)	2.56 (U)	2.61 (U)
11/09/2015	pCi/L	2.11 (U)	1.32 (U)	1.75 (U)	2.24 (U)
11/17/2015	pCi/L	1.94 (U)	1.87 (U)	2.01 (U)	2.38 (U)
12/01/2015	pCi/L	2.38 (U)	2.01 (U)	2.38 (U)	2.17 (U)
12/15/2015	pCi/L	1.65 (U)	2.26 (U)	1.48 (U)	1.91 (U)
01/05/2016	pCi/L	1.14 (U)	1.34 (U)	2.23 (U)	2.05 (U)
02/02/2016	pCi/L	2.09 (U)	1.94 (U)	2.02 (U)	1.79 (U)
02/29/2016	pCi/L	1.97 (U)	1.13 (U)	1.03 (U)	1.44 (U)
03/07/2016	pCi/L	1.24 (U)	1.61 (U)	1.58 (U)	2.23 (U)
03/21/2016	pCi/L	1.26 (U)	2.67 (U)	1.56 (U)	1.86 (U)
03/29/2016	pCi/L	1.57 (U)	2.22 (U)	1.54 (U)	1.94 (U)
04/13/2016	pCi/L	1.47 (U)	1.80 (U)	1.86 (U)	2.09 (U)
04/20/2016	pCi/L	1.37 (U)	1.83 (U)	2.18 (U)	2.09 (U)
05/11/2016	pCi/L	0.991 (U)	2.60 (U)	2.12 (U)	1.64 (U)
06/01/2016	pCi/L	1.77 (U)	1.46 (U)	1.40 (U)	1.31 (U)
Number > 3 pCi/L		0	0	0	0

WV Category A WQS = 3 pCi/L

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot achieve a reporting level lower than the CAWQS. Values reported as an exceedence are both above the MDL and the applicable standard.

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	2.27 (U)	2.03 (U)	2.44 (U)	1.51 (U)
07/07/2015	pCi/L	1.43 (U)	1.97 (U)	1.94 (U)	1.98 (U)
07/20/2015	pCi/L	2.12 (U)	0.842 (U)	0.826 (U)	1.94 (U)
08/03/2015	pCi/L	2.09 (U)	2.55 (U)	2.24 (U)	2.09 (U)
08/17/2015	pCi/L	1.88 (U)	2.67 (U)	2.71 (U)	2.74 (U)
09/01/2015	pCi/L	2.17 (U)	1.95 (U)	13.00 (U)	1.77 (U)
09/15/2015	pCi/L	1.99 (U)	2.18 (U)	2.48 (U)	2.41 (U)
09/29/2015	pCi/L	1.31 (U)	2.60 (U)	2.20 (U)	1.87 (U)
10/13/2015	pCi/L	1.59 (U)	3.56 (U)	2.98 (U)	2.86 (U)
11/03/2015	pCi/L	1.47 (U)	1.63 (U)	1.84 (U)	1.91 (U)
11/09/2015	pCi/L	1.51 (U)	1.64 (U)	1.31 (U)	2.08 (U)
11/17/2015	pCi/L	1.51 (U)	1.98 (U)	2.33 (U)	2.25 (U)
12/01/2015	pCi/L	2.16 (U)	2.82 (U)	1.88 (U)	2.27 (U)
12/15/2015	pCi/L	2.43 (U)	1.70 (U)	2.47 (U)	1.94 (U)
01/05/2016	pCi/L	1.15 (U)	1.61 (U)	1.83 (U)	1.67 (U)
02/02/2016	pCi/L	1.19 (U)	1.70 (U)	2.37 (U)	1.70 (U)
02/29/2016	pCi/L	2.83 (U)	1.18 (U)	1.08 (U)	1.26 (U)
03/07/2016	pCi/L	1.11 (U)	2.50 (U)	2.11 (U)	1.87 (U)
03/21/2016	pCi/L	2.81 (U)	2.92 (U)	1.07 (U)	1.70 (U)
03/29/2016	pCi/L	1.60 (U)	2.12 (U)	2.58 (U)	1.44 (U)
04/13/2016	pCi/L	1.42 (U)	1.52 (U)	2.14 (U)	1.80 (U)
04/20/2016	pCi/L	2.54 (U)	2.19 (U)	2.72 (U)	1.74 (U)
05/11/2016	pCi/L	1.18 (U)	1.42 (U)	1.70 (U)	1.95 (U)
06/01/2016	pCi/L	1.76 (U)	1.27 (U)	1.49	1.28 (U)
<b>Number &gt; 15 pCi/L</b>		0	0	0	0
<b>Number &gt; 15 pCi/L</b>		0	0	0	0

WV Category A WQS = 15 pCi/L  
 Primary DWS= 15 pCi/L

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	1.72	2.40 (U)	3.16 (U)	2.42 (U)
07/07/2015	pCi/L	1.68 (U)	2.47 (U)	1.95 (U)	1.81 (U)
07/20/2015	pCi/L	2.03	1.36	1.62	1.87 (U)
08/03/2015	pCi/L	2.08	2.39 (U)	2.15	2.10 (U)
08/17/2015	pCi/L	2.17 (U)	2.17 (U)	1.74 (U)	2.50 (U)
09/01/2015	pCi/L	1.80 (U)	1.70	1.98	1.83 (U)
09/15/2015	pCi/L	1.82 (U)	1.89	2.00 (U)	1.86 (U)
09/29/2015	pCi/L	1.54 (U)	3.67 (U)	2.47 (U)	2.21 (U)
10/13/2015	pCi/L	1.14	3.29 (U)	3.20 (U)	2.35 (U)
11/03/2015	pCi/L	2.76	2.12 (U)	2.33 (U)	2.78
11/09/2015	pCi/L	1.78 (U)	2.27	1.71 (U)	1.69 (U)
11/17/2015	pCi/L	1.51 (U)	1.52 (U)	2.03	1.84 (U)
12/01/2015	pCi/L	1.84 (U)	2.35 (U)	1.72 (U)	2.89
12/15/2015	pCi/L	1.97 (U)	1.82 (U)	1.81 (U)	2.66
01/05/2016	pCi/L	1.69 (U)	2.60 (U)	2.26 (U)	2.31 (U)
02/02/2016	pCi/L	1.40 (U)	2.18	1.78 (U)	1.76 (U)
02/29/2016	pCi/L	3.01 (U)	1.13 (U)	1.15 (U)	1.12 (U)
03/07/2016	pCi/L	1.98 (U)	1.78 (U)	2.26 (U)	1.69 (U)
03/21/2016	pCi/L	3.36 (U)	2.79 (U)	1.35	1.49 (U)
03/29/2016	pCi/L	1.83 (U)	1.77 (U)	1.76 (U)	2.01 (U)
04/13/2016	pCi/L	2.44 (U)	2.06 (U)	2.34 (U)	2.29 (U)
04/20/2016	pCi/L	1.86 (U)	2.32 (U)	1.90 (U)	1.94 (U)
05/11/2016	pCi/L	1.70 (U)	1.72 (U)	1.89 (U)	2.26 (U)
06/01/2016	pCi/L	1.83 (U)	2.01	3.17	1.89 (U)
Number >1000 pCi/L		0	0	0	0

WV Category A WQS = 1,000 pCi/L

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	0.537 (U)	0.628 (U)	0.745 (U)	0.435 (U)
07/07/2015	pCi/L	0.758 (U)	0.728 (U)	1.15	0.887 (U)
07/20/2015	pCi/L	0.301	0.617 (U)	0.825 (U)	0.713 (U)
08/03/2015	pCi/L	0.978 (U)	0.425 (U)	0.997 (U)	0.202
08/17/2015	pCi/L	0.334	0.871 (U)	0.837 (U)	0.327
09/01/2015	pCi/L	0.888 (U)	0.928 (U)	0.961 (U)	0.848 (U)
09/15/2015	pCi/L	0.999 (U)	0.944 (U)	8.21 (U)	5.50 (U)
09/29/2015	pCi/L	1.13 (U)	0.794 (U)	0.979 (U)	0.986 (U)
10/13/2015	pCi/L	0.972 (U)	0.709 (U)	0.857 (U)	0.653 (U)
11/03/2015	pCi/L	0.865 (U)	0.16 (U)	0.591 (U)	0.656 (U)
11/09/2015	pCi/L	0.568 (U)	0.494 (U)	0.412 (U)	0.881 (U)
11/17/2015	pCi/L	0.653 (U)	0.421 (U)	0.810 (U)	0.409 (U)
12/01/2015	pCi/L	0.409 (U)	0.602 (U)	0.734	0.368 (U)
12/15/2015	pCi/L	0.765 (U)	0.322	0.793 (U)	0.807 (U)
01/05/2016	pCi/L	0.833 (U)	0.784 (U)	0.669 (U)	0.502 (U)
02/02/2016	pCi/L	0.843 (U)	0.244	0.620 (U)	0.811 (U)
02/29/2016	pCi/L	0.745 (U)	0.949 (U)	0.698 (U)	0.680 (U)
03/07/2016	pCi/L	0.223	0.799 (U)	0.620 (U)	0.801 (U)
03/21/2016	pCi/L	0.731 (U)	0.850 (U)	0.792 (U)	0.788 (U)
03/29/2016	pCi/L	0.611 (U)	0.977 (U)	0.255 (U)	0.820 (U)
04/13/2016	pCi/L	0.707 (U)	0.948 (U)	0.703 (U)	0.716 (U)
04/20/2016	pCi/L	0.674 (U)	0.660 (U)	0.991 (U)	0.488 (U)
05/11/2016	pCi/L	0.794 (U)	0.687 (U)	0.598 (U)	0.991 (U)
06/01/2016	pCi/L	0.825 (U)	0.446 (U)	0.498 (U)	0.827 (U)
Number > 5 pCi/L		0	0	0	0
Number > 5 pCi/L		0	0	0	0

WV Category A WQS = 5 pCi/L  
 Primary DWS = 5 pCi/L

Analytical methods providing the lowest MRL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot consistently achieve a reporting level lower than the CAWQS and PDWS. Values reported as an exceedance are both above the MRL and the applicable standard.

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	0.933 (U)	0.898 (U)	0.911 (U)	0.761 (U)
07/07/2015	pCi/L	0.892 (U)	0.820 (U)	0.903 (U)	0.702 (U)
07/20/2015	pCi/L	0.968 (U)	0.738 (U)	0.832 (U)	0.912 (U)
08/03/2015	pCi/L	0.871 (U)	0.729 (U)	0.823 (U)	0.762 (U)
08/17/2015	pCi/L	0.946 (U)	0.693 (U)	0.732 (U)	0.698 (U)
09/01/2015	pCi/L	0.809 (U)	0.887 (U)	0.823 (U)	0.881 (U)
09/15/2015	pCi/L	3.06	0.858 (U)	6.72 (U)	7.77 (U)
09/29/2015	pCi/L	0.714 (U)	0.726 (U)	0.699 (U)	0.838 (U)
10/13/2015	pCi/L	0.913 (U)	0.887 (U)	0.938 (U)	0.977
11/03/2015	pCi/L	1.13	0.650 (U)	0.702 (U)	0.702 (U)
11/09/2015	pCi/L	0.849 (U)	0.659 (U)	0.611 (U)	0.920
11/17/2015	pCi/L	0.601 (U)	0.862	0.737 (U)	0.597 (U)
12/01/2015	pCi/L	0.767 (U)	0.765 (U)	0.692 (U)	0.749 (U)
12/15/2015	pCi/L	0.747 (U)	0.811 (U)	0.769	0.736 (U)
01/05/2016	pCi/L	0.855 (U)	0.750 (U)	0.640 (U)	0.711 (U)
02/02/2016	pCi/L	0.657 (U)	0.709 (U)	0.634 (U)	0.676 (U)
02/29/2016	pCi/L	0.901 (U)	0.842 (U)	0.783 (U)	0.917 (U)
03/07/2016	pCi/L	0.820 (U)	0.925 (U)	0.782 (U)	0.836 (U)
03/21/2016	pCi/L	0.674 (U)	0.782 (U)	0.928 (U)	0.854 (U)
03/29/2016	pCi/L	0.883 (U)	0.994 (U)	1.13 (U)	0.995 (U)
04/13/2016	pCi/L	0.845	0.682 (U)	0.768 (U)	0.754 (U)
04/20/2016	pCi/L	0.696 (U)	0.757 (U)	0.679 (U)	0.781 (U)
05/11/2016	pCi/L	0.735 (U)	0.753 (U)	0.839 (U)	0.752 (U)
06/01/2016	pCi/L	0.711 (U)	0.818	0.574 (U)	0.738
Number > 5 pCi/L		0	0	0	0
Number > 5 pCi/L		0	0	0	0

WV Category A WQS = 5 pCi/L

Primary DWS = 5 pCi/L

Analytical methods providing the lowest MRL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot consistently achieve a reporting level lower than the CAWQS and PDWS. Values reported as an exceedance are both above the MRL and the applicable standard.

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

**Strontium-90 (dissolved)**

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	1.500 (U)	1.53 (U)	1.39 (U)	1.68 (U)
07/07/2015	pCi/L	0.934 (U)	1.02 (U)	0.832 (U)	0.997 (U)
07/20/2015	pCi/L	1.34 (U)	1.94 (U)	1.37 (U)	1.37 (U)
08/03/2015	pCi/L	0.858 (U)	0.855 (U)	0.937 (U)	0.722 (U)
08/17/2015	pCi/L	0.806 (U)	0.751 (U)	0.743 (U)	0.788 (U)
09/01/2015	pCi/L	1.05 (U)	1.14 (U)	1.26 (U)	0.798 (U)
09/15/2015	pCi/L	0.494 (U)	0.522 (U)	0.523 (U)	0.511 (U)
09/29/2015	pCi/L	1.52 (U)	1.44 (U)	1.60 (U)	1.40 (U)
10/13/2015	pCi/L	0.579 (U)	0.416 (U)	0.527 (U)	0.451 (U)
11/03/2015	pCi/L	0.383 (U)	0.356 (U)	0.429 (U)	0.355 (U)
11/09/2015	pCi/L	3.97 (U)	2.750 (U)	2.29 (U)	2.56 (U)
11/17/2015	pCi/L	1.84 (U)	1.85 (U)	1.81 (U)	1.61 (U)
12/01/2015	pCi/L	1.53 (U)	1.61 (U)	1.51 (U)	1.51 (U)
12/15/2015	pCi/L	0.792 (U)	0.896 (U)	0.827 (U)	0.751 (U)
01/05/2016	pCi/L	1.300 (U)	1.61 (U)	1.14 (U)	1.10 (U)
02/02/2016	pCi/L	1.14 (U)	1.22 (U)	1.18 (U)	1.21 (U)
02/29/2016	pCi/L	1.11 (U)	1.19 (U)	1.27 (U)	1.06 (U)
03/07/2016	pCi/L	1.06 (U)	1.16 (U)	1.17 (U)	1.06 (U)
03/21/2016	pCi/L	0.439 (U)	1.04 (U)	0.982 (U)	1.35 (U)
03/29/2016	pCi/L	0.882 (U)	0.888 (U)	0.798 (U)	0.817 (U)
04/13/2016	pCi/L	0.894 (U)	0.889 (U)	0.905 (U)	0.925 (U)
04/20/2016	pCi/L	1.08 (U)	1.20 (U)	1.08 (U)	1.47 (U)
05/11/2016	pCi/L	1.11 (U)	1.32 (U)	1.11 (U)	0.992 (U)
06/01/2016	pCi/L	0.961 (U)	0.948 (U)	1.38 (U)	0.991 (U)
<b>Number &gt; 10 pCi/L</b>		0	0	0	0

**WV Category A WQS = 10 pCi/L**

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	246 (U)	258 (U)	228 (U)	254 (U)
07/07/2015	pCi/L	239 (U)	239 (U)	258 (U)	249 (U)
07/20/2015	pCi/L	275 (U)	254 (U)	239 (U)	255 (U)
08/03/2015	pCi/L	228 (U)	242 (U)	243 (U)	254 (U)
08/17/2015	pCi/L	285 (U)	285 (U)	256 (U)	277 (U)
09/01/2015	pCi/L	253 (U)	262 (U)	273 (U)	267 (U)
09/15/2015	pCi/L	246 (U)	232 (U)	251 (U)	252 (U)
09/29/2015	pCi/L	256 (U)	236 (U)	231 (U)	904
10/13/2015	pCi/L	241 (U)	242 (U)	243 (U)	240 (U)
11/03/2015	pCi/L	247 (U)	246 (U)	249 (U)	249 (U)
11/09/2015	pCi/L	257 (U)	256 (U)	254 (U)	255 (U)
11/17/2015	pCi/L	243 (U)	279 (U)	281 (U)	280 (U)
12/01/2015	pCi/L	285 (U)	285 (U)	286 (U)	285 (U)
12/15/2015	pCi/L	239 (U)	238 (U)	237 (U)	239 (U)
01/05/2016	pCi/L	244 (U)	587	244 (U)	244 (U)
02/02/2016	pCi/L	246 (U)	244 (U)	246 (U)	242 (U)
02/29/2016	pCi/L	256 (U)	247 (U)	245 (U)	246 (U)
03/07/2016	pCi/L	246 (U)	262 (U)	257 (U)	261 (U)
03/21/2016	pCi/L	265 (U)	264 (U)	268 (U)	267 (U)
03/29/2016	pCi/L	247 (U)	1,750	1,151	246 (U)
04/13/2016	pCi/L	273 (U)	273 (U)	269 (U)	272 (U)
04/20/2016	pCi/L	227 (U)	226 (U)	224 (U)	242 (U)
05/11/2016	pCi/L	249 (U)	249 (U)	245 (U)	250 (U)
06/01/2016	pCi/L	249 (U)	272 (U)	249 (U)	255 (U)
Number > 20000 pCi/L		0	0	0	0

**Primary DWS = 20,000 pCi/L**

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.202
07/07/2015	pCi/L	0.194	0.193 (U)	0.193 (U)	0.193 (U)
07/20/2015	pCi/L	0.193 (U)	0.271	0.294	0.193 (U)
08/03/2015	pCi/L	0.193 (U)	0.215	0.408	0.233
08/17/2015	pCi/L	0.201	0.385 (U)	0.212	0.216
09/01/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
09/15/2015	pCi/L	1.927 (U)	0.224	0.197	0.193 (U)
09/29/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	10.9
10/13/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
11/03/2015	pCi/L	0.257	0.231	0.200	0.193 (U)
11/09/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
11/17/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
12/01/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
12/15/2015	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
01/05/2016	pCi/L	0.233	0.235	0.193 (U)	0.193 (U)
02/02/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.196
02/29/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
03/07/2016	pCi/L	0.197	0.266	0.248	0.287
03/21/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
03/29/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
04/13/2016	pCi/L	0.207	0.195	0.204	0.198
04/20/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
05/11/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
06/01/2016	pCi/L	0.193 (U)	0.193 (U)	0.193 (U)	0.193 (U)
<b>Number &gt;20 pCi/L</b>		0	0	0	0

**Primary DWS = 20 pCi/L**

The sensitivity of the minimum detectable concentration is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the minimum detectable concentration throughout the sampling period is anticipated and acceptable.

Testing for the presence of uranium in drinking water can be done using several methods approved by USEPA. Depending on the analytical method, uranium can be measured either as the activity of the radionuclide where the results are reported in units of picocuries per liter (pCi/l), or uranium can be measured as the mass of the isotope and the results are reported in mg/l or ug/l. Uranium was reported by the laboratory in pCi/L. The PDWS is presented as ug/L. For review of this data, the PDWS was converted from ug/L to pCi/L using a conservative activity to mass ratio of 0.67 pCi/ug.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	MFL	0.20 (U)	0.20 (U)	0.51 (U)	0.51 (U)
07/07/2015	MFL	1.00 (U)	0.51 (U)	1.00 (U)	1.00 (U)
07/20/2015	MFL	0.19 (U)	0.51 (U)	0.51 (U)	0.51 (U)
08/03/2015	MFL	0.20 (U)	0.51 (U)	0.51 (U)	0.51 (U)
08/17/2015	MFL	0.20 (U)	0.52 (U)	0.52 (U)	0.52 (U)
09/01/2015	MFL	0.49 (U)	0.49 (U)	0.19 (U)	0.49 (U)
09/15/2015	MFL	1.00 (U)	1.00 (U)	1.00 (U)	1.00 (U)
09/29/2015	MFL	0.51 (U)	0.51 (U)	0.51 (U)	0.51 (U)
10/13/2015	MFL	0.49 (U)	0.20 (U)	0.20 (U)	0.52 (U)
11/03/2015	MFL	0.52 (U)	0.52 (U)	1.00 (U)	0.52 (U)
11/09/2015	MFL	10.00 (U)	5.10 (U)	10.00 (U)	10.00 (U)
11/17/2015	MFL	1.00 (U)	1.00 (U)	0.52 (U)	0.52 (U)
12/01/2015	MFL	0.53 (U)	0.53 (U)	0.53 (U)	0.20 (U)
12/15/2015	MFL	0.53 (U)	0.52 (U)	0.52 (U)	0.52 (U)
01/05/2016	MFL	0.20 (U)	0.20 (U)	0.20 (U)	0.20 (U)
02/02/2016	MFL	0.53 (U)	0.53 (U)	0.53 (U)	0.53 (U)
02/29/2016	MFL	0.51 (U)	0.20 (U)	0.51 (U)	0.51 (U)
03/07/2016	MFL	0.20 (U)	0.50 (U)	0.50 (U)	0.50 (U)
03/21/2016	MFL	0.20 (U)	0.53 (U)	0.53 (U)	0.53 (U)
03/29/2016	MFL	1.10 (U)	1.10 (U)	1.00 (U)	1.00 (U)
04/13/2016	MFL	0.52 (U)	0.19 (U)	0.19 (U)	0.19 (U)
04/20/2016	MFL	0.20 (U)	1.10 (U)	0.20 (U)	0.20 (U)
05/11/2016	MFL	0.50 (U)	18.00 (U)	18.00 (U)	18.00 (U)
06/01/2016	MFL	0.54 (U)	0.54 (U)	0.54 (U)	0.54 (U)
<b>Number &gt; 7 MFL</b>		0	0	0	0

**PrimaryDWS = 7 MFL**

Analytical methods providing the lowest MDL available from a WVDEP-certified lab for raw water were used for the analysis. However, the available analytical method cannot consistently achieve a reporting level lower than the PDWS. Values reported as an exceedance are both above the MDL and the applicable standard.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.



1,1-Dichloroethane

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.030 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
07/07/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)	
07/20/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/29/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
10/13/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/09/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
01/05/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
02/02/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U,S)		0.015 (U)		0.015 (U)		0.015 (U)	
02/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/07/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/21/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/13/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/20/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
05/11/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
06/01/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
Number > 0.03 µg/L		0		0		0		0		0		0		0		0	
Number > 6.14 µg/L		0		0		0		0		0		0		0		0	
Number > 614 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.03 µg/L  
 UCMR3 RC = 6.14 to 614 µg/L





1,2,3-Trichloropropane

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.030 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
07/07/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)	
07/20/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/29/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
10/13/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/09/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
01/05/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
02/02/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U,S)		0.015 (U)		0.015 (U)	
02/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/07/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/21/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/13/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/20/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
05/11/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
06/01/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
Number > 0.03 µg/L		0		0		0		0		0		0		0		0	
Number >0.0004 µg/L		0		0		0		0		0		0		0		0	
Number >0.04 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.03 µg/L  
 UCMR3 RC = 0.0004 to 0.04 µg/L

The EPA UCMR3-approved analytical method was used for the analysis. However, the analytical method cannot achieve a reporting level as low as the lower end of the RC range. Values reported as an exceedance are both above the MRL and the RC.



1,2,3-Trichloropropane

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
07/07/2015	µg/L	0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)		0.030 (U)	
07/20/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
08/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
09/29/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
10/13/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/03/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/09/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
11/17/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/01/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
12/15/2015	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
01/05/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
02/02/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U,S)		0.015 (U)	
02/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/07/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/21/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
03/29/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U,S)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/13/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
04/20/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
05/11/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
06/01/2016	µg/L	0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)		0.015 (U)	
Number > 0.03 µg/L		0		0		0		0		0		0		0		0	
Number >0.0004 µg/L		0		0		0		0		0		0		0		0	
Number >0.04 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.03 µg/L  
 UCMR3 RC = 0.0004 to 0.04 µg/L

The EPA UCMR3-approved analytical method was used for the analysis. However, the analytical method cannot achieve a reporting level as low as the lower end of the RC range. Values reported as an exceedance are both above the MRL and the RC.

1,3-Butadiene

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.10 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.10 (U)	0.050 (U)	0.050 (U)
07/07/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.10 (U)	0.050 (U)	0.10 (U)	0.050 (U)	0.050 (U)	0.10 (U)	0.050 (U)	0.050 (U)
07/20/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (S,U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
08/03/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
08/17/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
09/01/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
09/15/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
09/29/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
10/13/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
11/03/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
11/09/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
11/17/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
12/01/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
12/15/2015	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
01/05/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U,S)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
02/02/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
02/29/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
03/07/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
03/21/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
03/29/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
04/13/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
04/20/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
05/11/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
06/01/2016	µg/L	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)	0.050 (U)
Number > 0.1 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number > 0.0103 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number > 1.03 µg/L		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

UCMR3 MRL = 0.1 µg/L  
 UCMR3 RC = 0.0103 to 1.03 µg/L

The EPA UCMR3-approved analytical method was used for the analysis. However, the analytical method cannot achieve a reporting level as low as the lower end of the RC range. Values reported as an exceedance are both above the MRL and the RC.

1,3-Butadiene

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
07/07/2015	µg/L	0.10 (U)		0.10 (U)		0.10 (U)		0.10 (U)		0.10 (U)		0.10 (U)		0.10 (U)		0.10 (U)	
07/20/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
08/03/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
08/17/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
09/01/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
09/15/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
09/29/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
10/13/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
11/03/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
11/09/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
11/17/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
12/01/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
12/15/2015	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
01/05/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
02/02/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U,S)		0.050 (U)	
02/29/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
03/07/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
03/21/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
03/29/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
04/13/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
04/20/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
05/11/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
06/01/2016	µg/L	0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)		0.050 (U)	
Number > 0.1 µg/L		0		0		0		0		0		0		0		0	
Number > 0.103 µg/L		0		0		0		0		0		0		0		0	
Number > 1.03 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.1 µg/L

UCMR3 RC = 0.0103 to 1.03 µg/L

The EPA UCMR3-approved analytical method was used for the analysis. However, the analytical method cannot achieve a reporting level as low as the lower end of the RC range. Values reported as an exceedance are both above the MRL and the RC.



Bromochloromethane (Halon 1011)

Date	Units	MNT-1-T		MNT-1-B		MNT-2-T		MNT-2-B		M-1-T		M-1-B		M-2-T		M-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.060	(U)	0.030	(U)	0.030	(U)	0.030	(U)
07/07/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.060	(U)	0.060	(U)	0.060	(U)	0.060	(U)
07/20/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
08/03/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
08/17/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
09/01/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
09/15/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
09/29/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
10/13/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
11/03/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
11/09/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
11/17/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
12/01/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
12/15/2015	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
01/05/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U,S)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
02/02/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
02/29/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
03/07/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
03/21/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
03/29/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
04/13/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
04/20/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
05/11/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
06/01/2016	µg/L	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)	0.030	(U)
Number > 0.06 µg/L		0		0		0		0		0		0		0		0	
Number > 90 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.06 µg/L  
 UCMR# RC = 90 µg/L



**Bromomethane (2)**

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.20 (U)	0.10 (U)	0.10 (U)	0.10 (U)
07/07/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.20 (U)	0.20 (U)	0.20 (U)	0.20 (U)
07/20/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
08/03/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
08/17/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/01/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/15/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/29/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
10/13/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/03/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/09/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/17/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
12/01/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
12/15/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
01/05/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
02/02/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U,S)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
02/29/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/07/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/21/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/29/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
04/13/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
04/20/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
05/11/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
06/01/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
Number > 0.2 µg/L		0	0	0	0	0	0	0	0
Number > 140 µg/L		0	0	0	0	0	0	0	0

UCMR3 MRL = 0.2 µg/L  
 UCMR3 RC = 140 µg/L



Bromomethane (2)

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
07/07/2015	µg/L	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)
07/20/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
08/03/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
08/17/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
09/01/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
09/15/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
09/29/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
10/13/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/03/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/09/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/17/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
12/01/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
12/15/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
01/05/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
02/02/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U,S)	0.10	(U)	0.10	(U)
02/29/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
03/07/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
03/21/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U,S)
03/29/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
04/13/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
04/20/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
05/11/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
06/01/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
Number > 0.2 µg/L		0		0		0		0		0		0		0		0	
Number > 140 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.2 µg/L  
 UCMR3 RC = 140 µg/L

Chlorodifluoromethane (HCFC-22)

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.080 (U)	0.040 (U)	0.040 (U)	0.040 (U)
07/07/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.080 (U)	0.080 (U)	0.080 (U)	0.080 (U)
07/20/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
08/03/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
08/17/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
09/01/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
09/15/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
09/29/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
10/13/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
11/03/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
11/09/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
11/17/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
12/01/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
12/15/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
01/05/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U,S)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
02/02/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
02/29/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
03/07/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
03/21/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
03/29/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
04/13/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
04/20/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
05/11/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
06/01/2016	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
Number > 0.08 µg/L		0	0	0	0	0	0	0	0

UCMR3 MRL = 0.08 µg/L

UCMR3 RC = Not applicable





Chloromethane (Methyl Chloride)

Date	Units	MNT-1-T	MNT-1-B	MNT-2-T	MNT-2-B	M-1-T	M-1-B	M-2-T	M-2-B
		Result	Result	Result	Result	Result	Result	Result	Result
06/24/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.20 (U)	0.10 (U)	0.10 (U)	0.10 (U)
07/07/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.20 (U)	0.20 (U)	0.20 (U)	0.20 (U)
07/20/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
08/03/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
08/17/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/01/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/15/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
09/29/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
10/13/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/03/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/09/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
11/17/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
12/01/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
12/15/2015	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
01/05/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
02/02/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
02/29/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/07/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/21/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
03/29/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
04/13/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
04/20/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
05/11/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
06/01/2016	µg/L	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)	0.10 (U)
Number > 0.2 µg/L		0	0	0	0	0	0	0	0
Number > 2.69 µg/L		0	0	0	0	0	0	0	0
Number > 269 µg/L		0	0	0	0	0	0	0	0

UCMR3 MRL = 0.2 µg/L  
 UCMR3 RC = 2.69 to 269 µg/L

Chloromethane (Methyl Chloride)

Date	Units	ES-1-T		ES-1-B		ES-2-T		ES-2-B		CH-1-T		CH-1-B		CH-2-T		CH-2-B	
		Result		Result		Result		Result		Result		Result		Result		Result	
06/24/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
07/07/2015	µg/L	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)	0.20	(U)
07/20/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
08/03/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
08/17/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U,S)	0.10	(U)	0.10	(U)
09/01/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
09/15/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
09/29/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
10/13/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/03/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/09/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
11/17/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
12/01/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
12/15/2015	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
01/05/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U,S)	0.10	(U)	0.10	(U)
02/02/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
02/29/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
03/07/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U,S)
03/21/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
03/29/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
04/13/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
04/20/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
05/11/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
06/01/2016	µg/L	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)	0.10	(U)
Number > 0.2 µg/L		0		0		0		0		0		0		0		0	
Number > 2.69 µg/L		0		0		0		0		0		0		0		0	
Number > 269 µg/L		0		0		0		0		0		0		0		0	

UCMR3 MRL = 0.2 µg/L

UCMR3 RC = 2.69 to 269 µg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.014 (U)	0.18 (S)	0.17	0.19
07/07/2015	µg/L	0.014 (U)	0.27	0.29	0.28
07/20/2015	µg/L	<b>0.014 (U)</b>	<b>0.24</b>	<b>0.23</b>	<b>0.19</b>
08/03/2015	µg/L	0.014 (U)	0.063	0.061	0.097
08/17/2015	µg/L	0.014 (U)	0.054	0.05	0.054
09/01/2015	µg/L	<b>0.014 (U)</b>	<b>0.014 (U)</b>	--	<b>0.036</b>
09/15/2015	µg/L	0.014 (U)	0.014 (U)	0.014 (U)	0.014 (U)
09/29/2015	µg/L	0.014 (U)	0.71	0.79	0.70
10/13/2015	µg/L	0.043	0.53	0.44	0.43
11/03/2015	µg/L	0.014 (U)	0.36	0.37	0.37
11/09/2015	µg/L	0.014 (U)	0.075	0.070	0.079
11/17/2015	µg/L	0.014 (U)	0.20	0.18	0.18
12/01/2015	µg/L	0.014 (U)	0.014 (U)	0.014 (U)	0.014 (U)
12/15/2015	µg/L	0.014 (U)	0.014 (U)	0.014 (U)	0.014 (U)
01/05/2016	µg/L	0.014 (U)	0.019	0.034	0.018
02/02/2016	µg/L	0.014 (U)	0.014 (U)	0.014 (U)	0.014 (U)
02/29/2016	µg/L	<b>0.014 (U)</b>	<b>0.036</b>	<b>0.26</b>	<b>0.25</b>
03/07/2016	µg/L	0.014 (U)	0.32	0.26	0.23
03/21/2016	µg/L	0.099	0.38	0.46	0.36
03/29/2016	µg/L	0.018	0.14	0.14	0.11
04/13/2016	µg/L	0.014 (U)	0.14	0.26	0.090
04/20/2016	µg/L	0.032	0.28	0.23	0.23
05/11/2016	µg/L	<b>0.036</b>	<b>0.036</b>	<b>0.028</b>	<b>0.039</b>
06/01/2016	µg/L	0.014 (U)	0.014 (U)	0.14	0.014 (U)
<b>Number &gt; 0.07 µg/L</b>		1	13	15	15
<b>Number &gt; 0.35 µg/L</b>		0	4	4	4
<b>Number &gt; 35 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.07 µg/L

UCMR3 RC = 0.35 to 35 µg/L

07/20/2015 - 0.048 µg/L detected in field blank.

09/01/2015 - 0.064 µg/L detected in field blank.

02/29/2016 - 0.23 µg/L detected in field blank.

05/11/2016 - 0.063 µg/L detected in field blank.

Data are not available for ES-C on 9/1/2015 because the sample was broken at the laboratory.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.



## Hexavalent Chromium (2)

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.024	0.035	0.030	0.030
07/07/2015	µg/L	0.028	0.033	0.039	0.038
07/20/2015	µg/L	0.062	0.073	0.072	0.068
08/03/2015	µg/L	0.0060 (U)	0.0060 (U)	0.0060 (U)	0.0060 (U)
08/17/2015	µg/L	0.049	0.038	0.044	0.038
09/01/2015	µg/L	0.038	0.044	0.046	0.041
09/15/2015	µg/L	0.029	0.035	0.037	0.032
09/29/2015	µg/L	0.036	0.043	0.047	0.034
10/13/2015	µg/L	0.038	0.047	0.049	0.029
11/03/2015	µg/L	0.011	0.045	0.037	0.032
11/09/2015	µg/L	0.025	0.027	0.0060 (U)	0.017
11/17/2015	µg/L	0.0060 (U)	0.0060 (U)	0.0060 (U)	0.0060 (U)
12/01/2015	µg/L	0.039	0.028	0.044	0.055
12/15/2015	µg/L	0.046	0.026	0.030	0.025
01/05/2016	µg/L	0.023	0.021	0.026	0.025
02/02/2016	µg/L	0.050	0.053	0.063	0.058
02/29/2016	µg/L	0.072	0.061	0.047	0.060
03/07/2016	µg/L	0.060	0.043	0.035	0.066
03/21/2016	µg/L	0.038	0.034	0.033	0.037
03/29/2016	µg/L	0.016	0.025	0.015	0.021
04/13/2016	µg/L	0.028	0.041	0.025	0.029
04/20/2016	µg/L	0.041	0.029	0.033	0.025
05/11/2016	µg/L	0.037	0.035	0.058	0.055
06/01/2016	µg/L	0.044	0.032	0.037	0.027
<b>Number &gt; 0.03 µg/L</b>		14	16	18	14

UCM3R MRL = 0.03 µg/L  
 UCMR3 RC = Not applicable

06/01/2016 - MNT-C field duplicate exceeded 30 percent RPD.

## Total Chromium (2)

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.35	0.25	0.30	0.29
07/07/2015	µg/L	0.33	0.34	0.31	0.32
07/20/2015	µg/L	0.25	0.39	0.26	0.24
08/03/2015	µg/L	0.39	0.36	0.36	0.39
08/17/2015	µg/L	0.33	0.31	0.31	0.34
09/01/2015	µg/L	0.44	0.37	0.42	0.44
09/15/2015	µg/L	0.35	0.33	0.34	0.32
09/29/2015	µg/L	0.31	0.30	0.34	0.33
10/13/2015	µg/L	0.47	0.45	0.45	0.48
11/03/2015	µg/L	0.21	0.35	0.24	0.23
11/09/2015	µg/L	0.48	0.23	0.23	0.22
11/17/2015	µg/L	0.28	0.16	0.19	0.23
12/01/2015	µg/L	0.31	0.31	0.50	0.30
12/15/2015	µg/L	0.22	0.31	0.36	0.19
01/05/2016	µg/L	0.21	0.28	0.47	0.48
02/02/2016	µg/L	0.40	0.50	0.60	0.26
02/29/2016	µg/L	0.46	0.53	0.65	0.58
03/07/2016	µg/L	0.48	0.46	0.46	0.50
03/21/2016	µg/L	3.3	4.0	0.49	0.47
03/29/2016	µg/L	0.47	0.43	0.45	0.40
04/13/2016	µg/L	0.46	0.32	0.43	0.44
04/20/2016	µg/L	0.40	0.40	0.40	0.51
05/11/2016	µg/L	0.7	0.8	0.6	0.7
06/01/2016	µg/L	0.7	0.7	0.7	0.7
<b>Number &gt; 0.03 µg/L</b>		24	24	24	24
<b>Number &gt; 100 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.03 µg/L

UCMR3 RC = 100 µg/L

09/01/2015 - 0.012 µg/L detected in field blank.

11/19/2015 - MNT-C field duplicate exceeded 30 percent RPD.

02/29/2016 - 0.22 µg/L detected in field blank.

5/11/2016 = 0.4 µg/L detected in field blank.

A different laboratory performed the analysis for 5/11/2016 and 6/01/2016.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.33 (U)	0.33 (U)	0.37	0.33 (U)
07/07/2015	µg/L	0.48	1.0 (U)	1.0 (U)	1.0 (U)
07/20/2015	µg/L	0.33 (U)	0.38	0.39	0.37
08/03/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
08/17/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
09/01/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
09/15/2015	µg/L	0.33 (U)	0.35	0.35	0.33 (U)
09/29/2015	µg/L	0.33 (U)	0.41	0.46	0.35
10/13/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
11/03/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
11/09/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
11/17/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
12/01/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
12/15/2015	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
01/05/2016	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
02/02/2016	µg/L	0.52	0.71	0.82	0.67
02/29/2016	µg/L	0.33 (U)	0.40	0.44	0.38
03/07/2016	µg/L	0.33 (U)	0.52	0.51	0.51
03/21/2016	µg/L	0.33 (U)	0.49	0.38	0.36
03/29/2016	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
04/13/2016	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
04/20/2016	µg/L	0.33 (U)	0.33 (U)	0.33 (U)	0.33 (U)
05/11/2016	µg/L	1.0 (U)	1.0 (U)	1.0 (U)	1.0 (U)
06/01/2016	µg/L	1.0 (U)	1.0 (U)	1.0 (U)	1.0 (U)
Number > 1 µg/L		0	0	0	0
Number > 70 µg/L		0	0	0	0

UCMR3 MRL = 1 µg/L  
 UCMR3 RC = 70 µg/L

A different laboratory performed the analysis for 5/11/2016 and 6/01/2016, using an MDL of 1.0 µg/L.



**Moybdenum**

Date	Units	MNT-C		M-C		ES-C		CH-C	
		Result		Result		Result		Result	
06/24/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
07/07/2015	µg/L	0.33	(U)	1.0	(U)	1.0	(U)	1.0	(U)
07/20/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
08/03/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
08/17/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
09/01/2015	µg/L	0.34		0.33	(U)	0.33	(U)	0.33	(U)
09/15/2015	µg/L	0.33	(U)	0.33		0.33	(U)	0.33	(U)
09/29/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
10/13/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
11/03/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
11/09/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
11/17/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
12/01/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
12/15/2015	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
01/05/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
02/02/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
02/29/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
03/07/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
03/21/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
03/29/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
04/13/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
04/20/2016	µg/L	0.33	(U)	0.33	(U)	0.33	(U)	0.33	(U)
05/11/2016	µg/L	1.0	(U)	1.0	(U)	1.0	(U)	1.0	(U)
06/01/2016	µg/L	1.0	(U)	1.0	(U)	1.0	(U)	1.0	(U)
<b>Number &gt; 1 µg/L</b>		0		0		0		0	
<b>Number &gt; 40 µg/L</b>		0		0		0		0	

UCMR3 MRL = 1 µg/L  
 UCMR3 RC = 40 µg/L

## Strontium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	79.8	151	142	136
07/07/2015	µg/L	89.4	102	102	101
07/20/2015	µg/L	77.2	107	107	108
08/03/2015	µg/L	104	157	150	149
08/17/2015	µg/L	130	165	165	324
09/01/2015	µg/L	148	177	187	192
09/15/2015	µg/L	104	197	197	193
09/29/2015	µg/L	108	165	163	153
10/13/2015	µg/L	75.9	100	98.8	98.8
11/03/2015	µg/L	95.8	98.9	101	99.7
11/09/2015	µg/L	90.6	107	102	99.5
11/17/2015	µg/L	74.0	86.4	85.6	84.7
12/01/2015	µg/L	71.8	88.4	87.1	83.5
12/15/2015	µg/L	75.0	102	91.9	95.9
01/05/2016	µg/L	73.2	83.8	85.5	88.9
02/02/2016	µg/L	72.4	89.4	92.1	88.6
02/29/2016	µg/L	61.9	71.2	66.3	70.9
03/07/2016	µg/L	111	89.3	89.9	81.8
03/21/2016	µg/L	78.2	101	97.6	92.1
03/29/2016	µg/L	87.9	121	120	114
04/13/2016	µg/L	93.9	128	127	130
04/20/2016	µg/L	88.6	130	123	122
05/11/2016	µg/L	80	94	92	90
06/01/2016	µg/L	83	120	120	120
<b>Number &gt; 0.3 µg/L</b>		24	24	24	24
<b>Number &gt; 1,500 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.3 µg/L

## Vanadium

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.44	0.45	0.51	0.46
07/07/2015	µg/L	0.57	0.39	0.40	0.39
07/20/2015	µg/L	0.41	0.38	0.39	0.35
08/03/2015	µg/L	0.48	0.38	0.38	0.38
08/17/2015	µg/L	0.59	0.47	0.47	0.47
09/01/2015	µg/L	0.61	0.45	0.43	0.50
09/15/2015	µg/L	0.41	0.44	0.44	0.42
09/29/2015	µg/L	0.47	0.40	0.46	0.40
10/13/2015	µg/L	0.79	0.75	0.68	0.76
11/03/2015	µg/L	0.63	0.61	0.62	0.62
11/09/2015	µg/L	0.53	0.51	0.52	0.47
11/17/2015	µg/L	0.48	0.47	0.49	0.49
12/01/2015	µg/L	0.40	0.38	0.40	0.37
12/15/2015	µg/L	0.42	0.39	0.38	0.39
01/05/2016	µg/L	0.47	0.48	0.48	0.44
02/02/2016	µg/L	0.46	0.38	0.43	0.30
02/29/2016	µg/L	0.45	0.46	0.47	0.55
03/07/2016	µg/L	0.48	0.37	0.40	0.43
03/21/2016	µg/L	0.45	0.49	0.46	0.43
03/29/2016	µg/L	0.38	0.30	0.35	0.32
04/13/2016	µg/L	0.37	0.39	0.33	0.34
04/20/2016	µg/L	0.31	0.27	0.25	0.32
05/11/2016	µg/L	0.3	0.4	0.3	0.4
06/01/2016	µg/L	0.4	0.4	0.4	0.4
Number > 0.2 µg/L		24	24	24	24
Number > 21 µg/L		0	0	0	0

UCMR3 MRL = 0.2 µg/L

UCMR3 MRL = 21 µg/L



## Chlorate

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	6.9	3.4 (U)	3.4 (U)	3.4 (U)
07/07/2015	µg/L	3.4 (U)	20.0 (U)	20.0 (U)	20.0 (U)
07/20/2015	µg/L	3.4 (U)	3.6	3.4 (U)	3.4 (U)
08/03/2015	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
08/17/2015	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
09/01/2015	µg/L	4.5	6.7	10.5	10.7
09/15/2015	µg/L	3.4 (U)	39.4	7.0	8.5
09/29/2015	µg/L	3.4 (U)	7.4	7.1	7.2
10/13/2015	µg/L	3.4 (U)	5.6	3.9	4.5
11/03/2015	µg/L	3.4 (U)	3.4 (U)	5.4	3.4 (U)
11/09/2015	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
11/17/2015	µg/L	3.4 (U)	6.8	5.6	4.7
12/01/2015	µg/L	3.4 (U)	5.7	5.3	3.4 (U)
12/15/2015	µg/L	3.4 (U)	3.4 (U)	3.8	7.0
01/05/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
02/02/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
02/29/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
03/07/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
03/21/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
03/29/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
04/13/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
04/20/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
05/11/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
06/01/2016	µg/L	3.4 (U)	3.4 (U)	3.4 (U)	3.4 (U)
Number > 20 µg/L		0	1	0	0
Number > 210 µg/L		0	0	0	0

UCMR3 MRL = 20 µg/L

UCMR3 MRL = 210 µg/L

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.0804 (U)	0.0804 (U)	0.0776 (U)	0.0804 (U)
07/07/2015	µg/L	0.0865 (U)	0.0833 (U)	0.0833 (U)	0.0833 (U)
07/20/2015	µg/L	0.0804 (U)	0.0900 (U)	0.0900 (U)	0.0833 (U)
08/03/2015	µg/L	0.0833 (U)	0.0900 (U)	0.0865 (U)	0.0900 (U)
08/17/2015	µg/L	0.0865 (U)	0.0900 (U)	0.0804 (U)	0.0833 (U)
09/01/2015	µg/L	0.0833 (U)	0.0833 (U)	0.0865 (U)	0.0804 (U)
09/15/2015	µg/L	0.0804 (U)	0.0804 (U)	0.0833 (U)	0.0776 (U)
09/29/2015	µg/L	0.0833 (U)	0.0865 (U)	0.0900 (U)	0.0804 (U)
10/13/2015	µg/L	0.0804 (U)	0.0776 (U)	0.0833 (U)	0.0804 (U)
11/03/2015	µg/L	0.0833 (U)	0.0804 (U)	0.0804 (U)	0.0804 (U)
11/09/2015	µg/L	0.090 (U,S)	0.090 (U,S)	0.090 (U)	0.090 (U)
11/17/2015	µg/L	0.0833 (U)	0.0833 (U)	0.0833 (U)	0.0804 (U)
12/01/2015	µg/L	0.0833 (U)	0.0865 (U)	0.0804 (U)	0.0804 (U)
12/15/2015	µg/L	0.090 (U)	0.090 (U)	0.090 (U)	0.090 (U)
01/05/2016	µg/L	0.0804 (U)	0.0804 (U)	0.0804 (U)	0.0804 (U)
02/02/2016	µg/L	0.0776 (U)	0.0776 (U)	0.0804 (U)	0.0776 (U)
02/29/2016	µg/L	0.0804 (U)	0.0776 (U)	0.0804 (U)	0.0804 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.0818 (U)	0.0763 (U)	0.0776 (U)	0.0833 (U)
03/29/2016	µg/L	0.0833 (U)	0.0804 (U)	0.0804 (U)	0.0804 (U)
04/13/2016	µg/L	0.0804 (U)	0.0776 (U)	0.0776 (U)	0.0776 (U)
04/20/2016	µg/L	0.0804 (U)	0.0278 (U)	0.0804 (U)	0.0833 (U)
05/11/2016	µg/L	0.0045 (U)	0.0046 (U)	0.0045 (U)	0.0045 (U)
06/01/2016	µg/L	0.0776 (U)	0.0776 (U)	0.0750 (U)	0.0804 (U)
<b>Number &gt; 0.09 µg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

UCMR3 MRL = **0.09 µg/L**  
 UCMR3 RC = **Not applicable**

Data for the 3/7/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.00893 (U)	0.00893 (U)	0.00862 (U)	0.00893 (U)
07/07/2015	µg/L	0.00962 (U)	0.00926 (U)	0.00926 (U)	0.00926 (U)
07/20/2015	µg/L	0.00893 (U)	0.0100 (U)	0.0100 (U)	0.00926 (U)
08/03/2015	µg/L	0.00926 (U)	0.0100 (U)	0.00962 (U)	0.0100 (U)
08/17/2015	µg/L	0.00962 (U)	0.0100 (U)	0.00893 (U)	0.00926 (U)
09/01/2015	µg/L	0.00926 (U)	0.00926 (U)	0.00962 (U)	0.00893 (U)
09/15/2015	µg/L	0.00893 (U)	0.00893 (U)	0.00926 (U)	0.00862 (U)
09/29/2015	µg/L	0.00926 (U)	0.00962 (U)	0.0100 (U)	0.00893 (U)
10/13/2015	µg/L	0.00893 (U)	0.00862 (U)	0.00926 (U)	0.00893 (U)
11/03/2015	µg/L	0.00926 (U)	0.00893 (U)	0.00893 (U)	0.00893 (U)
11/09/2015	µg/L	0.010 (U,S)	0.010 (U,S)	0.010 (U)	0.010 (U)
11/17/2015	µg/L	0.00926 (U)	0.00926 (U)	0.00926 (U)	0.00893 (U)
12/01/2015	µg/L	0.00926 (U)	0.00962 (U)	0.00893 (U)	0.00893 (U)
12/15/2015	µg/L	0.010 (U)	0.010 (U)	0.010 (U)	0.010 (U)
01/05/2016	µg/L	0.00893 (U)	0.00893 (U)	0.00893 (U)	0.00893 (U)
02/02/2016	µg/L	0.00862 (U)	0.00862 (U)	0.00893 (U)	0.00862 (U)
02/29/2016	µg/L	0.00893 (U)	0.00862 (U)	0.00893 (U)	0.00893 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.00909 (U)	0.00847 (U)	0.00862 (U)	0.00926 (U)
03/29/2016	µg/L	0.00926 (U)	0.00893 (U)	0.00893 (U)	0.00893 (U)
04/13/2016	µg/L	0.00893 (U)	0.00862 (U)	0.00862 (U)	0.00862 (U)
04/20/2016	µg/L	0.00893 (U)	0.00926 (U)	0.00893 (U)	0.00926 (U)
05/11/2016	µg/L	0.0045 (U)	0.0046 (U)	0.0045 (U)	0.0045 (U)
06/01/2016	µg/L	0.00862 (U)	0.00862 (U)	0.00833 (U)	0.00893 (U)
<b>Number &gt; 0.01 µg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

UCMR3 MRL = **0.01 µg/L**  
 UCMR3 RC = **Not applicable**

Data for the 5/11/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.0268 (U)	0.0268 (U)	0.0259 (U)	0.0268 (U)
07/07/2015	µg/L	0.0288 (U)	0.0278 (U)	0.0278 (U)	0.0278 (U)
07/20/2015	µg/L	0.0268 (U)	0.0300 (U)	0.0300 (U)	0.0278 (U)
08/03/2015	µg/L	0.0278 (U)	0.0300 (U)	0.0288 (U)	0.0300 (U)
08/17/2015	µg/L	0.0288 (U)	0.0300 (U)	0.0268 (U)	0.0278 (U)
09/01/2015	µg/L	0.0278 (U)	0.0278 (U)	0.0288 (U)	0.0268 (U)
09/15/2015	µg/L	0.0268 (U)	0.0268 (U)	0.0278 (U)	0.0259 (U)
09/29/2015	µg/L	0.0278 (U)	0.0288 (U)	0.0300 (U)	0.0268 (U)
10/13/2015	µg/L	0.0268 (U)	0.0259 (U)	0.0278 (U)	0.0268 (U)
11/03/2015	µg/L	0.0278 (U)	0.0268 (U)	0.0268 (U)	0.0268 (U)
11/09/2015	µg/L	0.030 (U,S)	0.030 (U,S)	0.030 (U)	0.030 (U)
11/17/2015	µg/L	0.0278 (U)	0.0278 (U)	0.0278 (U)	0.0268 (U)
12/01/2015	µg/L	0.0278 (U)	0.0288 (U)	0.0268 (U)	0.0268 (U)
12/15/2015	µg/L	0.030 (U)	0.030 (U)	0.030 (U)	0.030 (U)
01/05/2016	µg/L	0.0268 (U)	0.0268 (U)	0.0268 (U)	0.0268 (U)
02/02/2016	µg/L	0.0259 (U)	0.0259 (U)	0.0268 (U)	0.0259 (U)
02/29/2016	µg/L	0.0268 (U)	0.0259 (U)	0.0268 (U)	0.0268 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.0273 (U)	0.0254 (U)	0.0259 (U)	0.0278 (U)
03/29/2016	µg/L	0.0278 (U)	0.0268 (U)	0.0268 (U)	0.0268 (U)
04/13/2016	µg/L	0.0268 (U)	0.0259 (U)	0.0259 (U)	0.0259 (U)
04/20/2016	µg/L	0.0268 (U)	0.0278 (U)	0.0268 (U)	0.0278 (U)
05/11/2016	µg/L	0.0045 (U)	0.0046 (U)	0.0045 (U)	0.0045 (U)
06/01/2016	µg/L	0.0259 (U)	0.0259 (U)	0.0250 (U)	0.0268 (U)
<b>Number &gt; 0.03 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.03 µg/L  
 UCMR3 RC = Not applicable

Data for the 3/7/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.0179 (U)	0.0179 (U)	0.0172 (U)	0.0179 (U)
07/07/2015	µg/L	0.0192 (U)	0.0185 (U)	0.0185 (U)	0.0185 (U)
07/20/2015	µg/L	0.0179 (U)	0.0200 (U)	0.0200 (U)	0.0185 (U)
08/03/2015	µg/L	0.0185 (U)	0.0200 (U)	0.0192 (U)	0.0200 (U)
08/17/2015	µg/L	0.0192 (U)	0.0200 (U)	0.0179 (U)	0.0185 (U)
09/01/2015	µg/L	0.0185 (U)	0.0185 (U)	0.0192 (U)	0.0179 (U)
09/15/2015	µg/L	0.0179 (U)	0.0179 (U)	0.0185 (U)	0.0172 (U)
09/29/2015	µg/L	0.0185 (U)	0.0192 (U)	0.0200 (U)	0.0179 (U)
10/13/2015	µg/L	0.0179 (U)	0.0172 (U)	0.0185 (U)	0.0179 (U)
11/03/2015	µg/L	0.0185 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
11/09/2015	µg/L	0.020 (U,S)	0.020 (U,S)	0.020 (U)	0.020 (U)
11/17/2015	µg/L	0.0185 (U)	0.0185 (U)	0.0185 (U)	0.0179 (U)
12/01/2015	µg/L	0.0185 (U)	0.0192 (U)	0.0179 (U)	0.0179 (U)
12/15/2015	µg/L	0.020 (U)	0.020 (U)	0.020 (U)	0.020 (U)
01/05/2016	µg/L	0.0179 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
02/02/2016	µg/L	0.0172 (U)	0.0172 (U)	0.0179 (U)	0.0172 (U)
02/29/2016	µg/L	0.0179 (U)	0.0172 (U)	0.0179 (U)	0.0179 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.0182 (U)	0.0169 (U)	0.0172 (U)	0.0185 (U)
03/29/2016	µg/L	0.0185 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
04/13/2016	µg/L	0.0179 (U)	0.0172 (U)	0.0172 (U)	0.0172 (U)
04/20/2016	µg/L	0.0179 (U)	0.0185 (U)	0.0179 (U)	0.0185 (U)
05/11/2016	µg/L	0.0045 (U)	0.0046 (U)	0.0045 (U)	0.0045 (U)
06/01/2016	µg/L	0.0172 (U)	0.0172 (U)	0.0167 (U)	0.0179 (U)
<b>Number &gt; 0.02 µg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

UCMR3 MRL = 0.02 µg/L  
 UCMR3 RC = Not applicable

Data for the 3/7/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.0179 (U)	0.0179 (U)	0.0172 (U)	0.0179 (U)
07/07/2015	µg/L	0.0192 (U)	0.0185 (U)	0.0185 (U)	0.0185 (U)
07/20/2015	µg/L	0.0179 (U)	0.0200 (U)	0.0200 (U)	0.0185 (U)
08/03/2015	µg/L	0.0185 (U)	0.0200 (U)	0.0192 (U)	0.0200 (U)
08/17/2015	µg/L	0.0192 (U)	0.0200 (U)	0.0179 (U)	0.0185 (U)
09/01/2015	µg/L	0.0185 (U)	0.0185 (U)	0.0192 (U)	0.0179 (U)
09/15/2015	µg/L	0.0179 (U)	0.0179 (U)	0.0185 (U)	0.0172 (U)
09/29/2015	µg/L	0.0185 (U)	0.0192 (U)	0.0200 (U)	0.0179 (U)
10/13/2015	µg/L	0.0179 (U)	0.0172 (U)	0.0185 (U)	0.0179 (U)
11/03/2015	µg/L	0.0185 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
11/09/2015	µg/L	0.020 (U,S)	0.020 (U,S)	0.020 (U)	0.020 (U)
11/17/2015	µg/L	0.0185 (U)	0.0185 (U)	0.0185 (U)	0.0179 (U)
12/01/2015	µg/L	0.0185 (U)	0.0192 (U)	0.0179 (U)	0.0179 (U)
12/15/2015	µg/L	0.020 (U)	0.020 (U)	0.020 (U)	0.020 (U)
01/05/2016	µg/L	0.0179 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
02/02/2016	µg/L	0.0172 (U)	0.0172 (U)	0.0179 (U)	0.0172 (U)
02/29/2016	µg/L	0.0179 (U)	0.0172 (U)	0.0179 (U)	0.0179 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.0182 (U)	0.0169 (U)	0.0172 (U)	0.0185 (U)
03/29/2016	µg/L	0.0185 (U)	0.0179 (U)	0.0179 (U)	0.0179 (U)
04/13/2016	µg/L	0.0179 (U)	0.0172 (U)	0.0172 (U)	0.0172 (U)
04/20/2016	µg/L	0.0179 (U)	0.0185 (U)	0.0179 (U)	0.0185 (U)
05/11/2016	µg/L	0.0036	0.0019 (U)	0.0018 (U)	0.0018 (U)
06/01/2016	µg/L	0.0172 (U)	0.0172 (U)	0.0167 (U)	0.0179 (U)
<b>Number &gt; 0.02 µg/L</b>		0	0	0	0
<b>Number &gt; 0.07 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.02 µg/L

UCMR3 RC = 0.07 µg/L

Data for the 3/7/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	0.0357 (U)	0.0357 (U)	0.0345 (U)	0.0357 (U)
07/07/2015	µg/L	0.0385 (U)	0.0370 (U)	0.0370 (U)	0.0370 (U)
07/20/2015	µg/L	0.0357 (U)	0.0400 (U)	0.0400 (U)	0.0370 (U)
08/03/2015	µg/L	0.0370 (U)	0.0400 (U)	0.0385 (U)	0.0400 (U)
08/17/2015	µg/L	0.0385 (U)	0.0400 (U)	0.0357 (U)	0.0370 (U)
09/01/2015	µg/L	0.0370 (U)	0.0370 (U)	0.0385 (U)	0.0357 (U)
09/15/2015	µg/L	0.0357 (U)	0.0357 (U)	0.0370 (U)	0.0345 (U)
09/29/2015	µg/L	0.0370 (U)	0.0385 (U)	0.0400 (U)	0.0357 (U)
10/13/2015	µg/L	0.0357 (U)	0.0345 (U)	0.0370 (U)	0.0357 (U)
11/03/2015	µg/L	0.0370 (U)	0.0357 (U)	0.0357 (U)	0.0357 (U)
11/09/2015	µg/L	0.040 (U,S)	0.040 (U,S)	0.040 (U)	0.040 (U)
11/17/2015	µg/L	0.0370 (U)	0.0370 (U)	0.0370 (U)	0.0357 (U)
12/01/2015	µg/L	0.0370 (U)	0.0385 (U)	0.0357 (U)	0.0357 (U)
12/15/2015	µg/L	0.040 (U)	0.040 (U)	0.040 (U)	0.040 (U)
01/05/2016	µg/L	0.0357 (U)	0.0357 (U)	0.0357 (U)	0.0357 (U)
02/02/2016	µg/L	0.0345 (U)	0.0345 (U)	0.0357 (U)	0.0345 (U)
02/29/2016	µg/L	0.0357 (U)	0.0345 (U)	0.0357 (U)	0.0357 (U)
03/07/2016	µg/L	--	--	--	--
03/21/2016	µg/L	0.0364 (U)	0.0339 (U)	0.0345 (U)	0.0370 (U)
03/29/2016	µg/L	0.0370 (U)	0.0357 (U)	0.0357 (U)	0.0357 (U)
04/13/2016	µg/L	0.0357 (U)	0.0345 (U)	0.0345 (U)	0.0345 (U)
04/20/2016	µg/L	0.0357 (U)	0.0370 (U)	0.0357 (U)	0.0370 (U)
05/11/2016	µg/L	0.0045 (U)	0.0046 (U)	0.0045 (U)	0.0045 (U)
06/01/2016	µg/L	0.0345 (U)	0.0345 (U)	0.0333 (U)	0.0357 (U)
<b>Number &gt; 0.04 µg/L</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

UCMR3 MRL = **0.04 µg/L**  
 UCMR3 RC = **Not applicable**

Data for the 3/7/2016 samples were not reported because there was a laboratory spiking error with the first extraction which invalidated the data. By the time the error was noted the hold time had expired. Additionally, part of the MNT-C sample was used for quality control purposes and there was no sample left for re-analysis. The laboratory was instructed not to proceed with re-analysis of the other samples.

The sensitivity of the MDL is dependent upon the daily instrument calibration, the level of interference within the matrix and/or the complexity of the matrix. Therefore, variation of the MDL throughout the sampling period is anticipated and acceptable.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.000800 (U,S)	0.000800 (U,S)	0.000800 (U,S)	0.000800 (U)
08/17/2015	µg/L	0.000800 (U)	0.000800 (U,S)	0.000800 (U,S)	0.000800 (U,S)
09/01/2015	µg/L	--	--	--	0.0008 (U)
09/15/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
09/29/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
10/13/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
11/03/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
11/09/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
11/17/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
12/01/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
12/15/2015	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
01/05/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
02/02/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
02/29/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
03/07/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
03/21/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
03/29/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
04/13/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
04/20/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
05/11/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
06/01/2016	µg/L	0.00080 (U)	0.00080 (U)	0.00080 (U)	0.00080 (U)
<b>Number &gt; 0.0008 µg/L</b>		0	0	0	0
<b>Number &gt; 0.35 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.0008 µg/L

UCMR3 RC = 0.35 µg/L

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.000900 (U,S)	0.000900 (U,S)	0.000900 (U,S)	0.000900 (U)
08/17/2015	µg/L	0.000900 (U)	0.000900 (U,S)	0.000900 (U,S)	0.000900 (U,S)
09/01/2015	µg/L	--	--	--	0.0009 (U)
09/15/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
09/29/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
10/13/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
11/03/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
11/09/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
11/17/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
12/01/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
12/15/2015	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
01/05/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
02/02/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
02/29/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
03/07/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
03/21/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
03/29/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
04/13/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
04/20/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
05/11/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
06/01/2016	µg/L	0.00090 (U)	0.00090 (U)	0.00090 (U)	0.00090 (U)
Number > 0.0009 µg/L		0	0	0	0
Number > 0.035 µg/L		0	0	0	0

UCMR3 MRL = 0.0009 µg/L

UCMR3 RC = 0.035 µg/L

02/29/2016 - 0.0012 µg/l detected in field blank.

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.000400 (U,S)	0.000400 (U,S)	0.000400 (U,S)	0.000400 (U)
08/17/2015	µg/L	0.000400 (U)	0.000400 (U,S)	0.000400 (U,S)	0.000400 (U,S)
09/01/2015	µg/L	--	--	--	0.0004 (U)
09/15/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
09/29/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
10/13/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
11/03/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
11/09/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
11/17/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
12/01/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
12/15/2015	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
01/05/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
02/02/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
02/29/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
03/07/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
03/21/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
03/29/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
04/13/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
04/20/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
05/11/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
06/01/2016	µg/L	0.00040 (U)	0.00040 (U)	0.00040 (U)	0.00040 (U)
<b>Number &gt; 0.0004 µg/L</b>		0	0	0	0
<b>Number &gt; 0.0009 µg/L</b>		0	0	0	0
<b>Number &gt; 0.09 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.0004 µg/L  
 UCMR3 RC = 0.0009 to 0.09 µg/L

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.000300 (U,S)	0.000300 (U,S)	0.000300 (U,S)	0.000300 (U)
08/17/2015	µg/L	0.00030 (U)	0.000300 (U,S)	0.000300 (U,S)	0.000300 (U,S)
09/01/2015	µg/L	--	--	--	0.0003 (U)
09/15/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
09/29/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
10/13/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
11/03/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
11/09/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
11/17/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
12/01/2015	µg/L	0.00030 (U,S)	0.00030 (U,S)	0.00054	0.00053
12/15/2015	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
01/05/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
02/02/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
02/29/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
03/07/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
03/21/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
03/29/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
04/13/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
04/20/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
05/11/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
06/01/2016	µg/L	0.00030 (U)	0.00030 (U)	0.00030 (U)	0.00030 (U)
<b>Number &gt; 0.0003 µg/L</b>		0	0	1	1

UCMR3 MRL = **0.0003 µg/L**  
 UCMR3 RC = **Not applicable**

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.00400 (U,S)	0.00400 (U,S)	0.00400 (U,S)	0.00400 (U)
08/17/2015	µg/L	0.00400 (U)	0.00400 (U,S)	0.00400 (U,S)	0.00400 (U,S)
09/01/2015	µg/L	--	--	--	0.004 (U)
09/15/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
09/29/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
10/13/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
11/03/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
11/09/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
11/17/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
12/01/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
12/15/2015	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
01/05/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
02/02/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
02/29/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
03/07/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
03/21/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
03/29/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
04/13/2016	µg/L	0.00400 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
04/20/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
05/11/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
06/01/2016	µg/L	0.0040 (U)	0.0040 (U)	0.0040 (U)	0.0040 (U)
<b>Number &gt; 0.0004 µg/L</b>		0	0	0	0
<b>Number &gt; 0.35 µg/L</b>		0	0	0	0

UCMR3 MRL = **0.0004 µg/L**

UCMR3 RC = **0.35 µg/L**

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.



Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.00200 (U,S)	0.00200 (U,S)	0.00200 (U,S)	0.00200 (U)
08/17/2015	µg/L	0.00200 (U)	0.00200 (U,S)	0.00200 (U,S)	0.00200 (U,S)
09/01/2015	µg/L	--	--	--	0.002 (U)
09/15/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
09/29/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
10/13/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/03/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/09/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
11/17/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/01/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
12/15/2015	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
01/05/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
02/02/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
02/29/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/07/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/21/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
03/29/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/13/2016	µg/L	0.00200 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
04/20/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
05/11/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
06/01/2016	µg/L	0.0020 (U)	0.0020 (U)	0.0020 (U)	0.0020 (U)
<b>Number &gt; 0.002 µg/L</b>		0	0	0	0
<b>Number &gt; 0.35 µg/L</b>		0	0	0	0

UCMR3 MRL = 0.002 µg/L

UCMR3 RC = 0.35 µg/L

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

Date	Units	MNT-C	M-C	ES-C	CH-C
		Result	Result	Result	Result
06/24/2015	µg/L	--	--	--	--
07/07/2015	µg/L	--	--	--	--
07/20/2015	µg/L	--	--	--	--
08/03/2015	µg/L	0.000100 (U,S)	0.000100 (U,S)	0.000100 (U,S)	0.000100 (U,S)
08/17/2015	µg/L	0.000100 (U,S)	0.000100 (U,S)	0.000100 (U,S)	0.000100 (U,S)
09/01/2015	µg/L	--	--	--	0.0001 (U)
09/15/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
09/29/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
10/13/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
11/03/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
11/09/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
11/17/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
12/01/2015	µg/L	0.00010 (U,S)	0.00010 (U,S)	0.00014	0.00016
12/15/2015	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
01/05/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
02/02/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
02/29/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
03/07/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
03/21/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
03/29/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
04/13/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
04/20/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
05/11/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
06/01/2016	µg/L	0.00010 (U)	0.00010 (U)	0.00010 (U)	0.00010 (U)
<b>Number &gt; 0.0001 µg/L</b>		0	0	1	1

UCMR3 MRL = 0.0001 µg/L  
 UCMR3 RC = Not applicable

Due to difficulties associated with laboratory coordination and instrumentation at the beginning of the study, hormones were only analyzed for 21 events at sampling location CH-C and 20 sampling events at the other three sampling locations.

Field Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
KUB	06/24/2015	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.005	U	
KUB	06/24/2015	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
KUB	06/24/2015	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
KUB	06/24/2015	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
KUB	06/24/2015	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
KUB	06/24/2015	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
KUB	06/24/2015	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0013	J	Result is qualified as estimated.
KUB	06/24/2015	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
KUB	06/24/2015	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
KUB	06/24/2015	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.0020	U	
KUB	06/24/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U	
KUB	06/24/2015	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
KUB	06/24/2015	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
KUB	06/24/2015	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
KUB	06/24/2015	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
KUB	06/24/2015	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	1.00	U	
KUB	06/24/2015	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.003	U	
LC-C	07/20/2015	1,4-Dioxane	ALS	E522	ug/L	0.048		> 30% of lowest sample.
LC-C	07/20/2015	16- $\alpha$ -Hydroxyestradiol (estriol)	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	17- $\alpha$ -Ethinylestradiol	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	17- $\beta$ -Estradiol	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	4-Androstene-3,17-dione	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	Asbestos (fiber > 10 micrometers)	REIC	E600/R-94/134	MFL	0.17	U	
LC-C	07/20/2015	Chlorate	ALS	E300.1	ug/L	3.4	U	
LC-C	07/20/2015	Chromium (total)	ALS	E200.8	ug/L	0.067	U	
LC-C	07/20/2015	Cobalt	ALS	E200.8	ug/L	0.33	U	
LC-C	07/20/2015	Cryptosporidium	ALS	E1623.1	(Ob) cysts/L	0.00	U	
LC-C	07/20/2015	Dioxin (2,3,7,8-TCDD)	REIC	1613B	pg/L	6.1	U	
LC-C	07/20/2015	Dissolved Alpha Emitters	REIC	E900	pCi/L	1.68	U	
LC-C	07/20/2015	Equilin	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	Estrone	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	Giardia lamblia	ALS	E1623.1	(Ob) cysts/L	0.00	U	
LC-C	07/20/2015	Gross Alpha	REIC	E900	pCi/L	1.75	U	
LC-C	07/20/2015	Gross Beta	REIC	E900	pCi/L	2.33	U	
LC-C	07/20/2015	Hexavalent chromium (dissolved)	ALS	E218.7	ug/L	0.0060	U	
LC-C	07/20/2015	Molybdenum	ALS	E200.8	ug/L	0.33	U	
LC-C	07/20/2015	Perfluorobutanesulfonic acid (PFBS)	ALS	E537 Rev 1.1	ug/L	0.0900	U	
LC-C	07/20/2015	Perfluorheptanoic acid (PFHpA)	ALS	E537 Rev 1.1	ug/L	0.0100	U	
LC-C	07/20/2015	Perfluorhexylsulfonic acid (PFHxS)	ALS	E537 Rev 1.1	ug/L	0.0300	U	
LC-C	07/20/2015	Perfluorononanoic acid (PFNA)	ALS	E537 Rev 1.1	ug/L	0.0200	U	



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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	07/20/2015	Perfluorooctanoic acid (PFOA)	ALS	E537 Rev 1.1	ug/L	0.0200	U	
LC-C	07/20/2015	Perfluorooctylsulfonic acid (PFOS)	ALS	E537 Rev 1.1	ug/L	0.0400	U	
LC-C	07/20/2015	Radium-226	REIC	E903	pCi/L	0.434	U	
LC-C	07/20/2015	Radium-228	REIC	E904	pCi/L	0.939	U	
LC-C	07/20/2015	Strontium	ALS	E200.8	ug/L	0.10	U	
LC-C	07/20/2015	Strontium-90 (dissolved)	REIC	ASTMD5174	pCi/L	1.25	U	
LC-C	07/20/2015	Testosterone	ALS	E539	ug/L	--	--	
LC-C	07/20/2015	Tritium	REIC	E906	pCi/L	241	U	
LC-C	07/20/2015	Uranium	REIC	ASTMD5174	ug/L	0.193	U	
LC-C	07/20/2015	Vanadium	ALS	E200.8	ug/L	0.067	U	
LC-G	07/20/2015	1,1-Dichloroethane	ALS	E524.3	ug/L	0.015	U	
LC-G	07/20/2015	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U	
LC-G	07/20/2015	1,3-Butadiene	ALS	E524.3	ug/L	0.050	U	
LC-G	07/20/2015	Bromochloromethane (Halon 1011)	ALS	E524.3	ug/L	0.030	U	
LC-G	07/20/2015	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	0.040	U	
LC-G	07/20/2015	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.10	U	
LC-G	07/20/2015	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.10	U	
LC-C	07/20/2015	2,4,6-Trichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	07/20/2015	2,4-Dichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	07/20/2015	2,4-Dimethylphenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	07/20/2015	2,4-Dinitrophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	07/20/2015	2,4-Dinitrotoluene	REIC	EPA 625 (1982)	mg/L	0.0002	U	
LC-C	07/20/2015	2-Chloronaphthalene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	07/20/2015	2-Chlorophenol	REIC	EPA 604	mg/L	0.0003	U	
LC-C	07/20/2015	4,4'-DDT	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	4,6-Dinitro-2-methylphenol	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	07/20/2015	4-MCHM	REIC	SW8015C (2000)	ug/L	2	U	
LC-C	07/20/2015	Acenaphthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Aldrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Alkalinity, Total (As CaCO3)	REIC	SM2320 B-1997	mg/L	1.00	U	< 30% of lowest sample
LC-C	07/20/2015	alpha-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.018	J	Result is qualified as estimated.
LC-C	07/20/2015	Anthracene	REIC	EPA 610	mg/L	0.0003	U	
LC-C	07/20/2015	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	07/20/2015	Aroclor 1016	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aroclor 1221	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aroclor 1232	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aroclor 1242	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aroclor 1248	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Aroclor 1254	REIC	EPA 608	mg/L	0.000025	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	07/20/2015	Aroclor 1260	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	07/20/2015	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	07/20/2015	Benzo(a)anthracene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	07/20/2015	Benzo(a)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Benzo(b)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Benzo(k)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	07/20/2015	beta-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Bis(2-ethylhexyl)phthalate	REIC	EPA 625 (1982)	mg/L	0.0052	U	
LC-C	07/20/2015	Bromide	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	07/20/2015	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	07/20/2015	Chlordane	REIC	EPA 608	mg/L	0.000253	U	
LC-C	07/20/2015	Chloride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.20	U	
LC-C	07/20/2015	Chrysene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	07/20/2015	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0012	J	
LC-C	07/20/2015	Cyanide, Free	REIC	SM4500-CN I-1997	mg/L	0.005	U	
LC-C	07/20/2015	Cyanide, Total	REIC	EPA 335.4, Rev. 1 (1993)	mg/L	0.005	U	
LC-C	07/20/2015	Dibenz(a,h)anthracene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Dieldrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Endrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Fluorene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Fluoride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	07/20/2015	gamma-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Hardness, Total (As CaCO3)	REIC	SM2340 B-1997	mg/L	1.00	U	
LC-C	07/20/2015	Heptachlor	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Heptachlor epoxide	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Hexachlorobenzene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	07/20/2015	Indeno(1,2,3-cd)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
LC-C	07/20/2015	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	07/20/2015	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.0020	U	
LC-C	07/20/2015	MBAS (calibrated on MW340 LAS)	REIC	SM5540 C-2000	mg/L	0.0250	U	
LC-C	07/20/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U	
LC-C	07/20/2015	Methoxychlor	REIC	EPA 608	mg/L	0.000025	U	
LC-C	07/20/2015	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
LC-C	07/20/2015	Nitrogen, Nitrate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.02	U	
LC-C	07/20/2015	Nitrogen, Nitrite	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	07/20/2015	Pentachlorophenol	REIC	EPA 604	mg/L	0.0004	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	07/20/2015	Phenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	07/20/2015	Pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	07/20/2015	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	07/20/2015	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	07/20/2015	Sulfate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	1.00	U	
LC-C	07/20/2015	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	07/20/2015	Total Dissolved Solids	REIC	SM2540 C-1997	mg/L	5	J	Result is qualified as estimated.
LC-C	07/20/2015	Total Organic Carbon	REIC	SM5310 C-2000	mg/L	0.20	U	
LC-C	07/20/2015	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	8.5		> 30% of lowest sample.
LC-C	07/20/2015	Toxaphene	REIC	EPA 608	mg/L	0.000253	U	
LC-C	07/20/2015	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.009	J	Result is qualified as estimated.
LC-G	07/20/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U	
LC-G	07/20/2015	Benzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	m,p-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Methylene chloride	REIC	EPA 624	µg/L	1.00	U	
LC-G	07/20/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Toluene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	07/20/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U	
LC-S	07/20/2015	Bacteria, Heterotrophic Plate Count	REIC	SM9215 B SIMPLATE	MPN/mL	10		< 30% of lowest sample
LC-S	07/20/2015	E-Coli	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-S	07/20/2015	Fecal Coliform	REIC	SM9222 D-1997	col/100mL	1	U	



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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-S	07/20/2015	Total Coliform	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-C	09/01/2015	1,4-Dioxane	ALS	E522	ug/L	0.064		> 30% of lowest sample.
LC-C	09/01/2015	16- $\alpha$ -Hydroxycyestradiol (estriol)	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	17- $\alpha$ -Ethinylestradiol	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	17- $\beta$ -Estradiol	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	4-Androstene-3,17-dione	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	Asbestos (fiber > 10 micrometers)	REIC	E600/R-94/134	MFL	0.17	U	
LC-C	09/01/2015	Chlorate	ALS	E300.1	ug/L	3.4	U	
LC-C	09/01/2015	Chromium (total)	ALS	E200.8	ug/L	0.12		> 30% of lowest sample.
LC-C	09/01/2015	Cobalt	ALS	E200.8	ug/L	0.33	U	
LC-C	09/01/2015	Cryptosporidium	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	09/01/2015	Dioxin (2,3,7,8-TCDD)	REIC	1613B	pg/L	1.00	U	
LC-C	09/01/2015	Dissolved Alpha Emitters	REIC	E900	pCi/L	1.52	U	
LC-C	09/01/2015	Equilin	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	Estrone	ALS	E539	ug/L	--	--	
LC-C	09/01/2015	Giardia lamblia	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	09/01/2015	Gross Alpha	REIC	E900	pCi/L	1.69	U	
LC-C	09/01/2015	Gross Beta	REIC	E900	pCi/L	1.67	U	
LC-C	09/01/2015	Hexavalent chromium (dissolved)	ALS	E218.7	ug/L	0.0060	U	
LC-C	09/01/2015	Molybdenum	ALS	E200.8	ug/L	0.33	U	
LC-C	09/01/2015	Perfluorobutanesulfonic acid (PFBS)	ALS	E537 Rev 1.1	ug/L	0.0833	U	
LC-C	09/01/2015	Perfluorohexanesulfonic acid (PFHxS)	ALS	E537 Rev 1.1	ug/L	0.00926	U	
LC-C	09/01/2015	Perfluorooctanoic acid (PFNA)	ALS	E537 Rev 1.1	ug/L	0.0278	U	
LC-C	09/01/2015	Perfluorooctanoic acid (PFOA)	ALS	E537 Rev 1.1	ug/L	0.0185	U	
LC-C	09/01/2015	Perfluorooctanesulfonic acid (PFOS)	ALS	E537 Rev 1.1	ug/L	0.0185	U	
LC-C	09/01/2015	Radium-226	REIC	E903	pCi/L	0.0370	U	
LC-C	09/01/2015	Radium-228	REIC	E904	pCi/L	0.960	U	
LC-C	09/01/2015	Strontium	ALS	E200.8	ug/L	0.858	U	
LC-C	09/01/2015	Strontium-90 (dissolved)	REIC	ASTM D5811	pCi/L	0.10	U	
LC-C	09/01/2015	Testosterone	ALS	E539	ug/L	1.13	U	
LC-C	09/01/2015	Tritium	REIC	E906	ug/L	--	--	
LC-C	09/01/2015	Uranium	REIC	ASTMD5174	pCi/L	260	U	
LC-C	09/01/2015	Vanadium	ALS	E200.8	ug/L	0.193	U	
LC-G	09/01/2015	1,1-Dichloroethane	ALS	E524.3	ug/L	0.067	U	
LC-G	09/01/2015	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U	
LC-G	09/01/2015	1,3-Butadiene	ALS	E524.3	ug/L	0.015	U	
LC-G	09/01/2015	Bromochloromethane (Halon 1011)	ALS	E524.3	ug/L	0.050	U	
LC-G	09/01/2015	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	0.030	U	
LC-G	09/01/2015	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.040	U	
LC-G	09/01/2015	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.10	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-G	09/01/2015	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.10	U	
LC-C	09/01/2015	2,4,6-Trichlorophenol	REIC	EPA 604	mg/L	0.0005	U	
LC-C	09/01/2015	2,4-Dichlorophenol	REIC	EPA 604	mg/L	0.0005	U	
LC-C	09/01/2015	2,4-Dimethylphenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	09/01/2015	2,4-Dinitrophenol	REIC	EPA 604	mg/L	0.0002	U	
LC-C	09/01/2015	2,4-Dinitrotoluene	REIC	EPA 625 (1982)	mg/L	0.0023	U	
LC-C	09/01/2015	2-Chloronaphthalene	REIC	EPA 625 (1982)	mg/L	0.0023	U	
LC-C	09/01/2015	2-Chlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	09/01/2015	4,4'-DDT	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	4,6-Dinitro-2-methylphenol	REIC	EPA 625 (1982)	mg/L	0.0023	U	
LC-C	09/01/2015	4-MCEM	REIC	SW8015C (2000)	ug/L	2	U	
LC-C	09/01/2015	Acenaphthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Aldrin	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Alkalinity, Total (As CaCO3)	REIC	SM2320 B-1997	mg/L	1.6	U	< 30% of lowest sample
LC-C	09/01/2015	alpha-BHC	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.005	U	
LC-C	09/01/2015	Anthracene	REIC	EPA 610	mg/L	0.0003	U	
LC-C	09/01/2015	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	09/01/2015	Aroclor 1016	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1221	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1232	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1242	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1248	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1254	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Aroclor 1260	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	09/01/2015	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	09/01/2015	Benzo(a)anthracene	REIC	EPA 610	mg/L	0.0007	U	
LC-C	09/01/2015	Benzo(a)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Benzo(b)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Benzo(k)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	09/01/2015	beta-BHC	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Bis(2-ethylhexyl)phthalate	REIC	EPA 625 (1982)	mg/L	0.0058	U	
LC-C	09/01/2015	Bromide	REIC	EPA 300.0, Rev. 2.1 (1993)	mg/L	0.05	U	
LC-C	09/01/2015	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	09/01/2015	Chlordane	REIC	EPA 608	mg/L	0.000284	U	
LC-C	09/01/2015	Chloride	REIC	EPA 300.0, Rev. 2.1 (1993)	mg/L	0.20	U	
LC-C	09/01/2015	Chrysene	REIC	EPA 610	mg/L	0.0007	U	
LC-C	09/01/2015	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	09/01/2015	Cyanide, Free	REIC	SM4500-CN I-1997	mg/L	0.005	U	
LC-C	09/01/2015	Cyanide, Total	REIC	EPA 335.4, Rev. 1 (1993)	mg/L	0.005	U	
LC-C	09/01/2015	Dibenz(a,b)anthracene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Dieldrin	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Endrin	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Fluorene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Fluoride	REIC	EPA 300.0, Rev 2.1 (1993)	mg/L	0.05	U	
LC-C	09/01/2015	gamma-BHC	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Hardness, Total (As CaCO3)	REIC	SM2340 B-1997	mg/L	1.00	U	
LC-C	09/01/2015	Heptachlor	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Heptachlor epoxide	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Hexachlorobenzene	REIC	EPA 625 (1982)	mg/L	0.0023	U	
LC-C	09/01/2015	Indeno(1,2,3-cd)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
LC-C	09/01/2015	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	09/01/2015	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.002	U	
LC-C	09/01/2015	MBAS (calibrated on MW340 LAS)	REIC	SM5540 C-2000	mg/L	0.0250	U	
LC-C	09/01/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U	
LC-C	09/01/2015	Methoxychlor	REIC	EPA 608	mg/L	0.000028	U	
LC-C	09/01/2015	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
LC-C	09/01/2015	Nitrogen, Nitrate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.02	U	
LC-C	09/01/2015	Nitrogen, Nitrite	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	09/01/2015	Pentachlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	09/01/2015	Phenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	09/01/2015	Pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	09/01/2015	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	09/01/2015	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	09/01/2015	Sulfate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	1.00	U	
LC-C	09/01/2015	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	09/01/2015	Total Dissolved Solids	REIC	SM2540 C-1997	mg/L	5	U	
LC-C	09/01/2015	Total Organic Carbon	REIC	SM5310 C-2000	mg/L	0.46	U	
LC-C	09/01/2015	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	1.0	U	< 30% of lowest sample
LC-C	09/01/2015	Toxaphene	REIC	EPA 608	mg/L	0.000284	U	
LC-C	09/01/2015	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0030	U	
LC-G	09/01/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,1-Dichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U	



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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-G	09/01/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U	
LC-G	09/01/2015	Benzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Bromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	m,p-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Methylene chloride	REIC	EPA 624	µg/L	1.00	U	
LC-G	09/01/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Toluene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	09/01/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U	
LC-S	09/01/2015	Bacteria, Heterotrophic Plate Count	REIC	SM9215 B SIMPLATE	MPN/mL	1 0	U	
LC-S	09/01/2015	E-Coli	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-S	09/01/2015	Fecal Coliform	REIC	SM9222 D-1997	col/100mL	1	U	
LC-S	09/01/2015	Total Coliform	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-C	02/29/2016	1,4-Dioxane	ALS	E522	ug/L	0.23		> 30% of lowest sample.
LC-C	02/29/2016	16- $\alpha$ -Hydroxyestradiol (estriol)	ALS	E539	ug/L	0.00080	U	
LC-C	02/29/2016	17- $\alpha$ -Ethinylestradiol	ALS	E539	ug/L	0.0012		>30% of lowest sample
LC-C	02/29/2016	17- $\beta$ -Estradiol	ALS	E539	ug/L	0.00040	U	
LC-C	02/29/2016	4-Androstene-3,17-dione	ALS	E539	ug/L	0.00030	U	
LC-C	02/29/2016	Asbestos (fiber > 10 micrometers)	REIC	E600/R-94/134	MFL	0.17	U	
LC-C	02/29/2016	Chlorate	ALS	E300.1	ug/L	3.4	U	
LC-C	02/29/2016	Chromium (total)	ALS	E200.8	ug/L	0.22		>30% of lowest sample
LC-C	02/29/2016	Cobalt	ALS	E200.8	ug/L	0.33	U	
LC-C	02/29/2016	Cryptosporidium	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	02/29/2016	Dioxin (2,3,7,8-TCDD)	REIC	E1623.1	pg/L	2.5	U	
LC-C	02/29/2016	Dissolved Alpha Emitters	REIC	E900	pCi/L	1.49	U	
LC-C	02/29/2016	Equilin	ALS	E539	ug/L	0.0040	U	
LC-C	02/29/2016	Estrone	ALS	E539	ug/L	0.0020	U	
LC-C	02/29/2016	Giardia lamblia	ALS	E1623.1	(Oo) cysts/L	0.00	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	02/29/2016	Gross Alpha	REIC	E900	pCi/L	1.40	U	
LC-C	02/29/2016	Gross Beta	REIC	E900	pCi/L	1.67	U	
LC-C	02/29/2016	Hexavalent chromium (dissolved)	ALS	E218.7	ug/L	0.0060	U	
LC-C	02/29/2016	Molybdenum	ALS	E200.8	ug/L	0.33	U	
LC-C	02/29/2016	Perfluorobutanesulfonic acid (PFBS)	ALS	E537 Rev 1.1	ug/L	0.0833	U	
LC-C	02/29/2016	Perfluorooctanoic acid (PFHPA)	ALS	E537 Rev 1.1	ug/L	0.00926	U	
LC-C	02/29/2016	Perfluorohexylsulfonic acid (PFHxS)	ALS	E537 Rev 1.1	ug/L	0.0278	U	
LC-C	02/29/2016	Perfluorononanoic acid (PFNA)	ALS	E537 Rev 1.1	ug/L	0.0185	U	
LC-C	02/29/2016	Perfluorooctanoic acid (PFOA)	ALS	E537 Rev 1.1	ug/L	0.0185	U	
LC-C	02/29/2016	Perfluorooctylsulfonic acid (PFOS)	ALS	E537 Rev 1.1	ug/L	0.0370	U	
LC-C	02/29/2016	Radium-226	REIC	E903	pCi/L	0.460	U	
LC-C	02/29/2016	Radium-228	REIC	E904	pCi/L	0.874	U	
LC-C	02/29/2016	Strontium	ALS	E200.8	ug/L	0.10	U	
LC-C	02/29/2016	Strontium-90 (dissolved)	REIC	ASTM D5811	pCi/L	1.05	U	
LC-C	02/29/2016	Testosterone	ALS	E539	ug/L	0.00010	U	
LC-C	02/29/2016	Tritium	REIC	E906	pCi/L	261	U	
LC-C	02/29/2016	Uranium	REIC	ASTMD5174	ug/L	0.193	U	
LC-C	02/29/2016	Vanadium	ALS	E200.8	ug/L	0.067	U	
LC-G	02/29/2016	1,1-Dichloroethane	ALS	E524.3	ug/L	0.015	U	
LC-G	02/29/2016	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U	
LC-G	02/29/2016	1,3-Butadiene	ALS	E524.3	ug/L	0.050	U	
LC-G	02/29/2016	Bromochloromethane (Halon 1011)	ALS	E524.3	ug/L	0.030	U	
LC-G	02/29/2016	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	0.040	U	
LC-G	02/29/2016	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.10	U	
LC-G	02/29/2016	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.10	U	
LC-G	02/29/2016	1,1,1-Trichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,1,2-Trichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,1-Dichloroethene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,2-Dichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,2-Dichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,2-Dichloropropane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,3-Dichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	1,4-Dichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	Acrylonitrile	REIC	EPA 603	ug/L	7.50	U	
LC-G	02/29/2016	Benzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	Bromodichloromethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	Bromoform	REIC	EPA 624	ug/L	0.500	U	
LC-G	02/29/2016	Carbon tetrachloride	REIC	EPA 624	ug/L	0.500	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-G	02/29/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U	
LC-G	02/29/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Toluene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	02/29/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U	
LC-C	02/29/2016	2,4,6-Trichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	02/29/2016	2,4-Dichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	02/29/2016	2,4-Dimethylphenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	02/29/2016	2,4-Dinitrophenol	REIC	EPA 604	mg/L	0.0002	U	
LC-C	02/29/2016	2,4-Dinitrotoluene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	02/29/2016	2-Chloronaphthalene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	02/29/2016	2-Chlorophenol	REIC	EPA 604	mg/L	0.0003	U	
LC-C	02/29/2016	4,4'-DDT	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	4,6-Dinitro-2-methylphenol	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	02/29/2016	4-MCHM	REIC	SW8015C	µg/L	2	U	
LC-C	02/29/2016	Acenaphthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Aldrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Alkalinity, Total (As CaCO3)	REIC	SM2320 B-1997	mg/L	1.0	U	< 30% of lowest sample
LC-C	02/29/2016	alpha-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.005	U	
LC-C	02/29/2016	Anthracene	REIC	EPA 610	mg/L	0.0003	U	
LC-C	02/29/2016	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	02/29/2016	Aroclor 1016	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1221	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1232	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1242	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1248	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1254	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Aroclor 1260	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	02/29/2016	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	02/29/2016	Benzo(a)anthracene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	02/29/2016	Benzo(a)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Benzo(b)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	



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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	02/29/2016	Benzo(k)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	02/29/2016	beta-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Bis(2-ethylhexyl)phthalate	REIC	EPA 625 (1982)	mg/L	0.0051	U	
LC-C	02/29/2016	Bromide	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	02/29/2016	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	02/29/2016	Chlordane	REIC	EPA 608	mg/L	0.000253	U	
LC-C	02/29/2016	Chloride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.20	U	
LC-C	02/29/2016	Chrysene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	02/29/2016	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	02/29/2016	Cyanide, Free	REIC	SM4500-CN I-1997	mg/L	0.005	U	
LC-C	02/29/2016	Cyanide, Total	REIC	EPA 335.4, Rev. 1 (1993)	mg/L	0.005	U	
LC-C	02/29/2016	Dibenzo(a,h)anthracene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Dieldrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Endrin	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Fluorene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Fluoride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	02/29/2016	gamma-BHC	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Hardness, Total (As CaCO3)	REIC	SM2340 B-1997	mg/L	1.00	U	
LC-C	02/29/2016	Heptachlor	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Heptachlor epoxide	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Hexachlorobenzene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	02/29/2016	Indeno(1,2,3-cd)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
LC-C	02/29/2016	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	02/29/2016	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.002	U	
LC-C	02/29/2016	MBAS (calibrated on MW340 LAS)	REIC	SM5540 C-2000	mg/L	0.0250	U	
LC-C	02/29/2016	Mercury	REIC	EPA 245.7	ng/L	3.60	U	
LC-C	02/29/2016	Methoxychlor	REIC	EPA 608	mg/L	0.000025	U	
LC-C	02/29/2016	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
LC-C	02/29/2016	Nitrogen, Nitrate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.02	U	
LC-C	02/29/2016	Nitrogen, Nitrite	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	02/29/2016	Pentachlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	02/29/2016	Phenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	02/29/2016	Pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	02/29/2016	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	02/29/2016	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	02/29/2016	Sulfate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	1.00	U	
LC-C	02/29/2016	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	02/29/2016	Total Dissolved Solids	REIC	SM2540 C-1997	mg/L	5	U	
LC-C	02/29/2016	Total Organic Carbon	REIC	SM5310 C-2000	mg/L	0.35		< 30% of lowest sample
LC-C	02/29/2016	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	1.0	U	
LC-C	02/29/2016	Toxaphene	REIC	EPA 608	mg/L	0.000253	U	
LC-C	02/29/2016	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0044	J	Result is qualified as estimated.
LC-S	02/29/2016	Bacteria, Heterotrophic Plate Count	REIC	SM9215 B SIMPLATE	MPN/mL	29.0		< 30% of lowest sample
LC-S	02/29/2016	E-Coli	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-S	02/29/2016	Fecal Coliform	REIC	SM9222 D-1997	col/100mL	1	U	
LC-S	02/29/2016	Total Coliform	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-C	04/20/2016	1,4-Dioxane	ALS	E522	ug/L	0.014	U	
LC-C	04/20/2016	16- $\alpha$ -Hydroxyestradiol (estriol)	ALS	E539	ug/L	0.00080	U	
LC-C	04/20/2016	17- $\alpha$ -Ethinylestradiol	ALS	E539	ug/L	0.00140	U	
LC-C	04/20/2016	17- $\beta$ -Estradiol	ALS	E539	ug/L	0.00040	U	< 30% of lowest sample
LC-C	04/20/2016	4-Androstene-3,17-dione	ALS	E539	ug/L	0.00030	U	
LC-C	04/20/2016	Asbestos (fiber > 10 micrometers)	REIC	E600/R-94/134	MFL	0.18	U	
LC-C	04/20/2016	Chlorate	ALS	E300.1	ug/L	3.4	U	
LC-C	04/20/2016	Chromium (total)	ALS	E200.8	ug/L	0.067	U	
LC-C	04/20/2016	Cobalt	ALS	E200.8	ug/L	0.33	U	
LC-C	04/20/2016	Cryptosporidium	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	04/20/2016	Dioxin (2,3,7,8-TCDD)	REIC	1613B	pg/L	0.44	U	
LC-C	04/20/2016	Dissolved Alpha Emitters	REIC	E900	pCi/L	1.71	U	
LC-C	04/20/2016	Equilin	ALS	E539	ug/L	0.0040	U	
LC-C	04/20/2016	Estrone	ALS	E539	ug/L	0.0020	U	
LC-C	04/20/2016	Giardia lamblia	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	04/20/2016	Gross Alpha	REIC	E900	pCi/L	1.39	U	
LC-C	04/20/2016	Gross Beta	REIC	E900	pCi/L	1.91	U	
LC-C	04/20/2016	Hexavalent chromium (dissolved)	ALS	E218.7	ug/L	0.0060	U	
LC-C	04/20/2016	Molybdenum	ALS	E200.8	ug/L	0.33	U	
LC-C	04/20/2016	Perfluorobutanesulfonic acid (PFBS)	ALS	E537 Rev 1.1	ug/L	0.0804	U	
LC-C	04/20/2016	Perfluorohexanoic acid (PFHpA)	ALS	E537 Rev 1.1	ug/L	0.00893	U	
LC-C	04/20/2016	Perfluorohexylsulfonic acid (PFHxS)	ALS	E537 Rev 1.1	ug/L	0.0268	U	
LC-C	04/20/2016	Perfluorononanoic acid (PFNA)	ALS	E537 Rev 1.1	ug/L	0.0179	U	
LC-C	04/20/2016	Perfluorooctanoic acid (PFOA)	ALS	E537 Rev 1.1	ug/L	0.0179	U	
LC-C	04/20/2016	Perfluorooctylsulfonic acid (PFOS)	ALS	E537 Rev 1.1	ug/L	0.0357	U	
LC-C	04/20/2016	Radium-226	REIC	E903	pCi/L	0.605	U	
LC-C	04/20/2016	Radium-228	REIC	E904	pCi/L	0.704	U	
LC-C	04/20/2016	Strontium	ALS	E200.8	ug/L	0.10	U	
LC-C	04/20/2016	Strontium-90 (dissolved)	REIC	ASTM D5811	pCi/L	1.08	U	
LC-C	04/20/2016	Testosterone	ALS	E539	ug/L	0.00010	U	
LC-C	04/20/2016	Tritium	REIC	E906	pCi/L	221	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	04/20/2016	Uranium	REIC	ASTMD5174	µg/L	0.193	U	
LC-C	04/20/2016	Vanadium	ALS	E200 8	ug/L	0.067	U	
LC-G	04/20/2016	1,1-Dichloroethane	ALS	E524.3	ug/L	0.015	U	
LC-G	04/20/2016	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U	
LC-G	04/20/2016	1,3-Butadiene	ALS	E524.3	ug/L	0.050	U	
LC-G	04/20/2016	Bromochloromethane (Halon 1011)	ALS	E524.3	ug/L	0.030	U	
LC-G	04/20/2016	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	0.040	U	
LC-G	04/20/2016	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.10	U	
LC-G	04/20/2016	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.10	U	
LC-G	04/20/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U	
LC-G	04/20/2016	Benzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U	
LC-G	04/20/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Toluene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	04/20/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U	
LC-C	04/20/2016	2,4,6-Trichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	04/20/2016	2,4-Dichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	04/20/2016	2,4-Dimethylphenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	04/20/2016	2,4-Dinitrophenol	REIC	EPA 604	mg/L	0.0002	U	
LC-C	04/20/2016	2,4-Dinitrotoluene	REIC	EPA 625 (1982)	mg/L	0.0021	U	



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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	04/20/2016	2-Chloronaphthalene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	04/20/2016	2-Chlorophenol	REIC	EPA 604	mg/L	0.0003	U	
LC-C	04/20/2016	4,4'-DDT	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	4,6-Dinitro-2-methylphenol	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	04/20/2016	4-MCHM	REIC	SW8015C	µg/L	2	U	
LC-C	04/20/2016	Acenaphthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Aldrin	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Alkalinity, Total (As CaCO3)	REIC	SM2320 B-1997	mg/L	1.0	U	
LC-C	04/20/2016	alpha-BHC	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.006	U	
LC-C	04/20/2016	Anthracene	REIC	EPA 610	mg/L	0.0003	U	
LC-C	04/20/2016	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	04/20/2016	Aroclor 1016	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1221	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1232	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1242	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1248	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1254	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Aroclor 1260	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	04/20/2016	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	04/20/2016	Benzo(a)anthracene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	04/20/2016	Benzo(a)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Benzo(b)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Benzo(k)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	04/20/2016	beta-BHC	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Bis(2-ethylhexyl)phthalate	REIC	EPA 625 (1982)	mg/L	0.0054	U	
LC-C	04/20/2016	Bromide	REIC	EPA 300.0, Rev. 2.1 (1993)	mg/L	0.05	U	
LC-C	04/20/2016	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	04/20/2016	Chlordane	REIC	EPA 608	mg/L	0.000256	U	
LC-C	04/20/2016	Chloride	REIC	EPA 300.0, Rev. 2.1 (1993)	mg/L	0.20	U	
LC-C	04/20/2016	Chrysene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	04/20/2016	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0025	J	
LC-C	04/20/2016	Cyanide, Free	REIC	SM4500-CN I-1997	mg/L	0.005	U	
LC-C	04/20/2016	Cyanide, Total	REIC	EPA 335.4, Rev. 1 (1993)	mg/L	0.005	U	
LC-C	04/20/2016	Dibenzo(a,h)anthracene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Dieldrin	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Endrin	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Fluoranthene	REIC	EPA 610	mg/L	0.0001	U	

Result is qualified as estimated.

