*Data Evaluation Report*

# Velsicol Operable Unit 3

# St. Louis, Gratiot County, Michigan

## Remedial Investigation/Feasibility Study

## WA No. 174-RICO-0532/Contract No. EP-S5-06-01

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CH2MHILL®

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# Acronyms and Abbreviations

| | |
|---|---|
| bgs | below ground surface |
| DDT | dichlorodiphenyl trichlorethane |
| DPT | direct push technology |
| DS | downstream |
| GPS | global positioning system |
| HBB | hexabromobenzene |
| MDEQ | Michigan Department of Environmental Quality |
| µg/kg | micrograms per kilogram |
| µg/L | micrograms per liter |
| mg/kg | milligram per kilogram |
| OU | operable unit |
| PAHs | polycyclic aromatic hydrocarbons |
| PBB | polybrominated biphenyl |
| QAPP | Quality Assurance Project Plan |
| RI | remedial investigation |
| SVOCs | semivolatile organic compounds |
| TOC | total organic carbon |
| EPA | U.S. Environmental Protection Agency |
| Velsicol | Chemical Corporation |
| VOC | volatile organic compound |
| Weston | Weston Solutions of Michigan, Inc. |

SECTION 1

# Introduction

This data evaluation report summarizes the results of the remedial investigation (RI) activities completed at the Velsicol Chemical Site Operable Unit 3 (OU3) from November 2013 through January 2015 and evaluates the usability of the data collected. A detailed summary of the work completed, evaluation of the data collected, and the findings and conclusions of the RI activities will be included in the RI report. The work was performed for the U.S. Environmental Protection Agency (EPA) in accordance with Work Assignment No. 174-RICO-0532 under Contract No. EP-S5-06-01, under the Statement of Work dated May 2, 2013.

OU3 consists of sediment in the Pine River and associated floodplains from the St. Louis hydroelectric dam downstream to the Pine River's confluence with the Chippewa River near Midland, Michigan. The Michigan Department of Environmental Quality (MDEQ) conducted an initial baseline investigation in OU3 from 2003 to 2011. MDEQ divided OU3 into five segments referenced as downstream (DS) segments DS-1, DS-1.25, DS-1.5, DS-1.75, and DS-2. For consistency, EPA used the same referencing scheme for the RI activities conducted from 2013 to 2015. All RI activities conducted by EPA from 2013 through 2015 were located within river segments DS-1 and DS-1.25, which are located between the St. Louis hydroelectric dam and Redstone Road. The location of river segments DS-1 and DS-1.25 are depicted on Figure 1.

SECTION 2

# Summary of Investigation Activities

The RI activities were conducted to supplement the previous OU3 baseline investigation conducted by MDEQ in 2003/2005 and 2010/2011 to further characterize the extent of dichlorodiphenyl trichlorethane (DDT) isomers, polybrominated biphenyl (PBB), hexabromobenzene (HBB), and polycyclic aromatic hydrocarbon (PAH) contamination in floodplain soils and river sediments in DS-1 and DS-1.25. Findings from the EPA RI and MDEQ initial baseline investigation will support selection of a remedy that eliminates, reduces, or controls risks to human health and the environment.

Field investigation activities for this RI included collecting soil samples from 13 floodplain areas, sediment samples from 16 in-stream transects and 24 depositional areas, surface water samples from 10 locations located in DS-1 and DS-1.25, and fish samples from DS-1.25 and a reference area located upstream of the St. Louis hydroelectric dam near Alma, Michigan. The activities conducted and data collected by EPA in 2013, 2014, and 2015 are summarized in the following subsections.

## 2.1 Floodplain Sample Collection

Floodplain sampling was performed by Weston Solutions of Michigan, Inc. (Weston) for MDEQ in 2003/2005 and 2010/2011 as part of the OU3 initial baseline investigation. Weston collected soil samples from two floodplains (FP-1 and FP-2) within river segment DS-1.

Based on the analytical data from floodplains FP-1 and FP-2, additional floodplain sampling was required to characterize the extent of DDT, HBB, and PBB impact in floodplains located in river segment DS-1. In July 2013, EPA, MDEQ, Weston, and CH2M identified eight additional floodplain areas within DS-1 (FP-1.1, FP-1.2, FP1.35, FP-1.4, FP-1.5, FP-1.6, FP-1.7, and FP-2.1). All of the additional floodplains were sampled during the RI activities in 2013, with the exception of FP-2.1, which was sampled during the 2014 RI activities. In 2014, Floodplain 2.1, the St. Louis High School athletic fields, FP-0.5 located in DS-1, and three additional floodplains (FP-1.25-1, FP-1.25-4, and FP-1.25-6) located in DS-1.25 were sampled. The 2 floodplains sampled by MDEQ and 13 additional floodplains sampled by EPA are depicted on Figures 2, 3, and 4.

The 2013 and 2014 sample locations were determined using 100-foot grid spacing in each floodplain. Floodplain cores were collected using 2-inch rigid polycarbonate tubing driven to refusal. A clean tube was used for each core.

The 2015 St. Louis High School athletic field sampling was conducted on a 50-foot grid spacing to more accurately delineate the extend of DDT-, HBB-, and PBB-impacted soil on the St. Louis High School athletic fields. Cores were collected using a 2-inch-diameter macro core sampler pushed by a direct push technology (DPT) drill rig.

Floodplain cores were taken to the site trailer, where they were characterized and processed as specified in the Quality Assurance Project Plan (QAPP) (CH2M HILL 2013). All floodplain samples were analyzed for all six DDT isomers (i.e., 4,4-DDT; 4,4-DDD and 4,4-DDE; 2, 4-DDT; 2,4-DDD; and 2,4-DDE), PBB, HBB, total organic carbon (TOC), and grain size. The EPA results are reported for each DDT isomer, as well as total DDT, which is calculated by summing the six DDT isomers. Only detections were used in the summing calculations, i.e., an isomer not detected above the detection limit was assigned a zero value. All sample locations (with the exception of fish collection sites) were documented by global positioning system (GPS).

### 2.1.1 2013 Floodplain Sample Collection

CH2M sampled floodplains FP-1.1, FP-1.2, FP1.35, FP-1.4, FP-1.5, FP-1.6, and FP-1.7 in December 2013 to delineate the vertical and horizontal extent of contamination in the floodplains. A total of 78 floodplain cores were collected from the 7 floodplains (VCS-OU3-SO001 through VCS-OU3-SO078). Sample locations for each individual floodplain are depicted on Figures 5, 6, 7, 8, 9, 10, 11, and 12.

A total of 205 soil samples (including field duplicates) were collected and analyzed from the 78 floodplain cores. Sample collection was conducted in accordance with Standard Operating Procedure No. 1 of the QAPP (CH2M HILL 2013). In addition to the analytical parameters referenced in Section 2, 13 of the soil samples were also analyzed for PAHs.

### 2.1.2 2014 Floodplain Sample Collection

CH2M sampled floodplains FP-0.5, FP-2.1, FP-1.25-1, FP-1.25-4, and FP-1.25-6 and the St. Louis High School athletic fields in August 2014 to delineate the vertical and horizontal extent of contamination in the floodplains and the overall impact to OU3. A total of 56 floodplain cores (VCS-OU3-SO079 through VCS-OU3-SO134) were collected from the St. Louis High School athletic fields from 0- to 6-inches below ground surface (bgs). The 2014 sample locations (circles) collected from the St. Louis High School athletic fields are depicted on Figures 13 and 14.

A total of 37 floodplain cores (VCS-OU3-SO135 through VCS-OU3-SO171) were collected from floodplains FP-0.5, FP-2.1, FP-1.25-1, FP-1.25-4, and FP-1.25-6. Cores within floodplains FP-0.5, FP-2.1, FP-1.25-1, FP-1.25-4, and FP-1.25-6 were driven to 3 feet bgs or refusal, whichever occurred first. Sample locations for floodplains FP-0.5, FP-2.1, FP-1.25-1, FP-1.25-4, and FP-1.25-6 are depicted on Figures 15, 16, 17, and 18.

A total of 158 soil samples (including field duplicates) were collected and analyzed from the 93 floodplain cores.

### 2.1.3 2015 Floodplain Sample Collection

CH2M performed additional sample collection at the St. Louis High School athletic fields in January 2015 to further delineate the vertical and horizontal extent of contamination. A total of 50 additional floodplain cores (VCS-OU3-SO172 through VCS-OU3-SO221) were collected from the athletic fields. Cores were collected using a 2-inch-diameter macro core sampler pushed by a DPT drill rig. A total of 178 soil samples (including field duplicates) were collected from the 50 additional floodplain cores. The 2015 sample locations (squares) collected from the St. Louis High School athletic fields are depicted on Figures 13 and 14.

A total of 178 soil samples (including field duplicates) were taken from the 50 floodplain cores.

## 2.2 2013 Sediment Sample Collection

Sediment samples were collected by Weston for MDEQ in 2003/2005 and 2010/2011 as part of the OU3 initial baseline investigation. Weston collected sediment samples from 7 transects and 12 sediment deposits in river segment DS-1. No previous sediment sample collection was completed in river segment DS-1.25. Based on the analytical data from the MDEQ sediment samples, additional sediment sampling was required to characterize the extent of DDT, HBB, and PBB impact in river sediments located in river segment DS-1 and DS-1.25.

CH2M conducted a sediment probing survey in September 2013 and verified the location of 16 previously identified sediment deposits and 6 new sediment deposits within DS-1.25 (CH2M HILL 2013). A total of 16 transects and 24 depositional areas were sampled during the RI activities. The sediment transect and depositional areas sampled are depicted on Figures 19, 20, and 21. All sediment deposit and transect sample collection was conducted in November and December 2013.

Sediment cores were collected at each sample location using 2-inch rigid polycarbonate tubing driven to refusal. A clean tube was used for each core. Sediment cores were taken to the site trailer, characterized, and processed as specified in the QAPP (CH2M HILL 2013). All sediment samples were analyzed for all six DDT isomers (i.e., 4,4-DDT; 4,4-DDD and 4,4-DDE; 2, 4-DDT; 2,4-DDD; and 2,4-DDE), PBB, HBB, TOC, and grain size. The EPA results are reported for each DDT isomer, as well as total DDT, the sum of the six DDT isomers.

### 2.2.1 Transect Sediment Sample Collection

A total of 16 transects were sampled—six transects in river segment DS-1 and ten transects in river segment DS-1.25.

The DS-1 transect locations were selected to "resample" locations previously sampled by Weston in the initial baseline assessment. Six sediment cores were scheduled for collection at each transect location in river segment DS-1. The proposed core placement at each transect included two cores located near the river bank for comparison to previous unbiased samples collected by Weston and four in-stream samples for comparison to samples collected in sediment deposition areas to assess if DDT concentrations within sediment deposition areas are statistically different than unbiased sediment samples.

The proposed core placement for each DS-1.25 transect consisted of two cores placed near the river bank. No in-stream sediment cores were proposed for the DS-1.25 transect locations. Data acquired from the transect locations were used to unbiasedly assess contamination in river segment DS-1.25.

A total of 58 sediment samples (including field duplicates) were collected and analyzed from 47 sediment cores (29 cores from DS-1 and 18 cores from DS-1.25). Transect and individual core locations are depicted on Figures 19, 20, and 21.

### 2.2.2 Depositional Sediment Sample Collection

A total of 24 sediment deposition areas were sampled in river segment DS-1.25. A total of 221 sediment samples (including field duplicates) were analyzed from 77 sediment cores.

## 2.3 2013 Surface Water Sample Collection

Monthly from October 2003 and October 2004 (13 total sampling events) Weston collected surface water samples from three locations—one location upstream of OU2 (Tyler Road Bridge—approximately 8 miles upstream), and two locations downstream of the Velsicol Plant Site (at the Main Street Bridge—approximately 500 feet down stream of the St. Louis hydroelectric dam and the Prairie Road Bridge near Midland, Michigan approximately 25 miles downstream).

Based on the analytical data from the Weston surface water samples, additional surface water sample collection was required to characterize the extent of DDT, HBB, and PBB impact to surface water located in river segments DS-1 and DS-1.5.

Eleven surface water samples (including field duplicates) were collected and analyzed from ten of the sediment transect locations in river segments DS-1 and DS-1.25. The surface water sample locations are depicted on Figures 19, 20, and 21.

Surface water sampling was conducted in accordance with Standard Operating Procedure No. 3 of the QAPP (CH2M HILL 2013).

All surface water samples were analyzed for all six DDT isomers (i.e., 4,4-DDT; 4,4-DDD and 4,4-DDE; 2, 4-DDT; 2,4-DDD; and 2,4-DDE), PBB, and HBB. The EPA results are reported for each DDT isomer, as well as total DDT, the sum of the six DDT isomers. Three sample locations, the furthest upstream (VCS-OU3-SW001), furthest downstream (VCS-OU3-SW010), and the middle transect (VCS-OU3-SW005) were also analyzed for volatile organic compounds (VOCs) and PAHs.

## 2.4 2013 Fish Tissue Sampling

Biota samples (including fish in 2003/2004 and 2010) were collected as part of the initial baseline study.

The 2013 fish tissue samples were collected to assess contaminant trends in fish, since the initial fish samples were collected in 2003.

Thirty fish tissue samples were collected from river section DS-1.25. Nine fish tissue samples were also collected from a reference location, R-1, upstream of the Velsicol Chemical Site near Tyler Road. The fish collection areas are depicted on Figure 22. Fish tissue samples submitted to the lab included fillets and offal from a top level predator (small mouth bass [Micropterus Dolomieui]) and fillets from a bottom feeder (common carp [Cyprinus carpio]). Forage fish were also collected and submitted in their entirety.

Fish tissue sample collection was conducted in accordance with Standard Operating Procedure Nos. 4, 5, and 6 of the QAPP (CH2M HILL 2013). Length, weight, and age data were collected from each small mouth bass and carp collected.

All fish tissue samples were analyzed for all six DDT isomers (i.e., 4,4-DDT; 4,4-DDD and 4,4-DDE; 2, 4-DDT; 2,4-DDD; and 2,4-DDE), PBB, HBB, and lipids. The EPA results are reported for each DDT isomer, as well as total DDT, which is calculated by summing the six DDT isomers.

SECTION 3

# Investigation Objectives and Data Evaluation

Each investigation activity was designed to acquire specific data to further define the extent of contamination to support development of a remedy that can be implemented by EPA to eliminate, reduce, or control the risks to human health and the environment. An evaluation of the data collected during each investigation activity is included in the following subsections.

## 3.1 Floodplain Data

The objective of the floodplain sampling was to assess the extent of contamination in river segments DS-1 and DS-1.25 to help develop potential remedial alternatives.

### 3.1.1 2013 Floodplain Data

Seventy-eight soil cores (VCS-OU3-SO001 through VCS-OU3-SO078) were collected from river segment DS-1. A total of 205 soil samples (including field duplicates) were collected from the 78 floodplain cores. The floodplain core locations for each individual floodplain are depicted on Figures 5, 6, 7, 8, 9, 10, 11, and 12. The soil samples were analyzed for DDT, PBB, and HBB. Ten percent of the samples were also analyzed for PAHs. DDT was detected in at least one sample interval from every core collected. DDT concentrations ranged between 21 micrograms per kilogram (µg/kg) (VCS-OU3-SO040/1-1.4) to 55,000 µg/kg (VCS-OU3-SO078/0.5-1.1). PBB was detected in 22 of the 78 cores collected. PBB concentrations ranged between 170 µg/kg (VCS-OU3-SO054/0-0.5) to 540 µg/kg (VCS-OU3-SO052/0-0.5). HBB was detected in 75 of the 78 cores collected and concentrations ranged between 13 µg/kg (VCS-OU3-SO029/0.5-1.2-FD and VCS-OU3-SO037/0.5-1) to 5,500 µg/kg (VCS-OU3-SO078/0-0.5). Thirteen samples were submitted for PAHs analysis. PAHs were detected in all 13 samples; however, none exceeded any ecological screening levels.

Analytical data are presented in Tables 1 and 2. Boring logs for the floodplain sample locations are included in Appendix A.

Data generated for this portion of the RI investigation did not adequately meet the intended objective; therefore, additional floodplain sample collection was proposed. The 2013 data will be used in completion of the RI report.

### 3.1.2 2014 Floodplain Soil Sampling

A total of 93 soil cores were collected from floodplains FP-0.5, FP-2.1, FP-1.25-1, FP-1.25-4, and FP-1.25-6 and the St. Louis High School athletic fields (VCS-OU3-SO079 through VCS-OU3-SO171). A total of 158 soil samples (including field duplicates) were collected from the 93 floodplain cores. The floodplain core locations for each individual floodplain are depicted on Figures 13, 14, 15, 16, 17, and 18. The soil samples were analyzed for DDT, PBB, and HBB.

DDT was detected in 53 of the 56 borings collected from the athletic fields with concentrations ranging between 37 µg/kg (VCS-OU3-SO104/0-0.5) and 40,000 µg/kg (VCS-OU3-SO119/0-0.5). PBB was detected in 9 of the 56 locations sampled. PBB concentrations ranged between 130 µg/kg (VCS-OU3-SO110/0-0.5 and VCS-OU3-SO122/0-0.5) and 440 µg/kg (VCS-OU3-SO117/0-0.5). HBB was detected in 52 of the 56 locations concentrations ranging between 12 µg/kg (VCS-OU3-SO102/0-0.5) and 1,500 µg/kg (VCS-OU3-SO117/0-0.5).

For the remainder of the floodplains sampled, DDT concentrations ranged between 25 µg/kg (VCS-OU3-SO144/0.5-0.85) and 17,000 µg/kg (VCS-OU3-SO156/0-0.5). PBB was detected in 14 of the 37 locations sampled. Detected PBB concentrations ranged between 190 µg/kg (VCS-OU3-SO138/0.5-1) and 490 µg/kg (VCS-OU3-SO169/0-0.5). HBB was detected in all of the 37 locations and the concentrations ranged between 14 µg/kg (VCS-OU3-SO140/1-1.3) and 2,700 µg/kg (VCS-OU3-SO149/0.5-1).

Data generated for this portion of the RI investigation adequately met the intended objective; however, additional floodplain sample collection was proposed on the athletic fields to further refine the extent of contamination. Analytical data are presented in Table 1. Boring logs for the floodplain sample locations are included in Appendix A.

### 3.1.3 2015 Floodplain Soil Sampling

A total of 50 additional floodplain soil cores (VCS-OU3-SO172 through VCS-OU3-SO221) were collected and analyzed from the St. Louis High School athletic fields. The additional athletic field core locations are depicted on Figures 13 and 14. A total of 178 samples (including duplicates) were collected from the 50 additional soil cores.

Total DDT was detected in all 50 of the soil cores and concentrations ranged between 29 µg/kg (VCS-OU3-SO175/2-2.6) and 82,000 µg/kg (VCS-OU3-SO182/0-0.5). PBB was detected in 26 of the 50 locations sampled. PBB concentrations ranged between 160 µg/kg (VCS-OU3-SO178/0-0.5) and 2,500 µg/kg (VCS-OU3-SO205/0-0.5). HBB was detected in 47 of the 50 locations and the concentrations ranged between 11 µg/kg (VCS-OU3-SO185/0.5-1 and VCS-OU3-SO207/0.5-1) and 2,900 µg/kg (VCS-OU3-SO197/0.5-1).

Data generated for this portion of the RI investigation adequately met the intended objective—to delineate the horizontal and vertical extent of contamination at the St. Louis High School athletic fields. Analytical data are presented in Table 1. Boring logs for the floodplain sample locations are included in Appendix A.

## 3.2 Sediment Data

The objective of the sediment sampling was to assess the extent of contamination in river segments DS-1 and DS-1.25 to help develop potential remedial alternatives.

### 3.2.1 2013 Transect Sediment Data

A total of 16 transects were sampled—6 transects in river segment DS-1 and 10 transects in river segment DS-1.25.

DDT was detected in 28 of the 29 samples collected in river segment DS-1. The DDT concentrations ranged between 8 µg/kg (VCS-OU3-SS019 /0.5-1) and 6,100 µg/kg (VCS-OU3-SS001/0-0.5). PBB was not detected in any of the samples collected in river segment DS-1. HBB was detected in four samples collected in river segment DS-1. The HBB concentrations ranged between 13 µg/kg (VCS-OU3-SS006/0-0.5) 560 µg/kg (VCS-OU3-SS013/0.5-1). TOC concentrations ranged between 1,400 milligrams per kilogram (mg/kg) (VCS-OU3-SS031/0-0.5) to 36,000 mg/kg (VCS-OU3-SS014/0-0.5). Percent solids values ranged between 50 percent (VCS-OU3-SS013/0.5-1) and 95.2 percent (VCS-OU3-SS005/0-0.5).

Transect sediment sample locations and data from river segment DS-1 are depicted on Figures 23, 24, and 25. Analytical data are presented in Table 3 and boring logs are included in Appendix B.

DDT was detected in 27 of the 29 samples collected in river segment DS-1.25. The DDT concentrations ranged between 2 µg/kg (VCS-OU3-SS072 /0-0.5) and 10,000 µg/kg (VCS-OU3-SS124/0.5-1). PBB was not detected in any of the samples collected in river segment DS-1.25. HBB was detected in four samples. The HBB concentrations ranged between 25 µg/kg (VCS-OU3-SS057/0.5-1) and 140 µg/kg (VCS-OU3-SS057/0-0.5). TOC concentrations ranged between 550 mg/kg (VCS-OU3-SS098/0.5-1) and 16,000 mg/kg (VCS-OU3-SS057/0-0.5). Percent solids values ranged between 62.6 percent (VCS-OU3-SS122/0-0.5) and 89.9 percent (VCS-OU3-SS098/1-2).

Transect sediment sample locations and data from river segment DS-1.25 are depicted on Figures 26, 27, 28, 29, 30, 31, and 32. Analytical data are presented in Table 3. Boring logs for the transect sample locations are included in Appendix B.

### 3.2.2 2013 Depositional Sediment Data

A total of 24 sediment deposition areas were sampled in Area DS-1.25. A total of 221 sediment samples (including field duplicates) were analyzed from 75 sediment cores.

DDT was detected in 201 of the 221 sediment samples with concentrations ranging between 1.6 µg/kg (VCS-OU3-SS061/1-2 and VCS-OU3-SS062/0.5-1) and 5,600 µg/kg (VCS-OU3-SS106/1-2). PBB was detected in three depositional sediment samples. The PBB concentrations ranged between 220 µg/kg (VCS-OU3-SS049/1-2) and 260 µg/kg (VCS-OU3-SS095/0-0.5-FD). HBB was detected in 35 samples. The HBB concentrations ranged between 9.3 µg/kg (VCS-OU3-SS101/1-2) and 620 µg/kg (VCS-OU3-SS109/0-0.5). TOC concentrations ranged between 400 mg/kg (VCS-OU3-SS058/0.5-1) and 110,000 mg/kg (VCS-OU3-SS068/1-2). Percent solids values ranged between 34.9 percent (VCS-OU3-SS068/1-2) and 95.9 percent (VCS-OU3-SS113 /0-0.5).

In-stream sediment sample locations for Area DS-1.25 are depicted on Figures 26, 27, 28, 29, 30, 31, and 32.

Data generated for this portion of the RI investigation adequately met the intended objective—to delineate the horizontal and vertical extent of contamination in sediment in river segments DS-1 and DS-1.25. Analytical data are presented in Table 3. Boring logs for the floodplain sample locations are included in Appendix B.

## 3.3 Surface Water Sample Analysis

Eleven surface water samples (including field duplicates) were collected from ten of the selected sediment transect locations in river segments DS-1 and DS-1.25.

### 3.3.1 2013 Surface Water Data

DDT was detected in 6 of the 11 samples collected. DDT concentrations ranged between 0.0086 micrograms per liter (µg/L) (VCS-OU3-SW010) and 0.023 µg/L (VCS-OU3-SW001). PBB and HBB were not detected in any of the surface water samples. Semivolatile organic compounds (SVOCs) were analyzed in three of the samples. Bis(2-ethylhexyl) phthalate (a common laboratory contaminant) was detected in sample VCS-OU3-SW005 at a concentration of 0.49 µg/L. No other SVOCs were detected in any of the samples analyzed. Four of the samples were analyzed for VOCs. None of the samples analyzed contained detectable VOC concentrations.

Surface water sample locations are depicted on Figures 19, 20, and 21. Analytical data are presented in Tables 4 and 5.

Data generated for this portion of the RI investigation adequately met the intended objective—to assess the extent of surface water contamination in the Pine River downstream of the Velsicol Chemical site—and the data will be used in completion of the RI report.

## 3.4 Fish Tissue Data

Thirty fish tissue samples were collected from small mouth bass, common carp, and forage fish in river segment DS-1.25. Fish tissue samples were also collected from a reference location, R-1, upstream of the Velsicol Plant Site near Tyler Road.

Data generated for this portion of the RI investigation adequately met the intended objective—to assess trends in fish tissue concentrations compared to the initial fish tissue samples collected in 2003—and the data will be used in completion of the RI report. The results of the 2013 fish tissue sampling are summarized in Table 6.

## 3.5 Sample Validation

Soil, sediment, surface water, and fish tissue sample data validation was conducted by CH2M to assess the accuracy and precision of the data following guidelines outlined in the *Quality Assurance Project Plan,*

*Velsicol Chemical Corporation Superfund Site, OU3—Remedial Investigation/Feasibility Study, St. Louis, Michigan* (CH2M HILL 2014a, 2014b, 2014c, and 2015). The data validation reports for samples analyzed by CT Laboratories are included in Appendix C. The data validation reports conclude the collected analytical data is usable and the completeness goals were met for all analytes.

SECTION 4

# References


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CH2M HILL, Inc. 2014b. *Analytical Data Summary of the Soil, Sediment, and Surface Water Sampling at the Velsicol, Operable Unit 3, Superfund Site, St. Louis, Michigan*. March 13.

CH2M HILL, Inc. 2014c. *Analytical Data Summary of the Soil, Sediment, and Surface Water Sampling at the Velsicol, Operable Unit 3, Superfund Site, St. Louis, Michigan*. October 6.

CH2M HILL, Inc. 2015. *Analytical Data Summary of the Soil Sampling at the Velsicol, Operable Unit 3, Superfund Site, St. Louis, Michigan*. March 18.

