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Mr. James Saric, Remedial Project Manager
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SEDIMENTS

Subject:
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Post-Removal Sediment PCB Sampling Results
Former Plainwell Impoundment Time-Critical Removal Action

Date:
September 29, 2009

Contact:
Michael J. Erickson, P.E.

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Our ref:
B0064539.00500

Dear Mr. Saric:

Enclosed for your review are the results of the post-removal surface sediment sampling performed by ARCADIS as part of the Time-Critical Removal Action (TCRA) in the former Plainwell Impoundment. This sampling was carried out as required by Section 3.4.5 of the *Supplemental Remedial Investigation/Feasibility Study Work Plan – Morrow Dam to Plainwell* (Area 1 SRI/FS Work Plan; ARCADIS BBL 2007a) and Section 5.6.1 of the *Former Plainwell Impoundment Time-Critical Removal Action Design Report* (TCRA Design Report; ARCADIS BBL 2007b). The results of the quality assurance review of the sample PCB data are also presented.

The first post-removal surface sediment sampling was performed in the areas excavated during the 2007 constructions season – Removal Areas 1 through 8, Islands 1 and 2, and Cofferdam Area 1 – on January 22 and 23, 2008. These data were provided to USEPA in a letter dated March 3, 2008. Removal Areas excavated during the 2008 construction season (all located downstream of Removal Area 8) were sampled on March 10, 12, and 13, 2009 after completion of the TCRA in January 2009. This letter provides an update to the March 2008 data submittal and includes the 2009 post-removal surface sediment sampling results and field documentation. The sampling completed in March 2009 marks the conclusion of the post-removal sediment sampling required by the Area 1 SRI/FS Work Plan and the TCRA Design Report.

Sample Location and Collection

ARCADIS proposed the plan for the 2009 post-removal surface sediment sampling to the United States Environmental Protection Agency (USEPA) in a January 13, 2009 e-mail (Erickson 2009), and USEPA approved the plan on January 26, 2009 (Saric 2009). All sampling was conducted in accordance with the *Multi-Area Field Sampling Plan* (ARCADIS BBL 2007d) and the *Multi-Area Quality Assurance Project Plan for*

the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site (Multi-Area QAPP; ARCADIS BBL 2007c).

During the 2008 and 2009 sampling events, surface sediment (0- to 2-inch depth) was sampled in 26 areas within the former Plainwell Impoundment. Of the 26 individual removal areas, 25 were described in the TCRA Design Report (ARCADIS BBL 2007b), and one was added after the start of the project at the direction of USEPA (the added area is the furthest upstream area sampled). Water depth, probing depth, and sample descriptions were recorded for each sample location and each sample was photographed. All field notes and sample photographs from the 2008 and 2009 events are provided electronically on the attached compact disc (Attachment 1). The post-removal sample IDs begin with the PCS identifier and correspond to the removal area where the sample was collected. For example:

- Samples collected from numbered Removal Areas (e.g., Removal Area 1) are identified by the corresponding number and bank location. For example, sample PCS-3B was collected from Removal Area 3B.

- Samples collected from the three mid-channel removal areas are identified as PCS-MCA, MCB, or MCC.

- Samples collected from the islands just west of the US-131 Bridge are identified as PCS-I1 and PCS-I2.

- Samples collected from the two removal areas by the former Plainwell Dam where the cofferdam structures were located are identified as PCS-CD1 or CD2.

During the 2009 sampling, sample IDs were inadvertently re-used from previous sediment sampling activities. To ensure each sample has a unique sample ID, the sample IDs from the 2009 sampling were subsequently revised after completion of sampling activities. The original and corrected sample IDs are listed in Table 1. The corrected sample IDs listed in Table 1 and in all subsequent data presentations correspond to the sample IDs in the Kalamazoo River database. Sample IDs have also been revised in the field notes and sample photograph log provided in Attachment 1.

A total of 75 locations were sampled under Agency oversight (Figure 1). At three proposed sample locations (PCS-6A-1, PCS-7-1, and PCS-7-3), no sediment was present and samples were not collected. Five proposed sample locations were adjusted in the field away from the post-removal bank armor material present at the proposed locations in order to collect sediment samples. These sample locations in Removal Areas 11, 12, and 13 were PCS-11B-1, PCS-11B-2, PCS-12B-1, PCS-13B-1, and PCS-13B-2.

Results of Confirmation Sampling

In total, 80 samples (including 5 duplicate samples) from 75 locations were shipped to Test America Laboratories in South Burlington, VT and analyzed for polychlorinated biphenyls (PCBs) and total organic carbon (TOC). Samples from 67 locations were also analyzed for particle size distribution (samples from eight locations did not yield enough sample volume for particle size distribution analysis).

PCBs were not detected in 41% of the samples, and concentrations were less than 1.0 milligrams per kilogram (mg/kg) in 81% of the samples. The median PCB concentration was 0.061 mg/kg. The total PCB concentration was greater than 1.0 mg/kg in 15 samples, including a maximum observed concentration of 48 mg/kg (sample PCS-1-1). The data are summarized in Table 2, and the PCB data are presented with the sample locations in Figure 1. A cumulative relative frequency distribution plot, which shows the cumulative relative frequency distribution for the removal area averaged PCB concentrations, is included as Figure 2. (Each data point on Figure 2 represents the average of the samples collected in a particular removal area. The percentiles less than five are represented by the three locations from which no sample could be collected [PCS-6A-1, PCS-7-1, and PCS-7-3] where PCB concentrations were assumed to be zero.).

A statistical summary of the data is provided in Table 3 below. The number of data points shown below (78) reflects the fact that the five duplicate samples were averaged, and the three sample locations where no sediment was present were counted as data points with no detectable PCBs.

Table 3 – Statistical Summary of 2008 and 2009 Post-Removal Sediment PCB Data

Statistic	Value
Data Points	78
Range	ND – 48 mg/kg
Median	0.061 mg/kg
Average	1.7 mg/kg
Average excluding sample PCS-1-1	1.1 mg/kg

Note: Duplicate samples were averaged, and one-half of the sample quantitation limit was used for samples where PCB were not detected.

Three of the 15 samples with PCB concentrations greater than 1.0 mg/kg, including the maximum 48 mg/kg, were collected in the most upstream area (i.e., Removal Area 1). This is the area that was added at the direction of USEPA and was not included in the TCRA Design Report (ARCADIS BBL 2007b). The maximum result is from sample PCS-1-1, which contained nearly 50% gravel along with 8% of a clay size fraction. The high percentage of gravel and coarse materials in the sample suggests the overlying fine-grained material targeted for excavation was removed, and the sample may be either residual material mixed with gravel or small amounts

of sediment transported in from adjacent areas. If this sample is not included in the statistical summary, the average PCB concentration of the remaining 77 samples is 1.1 mg/kg (compared to 1.7 mg/kg with sample PCS-1-1). PCB concentrations were greater than 1.0 mg/kg in only eight of the 26 sampling areas, and the overall median concentration of all samples was less than 0.1 mg/kg.

All the results of the post-removal sampling were subjected to a standard data quality review process. As documented in the Multi-Area QAPP (ARCADIS BBL 2007c), this process includes field duplicate analysis, which is used to assess the precision and accuracy of the field sampling procedures and analytical methods. For the samples collected in March 2009, there were five parent/duplicate sample pairs analyzed. Of these five pairs, all quality assurance/quality control (QA/QC) results were within applicable control limits for three pairs. The results for two pairs were not within the applicable control limits; therefore, as described in more detail in Attachment 2, a detailed review of the standard quality assurance process proscribed in the Multi-Area QAPP (ARCADIS BBL 2007c) was initiated to assess the differences in results between the parent and duplicate samples collected at these locations. This process included a review of the associated QA/QC elements (holding times, method blanks, calibration, surrogates, laboratory control samples, matrix spike/matrix spike duplicates), checking sample calculations, review of the sample chromatograms, and contacting the laboratory.

Review of the associated sample QA/QC for the two parent/duplicate pairs with results that were not within the applicable control limits (from locations PCS-12B and location PCS-12A) did not reveal any data quality issues. Based on the field duplicate analysis of location PCS-12A (samples PCS-12A-1/PCS-12A-1 DUP – Total PCB of 40 mg/kg in the DUP compared to 0.32 mg/kg in the original sample), it appears that the difference in PCB concentrations was due to variability in the sample matrix. The QA/QC analysis is described in Attachment 2. Results for both pairs of samples have been qualified as estimated.

Please review these data and contact me with any questions or comments.

Sincerely,

ARCADIS

Michael J. Erickson, P.E.
Vice President

Copies:
Sam Borries, USEPA
Paul Bucholtz, MDEQ
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Todd Goeks, NOAA
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Sharon Hanshue, MDNR
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Richard Gay, Weyerhaeuser Company
Kathy Huibregtse, RMT, Inc.

Enclosures

Tables

Table 1: 2009 Post-Removal Surface Sediment Samples in Plainwell TCRA Area

Table 2: Post-Removal Surface Sediment Data Summary of Sample Analytical Results (2008 and 2009 Samples)

Table 3: Statistical Summary of 2008 and 2009 Post-Removal Sediment PCB Data

Figures

Figure 1: 2008/2009 Post-Removal Surface Sediment PCB Results

Figure 2: 2008/2009 Post-Removal Surface Sediment Total PCB Cumulative Frequency Distribution

Attachments

Attachment 1: 2008 and 2009 Sampling Field Notes and Photographs

Attachment 2: Quality Assurance Review

References

ARCADIS BBL. 2007a. *Supplemental Remedial Investigation/Feasibility Study Work Plan – Morrow Dam to Plainwell.* February 2007.

ARCADIS BBL. 2007b. *Former Plainwell Impoundment Time-Critical Removal Action Design Report.* February 2007.

ARCADIS BBL. 2007c. *Multi-Area Quality Assurance Project Plan for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site*. April 2007.

ARCADIS BBL. 2007d. *Multi-Area Field Sampling Plan*. October 2007.

Erickson, M. 2009. E-mail from Michael J. Erickson, P.E. (ARCADIS) to James Saric (USEPA) re: 2009 post-removal surface sediment sampling for the former Plainwell Impoundment Time-Critical Removal Action. January 13, 2009.

Saric, J. 2009. Letter from James Saric (USEPA) to Michael J. Erickson (ARCADIS) re: approval of revised sediment sampling locations and approach for the former Plainwell Impoundment Time-Critical Removal Action. January 26, 2009.

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Tables

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 1 -- Post-Removal Surface Sediment Samples in Plainwell TCRA Area
Data Received in April 2009

Date Collected	Sample Location	Original Sample ID	Corrected Sample ID	SDG
3/9/2009	PCS-9A-1	K56226	K56250	TCRA116
	PCS-9A-2	K56227	K56251	TCRA116
	PCS-9A-3	K56231	K56255	TCRA116
	PCS-9B-1	K56229	K56253	TCRA116
	PCS-9B-2	K56230	K56254	TCRA116
	PCS-9B-3	K56228	K56252	TCRA116
	PCS-10A-1	K56232	K56256	TCRA116
	PCS-10A-2	K56233	K56257	TCRA116
	PCS-10A-3	K56234	K56258	TCRA116
	PCS-10B-1	K56235	K56259	TCRA116
	PCS-10B-2	K56236	K56260	TCRA116
	PCS-10B-3	K56237	K56261	TCRA116
3/10/2009	PCS-11A-1	K56241	K56265	TCRA116
	PCS-11A-2	K56242	K56266	TCRA116
	PCS-11A-3	K56243	K56267	TCRA116
	PCS-12B-2	K56244	K56268	TCRA116
	PCS-12B-3	K56245 [K56246]	K56269 [K56270]	TCRA116 [TCRA117]
	PCS-MCC-1	K56238	K56262	TCRA116
	PCS-MCC-2[1]	K56239	K56263	TCRA116
	PCS-MCC-3	K56240	K56264	TCRA116
3/12/2009	PCS-11B-1 rev[1, 2]	K56248	K56272	TCRA118
	PCS-11B-2 rev[2]	K56249	K56273	TCRA118
	PCS-11B-3	K56250	K56274	TCRA118
	PCS-12A-1	K56251 [K56252]	K56275 [K56276]	TCRA118 [TCRA118]
	PCS-12A-2	K56253	K56277	TCRA118
	PCS-12A-3	K56254	K56278	TCRA118
	PCS-12B-1 rev[2]	K56260	K56284	TCRA118
	PCS-13A-1	K56259	K56283	TCRA118
	PCS-13A-2	K56258	K56282	TCRA118
	PCS-13A-3	K56274	K56298	TCRA117
	PCS-13B-1 rev[2]	K56257	K56281	TCRA118
	PCS-13B-2 rev[2]	K56256	K56280	TCRA118
	PCS-13B-3	K56255	K56279	TCRA118
	PCS-CD1-1	K56261	K56285	TCRA118
	PCS-CD1-2	K56262	K56286	TCRA118
	PCS-CD1-3	K56263 [K56264]	K56287 [K56288]	TCRA118 [TCRA118]
	PCS-CD2-1	K56265	K56289	TCRA118
	PCS-CD2-2	K56266	K56290	TCRA118
	PCS-CD2-3[1]	K56267	K56291	TCRA117
	PCS-MCA-1	K56268	K56292	TCRA118
	PCS-MCA-2	K56269	K56293	TCRA117
	PCS-MCA-3	K56270	K56294	TCRA117
	PCS-MCB-1	K56271	K56295	TCRA117
	PCS-MCB-2	K56272	K56296	TCRA117
	PCS-MCB-3	K56273	K56297	TCRA117

See Notes on Page 2.

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 1 -- Post-Removal Surface Sediment Samples in Plainwell TCRA Area
Data Received in April 2009

Notes:

1. All samples are the 0- to 2-inch interval.
2. All samples collected were shipped to Test America - South Burlington for PCB, TOC and particle grain size distribution analysis.
3. Duplicate samples are in brackets.
4. No samples were collected on 3/11/09 due to high flow conditions in the river and sustained wind speeds of 25-23 mph.

SDG - sample delivery group.

[1]MS/MSD performed on this sample.

[2]Five sample locations were revised in the field (PCS-11B-1, PCS-11B-2, PCS-12B-1, PCS-13B-1 and PCS-13B-2) those locations are noted in the table (i.e., PCS-11B-1 rev).