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	04/20/2016	Fluorene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Fluoride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	04/20/2016	gamma-BHC	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Hardness, Total (As CaCO3)	REIC	SM2340 B-1997	mg/L	1.00	U	
LC-C	04/20/2016	Heptachlor	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Heptachlor epoxide	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Hexachlorobenzene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	04/20/2016	Indeno(1,2,3-cd)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
LC-C	04/20/2016	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	04/20/2016	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.002	U	
LC-C	04/20/2016	MBAS (calibrated on MW340 LAS)	REIC	SM5540 C-2000	mg/L	0.0500	U	
LC-C	04/20/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U	
LC-C	04/20/2016	Methoxychlor	REIC	EPA 608	mg/L	0.000026	U	
LC-C	04/20/2016	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
LC-C	04/20/2016	Nitrogen, Nitrate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.02	U	
LC-C	04/20/2016	Nitrogen, Nitrite	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	04/20/2016	Pentachlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	04/20/2016	Phenol	REIC	EPA 604	mg/L	0.0010	U	
LC-C	04/20/2016	Pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	04/20/2016	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	04/20/2016	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	04/20/2016	Sulfate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	1.00	U	
LC-C	04/20/2016	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	04/20/2016	Total Dissolved Solids	REIC	SM2540 C-1997	mg/L	5	U	
LC-C	04/20/2016	Total Organic Carbon	REIC	SM5310 C-2000	mg/L	0.24	J	Result is qualified as estimated
LC-C	04/20/2016	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	1.0	U	
LC-C	04/20/2016	Toxaphene	REIC	EPA 608	mg/L	0.000256	U	
LC-C	04/20/2016	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0030	U	
LC-S	04/20/2016	Bacteria, Heterotrophic Plate Count	REIC	SM9215 B SIMPLATE	MPN/mL	20.0	U	
LC-S	04/20/2016	E-Coli	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-S	04/20/2016	Fecal Coliform	REIC	SM9222 D-1997	col/100mL	1	U	
LC-S	04/20/2016	Total Coliform	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-C	05/11/2016	1,4-Dioxane	ALS	E522	ug/L	0.063		> 30% of lowest sample.
LC-C	05/11/2016	16- $\alpha$ -Hydroxyestradiol (Estriol)	ALS	E539	ug/L	0.00080	U	
LC-C	05/11/2016	17- $\alpha$ -Ethinylestradiol	ALS	E539	ug/L	0.00090	U	
LC-C	05/11/2016	17- $\beta$ -Estradiol	ALS	E539	ug/L	0.00040	U	
LC-C	05/11/2016	4-Androstene-3,17-dione	ALS	E539	ug/L	0.00030	U	
LC-C	05/11/2016	Asbestos (fiber > 10 micrometers)	REIC	E600/R-94/134	MFL	0.50	U	
LC-C	05/11/2016	Chlorate	ALS	E300.1	ug/L	3.4	U	

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Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	05/11/2016	Chromium (total)	ALS	E200.8	ug/L	0.4		> 30% of lowest sample.
LC-C	05/11/2016	Cobalt	ALS	E200.8	ug/L	1.0	U	
LC-C	05/11/2016	Cryptosporidium	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	05/11/2016	Dioxin (2,3,7,8-TCDD)	REIC	1613B	pg/L	2.40	U	
LC-C	05/11/2016	Dissolved Alpha Emitters	REIC	E900	pCi/L	1.49	U	
LC-C	05/11/2016	Equilin	ALS	E539	ug/L	0.0040	U	
LC-C	05/11/2016	Estrone	ALS	E539	ug/L	0.0020	U	
LC-C	05/11/2016	Giardia lamblia	ALS	E1623.1	(Oo) cysts/L	0.00	U	
LC-C	05/11/2016	Gross Alpha	REIC	E900	pCi/L	1.75	U	
LC-C	05/11/2016	Gross Beta	REIC	E900	pCi/L	1.76	U	
LC-C	05/11/2016	Hexavalent chromium (dissolved)	ALS	E218.7	ug/L	0.0060	U	
LC-C	05/11/2016	Molybdenum	ALS	E200.8	ug/L	1.0	U	
LC-C	05/11/2016	Perfluorobutanesulfonic acid (PFBS)	ALS	E537 Rev 1.1	ug/L	0.0046	U	
LC-C	05/11/2016	Perfluorooctanoic acid (PFHpA)	ALS	E537 Rev 1.1	ug/L	0.0046	U	
LC-C	05/11/2016	Perfluorohexylsulfonic acid (PFHxS)	ALS	E537 Rev 1.1	ug/L	0.0046	U	
LC-C	05/11/2016	Perfluorononanoic acid (PFNA)	ALS	E537 Rev 1.1	ug/L	0.0046	U	
LC-C	05/11/2016	Perfluorooctanoic acid (PFOA)	ALS	E537 Rev 1.1	ug/L	0.0019	U	
LC-C	05/11/2016	Perfluorooctylsulfonic acid (PROS)	ALS	E537 Rev 1.1	ug/L	0.0077		> 30% of lowest sample.
LC-C	05/11/2016	Radium-226	REIC	E903	pCi/L	0.742	U	
LC-C	05/11/2016	Radium-228	REIC	E904	pCi/L	0.735	U	
LC-C	05/11/2016	Strontium	ALS	E200.8	ug/L	0.3	U	
LC-C	05/11/2016	Strontium-90 (dissolved)	REIC	ASTM D5811	pCi/L	1.31	U	
LC-C	05/11/2016	Testosterone	ALS	E539	ug/L	0.00010	U	
LC-C	05/11/2016	Tritium	REIC	E906	pCi/L	249	U	
LC-C	05/11/2016	Uranium	REIC	ASTMD5174	ug/L	0.193	U	
LC-C	05/11/2016	Vanadium	ALS	E200.8	ug/L	0.2	U	
LC-G	05/11/2016	1,1-Dichloroethane	ALS	E524.3	ug/L	0.015	U	
LC-G	05/11/2016	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U	
LC-G	05/11/2016	1,3-Butadiene	ALS	E524.3	ug/L	0.050	U	
LC-G	05/11/2016	Bromo-chloromethane (Halon 1011)	ALS	E524.3	ug/L	0.030	U	
LC-G	05/11/2016	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	2.0	U	
LC-G	05/11/2016	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	105	E	Result is qualified as outside of method calibration.
LC-G	05/11/2016	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.73		> 30% of lowest sample.
LC-G	05/11/2016	1,1,1-Trichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,1,2-Trichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,1-Dichloroethane	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,2-Dichlorobenzene	REIC	EPA 624	ug/L	0.500	U	
LC-G	05/11/2016	1,2-Dichloroethane	REIC	EPA 624	ug/L	0.500	U	



Field Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-G	05/11/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U	
LC-G	05/11/2016	Benzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U	
LC-G	05/11/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Toluene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U	
LC-G	05/11/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U	
LC-C	05/11/2016	2,4,6-Trichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	05/11/2016	2,4-Dichlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	05/11/2016	2,4-Dimethylphenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	05/11/2016	2,4-Dinitrophenol	REIC	EPA 604	mg/L	0.0002	U	
LC-C	05/11/2016	2,4-Dinitrotoluene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	05/11/2016	2-Chloronaphthalene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	05/11/2016	2-Chlorophenol	REIC	EPA 604	mg/L	0.0003	U	
LC-C	05/11/2016	4,4'-DDT	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	4,6-Dinitro-2-methylphenol	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	05/11/2016	4-MCHM	REIC	SW8015C	µg/L	2	U	
LC-C	05/11/2016	Acenaphthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Aldrin	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Alkalinity, Total (As CaCO3)	REIC	SM2320 B-1997	mg/L	1.0	U	
LC-C	05/11/2016	alpha-BHC	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aluminum	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.0005	U	
LC-C	05/11/2016	Anthracene	REIC	EPA 610	mg/L	0.0003	U	
LC-C	05/11/2016	Antimony	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	05/11/2016	Aroclor 1016	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aroclor 1221	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aroclor 1232	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aroclor 1242	REIC	EPA 608	mg/L	0.000029	U	

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	05/11/2016	Aroclor 1248	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aroclor 1254	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Aroclor 1260	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Arsenic	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	05/11/2016	Barium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	05/11/2016	Benzo(a)anthracene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	05/11/2016	Benzo(a)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Benzo(b)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Benzo(k)fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Beryllium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	05/11/2016	beta-BHC	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Bis(2-ethylhexyl)phthalate	REIC	EPA 625 (1982)	mg/L	0.0052	U	
LC-C	05/11/2016	Bromide	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	05/11/2016	Cadmium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	05/11/2016	Chlordane	REIC	EPA 608	mg/L	0.000288	U	
LC-C	05/11/2016	Chloride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.30	U	
LC-C	05/11/2016	Chrysene	REIC	EPA 610	mg/L	0.0006	U	
LC-C	05/11/2016	Copper	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	05/11/2016	Cyanide, Free	REIC	SM4500-CN 1-1997	mg/L	0.005	U	
LC-C	05/11/2016	Cyanide, Total	REIC	EPA 335.4, Rev. 1 (1993)	mg/L	0.005	U	
LC-C	05/11/2016	Dibenzo(a,h)anthracene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Dieldrin	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Endrin	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Fluoranthene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Fluorene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Fluoride	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	05/11/2016	gamma-BHC	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Hardness, Total (As CaCO3)	REIC	SM2340 B-1997	mg/L	1.00	U	
LC-C	05/11/2016	Heptachlor	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Heptachlor epoxide	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Hexachlorobenzene	REIC	EPA 625 (1982)	mg/L	0.0021	U	
LC-C	05/11/2016	Indeno(1,2,3-cd)pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Iron	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.010	U	
LC-C	05/11/2016	Lead	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	05/11/2016	Manganese	REIC	EPA 200.7 Rev. 4.4 (1994)	mg/L	0.002	U	
LC-C	05/11/2016	MBAS (calibrated on MW340 LAS)	REIC	SM5540 C-2000	mg/L	0.0500	U	
LC-C	05/11/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U	
LC-C	05/11/2016	Methoxychlor	REIC	EPA 608	mg/L	0.000029	U	
LC-C	05/11/2016	Nickel	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0020	U	
LC-C	05/11/2016	Nitrogen, Nitrate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.02	U	

## Field Blanks

September 15, 2016

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier	Notes
LC-C	05/11/2016	Nitrogen, Nitrite	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	0.05	U	
LC-C	05/11/2016	Pentachlorophenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	05/11/2016	Phenol	REIC	EPA 604	mg/L	0.0004	U	
LC-C	05/11/2016	Pyrene	REIC	EPA 610	mg/L	0.0001	U	
LC-C	05/11/2016	Selenium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	05/11/2016	Silver	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0010	U	
LC-C	05/11/2016	Sulfate	REIC	EPA 300.0, Rev.2.1 (1993)	mg/L	1.00	U	
LC-C	05/11/2016	Thallium	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0002	U	
LC-C	05/11/2016	Total Dissolved Solids	REIC	SM2540 C-1997	mg/L	6	J	Result is qualified as estimated.
LC-C	05/11/2016	Total Organic Carbon	REIC	SM5310 C-2000	mg/L	0.39	J	Result is qualified as estimated.
LC-C	05/11/2016	Total Suspended Solids	REIC	SM2540 D-1997	mg/L	1.0	U	
LC-C	05/11/2016	Toxaphene	REIC	EPA 608	mg/L	0.000288	U	
LC-C	05/11/2016	Zinc	REIC	EPA 200.8 Rev. 5.4 (1994)	mg/L	0.0061	J	Result is qualified as estimated.
LC-S	05/11/2016	Bacteria, Heterotrophic Plate Count	REIC	SM9215 B SIMPLATE	MPN/mL	40.0		< 30% of lowest sample
LC-S	05/11/2016	E-Coli	REIC	SM9223B-QT	MPN/100mL	1	U	
LC-S	05/11/2016	Fecal Coliform	REIC	SM9222 D-1997	col/100mL	1	U	
LC-S	05/11/2016	Total Coliform	REIC	SM9223B-QT	MPN/100mL	1	U	



## LL Hg Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
LL HG BLANK	06/24/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	07/07/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	07/20/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	08/03/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	08/17/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	09/01/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	09/15/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	09/29/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	10/13/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	11/03/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	11/09/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	11/17/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	12/01/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK	12/15/2015	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 07A	01/05/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 19A	01/05/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 08A	02/02/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 20A	02/02/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 7A	02/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 20A	02/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 07A	02/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 19A	03/07/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 07A	03/21/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 19A	03/21/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 08A	03/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 20A	03/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 08A	04/13/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 20A	04/13/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 10A	03/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 19A	03/29/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 10A	05/11/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 20A	05/11/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LL HG BLANK 10A	06/01/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U
LLHG BLANK19A	06/01/2016	Mercury	REIC	EPA 245.7	ng/L	1.80	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK	06/24/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK	06/24/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK	06/24/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	06/24/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK	07/07/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK	07/07/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK	07/07/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 11A	07/20/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 11A	07/20/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	07/20/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	07/20/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	07/20/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	07/20/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	07/20/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 11A	08/03/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	08/03/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	08/03/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	08/03/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/03/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 08A	08/17/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 08A	08/17/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	08/17/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	08/17/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	08/17/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	08/17/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	08/17/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 11A	09/01/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 11A	09/01/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	09/01/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	09/01/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	09/01/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	09/01/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	09/01/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	1.50	U
TRIP BLANK 07A	09/15/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 07A	09/15/2015	Benzene	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 07A	09/15/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 07A	09/15/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	09/15/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	1.50	U
TRIP BLANK 20A	09/15/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	09/15/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	09/15/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	09/15/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
NO TRIP BLANKS	09/29/2016	NA	REIC	--	--	--	--
TRIP BLANK 19A	10/13/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	10/13/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	10/13/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	10/13/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	10/13/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 08A	11/03/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	11/03/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/03/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	11/03/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 20A	11/03/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	11/03/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	11/03/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	11/09/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	11/09/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	11/09/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	11/09/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/09/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 08A	11/17/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	11/17/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	11/17/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	11/17/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	11/17/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	11/17/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	11/17/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	12/01/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	12/01/2015	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	12/01/2015	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	12/01/2015	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	12/01/2015	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
NO TRIP BLANKS	12/15/2015	NA	REIC	--	--	--	--
TRIP BLANK 08A	01/05/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 08A	01/05/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	01/05/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 08A	01/05/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	01/05/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	01/05/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	01/05/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	01/05/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 07A	02/02/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Toluene	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 07A	02/02/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	02/02/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	02/02/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/02/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 11A	02/29/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	02/29/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	02/29/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	02/29/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	02/29/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	02/29/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	02/29/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 08A	03/07/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	03/07/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/07/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 20A	03/07/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	03/07/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	03/07/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/07/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 08A	03/21/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 08A	03/21/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 20A	03/21/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	03/21/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	03/21/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	03/21/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Acrylonitrile	REIC	EPA 624	µg/L	7.50	U
TRIP BLANK 07A	03/29/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 07A	03/29/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 07A	03/29/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U



Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	03/29/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	03/29/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	03/29/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	03/29/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	04/13/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	04/13/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	04/13/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 20A	04/13/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.500	U
TRIP BLANK 20A	04/13/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.000	U
TRIP BLANK 20A	04/13/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/13/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 11A	04/20/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	04/20/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	04/20/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 20A	04/20/2016	Benzene	REIC	EPA 624	µg/L	0.500	U



Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 20A	04/20/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 20A	04/20/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 20A	04/20/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 11A	05/11/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 11A	05/11/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 11A	05/11/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK 19A	05/11/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U



## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK 19A	05/11/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK 19A	05/11/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK 19A	05/11/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
LC-Trip Blank	05/11/2016	1,2,3-Trichloropropane	ALS	E524.3	ug/L	0.015	U
LC-Trip Blank	05/11/2016	1,3-Butadiene	ALS	E524.3	ug/L	0.050	U
LC-Trip Blank	05/11/2016	Chloromethane (methyl chloride)	ALS	E524.3	ug/L	0.10	U
LC-Trip Blank	05/11/2016	1,1-Dichloroethane	ALS	E524.3	ug/L	0.015	U
LC-Trip Blank	05/11/2016	Chlorodifluoromethane (HCFC-22)	ALS	E524.3	ug/L	0.040	U
LC-Trip Blank	05/11/2016	Bromochloromethane (Halon 1011)	ALS	E524.3	ug/L	0.030	U
LC-Trip Blank	05/11/2016	Methyl bromide (bromomethane)	ALS	E524.3	ug/L	0.10	U
TRIP BLANK08A	06/01/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK08A	06/01/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK08A	06/01/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK08A	06/01/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,1,1-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,1,2,2-Tetrachloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,1,2-Trichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,1-Dichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,2,4-Trichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,2-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,2-Dichloroethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,2-Dichloropropane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	1,3-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U

## Trip Blanks

Sample ID	Date	Parameter	Lab	Method	Units	Result	Qualifier
TRIP BLANK20A	06/01/2016	1,4-Dichlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Acrylonitrile	REIC	EPA 603	µg/L	7.50	U
TRIP BLANK20A	06/01/2016	Benzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Bromodichloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Bromoform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Carbon tetrachloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Chlorobenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Chloroform	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Dibromochloromethane	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Ethylbenzene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	m,p-Xylene	REIC	EPA 624	µg/L	1.00	U
TRIP BLANK20A	06/01/2016	Methylene chloride	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	o-Xylene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Tetrachloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Toluene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Trichloroethene	REIC	EPA 624	µg/L	0.500	U
TRIP BLANK20A	06/01/2016	Vinyl chloride	REIC	EPA 624	µg/L	0.500	U

Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-G	08/03/2015	1,1,1-Trichloroethane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,1,2,2-Tetrachloroethane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,1,2-Trichloroethane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,1-Dichloroethene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,2,4-Trichlorobenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,2-Dichlorobenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,2-Dichloropropane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,3-Dichlorobenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,4-Dichlorobenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Acrylonitrile	7.50	U	MNT-2-B	7.500	U	
LC-G	08/03/2015	Benzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Bromodichloromethane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Bromoform	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Carbon tetrachloride	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Chlorobenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Chloroform	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Dibromochloromethane	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Ethylbenzene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	m,p-Xylene	1.00	U	MNT-2-B	1.00	U	
LC-G	08/03/2015	Methylene chloride	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	o-Xylene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Tetrachloroethene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Toluene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Trichloroethene	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	Vinyl chloride	0.500	U	MNT-2-B	0.500	U	
LC-G	08/03/2015	1,2,3-Trichloropropane	0.015	U	MNT-2-B	0.015	U	
LC-G	08/03/2015	1,3-Butadiene	0.050	U	MNT-2-B	0.050	U	
LC-G	08/03/2015	Chloromethane (methyl chloride)	0.10	U	MNT-2-B	0.10	U	
LC-G	08/03/2015	1,1-Dichloroethane	0.015	U	MNT-2-B	0.015	U	
LC-G	08/03/2015	Chlorodifluoromethane (HCFC-22)	0.040	U	MNT-2-B	0.040	U	
LC-G	08/03/2015	Bromochloromethane (Halon 1011)	0.030	U	MNT-2-B	0.030	U	
LC-G	08/03/2015	Methyl bromide (bromomethane)	0.10	U	MNT-2-B	0.10	U	
LC-C	08/03/2015	2,4,6-Trichlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	08/03/2015	2,4-Dichlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	08/03/2015	2,4-Dimethylphenol	0.0004	U	MNT-C	0.0004	U	
LC-C	08/03/2015	2,4-Dinitrophenol	0.0002	U	MNT-C	0.0002	U	
LC-C	08/03/2015	2,4-Dinitrotoluene	0.0020	U	MNT-C	0.0020	U	
LC-C	08/03/2015	2-Chloronaphthalene	0.0020	U	MNT-C	0.0020	U	
LC-C	08/03/2015	2-Chlorophenol	0.0003	U	MNT-C	0.0003	U	
LC-C	08/03/2015	4,4'-DDT	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	4,6-Dinitro-2-methylphenol	0.002	U	MNT-C	0.0020	U	
LC-C	08/03/2015	4-MCHM	1	U	MNT-C	2	U	
LC-C	08/03/2015	Acenaphthene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Aldrin	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Alkalinity, Total (As CaCO3)	50.6		MNT-C	48		5.27
LC-C	08/03/2015	alpha-BHC	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aluminum	0.102		MNT-C	0.111		8.45
LC-C	08/03/2015	Anthracene	0.0003	U	MNT-C	0.0003	U	
LC-C	08/03/2015	Antimony	0.0002	U	MNT-C	0.0002	U	
LC-C	08/03/2015	Aroclor 1016	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aroclor 1221	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aroclor 1232	0.000026	U	MNT-C	0.000025	U	



Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-C	08/03/2015	Aroclor 1242	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aroclor 1248	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aroclor 1254	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Aroclor 1260	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Arsenic	0.0010	U	MNT-C	0.0010	U	
LC-C	08/03/2015	Barium	0.0313		MNT-C	0.0328		4.68
LC-C	08/03/2015	Benzo(a)anthracene	0.0006	U	MNT-C	0.0006	U	
LC-C	08/03/2015	Benzo(a)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Benzo(b)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Benzo(k)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Beryllium	0.0002	U	MNT-C	0.0002	U	
LC-C	08/03/2015	beta-BHC	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Bis(2-ethylhexyl)phthalate	0.0051	U	MNT-C	0.0051	U	
LC-C	08/03/2015	Bromide	0.05	U	MNT-C	0.05	U	
LC-C	08/03/2015	Cadmium	0.0002	U	MNT-C	0.0002	U	
LC-C	08/03/2015	Chlordane	0.000026	U	MNT-C	0.000251	U	
LC-C	08/03/2015	Chloride	6.32		MNT-C	6.28		0.63
LC-C	08/03/2015	Chrysene	0.0006	U	MNT-C	0.0006	U	
LC-C	08/03/2015	Copper	0.0023		MNT-C	0.0023	J	
LC-C	08/03/2015	Cyanide, Free	0.005	U	MNT-C	0.005	U	
LC-C	08/03/2015	Cyanide, Total	0.005	U	MNT-C	0.005	U	
LC-C	08/03/2015	Dibenzo(a,h)anthracene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Dieldrin	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Endrin	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Fluorene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Fluoride	0.05	U	MNT-C	0.08	J	46.15
LC-C	08/03/2015	gamma-BHC	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Hardness, Total (As CaCO3)	68.8		MNT-C	68.9		0.15
LC-C	08/03/2015	Heptachlor	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Heptachlor epoxide	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Hexachlorobenzene	0.0020	U	MNT-C	0.0020	U	
LC-C	08/03/2015	Indeno(1,2,3-cd)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Iron	0.205		MNT-C	0.223		8.41
LC-C	08/03/2015	Lead	0.0002	J	MNT-C	0.0002	J	
LC-C	08/03/2015	Manganese	0.047	J	MNT-C	0.047	J	
LC-C	08/03/2015	MBAS (calibrated on MW340 LAS)	0.0250	U	MNT-C	0.100	U, H	
LC-C	08/03/2015	Mercury	1.80	U	MNT-C	1.80	U	
LC-C	08/03/2015	Methoxychlor	0.000026	U	MNT-C	0.000025	U	
LC-C	08/03/2015	Nickel	0.002	U	MNT-C	0.0020	U	
LC-C	08/03/2015	Nitrogen, Nitrate	0.24		MNT-C	0.9		115.79
LC-C	08/03/2015	Nitrogen, Nitrite	0.05	U	MNT-C	0.05	U	
LC-C	08/03/2015	Pentachlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	08/03/2015	Phenol	0.0004	U	MNT-C	0.0004	U	
LC-C	08/03/2015	Pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	08/03/2015	Selenium	0.0010	U	MNT-C	0.0010	U	
LC-C	08/03/2015	Silver	0.0010	U	MNT-C	0.0010	U	
LC-C	08/03/2015	Sulfate	18.8		MNT-C	18.6		1.07
LC-C	08/03/2015	Thallium	0.0002	U	MNT-C	0.0002	U	
LC-C	08/03/2015	Total Dissolved Solids	98		MNT-C	103		4.98
LC-C	08/03/2015	Total Organic Carbon	2.44		MNT-C	2.37		2.91
LC-C	08/03/2015	Total Suspended Solids	5.0		MNT-C	5.0		
LC-C	08/03/2015	Toxaphene	0.00026	U	MNT-C	0.000251	U	

Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-C	08/03/2015	Zinc	0.0031		MNT-C	0.0037	J	17.65
LC-C	08/03/2015	Dioxin (2,3,7,8-TCDD)	1.10	U	MNT-C	1.30	U	
LC-C	08/03/2015	Gross Alpha	2.11	U	MNT-C	2.09	U	
LC-C	08/03/2015	Gross Beta	2.02	U	MNT-C	2.08		2.93
LC-C	08/03/2015	Radium-226	0.935	U	MNT-C	0.978	U	
LC-C	08/03/2015	Radium-228	0.926	U	MNT-C	0.871	U	
LC-C	08/03/2015	Tritium	226	U	MNT-C	228	U	
LC-C	08/03/2015	Uranium	0.193	U	MNT-C	0.193	U	
LC-C	08/03/2015	Dissolved Alpha Emitters	2.17	U	MNT-C	1.94	U	
LC-C	08/03/2015	Strontium-90 (dissolved)	0.841	U	MNT-C	0.858	U	
LC-C	08/03/2015	Asbestos (fiber > 10 micrometers)	1.00	U	MNT-C	0.20	U	
LC-C	08/03/2015	Strontium	103		MNT-C	104		0.97
LC-C	08/03/2015	Chromium (total)	0.41		MNT-C	0.39		5.00
LC-C	08/03/2015	Cobalt	0.33	U	MNT-C	0.33	U	
LC-C	08/03/2015	Molybdenum	0.33	U	MNT-C	0.33	U	
LC-C	08/03/2015	Vanadium	0.49		MNT-C	0.48		2.06
LC-C	08/03/2015	Hexavalent chromium (dissolved)	0.0060	U	MNT-C	0.0060	U	
LC-C	08/03/2015	Chlorate	3.4	U	MNT-C	3.4	U	
LC-C	08/03/2015	1,4-Dioxane	0.014	U	MNT-C	0.014	U	
LC-C	08/03/2015	Perfluorooctylsulfonic acid (PFOS)	0.0400	U	MNT-C	0.0370	U	
LC-C	08/03/2015	Perfluorooctanoic acid (PFOA)	0.0200	U	MNT-C	0.0185	U	
LC-C	08/03/2015	Perfluorononanoic acid (PFNA)	0.0200	U	MNT-C	0.0185	U	
LC-C	08/03/2015	Perfluorohexylsulfonic acid (PFHxS)	0.0300	U	MNT-C	0.0278	U	
LC-C	08/03/2015	Perfluoroheptanoic acid (PFHpA)	0.0100	U	MNT-C	0.00926	U	
LC-C	08/03/2015	Perfluorobutanesulfonic acid (PFBS)	0.0900	U	MNT-C	0.0833	U	
LC-C	08/03/2015	17- $\beta$ -Estradiol	0.000400	U	MNT-C	0.000400	U, S	
LC-C	08/03/2015	17- $\alpha$ -Ethinylestradiol	0.000900	U	MNT-C	0.000900	U, S	
LC-C	08/03/2015	16- $\alpha$ -Hydroxyestradiol (estriol)	0.000800	U	MNT-C	0.000800	U, S	
LC-C	08/03/2015	Equilin	0.00400	U	MNT-C	0.00400	U, S	
LC-C	08/03/2015	Estrone	0.00200	U	MNT-C	0.00200	U, S	
LC-C	08/03/2015	Testosterone	0.000100	U	MNT-C	0.000100	U, S	
LC-C	08/03/2015	4-Androstene-3,17-dione	0.000300	U	MNT-C	0.000300	U, S	
LC-C	08/03/2015	Cryptosporidium	0.00		MNT-C	0.00	U	
LC-C	08/03/2015	Giardia lamblia	0.00		MNT-C	0.00	U	
LC-S	08/03/2015	Bacteria, Heterotrophic Plate Count	290		MNT-S	244		17.23
LC-S	08/03/2015	E-Coli	18		MNT-S	18		
LC-S	08/03/2015	Fecal Coliform	23		MNT-S	30		26.42
LC-S	08/03/2015	Total Coliform	1990		MNT-S	1730		13.98

Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-G	11/09/2015	1,1,1-Trichloroethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,1,2,2-Tetrachloroethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,1,2-Trichloroethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,1-Dichloroethene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,2,4-Trichlorobenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,2-Dichlorobenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,2-Dichloroethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,2-Dichloropropane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,3-Dichlorobenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,4-Dichlorobenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Acrylonitrile	7.50	U	MNT-1-B	7.50	U	
LC-G	11/09/2015	Benzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Bromodichloromethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Bromoform	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Carbon tetrachloride	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Chlorobenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Chloroform	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Dibromochloromethane	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Ethylbenzene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	m,p-Xylene	1.00	U	MNT-1-B	1.00	U	
LC-G	11/09/2015	Methylene chloride	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	o-Xylene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Tetrachloroethene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Toluene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Trichloroethene	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	Vinyl chloride	0.500	U	MNT-1-B	0.500	U	
LC-G	11/09/2015	1,2,3-Trichloropropane	0.015	U	MNT-1-B	0.015	U	
LC-G	11/09/2015	1,3-Butadiene	0.050	U	MNT-1-B	0.050	U	
LC-G	11/09/2015	Chloromethane (methyl chloride)	0.10	U	MNT-1-B	0.10	U	
LC-G	11/09/2015	1,1-Dichloroethane	0.015	U	MNT-1-B	0.015	U	
LC-G	11/09/2015	Chlorodifluoromethane (HCFC-22)	0.040	U	MNT-1-B	0.040	U	
LC-G	11/09/2015	Bromochloromethane (Halon 1011)	0.030	U	MNT-1-B	0.030	U	
LC-G	11/09/2015	Methyl bromide (bromomethane)	0.10	U	MNT-1-B	0.10	U	
LC-C	11/09/2015	2,4,6-Trichlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	11/09/2015	2,4-Dichlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	11/09/2015	2,4-Dimethylphenol	0.0004	U	MNT-C	0.0004	U	
LC-C	11/09/2015	2,4-Dinitrophenol	0.0002	U	MNT-C	0.0002	U	
LC-C	11/09/2015	2,4-Dinitrotoluene	0.0020	U	MNT-C	0.0021	U	
LC-C	11/09/2015	2-Chloronaphthalene	0.0020	U	MNT-C	0.0021	U	
LC-C	11/09/2015	2-Chlorophenol	0.0003	U	MNT-C	0.0003	U	
LC-C	11/09/2015	4,4'-DDT	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	4,6-Dinitro-2-methylphenol	0.0020	U	MNT-C	0.0021	U	
LC-C	11/09/2015	4-MCHM	2	U	MNT-C	2	U	
LC-C	11/09/2015	Acenaphthene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Aldrin	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Alkalinity, Total (As CaCO3)	42.6		MNT-C	41.4	J	2.86
LC-C	11/09/2015	alpha-BHC	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aluminum	0.131		MNT-C	0.116		12.15
LC-C	11/09/2015	Anthracene	0.0003	U	MNT-C	0.0003	U	
LC-C	11/09/2015	Antimony	0.0002	U	MNT-C	0.0002	U	
LC-C	11/09/2015	Aroclor 1016	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aroclor 1221	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aroclor 1232	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aroclor 1242	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aroclor 1248	2.5E-05	U	MNT-C	2.5E-05	U	



Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-C	11/09/2015	Aroclor 1254	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Aroclor 1260	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Arsenic	0.0010	U	MNT-C	0.0010	U	
LC-C	11/09/2015	Barium	0.0274		MNT-C	0.0268		2.21
LC-C	11/09/2015	Benzo(a)anthracene	0.0006	U	MNT-C	0.0007	U	
LC-C	11/09/2015	Benzo(a)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Benzo(b)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Benzo(k)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Beryllium	0.0002	U	MNT-C	0.0002	U	
LC-C	11/09/2015	beta-BHC	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Bis(2-ethylhexyl)phthalate	0.0051	U	MNT-C	0.0051	U	
LC-C	11/09/2015	Bromide	0.05	U	MNT-C	0.05	U	
LC-C	11/09/2015	Cadmium	0.0002	U	MNT-C	0.0002	U	
LC-C	11/09/2015	Chlordane	0.00025	U	MNT-C	0.000253	U	
LC-C	11/09/2015	Chloride	6.02		MNT-C	6.01		0.17
LC-C	11/09/2015	Chrysene	0.0006	U	MNT-C	0.0007	U	
LC-C	11/09/2015	Copper	0.0019		MNT-C	0.0017	J	11.11
LC-C	11/09/2015	Cyanide, Free	0.005	U	MNT-C	0.005	U	
LC-C	11/09/2015	Cyanide, Total	0.005	U	MNT-C	0.005	U	
LC-C	11/09/2015	Dibenzo(a,h)anthracene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Dieldrin	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Endrin	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Fluorene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Fluoride	0.05	U	MNT-C	0.05	U	
LC-C	11/09/2015	gamma-BHC	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Hardness, Total (As CaCO3)	60.8		MNT-C	59.5		2.16
LC-C	11/09/2015	Heptachlor	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Heptachlor epoxide	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Hexachlorobenzene	0.0020	U	MNT-C	0.0021	U	
LC-C	11/09/2015	Indeno(1,2,3-cd)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Iron	0.259		MNT-C	0.254		1.95
LC-C	11/09/2015	Lead	0.0005		MNT-C	0.0004	J	22.22
LC-C	11/09/2015	Manganese	0.034		MNT-C	0.034	J	
LC-C	11/09/2015	MBAS (calibrated on MW340 LAS)	0.0250	U	MNT-C	0.0250	U	
LC-C	11/09/2015	Mercury	1.80	U	MNT-C	1.80	U	
LC-C	11/09/2015	Methoxychlor	2.5E-05	U	MNT-C	2.5E-05	U	
LC-C	11/09/2015	Nickel	0.0020	U	MNT-C	0.0020	U	
LC-C	11/09/2015	Nitrogen, Nitrate	0.58		MNT-C	0.56		3.51
LC-C	11/09/2015	Nitrogen, Nitrite	0.05	U	MNT-C	0.05	U	
LC-C	11/09/2015	Pentachlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	11/09/2015	Phenol	0.0004	U	MNT-C	0.0004	U	
LC-C	11/09/2015	Pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	11/09/2015	Selenium	0.0010	U	MNT-C	0.0010	U	
LC-C	11/09/2015	Silver	0.0010	U	MNT-C	0.0010	U	
LC-C	11/09/2015	Sulfate	13.9		MNT-C	13.8		0.72
LC-C	11/09/2015	Thallium	0.0002	U	MNT-C	0.0002	U	
LC-C	11/09/2015	Total Dissolved Solids	92		MNT-C	97		5.29
LC-C	11/09/2015	Total Organic Carbon	2.48		MNT-C	2.83	J	13.18
LC-C	11/09/2015	Total Suspended Solids	5.5		MNT-C	8.5		42.86
LC-C	11/09/2015	Toxaphene	0.00025	U	MNT-C	0.000253	U	
LC-C	11/09/2015	Zinc	0.0039		MNT-C	0.0072	J	59.46
LC-C	11/09/2015	Dioxin (2,3,7,8-TCDD)	2.00	U	MNT-C	2.50	U	
LC-C	11/09/2015	Gross Alpha	1.54	U	MNT-C	1.51	U	

Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-C	11/09/2015	Gross Beta	1.86	U	MNT-C	1.78	U	
LC-C	11/09/2015	Radium-226	0.853	U	MNT-C	0.568	U	
LC-C	11/09/2015	Radium-228	0.851	U	MNT-C	0.849	U	
LC-C	11/09/2015	Tritium	256	U	MNT-C	257	U	
LC-C	11/09/2015	Uranium	0.193	U	MNT-C	0.193	U	
LC-C	11/09/2015	Dissolved Alpha Emitters	2.09	U	MNT-C	2.11	U	
LC-C	11/09/2015	Strontium-90 (dissolved)	3.12	U	MNT-C	3.97	U	
LC-C	11/09/2015	Asbestos (fiber > 10 micrometers)	10.00	U	MNT-C	10.00	U	
LC-C	11/09/2015	Strontium	83.6		MNT-C	90.6		8.04
LC-C	11/09/2015	Chromium (total)	0.34		MNT-C	0.48		34.15
LC-C	11/09/2015	Cobalt	0.33	U	MNT-C	0.33	U	
LC-C	11/09/2015	Molybdenum	0.33	U	MNT-C	0.33	U	
LC-C	11/09/2015	Vanadium	0.55		MNT-C	0.53		3.70
LC-C	11/09/2015	Hexavalent chromium (dissolved)	0.025		MNT-C	0.025		
LC-C	11/09/2015	Chlorate	3.4	U	MNT-C	3.4	U	
LC-C	11/09/2015	1,4-Dioxane	0.014	U	MNT-C	0.014	U	
LC-C	11/09/2015	Perfluorooctylsulfonic acid (PFOS)	0.040	U	MNT-C	0.040	U, S	
LC-C	11/09/2015	Perfluorooctanoic acid (PFOA)	0.020	U	MNT-C	0.020	U, S	
LC-C	11/09/2015	Perfluorononanoic acid (PFNA)	0.020	U	MNT-C	0.020	U, S	
LC-C	11/09/2015	Perfluorohexylsulfonic acid (PFHxS)	0.030	U	MNT-C	0.030	U, S	
LC-C	11/09/2015	Perfluoroheptanoic acid (PFHpA)	0.010	U	MNT-C	0.010	U, S	
LC-C	11/09/2015	Perfluorobutanesulfonic acid (PFBS)	0.090	U	MNT-C	0.090	U, S	
LC-C	11/09/2015	17- $\beta$ -Estradiol	0.00040	U	MNT-C	0.00040	U	
LC-C	11/09/2015	17- $\alpha$ -Ethinylestradiol	0.00090	U	MNT-C	0.00090	U	
LC-C	11/09/2015	16- $\alpha$ -Hydroxyestradiol (estriol)	0.00080	U	MNT-C	0.00080	U	
LC-C	11/09/2015	Equilin	0.0040	U	MNT-C	0.0040	U	
LC-C	11/09/2015	Estrone	0.0020	U	MNT-C	0.0020	U	
LC-C	11/09/2015	Testosterone	0.00010	U	MNT-C	0.00010	U	
LC-C	11/09/2015	4-Androstene-3,17-dione	0.00030	U	MNT-C	0.00030	U	
LC-C	11/09/2015	Cryptosporidium	0.00		MNT-C	0.00	U	
LC-C	11/09/2015	Giardia lamblia	0.00		MNT-C	0.00	U	
LC-S	11/09/2015	Bacteria, Heterotrophic Plate Count	151		MNT-S	252		50.12
LC-S	11/09/2015	E-Coli	54		MNT-S	50		7.69
LC-S	11/09/2015	Fecal Coliform	58		MNT-S	62		6.67
LC-S	11/09/2015	Total Coliform	980		MNT-S	816		18.26

Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-G	06/01/2016	1,2,3-Trichloropropane	0.015	U	MNT-1-T	0.015	U	
LC-G	06/01/2016	1,3-Butadiene	0.050	U	MNT-1-T	0.050	U	
LC-G	06/01/2016	Chloromethane (methyl chloride)	0.10	U	MNT-1-T	0.10	U	
LC-G	06/01/2016	1,1-Dichloroethane	0.015	U	MNT-1-T	0.015	U	
LC-G	06/01/2016	Chlorodifluoromethane (HCFC-22)	0.040	U	MNT-1-T	0.040	U	
LC-G	06/01/2016	Bromochloromethane (Halon 1011)	0.030	U	MNT-1-T	0.030	U	
LC-G	06/01/2016	Methyl bromide (bromomethane)	0.10	U	MNT-1-T	0.10	U	
LC-C	06/01/2016	Strontium	84		MNT-C	83		1.20
LC-C	06/01/2016	Chromium (total)	0.7		MNT-C	0.7		
LC-C	06/01/2016	Cobalt	1.0	U	MNT-C	1.0	U	
LC-C	06/01/2016	Molybdenum	1.0	U	MNT-C	1.0	U	
LC-C	06/01/2016	Vanadium	0.4		MNT-C	0.4		
LC-C	06/01/2016	Hexavalent chromium (dissolved)	0.030		MNT-C	0.044		37.84
LC-C	06/01/2016	Chlorate	3.4	U	Duplicate	3.4	U	
LC-C	06/01/2016	1,4-Dioxane	0.014	U	MNT-C	0.014	U	
LC-C	06/01/2016	Perfluorooctylsulfonic acid (PFOS)	0.0357	U	MNT-C	0.0345	U	
LC-C	06/01/2016	Perfluorooctanoic acid (PFOA)	0.0179	U	MNT-C	0.0172	U	
LC-C	06/01/2016	Perfluorononanoic acid (PFNA)	0.0179	U	MNT-C	0.0172	U	
LC-C	06/01/2016	Perfluorohexylsulfonic acid	0.0268	U	MNT-C	0.0259	U	
LC-C	06/01/2016	Perfluoroheptanoic acid (PFHpA)	0.00893	U	MNT-C	0.00862	U	
LC-C	06/01/2016	Perfluorobutanesulfonic acid (PFBS)	0.0804	U	MNT-C	0.0776	U	
LC-C	06/01/2016	17- $\beta$ -Estradiol	0.00040	U	MNT-C	0.00040	U	
LC-C	06/01/2016	17- $\alpha$ -Ethinylestradiol	0.00090	U	MNT-C	0.00090	U	
LC-C	06/01/2016	16- $\alpha$ -Hydroxyestradiol (estriol)	0.00080	U	MNT-C	0.00080	U	
LC-C	06/01/2016	Equilin	0.0040	U	MNT-C	0.0040	U	
LC-C	06/01/2016	Estrone	0.0020	U	MNT-C	0.0020	U	
LC-C	06/01/2016	Testosterone	0.00010	U	MNT-C	0.00010	U	
LC-C	06/01/2016	4-Androstene-3,17-dione	0.00030	U	MNT-C	0.00030	U	
LC-C	06/01/2016	Cryptosporidium	0.00		MNT-C	0.00		
LC-C	06/01/2016	Dioxin (2,3,7,8-TCDD)	3.00	U	MNT-C	1.20	U	
LC-C	06/01/2016	Gross Alpha	2.19	U	MNT-C	1.76	U	
LC-C	06/01/2016	Gross Beta	1.56	U	MNT-C	1.83	U	
LC-C	06/01/2016	Radium-226	0.783	U	MNT-C	0.825	U	
LC-C	06/01/2016	Radium-228	1.02		MNT-C	0.711	U	35.70
LC-C	06/01/2016	Tritium	259	U	MNT-C	249	U	
LC-C	06/01/2016	Uranium	0.193	U	MNT-C	0.193	U	
LC-C	06/01/2016	Dissolved Alpha Emitters	2.31	U	MNT-C	1.77	U	
LC-C	06/01/2016	Strontium-90 (dissolved)	1.01	U	MNT-C	0.961	U	
LC-C	06/01/2016	Asbestos (fiber > 10 micrometers)	0.54	U	MNT-C	0.54	U	
LC-G	06/01/2016	1,1,1-Trichloroethane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,1,2,2-Tetrachloroethane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,1,2-Trichloroethane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,1-Dichloroethene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,2,4-Trichlorobenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,2-Dichlorobenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,2-Dichloroethane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,2-Dichloropropane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,3-Dichlorobenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	1,4-Dichlorobenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Acrylonitrile	7.50	U	MNT-1-T	7.50	U	
LC-G	06/01/2016	Benzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Bromodichloromethane	0.500	U	MNT-1-T	0.500	U	



Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-G	06/01/2016	Bromoform	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Carbon tetrachloride	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Chlorobenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Chloroform	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Dibromochloromethane	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Ethylbenzene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	m,p-Xylene	1.00	U	MNT-1-T	1.00	U	
LC-G	06/01/2016	Methylene chloride	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	o-Xylene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Tetrachloroethene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Toluene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Trichloroethene	0.500	U	MNT-1-T	0.500	U	
LC-G	06/01/2016	Vinyl chloride	0.500	U	MNT-1-T	0.500	U	
LC-C	06/01/2016	2,4,6-Trichlorophenol	0.0004	U	MNT-C	0.0005	U	
LC-C	06/01/2016	2,4-Dichlorophenol	0.0004	U	MNT-C	0.0005	U	
LC-C	06/01/2016	2,4-Dimethylphenol	0.0004	U	MNT-C	0.0004	U	
LC-C	06/01/2016	2,4-Dinitrophenol	0.0002	U	MNT-C	0.0002	U	
LC-C	06/01/2016	2,4-Dinitrotoluene	0.0022	U	MNT-C	0.0020	U	
LC-C	06/01/2016	2-Chloronaphthalene	0.0022	U	MNT-C	0.0020	U	
LC-C	06/01/2016	2-Chlorophenol	0.0003	U	MNT-C	0.0004	U	
LC-C	06/01/2016	4,4'-DDT	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	4,6-Dinitro-2-methylphenol	0.0022	U	MNT-C	0.0020	U	
LC-C	06/01/2016	4-MCHM	2	U	MNT-C	2	U	
LC-C	06/01/2016	Acenaphthene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Aldrin	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Alkalinity, Total (As CaCO3)	42.1		MNT-C	42.7		1.42
LC-C	06/01/2016	alpha-BHC	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aluminum	0.095	J	MNT-C	0.148		
LC-C	06/01/2016	Anthracene	0.0003	U	MNT-C	0.0003	U	
LC-C	06/01/2016	Antimony	0.0002	U	MNT-C	0.0002	U	
LC-C	06/01/2016	Aroclor 1016	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1221	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1232	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1242	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1248	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1254	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Aroclor 1260	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Arsenic	0.0010	U	MNT-C	0.0010	U	
LC-C	06/01/2016	Barium	0.0288		MNT-C	0.0303		5.08
LC-C	06/01/2016	Benzo(a)anthracene	0.0006	U	MNT-C	0.0006	U	
LC-C	06/01/2016	Benzo(a)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Benzo(b)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Benzo(k)fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Beryllium	0.0002	U	MNT-C	0.0002	U	
LC-C	06/01/2016	beta-BHC	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Bis(2-ethylhexyl)phthalate	0.0055	U	MNT-C	0.0050	U	
LC-C	06/01/2016	Bromide	0.05	U	MNT-C	0.05	U	
LC-C	06/01/2016	Cadmium	0.0002	U	MNT-C	0.0002	U	
LC-C	06/01/2016	Chlordane	0.00026	U	MNT-C	0.000261	U	
LC-C	06/01/2016	Chloride	4.40		MNT-C	4.26		3.23
LC-C	06/01/2016	Chrysene	0.0006	U	MNT-C	0.0006	U	
LC-C	06/01/2016	Copper	0.0013	J	MNT-C	0.0015	J	

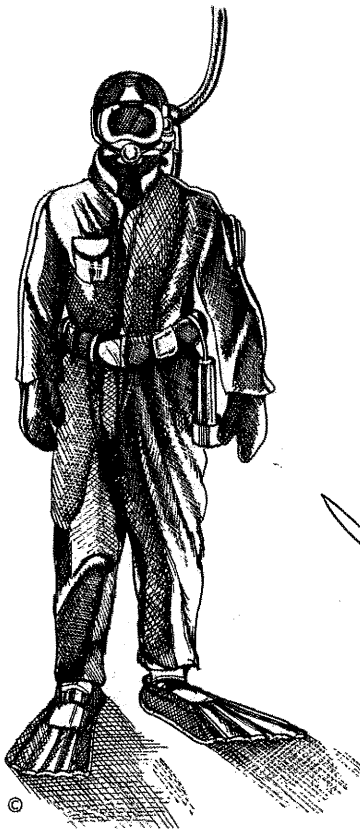
Sample ID	Date	Parameter	Result	Qualifier	Sample ID	Result	Qualifier	RPD
LC-C	06/01/2016	Cyanide, Free	0.005	U	MNT-C	0.005	U	
LC-C	06/01/2016	Cyanide, Total	0.005	U	MNT-C	0.005	U	
LC-C	06/01/2016	Dibenzo(a,h)anthracene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Dieldrin	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Endrin	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Fluoranthene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Fluorene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Fluoride	0.05	U	MNT-C	0.05	U	
LC-C	06/01/2016	gamma-BHC	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Hardness, Total (As CaCO3)	55.7		MNT-C	55.4		0.54
LC-C	06/01/2016	Heptachlor	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Heptachlor epoxide	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Hexachlorobenzene	0.0022	U	MNT-C	0.0020	U	
LC-C	06/01/2016	Indeno(1,2,3-cd)pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Iron	0.173		MNT-C	0.288		49.89
LC-C	06/01/2016	Lead	0.0005	J	MNT-C	0.0012		
LC-C	06/01/2016	Manganese	0.029	J	MNT-C	0.035	J	
LC-C	06/01/2016	MBAS (calibrated on MW340 LAS)	0.0500	U	MNT-C	0.0500	U	
LC-C	06/01/2016	Mercury	1.80	U	MNT-C	1.80	U	
LC-C	06/01/2016	Methoxychlor	2.6E-05	U	MNT-C	0.000026	U	
LC-C	06/01/2016	Nickel	0.0020	U	MNT-C	0.0023	J	
LC-C	06/01/2016	Nitrogen, Nitrate	0.35		MNT-C	0.44		22.78
LC-C	06/01/2016	Nitrogen, Nitrite	0.05	U	MNT-C	0.05	U	
LC-C	06/01/2016	Pentachlorophenol	0.0004	U	MNT-C	0.0004	U	
LC-C	06/01/2016	Phenol	0.0004	U	MNT-C	0.0004	U	
LC-C	06/01/2016	Pyrene	0.0001	U	MNT-C	0.0001	U	
LC-C	06/01/2016	Selenium	0.0010	U	MNT-C	0.0010	U	
LC-C	06/01/2016	Silver	0.0010	U	MNT-C	0.0010	U	
LC-C	06/01/2016	Sulfate	14.4		MNT-C	14.4		0.00
LC-C	06/01/2016	Thallium	0.0002	U	MNT-C	0.0002	U	
LC-C	06/01/2016	Total Dissolved Solids	81		MNT-C	76		6.37
LC-C	06/01/2016	Total Organic Carbon	3.07		MNT-C	2.35		26.57
LC-C	06/01/2016	Total Suspended Solids	11.5		MNT-C	11.0		4.44
LC-C	06/01/2016	Toxaphene	0.00026	U	MNT-C	0.000261	U	
LC-C	06/01/2016	Zinc	0.0098	J	MNT-C	0.0098	J	
LC-S	06/01/2016	Bacteria, Heterotrophic Plate Count	155		MNT-S	210		30.14
LC-S	06/01/2016	E-Coli	21		MNT-S	30		35.29
LC-S	06/01/2016	Fecal Coliform	280		MNT-S	22		170.86
LC-S	06/01/2016	Total Coliform	1,200		MNT-S	2419.6		67.39
LC-C	06/01/2016	Cryptosporidium	0.00		MNT-C	0.00	U,T+	
LC-C	06/01/2016	Giardia lamblia	0.00		MNT-C	0.00	U,T+	

**SEDIMENT STUDY FOR  
FOR SEVEN SITES  
ON THE KANAWHA RIVER  
CHARLESTON, WEST VIRGINIA**


**WJC No. 10-2211-15**

**Prepared For:**

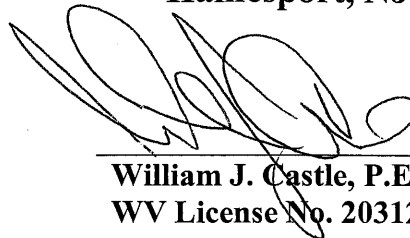
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# 2015 KANAWHA RIVER SEDIMENT STUDY

## I. INTRODUCTION

W.J Castle, P.E. & Associates, P.C. (CASTLE) was retained by Potesta & Associates, Inc. to evaluate seven (7) different areas of the Kanawha River in and around Charleston, West Virginia. The sites are designated SED01 through SED 07. The areas to be studied run approximately 500 feet along both banks, and include the full width of the river at each site. The purpose of the evaluation was to determine what sediments are present and the limits of each area of sediment on the channel bottom and banks.



**Figure 1: Location of the seven study areas.**

Four levels of study were performed for the project: a single beam hydrographic survey; a side scan sonar study of the area; a sonar sub-bottom profiler mapping of the area; and core and grab samples of the channel bottom. All survey operations were conducted from CASTLE's 24-foot steel survey boat, "Buddy Boat II". The hydrographic survey was performed of the area to record channel bottom elevations and develop a bathymetric map of the area. The side scan sonar was used to identify surface sediments and locate areas of changes. The sub-bottom profiler detects the possible changes in soil layers below the surface, which the side scan sonar cannot detect. The core samples were 2-inch diameter and varied from approximately one-foot to 7-feet deep depending on the soil. Grab samples were taken in areas where the channel bottom was too rocky to be able to obtain a core sample. The core samples were then delivered to Potesta daily for further evaluation. The combination of these four forms of data collection provides a comprehensive picture of the seven study areas and the sediments that comprise the channel bottom.

This report presents all of the data collected. All forms of data are combined and shown in our findings. All of the findings are presented for Potesta & Associates, Inc. to be used for further study and engineering.

# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **II. EQUIPMENT**

### **A. HYDROGRAPHIC SURVEY**

The hydrographic survey was performed using a Seafloor Systems Hydrolite-TM single beam hydrographic survey equipment. This is a GPS based sonar depth system that meets the Army Corps of Engineers specifications provided in the Hydrographic Survey Manual EM 1110-2-1003. The Hydrolite-TM system has a beam width of 4 degrees and a depth accuracy of 1 cm.

### **B. SIDE SCAN SONAR**

The side scan sonar system used was a J.W. Fishers dual frequency SSS-100K/600K PC side scan sonar. The imaging is achieved by a tow fish that is pulled behind the vessel. Sonar images are generated and recorded while the tow fish travels over the channel bottom. A Trimble ProXT GPS was tied into the sonar processing system for geo-referencing the sonar data. This allows for all information collected to be referenced in the West Virginia South State Plane Coordinate system. The photos below show the sonar tow fish and the computer interface during operation.



**Figure 2: Side Scan Sonar Tow Fish.**



## 2015 KANAWHA RIVER SEDIMENT STUDY



**Figure 3: Side Scan Sonar Controller and Interface.**



**Figure 4: Side Scan Sonar Interface during data collection.**

# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **C. SUB-BOTTOM PROFILER**

The device employed for the survey was an EdgeTech X-Star Chirp Sub-bottom Profiler. The tow fish used was the model SB-216S which can sweep sonic pulses from 2 kHz to 16 kHz. The sub-bottom profiler is capable of penetrating the sediment and getting reflections from changes in density from one type of sediment to another. The limitations of the sub-bottom profiler are:

1. The sediment may not be conducive to penetration if it contains gaseous organic material.
2. The sediment may be too coarse (large grain size) for significant penetration. Typical penetration for this system is 6 meters in coarse sand and 80 meters in soft clay.



**Figure 5: Sub-Bottom Profiler Towfish.**

# 2015 KANAWHA RIVER SEDIMENT STUDY

## **D. CORE SAMPLES**

The core samples were obtained with a VibeCore-D vibrating head manufactured by Specialty Devices, Inc. The VibeCore obtains samples with either a 2 or 3-inch diameter tube that can range from 2 feet to 20 feet long and are attached to the vibrating head. The tubes can be manufactured from aluminum, plastic, or stainless steel. It was agreed that for the purposes of this study that a 2-inch diameter, 8-foot long aluminum tube would be used. The VibeCore was lifted and lowered into the water by a davit crane attached to the boat. Vibrations cause the tube to sink into the soil and capture the sample. Photo 5 shows the VibeCore in operation.



**Figure 6: VibeCore-D Equipment.**

# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **III. SURVEY METHODOLOGY**

The seven areas to be studied covered the full width of the river, and spanned approximately 500 feet along the banks of the river centered on each of the given locations. These locations were provided by Potesta & Associates, Inc. as \*.kmz files that could be processed in Google Earth.

### **A. HYDROGRAPHIC SURVEY**

A hydrographic survey was the first operation conducted at each site. Survey points were recorded on a maximum 50 foot grid. In our experience, this spacing provides a sufficient density of points to create an accurate contour map of the river bottom.

The hydrographic survey data was recorded using Carlson SurvCE software. The 3D data points were recorded in the West Virginia South State Plane Coordinate system. The water depths were recorded and converted to elevations using United States Geological Survey (USGS) gauge readings at time of the survey. USGS gauge 03198000 was used for this study. It is located on the left bank of the old Lock 6 in the Winfield Pool at an elevation of 547.14 feet above NAVD 88. The gauge readings are available at 15 minute intervals on the USGS website, gauge readings were obtained for the time the survey was conducted. SED01 through SED05 were located in the Winfield pool and were calculated directly from USGS data and the recorded water depths. SED06 and SED07 are located in the Marmet pool, and the elevations were calculated using the water elevation difference between pools, which was obtained from the Marmet lock master. The hydrographic data was processed using AutoCAD and Microstation InRoads.

### **B. SIDE SCAN SONAR**

The side scan sonar was performed second to provide a picture of the limits of the various sediments that make up the river channel bottom. The first scans were performed at a long range/lower resolution. Two to five passes were performed to cover the entire area depending on the width of the river at the given location. These runs helped develop an overall picture of the river. The subsequent passes were performed at a shorter range and higher resolution for a more detailed image of the sediments along the river bottom. The imaging was performed traveling upstream and downstream.

#### **Data Processing:**

All side scan sonar data was processed using SonarTRX software. This allows for all images to be geo-referenced onto maps such as Google Earth for review and data interpretation. The images collected can also be viewed as raw playback images from the JW Fishers processing software. This viewing mode displays high resolution images and provides tools to measure dimensions of any object found.

Multiple runs were made at each location and each run was saved as a separate image. The images for each site are post-processed in-house and combined as a mosaic in Photoshop to construct a complete image of the channel bottom at each site.



# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **C. SUB-BOTTOM PROFILER**

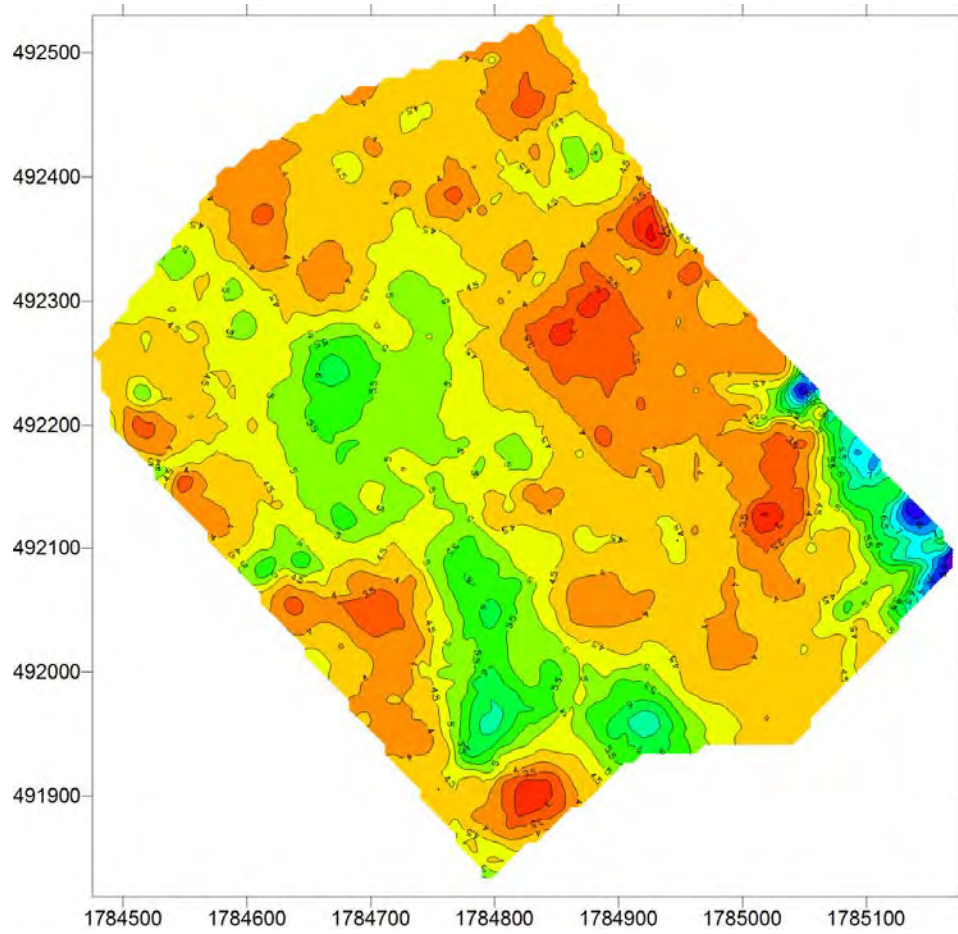
The sub-bottom profiler is capable of detecting different densities in soil layers below the river bottom. It uses sonar at low frequencies that penetrate the soil and reflect when the densities change. These changes are mapped as reflectors at varying depths. This test was performed after the side scan sonar. The survey vessel was mobilized with the Sub-bottom Profiler and Trimble DGPS Navigation System. The navigation computer with Hypack Navigation Software was used to interface the DGPS and output tow fish coordinates to the Sub-bottom profiler computer topside. The navigation computer was loaded with pre-planned survey lines equally spaced at 50 foot intervals through the length and width of the survey area within the waterway. This method provided visual guidance to the helmsman for navigation of each line. The DGPS system received differential corrections from the nearest Coast Guard beacon, and it was also able to provide WGS 84 differential positions to the Navigation computer.

The Sub-bottom profiler was deployed at the side of the vessel. The distance from the DGPS antenna to the center of the transducers was measured. The layback and offset was calculated by the Navigation software, enabling tow fish coordinates to be sent to the Sub-bottom page 7 profiler computer in real time.

### Data Processing:

The Sub-bottom profiler data was recorded in the native EdgeTech (.jsf) format on the hard drive in the Sub-bottom profiler computer. The data was monitored in real time and replayed and analyzed for detection of near surface layers and prospective coring locations to identify them. In post processing, the survey data was imported into the Chesapeake SonarWiz6 Program where the individual transects were navigationally smoothed. They were displayed and adjusted for color, gain and resolution. Reflectors were identified and digitized into XYZ (X and Y horizontal coordinates and Z vertical thickness from river bottom to reflector or thickness between reflectors) files. Profile views as images (HTML-PNG format in Appendix B) and isopach (sediment thickness contour map) XYZ files were produced. The XYZ files were imported to the Golden Software Surfer Program to produce color contoured isopach images such as the example in Figure 7.

# 2015 KANAWHA RIVER SEDIMENT STUDY



**Figure 7: Isopach map of RF1 reflector from SED01.**

# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **D. CORE SAMPLES**

Core samples were obtained as the final part of the study. The locations of the core samples were based on an interpretation of the findings from the sub-bottom profiler and side scan sonar. Core samples were taken in locations that appeared to have varying sediments and specifically along the banks in order to obtain a good representative sample.

The vibration from the VibeCore allows the tube to sink into the soil and collect the sample. Once the full length of tube sinks into the soil or reaches a point of refusal, the VibeCore was turned off and lifted up to the surface. Once the sample was brought to the surface, it was capped on both the top and bottom. The soil sample height was then recorded and the excess tubing is cut away.

Depending on the nature of the soil the tube might reach a point of refusal before the full length of the tube can sink into the soil. This is commonly seen with rocks and other hard objects like buried trees. In some instances where the surface was too rocky, the tube was unable to penetrate the surface. Alternatively, CASTLE collected grab samples obtained by a commercial diver using commercial SCUBA gear. All core sample locations were recorded using GPS.

Three samples were obtained at each site. These samples were stored upright at all times to prevent soil layers from mixing. At the end of each day, CASTLE handed off the core samples to Potesta & Associates, Inc., to be logged and checked for classification and contaminants.

# 2015 KANAWHA RIVER SEDIMENT STUDY

## IV. FINDINGS

The findings are presented at the end of this section in a series of graphics. Presented for each site are; a contour plan, surface sediment plan, sub-bottom isopach plans, and boring logs.

### A. Sediment Map Findings:

The sediment maps for each location are graphics developed by correlating side scan and boring log data. The results from the boring collection were provided by Potesta & Associates. The side scan sonar imaging shows coarseness and types of sediment by the differing reflectivity received. Similar reflectivity or imaging in an area with a boring indicates that the sediment collected in the boring is distributed in those areas with similar imaging. Based on this methodology, outlines were placed on the sediment maps with labels indicating the most likely and relevant types of sediment for each delineated area. The figure below is an example of the different imaging. The upper portion of the image shows coarser sediment and the lower portion shows finer sediment with some scattered large rocks. In this case, the boring taken in the lower area showed silty sand and coal fines. Therefore the map was labeled accordingly.



Figure 8: Varied imaging due to the differing sediments.



## **2015 KANAWHA RIVER SEDIMENT STUDY**

The surface sediment findings are generally silty sands, coal fines and gravel. The site just below Marmet Lock – SED05 exhibited less silty sands and more coarse gravel and cobbles. And the site just above Marmet Lock exhibited mostly silty sands and finer grained deposits. This is expected. Sediment would be eroded away just below a dam and collected just above a dam due to the flow conditions created by the dam.

It should be noted that the coal fines commonly appear as the finest sediments in all of the side scan survey imaging. It can be used as a confident assessment of this sediment classification.



**Figure 9: Varied imaging due to differing sediments.**

# 2015 KANAWHA RIVER SEDIMENT STUDY

## 1. SED01



**Figure 10: Location of SED01.**

This site is at the Charleston riverfront facilities. The Charleston bank and the opposite bank are heavily protected with 12 inch to 24 inch riprap. Just beyond the embankment is the typical silty sand and gravel throughout the remainder of the riverbed.

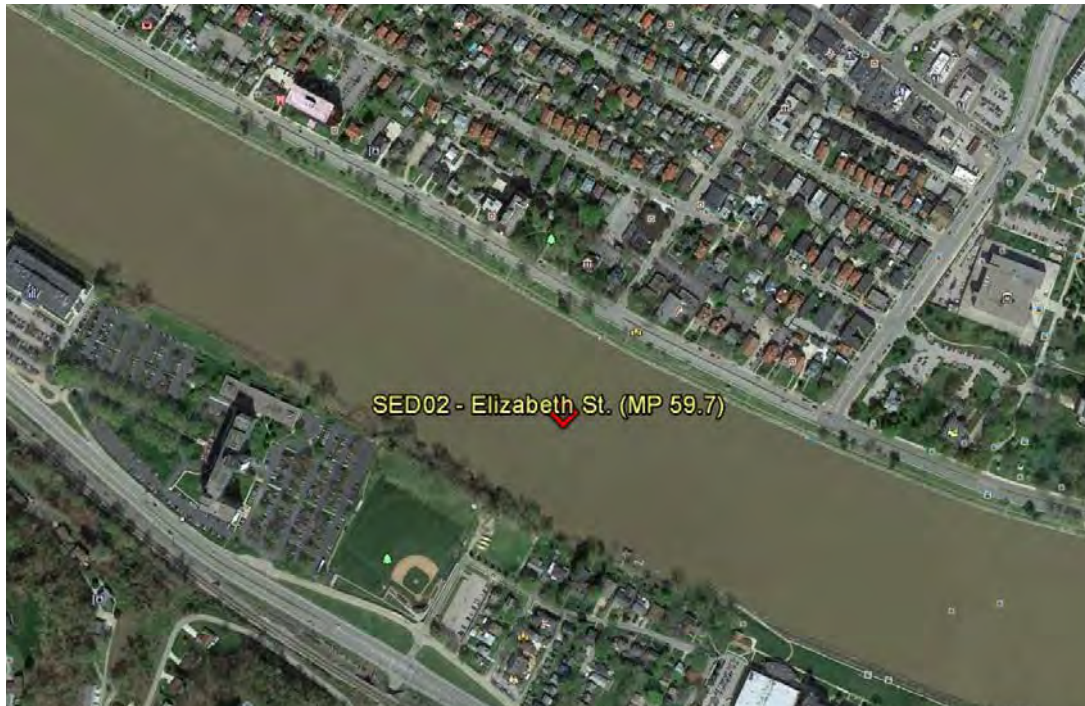


**Figure 11: Typical bank protection along the Charleston Waterfront.**



# 2015 KANAWHA RIVER SEDIMENT STUDY

## 2. SED02



**Figure 12: Location of SED02.**

This site is located east of SED01 with Charleston on the north bank. The north bank is protected with a mixture of capstone and riprap. There is a large outfall pipe on the bank inside the site limits. The opposite bank is composed of silty sands and gravels. The center of the channel is a mixture of sand and gravel.



**Figure 13: Large outfall pipe along the Charleston Waterfront.**



# 2015 KANAWHA RIVER SEDIMENT STUDY

## 3. SED03



**Figure 14: Location of SED03.**

Site 3 is located at Moose Lodge, which is on the north bank. Also located on the north bank, just west of the site limits, is a small creek, which is likely responsible for clay found in the northwest corner of the site. The south bank has two personal docks and rip rap protecting the embankment. The center of the channel is mostly coarse gravel with areas of silty sands with coal fines. Coal fines were also found along areas of both banks and therefore in all areas of the site.



**Figure 15: Small creek at the northwest corner of the site.**



# 2015 KANAWHA RIVER SEDIMENT STUDY

## 4. SED04



**Figure 16: Location of SED04.**

Site 4 is located downstream of Campbell's Creek. There are silty sands located on the north bank, just downstream of the creek. There is also clay found below the top soil layer indicated by Core 1 near the creek. The other half of the north bank is very rocky sediment. The south bank is composed of sand organics and some coal fines. The center of the channel is composed of two main areas, one that is mostly coarse sands, and the other is mostly fine sediments. There is a medium sized outfall pipe located on each bank.



**Figure 17: Campbell's Creek on the north bank upstream of SED04.**



# 2015 KANAWHA RIVER SEDIMENT STUDY

## 5. SED05



**Figure 18: Location of SED05.**

Site 5 is located just downstream of the Marmet Locks and Dam. Because of this, much of the silts and sands have eroded away and most of the river bottom in the site is composed of rock. The east bank does have silty sands along the bank, where two private docks are located. Near the west bank, just past the rock embankment is an area with sand mixed with gravel.

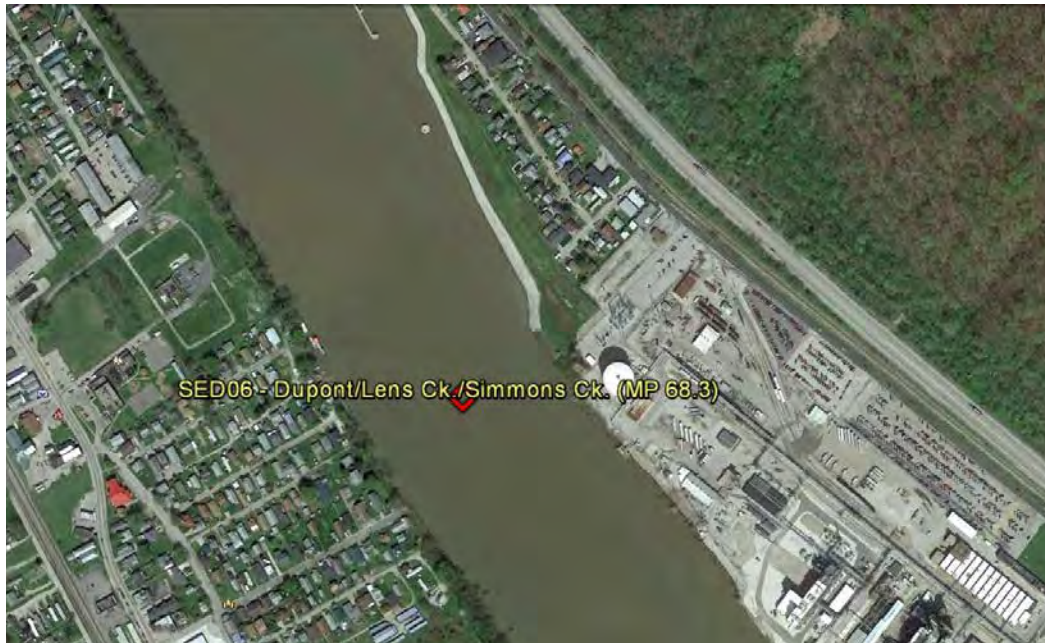


**Figure 19: West bank with rock embankment and a mooring buoy.**



# 2015 KANAWHA RIVER SEDIMENT STUDY

## 6. SED06



**Figure 20: Location of SED06.**

Site 6 is located next to the DuPont Plant upstream of the Marmet Locks and Dam. Because it is upstream of the dam, there is significant silt that collects on the river bottom. The north bank is protected by riprap and just beyond that are medium grained sand and coal fines. The south bank is mostly silty sands. The southeast corner also has clay along with finer sands. The rest of the south bank contains coarser sediments and scattered debris. The middle of the channel is very uniform and is composed of fine grained sand, clay and some coal fines.



**Figure 21: Outfall pipe with typical riprap along the north bank at DuPont plant.**

# 2015 KANAWHA RIVER SEDIMENT STUDY

## 7. SED07



**Figure 11: Location of SED07**

Site 7 is the farthest upstream and is located in the Marmet Pool. The north bank at this site was inaccessible by boat and sonar, because about 50 feet from the shoreline the channel bottom rose and the water depth dropped to about one foot. There was timber sheeting located at the area of change indicating that there was probably a structure located at this site in the past. Right in front of the sheeting and the shallow area is an area of silty, clayey sand and coal fines. Following this is a small area of coarse gravel and silty sand, also mixed with some coal fines.



**Figure 22: Timber sheeting and shallow area near the north bank.**



## **2015 KANAWHA RIVER SEDIMENT STUDY**

Cabin Creek is located on the south bank just upstream of the study area. There are also rock groins spaced about 100 feet apart and debris found along the bank. The sediments are mostly silty sands mixed with organics and coal fines. As with other sites near a creek, there are clay layers found below the surface near the creek. The center of the channel is a very uniform area of silty sands with some coal fines found. Coal fines were found everywhere in the site.



**Figure 23: Typical rock groins along the south bank.**

# **2015 KANAWHA RIVER SEDIMENT STUDY**

## **B. Sub-bottom Findings:**

Near surface layers were detected in all seven areas; however, they were masked by near surface rocky material close to shore where the information was most needed. Most reflectors are subtle, indicating only slight changes in density. They are difficult to follow especially as they approach the river bank and shallow water. Bedrock was hypothesized to be at various elevations by several sources, but we had only anecdotal information to verify the deeper reflectors found in the data.

### **1. SED01**

Layers mapped at this site include “RF1” and “RF2”. RF1 and RF2 covered enough area to construct isopach maps RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness) and RF1-RF2 (RF1 to RF2 thickness). Reflectors were mapped on all track lines, including those closest to the banks.

### **2. SED02**

The lines closest to the banks (2SE and 14SE) were completely masked.

Layers mapped at this site include “RF1” and “RF2”. RF1 and RF2 covered enough area to construct isopach maps RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness) and RF1-RF2 (RF1 to RF2 thickness).

### **3. SED03**

Layers mapped at this site include “RF0”, “RF1”, “RF2” and “RF3”. RF0, RF1 and RF2 covered enough area to construct isopach maps RF0 (river bottom to RF0 thickness) RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness), RF0-RF1 (RF0 to RF1 thickness) and RF1-RF2 (RF1 to RF2 thickness). Reflectors were mapped on all track lines including those closest to the banks.

### **4. SED04**

The line along the southwest bank (12SE) was masked while the line along the northeast bank (4SE) was not. Lines perpendicular and crossing 4SE did encounter masking as they approached the bank. Layers mapped at this site include “RF0”, “RF1” and “RF2”. RF1 and RF2 covered enough area to construct isopach maps RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness) and RF1-RF2 (RF1 to RF2 thickness).

### **5. SED05**

Layers mapped at this site include “RF0” and “RF1”. RF1 covered enough area to construct an isopach map RF1 (river bottom to RF1 thickness). Reflectors were mapped on all track lines including those closest to the banks.