# Tables

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO001/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 16 U | 16 U | 100 | 19 U | 100 | 140 U | 9.4 U | 84.8 |
| VCS-OU3-SO001/0-0.5 | 0 - 0.5 | 2013 | 17 U | 17 U | 17 U | 17 U | 45 J | 19 U | 45 J | 140 U | 71 | 84.2 |
| VCS-OU3-SO001/1-1.2 | 1 - 1.2 | 2013 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 9.3 U | 85.4 |
| VCS-OU3-SO002/0.5-0.9 | 0.5 - 0.9 | 2013 | 51 J | 44 J | 62 | 69 | 730 | 430 | 1,400 | 150 U | 10 U | 77.8 |
| VCS-OU3-SO002/0-0.5 | 0 - 0.5 | 2013 | 47 J | 29 J | 47 J | 68 | 730 | 170 | 1,100 | 160 U | 360 | 76.3 |
| VCS-OU3-SO003/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 120 | 20 J | 140 | 150 U | 9.9 U | 80.2 |
| VCS-OU3-SO003/0-0.5 | 0 - 0.5 | 2013 | 27 J | 17 U | 22 J | 32 J | 400 | 88 | 570 | 150 U | 24 J | 82.1 |
| VCS-OU3-SO003/1-1.95 | 1 - 1.95 | 2013 | 17 U | 17 U | 17 U | 17 U | 21 U | 19 U | 21 U | 140 U | 9.5 U | 83.9 |
| VCS-OU3-SO004/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 39 J | 39 J | 150 U | 75 J | 82.2 |
| VCS-OU3-SO004/0.5-1-FD | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 29 J | 29 J | 150 U | 17 J | 81.6 |
| VCS-OU3-SO004/0-0.5 | 0 - 0.5 | 2013 | 18 U | 18 U | 20 J | 38 J | 54 J | 260 | 370 | 150 U | 940 | 78.1 |
| VCS-OU3-SO004/1-1.4 | 1 - 1.4 | 2013 | 17 U | 17 U | 17 U | 17 U | 21 U | 19 U | 21 U | 140 U | 9.5 U | 84.6 |
| VCS-OU3-SO005/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 24 J | 24 J | 140 U | 9.6 U | 82.2 |
| VCS-OU3-SO005/0-0.5 | 0 - 0.5 | 2013 | 17 U | 17 U | 17 U | 24 J | 48 J | 24 J | 96 | 140 U | 280 | 82.8 |
| VCS-OU3-SO005/1-1.4 | 1 - 1.4 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 U | 9.8 UJ | 81.4 |
| VCS-OU3-SO006/0.5-1 | 0.5 - 1 | 2013 | 93 U | 93 U | 93 U | 160 J | 490 | 2,200 | 2,900 | 320 J | 480 | 75.5 |
| VCS-OU3-SO006/0-0.5 | 0 - 0.5 | 2013 | 32 J | 27 J | 17 U | 88 | 590 | 64 J | 800 | 150 U | 300 | 81.8 |
| VCS-OU3-SO006/1-2 | 1 - 2 | 2013 | 37 J | 25 J | 17 U | 72 | 540 | 70 | 740 | 150 U | 410 | 80.1 |
| VCS-OU3-SO007/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 47 J | 16 J | 700 | 180 | 940 | 140 U | 26 J | 85.6 |
| VCS-OU3-SO007/0-0.5 | 0 - 0.5 | 2013 | 41 UJ | 41 UJ | 41 UJ | 41 J | 260 J | 840 J | 1,100 J | 140 U | 180 | 84.4 |
| VCS-OU3-SO007/0-0.5-FD | 0 - 0.5 | 2013 | 16 U | 16 U | 16 U | 16 J | 290 | 78 J | 380 J | 140 U | 170 | 84.3 |
| VCS-OU3-SO007/1-1.7 | 1 - 1.7 | 2013 | 16 U | 16 U | 16 U | 16 U | 80 | 18 U | 80 | 140 U | 9.2 U | 86.5 |
| VCS-OU3-SO008/0.5-1.1 | 0.5 - 1.1 | 2013 | 16 U | 16 U | 16 J | 19 J | 150 | 35 J | 220 | 140 U | 9.4 U | 84.5 |
| VCS-OU3-SO008/0-0.5 | 0 - 0.5 | 2013 | 25 J | 20 U | 22 J | 48 J | 290 | 59 J | 440 | 170 U | 380 | 71.1 |
| VCS-OU3-SO009/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 16 U | 16 U | 32 J | 18 U | 32 J | 140 U | 9.1 U | 88.5 |
| VCS-OU3-SO009/0-0.5 | 0 - 0.5 | 2013 | 16 U | 16 U | 16 U | 16 U | 84 | 19 J | 100 | 140 U | 9.3 U | 85.4 |
| VCS-OU3-SO009/1-2 | 1 - 2 | 2013 | 16 U | 16 U | 16 U | 16 U | 20 U | 18 U | 20 U | 140 U | 9.1 U | 87.3 |
| VCS-OU3-SO010/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 110 | 20 U | 110 | 150 U | 17 J | 81.1 |
| VCS-OU3-SO010/0-0.5 | 0 - 0.5 | 2013 | 17 U | 17 U | 17 U | 17 U | 240 | 37 J | 280 | 150 U | 200 | 80.2 |
| VCS-OU3-SO010/1-1.8 | 1 - 1.8 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 U | 9.8 U | 82.0 |
| VCS-OU3-SO011/0.5-1 | 0.5 - 1 | 2013 | 24 J | 19 U | 19 U | 24 J | 180 | 21 U | 230 | 160 U | 40 | 74.2 |
| VCS-OU3-SO011/0-0.5 | 0 - 0.5 | 2013 | 20 U | 20 U | 20 U | 28 J | 110 | 23 U | 140 | 170 U | 840 | 70.4 |
| VCS-OU3-SO012/0.5-1 | 0.5 - 1 | 2013 | 18 U | 18 U | 18 U | 18 U | 23 U | 21 U | 23 U | 160 U | 10 U | 77.3 |
| VCS-OU3-SO012/0-0.5 | 0 - 0.5 | 2013 | 18 U | 18 U | 18 U | 18 U | 23 J | 20 U | 23 J | 150 U | 95 | 78.3 |
| VCS-OU3-SO013/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 22 U | 140 U | 9.6 U | 82.2 |
| VCS-OU3-SO013/0-0.5 | 0 - 0.5 | 2013 | 22 J | 17 U | 17 U | 32 J | 230 | 30 J | 310 | 150 U | 310 | 80.2 |
| VCS-OU3-SO014/0.5-0.8 | 0.5 - 0.8 | 2013 | 800 | 320 | 43 J | 310 | 490 | 310 | 2,300 | 200 U | 97 | 59.9 |
| VCS-OU3-SO014/0-0.5 | 0 - 0.5 | 2013 | 600 | 250 | 46 J | 350 | 690 | 480 | 2,400 | 240 J | 2,700 J | 60.7 |
| VCS-OU3-SO015/0-0.6 | 0 - 0.6 | 2013 | 3,300 J | 580 J | 140 J | 1,200 J | 860 J | 2,300 J | 8,400 J | 530 J | 2,600 J | 62.4 |
| VCS-OU3-SO016/0-0.6 | 0 - 0.6 | 2013 | 280 | 140 | 29 J | 160 | 340 | 170 | 1,100 | 170 U | 610 | 68.1 |
| VCS-OU3-SO017/0.5-0.7 | 0.5 - 0.7 | 2013 | 150 | 62 J | 32 J | 140 | 350 | 200 | 930 | 190 U | 2,400 J | 61.8 |
| VCS-OU3-SO017/0-0.5 | 0 - 0.5 | 2013 | 70 | 35 J | 20 U | 47 J | 110 | 41 J | 300 | 170 U | 120 | 68.7 |
| VCS-OU3-SO018/0.5-0.9 | 0.5 - 0.9 | 2013 | 280 | 160 | 21 U | 180 | 510 | 89 | 1,200 | 180 U | 560 | 64.8 |
| VCS-OU3-SO018/0-0.5 | 0 - 0.5 | 2013 | 180 | 85 | 23 U | 160 | 480 | 72 J | 980 | 360 J | 1,200 | 61.3 |
| VCS-OU3-SO019/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 9.4 U | 84.6 |
| VCS-OU3-SO019/0-0.5 | 0 - 0.5 | 2013 | 20 U | 20 U | 20 U | 23 J | 25 J | 40 J | 88 | 170 U | 290 | 70.8 |
| VCS-OU3-SO020/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 80 | 33 J | 110 | 140 U | 9.5 U | 84.6 |
| VCS-OU3-SO020/0-0.5 | 0 - 0.5 | 2013 | 60 J | 33 J | 100 J | 110 | 1,200 | 290 | 1,800 | 160 U | 510 | 73.0 |
| VCS-OU3-SO020/0-0.5-FD | 0 - 0.5 | 2013 | 54 J | 32 J | 56 J | 99 | 1,300 | 260 | 1,800 | 160 U | 520 | 74.7 |
| VCS-OU3-SO021/0.5-0.8 | 0.5 - 0.8 | 2013 | 42 J | 18 U | 18 U | 63 | 82 | 77 | 260 | 160 U | 32 J | 75.2 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO021/0-0.5 | 0 - 0.5 | 2013 | 180 | 87 | 290 | 510 | 800 | 1,500 | 3,400 | 190 U | 840 | 64.3 |
| VCS-OU3-SO022/0.5-1 | 0.5 - 1 | 2013 | 49 J | 36 J | 160 | 110 | 500 | 900 | 1,800 | 160 U | 220 | 77.3 |
| VCS-OU3-SO022/0-0.5 | 0 - 0.5 | 2013 | 130 J | 88 J | 140 J | 340 | 1,100 | 2,300 | 4,100 | 160 U | 1,100 | 74.2 |
| VCS-OU3-SO022/1-1.4 | 1 - 1.4 | 2013 | 19 U | 19 U | 19 U | 19 U | 48 J | 38 J | 86 | 160 U | 11 UJ | 74.6 |
| VCS-OU3-SO023/0.5-1 | 0.5 - 1 | 2013 | 590 J | 410 U | 3,500 J | 760 J | 1,300 J | 20,000 J | 26,000 J | 260 J | 570 J | 85.4 |
| VCS-OU3-SO023/0.5-1-FD | 0.5 - 1 | 2013 | 670 | 160 U | 1,600 J | 490 J | 1,500 | 6,300 J | 11,000 J | 300 J | 390 J | 85.9 |
| VCS-OU3-SO023/0-0.5 | 0 - 0.5 | 2013 | 440 J | 170 U | 2,000 | 540 J | 1,800 | 9,400 | 14,000 | 390 J | 930 | 81.3 |
| VCS-OU3-SO023/1-1.75 | 1 - 1.75 | 2013 | 82 | 37 J | 160 J | 60 | 310 | 650 | 1,300 | 150 U | 30 J | 79.4 |
| VCS-OU3-SO024/0.5-1 | 0.5 - 1 | 2013 | 1,200 | 230 J | 830 | 880 | 160 J | 3,600 | 6,900 | 160 U | 88 | 74.4 |
| VCS-OU3-SO024/0-0.5 | 0 - 0.5 | 2013 | 1,500 J | 370 J | 49 UJ | 1,500 J | 700 J | 560 J | 4,600 J | 170 U | 530 | 70.4 |
| VCS-OU3-SO024/0-0.5-FD | 0 - 0.5 | 2013 | 1,800 | 370 J | 2,000 | 1,600 | 660 J | 6,000 J | 12,000 J | 170 U | 650 | 69.2 |
| VCS-OU3-SO024/1-1.4 | 1 - 1.4 | 2013 | 84 | 20 U | 81 | 150 | 29 J | 330 | 670 | 170 U | 12 U | 68.8 |
| VCS-OU3-SO025/0.5-1 | 0.5 - 1 | 2013 | 17 J | 17 U | 100 | 35 J | 24 J | 390 | 570 | 140 U | 33 | 83.9 |
| VCS-OU3-SO025/0.5-1-FD | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 U | 21 U | 19 U | 21 U | 140 U | 9.5 U | 83.6 |
| VCS-OU3-SO025/0-0.5 | 0 - 0.5 | 2013 | 120 J | 52 UJ | 52 UJ | 260 J | 540 J | 1,000 J | 1,900 J | 180 U | 740 | 67.1 |
| VCS-OU3-SO026/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 9.4 U | 84.4 |
| VCS-OU3-SO026/0-0.5 | 0 - 0.5 | 2013 | 63 J | 20 U | 20 U | 89 | 300 | 66 J | 520 | 170 U | 1,100 | 69.6 |
| VCS-OU3-SO027/0.5-1 | 0.5 - 1 | 2013 | 160 | 140 | 20 U | 170 | 390 | 23 U | 860 | 170 U | 82 | 70.5 |
| VCS-OU3-SO027/0-0.5 | 0 - 0.5 | 2013 | 910 | 460 | 50 U | 1,400 | 1,700 | 57 U | 4,500 | 270 J | 720 | 69.4 |
| VCS-OU3-SO028/0.5-1 | 0.5 - 1 | 2013 | 89 | 19 U | 24 J | 100 | 150 | 400 | 760 | 160 U | 450 | 73.4 |
| VCS-OU3-SO028/0-0.5 | 0 - 0.5 | 2013 | 23 U | 23 U | 23 U | 32 J | 71 J | 26 U | 100 | 190 U | 350 | 61.7 |
| VCS-OU3-SO028/1-1.5 | 1 - 1.5 | 2013 | 19 J | 17 U | 17 U | 17 J | 22 U | 19 U | 36 J | 150 U | 9.7 U | 82.3 |
| VCS-OU3-SO029/0.5-1.2 | 0.5 - 1.2 | 2013 | 16 U | 16 U | 16 U | 16 U | 230 J | 46 J | 280 J | 140 U | 260 J | 87.4 |
| VCS-OU3-SO029/0.5-1.2-FD | 0.5 - 1.2 | 2013 | 16 U | 16 U | 16 U | 16 U | 76 J | 18 U | 76 J | 130 U | 13 J | 89.0 |
| VCS-OU3-SO029/0-0.5 | 0 - 0.5 | 2013 | 18 U | 18 U | 18 U | 21 J | 280 | 60 J | 360 | 160 U | 270 | 76.7 |
| VCS-OU3-SO030/0.5-0.9 | 0.5 - 0.9 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 U | 9.8 U | 81.5 |
| VCS-OU3-SO030/0-0.5 | 0 - 0.5 | 2013 | 19 U | 19 U | 19 U | 19 U | 160 | 50 J | 210 | 160 U | 11 U | 74.8 |
| VCS-OU3-SO031/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 46 J | 16 J | 470 J | 200 | 730 J | 140 U | 9.2 U | 87.2 |
| VCS-OU3-SO031/0.5-1-FD | 0.5 - 1 | 2013 | 16 U | 16 U | 57 | 18 J | 640 J | 270 | 990 J | 140 U | 9.2 U | 87.0 |
| VCS-OU3-SO031/0-0.5 | 0 - 0.5 | 2013 | 16 U | 16 U | 33 J | 16 J | 360 | 230 | 640 | 140 U | 9.4 U | 85.6 |
| VCS-OU3-SO031/1-2 | 1 - 2 | 2013 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 9.4 UJ | 84.5 |
| VCS-OU3-SO032/0.5-1 | 0.5 - 1 | 2013 | 27 J | 17 U | 29 J | 34 J | 740 | 110 | 940 | 150 U | 34 J | 81.2 |
| VCS-OU3-SO032/0-0.5 | 0 - 0.5 | 2013 | 18 U | 18 U | 18 U | 23 J | 380 | 85 | 490 | 150 U | 200 | 77.6 |
| VCS-OU3-SO032/1-1.5 | 1 - 1.5 | 2013 | 17 U | 17 U | 17 U | 17 U | 36 J | 19 U | 36 J | 140 U | 9.6 U | 83.2 |
| VCS-OU3-SO033/0.5-1 | 0.5 - 1 | 2013 | 110 J | 110 J | 150 J | 99 J | 2,000 J | 440 J | 2,900 J | 210 J | 27 J | 75.2 |
| VCS-OU3-SO033/0-0.5 | 0 - 0.5 | 2013 | 310 J | 210 J | 98 U | 340 | 3,900 | 110 U | 4,800 | 170 U | 150 | 71.4 |
| VCS-OU3-SO034/0.5-1 | 0.5 - 1 | 2013 | 89 U | 89 U | 89 U | 89 U | 2,500 | 310 J | 2,800 | 150 U | 71 | 77.8 |
| VCS-OU3-SO034/0-0.5 | 0 - 0.5 | 2013 | 36 J | 20 U | 53 J | 62 J | 1,100 | 600 | 1,900 | 340 J | 670 | 70.9 |
| VCS-OU3-SO035/0.5-1.2 | 0.5 - 1.2 | 2013 | 200 J | 94 J | 44 UJ | 140 J | 880 J | 420 J | 1,700 J | 150 U | 230 | 80.3 |
| VCS-OU3-SO035/0-0.5 | 0 - 0.5 | 2013 | 53 J | 26 J | 26 J | 82 | 710 | 280 | 1,200 | 160 U | 770 | 75.9 |
| VCS-OU3-SO036/0.5-1 | 0.5 - 1 | 2013 | 54 J | 39 J | 54 J | 59 | 580 | 370 | 1,200 | 150 U | 480 | 81.4 |
| VCS-OU3-SO036/0-0.5 | 0 - 0.5 | 2013 | 46 J | 29 J | 26 J | 160 | 510 | 510 | 1,300 | 410 J | 1,100 | 68.5 |
| VCS-OU3-SO036/0-0.5-FD | 0 - 0.5 | 2013 | 56 J | 33 J | 33 J | 120 | 590 | 280 | 1,100 | 470 J | 1,400 | 72.1 |
| VCS-OU3-SO037/0.5-1 | 0.5 - 1 | 2013 | 62 | 64 J | 31 J | 64 | 910 | 95 | 1,200 | 150 U | 13 J | 77.4 |
| VCS-OU3-SO037/0-0.5 | 0 - 0.5 | 2013 | 18 UJ | 18 UJ | 18 UJ | 24 J | 150 J | 21 UJ | 170 J | 160 UJ | 92 J | 75.4 |
| VCS-OU3-SO038/0.5-1 | 0.5 - 1 | 2013 | 21 J | 26 J | 18 U | 24 J | 400 | 26 J | 500 | 160 U | 11 U | 75.3 |
| VCS-OU3-SO038/0-0.5 | 0 - 0.5 | 2013 | 70 J | 48 J | 65 J | 70 J | 720 J | 170 J | 1,100 | 170 U | 630 | 70.7 |
| VCS-OU3-SO039/0.5-1 | 0.5 - 1 | 2013 | 63 J | 94 J | 140 J | 50 J | 1,600 J | 170 J | 2,100 J | 150 U | 48 | 80.1 |
| VCS-OU3-SO039/0-0.5 | 0 - 0.5 | 2013 | 71 J | 97 J | 150 J | 58 J | 1,800 J | 210 J | 2,400 J | 160 U | 34 | 77.0 |
| VCS-OU3-SO039/0-0.5-FD | 0 - 0.5 | 2013 | 23 J | 18 U | 26 J | 31 J | 600 J | 62 J | 740 J | 160 U | 210 J | 76.6 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO040/0.5-1 | 0.5 - 1 | 2013 | 17 U | 17 U | 17 U | 17 J | 370 | 29 J | 420 | 150 U | 39 | 80.9 |
| VCS-OU3-SO040/0-0.5 | 0 - 0.5 | 2013 | 18 U | 18 U | 18 U | 21 J | 170 | 28 J | 220 | 160 U | 240 | 77.2 |
| VCS-OU3-SO040/1-1.4 | 1 - 1.4 | 2013 | 17 U | 17 U | 17 U | 17 U | 21 J | 19 U | 21 J | 140 U | 9.5 U | 84.5 |
| VCS-OU3-SO041/0.5-0.8 | 0.5 - 0.8 | 2013 | 18 U | 18 U | 18 U | 18 U | 95 | 20 U | 95 | 150 U | 10 U | 79.3 |
| VCS-OU3-SO041/0-0.5 | 0 - 0.5 | 2013 | 19 U | 19 U | 19 U | 21 J | 110 | 21 U | 130 | 160 U | 160 | 74.6 |
| VCS-OU3-SO042/0.5-0.75 | 0.5 - 0.75 | 2013 | 20 U | 20 U | 20 U | 23 J | 150 | 85 | 260 | 170 U | 85 | 69.9 |
| VCS-OU3-SO042/0-0.5 | 0 - 0.5 | 2013 | 22 U | 22 U | 22 U | 28 J | 160 | 25 J | 210 | 190 U | 330 | 63.5 |
| VCS-OU3-SO043/0.5-1 | 0.5 - 1 | 2013 | 480 J | 120 J | 480 J | 120 J | 1,800 J | 1,300 J | 4,300 J | 150 U | 130 | 82.4 |
| VCS-OU3-SO043/0-0.5 | 0 - 0.5 | 2013 | 560 J | 140 J | 420 J | 280 J | 3,700 J | 1,500 J | 6,600 J | 190 J | 730 | 70.6 |
| VCS-OU3-SO043/1-1.3 | 1 - 1.3 | 2013 | 25 J | 17 U | 25 J | 25 J | 150 | 75 | 300 | 150 U | 10 U | 79.9 |
| VCS-OU3-SO044/0.5-0.8 | 0.5 - 0.8 | 2013 | 66 | 40 J | 53 J | 85 | 540 | 230 | 1,000 | 160 U | 240 | 75.4 |
| VCS-OU3-SO044/0-0.5 | 0 - 0.5 | 2013 | 150 | 78 J | 99 | 210 | 1,400 | 900 | 2,800 | 180 U | 1,200 | 66.8 |
| VCS-OU3-SO045/0.5-1 | 0.5 - 1 | 2013 | 180 | 60 J | 480 | 60 J | 1,300 | 950 | 3,000 | 140 U | 220 | 84.0 |
| VCS-OU3-SO045/0-0.5 | 0 - 0.5 | 2013 | 25 J | 17 U | 25 J | 25 J | 300 | 100 | 480 | 150 U | 60 | 80.2 |
| VCS-OU3-SO045/1-1.4 | 1 - 1.4 | 2013 | 16 U | 16 U | 67 J | 22 J | 200 J | 110 J | 400 J | 130 U | 8.9 U | 89.6 |
| VCS-OU3-SO045/1-1.4-FD | 1 - 1.4 | 2013 | 23 J | 23 J | 91 J | 23 J | 340 J | 180 J | 680 J | 140 U | 9.1 U | 87.6 |
| VCS-OU3-SO046/0.5-0.95 | 0.5 - 0.95 | 2013 | 160 | 57 J | 22 J | 90 | 170 | 140 | 640 | 160 U | 210 | 73.5 |
| VCS-OU3-SO046/0-0.5 | 0 - 0.5 | 2013 | 150 | 66 J | 33 J | 160 | 390 | 720 | 1,500 | 230 J | 3,400 | 66.7 |
| VCS-OU3-SO047/0.5-1 | 0.5 - 1 | 2013 | 300 | 130 | 70 | 200 | 370 | 340 | 1,400 | 180 U | 1,400 | 68.5 |
| VCS-OU3-SO047/0-0.5 | 0 - 0.5 | 2013 | 330 | 130 J | 50 J | 300 | 580 | 620 | 2,000 | 190 U | 3,300 J | 63.8 |
| VCS-OU3-SO048/0.5-0.8 | 0.5 - 0.8 | 2013 | 190 | 47 J | 19 J | 75 | 95 | 64 J | 490 | 170 U | 81 | 71.8 |
| VCS-OU3-SO048/0-0.5 | 0 - 0.5 | 2013 | 2,500 | 560 | 140 J | 940 | 1,100 | 1,900 | 7,100 | 200 J | 3,000 J | 66.8 |
| VCS-OU3-SO049/0.5-0.85 | 0.5 - 0.85 | 2013 | 750 | 190 | 83 | 410 | 390 | 390 | 2,200 | 170 U | 230 | 71.8 |
| VCS-OU3-SO049/0-0.5 | 0 - 0.5 | 2013 | 2,700 | 580 | 290 | 1,600 | 1,200 | 1,400 | 7,800 | 220 J | 890 | 68.9 |
| VCS-OU3-SO050/0.5-1.1 | 0.5 - 1.1 | 2013 | 17 U | 17 U | 22 J | 32 J | 170 | 180 | 400 | 150 U | 110 | 80.1 |
| VCS-OU3-SO050/0-0.5 | 0 - 0.5 | 2013 | 74 | 40 J | 71 | 160 | 770 | 1,400 | 2,500 | 170 U | 960 | 70.1 |
| VCS-OU3-SO051/0.5-1 | 0.5 - 1 | 2013 | 5,700 | 800 | 360 J | 1,900 | 860 | 3,600 | 13,000 | 170 U | 120 | 72.5 |
| VCS-OU3-SO051/0-0.5 | 0 - 0.5 | 2013 | 1,700 | 330 | 120 | 670 | 500 | 1,300 | 4,600 | 170 U | 2,300 J | 69.7 |
| VCS-OU3-SO051/1-1.2 | 1 - 1.2 | 2013 | 140 | 20 U | 20 J | 61 J | 38 J | 50 J | 310 | 170 U | 12 U | 68.6 |
| VCS-OU3-SO052/0.5-1.1 | 0.5 - 1.1 | 2013 | 4,000 J | 420 J | 140 J | 1,900 J | 550 J | 1,500 J | 8,500 J | 170 J | 460 | 71.6 |
| VCS-OU3-SO052/0-0.5 | 0 - 0.5 | 2013 | 4,200 J | 580 J | 140 J | 1,700 J | 1,000 J | 720 J | 8,300 J | 540 J | 2,400 J | 69.0 |
| VCS-OU3-SO053/0.5-1 | 0.5 - 1 | 2013 | 30 J | 17 U | 55 J | 50 J | 250 | 180 J | 570 J | 150 UJ | 70 J | 80.4 |
| VCS-OU3-SO053/0.5-1-FD | 0.5 - 1 | 2013 | 32 J | 20 J | 47 J | 67 | 290 | 580 J | 1,000 J | 150 U | 180 J | 80.7 |
| VCS-OU3-SO053/0-0.5 | 0 - 0.5 | 2013 | 37 J | 19 J | 40 J | 71 | 340 | 300 | 810 | 160 UJ | 140 J | 75.7 |
| VCS-OU3-SO053/1-1.9 | 1 - 1.9 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 UJ | 9.9 UJ | 80.8 |
| VCS-OU3-SO054/0.5-1 | 0.5 - 1 | 2013 | 460 J | 270 J | 1,900 | 580 J | 1,200 | 11,000 J | 15,000 J | 150 U | 140 | 81.8 |
| VCS-OU3-SO054/0.5-1-FD | 0.5 - 1 | 2013 | 490 J | 340 U | 1,400 | 640 J | 1,400 J | 6,400 J | 10,000 J | 150 U | 140 | 81.8 |
| VCS-OU3-SO054/0-0.5 | 0 - 0.5 | 2013 | 540 J | 240 J | 1,100 | 620 J | 3,000 | 5,800 | 11,000 | 170 J | 1,000 | 73.0 |
| VCS-OU3-SO054/1-1.45 | 1 - 1.45 | 2013 | 18 U | 18 U | 28 J | 20 J | 65 J | 88 | 200 | 150 UJ | 10 UJ | 79.5 |
| VCS-OU3-SO055/0.5-1 | 0.5 - 1 | 2013 | 560 | 130 J | 850 | 430 | 990 | 3,300 | 6,300 | 140 U | 91 | 83.8 |
| VCS-OU3-SO055/0-0.5 | 0 - 0.5 | 2013 | 560 | 210 J | 890 | 420 | 2,400 | 5,600 | 10,000 | 160 U | 810 | 75.6 |
| VCS-OU3-SO055/1-2.1 | 1 - 2.1 | 2013 | 18 U | 18 U | 37 J | 24 J | 120 J | 150 J | 330 | 160 U | 11 UJ | 76.4 |
| VCS-OU3-SO056/0.5-1 | 0.5 - 1 | 2013 | 130 | 62 | 89 | 110 | 390 | 600 J | 1,400 | 150 U | 52 | 80.4 |
| VCS-OU3-SO056/0.5-1-FD | 0.5 - 1 | 2013 | 130 | 67 | 96 | 120 | 400 | 1,100 J | 1,900 | 150 U | 49 | 81.1 |
| VCS-OU3-SO056/0-0.5 | 0 - 0.5 | 2013 | 130 J | 46 U | 270 | 270 | 960 | 2,700 | 4,400 | 160 U | 870 | 75.9 |
| VCS-OU3-SO056/1-1.3 | 1 - 1.3 | 2013 | 17 U | 17 U | 17 U | 17 U | 22 U | 29 J | 29 J | 140 U | 9.6 U | 83.7 |
| VCS-OU3-SO057/0.5-0.95 | 0.5 - 0.95 | 2013 | 650 | 210 J | 360 | 460 | 1,700 | 1,800 | 5,200 | 160 U | 210 | 76.5 |
| VCS-OU3-SO057/0-0.5 | 0 - 0.5 | 2013 | 680 | 260 J | 360 | 680 | 3,200 | 2,000 | 7,200 | 170 U | 880 | 68.8 |
| VCS-OU3-SO058/0.5-1 | 0.5 - 1 | 2013 | 31 J | 34 J | 120 | 43 J | 1,300 | 600 | 2,100 | 140 U | 51 J | 83.1 |
| VCS-OU3-SO058/0-0.5 | 0 - 0.5 | 2013 | 110 J | 92 U | 290 J | 140 J | 3,400 | 850 | 4,800 | 160 U | 330 | 76.3 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO058/1-1.4 | 1 - 1.4 | 2013 | 17 U | 17 U | 21 J | 17 U | 73 | 43 J | 140 | 140 U | 9.5 U | 84.3 |
| VCS-OU3-SO059/0.5-1.05 | 0.5 - 1.05 | 2013 | 18 U | 18 U | 18 U | 18 U | 41 J | 26 J | 67 J | 150 U | 10 U | 78.2 |
| VCS-OU3-SO059/0-0.5 | 0 - 0.5 | 2013 | 170 | 75 | 130 | 170 | 760 | 830 | 2,100 | 160 U | 540 | 74.2 |
| VCS-OU3-SO060/0.5-1 | 0.5 - 1 | 2013 | 250 | 95 | 28 U | 170 | 270 | 150 | 940 | 240 U | 350 | 50.8 |
| VCS-OU3-SO060/0-0.5 | 0 - 0.5 | 2013 | 80 J | 36 J | 28 U | 110 | 290 | 340 | 860 | 240 UJ | 890 J | 50.1 |
| VCS-OU3-SO060/1-1.35 | 1 - 1.35 | 2013 | 31 U | 31 U | 31 U | 31 U | 40 U | 36 U | 40 U | 270 UJ | 18 UJ | 44.2 |
| VCS-OU3-SO060/1-1.35-FD | 1 - 1.35 | 2013 | 32 U | 32 U | 32 U | 32 U | 46 J | 79 J | 130 J | 280 U | 19 U | 42.8 |
| VCS-OU3-SO061/0-0.65 | 0 - 0.65 | 2013 | 260 J | 130 J | 130 J | 260 J | 830 J | 2,100 J | 3,700 J | 170 UJ | 850 J | 69.8 |
| VCS-OU3-SO062/0.5-1.15 | 0.5 - 1.15 | 2013 | 44 U | 44 U | 320 J | 95 J | 1,000 | 1,700 | 3,100 | 150 U | 68 J | 79.2 |
| VCS-OU3-SO062/0-0.5 | 0 - 0.5 | 2013 | 69 J | 48 U | 170 | 130 J | 2,000 | 1,100 J | 3,500 | 170 U | 250 | 72.2 |
| VCS-OU3-SO062/0-0.5-FD | 0 - 0.5 | 2013 | 55 J | 48 U | 140 J | 100 J | 1,700 | 800 J | 2,800 | 160 U | 230 | 72.6 |
| VCS-OU3-SO063/0.5-0.8 | 0.5 - 0.8 | 2013 | 470 | 260 | 210 | 330 | 370 | 2,100 | 3,700 | 200 U | 540 | 61.0 |
| VCS-OU3-SO063/0-0.5 | 0 - 0.5 | 2013 | 290 | 130 | 24 J | 300 | 520 | 400 J | 1,700 | 210 U | 2,200 J | 58.3 |
| VCS-OU3-SO063/0-0.5-FD | 0 - 0.5 | 2013 | 270 | 120 | 29 J | 290 | 470 | 280 J | 1,500 | 360 J | 2,100 J | 55.5 |
| VCS-OU3-SO064/0.5-1 | 0.5 - 1 | 2013 | 16 U | 16 U | 16 U | 16 U | 200 | 84 | 280 | 140 U | 14 J | 85.3 |
| VCS-OU3-SO064/0-0.5 | 0 - 0.5 | 2013 | 24 J | 17 U | 43 J | 43 J | 650 | 760 | 1,500 | 140 U | 140 | 83.1 |
| VCS-OU3-SO064/1-1.95 | 1 - 1.95 | 2013 | 17 U | 17 U | 17 U | 17 U | 24 J | 20 J | 44 J | 150 U | 9.8 UJ | 81.9 |
| VCS-OU3-SO065/0.5-0.75 | 0.5 - 0.75 | 2013 | 490 | 180 | 130 | 230 | 500 | 540 | 2,100 | 160 U | 570 | 73.6 |
| VCS-OU3-SO065/0-0.5 | 0 - 0.5 | 2013 | 620 | 250 | 62 J | 410 | 1,000 | 1,200 | 3,500 | 170 U | 3,000 J | 70.1 |
| VCS-OU3-SO066/0.5-0.9 | 0.5 - 0.9 | 2013 | 570 | 120 | 26 J | 360 | 180 | 250 | 1,500 | 160 U | 26 J | 77.1 |
| VCS-OU3-SO066/0-0.5 | 0 - 0.5 | 2013 | 1,100 | 310 | 90 | 830 | 770 | 1,400 | 4,500 | 460 J | 2,400 J | 66.2 |
| VCS-OU3-SO067/0.5-1 | 0.5 - 1 | 2013 | 97 J | 66 J | 89 J | 73 J | 790 | 510 | 1,600 | 160 U | 10 UJ | 76.5 |
| VCS-OU3-SO067/0-0.5 | 0 - 0.5 | 2013 | 53 J | 32 J | 45 J | 61 J | 770 | 220 | 1,200 | 160 U | 110 | 75.4 |
| VCS-OU3-SO067/1-1.2 | 1 - 1.2 | 2013 | 18 U | 18 U | 18 U | 18 U | 76 J | 42 J | 120 | 160 U | 10 U | 76.7 |
| VCS-OU3-SO068/0.5-0.85 | 0.5 - 0.85 | 2013 | 760 | 130 | 41 J | 270 | 300 | 170 | 1,700 | 170 U | 220 | 68.3 |
| VCS-OU3-SO068/0-0.5 | 0 - 0.5 | 2013 | 210 | 69 | 40 J | 130 | 350 | 320 | 1,100 | 170 U | 1,000 | 69.5 |
| VCS-OU3-SO069/0.5-1 | 0.5 - 1 | 2013 | 2,700 | 350 | 150 J | 1,400 | 440 | 1,200 | 6,200 | 180 U | 790 | 65.8 |
| VCS-OU3-SO069/0-0.5 | 0 - 0.5 | 2013 | 930 | 200 | 54 J | 770 | 650 | 1,200 | 3,800 | 510 J | 2,700 | 63.3 |
| VCS-OU3-SO069/1-1.55 | 1 - 1.55 | 2013 | 65 | 19 U | 19 U | 44 J | 25 J | 27 J | 160 | 160 U | 11 U | 72.8 |
| VCS-OU3-SO070/0.5-0.9 | 0.5 - 0.9 | 2013 | 18 U | 18 U | 18 U | 18 U | 100 | 34 J | 130 | 160 U | 42 | 75.6 |
| VCS-OU3-SO070/0-0.5 | 0 - 0.5 | 2013 | 19 U | 19 U | 19 U | 19 J | 65 J | 38 J | 120 | 160 U | 600 | 72.8 |
| VCS-OU3-SO070/0-0.5-FD | 0 - 0.5 | 2013 | 19 U | 19 U | 19 U | 19 U | 63 J | 36 J | 99 | 160 U | 480 | 73.3 |
| VCS-OU3-SO071/0.5-1 | 0.5 - 1 | 2013 | 35 J | 22 J | 27 J | 62 | 540 | 230 | 920 | 150 U | 260 | 79.9 |
| VCS-OU3-SO071/0-0.5 | 0 - 0.5 | 2013 | 44 J | 21 J | 44 J | 130 | 670 | 1,400 | 2,300 | 290 J | 990 | 76.3 |
| VCS-OU3-SO071/1-1.2 | 1 - 1.2 | 2013 | 17 U | 17 U | 17 U | 17 U | 39 J | 25 J | 64 J | 150 U | 9.9 U | 80.8 |
| VCS-OU3-SO072/0.5-1 | 0.5 - 1 | 2013 | 52 J | 26 J | 39 J | 55 J | 350 | 130 | 650 | 160 U | 39 J | 75.6 |
| VCS-OU3-SO072/0.5-1-FD | 0.5 - 1 | 2013 | 53 J | 32 J | 55 J | 69 | 380 | 650 | 1,200 | 160 U | 55 J | 75.8 |
| VCS-OU3-SO072/0-0.5 | 0 - 0.5 | 2013 | 98 | 64 J | 190 | 120 | 1,000 | 620 | 2,100 | 170 U | 470 | 70.9 |
| VCS-OU3-SO072/1-1.2 | 1 - 1.2 | 2013 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 J | 21 U | 140 U | 9.4 U | 84.6 |
| VCS-OU3-SO073/0.5-0.9 | 0.5 - 0.9 | 2013 | 180 | 95 | 47 J | 150 | 660 | 180 | 1,300 | 170 U | 320 | 71.4 |
| VCS-OU3-SO073/0-0.5 | 0 - 0.5 | 2013 | 110 | 49 J | 46 J | 110 | 520 | 210 | 1,000 | 180 U | 540 | 64.9 |
| VCS-OU3-SO074/0.5-1 | 0.5 - 1 | 2013 | 18 U | 18 U | 21 J | 28 J | 90 | 41 J | 180 | 150 U | 10 U | 77.7 |
| VCS-OU3-SO074/0-0.5 | 0 - 0.5 | 2013 | 38 J | 20 U | 29 J | 64 J | 220 | 61 J | 410 | 170 U | 410 | 68.8 |
| VCS-OU3-SO075/0.5-1.1 | 0.5 - 1.1 | 2013 | 17 U | 17 U | 17 U | 17 U | 30 J | 20 U | 30 J | 150 U | 45 J | 80.2 |
| VCS-OU3-SO075/0.5-1.1-FD | 0.5 - 1.1 | 2013 | 17 U | 17 U | 17 U | 17 U | 32 J | 22 J | 54 J | 150 U | 25 J | 80.1 |
| VCS-OU3-SO075/0-0.5 | 0 - 0.5 | 2013 | 20 U | 20 U | 20 U | 23 J | 120 | 44 J | 190 | 170 U | 370 | 68.9 |
| VCS-OU3-SO076/0.5-1 | 0.5 - 1 | 2013 | 4,400 J | 500 J | 160 J | 2,200 J | 760 J | 1,500 J | 9,500 J | 350 J | 3,000 J | 68.1 |
| VCS-OU3-SO076/0-0.5 | 0 - 0.5 | 2013 | 190 | 48 J | 27 J | 170 | 250 | 310 | 1,000 | 370 J | 1,800 | 66.7 |
| VCS-OU3-SO076/1-1.5 | 1 - 1.5 | 2013 | 830 | 90 | 19 U | 310 | 140 | 82 | 1,500 | 160 U | 46 | 73.4 |
| VCS-OU3-SO077/0.5-1.15 | 0.5 - 1.15 | 2013 | 430 | 120 | 22 J | 340 | 250 | 260 J | 1,400 J | 170 U | 1,100 | 71.9 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO077/0.5-1.15-FD | 0.5 - 1.15 | 2013 | 350 | 110 J | 70 J | 320 | 230 | 1,900 J | 3,000 J | 170 U | 970 | 71.3 |
| VCS-OU3-SO077/0-0.5 | 0 - 0.5 | 2013 | 79 | 29 J | 24 J | 150 | 210 | 390 | 880 | 290 J | 1,400 | 68.2 |
| VCS-OU3-SO078/0.5-1.1 | 0.5 - 1.1 | 2013 | 1,900 J | 1,000 J | 8,000 J | 2,000 J | 1,300 J | 41,000 J | 55,000 J | 170 U | 720 J | 69.1 |
| VCS-OU3-SO078/0.5-1.1-FD | 0.5 - 1.1 | 2013 | 2,200 | 350 J | 1,600 J | 1,100 J | 580 J | 9,400 J | 15,000 J | 170 U | 1,200 J | 68.8 |
| VCS-OU3-SO078/0-0.5 | 0 - 0.5 | 2013 | 140 J | 56 U | 140 J | 270 | 440 | 2,700 | 3,700 | 530 J | 5,500 J | 63.0 |
| VCS-OU3-SO079/0-0.5 | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 18 U | 250 | 65 J | 320 | 160 U | 60 | 76.3 |
| VCS-OU3-SO079/0-0.5-FD | 0 - 0.5 | 2014 | 19 U | 19 U | 19 U | 19 U | 250 | 59 J | 310 | 160 U | 54 | 74.6 |
| VCS-OU3-SO080/0-0.5 | 0 - 0.5 | 2014 | 20 U | 20 U | 20 U | 20 U | 390 | 200 | 590 | 180 U | 250 | 68.7 |
| VCS-OU3-SO081/0-0.5 | 0 - 0.5 | 2014 | 96 J | 45 J | 57 J | 270 | 880 | 1,800 | 3,100 | 170 U | 1,300 | 70.3 |
| VCS-OU3-SO082/0-0.5 | 0 - 0.5 | 2014 | 41 UJ | 76 J | 400 J | 99 J | 2,500 J | 2,100 J | 5,200 J | 160 J | 280 | 85.7 |
| VCS-OU3-SO083/0-0.5 | 0 - 0.5 | 2014 | 17 U | 29 J | 56 | 39 J | 710 | 170 | 1,000 | 150 U | 140 | 81.9 |
| VCS-OU3-SO084/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 24 J | 29 J | 360 | 370 | 780 | 130 U | 42 | 90.4 |
| VCS-OU3-SO085/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 75 | 26 J | 100 | 130 U | 17 J | 92.7 |
| VCS-OU3-SO086/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 16 U | 16 U | 250 | 76 | 330 | 130 U | 20 J | 88.9 |
| VCS-OU3-SO087/0-0.5 | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 18 U | 23 U | 21 U | 23 U | 160 U | 10 U | 76.3 |
| VCS-OU3-SO088/0-0.5 | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 18 U | 83 | 21 U | 83 | 160 U | 190 | 77.0 |
| VCS-OU3-SO089/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 33 J | 15 U | 450 | 80 | 560 | 130 U | 43 | 91.6 |
| VCS-OU3-SO090/0-0.5 | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 18 U | 580 | 69 | 650 | 190 J | 38 | 79.1 |
| VCS-OU3-SO091/0-0.5 | 0 - 0.5 | 2014 | 17 U | 17 U | 42 J | 17 U | 800 | 190 | 1,000 | 280 J | 82 | 79.9 |
| VCS-OU3-SO092/0-0.5 | 0 - 0.5 | 2014 | 15 U | 18 J | 50 | 15 U | 840 | 260 | 1,200 | 130 U | 230 | 91.0 |
| VCS-OU3-SO093/0-0.5 | 0 - 0.5 | 2014 | 31 U | 31 U | 120 | 31 U | 1,900 | 700 | 2,700 | 130 U | 250 | 88.5 |
| VCS-OU3-SO094/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 94 | 38 J | 970 | 560 | 1,700 | 130 U | 160 | 89.2 |
| VCS-OU3-SO095/0-0.5 | 0 - 0.5 | 2014 | 160 U | 160 U | 970 | 160 U | 8,000 | 3,200 | 12,000 | 140 U | 220 | 86.7 |
| VCS-OU3-SO095/0-0.5-FD | 0 - 0.5 | 2014 | 160 U | 160 U | 1,100 | 160 U | 9,100 | 3,300 | 14,000 | 140 U | 190 | 86.7 |
| VCS-OU3-SO096/0-0.5 | 0 - 0.5 | 2014 | 290 J | 290 J | 1,600 | 310 J | 9,100 | 4,300 | 16,000 | 370 J | 130 | 76.7 |
| VCS-OU3-SO097/0-0.5 | 0 - 0.5 | 2014 | 37 U | 37 U | 190 | 37 U | 1,700 | 830 | 2,700 | 160 U | 39 | 75.8 |
| VCS-OU3-SO098/0-0.5 | 0 - 0.5 | 2014 | 33 U | 47 J | 200 | 74 J | 1,900 | 1,100 | 3,300 | 140 U | 280 | 85.9 |
| VCS-OU3-SO099/0-0.5 | 0 - 0.5 | 2014 | 79 U | 150 J | 900 | 150 J | 5,300 | 3,300 | 9,800 | 130 U | 88 | 88.9 |
| VCS-OU3-SO100/0-0.5 | 0 - 0.5 | 2014 | 450 U | 450 U | 7,300 | 1,100 J | 3,800 | 27,000 | 39,000 | 150 U | 26 J | 77.0 |
| VCS-OU3-SO101/0-0.5 | 0 - 0.5 | 2014 | 33 U | 33 U | 95 J | 33 U | 1,300 | 630 | 2,000 | 140 U | 340 | 83.2 |
| VCS-OU3-SO102/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 16 U | 16 U | 550 | 100 | 650 | 140 U | 12 J | 85.7 |
| VCS-OU3-SO103/0-0.5 | 0 - 0.5 | 2014 | 39 U | 39 U | 110 J | 230 | 1,700 | 640 | 2,700 | 170 U | 200 | 72.3 |
| VCS-OU3-SO104/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 37 J | 18 U | 37 J | 130 U | 8.8 U | 91.0 |
| VCS-OU3-SO105/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 26 J | 16 U | 570 | 470 | 1,100 | 140 U | 54 | 84.9 |
| VCS-OU3-SO106/0-0.5 | 0 - 0.5 | 2014 | 37 J | 41 J | 80 J | 37 J | 750 | 230 | 1,200 | 140 U | 90 | 86.3 |
| VCS-OU3-SO107/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 20 U | 17 U | 20 U | 130 U | 8.7 U | 91.9 |
| VCS-OU3-SO108/0-0.5 | 0 - 0.5 | 2014 | 31 J | 33 J | 130 | 16 U | 1,300 | 340 | 1,800 | 130 U | 27 J | 89.5 |
| VCS-OU3-SO109/0-0.5 | 0 - 0.5 | 2014 | 94 J | 36 U | 240 | 100 J | 1,900 | 1,400 | 3,700 | 160 U | 110 | 76.3 |
| VCS-OU3-SO109/0-0.5-FD | 0 - 0.5 | 2014 | 90 J | 37 U | 270 | 110 J | 2,100 | 1,700 | 4,300 | 160 U | 98 | 75.9 |
| VCS-OU3-SO110/0-0.5 | 0 - 0.5 | 2014 | 30 U | 30 U | 130 J | 120 J | 1,600 | 710 | 2,600 | 130 J | 150 | 92.3 |
| VCS-OU3-SO111/0-0.5 | 0 - 0.5 | 2014 | 34 U | 43 J | 140 | 34 U | 1,400 | 720 | 2,300 | 140 U | 360 | 82.4 |
| VCS-OU3-SO111/0-0.5-FD | 0 - 0.5 | 2014 | 57 J | 48 J | 140 | 86 J | 1,400 | 890 | 2,600 | 140 U | 390 | 83.1 |
| VCS-OU3-SO112/0-0.5 | 0 - 0.5 | 2014 | 43 J | 26 J | 86 | 84 | 610 | 1,100 | 1,900 | 140 J | 450 | 83.8 |
| VCS-OU3-SO113/0-0.5 | 0 - 0.5 | 2014 | 27 J | 16 J | 34 J | 34 J | 210 | 240 | 560 | 140 U | 640 | 86.6 |
| VCS-OU3-SO114/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 J | 37 J | 15 U | 570 | 170 | 790 | 130 U | 470 | 93.1 |
| VCS-OU3-SO115/0-0.5 | 0 - 0.5 | 2014 | 220 J | 82 U | 390 | 260 J | 3,000 | 1,800 | 5,700 | 160 J | 570 | 85.1 |
| VCS-OU3-SO116/0-0.5 | 0 - 0.5 | 2014 | 88 J | 44 J | 83 J | 93 J | 960 J | 750 J | 2,000 J | 150 U | 700 | 81.6 |
| VCS-OU3-SO117/0-0.5 | 0 - 0.5 | 2014 | 670 J | 430 U | 980 J | 1,000 J | 1,800 J | 23,000 | 27,000 | 440 J | 1,500 | 80.8 |
| VCS-OU3-SO118/0-0.5 | 0 - 0.5 | 2014 | 40 J | 23 J | 65 | 73 | 540 | 430 | 1,200 | 150 U | 310 | 78.9 |
| VCS-OU3-SO119/0-0.5 | 0 - 0.5 | 2014 | 900 U | 900 U | 7,900 | 900 U | 2,700 J | 29,000 | 40,000 | 150 U | 450 | 77.5 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO120/0-0.5 | 0 - 0.5 | 2014 | 83 U | 83 U | 290 | 230 J | 2,100 | 4,900 | 7,500 | 140 U | 440 | 83.3 |
| VCS-OU3-SO121/0-0.5 | 0 - 0.5 | 2014 | 82 U | 82 U | 390 | 82 U | 3,800 | 1,300 | 5,500 | 140 U | 310 | 85.2 |
| VCS-OU3-SO122/0-0.5 | 0 - 0.5 | 2014 | 31 U | 31 U | 92 J | 57 J | 1,500 | 840 J | 2,500 | 130 J | 300 | 90.1 |
| VCS-OU3-SO122/0-0.5-FD | 0 - 0.5 | 2014 | 30 U | 30 U | 70 J | 30 U | 1,200 | 580 J | 1,900 | 130 U | 250 | 92.0 |
| VCS-OU3-SO123/0-0.5 | 0 - 0.5 | 2014 | 33 U | 33 U | 150 | 33 U | 1,300 | 530 | 2,000 | 140 U | 310 | 84.6 |
| VCS-OU3-SO124/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 38 J | 200 | 410 | 700 | 1,300 | 130 U | 150 | 94.1 |
| VCS-OU3-SO125/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 20 U | 17 U | 20 U | 130 U | 78 | 92.0 |
| VCS-OU3-SO125/0-0.5-FD | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 19 U | 17 U | 19 U | 130 U | 58 | 92.7 |
| VCS-OU3-SO126/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 16 U | 16 U | 150 | 18 J | 170 | 130 U | 220 | 90.0 |
| VCS-OU3-SO127/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 330 | 24 J | 350 | 130 U | 270 | 90.3 |
| VCS-OU3-SO128/0-0.5 | 0 - 0.5 | 2014 | 32 J | 17 U | 17 U | 42 J | 390 | 240 | 700 | 150 U | 410 | 80.4 |
| VCS-OU3-SO129/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 42 J | 16 U | 460 | 200 | 700 | 130 U | 230 | 89.3 |
| VCS-OU3-SO130/0-0.5 | 0 - 0.5 | 2014 | 57 J | 17 U | 32 J | 45 J | 940 | 130 | 1,200 | 150 U | 380 | 80.1 |
| VCS-OU3-SO131/0-0.5 | 0 - 0.5 | 2014 | 72 J | 33 U | 33 U | 33 U | 1,100 | 120 J | 1,300 | 140 U | 250 | 83.1 |
| VCS-OU3-SO132/0-0.5 | 0 - 0.5 | 2014 | 50 J | 18 U | 110 | 38 J | 1,000 | 290 | 1,500 | 150 U | 220 | 79.2 |
| VCS-OU3-SO133/0-0.5 | 0 - 0.5 | 2014 | 65 | 17 U | 160 | 43 J | 1,100 | 320 | 1,700 | 140 U | 340 | 83.4 |
| VCS-OU3-SO134/0-0.5 | 0 - 0.5 | 2014 | 15 U | 15 U | 15 U | 15 U | 81 | 17 U | 81 | 130 U | 8.6 U | 93.1 |
| VCS-OU3-SO135/0.5-0.8 | 0.5 - 0.8 | 2014 | 160 U | 160 U | 390 J | 160 U | 3,400 | 1,600 | 5,400 | 200 J | 110 | 86.9 |
| VCS-OU3-SO135/0-0.5 | 0 - 0.5 | 2014 | 160 U | 160 U | 500 J | 1,000 | 4,500 | 2,600 | 8,600 | 280 J | 270 | 86.8 |
| VCS-OU3-SO136/0.5-1 | 0.5 - 1 | 2014 | 32 U | 32 U | 32 U | 32 U | 570 | 110 J | 680 | 140 U | 32 | 87.8 |
| VCS-OU3-SO136/0-0.5 | 0 - 0.5 | 2014 | 33 U | 38 J | 150 J | 33 U | 1,700 J | 550 J | 2,400 J | 210 J | 490 | 84.6 |
| VCS-OU3-SO136/1-1.3 | 1 - 1.3 | 2014 | 16 U | 16 U | 16 U | 16 U | 57 J | 18 U | 57 | 140 U | 9.1 U | 88.1 |
| VCS-OU3-SO137/0.5-1 | 0.5 - 1 | 2014 | 31 U | 31 U | 83 J | 31 U | 1,800 J | 300 J | 2,200 J | 180 J | 94 | 90.7 |
| VCS-OU3-SO137/0-0.5 | 0 - 0.5 | 2014 | 84 U | 84 U | 84 U | 84 U | 2,700 | 1,200 | 3,900 | 250 J | 330 | 83.4 |
| VCS-OU3-SO137/1-1.65 | 1 - 1.65 | 2014 | 17 U | 17 U | 17 U | 17 U | 410 | 58 J | 470 | 140 U | 9.6 U | 82.3 |
| VCS-OU3-SO138/0.5-1 | 0.5 - 1 | 2014 | 160 U | 250 J | 1,100 | 160 U | 6,700 | 2,900 | 11,000 | 190 J | 92 | 87.7 |
| VCS-OU3-SO138/0-0.5 | 0 - 0.5 | 2014 | 150 U | 240 J | 1,200 | 150 U | 8,800 | 3,100 | 13,000 | 240 J | 210 | 92.8 |
| VCS-OU3-SO138/1-1.7 | 1 - 1.7 | 2014 | 82 U | 82 U | 130 J | 82 U | 1,600 | 400 | 2,100 | 140 U | 30 J | 85.7 |
| VCS-OU3-SO139/0.5-1 | 0.5 - 1 | 2014 | 40 UJ | 40 UJ | 150 J | 40 UJ | 1,700 J | 340 J | 2,200 J | 140 U | 62 | 87.8 |
| VCS-OU3-SO139/0-0.5 | 0 - 0.5 | 2014 | 170 U | 170 U | 170 U | 170 U | 2,800 | 640 | 3,400 | 220 J | 280 | 84.0 |
| VCS-OU3-SO139/1-1.2 | 1 - 1.2 | 2014 | 31 U | 31 U | 31 U | 31 U | 480 | 66 J | 550 | 130 U | 8.8 U | 90.6 |
| VCS-OU3-SO140/0.5-1 | 0.5 - 1 | 2014 | 400 U | 400 U | 1,700 | 400 U | 7,000 | 3,800 | 13,000 | 190 J | 120 | 87.5 |
| VCS-OU3-SO140/0-0.5 | 0 - 0.5 | 2014 | 410 U | 410 U | 1,200 J | 410 U | 7,500 | 3,600 | 12,000 | 240 J | 280 | 85.3 |
| VCS-OU3-SO140/0-0.5-FD | 0 - 0.5 | 2014 | 410 U | 410 U | 1,200 J | 410 U | 6,600 | 3,200 | 11,000 | 230 J | 240 | 85.2 |
| VCS-OU3-SO140/1-1.3 | 1 - 1.3 | 2014 | 42 U | 90 J | 330 | 42 U | 2,400 | 590 | 3,400 | 140 U | 14 J | 83.9 |
| VCS-OU3-SO141/0.5-0.9 | 0.5 - 0.9 | 2014 | 81 | 65 | 100 | 110 | 900 | 1,100 | 2,400 | 140 U | 120 | 83.6 |
| VCS-OU3-SO141/0-0.5 | 0 - 0.5 | 2014 | 75 | 46 J | 40 J | 170 | 910 | 770 | 2,000 | 160 U | 630 | 74.0 |
| VCS-OU3-SO141/0-0.5-FD | 0 - 0.5 | 2014 | 76 | 44 J | 42 J | 170 | 900 | 750 | 2,000 | 160 U | 640 | 77.0 |
| VCS-OU3-SO142/0.5-0.95 | 0.5 - 0.95 | 2014 | 600 | 110 | 21 U | 430 | 140 | 140 | 1,400 | 180 U | 1,900 | 68.2 |
| VCS-OU3-SO142/0-0.5 | 0 - 0.5 | 2014 | 58 J | 27 J | 21 U | 150 J | 230 | 350 | 820 | 180 U | 1,700 | 65.6 |
| VCS-OU3-SO143/0.5-0.9 | 0.5 - 0.9 | 2014 | 120 | 47 J | 18 U | 98 | 260 | 170 | 700 | 160 U | 1,900 | 76.1 |
| VCS-OU3-SO143/0-0.5 | 0 - 0.5 | 2014 | 50 J | 29 J | 29 J | 130 | 280 | 1,400 | 1,900 | 160 U | 2,000 | 75.8 |
| VCS-OU3-SO144/0.5-0.85 | 0.5 - 0.85 | 2014 | 18 U | 18 U | 18 U | 18 U | 25 J | 20 U | 25 J | 150 U | 10 U | 78.5 |
| VCS-OU3-SO144/0-0.5 | 0 - 0.5 | 2014 | 190 | 82 | 34 J | 180 | 630 | 460 | 1,600 | 160 U | 570 | 75.7 |
| VCS-OU3-SO145/0.5-1 | 0.5 - 1 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 1.1 U | 150 U | 61 | 82.7 |
| VCS-OU3-SO145/0-0.5 | 0 - 0.5 | 2014 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 1 U | 140 U | 30 | 85.8 |
| VCS-OU3-SO145/1-1.3 | 1 - 1.3 | 2014 | 20 U | 20 U | 20 U | 20 U | 26 U | 23 U | 26 U | 170 U | 110 | 69.8 |
| VCS-OU3-SO146/0.5-1.05 | 0.5 - 1.05 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 22 U | 140 U | 9.6 U | 83.3 |
| VCS-OU3-SO146/0-0.5 | 0 - 0.5 | 2014 | 20 U | 20 U | 20 U | 52 J | 140 | 240 | 430 | 170 U | 290 | 69.1 |
| VCS-OU3-SO147/0.5-0.9 | 0.5 - 0.9 | 2014 | 19 U | 19 U | 19 U | 19 U | 24 U | 22 U | 24 U | 160 U | 11 U | 74.4 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO147/0-0.5 | 0 - 0.5 | 2014 | 46 J | 23 U | 23 U | 52 J | 140 | 26 U | 240 | 200 U | 330 | 61.3 |
| VCS-OU3-SO148/0.5-0.7 | 0.5 - 0.7 | 2014 | 20 U | 20 U | 20 U | 20 U | 31 J | 23 U | 31 J | 170 U | 11 U | 70.6 |
| VCS-OU3-SO148/0-0.5 | 0 - 0.5 | 2014 | 410 | 170 | 20 U | 260 | 600 | 470 J | 1,900 | 170 U | 1,300 | 69.4 |
| VCS-OU3-SO148/0-0.5-FD | 0 - 0.5 | 2014 | 420 | 180 | 20 U | 240 | 580 | 300 J | 1,700 | 170 U | 1,200 | 69.6 |
| VCS-OU3-SO149/0.5-1 | 0.5 - 1 | 2014 | 190 | 74 J | 46 J | 170 | 450 | 830 | 1,800 | 340 J | 2,700 | 78.5 |
| VCS-OU3-SO149/0-0.5 | 0 - 0.5 | 2014 | 44 J | 18 U | 26 J | 65 | 170 | 210 | 520 | 200 J | 440 | 77.4 |
| VCS-OU3-SO150/0.5-0.8 | 0.5 - 0.8 | 2014 | 260 | 120 | 43 J | 170 | 480 | 490 | 1,600 | 250 J | 960 | 74.1 |
| VCS-OU3-SO150/0-0.5 | 0 - 0.5 | 2014 | 84 | 38 J | 43 J | 100 | 360 | 500 | 1,100 | 300 J | 1,500 | 69.5 |
| VCS-OU3-SO151/0-0.5 | 0 - 0.5 | 2014 | 46 J | 30 J | 19 U | 65 | 590 | 84 J | 820 | 230 J | 780 | 73.7 |
| VCS-OU3-SO151/0-0.5-FD | 0 - 0.5 | 2014 | 48 J | 19 U | 19 U | 69 | 590 | 130 J | 840 | 220 J | 970 | 75.2 |
| VCS-OU3-SO152/0.5-1 | 0.5 - 1 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 UJ | 9.8 U | 81.8 |
| VCS-OU3-SO152/0-0.5 | 0 - 0.5 | 2014 | 19 U | 19 U | 32 J | 76 | 100 | 1,200 J | 1,400 J | 160 U | 190 | 73.9 |
| VCS-OU3-SO152/0-0.5-FD | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 18 U | 100 | 24 J | 120 J | 160 U | 170 | 76.1 |
| VCS-OU3-SO152/1-1.35 | 1 - 1.35 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 22 U | 140 U | 9.6 U | 83.3 |
| VCS-OU3-SO153/0.5-0.9 | 0.5 - 0.9 | 2014 | 20 U | 20 U | 20 U | 20 U | 88 | 260 | 350 | 170 U | 310 | 70.4 |
| VCS-OU3-SO153/0-0.5 | 0 - 0.5 | 2014 | 24 U | 24 U | 24 U | 54 J | 130 | 74 J | 260 | 240 J | 350 | 59.1 |
| VCS-OU3-SO154/0.5-0.85 | 0.5 - 0.85 | 2014 | 21 U | 21 U | 21 U | 21 U | 49 J | 25 U | 49 J | 180 U | 260 | 65.1 |
| VCS-OU3-SO154/0-0.5 | 0 - 0.5 | 2014 | 30 U | 30 U | 30 U | 30 U | 64 J | 34 U | 64 J | 260 U | 800 | 46.8 |
| VCS-OU3-SO155/0.5-1 | 0.5 - 1 | 2014 | 23 J | 18 U | 18 U | 66 | 89 | 590 | 770 | 270 J | 1,200 | 78.3 |
| VCS-OU3-SO155/0-0.5 | 0 - 0.5 | 2014 | 18 U | 18 U | 18 U | 49 J | 110 | 230 | 390 | 250 J | 950 | 77.2 |
| VCS-OU3-SO155/1-1.3 | 1 - 1.3 | 2014 | 26 U | 26 U | 26 U | 26 U | 33 U | 30 U | 33 U | 220 U | 15 U | 54.0 |
| VCS-OU3-SO156-0.5/1 | 0 - 1 | 2014 | 440 | 82 | 40 J | 370 | 120 | 930 | 2,000 | 400 J | 1,800 | 70.5 |
| VCS-OU3-SO156-0/0.5 | 0 - 0.5 | 2014 | 510 U | 510 U | 2,000 | 580 J | 660 U | 14,000 | 17,000 | 300 J | 1,200 | 68.7 |
| VCS-OU3-SO156-1/1.35 | 1 - 1.35 | 2014 | 750 | 350 | 18 U | 900 | 750 | 480 | 3,200 | 150 U | 10 U | 77.0 |
| VCS-OU3-SO157-0.5/1 | 0.5 - 1 | 2014 | 110 | 17 U | 17 U | 150 | 32 J | 260 | 550 | 280 J | 85 | 79.5 |
| VCS-OU3-SO157-0/0.5 | 0 - 0.5 | 2014 | 56 J | 21 U | 21 U | 110 | 59 J | 110 | 340 | 180 U | 160 | 68.3 |
| VCS-OU3-SO157-1/1.5 | 1 - 1.5 | 2014 | 20 U | 20 U | 20 U | 26 J | 26 U | 23 U | 26 | 170 U | 11 U | 70.0 |
| VCS-OU3-SO158/0.5-1 | 0.5 - 1 | 2014 | 180 | 18 U | 18 U | 200 | 23 U | 270 | 650 | 150 U | 43 | 79.5 |
| VCS-OU3-SO158/0-0.5 | 0 - 0.5 | 2014 | 22 U | 22 U | 22 U | 59 J | 37 J | 120 J | 220 J | 190 U | 140 J | 64.9 |
| VCS-OU3-SO158/0-0.5-FD | 0 - 0.5 | 2014 | 45 J | 19 U | 29 J | 100 J | 24 U | 230 J | 400 J | 160 U | 69 J | 75.7 |
| VCS-OU3-SO158/1-2 | 1 - 2 | 2014 | 15 U | 15 U | 15 U | 15 U | 19 U | 41 J | 41 J | 130 U | 8.6 U | 92.1 |
| VCS-OU3-SO158/2-2.2 | 2 - 2.2 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 22 U | 150 U | 10 U | 80.2 |
| VCS-OU3-SO159/0.5-1 | 0.5 - 1 | 2014 | 77 | 19 U | 19 U | 110 | 41 J | 460 | 690 | 170 U | 170 | 72.7 |
| VCS-OU3-SO159/0-0.5 | 0 - 0.5 | 2014 | 46 J | 18 U | 18 U | 95 J | 52 J | 77 | 270 | 150 U | 64 | 77.5 |
| VCS-OU3-SO159/1-1.4 | 1 - 1.4 | 2014 | 90 | 17 U | 17 U | 140 | 22 U | 64 J | 290 | 150 U | 200 | 81.4 |
| VCS-OU3-SO160/0.5-1 | 0.5 - 1 | 2014 | 120 | 19 U | 42 J | 240 | 37 J | 240 | 680 | 160 U | 93 | 74.7 |
| VCS-OU3-SO160/0-0.5 | 0 - 0.5 | 2014 | 79 | 18 U | 18 U | 100 | 24 U | 68 J | 250 | 160 U | 10 U | 76.1 |
| VCS-OU3-SO160/1-1.55 | 1 - 1.55 | 2014 | 20 U | 20 U | 20 U | 20 U | 26 U | 23 U | 26 U | 170 U | 12 U | 69.2 |
| VCS-OU3-SO161/0.5-0.95 | 0.5 - 0.95 | 2014 | 18 U | 18 U | 18 U | 18 U | 23 U | 21 U | 23 U | 160 U | 21 J | 76.7 |
| VCS-OU3-SO161/0-0.5 | 0 - 0.5 | 2014 | 20 U | 20 U | 20 U | 23 J | 250 | 190 | 460 | 340 J | 910 | 69.9 |
| VCS-OU3-SO162/0.5-0.95 | 0.5 - 0.95 | 2014 | 27 J | 19 U | 21 J | 40 J | 330 J | 120 J | 540 J | 160 U | 250 | 74.7 |
| VCS-OU3-SO162/0-0.5 | 0 - 0.5 | 2014 | 37 J | 20 U | 29 J | 60 J | 520 | 260 | 920 | 210 J | 790 | 69.9 |
| VCS-OU3-SO163/0.5-1 | 0.5 - 1 | 2014 | 17 U | 17 U | 17 U | 22 J | 92 | 41 J | 170 | 140 U | 41 | 82.7 |
| VCS-OU3-SO163/0-0.5 | 0 - 0.5 | 2014 | 58 J | 24 J | 26 J | 79 | 450 | 220 | 860 | 190 J | 460 | 75.9 |
| VCS-OU3-SO164/0.5-0.8 | 0.5 - 0.8 | 2014 | 29 J | 18 U | 18 U | 39 J | 210 | 42 J | 320 | 160 U | 180 | 76.3 |
| VCS-OU3-SO164/0-0.5 | 0 - 0.5 | 2014 | 19 J | 19 U | 19 U | 50 J | 370 | 120 | 560 | 220 J | 920 | 72.2 |
| VCS-OU3-SO165/0.5-1.1 | 0.5 - 1.1 | 2014 | 17 U | 17 U | 17 U | 17 U | 22 U | 20 U | 1.1 U | 150 U | 10 U | 80.3 |
| VCS-OU3-SO165/0-0.5 | 0 - 0.5 | 2014 | 61 J | 21 U | 21 U | 58 J | 150 | 55 J | 320 | 180 U | 420 | 65.9 |
| VCS-OU3-SO166/0.5-1.15 | 0.5 - 1.15 | 2014 | 140 J | 46 J | 21 J | 200 J | 170 J | 110 J | 690 J | 380 J | 610 | 65.9 |
| VCS-OU3-SO166/0-0.5 | 0 - 0.5 | 2014 | 46 J | 19 U | 73 | 78 | 76 J | 400 | 670 | 160 U | 110 | 73.9 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO167/0.5-1 | 0.5 - 1 | 2014 | 600 | 53 U | 440 | 620 | 68 U | 2,200 | 3,900 | 180 U | 110 | 66.8 |
| VCS-OU3-SO167/0-0.5 | 0 - 0.5 | 2014 | 77 J | 38 U | 38 U | 190 | 88 J | 370 | 730 | 330 U | 940 | 36.3 |
| VCS-OU3-SO168/0.5-1.15 | 0.5 - 1.15 | 2014 | 89 J | 48 U | 230 | 140 J | 180 J | 1,600 | 2,200 | 220 J | 640 | 73.6 |
| VCS-OU3-SO168/0-0.5 | 0 - 0.5 | 2014 | 50 J | 50 U | 2,000 | 79 J | 190 J | 760 | 3,100 | 220 J | 380 | 69.8 |
| VCS-OU3-SO169/0.5-1.1 | 0.5 - 1.1 | 2014 | 170 J | 52 U | 280 | 280 | 67 U | 3,200 | 3,900 | 180 U | 130 | 67.4 |
| VCS-OU3-SO169/0-0.5 | 0 - 0.5 | 2014 | 190 J | 64 U | 130 J | 430 J | 82 U | 2,000 J | 2,800 J | 490 J | 380 | 54.4 |
| VCS-OU3-SO169/0-0.5-FD | 0 - 0.5 | 2014 | 380 J | 240 U | 2,200 J | 590 J | 310 U | 13,000 J | 16,000 J | 210 U | 340 | 57.6 |
| VCS-OU3-SO170/0.5-1 | 0.5 - 1 | 2014 | 39 J | 18 U | 69 | 59 J | 110 | 720 | 1,000 | 210 J | 450 | 77.3 |
| VCS-OU3-SO170/0-0.5 | 0 - 0.5 | 2014 | 32 J | 19 U | 35 J | 57 J | 76 J | 330 J | 530 J | 160 U | 110 J | 73.9 |
| VCS-OU3-SO170/0-0.5-FD | 0 - 0.5 | 2014 | 96 U | 96 U | 1,600 J | 160 J | 120 J | 5,500 J | 7,400 J | 200 J | 160 J | 72.7 |
| VCS-OU3-SO170/1-1.55 | 1 - 1.55 | 2014 | 85 | 16 U | 21 J | 75 | 21 U | 180 | 360 | 140 U | 160 | 84.5 |
| VCS-OU3-SO171/0.5-1.1 | 0.5 - 1.1 | 2014 | 130 | 17 U | 30 J | 170 | 27 J | 560 | 920 | 190 J | 100 | 80.0 |
| VCS-OU3-SO171/0-0.5 | 0 - 0.5 | 2014 | 78 J | 46 U | 46 U | 140 J | 59 U | 2,000 | 2,200 | 160 U | 220 | 76.2 |
| VCS-OU3-SO-172/0 - 0.5 | 0 - 0.5 | 2015 | 190 U | 190 U | 2,500 | 370 J | 5,700 | 11,000 | 20,000 | 300 J | 190 J | 75.3 |
| VCS-OU3-SO-172/0.5 - 1 | 0.5 - 1 | 2015 | 180 J | 160 U | 2,900 | 270 J | 3,900 | 10,000 | 17,000 | 140 U | 120 | 87.7 |
| VCS-OU3-SO-172/1 - 2 | 1 - 2 | 2015 | 30 U | 43 J | 380 | 34 J | 1,400 | 690 | 2,500 | 130 U | 8.6 U | 92.4 |
| VCS-OU3-SO-172/2 - 2.9 | 2 - 2.9 | 2015 | 17 U | 17 U | 79 J | 17 U | 590 J | 130 J | 800 | 150 U | 9.9 UJ | 81.4 |
| VCS-OU3-SO-173/0 - 0.5 | 0 - 0.5 | 2015 | 92 U | 92 U | 360 | 92 U | 3,200 | 1,500 | 5,100 | 160 U | 350 | 75.6 |
| VCS-OU3-SO-173/0.5 - 1 | 0.5 - 1 | 2015 | 17 U | 26 J | 120 | 17 U | 1,000 J | 300 J | 1,400 | 140 U | 9.6 UJ | 83.7 |
| VCS-OU3-SO-173/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 15 U | 15 U | 180 | 26 J | 210 | 130 U | 8.7 U | 90.9 |
| VCS-OU3-SO-174/1 - 2-FD | 1 - 2 | 2015 | 15 U | 15 U | 39 J | 15 U | 400 | 50 J | 490 J | 130 U | 8.7 U | 91.8 |
| VCS-OU3-SO-174/0 - 0.5 | 0 - 0.5 | 2015 | 73 U | 73 J | 590 | 84 J | 4,400 | 1,700 | 6,800 | 160 U | 55 | 76.1 |
| VCS-OU3-SO-174/0.5 - 1 | 0.5 - 1 | 2015 | 30 U | 30 U | 190 | 30 U | 1,400 | 410 | 2,000 | 130 U | 8.5 U | 94.0 |
| VCS-OU3-SO-174/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 62 J | 15 U | 540 | 91 J | 690 J | 130 U | 8.9 U | 90.0 |
| VCS-OU3-SO-175/0 - 0.5 | 0 - 0.5 | 2015 | 560 J | 200 U | 5,500 | 1,200 | 8,600 | 12,000 | 28,000 | 360 J | 120 | 71.6 |
| VCS-OU3-SO-175/0.5 - 1 | 0.5 - 1 | 2015 | 400 U | 400 U | 9,900 | 740 J | 4,000 | 26,000 | 41,000 | 230 J | 71 | 87.2 |
| VCS-OU3-SO-175/1 - 2 | 1 - 2 | 2015 | 30 U | 30 J | 620 | 51 J | 880 | 1,900 | 3,500 | 130 U | 8.6 U | 93.0 |
| VCS-OU3-SO-175/2 - 2.6 | 2 - 2.6 | 2015 | 16 U | 16 U | 16 U | 16 U | 29 J | 18 U | 29 J | 130 U | 9 U | 89.1 |
| VCS-OU3-SO-176-FD | 0.5 - 1 | 2015 | 320 J | 320 J | 3,800 | 2,900 J | 9,800 | 9,000 | 26,000 | 500 J | 180 | 82.7 |
| VCS-OU3-SO-176/0 - 0.5 | 0 - 0.5 | 2015 | 190 U | 190 U | 1,900 | 210 J | 9,900 | 5,300 | 17,000 | 220 J | 130 | 74.5 |
| VCS-OU3-SO-176/0.5 - 1 | 0.5 - 1 | 2015 | 240 J | 290 J | 3,100 | 270 J | 9,600 | 7,200 | 21,000 | 300 J | 170 | 83.2 |
| VCS-OU3-SO-176/1 - 2 | 1 - 2 | 2015 | 79 U | 140 J | 1,400 | 140 J | 4,300 | 5,200 | 11,000 | 230 J | 59 | 88.8 |
| VCS-OU3-SO-176/2 - 2.56 | 2 - 2.56 | 2015 | 16 U | 16 U | 16 U | 16 U | 21 U | 18 U | 21 U | 140 U | 9.2 U | 86.7 |
| VCS-OU3-SO-177/0 - 0.5 | 0 - 0.5 | 2015 | 97 U | 97 U | 440 | 97 U | 4,200 | 1,500 | 6,100 | 170 J | 25 J | 72.7 |
| VCS-OU3-SO-177/0.5 - 1 | 0.5 - 1 | 2015 | 32 U | 41 J | 330 | 50 J | 2,000 | 870 | 3,300 | 140 U | 9 U | 88.7 |
| VCS-OU3-SO-177/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 16 J | 16 U | 180 | 44 J | 240 | 140 U | 9.3 U | 85.7 |
| VCS-OU3-SO-178/0 - 0.5 | 0 - 0.5 | 2015 | 360 UJ | 360 UJ | 8,300 | 670 J | 5,300 | 19,000 | 33,000 | 160 J | 73 J | 77.0 |
| VCS-OU3-SO-178/0.5 - 1 | 0.5 - 1 | 2015 | 170 U | 170 U | 1,700 | 270 J | 3,500 | 10,000 | 15,000 | 150 U | 9.9 U | 80.8 |
| VCS-OU3-SO-178/1 - 2 | 1 - 2 | 2015 | 33 U | 33 U | 310 | 43 J | 1,600 | 900 | 2,900 | 140 U | 9.4 U | 85.0 |
| VCS-OU3-SO-178/2 - 3 | 2 - 3 | 2015 | 18 U | 18 U | 45 J | 18 U | 310 | 79 | 430 | 160 U | 10 U | 75.8 |
| VCS-OU3-SO-179/1 - 2-FD | 1 - 2 | 2015 | 50 J | 33 J | 280 J | 63 J | 1,200 | 960 J | 2,600 J | 130 U | 8.7 U | 92.0 |
| VCS-OU3-SO-179/0 - 0.5 | 0 - 0.5 | 2015 | 18 U | 18 U | 43 J | 18 U | 320 | 190 | 550 | 150 U | 10 U | 78.4 |
| VCS-OU3-SO-179/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 96 | 19 J | 540 | 320 | 980 | 140 U | 9.3 U | 85.8 |
| VCS-OU3-SO-179/1 - 2 | 1 - 2 | 2015 | 28 J | 24 J | 180 J | 35 J | 980 | 330 J | 1,600 J | 130 U | 8.7 U | 92.3 |
| VCS-OU3-SO-179/2 - 3 | 2 - 3 | 2015 | 16 U | 16 U | 20 J | 16 U | 200 | 38 J | 260 | 130 U | 9 U | 89.1 |
| VCS-OU3-SO-180/0 - 0.5 | 0 - 0.5 | 2015 | 18 U | 18 U | 18 U | 18 U | 50 J | 29 J | 79 J | 160 U | 10 U | 77.0 |
| VCS-OU3-SO-180/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 9.3 U | 85.6 |
| VCS-OU3-SO-180/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 15 U | 15 U | 20 U | 18 U | 20 U | 130 U | 8.8 U | 91.7 |
| VCS-OU3-SO-181/0 - 0.5 | 0 - 0.5 | 2015 | 560 J | 360 U | 5,500 | 560 J | 13,000 | 19,000 | 39,000 | 150 U | 190 J | 78.9 |
| VCS-OU3-SO-181/0.5 - 1 | 0.5 - 1 | 2015 | 330 U | 380 J | 5,900 | 570 J | 8,000 | 23,000 | 38,000 | 140 U | 31 J | 84.7 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO-181/1 - 2 | 1 - 2 | 2015 | 16 U | 21 J | 140 | 16 U | 850 | 210 | 1,200 | 140 U | 9.2 U | 87.7 |
| VCS-OU3-SO-182/0 - 0.5 | 0 - 0.5 | 2015 | 920 U | 920 U | 17,000 | 1,400 J | 16,000 | 48,000 | 82,000 | 290 J | 470 J | 75.9 |
| VCS-OU3-SO-182/0.5 - 1 | 0.5 - 1 | 2015 | 170 J | 190 J | 2,100 J | 140 J | 5,500 J | 5,400 J | 14,000 J | 140 U | 21 J | 84.2 |
| VCS-OU3-SO-182/1 - 2 | 1 - 2 | 2015 | 15 U | 24 J | 210 | 17 J | 900 | 400 | 1,600 | 130 U | 8.7 U | 91.5 |
| VCS-OU3-SO-182/2 - 2.7 | 2 - 2.7 | 2015 | 15 U | 15 U | 22 J | 15 U | 140 | 51 J | 210 | 130 U | 8.9 U | 90.6 |
| VCS-OU3-SO-183/0 - 0.5 | 0 - 0.5 | 2015 | 91 UJ | 91 UJ | 540 J | 91 UJ | 6,300 J | 1,900 J | 8,700 J | 160 U | 200 | 77.6 |
| VCS-OU3-SO-183/0.5 - 1 | 0.5 - 1 | 2015 | 40 U | 40 U | 230 | 40 U | 2,500 | 620 | 3,400 | 140 U | 37 J | 86.7 |
| VCS-OU3-SO-183/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 41 J | 16 U | 690 | 150 | 880 | 140 U | 9 U | 88.8 |
| VCS-OU3-SO-184/0 - 0.5 | 0 - 0.5 | 2015 | 280 J | 170 J | 1,100 J | 220 J | 7,700 J | 2,600 J | 12,000 J | 170 U | 250 J | 70.9 |
| VCS-OU3-SO-184/0.5 - 1 | 0.5 - 1 | 2015 | 50 J | 62 J | 480 J | 56 J | 2,000 J | 1,500 J | 4,100 J | 130 U | 9 U | 89.3 |
| VCS-OU3-SO-184/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 21 J | 16 U | 220 | 51 J | 290 | 140 U | 9.3 U | 86.1 |
| VCS-OU3-SO-185/0 - 0.5 | 0 - 0.5 | 2015 | 49 U | 49 U | 49 U | 140 J | 2,900 | 84 J | 3,100 | 270 J | 210 | 71.4 |
| VCS-OU3-SO-185/0.5 - 1 | 0.5 - 1 | 2015 | 39 UJ | 39 UJ | 120 J | 39 UJ | 1,400 J | 380 J | 1,900 J | 130 U | 11 J | 88.5 |
| VCS-OU3-SO-185/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 16 U | 16 U | 150 | 32 J | 180 | 140 U | 9.1 U | 87.6 |
| VCS-OU3-SO-186/0.5 - 1-FD | 0.5 - 1 | 2015 | 83 UJ | 83 UJ | 450 J | 83 UJ | 5,300 J | 1,300 J | 7,100 J | 180 J | 50 J | 83.2 |
| VCS-OU3-SO-186/0 - 0.5 | 0 - 0.5 | 2015 | 120 J | 96 UJ | 440 J | 120 J | 6,600 J | 1,900 J | 9,200 J | 360 J | 240 | 72.4 |
| VCS-OU3-SO-186/0.5 - 1 | 0.5 - 1 | 2015 | 86 UJ | 86 UJ | 520 J | 86 UJ | 6,000 J | 1,800 J | 8,300 J | 200 J | 140 J | 81.5 |
| VCS-OU3-SO-186/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 29 J | 15 U | 440 | 90 J | 560 | 130 U | 8.8 UJ | 91.1 |
| VCS-OU3-SO-187/0 - 0.5 | 0 - 0.5 | 2015 | 18 U | 18 U | 18 U | 18 U | 69 J | 48 J | 120 | 150 U | 74 | 78.6 |
| VCS-OU3-SO-187/0.5 - 1 | 0.5 - 1 | 2015 | 17 U | 17 U | 17 U | 17 U | 65 J | 31 J | 96 | 140 U | 12 J | 83.3 |
| VCS-OU3-SO-187/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 17 U | 17 U | 58 J | 24 J | 82 | 140 U | 9.7 U | 82.4 |
| VCS-OU3-SO-188/0 - 0.5 | 0 - 0.5 | 2015 | 62 | 54 J | 170 | 62 | 860 | 580 | 1,800 | 380 J | 570 | 77.4 |
| VCS-OU3-SO-188/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 20 J | 16 U | 140 | 110 | 270 | 140 U | 180 | 88.8 |
| VCS-OU3-SO-188/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 17 U | 17 U | 51 J | 27 J | 78 | 150 U | 12 J | 81.4 |
| VCS-OU3-SO-189/0 - 0.5 | 0 - 0.5 | 2015 | 200 | 61 J | 230 | 230 | 840 | 2,000 | 3,600 | 710 | 1,300 | 73.3 |
| VCS-OU3-SO-189/0.5 - 1 | 0.5 - 1 | 2015 | 290 | 37 J | 78 | 240 | 220 | 800 | 1,700 | 710 | 1,100 | 81.2 |
| VCS-OU3-SO-189/1 - 2 | 1 - 2 | 2015 | 18 U | 18 U | 18 J | 26 J | 240 | 99 | 380 | 160 U | 10 U | 76.6 |
| VCS-OU3-SO-190/0 - 0.5-FD | 0 - 0.5 | 2015 | 140 J | 54 J | 250 J | 180 | 1,300 | 1,800 | 3,700 | 440 J | 1,000 | 73.8 |
| VCS-OU3-SO-190/0 - 0.5 | 0 - 0.5 | 2015 | 130 J | 48 J | 180 J | 170 | 1,200 | 1,700 | 3,400 | 570 J | 1,100 | 72.6 |
| VCS-OU3-SO-190/0.5 - 1 | 0.5 - 1 | 2015 | 24 J | 16 U | 45 J | 33 J | 370 | 360 | 830 | 140 U | 120 | 84.4 |
| VCS-OU3-SO-190/1 - 2 | 1 - 2 | 2015 | 97 | 45 J | 100 | 66 J | 1,200 | 440 | 1,900 | 180 U | 12 U | 66.4 |
| VCS-OU3-SO-191/1 - 2-FD | 1 - 2 | 2015 | 32 J | 18 U | 26 J | 42 J | 420 J | 110 J | 630 J | 160 U | 11 U | 75.4 |
| VCS-OU3-SO-191/0 - 0.5 | 0 - 0.5 | 2015 | 20 U | 20 J | 20 U | 40 J | 610 | 23 U | 670 | 190 J | 120 | 70.7 |
| VCS-OU3-SO-191/0.5 - 1 | 0.5 - 1 | 2015 | 21 J | 16 U | 30 J | 34 J | 510 | 170 | 770 | 140 U | 55 | 86.7 |
| VCS-OU3-SO-191/1 - 2 | 1 - 2 | 2015 | 49 J | 19 U | 78 J | 67 J | 600 J | 580 J | 1,400 J | 160 U | 11 U | 73.7 |
| VCS-OU3-SO-192/0.5 - 1-FD | 0.5 - 1 | 2015 | 190 | 86 J | 400 J | 130 J | 2,300 | 1,500 J | 4,600 | 260 J | 340 J | 80.4 |
| VCS-OU3-SO-192/0 - 0.5 | 0 - 0.5 | 2015 | 4,100 | 1,300 J | 1,700 | 14,000 | 5,900 | 6,300 | 33,000 | 860 | 710 | 74.2 |
| VCS-OU3-SO-192/0.5 - 1 | 0.5 - 1 | 2015 | 240 | 93 J | 550 J | 160 | 2,300 | 2,400 J | 5,700 | 300 J | 600 J | 80.8 |
| VCS-OU3-SO-192/1 - 2 | 1 - 2 | 2015 | 560 | 170 J | 1,200 | 300 | 2,300 | 3,500 | 8,000 | 150 U | 46 J | 81.8 |
| VCS-OU3-SO-192/2 - 3 | 2 - 3 | 2015 | 16 U | 16 U | 16 U | 16 U | 46 J | 21 J | 67 J | 140 U | 9.2 U | 86.2 |
| VCS-OU3-SO-193/0 - 0.5-FD | 0 - 0.5 | 2015 | 90 U | 90 U | 240 J | 90 U | 3,400 | 900 | 4,500 | 300 J | 260 | 77.9 |
| VCS-OU3-SO-193/0 - 0.5 | 0 - 0.5 | 2015 | 89 UJ | 89 UJ | 290 J | 89 J | 4,200 J | 1,000 J | 5,600 J | 350 J | 310 | 78.9 |
| VCS-OU3-SO-193/0.5 - 1 | 0.5 - 1 | 2015 | 210 J | 240 J | 1,600 | 160 U | 7,200 | 4,800 | 14,000 | 270 J | 57 | 84.3 |
| VCS-OU3-SO-193/1 - 2 | 1 - 2 | 2015 | 15 U | 24 J | 100 | 15 U | 920 | 100 | 1,100 | 130 U | 8.8 U | 91.3 |
| VCS-OU3-SO-194/0 - 0.5 | 0 - 0.5 | 2015 | 100 J | 91 U | 320 | 140 J | 2,400 | 1,700 | 4,700 | 420 J | 440 | 76.4 |
| VCS-OU3-SO-194/0.5 - 1 | 0.5 - 1 | 2015 | 210 J | 170 J | 530 J | 130 J | 4,500 J | 1,100 J | 6,600 J | 150 U | 34 J | 81.0 |
| VCS-OU3-SO-194/1 - 2 | 1 - 2 | 2015 | 31 J | 33 J | 72 | 31 J | 1,100 | 260 | 1,500 | 140 U | 9.5 U | 83.2 |
| VCS-OU3-SO-195/0 - 0.5 | 0 - 0.5 | 2015 | 120 | 54 J | 200 | 140 | 1,500 | 1,300 | 3,300 | 170 U | 600 J | 70.2 |
| VCS-OU3-SO-195/0.5 - 1 | 0.5 - 1 | 2015 | 210 | 83 | 140 | 98 | 1,300 | 1,000 | 2,800 | 150 U | 150 J | 79.4 |
| VCS-OU3-SO-195/1 - 2 | 1 - 2 | 2015 | 980 J | 230 J | 420 J | 320 J | 3,000 J | 1,500 J | 6,500 J | 150 U | 17 J | 81.1 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO-195/2 - 3 | 2 - 3 | 2015 | 23 J | 18 U | 18 U | 18 U | 75 J | 60 J | 160 | 150 U | 10 U | 79.3 |
| VCS-OU3-SO-196/0 - 0.5 | 0 - 0.5 | 2015 | 130 | 49 J | 76 | 260 | 1,300 | 540 | 2,400 | 360 J | 760 | 65.5 |
| VCS-OU3-SO-196/0.5 - 1 | 0.5 - 1 | 2015 | 100 | 87 J | 130 | 110 | 730 | 920 | 2,000 | 180 J | 740 | 75.8 |
| VCS-OU3-SO-196/1 - 2 | 1 - 2 | 2015 | 160 | 63 | 61 | 82 | 540 | 310 | 1,200 | 160 U | 11 U | 75.4 |
| VCS-OU3-SO-197/0 - 0.5 | 0 - 0.5 | 2015 | 63 | 26 J | 130 | 97 | 770 | 830 | 1,900 | 240 J | 540 | 75.6 |
| VCS-OU3-SO-197/0.5 - 1 | 0.5 - 1 | 2015 | 450 J | 99 J | 450 J | 360 J | 1,200 J | 1,800 J | 4,400 J | 820 | 2,900 J | 75.2 |
| VCS-OU3-SO-197/1 - 2 | 1 - 2 | 2015 | 120 | 41 J | 27 J | 63 | 340 | 260 | 850 | 150 U | 39 J | 82.1 |
| VCS-OU3-SO-198/0 - 0.5 | 0 - 0.5 | 2015 | 35 J | 19 U | 70 | 59 J | 430 | 610 | 1,200 | 160 U | 420 | 74.3 |
| VCS-OU3-SO-198/0.5 - 1 | 0.5 - 1 | 2015 | 250 J | 68 J | 290 J | 340 J | 1,200 J | 2,400 J | 4,500 J | 1,100 | 1,500 J | 72.7 |
| VCS-OU3-SO-198/1 - 2 | 1 - 2 | 2015 | 200 | 46 J | 81 J | 370 J | 490 | 1,000 | 2,200 | 260 J | 1,100 J | 74.1 |
| VCS-OU3-SO-199/0 - 0.5 | 0 - 0.5 | 2015 | 120 | 49 J | 110 | 180 | 820 | 1,600 | 2,900 | 270 J | 840 | 65.6 |
| VCS-OU3-SO-199/0.5 - 1 | 0.5 - 1 | 2015 | 40 J | 18 U | 38 J | 53 J | 250 | 150 | 530 | 150 U | 140 | 79.1 |
| VCS-OU3-SO-199/1 - 2 | 1 - 2 | 2015 | 620 | 90 | 28 J | 140 | 150 | 230 | 1,300 | 170 U | 11 U | 70.9 |
| VCS-OU3-SO-200/0 - 0.5 | 0 - 0.5 | 2015 | 150 | 53 J | 260 | 160 | 1,600 | 2,100 | 4,300 | 160 U | 640 | 74.8 |
| VCS-OU3-SO-200/0.5 - 1 | 0.5 - 1 | 2015 | 490 | 170 | 320 | 270 | 2,000 | 2,000 | 5,300 | 160 U | 620 | 76.7 |
| VCS-OU3-SO-200/1 - 2 | 1 - 2 | 2015 | 50 J | 25 J | 17 U | 37 J | 210 | 67 | 390 | 150 U | 10 U | 80.6 |
| VCS-OU3-SO-201/0 - 0.5 | 0 - 0.5 | 2015 | 87 J | 38 U | 110 J | 140 J | 810 J | 1,500 J | 2,600 J | 160 U | 950 | 73.7 |
| VCS-OU3-SO-201/0.5 - 1 | 0.5 - 1 | 2015 | 360 J | 180 U | 420 J | 440 J | 910 | 5,000 | 7,100 | 340 J | 2,300 J | 76.6 |
| VCS-OU3-SO-201/1 - 2 | 1 - 2 | 2015 | 34 J | 18 U | 18 U | 34 J | 150 | 150 | 370 | 150 U | 130 | 77.9 |
| VCS-OU3-SO-202/0 - 0.5 | 0 - 0.5 | 2015 | 62 J | 22 J | 64 J | 120 J | 740 J | 910 J | 1,900 J | 170 U | 1,200 | 71.2 |
| VCS-OU3-SO-202/0.5 - 1 | 0.5 - 1 | 2015 | 130 | 17 U | 49 J | 220 | 310 | 450 | 1,200 | 430 J | 610 | 81.6 |
| VCS-OU3-SO-202/1 - 2 | 1 - 2 | 2015 | 180 J | 85 | 18 U | 110 | 270 | 170 J | 820 | 150 U | 10 U | 77.3 |
| VCS-OU3-SO-203/0 - 0.5 | 0 - 0.5 | 2015 | 49 J | 24 J | 82 | 54 J | 1,200 | 590 | 2,000 | 160 U | 480 | 73.2 |
| VCS-OU3-SO-203/0.5 - 1 | 0.5 - 1 | 2015 | 150 J | 110 J | 280 J | 120 J | 2,500 J | 1,100 J | 4,300 J | 150 U | 680 | 76.9 |
| VCS-OU3-SO-203/1 - 2 | 1 - 2 | 2015 | 44 J | 34 J | 63 | 29 J | 660 | 130 | 960 | 150 U | 51 | 81.8 |
| VCS-OU3-SO-204/0 - 0.5-FD | 0 - 0.5 | 2015 | 60 J | 33 J | 110 | 79 | 1,100 | 870 | 2,300 | 160 U | 390 | 72.7 |
| VCS-OU3-SO-204/0 - 0.5 | 0 - 0.5 | 2015 | 72 | 35 J | 120 | 94 | 1,200 | 1,100 | 2,600 | 160 U | 400 | 74.2 |
| VCS-OU3-SO-204/0.5 - 1 | 0.5 - 1 | 2015 | 140 J | 86 U | 320 J | 170 J | 1,300 J | 3,400 J | 5,300 J | 150 U | 630 | 80.4 |
| VCS-OU3-SO-204/1 - 2 | 1 - 2 | 2015 | 71 | 34 J | 44 J | 42 J | 630 | 140 | 960 | 150 U | 34 | 81.5 |
| VCS-OU3-SO-205/0 - 0.5 | 0 - 0.5 | 2015 | 36 U | 36 U | 130 | 36 U | 1,000 | 1,000 | 2,100 | 2,500 | 290 | 78.4 |
| VCS-OU3-SO-205/0.5 - 1 | 0.5 - 1 | 2015 | 33 U | 33 U | 67 J | 33 U | 890 | 250 | 1,200 | 140 U | 88 | 83.9 |
| VCS-OU3-SO-205/1 - 2 | 1 - 2 | 2015 | 16 U | 21 J | 81 | 16 U | 1,000 | 180 | 1,300 | 140 U | 9.2 U | 87.0 |
| VCS-OU3-SO-206/0 - 0.5 | 0 - 0.5 | 2015 | 18 U | 18 U | 50 J | 25 J | 730 | 430 | 1,200 | 230 J | 210 | 79.1 |
| VCS-OU3-SO-206/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 16 U | 16 U | 180 | 28 J | 210 | 140 U | 9.3 U | 85.3 |
| VCS-OU3-SO-206/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 15 U | 15 U | 71 | 23 J | 94 | 130 U | 8.3 U | 96.0 |
| VCS-OU3-SO-207/0.5 - 1-FD | 0.5 - 1 | 2015 | 16 U | 16 U | 16 U | 16 U | 80 J | 18 U | 80 J | 140 U | 9.1 U | 87.2 |
| VCS-OU3-SO-207/0 - 0.5 | 0 - 0.5 | 2015 | 17 U | 17 U | 29 J | 17 U | 470 | 290 | 790 | 140 U | 280 | 82.9 |
| VCS-OU3-SO-207/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 16 U | 16 U | 110 J | 23 J | 130 J | 140 U | 11 J | 86.8 |
| VCS-OU3-SO-207/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 16 U | 16 U | 36 J | 18 U | 36 J | 140 U | 9 U | 88.0 |
| VCS-OU3-SO-208/1 - 2-FD | 1 - 2 | 2015 | 16 U | 16 U | 16 U | 16 U | 110 | 18 J | 130 | 130 U | 8.9 U | 89.8 |
| VCS-OU3-SO-208/0 - 0.5 | 0 - 0.5 | 2015 | 51 J | 36 U | 87 J | 72 J | 1,400 J | 630 J | 2,200 J | 190 J | 690 | 77.6 |
| VCS-OU3-SO-208/0.5 - 1 | 0.5 - 1 | 2015 | 43 J | 33 U | 240 J | 33 U | 1,700 J | 1,000 J | 3,000 J | 140 U | 200 | 83.1 |
| VCS-OU3-SO-208/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 15 U | 15 U | 100 | 20 J | 120 | 130 U | 8.7 U | 90.8 |
| VCS-OU3-SO-209/0 - 0.5 | 0 - 0.5 | 2015 | 37 J | 18 J | 120 J | 76 J | 1,100 J | 780 J | 2,100 J | 160 U | 600 | 76.3 |
| VCS-OU3-SO-209/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 33 J | 16 U | 580 J | 150 J | 760 J | 140 U | 180 | 84.9 |
| VCS-OU3-SO-209/1 - 2 | 1 - 2 | 2015 | 16 U | 16 U | 16 U | 16 U | 69 | 18 U | 69 | 130 U | 8.9 UJ | 88.8 |
| VCS-OU3-SO-210/0 - 0.5-FD | 0 - 0.5 | 2015 | 81 J | 47 U | 200 J | 990 J | 2,500 J | 1,700 J | 5,500 J | 160 U | 460 | 74.1 |
| VCS-OU3-SO-210/0 - 0.5 | 0 - 0.5 | 2015 | 190 U | 190 U | 320 J | 190 U | 2,700 J | 9,400 J | 12,000 J | 290 J | 520 | 74.9 |
| VCS-OU3-SO-210/0.5 - 1 | 0.5 - 1 | 2015 | 45 U | 45 U | 150 | 45 U | 2,300 | 1,300 | 3,800 | 150 U | 260 | 77.7 |
| VCS-OU3-SO-210/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 19 J | 17 U | 340 J | 87 J | 450 J | 140 U | 17 J | 84.1 |