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55459		K55460		K55461		K55462		K55463	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/22/08		01/22/08		01/22/08		01/22/08		01/22/08	
Location ID:	Units	PCS-8-3		PCS-8-2		PCS-8-1		PCS-8-1 (DUP)		PCS-7-2	
PCB Aroclors											
Aroclor-1016	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Aroclor-1221	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Aroclor-1232	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Aroclor-1242	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Aroclor-1248	mg/kg	0.057 U		0.035 J		0.060 U		0.060 U		0.064 U	
Aroclor-1254	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Aroclor-1260	mg/kg	0.057 U		0.062 U		0.060 U		0.060 U		0.064 U	
Total PCBs	mg/kg	0.057 U		0.035 J		0.060 U		0.060 U		0.064 U	
Miscellaneous											
Percent Solids	%	87.8		80.4		82.6		82.5		77.6	
TOC											
Total Organic Carbon	mg/kg	2370		1100		6870 J		2550		814	
Grain Size Analysis											
Gravel	%	64.1		4		0.1		0.3		NA	
Coarse Sand	%	19.1		15.3		0.8		1.3		NA	
Medium Sand	%	4		46.7		69		69.5		NA	
Fine Sand	%	2.1		32.5		28.5		28		NA	
Silt	%	10		0.7		0.7		0.6		NA	
Clay	%	0.7		0.8		1		0.3		NA	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	NA	
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	NA	
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	NA	
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	NA	
Sieve, 3/4 inch	% passing	100	19000	100	19000	100	19000	100	19000	NA	
Sieve, 3/8 inch	% passing	66.8	9500	100	9500	100	9500	100	9500	NA	
Sieve, #4	% passing	35.9	4750	96.0	4750	99.9	4750	99.7	4750	NA	
Sieve, #10	% passing	16.8	2000	80.7	2000	99.2	2000	98.5	2000	NA	
Sieve, #20	% passing	13.5	850	60.1	850	87.4	850	86.3	850	NA	
Sieve, #40	% passing	12.8	425	34.0	425	30.2	425	28.9	425	NA	
Sieve, #60	% passing	12.2	250	8.5	250	6.6	250	5.5	250	NA	
Sieve, #80	% passing	11.1	180	2.5	180	2.5	180	1.6	180	NA	
Sieve, #100	% passing	11.0	150	2.0	150	2.1	150	1.3	150	NA	
Sieve, #200	% passing	10.7	75	1.5	75	1.6	75	0.9	75	NA	
Hydrometer Reading 1	% passing	1.5	37	0.8	37	1.0	37	0.9	37	NA	
Hydrometer Reading 2	% passing	1.5	23	0.8	23	1.0	24	0.9	24	NA	
Hydrometer Reading 3	% passing	1.1	13.5	0.8	13.6	1.0	13.6	0.9	13.6	NA	
Hydrometer Reading 4	% passing	1.1	9.6	0.8	9.6	1.0	9.8	0.9	9.5	NA	
Hydrometer Reading 5	% passing	0.7	6.9	0.8	6.9	1.0	6.9	0.3	6.9	NA	
Hydrometer Reading 6	% passing	0.6	3.3	0.3	3.3	0.3	3.4	0.3	3.4	NA	
Hydrometer Reading 7	% passing	0.6	1.4	0.2	1.4	0.3	1.4	0.3	1.4	NA	

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55464		K55465		K55466		K55467		K55468	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/22/08		01/22/08		01/22/08		01/22/08		01/22/08	
Location ID:	Units	PCS-6B-3		PCS-6B-2		PCS-6B-1		PCS-6B-1 (DUP)		PCS-I1-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.084 U		0.098 U		0.13 U		0.13 UJ		0.060 U	
Aroclor-1221	mg/kg	0.084 U		0.098 U		0.13 U		0.13 UJ		0.060 U	
Aroclor-1232	mg/kg	0.084 U		0.098 U		0.13 U		0.13 UJ		0.060 U	
Aroclor-1242	mg/kg	0.084 U		0.098 U		0.13 U		0.13 UJ		0.060 U	
Aroclor-1248	mg/kg	0.049 J		0.098 U		0.46		0.076 J		0.032 J	
Aroclor-1254	mg/kg	0.084 U		0.18		0.077 J		0.13 UJ		0.060 U	
Aroclor-1260	mg/kg	0.084 U		0.098 U		0.13 U		0.13 UJ		0.060 U	
Total PCBs	mg/kg	0.049 J		0.18		0.54		0.076 J		0.032 J	
Miscellaneous											
Percent Solids	%	58.9		50.6		37		37.9		82.8	
TOC											
Total Organic Carbon	mg/kg	30600		22400		67600		55000		5010	
Grain Size Analysis											
Gravel	%	37.4		30.3		12.3		12.3		13.3	
Coarse Sand	%	10.2		14.4		5.5		2.9		13.6	
Medium Sand	%	17.2		27.3		15.4		17.8		41.3	
Fine Sand	%	11.6		18.8		17.5		18.4		29.7	
Silt	%	20.7		7.7		31.4		29		1.7	
Clay	%	2.8		1.5		17.9		19.6		0.3	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	92.6	19000	83.4	19000	100	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	73.1	9500	81.9	9500	91.3	9500	92.8	9500	95.4	9500
Sieve, #4	% passing	62.6	4750	69.7	4750	87.7	4750	87.7	4750	86.7	4750
Sieve, #10	% passing	52.3	2000	55.3	2000	82.2	2000	84.8	2000	73.0	2000
Sieve, #20	% passing	45.3	850	43.0	850	77.7	850	78.7	850	59.2	850
Sieve, #40	% passing	35.1	425	28.0	425	66.8	425	67.1	425	31.7	425
Sieve, #60	% passing	27.8	250	17.1	250	57.6	250	57.3	250	7.2	250
Sieve, #80	% passing	24.9	180	12.1	180	52.2	180	51.5	180	2.1	180
Sieve, #100	% passing	24.6	150	11.2	150	51.6	150	50.9	150	2.0	150
Sieve, #200	% passing	23.5	75	9.2	75	49.3	75	48.7	75	2.0	75
Hydrometer Reading 1	% passing	7.0	35	4.3	36	38.2	34	39.9	32	0.8	37
Hydrometer Reading 2	% passing	5.9	22	3.7	23	33.6	22	37.3	21	0.8	24
Hydrometer Reading 3	% passing	4.4	13.2	2.1	13.5	27.4	12.7	30.5	12.3	0.8	13.6
Hydrometer Reading 4	% passing	3.9	9.3	2.1	9.4	22.7	9	23.7	8.7	0.8	9.7
Hydrometer Reading 5	% passing	2.8	6.8	1.5	6.9	17.9	6.6	19.6	6.4	0.3	6.7
Hydrometer Reading 6	% passing	2.3	3.4	0.8	3.3	11.7	3.3	14.1	3.2	0.2	3.4
Hydrometer Reading 7	% passing	1.8	1.4	0.8	1.4	6.9	1.4	10.0	1.4	0.2	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55469		K55470		K55471		K55472		K55473	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/22/08		01/22/08		01/22/08		01/22/08		01/22/08	
Location ID:	Units	PCS-I1-2		PCS-I1-1		PCS-I2-3		PCS-I2-2		PCS-I2-1	
PCB Aroclors											
Aroclor-1016	mg/kg	0.064 U		0.054 U		0.062 U		0.069 U		0.17 U	
Aroclor-1221	mg/kg	0.064 U		0.054 U		0.062 U		0.069 U		0.17 U	
Aroclor-1232	mg/kg	0.064 U		0.054 U		0.062 U		0.069 U		0.17 U	
Aroclor-1242	mg/kg	0.064 U		0.054 U		0.052 J		0.069 U		0.22	
Aroclor-1248	mg/kg	0.064 U		0.054 U		0.039 J		0.23		0.13 J	
Aroclor-1254	mg/kg	0.064 U		0.054 U		0.033 J		0.051 J		0.18	
Aroclor-1260	mg/kg	0.064 U		0.054 U		0.062 U		0.069 U		0.17 U	
Total PCBs	mg/kg	0.064 U		0.054 U		0.12 J		0.28 J		0.53	
Miscellaneous											
Percent Solids	%	79.3		93		79.8		72.9		28.5	
TOC											
Total Organic Carbon	mg/kg	15800		2350		9540		18800		127000	
Grain Size Analysis											
Gravel	%	42.1		40.7		43.9		35.1		40.8	
Coarse Sand	%	23.1		27.3		8.1		7		3.6	
Medium Sand	%	18.2		17.4		16.9		21.2		8.1	
Fine Sand	%	14.5		10.9		25.5		30.6		26.8	
Silt	%	1.7		3.5		5.3		4.9		14.4	
Clay	%	0.3		0.2		0.3		1.1		6.3	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	96.4	19000	100	19000	91.8	19000	100	19000
Sieve, 3/8 inch	% passing	85.4	9500	86.1	9500	64.8	9500	76.0	9500	64.5	9500
Sieve, #4	% passing	57.9	4750	59.3	4750	56.1	4750	64.9	4750	59.2	4750
Sieve, #10	% passing	34.8	2000	32.0	2000	48.0	2000	57.9	2000	55.6	2000
Sieve, #20	% passing	24.9	850	22.2	850	40.9	850	51.0	850	52.1	850
Sieve, #40	% passing	16.5	425	14.6	425	31.1	425	36.6	425	47.5	425
Sieve, #60	% passing	6.8	250	7.4	250	19.0	250	19.1	250	43.5	250
Sieve, #80	% passing	2.4	180	4.1	180	10.4	180	10.3	180	35.8	180
Sieve, #100	% passing	2.2	150	3.9	150	8.5	150	8.6	150	33.0	150
Sieve, #200	% passing	2.0	75	3.7	75	5.6	75	6.0	75	20.7	75
Hydrometer Reading 1	% passing	0.8	37	0.7	37	1.7	37	2.5	37	17.1	36
Hydrometer Reading 2	% passing	0.8	24	0.7	24	1.2	24	2.0	23	13.6	23
Hydrometer Reading 3	% passing	0.8	13.7	0.7	13.7	1.2	13.6	2.0	13.5	10.0	13.4
Hydrometer Reading 4	% passing	0.3	9.7	0.2	9.7	0.8	9.5	1.6	9.6	8.2	9.5
Hydrometer Reading 5	% passing	0.3	7	0.2	6.7	0.3	7	1.1	6.9	6.3	6.9
Hydrometer Reading 6	% passing	0.3	3.4	0.2	3.4	0.2	3.5	0.6	3.4	2.5	3.4
Hydrometer Reading 7	% passing	0.2	1.4	0.2	1.4	0.2	1.4	0.2	1.4	2.5	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55474		K55475		K55476		K55477		K55478	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/23/08		01/23/08		01/23/08		01/23/08		01/23/08	
Location ID:	Units	PCS-5-3		PCS-5-2		PCS-5-1		PCS-2A-3		PCS-2A-2	
PCB Aroclors											
Aroclor-1016	mg/kg	0.093 U		0.14 U		0.18 U		0.065 U		0.064 U	
Aroclor-1221	mg/kg	0.093 U		0.14 U		0.18 U		0.065 U		0.064 U	
Aroclor-1232	mg/kg	0.093 U		0.14 U		0.18 U		0.065 U		0.064 U	
Aroclor-1242	mg/kg	0.15		0.43		0.70		0.21		0.15	
Aroclor-1248	mg/kg	0.093 U		0.22		0.25		0.065 U		0.062 J	
Aroclor-1254	mg/kg	0.093 U		0.26		0.48		0.042 J		0.047 J	
Aroclor-1260	mg/kg	0.093 U		0.071 J		0.097 J		0.065 U		0.064 U	
Total PCBs	mg/kg	0.15		0.98		1.5		0.25		0.26 J	
Miscellaneous											
Percent Solids	%	53.9		37.3		27.3		77.1		77.7	
TOC											
Total Organic Carbon	mg/kg	29300		56000		70700		1540		5310	
Grain Size Analysis											
Gravel	%	0.2		0.4		0		3.4		0.3	
Coarse Sand	%	1.1		0.3		0.1		21.4		17.7	
Medium Sand	%	8.1		2.9		2.4		37.2		38.9	
Fine Sand	%	56.9		36.5		9.3		32.9		38.1	
Silt	%	21.9		51.1		72		4.8		4.3	
Clay	%	11.9		8.9		16.2		0.2		0.8	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	100	19000	100	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	100	9500	100	9500	100	9500	99.7	9500	100	9500
Sieve, #4	% passing	99.8	4750	99.6	4750	100	4750	96.6	4750	99.7	4750
Sieve, #10	% passing	98.7	2000	99.3	2000	99.9	2000	75.1	2000	82.0	2000
Sieve, #20	% passing	95.1	850	97.6	850	98.1	850	51.1	850	50.9	850
Sieve, #40	% passing	90.6	425	96.4	425	97.5	425	37.9	425	43.2	425
Sieve, #60	% passing	79.4	250	92.8	250	96.8	250	26.5	250	36.1	250
Sieve, #80	% passing	57.0	180	82.6	180	94.9	180	11.9	180	16.5	180
Sieve, #100	% passing	50.8	150	77.9	150	94.2	150	8.8	150	10.6	150
Sieve, #200	% passing	33.8	75	59.9	75	88.2	75	5.0	75	5.1	75
Hydrometer Reading 1	% passing	29.4	34	25.3	35	50.8	34	0.7	38	0.8	38
Hydrometer Reading 2	% passing	24.5	22	21.2	22	37.8	22	0.7	24	0.8	24
Hydrometer Reading 3	% passing	18.2	12.9	15.8	13.1	27.0	13.1	0.7	13.8	0.8	13.8
Hydrometer Reading 4	% passing	14.5	9.4	11.7	9.5	20.5	9.2	0.7	9.4	0.8	9.7
Hydrometer Reading 5	% passing	11.9	6.8	8.9	6.6	16.2	6.8	0.2	6.9	0.8	6.7
Hydrometer Reading 6	% passing	8.1	3.3	4.8	3.3	11.7	3.2	0.2	3.3	0.8	3.4
Hydrometer Reading 7	% passing	4.4	1.4	2.0	1.4	7.4	1.4	0.2	1.4	0.8	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55479		K55480		K55481		K55482		K55483	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/23/08		01/23/08		01/23/08		01/23/08		01/23/08	
Location ID:	Units	PCS-2A-1		PCS-1-3		PCS-1-2		PCS-1-1		PCS-3B-1	
PCB Aroclors											
Aroclor-1016	mg/kg	0.56 U		0.19 U		0.42 U		2.8 U		0.079 U	
Aroclor-1221	mg/kg	0.56 U		0.19 U		0.42 U		2.8 U		0.079 U	
Aroclor-1232	mg/kg	0.56 U		0.19 U		0.42 U		2.8 U		0.079 U	
Aroclor-1242	mg/kg	5.5		2.1		4.1		43		0.45	
Aroclor-1248	mg/kg	0.56 U		0.19 U		0.42 U		2.8 U		0.89	
Aroclor-1254	mg/kg	1.1		0.76		0.34 J		4.7		0.96	
Aroclor-1260	mg/kg	0.56 U		0.19 U		0.42 U		2.8 U		0.10	
Total PCBs	mg/kg	6.6		2.9		4.4		48		2.4	
Miscellaneous											
Percent Solids	%	17.9		53.2		59.7		53.1		63	
TOC											
Total Organic Carbon	mg/kg	150000		40600		21300		41600		11000	
Grain Size Analysis											
Gravel	%	9.7		23.1		29.4		45.5		16.5	
Coarse Sand	%	3.7		9.8		15		15.1		11.4	
Medium Sand	%	4.3		9.2		22.9		16.6		50	
Fine Sand	%	38.3		39.9		21.7		6.8		15.4	
Silt	%	40.2		17.2		9		8.2		4.6	
Clay	%	3.7		0.9		1.9		7.8		2.1	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	88.3	19000	100	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	92.6	9500	84.7	9500	88.9	9500	72.1	9500	89.3	9500
Sieve, #4	% passing	90.3	4750	76.9	4750	70.6	4750	54.5	4750	83.5	4750
Sieve, #10	% passing	86.6	2000	67.2	2000	55.5	2000	39.4	2000	72.1	2000
Sieve, #20	% passing	85.0	850	63.1	850	43.3	850	28.8	850	45.0	850
Sieve, #40	% passing	82.2	425	58.0	425	32.7	425	22.8	425	22.1	425
Sieve, #60	% passing	78.6	250	47.0	250	25.2	250	20.0	250	13.1	250
Sieve, #80	% passing	70.2	180	32.8	180	18.3	180	17.5	180	8.9	180
Sieve, #100	% passing	65.9	150	28.6	150	15.7	150	17.2	150	8.2	150
Sieve, #200	% passing	43.9	75	18.0	75	10.9	75	16.0	75	6.7	75
Hydrometer Reading 1	% passing	11.1	37	3.7	37	4.1	37	12.7	35	4.4	36
Hydrometer Reading 2	% passing	9.6	23	3.1	23	4.1	23	11.0	22	4.4	23
Hydrometer Reading 3	% passing	6.6	13.6	2.0	13.6	3.0	13.5	10.2	13	3.2	13.4
Hydrometer Reading 4	% passing	5.2	9.6	2.0	9.6	2.4	9.4	9.4	9.2	2.6	9.5
Hydrometer Reading 5	% passing	3.7	7	0.9	6.7	1.9	7	7.8	6.7	2.1	6.9
Hydrometer Reading 6	% passing	2.1	3.4	0.8	3.5	1.3	3.5	6.1	3.2	2.0	3.3
Hydrometer Reading 7	% passing	2.1	1.4	0.8	1.4	1.3	1.4	3.7	1.4	0.9	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55484		K55485		K55486		K55487		K55488	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/23/08		01/23/08		01/23/08		01/23/08		01/23/08	
Location ID:	Units	PCS-3B-2		PCS-3B-3		PCS-4B-1		PCS-4B-2		PCS-4B-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.064 U		0.072 U		0.12 U		0.064 U		0.064 U	
Aroclor-1221	mg/kg	0.064 U		0.072 U		0.12 U		0.064 U		0.064 U	
Aroclor-1232	mg/kg	0.064 U		0.072 U		0.12 U		0.064 U		0.064 U	
Aroclor-1242	mg/kg	0.11		0.061 J		0.12 U		0.062 J		0.14	
Aroclor-1248	mg/kg	0.20		0.074		0.12 U		0.088		0.083	
Aroclor-1254	mg/kg	0.11		0.084		0.12 U		0.055 J		0.065	
Aroclor-1260	mg/kg	0.064 U		0.072 U		0.12 U		0.064 U		0.064 U	
Total PCBs	mg/kg	0.42		0.22		0.12 U		0.21 J		0.29	
Miscellaneous											
Percent Solids	%	77.9		70.3		41.2		78		77.7	
TOC											
Total Organic Carbon	mg/kg	8420		14600		55500		30900		30800	
Grain Size Analysis											
Gravel	%	41.3		14.3		65.3		0.9		1.5	
Coarse Sand	%	19.5		16.8		7		2.3		6.4	
Medium Sand	%	30.5		43		14.6		76		68.5	
Fine Sand	%	7.6		23.5		6.3		18.7		21.2	
Silt	%	0.8		1.5		5.3		1.7		1.7	
Clay	%	0.3		0.9		1.5		0.3		0.8	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	100	19000	62.8	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	74.4	9500	92.7	9500	47.6	9500	100	9500	100	9500
Sieve, #4	% passing	58.7	4750	85.7	4750	34.7	4750	99.1	4750	98.5	4750
Sieve, #10	% passing	39.2	2000	68.9	2000	27.7	2000	96.7	2000	92.1	2000
Sieve, #20	% passing	19.2	850	45.3	850	20.4	850	69.6	850	62.4	850
Sieve, #40	% passing	8.7	425	25.8	425	13.1	425	20.7	425	23.6	425
Sieve, #60	% passing	4.4	250	15.6	250	9.4	250	6.1	250	9.6	250
Sieve, #80	% passing	2.0	180	7.3	180	7.6	180	2.3	180	3.7	180
Sieve, #100	% passing	1.6	150	5.5	150	7.4	150	2.2	150	3.0	150
Sieve, #200	% passing	1.0	75	2.4	75	6.8	75	2.0	75	2.4	75
Hydrometer Reading 1	% passing	0.7	37	2.0	37	3.1	36	0.9	37	0.8	37
Hydrometer Reading 2	% passing	0.7	24	1.4	24	2.7	23	0.9	24	0.8	24
Hydrometer Reading 3	% passing	0.7	13.7	0.9	13.7	2.3	13.4	0.3	13.7	0.8	13.7
Hydrometer Reading 4	% passing	0.3	9.9	0.9	9.8	1.9	9.4	0.3	9.6	0.8	9.5
Hydrometer Reading 5	% passing	0.3	7	0.9	6.7	1.5	6.8	0.3	7	0.8	6.9
Hydrometer Reading 6	% passing	0.2	3.4	0.3	3.4	0.6	3.4	0.3	3.5	0.8	3.3
Hydrometer Reading 7	% passing	0.2	1.4	0.3	1.4	0.2	1.4	0.3	1.4	0.3	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K55489		K55490		K56250		K56251		K56252	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		01/23/08		01/23/08		03/10/09		03/10/09		03/10/09	
Location ID:	Units	PCS-6A-2		PCS-6A-3		PCS-9A-1		PCS-9A-2		PCS-9B-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.062 U	
Aroclor-1221	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.062 U	
Aroclor-1232	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.062 U	
Aroclor-1242	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.039 J	
Aroclor-1248	mg/kg	0.055 J		0.065		0.071 U		0.13 U		0.062 U	
Aroclor-1254	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.062 U	
Aroclor-1260	mg/kg	0.093 U		0.063 U		0.071 U		0.13 U		0.062 U	
Total PCBs	mg/kg	0.055 J		0.065		0.071 U		0.13 U		0.039 J	
Miscellaneous											
Percent Solids	%	54.2		80.5		69.9		38		79.5	
TOC											
Total Organic Carbon	mg/kg	74300		18900		22300 J		51900		11500	
Grain Size Analysis											
Gravel	%	88.8		66.6		10.4		84.1		51	
Coarse Sand	%	2		11.9		19		3.3		8.2	
Medium Sand	%	2.7		6.9		43.2		3.4		22	
Fine Sand	%	3.7		8.8		18.3		1.2		12.2	
Silt	%	2.3		5.7		5.5		7.4		3.9	
Clay	%	0.6		0.2		3.6		0.6		2.7	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	56.3	25000	74.4	25000
Sieve, 3/4 inch	% passing	40.8	19000	90.5	19000	100	19000	42.8	19000	60.0	19000
Sieve, 3/8 inch	% passing	15.6	9500	54.2	9500	95.8	9500	19.5	9500	57.9	9500
Sieve, #4	% passing	11.2	4750	33.4	4750	89.6	4750	15.9	4750	49.0	4750
Sieve, #10	% passing	9.3	2000	21.5	2000	70.6	2000	12.7	2000	40.8	2000
Sieve, #20	% passing	8.1	850	17.7	850	39.2	850	10.3	850	31.0	850
Sieve, #40	% passing	6.6	425	14.6	425	27.4	425	9.3	425	18.8	425
Sieve, #60	% passing	5.6	250	11.2	250	18.9	250	8.7	250	10.1	250
Sieve, #80	% passing	4.0	180	7.2	180	14.2	180	8.5	180	7.8	180
Sieve, #100	% passing	3.7	150	6.6	150	12.5	150	8.4	150	7.3	150
Sieve, #200	% passing	2.9	75	5.8	75	9.1	75	8.1	75	6.6	75
Hydrometer Reading 1	% passing	0.6	37	0.6	37	7.2	36	2.2	36	5.8	35
Hydrometer Reading 2	% passing	0.6	24	0.6	24	6.5	23	1.6	23	5.0	22
Hydrometer Reading 3	% passing	0.6	13.7	0.6	13.7	5.0	13.3	1.3	13.5	3.9	13.1
Hydrometer Reading 4	% passing	0.6	9.4	0.2	9.8	4.3	9.4	0.9	9.6	3.5	9.5
Hydrometer Reading 5	% passing	0.6	6.9	0.2	6.7	3.6	6.8	0.6	6.9	2.7	6.8
Hydrometer Reading 6	% passing	0.2	3.3	0.2	3.4	2.9	3.3	0.0	3.3	1.5	3.3
Hydrometer Reading 7	% passing	0.2	1.4	0.2	1.4	2.0	1.4	0.0	1.4	1.1	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name: Sample Depth (in): Date Collected: Location ID:	Units	K56253 0 - 2 03/10/09 PCS-9B-1		K56254 0 - 2 03/10/09 PCS-9B-2		K56255 0 - 2 03/10/09 PCS-9A-3		K56256 0 - 2 03/10/09 PCS-10A-1		K56257 0 - 2 03/10/09 PCS-10A-2	
PCB Aroclors											
Aroclor-1016	mg/kg	0.068 U		0.062 U		0.063 U		0.060 U		0.063 U	
Aroclor-1221	mg/kg	0.068 U		0.062 U		0.063 U		0.060 U		0.063 U	
Aroclor-1232	mg/kg	0.068 U		0.062 U		0.063 U		0.060 U		0.063 U	
Aroclor-1242	mg/kg	0.068 U		0.034 J		0.063 U		0.11		0.063 U	
Aroclor-1248	mg/kg	0.068 U		0.062 U		0.034 J		0.060 U		0.063 U	
Aroclor-1254	mg/kg	0.068 U		0.062 U		0.063 U		0.060 U		0.063 U	
Aroclor-1260	mg/kg	0.068 U		0.062 U		0.063 U		0.060 U		0.063 U	
Total PCBs	mg/kg	0.068 U		0.034 J		0.034 J		0.11		0.063 U	
Miscellaneous											
Percent Solids	%	74.5		80.3		80.1		82.8		79	
TOC											
Total Organic Carbon	mg/kg	17400		9280 J		8600 J		2930 J		34700 J	
Grain Size Analysis											
Gravel	%	24.2		64.1		68.1		20.9		63.1	
Coarse Sand	%	12.2		7		10		9.9		12.6	
Medium Sand	%	30.3		18.1		11.3		48		13.4	
Fine Sand	%	23.9		8.5		9.9		18.7		8.5	
Silt	%	6.8		1.3		0.7		2.1		1.6	
Clay	%	2.6		0.9		0		0.4		0.7	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	68.2	25000	74.0	25000	100	25000	80.9	25000
Sieve, 3/4 inch	% passing	100	19000	57.5	19000	62.7	19000	89.3	19000	80.9	19000
Sieve, 3/8 inch	% passing	87.0	9500	42.0	9500	44.1	9500	85.4	9500	56.4	9500
Sieve, #4	% passing	75.8	4750	35.9	4750	31.9	4750	79.1	4750	36.9	4750
Sieve, #10	% passing	63.6	2000	28.9	2000	21.9	2000	69.2	2000	24.2	2000
Sieve, #20	% passing	51.7	850	20.7	850	15.6	850	51.2	850	15.6	850
Sieve, #40	% passing	33.3	425	10.8	425	10.6	425	21.2	425	10.8	425
Sieve, #60	% passing	14.5	250	4.3	250	5.0	250	4.8	250	7.6	250
Sieve, #80	% passing	10.9	180	2.8	180	2.2	180	3.3	180	5.0	180
Sieve, #100	% passing	10.3	150	2.5	150	1.4	150	2.9	150	3.9	150
Sieve, #200	% passing	9.4	75	2.2	75	0.7	75	2.5	75	2.3	75
Hydrometer Reading 1	% passing	8.7	35	2.2	36	0.6	37	1.2	37	2.0	37
Hydrometer Reading 2	% passing	7.7	22	1.9	23	0.6	24	1.2	23	1.7	23
Hydrometer Reading 3	% passing	4.6	13.2	1.6	13.4	0.3	13.6	1.2	13.5	1.4	13.5
Hydrometer Reading 4	% passing	3.1	9.6	0.9	9.4	0.0	9.5	0.8	9.4	1.0	9.3
Hydrometer Reading 5	% passing	2.6	6.5	0.9	6.8	0.0	6.9	0.4	6.9	0.7	6.8
Hydrometer Reading 6	% passing	1.5	3.3	0.3	3.4	0.0	3.5	0.4	3.2	0.3	3.3
Hydrometer Reading 7	% passing	0.9	1.4	0.3	1.4	0.0	1.4	0.0	1.4	0.3	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K56258		K56259		K56260		K56261		K56262	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		03/10/09		03/10/09		03/10/09		03/10/09		03/10/09	
Location ID:	Units	PCS-10A-3		PCS-10B-1		PCS-10B-2		PCS-10B-3		PCS-MCC-1	
PCB Aroclors											
Aroclor-1016	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1221	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1232	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1242	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1248	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1254	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Aroclor-1260	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Total PCBs	mg/kg	0.096 U		0.062 U		0.063 U		0.057 U		0.073 U	
Miscellaneous											
Percent Solids	%	52.1		81.4		79.4		88.1		69.1	
TOC											
Total Organic Carbon	mg/kg	33000		10980 J		37900 J		12500 J		21200 J	
Grain Size Analysis											
Gravel	%	6.1		61		79.5		68.6		NA	
Coarse Sand	%	3.5		15.1		2.3		10.7		NA	
Medium Sand	%	29.5		17.7		7.8		9.1		NA	
Fine Sand	%	14.7		1.3		4		2.2		NA	
Silt	%	44		4.9		5		8.8		NA	
Clay	%	2.1		0		1.4		0.5		NA	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	NA	
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	NA	
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	NA	
Sieve, 1 inch	% passing	100	25000	79.6	25000	75.5	25000	76.9	25000	NA	
Sieve, 3/4 inch	% passing	100	19000	69.5	19000	70.0	19000	59.5	19000	NA	
Sieve, 3/8 inch	% passing	96.8	9500	51.8	9500	28.6	9500	37.9	9500	NA	
Sieve, #4	% passing	93.9	4750	39.0	4750	20.5	4750	31.4	4750	NA	
Sieve, #10	% passing	90.4	2000	23.9	2000	18.2	2000	20.6	2000	NA	
Sieve, #20	% passing	72.6	850	12.3	850	13.1	850	13.7	850	NA	
Sieve, #40	% passing	60.9	425	6.2	425	10.4	425	11.5	425	NA	
Sieve, #60	% passing	53.3	250	5.2	250	8.8	250	10.6	250	NA	
Sieve, #80	% passing	50.0	180	5.0	180	8.0	180	10.1	180	NA	
Sieve, #100	% passing	48.8	150	5.0	150	7.6	150	9.9	150	NA	
Sieve, #200	% passing	46.2	75	4.9	75	6.4	75	9.3	75	NA	
Hydrometer Reading 1	% passing	4.8	36	0.3	37	3.7	36	1.8	37	NA	
Hydrometer Reading 2	% passing	4.8	23	0.3	24	3.1	23	1.5	23	NA	
Hydrometer Reading 3	% passing	3.8	13.3	0.3	13.6	2.6	13.2	1.3	13.5	NA	
Hydrometer Reading 4	% passing	2.7	9.5	0.0	9.7	1.7	9.5	0.7	9.5	NA	
Hydrometer Reading 5	% passing	2.1	6.6	0.0	7	1.4	6.6	0.5	7	NA	
Hydrometer Reading 6	% passing	1.1	3.3	0.0	3.4	0.9	3.4	0.3	3.4	NA	
Hydrometer Reading 7	% passing	0.4	1.4	0.0	1.4	0.6	1.4	0.3	1.4	NA	