### **6. SED06**

The lines closest to the banks (2NW and 17NW) were completely masked. Layers mapped at this site include “RF0”, “RF1” and “RF2”. RF0, RF1 and RF2 covered enough area to construct isopach maps RF0 (river bottom to RF0 thickness) RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness) RF0-RF1 (RF0 to RF1 thickness) and RF1-RF2 (RF1 to RF2 thickness).

## **2015 KANAWHA RIVER SEDIMENT STUDY**

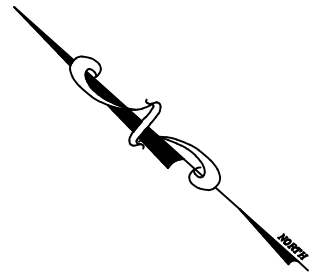
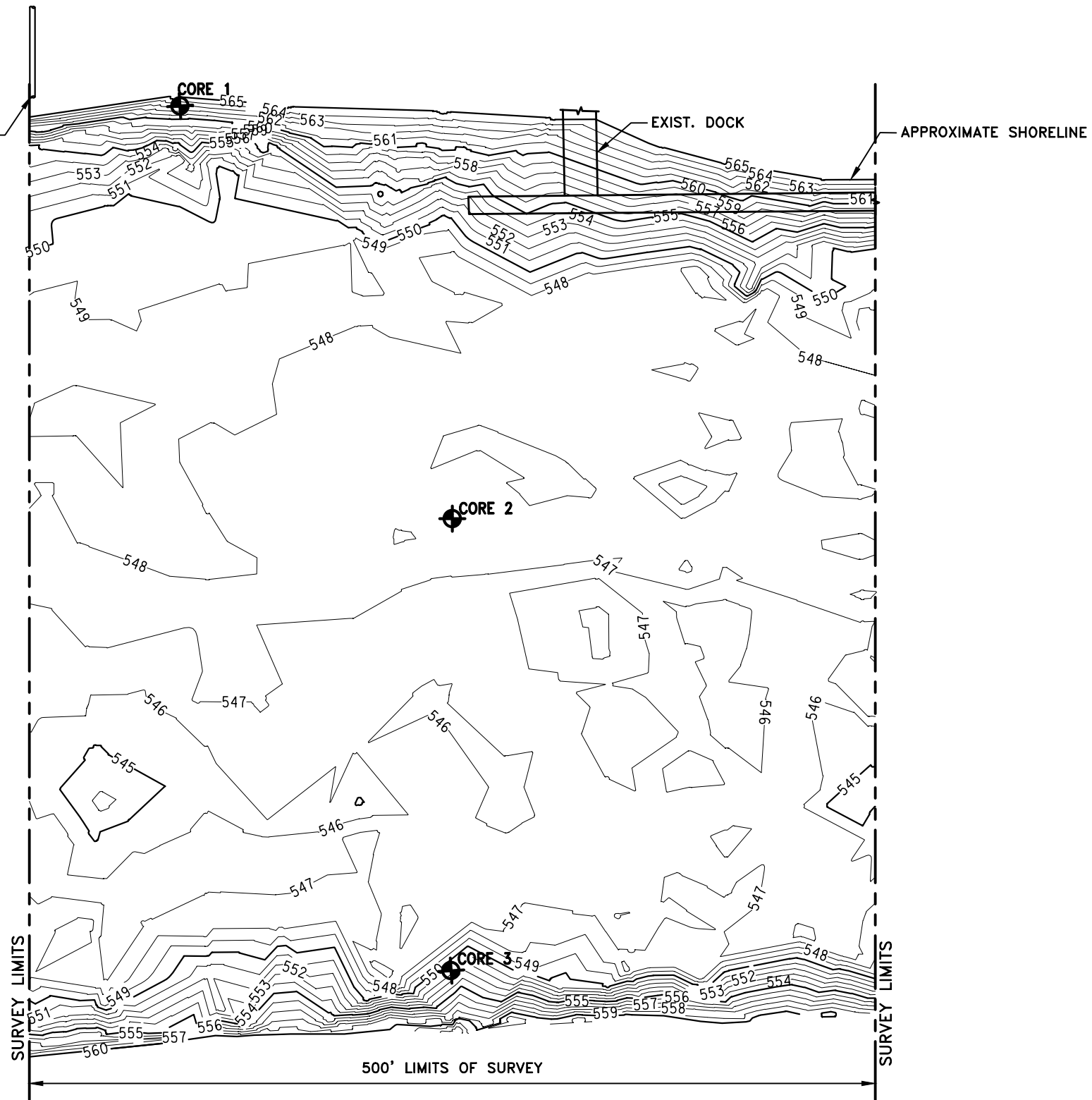
### **7. SED07**

The lines closest to the banks (23E and 5W) were completely masked with the exception of a silty sand area on line 5W confirmed by boring SED-07C-1. Gravel was encountered at a depth of 3.6 feet below river bottom and this gravel layer was mapped and annotated as “Gravel” on the profile (see Figure 1). This was the only feature matched to a boring in the entire project. Other layers mapped at this site include “RF00”, “RF0”, “RF1”, RF2 and “RF3”. RF1 and RF2 covered enough area to construct isopach maps RF1 (river bottom to RF1 thickness) RF2 (river bottom to RF2 thickness) and RF1-RF2 (RF1 to RF2 thickness).

### **C. Graphic Images:**

The findings are presented in the following series of graphics. Presented for each site are; a contour plan, surface sediment plan, sub-bottom isopach plans, and boring logs.

EXIST. PIPE  
N 492565.23  
E 1784896.98



**LEGEND:**

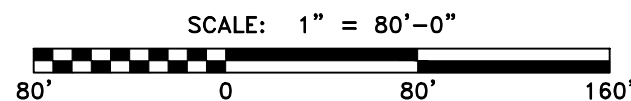
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	492485.72	1784918.96
2	492203.16	1784844.45
3	492025.69	1784644.84

**GENERAL NOTES:**

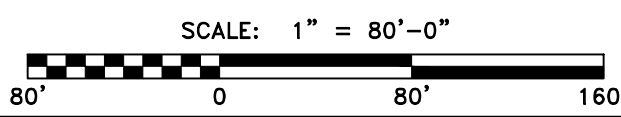
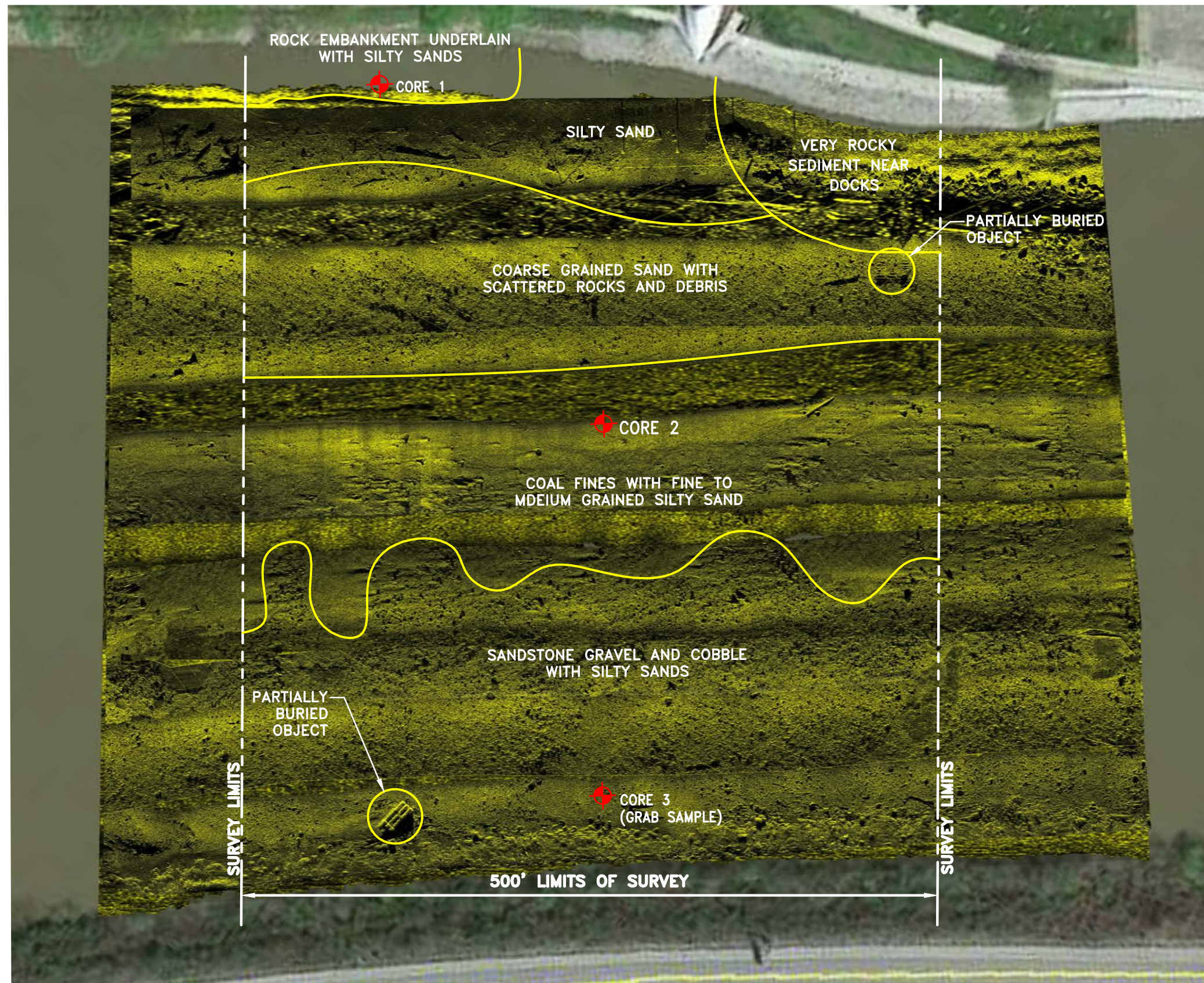
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 10, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (WINFIELD POOL) WAS 565.42' AT THE TIME OF THE SURVEY BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.

DATE	NO.	REVISIONS	BY		
SED01 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	1 OF 33



**CONTOUR PLAN**  
SCALE: 1" = 80'





**SEDIMENT MAP PLAN**  
SCALE: 1" = 80'

**LEGEND:**

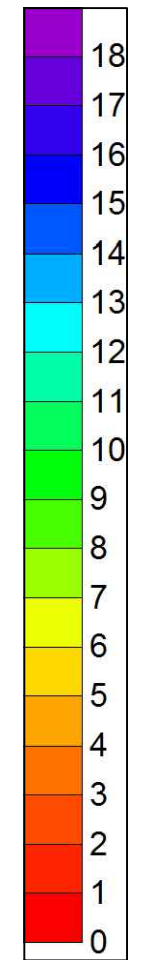
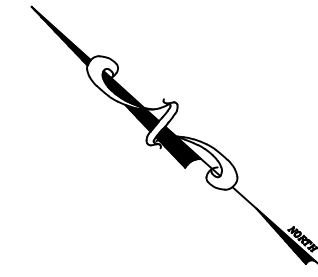
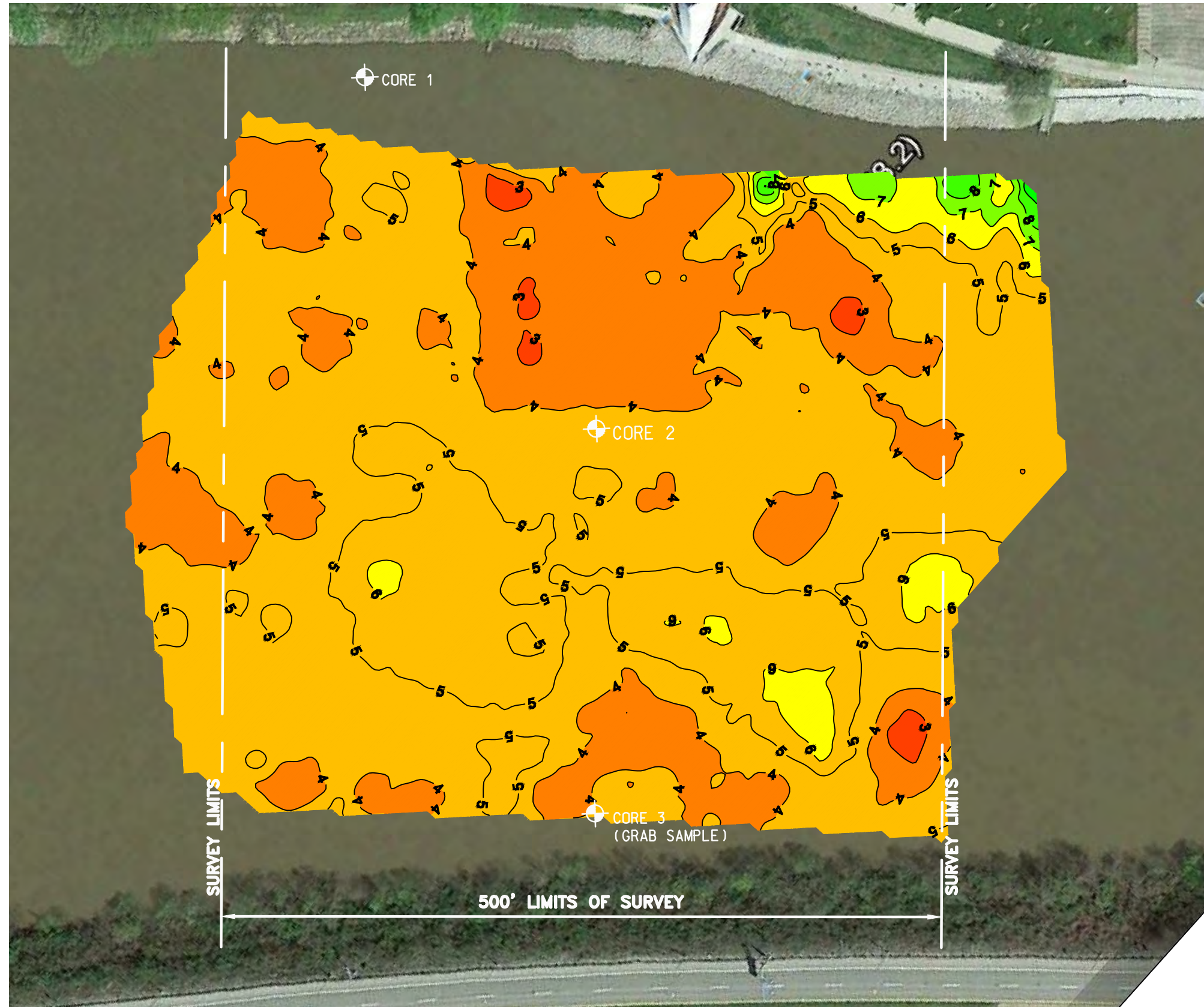
- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

**GENERAL NOTES:**

1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 10, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
SED01 SEDIMENT MAP			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
W.J. Castle PE & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/13/15	DRAWING No. 2 OF 33

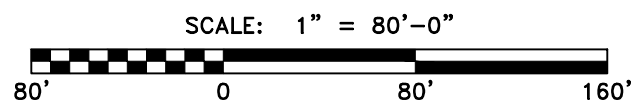




**GENERAL NOTES:**

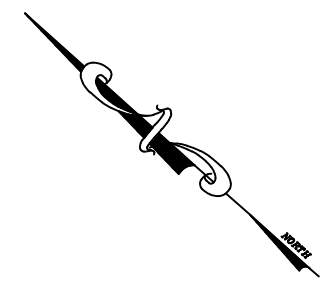
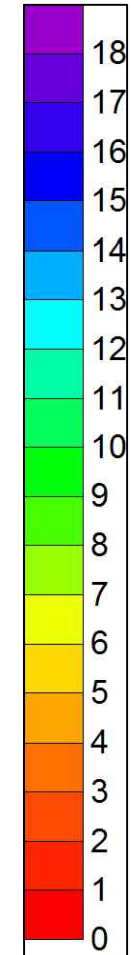
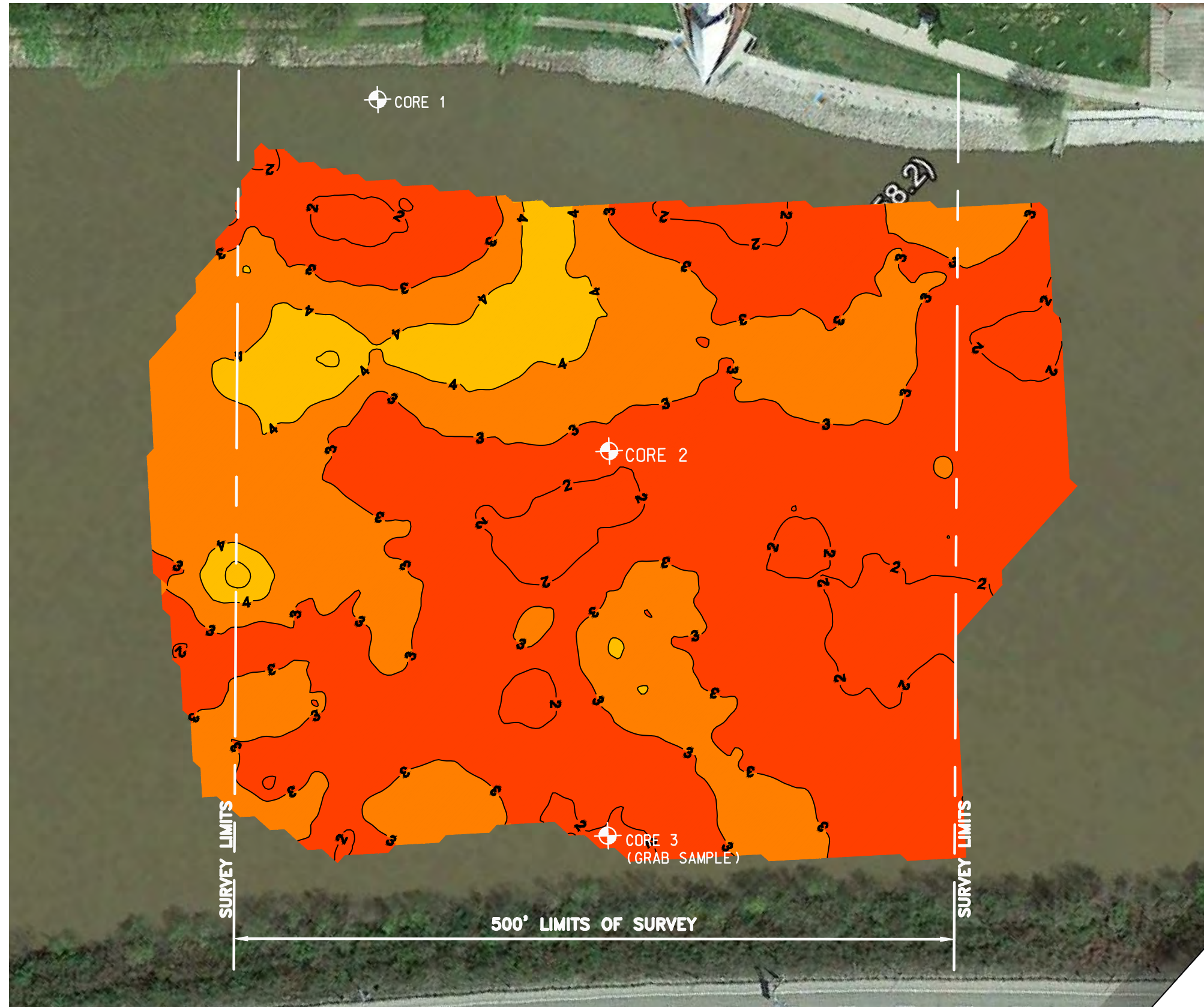
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF TOP SEIMENT LAYER RF1 BELOW RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED01 RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 3 OF 33



**RF1 ISOPACH PLAN**  
SCALE: 1" = 80'

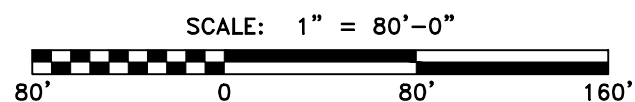




**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED01 RF2 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/15	DRAWING No. 4 OF 33



**RF2 ISOPACH PLAN**  
SCALE: 1" = 80'

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 563.3 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 5.8 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
563.1	(Wavy pattern)	Dark Gray, Fine Grained <b>SILTY SAND</b>								
0.17		Dark Gray, Medium Grained <b>SILTY SAND</b> with Trace Organics								
562.5		Dark Gray, Medium to Fine Grained <b>SILTY SAND</b> with Trace Organics								
0.83	(Wavy pattern)									
558.3		Dark Gray <b>SILTY CLAY</b>		5						
5	(Wavy pattern)									
557.5										
5.83				10						

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



7012 MacCorkle Ave SE  
Charleston, WV 25301  
Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 547 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 0.8 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
546.8		Black <b>COAL FINES</b> with Some Fine Sand								
0.17		Brown, Fine to Coarse Grained <b>SAND</b> with Coal Fines								
546.3										
0.75										
				5						
				10						

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



7012 MacCorkle Ave SE  
Charleston, WV 25301  
Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Grab</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 548.3 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 0.3 Ft.

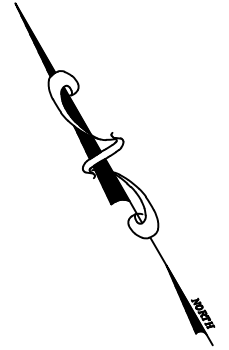
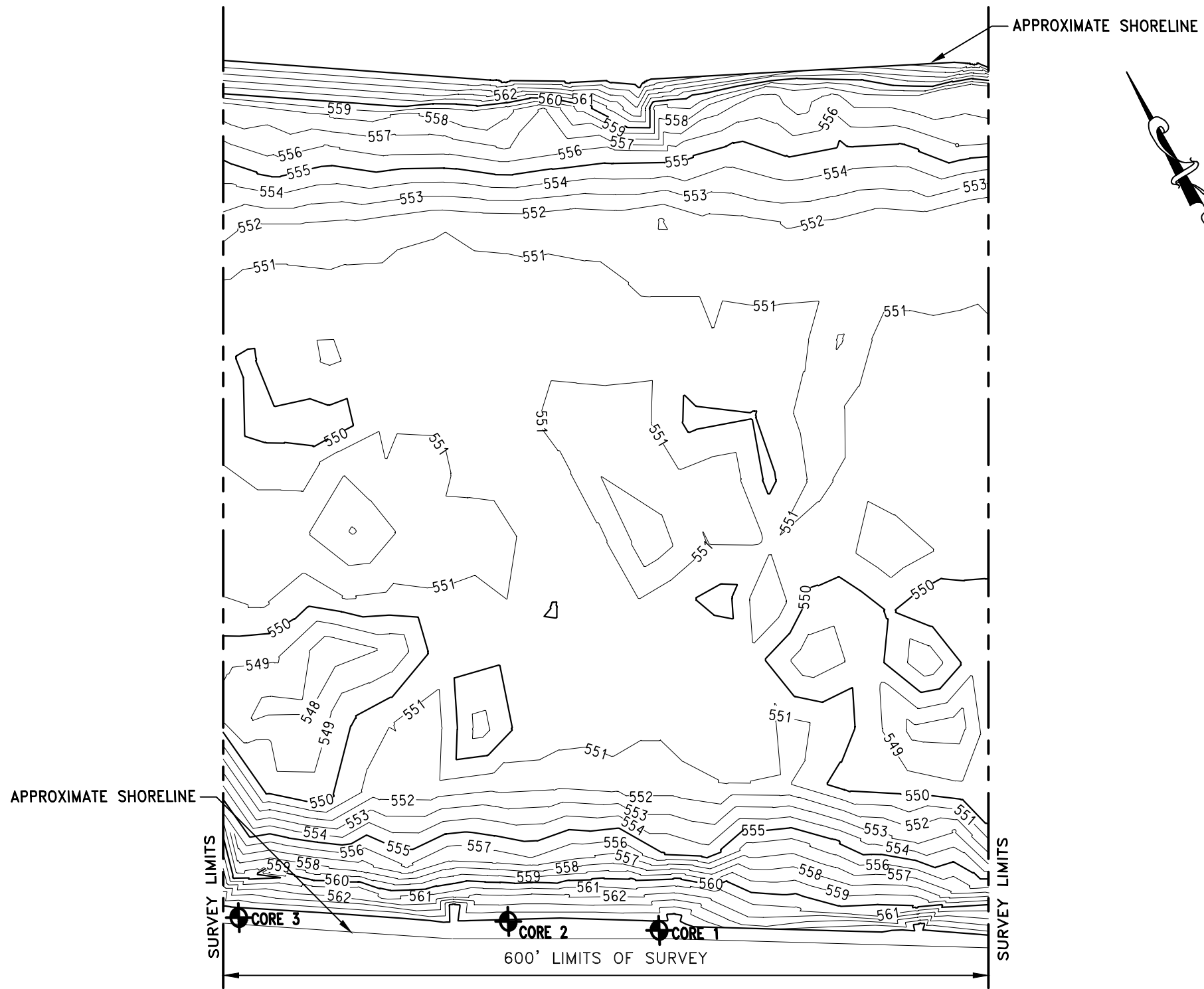
Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsfc
548.1 0.25	o o	Coarse SANDSTONE GRAVEL AND COBBLE with Trace Silty Sand (Grab sample due to larger rocks.)		5						
				10						

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



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BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



**LEGEND:**

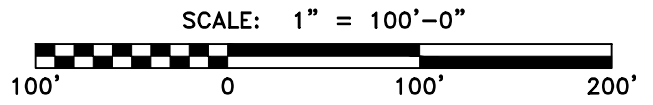
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	486938.57	1790513.75
2	487003.77	1790415.11
3	487112.11	1790233.29

**GENERAL NOTES:**

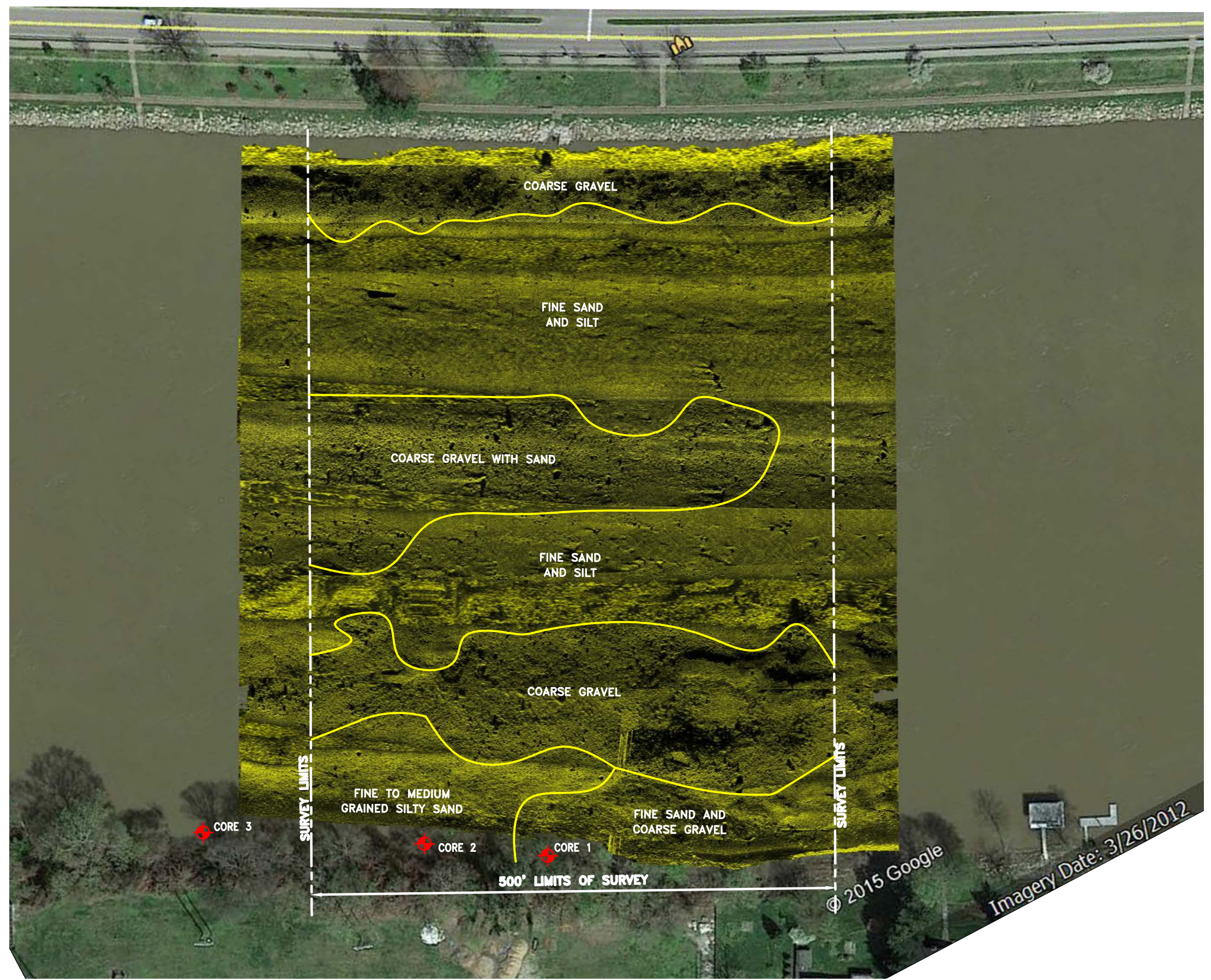
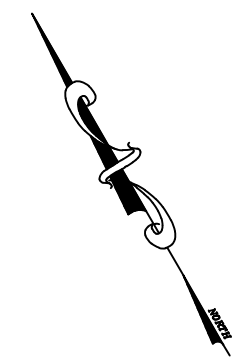
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 13, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (WINFIELD POOL) WAS 565.66' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.

DATE	NO.	REVISIONS	BY		
SED02 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	5 OF 33



**CONTOUR PLAN**  
SCALE: 1" = 100'



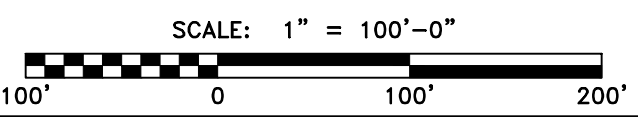


**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- + DENOTES THE LOCATION OF SOIL BORING.

**GENERAL NOTES:**

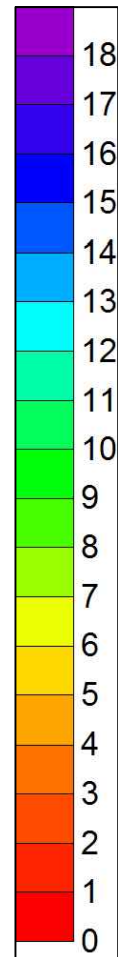
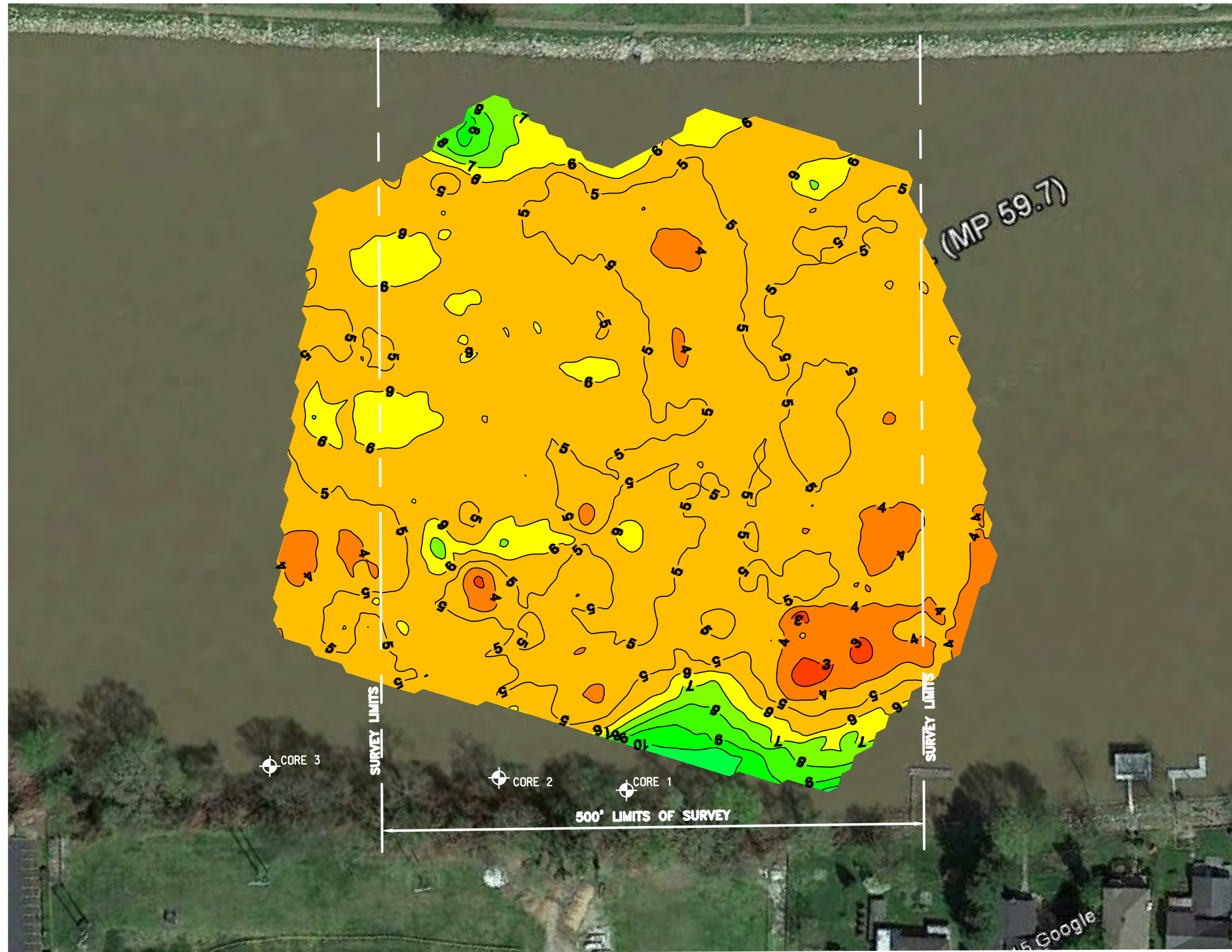
1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 13, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.



**SEDIMENT MAP PLAN**  
SCALE: 1" = 100'

DATE	NO.	REVISIONS	BY
SED02 SEDIMENT MAP			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE	DRAWN BY	CHECKED BY	JOB NO.
AS SHOWN	GPD	W.J.C.	10-2211-15
		DATE	DRAWING No.
		10/13/15	6 OF 33





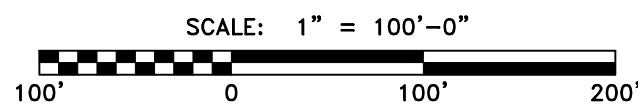
**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF TOP SEDIMENT LAYER RF1 BELOW RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED02 RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			

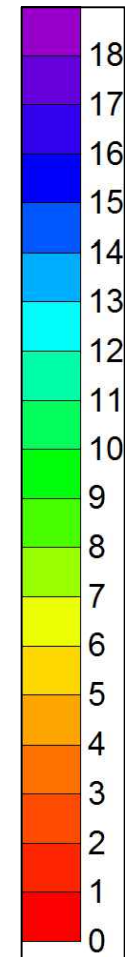
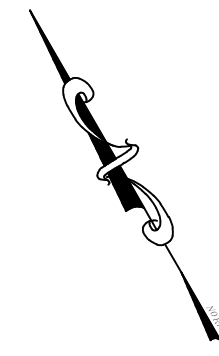
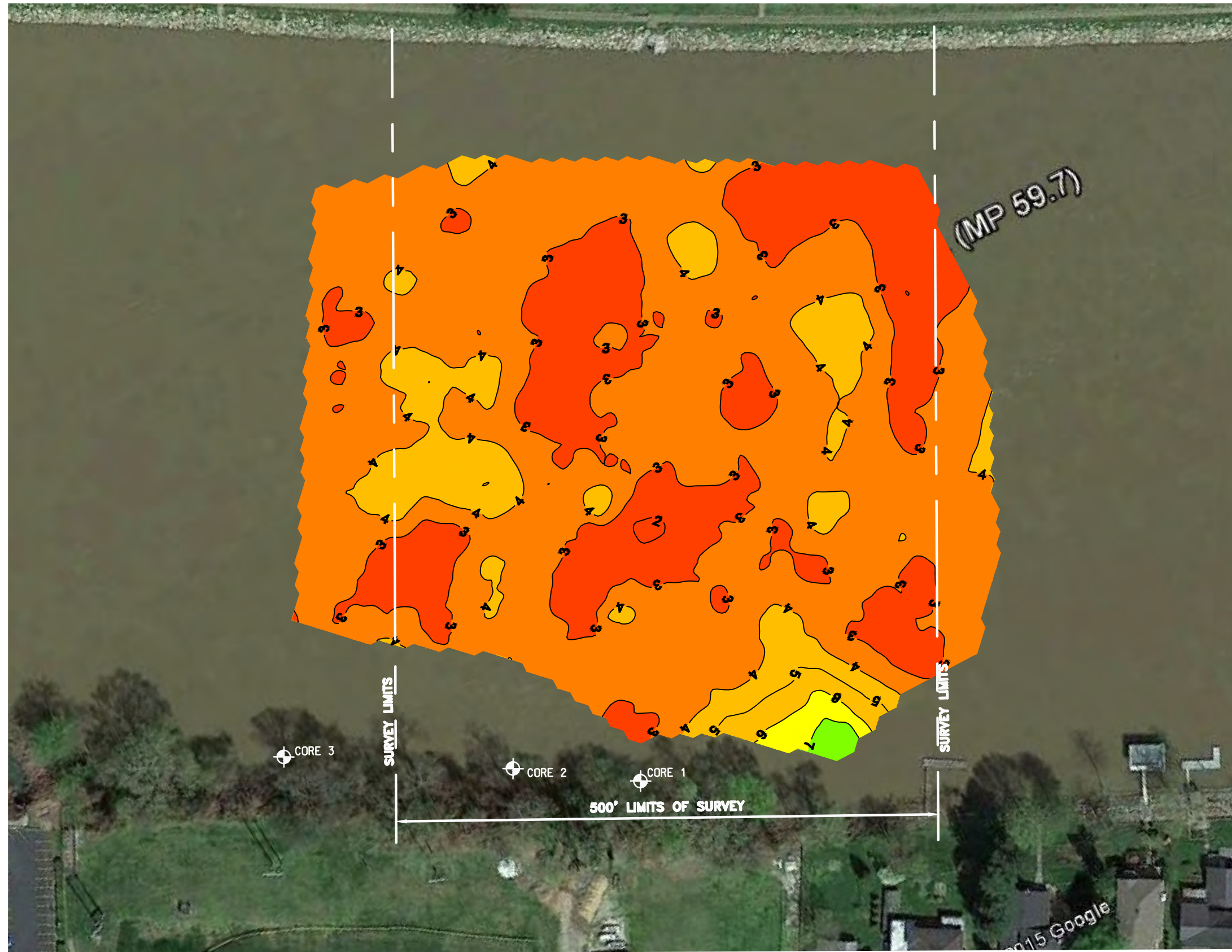

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 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	7 OF 33



**RF1 ISOPACH PLAN**  
SCALE: 1" = 100'





**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

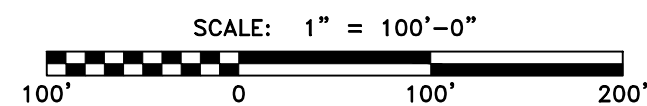
DATE	NO.	REVISIONS	BY
SED02 RF2 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			


**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	8 OF 33

**RF2 ISOPACH PLAN**

SCALE: 1" = 100'



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 565 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 2.7 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
564.7	[Lithology Pattern]	Dark Gray, Medium to Fine Grained SAND with Trace Organics								
0.29		Gray, Fine SAND								
564.1		Gray, Fine SAND and Coarse GRAVEL								
0.92										
563.9		Gray, Fine to Medium SAND								
1.08										
563.4	[Lithology Pattern]	Gray, Fine to Medium SAND with Yellow Orange, Medium SAND and Coarse GRAVEL								
1.58										
563.0		Gray, Medium to Coarse Grained SAND with Trace Coarse Gravel								
2										
562.3										
2.67										

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



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BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 564.6 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 5.5 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
563.4	~ ~ ~ ~ ~	Dark Gray, Fine <b>SILTY SAND</b> with Some Organics and Coal Fines								
1.17	~ ~ ~ ~ ~	Red, Medium Grained <b>SILTY SAND</b> with Trace Coarse Gravel								
562.4	~ ~ ~ ~ ~	Red, Medium Grained <b>SAND</b> with Trace Coarse Gravel								
2.17	~ ~ ~ ~ ~									
559.9	~ ~ ~ ~ ~	Gray to Red, Medium to Coarse Grained <b>SAND</b> with Trace Coarse Gravel		5						
4.67	~ ~ ~ ~ ~									
559.1	~ ~ ~ ~ ~									
5.5	~ ~ ~ ~ ~									
				10						

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



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 Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 565 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 2.4 Ft.

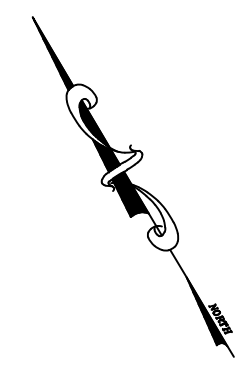
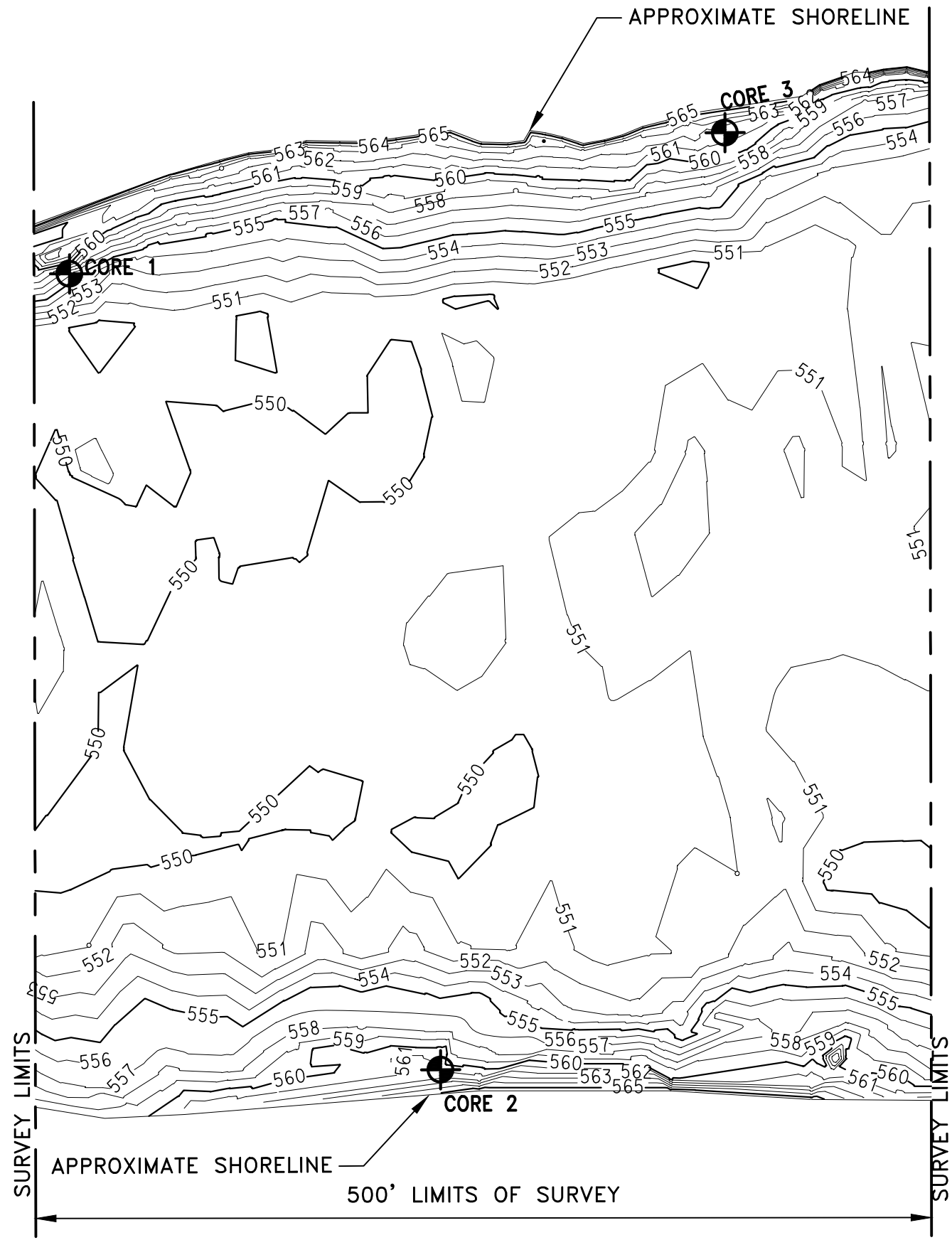
Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
564.8		<b>ORGANICS</b> , Detritus, Silty, Brown, Fine Sand								
0.17		Brown, Silty, Fine <b>SAND</b>								
564.6		Brown, Silty, Medium <b>SAND</b>								
0.42		Brown, Coarse <b>SAND</b> and Fine <b>GRAVEL</b>								
564.4										
0.58										
563.8		Dark Gray, Medium to Fine <b>SAND</b>								
1.17		Dark Gray, Medium to Fine <b>SAND</b> and Fine <b>GRAVEL</b>								
563.6		Dark Gray and Brown, Medium <b>SAND</b> with Some Fine Gravel and Trace Organics								
1.42										
563.3										
1.67										
562.6										
2.42										

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



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BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



**LEGEND:**

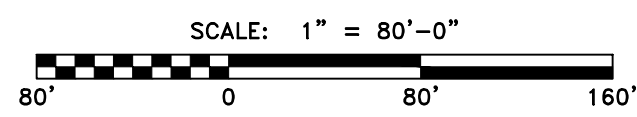
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	485549.07	1799821.07
2	485037.05	1799770.32
3	485424.55	1800193.66

**GENERAL NOTES:**

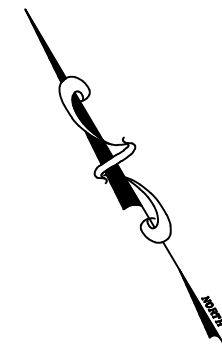
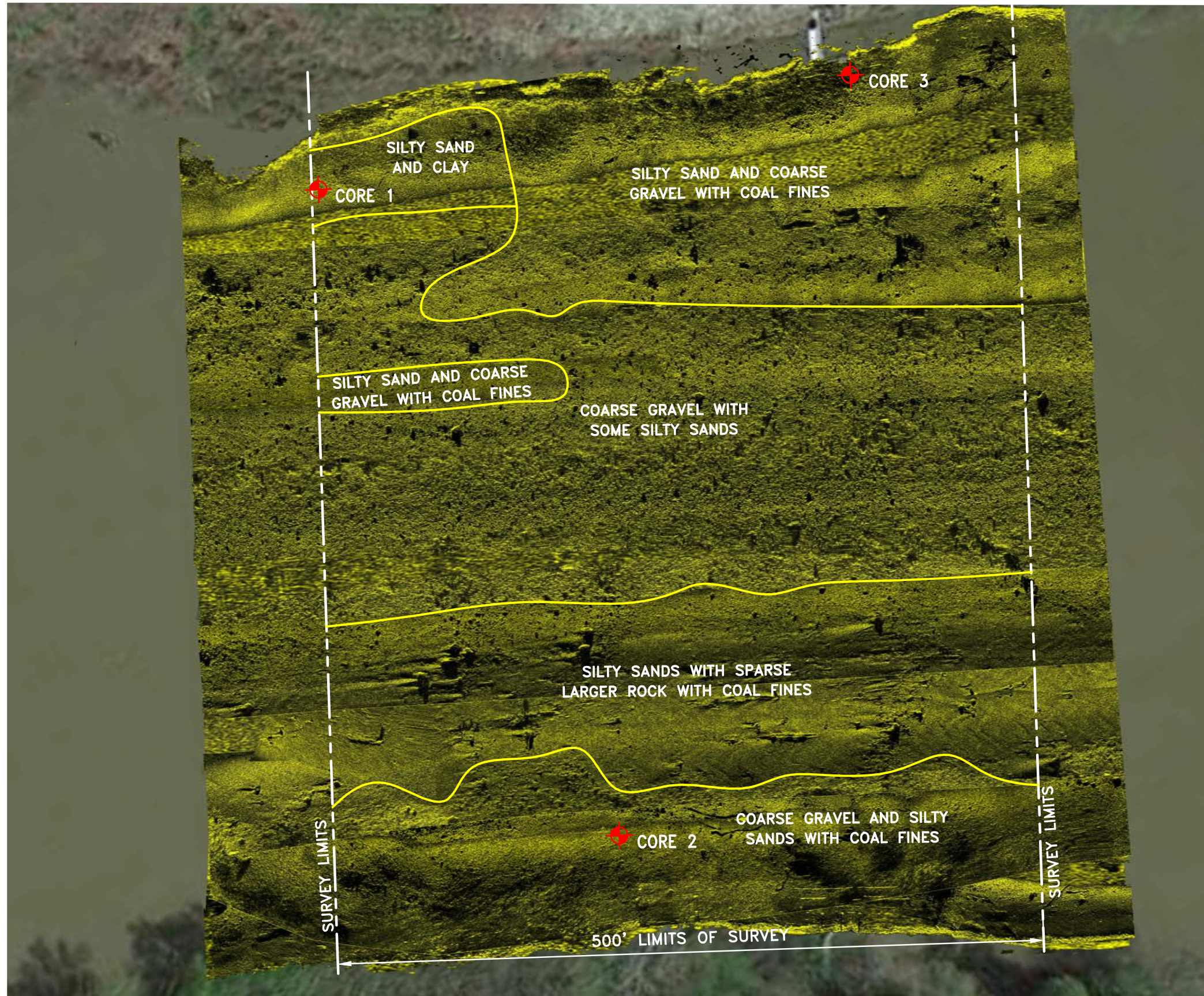
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 13, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (WINFIELD POOL) WAS 565.64' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.

DATE	NO.	REVISIONS	BY		
SED03 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	9 OF 33



**CONTOUR PLAN**  
SCALE: 1" = 80'





**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

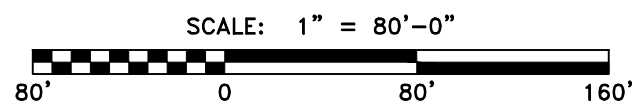
**GENERAL NOTES:**

1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 13, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
SED03 SEDIMENT MAP			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			

**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

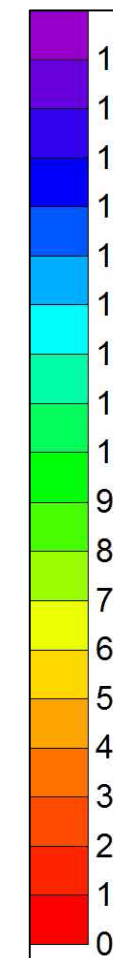
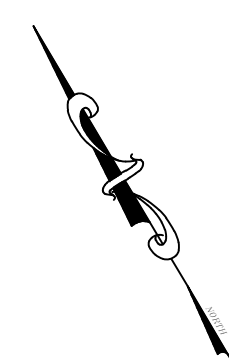
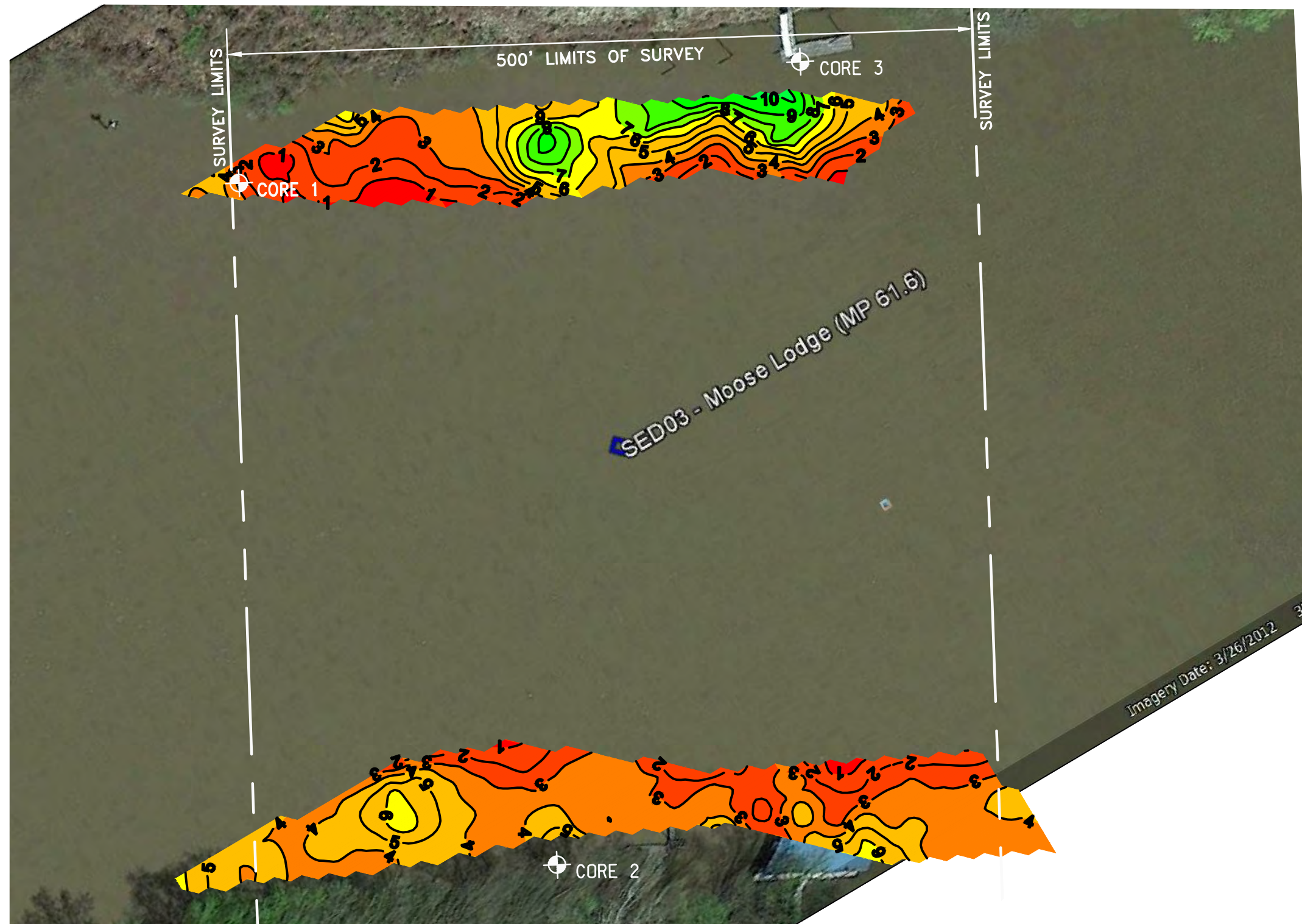
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	10/13/15	10 OF 33



**SEDIMENT MAP PLAN**

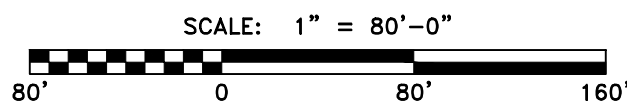
SCALE: 1" = 80'





**GENERAL NOTES:**

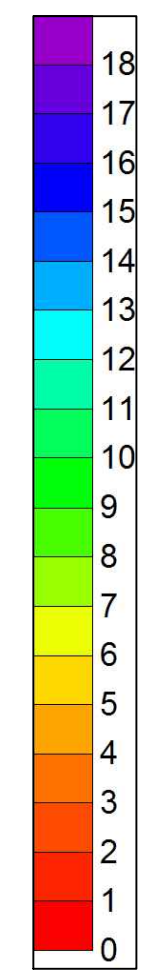
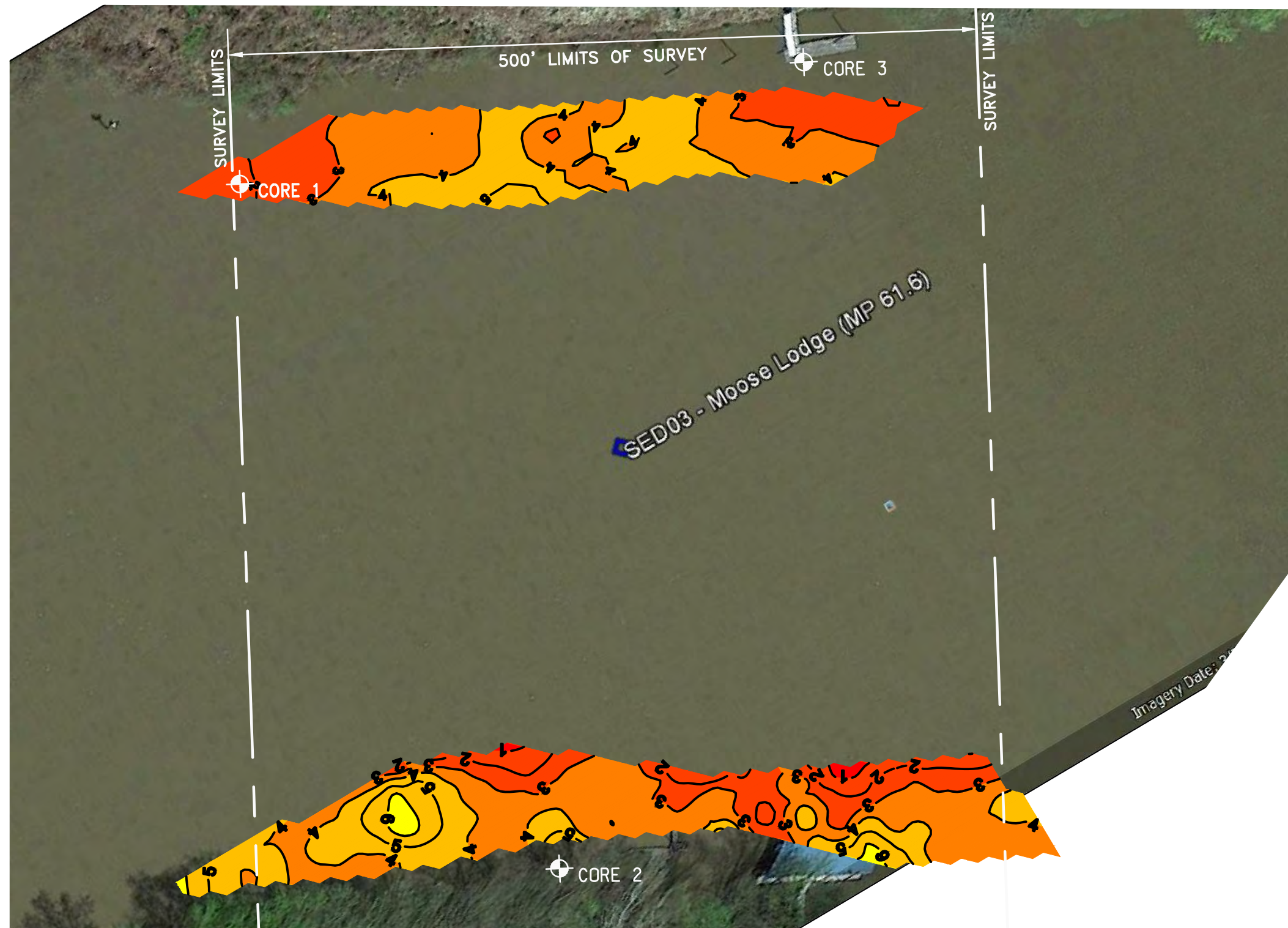
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE TOP SEDIMENT LAYER RFO BELOW THE RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.



**RFO ISOPACH PLAN**  
SCALE: 1" = 80'

DATE	NO.	REVISIONS	BY		
SED03 RFO ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	11 OF 33

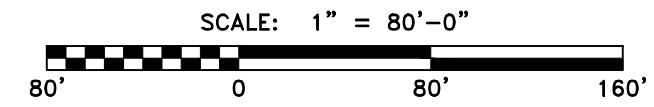




**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE SECOND SEDIMENT LAYER RF1 BELOW RFO SOUTH.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

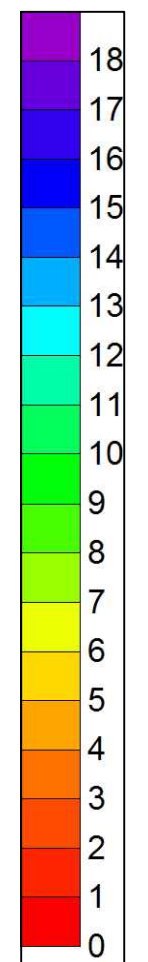
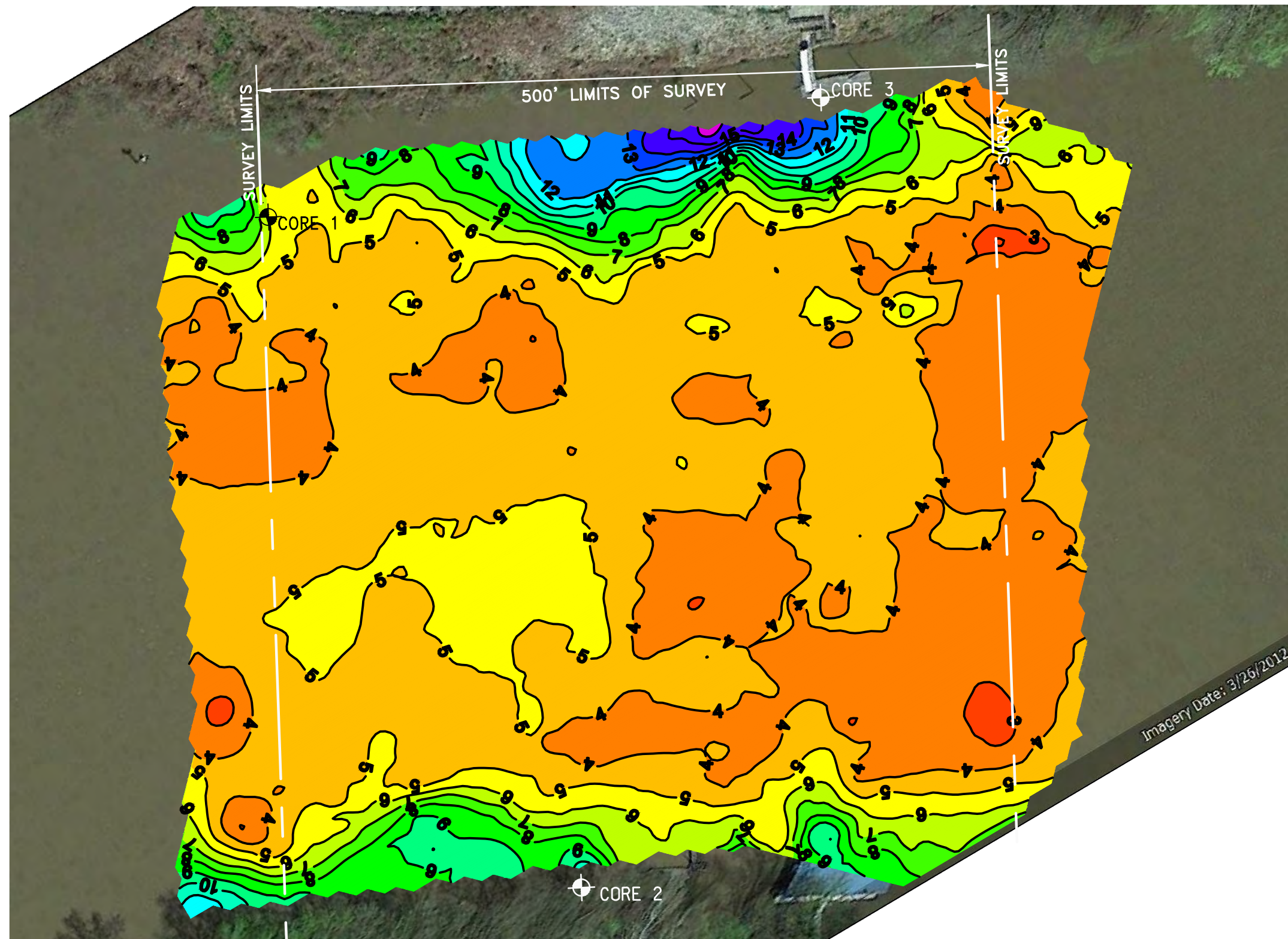
**RFO-RF1 ISOPACH PLAN**



SCALE: 1" = 80'

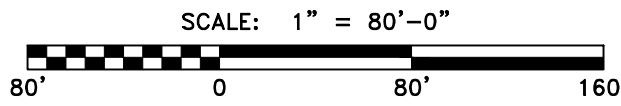
DATE	NO.	REVISIONS	BY		
SED03 RFO-RF1 SOUTH ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	12 OF 33





**GENERAL NOTES:**

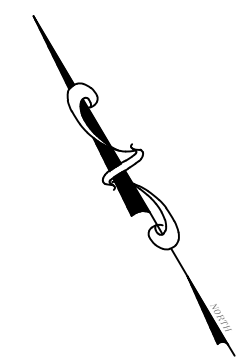
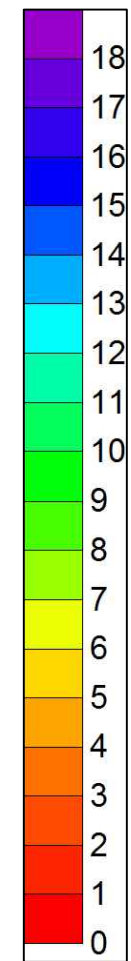
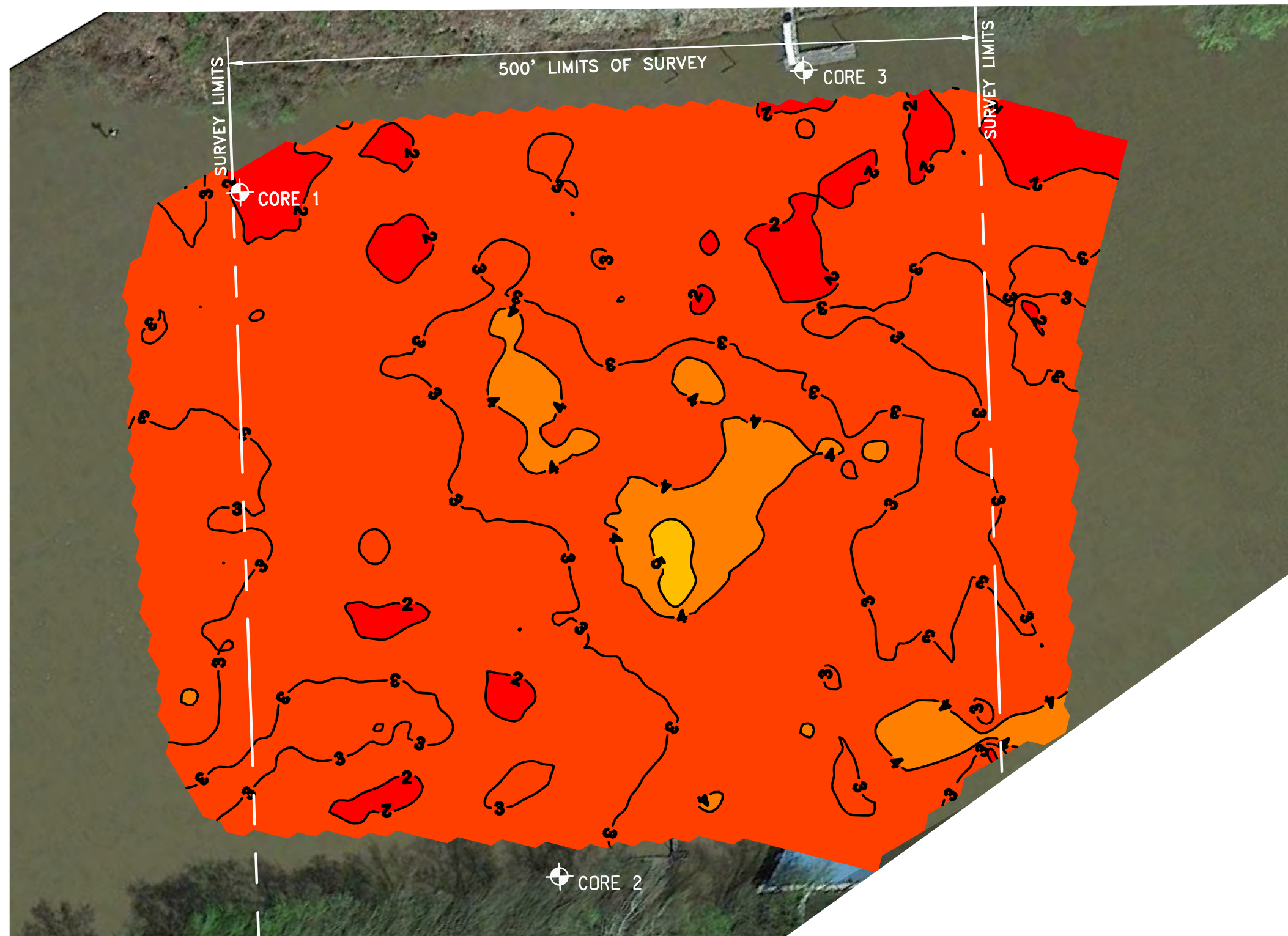
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE SECOND SEDIMENT LAYER RF1 BELOW THE RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.



**RF1 ISOPACH PLAN**  
SCALE: 1" = 80'

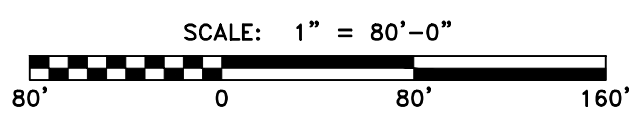
DATE	NO.	REVISIONS	BY
SED03 RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 13 OF 33





**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE THIRD SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.



**RF2 ISOPACH PLAN**  
SCALE: 1" = 80'

DATE	NO.	REVISIONS	BY
SED03 RF2 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 14 OF 33

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 556.4 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 3.3 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
556.3		Brown <b>SILTY CLAY</b>								
0.08		Brown <b>SILTY SAND</b>								
556.2		Brown, Medium Grained <b>SAND</b> with Trace Fine Gravel								
0.17										
555.4										
1		Brown/Gray, Coarse Grained <b>SAND</b> with Fine and Coarse Gravel								
555.1										
1.33		Gray, Fine Grained <b>SILTY SAND</b>								
553.9										
2.5		Gray, Medium to Coarse Grained <b>SILTY SAND</b>								
553.2										
3.25										

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	

7012 MacCorkle Ave SE  
 Charleston, WV 25301  
 Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15





# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-19-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-19-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 561.5 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 2.0 Ft.

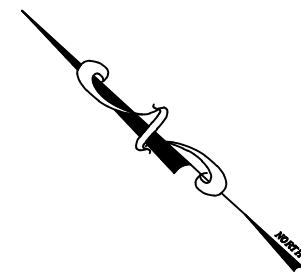
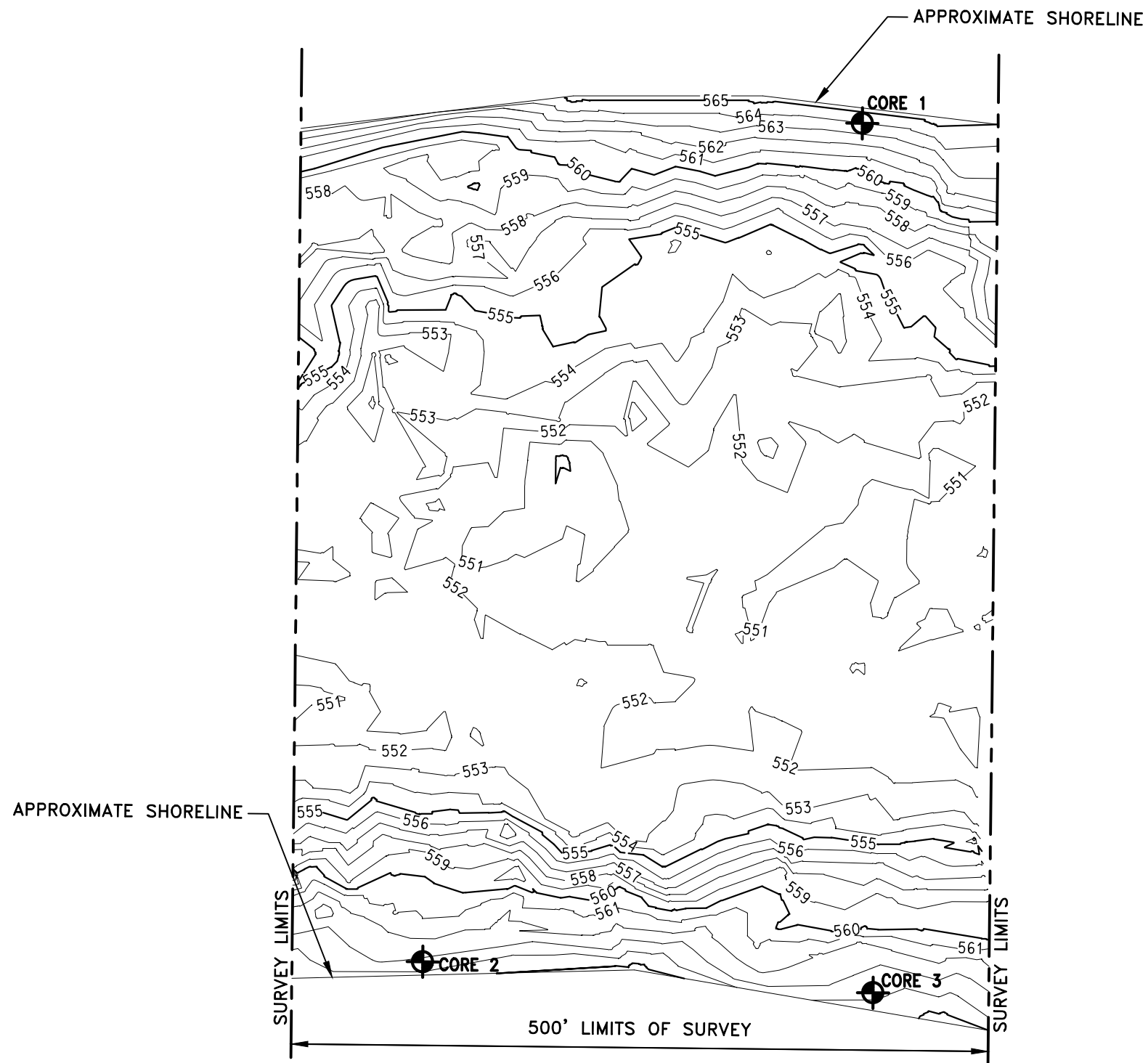
Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
560.5	~ ~ ~ ~ ~	Brown, Fine to Medium Grained <b>SILTY SAND</b>								
1 560.0	~ ~ ~ ~ ~	Brown, Fine to Medium Grained <b>SILTY SAND</b> and Coarse <b>GRAVEL</b> with Coal Fines								
1.5 559.5	o o o o o	Dark Gray, Coarse <b>GRAVEL</b> and Coal Fines								
2										

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



7012 MacCorkle Ave SE  
Charleston, WV 25301  
Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



**LEGEND:**

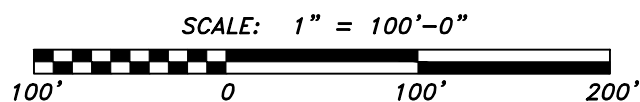
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	480068.19	1807047.84
2	479895.22	1806391.14
3	479641.79	1806592.60

**GENERAL NOTES:**

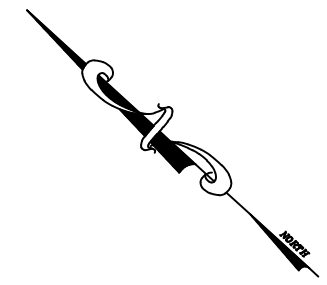
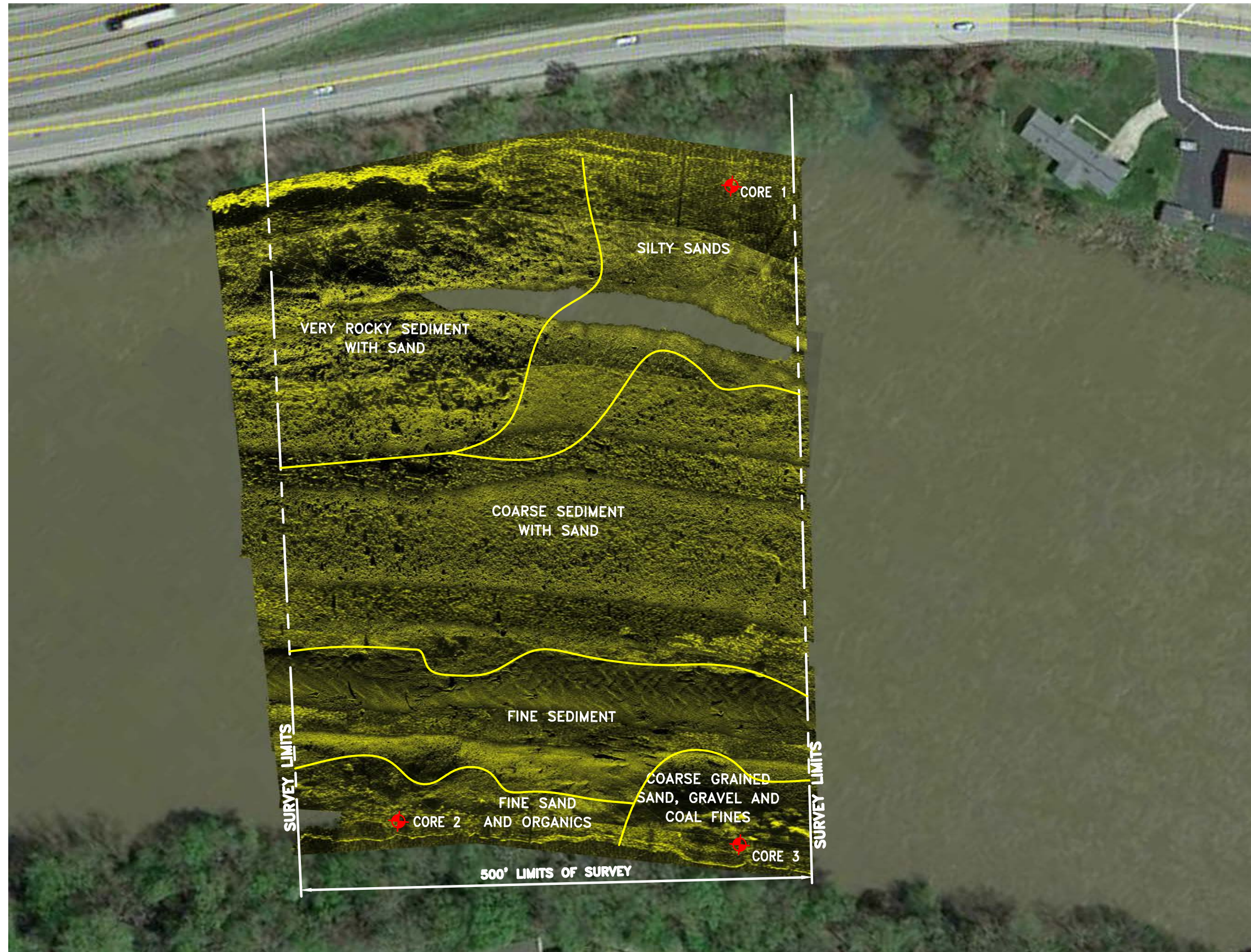
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 11, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (WINFIELD POOL) WAS 565.44' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.