TABLE 1
**DDT, PBB, and HBB**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Interval | Sampling Event | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg | Solids (Percent) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO-211/0 - 0.5 | 0 - 0.5 | 2015 | 120 J | 38 U | 100 J | 210 J | 2,000 J | 1,600 J | 4,000 J | 160 U | 760 | 73.8 |
| VCS-OU3-SO-211/0.5 - 1 | 0.5 - 1 | 2015 | 25 J | 20 J | 46 J | 33 J | 1,200 | 220 | 1,500 | 150 U | 170 | 78.4 |
| VCS-OU3-SO-211/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 17 U | 17 U | 84 | 19 U | 84 | 140 U | 9.6 U | 82.8 |
| VCS-OU3-SO-212/0 - 0.5-FD | 0 - 0.5 | 2015 | 72 | 25 J | 33 J | 72 | 850 | 300 | 1,400 | 170 U | 1,000 | 71.9 |
| VCS-OU3-SO-212/0 - 0.5 | 0 - 0.5 | 2015 | 69 | 25 J | 33 J | 66 | 800 | 290 | 1,300 | 170 U | 1,100 | 72.8 |
| VCS-OU3-SO-212/0.5 - 1 | 0.5 - 1 | 2015 | 440 | 130 J | 190 J | 190 | 2,100 | 250 J | 3,300 | 150 U | 300 | 77.8 |
| VCS-OU3-SO-212/1 - 2 | 1 - 2 | 2015 | 250 | 70 | 38 J | 120 | 930 | 170 | 1,600 | 160 U | 27 J | 73.9 |
| VCS-OU3-SO-213/0.5 - 1-FD | 0.5 - 1 | 2015 | 180 J | 160 J | 890 J | 260 J | 2,300 J | 3,100 J | 6,900 J | 160 U | 130 | 76.9 |
| VCS-OU3-SO-213/0 - 0.5 | 0 - 0.5 | 2015 | 230 J | 180 U | 410 J | 1,000 J | 3,200 J | 14,000 J | 19,000 J | 150 U | 480 | 78.0 |
| VCS-OU3-SO-213/0.5 - 1 | 0.5 - 1 | 2015 | 180 | 150 | 170 J | 250 | 2,300 | 710 J | 3,800 | 150 U | 170 | 78.7 |
| VCS-OU3-SO-213/1 - 2 | 1 - 2 | 2015 | 18 U | 18 U | 18 U | 18 U | 110 | 21 U | 110 | 160 U | 10 U | 76.9 |
| VCS-OU3-SO-214/0 - 0.5 | 0 - 0.5 | 2015 | 87 J | 53 J | 310 J | 150 J | 2,700 J | 1,600 J | 4,900 J | 160 U | 470 | 75.2 |
| VCS-OU3-SO-214/0.5 - 1 | 0.5 - 1 | 2015 | 80 J | 87 J | 280 J | 62 J | 2,700 J | 570 J | 3,800 J | 150 U | 110 | 81.1 |
| VCS-OU3-SO-214/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 20 J | 17 U | 370 J | 51 J | 440 J | 150 U | 9.8 U | 81.1 |
| VCS-OU3-SO-215/0 - 0.5-FD | 0 - 0.5 | 2015 | 100 J | 45 UJ | 130 J | 150 J | 2,300 J | 540 J | 3,200 J | 270 J | 440 J | 77.0 |
| VCS-OU3-SO-215/0 - 0.5 | 0 - 0.5 | 2015 | 46 UJ | 46 UJ | 86 J | 110 J | 2,000 J | 390 J | 2,600 J | 160 U | 300 J | 75.9 |
| VCS-OU3-SO-215/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 40 J | 16 U | 720 | 130 | 890 | 140 U | 35 | 84.3 |
| VCS-OU3-SO-215/1 - 2 | 1 - 2 | 2015 | 15 U | 15 U | 15 U | 15 U | 59 J | 17 U | 59 J | 130 U | 8.7 UJ | 91.1 |
| VCS-OU3-SO-216/0 - 0.5 | 0 - 0.5 | 2015 | 89 UJ | 89 UJ | 170 J | 89 UJ | 3,500 J | 840 J | 4,500 J | 150 U | 330 | 78.8 |
| VCS-OU3-SO-216/0.5 - 1 | 0.5 - 1 | 2015 | 120 J | 130 J | 520 J | 84 UJ | 4,800 J | 1,000 J | 6,600 J | 140 U | 46 | 83.2 |
| VCS-OU3-SO-216/1 - 2 | 1 - 2 | 2015 | 85 J | 110 J | 450 J | 85 U | 2,800 J | 780 J | 4,200 J | 150 U | 9.8 J | 81.8 |
| VCS-OU3-SO-217/0 - 0.5-FD | 0 - 0.5 | 2015 | 97 J | 59 J | 70 J | 150 J | 1,700 J | 400 J | 2,500 J | 160 U | 770 | 74.3 |
| VCS-OU3-SO-217/0 - 0.5 | 0 - 0.5 | 2015 | 86 J | 48 J | 70 J | 150 | 1,700 | 390 | 2,400 | 160 U | 740 | 74.8 |
| VCS-OU3-SO-217/0.5 - 1 | 0.5 - 1 | 2015 | 190 U | 190 U | 610 J | 190 U | 2,700 J | 6,000 J | 9,300 J | 160 U | 450 | 75.6 |
| VCS-OU3-SO-217/1 - 2 | 1 - 2 | 2015 | 19 U | 27 J | 38 J | 27 J | 820 | 110 | 1,000 | 160 U | 49 | 72.9 |
| VCS-OU3-SO-218/0.5 - 1-FD | 0.5 - 1 | 2015 | 61 | 42 J | 57 J | 49 J | 860 | 240 | 1,300 | 150 U | 110 | 81.3 |
| VCS-OU3-SO-218/0 - 0.5 | 0 - 0.5 | 2015 | 29 J | 19 U | 24 J | 40 J | 530 | 160 | 780 | 160 U | 140 | 74.3 |
| VCS-OU3-SO-218/0.5 - 1 | 0.5 - 1 | 2015 | 72 | 47 J | 94 J | 62 | 960 | 300 | 1,500 | 150 U | 140 | 80.9 |
| VCS-OU3-SO-218/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 17 U | 17 U | 34 J | 20 U | 34 J | 150 U | 9.9 U | 80.8 |
| VCS-OU3-SO-219/0 - 0.5-FD | 0 - 0.5 | 2015 | 18 U | 18 U | 18 U | 18 U | 57 J | 39 J | 96 | 160 U | 65 | 76.2 |
| VCS-OU3-SO-219/0 - 0.5 | 0 - 0.5 | 2015 | 18 U | 18 U | 18 U | 18 U | 50 J | 31 J | 81 | 160 UJ | 63 | 76.3 |
| VCS-OU3-SO-219/0.5 - 1 | 0.5 - 1 | 2015 | 16 U | 16 U | 16 U | 16 U | 43 J | 27 J | 70 | 140 U | 14 J | 88.0 |
| VCS-OU3-SO-219/1 - 2 | 1 - 2 | 2015 | 22 J | 17 U | 17 U | 17 U | 59 J | 27 J | 110 | 150 U | 9.8 U | 80.7 |
| VCS-OU3-SO-220/0 - 0.5-FD | 0 - 0.5 | 2015 | 16 U | 16 U | 16 U | 16 U | 21 U | 19 U | 21 U | 140 U | 28 J | 85.4 |
| VCS-OU3-SO-220/0 - 0.5 | 0 - 0.5 | 2015 | 20 U | 20 U | 20 U | 20 U | 25 U | 23 U | 25 U | 170 U | 130 J | 70.9 |
| VCS-OU3-SO-220/0.5 - 1 | 0.5 - 1 | 2015 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 22 U | 140 U | 14 J | 82.4 |
| VCS-OU3-SO-220/1 - 2 | 1 - 2 | 2015 | 17 U | 17 U | 17 U | 17 U | 49 J | 27 J | 76 | 150 U | 9.8 U | 81.1 |
| VCS-OU3-SO-221/0.5 - 1-FD | 0.5 - 1 | 2015 | 17 U | 17 U | 17 U | 17 U | 21 U | 19 U | 21 U | 140 U | 9.5 U | 83.8 |
| VCS-OU3-SO-221/0 - 0.5 | 0 - 0.5 | 2015 | 19 U | 19 U | 19 U | 19 U | 24 U | 21 U | 24 U | 160 U | 11 U | 74.6 |
| VCS-OU3-SO-221/0.5 - 1 | 0.5 - 1 | 2015 | 17 U | 17 U | 17 U | 17 U | 22 U | 19 U | 22 U | 150 U | 9.7 U | 82.2 |
| VCS-OU3-SO-221/1 - 2 | 42006 | 2015 | 16 U | 16 U | 16 U | 16 U | 30 J | 20 J | 50 J | 140 U | 9.1 U | 87.9 |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 2
**Polycyclic Aromatic Hydrocarbons (PAHs)**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sampling Event | 1-METHYLNAPHTHALENE µg/kg | 2-METHYLNAPHTHALENE µg/kg | ACENAPHTHENE µg/kg | ACENAPHTHYLENE µg/kg | ANTHRACENE µg/kg | BENZO(A)ANTHRACENE µg/kg | BENZO(A)PYRENE µg/kg | BENZO(B)FLUORANTHENE µg/kg | BENZO(G,H,I)PERYLENE µg/kg | BENZO(K)FLUORANTHENE µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO006/0.5-1 | 0.5 - 1 | 2013 | 7.4 J | 14 J | 2.3 J | 6.1 J | 7.8 J | 42 J | 78 J | 110 J | 120 J | 28 J |
| VCS-OU3-SO006/0-0.5 | 0 - 0.5 | 2013 | 6.5 J | 11 J | 1.9 J | 4.8 J | 7.3 J | 82 J | 140 J | 130 J | 230 J | 36 J |
| VCS-OU3-SO006/1-2 | 1 - 2 | 2013 | 12 J | 19 J | 3.9 J | 11 J | 11 J | 61 J | 94 J | 130 J | 120 J | 36 J |
| VCS-OU3-SO025/0.5-1 | 0.5 - 1 | 2013 | 1.3 J | 1.5 J | 0.39 UJ | 1.4 UJ | 0.76 J | 4.6 J | 5.5 J | 7 J | 5.8 J | 3.5 J |
| VCS-OU3-SO025/0.5-1-FD | 0.5 - 1 | 2013 | 1.4 J | 2 J | 0.39 UJ | 1.6 UJ | 0.74 J | 6.4 J | 6.8 J | 8.5 J | 6.8 J | 3.9 J |
| VCS-OU3-SO025/0-0.5 | 0 - 0.5 | 2013 | 15 J | 28 J | 4.4 J | 14 J | 14 J | 86 J | 110 J | 160 J | 100 J | 43 J |
| VCS-OU3-SO031/0.5-1 | 0.5 - 1 | 2013 | 1.7 J | 2.5 J | 0.44 J | 2.3 UJ | 1.3 J | 9.6 J | 12 J | 19 J | 12 J | 20 J |
| VCS-OU3-SO031/0.5-1-FD | 0.5 - 1 | 2013 | 2.2 J | 4.1 J | 0.53 J | 3.2 J | 2.3 J | 20 J | 22 J | 31 J | 19 J | 10 J |
| VCS-OU3-SO031/0-0.5 | 0 - 0.5 | 2013 | 2.6 J | 4 J | 0.7 J | 2.6 UJ | 2.5 J | 12 J | 17 J | 25 J | 15 J | 7.6 J |
| VCS-OU3-SO031/1-2 | 1 - 2 | 2013 | 0.35 J | 0.53 J | 0.39 UJ | 1.1 UJ | 0.37 UJ | 0.69 J | 0.55 J | 0.96 J | 1.2 J | 0.5 J |
| VCS-OU3-SO040/0.5-1 | 0.5 - 1 | 2013 | 2.5 | 4.1 | 0.6 J | 3 UJ | 2.2 J | 23 J | 26 J | 35 J | 24 J | 11 J |
| VCS-OU3-SO040/0-0.5 | 0 - 0.5 | 2013 | 5.9 J | 9.6 J | 1.8 J | 5.5 J | 6.3 J | 45 J | 60 J | 84 J | 54 J | 23 J |
| VCS-OU3-SO040/1-1.4 | 1 - 1.4 | 2013 | 1.1 J | 1.4 J | 0.39 UJ | 1.3 UJ | 0.37 UJ | 1.4 J | 1.6 J | 2.1 J | 2 J | 0.92 J |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 2
**Polycyclic Aromatic Hydrocarbons (PAHs)**
**Floodplain Sample Results Summary**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sampling Event | CHRYSENE µg/kg | DIBENZ(A,H)ANTHRACENE µg/kg | FLUORANTHENE µg/kg | FLUORENE µg/kg | INDENO(1,2,3-C,D)PYRENE µg/kg | NAPHTHALENE µg/kg | PHENANTHRENE µg/kg | PYRENE µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SO006/0.5-1 | 0.5 - 1 | 2013 | 51 J | 13 J | 71 J | 2.7 J | 51 J | 12 J | 44 J | 72 J |
| VCS-OU3-SO006/0-0.5 | 0 - 0.5 | 2013 | 170 J | 63 J | 57 J | 2.1 J | 72 J | 7.7 J | 42 J | 270 J |
| VCS-OU3-SO006/1-2 | 1 - 2 | 2013 | 50 J | 12 J | 93 J | 3.8 J | 60 J | 13 J | 74 J | 97 J |
| VCS-OU3-SO025/0.5-1 | 0.5 - 1 | 2013 | 3.8 J | 0.71 J | 7.9 J | 0.43 UJ | 3.9 J | 1.9 UJ | 4.1 J | 8 J |
| VCS-OU3-SO025/0.5-1-FD | 0.5 - 1 | 2013 | 4.7 J | 0.87 J | 9.6 J | 0.43 UJ | 4.7 J | 2.5 UJ | 4.6 J | 9.2 J |
| VCS-OU3-SO025/0-0.5 | 0 - 0.5 | 2013 | 88 J | 13 J | 140 J | 4.8 J | 76 J | 28 J | 79 J | 130 J |
| VCS-OU3-SO031/0.5-1 | 0.5 - 1 | 2013 | 8.6 J | 2.4 J | 15 J | 0.58 J | 8.1 J | 2.8 UJ | 7.8 J | 14 J |
| VCS-OU3-SO031/0.5-1-FD | 0.5 - 1 | 2013 | 16 J | 2.6 J | 24 J | 0.77 J | 15 J | 4.6 J | 11 J | 25 J |
| VCS-OU3-SO031/0-0.5 | 0 - 0.5 | 2013 | 15 J | 3.1 J | 25 J | 0.93 J | 12 J | 4.2 J | 15 J | 22 J |
| VCS-OU3-SO031/1-2 | 1 - 2 | 2013 | 0.66 J | 0.41 UJ | 1.3 J | 0.43 UJ | 0.59 J | 1.4 UJ | 1.3 UJ | 1.1 J |
| VCS-OU3-SO040/0.5-1 | 0.5 - 1 | 2013 | 16 J | 3 J | 27 J | 0.67 J | 17 J | 3.5 UJ | 11 J | 28 J |
| VCS-OU3-SO040/0-0.5 | 0 - 0.5 | 2013 | 34 J | 6.6 J | 61 J | 2.1 J | 41 J | 11 J | 32 J | 62 J |
| VCS-OU3-SO040/1-1.4 | 1 - 1.4 | 2013 | 1.2 J | 0.41 UJ | 2.3 J | 0.42 J | 1.1 J | 2.4 UJ | 2.3 UJ | 2.2 J |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS001/0-0.5 | 0 - 0.5 | Transect | DS-1 | 650 | 150 J | 100 J | 1,200 | 220 J | 3,800 | 6,100 | 190 U | 310 |
| VCS-OU3-SS002/0-0.5 | 0 - 0.5 | Transect | DS-1 | 67 | 17 U | 30 J | 110 | 22 U | 320 | 530 | 150 U | 9.9 U |
| VCS-OU3-SS003/0-0.5 | 0 - 0.5 | Transect | DS-1 | 20 J | 15 U | 15 U | 26 J | 20 U | 18 U | 46 J | 130 U | 8.8 U |
| VCS-OU3-SS005/0-0.5 | 0 - 0.5 | Transect | DS-1 | 170 | 15 U | 15 U | 170 | 21 J | 17 U | 360 | 130 U | 8.4 U |
| VCS-OU3-SS006/0-0.5 | 0 - 0.5 | Transect | DS-1 | 120 | 23 U | 23 U | 110 | 29 U | 26 U | 230 | 190 U | 13 J |
| VCS-OU3-SS007/0.5-1.0 | 0.5 - 1 | Transect | DS-1 | 0.91 UJ | 0.91 UJ | 0.91 UJ | 0.91 UJ | 1.2 UJ | 1 UJ | 1.2 UJ | 160 U | 10 UJ |
| VCS-OU3-SS007/0-0.5 | 0 - 0.5 | Transect | DS-1 | 16 J | 3 J | 0.93 UJ | 14 J | 7 J | 30 J | 70 J | 160 U | 11 U |
| VCS-OU3-SS010/0-0.5 | 0 - 0.5 | Transect | DS-1 | 16 J | 2.8 J | 2.8 J | 23 J | 19 J | 18 J | 82 J | 150 U | 10 U |
| VCS-OU3-SS013/0.5-1.0 | 0.5 - 1 | Transect | DS-1 | 490 | 88 J | 28 U | 940 | 120 | 32 U | 1,600 | 240 U | 560 |
| VCS-OU3-SS013/0-0.5 | 0 - 0.5 | Transect | DS-1 | 95 | 17 U | 17 U | 330 | 32 J | 22 J | 480 | 150 U | 190 |
| VCS-OU3-SS014/0-0.5 | 0 - 0.5 | Transect | DS-1 | 78 | 22 J | 15 U | 120 | 22 J | 530 | 770 | 130 U | 8.7 U |
| VCS-OU3-SS015/0-0.5 | 0 - 0.5 | Transect | DS-1 | 41 J | 16 U | 16 U | 34 J | 20 U | 18 U | 75 | 140 U | 9.1 U |
| VCS-OU3-SS016/0-0.5 | 0 - 0.5 | Transect | DS-1 | 5.3 J | 0.83 UJ | 0.83 UJ | 8.2 J | 5.1 J | 18 J | 37 J | 140 UJ | 9.5 U |
| VCS-OU3-SS019/0.5-1.0 | 0.5 - 1 | Transect | DS-1 | 3.7 J | 0.97 UJ | 0.97 UJ | 4.4 J | 1.2 UJ | 1.1 UJ | 8.1 J | 170 U | 11 U |
| VCS-OU3-SS019/0-0.5 | 0 - 0.5 | Transect | DS-1 | 67 J | 20 U | 20 U | 110 | 26 U | 23 U | 180 | 170 U | 12 U |
| VCS-OU3-SS020/0-0.5 | 0 - 0.5 | Transect | DS-1 | 160 | 31 J | 17 U | 150 | 22 U | 19 U | 360 | 140 U | 9.6 U |
| VCS-OU3-SS025/0-0.5 | 0 - 0.5 | Transect | DS-1 | 4.5 J | 1.2 UJ | 1.2 UJ | 6.2 J | 3.9 J | 1.4 UJ | 15 J | 10 U | 14 U |
| VCS-OU3-SS026/0-0.5 | 0 - 0.5 | Transect | DS-1 | 19 J | 17 U | 120 | 17 J | 21 U | 130 | 290 | 7.1 UJ | 9.5 U |
| VCS-OU3-SS028/0.5-1.0 | 0.5 - 1 | Transect | DS-1 | 89 | 17 U | 17 U | 130 | 32 J | 110 | 360 | 150 U | 9.9 U |
| VCS-OU3-SS028/0-0.5 | 0 - 0.5 | Transect | DS-1 | 21 J | 18 U | 18 U | 46 J | 23 U | 21 U | 67 J | 150 U | 10 U |
| VCS-OU3-SS029/0.5-1.0 | 0.5 - 1 | Transect | DS-1 | 24 J | 15 U | 15 U | 18 J | 20 U | 18 U | 42 J | 6.6 U | 8.8 U |
| VCS-OU3-SS029/0-0.5 | 0 - 0.5 | Transect | DS-1 | 160 | 15 U | 15 U | 150 | 20 U | 51 J | 360 | 6.6 UJ | 8.8 UJ |
| VCS-OU3-SS030/0-0.5 | 0 - 0.5 | Transect | DS-1 | 86 | 16 U | 16 U | 79 | 21 U | 19 U | 170 | 140 U | 9.3 U |
| VCS-OU3-SS031/0-0.5 | 0 - 0.5 | Transect | DS-1 | 13 J | 3.8 J | 2.6 J | 17 J | 2.6 J | 31 J | 70 J | 130 U | 8.9 U |
| VCS-OU3-SS032/0-0.5 | 0 - 0.5 | Transect | DS-1 | 31 J | 16 U | 16 U | 40 J | 20 U | 210 | 280 | 130 U | 8.9 U |
| VCS-OU3-SS033/0-0.5 | 0 - 0.5 | Transect | DS-1 | 64 J | 19 U | 19 U | 88 | 25 U | 69 J | 220 | 8.3 U | 11 U |
| VCS-OU3-SS034/0-0.5 | 0 - 0.5 | Transect | DS-1 | 20 J | 4.6 J | 0.89 UJ | 24 J | 8.5 J | 3.2 J | 60 J | 150 U | 10 U |
| VCS-OU3-SS035/0-0.5 | 0 - 0.5 | Transect | DS-1 | 69 | 17 U | 30 J | 57 J | 30 J | 52 J | 240 | 150 U | 9.8 U |
| VCS-OU3-SS036/0-0.5 | 0 - 0.5 | Transect | DS-1 | 31 J | 16 U | 16 U | 40 J | 20 U | 49 J | 120 | 130 U | 8.9 U |
| VCS-OU3-SS037/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 20 U | 20 U | 70 | 20 U | 26 U | 110 | 180 | 170 U | 12 U |
| VCS-OU3-SS038/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 20 J | 18 U | 90 | 95 | 23 J | 770 | 1,000 | 150 U | 10 U |
| VCS-OU3-SS038/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 43 U | 43 U | 43 U | 50 J | 56 U | 1,800 | 1,900 | 150 U | 9.9 U |
| VCS-OU3-SS039/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 42 J | 16 U | 16 U | 38 J | 20 U | 18 U | 80 | 130 UJ | 8.9 UJ |
| VCS-OU3-SS040/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 J | 4.7 J | 0.76 UJ | 16 J | 3.5 J | 0.87 UJ | 41 J | 130 U | 8.7 UJ |
| VCS-OU3-SS041/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 50 J | 16 U | 16 U | 60 | 21 U | 18 U | 110 | 230 J | 9.2 U |
| VCS-OU3-SS041/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 140 | 19 U | 19 J | 170 | 24 U | 120 | 450 | 160 U | 11 U |
| VCS-OU3-SS042/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 33 J | 17 U | 17 U | 76 | 21 U | 240 | 350 | 140 U | 9.5 U |
| VCS-OU3-SS042/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 83 | 20 U | 260 | 120 | 26 U | 770 | 1,200 | 170 U | 11 U |
| VCS-OU3-SS043/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 260 | 31 J | 18 U | 350 | 23 U | 530 | 1,200 | 160 U | 10 U |
| VCS-OU3-SS043/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 140 | 25 U | 25 U | 210 | 32 U | 100 | 450 | 210 U | 14 U |
| VCS-OU3-SS044/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 55 J | 21 U | 21 U | 80 | 28 U | 160 | 300 | 180 U | 12 U |
| VCS-OU3-SS045/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 16 U | 16 U | 16 U | 16 U | 21 U | 140 | 140 | 140 U | 9.3 U |
| VCS-OU3-SS046/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 7.4 J | 1.9 J | 0.87 UJ | 12 J | 5.2 J | 2 J | 29 J | 150 U | 10 U |
| VCS-OU3-SS047/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 130 | 20 U | 20 U | 220 | 35 J | 29 J | 410 | 170 U | 58 |
| VCS-OU3-SS047/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 56 J | 17 U | 17 U | 76 | 22 U | 25 J | 160 | 150 U | 9.8 U |
| VCS-OU3-SS047/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 42 J | 17 U | 17 U | 74 J | 22 U | 59 J | 180 J | 150 U | 25 J |
| VCS-OU3-SS047/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 70 J | 18 U | 76 | 130 J | 23 U | 550 J | 840 J | 160 U | 52 J |
| VCS-OU3-SS048/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 35 J | 16 U | 16 U | 37 J | 21 U | 19 U | 72 | 140 U | 9.3 U |