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name: Sample Depth (in): Date Collected: Location ID:	Units	K56263 0 - 2 03/10/09 PCS-MCC-2		K56264 0 - 2 03/10/09 PCS-MCC-3		K56265 0 - 2 03/10/09 PCS-11A-1		K56266 0 - 2 03/10/09 PCS-11A-2		K56267 0 - 2 03/10/09 PCS-11A-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Aroclor-1221	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Aroclor-1232	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Aroclor-1242	mg/kg	0.067 U		0.059 U		0.081		0.065 U		0.053 U	
Aroclor-1248	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Aroclor-1254	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Aroclor-1260	mg/kg	0.067 U		0.059 U		0.062 U		0.065 U		0.053 U	
Total PCBs	mg/kg	0.067 U		0.059 U		0.081		0.065 U		0.053 U	
Miscellaneous											
Percent Solids	%	74.7		84		81.2		77.2		94.6	
TOC											
Total Organic Carbon	mg/kg	3590 J		21100 J		51900		648 U		34700 J	
Grain Size Analysis											
Gravel	%	NA		NA		NA		NA		NA	
Coarse Sand	%	NA		NA		NA		NA		NA	
Medium Sand	%	NA		NA		NA		NA		NA	
Fine Sand	%	NA		NA		NA		NA		NA	
Silt	%	NA		NA		NA		NA		NA	
Clay	%	NA		NA		NA		NA		NA	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	NA		NA		NA		NA		NA	
Sieve, 2 inch	% passing	NA		NA		NA		NA		NA	
Sieve, 1.5 inch	% passing	NA		NA		NA		NA		NA	
Sieve, 1 inch	% passing	NA		NA		NA		NA		NA	
Sieve, 3/4 inch	% passing	NA		NA		NA		NA		NA	
Sieve, 3/8 inch	% passing	NA		NA		NA		NA		NA	
Sieve, #4	% passing	NA		NA		NA		NA		NA	
Sieve, #10	% passing	NA		NA		NA		NA		NA	
Sieve, #20	% passing	NA		NA		NA		NA		NA	
Sieve, #40	% passing	NA		NA		NA		NA		NA	
Sieve, #60	% passing	NA		NA		NA		NA		NA	
Sieve, #80	% passing	NA		NA		NA		NA		NA	
Sieve, #100	% passing	NA		NA		NA		NA		NA	
Sieve, #200	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 1	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 2	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 3	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 4	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 5	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 6	% passing	NA		NA		NA		NA		NA	
Hydrometer Reading 7	% passing	NA		NA		NA		NA		NA	