DATE	NO.	REVISIONS	BY
SED04 FATHOMETRIC SURVEY			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE	DRAWN BY	CHECKED BY	JOB NO.
AS SHOWN	GPD	W.J.C.	10-2211-15
DATE		DRAWING No.	
08/25/15		15 OF 33	



**CONTOUR PLAN**  
SCALE: 1" = 100'



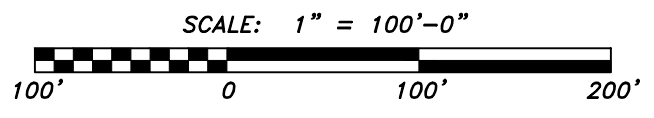


**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

**GENERAL NOTES:**

1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 11, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

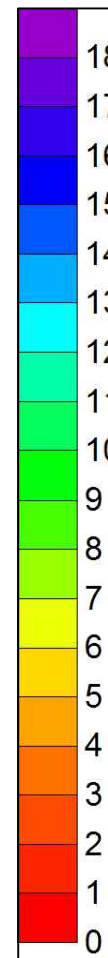
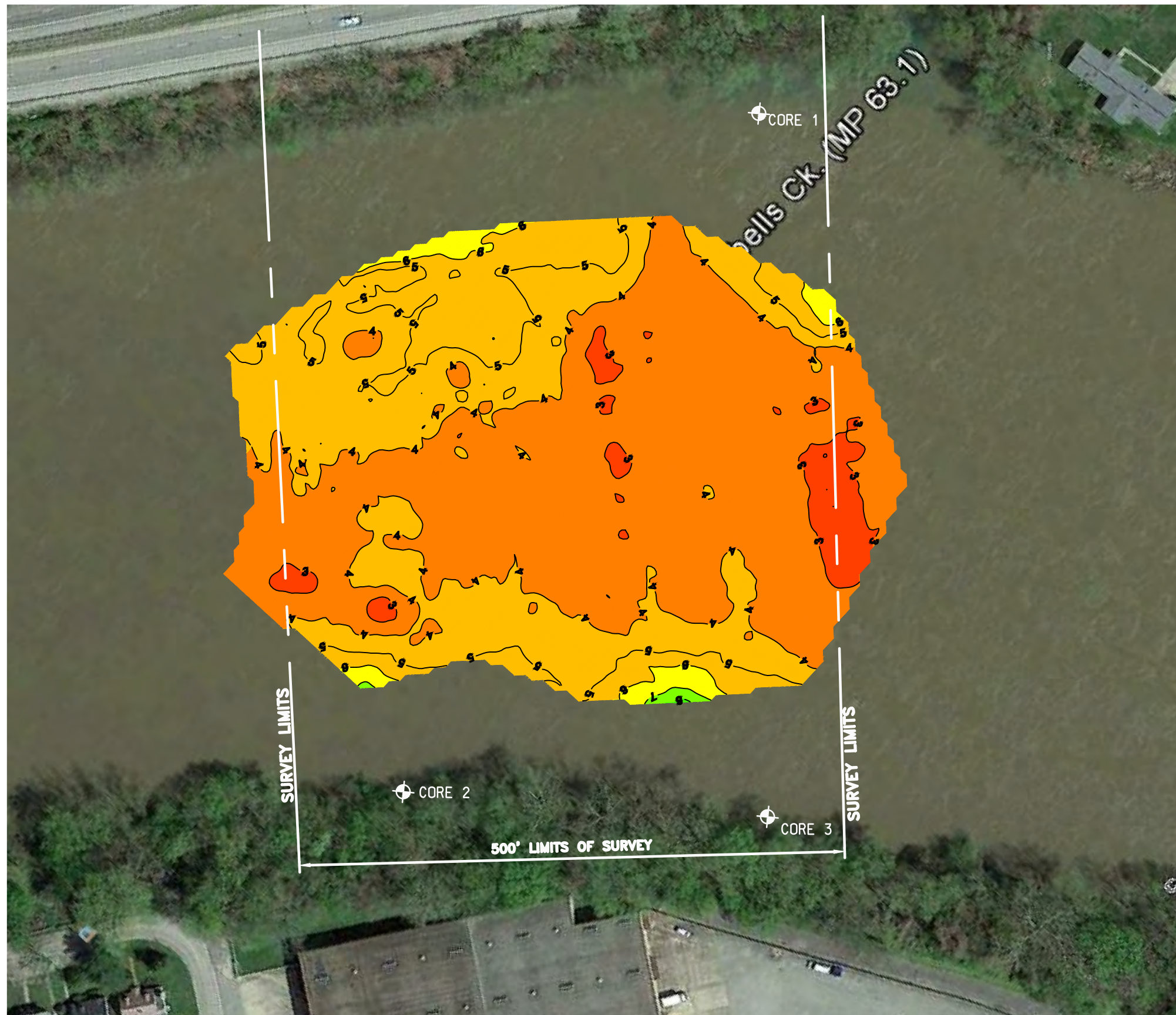


**SEDIMENT MAP PLAN**

SCALE: 1" = 100'

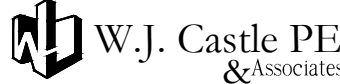
DATE	NO.	REVISIONS	BY
<b>SED04 SEDIMENT MAP</b>			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
<b>W.J. Castle PE</b> & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/13/15	DRAWING No. 16 OF 33

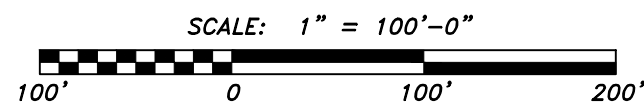




**GENERAL NOTES:**

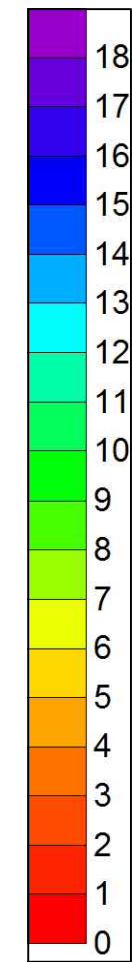
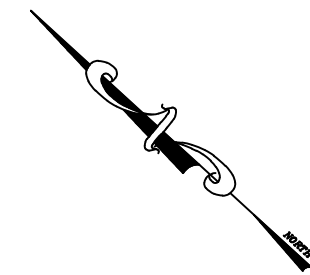
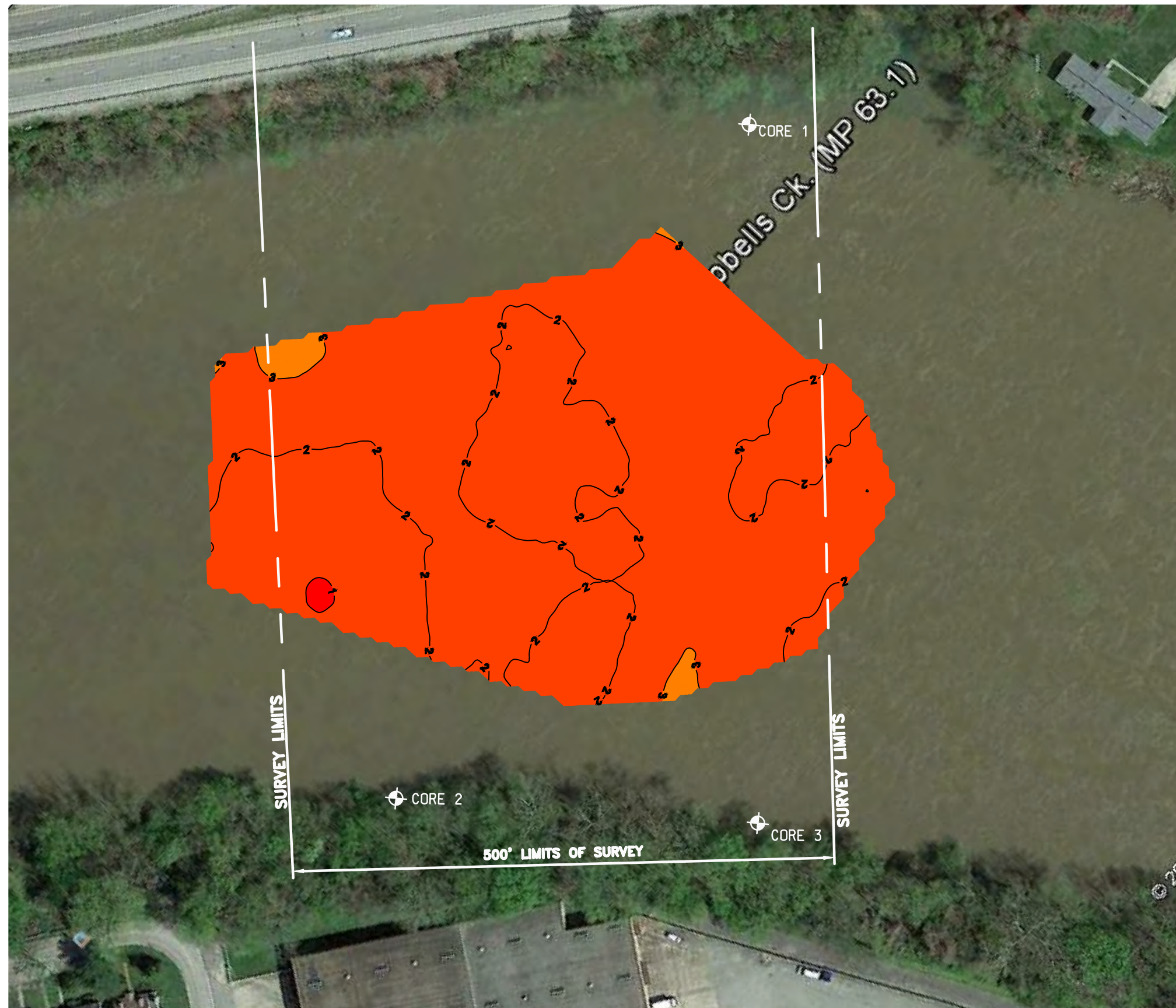
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 18, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF TOP SEDIMENT LAYER RF1 BELOW RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED04 RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 17 OF 33



**RF1 ISOPACH PLAN**  
SCALE: 1" = 100'

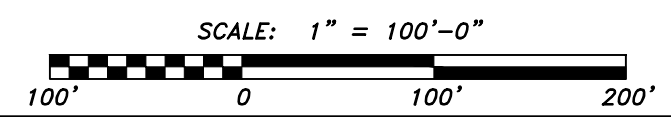




**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 18, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY		
SED04 RF2 ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	18 OF 33



**RF2 ISOPACH PLAN**  
SCALE: 1" = 100'



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-18-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-18-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 564 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 4.8 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
563.9 0.08	~	<b>ORGANICS</b> , Leaf Litter Gray, Fine <b>SILTY SAND</b> with Organics and Trace Coal Fines								
562.8 1.25	~	Brown/Gray, Medium to Fine Grained <b>SILTY SAND</b> with Trace Coal Fines								
562.1 1.92	~	Gray, Medium Grained <b>SILTY SAND</b> and Coarse <b>GRAVEL</b>								
561.1 2.92	~	Gray, Medium to Coarse Grained <b>SILTY SAND</b>								
560.3 3.75	~	Dark Gray <b>SILTY CLAY</b> with Gray Medium Grained Sand								
559.3 4.75	~			5						
				10						

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



7012 MacCorkle Ave SE  
Charleston, WV 25301  
Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-18-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-18-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 564 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 2.5 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsfc
563.9		Dark Gray, Fine <b>SAND AND ORGANICS</b>								
0.08		Brown/Gray, Fine <b>SAND</b>								
563.4										
0.58		Brown/Gray, Fine <b>SAND AND ORGANICS</b>								
563.2		Dark Gray, Fine <b>SAND</b> and Coarse <b>GRAVEL</b>								
0.83										
562.9		Dark Gray, Medium to Fine <b>SAND</b> with Trace Coarse Gravel and Organics								
1.08										
562.5		Dark Gray, Medium to Fine <b>SAND AND ORGANICS</b>								
1.5		Gray, Fine <b>SAND</b>								
562.4										
1.58	o o o o	Dark Gray, Coarse <b>GRAVEL AND SILT</b>								
561.9	o o o o									
2.08										
561.5										
2.5										

BORING LOG RECORD 0101-15-0018.GPJ\_POTESTA.GDT 9/3/15

	7012 MacCorkle Ave SE Charleston, WV 25301 Telephone: 304-342-1400	<b>BORING METHOD</b>	<b>SAMPLE TYPE</b>
		HSA - Hollow Stem Auger SFA - Solid Flight Auger CC - Concrete Coring MD - Mud Drilling HA - Hand Auger RC - Rock Coring	SS - Split Spoon Sample ST - Shelby Tube Sample RC - Rock Core Sample BS - Bag Sample

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-18-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-18-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 563.7 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

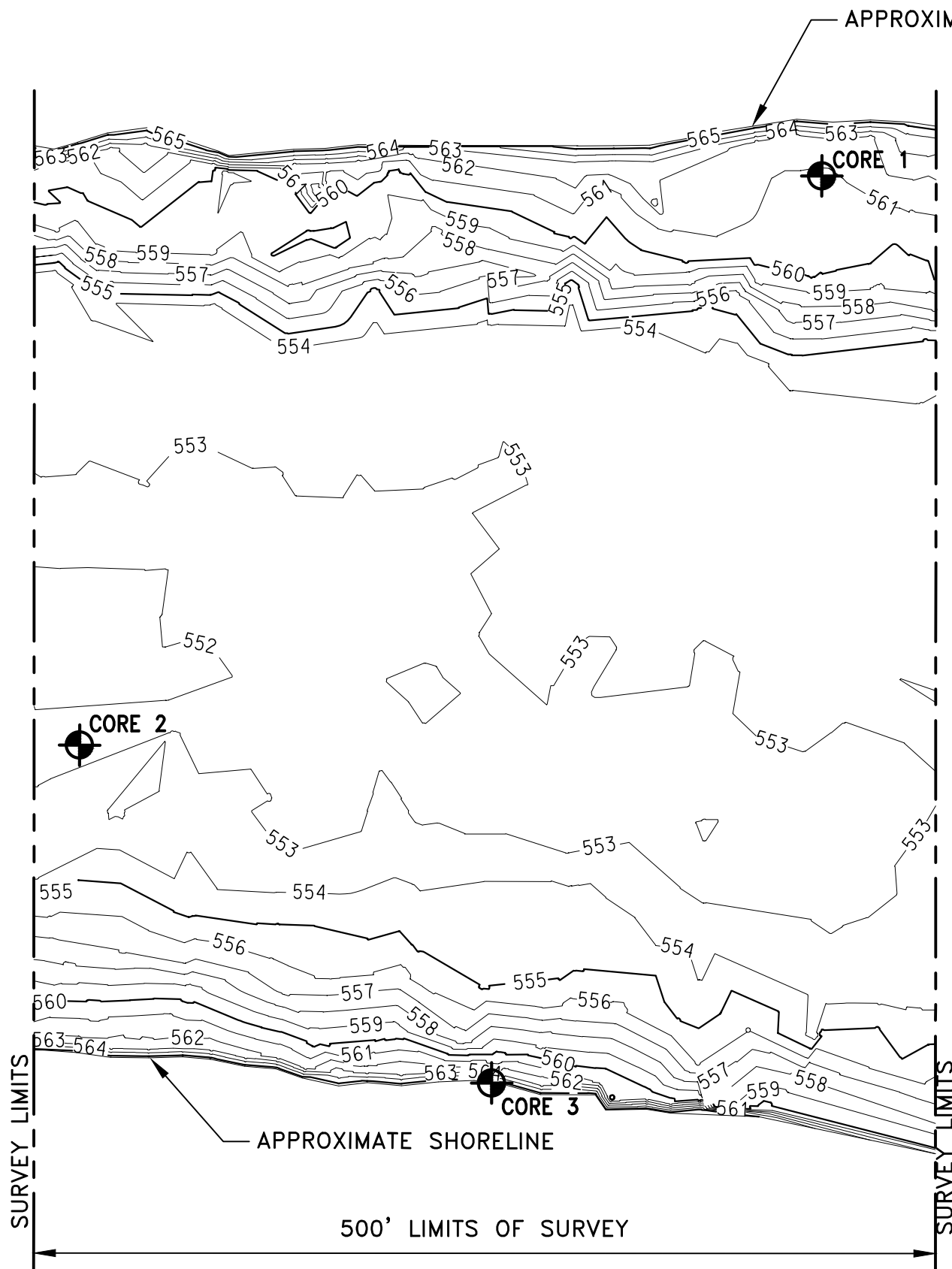
**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 3.9 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
563.2	○ ○ ○ ○ ○	Black, Coarse <b>GRAVEL AND COAL FINES</b>								
0.5	● ● ● ● ●	Brown, Medium to Fine <b>SAND</b> with Some Coarse Sandstone Gravel								
562.5	● ● ● ● ●	Dark Gray and Brown, Medium to Fine <b>SAND</b> with Trace Coal Fines								
1.25	● ● ● ● ●	Dark Gray, Medium Grained <b>SILTY SAND</b> and Coarse <b>GRAVEL</b>								
562.0	● ● ● ● ●	Brown, Medium Grained <b>SAND</b> and Coarse <b>GRAVEL</b>								
1.67	~ ~ ~ ~ ~	Gray, Medium Grained <b>SILTY SAND</b> with Coarse Gravel and Coal Fines								
561.7	~ ~ ~ ~ ~	Brown, Coarse to Medium Grained <b>SAND</b> with Some Coarse Gravel								
2	~ ~ ~ ~ ~	Brown/Red, Coarse Grained <b>SAND</b>								
561.2	~ ~ ~ ~ ~									
2.5	~ ~ ~ ~ ~									
560.9	~ ~ ~ ~ ~									
2.83	~ ~ ~ ~ ~									
560.2	~ ~ ~ ~ ~									
3.5	~ ~ ~ ~ ~									
559.8	~ ~ ~ ~ ~									
3.92	~ ~ ~ ~ ~									

BORING LOG RECORD 0101-15-0018.GPJ\_POTESTA.GDT 9/3/15

	7012 MacCorkle Ave SE Charleston, WV 25301 Telephone: 304-342-1400	<b>BORING METHOD</b>	<b>SAMPLE TYPE</b>
		HSA - Hollow Stem Auger SFA - Solid Flight Auger CC - Concrete Coring MD - Mud Drilling HA - Hand Auger RC - Rock Coring	SS - Split Spoon Sample ST - Shelby Tube Sample RC - Rock Core Sample BS - Bag Sample





**LEGEND:**

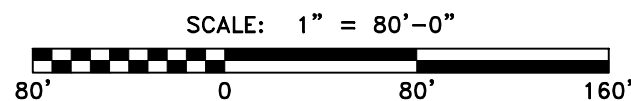
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	460844.86	1804361.38
2	461223.65	1804007.01
3	460977.99	1803842.81

**GENERAL NOTES:**

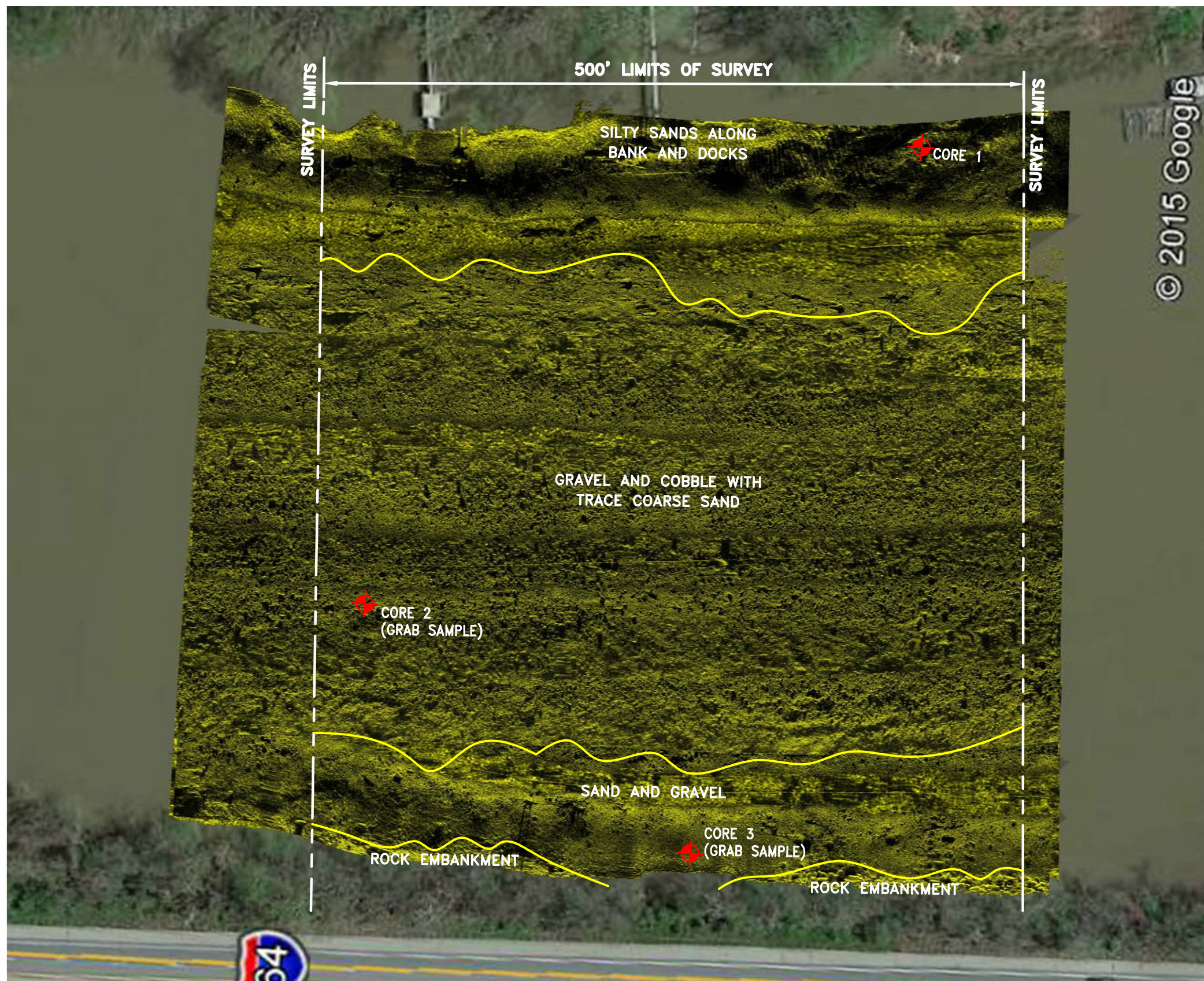
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 11, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (WINFIELD POOL) WAS 565.45' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.

DATE	NO.	REVISIONS	BY		
SED05 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	19 OF 33



**CONTOUR PLAN**  
SCALE: 1" = 80'



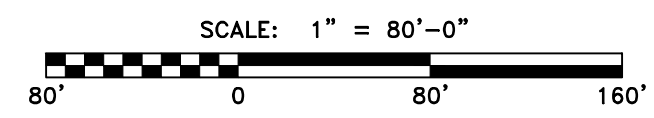


**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

**GENERAL NOTES:**

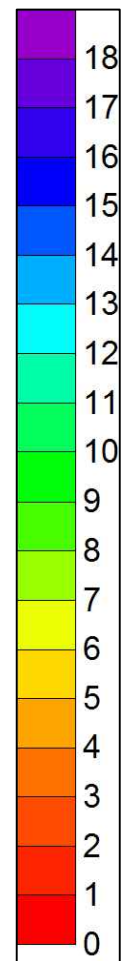
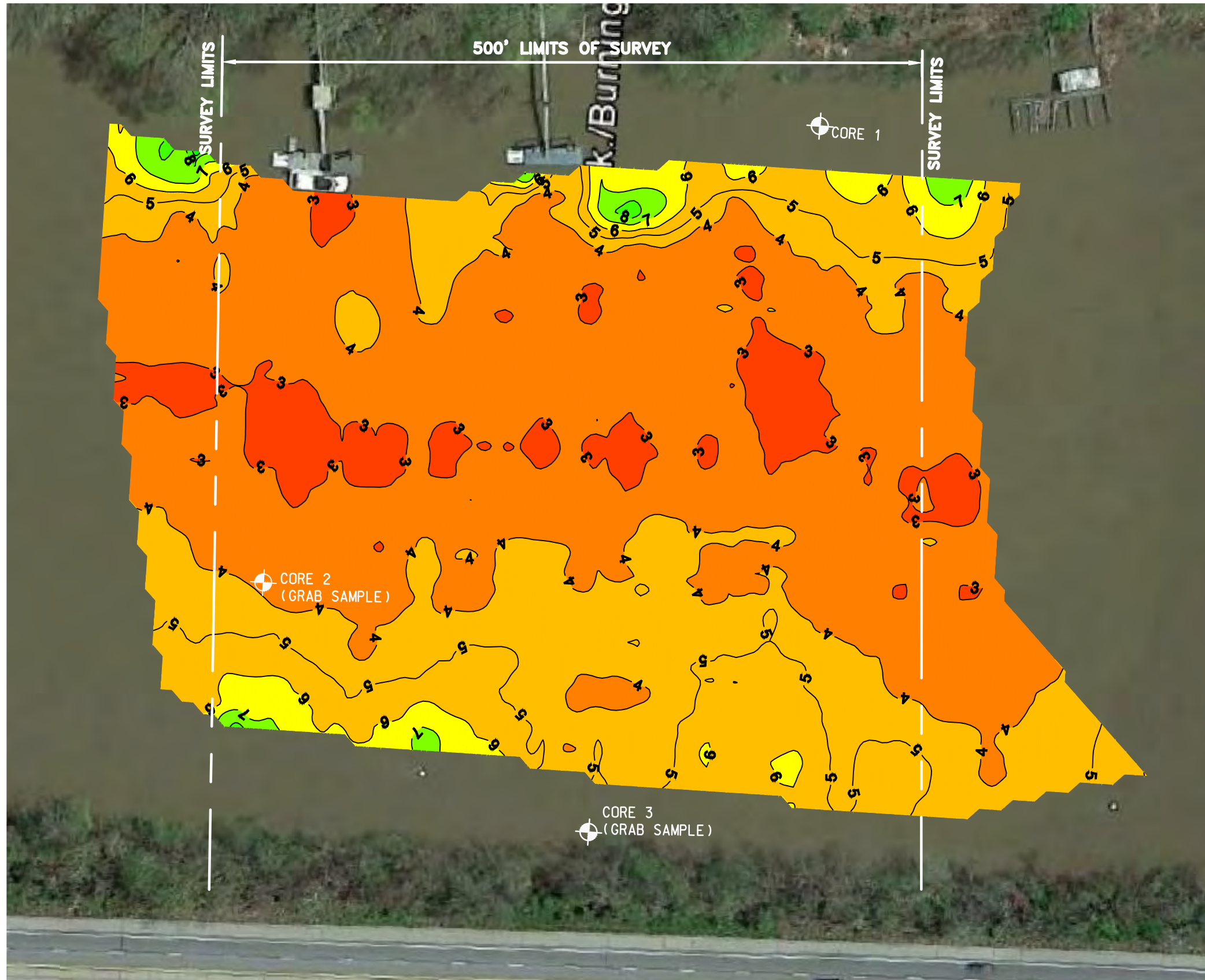
1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 11, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.



**SEDIMENT MAP PLAN**  
SCALE: 1" = 80'

DATE	NO.	REVISIONS	BY
SED05 SEDIMENT MAP			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15 DATE 10/13/15 DRAWING No. 20 OF 33

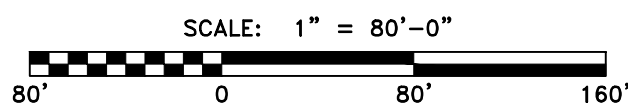




**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 18, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF TOP SEDIMENT LAYER RF1 BELOW RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED05 RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 21 OF 33



**RF1 ISOPACH PLAN**

SCALE: 1" = 80'



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-18-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-18-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 561.6 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 1.8 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
561.5 0.08	~ ~ ~ ~	<b>ORGANICS</b> Gray, Fine <b>SILTY SAND</b> with Some Coarse Gravel and Trace Organics								
560.7 0.92	~ ~ ~ ~	Gray, Fine to Medium Grained <b>SILTY SAND</b> with Coarse Gravel to Cobble								
559.9 1.75	~ ~ ~ ~									

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



7012 MacCorkle Ave SE  
Charleston, WV 25301  
Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15

# BORING LOG RECORD

Client : <u>West Virginia American Water</u>	Project No. : <u>0101-15-0018</u>
Project Name : <u>Kanawha River Water Study</u>	Boring Method : <u>Grab</u>
Location : <u>Kanawha County, WV</u>	Weather/ Temp. : _____
Start Date : <u>08-18-15</u>	Field Engineer/ Geologist : _____
Completion Date : <u>08-18-15</u>	Driller : <u>W. J. Castle &amp; Associates</u>

Surface Elevation : 552.6 Ft.      Benchmark/Elev. : \_\_\_\_\_

Water Level Observations :     Immediate :                       At completion/# hours / \_\_\_\_\_

Station : \_\_\_\_\_      Offset : \_\_\_\_\_      Boring Depth: 0.3 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsfc
552.4 0.25	o o	Coarse <b>GRAVEL AND COBBLE</b> with Trace Coarse Sand (Grab sample due to large rocks.)		5						
				10						

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



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Charleston, WV 25301  
Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Grab</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-18-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-18-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 565 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 0.3 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
564.8 0.25	o o	Brown, Coarse <b>SAND AND GRAVEL</b> with Some Cobble (Grab sample due to large rocks.)		5						
				10						

BORING LOG RECORD 0101-15-0018.GPJ\_POTESTA.GDT 9/3/15

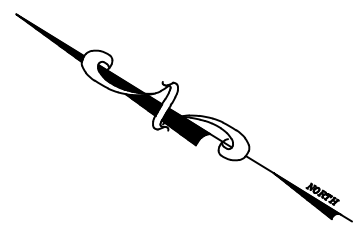
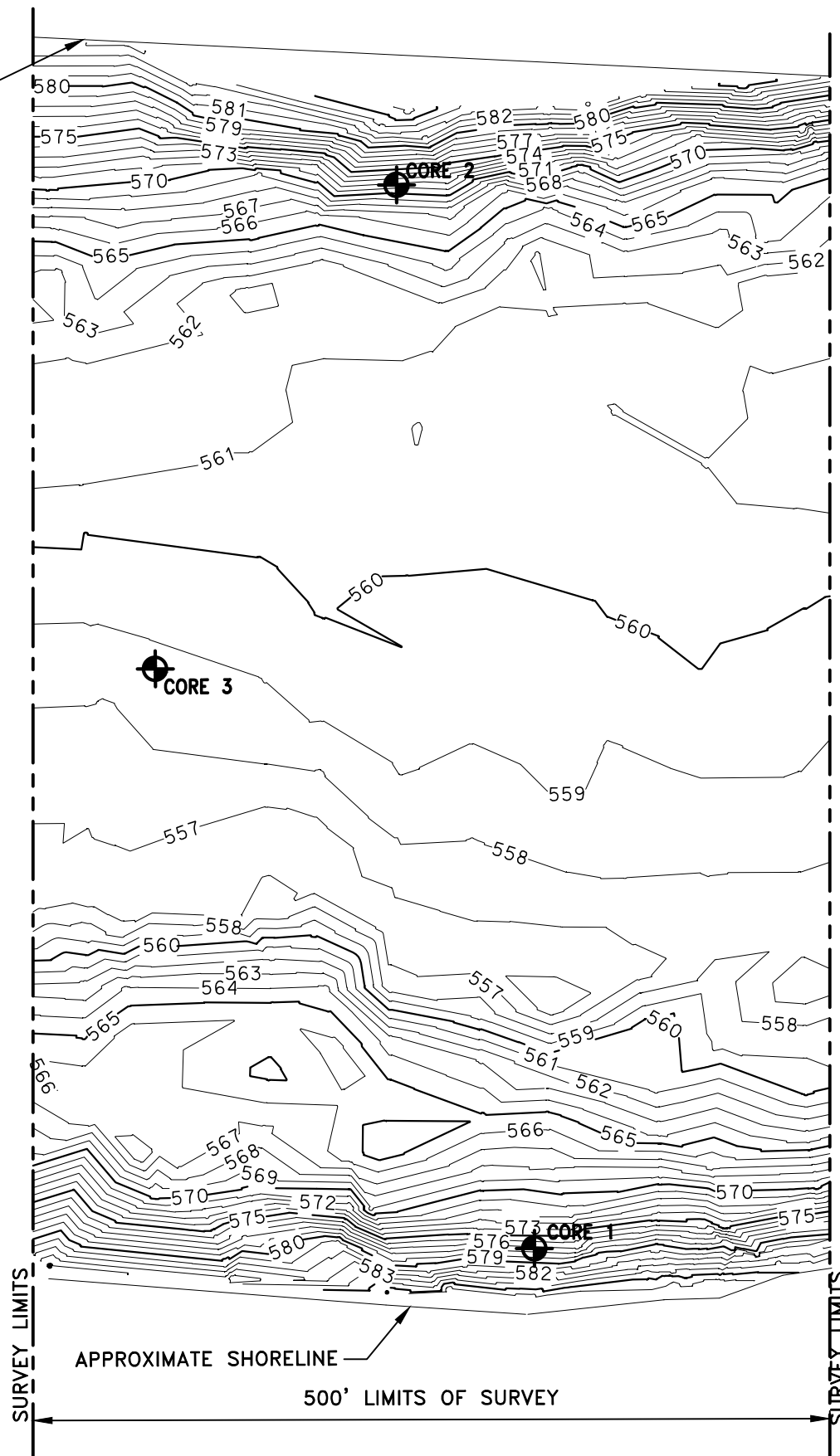


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Charleston, WV 25301  
Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



APPROXIMATE SHORELINE



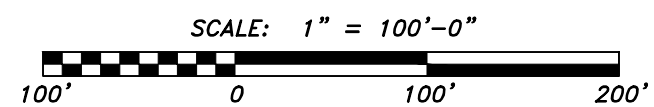
**LEGEND:**

- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
- DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
- 547 DENOTES CHANNEL BOTTOM ELEVATION
- ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	453890.28	1806831.45
2	454314.52	1807354.22
3	454283.77	1807016.14

**GENERAL NOTES:**

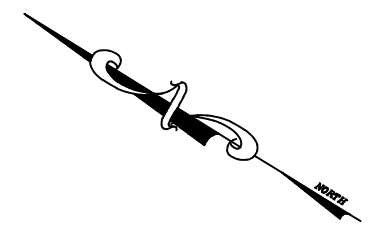
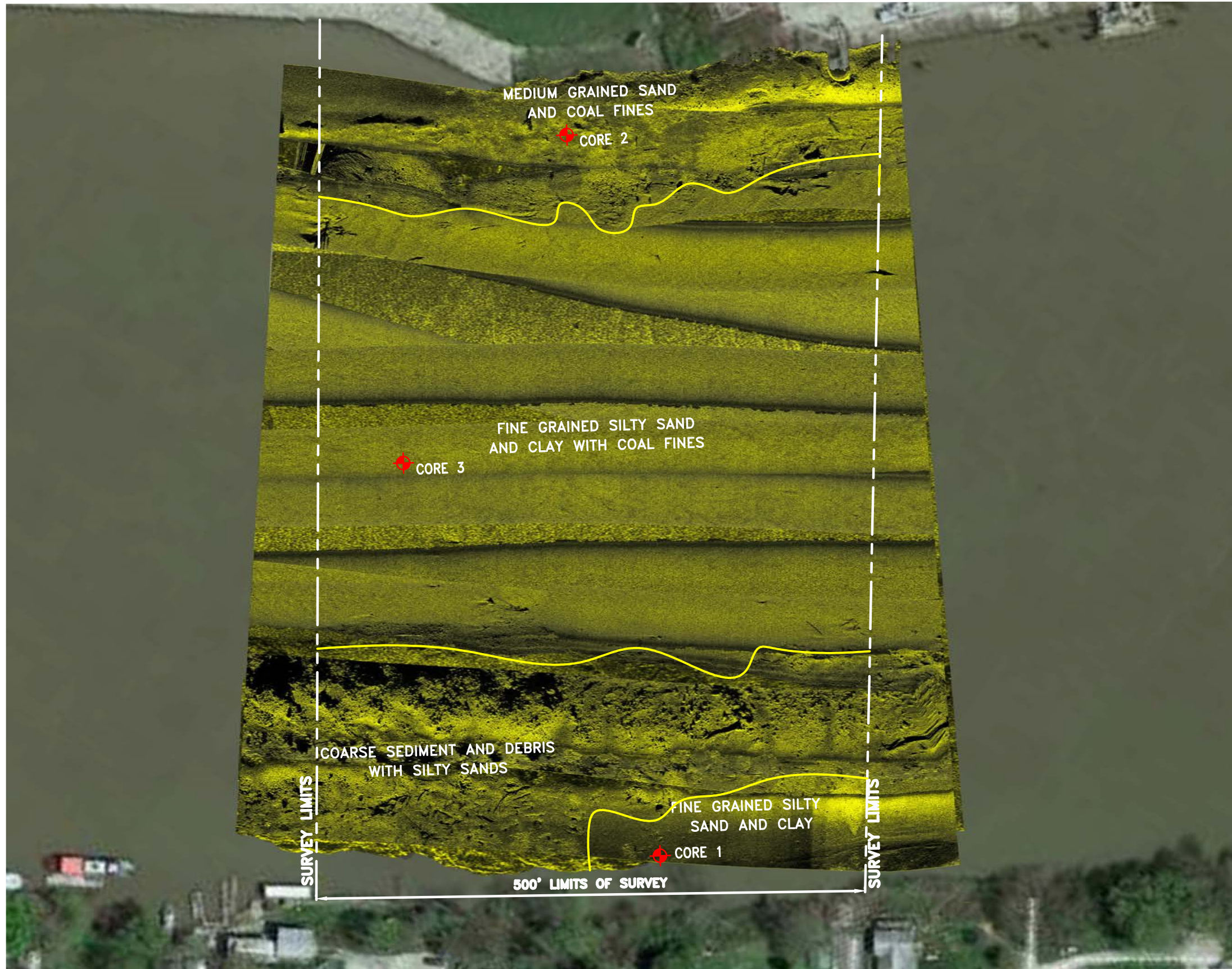
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 12, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. THE WATER SURFACE ELEVATION (MARMET POOL) WAS 589.17' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.



**CONTOUR PLAN**  
SCALE: 1" = 100'

DATE	NO.	REVISIONS	BY		
SED06 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	22 OF 33





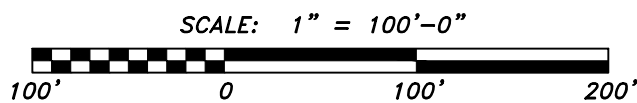
**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

**GENERAL NOTES:**

1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 12, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
<b>SED06 SEDIMENT MAP</b>			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
<b>W.J. Castle PE</b> & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE	DRAWN BY	CHECKED BY	JOB NO.
AS SHOWN	GPD	W.J.C.	10-2211-15
		DATE	DRAWING No.
		10/13/15	23 OF 33

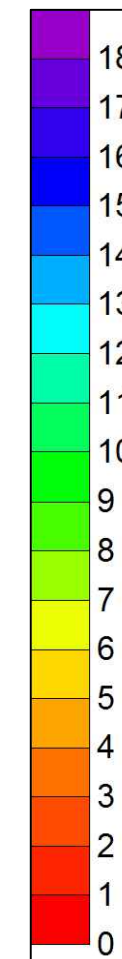
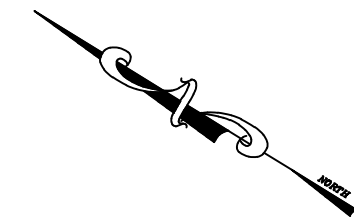
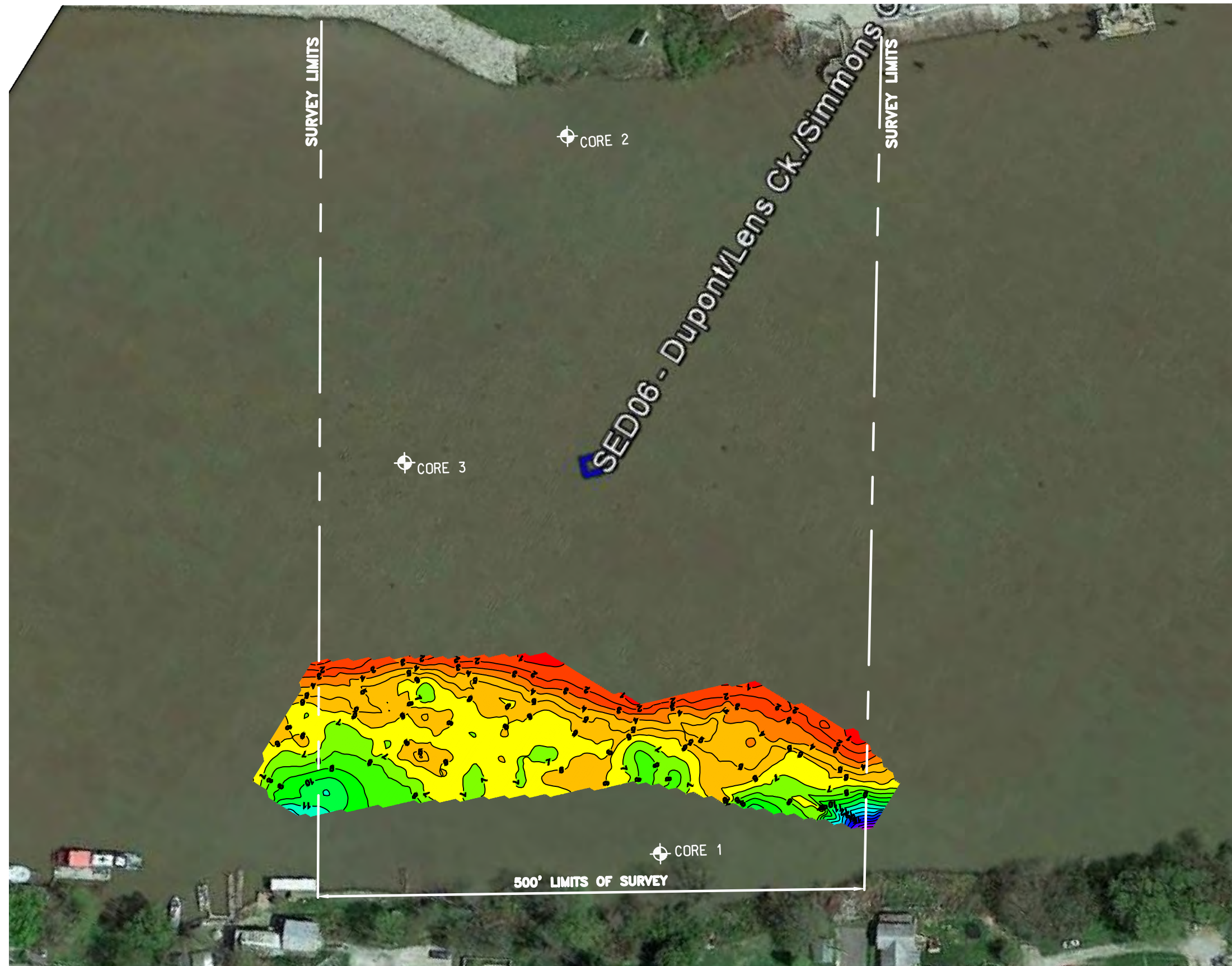


SCALE: 1" = 100'-0"

**SEDIMENT MAP PLAN**

SCALE: 1" = 100'





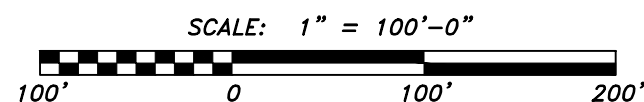
**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE TOP SEDIMENT LAYER RFO BELOW THE RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED06 RFO ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			

**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

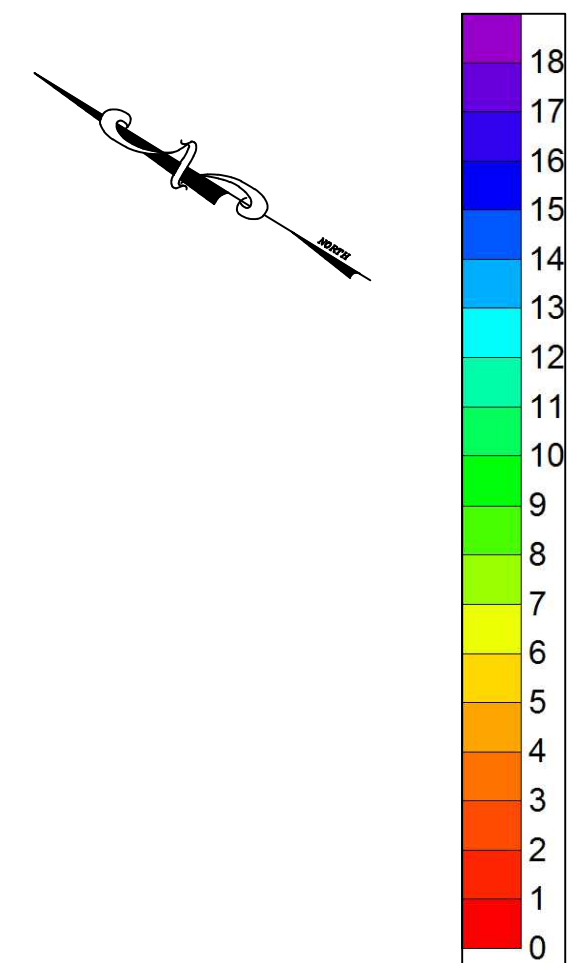
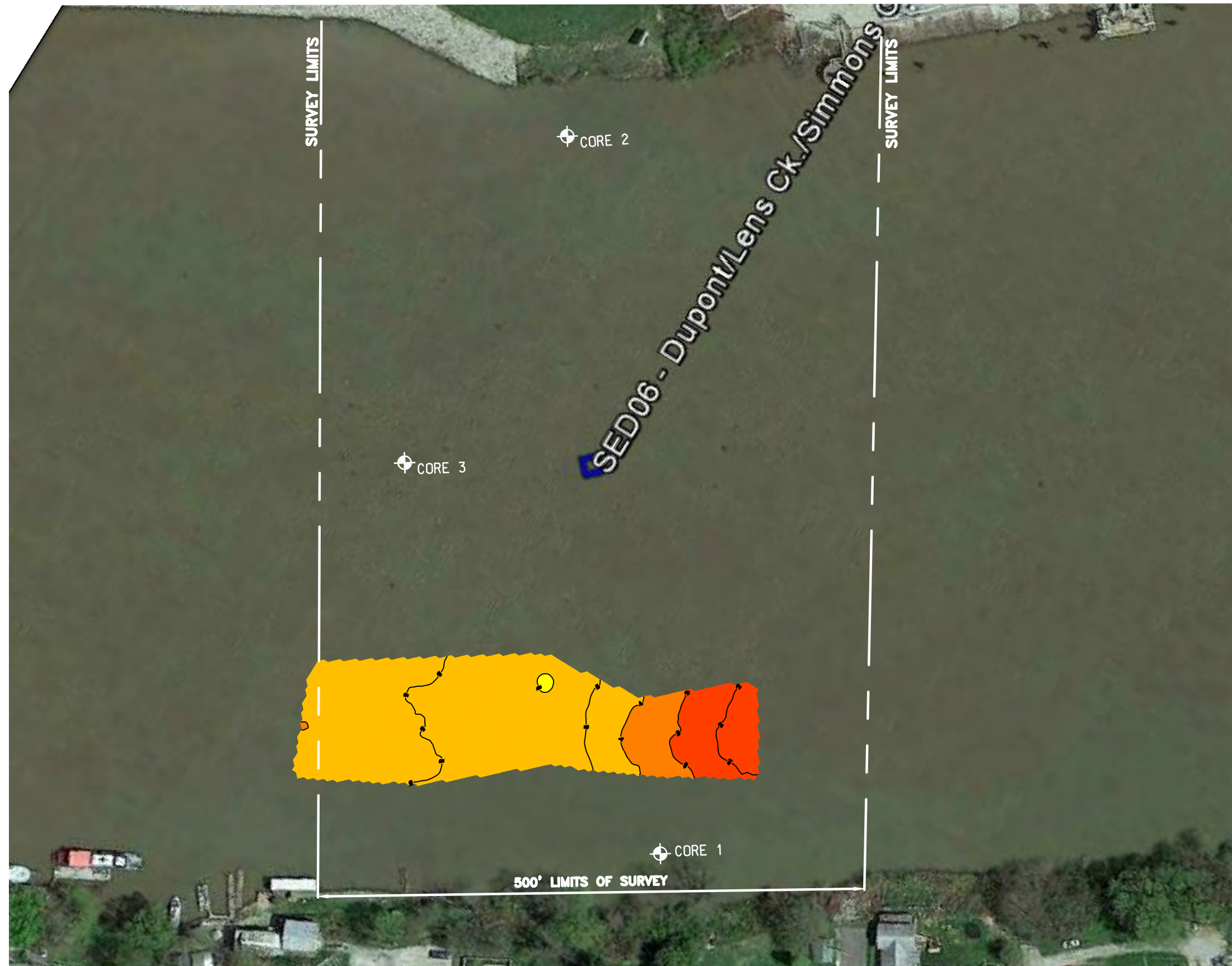
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	24 OF 33



**RFO ISOPACH PLAN**

SCALE: 1" = 100'

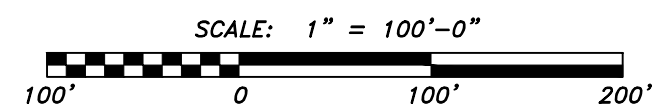




**GENERAL NOTES:**

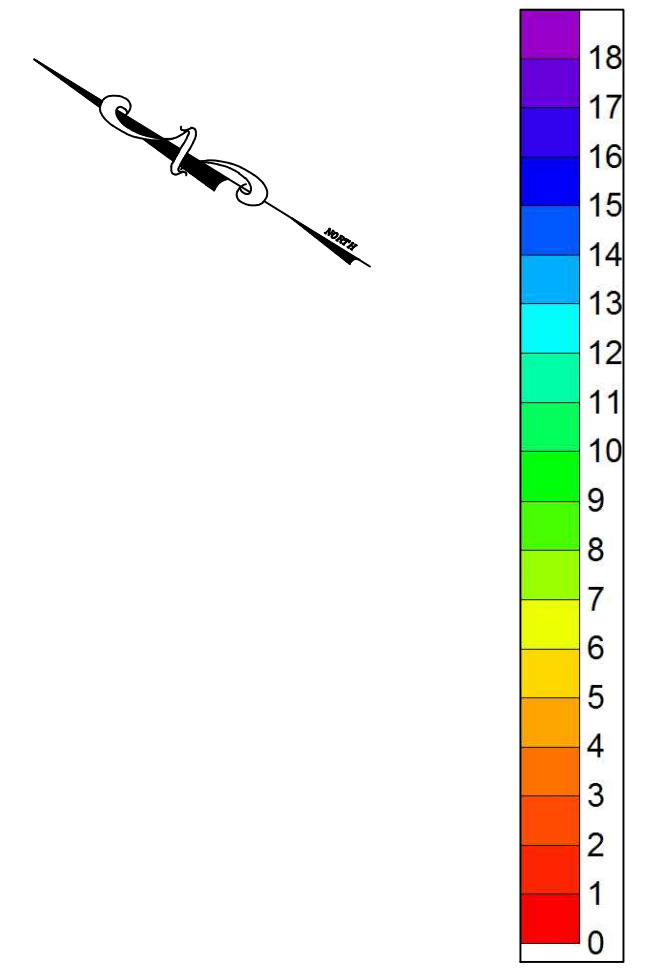
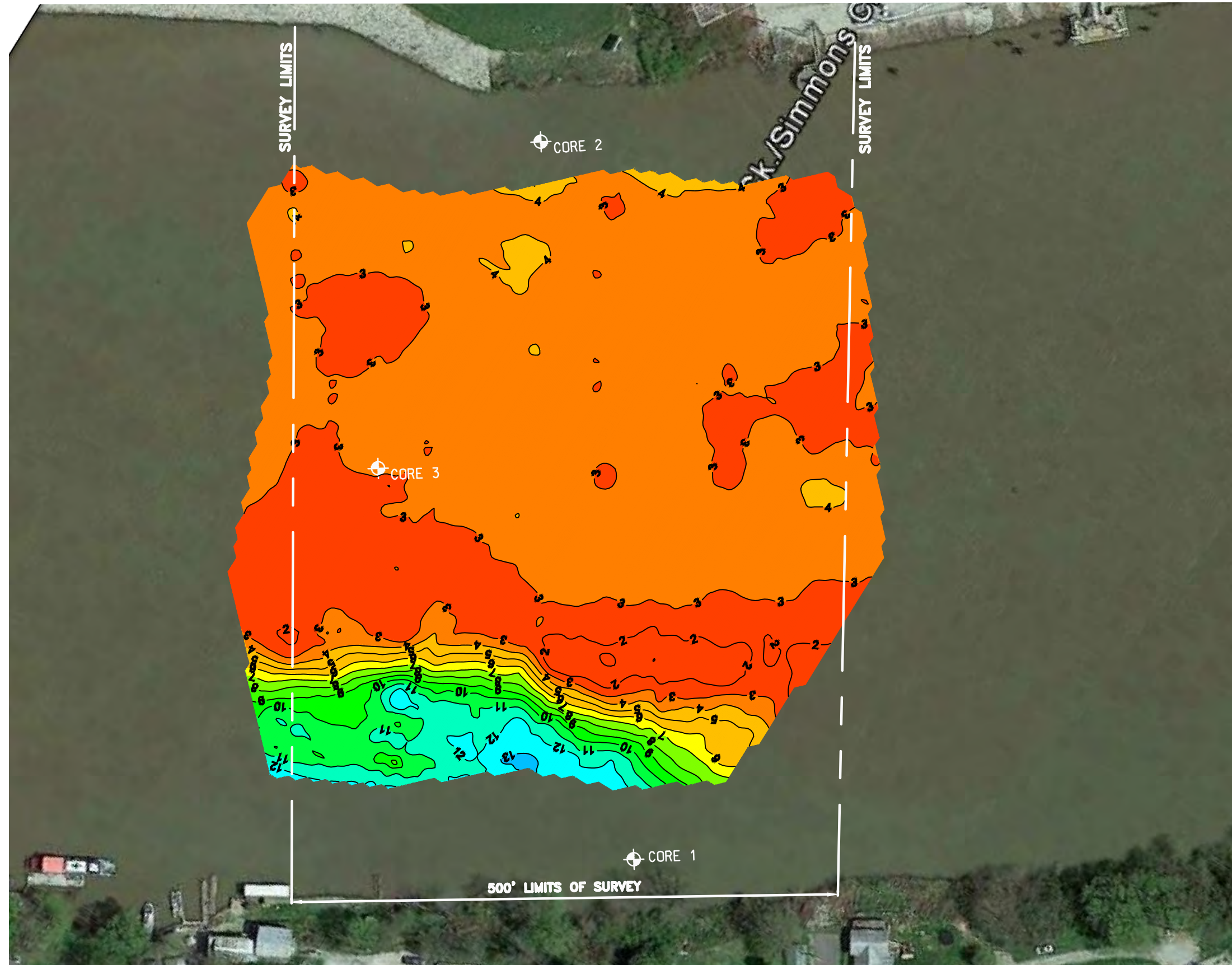
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF1 BELOW RFO.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY		
SED06 RFO-RF1 ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	25 OF 33




**RF0-RF1 ISOPACH PLAN**  
SCALE: 1" = 100'

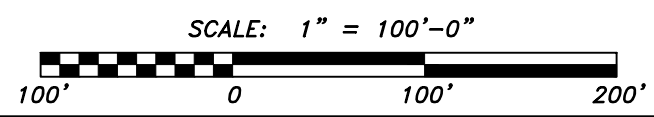




**GENERAL NOTES:**

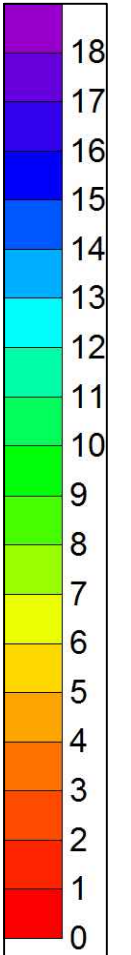
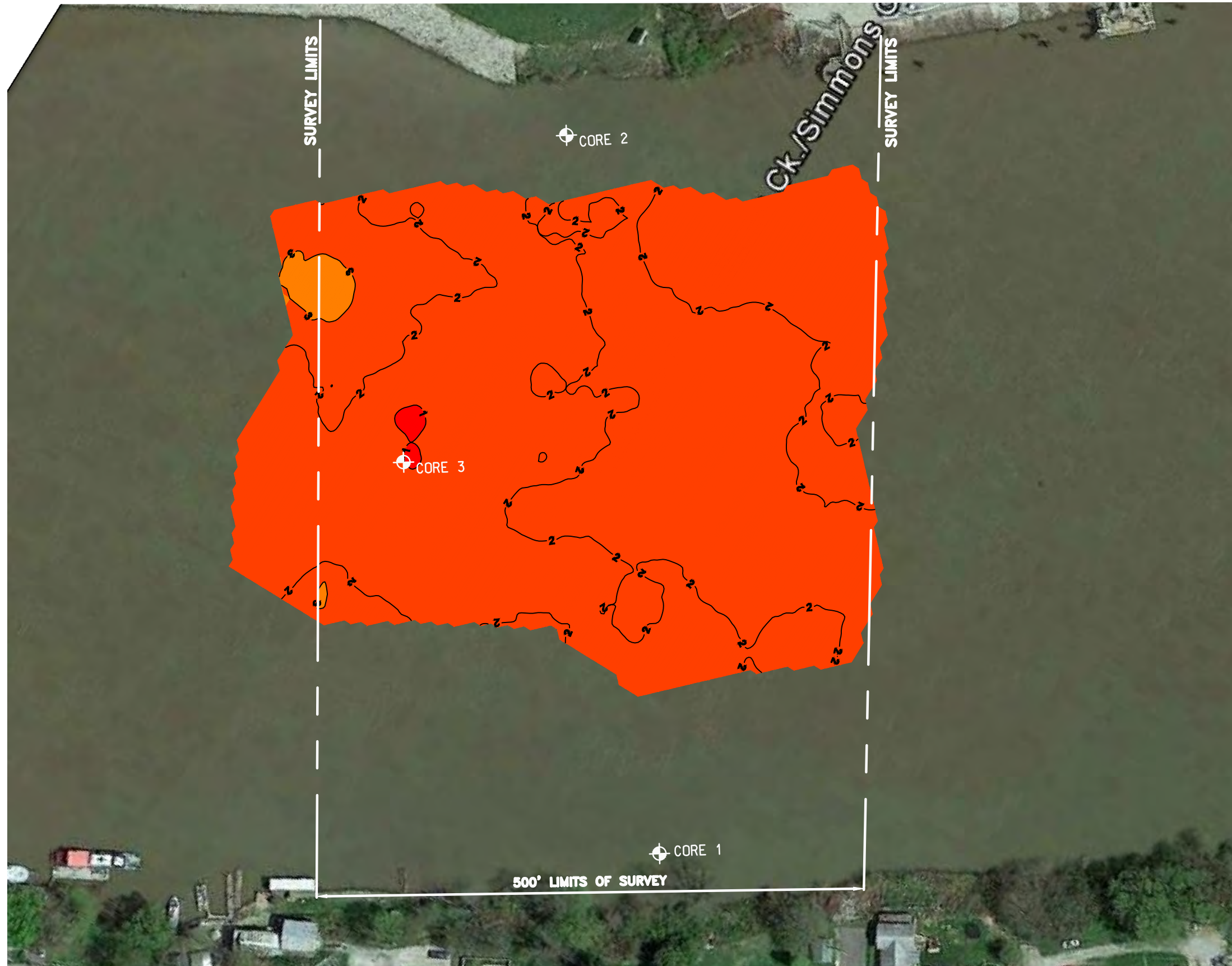
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF1 BELOW THE RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY		
SED06 RF1 ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	26 OF 33



**RF1 ISOPACH PLAN**  
SCALE: 1" = 100'

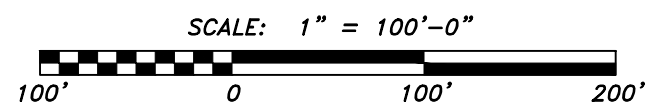




**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE THIRD SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

DATE	NO.	REVISIONS	BY
SED06 RF2 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 1/19/16	DRAWING No. 27 OF 33



SCALE: 1" = 100'-0"

**RF2 ISOPACH PLAN**

SCALE: 1" = 100'



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-17-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-17-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 562.4 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 1.4 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
562.1	[Symbol]	Dark Gray <b>SILTY CLAY</b>								
0.33	[Symbol]	Dark Gray, Fine Grained <b>SILTY SAND</b>								
561.0	[Symbol]									
1.42										

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



7012 MacCorkle Ave SE  
 Charleston, WV 25301  
 Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15

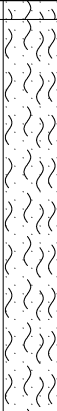
# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-17-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-17-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 556.5 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 3.6 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
556.3 0.17		Gray, Fine Grained <b>SILTY SAND</b> with Coarse Gravel Gray, Fine to Medium Grained <b>SILTY SAND</b> with Trace Organics								
552.9 3.58				5						
				10						

BORING LOG RECORD 0101-15-0018.GPJ\_POTESTA.GDT 9/3/15



7012 MacCorkle Ave SE  
 Charleston, WV 25301  
 Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	

# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-17-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-17-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 543.7 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 1.4 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
543.2	~ ~ ~	Dark Brown, Fine Grained <b>SILTY SAND</b> and Coal Fines								
0.5	. . .	Brown, Medium to Coarse Grained <b>SAND</b>								
542.9	■	Black <b>COAL FINES</b> with Medium Grained Sand								
0.83	■									
542.3	■									
1.42	■									

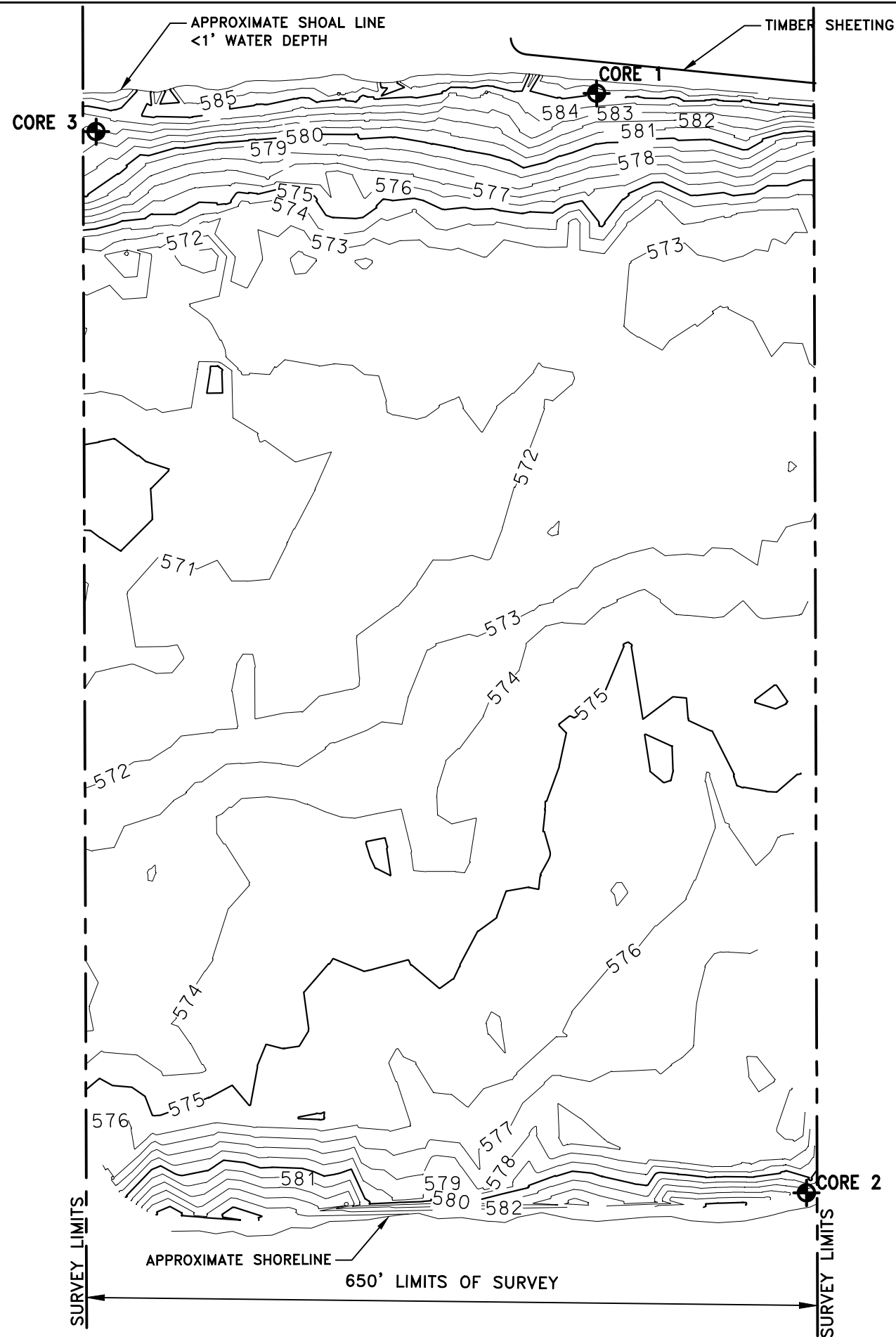
BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



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 Telephone: 304-342-1400

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15

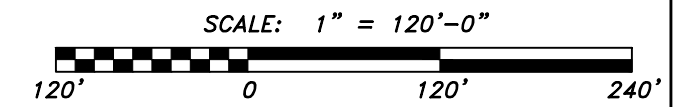




- LEGEND:**
- DENOTES MAJOR CONTOUR LINES AT 5'-0" INTERVALS
  - DENOTES MINOR CONTOUR LINES AT 1'-0" INTERVALS
  - 547 DENOTES CHANNEL BOTTOM ELEVATION
  - ⊕ DENOTES THE LOCATION OF SOIL BORING.

CORE SAMPLE DATA		
CORE #	NORTHING	EASTING
1	437965.44	1830033.84
2	436999.46	1830273.39
3	437907.25	1829591.21

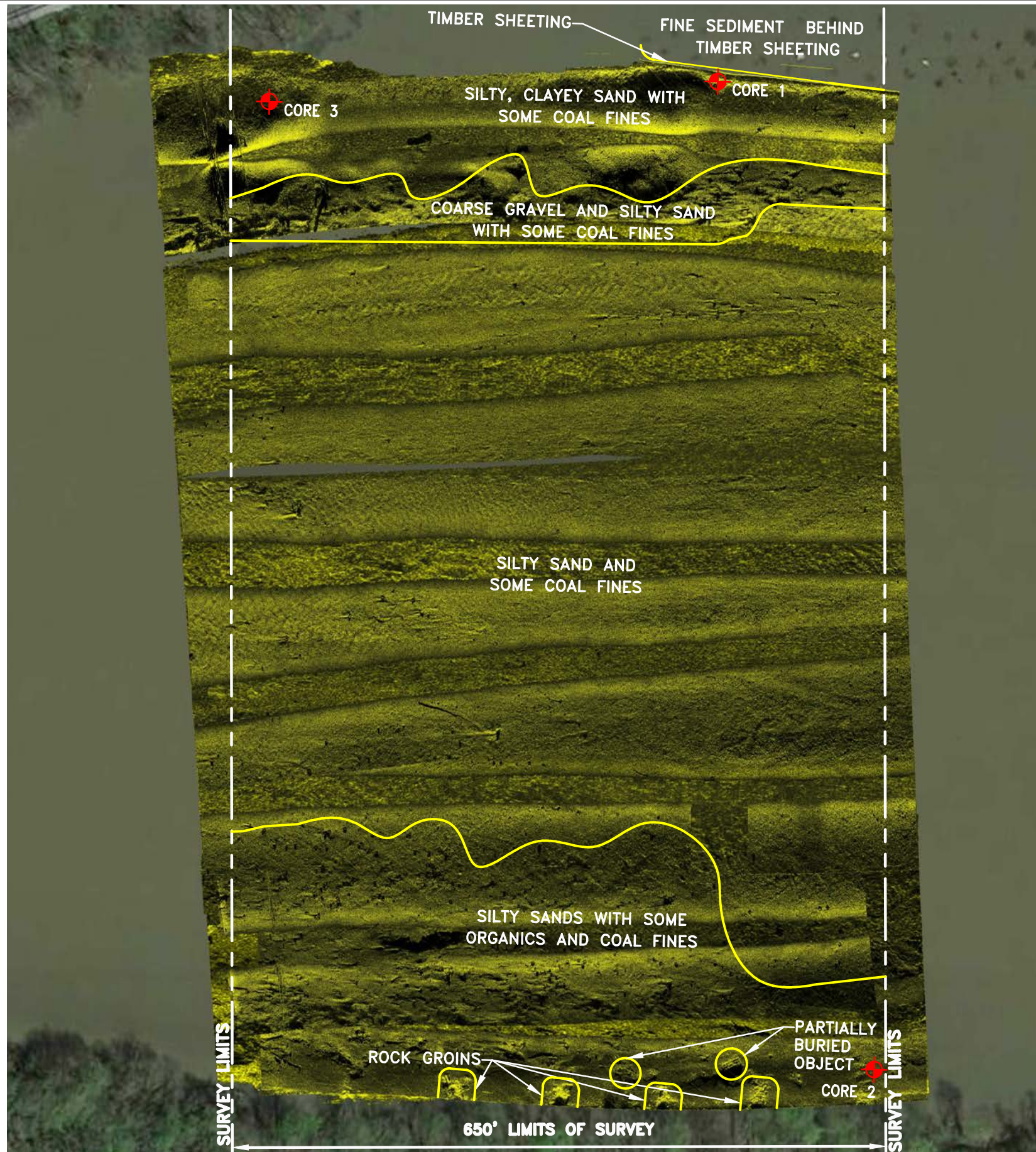
- GENERAL NOTES:**
1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 12, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
  2. THE WATER SURFACE ELEVATION (MARMET POOL) WAS 588.99' AT THE TIME OF THE SURVEY. BASED ON USGS GAUGE 03198000.
  3. VERTICAL DATUM IS IN FEET AND REFERENCES NAVD 1988 BASED ON USGS DOCUMENTATION.
  4. HORIZONTAL DATUM IS IN FEET AND REFERENCES THE WEST VIRGINIA SOUTH STATE PLANE COORDINATE SYSTEM NAD 1983.



**CONTOUR PLAN**  
SCALE: 1" = 120'

DATE	NO.	REVISIONS	BY		
SED07 FATHOMETRIC SURVEY					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	08/25/15	28 OF 33





**SEDIMENT MAP PLAN**  
SCALE: 1" = 120'

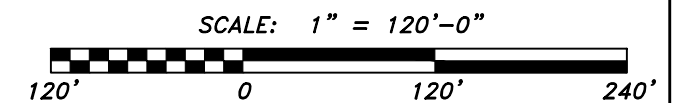


**LEGEND:**

- DENOTES TRANSITION BETWEEN DIFFERENT CHANNEL BOTTOM COMPOSITIONS.
- DENOTES THE LOCATION OF SOIL BORING.

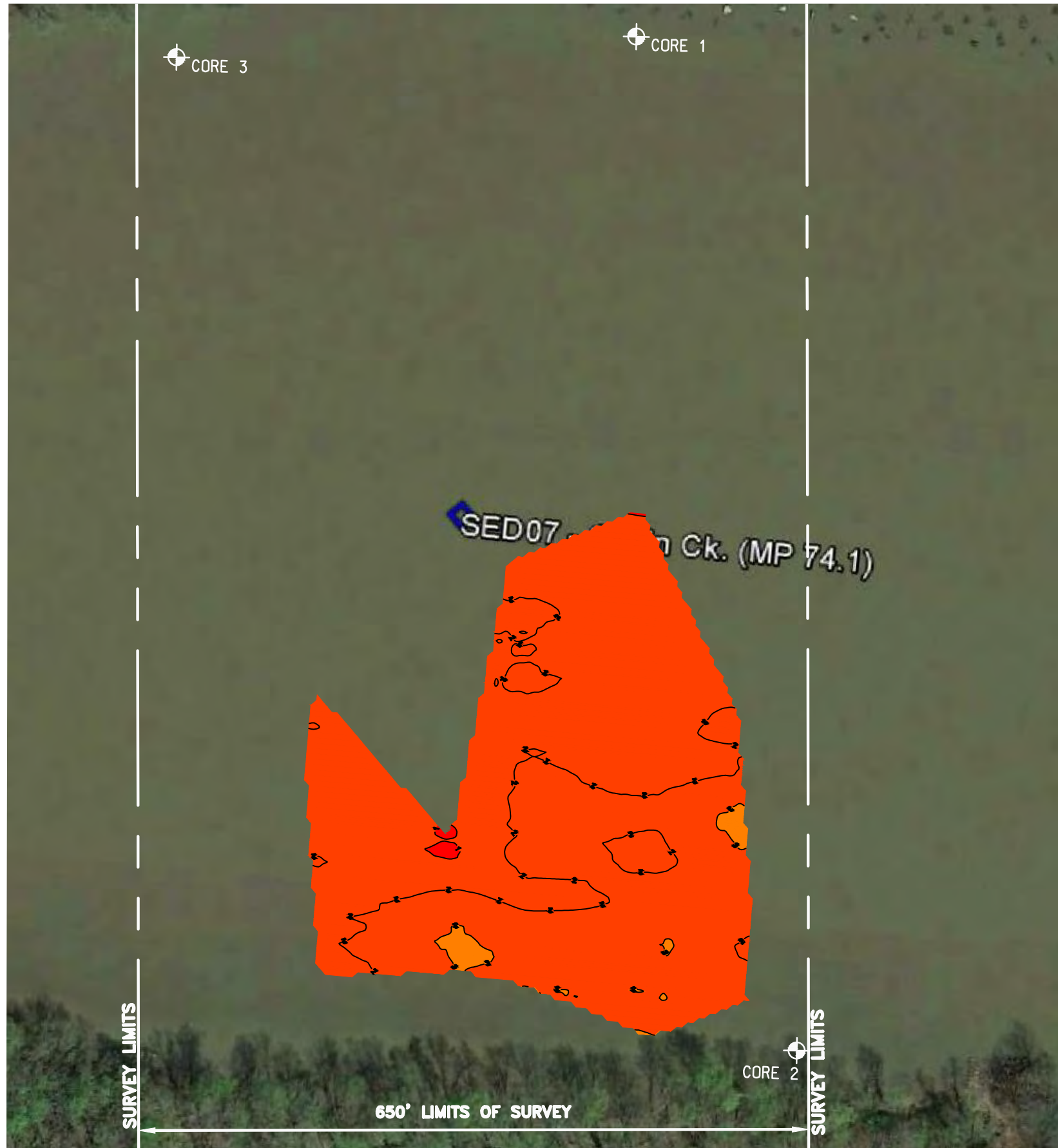
**GENERAL NOTES:**

1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 12, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

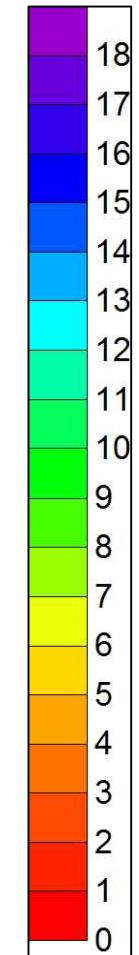


DATE	NO.	REVISIONS	BY
<b>SED07 SEDIMENT MAP</b>			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/13/15	DRAWING No. 29 OF 33





**RFO ISOPACH PLAN**  
SCALE: 1" = 120'



**GENERAL NOTES:**

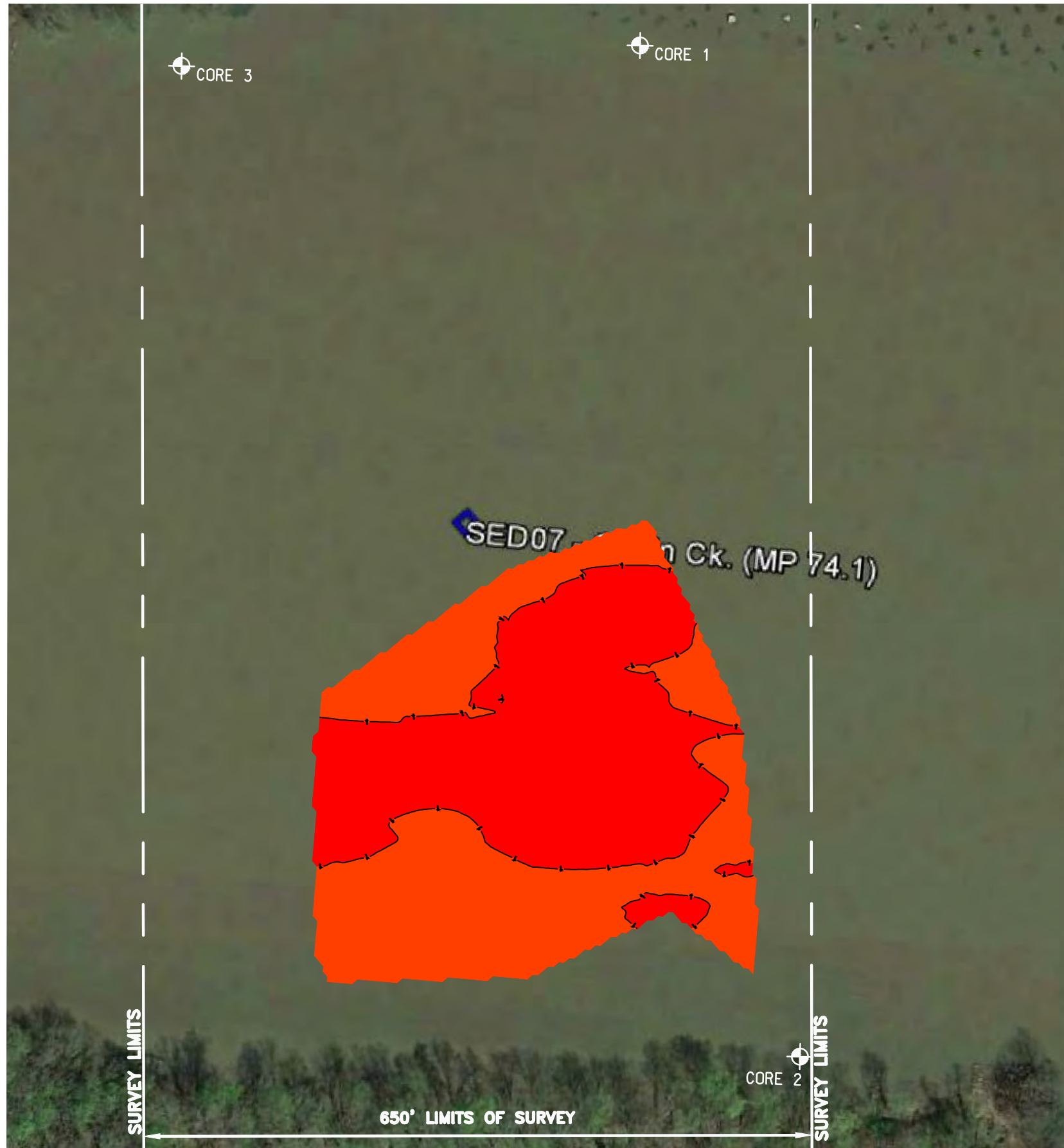
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THE TOP SEDIMENT LAYER RFO BELOW THE RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

SCALE: 1" = 120'-0"

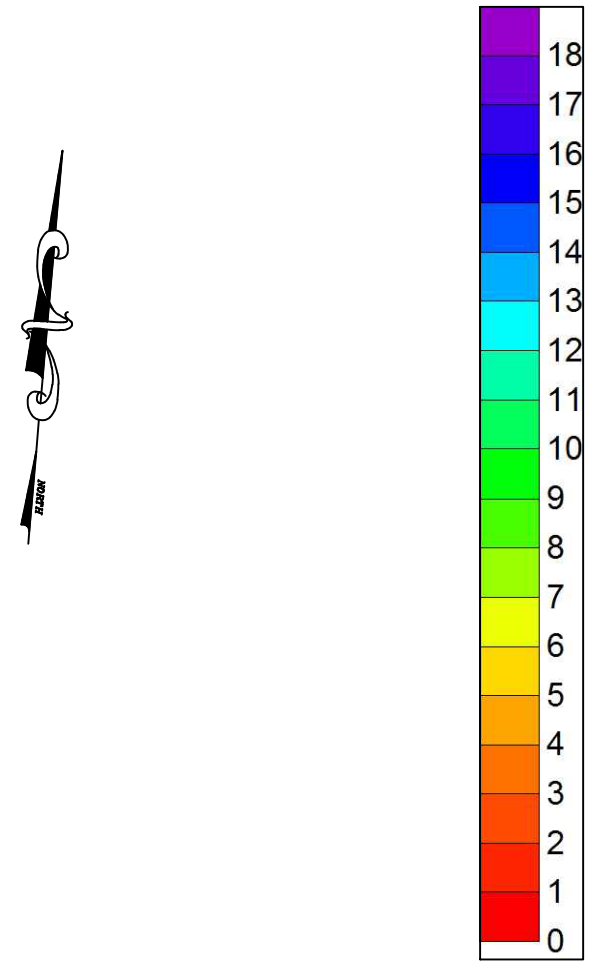


DATE	NO.	REVISIONS	BY		
SED07 RFO ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	30 OF 33



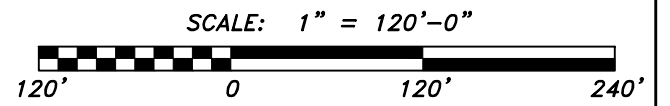


**RFO-RF1 ISOPACH PLAN**  
 SCALE: 1" = 120'



**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF1 BELOW RFO.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.



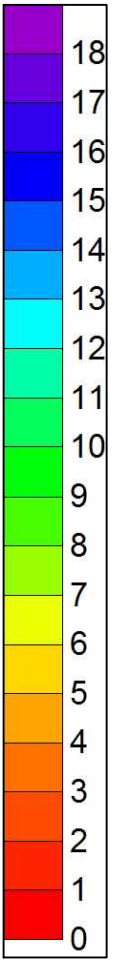
DATE	NO.	REVISIONS	BY
SED07 RFO-RF1 ISOPACH			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			

**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	31 OF 33

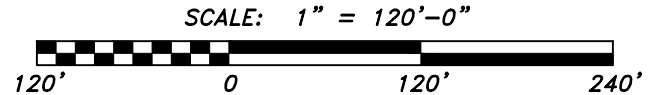


**RF1 ISOPACH PLAN**  
SCALE: 1" = 120'



**GENERAL NOTES:**

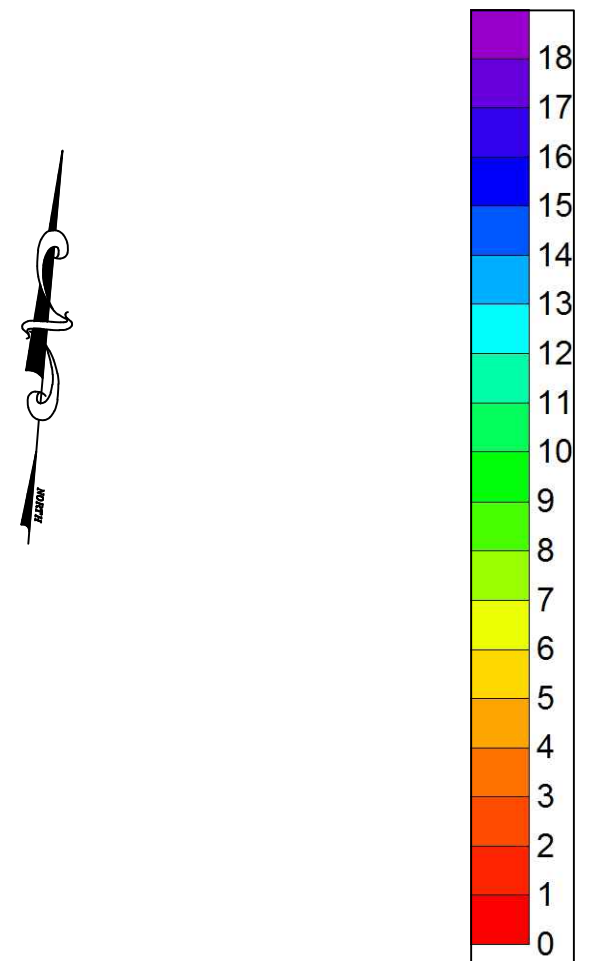
1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF SECOND SEDIMENT LAYER RF1 FROM RIVER BOTTOM.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.



DATE	NO.	REVISIONS	BY		
SED07 RF1 ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	32 OF 33



**RF2 ISOPACH PLAN**  
SCALE: 1" = 120'



**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILE SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.
2. CONTOURS REPRESENT THICKNESS OF THIRD SEDIMENT LAYER RF2 BELOW RF1.
3. GEOPHYSICAL COVERAGE MAY BE BLOCKED NEAR BANKS BECAUSE OF RIP RAP, DEBRIS AND SLOPED EMBANKMENTS.