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS048/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 29 J | 16 U | 16 U | 34 J | 20 U | 18 U | 63 J | 140 U | 9 U |
| VCS-OU3-SS048/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 180 | 70 J | 16 U | 170 | 72 | 19 U | 490 | 140 U | 9.3 U |
| VCS-OU3-SS049/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 46 J | 15 U | 15 U | 46 J | 20 U | 18 U | 92 | 130 U | 8.8 U |
| VCS-OU3-SS049/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 65 | 17 U | 17 U | 60 | 22 U | 20 U | 130 | 150 U | 10 U |
| VCS-OU3-SS049/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 42 J | 15 U | 15 U | 46 J | 20 U | 18 U | 88 | 220 J | 8.8 U |
| VCS-OU3-SS050/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 15 J | 15 U | 15 U | 24 J | 19 U | 17 U | 39 J | 130 U | 8.6 U |
| VCS-OU3-SS050/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 44 J | 15 U | 15 U | 31 J | 20 U | 17 U | 75 | 130 U | 8.7 U |
| VCS-OU3-SS050/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 1.5 J | 0.77 UJ | 0.77 UJ | 2.8 J | 0.99 UJ | 0.88 UJ | 4.3 J | 130 U | 8.8 U |
| VCS-OU3-SS051/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 5.3 J | 0.9 UJ | 10 J | 7.7 J | 2.4 J | 23 J | 48 J | 150 U | 10 U |
| VCS-OU3-SS051/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 2.5 J | 0.95 UJ | 0.95 UJ | 3 J | 1.2 J | 4.2 J | 11 J | 160 U | 11 U |
| VCS-OU3-SS052/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 260 | 71 | 68 | 290 | 94 | 200 | 980 | 140 U | 9.4 U |
| VCS-OU3-SS052/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 20 J | 15 U | 15 U | 24 J | 20 U | 17 U | 44 J | 130 U | 8.7 UJ |
| VCS-OU3-SS052/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 7.2 J | 2.4 J | 0.85 UJ | 9.8 J | 1.1 UJ | 0.98 UJ | 19 J | 150 U | 9.8 U |
| VCS-OU3-SS053/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 140 | 24 J | 15 U | 130 | 20 U | 24 J | 320 | 130 U | 11 J |
| VCS-OU3-SS053/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 80 | 15 U | 15 U | 62 | 20 U | 18 U | 140 | 130 U | 8.8 U |
| VCS-OU3-SS054/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 26 J | 15 U | 15 U | 32 J | 19 U | 17 U | 58 J | 130 U | 8.5 U |
| VCS-OU3-SS054/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 14 J | 4.1 J | 0.79 UJ | 17 J | 3.6 J | 3.7 J | 42 J | 140 U | 9 U |
| VCS-OU3-SS056/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 2.7 J | 2.3 J | 0.93 UJ | 4.1 J | 3.7 J | 1.1 UJ | 13 J | 160 U | 11 U |
| VCS-OU3-SS057/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 11 J | 3.2 J | 0.86 UJ | 15 J | 4.2 J | 19 J | 52 J | 150 U | 25 J |
| VCS-OU3-SS057/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 39 J | 20 U | 20 U | 76 | 31 J | 39 J | 190 | 170 U | 140 |
| VCS-OU3-SS058/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 0.82 UJ | 0.82 UJ | 0.82 UJ | 0.82 UJ | 1.1 UJ | 0.94 UJ | 1.1 UJ | 140 U | 9.4 U |
| VCS-OU3-SS058/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 1.4 J | 0.84 UJ | 0.84 UJ | 2.3 J | 1.1 UJ | 2.3 J | 6 J | 140 U | 9.6 U |
| VCS-OU3-SS059/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 24 J | 22 U | 300 | 320 | 150 U | 9.7 U |
| VCS-OU3-SS060/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 66 J | 21 U | 21 U | 86 | 42 J | 30 J | 220 | 180 U | 12 U |
| VCS-OU3-SS060/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 56 J | 17 U | 310 | 73 | 22 U | 20 U | 440 | 150 U | 9.8 U |
| VCS-OU3-SS061/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 8.5 J | 2 J | 0.89 UJ | 13 J | 6.6 J | 1 UJ | 30 J | 150 U | 10 U |
| VCS-OU3-SS061/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 19 U | 19 U | 19 U | 25 J | 25 U | 22 U | 25 J | 160 U | 11 U |
| VCS-OU3-SS061/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.6 J | 1.4 UJ | 1.3 UJ | 1.6 J | 190 U | 13 U |
| VCS-OU3-SS062/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 0.8 UJ | 0.8 UJ | 0.8 UJ | 1.6 J | 1 UJ | 0.92 UJ | 1.6 J | 140 U | 9.2 U |
| VCS-OU3-SS062/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 5.2 J | 1.4 J | 0.98 UJ | 7 J | 9.5 J | 2.7 J | 26 J | 170 U | 11 U |
| VCS-OU3-SS062/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.81 UJ | 0.81 UJ | 0.81 UJ | 0.81 UJ | 1 UJ | 0.93 UJ | 1 UJ | 140 U | 9.3 U |
| VCS-OU3-SS063/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 13 J | 4.5 J | 0.75 UJ | 18 J | 6.3 J | 0.86 UJ | 42 J | 130 U | 8.6 U |
| VCS-OU3-SS064/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 54 | 15 U | 15 U | 54 | 20 U | 78 | 190 | 130 U | 8.7 U |
| VCS-OU3-SS064/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 31 J | 16 U | 16 U | 38 J | 20 U | 18 U | 69 | 130 U | 8.9 U |
| VCS-OU3-SS065/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 0.9 J | 0.9 UJ | 0.9 UJ | 0.9 UJ | 1.9 UJ | 1 UJ | 2.8 J | 150 U | 10 UJ |
| VCS-OU3-SS065/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 9.7 J | 2.6 J | 1 UJ | 13 J | 5.7 J | 12 J | 43 J | 170 U | 12 U |
| VCS-OU3-SS066/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 18 U | 18 U | 18 U | 41 J | 23 U | 21 U | 41 J | 150 U | 31 J |
| VCS-OU3-SS067/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 19 J | 22 U | 19 U | 19 J | 150 U | 9.7 U |
| VCS-OU3-SS068/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 1.5 UJ | 1.5 UJ | 1.5 UJ | 1.5 UJ | 1.9 UJ | 1.7 UJ | 1.9 UJ | 260 U | 17 U |
| VCS-OU3-SS068/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 23 J | 6.1 J | 1.1 UJ | 22 J | 3.8 J | 1.2 UJ | 55 J | 180 U | 12 U |
| VCS-OU3-SS068/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 2 UJ | 2 UJ | 2 UJ | 2 UJ | 2.6 UJ | 2.3 UJ | 2.6 UJ | 340 U | 23 U |
| VCS-OU3-SS069/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 33 J | 23 U | 23 U | 91 | 36 J | 68 J | 230 | 200 U | 200 |
| VCS-OU3-SS069/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 36 J | 25 U | 25 U | 96 | 43 J | 340 | 520 | 210 U | 71 |
| VCS-OU3-SS070/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 110 | 120 | 19 U | 160 | 230 | 650 | 1,300 | 160 U | 11 U |
| VCS-OU3-SS070/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 39 J | 22 U | 20 U | 39 J | 150 U | 24 J |
| VCS-OU3-SS070/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 51 J | 58 | 16 U | 100 | 77 | 250 | 540 | 140 U | 9.3 U |
| VCS-OU3-SS070/2.0-3.0 | 2 - 3 | In-Stream | DS-1.25 | 0.86 UJ | 0.86 UJ | 0.86 UJ | 0.86 J | 1.1 UJ | 0.98 UJ | 1.1 UJ | 150 U | 9.8 U |
| VCS-OU3-SS071/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 20 J | 20 U | 20 U | 56 J | 26 U | 23 U | 76 J | 180 U | 12 U |

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS071/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 27 J | 27 U | 27 U | 38 J | 61 J | 53 J | 180 | 230 U | 38 J |
| VCS-OU3-SS071/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.88 UJ | 0.88 UJ | 0.88 UJ | 0.88 UJ | 1.1 UJ | 1 UJ | 1.1 UJ | 150 U | 10 U |
| VCS-OU3-SS072/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 0.89 J | 0.78 UJ | 0.78 UJ | 1.1 J | 1 UJ | 0.89 UJ | 2 J | 130 U | 8.9 U |
| VCS-OU3-SS073/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 74 | 32 J | 16 U | 88 | 39 J | 19 U | 230 | 140 U | 9.3 U |
| VCS-OU3-SS073/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 33 J | 16 U | 16 U | 37 J | 33 J | 19 U | 100 | 140 U | 9.3 U |
| VCS-OU3-SS073/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 72 | 62 | 41 J | 170 | 75 J | 840 | 1,300 | 160 U | 10 U |
| VCS-OU3-SS074/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 19 U | 19 U | 19 U | 30 J | 25 U | 140 | 170 | 170 U | 28 J |
| VCS-OU3-SS074/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 7.8 J | 2 J | 0.78 UJ | 11 J | 3.8 J | 3.9 J | 29 J | 130 U | 8.9 U |
| VCS-OU3-SS074/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 42 U | 42 U | 42 U | 53 J | 53 U | 1,300 J | 1,400 J | 140 U | 28 J |
| VCS-OU3-SS074/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 23 J | 16 U | 16 U | 66 | 21 U | 33 J | 120 J | 140 U | 80 J |
| VCS-OU3-SS075/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 1.8 J | 0.82 UJ | 0.82 UJ | 2.1 J | 1.1 UJ | 0.93 UJ | 3.9 J | 140 U | 9.3 U |
| VCS-OU3-SS075/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 45 J | 15 U | 15 U | 43 J | 19 U | 17 U | 88 | 130 U | 8.5 U |
| VCS-OU3-SS075/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.79 UJ | 0.79 UJ | 0.79 UJ | 0.79 UJ | 1 UJ | 0.9 UJ | 1 UJ | 140 U | 9 U |
| VCS-OU3-SS075/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 0.8 UJ | 0.8 UJ | 0.8 UJ | 0.8 UJ | 1 UJ | 0.91 UJ | 1 UJ | 140 U | 9.1 U |
| VCS-OU3-SS076/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 46 U | 46 U | 46 U | 92 J | 59 U | 1,400 | 1,500 | 160 U | 110 |
| VCS-OU3-SS076/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 31 J | 22 U | 22 U | 61 J | 28 U | 260 | 350 | 180 U | 31 J |
| VCS-OU3-SS076/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.97 J | 0.85 UJ | 0.85 UJ | 1.8 J | 1.1 UJ | 5 J | 7.8 J | 150 U | 9.7 UJ |
| VCS-OU3-SS077/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 1.9 J | 1.1 UJ | 1.1 UJ | 2.7 J | 1.4 UJ | 1.3 UJ | 4.6 J | 190 U | 13 U |
| VCS-OU3-SS077/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 10 J | 2.8 J | 0.88 UJ | 15 J | 3.9 J | 1 UJ | 32 J | 150 U | 10 U |
| VCS-OU3-SS077/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 11 J | 2.7 J | 0.87 UJ | 17 J | 3.7 J | 0.99 UJ | 34 J | 150 U | 9.8 U |
| VCS-OU3-SS077/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.1 UJ | 1.5 UJ | 1.3 UJ | 1.5 UJ | 190 U | 13 U |
| VCS-OU3-SS078/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 12 J | 6 J | 0.8 UJ | 16 J | 11 J | 5.8 J | 51 J | 140 U | 9.3 U |
| VCS-OU3-SS079/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 3.5 J | 0.87 UJ | 0.87 UJ | 1.7 J | 1.1 UJ | 2.2 J | 7.4 J | 150 U | 10 U |
| VCS-OU3-SS079/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 18 U | 18 U | 18 U | 18 U | 34 J | 21 U | 34 J | 160 UJ | 10 U |
| VCS-OU3-SS080/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 59 J | 59 U | 59 U | 220 | 110 J | 3,900 | 4,300 | 200 U | 13 U |
| VCS-OU3-SS081/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 40 J | 19 U | 19 U | 69 | 24 U | 26 J | 140 | 160 U | 11 U |
| VCS-OU3-SS081/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 30 J | 21 U | 21 U | 45 J | 27 U | 24 U | 75 J | 180 U | 12 U |
| VCS-OU3-SS081/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 84 | 22 J | 15 U | 92 | 20 U | 79 | 280 | 130 U | 8.8 U |
| VCS-OU3-SS082/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 37 J | 20 U | 20 U | 66 J | 26 U | 130 | 230 | 170 U | 20 J |
| VCS-OU3-SS082/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 20 U | 20 U | 20 U | 20 J | 25 U | 42 J | 62 J | 170 U | 22 J |
| VCS-OU3-SS082/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 25 J | 18 U | 18 U | 31 J | 23 U | 25 J | 81 | 150 U | 10 U |
| VCS-OU3-SS082/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 25 J | 18 U | 25 J | 35 J | 23 U | 130 | 220 | 150 U | 10 U |
| VCS-OU3-SS083/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 54 J | 20 U | 20 U | 100 | 51 J | 190 | 400 | 170 U | 74 |
| VCS-OU3-SS083/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 63 J | 24 U | 24 U | 150 | 73 J | 980 | 1,300 | 210 U | 14 U |
| VCS-OU3-SS084/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 44 J | 19 U | 19 U | 100 | 25 U | 180 | 320 | 160 U | 71 |
| VCS-OU3-SS084/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 110 | 28 U | 28 U | 220 | 100 J | 950 | 1,400 | 240 U | 16 U |
| VCS-OU3-SS085/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 2.5 J | 0.78 UJ | 0.78 UJ | 2.3 J | 1 UJ | 0.89 UJ | 4.8 J | 130 U | 8.9 U |
| VCS-OU3-SS085/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 19 U | 19 U | 19 U | 25 J | 25 U | 22 U | 25 J | 170 U | 11 U |
| VCS-OU3-SS085/1.0-2.0 | 1 - 2 | Transect | DS-1.25 | 0.83 UJ | 0.83 UJ | 0.83 UJ | 0.83 UJ | 1.1 UJ | 0.95 UJ | 1.1 UJ | 140 U | 9.5 U |
| VCS-OU3-SS085/1.0-2.0-FD | 1 - 2 | Transect | DS-1.25 | 0.84 UJ | 0.84 UJ | 0.84 UJ | 0.84 UJ | 1.1 UJ | 0.96 UJ | 1.1 UJ | 140 U | 9.6 U |
| VCS-OU3-SS086/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 18 U | 18 U | 18 U | 26 J | 24 U | 94 | 120 | 160 U | 10 U |
| VCS-OU3-SS086/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 19 U | 19 U | 19 U | 25 J | 25 U | 36 J | 61 J | 170 U | 11 U |
| VCS-OU3-SS087/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 20 J | 18 U | 18 U | 41 J | 23 U | 28 J | 89 | 150 U | 10 U |
| VCS-OU3-SS087/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 30 J | 17 U | 17 U | 55 J | 25 J | 20 U | 110 | 150 U | 37 |
| VCS-OU3-SS087/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 24 J | 22 U | 19 U | 24 J | 150 U | 9.7 U |
| VCS-OU3-SS087/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 15 U | 15 U | 15 U | 26 J | 20 U | 17 U | 26 J | 130 U | 8.7 U |
| VCS-OU3-SS088/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 45 J | 16 U | 16 U | 51 J | 20 U | 18 U | 96 | 130 U | 8.9 U |
| VCS-OU3-SS088/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 29 J | 22 U | 20 U | 29 J | 150 U | 9.8 U |
| VCS-OU3-SS089/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 73 | 57 J | 19 U | 110 | 67 J | 190 J | 500 | 160 U | 11 U |
| VCS-OU3-SS089/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 82 J | 28 J | 65 J | 130 J | 42 J | 270 J | 620 J | 170 U | 300 |
| VCS-OU3-SS089/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 120 J | 100 UJ | 380 J | 270 J | 130 J | 2,700 J | 3,600 J | 170 U | 280 |
| VCS-OU3-SS089/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 1 U | 1 U | 1 U | 1 U | 1.3 U | 1.2 U | 1.3 U | 180 U | 12 U |
| VCS-OU3-SS089/2.0-3.0 | 2 - 3 | In-Stream | DS-1.25 | 1.1 U | 1.1 U | 1.1 U | 1.1 U | 1.4 U | 1.2 U | 1.4 U | 180 U | 12 U |
| VCS-OU3-SS089/2.0-3.0-FD | 2 - 3 | In-Stream | DS-1.25 | 1 U | 1 U | 1 U | 1 U | 1.3 U | 1.1 U | 1.3 U | 170 U | 11 U |