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K56268		K56269		K56270		K56272		K56273	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		03/10/09		03/10/09		03/10/09		03/12/09		03/12/09	
Location ID:	Units	PCS-12B-2		PCS-12B-3		PCS-12B-3 (DUP)		PCS-11B-1		PCS-11B-2	
PCB Aroclors											
Aroclor-1016	mg/kg	0.067 U		0.082 U		0.26 U		0.12 U		0.11 U	
Aroclor-1221	mg/kg	0.067 U		0.082 U		0.26 U		0.12 U		0.11 U	
Aroclor-1232	mg/kg	0.067 U		0.082 U		0.26 U		0.12 U		0.11 U	
Aroclor-1242	mg/kg	0.067 U		0.082 UJ		0.71 J		0.12 U		0.11 U	
Aroclor-1248	mg/kg	0.067 U		0.082 U		0.26 U		0.12 U		0.061 J	
Aroclor-1254	mg/kg	0.067 U		0.082 UJ		1.1 J		0.12 U		0.11 U	
Aroclor-1260	mg/kg	0.067 U		0.082 U		0.15 J		0.12 U		0.11 U	
Total PCBs	mg/kg	0.067 U		0.082 UJ		2.0 J		0.12 U		0.061 J	
Miscellaneous											
Percent Solids	%	75.2		61		57.7		41.5		45.4	
TOC											
Total Organic Carbon	mg/kg	25400 J		50700 J		38500		71900		37400	
Grain Size Analysis											
Gravel	%	NA		NA		69.6		6.7		8.1	
Coarse Sand	%	NA		NA		9.4		6.2		4.6	
Medium Sand	%	NA		NA		8.5		5.2		13.2	
Fine Sand	%	NA		NA		4.9		12.7		43.3	
Silt	%	NA		NA		4.9		41.3		18.9	
Clay	%	NA		NA		2.7		28		11.9	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	NA		NA		100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	NA		NA		100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	NA		NA		100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	NA		NA		100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	NA		NA		59.7	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	NA		NA		44.2	9500	100	9500	95.1	9500
Sieve, #4	% passing	NA		NA		30.4	4750	93.3	4750	91.9	4750
Sieve, #10	% passing	NA		NA		21.0	2000	87.2	2000	87.3	2000
Sieve, #20	% passing	NA		NA		16.4	850	84.9	850	82.4	850
Sieve, #40	% passing	NA		NA		12.6	425	81.9	425	74.1	425
Sieve, #60	% passing	NA		NA		9.7	250	78.9	250	55.9	250
Sieve, #80	% passing	NA		NA		8.7	180	76.9	180	40.8	180
Sieve, #100	% passing	NA		NA		8.3	150	75.6	150	35.9	150
Sieve, #200	% passing	NA		NA		7.7	75	69.3	75	30.8	75
Hydrometer Reading 1	% passing	NA		NA		7.1	36	50.6	33	21.7	33
Hydrometer Reading 2	% passing	NA		NA		5.4	23	46.8	21	19.9	21
Hydrometer Reading 3	% passing	NA		NA		4.3	13.3	39.3	12.6	16.7	12.6
Hydrometer Reading 4	% passing	NA		NA		3.8	9.5	33.6	9	14.3	8.9
Hydrometer Reading 5	% passing	NA		NA		2.7	6.8	28.0	6.7	11.9	6.7
Hydrometer Reading 6	% passing	NA		NA		1.6	3.3	18.5	3.3	8.0	3.3
Hydrometer Reading 7	% passing	NA		NA		1.1	1.4	11.3	1.4	5.6	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name: Sample Depth (in): Date Collected: Location ID:	Units	K56274 0 - 2 03/12/09 PCS-11B-3		K56275 0 - 2 03/12/09 PCS-12A-1		K56276 0 - 2 03/12/09 PCS-12A-1 (DUP)		K56277 0 - 2 03/12/09 PCS-12A-2		K56278 0 - 2 03/12/09 PCS-12A-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.075 U		0.15 U		3.5 UJ		0.15 U		0.12 U	
Aroclor-1221	mg/kg	0.075 U		0.15 U		3.5 UJ		0.15 U		0.12 U	
Aroclor-1232	mg/kg	0.075 U		0.15 U		3.5 UJ		0.15 U		0.12 U	
Aroclor-1242	mg/kg	0.047 J		0.32 J		35 J		0.15 U		0.12 U	
Aroclor-1248	mg/kg	0.082		0.15 UJ		4.9 J		0.15 U		0.12 U	
Aroclor-1254	mg/kg	0.071 J		0.15 U		3.5 UJ		0.15 U		0.12 U	
Aroclor-1260	mg/kg	0.075 U		0.15 U		3.5 UJ		0.15 U		0.12 U	
Total PCBs	mg/kg	0.20 J		0.32 J		40 J		0.15 U		0.12 U	
Miscellaneous											
Percent Solids	%	66.8		33.5		28.9		32.8		40.1	
TOC											
Total Organic Carbon	mg/kg	8960		79400		74500		89300		85700	
Grain Size Analysis											
Gravel	%	5		4.1		0.4		40.1		22	
Coarse Sand	%	0.6		1.3		0.5		2.5		4.3	
Medium Sand	%	4.4		5.5		4.5		1.5		2.1	
Fine Sand	%	80.9		8.3		7.1		7.4		4.4	
Silt	%	5.1		59.7		67.6		37.7		43.6	
Clay	%	4.1		21.2		20		10.7		23.6	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	100	19000	100	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	95.7	9500	100	9500	100	9500	67.6	9500	82.7	9500
Sieve, #4	% passing	95.0	4750	95.9	4750	99.6	4750	59.9	4750	78.0	4750
Sieve, #10	% passing	94.4	2000	94.6	2000	99.1	2000	57.4	2000	73.7	2000
Sieve, #20	% passing	93.7	850	92.9	850	97.7	850	56.6	850	72.7	850
Sieve, #40	% passing	90.0	425	89.1	425	94.7	425	55.9	425	71.6	425
Sieve, #60	% passing	47.2	250	87.0	250	92.8	250	55.0	250	69.3	250
Sieve, #80	% passing	20.1	180	85.9	180	92.2	180	54.5	180	68.8	180
Sieve, #100	% passing	14.1	150	85.5	150	91.8	150	54.2	150	68.7	150
Sieve, #200	% passing	9.2	75	80.9	75	87.6	75	48.5	75	67.2	75
Hydrometer Reading 1	% passing	8.9	36	54.8	34	50.6	34	36.2	35	51.1	33
Hydrometer Reading 2	% passing	7.6	23	42.8	22	44.0	22	27.6	23	41.2	22
Hydrometer Reading 3	% passing	6.9	13.3	38.0	12.9	35.1	12.9	21.1	13.3	37.3	12.6
Hydrometer Reading 4	% passing	4.8	9.5	28.4	9.3	26.2	9.5	16.8	9.7	29.5	9
Hydrometer Reading 5	% passing	4.1	6.8	21.2	6.8	20.0	6.8	10.7	6.6	23.6	6.5
Hydrometer Reading 6	% passing	2.0	3.3	11.6	3.3	13.3	3.3	6.4	3.3	15.7	3.3
Hydrometer Reading 7	% passing	2.0	1.4	6.8	1.4	8.5	1.4	6.1	1.4	7.5	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K56279		K56280		K56281		K56282		K56283	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		03/12/09		03/13/09		03/13/09		03/13/09		03/13/09	
Location ID:	Units	PCS-13B-3		PCS-13B-2		PCS-13B-1		PCS-13A-2		PCS-13A-1	
PCB Aroclors											
Aroclor-1016	mg/kg	0.33 U		0.30 U		2.2 U		0.092 U		0.083 U	
Aroclor-1221	mg/kg	0.33 U		0.30 U		2.2 U		0.092 U		0.083 U	
Aroclor-1232	mg/kg	0.33 U		0.30 U		2.2 U		0.092 U		0.083 U	
Aroclor-1242	mg/kg	1.3		4.3		14		0.058 J		0.083 U	
Aroclor-1248	mg/kg	1.1		0.90		2.5		0.092 U		0.083 U	
Aroclor-1254	mg/kg	0.53		0.30 U		2.2 U		0.092 U		0.083 U	
Aroclor-1260	mg/kg	0.33 U		0.30 U		2.2 U		0.092 U		0.083 U	
Total PCBs	mg/kg	2.9		5.2		17		0.058 J		0.083 U	
Miscellaneous											
Percent Solids	%	30		32.6		56.6		53.8		60.3	
TOC											
Total Organic Carbon	mg/kg	76700		83300		42200		64600 J		46400	
Grain Size Analysis											
Gravel	%	88.3		0		12.2		18		5.4	
Coarse Sand	%	1.1		0.3		11.5		13		8.6	
Medium Sand	%	1.4		0.4		19.3		29.6		22.8	
Fine Sand	%	2.2		2.4		11.3		5.8		10.7	
Silt	%	4.9		66.1		26		28.1		37.6	
Clay	%	2.1		30.8		19.8		5.7		14.8	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	52.1	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	15.3	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	15.3	19000	100	19000	100	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	14.2	9500	100	9500	100	9500	90.1	9500	96.1	9500
Sieve, #4	% passing	11.7	4750	100	4750	87.8	4750	82.0	4750	94.6	4750
Sieve, #10	% passing	10.6	2000	99.7	2000	76.3	2000	69.1	2000	86.0	2000
Sieve, #20	% passing	9.7	850	99.5	850	64.7	850	52.6	850	72.2	850
Sieve, #40	% passing	9.2	425	99.3	425	57.1	425	39.5	425	63.1	425
Sieve, #60	% passing	8.7	250	98.7	250	50.5	250	35.6	250	56.4	250
Sieve, #80	% passing	8.4	180	98.2	180	48.4	180	35.3	180	55.3	180
Sieve, #100	% passing	8.2	150	97.9	150	47.7	150	35.2	150	55.0	150
Sieve, #200	% passing	7.0	75	96.9	75	45.7	75	33.8	75	52.4	75
Hydrometer Reading 1	% passing	4.8	36	67.8	34	38.5	34	17.2	34	35.5	34
Hydrometer Reading 2	% passing	3.9	23	62.1	22	35.5	21	13.9	22	31.1	22
Hydrometer Reading 3	% passing	3.5	13.3	53.6	12.7	29.0	12.7	10.6	13.1	23.7	12.8
Hydrometer Reading 4	% passing	2.6	9.4	42.2	9	22.9	8.9	7.3	9.4	19.2	9.2
Hydrometer Reading 5	% passing	2.1	6.9	30.8	6.7	19.8	6.6	5.7	6.6	14.8	6.8
Hydrometer Reading 6	% passing	1.2	3.5	19.9	3.2	13.9	3.2	2.5	3.3	8.9	3.3
Hydrometer Reading 7	% passing	0.8	1.4	10.9	1.4	10.5	1.4	2.3	1.4	4.2	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name: Sample Depth (in): Date Collected: Location ID:	Units	K56284 0 - 2 03/13/09 PCS-12B-1		K56285 0 - 2 03/13/09 PCS-CD1-1		K56286 0 - 2 03/13/09 PCS-CD1-2		K56287 0 - 2 03/13/09 PCS-CD1-3		K56288 0 - 2 03/13/09 PCS-CD1-3 (DUP)	
PCB Aroclors											
Aroclor-1016	mg/kg	0.062 U		0.092 U		0.23 U		0.061 U		0.059 U	
Aroclor-1221	mg/kg	0.062 U		0.092 U		0.23 U		0.061 U		0.059 U	
Aroclor-1232	mg/kg	0.062 U		0.092 U		0.23 U		0.061 U		0.059 U	
Aroclor-1242	mg/kg	0.062 U		0.62		1.9		0.12		0.092	
Aroclor-1248	mg/kg	0.062 U		0.16		0.23 U		0.061 U		0.058 J	
Aroclor-1254	mg/kg	0.062 U		0.12		0.17 J		0.088		0.11	
Aroclor-1260	mg/kg	0.062 U		0.092 U		0.23 U		0.061 U		0.059 U	
Total PCBs	mg/kg	0.062 U		0.90		2.1 J		0.21		0.26 J	
Miscellaneous											
Percent Solids	%	79.9		53.7		43.7		82.1		83.5	
TOC											
Total Organic Carbon	mg/kg	2250 J		56500		85700		12600 J		16700 J	
Grain Size Analysis											
Gravel	%	10.6		29.4		6.4		30.8		27.9	
Coarse Sand	%	13.1		11.2		5.9		15.9		18.9	
Medium Sand	%	65.2		14.5		3.5		39.1		39	
Fine Sand	%	8.9		15.5		16.1		10.9		11.3	
Silt	%	1.8		13.8		36.7		1.9		1.5	
Clay	%	0.5		15.5		31.4		1.3		1.4	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	100	19000	100	19000	100	19000	88.8	19000	100	19000
Sieve, 3/8 inch	% passing	93.7	9500	84.3	9500	100	9500	78.3	9500	80.4	9500
Sieve, #4	% passing	89.4	4750	70.6	4750	93.6	4750	69.2	4750	72.1	4750
Sieve, #10	% passing	76.3	2000	59.4	2000	87.7	2000	53.3	2000	53.2	2000
Sieve, #20	% passing	40.3	850	51.5	850	85.7	850	35.0	850	34.5	850
Sieve, #40	% passing	11.1	425	44.8	425	84.2	425	14.2	425	14.2	425
Sieve, #60	% passing	3.0	250	40.4	250	82.3	250	4.3	250	4.0	250
Sieve, #80	% passing	2.4	180	38.2	180	80.3	180	3.5	180	3.2	180
Sieve, #100	% passing	2.3	150	36.7	150	77.8	150	3.4	150	3.1	150
Sieve, #200	% passing	2.2	75	29.3	75	68.1	75	3.3	75	2.9	75
Hydrometer Reading 1	% passing	2.2	37	27.7	34	55.5	33	2.2	37	2.3	37
Hydrometer Reading 2	% passing	2.2	24	26.6	21	49.9	21	2.2	23	2.3	23
Hydrometer Reading 3	% passing	1.7	13.6	22.2	12.6	44.4	12.3	1.8	13.6	1.9	13.6
Hydrometer Reading 4	% passing	1.0	9.7	18.8	8.9	38.8	8.8	1.8	9.6	1.4	9.8
Hydrometer Reading 5	% passing	0.5	6.8	15.5	6.6	31.4	6.4	1.3	6.9	1.4	6.9
Hydrometer Reading 6	% passing	0.5	3.5	10.0	3.4	22.2	3.2	0.9	3.3	0.5	3.4
Hydrometer Reading 7	% passing	0.5	1.4	6.5	1.4	12.6	1.4	0.8	1.4	0.4	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name:		K56289		K56290		K56291		K56292		K56293	
Sample Depth (in):		0 - 2		0 - 2		0 - 2		0 - 2		0 - 2	
Date Collected:		03/13/09		03/13/09		03/13/09		03/13/09		03/13/09	
Location ID:	Units	PCS-CD2-1		PCS-CD2-2		PCS-CD2-3		PCS-MCA-1		PCS-MCA-2	
PCB Aroclors											
Aroclor-1016	mg/kg	0.067 U		0.34 U		0.069 U		0.068 U		0.37 U	
Aroclor-1221	mg/kg	0.067 U		0.34 U		0.069 U		0.068 U		0.37 U	
Aroclor-1232	mg/kg	0.067 U		0.34 U		0.069 U		0.068 U		0.37 U	
Aroclor-1242	mg/kg	0.067 U		1.4		0.069 U		0.042 J		1.9	
Aroclor-1248	mg/kg	0.067 U		0.55		0.41		0.068 U		0.37 U	
Aroclor-1254	mg/kg	0.067 U		1.1		0.069 U		0.068 U		0.37 U	
Aroclor-1260	mg/kg	0.067 U		0.34 U		0.041 J		0.068 U		0.37 U	
Total PCBs	mg/kg	0.067 U		3.1		0.45 J		0.042 J		1.9	
Miscellaneous											
Percent Solids	%	73.8		43.9		73.4		72.6		68.5	
TOC											
Total Organic Carbon	mg/kg	2840		30600 J		6860 J		3770 J		18000	
Grain Size Analysis											
Gravel	%	11.1		3.5		0		56.3		46.9	
Coarse Sand	%	18		4.9		0.8		7.6		8.6	
Medium Sand	%	52.9		21.7		2.4		31.7		29.1	
Fine Sand	%	17.3		57.8		81.5		4.1		6.6	
Silt	%	0.8		6		7.5		1		5.8	
Clay	%	0		6.1		7.7		-0.7		3.1	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	100	25000	100	25000	100	25000	68.5	25000	63.4	25000
Sieve, 3/4 inch	% passing	100	19000	100	19000	100	19000	68.5	19000	63.4	19000
Sieve, 3/8 inch	% passing	98.2	9500	100	9500	100	9500	49.4	9500	61.9	9500
Sieve, #4	% passing	88.9	4750	96.5	4750	100	4750	43.7	4750	53.1	4750
Sieve, #10	% passing	70.9	2000	91.7	2000	99.2	2000	36.1	2000	44.6	2000
Sieve, #20	% passing	46.4	850	83.8	850	98.8	850	23.3	850	30.3	850
Sieve, #40	% passing	18.0	425	69.9	425	96.8	425	4.4	425	15.4	425
Sieve, #60	% passing	3.3	250	40.0	250	77.9	250	0.6	250	11.2	250
Sieve, #80	% passing	1.3	180	24.2	180	50.5	180	0.4	180	10.3	180
Sieve, #100	% passing	1.0	150	18.7	150	37.0	150	0.4	150	9.9	150
Sieve, #200	% passing	0.8	75	12.1	75	15.2	75	0.3	75	8.9	75
Hydrometer Reading 1	% passing	0.5	38	12.0	36	14.9	34	0.3	38	6.8	36
Hydrometer Reading 2	% passing	0.5	24	11.0	23	13.1	22	0.3	24	6.3	23
Hydrometer Reading 3	% passing	0.0	13.8	9.1	13.2	10.5	12.8	0.3	13.8	4.7	13.4
Hydrometer Reading 4	% passing	0.0	9.9	7.1	9.3	9.2	9.2	0.7	9.6	3.6	9.7
Hydrometer Reading 5	% passing	0.0	6.7	6.1	6.7	7.7	6.7	0.7	7	3.1	6.6
Hydrometer Reading 6	% passing	0.1	3.4	4.0	3.4	5.9	3.2	0.8	3.6	2.1	3.3
Hydrometer Reading 7	% passing	0.1	1.4	2.8	1.4	3.9	1.4	0.8	1.4	1.1	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Sample Name: Sample Depth (in): Date Collected: Location ID:	Units	K56294 0 - 2 03/13/09 PCS-MCA-3		K56295 0 - 2 03/13/09 PCS-MCB-1		K56296 0 - 2 03/13/09 PCS-MCB-2		K56297 0 - 2 03/13/09 PCS-MCB-3		K56298 0 - 2 03/13/09 PCS-13A-3	
PCB Aroclors											
Aroclor-1016	mg/kg	0.056 U		0.077 U		0.052 U		0.80 U		0.069 U	
Aroclor-1221	mg/kg	0.056 U		0.077 U		0.052 U		0.80 U		0.069 U	
Aroclor-1232	mg/kg	0.056 U		0.077 U		0.052 U		0.80 U		0.069 U	
Aroclor-1242	mg/kg	0.056 U		0.077 U		0.052 U		5.6		0.23	
Aroclor-1248	mg/kg	0.056 U		0.077 U		0.052 U		0.80 U		0.083	
Aroclor-1254	mg/kg	0.056 U		0.077 U		0.052 U		1.1		0.13	
Aroclor-1260	mg/kg	0.056 U		0.077 U		0.052 U		0.80 U		0.069 U	
Total PCBs	mg/kg	0.056 U		0.077 U		0.052 U		6.7		0.44	
Miscellaneous											
Percent Solids	%	89.8		64.9		97		62.6		71.8	
TOC											
Total Organic Carbon	mg/kg	24100 J		30200 J		821 J		38300		16600 J	
Grain Size Analysis											
Gravel	%	76.1		55.2		90.6		2.7		5.6	
Coarse Sand	%	11.8		14.9		0.3		2.7		5	
Medium Sand	%	11.4		18.8		0.1		5.3		24.1	
Fine Sand	%	1.1		7		0		25.9		49.9	
Silt	%	-0.1		3.7		9.2		38.5		10.7	
Clay	%	-0.4		0.4		-0.2		24.9		4.6	
% passing/size (um)		**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**	**Percent Passing**	**Particle Size (um)**
Sieve, 3 inch	% passing	100	75000	100	75000	100	75000	100	75000	100	75000
Sieve, 2 inch	% passing	100	50000	100	50000	100	50000	100	50000	100	50000
Sieve, 1.5 inch	% passing	100	37500	100	37500	100	37500	100	37500	100	37500
Sieve, 1 inch	% passing	86	25000	84.5	25000	72.0	25000	100	25000	100	25000
Sieve, 3/4 inch	% passing	65.9	19000	76.6	19000	42.6	19000	100	19000	100	19000
Sieve, 3/8 inch	% passing	38.2	9500	62.0	9500	12.8	9500	100	9500	95.7	9500
Sieve, #4	% passing	23.9	4750	44.8	4750	9.4	4750	97.3	4750	94.4	4750
Sieve, #10	% passing	12.0	2000	29.9	2000	9.1	2000	94.6	2000	89.3	2000
Sieve, #20	% passing	4.0	850	20.8	850	9.0	850	92.7	850	78.3	850
Sieve, #40	% passing	0.6	425	11.0	425	9.0	425	89.3	425	65.3	425
Sieve, #60	% passing	0.4	250	5.1	250	9.0	250	78.3	250	43.1	250
Sieve, #80	% passing	0.5	180	4.4	180	9.0	180	70.9	180	29.6	180
Sieve, #100	% passing	0.5	150	4.2	150	8.9	150	68.3	150	24.4	150
Sieve, #200	% passing	0.5	75	4.1	75	8.9	75	63.4	75	15.4	75
Hydrometer Reading 1	% passing	0.4	38	1.3	37	0.2	38	43.1	33	11.2	37
Hydrometer Reading 2	% passing	0.4	24	1.3	24	0.2	24	38.9	21	7.9	24
Hydrometer Reading 3	% passing	0.4	14	0.4	13.8	0.2	13.9	34.7	12.3	7.9	13.6
Hydrometer Reading 4	% passing	0.4	9.7	0.4	9.6	0.2	9.7	29.1	8.6	6.3	9.7
Hydrometer Reading 5	% passing	0.4	7	0.4	7	0.2	7	24.9	6.4	4.6	6.7
Hydrometer Reading 6	% passing	0.4	3.5	0.0	3.5	0.2	3.3	16.8	3.1	3.3	3.3
Hydrometer Reading 7	% passing	0.4	1.4	0.0	1.4	0.2	1.4	11.2	1.4	1.4	1.4