SCALE: 1" = 120'-0"



DATE	NO.	REVISIONS	BY		
SED07 RF2 ISOPACH					
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.					
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	1/19/16	33 OF 33



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-17-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-17-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 570.4 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 5.6 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
567.9	2.5	Dark Gray, Fine Grained <b>SILTY SAND</b>								
567.3	3.08	Dark Gray, Medium Grained <b>SILTY SAND</b> to Coarse <b>GRAVEL</b> with Trace Coal Fines								
564.8	5.58	Dark Gray, Fine Grained, <b>SILTY CLAYEY SAND</b>		5						
				10						

BORING LOG RECORD 0101-15-0018.GPJ POTESTA.GDT 9/3/15



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 Charleston, WV 25301  
 Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



# BORING LOG RECORD

<b>Client :</b> <u>West Virginia American Water</u>	<b>Project No. :</b> <u>0101-15-0018</u>
<b>Project Name :</b> <u>Kanawha River Water Study</u>	<b>Boring Method :</b> <u>Direct Push</u>
<b>Location :</b> <u>Kanawha County, WV</u>	<b>Weather/ Temp. :</b> _____
<b>Start Date :</b> <u>08-17-15</u>	<b>Field Engineer/ Geologist :</b> _____
<b>Completion Date :</b> <u>08-17-15</u>	<b>Driller :</b> <u>W. J. Castle &amp; Associates</u>

**Surface Elevation :** 567.8 Ft.      **Benchmark/Elev. :** \_\_\_\_\_

**Water Level Observations :**     **Immediate :**                       **At completion/# hours /** \_\_\_\_\_

**Station :** \_\_\_\_\_      **Offset :** \_\_\_\_\_      **Boring Depth:** 2.6 Ft.

Stratum Elevation/Depth (ft.)	Lithology	Soil/Rock Description	Sample Type /Number	Sample Depth	SPT Blows	N-Value	Moisture (%)	Recovery (%)	RQD (%)	Unconf. Comp., Tsf
567.1	[Wavy pattern]	Dark Gray, Fine Grained <b>SILTY SAND</b> with Some Organics								
0.67	[Wavy pattern]	Dark Gray, Fine Grained <b>SILTY SAND AND ORGANICS</b>								
566.5	[Wavy pattern]	Gray <b>SILTY CLAY</b>								
1.33	[Wavy pattern]									
565.7	[Wavy pattern]	Gray, Medium to Coarse Grained <b>SAND</b> and <b>COAL FINES</b> with Coarse Gravel								
2.08	[Wavy pattern]									
565.2	[Wavy pattern]									
2.58	[Wavy pattern]									

BORING LOG RECORD 0101-15-0018.GPJ\_POTESTA.GDT 9/3/15



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 Charleston, WV 25301  
 Telephone: 304-342-1400

BORING METHOD	SAMPLE TYPE
HSA - Hollow Stem Auger	SS - Split Spoon Sample
SFA - Solid Flight Auger	ST - Shelby Tube Sample
CC - Concrete Coring	RC - Rock Core Sample
MD - Mud Drilling	BS - Bag Sample
HA - Hand Auger	
RC - Rock Coring	



## **APPENDIX A: SIDE SCAN RAW IMAGES**

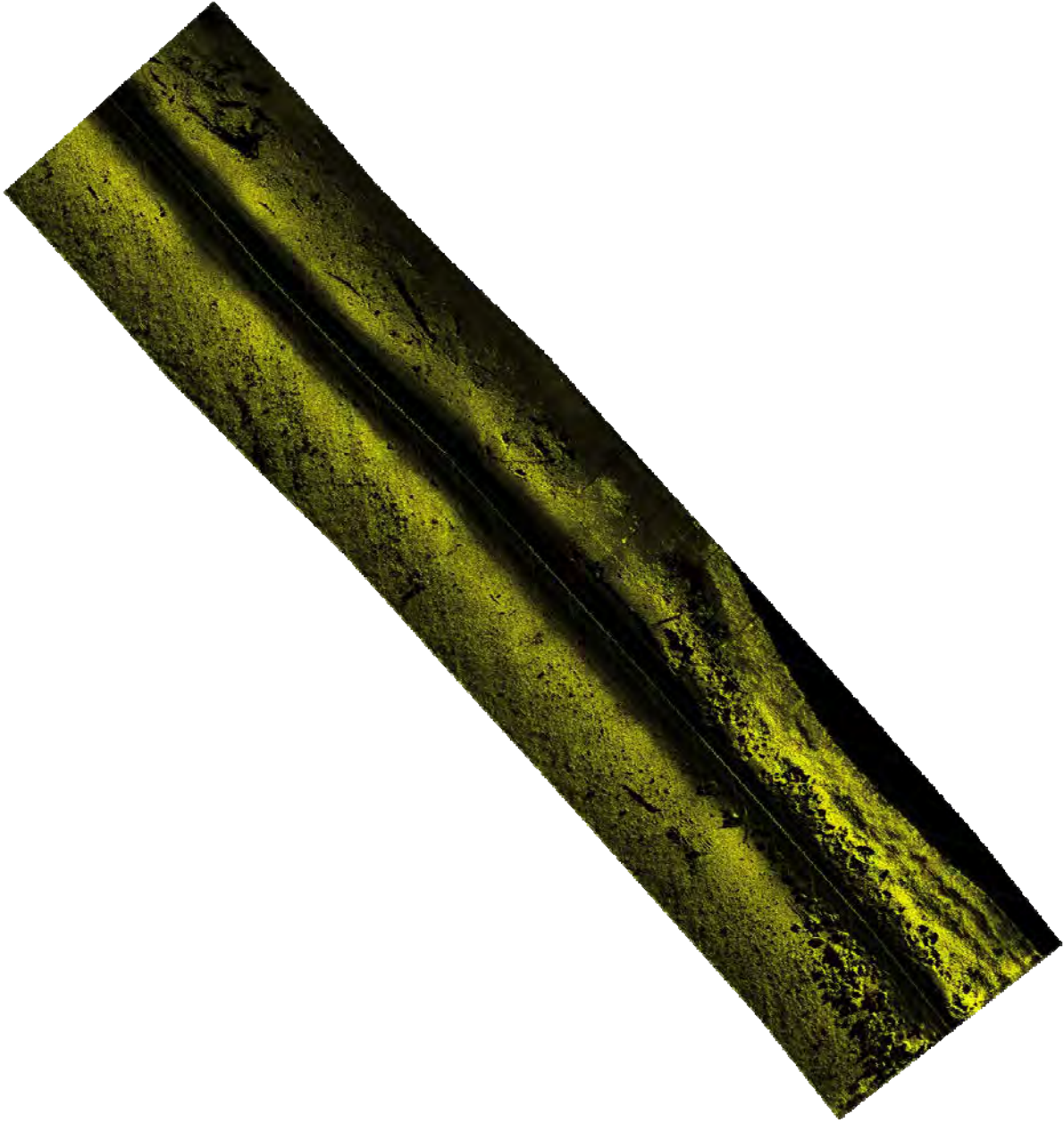
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**SED01**



**Photo 1: Side Scan Sonar Track Lines**





**Photo 2: Run #4**



**Photo 3: Run #5**



**Photo 4: Run #6**





**Photo 5: Run #7**



Photo 6: Run #8

**SED02**





**Photo 7: Side Scan Sonar Track Lines**



**Photo 8: Run #17**



**Photo 9: Run #18**





**Photo 10: Run #19**



**Photo 11: Run #20**



**Photo 12: Run #21**





**Photo 13: Run #22**

**SED03**



Photo 14: Side Scan Sonar Track Lines





**Photo 15: Run #6**



**Photo 16: Run #7**



**Photo 17: Run #8**





**Photo 18: Run #9**



**Photo 19: Run #10**



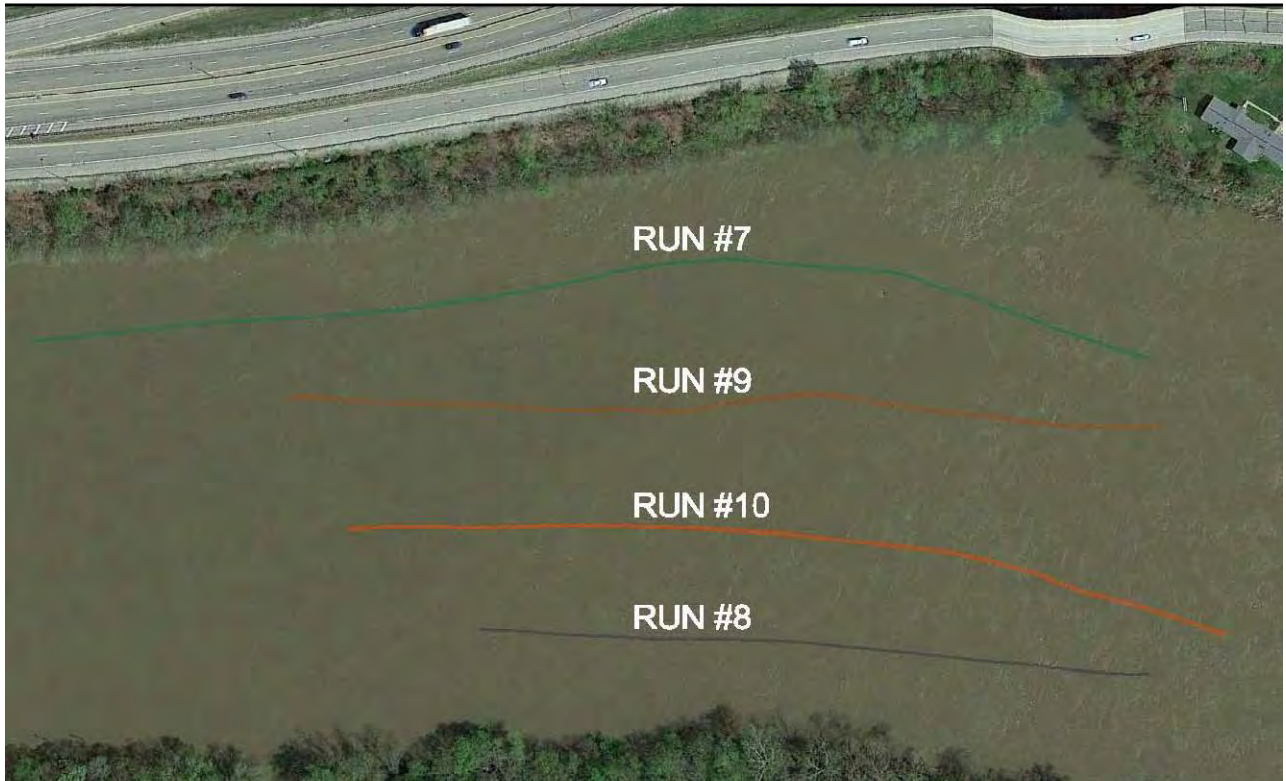
**Photo 20: Run #11**





**Photo 21: Run #12**

**SED04**

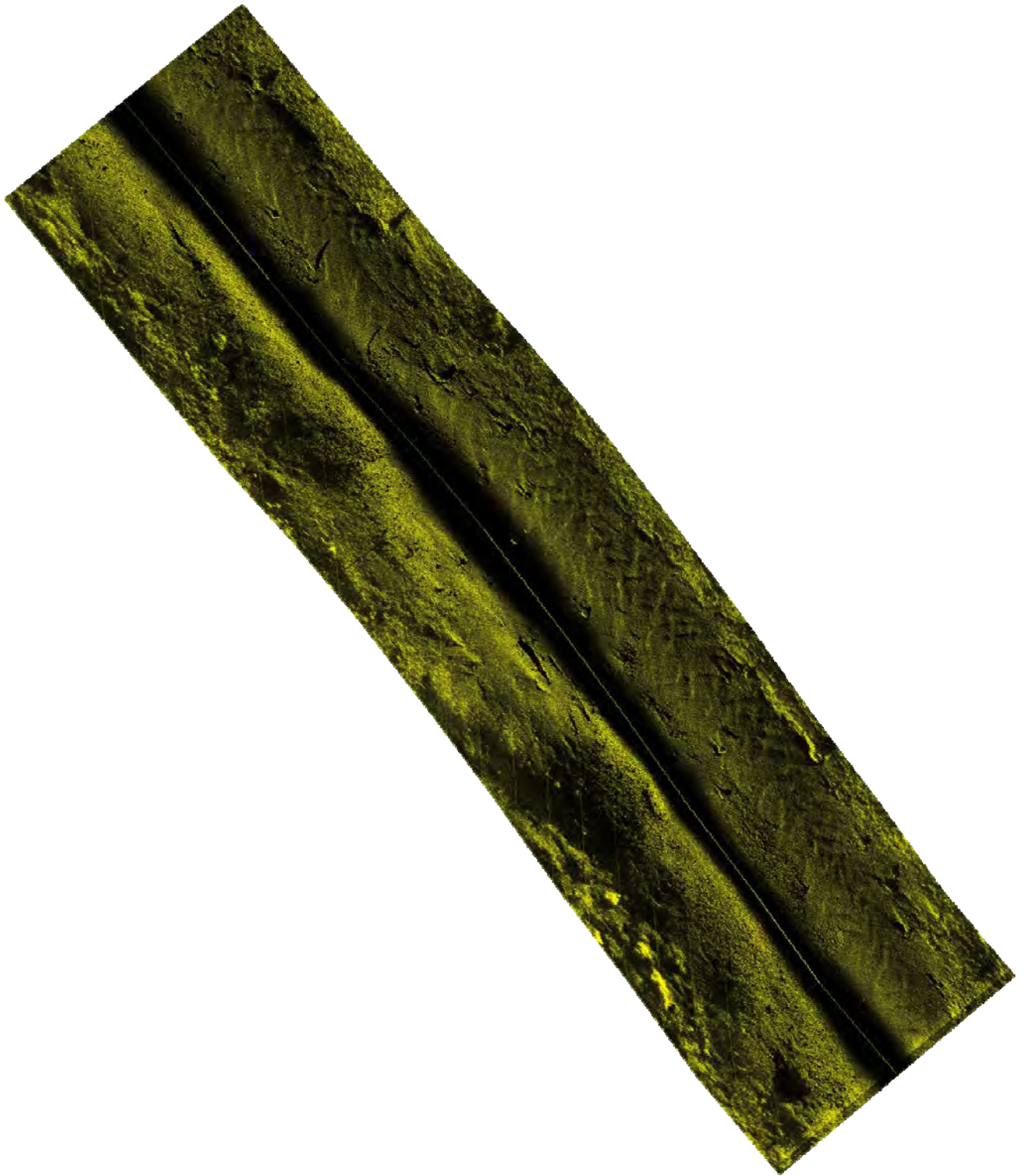


**Photo 22: Side Scan Sonar Track Lines**





**Photo 23: Run #7**



**Photo 24: Run #8**



**Photo 25: Run #9**





**Photo 26: Run #10**

**SED05**



**Photo 27: Side Scan Sonar Track Lines**





**Photo 28: Run #23**



Photo 29: Run #24



Photo 30: Run #25





**Photo 31: Run #26**



**Photo 32: Run #27**

**SED06**





Photo 33: Side Scan Sonar Track Lines



Photo 34: Run #18



**Photo 35: Run #19**





Photo 36: Run #20



**Photo 37: Run #21**

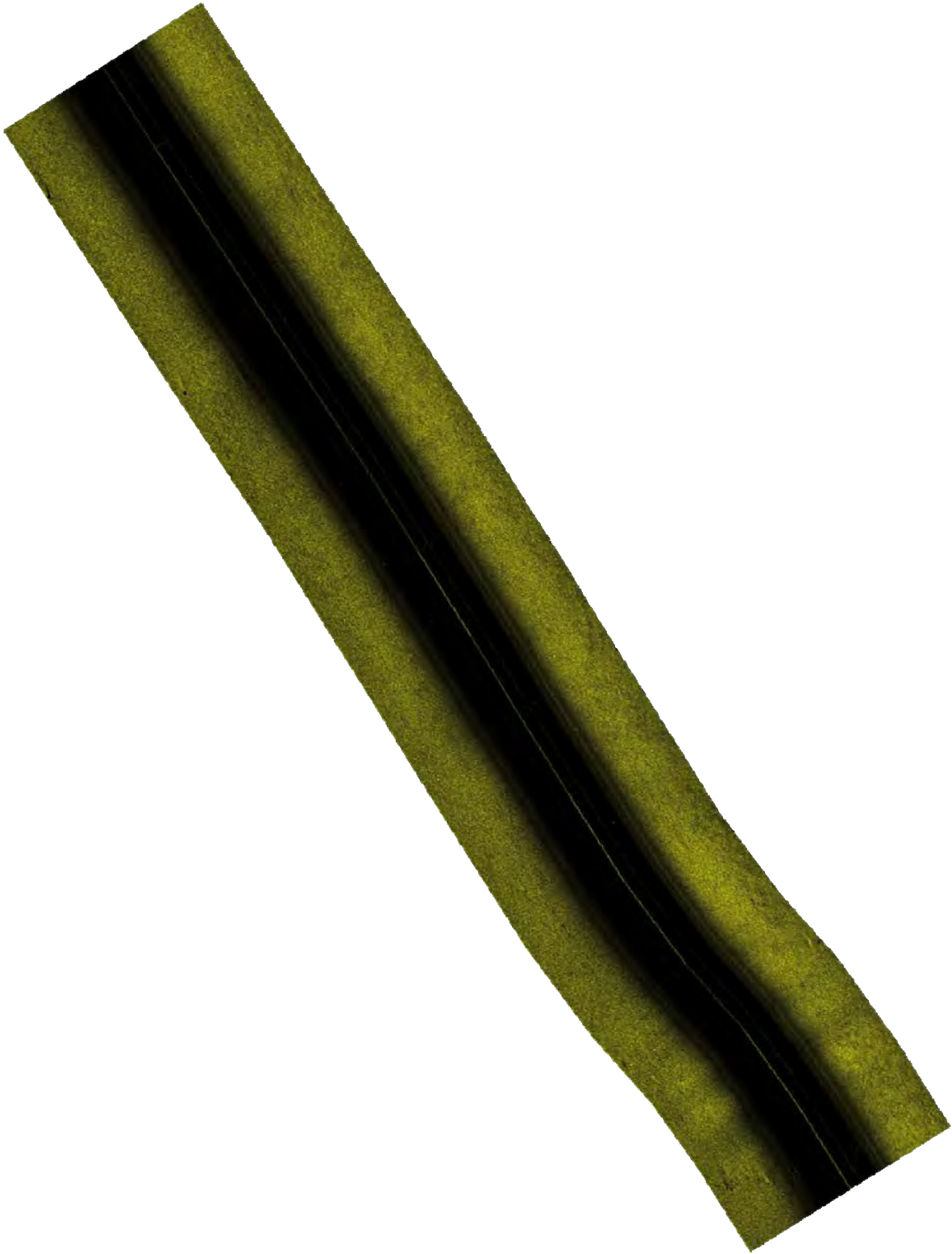


Photo 38: Run #22





**Photo 39: Run #23**



**Photo 40: Run #24**



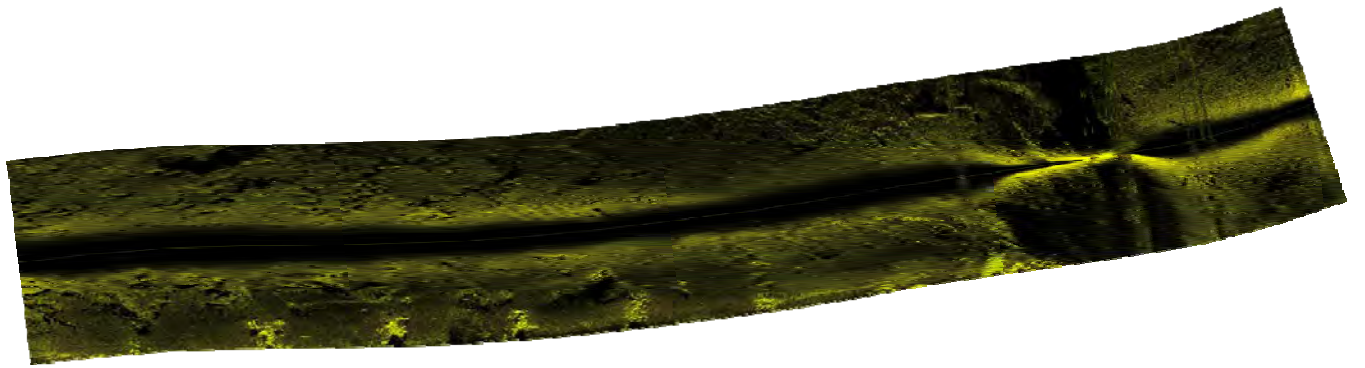
**Photo 41: Run #25**



**SED07**

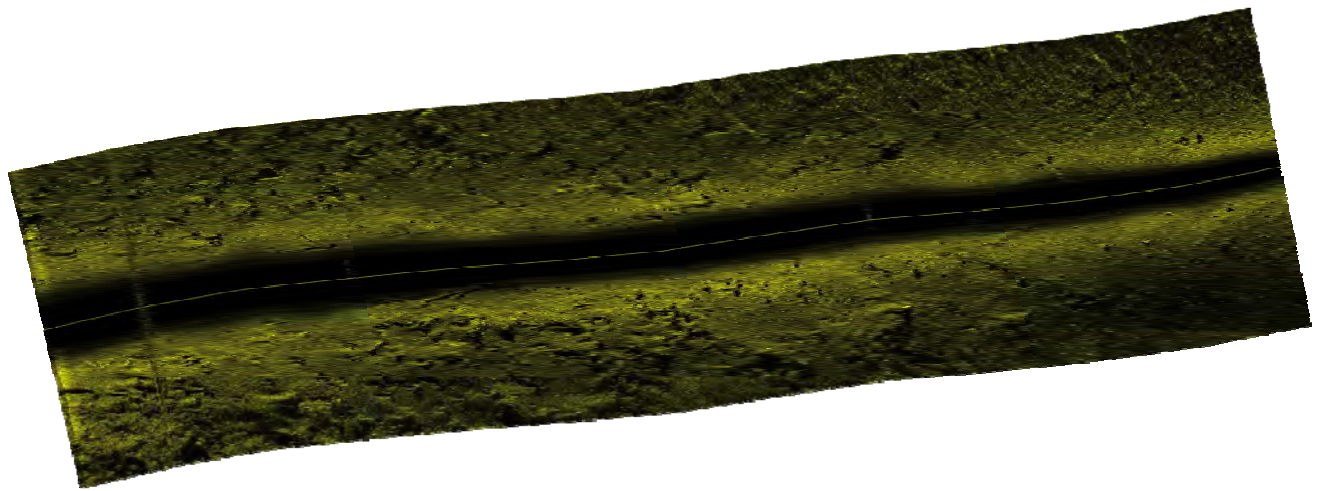


**Photo 42: Side Scan Sonar Track Lines**



**Photo 43: Run #8**

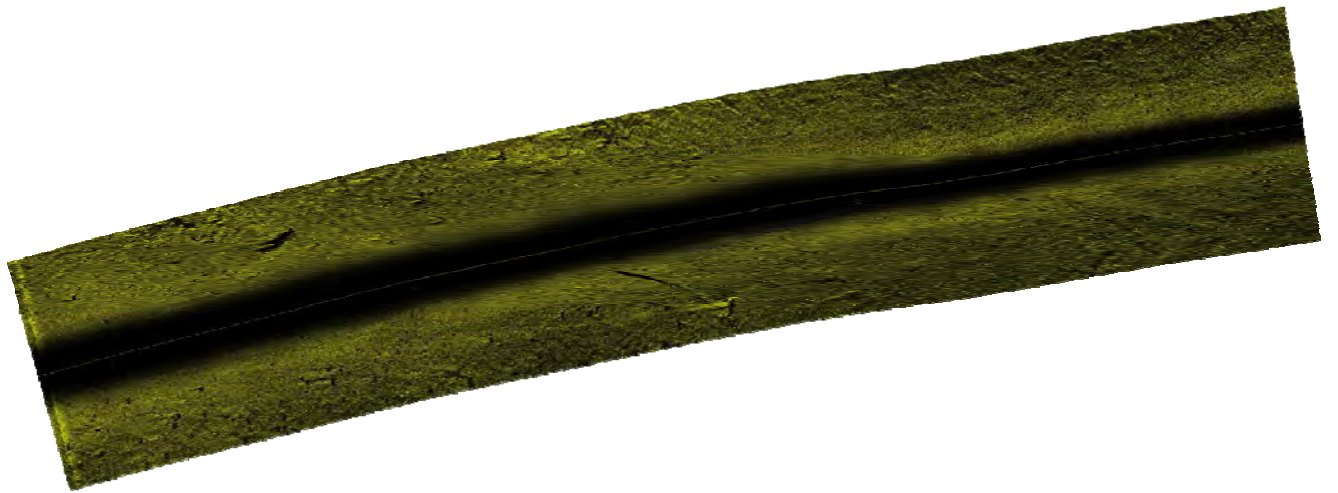




**Photo 44: Run #9**

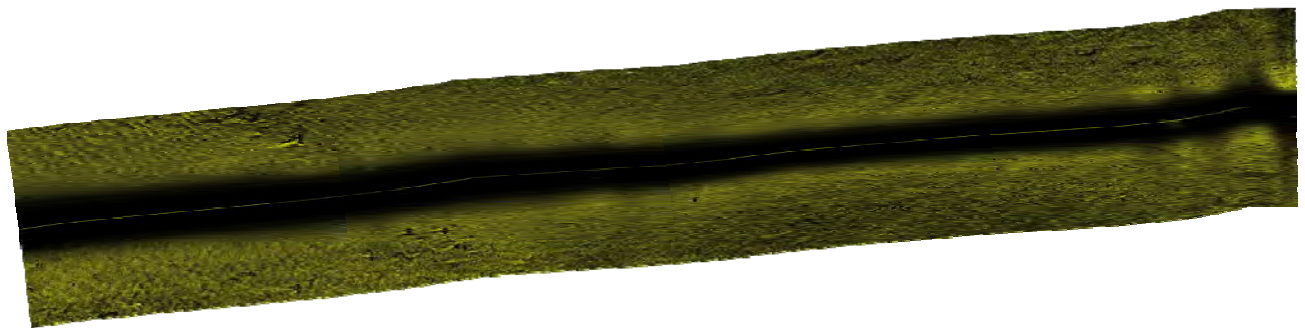


**Photo 45: Run #10**

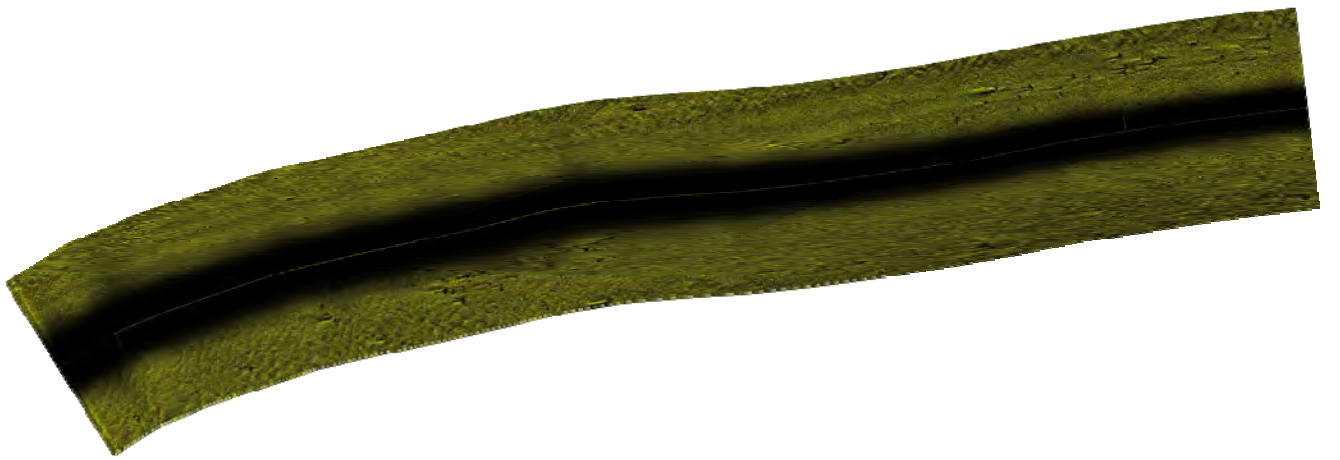


**Photo 46: Run #11**

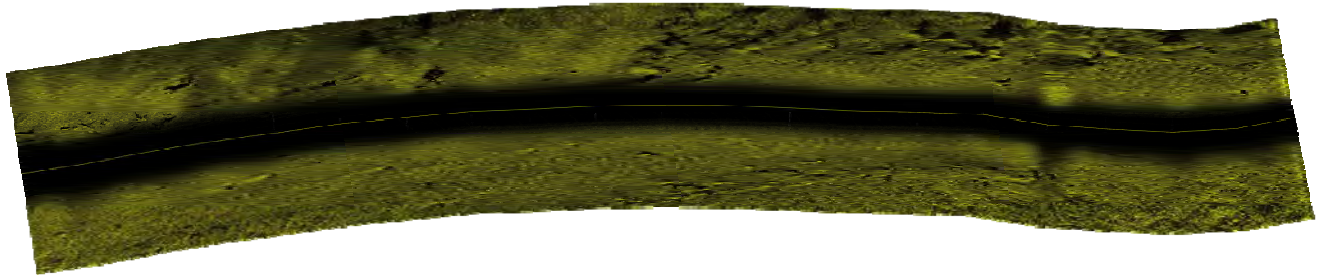




**Photo 47: Run #12**

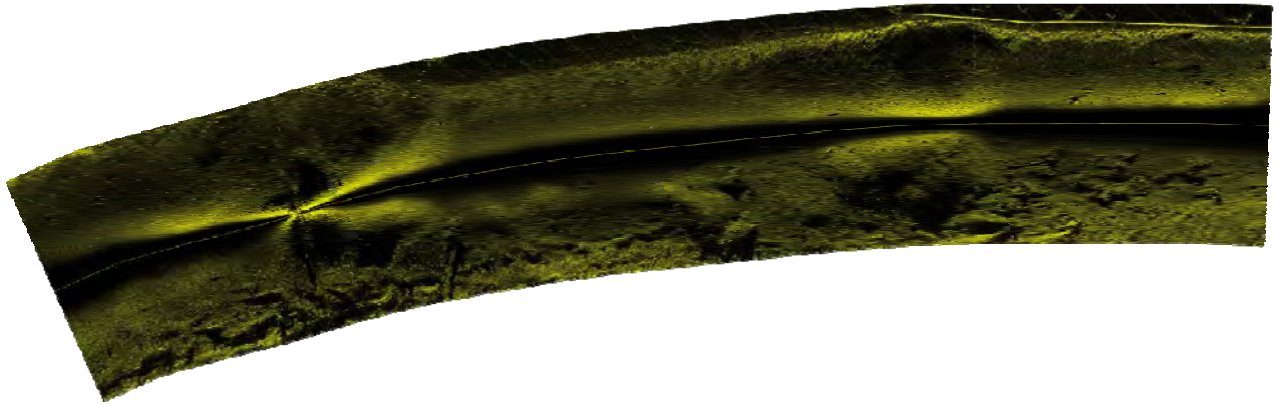


**Photo 48: Run #13**



**Photo 49: Run #14**





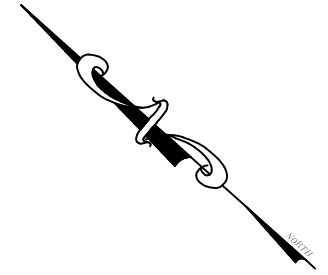
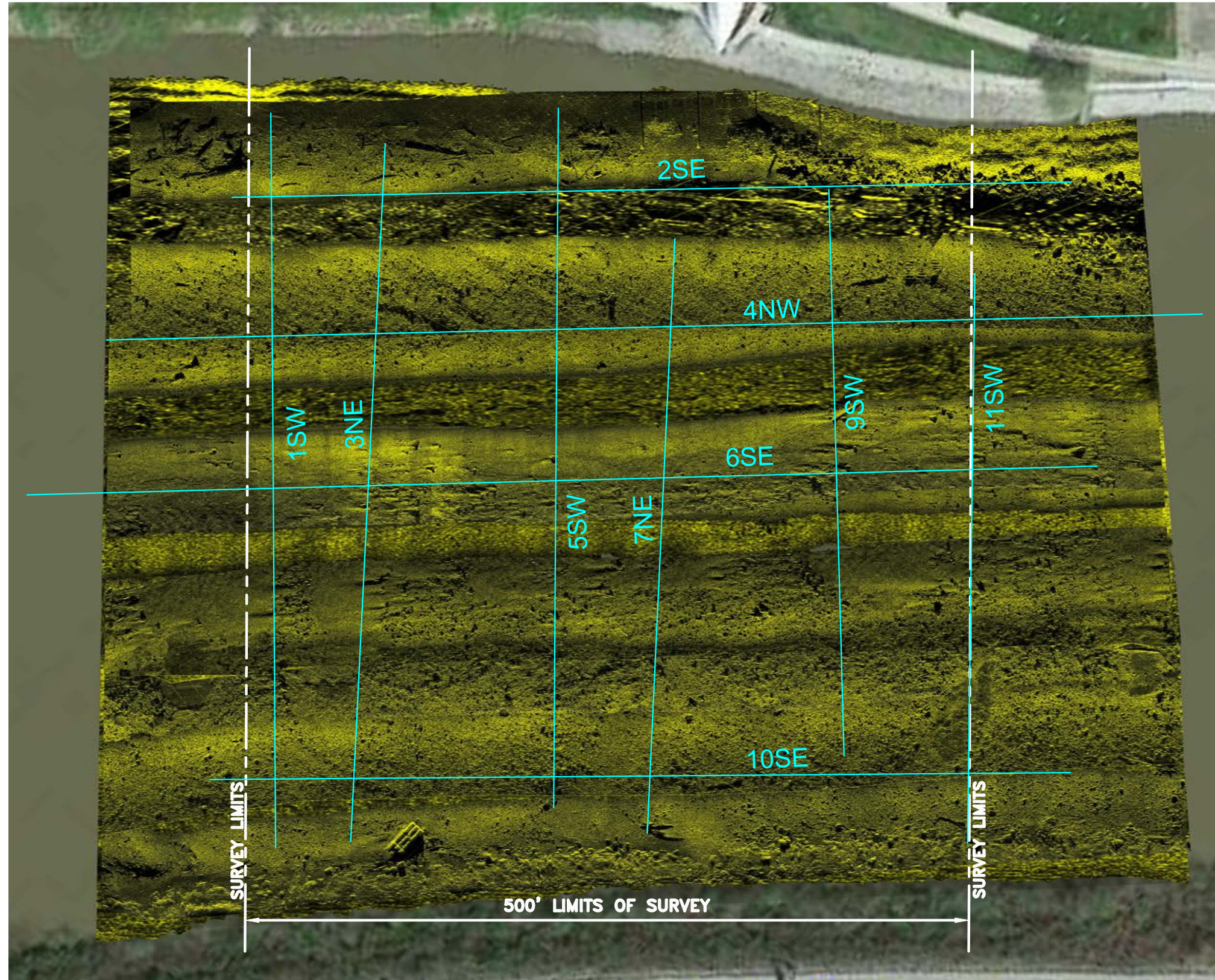
**Photo 50: Run #15**

## APPENDIX B: SUB-BOTTOM PROFILE RAW IMAGES

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**SED01**






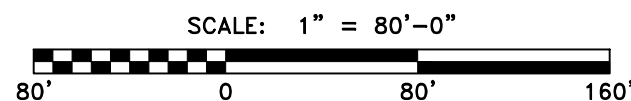
**LEGEND:**

— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN.

**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILER WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
SED01 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESA & ASSOCIATES, INC.			
 W.J. Castle PE & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/16/15	DRAWING No. 1 OF 1



**SUB-BOTTOM TRACK PLAN**  
SCALE: 1" = 80'



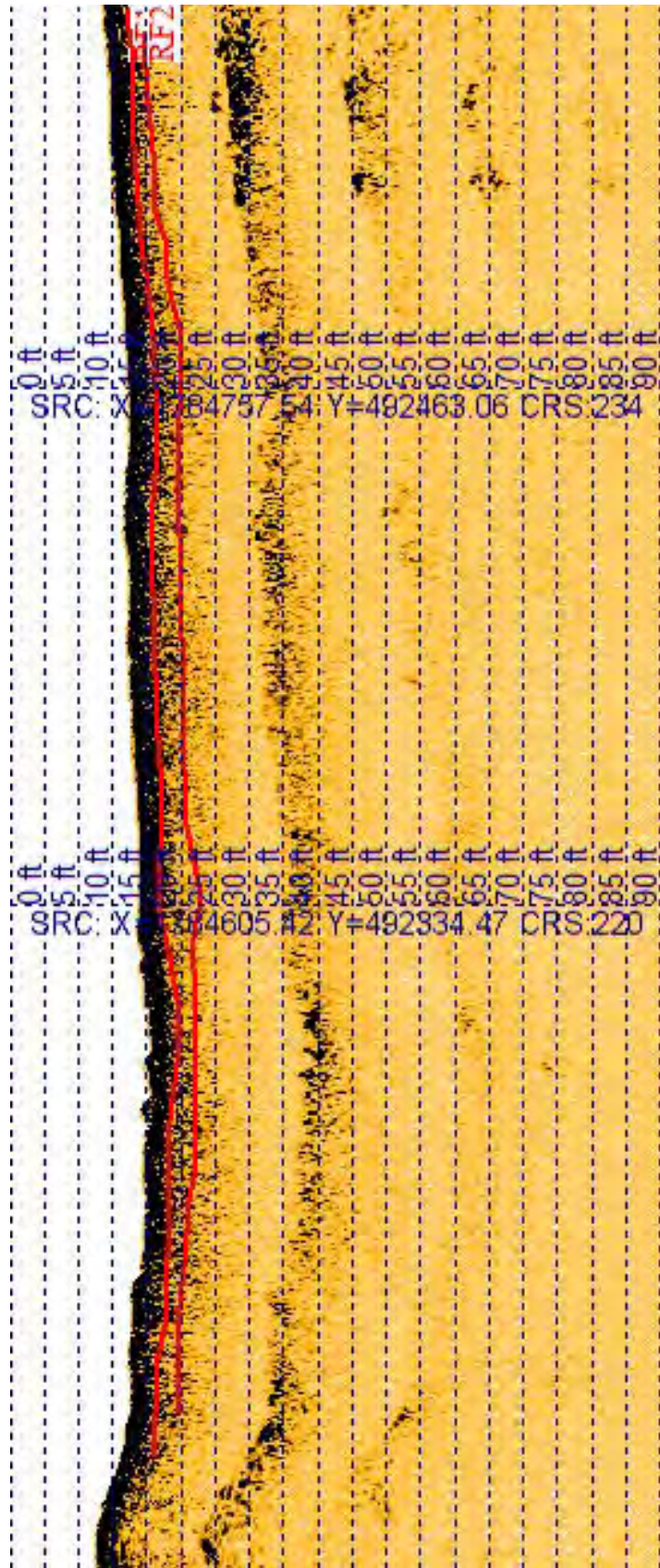


Photo 1: 1SW

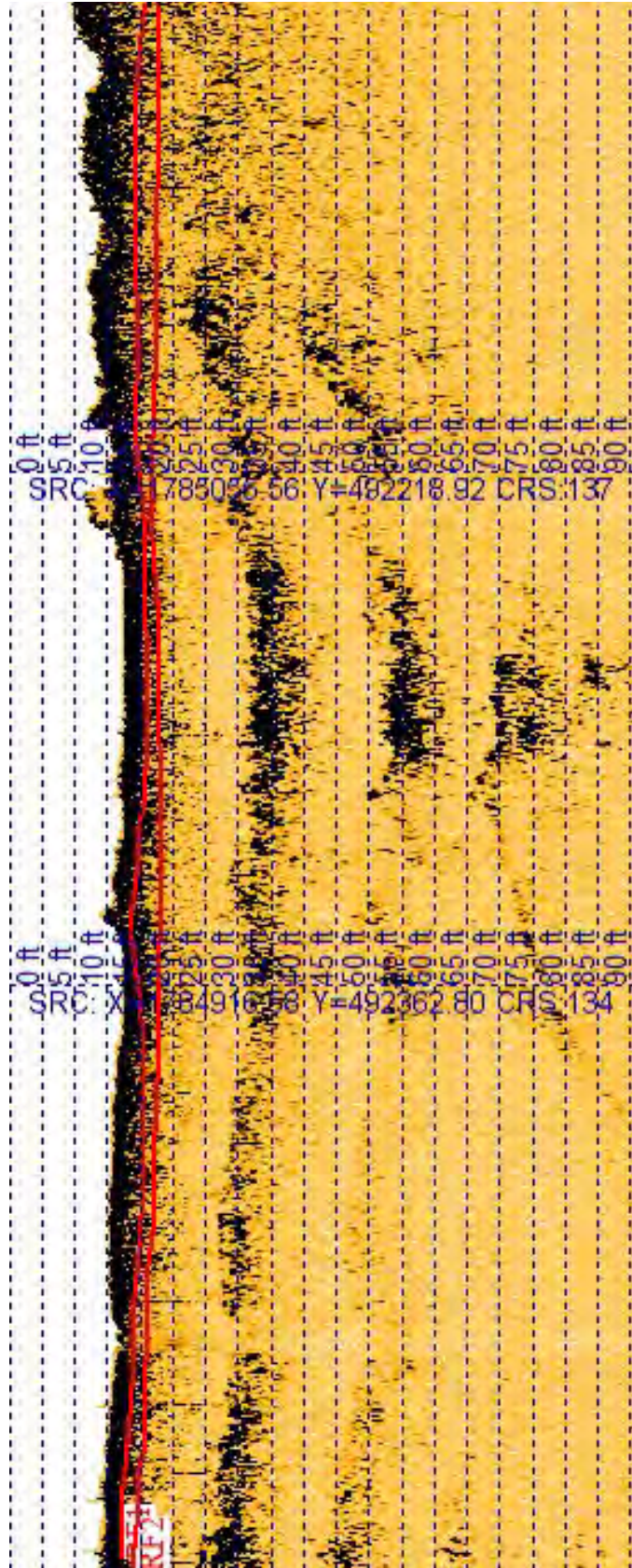


Photo 2: 2SE



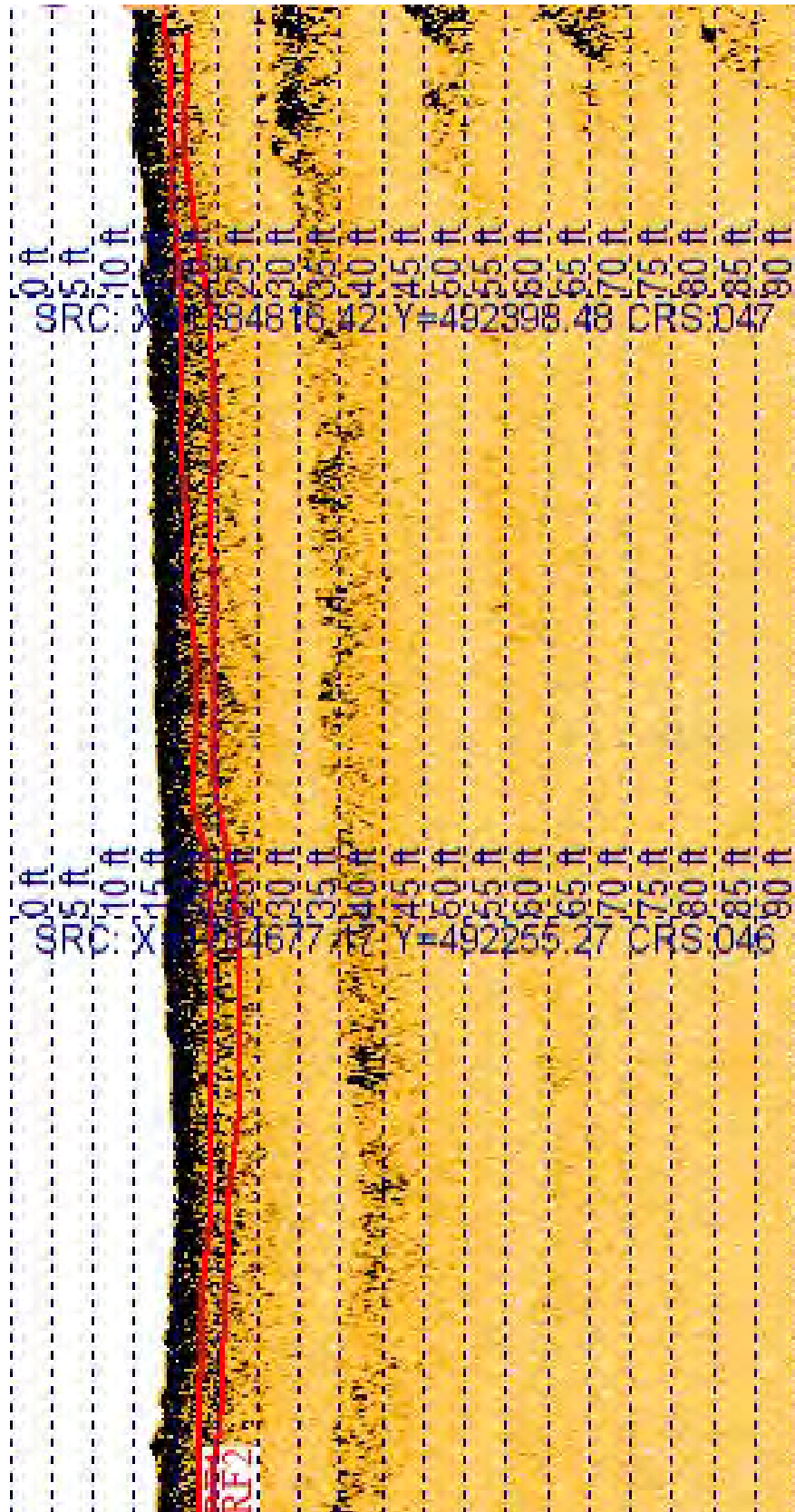


Photo 3: 3NE

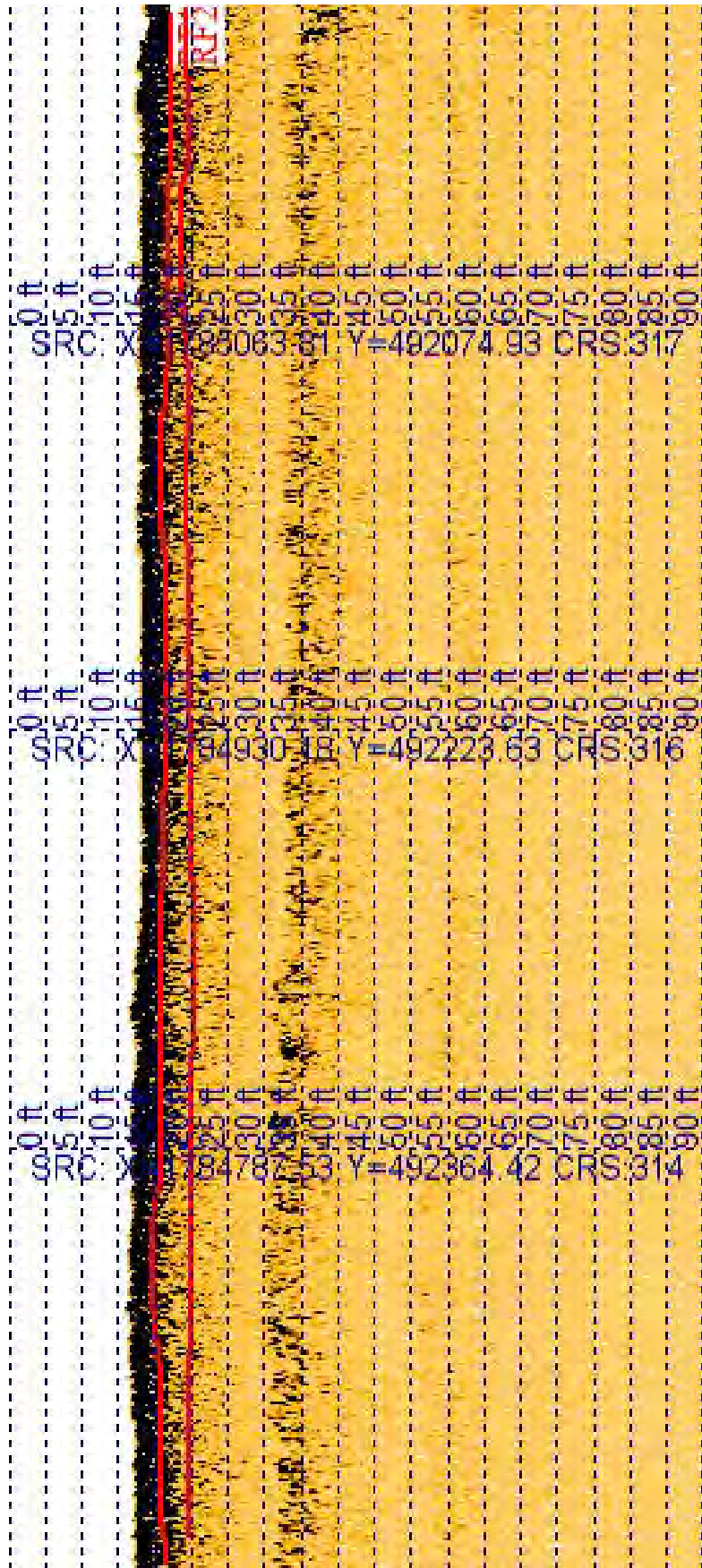


Photo 4: 4NW

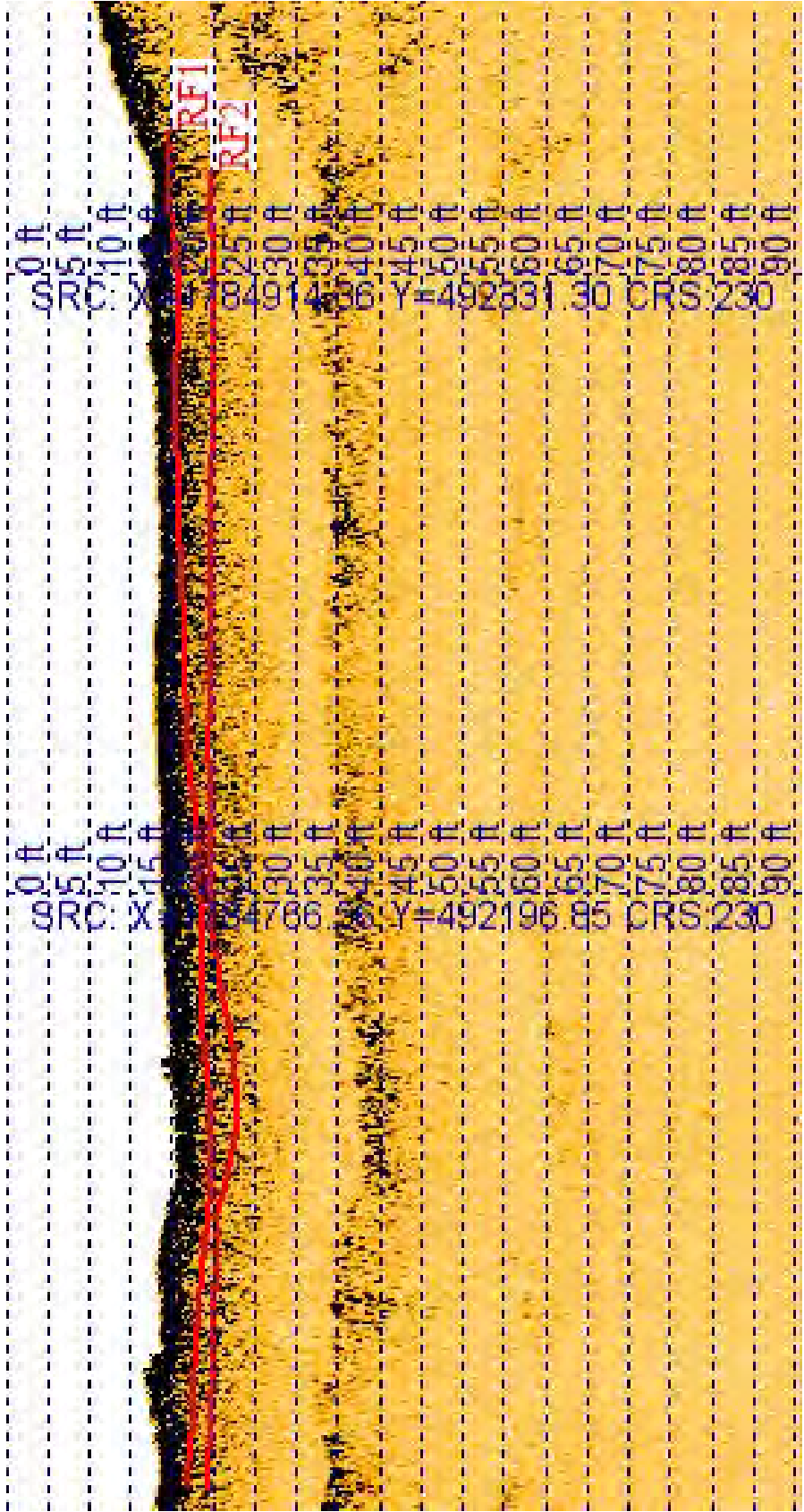


Photo 5: 5SW



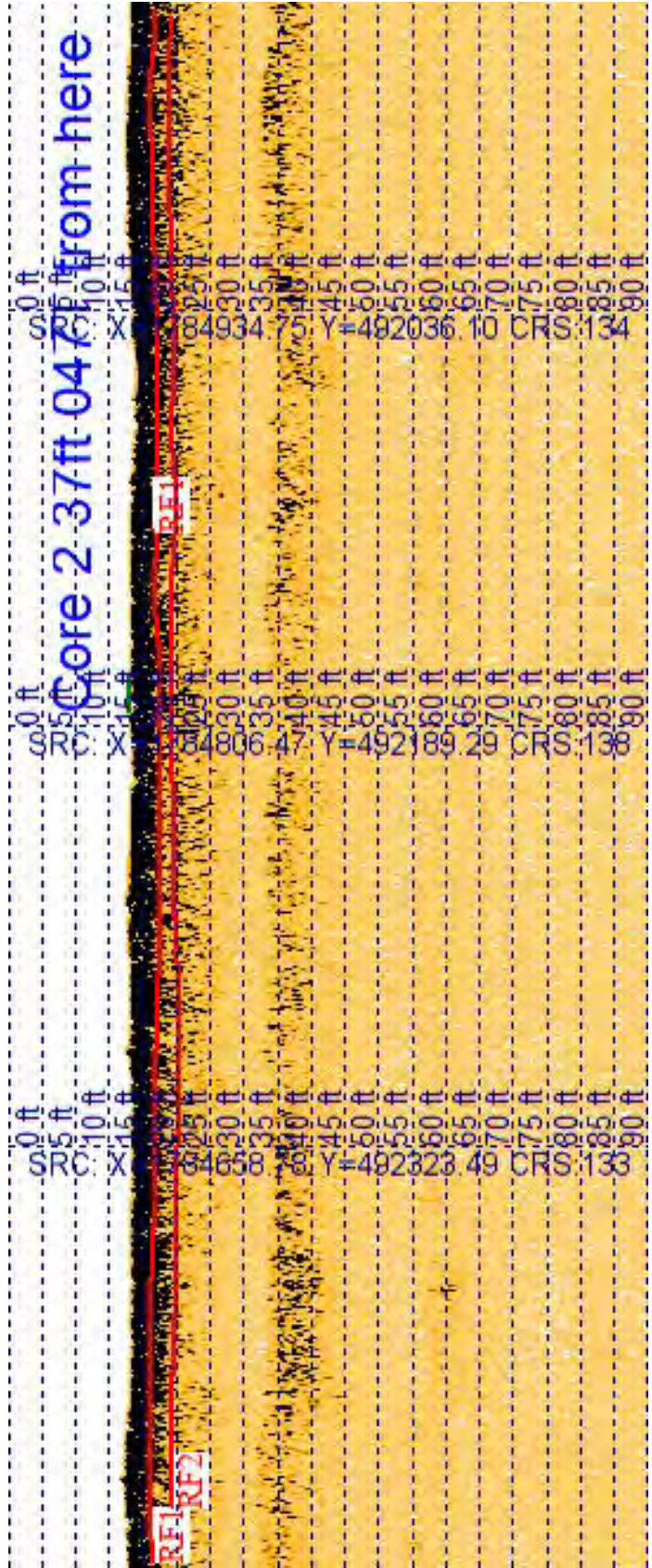


Photo 6: 6SE

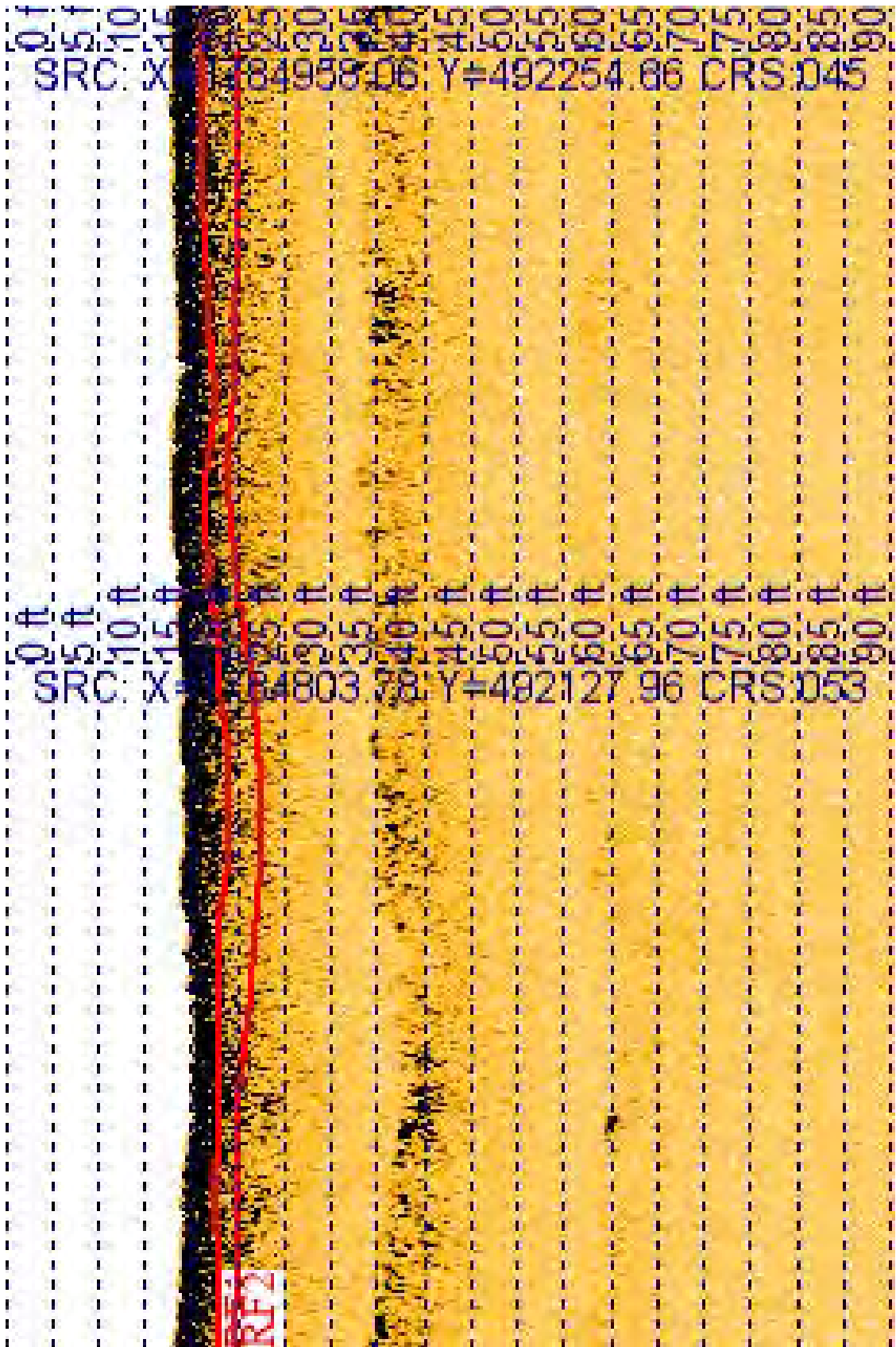


Photo 7: 7NE

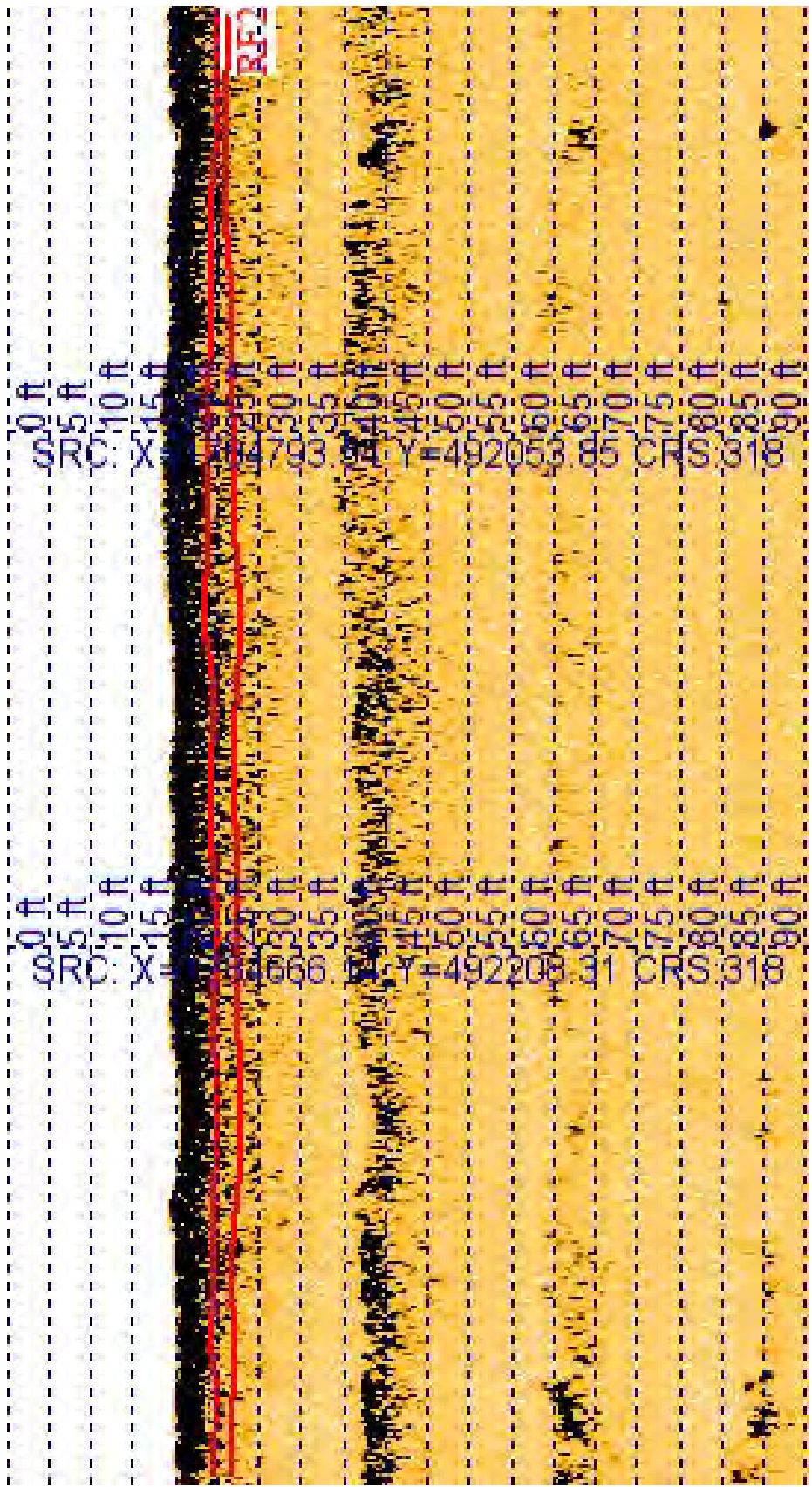


Photo 8: 8NW



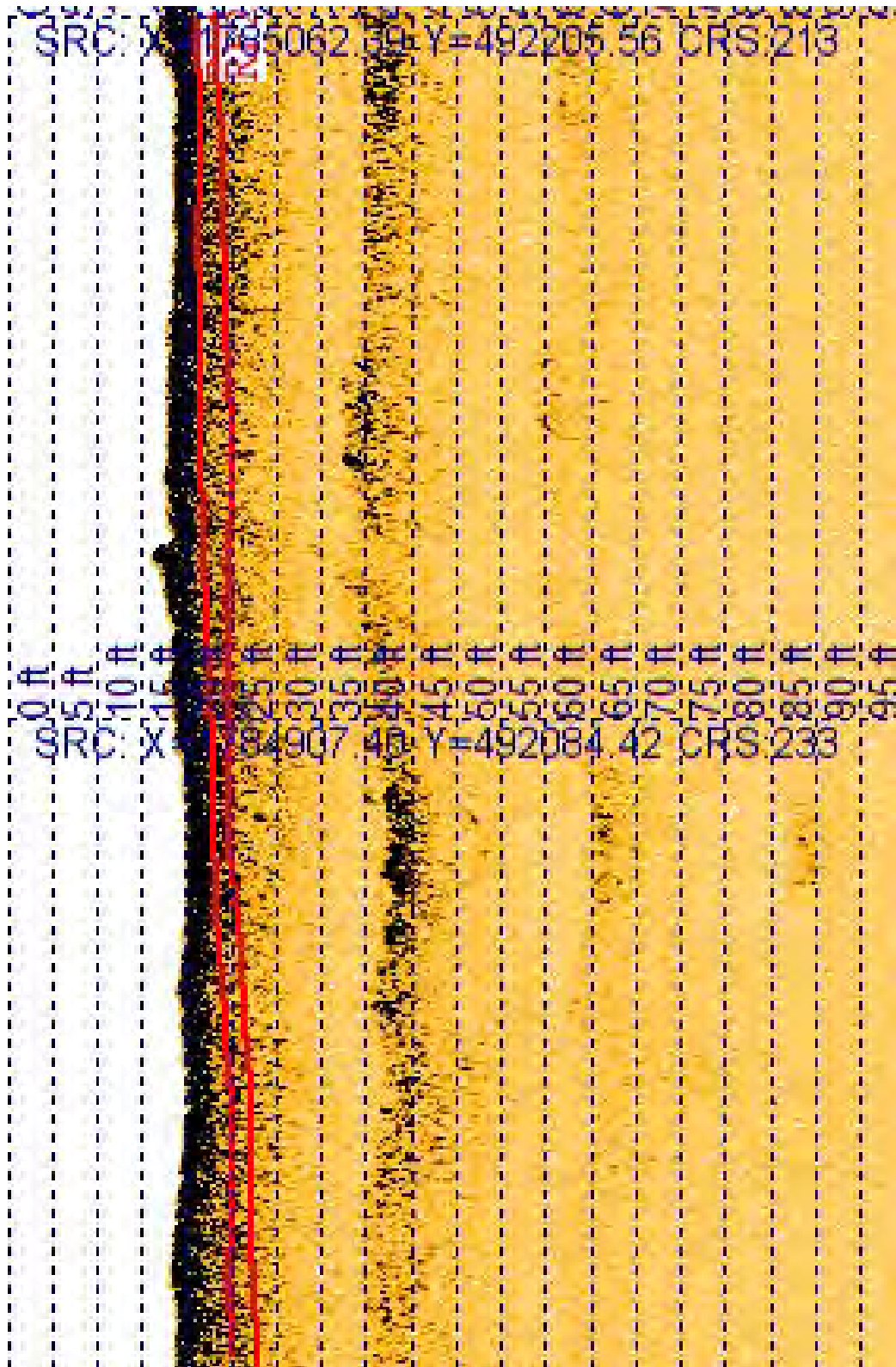


Photo 9: 9SW

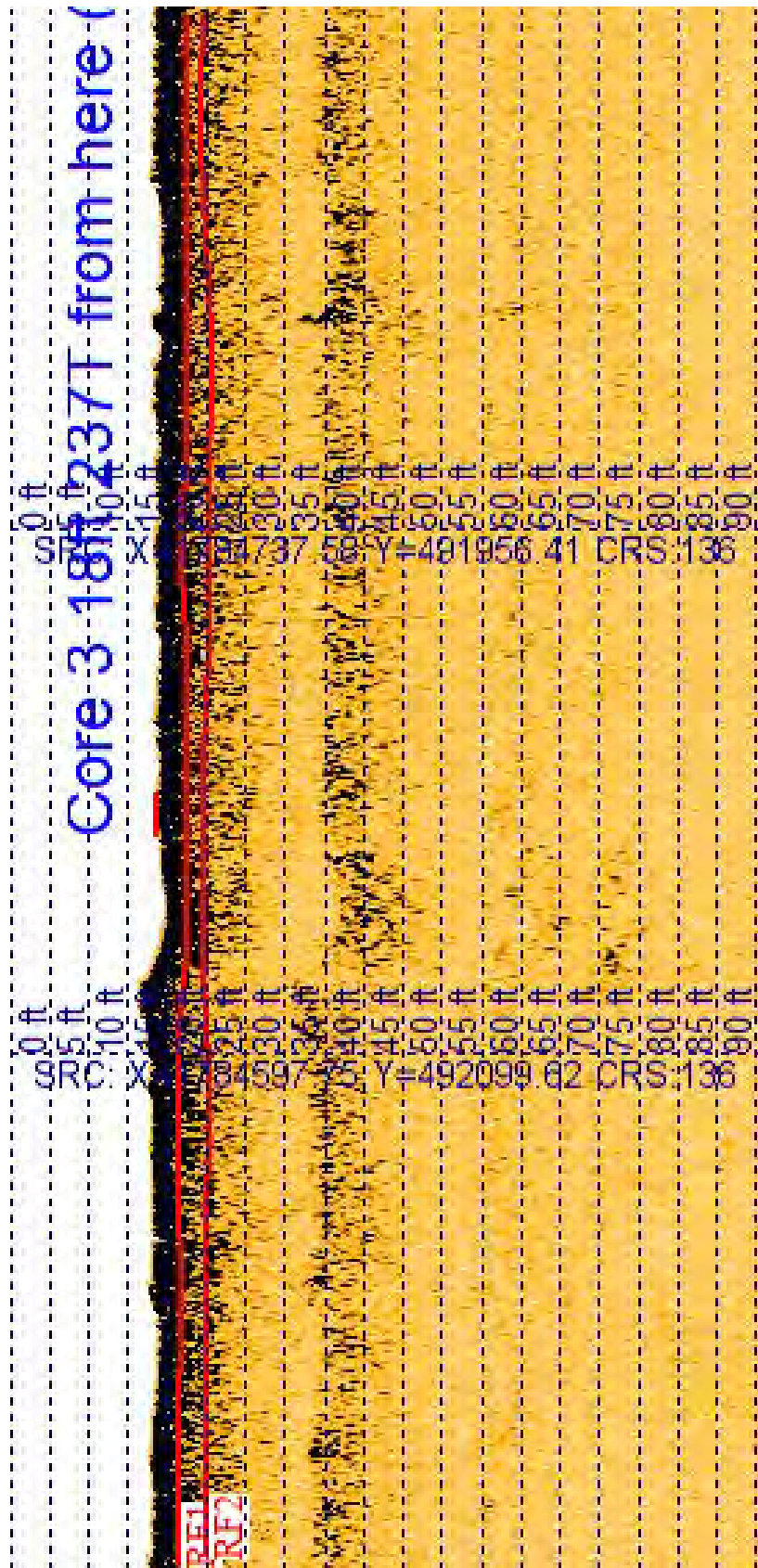
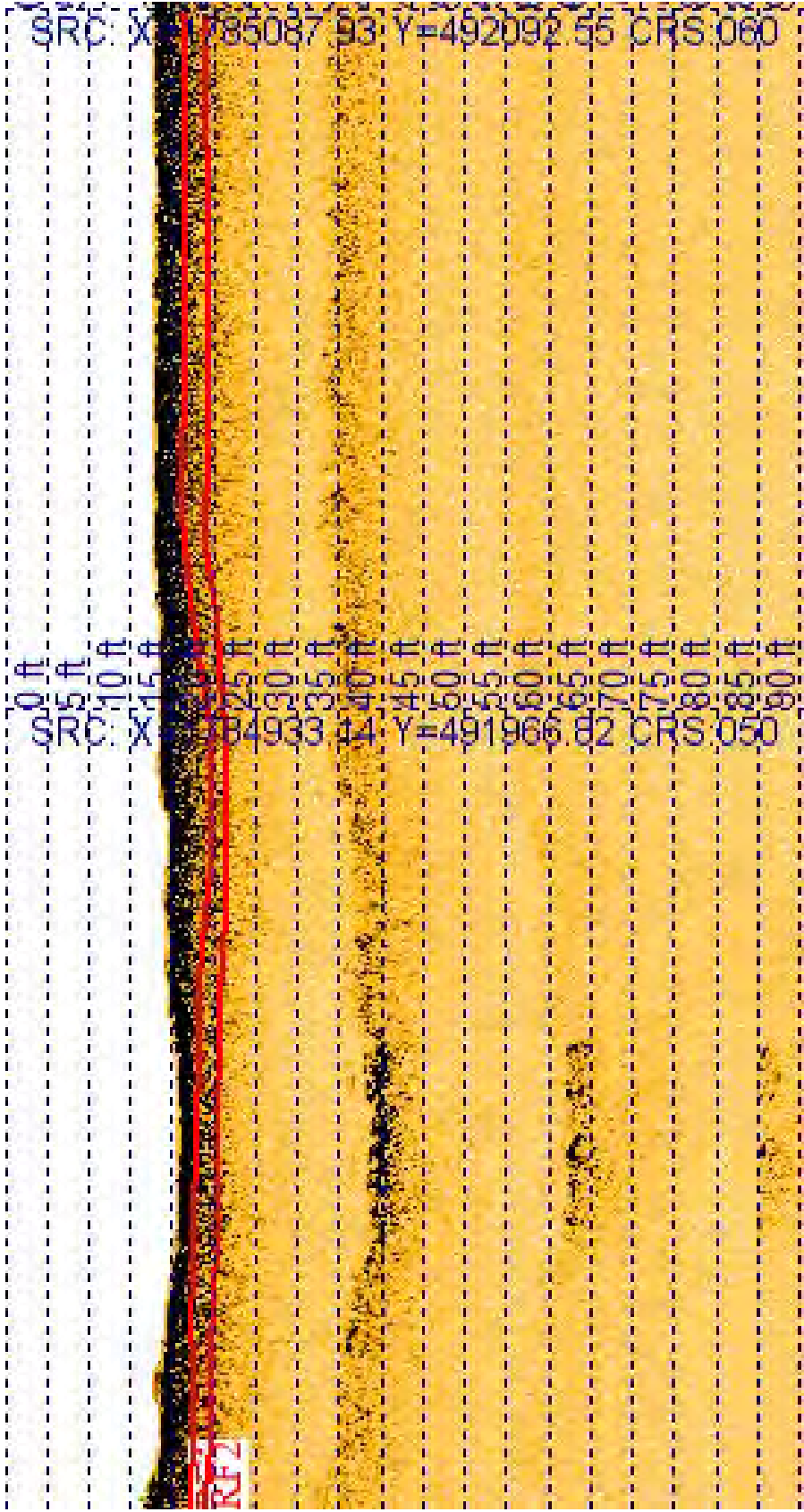


Photo 10: 10SE



SRC: X=785087.93 Y=492092.55 CRS: 060

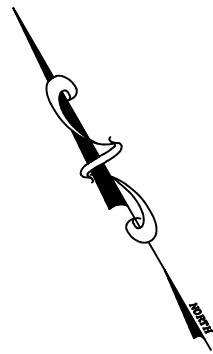
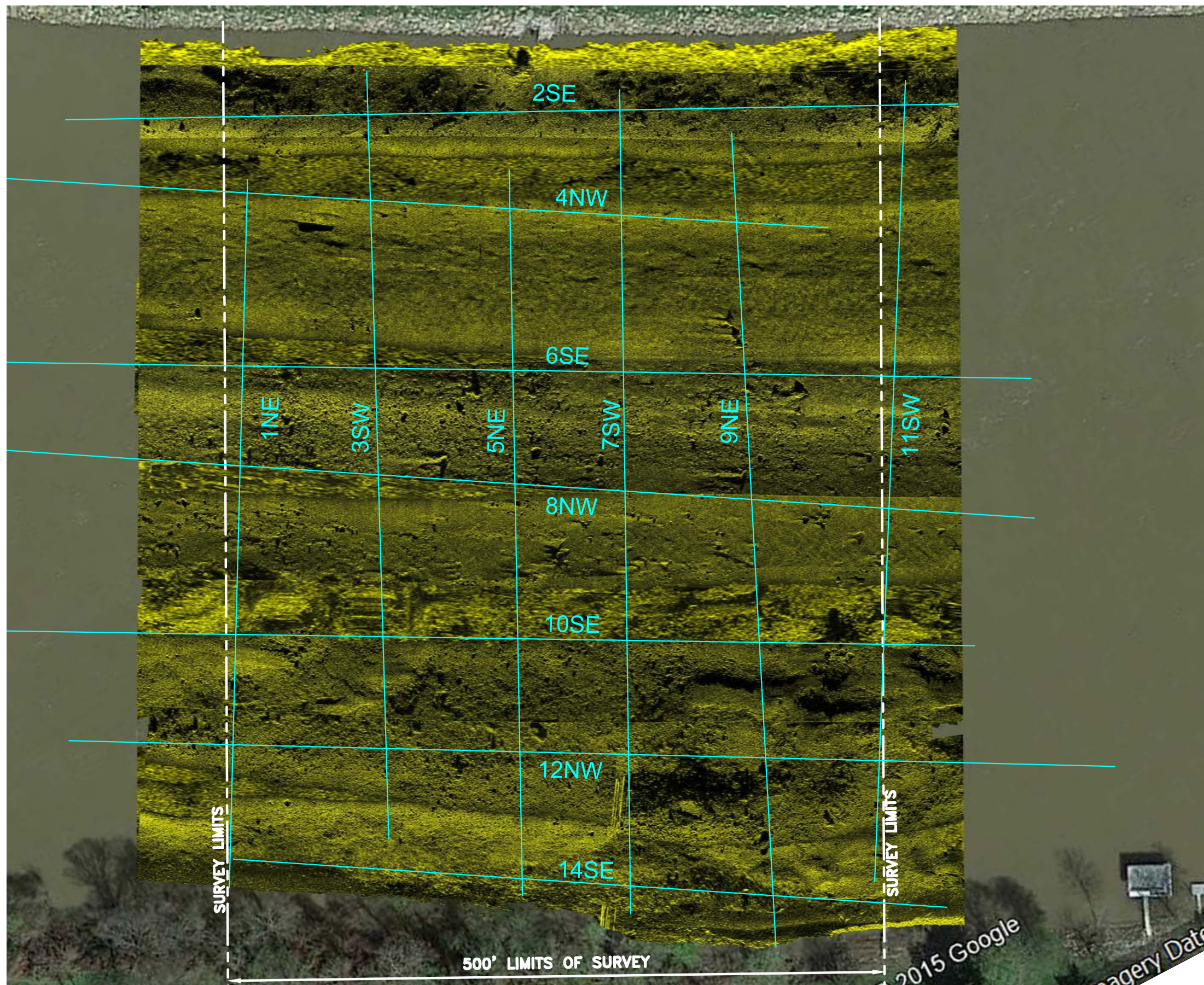
0 ft  
5 ft  
10 ft  
15 ft  
20 ft  
25 ft  
30 ft  
35 ft  
40 ft  
45 ft  
50 ft  
55 ft  
60 ft  
65 ft  
70 ft  
75 ft  
80 ft  
85 ft  
90 ft  
SRC: X=784933.44 Y=491966.82 CRS: 050

Photo 11: 11NE



**SED02**





**LEGEND:**

— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN

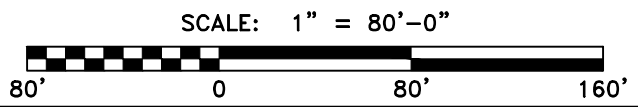
**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILER WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
SED02 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			