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS090/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 19 J | 15 U | 15 U | 37 J | 19 U | 17 U | 56 J | 130 U | 8.6 U |
| VCS-OU3-SS090/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 19 J | 17 U | 17 U | 41 J | 22 U | 19 U | 60 J | 150 U | 9.7 U |
| VCS-OU3-SS090/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.82 U | 0.82 U | 0.82 U | 0.82 U | 1.1 U | 0.94 U | 1.1 U | 140 U | 9.4 U |
| VCS-OU3-SS090/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 2.6 J | 1.3 J | 0.85 U | 6.7 | 1.1 U | 1.1 J | 12 | 150 U | 9.7 U |
| VCS-OU3-SS090/2.0-3.0 | 2 - 3 | In-Stream | DS-1.25 | 0.9 U | 0.9 U | 0.9 U | 0.9 U | 1.2 U | 1 U | 1.2 U | 150 U | 10 U |
| VCS-OU3-SS091/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 20 J | 15 U | 15 U | 26 J | 20 U | 18 U | 46 J | 130 U | 8.8 U |
| VCS-OU3-SS091/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 30 J | 15 U | 15 U | 32 J | 19 U | 17 U | 62 J | 130 U | 8.6 U |
| VCS-OU3-SS091/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 16 J | 16 U | 16 U | 25 J | 21 U | 18 U | 41 J | 140 U | 9.2 U |
| VCS-OU3-SS091/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 26 J | 16 U | 16 U | 44 J | 21 U | 19 U | 70 J | 140 U | 40 J |
| VCS-OU3-SS092/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 1.2 J | 0.97 UJ | 0.97 UJ | 1.5 J | 1.2 UJ | 1.1 UJ | 2.7 J | 170 U | 11 U |
| VCS-OU3-SS092/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 21 J | 16 U | 16 U | 31 J | 21 U | 61 J | 110 | 140 U | 9.4 U |
| VCS-OU3-SS092/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.86 UJ | 0.86 UJ | 0.86 UJ | 0.86 UJ | 1.1 UJ | 0.99 UJ | 1.1 UJ | 150 U | 9.9 U |
| VCS-OU3-SS093/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 4.4 J | 0.81 UJ | 0.81 UJ | 7 J | 1 J | 4 J | 16 J | 140 U | 9.3 U |
| VCS-OU3-SS093/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 21 J | 19 U | 19 U | 45 J | 24 U | 67 J | 130 | 160 U | 11 U |
| VCS-OU3-SS093/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.76 UJ | 0.76 UJ | 0.76 UJ | 0.76 UJ | 0.98 UJ | 0.87 UJ | 0.98 UJ | 130 U | 8.7 U |
| VCS-OU3-SS093/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 0.75 UJ | 0.75 UJ | 0.75 UJ | 0.75 UJ | 0.96 UJ | 0.86 UJ | 0.96 UJ | 130 U | 8.6 U |
| VCS-OU3-SS094/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 79 | 16 U | 16 U | 77 | 21 U | 19 U | 160 | 140 U | 9.3 U |
| VCS-OU3-SS095/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 15 U | 15 U | 15 U | 19 J | 19 U | 17 U | 19 J | 130 U | 8.5 U |
| VCS-OU3-SS095/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 23 J | 16 U | 16 U | 29 J | 20 U | 18 U | 52 J | 140 U | 9 U |
| VCS-OU3-SS095/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 26 J | 15 U | 15 U | 33 J | 20 U | 18 U | 59 J | 260 J | 8.8 U |
| VCS-OU3-SS095/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 1.3 J | 0.89 UJ | 0.89 UJ | 1.3 J | 1.1 UJ | 1 UJ | 2.6 J | 150 U | 10 U |
| VCS-OU3-SS096/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 1.1 J | 0.83 UJ | 0.83 UJ | 1.2 J | 1.1 UJ | 0.95 UJ | 2.3 J | 140 U | 9.5 U |
| VCS-OU3-SS096/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 23 J | 20 U | 20 U | 35 J | 26 U | 23 U | 99 | 180 U | 12 U |
| VCS-OU3-SS096/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.98 UJ | 0.98 UJ | 0.98 UJ | 0.98 UJ | 1.3 UJ | 1.1 UJ | 1.3 UJ | 170 U | 11 U |
| VCS-OU3-SS097/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 5.6 J | 1.3 UJ | 1.3 UJ | 3.6 J | 1.6 UJ | 1.5 UJ | 9.2 J | 220 U | 15 U |
| VCS-OU3-SS097/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 39 J | 18 U | 28 J | 52 J | 23 U | 160 | 280 | 160 U | 10 U |
| VCS-OU3-SS097/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.92 UJ | 0.92 UJ | 0.92 UJ | 0.92 UJ | 1.2 UJ | 1.1 UJ | 1.2 UJ | 160 U | 11 UJ |
| VCS-OU3-SS098/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 21 J | 16 U | 16 U | 30 J | 21 U | 19 U | 51 J | 140 U | 9.3 U |
| VCS-OU3-SS098/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 22 J | 17 U | 17 U | 39 J | 22 U | 19 U | 80 | 150 U | 9.7 U |
| VCS-OU3-SS098/1.0-2.0 | 1 - 2 | Transect | DS-1.25 | 5 J | 0.77 UJ | 0.77 UJ | 6.9 J | 1.7 J | 0.89 UJ | 14 J | 130 U | 8.9 U |
| VCS-OU3-SS100/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 29 J | 15 U | 15 U | 26 J | 20 U | 18 U | 55 J | 130 U | 8.8 U |
| VCS-OU3-SS100/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 25 J | 16 U | 16 U | 30 J | 21 U | 28 J | 83 | 140 U | 9.2 U |
| VCS-OU3-SS100/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 56 | 16 U | 16 U | 51 J | 20 U | 18 U | 110 | 130 U | 8.9 U |

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS101/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 19 J | 16 U | 16 U | 26 J | 21 U | 19 U | 45 J | 140 U | 9.3 U |
| VCS-OU3-SS101/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 32 J | 17 J | 17 U | 17 U | 22 U | 19 U | 49 J | 150 U | 9.7 U |
| VCS-OU3-SS101/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 28 J | 16 U | 16 U | 40 J | 21 U | 33 J | 100 | 140 U | 9.3 J |
| VCS-OU3-SS102/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 24 J | 17 U | 17 U | 37 J | 22 U | 20 U | 61 J | 150 U | 9.8 U |
| VCS-OU3-SS102/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 37 J | 17 U | 17 U | 56 J | 22 U | 27 J | 120 | 150 U | 9.8 U |
| VCS-OU3-SS102/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 26 J | 15 U | 15 U | 41 J | 19 U | 17 U | 67 | 130 U | 8.6 U |
| VCS-OU3-SS103/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 22 J | 15 U | 15 U | 35 J | 20 U | 170 | 230 | 130 U | 8.8 U |
| VCS-OU3-SS103/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 27 J | 22 U | 52 J | 79 J | 150 UJ | 10 U |
| VCS-OU3-SS103/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 20 J | 17 U | 17 U | 27 J | 22 U | 20 U | 47 J | 150 U | 9.9 U |
| VCS-OU3-SS103/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 160 | 100 | 17 U | 170 | 140 | 19 U | 570 | 140 U | 9.5 U |
| VCS-OU3-SS104/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 44 J | 19 U | 19 U | 47 J | 25 U | 22 U | 91 | 160 U | 11 U |
| VCS-OU3-SS104/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 60 J | 19 U | 19 U | 110 | 30 J | 22 U | 200 | 160 U | 36 J |
| VCS-OU3-SS104/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 96 J | 33 J | 19 U | 150 J | 36 J | 38 J | 350 J | 160 U | 11 U |
| VCS-OU3-SS104/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 62 J | 24 J | 17 U | 110 J | 26 J | 120 J | 340 J | 140 U | 9.5 U |
| VCS-OU3-SS105/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 55 | 15 U | 15 U | 55 | 22 J | 18 U | 130 | 130 U | 8.8 U |
| VCS-OU3-SS105/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 26 J | 16 U | 16 U | 35 J | 21 U | 19 U | 61 J | 140 U | 9.4 U |
| VCS-OU3-SS105/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 39 J | 15 U | 15 U | 43 J | 19 U | 17 U | 82 | 130 U | 8.6 U |
| VCS-OU3-SS106/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 42 J | 22 U | 820 J | 860 J | 150 U | 9.8 U |
| VCS-OU3-SS106/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 23 J | 18 U | 18 U | 33 J | 23 U | 30 J | 86 J | 150 U | 10 U |
| VCS-OU3-SS106/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 18 U | 18 U | 18 U | 25 J | 23 U | 20 U | 25 J | 150 U | 10 U |
| VCS-OU3-SS106/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 100 U | 100 U | 810 | 230 J | 130 U | 4,600 | 5,600 | 170 U | 12 U |
| VCS-OU3-SS107/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 22 J | 22 U | 41 J | 63 J | 140 U | 9.6 U |
| VCS-OU3-SS107/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 19 J | 22 U | 19 U | 19 J | 150 U | 9.7 U |
| VCS-OU3-SS107/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 24 J | 17 U | 17 U | 34 J | 22 U | 19 U | 58 J | 140 U | 9.6 U |
| VCS-OU3-SS108/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 34 J | 17 U | 17 U | 39 J | 22 U | 19 U | 73 J | 150 U | 9.7 U |
| VCS-OU3-SS108/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 18 J | 16 U | 16 U | 25 J | 20 U | 18 U | 43 J | 140 U | 9.1 U |
| VCS-OU3-SS108/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 56 | 16 U | 16 U | 58 | 21 U | 19 U | 110 | 140 U | 9.3 U |
| VCS-OU3-SS109/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 40 J | 31 J | 34 J | 130 | 50 J | 710 | 1,000 | 190 U | 300 |
| VCS-OU3-SS109/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 60 J | 50 J | 23 U | 180 | 86 J | 40 J | 420 | 200 U | 620 |
| VCS-OU3-SS109/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 73 J | 26 U | 26 U | 98 | 40 J | 29 U | 210 | 220 U | 15 U |
| VCS-OU3-SS110/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 140 | 35 J | 19 U | 220 | 40 J | 21 U | 440 | 160 U | 160 |
| VCS-OU3-SS110/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 33 J | 18 U | 18 U | 67 | 26 J | 20 U | 130 | 150 U | 10 U |
| VCS-OU3-SS110/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 230 | 28 J | 100 | 240 | 44 J | 100 | 740 | 140 U | 63 |
| VCS-OU3-SS111/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 7.5 J | 4.2 J | 0.84 U | 9.8 J | 4.9 J | 0.96 U | 26 J | 140 U | 9.6 U |
| VCS-OU3-SS111/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 3.1 J | 3 J | 0.78 U | 4.5 J | 3.3 J | 0.89 U | 14 J | 130 U | 8.9 U |
| VCS-OU3-SS111/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 37 J | 23 J | 20 U | 75 | 78 J | 350 | 560 | 170 U | 12 U |
| VCS-OU3-SS111/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.9 U | 0.9 U | 0.9 U | 0.9 U | 1.2 U | 1 U | 1.2 U | 150 U | 10 U |
| VCS-OU3-SS112/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 52 J | 29 J | 17 U | 81 J | 36 J | 19 U | 200 J | 140 U | 9.5 U |
| VCS-OU3-SS112/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 28 J | 24 J | 17 U | 54 J | 31 J | 19 U | 140 J | 140 U | 9.5 U |
| VCS-OU3-SS112/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 36 J | 17 J | 17 U | 48 J | 22 U | 19 U | 100 | 140 U | 9.6 U |
| VCS-OU3-SS112/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 0.88 U | 0.88 U | 0.88 U | 2.5 J | 1.1 U | 1 U | 2.5 J | 150 U | 10 U |
| VCS-OU3-SS113/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 21 J | 17 U | 17 U | 40 J | 21 U | 19 U | 61 J | 140 U | 9.5 U |
| VCS-OU3-SS113/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 21 J | 15 U | 15 U | 25 J | 19 U | 17 U | 46 J | 120 U | 8.3 U |
| VCS-OU3-SS113/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 42 J | 16 U | 16 U | 110 J | 21 U | 19 U | 150 | 140 U | 9.3 U |
| VCS-OU3-SS113/2.0-3.0 | 2 - 3 | In-Stream | DS-1.25 | 28 J | 17 U | 17 U | 45 J | 21 U | 19 U | 73 | 140 U | 9.5 U |
| VCS-OU3-SS113/2.0-3.0-FD | 2 - 3 | In-Stream | DS-1.25 | 28 J | 16 U | 16 U | 44 J | 21 U | 18 U | 72 | 140 U | 9.2 U |

TABLE 3
**Sediment Sample Results Summary**
**DDT, PBB, and HBB**
*Velsicol Chemical/Pine River Superfund Site - Operable Unit 3 (Downstream)*

| Station ID | Depth Interval | Sample Type | River Segment | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | PBB(BP-6) µg/kg | HBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SS114/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 38 J | 19 U | 19 U | 67 | 24 U | 51 J | 160 | 160 U | 11 U |
| VCS-OU3-SS114/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 47 J | 18 U | 18 U | 71 | 24 U | 21 U | 120 | 160 U | 11 U |
| VCS-OU3-SS114/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 22 J | 17 U | 17 U | 30 J | 22 U | 20 U | 52 J | 150 U | 10 U |
| VCS-OU3-SS114/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 18 U | 18 U | 18 U | 28 J | 23 U | 20 U | 28 J | 150 U | 10 U |
| VCS-OU3-SS114/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 59 J | 20 U | 92 | 130 J | 25 U | 120 | 400 | 170 U | 11 U |
| VCS-OU3-SS115/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 62 J | 51 J | 20 U | 160 | 85 J | 48 J | 410 | 170 U | 85 |
| VCS-OU3-SS115/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 61 J | 32 J | 25 U | 150 J | 58 J | 170 J | 470 J | 220 U | 120 |
| VCS-OU3-SS115/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 39 J | 120 | 20 U | 140 | 220 | 22 U | 520 | 170 U | 11 U |
| VCS-OU3-SS116/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 18 U | 18 U | 18 U | 33 J | 23 U | 20 U | 33 J | 150 U | 10 U |
| VCS-OU3-SS116/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 29 J | 20 U | 32 J | 58 J | 32 J | 78 | 230 | 170 U | 12 U |
| VCS-OU3-SS116/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 35 J | 19 U | 19 U | 64 | 27 J | 24 J | 150 | 160 U | 11 U |
| VCS-OU3-SS117/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 71 | 29 J | 20 U | 120 J | 26 U | 23 U | 220 | 170 U | 11 U |
| VCS-OU3-SS117/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 26 J | 17 U | 17 U | 36 J | 22 U | 24 J | 86 | 140 U | 9.6 U |
| VCS-OU3-SS117/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 47 J | 20 UJ | 35 J | 130 J | 41 J | 220 J | 470 J | 170 U | 12 UJ |
| VCS-OU3-SS118/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 67 | 17 U | 17 U | 79 | 22 U | 22 J | 170 | 140 U | 9.6 U |
| VCS-OU3-SS118/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 13 | 3.3 | 0.84 U | 16 | 8.3 | 3.1 J | 44 | 140 U | 9.6 U |
| VCS-OU3-SS118/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 79 J | 17 U | 17 U | 100 | 37 J | 44 J | 260 | 150 U | 52 |
| VCS-OU3-SS118/1.0-2.0-FD | 1 - 2 | In-Stream | DS-1.25 | 47 J | 18 U | 18 U | 76 | 29 J | 84 J | 240 | 160 U | 11 U |
| VCS-OU3-SS119/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 18 J | 16 U | 16 U | 36 J | 20 U | 390 J | 440 J | 130 U | 9 U |
| VCS-OU3-SS119/0-0.5-FD | 0 - 0.5 | Transect | DS-1.25 | 18 J | 16 U | 49 J | 29 J | 20 U | 78 J | 170 J | 130 U | 8.9 U |
| VCS-OU3-SS120/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 3.8 | 0.83 U | 0.83 U | 7.1 | 9.1 | 7.5 | 28 | 140 U | 9.4 U |
| VCS-OU3-SS120/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 20 U | 20 U | 20 U | 54 J | 43 J | 220 | 320 | 170 U | 43 |
| VCS-OU3-SS121/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 36 J | 17 U | 17 U | 53 J | 32 J | 19 U | 120 J | 150 U | 9.7 U |
| VCS-OU3-SS121/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 31 J | 17 U | 17 U | 33 J | 21 U | 19 U | 64 J | 140 U | 9.5 U |
| VCS-OU3-SS121/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 25 J | 17 U | 17 U | 34 J | 29 J | 20 U | 88 | 150 U | 9.8 U |
| VCS-OU3-SS122/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 29 J | 22 U | 22 U | 60 J | 29 U | 25 U | 89 J | 190 U | 13 U |
| VCS-OU3-SS123/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 6.3 | 2.1 J | 0.83 U | 7.9 | 3.2 J | 3.8 | 23 | 140 U | 9.4 U |
| VCS-OU3-SS124/0.5-1.0 | 0.5 - 1 | Transect | DS-1.25 | 100 J | 88 U | 3,400 | 290 J | 110 U | 6,700 | 10,000 | 150 U | 10 U |
| VCS-OU3-SS124/0-0.5 | 0 - 0.5 | Transect | DS-1.25 | 18 U | 18 U | 18 U | 28 J | 23 U | 20 U | 28 J | 150 U | 10 U |
| VCS-OU3-SS126/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 17 U | 17 U | 17 U | 27 J | 22 U | 22 J | 49 J | 150 U | 9.7 U |
| VCS-OU3-SS126/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 16 U | 16 U | 16 U | 23 J | 21 U | 19 U | 23 J | 140 U | 9.3 U |
| VCS-OU3-SS126/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 22 J | 17 U | 17 U | 30 J | 22 U | 20 U | 52 J | 150 U | 9.9 U |
| VCS-OU3-SS127/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 85 | 27 J | 17 U | 110 | 36 J | 87 | 350 | 150 U | 200 |
| VCS-OU3-SS127/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 21 J | 16 U | 16 U | 30 J | 21 U | 19 U | 51 J | 140 U | 9.3 U |
| VCS-OU3-SS127/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 51 J | 16 U | 16 U | 54 J | 20 U | 78 | 180 J | 130 U | 8.9 U |
| VCS-OU3-SS127/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 85 | 17 U | 17 U | 110 | 26 J | 43 J | 260 | 140 U | 21 J |
| VCS-OU3-SS128/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 26 J | 15 U | 15 U | 33 J | 20 U | 18 U | 59 J | 130 U | 8.8 U |
| VCS-OU3-SS128/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 23 J | 16 U | 16 U | 47 J | 21 U | 19 U | 70 J | 140 U | 9.4 U |
| VCS-OU3-SS128/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 450 | 36 J | 15 U | 350 | 44 J | 17 U | 880 | 130 U | 34 J |
| VCS-OU3-SS129/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 24 J | 17 U | 17 U | 37 J | 22 U | 19 U | 61 J | 150 U | 9.7 U |
| VCS-OU3-SS129/0.5-1.0-FD | 0.5 - 1 | In-Stream | DS-1.25 | 31 J | 17 U | 17 U | 41 J | 22 U | 19 U | 72 J | 150 U | 9.7 U |
| VCS-OU3-SS129/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 27 J | 17 U | 17 U | 42 J | 22 U | 20 U | 69 J | 150 U | 9.8 U |
| VCS-OU3-SS129/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 28 J | 18 U | 18 U | 38 J | 23 U | 21 U | 66 J | 150 U | 10 U |
| VCS-OU3-SS130/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 40 J | 15 U | 15 U | 45 J | 19 U | 17 U | 85 | 130 U | 19 J |
| VCS-OU3-SS130/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 54 J | 15 U | 15 U | 62 J | 19 U | 17 U | 120 J | 130 U | 8.6 U |
| VCS-OU3-SS130/0-0.5-FD | 0 - 0.5 | In-Stream | DS-1.25 | 7.8 J | 2.5 J | 0.76 U | 9 J | 3 J | 0.87 U | 22 J | 130 U | 8.7 U |
| VCS-OU3-SS130/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 21 U | 21 U | 21 U | 29 J | 26 U | 23 U | 29 J | 180 U | 12 U |
| VCS-OU3-SS131/0.5-1.0 | 0.5 - 1 | In-Stream | DS-1.25 | 37 J | 17 U | 17 U | 34 J | 22 U | 19 U | 71 J | 150 U | 9.7 U |
| VCS-OU3-SS131/0-0.5 | 0 - 0.5 | In-Stream | DS-1.25 | 52 J | 21 U | 21 U | 67 J | 64 J | 25 U | 180 | 180 U | 12 U |
| VCS-OU3-SS131/1.0-2.0 | 1 - 2 | In-Stream | DS-1.25 | 39 J | 17 U | 200 | 68 | 22 J | 650 | 980 | 150 U | 29 J |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/L | 2,4'-DDE µg/L | 2,4'-DDT µg/L | 4,4'-DDD µg/L | 4,4'-DDE µg/L | 4,4'-DDT µg/L | DDT TOTAL µg/L | PBB(BP-6) µg/L | HBB µg/L | 1,2,4,5-TETRACHLOROBENZENE µg/L | 2,3,4,6-TETRACHLOROPHENOL µg/L | 2,4,5-TRICHLOROPHENOL µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 J | 0.0029 U | 0.0017 U | 0.012 | 0.0032 U | 0.0075 J | 0.023 | 0.34 U | 0.11 U | 0.19 U | 1.2 U | 1.2 U |
| VCS-OU3-SW002 | 0.0023 U | 0.003 U | 0.0018 U | 0.0018 U | 0.0033 U | 0.0031 U | 0.0033 U | 0.36 U | 0.11 U | | | |
| VCS-OU3-SW003 | 0.0023 U | 0.0029 U | 0.0017 U | 0.0017 U | 0.0087 UB | 0.003 U | 0.0087 J | 0.35 U | 0.11 U | | | |
| VCS-OU3-SW004 | 0.0022 U | 0.0028 U | 0.0017 U | 0.0017 U | 0.0031 U | 0.0029 U | 0.0031 U | 0.33 U | 0.1 U | | | |
| VCS-OU3-SW005 | 0.0022 U | 0.0028 U | 0.0016 U | 0.0041 J | 0.0062 UB | 0.0082 J | 0.019 | 0.33 U | 0.1 U | 0.18 U | 1.2 U | 1.2 U |
| VCS-OU3-SW005-FD | 0.0023 U | 0.003 U | 0.0018 U | 0.0018 U | 0.0033 U | 0.0031 U | 0.0033 U | 0.35 U | 0.11 U | | | |
| VCS-OU3-SW006 | 0.0022 U | 0.0028 U | 0.0017 U | 0.0017 U | 0.0032 U | 0.0029 U | 0.0032 U | 0.34 U | 0.1 U | | | |
| VCS-OU3-SW007 | 0.0022 U | 0.0029 U | 0.0017 U | 0.0043 J | 0.0064 UB | 0.003 U | 0.011 | 0.34 U | 0.1 U | | | |
| VCS-OU3-SW008 | 0.0023 U | 0.0029 U | 0.0017 U | 0.0054 J | 0.0032 U | 0.0075 J | 0.013 | 0.34 U | 0.11 U | | | |
| VCS-OU3-SW009 | 0.0022 U | 0.0028 U | 0.0017 U | 0.0017 U | 0.0032 U | 0.0029 U | 0.0032 U | 0.34 U | 0.1 U | | | |
| VCS-OU3-SW010 | 0.0023 U | 0.0029 U | 0.0017 U | 0.0017 U | 0.0032 U | 0.0086 J | 0.0086 J | 0.34 U | 0.11 U | 0.18 U | 1.1 U | 1.1 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | 2,4,6-TRICHLOROPHENOL µg/L | 2,4-DICHLOROPHENOL µg/L | 2,4-DIMETHYLPHENOL µg/L | 2,4-DINITROPHENOL µg/L | 2,4-DINITROTOLUENE µg/L | 2,6-DINITROTOLUENE µg/L | 2-CHLORONAPHTHALENE µg/L | 2-CHLOROPHENOL µg/L | 2-METHYLNAPHTHALENE µg/L | 2-METHYLPHENOL (O-CRESOL) µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 1.1 U | 1.1 U | 0.91 U | 1.7 U | 0.23 U | 0.31 U | 0.2 U | 0.97 U | 0.19 U | 0.96 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 1.1 U | 1.1 U | 0.87 U | 1.6 U | 0.22 U | 0.3 U | 0.19 U | 0.93 U | 0.18 U | 0.91 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 1 U | 1 U | 0.85 U | 1.6 U | 0.22 U | 0.29 U | 0.19 U | 0.91 U | 0.18 U | 0.9 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | 2-NITROANILINE µg/L | 2-NITROPHENOL µg/L | 3,3'-DICHLOROBENZIDINE µg/L | 3-NITROANILINE µg/L | 4,6-DINITRO-2-METHYLPHENOL µg/L | 4-BROMOPHENYL PHENYL ETHER µg/L | 4-CHLORO-3-METHYLPHENOL µg/L | 4-CHLOROANILINE µg/L | 4-CHLOROPHENYL PHENYL ETHER µg/L | 4-NITROANILINE µg/L | 4-NITROPHENOL µg/L | ACENAPHTHENE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 0.24 U | 1 U | 0.73 U | 0.29 U | 1.8 U | 0.22 U | 0.89 U | 0.13 U | 0.2 U | 0.17 U | 1.2 U | 0.2 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 0.23 U | 0.96 U | 0.7 U | 0.28 U | 1.7 U | 0.21 U | 0.85 U | 0.13 U | 0.19 U | 0.16 U | 1.2 U | 0.19 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 0.23 U | 0.94 U | 0.69 U | 0.27 U | 1.7 U | 0.21 U | 0.83 U | 0.13 U | 0.19 U | 0.16 U | 1.1 U | 0.19 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | ACENAPHTHYLENE µg/L | ACETOPHENONE µg/L | ANTHRACENE µg/L | ATRAZINE µg/L | BENZALDEHYDE µg/L | BENZO(A)ANTHRACENE µg/L | BENZO(A)PYRENE µg/L | BENZO(B)FLUORANTHENE µg/L | BENZO(G,H,I)PERYLENE µg/L | BENZO(K)FLUORANTHENE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 0.19 U | 0.3 U | 0.12 U | 0.29 U | 0.28 U | 0.13 U | 0.16 U | 0.19 U | 0.23 U | 0.22 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 0.18 U | 0.29 U | 0.12 U | 0.28 U | 0.27 U | 0.13 U | 0.15 U | 0.18 U | 0.22 U | 0.21 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 0.18 U | 0.28 U | 0.11 U | 0.27 U | 0.26 U | 0.13 U | 0.15 U | 0.18 U | 0.22 U | 0.21 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | BENZYL BUTYL PHTHALATE µg/L | BIPHENYL (DIPHENYL) µg/L | BIS(2-CHLOROETHOXY) METHANE µg/L | BIS(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER) µg/L | BIS(2-CHLOROISOPROPYL) ETHER µg/L | BIS(2-ETHYLHEXYL) PHTHALATE µg/L | CAPROLACTAM µg/L | CARBAZOLE µg/L | CHRYSENE µg/L | CRESOLS, TOTAL µg/L | DIBENZ(A,H)ANTHRACENE µg/L | DIBENZOFURAN µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 0.52 U | 0.17 U | 0.21 U | 0.23 U | 0.24 U | 0.49 U | 0.21 U | 0.13 U | 0.18 U | 1.6 U | 0.19 U | 0.21 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 0.5 U | 0.16 U | 0.2 U | 0.22 U | 0.23 U | 0.49 J | 0.2 U | 0.13 U | 0.17 U | 1.5 U | 0.18 U | 0.2 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 0.49 U | 0.16 U | 0.2 U | 0.22 U | 0.23 U | 0.46 U | 0.2 U | 0.13 U | 0.17 U | 1.5 U | 0.18 U | 0.2 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | DIETHYL PHTHALATE µg/L | DIMETHYL PHTHALATE µg/L | DI-N-BUTYL PHTHALATE µg/L | DI-N-OCTYLPHTHALATE µg/L | FLUORANTHENE µg/L | FLUORENE µg/L | HEXACHLOROBENZENE µg/L | HEXACHLOROBUTADIENE µg/L | HEXACHLOROCYCLOPENTADIENE µg/L | HEXACHLOROETHANE µg/L | INDENO(1,2,3-C,D)PYRENE µg/L | ISOPHORONE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 0.5 U | 0.6 U | 0.74 U | 0.54 U | 0.14 U | 0.21 U | 0.3 U | 0.2 U | 0.29 U | 0.24 U | 0.2 U | 0.2 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 0.48 U | 0.57 U | 0.71 U | 0.52 U | 0.14 U | 0.2 U | 0.29 U | 0.19 U | 0.28 U | 0.23 U | 0.19 U | 0.19 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 0.47 U | 0.56 U | 0.7 U | 0.51 U | 0.14 U | 0.2 U | 0.28 U | 0.19 U | 0.27 U | 0.23 U | 0.19 U | 0.19 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 4
**Surface Water Sample Results Summary**
**DDT, HBB, PBB, and PAHs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 2,4'-DDD µg/ | NAPHTHALENE µg/L | NITROBENZENE µg/L | N-NITROSODI-N-PROPYLAMINE µg/L | N-NITROSODIPHENYL AMINE µg/L | PENTACHLOROPHENOL µg/L | PHENANTHRENE µg/L | PHENOL µg/L | PYRENE µg/L |
|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.0032 | 0.2 U | 0.18 U | 0.2 U | 0.4 U | 1.2 U | 0.33 U | 0.53 U | 0.14 U |
| VCS-OU3-SW002 | 0.0023 | | | | | | | | |
| VCS-OU3-SW003 | 0.0023 | | | | | | | | |
| VCS-OU3-SW004 | 0.0022 | | | | | | | | |
| VCS-OU3-SW005 | 0.0022 | 0.19 U | 0.17 U | 0.19 U | 0.38 U | 1.2 U | 0.32 U | 0.51 U | 0.14 U |
| VCS-OU3-SW005-FD | 0.0023 | | | | | | | | |
| VCS-OU3-SW006 | 0.0022 | | | | | | | | |
| VCS-OU3-SW007 | 0.0022 | | | | | | | | |
| VCS-OU3-SW008 | 0.0023 | | | | | | | | |
| VCS-OU3-SW009 | 0.0022 | | | | | | | | |
| VCS-OU3-SW010 | 0.0023 | 0.19 U | 0.17 U | 0.19 U | 0.38 U | 1.1 U | 0.31 U | 0.5 U | 0.14 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 5
**Surface Water Sample Results Summary**
**VOCs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 1,1,1-TRICHLOROETHANE µg/L | 1,1,2,2-TETRACHLOROETHANE µg/L | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE µg/L | 1,1,2-TRICHLOROETHANE µg/L | 1,1-DICHLOROETHANE µg/L | 1,1-DICHLOROETHENE µg/L | 1,2,3-TRICHLOROBENZENE µg/L | 1,2,4-TRICHLOROBENZENE µg/L | 1,2-DIBROMO-3-CHLOROPROPANE µg/L | 1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE) µg/L | 1,2-DICHLOROBENZENE µg/L | 1,2-DICHLOROETHANE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.21 U | 0.19 U | 0.5 U | 0.26 U | 0.2 U | 0.24 U | 0.3 U | 0.3 U | 0.4 U | 0.16 U | 0.23 U | 0.3 U |
| VCS-OU3-SW005 | 0.21 U | 0.19 U | 0.5 U | 0.26 U | 0.2 U | 0.24 U | 0.3 U | 0.3 U | 0.4 U | 0.16 U | 0.23 U | 0.3 U |
| VCS-OU3-SW005-FD | 0.21 U | 0.19 U | 0.5 U | 0.26 U | 0.2 U | 0.24 U | 0.3 U | 0.3 U | 0.4 U | 0.16 U | 0.23 U | 0.3 U |
| VCS-OU3-SW010 | 0.21 U | 0.19 U | 0.5 U | 0.26 U | 0.2 U | 0.24 U | 0.3 U | 0.3 U | 0.4 U | 0.16 U | 0.23 U | 0.3 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 5
**Surface Water Sample Results Summary**
**VOCs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 1,1,1-TRICHLOROETHAI µg/L | 1,2-DICHLOROPROPANE µg/L | 1,3-DICHLOROBENZENE µg/L | 1,4-DICHLOROBENZENE µg/L | 1,4-DIOXANE (P-DIOXANE) µg/L | 2,2-DICHLOROPROPANE µg/L | 2-HEXANONE µg/L | ACETONE µg/L | BENZENE µg/L | BROMOCHLOROMETHANE µg/L | BROMODICHLOROMETHANE µg/L | BROMOFORM µg/L | BROMOMETHANE µg/L | CARBON DISULFIDE µg/L | CARBON TETRACHLORIDE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.21 | 0.22 U | 0.26 U | 0.23 U | 5 UJ | 0.25 U | 4 U | 5 U | 0.19 U | 0.19 U | 0.2 U | 0.22 U | 0.5 U | 0.5 U | 0.23 U |
| VCS-OU3-SW005 | 0.21 | 0.22 U | 0.26 U | 0.23 U | 5 UJ | 0.25 U | 4 U | 5 U | 0.19 U | 0.19 U | 0.2 U | 0.22 U | 0.5 U | 0.5 U | 0.23 U |
| VCS-OU3-SW005-FD | 0.21 | 0.22 U | 0.26 U | 0.23 U | 5 UJ | 0.25 U | 4 U | 5 U | 0.19 U | 0.19 U | 0.2 U | 0.22 U | 0.5 U | 0.5 U | 0.23 U |
| VCS-OU3-SW010 | 0.21 | 0.22 U | 0.26 U | 0.23 U | 5 UJ | 0.25 U | 4 U | 5 U | 0.19 U | 0.19 U | 0.2 U | 0.22 U | 0.5 U | 0.5 U | 0.23 U |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 5
**Surface Water Sample Results Summary**
**VOCs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 1,1,1-TRICHLOROETHAI µg/L | CHLOROBENZENE µg/L | CHLOROETHANE µg/L | CHLOROFORM µg/L | CHLOROMETHANE µg/L | CIS-1,2-DICHLOROETHYLENE µg/L | CIS-1,3-DICHLOROPROPENE µg/L | CYCLOHEXANE µg/L | DIBROMOCHLORO METHANE µg/L | DICHLORODIFLUO ROMETHANE µg/L | DIMETHYL BENZENE µg/L | ETHYLBENZENE µg/L | ISOPROPYLBENZENE (CUMENE) µg/L | METHYL ACETATE µg/L | METHYL ETHYL KETONE (2-BUTANONE) µg/L | METHYL ISOBU KETONE (4-METHYL-2-PENTANONE) µ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.21 | 0.24 U | 0.4 U | 0.15 U | 0.4 U | 0.25 U | 0.19 U | 0.28 U | 0.19 U | 0.26 U | 0.5 U | 0.22 U | 0.18 U | 0.3 U | 2.4 U | 3 |
| VCS-OU3-SW005 | 0.21 | 0.24 U | 0.4 U | 0.15 U | 0.4 U | 0.25 U | 0.19 U | 0.28 U | 0.19 U | 0.26 U | 0.5 U | 0.22 U | 0.18 U | 0.3 U | 2.4 U | 3 |
| VCS-OU3-SW005-FD | 0.21 | 0.24 U | 0.4 U | 0.15 U | 0.4 U | 0.25 U | 0.19 U | 0.28 U | 0.19 U | 0.26 U | 0.5 U | 0.22 U | 0.18 U | 0.3 U | 2.4 U | 3 |
| VCS-OU3-SW010 | 0.21 | 0.24 U | 0.4 U | 0.15 U | 0.4 U | 0.25 U | 0.19 U | 0.28 U | 0.19 U | 0.26 U | 0.5 U | 0.22 U | 0.18 U | 0.3 U | 2.4 U | 3 |

Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 5
**Surface Water Sample Results Summary**
**VOCs**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | 1,1,1-TRICHLOROETHAI µg/L | METHYLCYCLOHEXANE µg/L | METHYLENE CHLORIDE µg/L | O-XYLENE (1,2-DIMETHYLBENZENE) µg/L | STYRENE µg/L | TERT-BUTYL METHYL ETHER µg/L | TETRACHLOROETHYLENE(PCE) µg/L | TOLUENE µg/L | TRANS-1,2-DICHLOROETHENE µg/L | TRANS-1,3-DICHLOROPROPENE µg/L | TRICHLOROETHYLENE (TCE) µg/L | TRICHLOROFLUOROMETHANE µg/L | VINYL CHLORIDE µg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-SW001 | 0.21 U | 0.23 U | 0.4 U | 0.24 U | 0.2 U | 0.29 U | 0.3 U | 0.22 U | 0.25 U | 0.19 U | 0.21 U | 0.2 U | 0.18 U |
| VCS-OU3-SW005 | 0.21 U | 0.23 U | 0.4 U | 0.24 U | 0.2 U | 0.29 U | 0.3 U | 0.22 U | 0.25 U | 0.19 U | 0.21 U | 0.2 U | 0.18 U |
| VCS-OU3-SW005-FD | 0.21 U | 0.23 U | 0.4 U | 0.24 U | 0.2 U | 0.29 U | 0.3 U | 0.22 U | 0.25 U | 0.19 U | 0.21 U | 0.2 U | 0.18 U |
| VCS-OU3-SW010 | 0.21 U | 0.23 U | 0.4 U | 0.24 U | 0.2 U | 0.29 U | 0.3 U | 0.22 U | 0.25 U | 0.19 U | 0.21 U | 0.2 U | 0.18 U |