See Notes on Page 17

Kalamazoo River Study Group
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Supplemental Remedial Investigations/Feasibility Studies
Former Plainwell Impoundment Sediment Confirmation Sampling

Table 2 -- Post-Removal Surface Sediment Data Summary of Sample Analytical Results
(2008 and 2009 Data)

Notes:
1. J = indicates an estimated value.
2. U = compound was analyzed for but not detected. The associated value is the compound quantitation limit.
3. um = micrometers.
4. mg/kg = milligrams per kilogram.

ARCADIS

Figures

KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC./PORTAGE CREEK/
KALAMAZOO RIVER SUPERFUND SITE

FORMER PLAINWELL IMPOUNDMENT SEDIMENT CONFIRMATION SAMPLING

2008/2009 POST-REMOVAL SURFACE SEDIMENT PCB RESULTS

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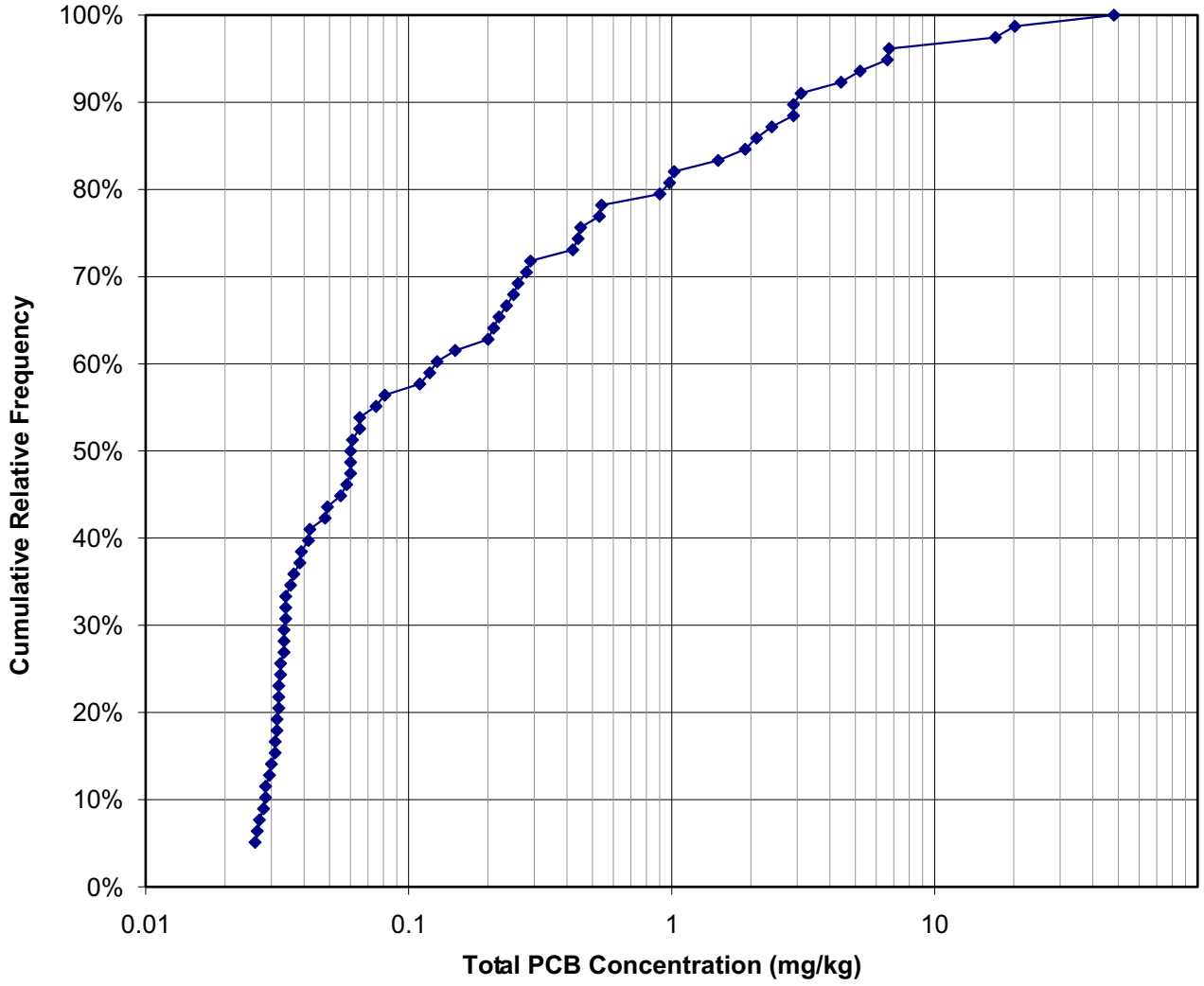
FIGURE
1

CITY: SYRACUSE DIV/GROUP: 141/ENV DB: LJP LD:(Opt) PIC:(Opt) PM: M.ERICKSON TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
V:\ENVCAD\SYRACUSE\ACT\CB\00201336\0000\000020\DWG\GMA1\NAPL\SPRING09\201336W10.DWG LAYOUT: 1SAVED: 8/7/2009 2:45 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: ----:PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 8/7/2009 4:19 PM BY: POSENAUER, LISA
XREFS: 64530X02 IMAGES: OTSEGO_NE.ecw



Note:
Duplicate samples were averaged and PCB non-detects are shown as one-half of the sample quantitation limit.

KALAMAZOO RIVER STUDY GROUP
ALLIED PAPER, INC./PORTAGE CREEK/
KALAMAZOO RIVER SUPERFUND SITE

POST-REMOVAL SURFACE SEDIMENT PCB SAMPLING RESULTS

2008/2009 POST-REMOVAL SURFACE SEDIMENT TOTAL PCB CUMULATIVE RELATIVE FREQUENCY DISTRIBUTION

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FIGURE
2

08/05/09 SYRACUSE, NY-ENV/141-DJHOWES
B0064539/0000/00500/CDR/64539G07.CDR

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Attachment 1

2008 and 2009 Sampling
Field Notes and
Photographs

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January 2008 Field Notes

1/22/08 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID PCS-8-3
WATER DEPTH 6.0' TIME 1128
SED PENETR 1.1'
METHOD POWER DRUDGE 0-2" GRAB
DESC BROWN FINE SAND AND SHELLS, LOOSE

SAMPLE ID ~~KS5360~~ KS5459 (STARTS WHERE SRI LEFT OFF)
ANALYSIS PCB, TOC, GRAIN SIZE * PHOTO SHOWS ID AS KS5360, SHOULD BE KS5459

LOCATION ID PCS-8-2
WATER DEPTH 4.0' TIME 1159
SED PENETR 2.4'
METHOD POWER DRUDGE 0-2" GRAB
DESC GRAY/BROWN FINE SAND, LITTLE C SAND, TRACE SHELLS, TRACE SLAG, LOOSE

SAMPLE ID KS5460
ANALYSIS PCB, TOC, GRAIN SIZE

LOCATION ID PCS-8-1
WATER DEPTH 4.9' TIME 1230/1235
SED PENETR 1.1'
METHOD POWER DRUDGE 0-2" GRAB
DESC GRAY/BROWN FINE SAND, TRACE C SAND, TRACE SHELLS

SAMPLE ID KS5461 (KS5462 - DUPLICATE)
ANALYSIS PCB, TOC, GRAIN SIZE * MS/MSD COLLECTED HERE

ON SITE ROB KUHN, TOM O'ROURKE, MIKE COURTNEY - ARCADIS
ANDREW SANTINI - CDM OVERSITE
WEATHER COLD ~20°F, SNOW

1/22/08 FORMER PLANTWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID	PCS-7-3
WATER DEPTH	4.9'
SED PROBED	0'
METHOD	TRIED PONAR DREDGE: SS HAND AUGER
DESC	N/A - NO SEDIMENT
SAMPLE ID	N/A
ANALYSIS	N/A

LOCATION ID	PCS-7-2
WATER DEPTH	5.2' TIME 1322
SED PROBED	0.05'
METHOD	PONAR DREDGE 0-2" GRAB
DESC	GRAY BROWN FINE SAND, TRACE C SAND, TRACE SHELL
SAMPLE ID	KS5463
ANALYSIS	PCB/TOC - INSUFFICIENT VOLUME FOR GRAIN SIZE