**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	10/16/15	1 OF 1



**SUB-BOTTOM TRACK PLAN**  
SCALE: 1" = 80'



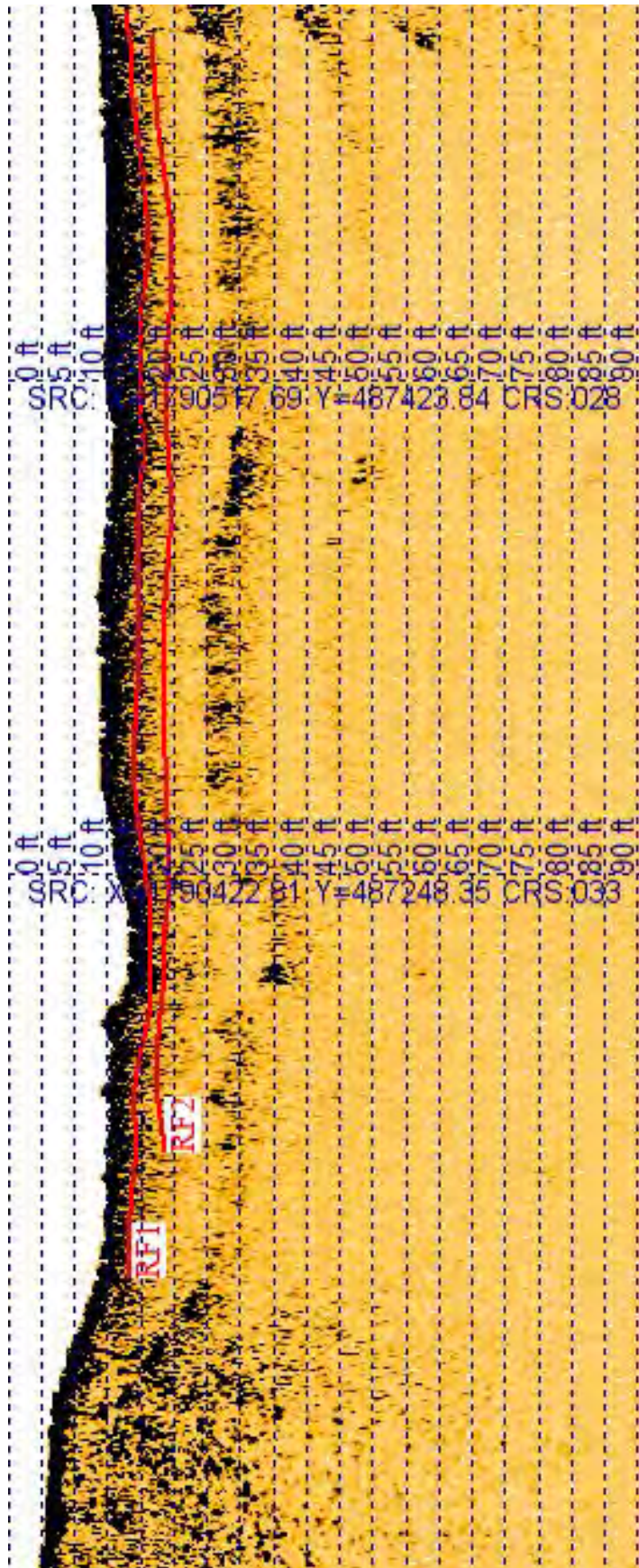


Photo 12: 1NE



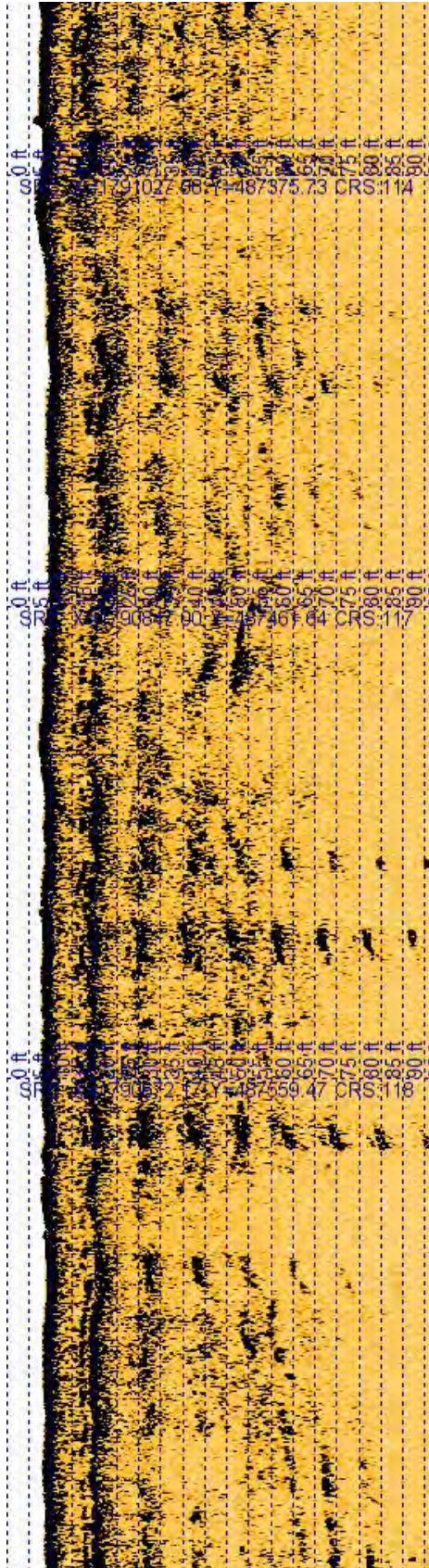


Photo 13: 2SE

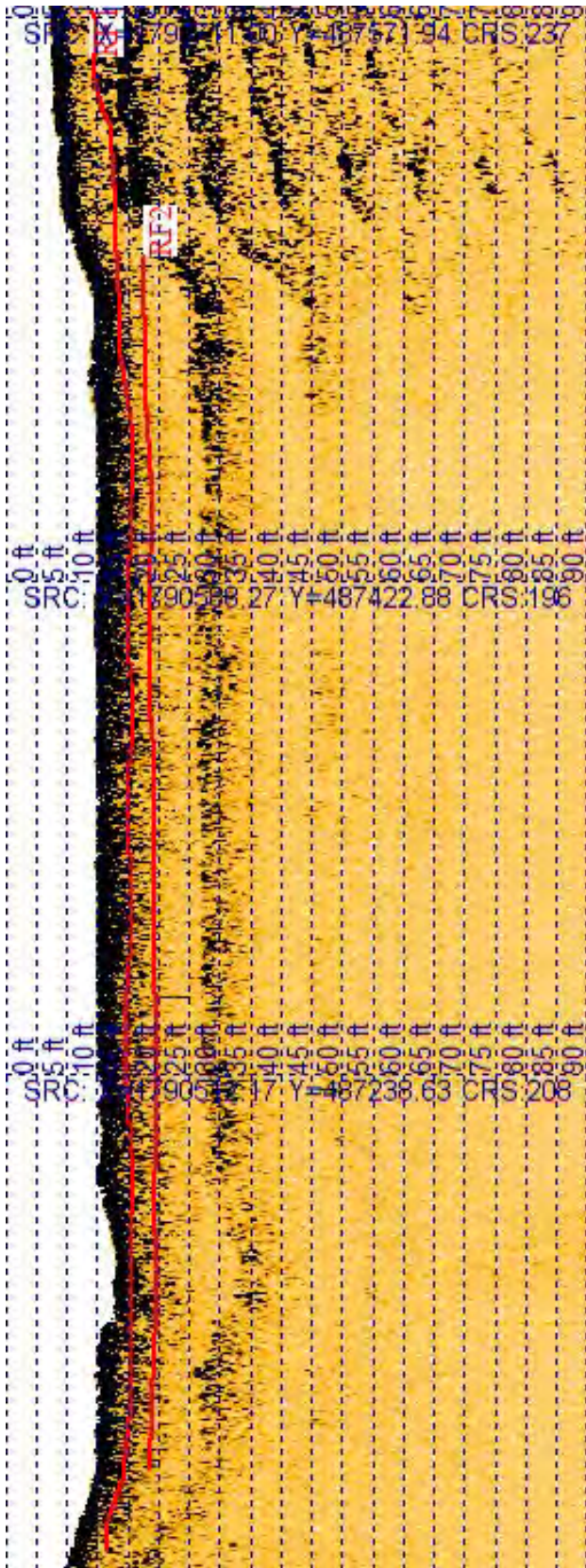


Photo 14: 3SW

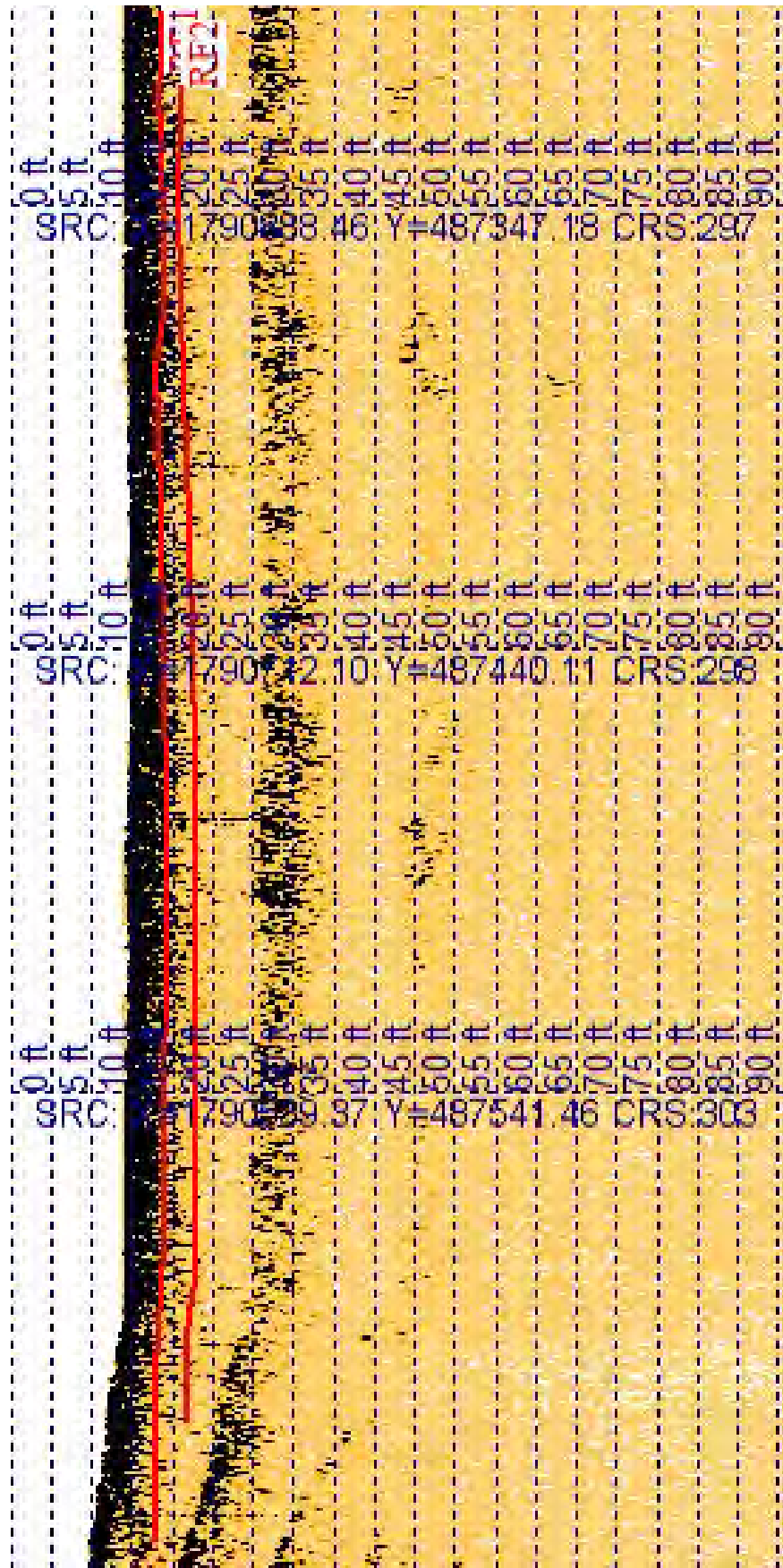


Photo 15: 4NW



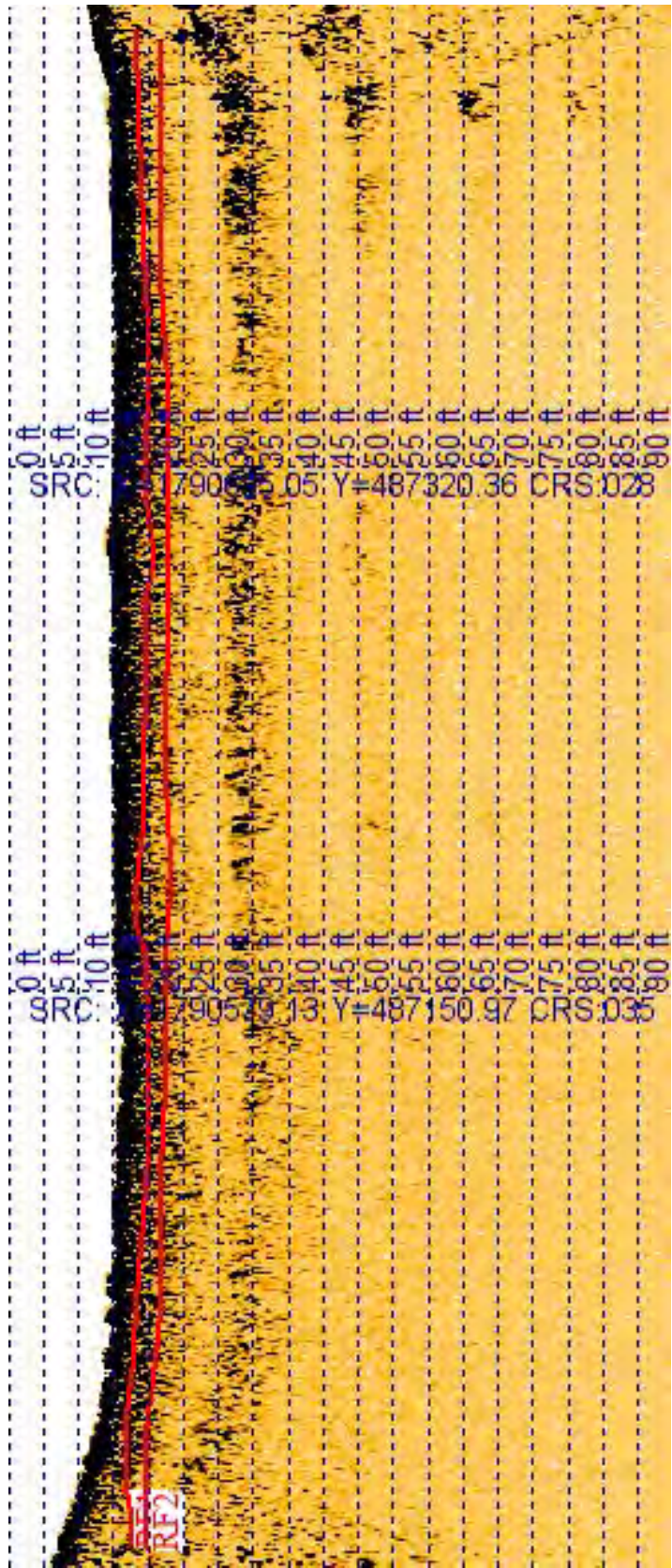


Photo 16: 5NE

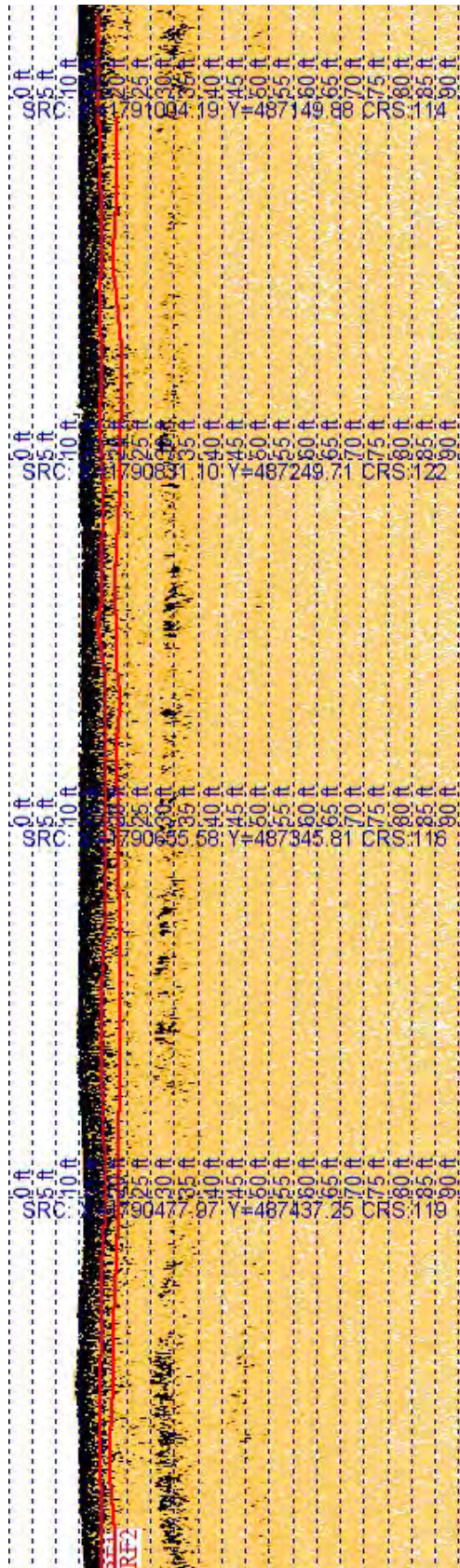


Photo 17: 6SE



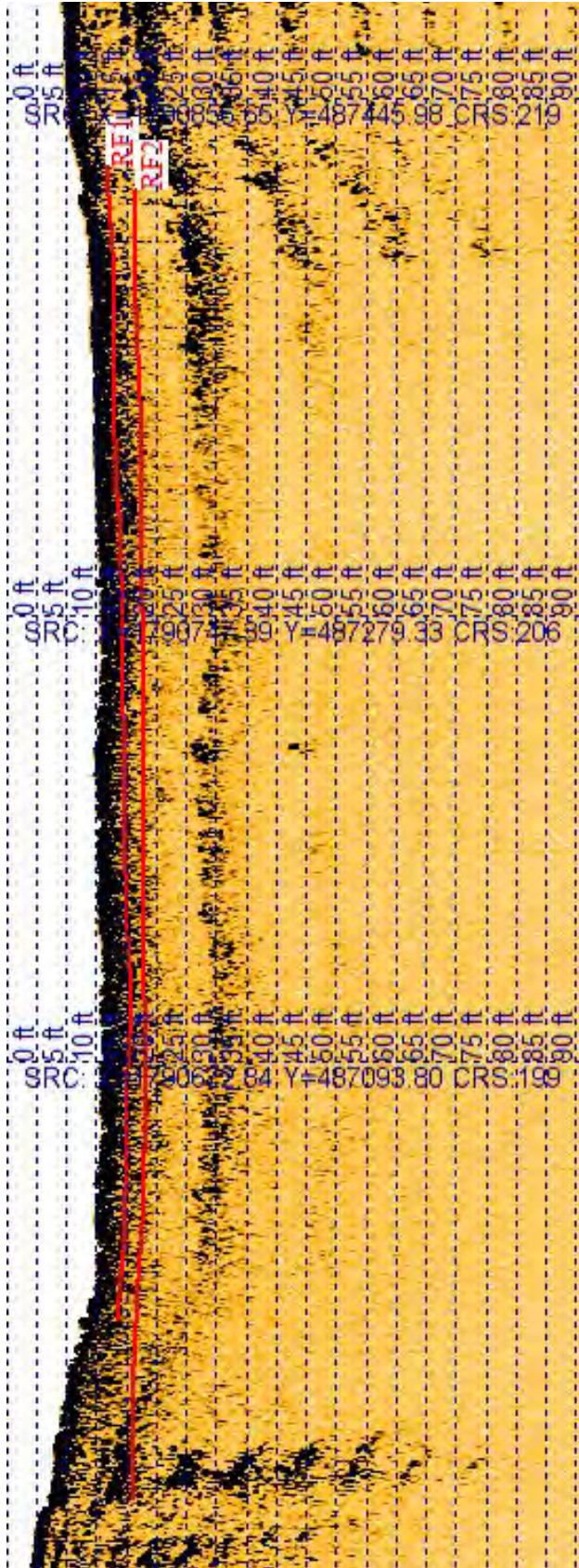


Photo 18: 7SW



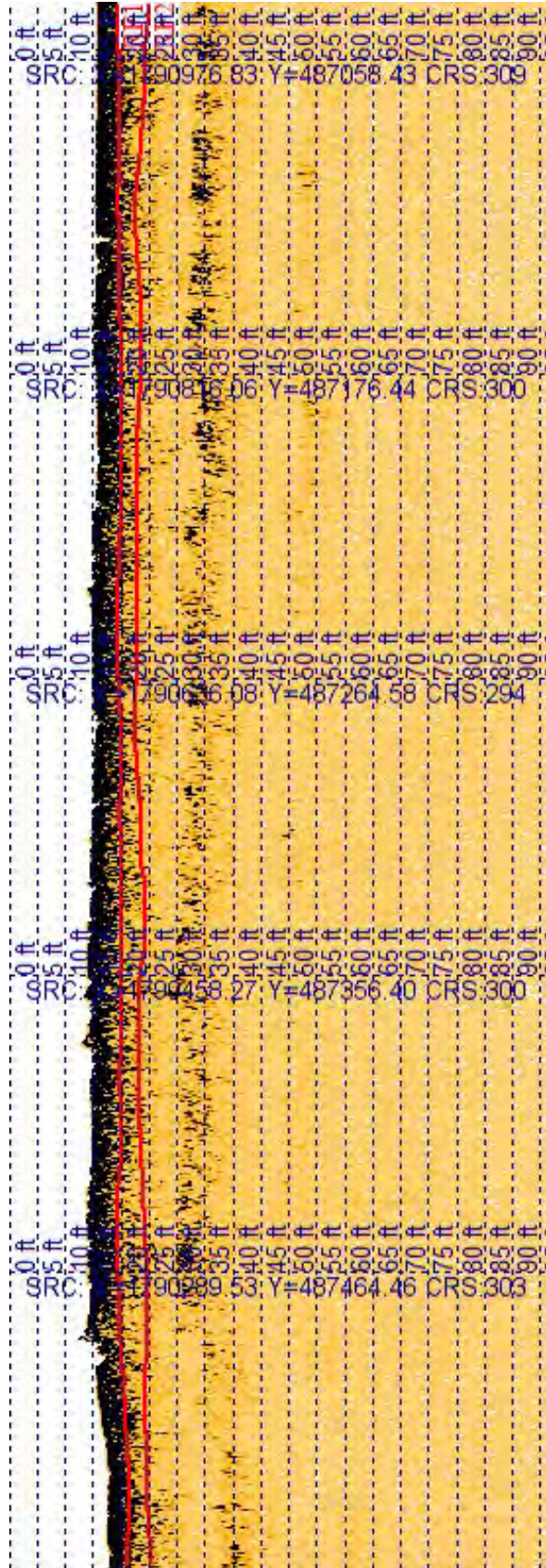


Photo 19: 8NW

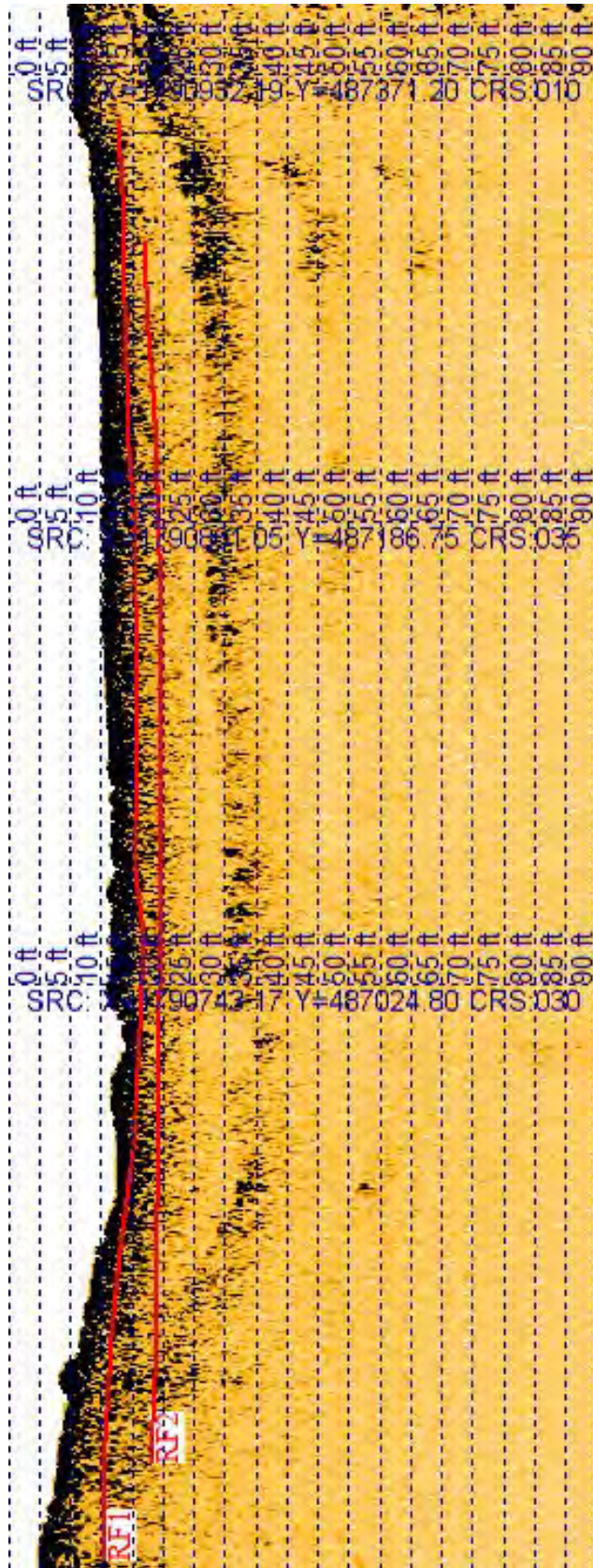


Photo 20: 9NE



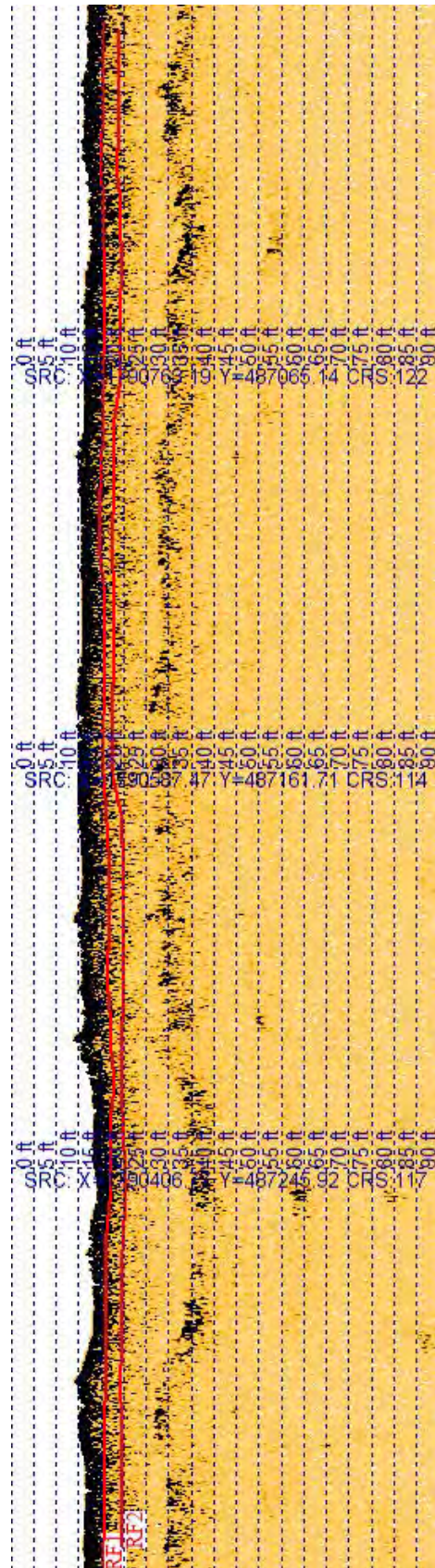


Photo 21: 10SE



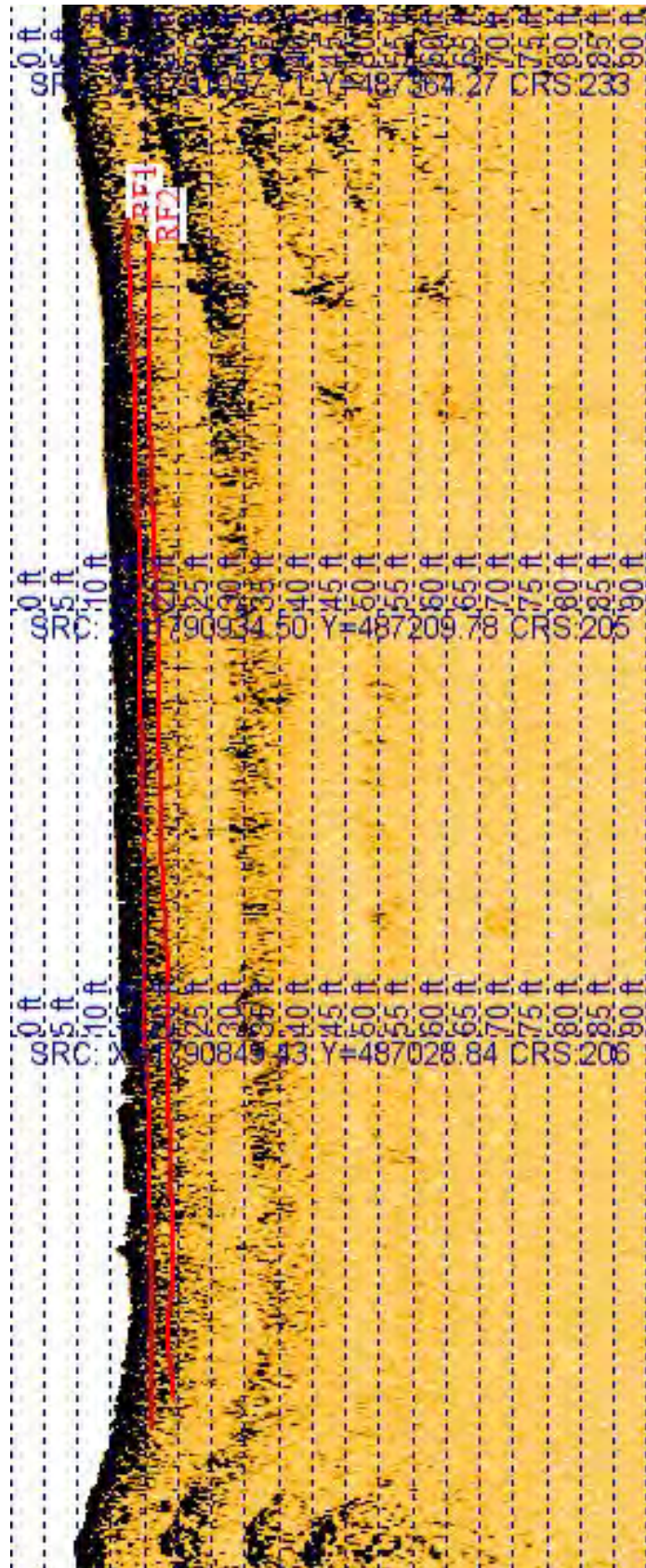


Photo 22: 11SW

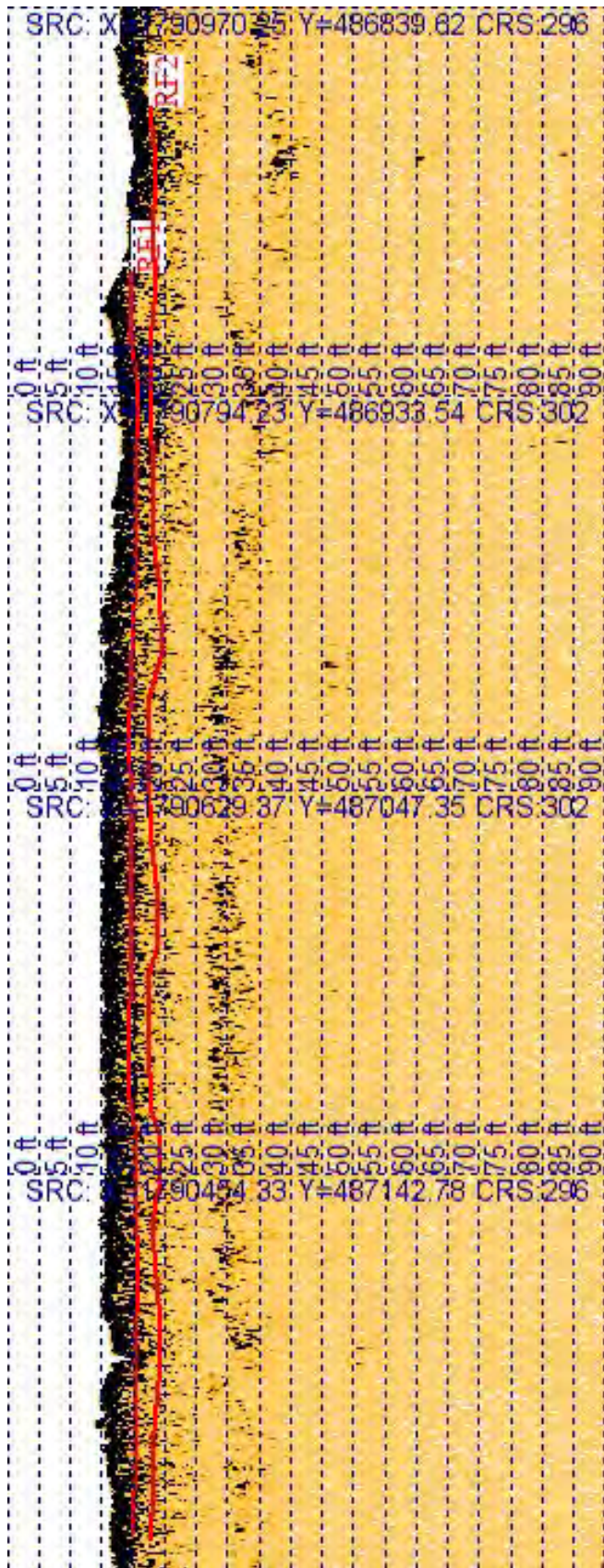


Photo 23: 12NW



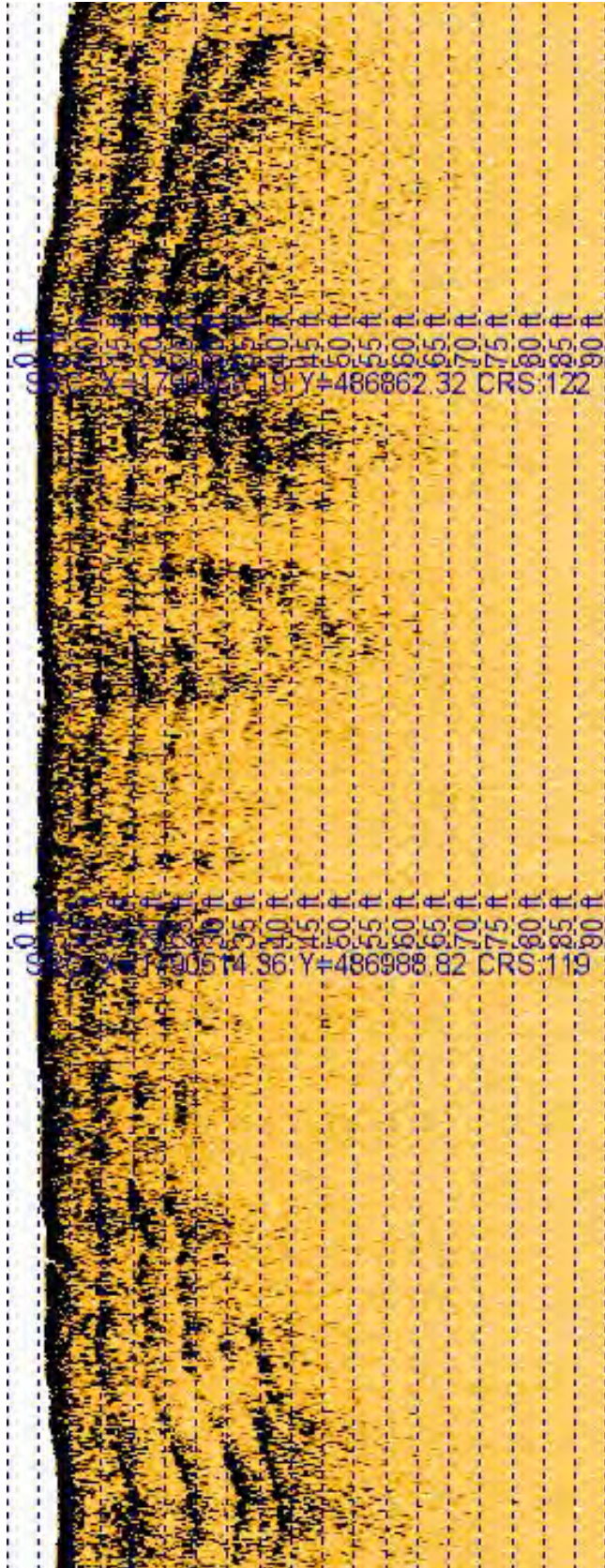
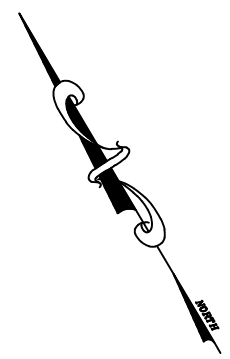
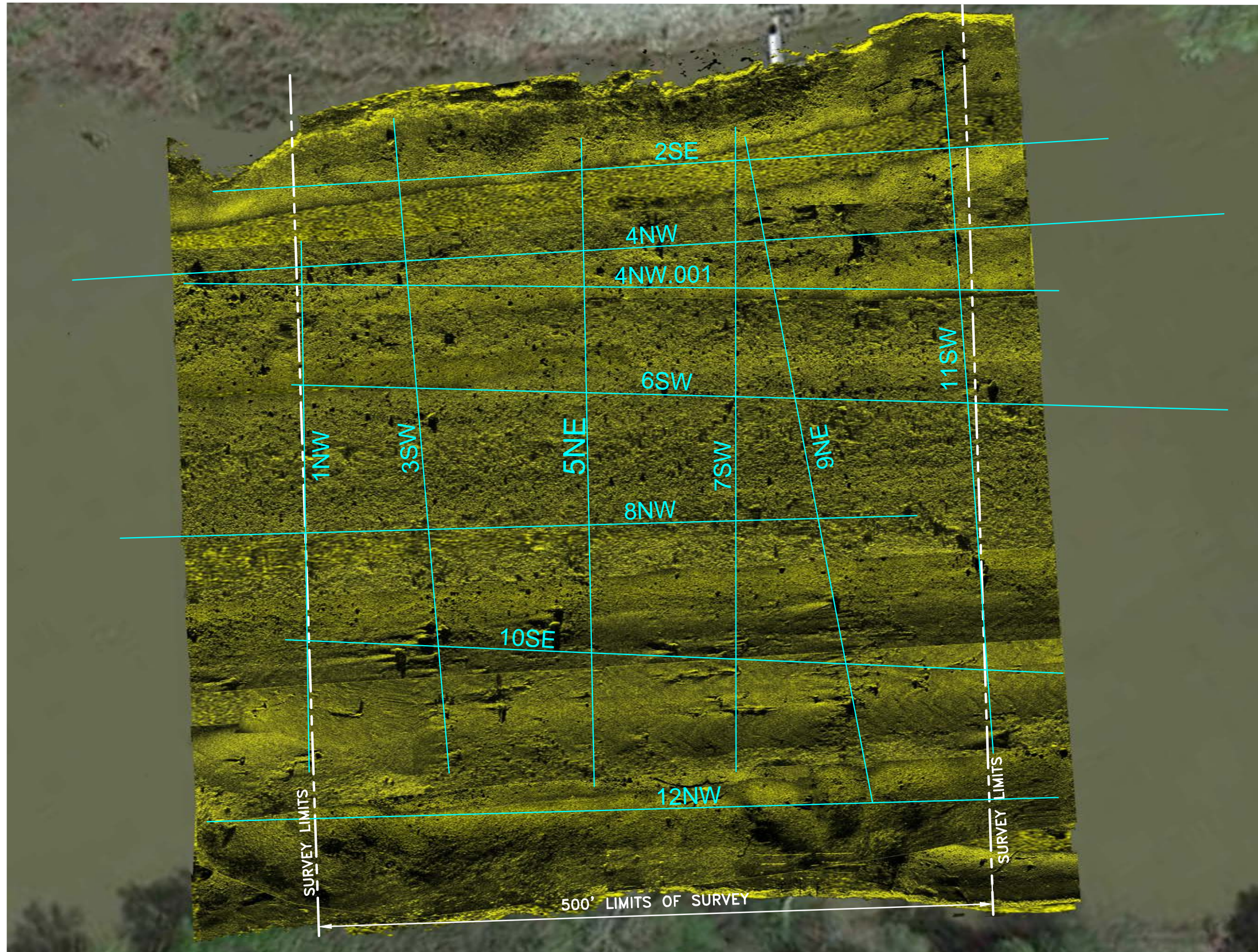


Photo 24: 14SE



**SED03**





**LEGEND:**

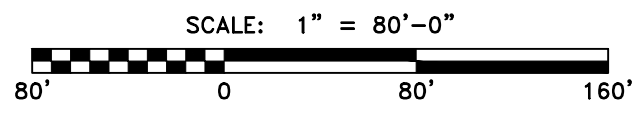
— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN

**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILER WAS PERFORMED ON AUGUST 19, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
<b>SED03 SUB-BOTTOM TRACKS</b>			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			

<b>W.J. Castle PE</b> & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036			
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15	DATE 10/16/15	DRAWING No. 1 OF 1



**SUB-BOTTOM TRACK PLAN**

SCALE: 1" = 80'



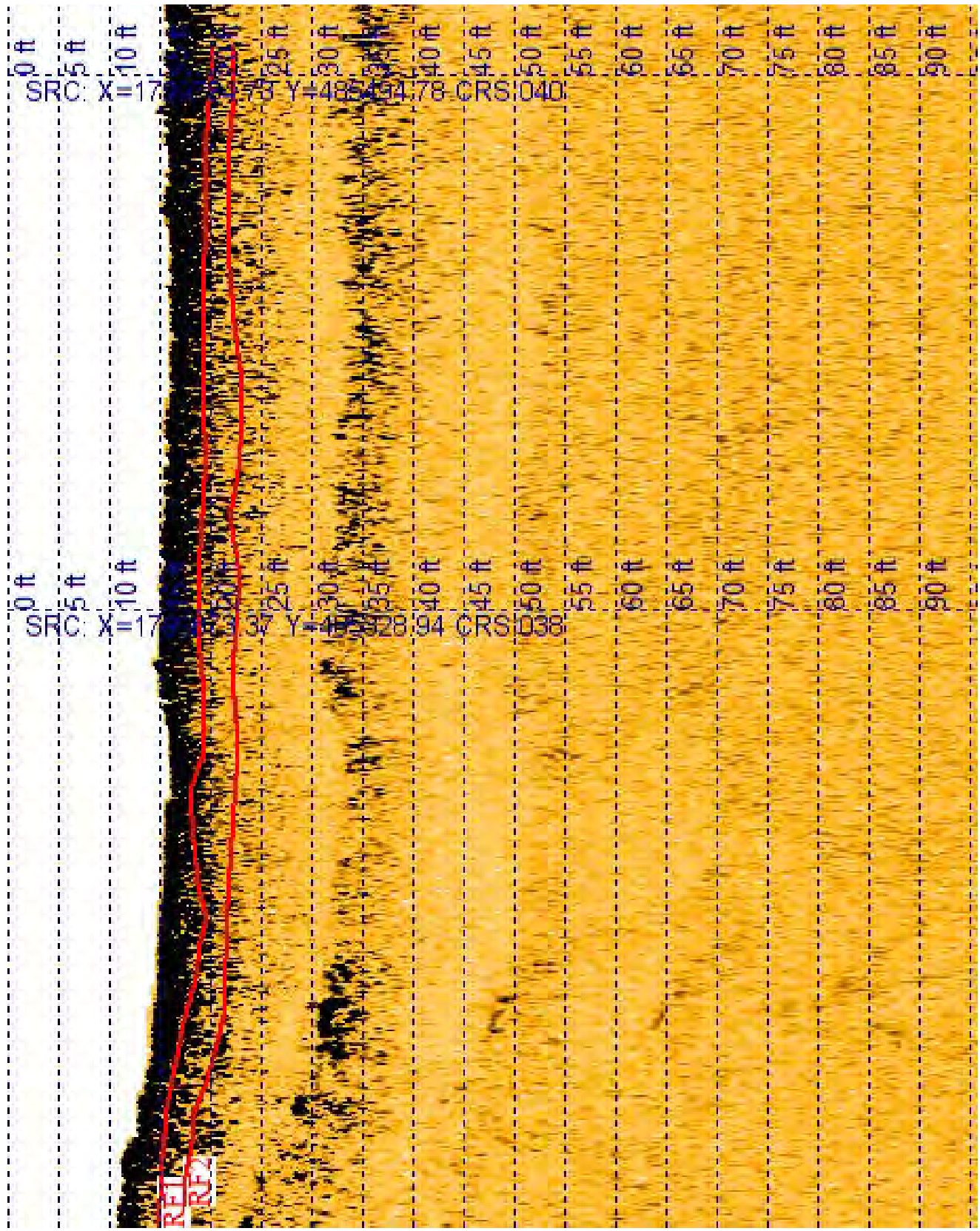


Photo 25: 1NW



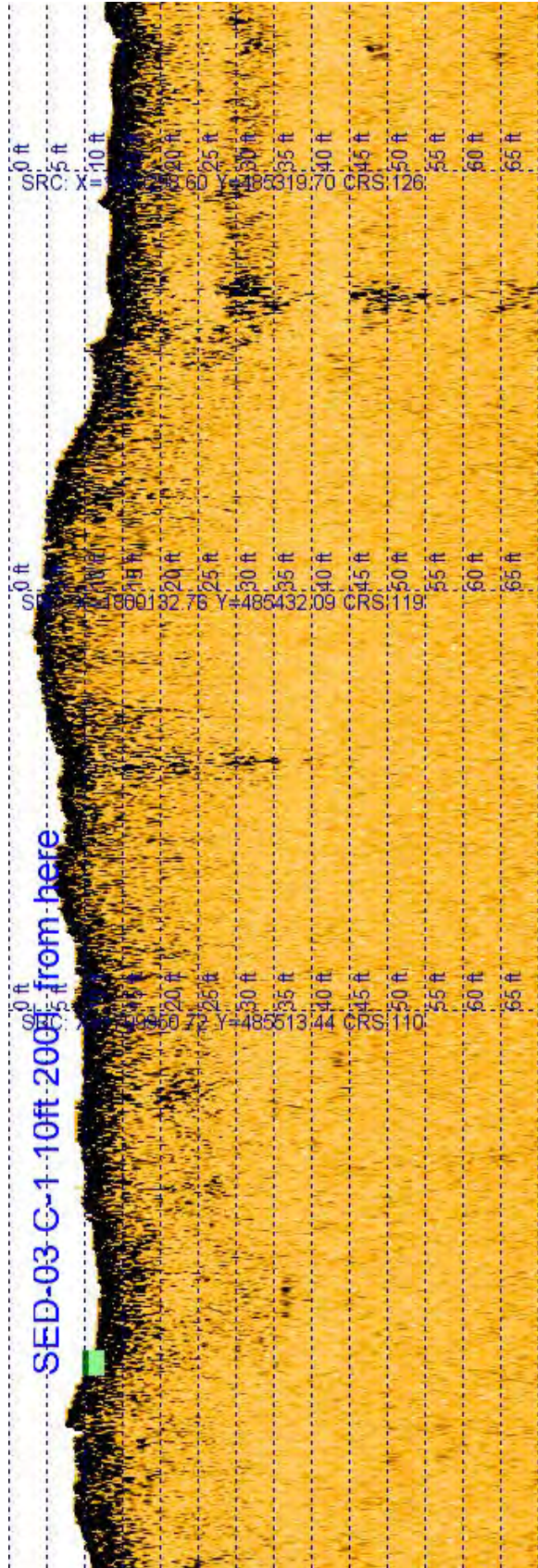


Photo 26: 2SE



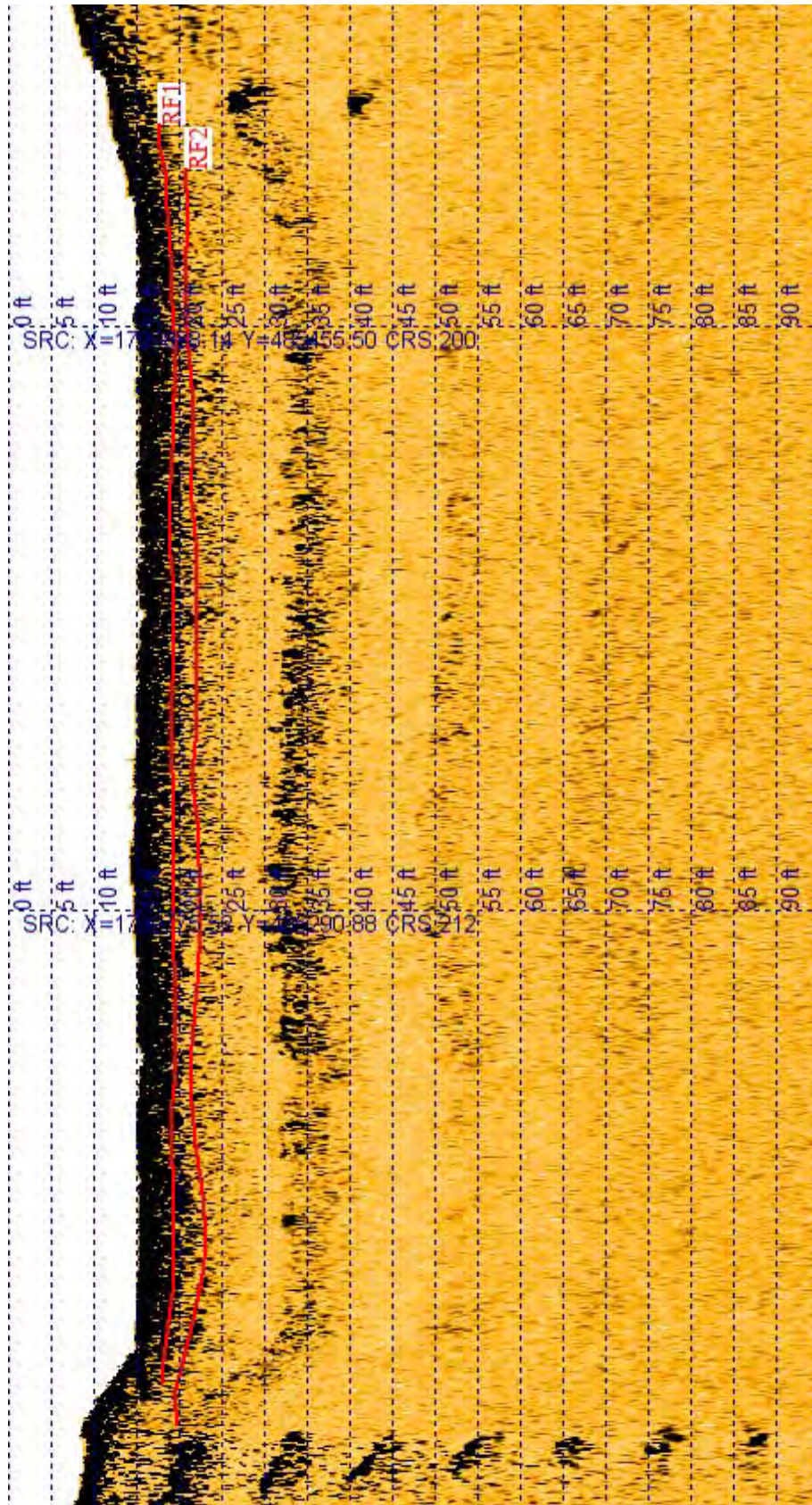


Photo 27: 3SW



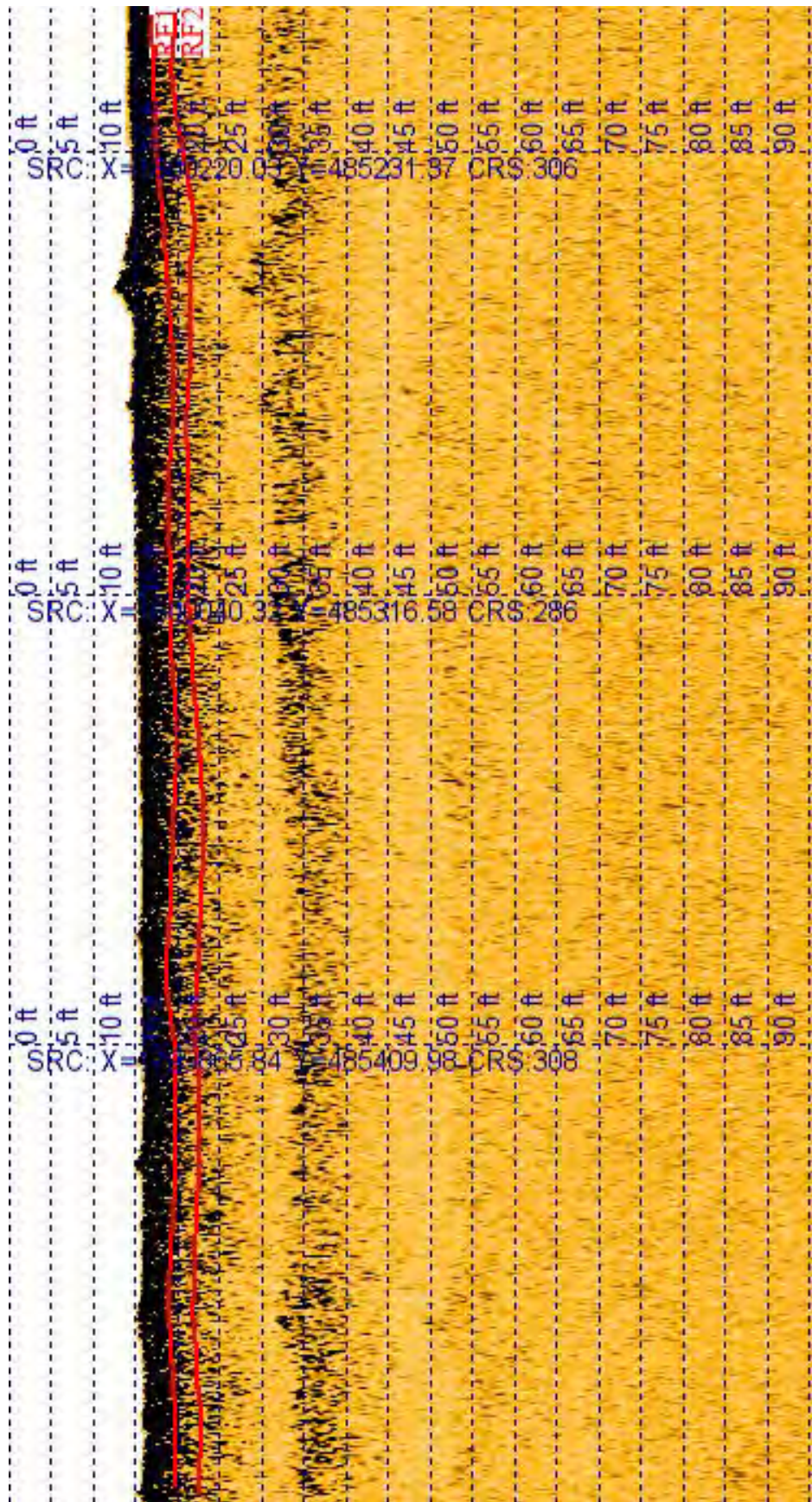


Photo 28: 4NW.001



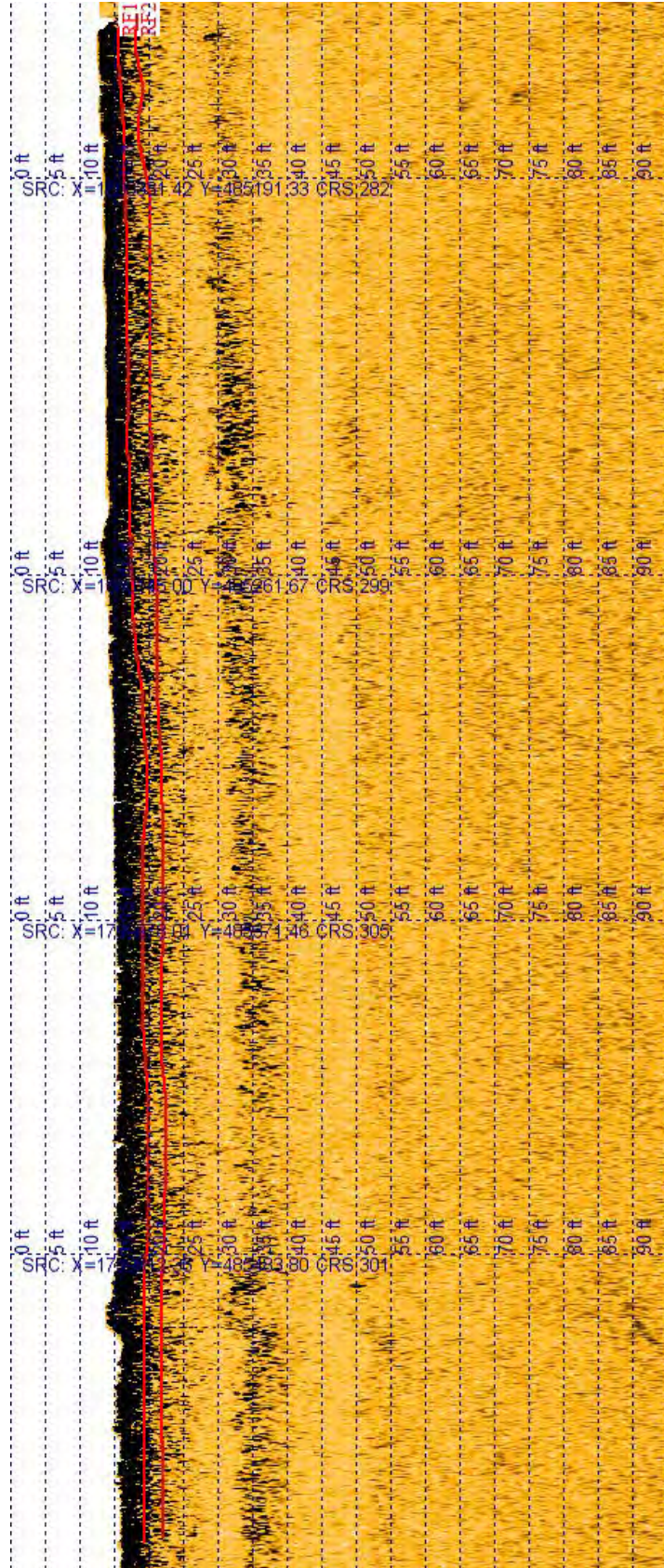


Photo 29: 4NW



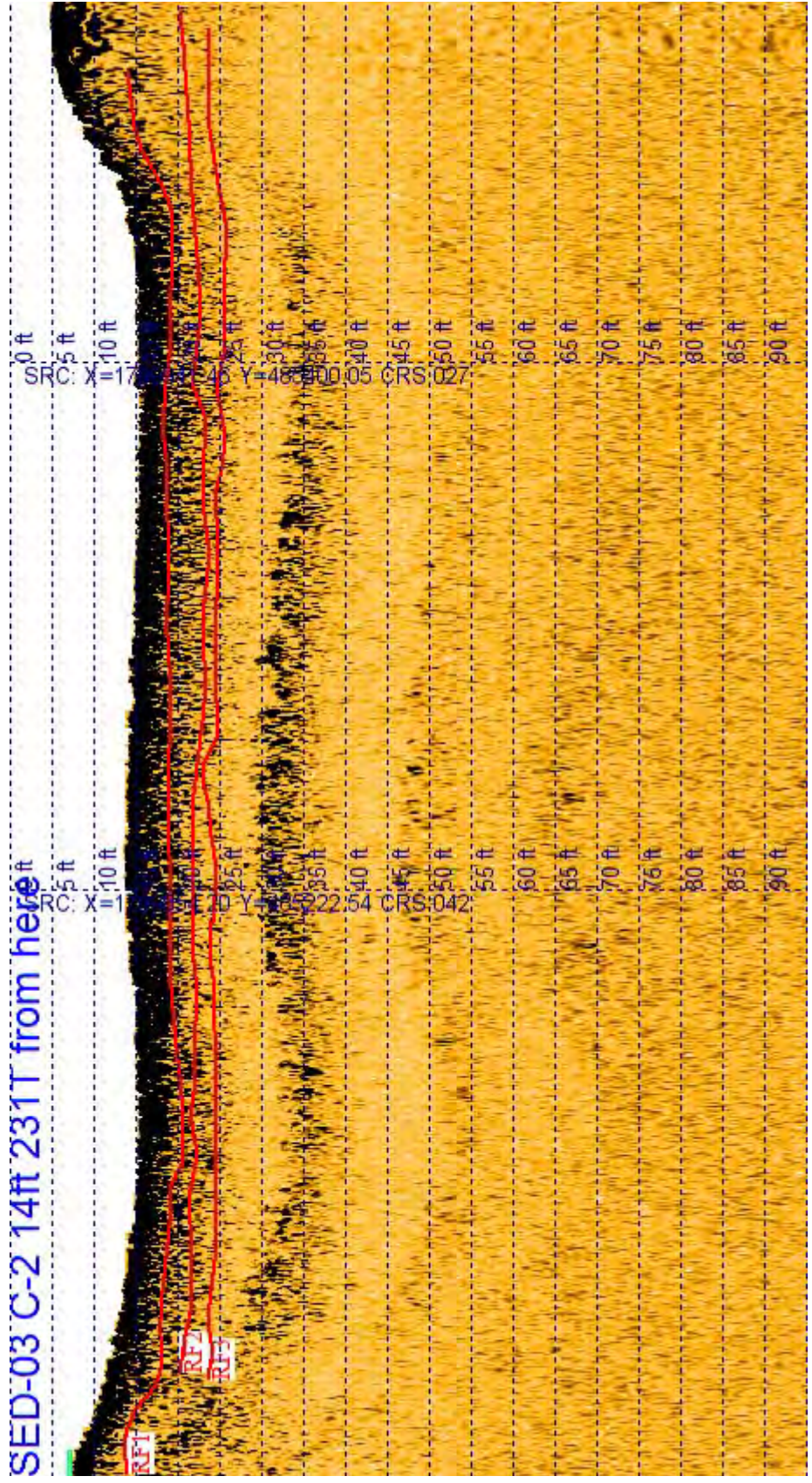


Photo 30: 5NE



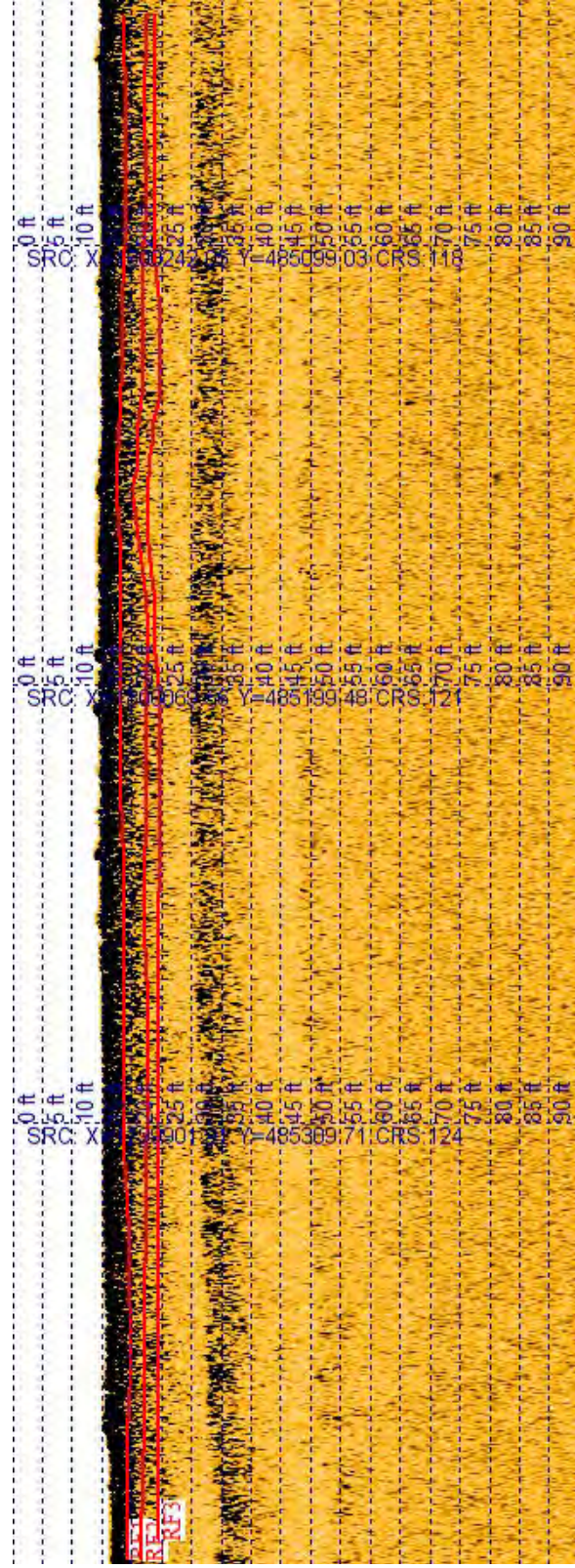


Photo 31: 6SW



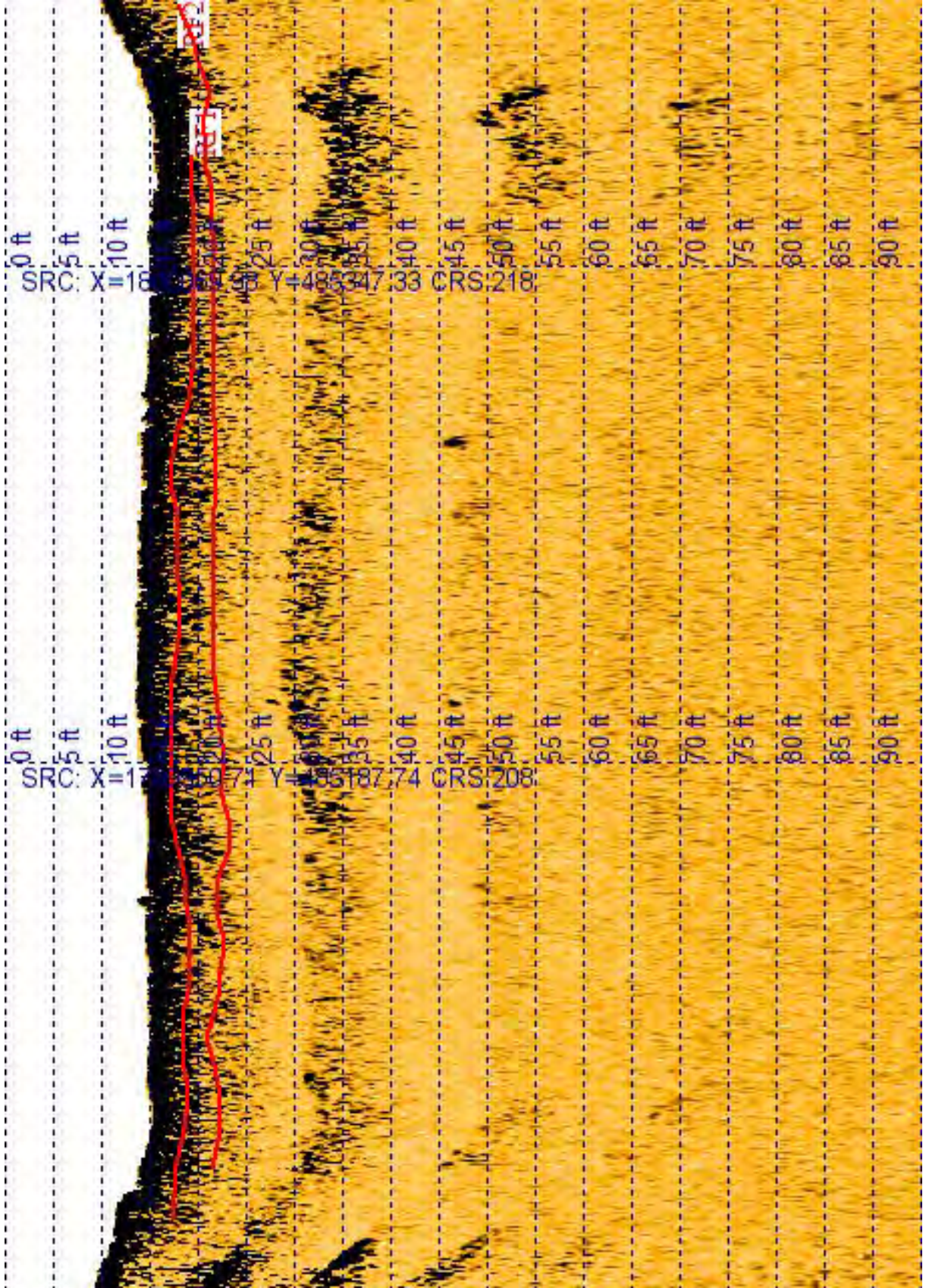


Photo 32: 7SW

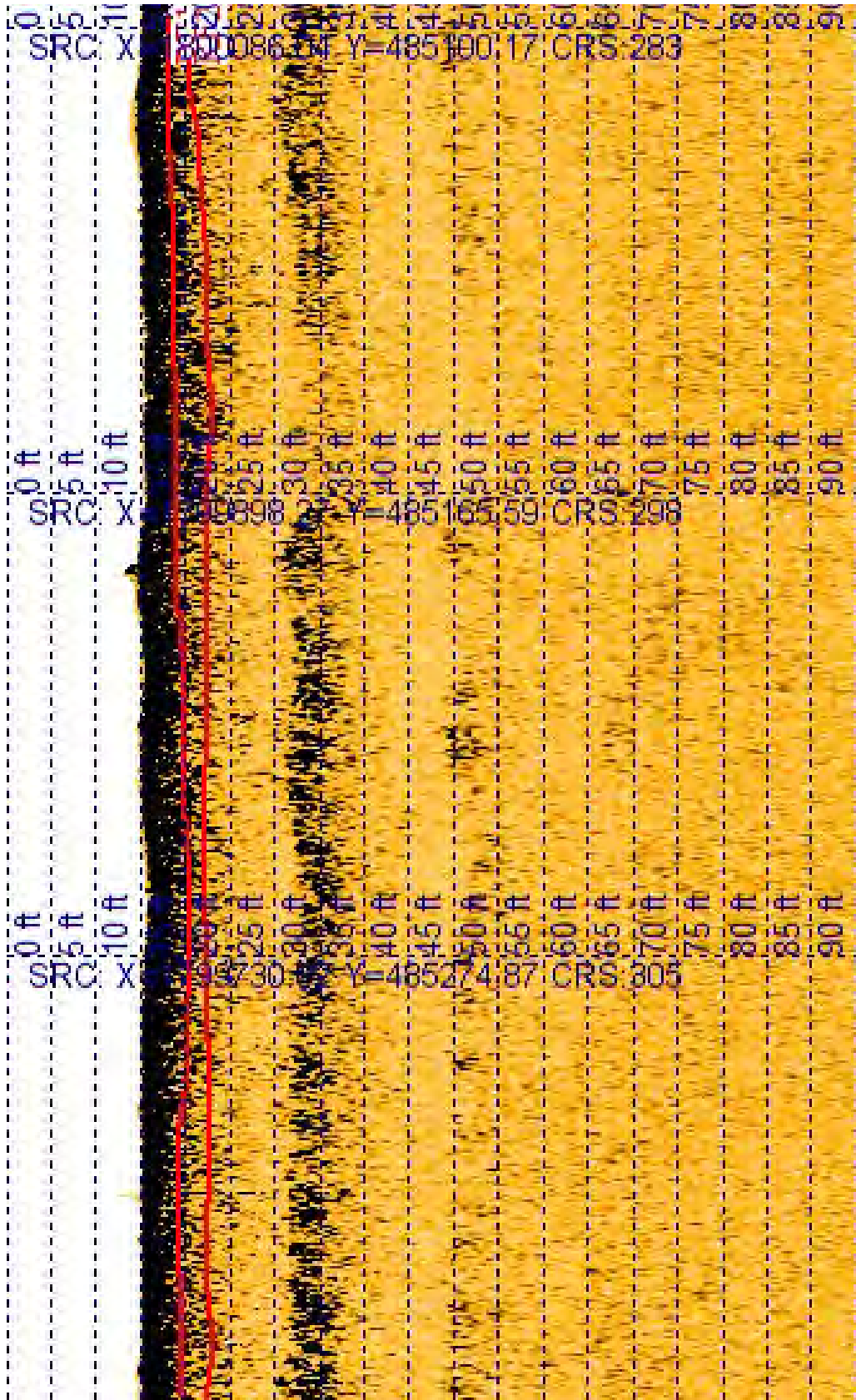


Photo 33: 8NW



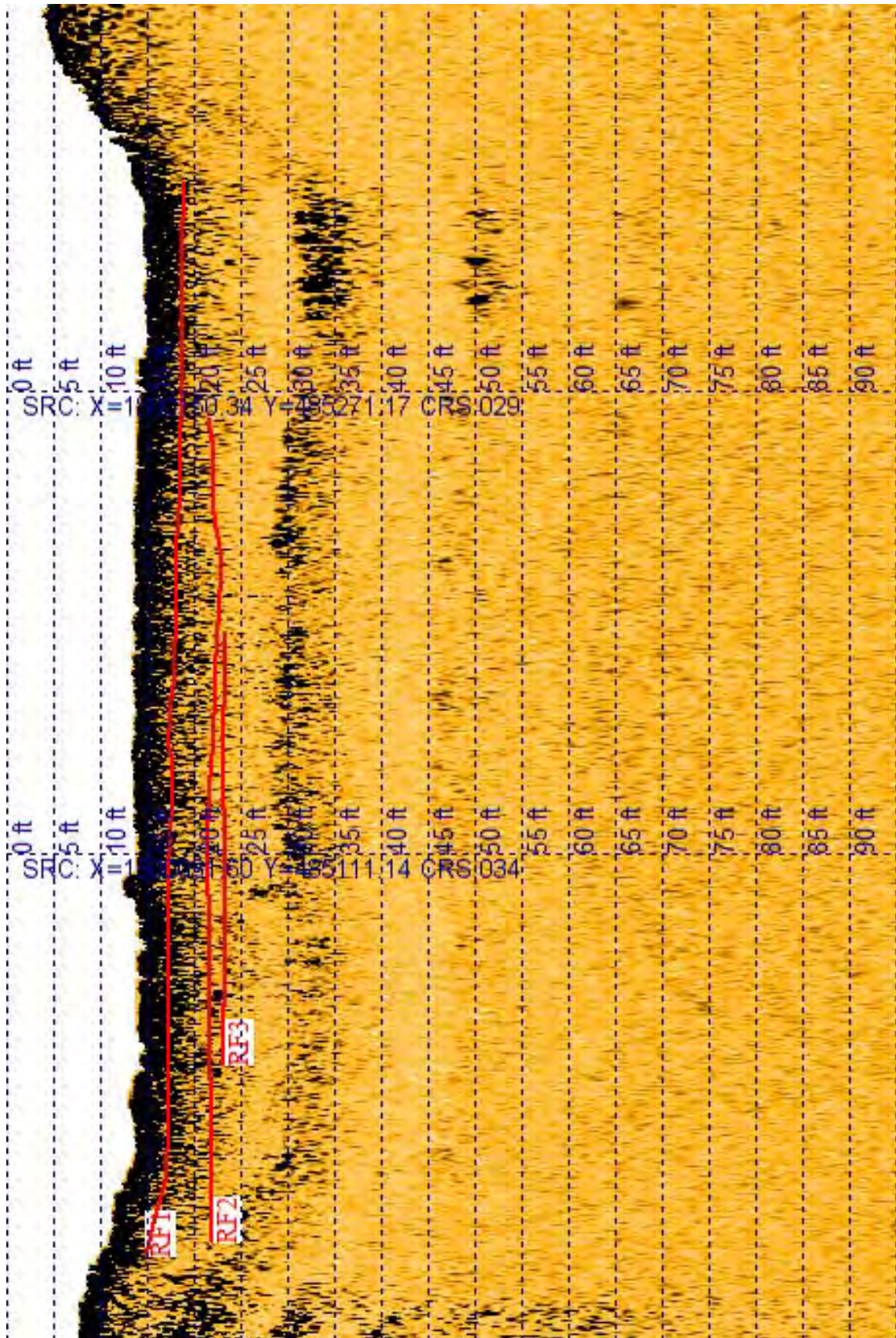


Photo 34: 9NE



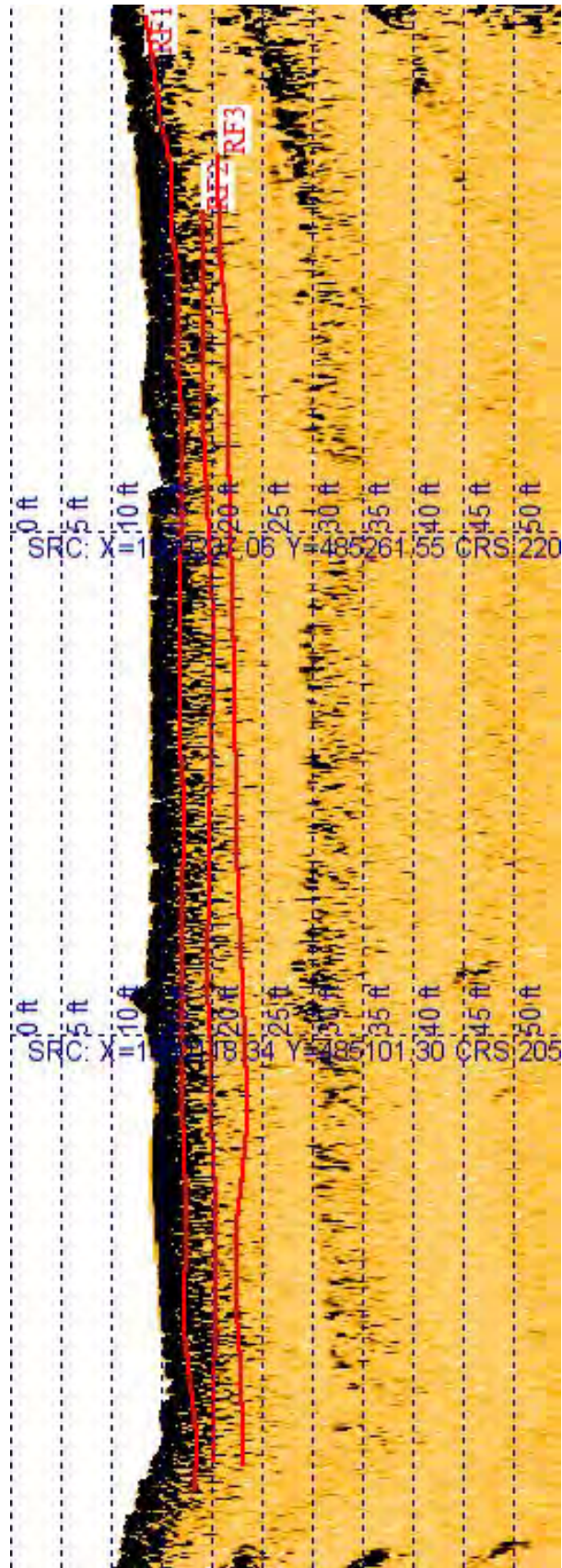


Photo 35: 10SE

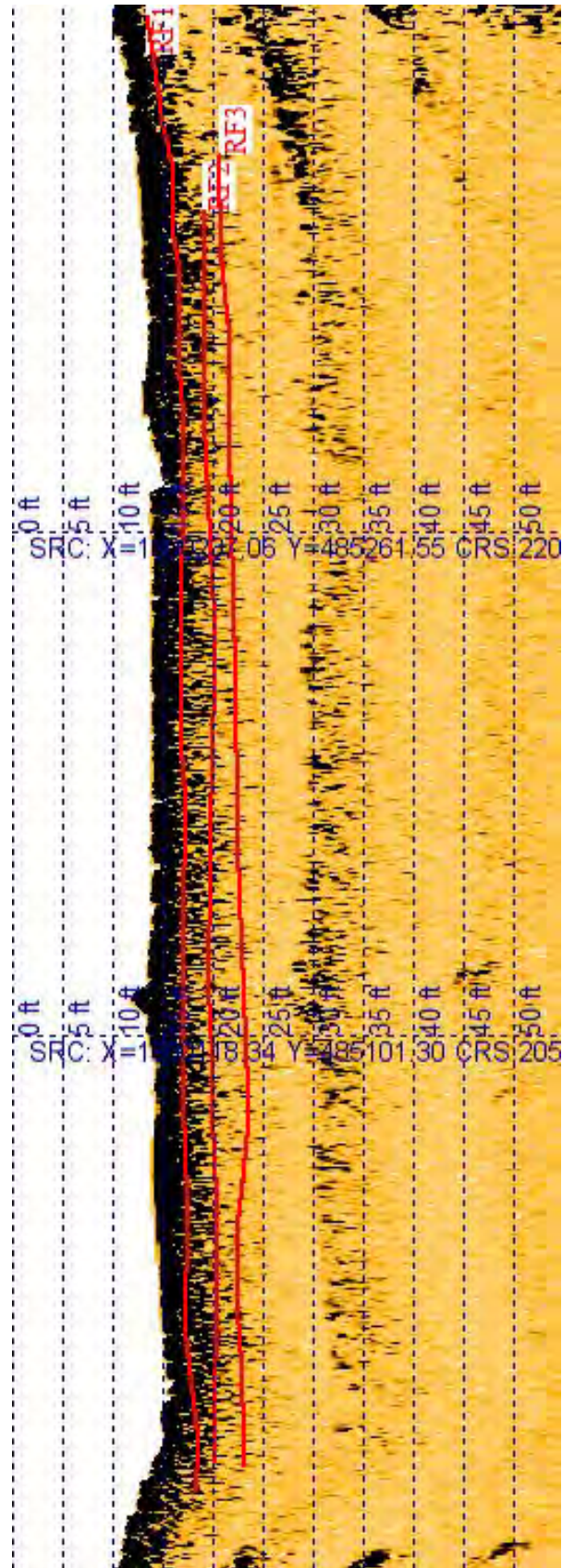


Photo 36: 11SW

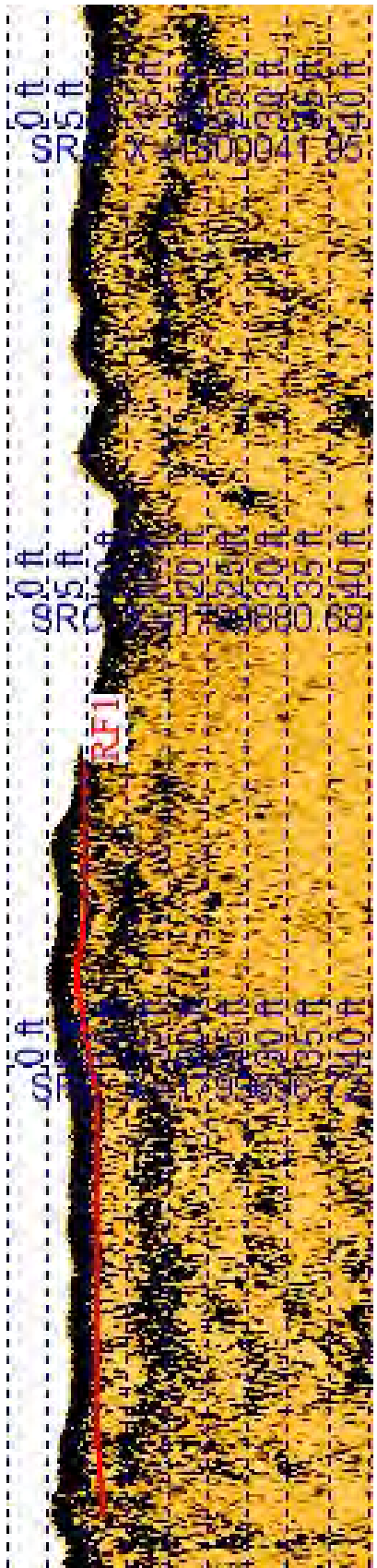
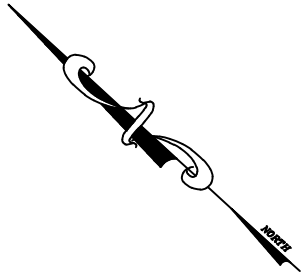
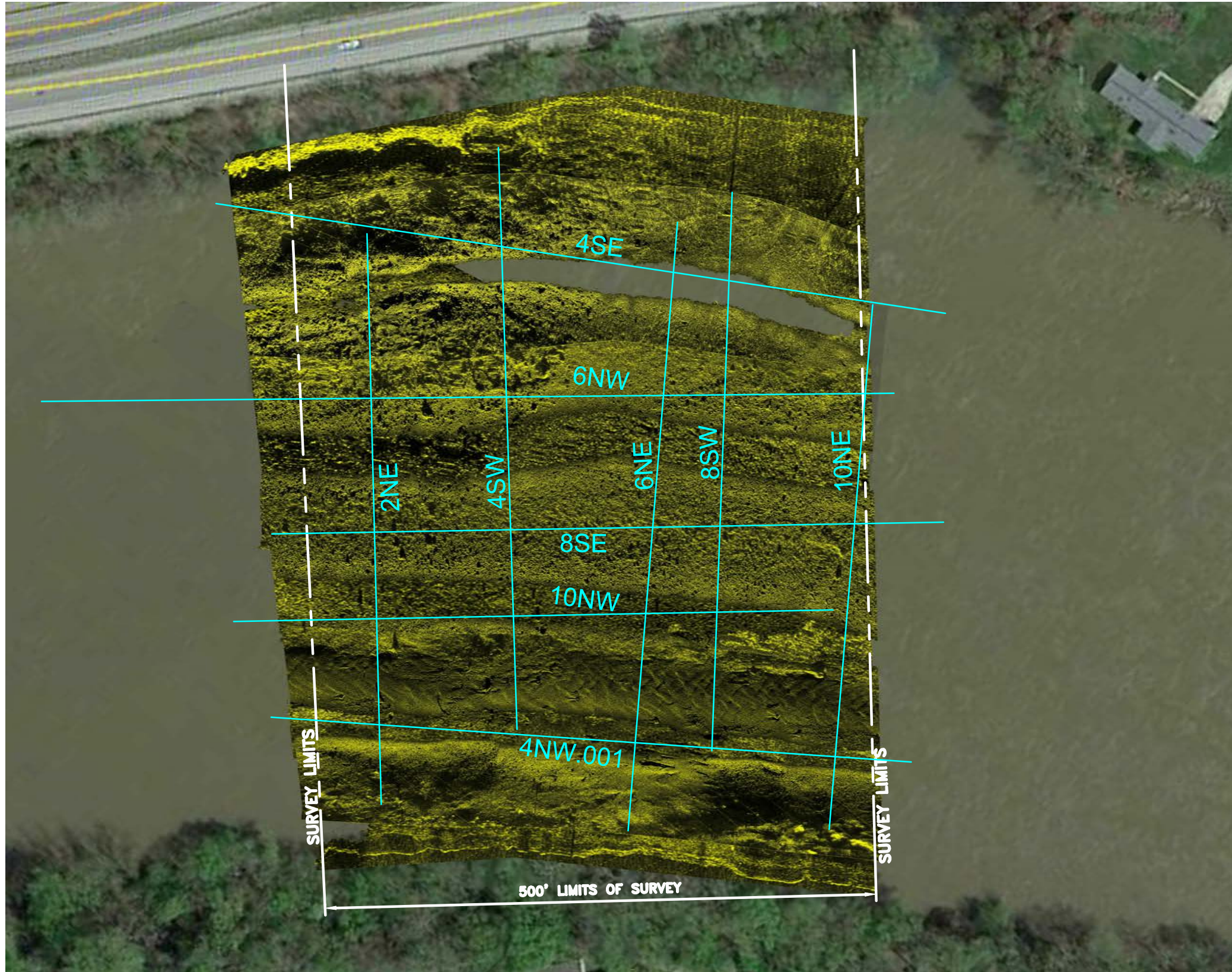


Photo 37: 12NW



**SED04**

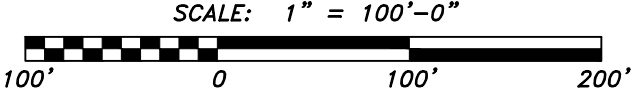


**LEGEND:**

— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN.

**GENERAL NOTES:**

1. THE SIDE SCAN SONAR WAS PERFORMED ON AUGUST 18, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.



**SUB-BOTTOM TRACK PLAN**  
SCALE: 1" = 100'

DATE	NO.	REVISIONS	BY
SED04 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
DATE 10/16/15		DRAWING No. 1 OF 1	



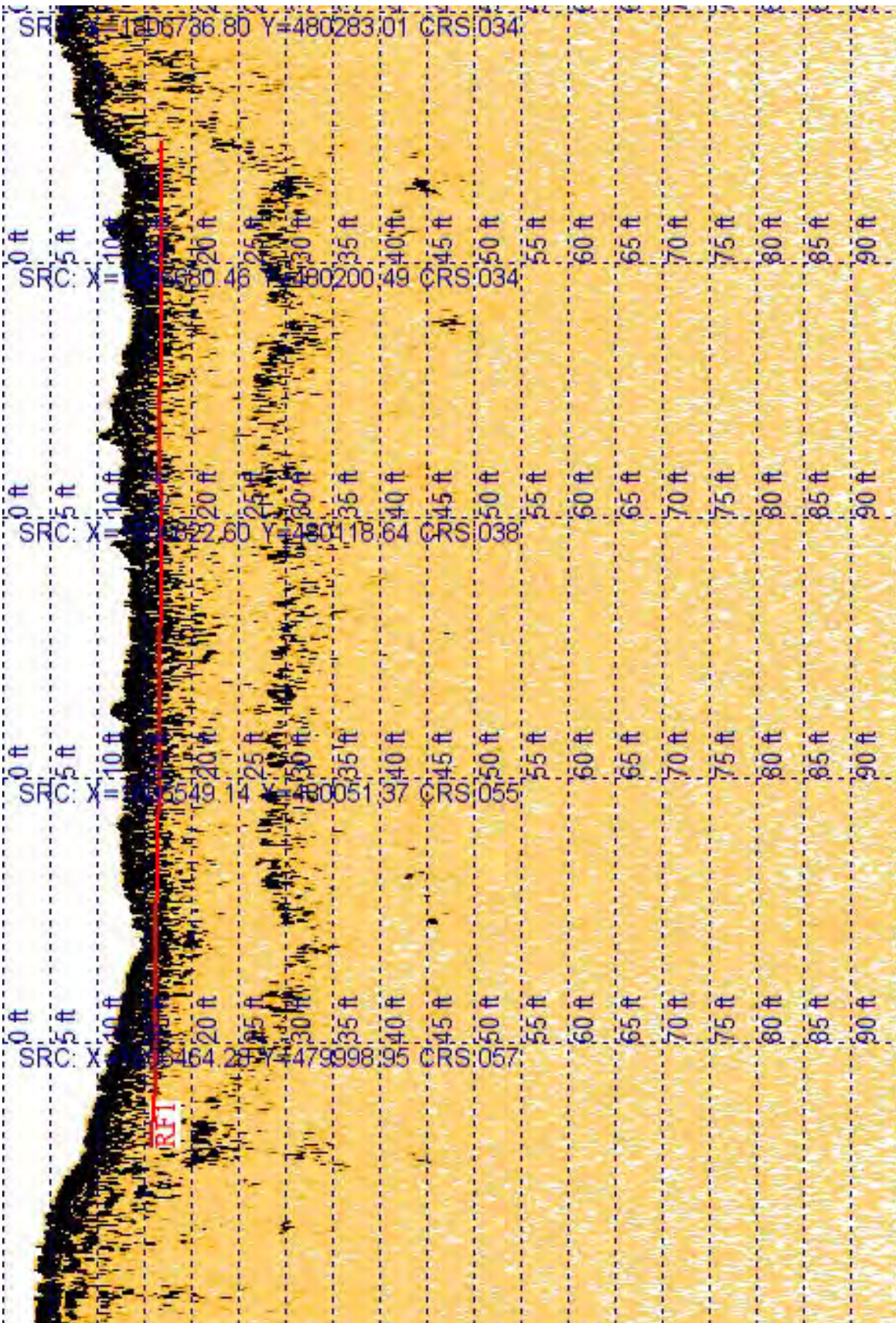


Photo 38: 2NE



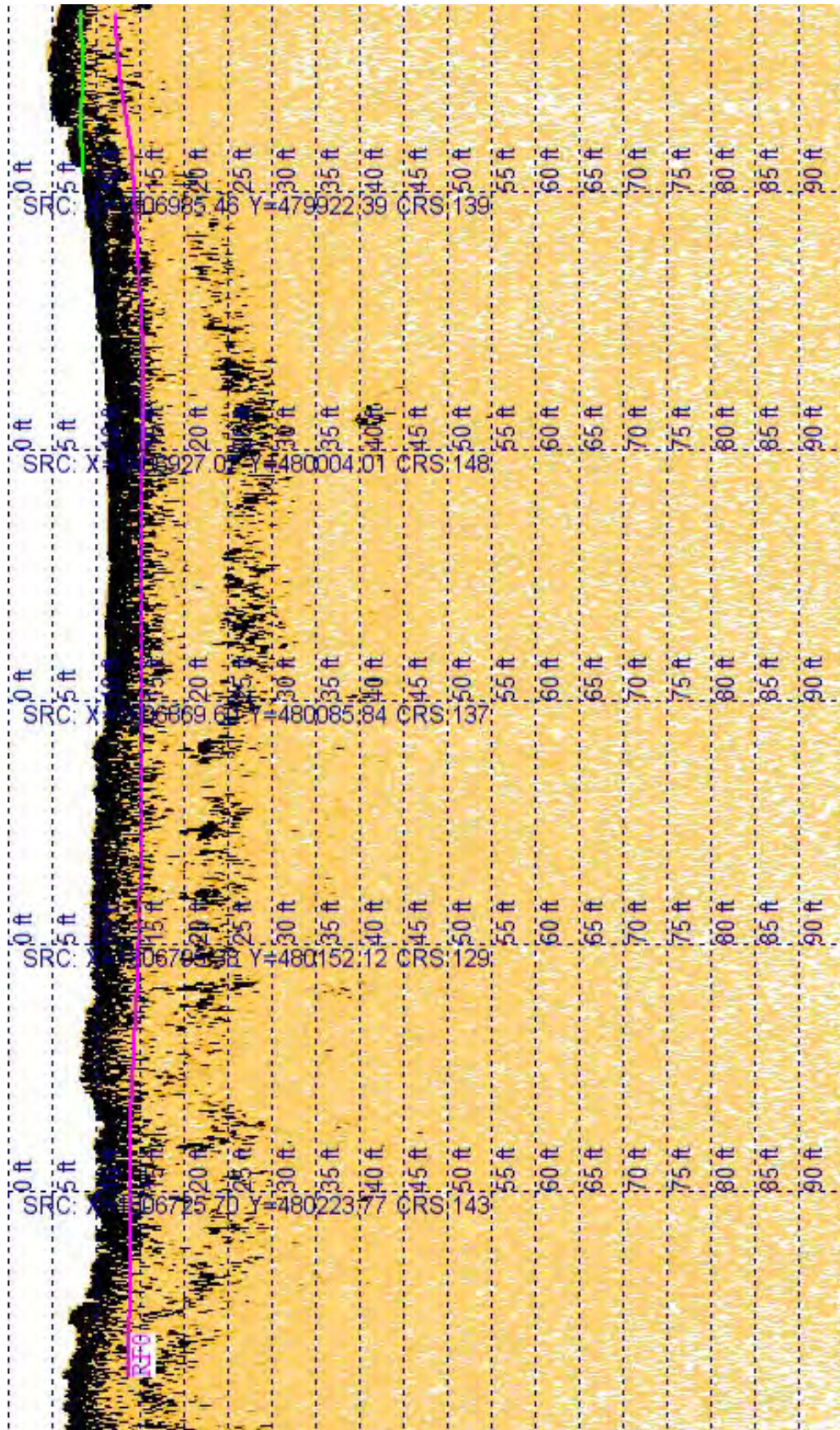


Photo 39: 4SE











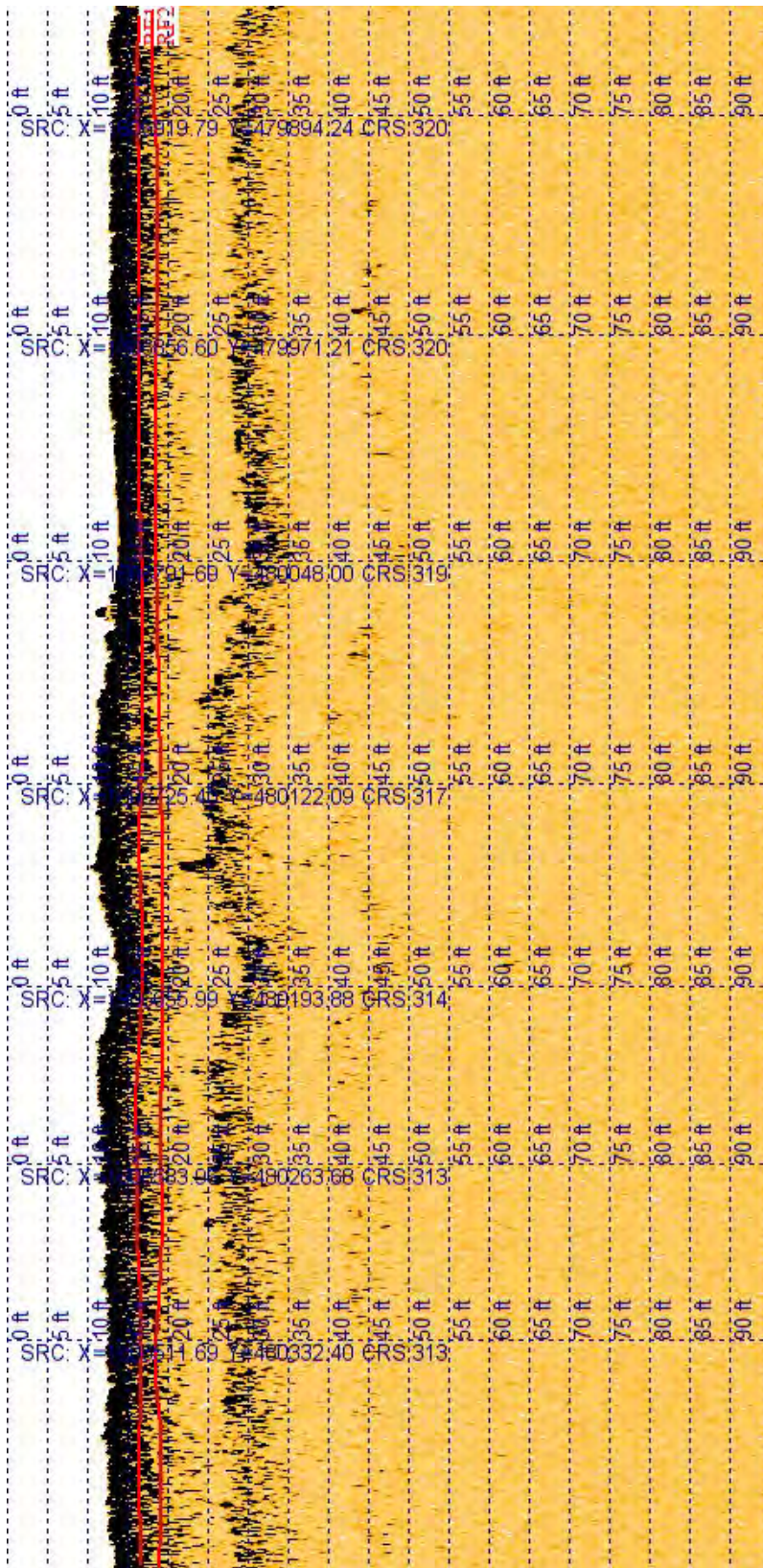


Photo 42: 6NW



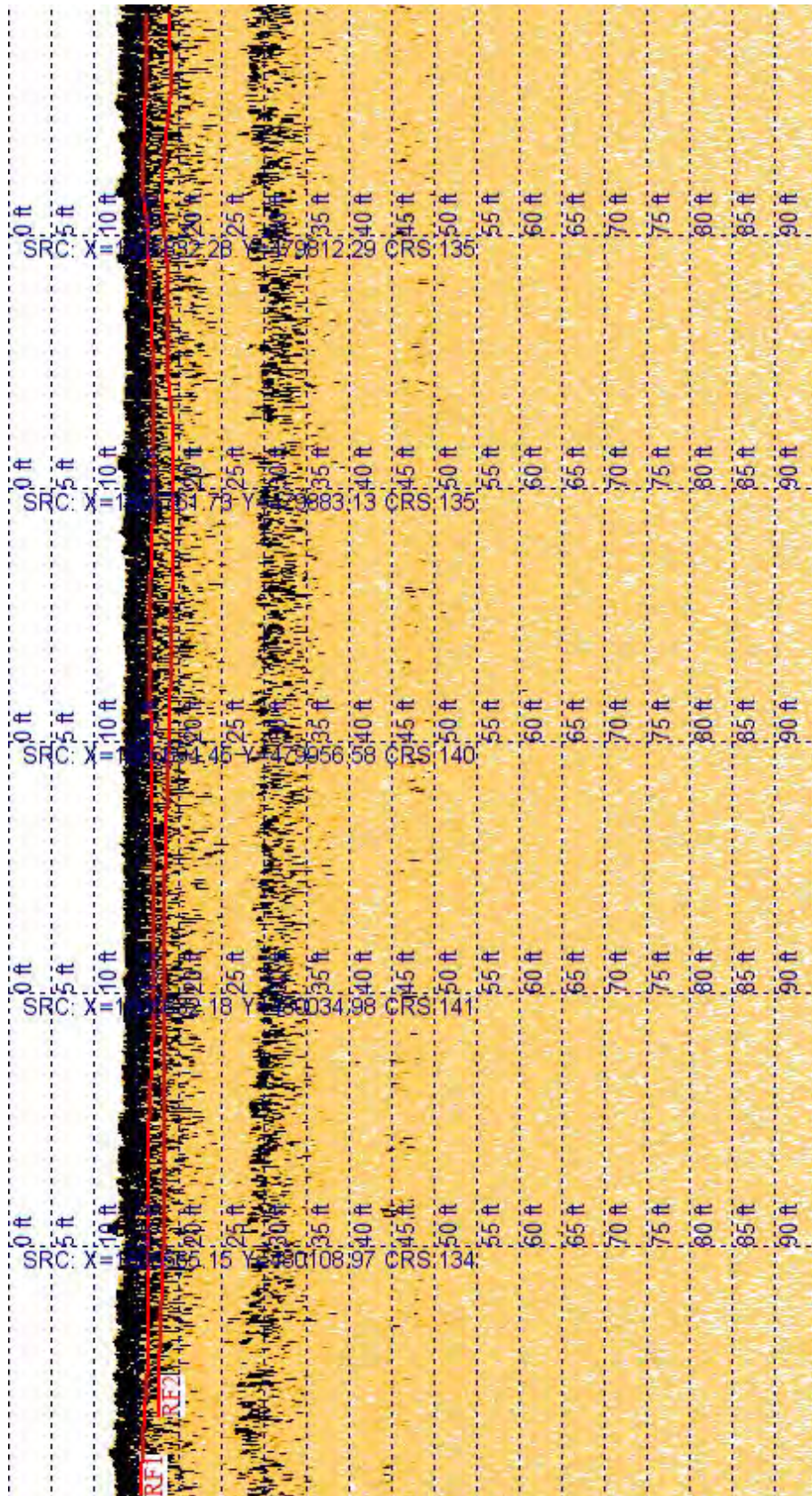


Photo 43: 8SE







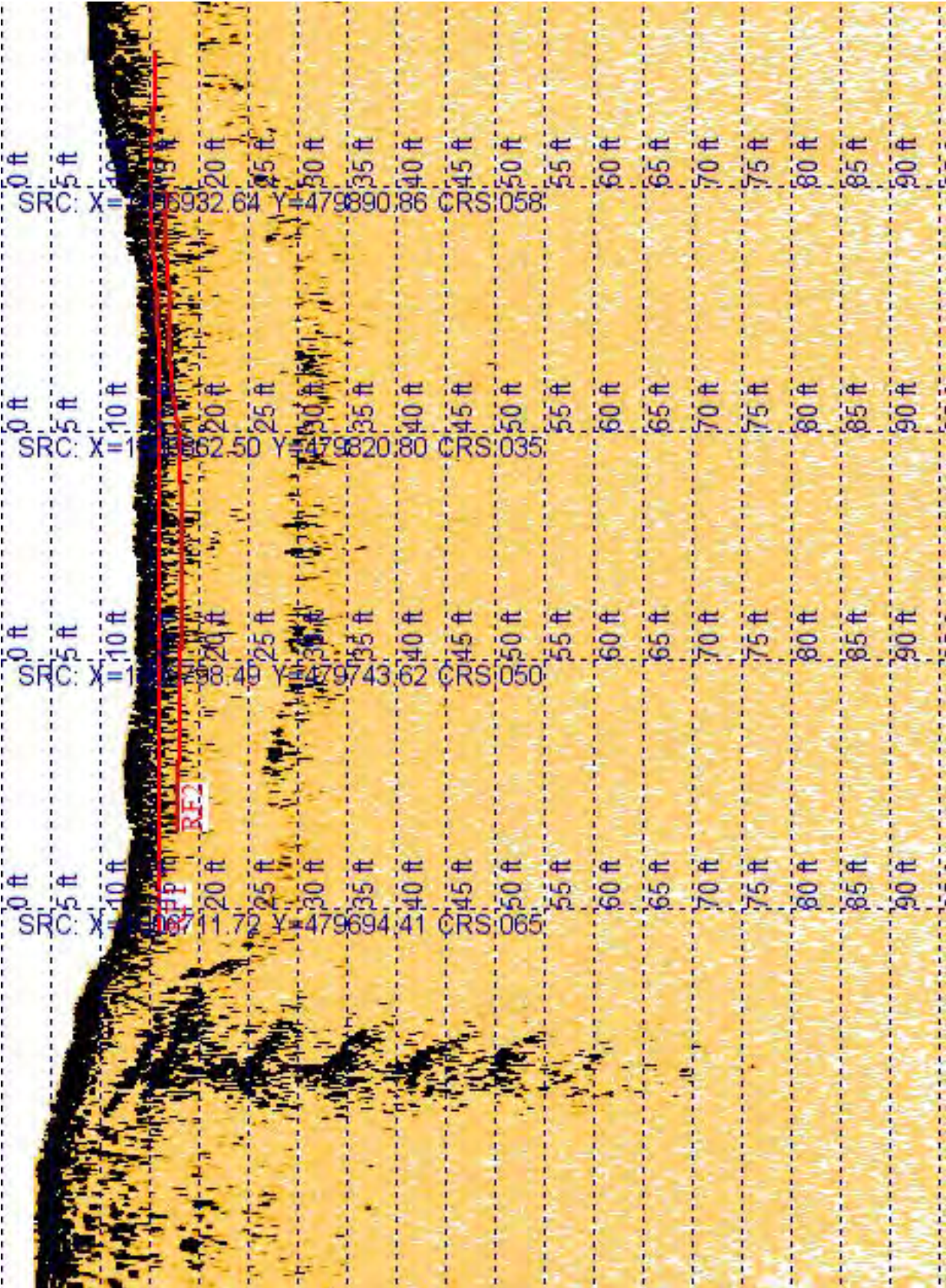


Photo 45: 10NE



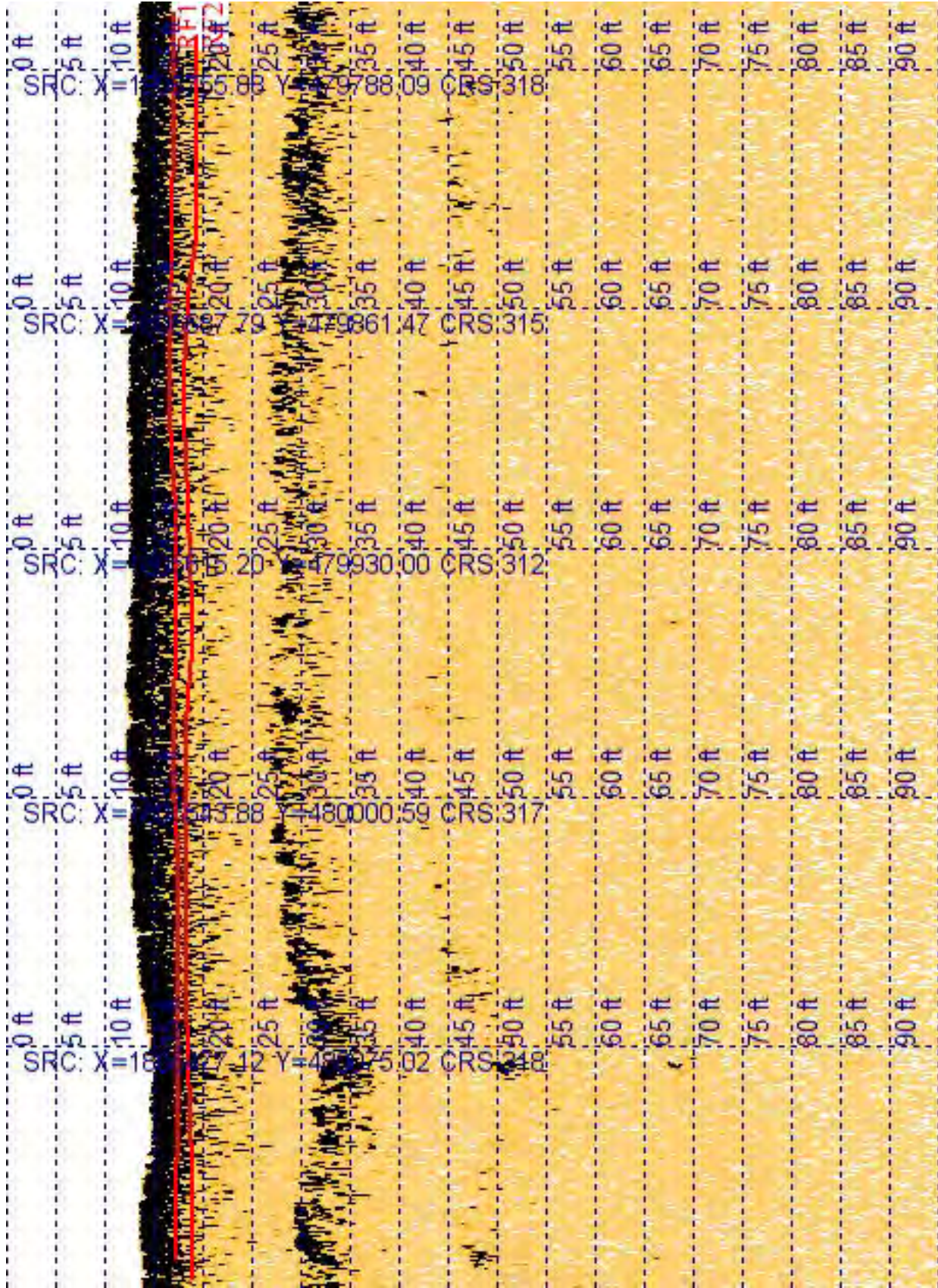


Photo 46: 10NW



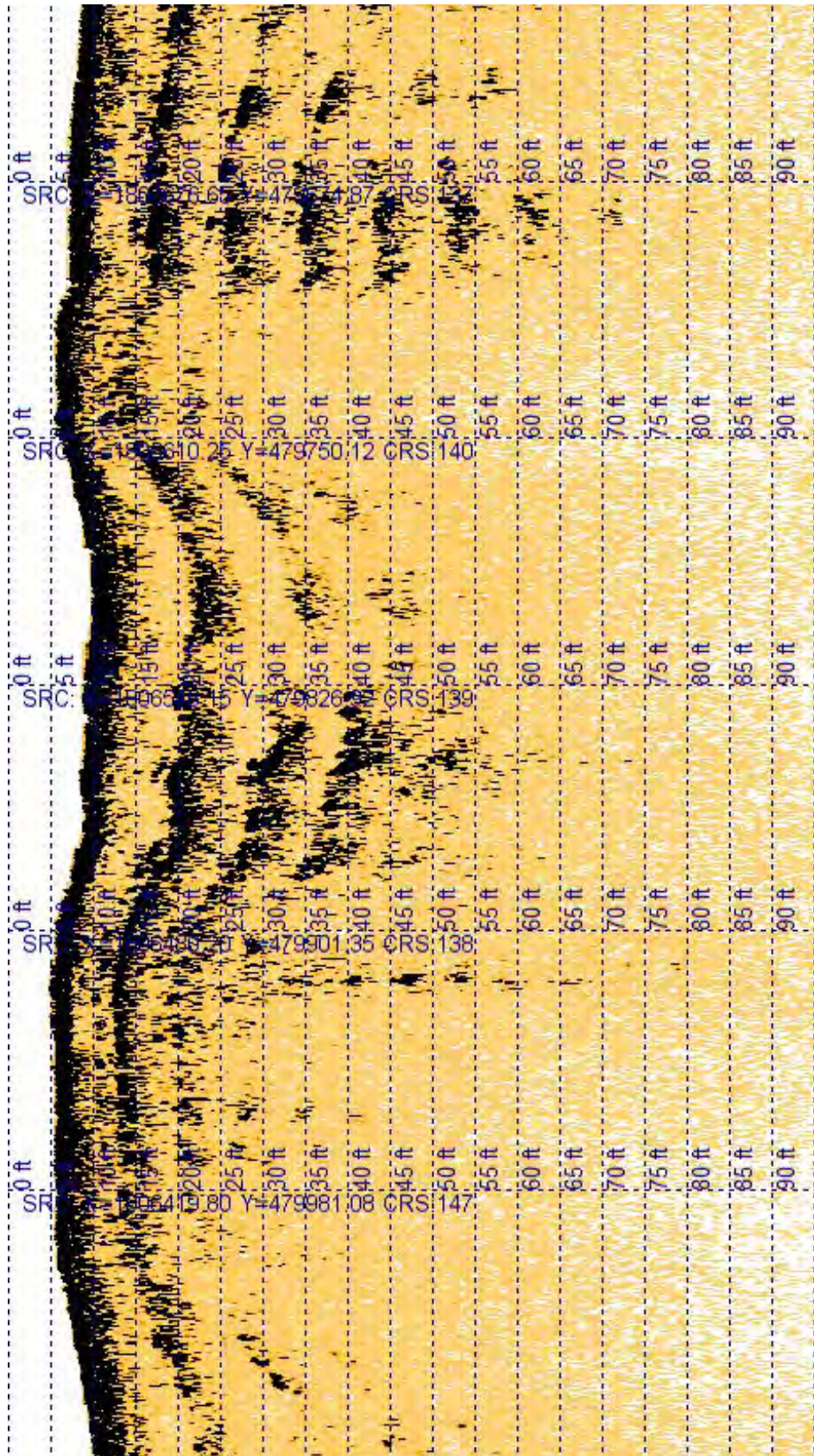
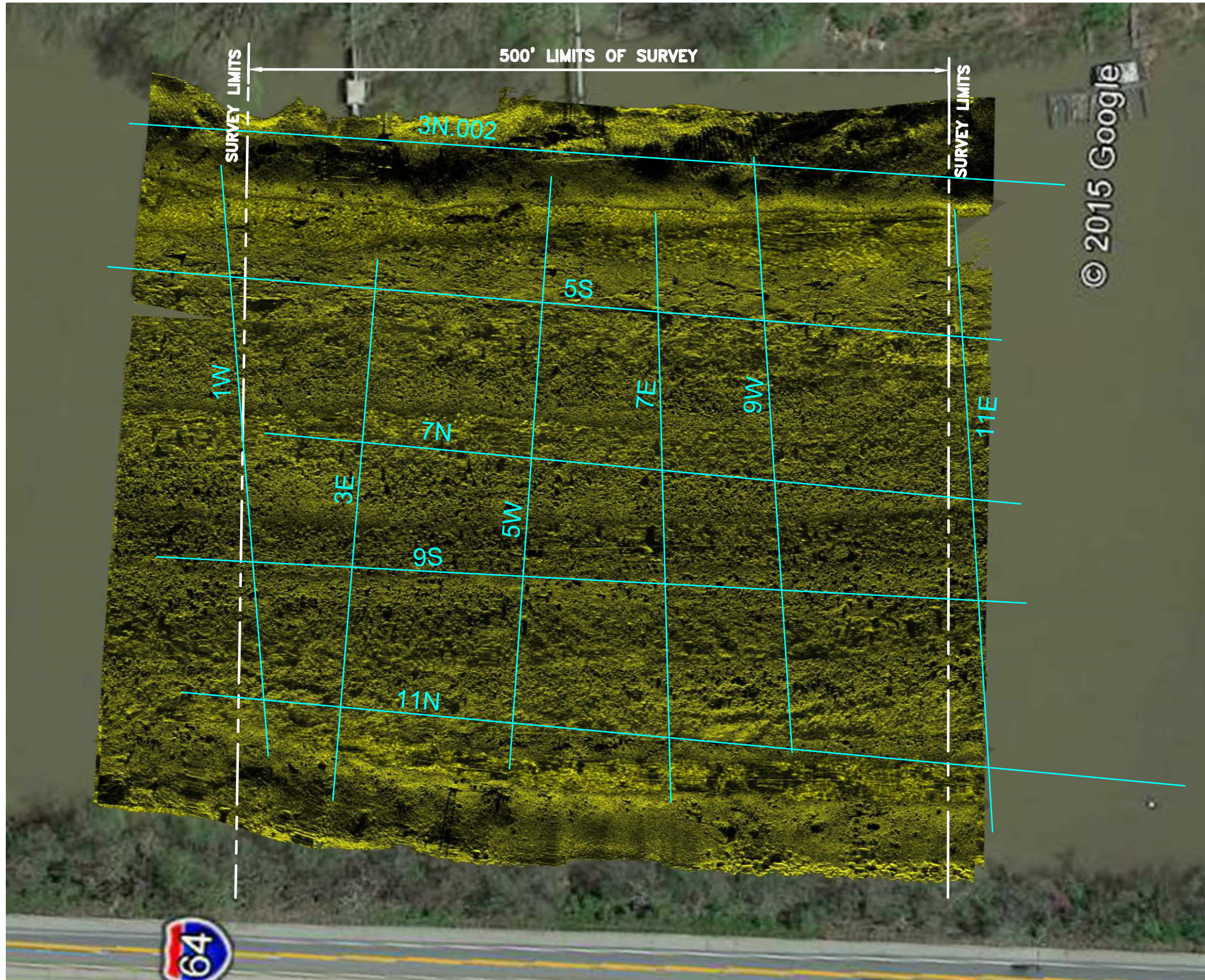


Photo 47: 12SE



**SED05**



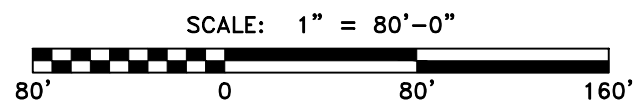


**LEGEND:**

— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN.