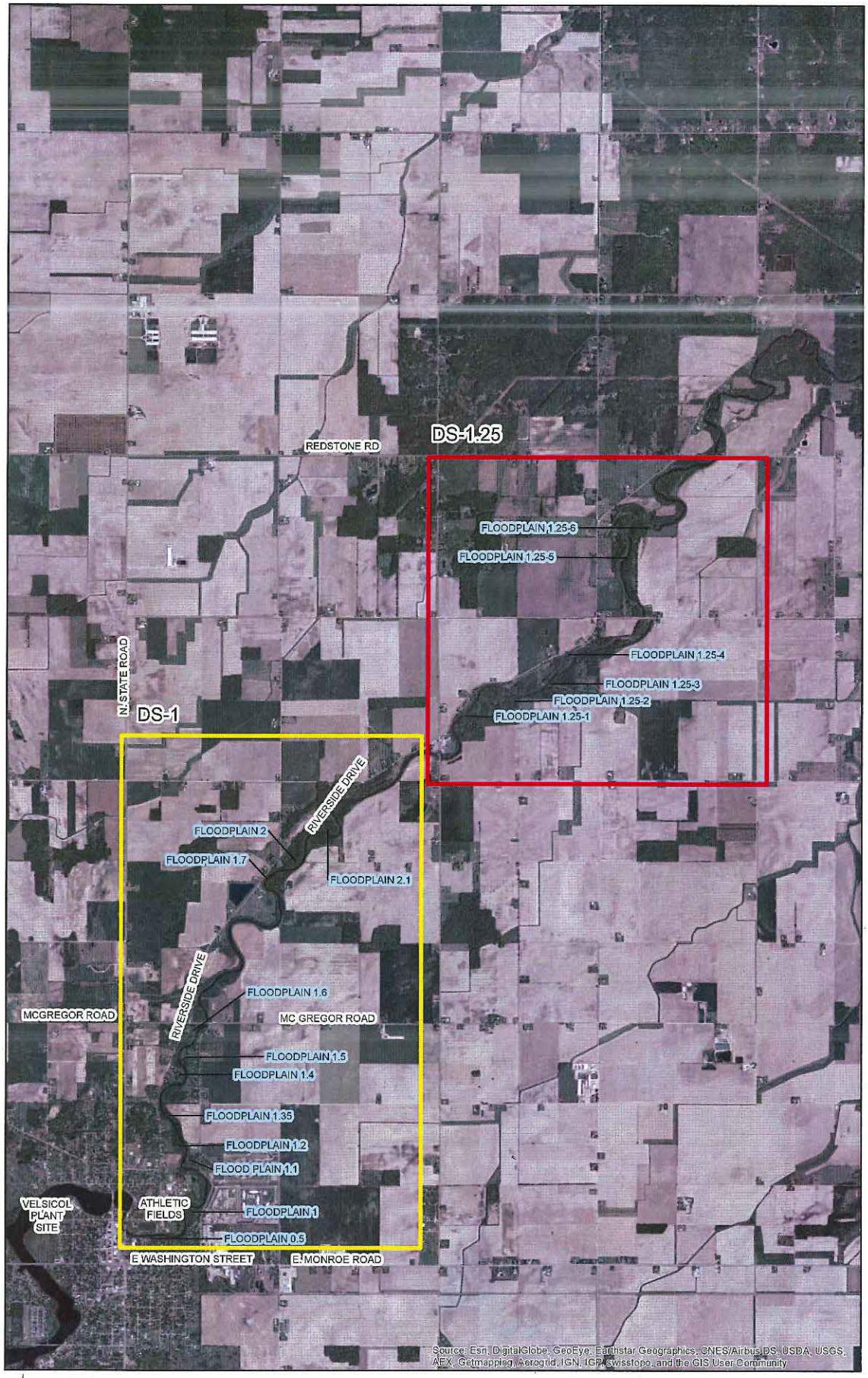
Notes:
FD = Field Duplicate
J = Value is estimated
U = Value is below detection limit

TABLE 6
**DDT, HBB, PBB, and Lipids**
**2013 Fish Tissue Sample Results Summary**
*Velsicol Chemical/Pine River Superfund*
*Site - Operable Unit 3 (Downstream)*

| Station ID | Location | Comment | Moisture (Percent) | 2,4'-DDD µg/kg | 2,4'-DDE µg/kg | 2,4'-DDT µg/kg | 4,4'-DDD µg/kg | 4,4'-DDE µg/kg | 4,4'-DDT µg/kg | DDT TOTAL µg/kg | HBB µg/kg | LIPID (Percent) | PBB µg/kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VCS-OU3-FS004 | R-1 | Common carp | 76.2 | 14 UJ | 14 UJ | 14 UJ | 14 UJ | 20 J | 16 UJ | 20 J | 8 UJ | 6.3 | 120 UJ |
| VCS-OU3-FS005 | R-1 | Common carp | 74.7 | 52 J | 44 J | 90 J | 28 J | 82 J | 40 J | 340 J | 8 U | 6.1 | 120 U |
| VCS-OU3-FS006 | R-1 | Common carp | 69.4 | 50 J | 36 J | 69 J | 77 J | 130 J | 32 J | 390 J | 7.9 U | 14.2 | 120 U |
| VCS-OU3-FS007 | R-1 | Small mouth bass tissue | 75.1 | 30 J | 32 J | 73 J | 14 U | 48 J | 28 J | 210 J | 7.9 U | 0.7 | 120 U |
| VCS-OU3-FS007-O | R-1 | Small mouth bass offal | 71.9 | 30 J | 32 J | 74 J | 24 J | 110 J | 40 J | 310 J | 8 U | 1 | 120 U |
| VCS-OU3-FS008 | R-1 | Small mouth bass tissue | 76.1 | 14 U | 14 U | 24 J | 14 U | 24 J | 16 U | 48 J | 8 U | 0.5 | 120 U |
| VCS-OU3-FS008-O | R-1 | Small mouth bass offal | 69 | 48 J | 30 J | 66 | 34 J | 110 J | 40 J | 330 J | 8 U | 1.9 | 120 U |
| VCS-OU3-FS009 | DS-1.25 | Small mouth bass tissue | 76.2 | 40 J | 16 J | 14 U | 67 | 97 | 51 J | 270 | 7.9 U | 0.7 | 120 U |
| VCS-OU3-FS009-O | DS-1.25 | Small mouth bass offal | 71 | 370 | 140 | 94 | 790 | 1,000 | 470 | 2,900 | 8 | 4.4 | 120 U |
| VCS-OU3-FS010 | DS-1.25 | Small mouth bass tissue | 77.7 | 54 J | 38 J | 62 J | 54 J | 140 J | 42 J | 390 J | 8 U | 0.3 | 120 U |
| VCS-OU3-FS011 | DS-1.25 | Small mouth bass tissue | 75.5 | 67 | 46 J | 28 | 120 | 270 | 65 | 600 | 7.9 U | 0.2 | 120 U |
| VCS-OU3-FS011-O | DS-1.25 | Small mouth bass offal | 72.4 | 91 J | 32 J | 59 J | 120 J | 300 J | 63 J | 670 J | 7.9 U | 0.6 | 120 U |
| VCS-OU3-FS012 | DS-1.25 | Small mouth bass tissue | 74.7 | 84 J | 42 J | 68 J | 94 J | 170 J | 62 J | 520 J | 8 U | 0.6 | 120 U |
| VCS-OU3-FS013 | DS-1.25 | Small mouth bass tissue | 73.2 | 26 J | 14 U | 14 U | 50 | 120 | 22 J | 220 | 8 U | 0.3 | 120 U |
| VCS-OU3-FS013-O | DS-1.25 | Small mouth bass offal | 68.5 | 160 J | 50 J | 40 J | 390 J | 890 J | 150 J | 1,700 J | 7.9 U | 1.9 | 120 |
| VCS-OU3-FS014 | DS-1.25 | Common carp | 78.9 | 200 | 34 J | 40 J | 340 | 320 | 36 J | 970 | 8 U | 2.3 | 120 U |
| VCS-OU3-FS015 | DS-1.25 | Common carp | 71.7 | 390 | 260 J | 80 J | 1,100 | 3,000 | 80 U | 4,800 | 66 J | 4.3 | 120 U |
| VCS-OU3-FS016 | DS-1.25 | Common carp | 71.5 | 300 | 95 J | 55 J | 810 | 1,600 | 40 U | 2,900 | 8 U | 3 | 120 U |
| VCS-OU3-FS017 | DS-1.25 | Common carp | 76.9 | 350 | 70 J | 35 U | 870 | 1,300 | 40 J | 2,600 | 8 U | 4.4 | 120 U |
| VCS-OU3-FS018 | DS-1.25 | Common carp | 77.5 | 200 | 45 J | 35 U | 590 | 1,400 | 40 U | 2,200 | 8 U | 3.5 | 120 U |
| VCS-OU3-FS019 | DS-1.25 | Forage fish | 77.3 | 64 | 28 J | 14 U | 150 | 230 | 16 U | 470 | 8 UJ | 2 | 120 U |
| VCS-OU3-FS020 | DS-1.25 | Forage fish | 77.9 | 24 J | 14 U | 14 U | 74 | 100 | 16 U | 200 | 8 UJ | 2.1 | 120 U |
| VCS-OU3-FS021 | DS-1.25 | Forage fish | 76.4 | 78 | 56 J | 14 U | 210 | 320 | 16 U | 660 | 8 U | 2.1 | 120 U |
| VCS-OU3-FS022 | DS-1.25 | Forage fish | 76.5 | 20 J | 14 UJ | 14 UJ | 60 J | 80 J | 16 UJ | 160 | 8 UJ | 2 | 120 UJ |
| VCS-OU3-FS023 | DS-1.25 | Forage fish | 74.2 | 64 | 38 J | 14 U | 150 | 230 | 16 U | 480 J | 8 UJ | 2.4 | 120 UJ |
| VCS-OU3-FS024 | R-1 | Small mouth bass tissue | 77.6 | 14 U | 14 U | 14 U | 14 U | 18 U | 16 U | 18 U | 8 U | 0.3 | 120 U |
| VCS-OU3-FS024-O | R-1 | Small mouth bass offal | 74.4 | 14 U | 14 U | 14 U | 14 U | 18 U | 16 U | 18 U | 8 U | 0.2 | 120 U |
| VCS-OU3-FS025 | R-1 | Forage fish | 74.6 | 14 U | 14 U | 14 U | 14 U | 18 U | 16 U | 18 U | 8 U | 4.7 | 120 U |
| VCS-OU3-FS026 | R-1 | Forage fish | 73.8 | 14 UJ | 14 UJ | 14 UJ | 14 UJ | 18 UJ | 16 UJ | 18 UJ | 7.9 UJ | 3.7 | 120 U |
| VCS-OU3-FS027 | R-1 | Forage fish | 73.1 | 14 U | 14 U | 14 U | 14 U | 18 U | 16 U | 18 U | 7.9 UJ | 3.8 | 120 U |

Notes:
Values reported for DDT, HBB and PBB compounds are wet-weight basis.
R-1 = Reference Area
J = Value is estimated
U = Value is below detection limit

# Figures




0 1,250 2,500 Feet

N

Figure 1
Floodplain Locations
Data Evaluation Report
*St. Louis, Michigan*

CH2MHILL

\\lakefront\Proj\Velsicol\GIS_Data\Velsicol\MXDs\OU3

**Legend**

0 150 300 Feet

Floodplain Sampling Location

Floodplain Location

Figure 2
Floodplains 0.5 Through 1.6
Data Evaluation Report
*St. Louis, Michigan*

CH2MHILL

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Legend

Floodplain Sampling Location

Floodplain Location

0 150 300 Feet

N

Figure 3
Floodplains 1.7 through Floodplain 2.1
Data Evaluation Report
*St. Louis, Michigan*

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N

0 250 500 Feet

Legend

Floodplain Sampling Location

Floodplain Location

Figure 4
Floodplains 1.25-1 through Floodplain 1.25-6
Data Evaluation Report
*St. Louis, Michigan*

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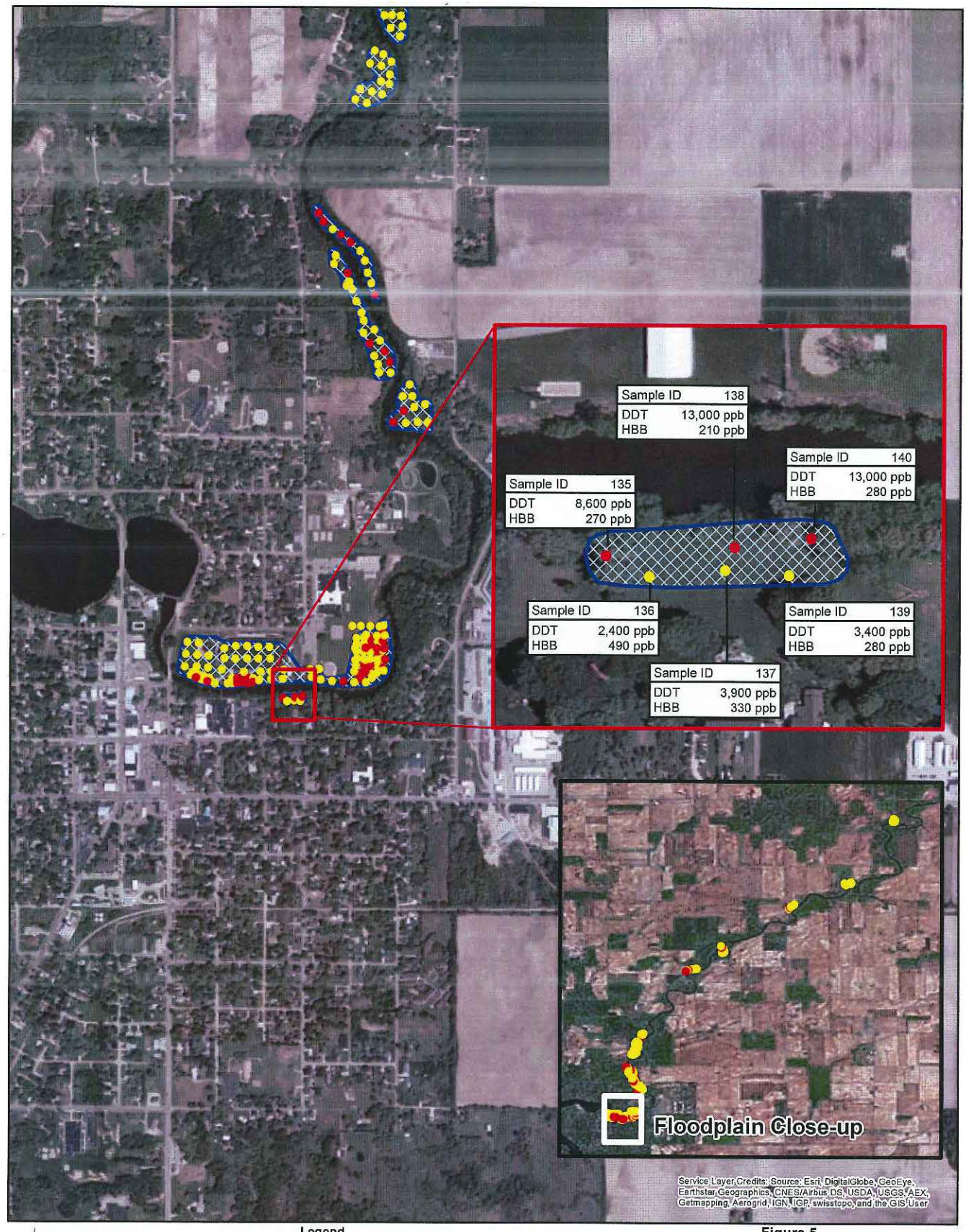


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

0 75 150 Feet

N

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb).
2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 5**
Floodplain 0.5 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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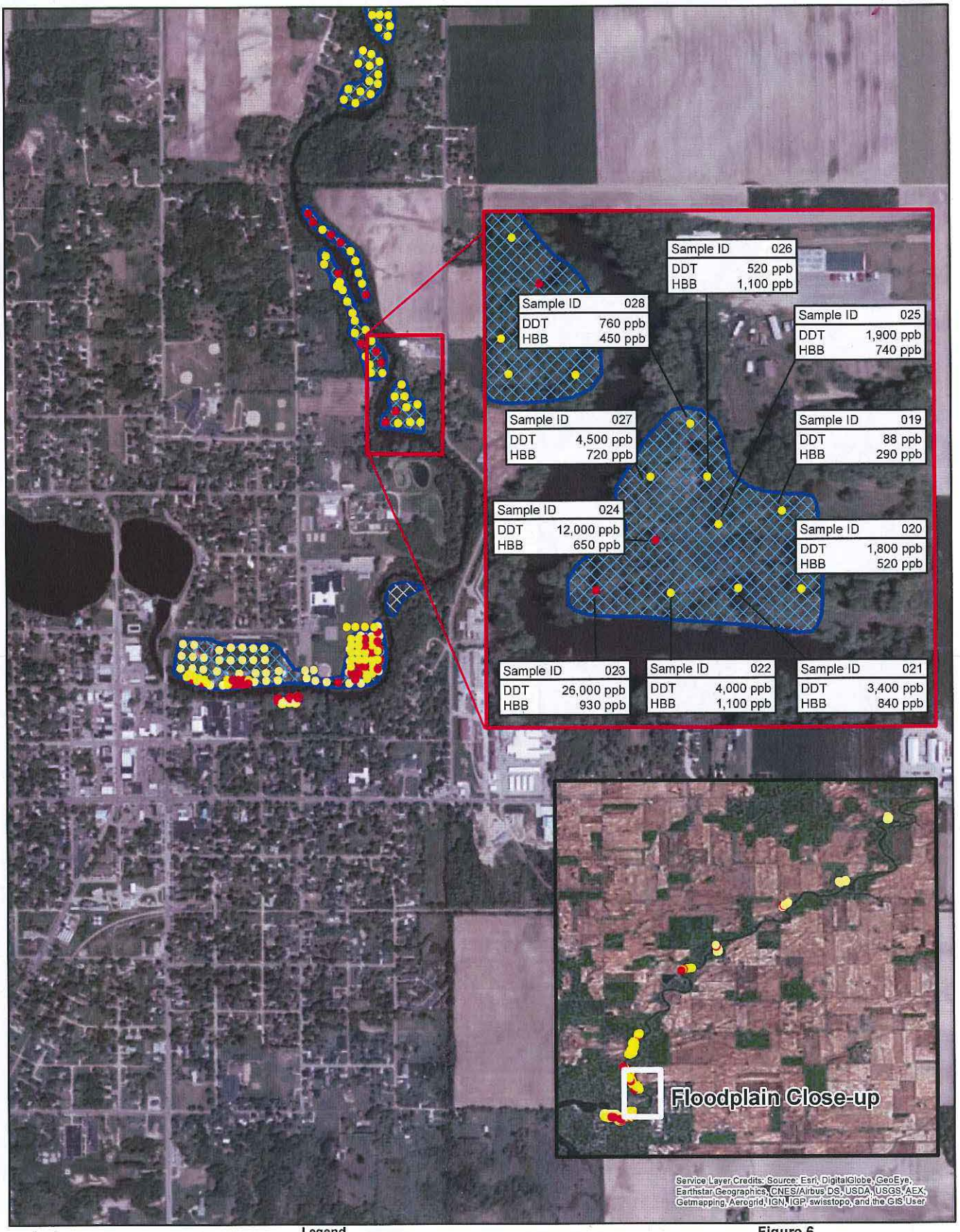


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

0 125 250 Feet

N

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb).
2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 6**
Floodplain 1.1 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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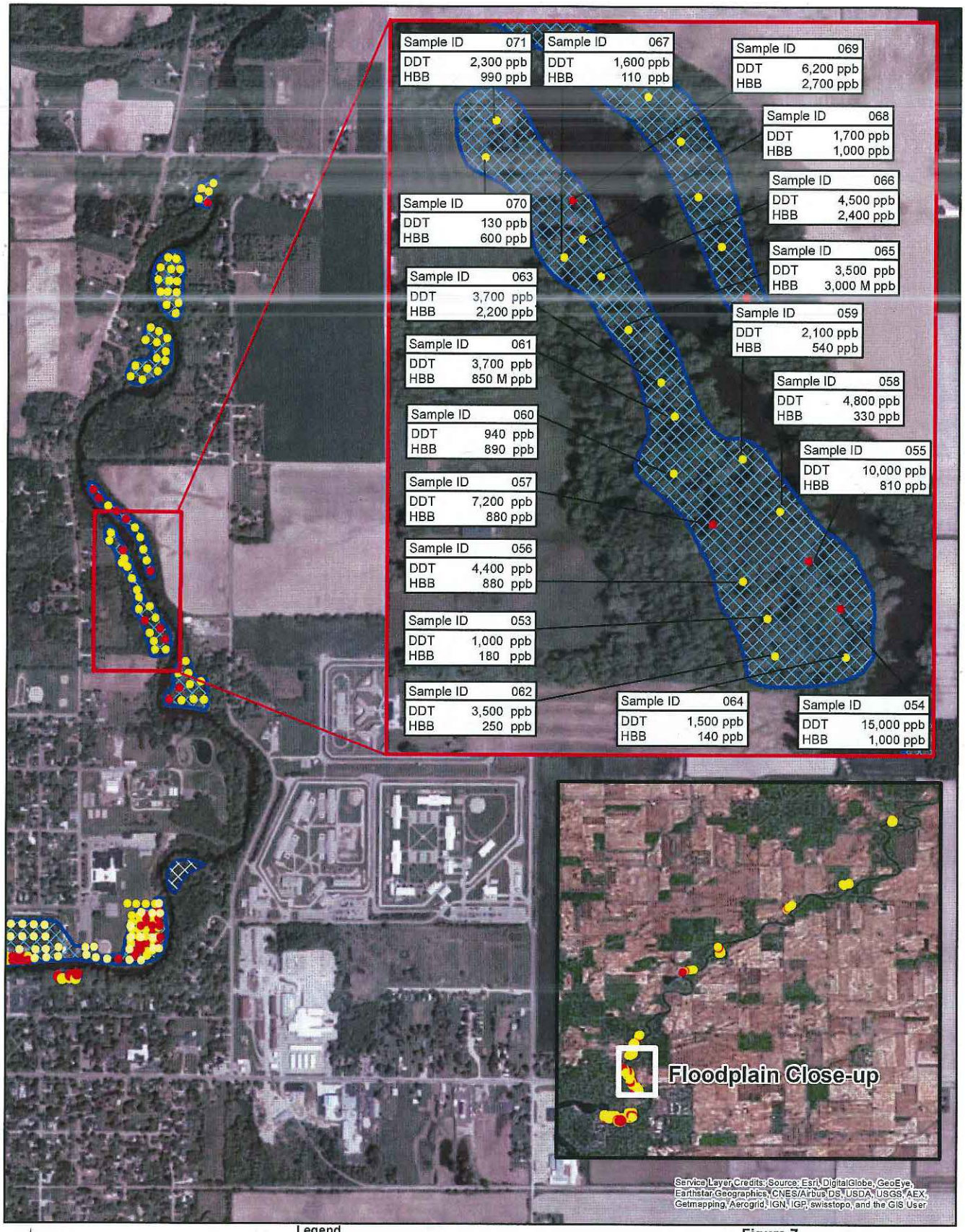


0 150 300 Feet

N

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 7**
Floodplain 1.2 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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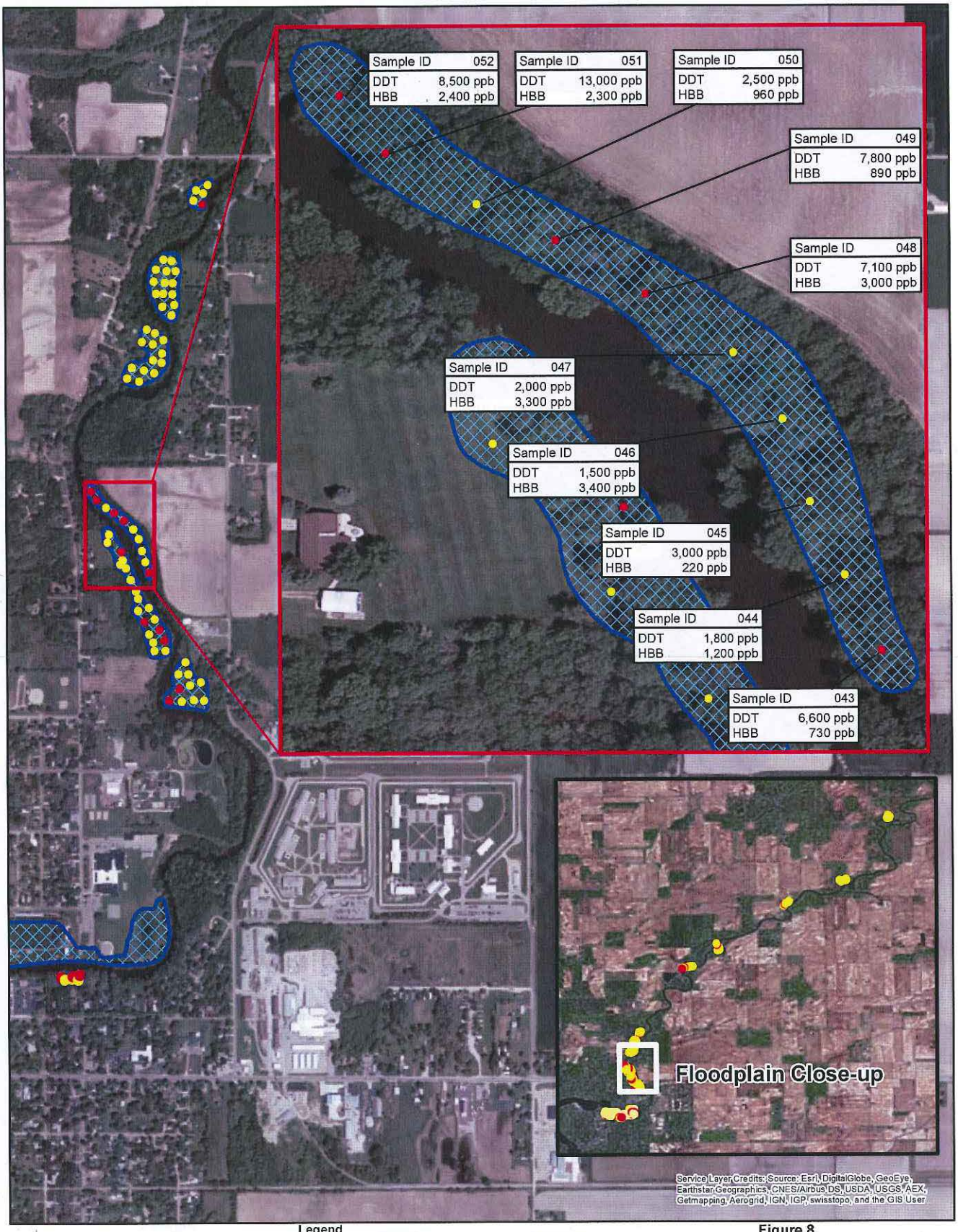


0 75 150 Feet

N

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb).
2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 8**
Floodplain 1.3 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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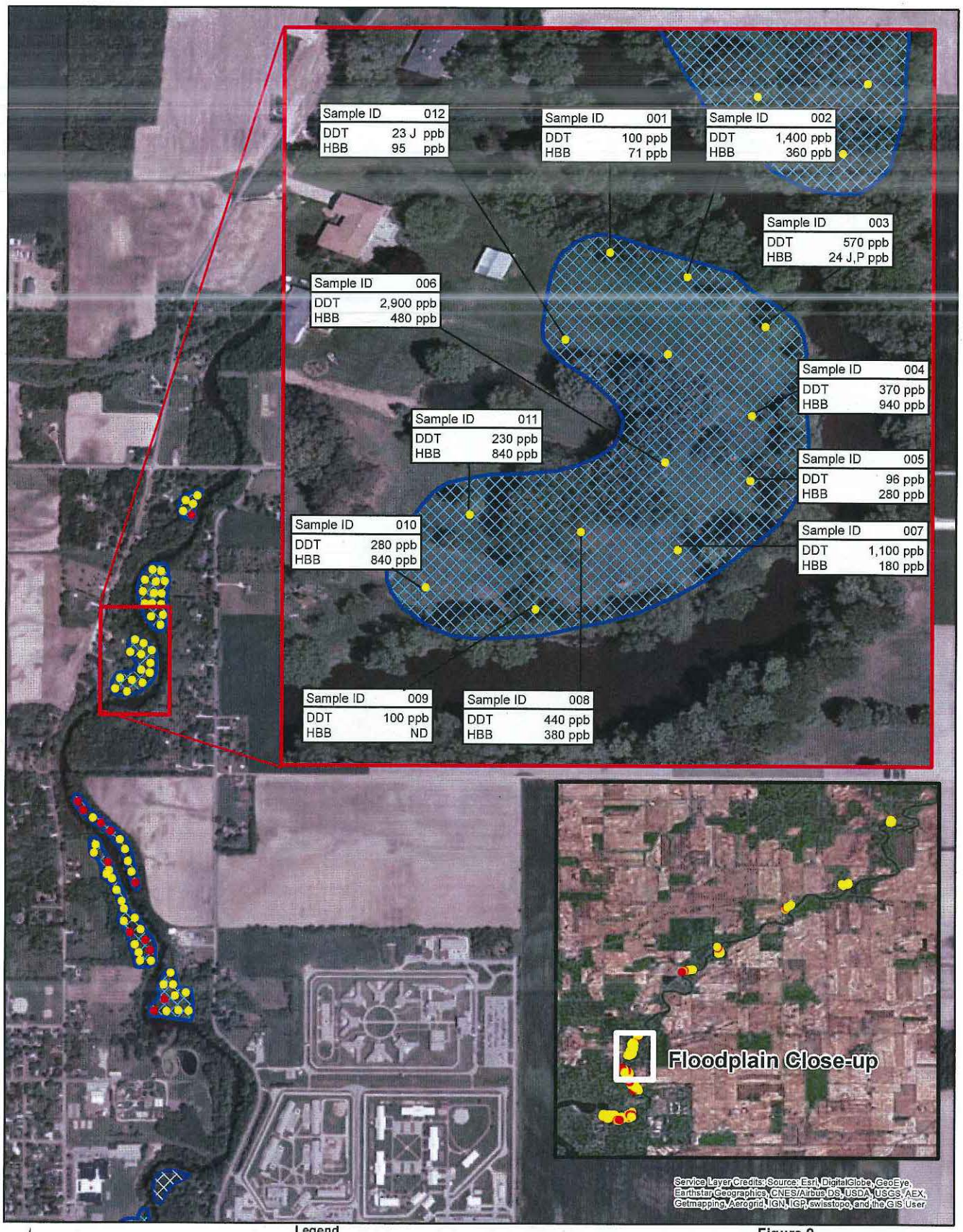


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

0 75 150 Feet

N

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 9**
Floodplain 1.4 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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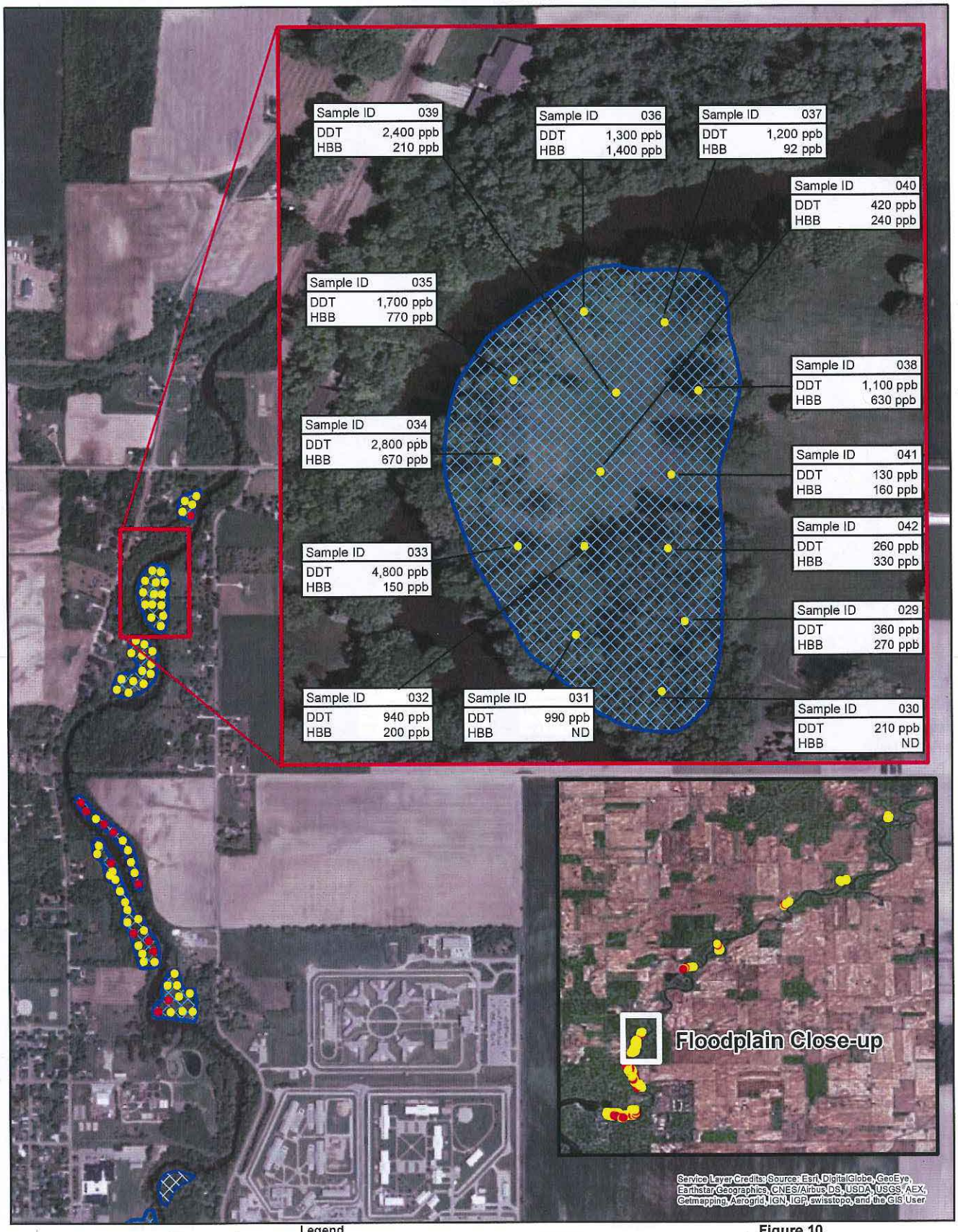


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

0 75 150 Feet

N

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 10**
Floodplain 1.5 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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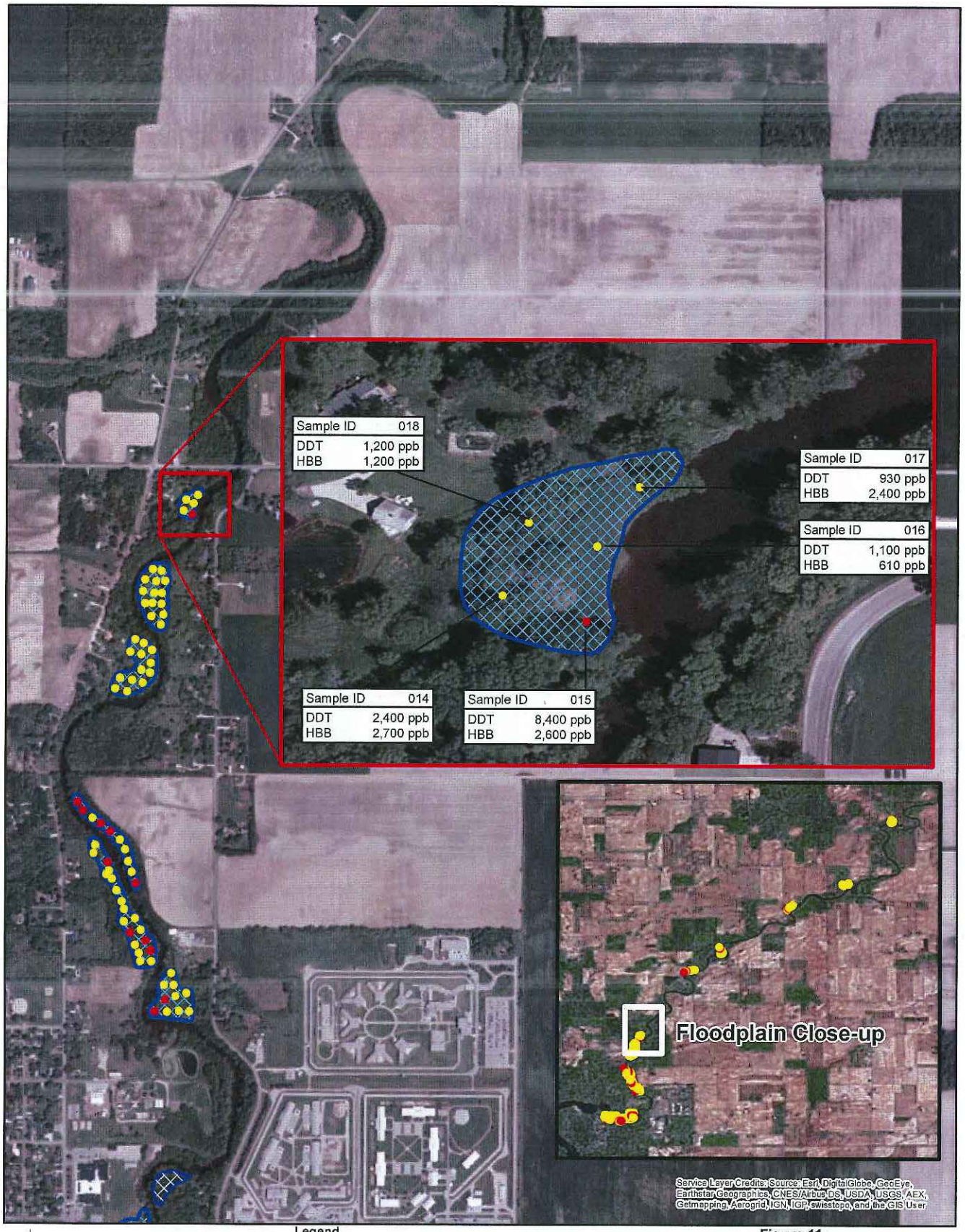


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

0 100 200 Feet

N

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 11**
Floodplain 1.6 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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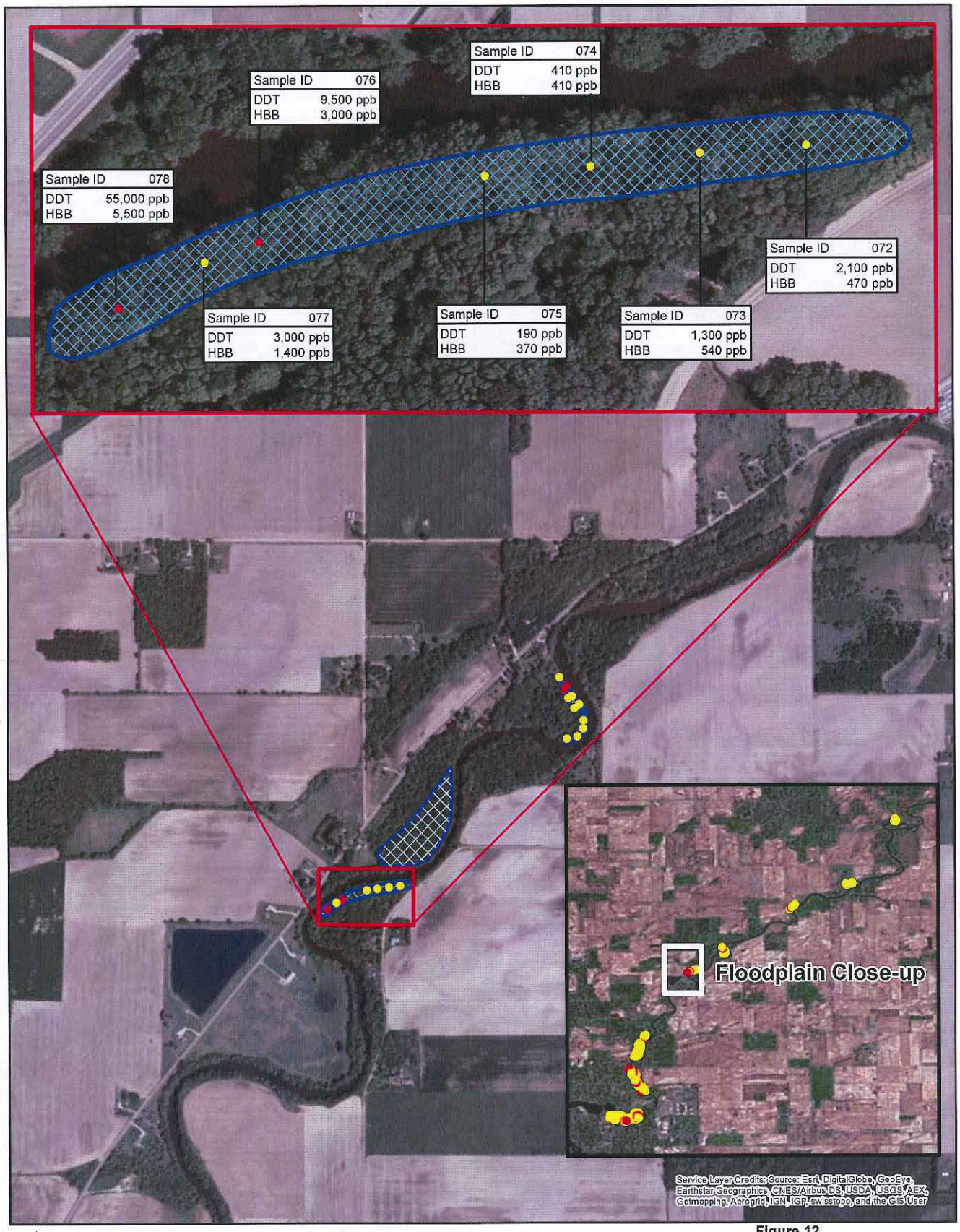