LOCATION ID	PCS-7-1
WATER DEPTH	4.1' TIME 1344
SED PROBED	0.05'
METHOD	PONAR DREDGE / SS HAND AUGER
DESC	N/A - NO SEDIMENT (GRAVEL ON HARD BOTTOM)
SAMPLE ID	N/A
ANALYSIS	N/A

1/22/08 FORMER PLANTWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID	PCS-6B-3
WATER DEPTH	3.0' TIME 1400
SED PROBED	0.1'
METHOD	SS AUGER 0-2" GRAB
DESC	DARK GRAY BROWN SILTY FINE SAND, TRACE FINE GRAVEL, SLIGHT ODOR
SAMPLE ID	KS5464
ANALYSIS	PCB/TOC/GRAIN SIZE * PHOTO SHOWS ID AS PCS-6-3

LOCATION ID	PCS-6B-2
WATER DEPTH	2.9' TIME 1430
SED PROBED	0.1'
METHOD	SS AUGER 0-2" GRAB
DESC	GRAY BROWN FINE SAND, LITTLE C SAND, TRACE FINE GRAVEL, TRACE SILT
SAMPLE ID	KS5465
ANALYSIS	PCB/TOC/GRAIN SIZE

LOCATION ID	PCS-6B-1
WATER DEPTH	2.2' TIME 1500/1505
SED PROBED	0.1'
METHOD	PONAR DREDGE 0-2" GRAB
DESC	DARK GRAY BROWN SILTY CLAY, TRACE FINE SAND, TRACE FINE GRAVEL, SLIGHT ODOR, TRACE SHELLS
SAMPLE ID	KS5466 (KS5467 - DUPLICATE)
ANALYSIS	PCB/TOC/GRAIN SIZE - INCLUDES MS/MSD

1/22/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-I1-3
Water Depth	2.7' Time 1505
Sed Probed	0.4'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown F to M Sand, Trace C Sand, Trace F Gravel, Trace Shells
Sample ID	K55468
Analysis	PCB/TOC/Grain Size
Location ID	PCS-I1-2
Water Depth	2.5' Time 1515
Sed Probed	0.5'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown F to C Sand, Little F to M Gravel, Little Shells, Loose
Sample ID	K55469
Analysis	PCB/TOC/Grain Size
Location ID	PCS-I1-1
Water Depth	2.6' Time 1520
Sed Probed	0.4'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown F to C Sand, Little F to C Gravel, Trace Shells, Loose
Sample ID	K55470
Analysis	PCB/TOC/Grain Size

1/22/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-I2-3
Water Depth	3.0' Time 1540
Sed Probed	0.3'
Method	SS Auger 0-2" Grab
Desc	Gray Brown F to M Sand, Little C Sand, Trace F to C Gravel, Loose
Sample ID	K55471
Analysis	PCB/TOC/Grain Size
Location ID	PCS-I2-2
Water Depth	3.0' Time 1550
Sed Probed	0.3'
Method	SS Auger 0-2" Grab
Desc	Gray Brown F to M Sand, Trace C Sand, Trace F Gravel, Trace Shells, Loose
Sample ID	K55472
Analysis	PCB/TOC/Grain Size
Location ID	PCS-I2-1
Water Depth	2.6' Time 1605
Sed Probed	0.1'
Method	Ponar Dredge 0-2" Grab
Desc	Dark Brown Leaves and Loose, Watery Silt
Sample ID	K55473
Analysis	PCB/TOC/Grain Size

1/23/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-5-3
Water Depth	0.3' Time 0944
Sed Probed	1.7'
Method	SS Auger 0-2" Grab
Desc	Dark Brown Silt, Little F Sand, Trace C Gravel
Sample ID	K55474
Analysis	PCB/TOC/Grain Size
Location ID	PCS-5-2
Water Depth	3.2' Time 1000
Sed Probed	0.1'
Method	Ponar Dredge 0-2" Grab
Desc	Brown Very Loose Silt, Trace F Sand, Trace Organics (veg)
Sample ID	K55475
Analysis	PCB/TOC/Grain Size
Location ID	PCS-5-1
Water Depth	2.5' Time 1015
Sed Probed	0.4'
Method	Ponar Dredge 0-2" Grab
Desc	Brown Very Loose Silt, Trace F Sand, Trace Organics (veg)
Sample ID	K55476
Analysis	PCB/TOC/Grain Size

In Attendance: Ron Kuhn, Tom O'Roure, Mike Courtney - Arcadis
Andrew Santini - CDM Oversite

Weather: Overcast, Periodic Snow, 15°F

1/23/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-2A-3
Water Depth	0.8' Time 1030
Sed Probed	~~2.1'~~ 1.3'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown F to M Sand, Little C Sand, Trace F Gravel, Trace Shells, Loose
Sample ID	K55477
Analysis	PCB/TOC/Grain Size
Location ID	PCS-2A-2
Water Depth	0.8' Time 1040
Sed Probed	2.1'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown F to M Sand, Little C Sand, Trace F Gravel, Trace Organics (wood), Loose
Sample ID	K55478
Analysis	PCB/TOC/Grain Size
Location ID	PCS-2A-1
Water Depth	1.4' Time 1045
Sed Probed	1.6'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Loose Silt, Little F Sand, Little Organics (leaves, veg, twigs)
Sample ID	K55479
Analysis	PCB/TOC/Grain Size

1/23/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-1-3
Water Depth	2.5' Time 1055
Sed Probed	0.5'
Method	Ponar Dredge 0-2" Grab Silt
Desc	Brown f om Gravel over Dark Gray f Sand, Loose
Sample ID	K55486
Analysis	PCB/TOC/Grain Size
Location ID	PCS-1-2
Water Depth	3.0' Time 1105
Sed Probed	1.0'
Method	Ponar Dredge 0-2" Grab
Desc	Brown f to C Sand, Little f om Gravel over Dark Gray Silty f Sand, Trace Organics (wood)
Sample ID	K55481 ~~0-2" Grab~~
Analysis	PCB/TOC/Grain Size
Location ID	PCS-1-1 * Location moved ~3' South (original fell over Bank)
Water Depth	0.8' Time 1115
Sed Probed	2.0'
Method	SS Auger 0-2" Grab
Desc	Orange Brown f to C Sand, Little f om Gravel over Dark Gray Clayey Silt, Slight odor
Sample ID	K55482
Analysis	PCB/TOC/Grain Size

1/23/08 Former Plainwell Impoundment Post Construction Sampling

Location ID	PCS-3B-1
Water Depth	1.7' Time 1140
Sed Probed	0.1'
Method	SS Auger 0-2" Grab
Desc	Gray Brown f om Sand, Little C Sand, Trace f om Gravel, Trace Organics (Twigs) over Gray Brown Sandy Clay
Sample ID	K55483
Analysis	PCB/TOC/Grain Size
Location ID	PCS-3B-2
Water Depth	1.7' Time 1200
Sed Probed	0.4'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown f to C Sand, Little/Some f to C Gravel, Trace Silt, Loose
Sample ID	K55484
Analysis	PCB/TOC/Grain Size
Location ID	PCS-3B-3
Water Depth	2.0' Time 1210
Sed Probed	0.1'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown f om Sand, Little C Sand, Little f to C Gravel, Trace Silt
Sample ID	K55485
Analysis	PCB/TOC/Grain Size

1/23/08 Former Plankell Impoundment Post Construction Sampling

Location ID	PCS-4B-1
Water Depth	3.2' Time 1220
Sed Probed	0.7'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Foc Gravel and Foc Sand, Trace Silt, Trace Shells
Sample ID	K55486
Analysis	PCB / TOC / Grain Size
Location ID	PCS-4B-2
Water Depth	3.4' Time 1230
Sed Probed	1.4'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Fine Sand, Trace C Sand, Loose
Sample ID	K55487
Analysis	PCB / TOC / Grain Size
Location ID	PCS-4B-3
Water Depth	3.3' Time 1240
Sed Probed	0.8'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Fine Sand, Trace C Sand, Trace Shells
Sample ID	K55488
Analysis	PCB / TOC / Grain Size

1/23/08 Former Plankell Impoundment Post Construction Sampling

Location ID	PCS-6A-1
Water Depth	1.5' Time 1250
Sed Probed	0.0
Method	SS Auger / Ponar Dredge
Desc	"Rip Rap" @ sample location, moved up to 15' south in an attempt to correct sample, very fast current w/ hard cobble/gravel bottom - no sediment present
Sample ID	N/A
Analysis	N/A
Location ID	PCS-6A-2
Water Depth	3.6' Time 1305
Sed Probed	0.1'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Foc Gravel, Little Foc Sand, Trace Shells
Sample ID	K55489 * Several attempts made to get sufficient volume
Analysis	PCB / TOC / Grain Size
Location ID	PCS-6A-3
Water Depth	3.4' Time 1325
Sed Probed	1.2'
Method	Ponar Dredge 0-2" Grab
Desc	Gray Brown Foc Sand, Little/Some Foc Gravel, Little Shells, Trace veg
Sample ID	K55490
Analysis	PCB / TOC / Grain Size
Sample ID	K55491 - Equipment Rinse Blank on Ponar Dredge
Sample ID	K55492 - Equipment Rinse Blank on SS Auger

* Equipment Rinse Blanks collected by pouring Distilled H2O over decontaminated equipment into lab provided glassware.

ARCADIS

January 2008 Photo Log

Photographic Log Former Plainwell Impoundment Post-TCRA Sample Photos

Project Number: B0064539.0000.00500
Project Name: Former Plainwell Impoundment
City, State: Plainwell, Michigan

Dates: January 22, 2008 - January 23, 2008
Number of photos In this series: 30
Photographer: Ron Kuhn

File Name: PCS-1-1.JPG
Date: 1/23/08
Location ID: PCS-1-1
Sample ID: K55482
Interval: 0-2 inches
Notes: Sample date in the photograph is incorrectly noted as 2007. All post-construction samples collected at the end of the first construction season were collected in January 2008. See Table 2 for correct collection dates.

P1

File Name: PCS-1-2.JPG
Date: 1/23/08 * (See note above.)
Location ID: PCS-1-2
Sample ID: K55481
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P2

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-1-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-1-3
Sample ID: K55480
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P3

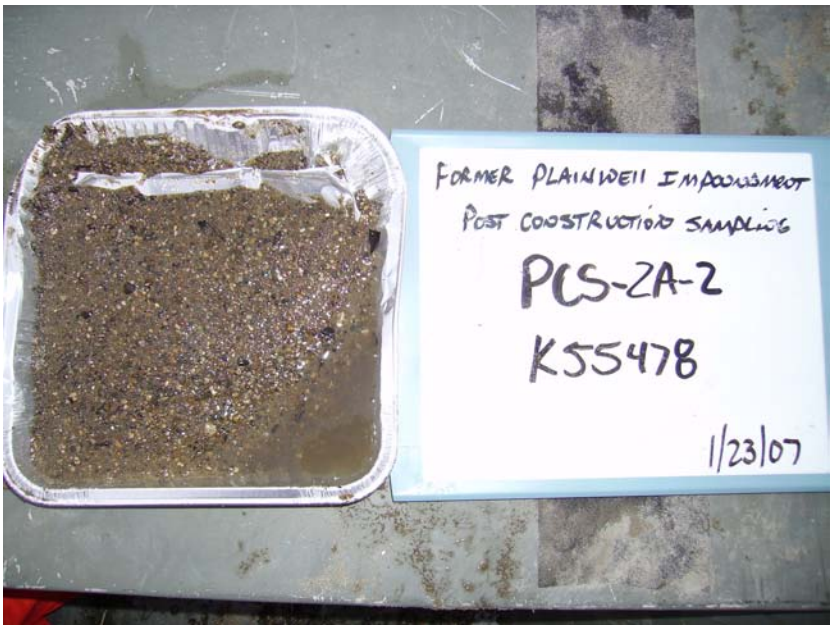
File Name: PCS-2A-1.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-2A-1
Sample ID: K55479
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P4

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS



File Name: PCS-2A-2.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-2A-2
Sample ID: K55478
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P5

File Name: PCS-2A-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-2A-3
Sample ID: K55477
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P6

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-3B-1.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-3B-1
Sample ID: K55483
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P7

File Name: PCS-3B-2.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-3B-2
Sample ID: K55484
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P8

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-3B-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-3B-3
Sample ID: K55485
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P9

File Name: PCS-4B-1.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-4B-1
Sample ID: K55486
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P10

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-4B-2.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-4B-2
Sample ID: K55487
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P11

File Name: PCS-4B-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-4B-3
Sample ID: K55488
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P12

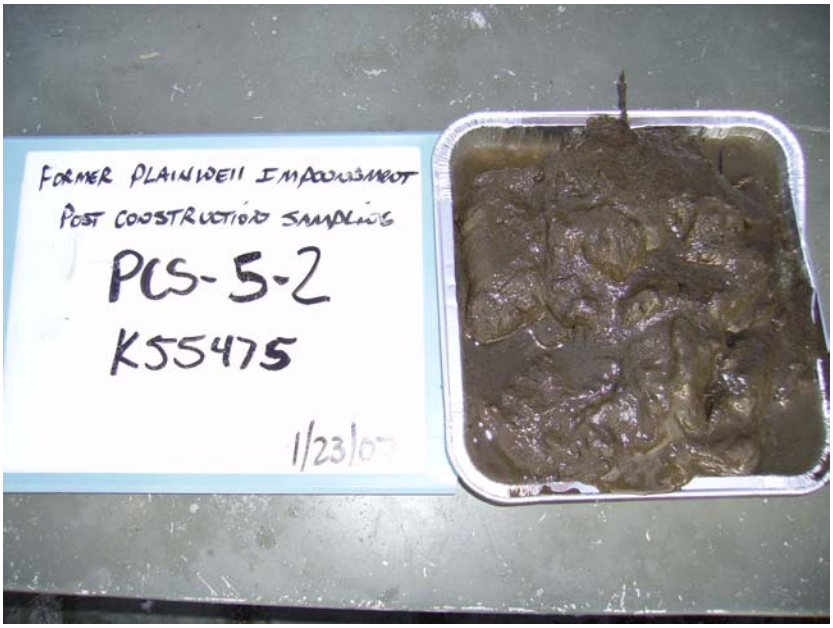
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-5-1.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-5-1
Sample ID: K55476
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P13



File Name: PCS-5-2.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-5-2
Sample ID: K55475
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P14

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-5-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-5-3
Sample ID:K55474
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P15

File Name: PCS-6-3.JPG
Date: 1/22/08
Location ID: PCS-6-3
Sample ID: K55464
Interval: 0-2 inches

P16

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-6A-2.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-6A-2
Sample ID: K55489
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P17

File Name: PCS-6A-3.JPG
Date: 1/23/08* (See note on first page.)
Location ID: PCS-6A-3
Sample ID:K55490
Interval: 0-2 inches
Notes: Collected in 2008. See Table 2 for correct collection dates.