**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILER WAS PERFORMED ON AUGUST 18, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.



**SUB-BOTTOM TRACK PLAN**

SCALE: 1" = 80'

DATE	NO.	REVISIONS	BY
SED05 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
 W.J. Castle PE & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/16/15	DRAWING No. 1 OF 1



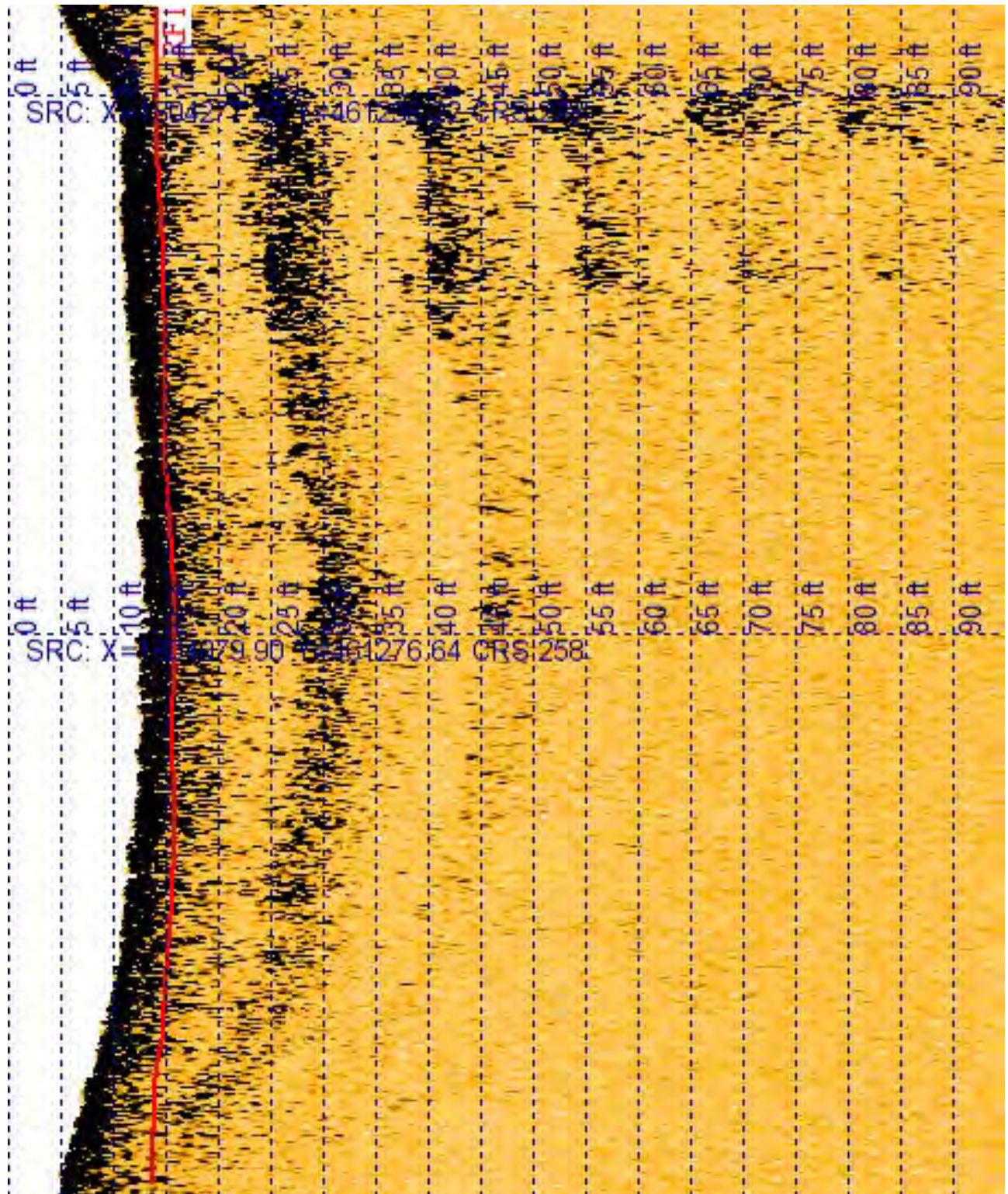


Photo 48: 1W



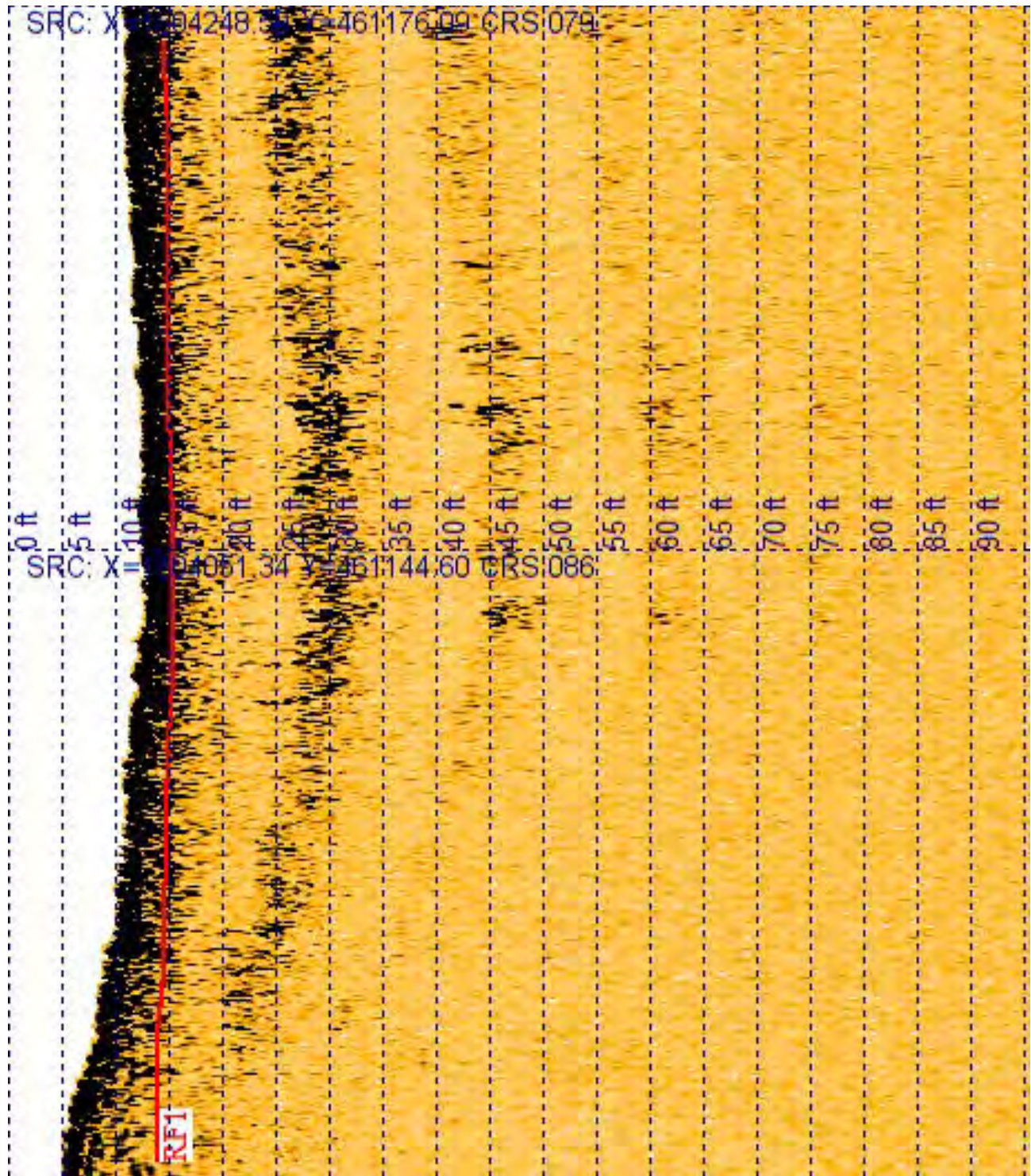


Photo 49: 3E



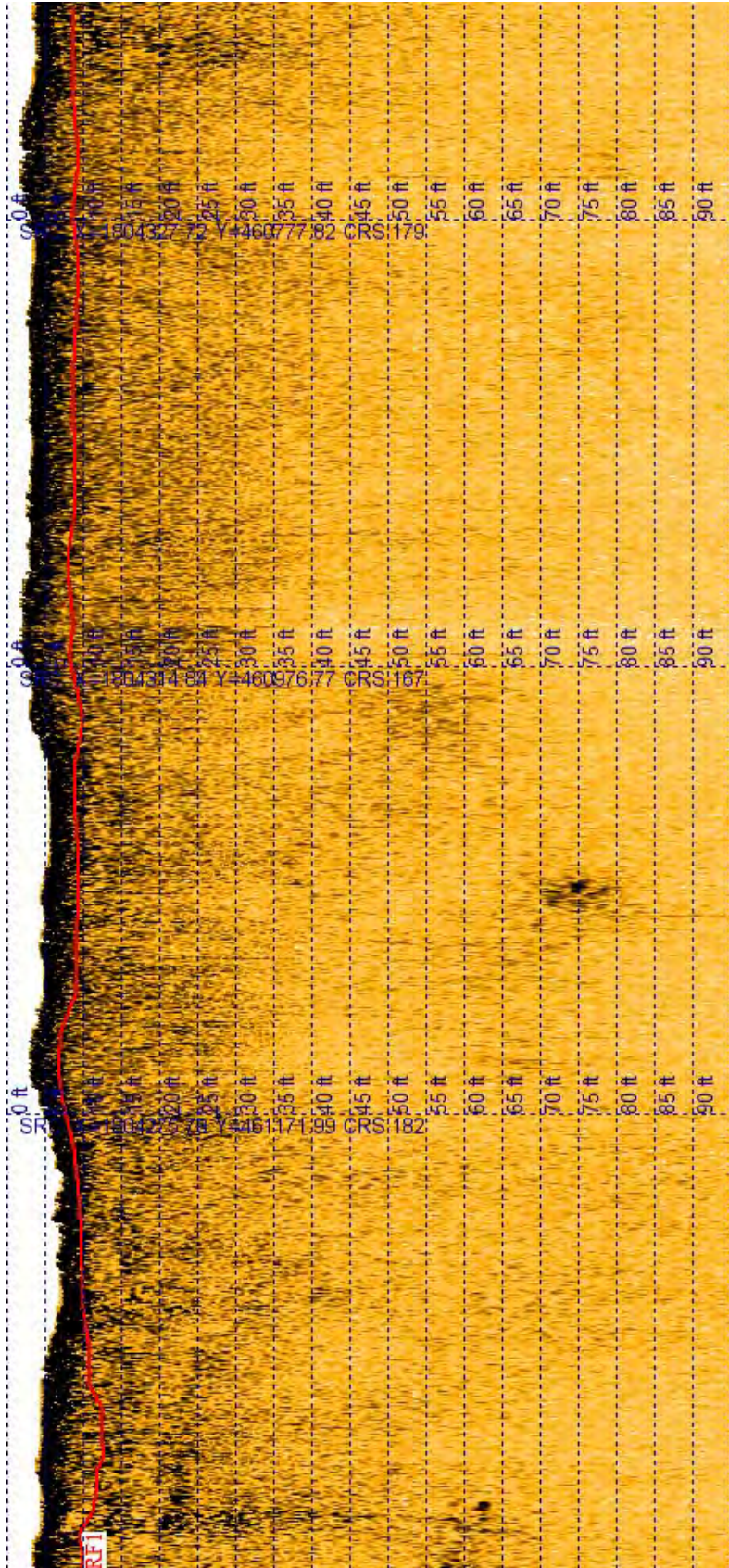


Photo 50: 3N.002



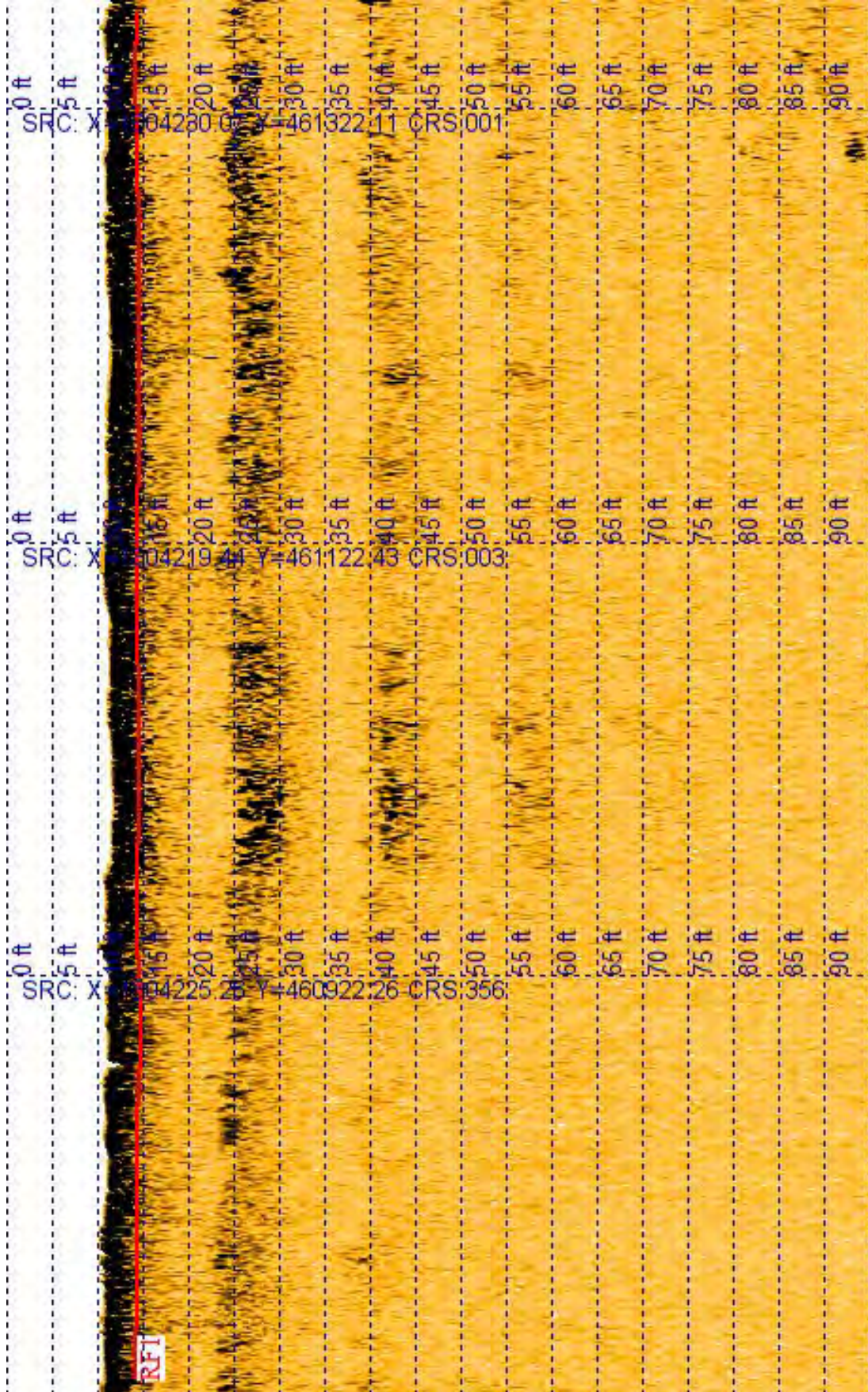


Photo 51: 5S



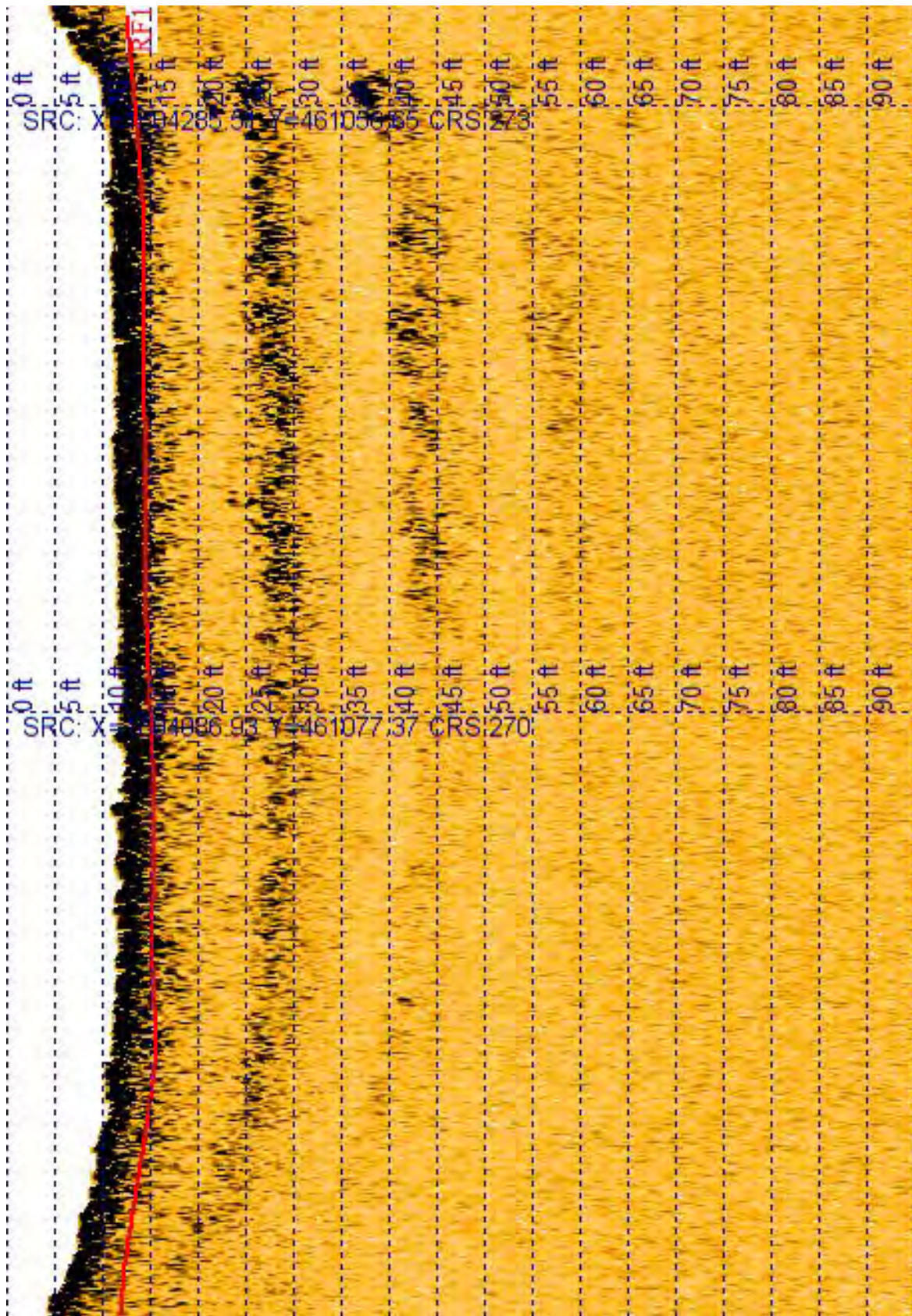


Photo 52: 5W



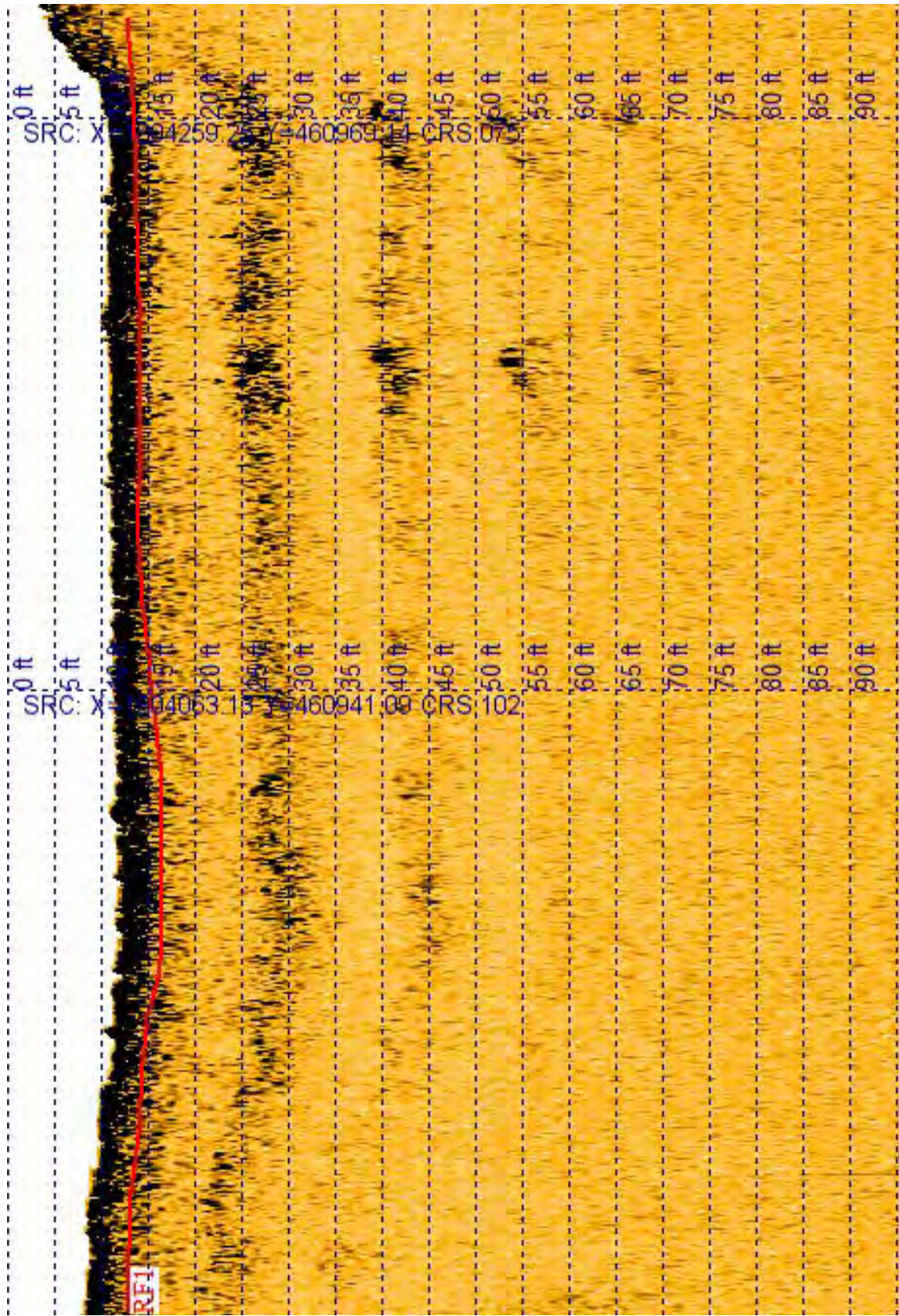


Photo 53: 7E



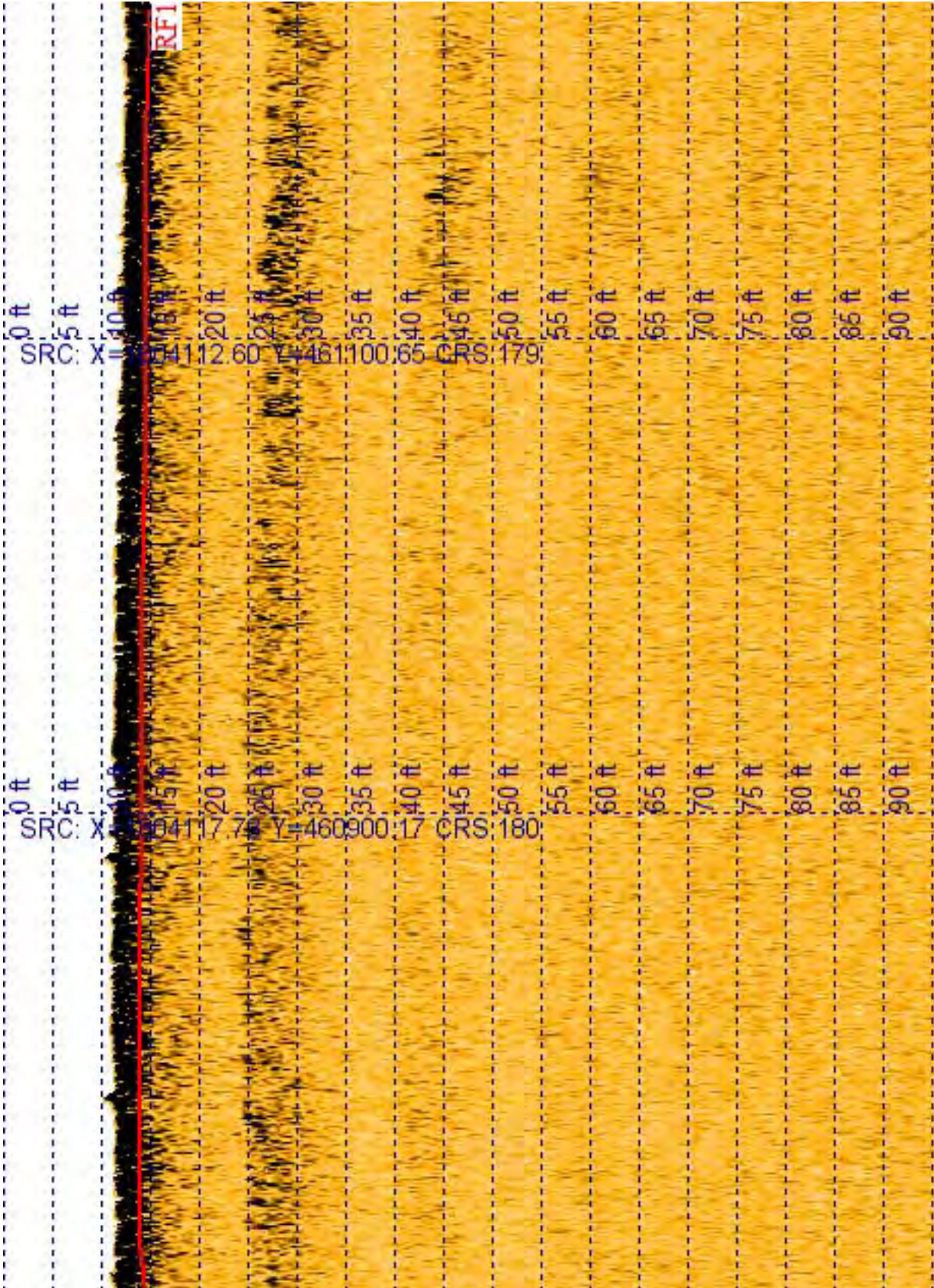


Photo 54: 7N



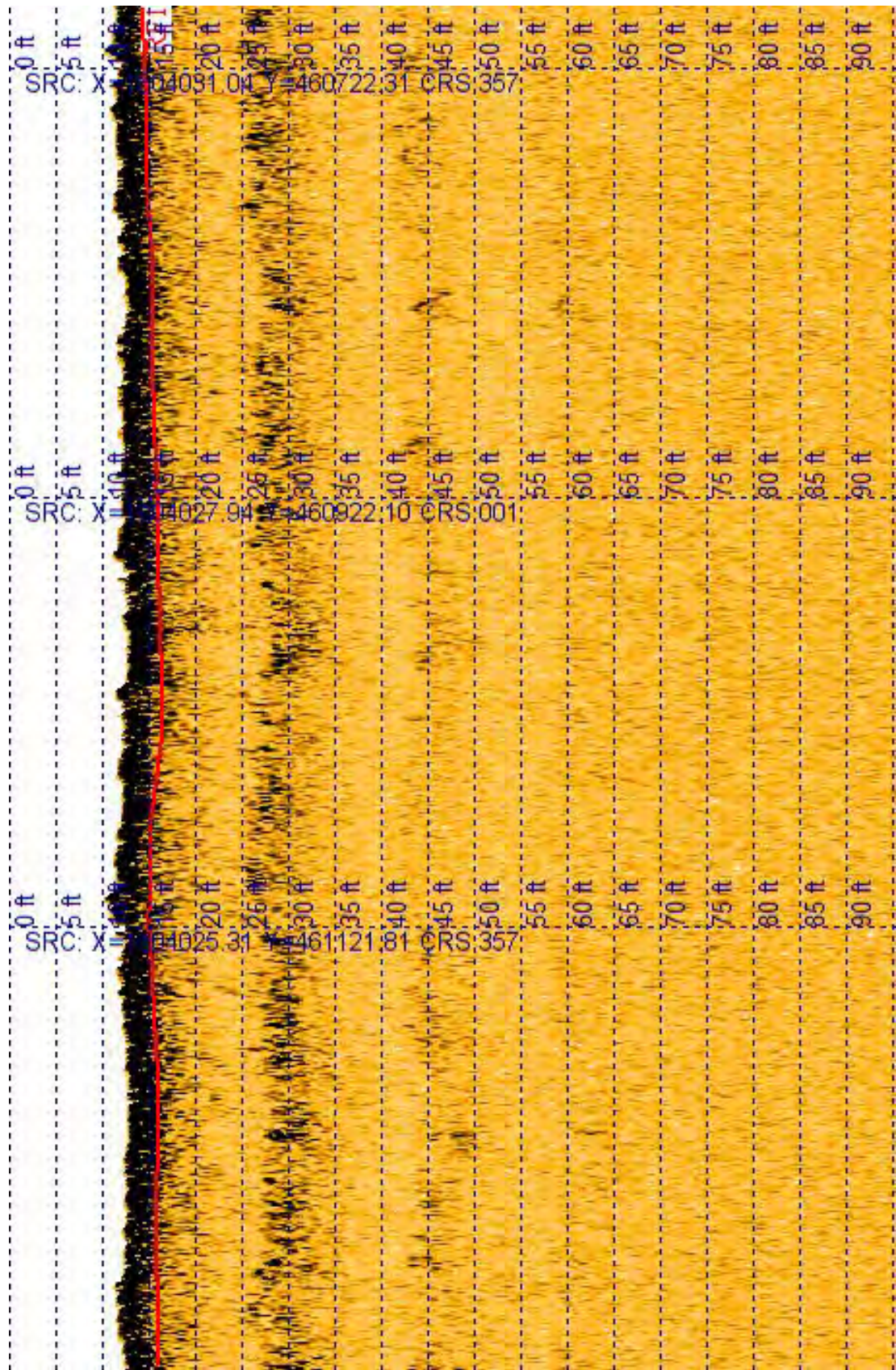


Photo 55: 9S



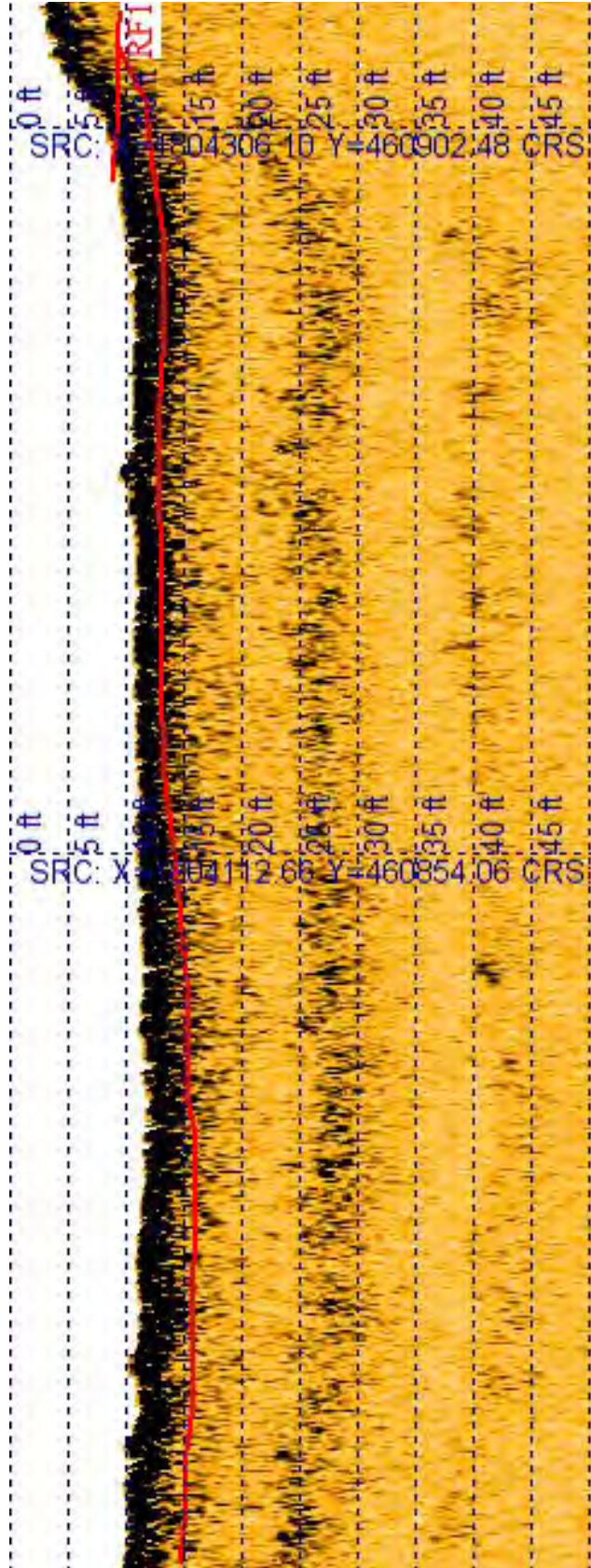


Photo 56: 9W

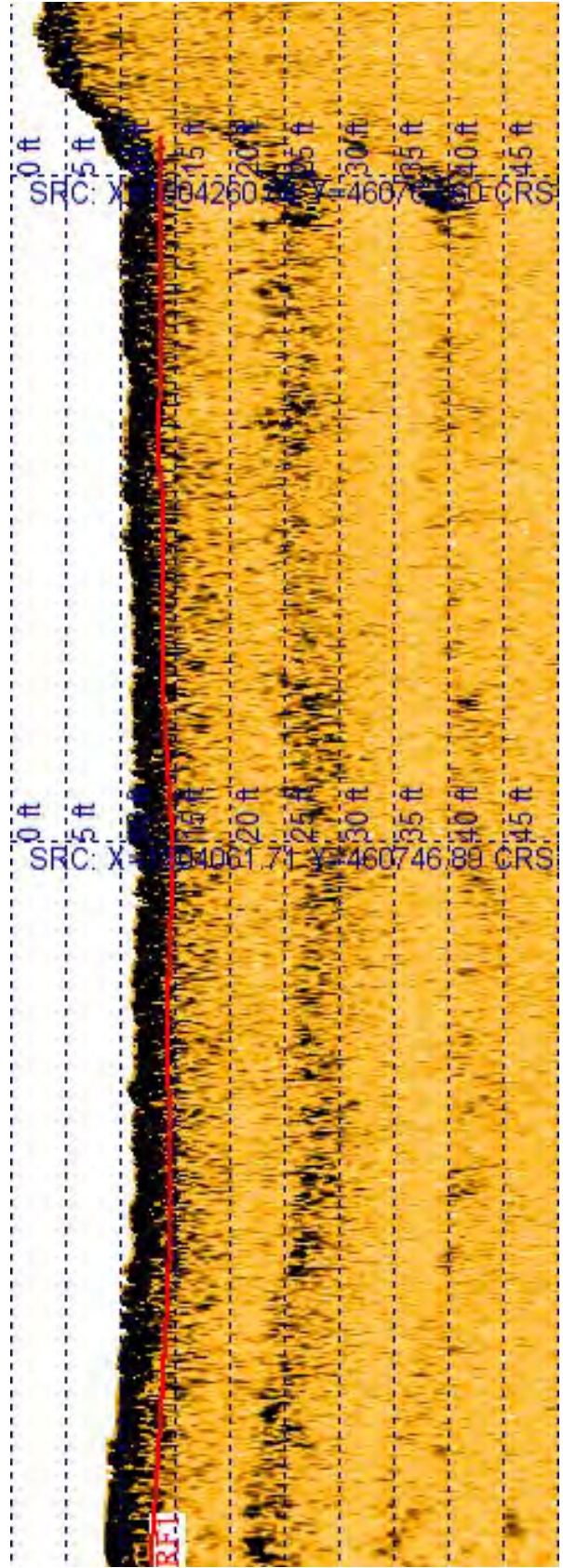


Photo 57: 11E



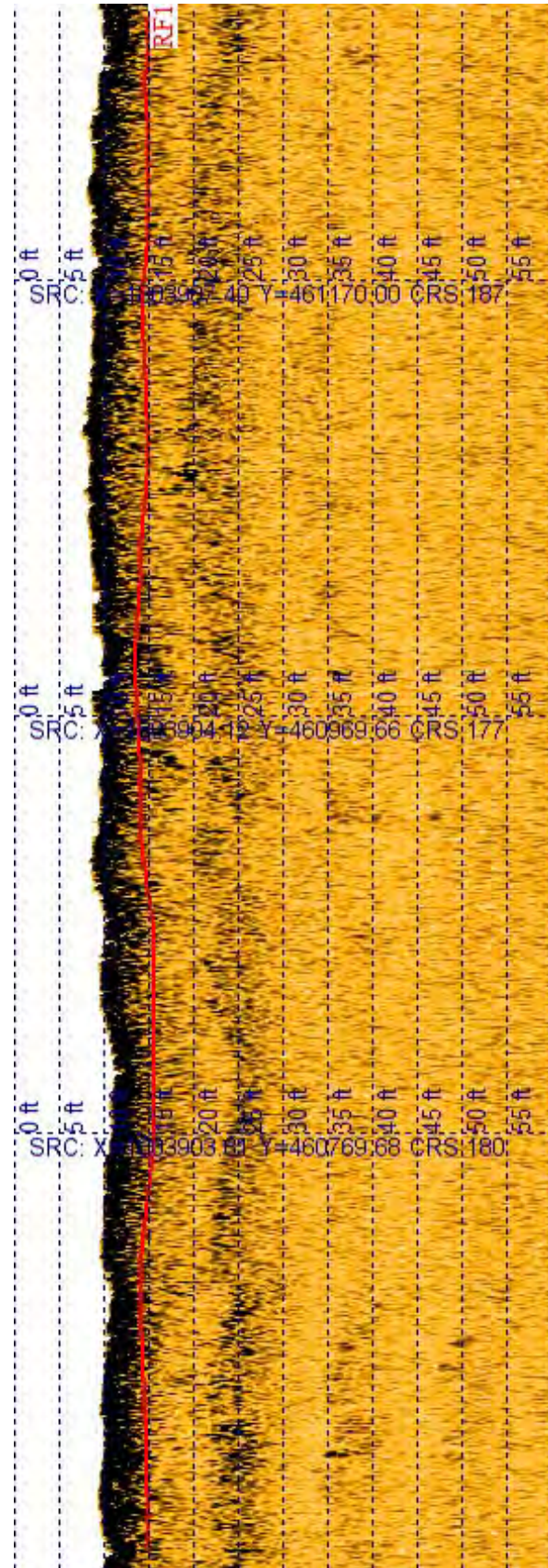
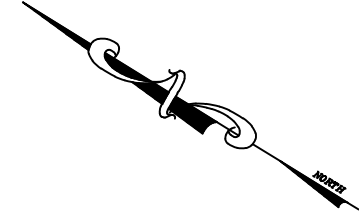
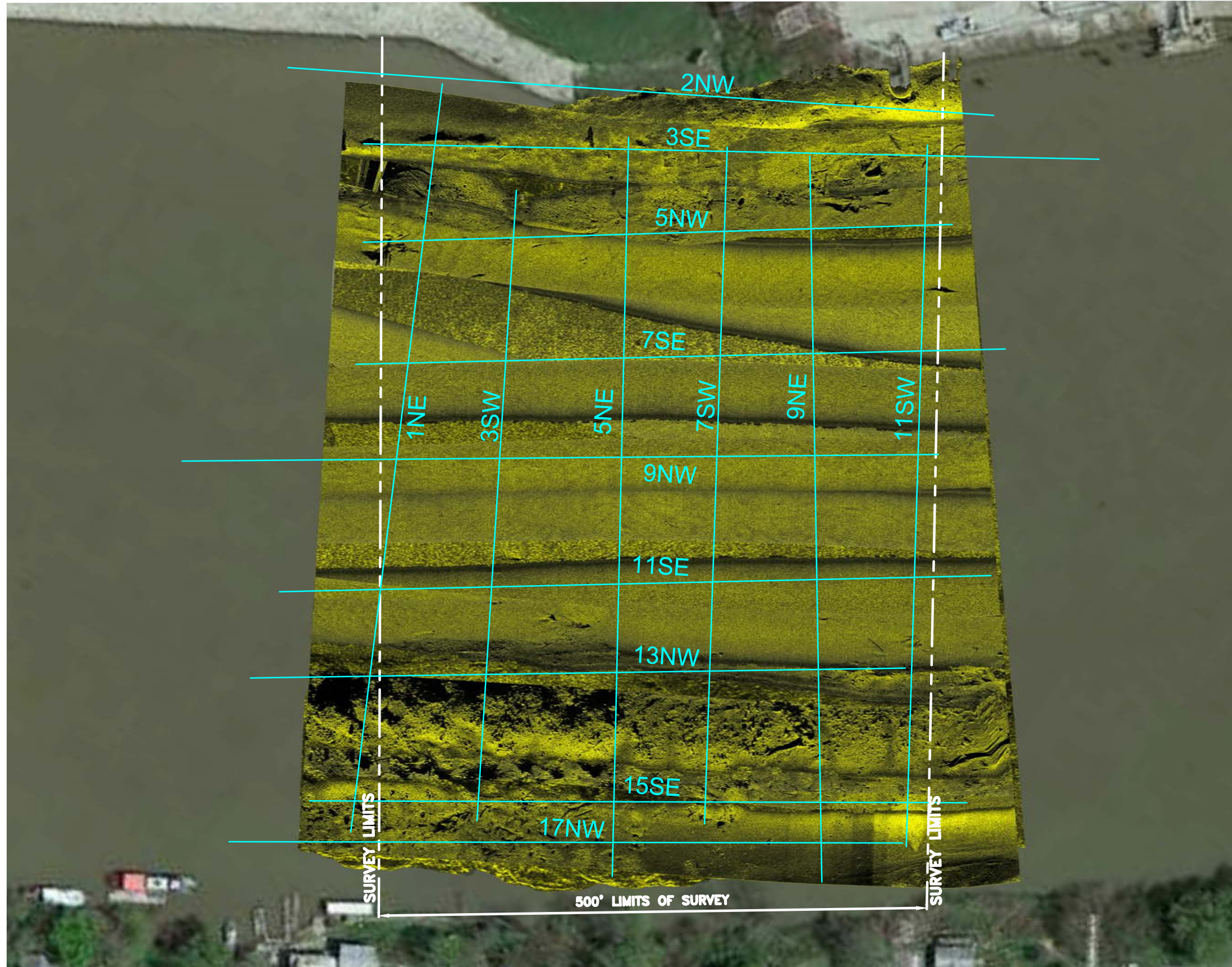


Photo 58: 11N

**SED06**





**LEGEND:**

— DENOTES LOCATION OF SUB-BOTTOM PROFILER RUN.

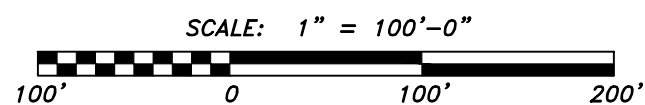
**GENERAL NOTES:**

1. THE FATHOMETRIC SURVEY WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

DATE	NO.	REVISIONS	BY
SED06 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			


**W.J. Castle PE** *Consulting Engineers*  
 & Associates 1345 ROUTE 38 WEST  
 HAINESPORT, NJ 08036

SCALE	DRAWN BY	CHECKED BY	JOB NO.	DATE	DRAWING No.
AS SHOWN	GPD	W.J.C.	10-2211-15	10/16/15	1 OF 1



SCALE: 1" = 100'-0"

**SUB-BOTTOM TRACK PLAN**

SCALE: 1" = 100'