0 75 150 Feet

N

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 12**
Floodplain 1.7 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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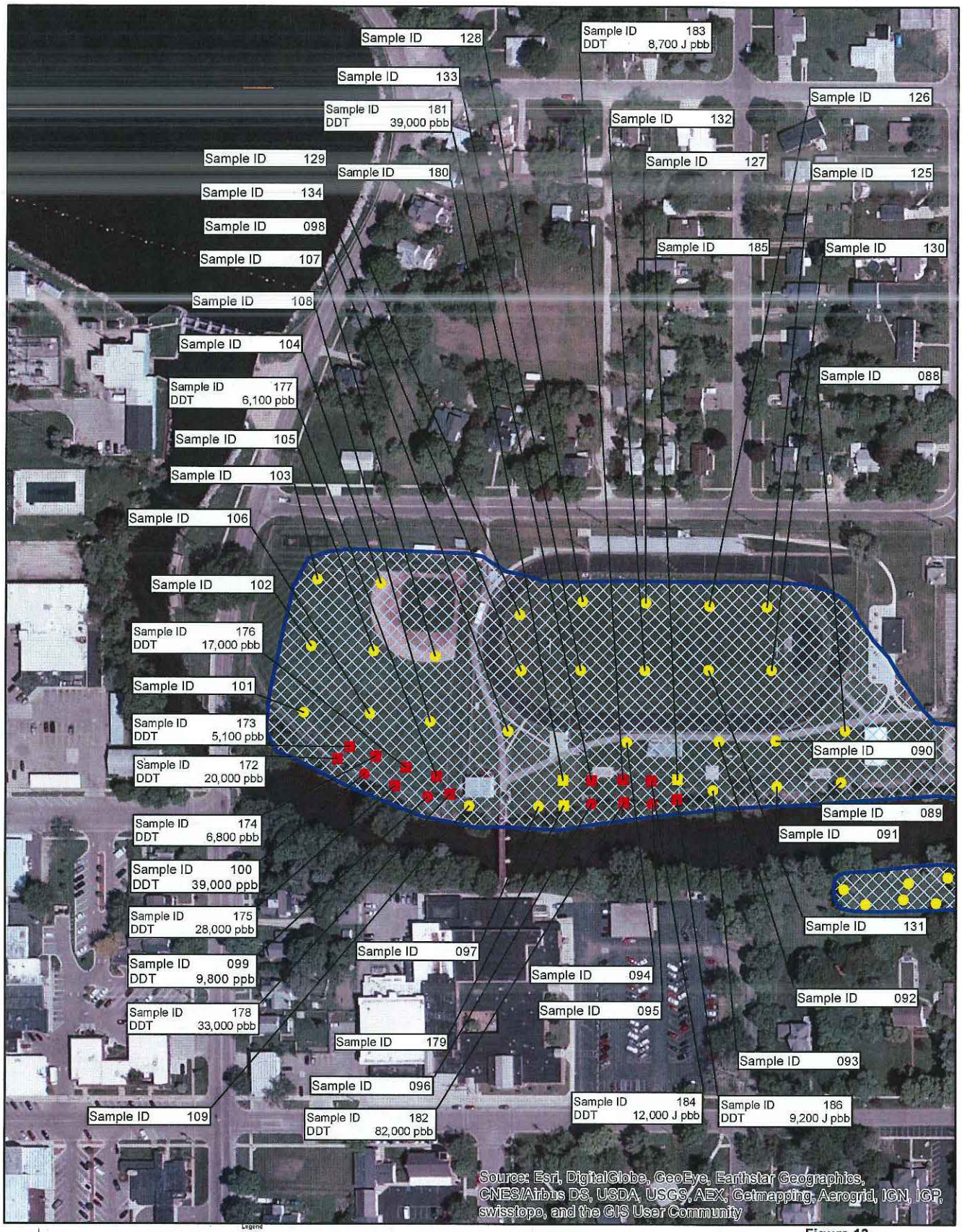


Legend

- 2015 Soil Sample with DDT Concentrations 5,000 ppb or greater
- 2014 Soil Sample with DDT Concentrations 5,000 ppb or greater
- Floodplains
- 2015 Soil Sample with DDT Concentrations less than 5,000 ppb
- 2014 Soil Sample with DDT Concentrations less than 5,000 ppb

0 50 100 Feet

N

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2. The greatest concentration of DDT and HBB is reported for each location

**Figure 13**
Athletic Field A
Data Evaluation Report
*St. Louis, Michigan*

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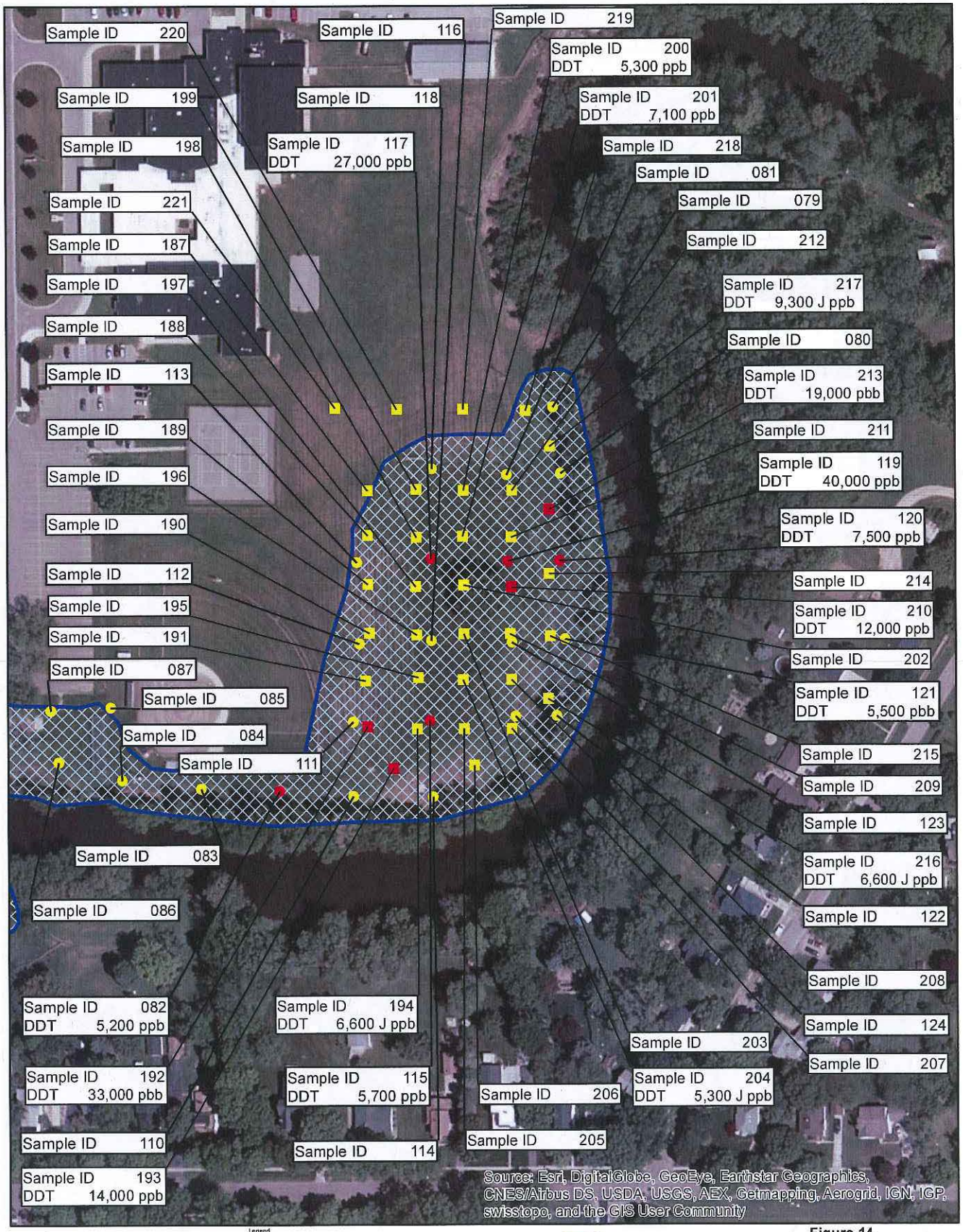


Legend

- 2015 Soil Sample with DDT Concentrations 5,000 ppb or greater
- 2015 Soil Sample with DDT Concentrations less than 5,000 ppb
- 2014 Soil Sample with DDT Concentrations 5,000 ppb or greater
- 2014 Soil Sample with DDT Concentrations less than 5,000 ppb
- Floodplains

N

0 50 100 Feet

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2. The greatest concentration of DDT and HBB is reported for each location

**Figure 14**
Athletic Field B
Data Evaluation Report
*St. Louis, Michigan*

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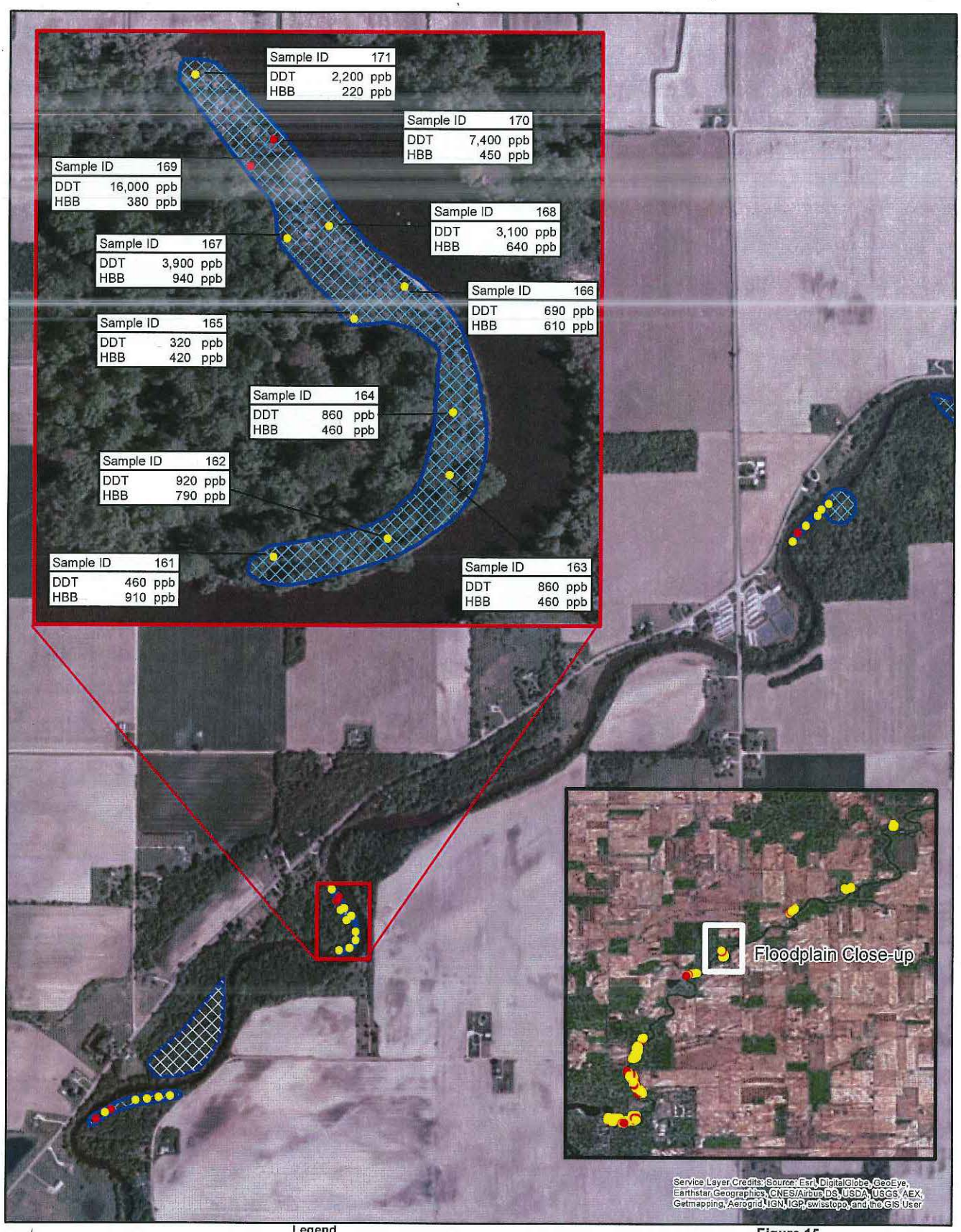


N

0 75 150 Feet

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Floodplain

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 15**
Floodplain 2.1 Sample Results
*Data Evaluation*
*St. Louis, Michigan*

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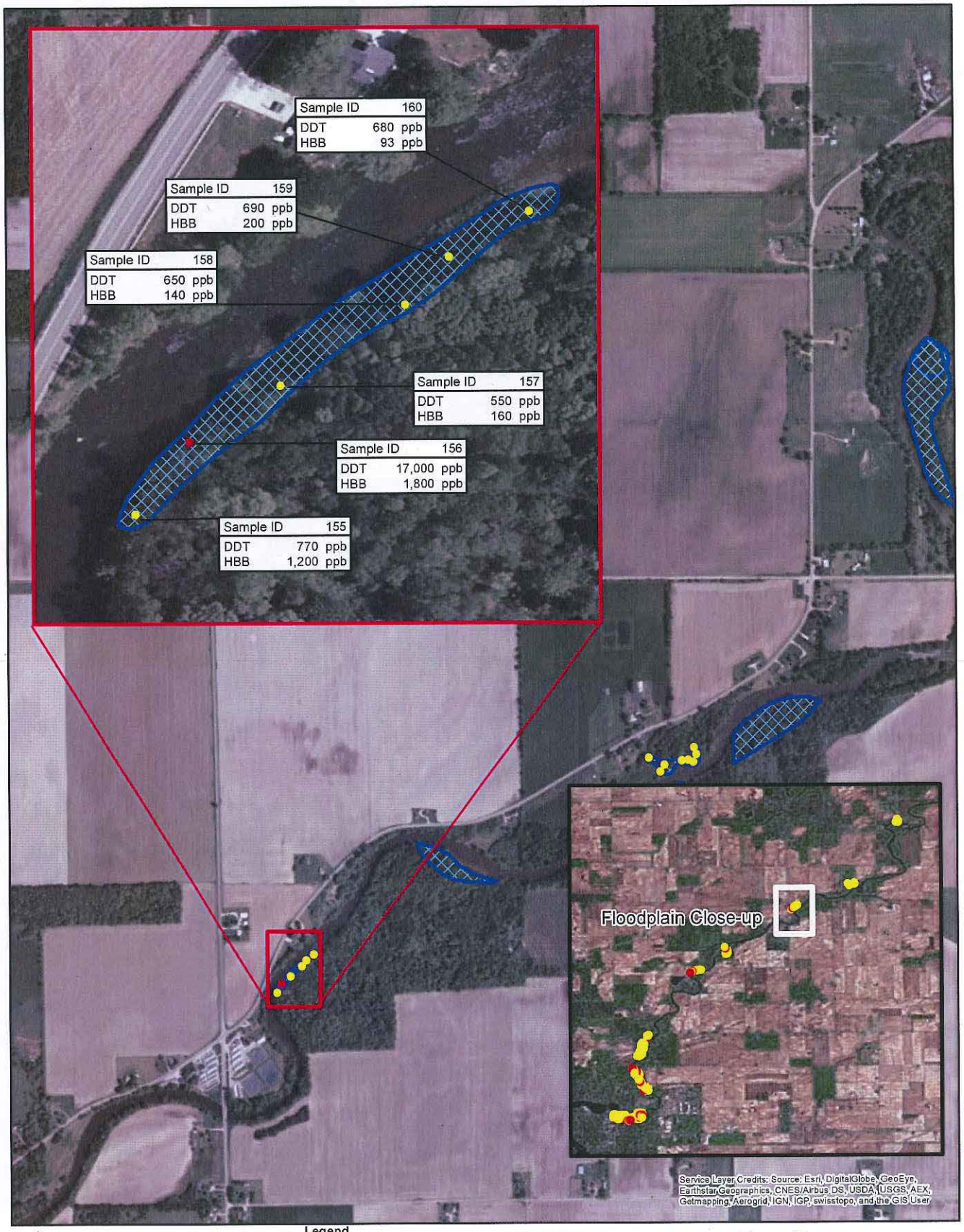


N

0 87.5 175 Feet

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 16**
Floodplain 1.25-1 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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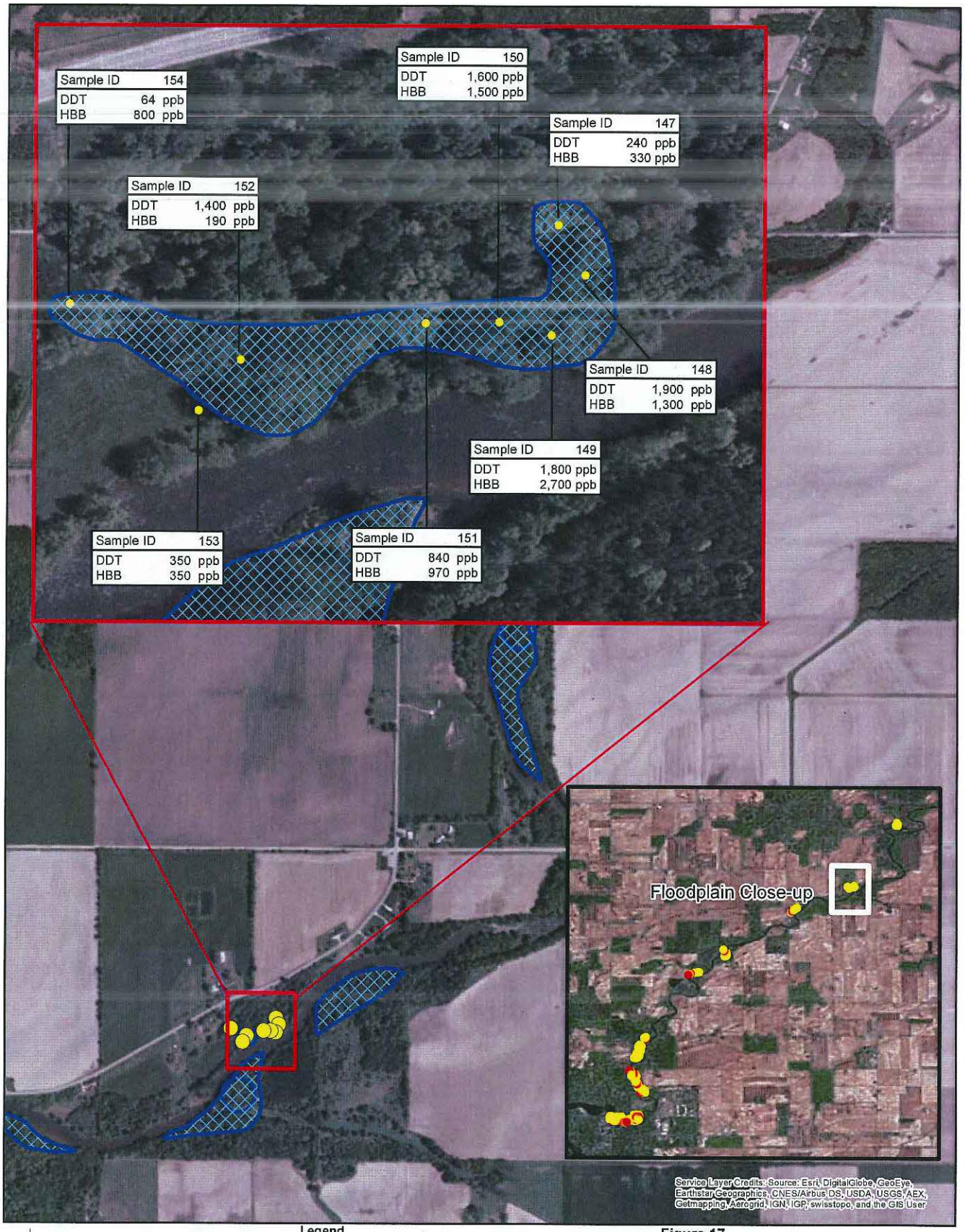


0 87.5 175 Feet

N

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 17**
Floodplain 1.25-4 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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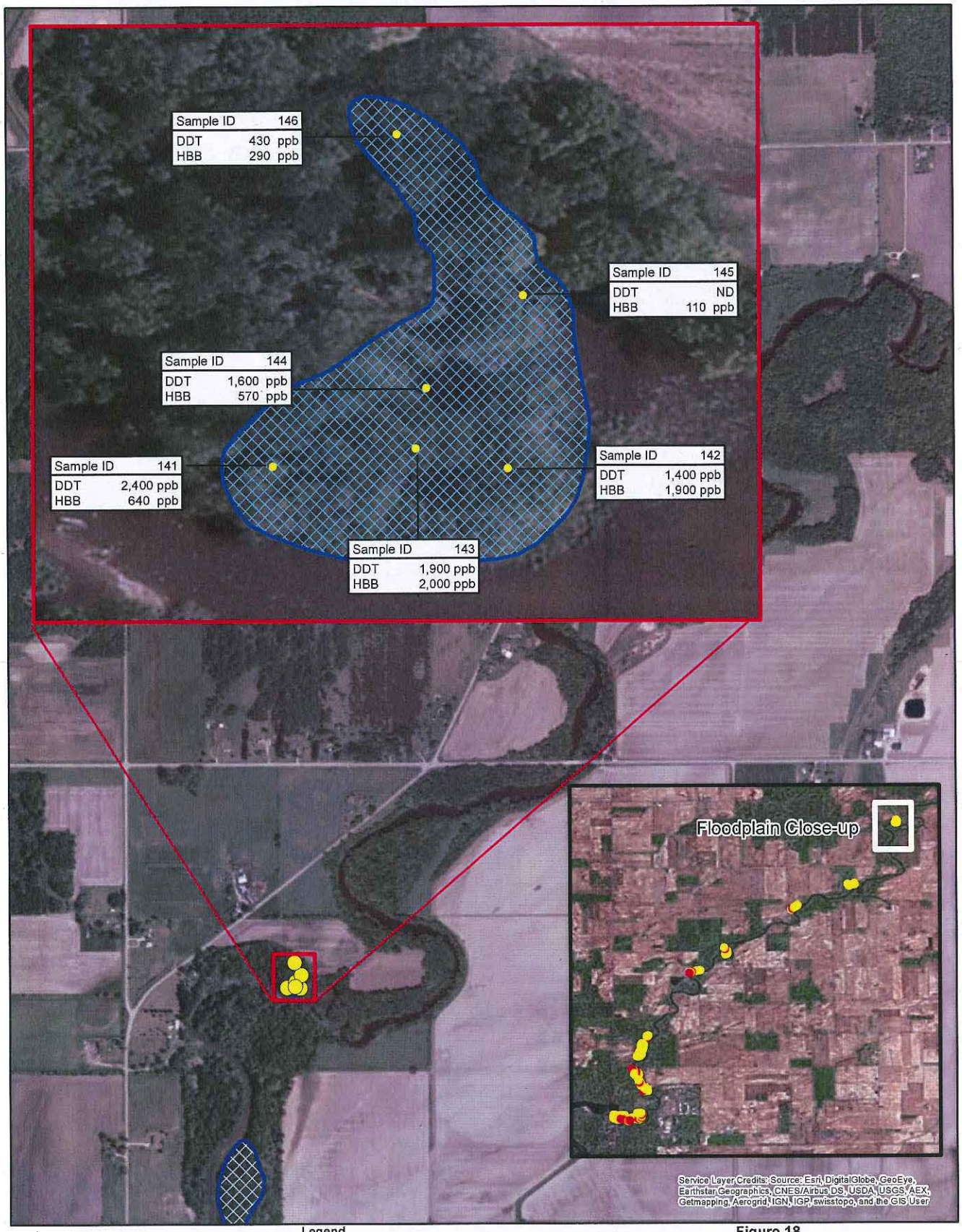


0 50 100 Feet

N

**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Corrected Floodplains

Note: 1.All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). 2.The greatest concentration of DDT and HBB is reported for each location.

**Figure 18**
Floodplain 1.25-6 Sample Results
*Data Evaluation Report*
*St. Louis, Michigan*

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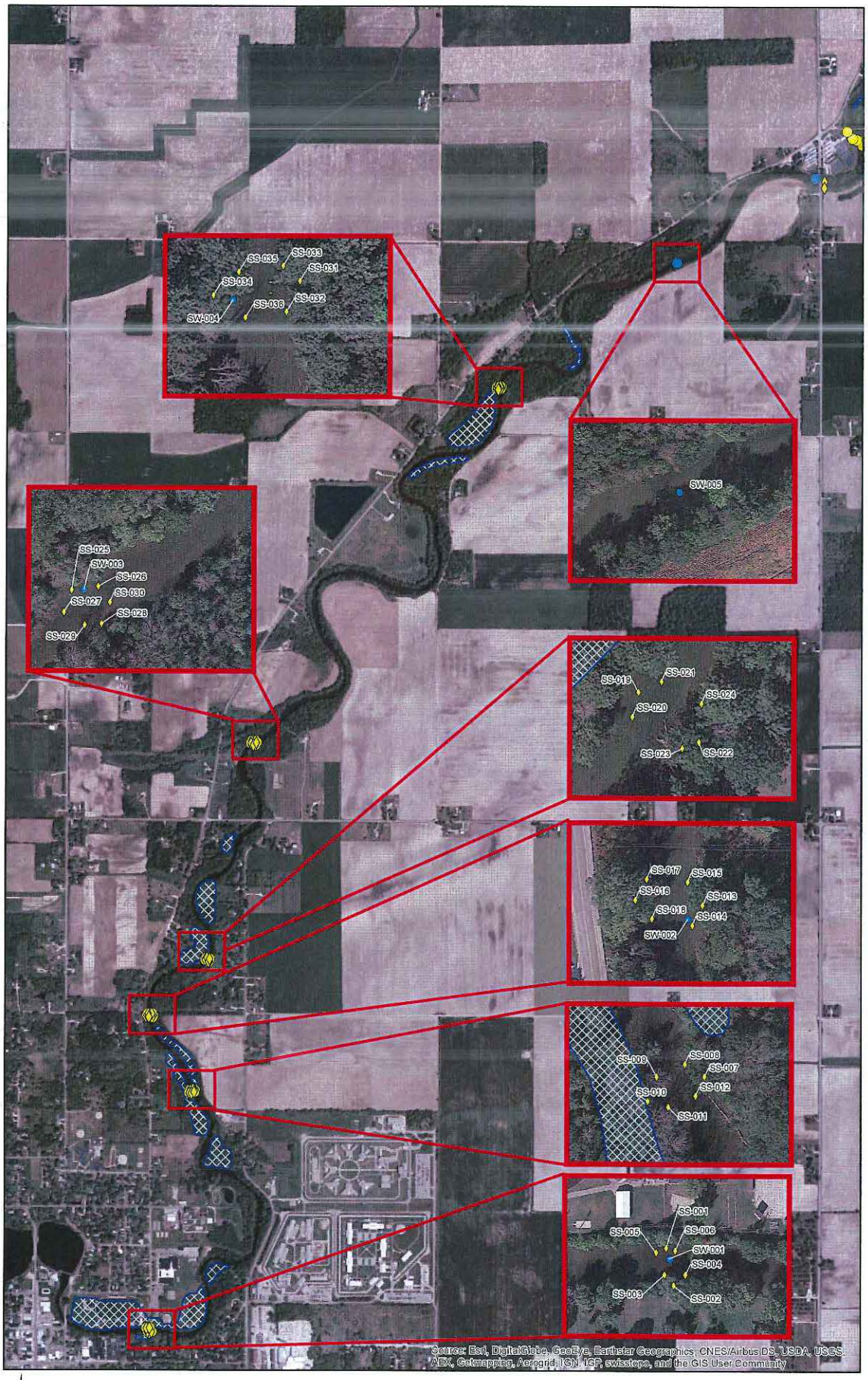



N

0 625 1,250 Feet

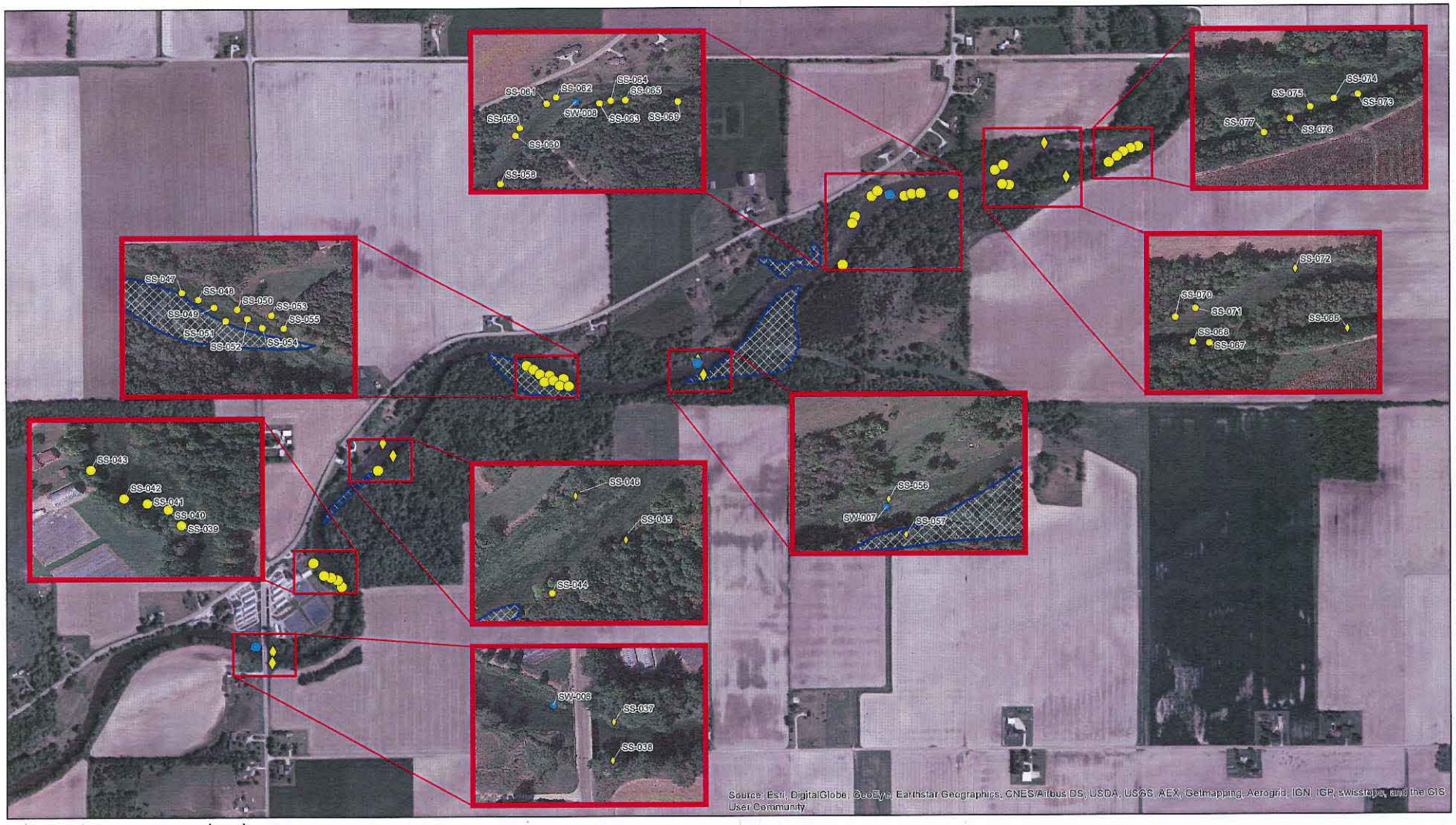
**Legend**

- Surface Water Samples
- Sediment Transect Samples
- Corrected Floodplains

Figure 19
DS-1 Sediment Transect and Surface Water Sample Locations
Data Evaluation Report
*St. Louis, Michigan*

CH2MHILL

\\lakehurst\Proj\Velsicol\GIS_Data\Velsicol\MXDs\OU5




**Legend**

- Surface Water Samples
- Sediment Samples
- Sediment Transect Square
- Corrected Floodplains

0 300 600 Feet

N

Figure 20
DS-1.25A Sediment, Sediment Transect, and Surface Water Sample Locations
Data Evaluation Report
*St. Louis, Michigan*

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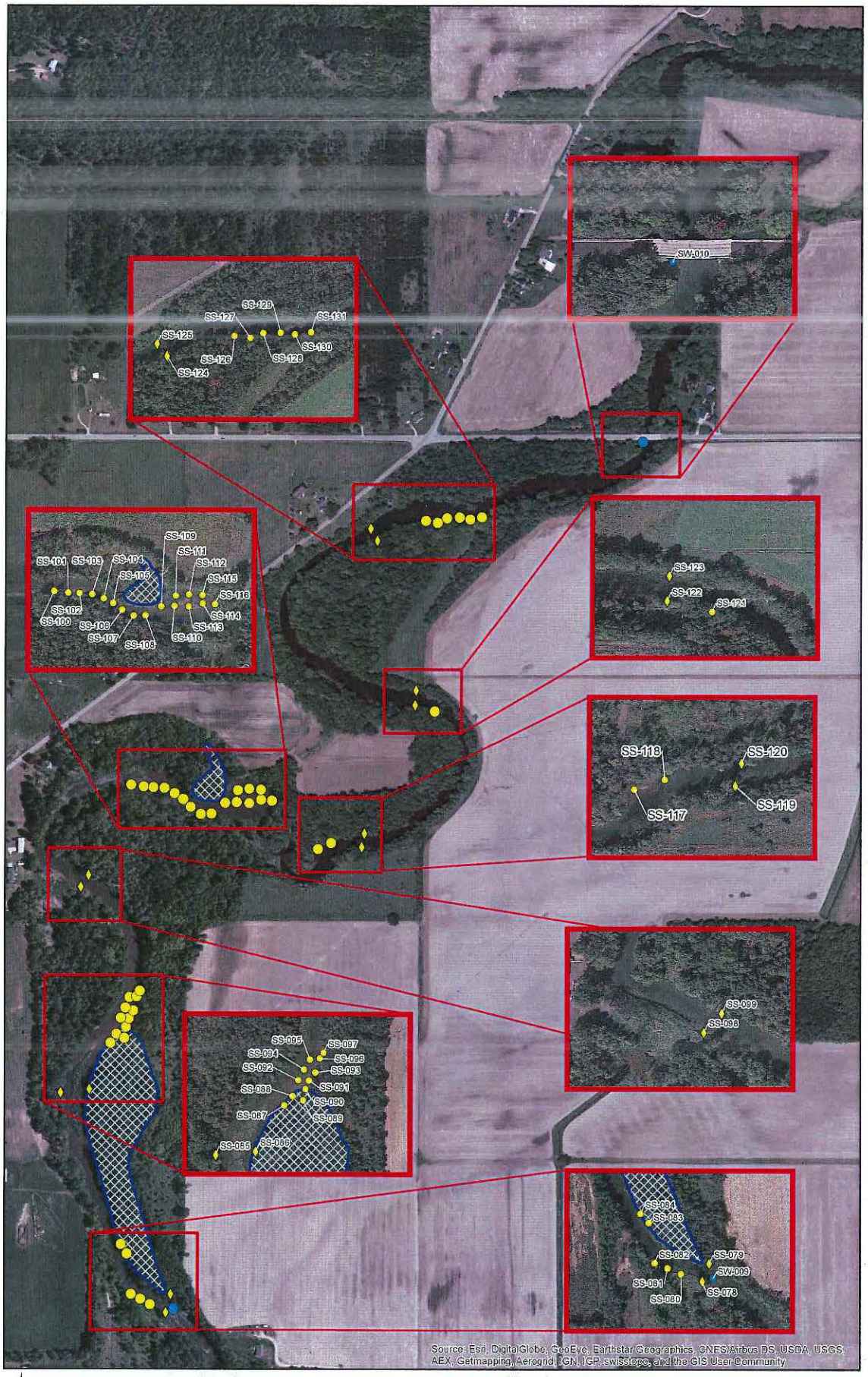
Wakefield/Proj/Velsicol/GIS_Data/Velsicol/MXDs/OU3




Legend

- Sediment Samples
- Sediment Transect Samples
- Surface Water Samples
- Corrected Floodplains

0 250 500 Feet

N

Figure 21
DS-1.25-B Sediment, Sediment Transect, and Surface Water Sample Locations
Data Evaluation Report
*St. Louis, Michigan*

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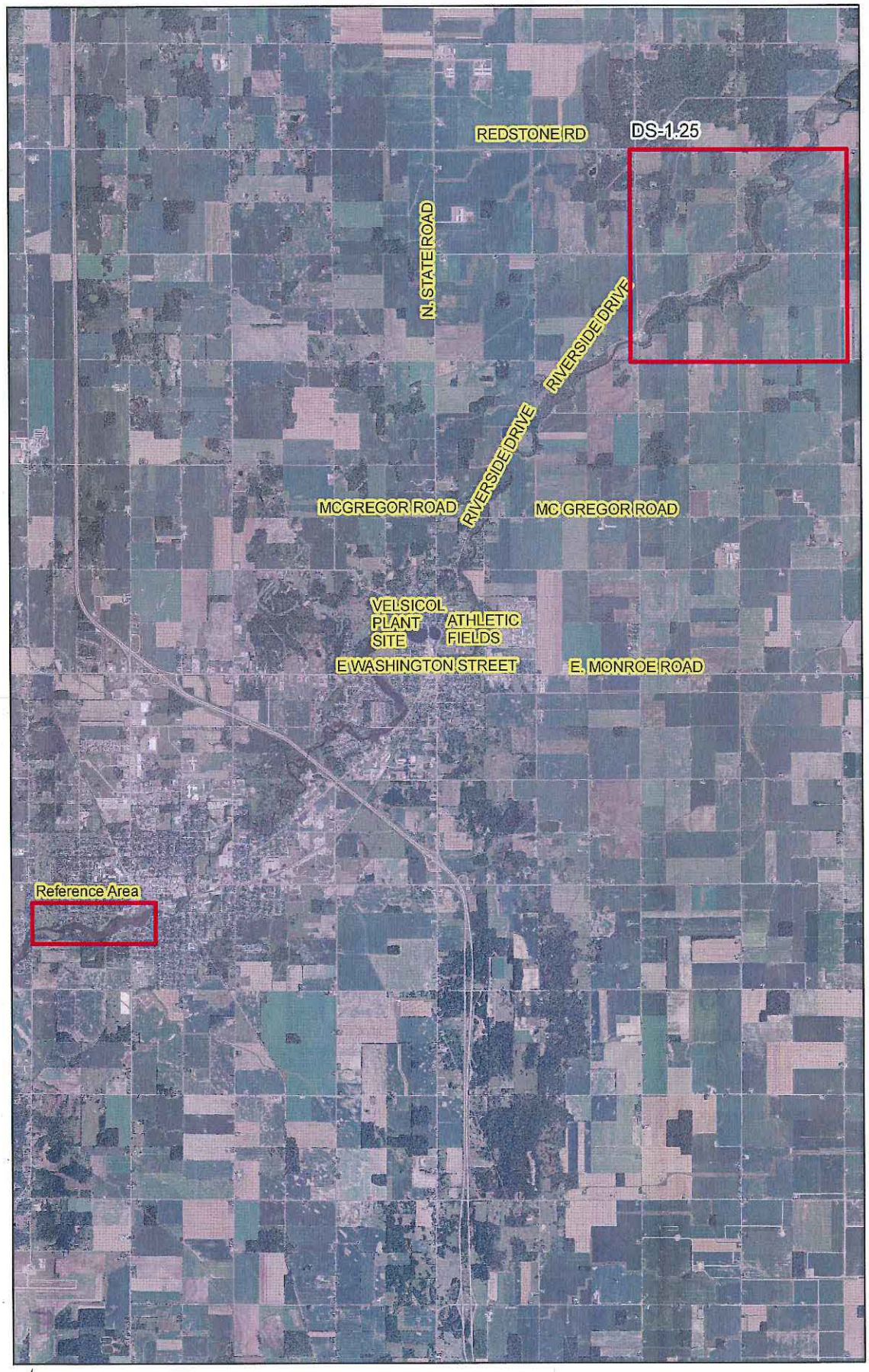
Waterfront/Prop/Velsicol/GIS_Data/Velsicol/MXDs/OU3