P18

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-6B-1.JPG
Date: 1/22/08
Location ID: PCS-6B-1
Sample ID: K55466 and K55467
Interval: 0-2 inches

P19

File Name: PCS-6B-3.JPG
Date: 1/22/08
Location ID: PCS-6B-2
Sample ID: K55465
Interval: 0-2 inches

P20

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-7-2.JPG
Date: 1/22/08
Location ID: PCS-7-2
Sample ID: K55463
Interval: 0-2 inches

P21

File Name: PCS-8-1.JPG
Date: 1/22/08
Location ID: PCS-8-1
Sample ID: K55461 and K55462
Interval: 0-2 inches

P22

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-8-2.JPG
Date: 1/22/08
Location ID: PCS-8-2
Sample ID: K55460
Interval: 0-2 inches

P23

File Name: PCS-8-3.JPG
Date: 1/22/08
Location ID: PCS-8-3
Sample ID: K55360
Interval: 0-2 inches

P24

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-I1-1.JPG
Date: 1/22/08
Location ID: PCS-I1-1
Sample ID: K55470
Interval: 0-2 inches

P25

File Name: PCS-I1-2.JPG
Date: 1/22/08
Location ID: PCS-I1-2
Sample ID: K55469
Interval: 0-2 inches

P26

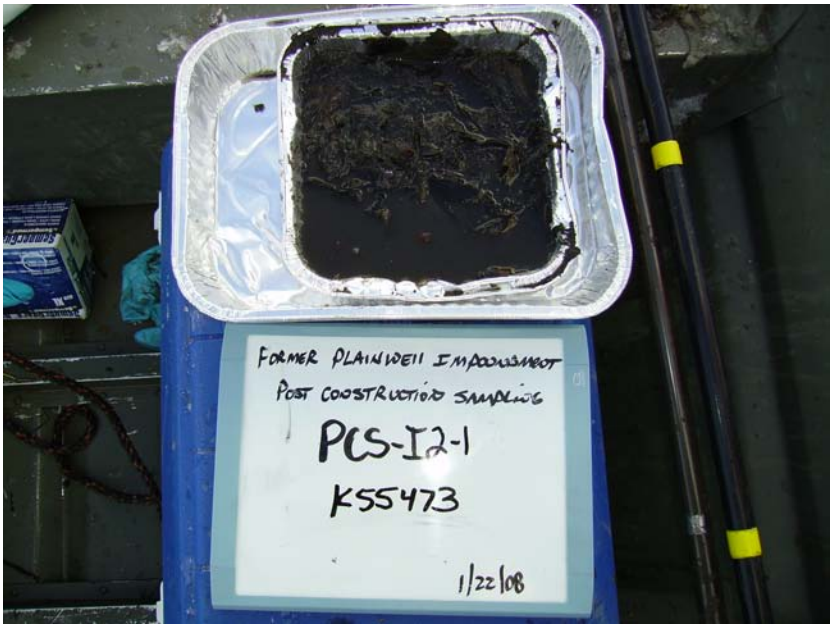
Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-I1-3.JPG
Date: 1/22/08
Location ID: PCS-I1-3
Sample ID: K55468
Interval: 0-2 inches

P27



File Name: PCS-I2-1.JPG
Date: 1/22/08
Location ID: PCS-I2-1
Sample ID: K55423
Interval: 0-2 inches

P28

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

File Name: PCS-I2-2.JPG
Date: 1/22/08
Location ID: PCS-I2-2
Sample ID: K55472
Interval: 0-2 inches

P29

File Name: PCS-I2-3.JPG
Date: 1/22/08
Location ID: PCS-I2-3
Sample ID: K55471
Interval: 0-2 inches

P30

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

SITE PHOTO LOG

ARCADIS

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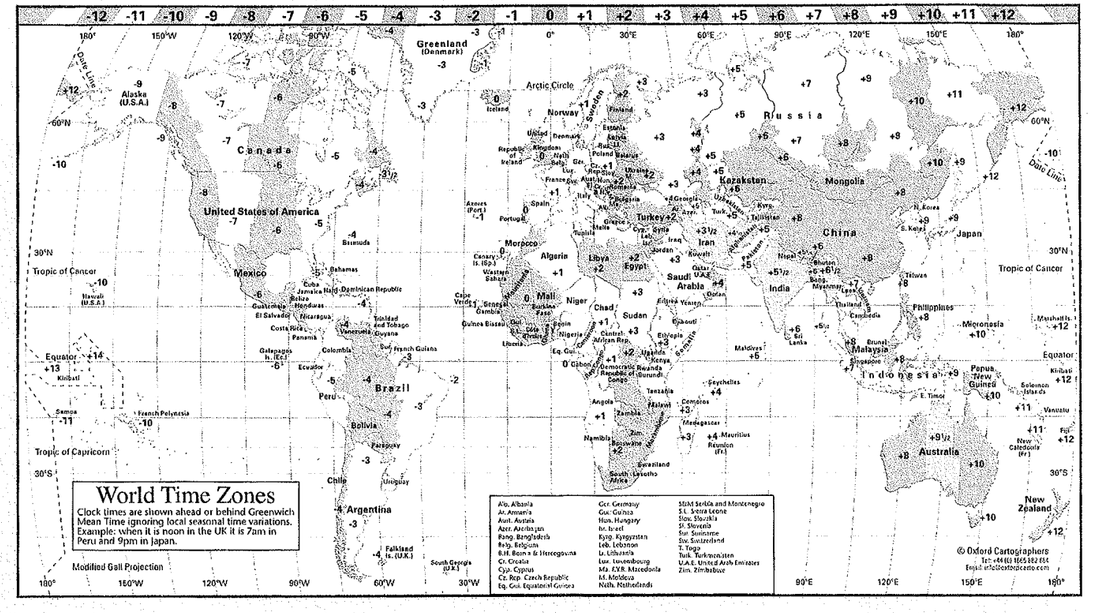
March 2009 Field Notes

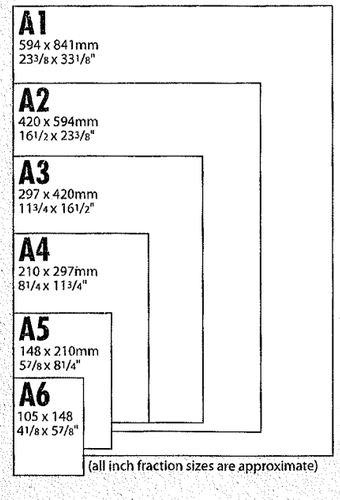
Useful Information

Black n' Red

World time zones

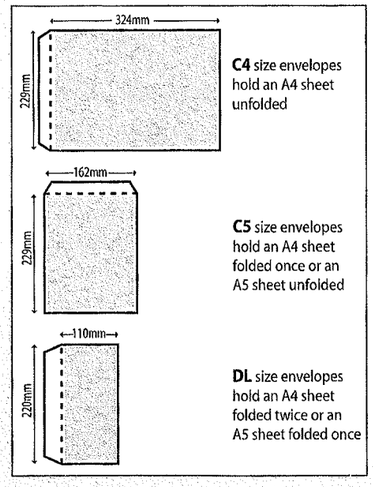


European paper sizes



(all inch fraction sizes are approximate)

European envelope sizes



US paper sizes

Description	Size mm	inches
Junior Legal	127 x 203	5 x 8
Executive	190 x 254	7 1/2 x 10
Letter	216 x 279	8 1/2 x 11
Legal	216 x 356	8 1/2 x 14
Ledger/Tabloid	279 x 432	11 x 17

US envelope sizes (commercial)

Description	Size (inches)
#6 1/4	3 1/2 x 6
#6 1/4	3 1/2 x 6 1/4
#6 3/4	3 5/8 x 6 1/2
#7	3 3/4 x 6 3/4
Check (Official)	3 5/8 x 8 5/8
#9	3 7/8 x 8 7/8
#10	4 1/8 x 9 1/2
#14	5 x 11 1/2

Conversion tables (figures may be rounded)

1in	=	2.54 cm
1cm	=	0.3937 in
1ft	=	0.3048 m
1m	=	3.2808 ft
1yd	=	0.9144 m
1m	=	1.0936 yd
1mile	=	1.6093 km
1km	=	0.6214 mile

1in^2	=	6.4516cm^2
1cm^2	=	0.155 in^2
1ft^2	=	0.0929 m^2
1m^2	=	10.7639 ft^2
1mile^2	=	2.5900 km^2
1km^2	=	0.3861 miles^2
1acre	=	0.4047 ha
1ha	=	2.471 acres

1in^3	=	16.387 cm^3
1cm^3	=	0.06102 in^3
1ft^3	=	0.02832 m^3
1m^3	=	35.3147 ft^3
1yd^3	=	0.76456 m^3
1m^3	=	1.30795 yd^3
1US gal	=	3.7854 litre
1litre	=	0.2642 US gal
1US gal	=	0.8327 UK gal

1UK gal	=	4.546 litre
1litre	=	0.22 UK gal
1oz	=	28.3495 g
1g	=	0.03527 oz
1lb	=	453.59 g
1g	=	0.002205 lb
1kg	=	2.2046 lb
1t (long)	=	1016.0469 kg
1kg	=	0.00098 t (long)

Speed

MPH 30 40 50 60 70 80

Temperature

0°F 32°F 212°F

F = 9/5 C+32

1

3/09/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID: PCS-9A-1
WATER DEPTH: 4.5
SED. PROBED: 0.0
METHOD: 3" HAND AUGER

TIME: 1520
PEN: -
REC: -

→ 2 ATTEMPTS w/ LEXANE
5 ATTEMPTS w/ PONAR DREDGE
ALL UNSUCCESSFUL DUE TO FAST MOVING WATER. HAND AUGER TO BE USED UNLESS LOW FLOW + SOFT SEDIMENTS ARE ENCOUNTERED TOGETHER, THEN PRESENT LEXANE WILL BE USED
EPA OVERSIGHT INFORMED + IN AGREEMENT W/ METHOD

DESC. DK GRAY BLACK, ~~F-C SAND, TR~~ F-C GRAVEL (SUB), TR. F. SAND

SAMPLE ID: ~~K56226~~ AES K56250
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-9A-2
WATER DEPTH: 4.7
SED PROBED: 0.1
METHOD: 3" HAND AUGER

TIME: 1535
PEN.
REC.

DESC: BLACK ROUNDED C. GRAVEL, LITTLE F-M SUB ROUNDED TO SUB ANG GRAVEL, TR F. SAND

SAMPLE ID: ~~K56227~~ AES K56251
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-9A-3
WATER DEPTH: 5.2
SED PROBED: 0.1
METHOD: 3" HAND AUGER

TIME 1545
PEN.
REC.

DESC.: BLACK F-M GRAVEL, LITTLE F. SAND, + ROUNDED GRAVEL TR. SILT

SAMPLE ID: ~~K56228~~ AES K56255
ANALYSIS: PCB/TOC/GRAIN SIZE

IN ATTENDANCE: PRIMARIS - B. LAWRENCE, M. KOHNGEN, N. HARMER, N. SMITH
CHEMTECH - MARK MISCHAK
TYK - [illegible]

D Z

Fc

Ja

03/09/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID: PCS-9B-1
WATER DEPTH: 5.7 TIME: 1610
SED. PROBED: 0.0 PEN.: –
METHOD: 3" HAND AUGER REC.: –
DESC.: BLK, F. SAND, F-M SAND, F-M GRAVEL, TR. C. GRAVEL, TR ORG (SHELLS) (TWIGS)

SAMPLE ID: ~~K56229~~ AES K56253
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-9B-2
WATER DEPTH: 6.0 TIME: 1615HRS
SED. PROBED: 0.0 PEN.: ~~0.0'~~ N/A
METHOD: 3" HAND AUGER REC.: N/A
DESC.: BLK F-M GRAVEL, SOME C. ROUNDED GRAVEL, LITTLE F-M SAND, TR ORG (SHELLS)

SAMPLE ID: ~~K56230~~ AES K56254
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-9B-3
WATER DEPTH: 6.5' TIME: 1625HRS
SED. PROBED: 0.0' PEN.: –
METHOD: 3" HAND AUGER REC.: –
DESC.: BLK F-M GRAVEL, F. SAND, C. GRAVEL

SAMPLE ID: ~~BLK F-M GRAVEL~~ ~~K56228~~ AES K56252
ANALYSIS: PCB/TOC/GRAIN SIZE, ~~F. SAND, F. GRAVEL~~

03/09/09 FMR. PLAINWELL IMPOUNDMENT POST CONS. SAMPLING

LOCATION ID: PCS-~~10A-1~~ 10A-1
WATER DEPTH: 5.5' TIME: 1635HRS
SED. PROBED: 0.0' PEN.: –
METHOD: 3" HAND AUGER. REC.: –
DESC.: F-M GRAVEL, C. GRAVEL, F. SAND, SILT

SAMPLE ID: ~~K56232~~ AES K56256
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-10A-2
WATER DEPTH: 5.8' TIME: 1645HRS
SED. PROBED: .10' PEN.: –
METHOD: 3" HAND AUGER REC.: –
DESC.: PCB/TOC/GRAIN SIZE

SAMPLE ID: ~~K56233~~ AES K56257
ANALYSIS: F. GRAVEL, M. GRAVEL, TR. C GRAVEL, F TO M SAND/SILT

LOCATION ID: PCS-10A-3
WATER DEPTH: 5.0' TIME: 1655HRS
SED. PROBED: 0.0' PEN.: –
METHOD: 3" HAND AUGER REC.: –
DESC.: PCB/TOC/GRAIN SIZE

SAMPLE ID: ~~K56234~~ ACS K56258
ANALYSIS: F TO M GRAVEL, F TO C SAND, TR C. GRAVEL, F. SAND/SILT

03/09/09 FMR PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID: 108-1
WATER DEPTH: 5.8' TIME: 5:30
SED. PROBED: 0.10' PEN.: -
METHOD: 3" HAND AUGER REC.: -
DESC.: M to C GRAVEL, SOME F. GRAVEL, TR F. SAND/SILT

SAMPLE ID: ~~A56235~~ AES K56259
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 108-2
WATER DEPTH: 5.7' TIME: 1742
SED. PROBED: 0.0' PEN.: -
METHOD: HAND AUGER REC.: -
DESC.: C. GRAVEL, M. GRAVEL, TR F. SAND/SILT

SAMPLE ID: ~~A56236~~ AES K56260
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 108-3
WATER DEPTH: 5.6' TIME: 1753
SED. PROBED: 0.0' PEN.: -
METHOD: HAND AUGER REC.: -
DESC.: F-C. GRAVEL

SAMPLE ID: ~~A56237~~ AES K56261
ANALYSIS: PCB/TOC/GRAIN SIZE

03/10/09
03/09/09 FMR. PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION ID: PCS-MCL-1
WATER DEPTH: 6.2' TIME: 1438
SED. PROBED: 0.0' PEN.: -
METHOD: HAND AUGER REC.: -
DESC.: FINE GRAVEL, FROM SAND, TR SILT

SAMPLE ID: ~~A56238~~ AES K56262
ANALYSIS: ~~FINE GRAVEL, FROM SAND, TR SILT~~ (BL) PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-MCL-2
WATER DEPTH: 6.3' TIME: 1447
SED. PROBED: 0.0 PEN.: -
METHOD: HAND AUGER REC.: -
DESC.: FROM GRAVEL, C GRAVEL, FROM SAND/SILT

SAMPLE ID: ~~A56239~~ AES K56263
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: PCS-MCL-3
WATER DEPTH: 6.2 TIME: 1453
SED. PROBED: 0.0 PEN.: -
METHOD: HAND AUGER REC.: -
DESC.: C. GRAVEL, FRO M GRAVEL, TR SILT/SAND

SAMPLE ID: ~~A56240~~ AES K56264
ANALYSIS: PCB/TOC/GRAIN SIZE

IN ATTENDANCE: R. LAWRENCE, M. HOMAGER, N. HARMAN (ALLIADS)
CHEMTECH M. MASSHAK

03/10/09 FMR. PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

PCS-MCC-1
H_2O - 6.2'
PEN. - 0.0'
1438 HRS

RECORDED IN THE FIELD 3/10/09 PS6
TRANSFERED 3/16/09 TO PG5.

PCS-MCC-2
H_2O - 6.3'
PEN - 0.0'
1447 HRS

PCS-MCC-3
H_2O - 6.2'
PEN - 0.0'
1453 HRS.