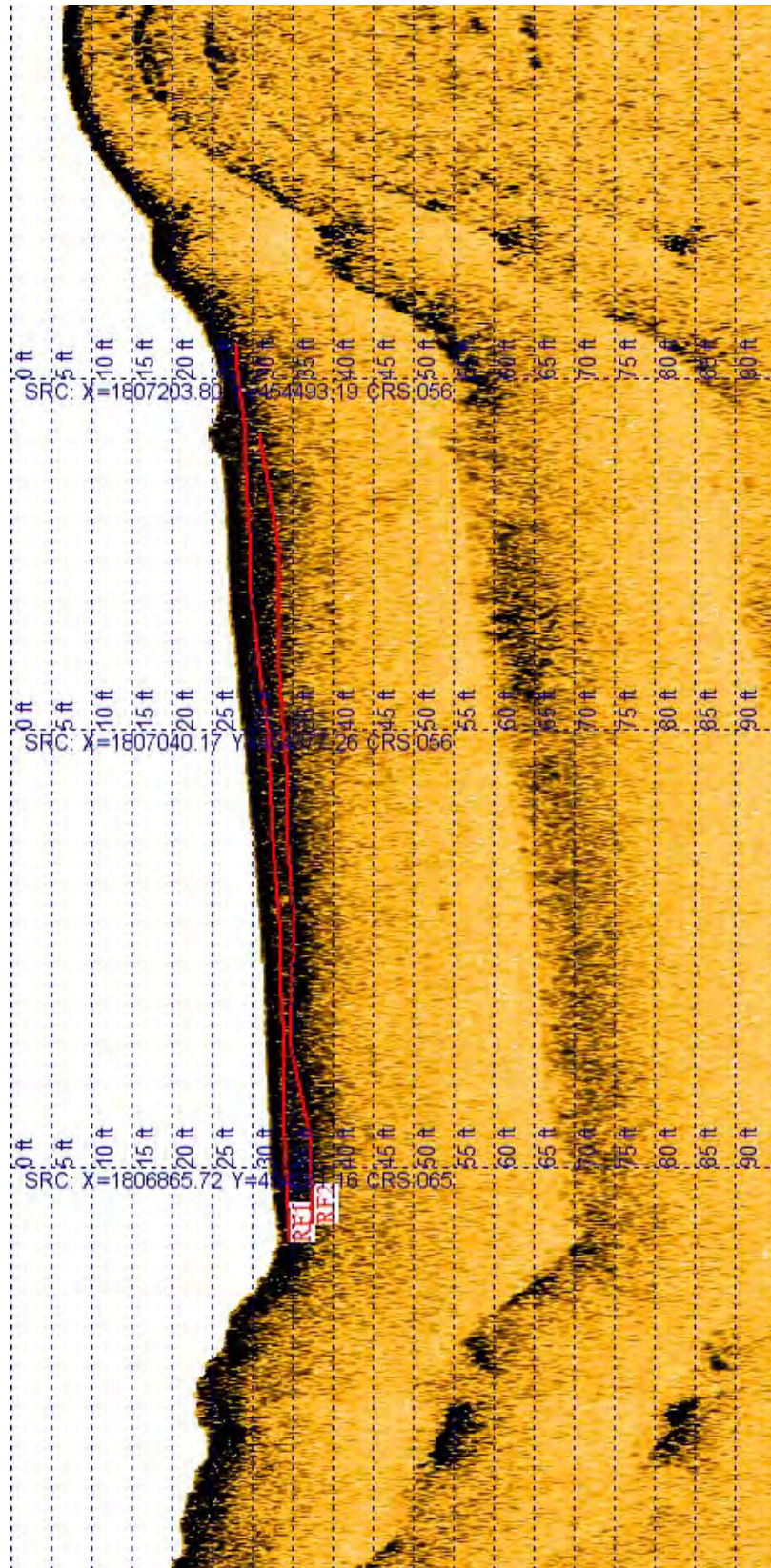


Photo 59: 1NE



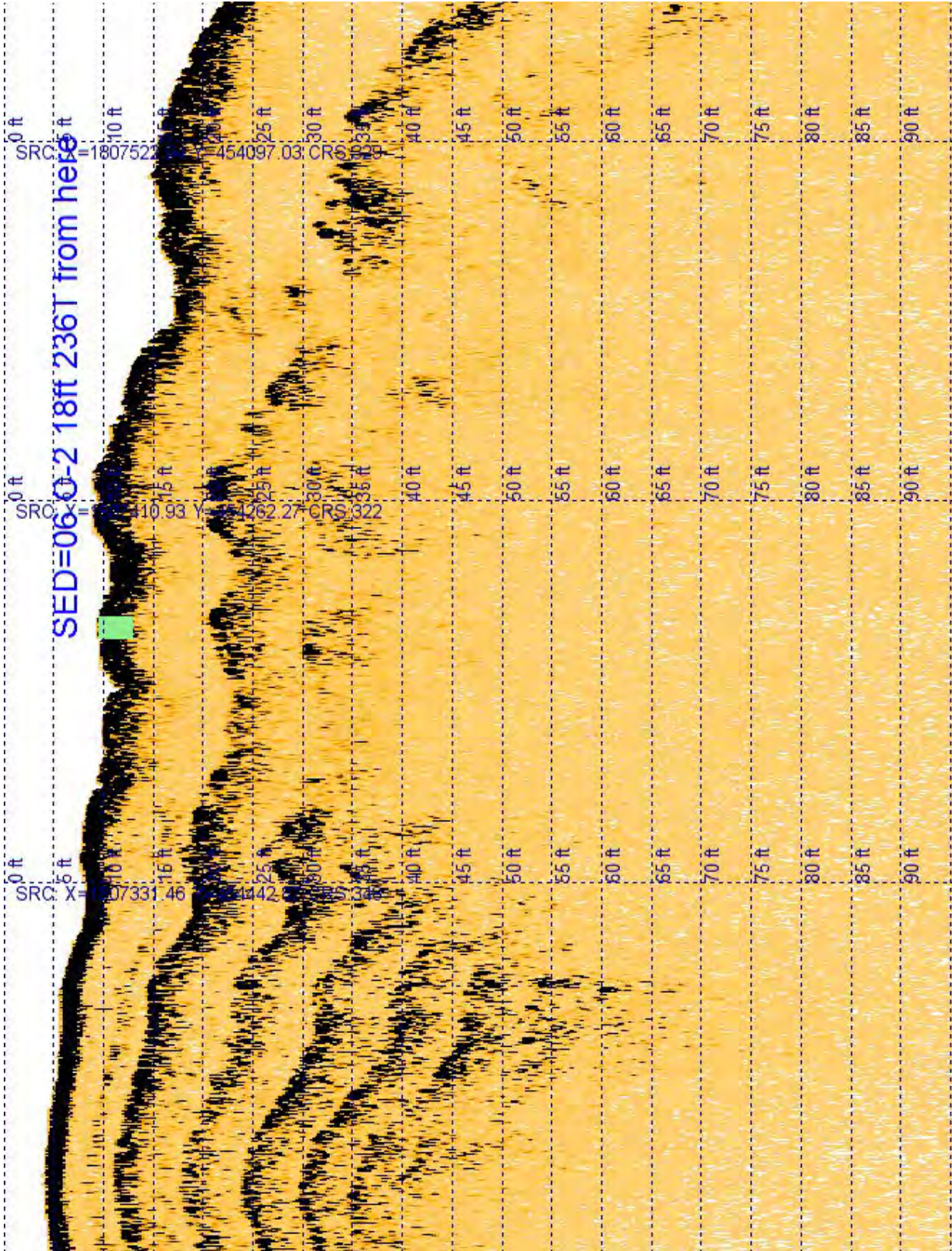


Photo 60: 2NW



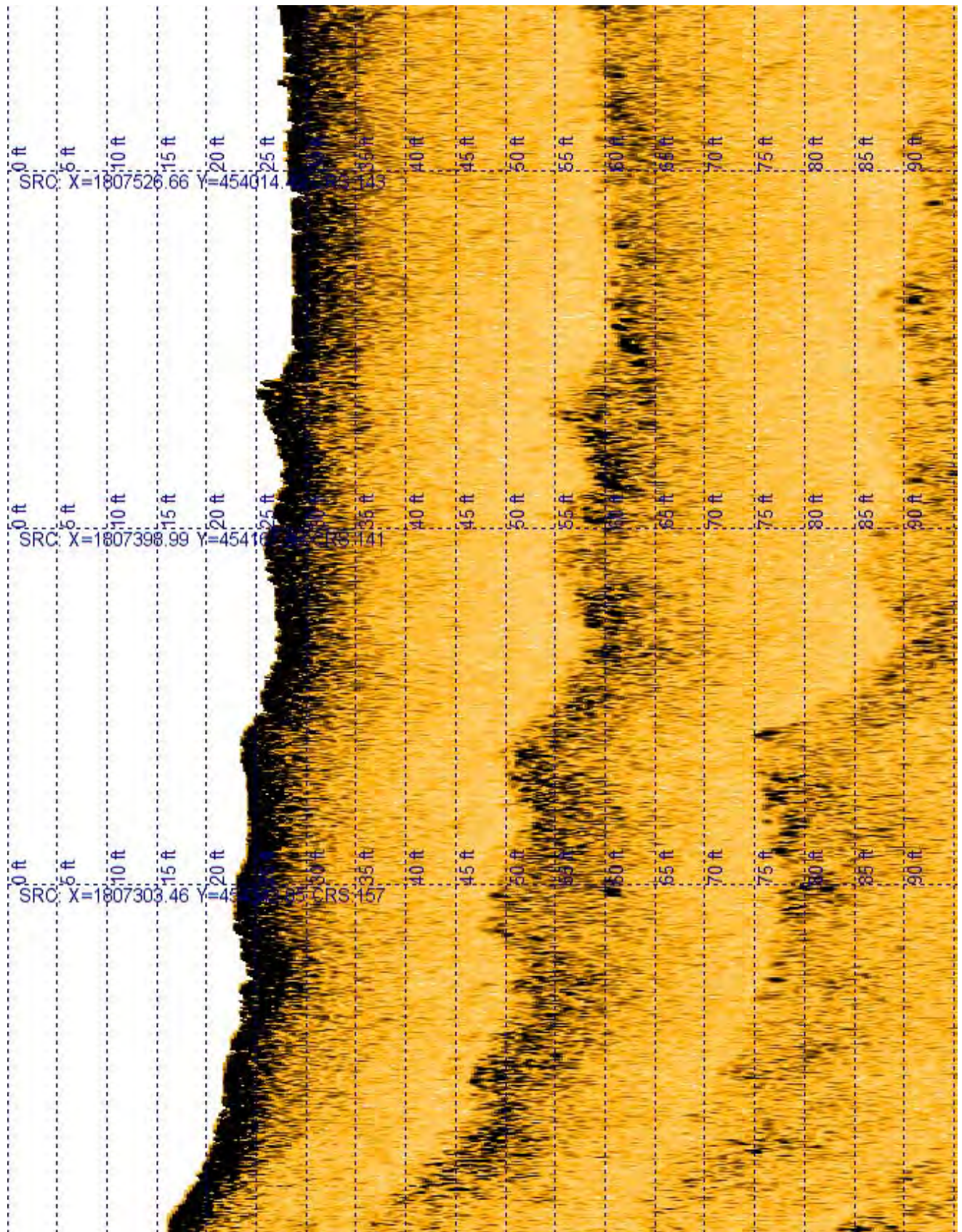


Photo 61: 3SE



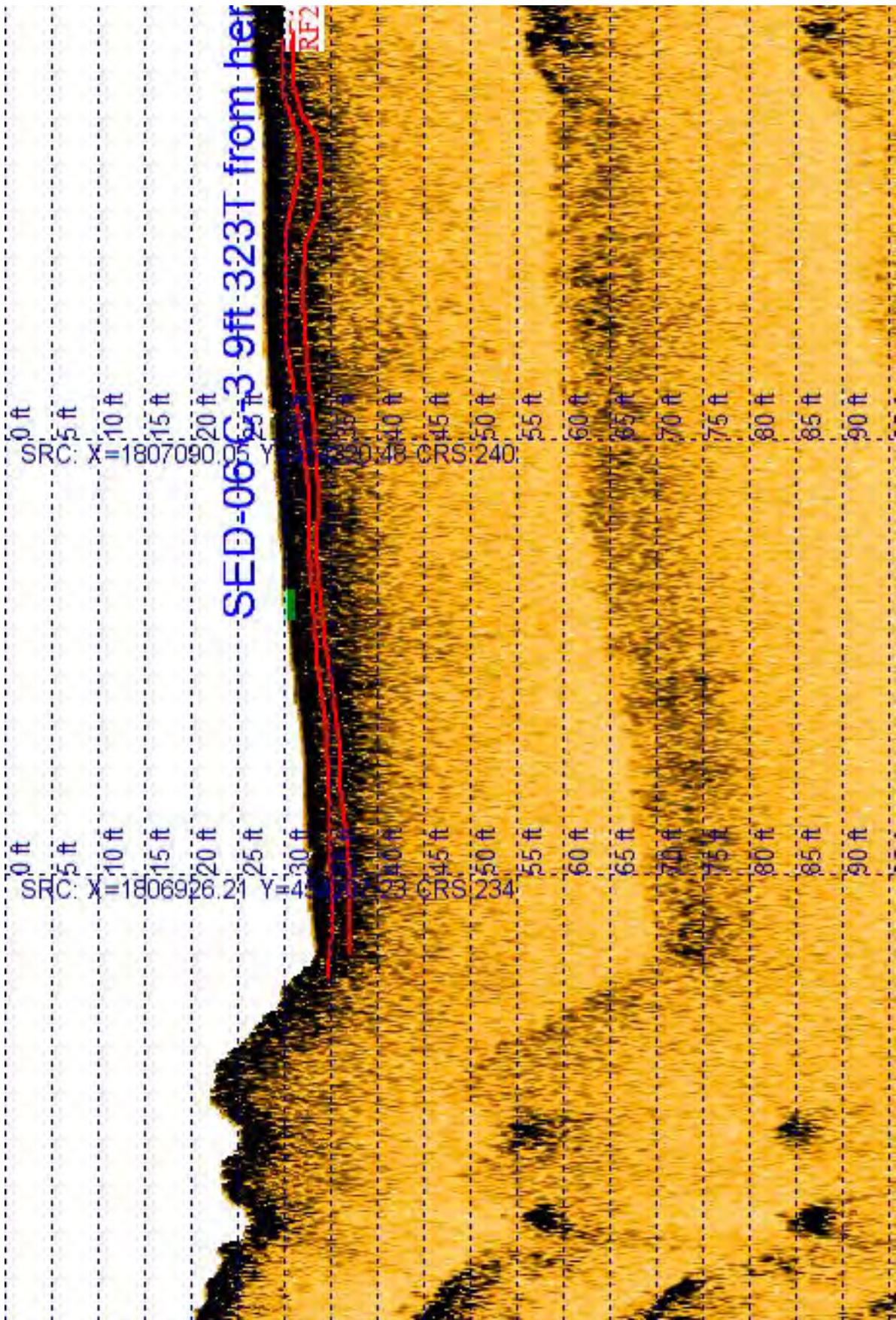


Photo 62: 3SW



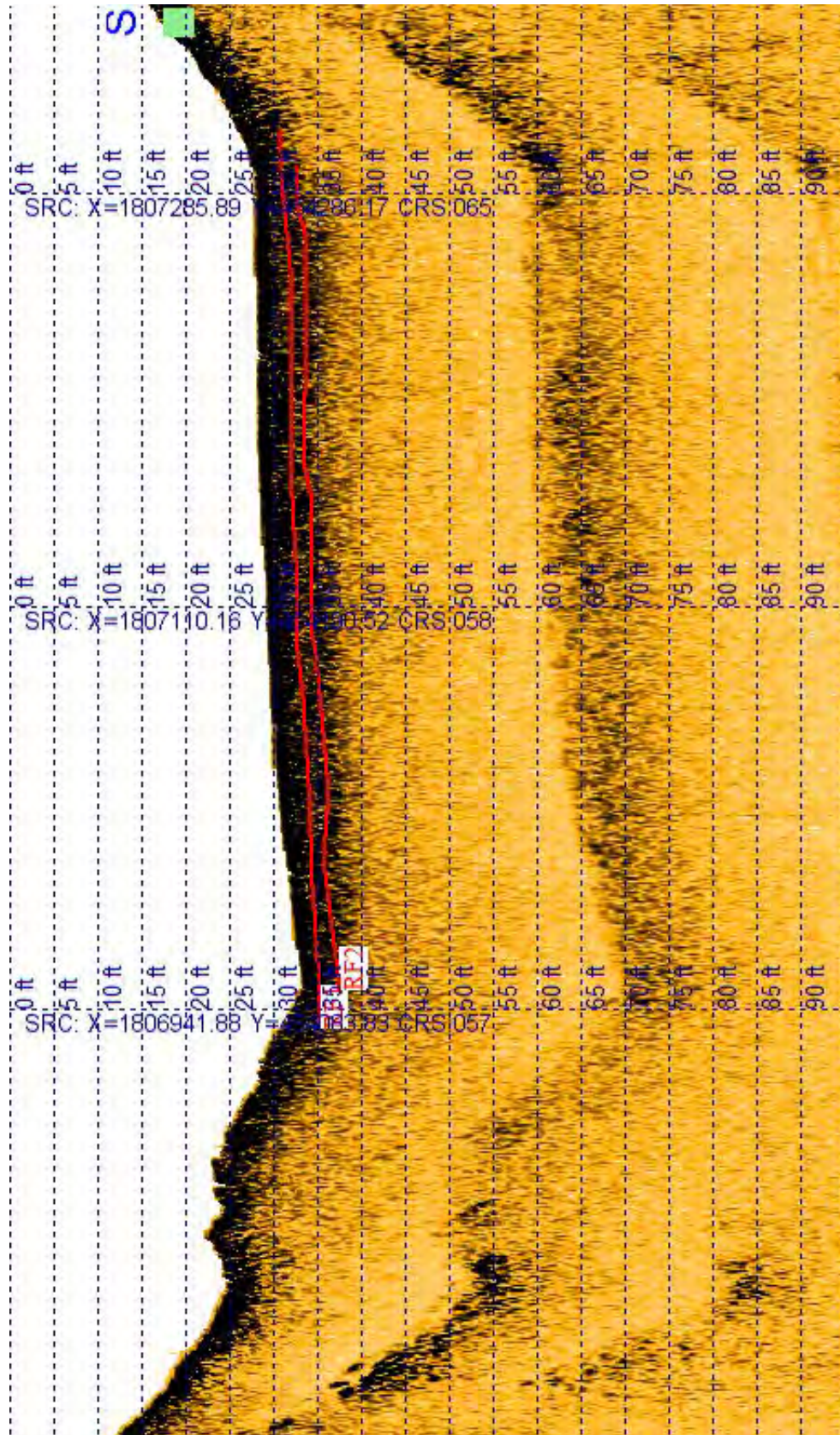


Photo 63: 5NE



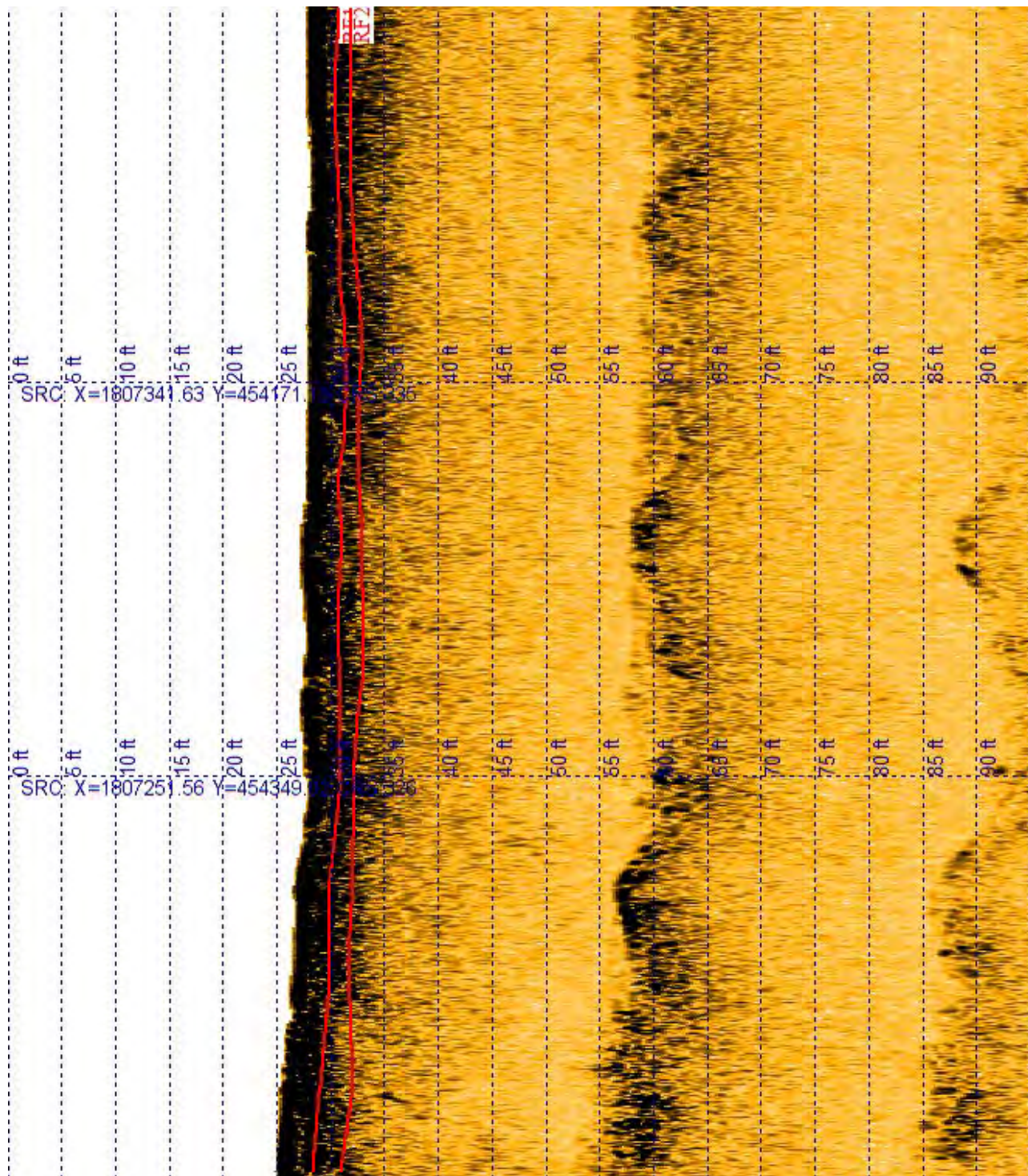


Photo 64: 5NW



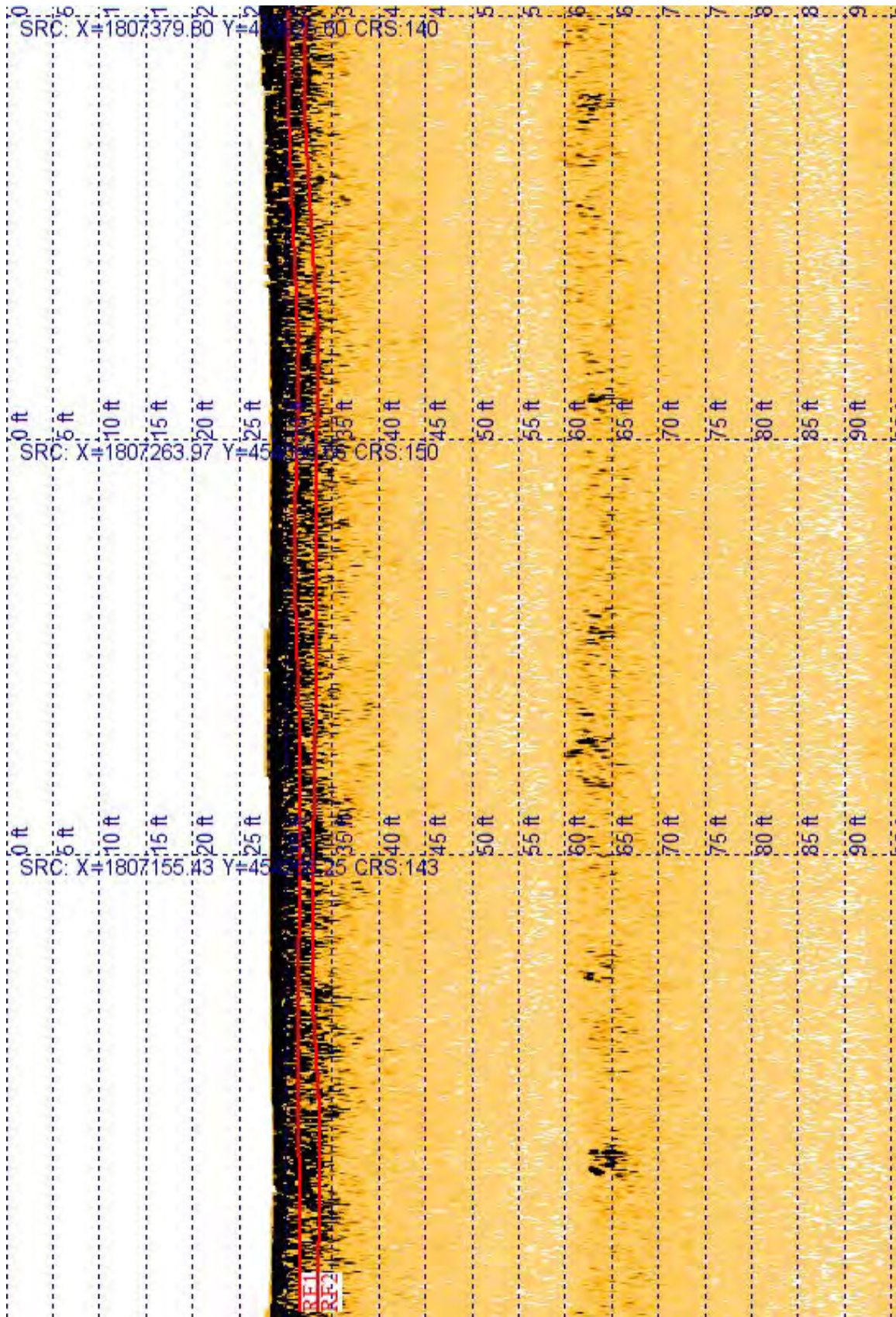


Photo 65: 7SE



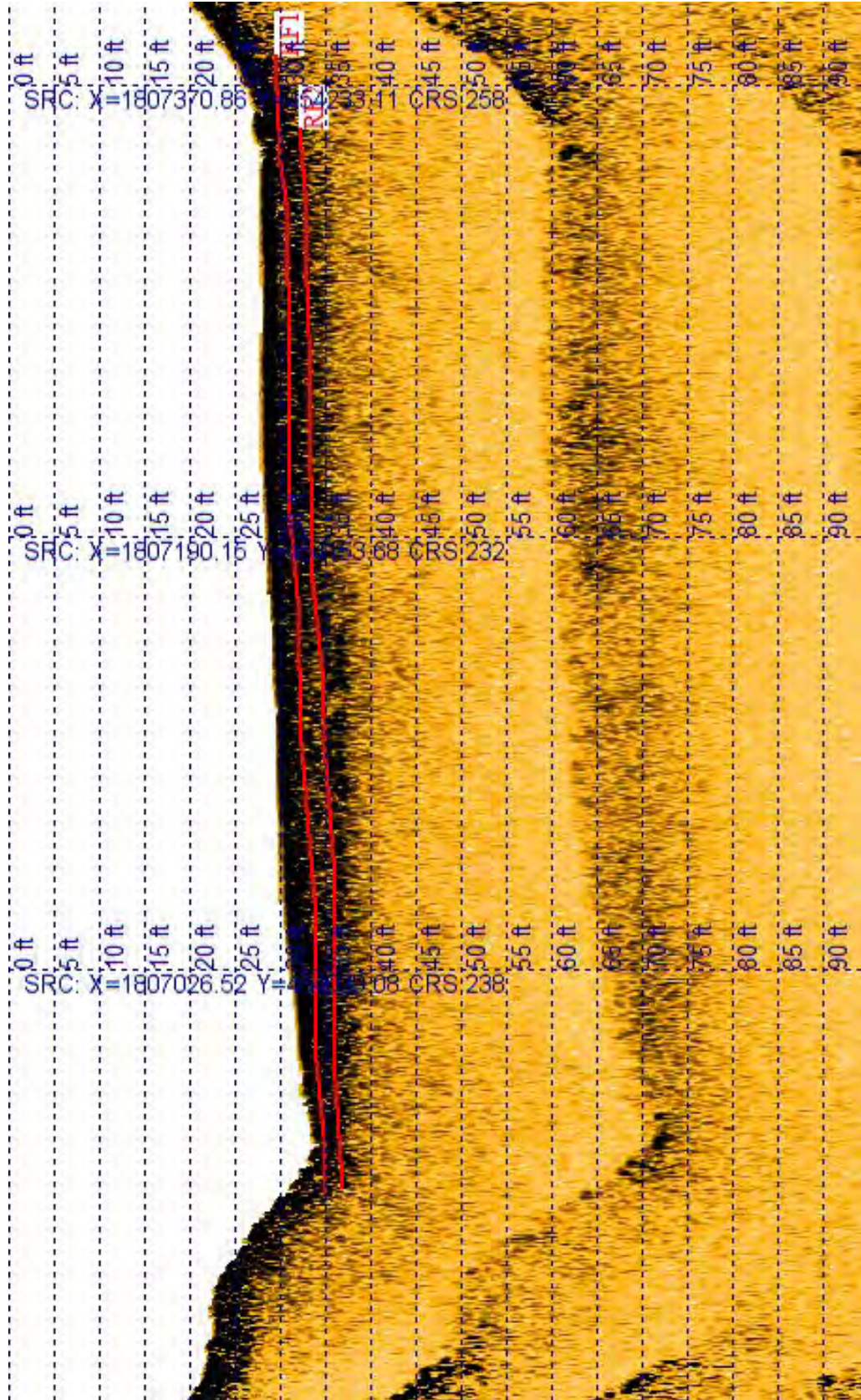


Photo 66: 7SW



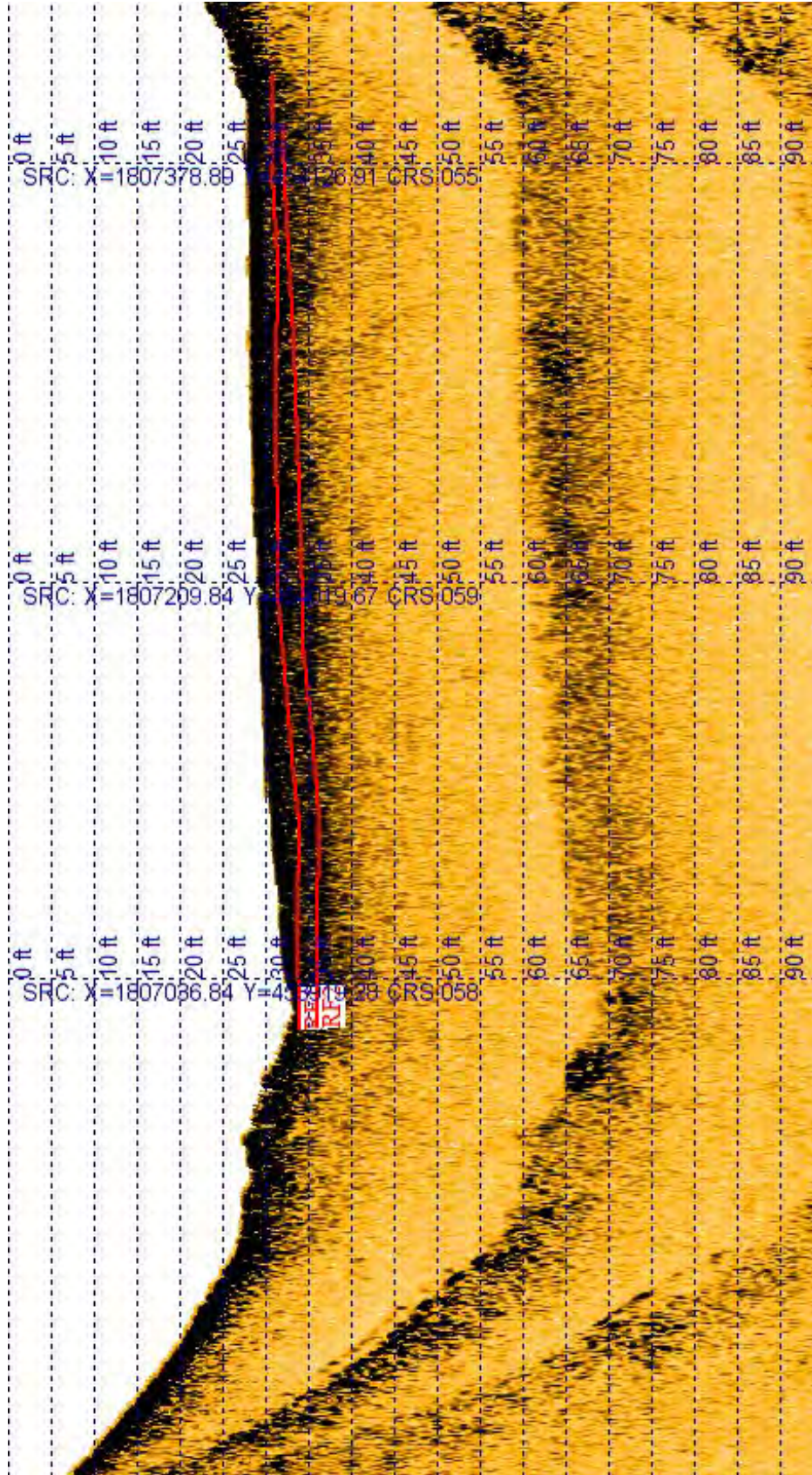


Photo 67: 9NE



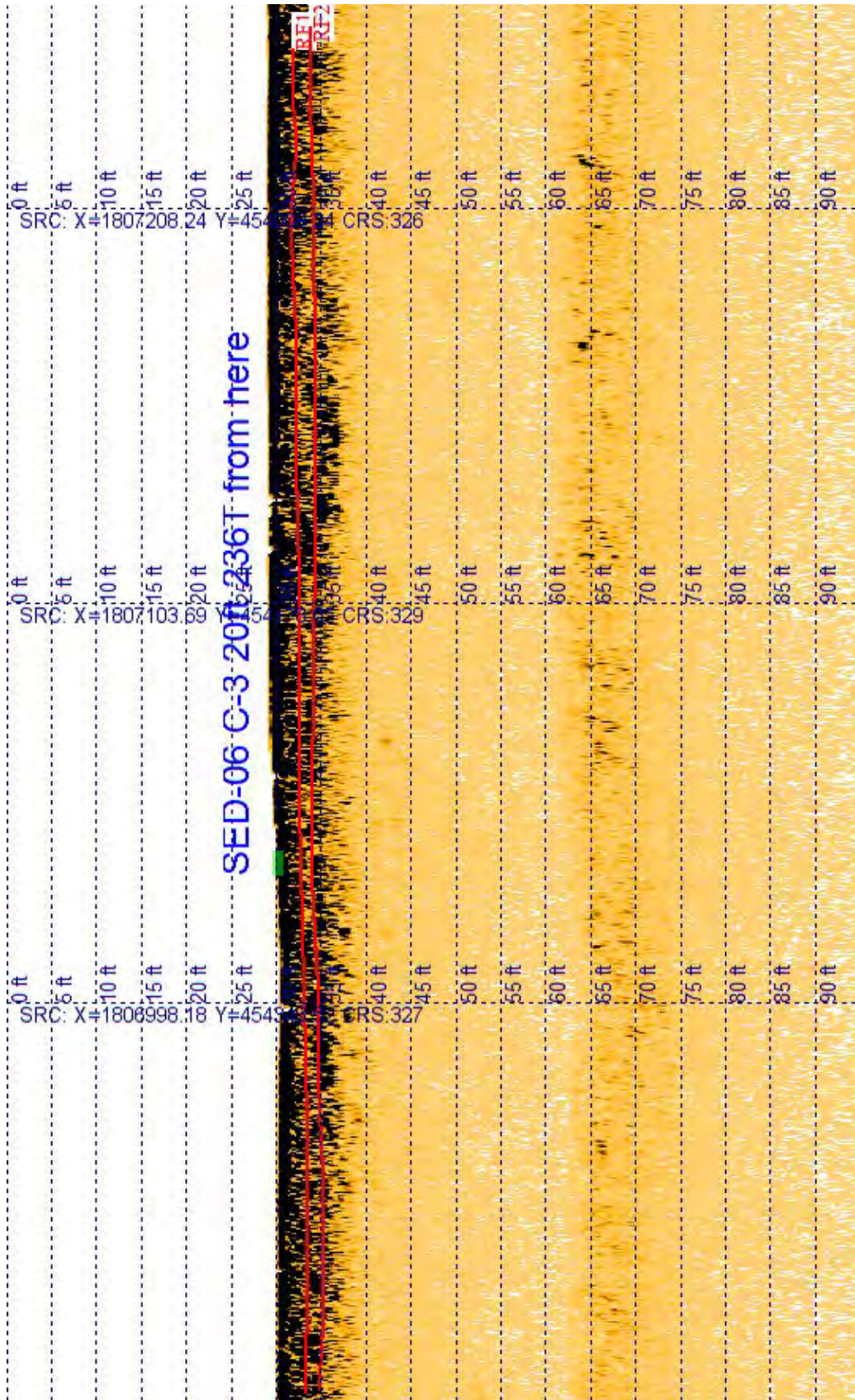


Photo 68: 9NW



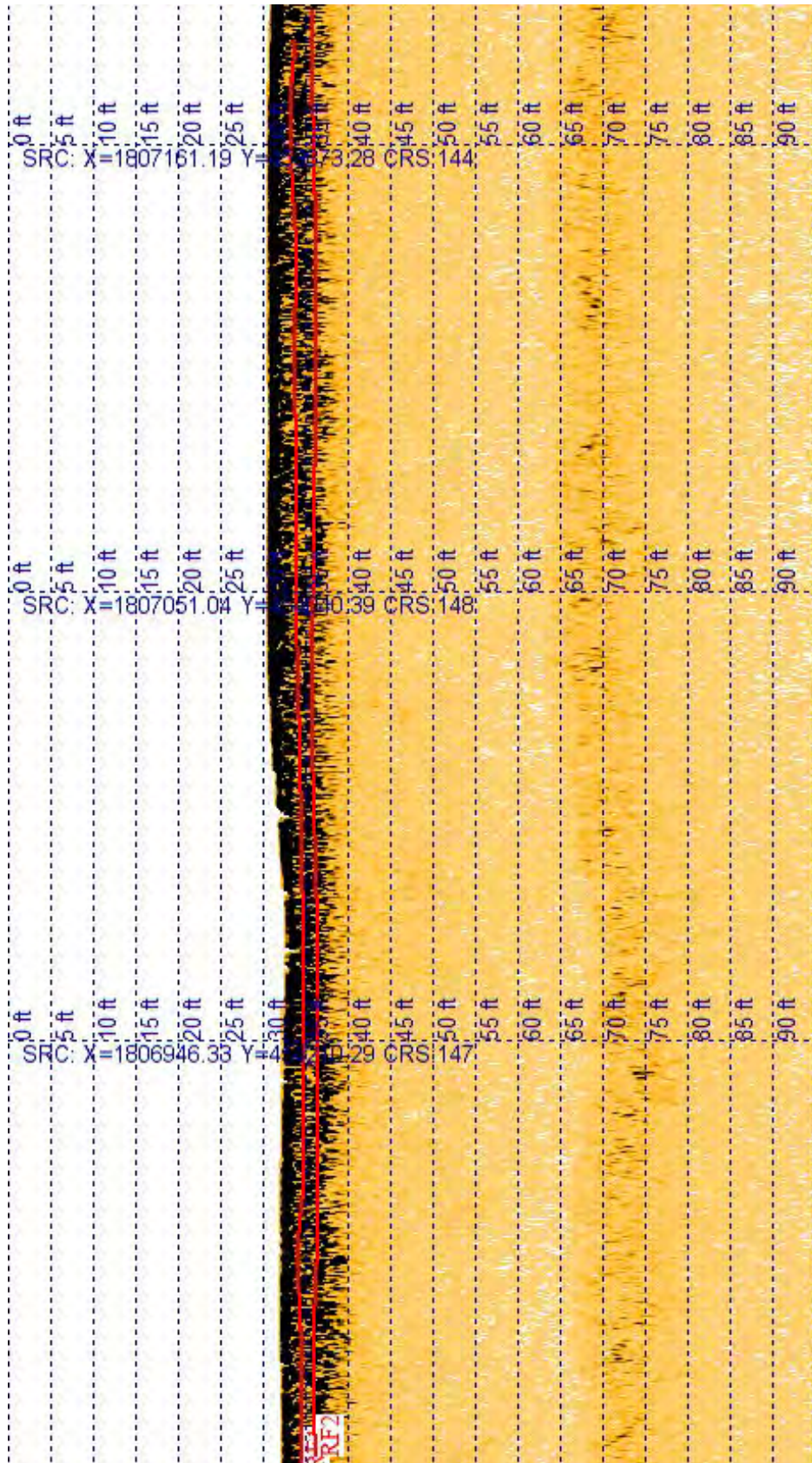


Photo 69: 11SE



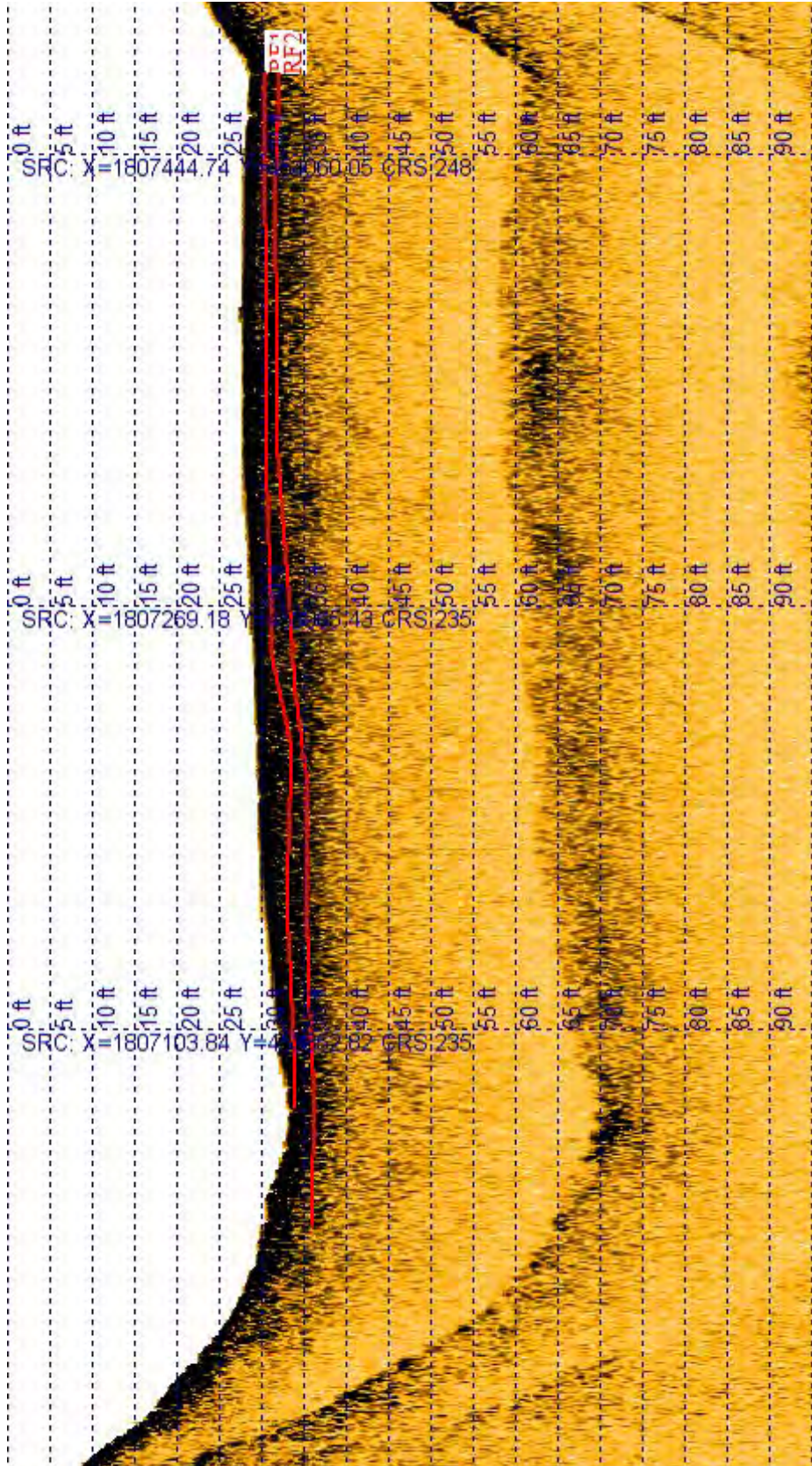


Photo 70: 11SW



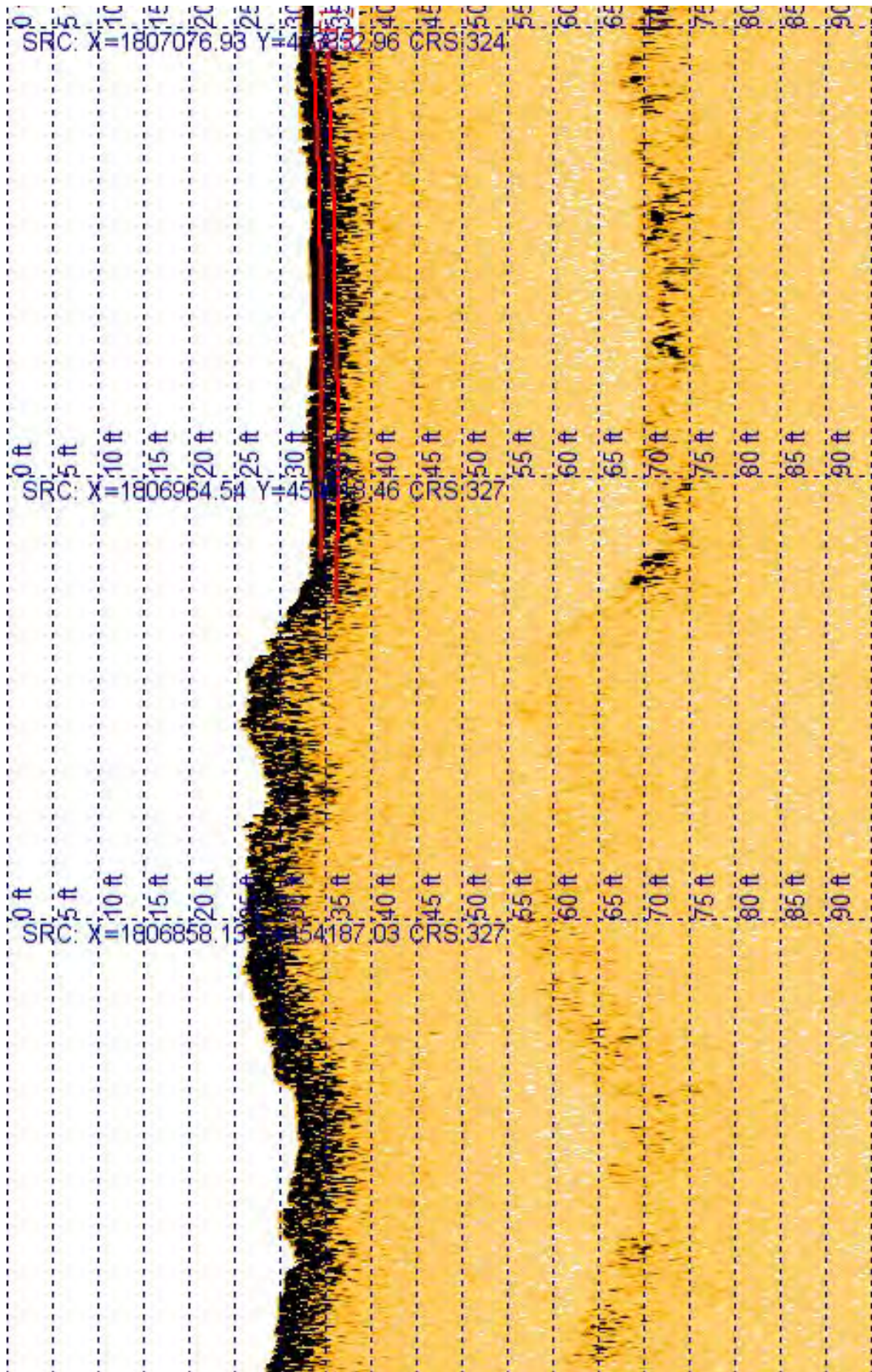


Photo 71: 13NW



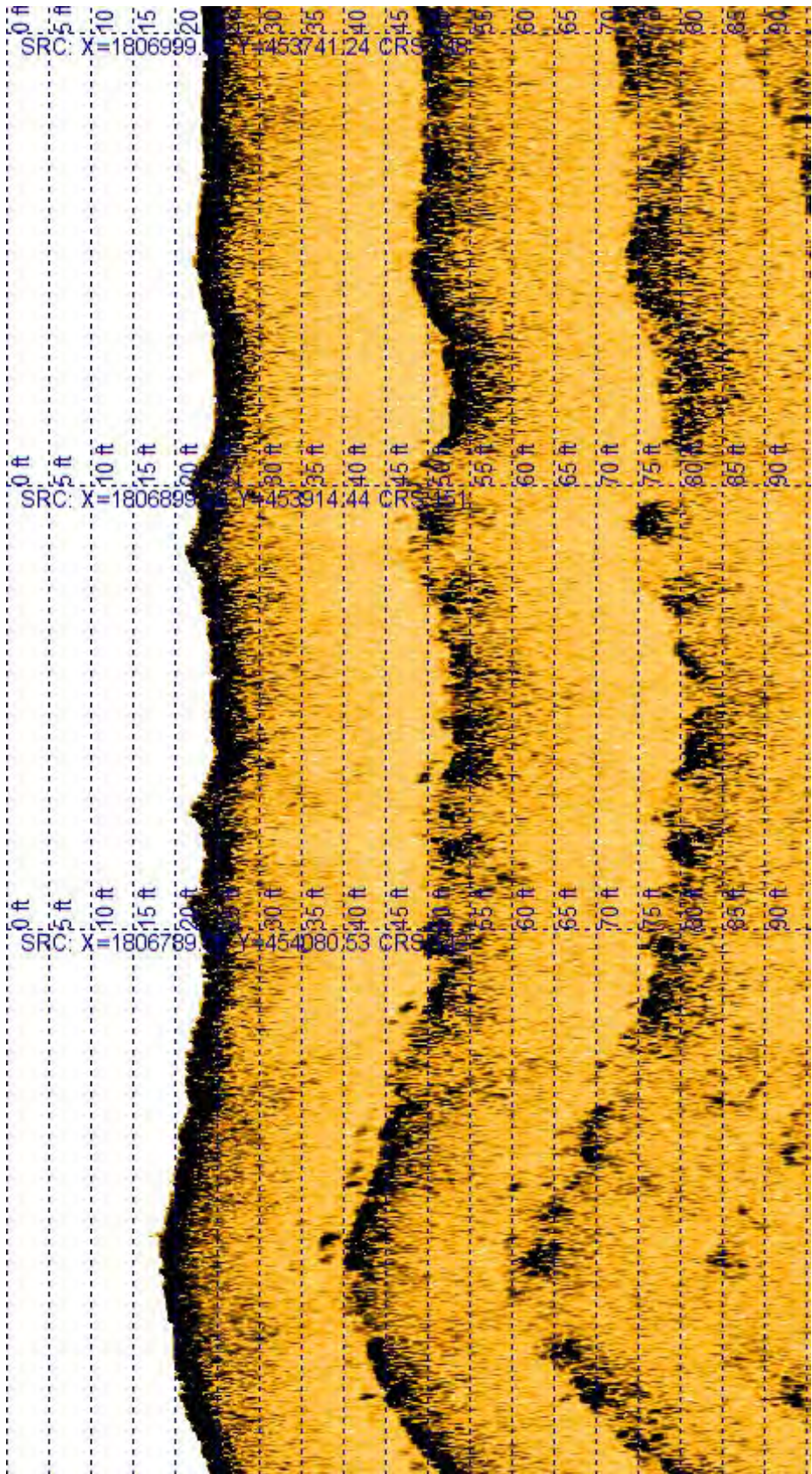


Photo 72: 15SE



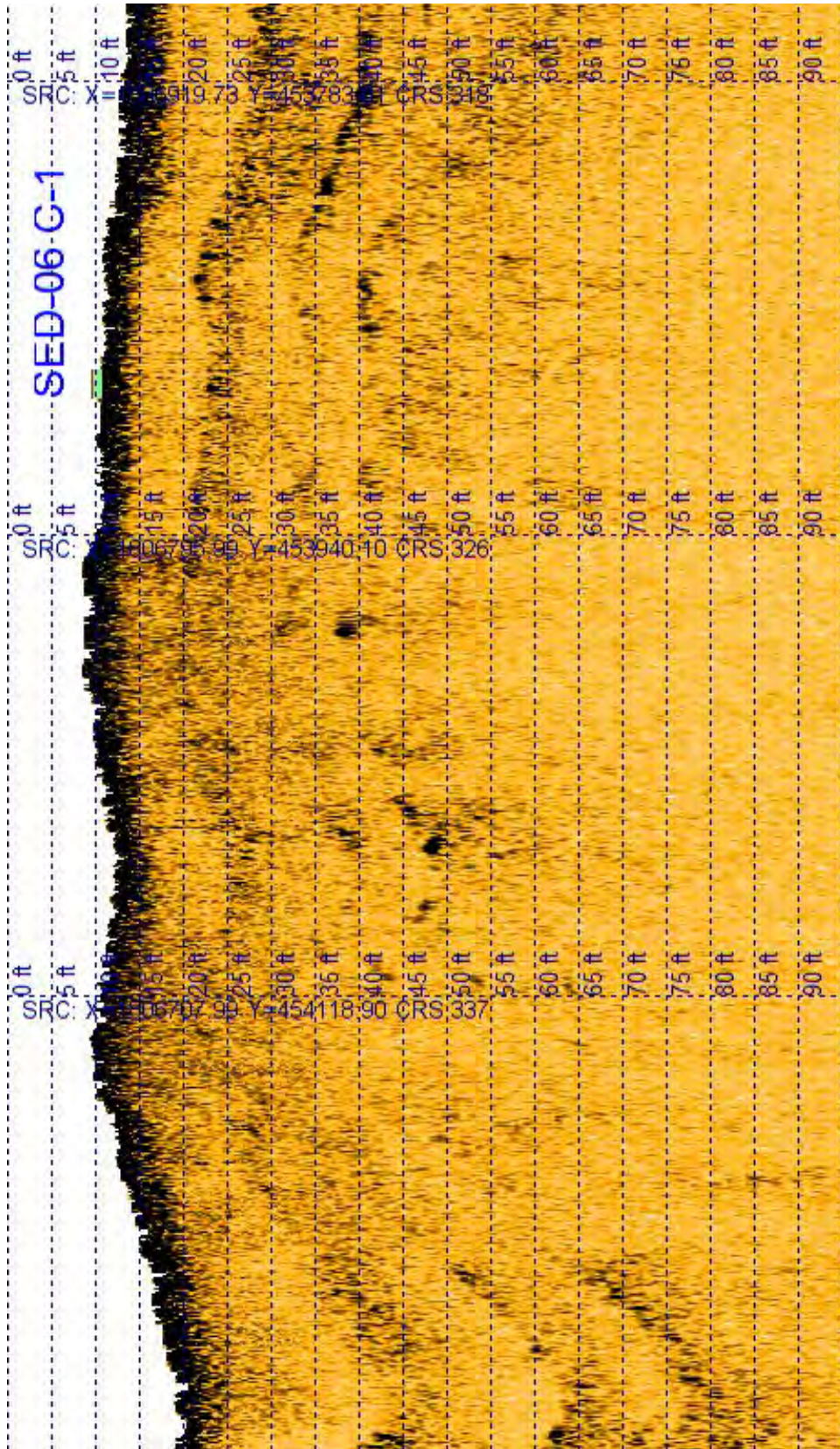
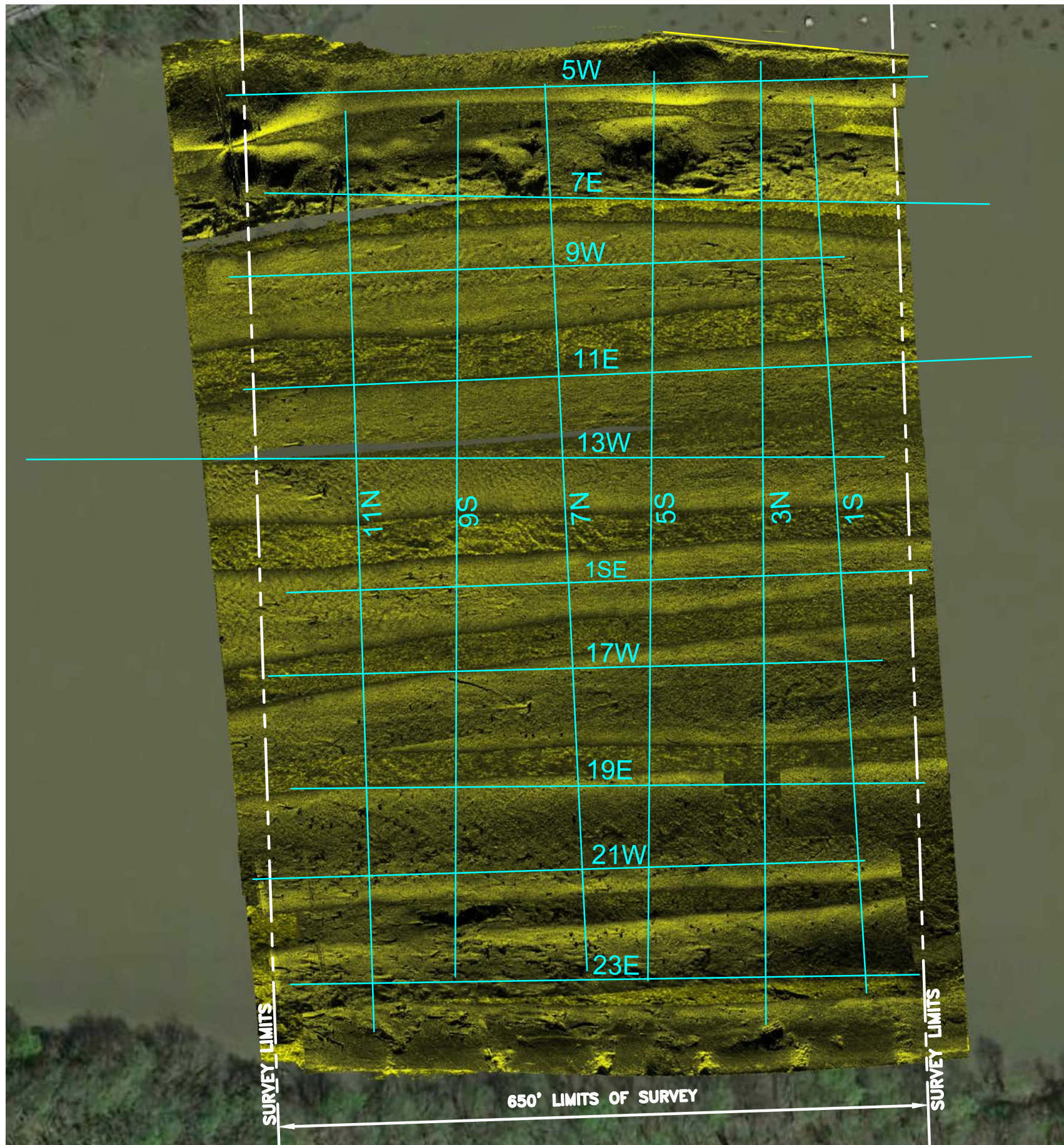


Photo 73: 17NW



**SED07**



**SUB-BOTTOM TRACK PLAN**

SCALE: 1" = 120'



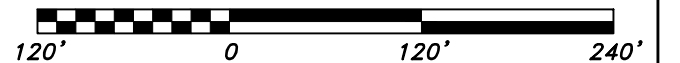
**LEGEND:**


— DENOTES THE LOCATION OF SUB-BOTTOM PROFILER RUN.

**GENERAL NOTES:**

1. THE SUB-BOTTOM PROFILER WAS PERFORMED ON AUGUST 17, 2015 BY W.J. CASTLE, P.E. & ASSOCIATES, P.C.

SCALE: 1" = 120'-0"



DATE	NO.	REVISIONS	BY
SED07 SUB-BOTTOM TRACKS			
WEST VIRGINIA AMERICAN WATER ALTERNATE RAW WATER INTAKE STUDY ON KANAWHA RIVER CHARLESTON, WEST VIRGINIA CLIENT: POTESTA & ASSOCIATES, INC.			
 W.J. Castle PE & Associates		<i>Consulting Engineers</i> 1345 ROUTE 38 WEST HAINESPORT, NJ 08036	
SCALE AS SHOWN	DRAWN BY GPD	CHECKED BY W.J.C.	JOB NO. 10-2211-15
		DATE 10/16/15	DRAWING No. 1 OF 1



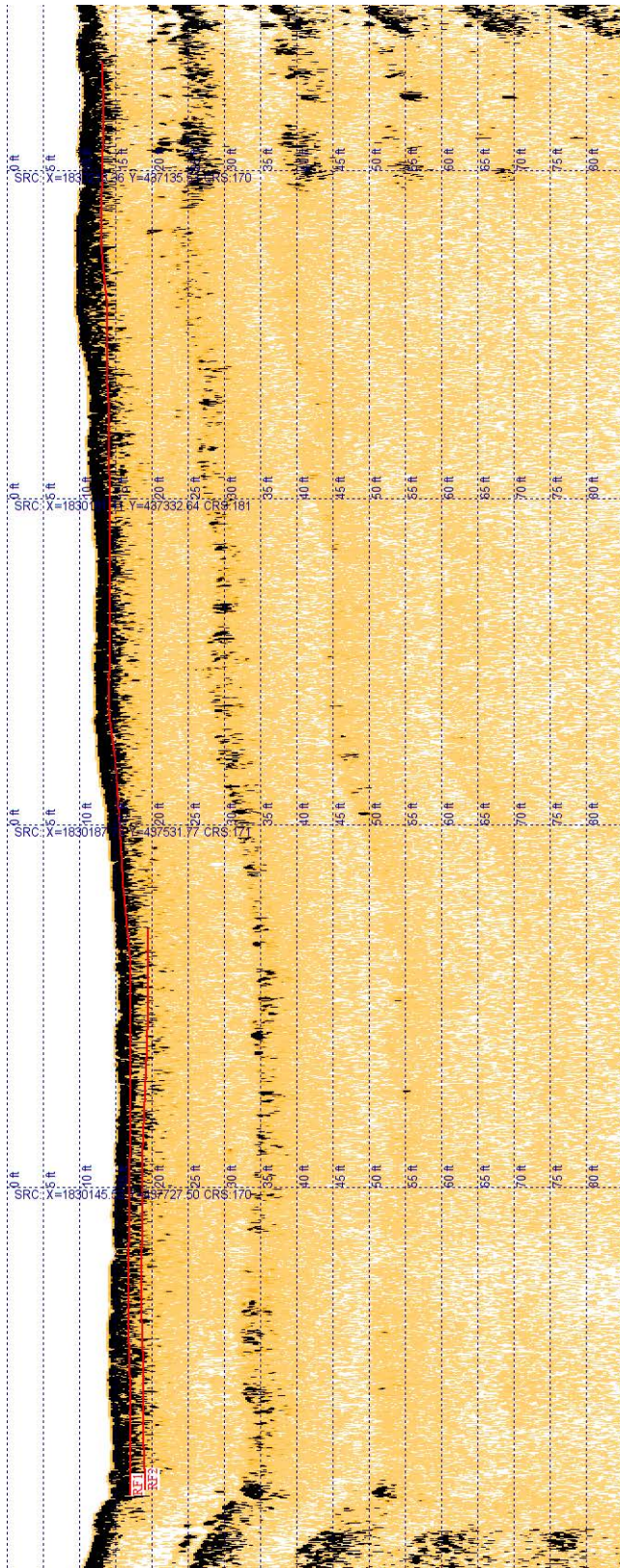


Photo 74: 15



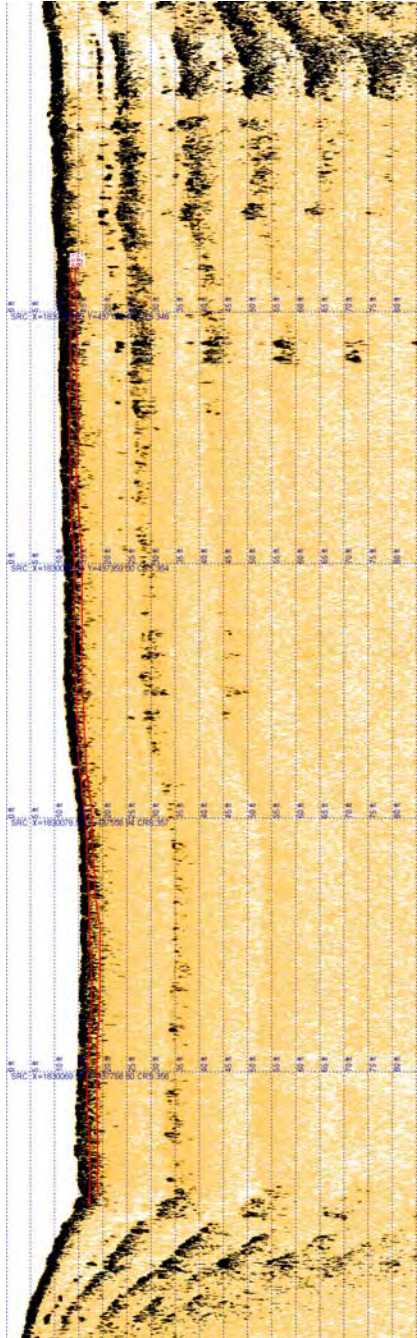


Photo 75: 3N

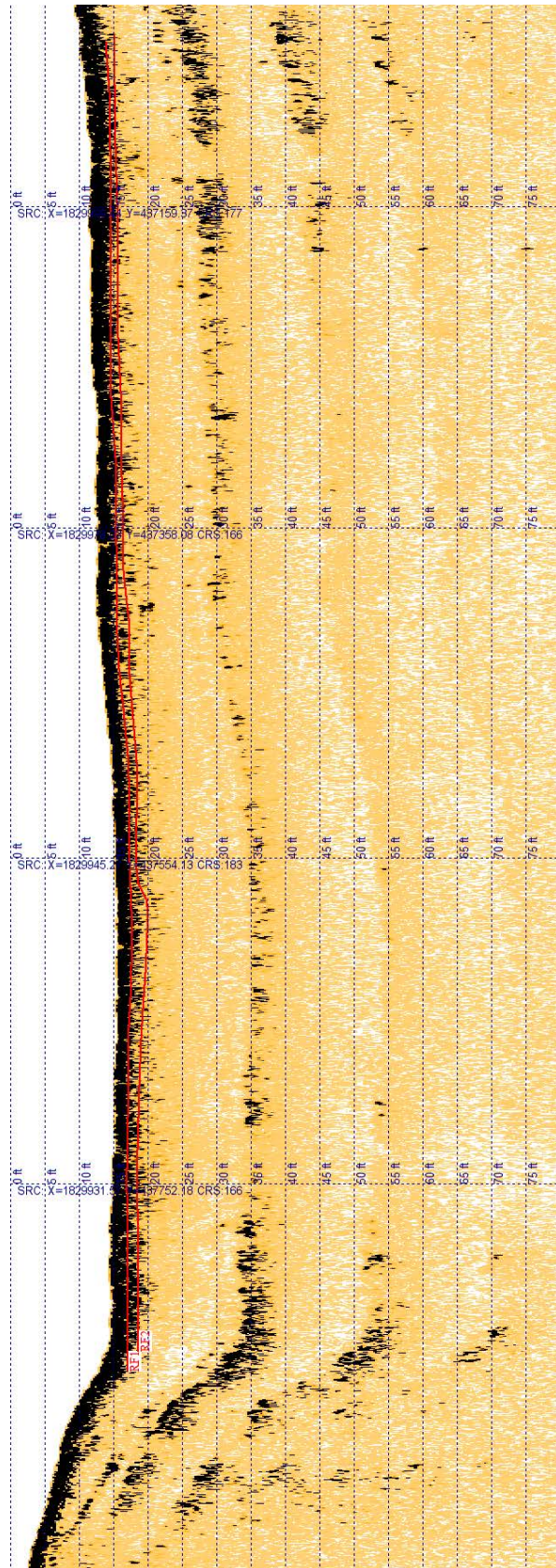


Photo 76: 55



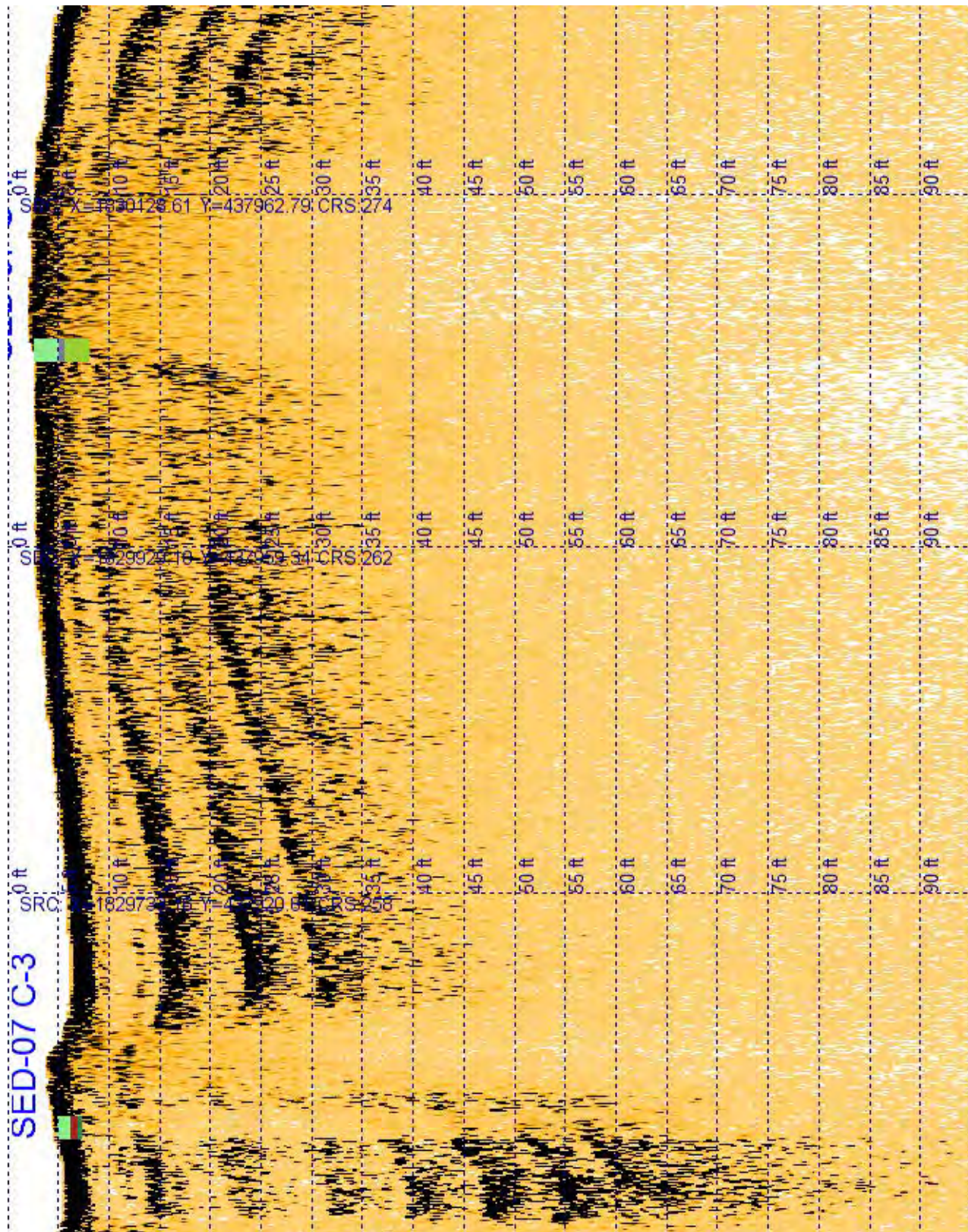


Photo 77: 5W



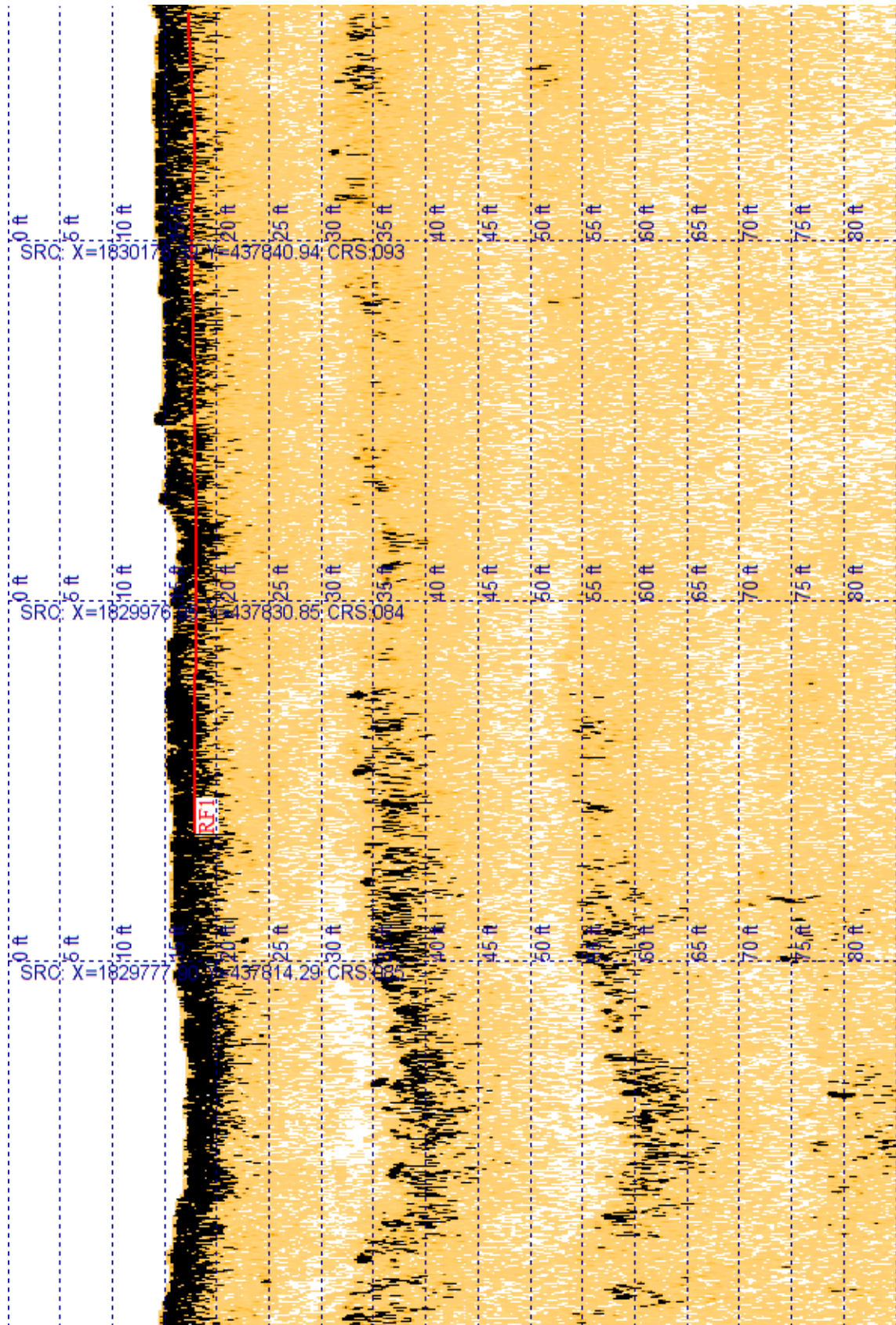


Photo 78: 7E

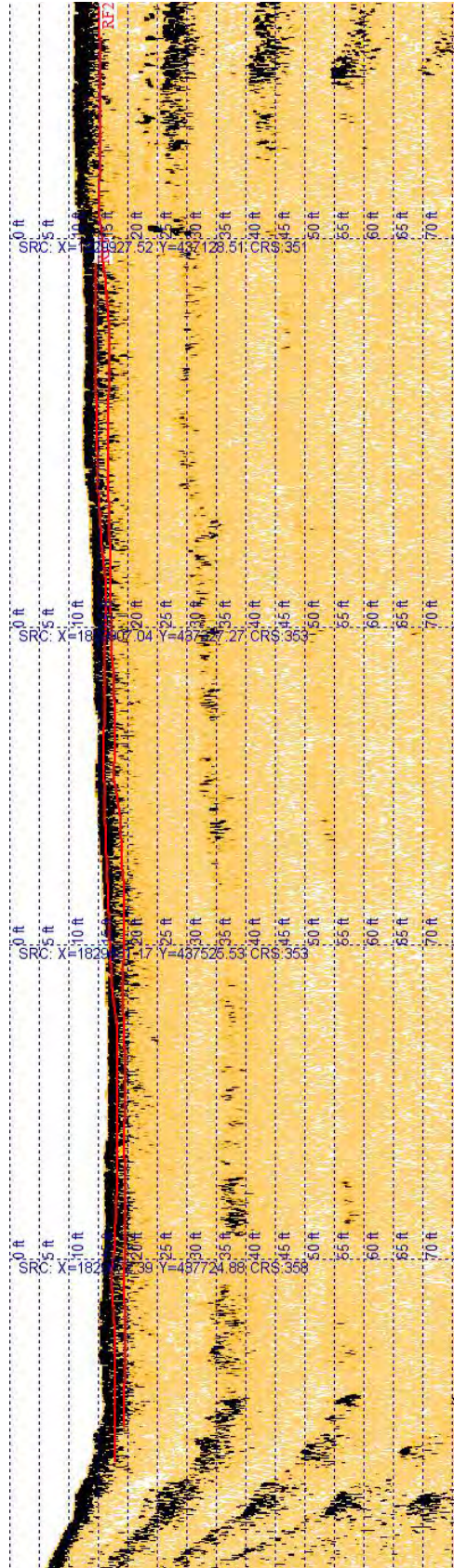


Photo 79: 7N



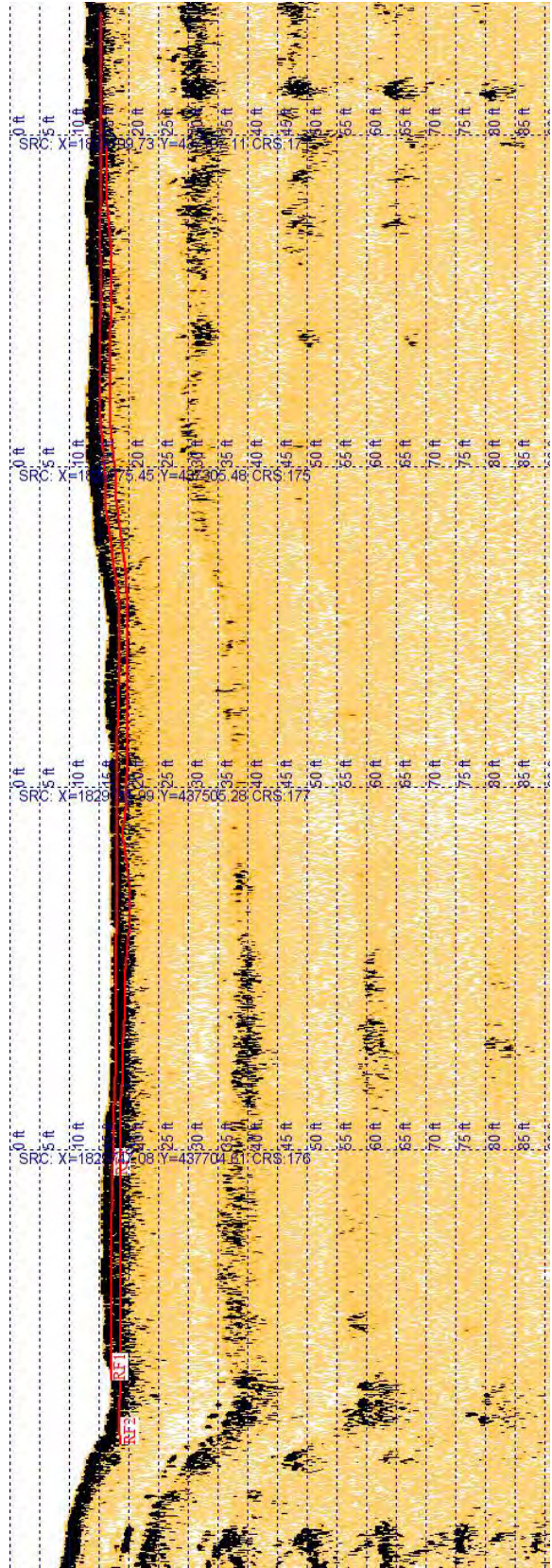


Photo 80: 9S



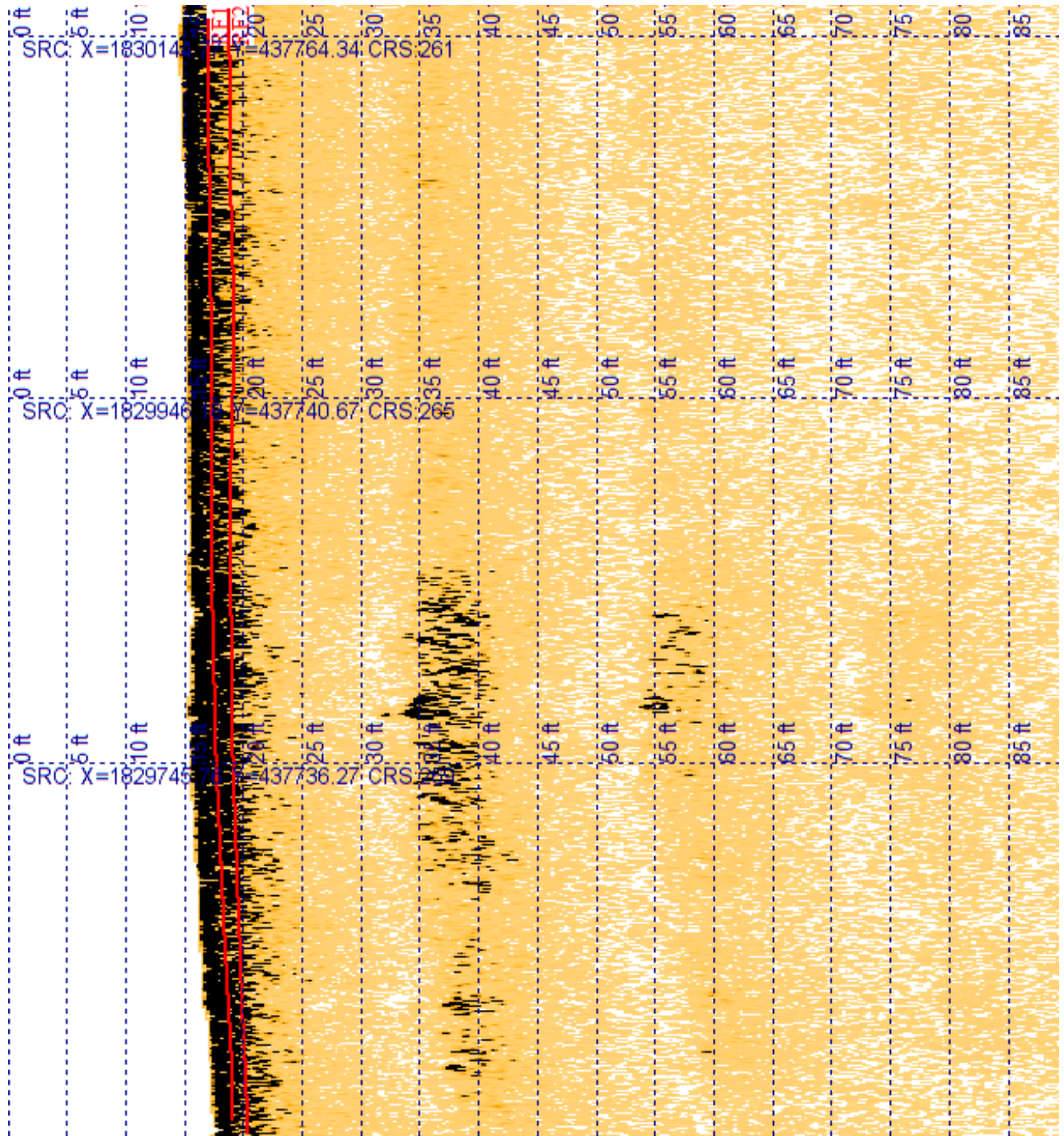


Photo 81: 9W

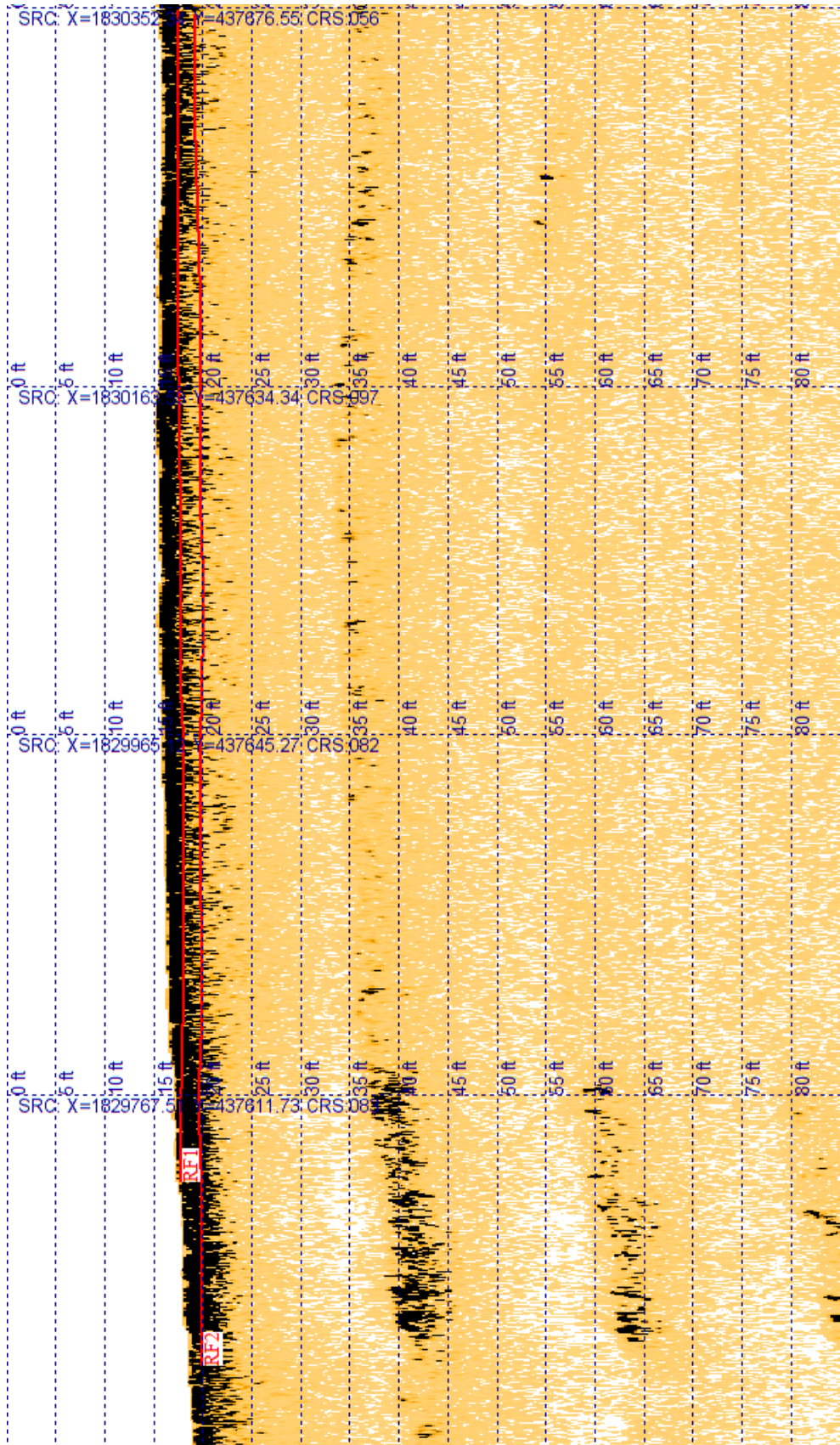


Photo 82: 11E



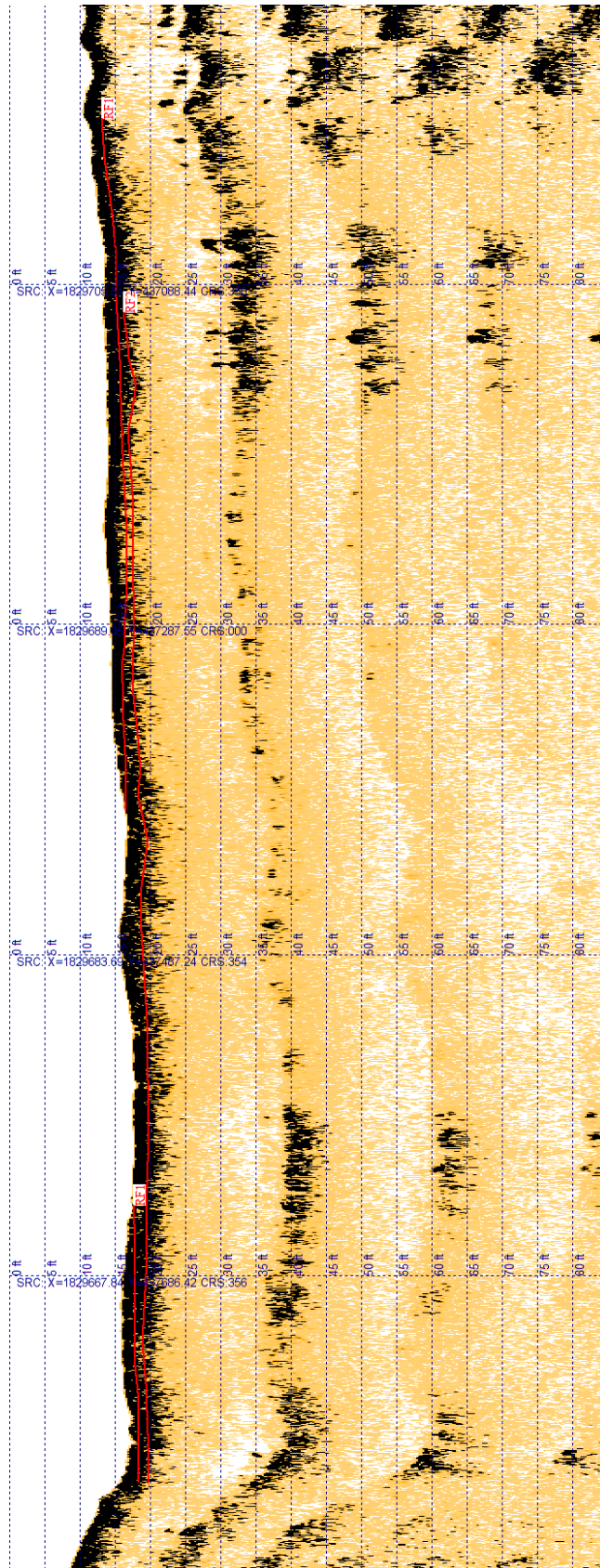


Photo 83: 11N



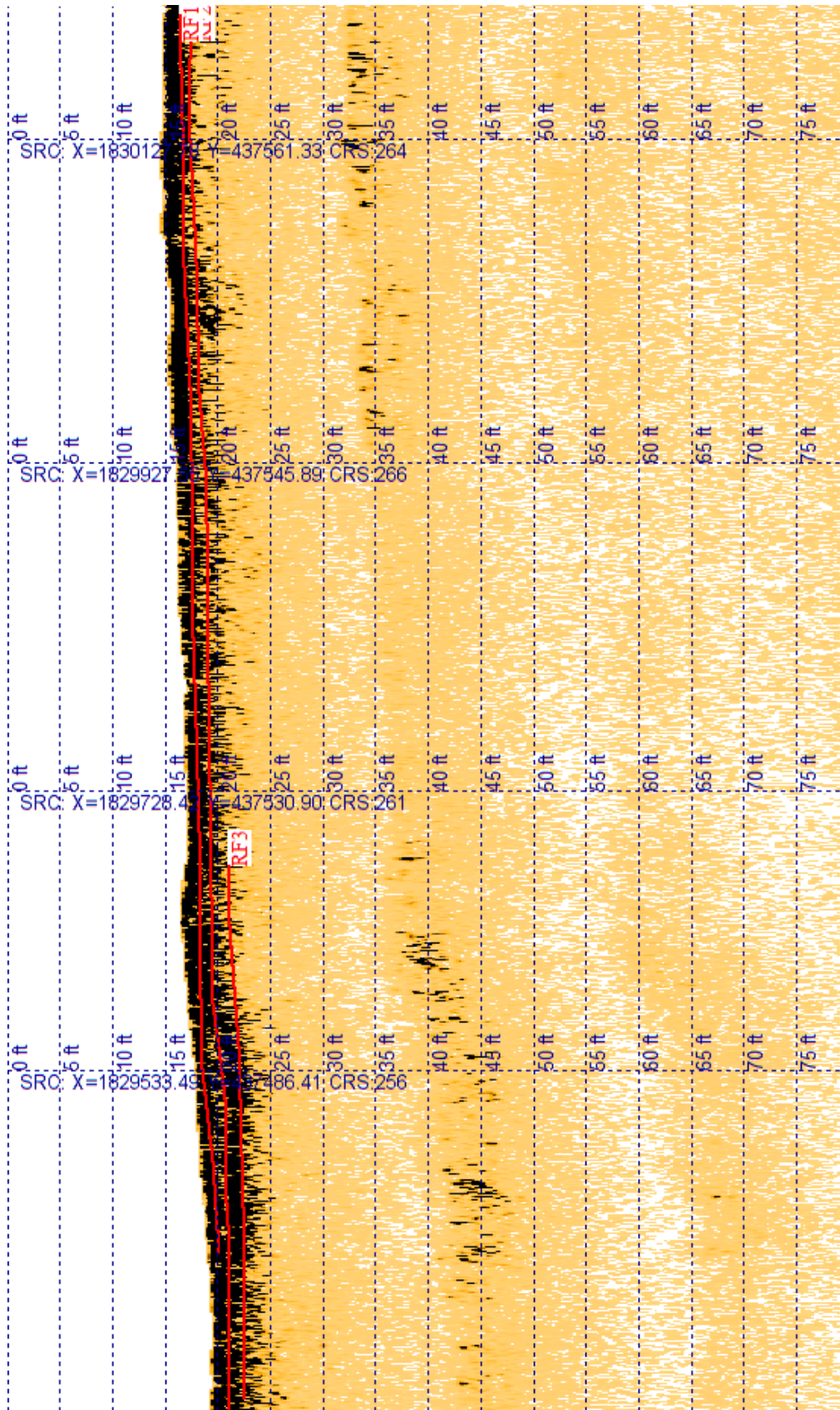


Photo 84: 13W



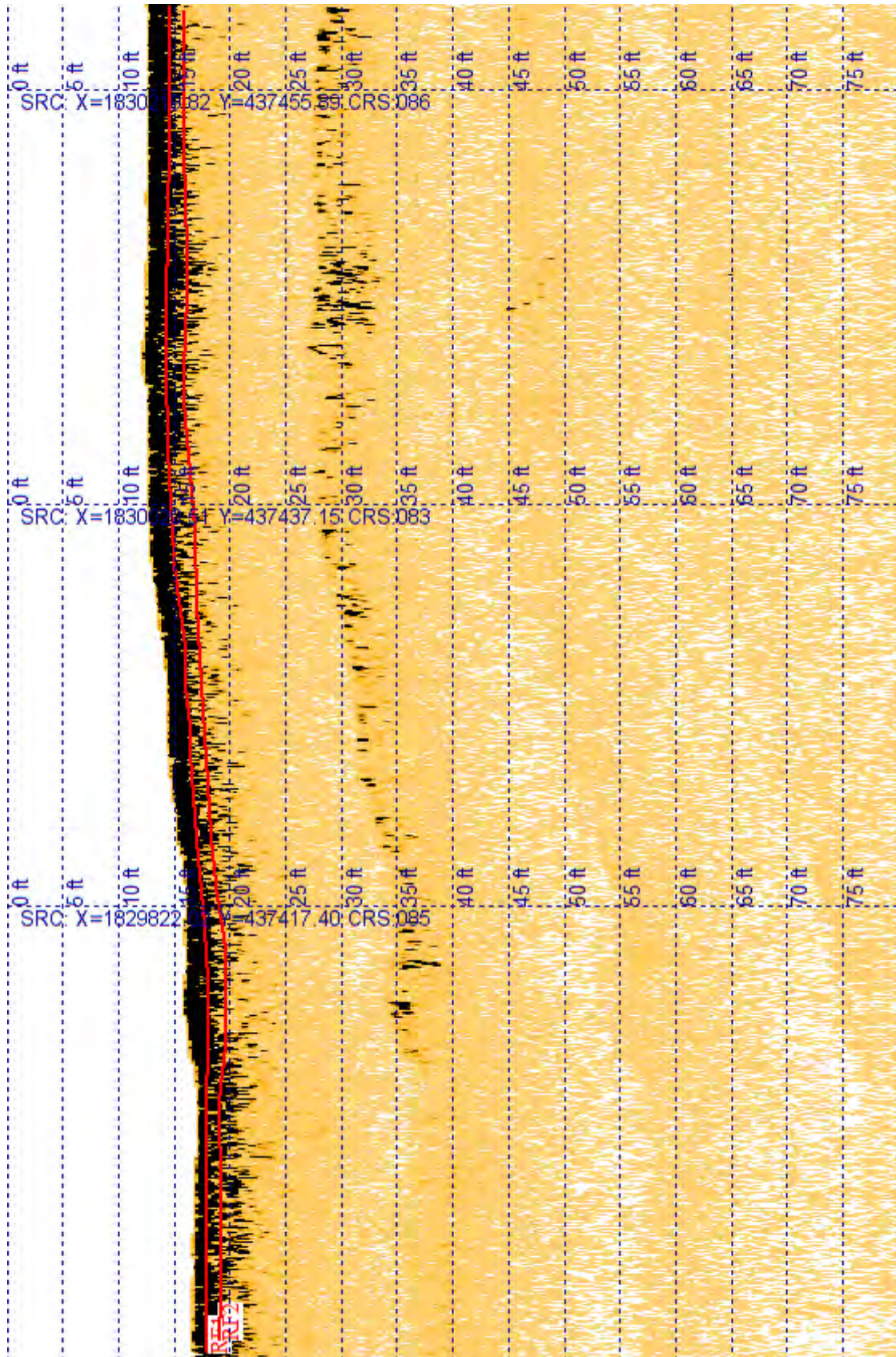


Photo 85: 15E



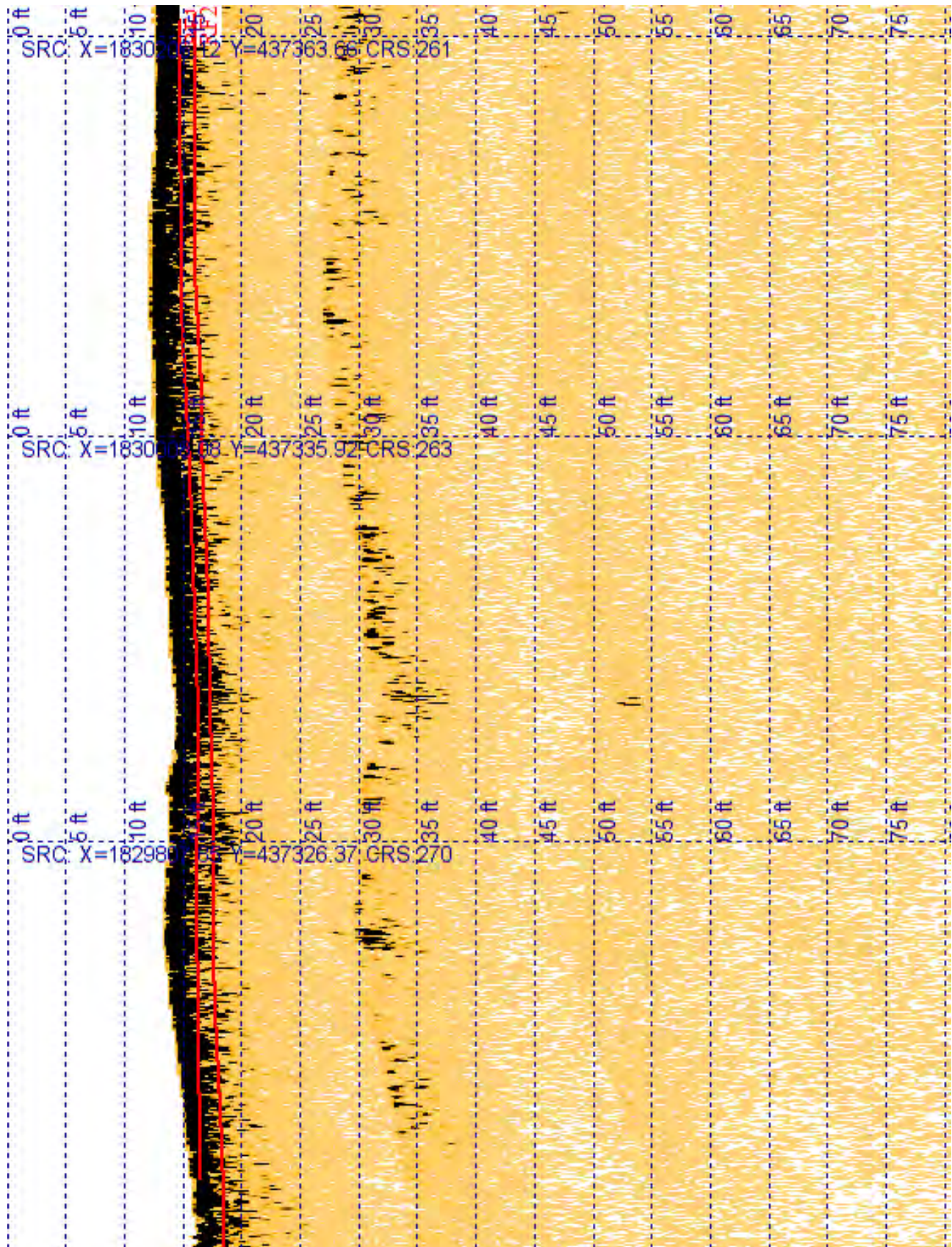


Photo 86: 17W



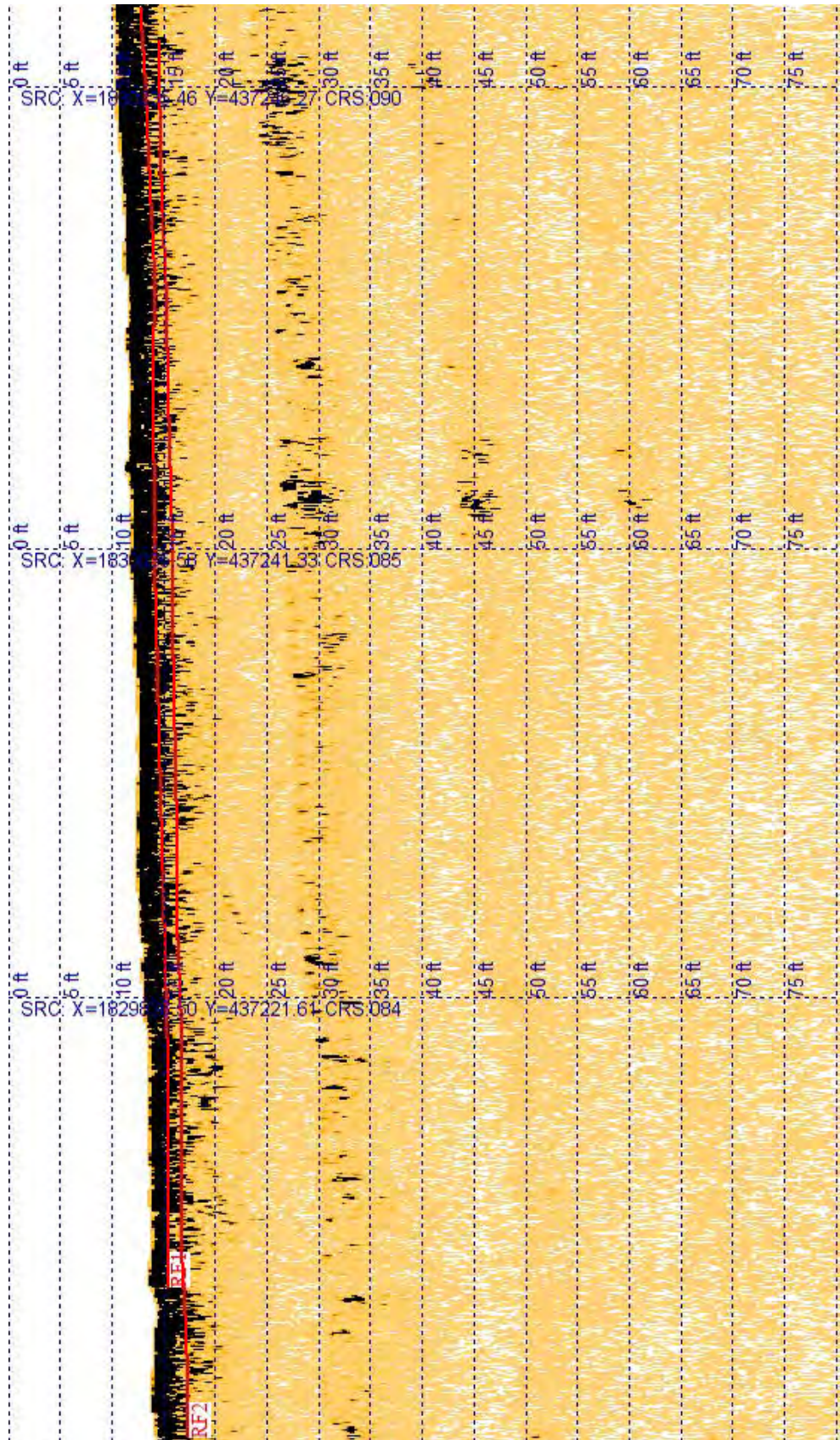


Photo 87: 19E



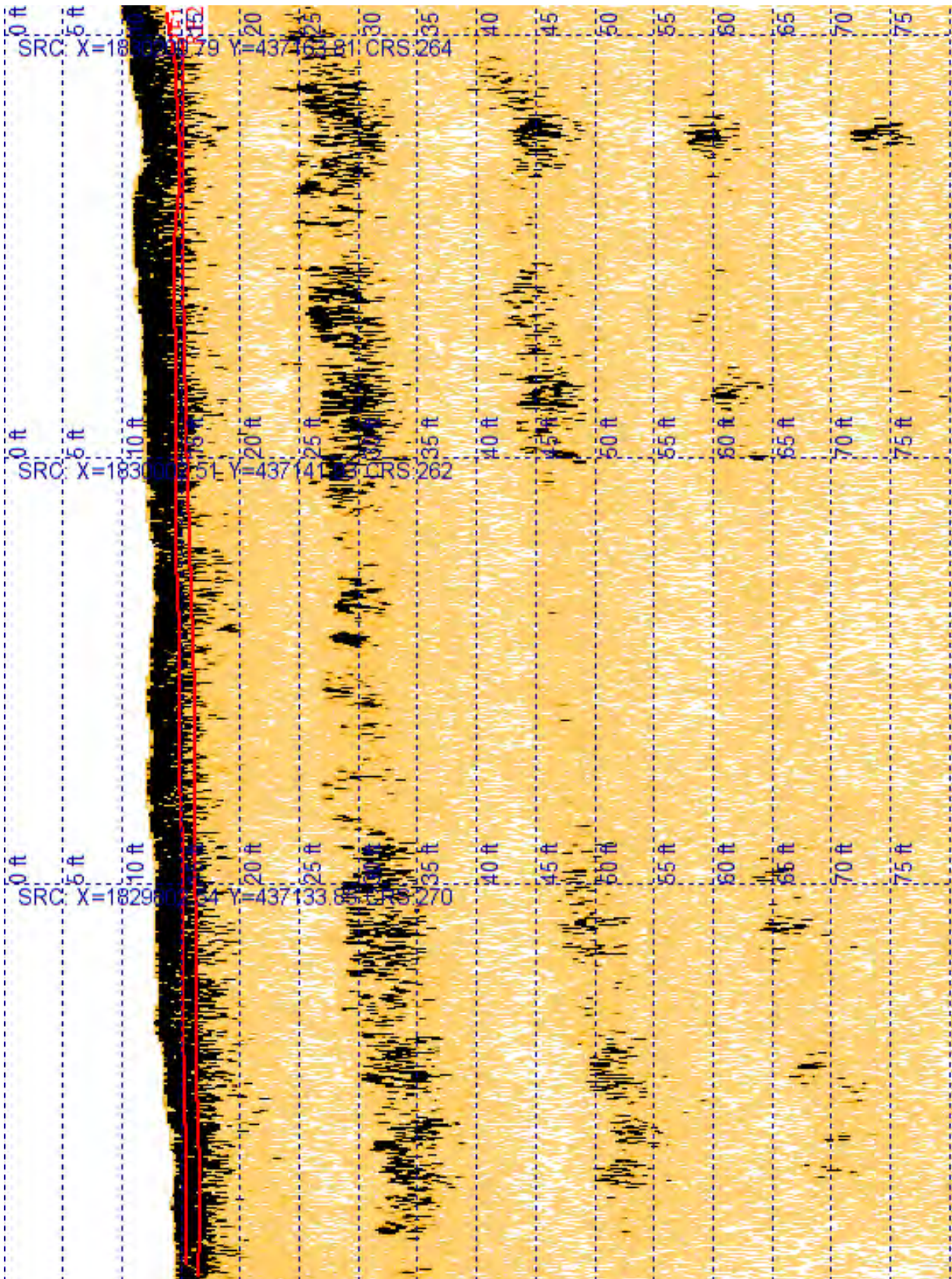


Photo 88: 21W



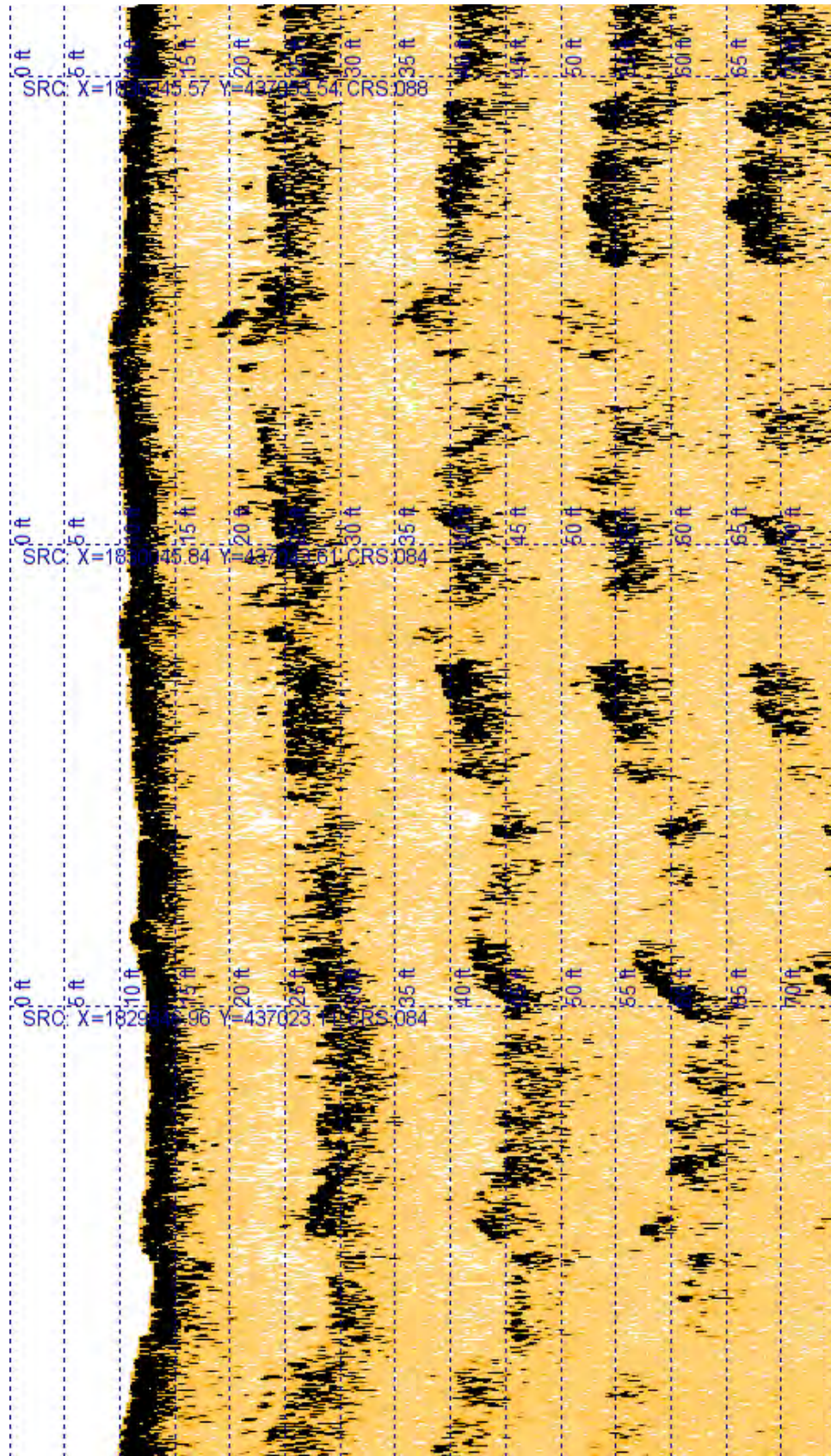


Photo 89: 23E



# *APPENDIX E*

### Abbreviations and Acronyms

mg/Kg	Milligram per Kilogram
mg/Kg-dry	Milligram per Kilogram - Dry
wt%	Percent Moisture
µg/Kg	Microgram per Kilogram
ng/Kg	Nanogram per Kilogram

### Data Qualifiers

NA	No data; sample was either not collected or was not analyzed.
B	Analyte detected in method blank.
E	Result exceeded instrument calibration.
I	Interference present.
J	Estimated value between the PQL and the MDL.
U	Analyte not detected at the MDL or MRL.

Total Organic Carbon

Table with columns for Analyte, Units, Consensus-Based PEC (Probable Effect Concentration, Max. Reported Concentration), and seven sampling sites (SS1-SS7) with RDB and LDB values for Oct 2015 and May 2016.

Metals by ICP

Large table listing various metals (Aluminum, Arsenic, Barium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silica, Silicon, Silver, Sodium, Strontium, Thallium, Vanadium, Zinc) with their units, PEC values, and RDB/LDB data for seven sampling sites.

Mercury

Table for Mercury showing units, PEC values, and RDB/LDB data for seven sampling sites.

Percent Moisture

Table for Percent Moisture showing units, PEC values, and RDB/LDB data for seven sampling sites.

PCBs

Table for PCBs listing specific congeners (Aroclor 1016, 1221, 1232, 1242, 1248, 1254, 1260) and Total PCBs, with units, PEC values, and RDB/LDB data for seven sampling sites.





Volatile Organic Compounds

Table with columns for Analyte, Units, Consensus-Based PEC (Probable Effect Concentration, Max. Reported Concentration), and seven sampling sites (SS1-SS7) with RDB and LDB values for Oct 2015 and May 2016.

Dioxins

Table for Dioxins with columns for Analyte, Units, Consensus-Based PEC, and seven sampling sites (SS1-SS7) with RDB and LDB values for Oct 2015 and May 2016.

# *APPENDIX F*





**Photo 1: Bomb Sampling Device**



7012 MacCorkle Avenue, SE  
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Phone: (304) 342-1400  
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**Photo 2: LiquiThief Sterile Sampler**



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**Photo 3: AMS Multi-Sludge and Sediment Sampler**



**Photo 4: Petit Ponar Sampler**



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**Photo 5: AMS Multi-Stage Sludge and Sediment Sampler**

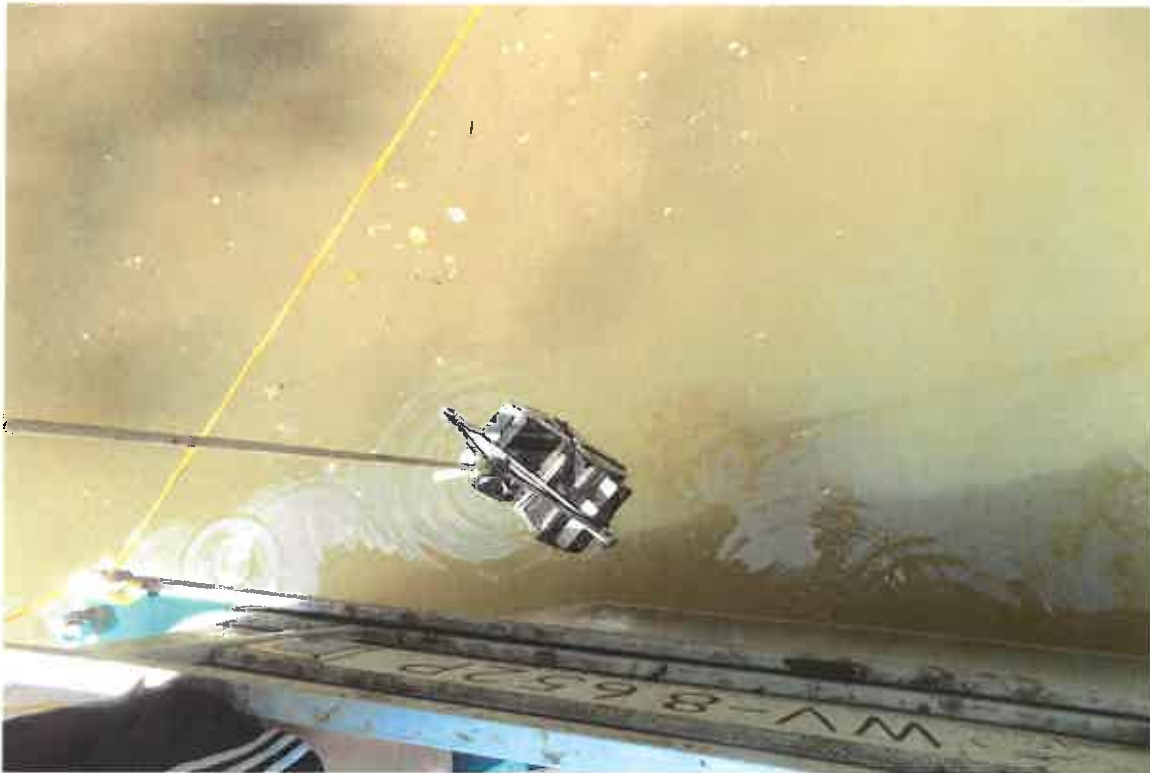


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**Photo 6: Petite Ponar**



**Photo 7: Petite Ponar Being Deployed**



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**Photo 8: Removing Sediment from Petite Ponar into Metal Can**



**Photo 9: Removing Sediment from Petite Ponar into Metal Bucket**





Photo 10: Removing Sediment from Petite Ponar into Metal Bucket

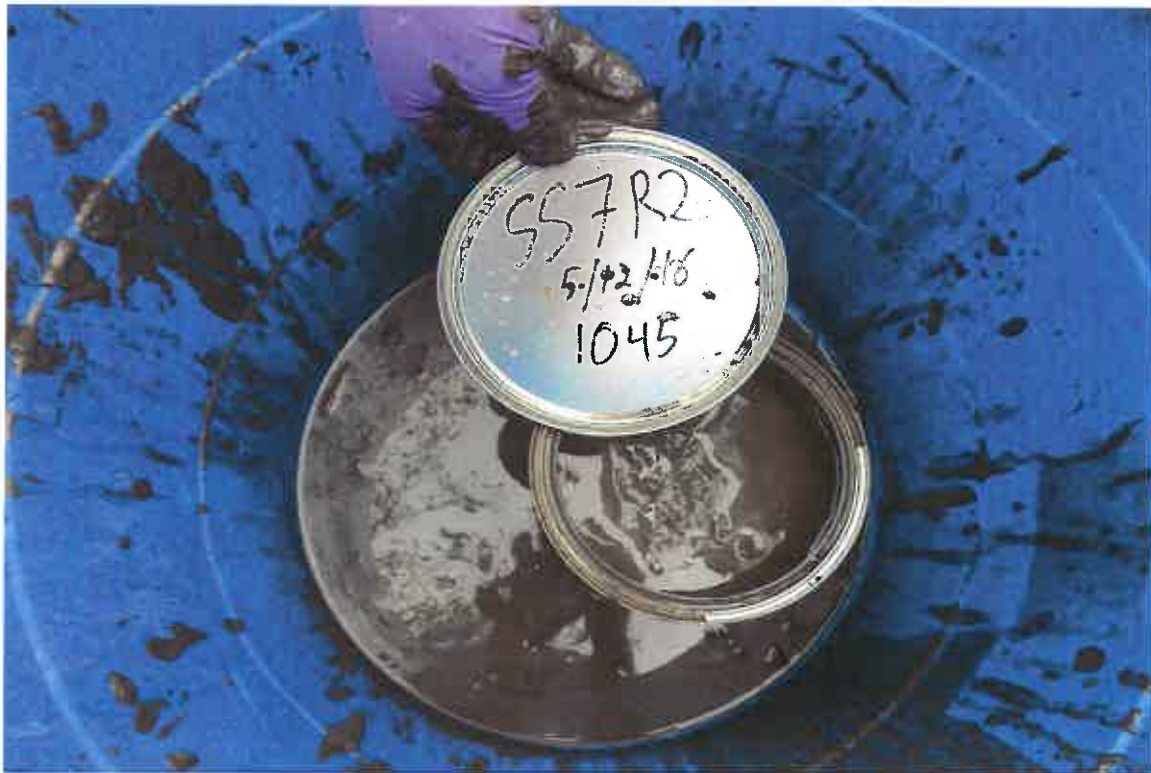


Photo 11: Full Metal Can of Sediment at Location SS7R2



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**Photo 12: Decontaminating Steel Bucket with Liquinox® Water Solution**



**Photo 13: Decontaminating Metal Bucket with Liquinox® Water Solution**



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**Photo 14: Decontaminating Metal Bucket with Liquinox® Water Solution**



**Photo 15: Terra Core™ Sampler**



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**Photo 16: Terra Core™ Sampler and 40 mL Vial**



**Photo 17: Placing Sample from Terra Core™ Sampler into 40 mL Vial**



**Photo 18: Placing Sample from Terra Core™ Sampler into 40 mL Vial**



**Photo 19: Sediment Placed in 8-ounce Glass Soil Jar**



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**Photo 20: Sediment Placed in 8-ounce Glass Soil Jar**



**Photo 21: Sediment Placed in 8-ounce Glass Soil Jar from Metal Bucket**



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**Photo 22: Samples Custody Sealed and Placed in Zip-Lock Bag**



**Photo 23: Samples Placed in Cooler on Ice**



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