0 2,500 5,000 Feet

N

Figure 22
Fish Sampling Areas
Data Evaluation Report
*St. Louis, Michigan*

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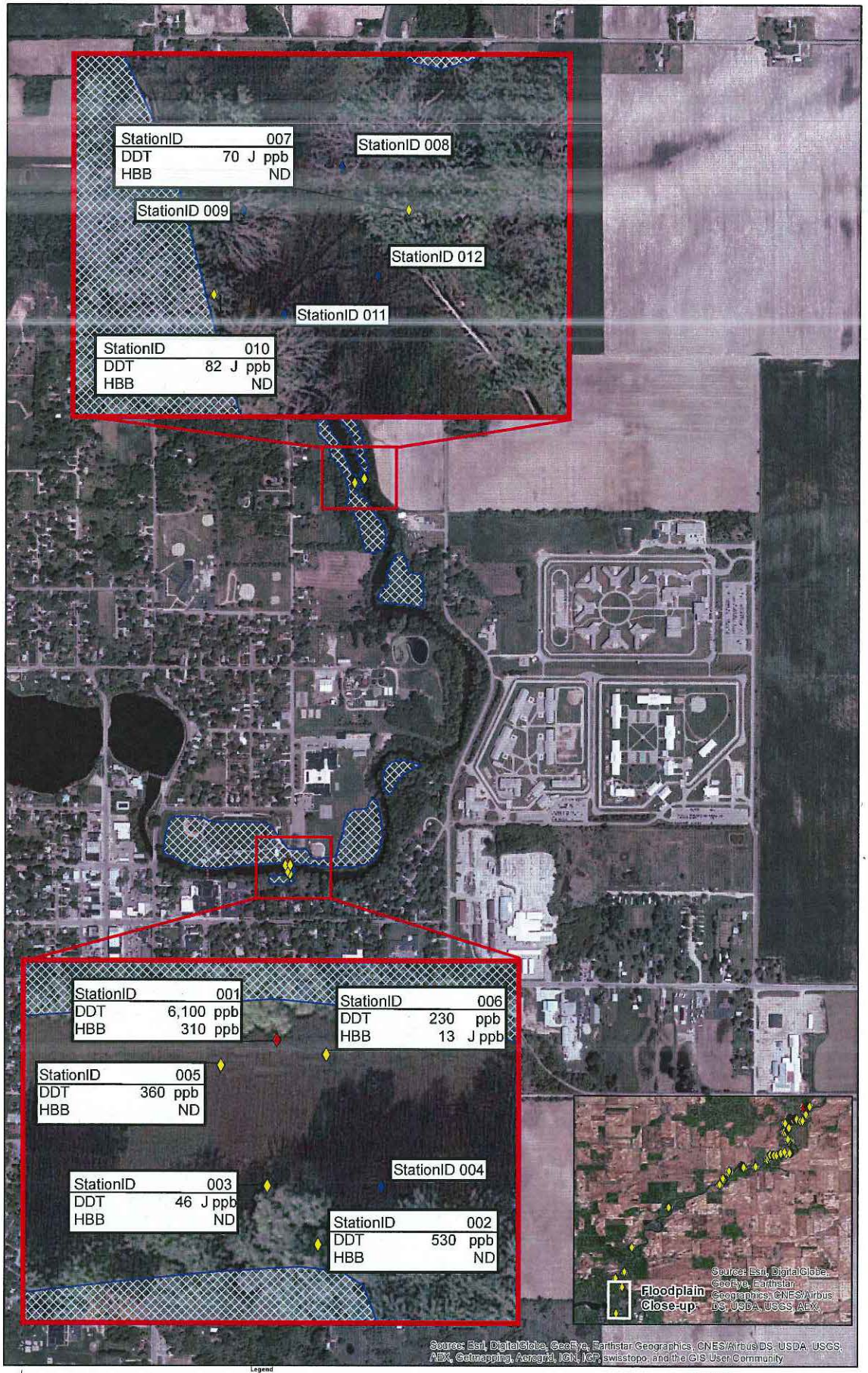


N

0 625 1,250 Feet

Legend

- Sediment Transect Sample DDT Concentrations 5,000 ppb or greater
- Sediment Transect Sample DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Corrected_Floodplains

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) concentrations are reported in parts per billion ( ppb). ND is Not Detected. 2. The greatest concentration of DDT and HBB is reported for each location

**Figure 23**
DS-1 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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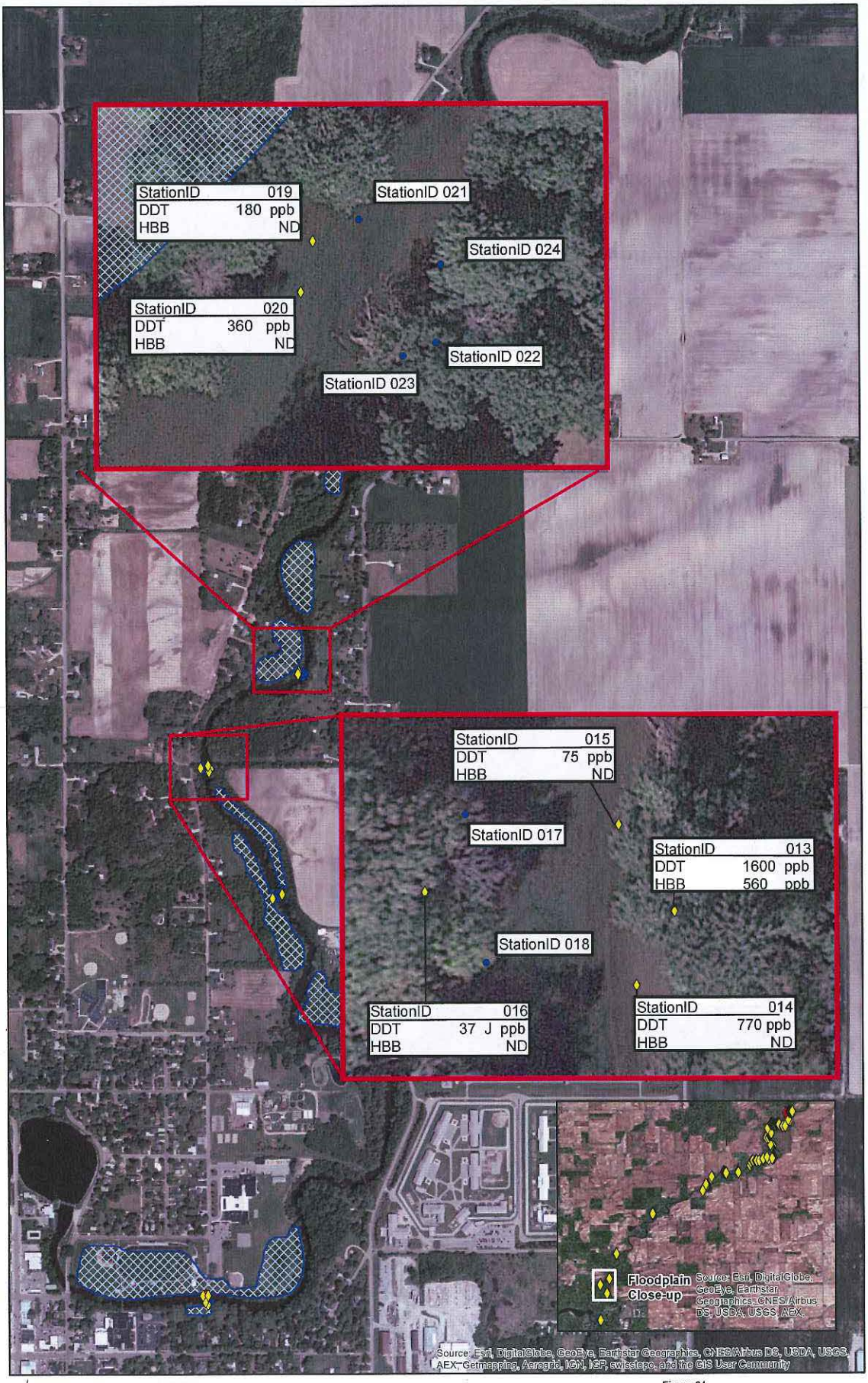


N

0 625 1,250 Feet

Legend

Sediment Transect Sample DDT Concentrations 5,000 ppb or greater

Sediment Transect Sample DDT Concentrations less than 5,000 ppb

Not sampled due to refusal or insufficient sample volume

Corrected Floodplains

Note:1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) concentrations are reported in parts per billion ( ppb). ND is Not Detected. 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 24**
DS-1 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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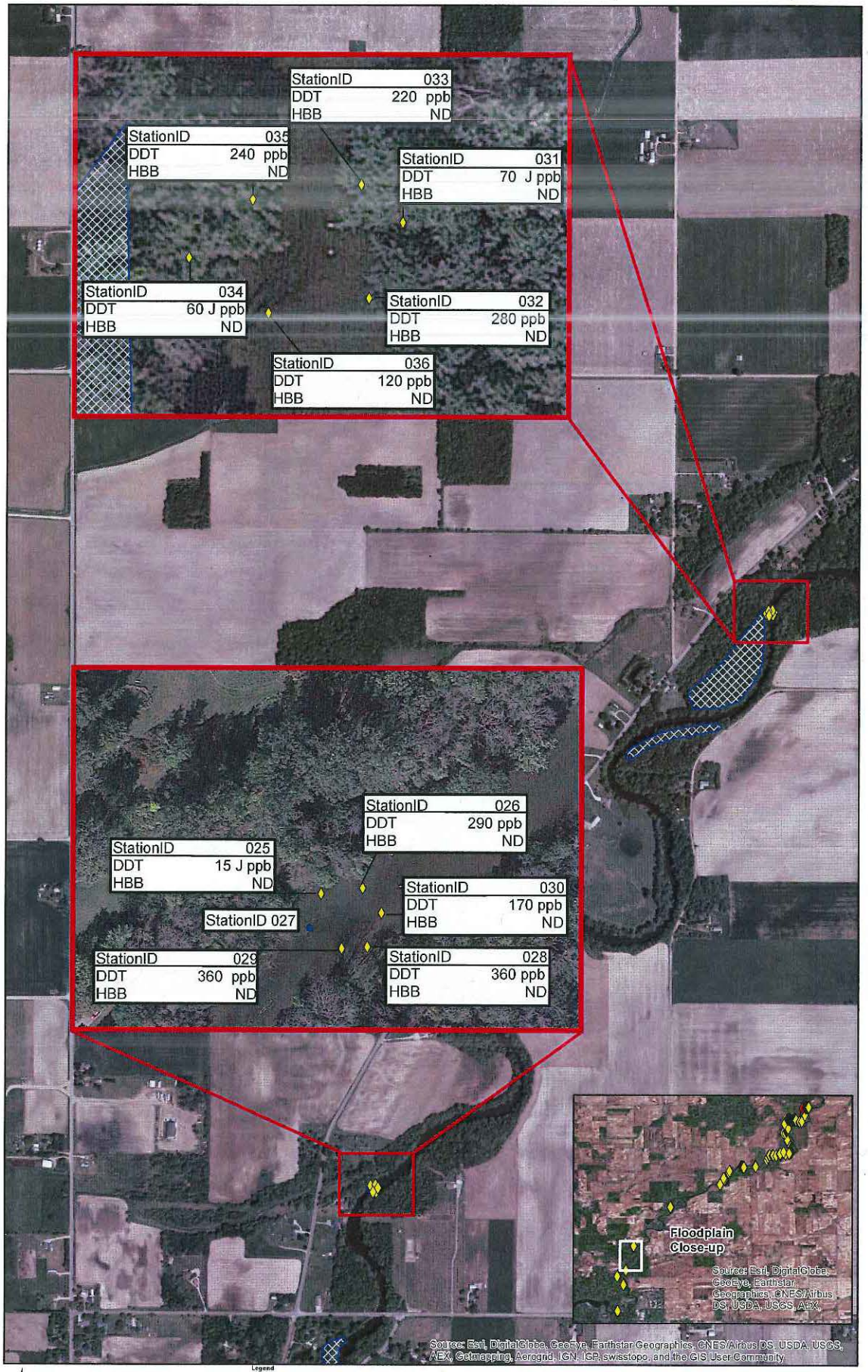


N

0 625 1,250 Feet

**Legend**

- Sediment Transect Sample DDT Concentrations 5,000 ppb or greater
- Sediment Transect Sample DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Corrected Floodplains

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) 2. The greatest concentration of DDT and concentrations are reported in parts per billion ( ppb). ND is Not Detected. HBB is reported for each location.

**Figure 25**
DS-1 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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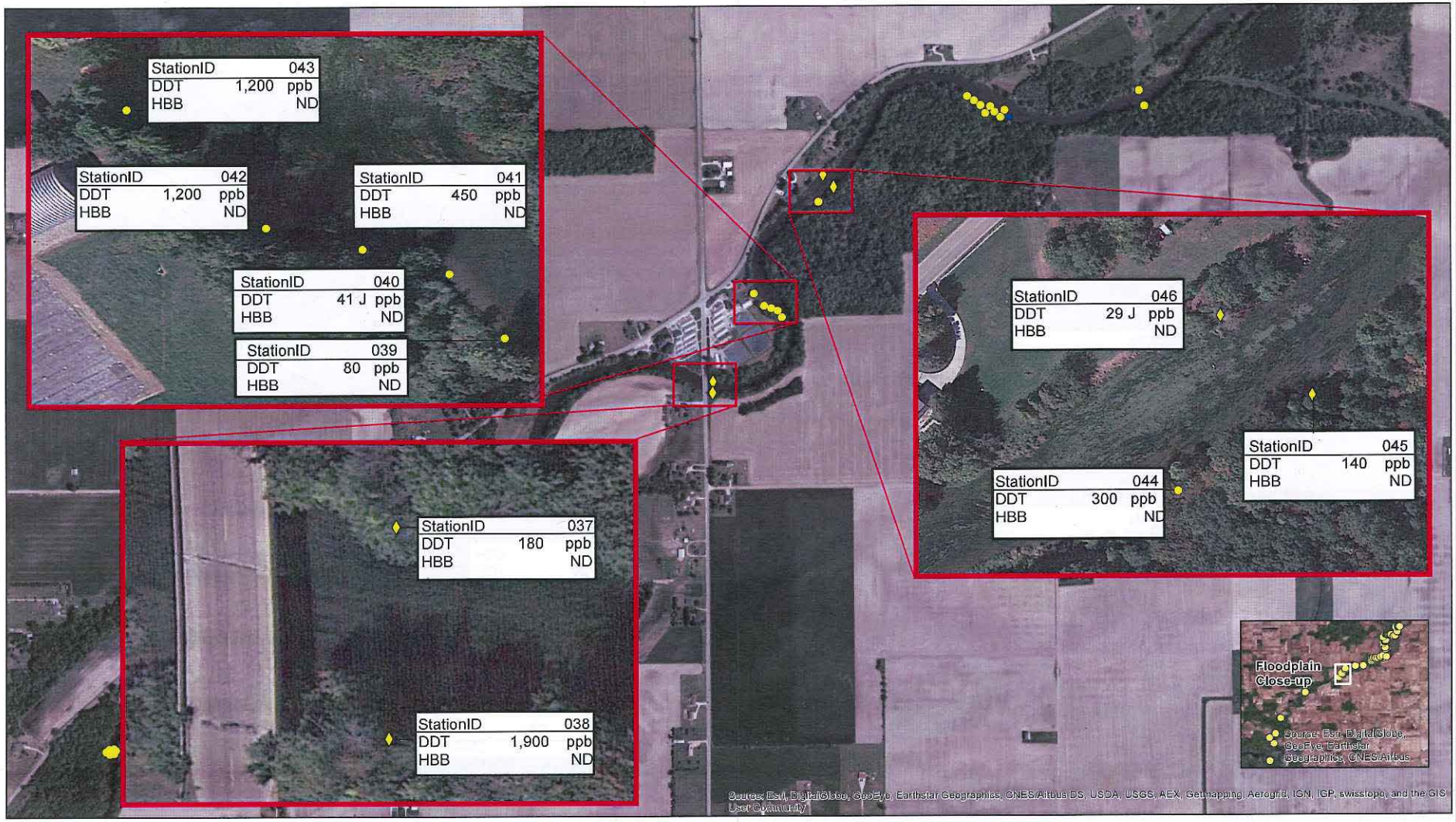


N

0 300 600 Feet

**Legend**

- Sediment samples with DDT Concentrations 5,000 ppb or greater
- Sediment samples with DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb

Note:1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) 2. The greatest concentration of DDT and concentrations are reported in parts per billion ( ppb). ND is Not Detected. HBB is reported for each location.

**Figure 26**
DS-1.25A Sediment Sample Results - 2013
*Date Evaluation Report*
*St. Louis, Michigan*

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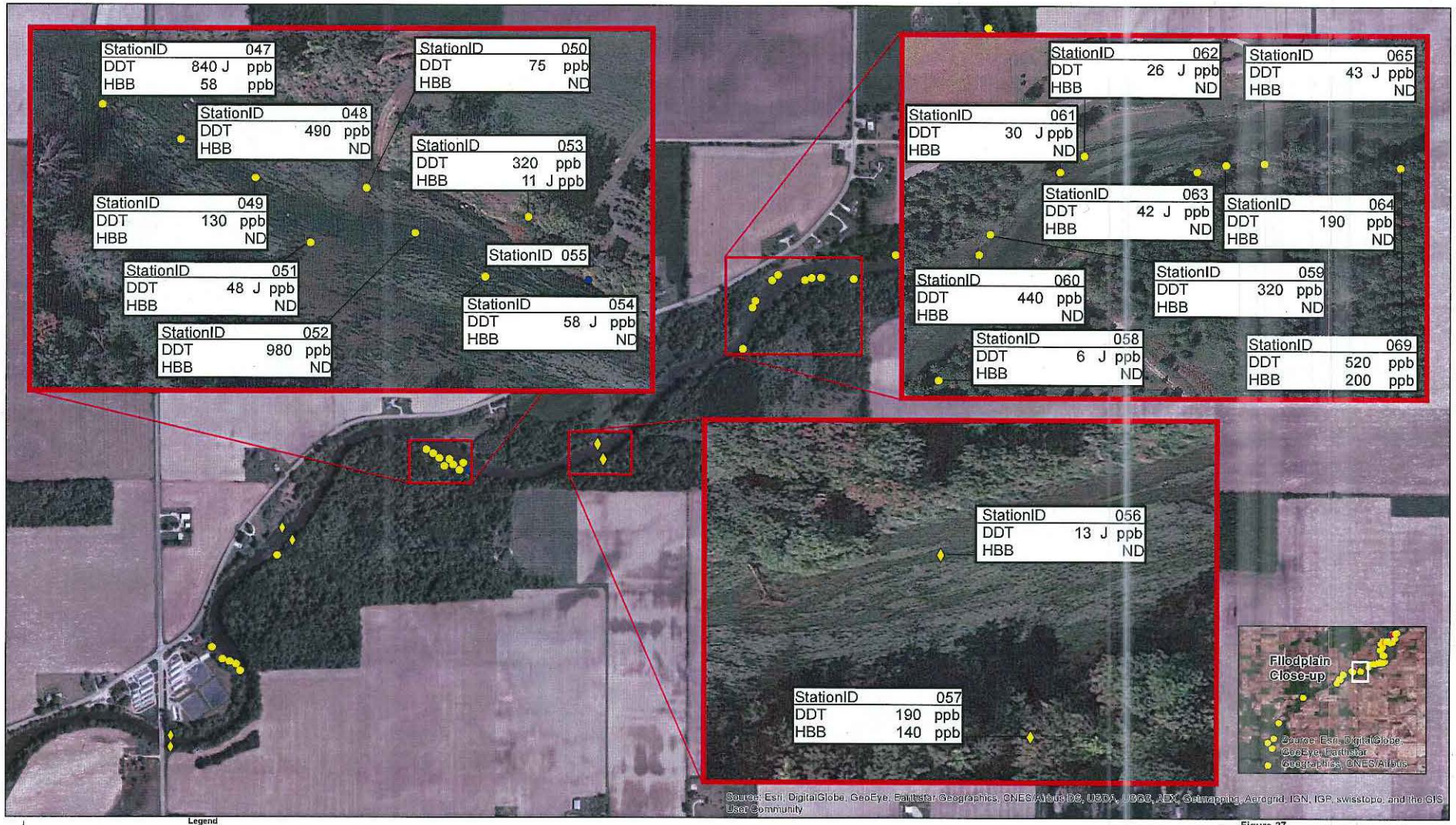


Legend

- Sediment samples with DDT Concentrations 5,000 ppb or greater
- Sediment samples with DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb

N

0 300 600 Feet

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) 2. The greatest concentration of DDT and concentrations are reported in parts per billion (ppb). ND is Not Detected. HBB is reported for each location.

Figure 27
DS-1.25 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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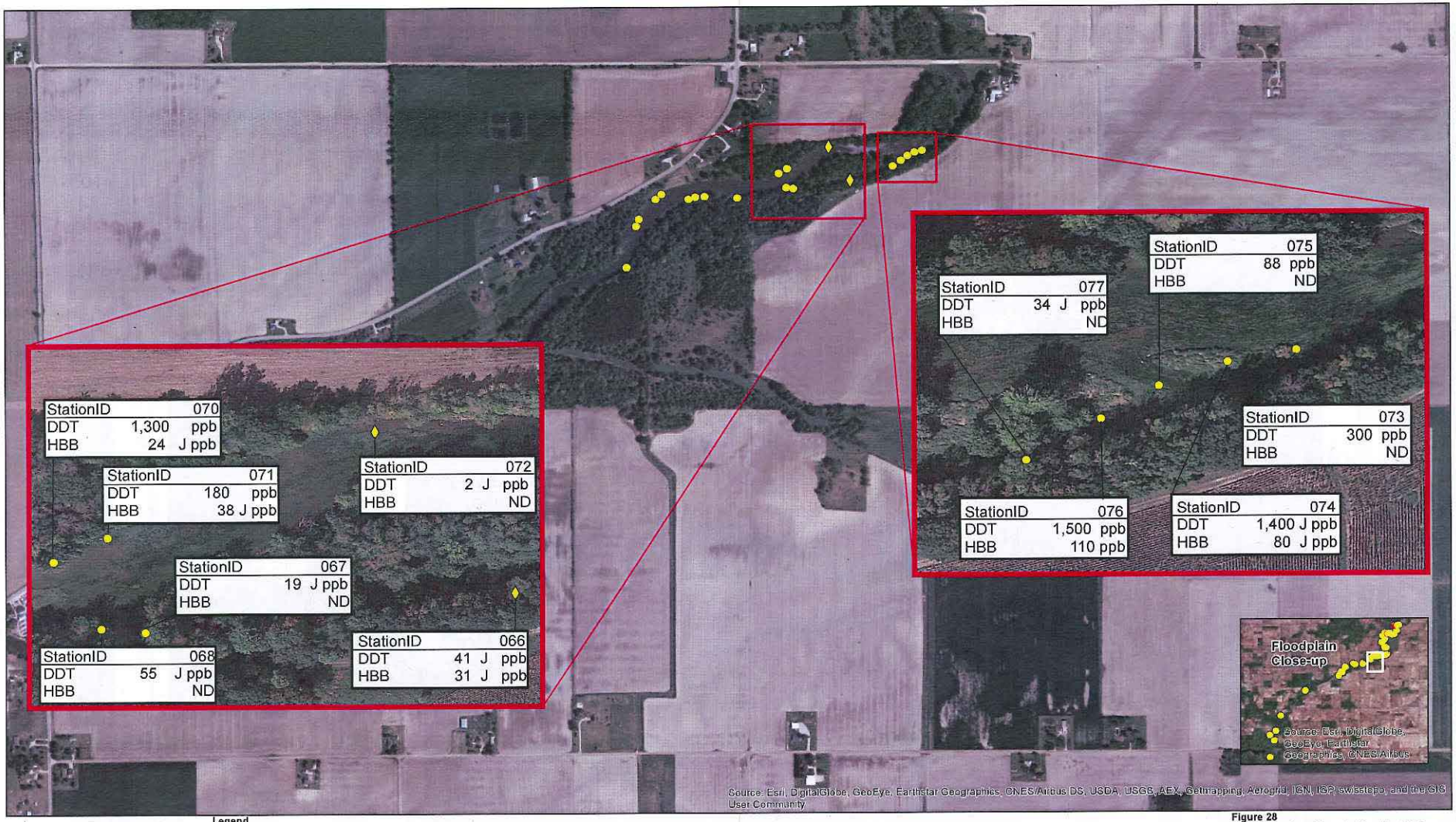


**Legend**

- DDT Concentrations 5,000 ppb or greater
- DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Sediment Transect Sample

N

0 300 600 Feet

Note:1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) 2. The greatest concentration of DDT and concentrations are reported in parts per billion (ppb). ND is Not Detected. HBB is reported for each location.

**Figure 28**
**DS-1.25 Sediment Sample Results - 2013**
*Data Evaluation Report*
*St. Louis, Michigan*

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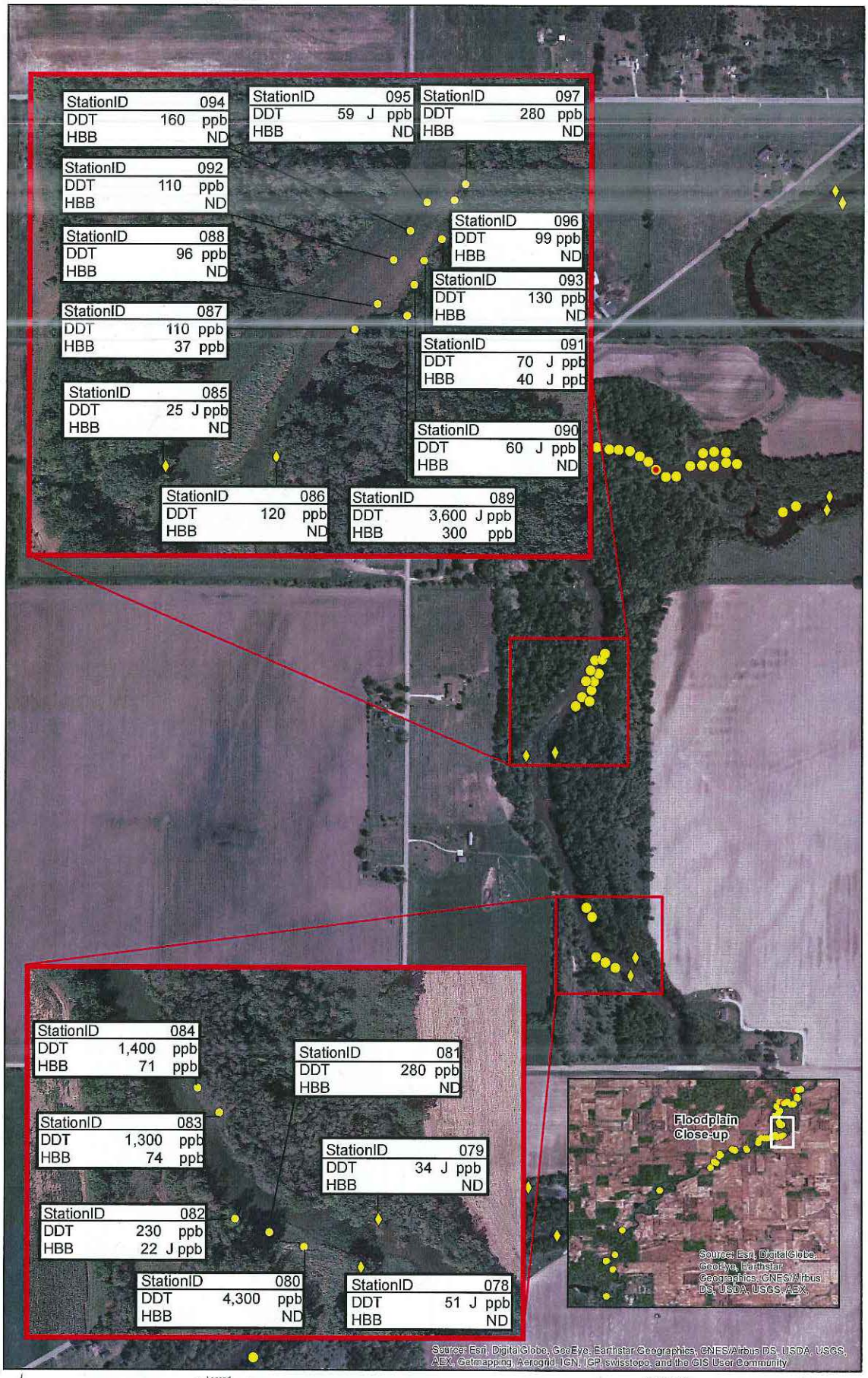


Legend

- 2015 Soil Sample with DDT Concentrations 5,000 ppb or greater
- 2015 Soil Sample with DDT Concentrations less than 5,000 ppb
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb

0 250 500 Feet

N

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). ND is Not Detected. 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 29**
DS-1.25 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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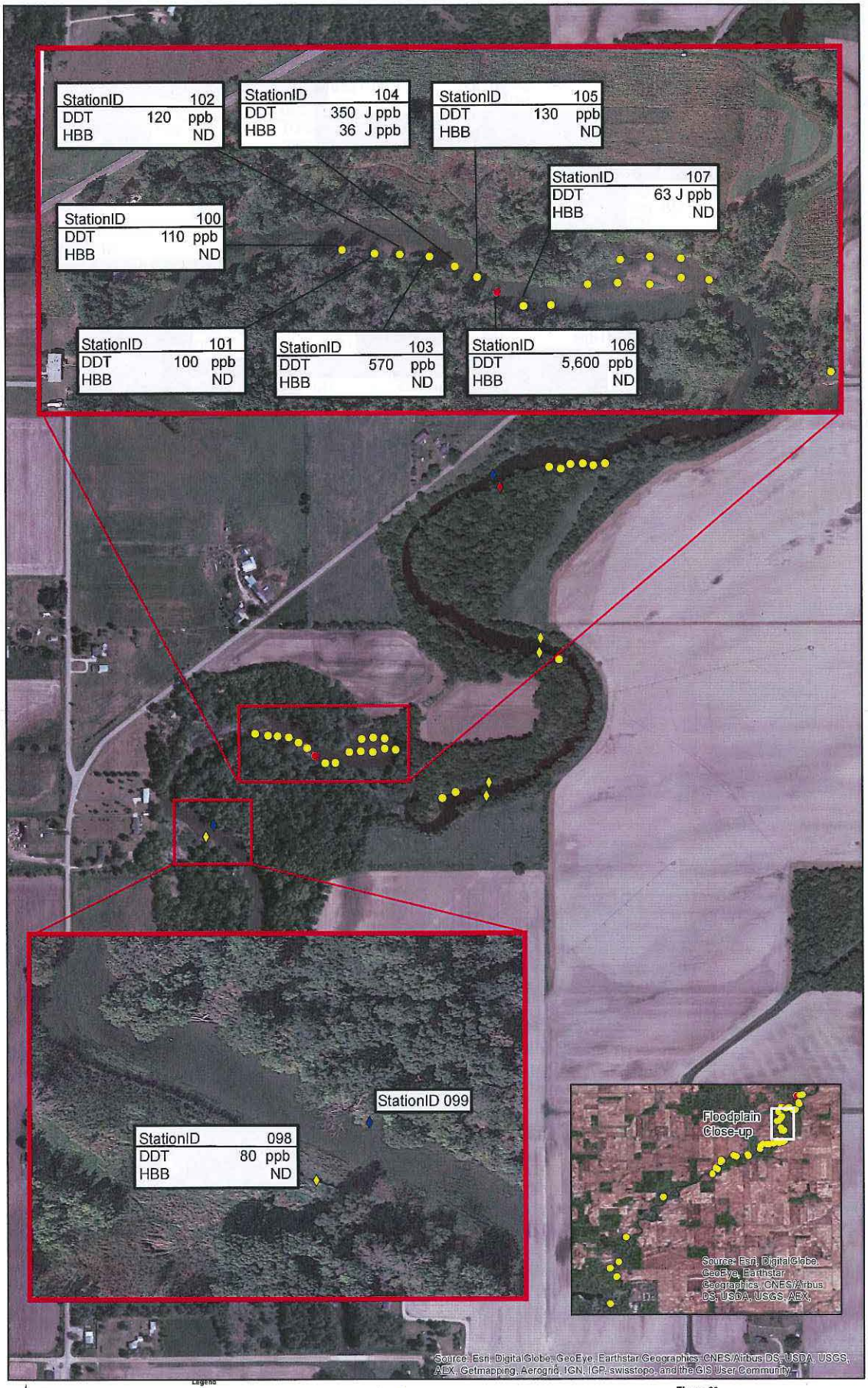
\\Bakatron\Proj\Velsicol\GIS_Data\Velsicol\MXD\ou3




Legend

- Sediment samples with DDT Concentrations 5,000 ppb or greater
- Sediment samples with DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb
- Sediment Transect Sample with DDT Concentrations 5,000 ppb or greater
- Sediment Transect Samples not sampled due to refusal or insufficient sample volume

N

0 250 500 Feet

Note:1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) concentrations are reported in parts per billion ( ppb). ND is Not Detected.

2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 30**
DS-1.25 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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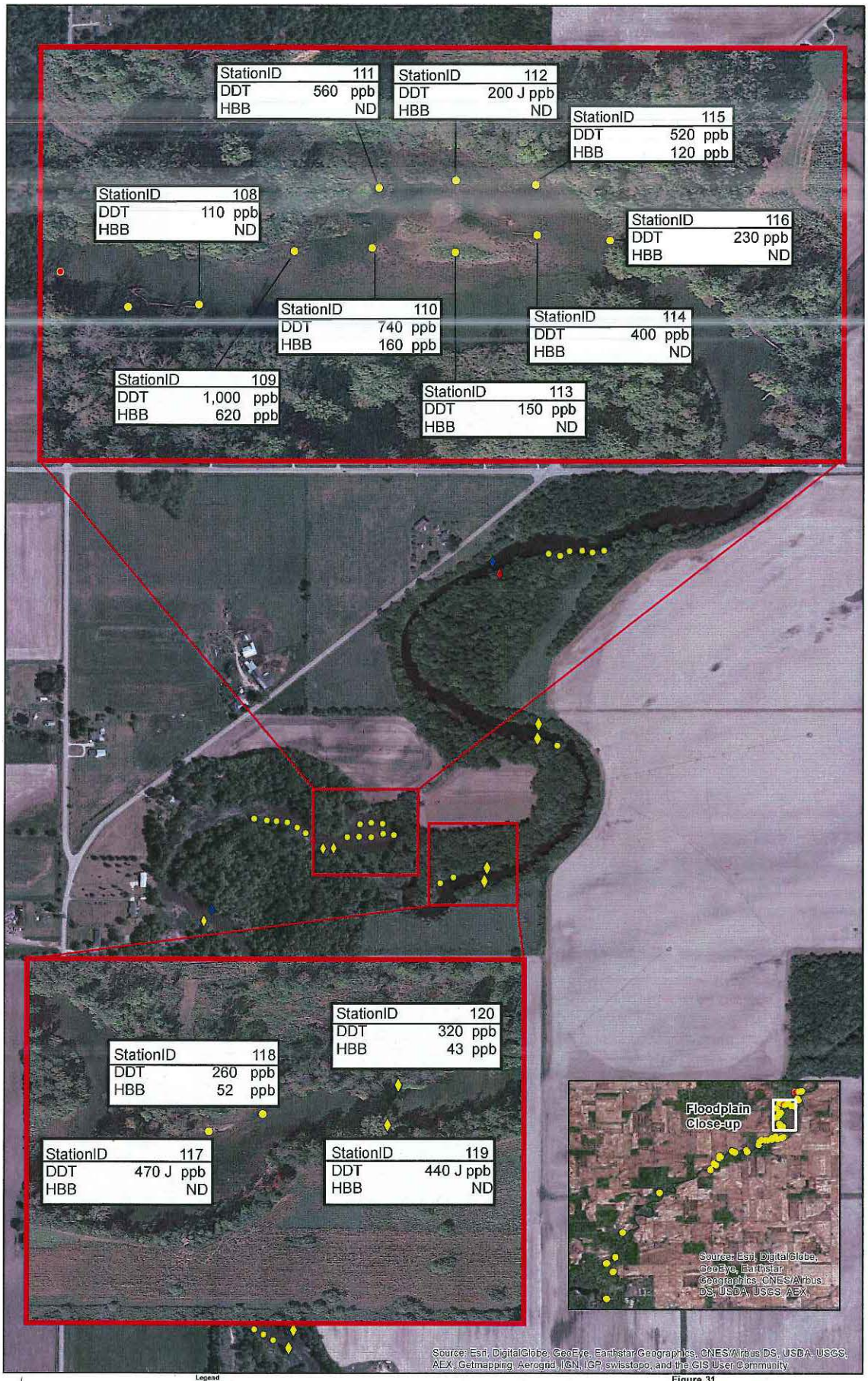


Legend

- Sediment samples with DDT Concentrations 5,000 ppb or greater
- Sediment samples with DDT Concentrations less than 5,000 ppb
- Not sampled due to refusal or insufficient sample volume
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb
- Sediment Transect Sample with DDT Concentrations 5,000 ppb or greater
- Sediment Transect Sample

N

0 250 500 Feet

Note:1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene ( HBB) concentrations are reported in parts per billion ( ppb). ND is Not Detected. 2. The greatest concentration of DDT and HBB is reported for each location.

**Figure 31**
DS-1.25 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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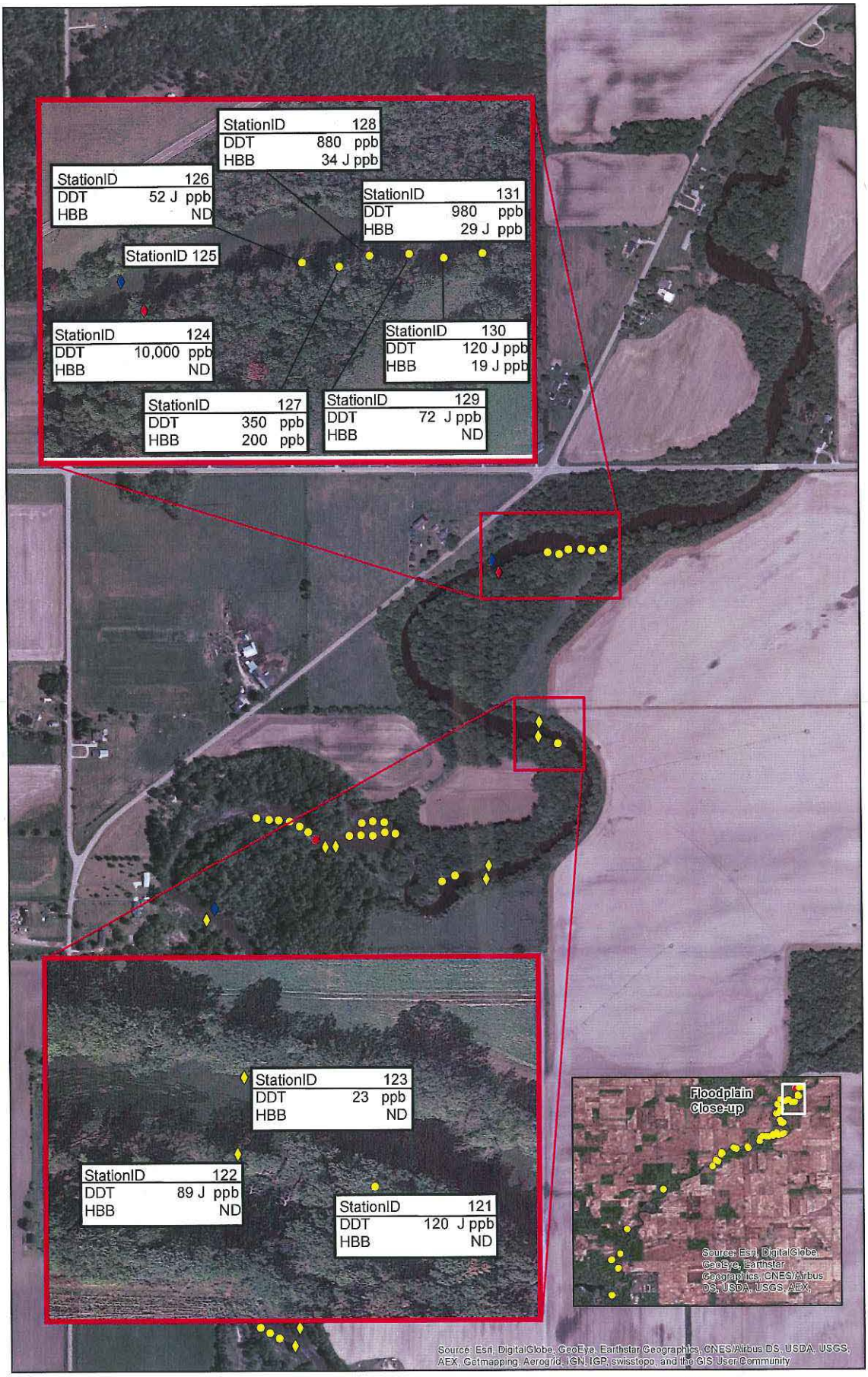


N

0 250 500 Feet

Legend

- Sediment samples with DDT Concentrations 5,000 ppb or greater
- Sediment samples with DDT Concentrations less than 5,000 ppb
- Sediment Transect Sample with DDT Concentrations 5,000 ppb or greater
- Sediment Transect Sample with DDT Concentrations less than 5,000 ppb
- Sediment Transect Sample
- Not sampled due to refusal or insufficient sample volume

Note: 1. All Dichlorodiphenyltrichloroethane (DDT) and Hexabromobenzene (HBB) concentrations are reported in parts per billion (ppb). ND is Not Detected. 2. The greatest concentration of DDT and HBB is reported for each location.

Figure 32
DS-1.25 Sediment Sample Results - 2013
*Data Evaluation Report*
*St. Louis, Michigan*

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