- CONTACTED M. SCHUELKE OF SAMPLE LOCATIONS FALLING IN RESTORATION MAT'L ADVISED TO STEP OUT 20FT UPSTREAM WITHIN REMOVAL LIMITS & COLLECT SAMPLE @ REVISED LOCATION.
- CHEMHILL - M. MASSLINK INFORMED OF LOCATION CHANGE & PROCEDURES. M. MASSLINK CONTACTED JEFF KAISER (CHEMHILL SUPERVISOR) TO INFORM

PCS-~~8~~ 11A-1
H_2O - ~~3'10"~~ (MC) 3.10'
PEN - 0.8'
1458 HRS
K56265

PCS-11A-2
H_2O - 7.4'
PEN - 0.0'
1505 K56266

03/10/09 FMR. PLAINWELL IMPOUNDMENT POST CONSTRUCTION

LOCATION ID: PCS-11A-3
WATER DEPTH: 6.3'
SED PROBED: 0.0
METHOD: 3" HAND AUGER
TIME: 1513
DESC.: C. GRAVEL, FROM GRAVEL
SAMPLE ID: ~~K56243~~ AES K56267

LOCATION ID: PCS-12B-3
WATER DEPTH: 7.3'
SED PROBED: 0.0
METHOD: 3" HAND AUGER
TIME: 1559
DESC: FINE GRAVEL
SAMPLE ID: ~~K56245~~ AES K56269
~~K56246~~ AES - DUP-01 K56270

LOCATION ID: PCS-12B-2
WATER DEPTH: 5.4'
SED PROBED: 0.0
METHOD: 3" HAND AUGER
TIME: 1610
DESC: GEOTEXTILE - F. GRAVEL, TR C. GRAVEL, FROM SAND
SAMPLE ID: ~~K56244~~ AES K56268

LOCATION ID: PCS-12B-1
WATER DEPTH: @ WATER LINE (0)
SED PROBED: 0 (RESTORATION STONE)
METHOD: 3" HAND AUGER
TIME: 1615
DESC: NOT SAMPLED DUE TO RESTORATION STONE.

PCS-12B-1 (Revised) 3/12/09
W.D = 7.2'
SED. PROBED: 1.3'
METHOD: HAND AUGER
TIME: 1257
SAMPLE ID: ~~K56260~~ AES K56284
DESC: FROM SAND. MAT'L GRAVEL

3/12/09

3/11/09 MT FMR PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING.

LOCATION ID: 11B-3 0958
WATER DEPTH: 6.2
SED PROBED: 0.2
METHOD: HAND AUGER
DESC: LOCATION JUST N (INSTREAM) RIVER RUN ROCK (F. SAND, MTOC GRAVEL)

SAMPLE ID: ~~K56250~~ AES K56274
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 11B-2/(REV) 1002/1025
WATER DEPTH: 5.5 / 7.2
SED PROBED: 0.0 / 0.2
METHOD: HAND AUGER
DESC: ON TOP OF RIVER RUN ROCK / 20FT ~~X~~ INSTREAM FROM EXISTING LOCATION / FTOMSAND, CTOM GRAVEL

SAMPLE ID: ~~K56249~~ AES K56273
ANALYSIS: ~~PCB/TOC~~ PCB/TOC/GRAINSIZE

LOCATION ID: 11B-1/REV 1004/1028
WATER DEPTH: 0.7/6.0
SED PROBED: 0.0 / 0.2
METHOD HAND AUGER
DESC: ON TOP OF RIVER RUN ROCK / (MTOC GRAVEL)

SAMPLE ID: ~~K56248~~ AES K56272
ANALYSIS: PCB/TOC/GRAINSIZE

IN ATTENDANCE: ARCADIS B. LAWRENCE, M. KOHAGEN, N. HARMER
CH2MHILL M. MISHAK

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING.

LOCATION ID: ~~12B-3~~ 12A-3 1008
WATER DEPTH: 10.0
SED PROBED: 0.4
METHOD: HAND AUGER
DESC: VF SAND, SILT, M. GRAVE

SAMPLE ID: ~~K56254~~ AES K56278
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 12A-2 1010
WATER DEPTH: 9.2
SED PROBED: 0.0
METHOD: HAND AUGER
DESC: VFSAND/SILT

SAMPLE ID: ~~K56253~~ AES K56277
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 12A-1 1015
WATER DEPTH: 7.7
SED PROBED: 0.0
METHOD: HAND AUGER
DESC: VF. SAND/SILT

SAMPLE ID: ~~K56251~~ AES + ~~K56252~~ AES (DUP-02) K56275 + K56276 (DUP-02)
ANALYSIS: PCB/TOC/GRAIN SIZE

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONS. SAMPLING

LOCATION ID: 13B-3 1038
WD: 3.2
SP: 0.2
METHOD: HAND AUGER
DESC: ~~K56255~~ F.SAND/C.GRAVEL

SAMPLE ID: ~~K56255~~ AES K56279
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 13B-2 (REV) 1044 WILL RECOLLECT W/HA EXT @ LATER ~~POINT~~ DATE/TIME 1304
WD: 9.5 / 4.5
SP: 0.2 / 3.4
METHOD: HAND AUGER
DESC: ENC RIVER RUN ROCK / BLK SILT, C GRAVEL

SAMPLE ID: ~~K56256~~ AES K56280
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 13B-1 (REV) 1045 WILL RECOLLECT W/HA EXT @ LATER DATE/TIME
WD: 11.0'
SP: 1.6'
METHOD: HAND AUGER
DESC: ENC RIVER RUN ROCK / BLK SILT / F.M SAND / M.C GRAVEL

SAMPLE ID: ~~K56257~~ AES K56281
ANALYSIS: PCB/TOC/GRAIN SIZE

/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONS. SED SAMPLING

LOCATION ID: 13A-3 1049 / 1526
WD: 2.8
SP: 2.0
METHOD: ~~HAND AUGER~~ LEXANE (DUE TO SEDIMENT THICKNESS) I/N BL (AREA HAS LOW FLOW/VELOCITY)
DESC: VFN SAND / SILT / F. GRAVEL

SAMPLE ID: ~~13A-2~~ ~~K56274~~ AES K56298
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 13A-2 1523
WD: 7.5'
SP: 0.2'
METHOD: HAND AUGER
DESC: ~~K56258~~ F.GRAVEL / M GRAVEL / SILT

SAMPLE ID: ~~K56258~~ K56282
ANALYSIS: PCB/TOC/GRAIN SIZE

LOCATION ID: 13A-1 1532
WD: 5.9
SP: 2.1
METHOD HAND AUGER
DESC: F TO C GRAVEL / SILT

SAMPLE ID: ~~K56259~~ AES K56283
ANALYSIS PCB/TOC/GRAIN SIZE

3/12/09 FMR PLAINWELL IMP POST CONS SAMPLING

LOCATION ID: PCS-CD1-1 1449
WD: 3.7
SP: 1.0
METHOD: HAND AUGER
DESC: Mod GRAVEL / F SAND

SAMPLE ID: ~~K56261~~ AES K56285
ANALYSIS: TOC / PCB / GRAIN SIZE

LOCATION ID PCS-CD1-2 1444
WD 8.5
SP 1.6
METHOD HAND AUGER
DESC. F. SAND / F to M GRAVEL

SAMPLE ID ~~K56262~~ AES K56286
ANALYSIS: PCB / TOC / GRAIN SIZE

LOCATION ID PCS-CD1-3 1442
WD 7.3'
SP 1.0'
METHOD HAND AUGER
DESC F. SAND / F to M GRAVEL

SAMPLE ID ~~K56263~~ AES + ~~K56264~~ AES (MAP-03) K56287 + K56288 (DUP-02)
ANALYSIS PCB / TOC / GRAIN SIZE

3/12/09 FMR PLAINWELL IMP POST CONST SAMPLING

LOCATION ID: PCS-CD2-1 1438
WD: 8.2'
SP: 1.9'
METHOD: HAND AUGER
DESC: F to M SAND / F. GRAVEL

SAMPLE ID: ~~K56265~~ AES K56289
ANALYSIS PCB / TOC / GRAIN SIZE

LOCATION ID: PCS-CD2-2 1435
WD: 7.0'
SP: 0.3'
METHOD: HAND AUGER
DESC: F to M SAND / F to M GRAVEL

SAMPLE ID: ~~K56266~~ AES K56290
ANALYSIS: TOC / PCB / GRAIN SIZE

LOCATION ID: PCS-CD2-3 1430
WD 7.2
SP 0.1
METHOD HAND AUGER
DESC SILT / F. SAND

SAMPLE ID: ~~K56267~~ AES K56291
ANALYSIS: PCB / TOC / GRAIN SIZE MS/MSD

3/12/09 FMR PLAINWELL IMP. POST CONS SAMPLING

LOCATION ID PCS-MCA-1 1415
WD 9.2'
SP 1.8'
METHOD HAND AUGER
DESC: F TO M SAND / F TO M GRAVEL / TR. SILT / TR L. GRAVEL

SAMPLE ID ~~K56268~~ AES K56292
ANALYSIS PCB / TOC / GRAIN SIZE

LOCATION ID PCS-MCA-2 1412
WD 9.8'
SP 0.4'
METHOD HAND AUGER
DESC: M TO C GRAVEL / F TO M SAND

SAMPLE ID ~~K56269~~ AES K56293
ANALYSIS TOC / PCB / GRAIN SIZE

LOCATION ID PCS-MCA-2 ~~1412~~ 1408
WD 8.4
SP 0.2
METHOD HAND AUGER
DESC.: M TO L GRAVEL / F TO M SAND

SAMPLE ID ~~K56270~~ AES K56294
ANALYSIS TOC / PCB / GRAIN SIZE

3/12/09 FMR PLAINWELL IMP. POST CONS SAMPLIN

LOCATION ID: PCS-MCB-1 1404
WD : 8.4'
SD : 0.1'
METHOD : HAND AUGER
DESC : F TO M SAND / F TO M GRAVEL / TR. SILT

SAMPLE ID: ~~K56271~~ AES K56295
ANALYSIS : PCB / TOC / GRAIN SIZE

LOCATION ID: PCS-MCB-2 1355
WD : 9.8'
SD : 0.5'
METHOD : HAND AUGER
DESC : F TO L GRAVEL

SAMPLE ID: ~~K56272~~ AES K56296
ANALYSIS : PCB / TOC / GRAIN SIZE

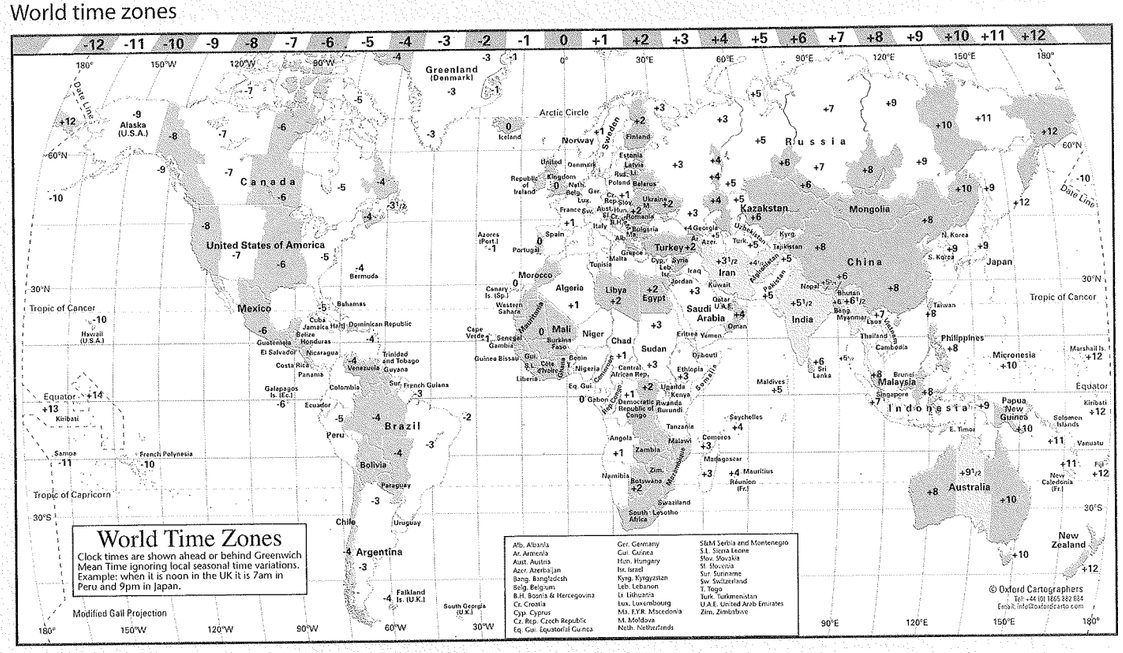
LOCATION ID : PCS-MCB-3 1348
WD : 12.0'
SD : 0.3'
METHOD : HAND AUGER
DESC : SILT / M. GRAVEL

SAMPLE ID: ~~K56273~~ AES K56297
ANALYSIS : PCB / TOC / GRAIN SIZE

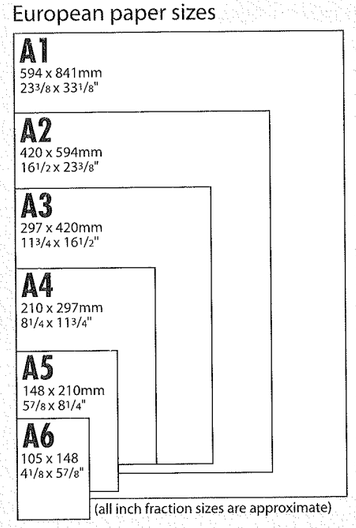
Useful Information

Black n' Red

World time zones

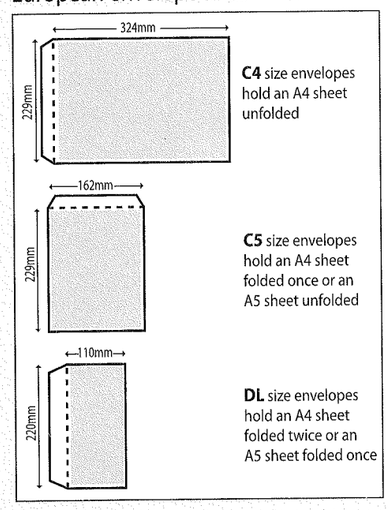


European paper sizes



(all inch fraction sizes are approximate)

European envelope sizes



C4 size envelopes hold an A4 sheet unfolded

C5 size envelopes hold an A4 sheet folded once or an A5 sheet unfolded

DL size envelopes hold an A4 sheet folded twice or an A5 sheet folded once

US paper sizes

Description	Size mm	inches
Junior Legal	127 x 203	5 x 8
Executive	190 x 254	7 ½ x 10
Letter	216 x 279	8 ½ x 11
Legal	216 x 356	8 ½ x 14
Ledger/Tabloid	279 x 432	11 x 17

US envelope sizes (commercial)

Description	Size (inches)
#6¼	3½ x 6
#6¼	3½ x 6¼
#6¾	3⅝ x 6½
#7	3¾ x 6¾
Check (Official)	3⅝ x 8⅝
#9	3⅞ x 8⅞
#10	4⅛ x 9½
#14	5 x 11½

Conversion tables (figures may be rounded)

1in	=	2.54 cm
1cm	=	0.3937 in
1ft	=	0.3048 m
1m	=	3.2808 ft
1yd	=	0.9144 m
1m	=	1.0936 yd
1mile	=	1.6093 km
1km	=	0.6214 mile

1in²	=	6.4516cm²
1cm²	=	0.155 in²
1ft²	=	0.0929 m²
1m²	=	10.7639 ft²
1mile²	=	2.5900 km²
1km²	=	0.3861 miles²
1acre	=	0.4047 ha
1ha	=	2.471 acres

1in³	=	16.387 cm³
1cm³	=	0.06102 in³
1ft³	=	0.02832 m³
1m³	=	35.3147 ft³
1yd³	=	0.76456 m³
1m³	=	1.30795 yd³
1US gal	=	3.7854 litre
1litre	=	0.2642 US gal
1US gal	=	0.8327 UK gal

1UK gal	=	4.546 litre
1litre	=	0.22 UK gal
1oz	=	28.3495 g
1g	=	0.03527 oz
1lb	=	453.59 g
1g	=	0.002205 lb
1kg	=	2.2046 lb
1t (long)	=	1016.0469 kg
1kg	=	0.00098 t (long)

Speed

MPH 30 40 50 60 70 80

Temperature

0°F 32°F 212°F

$F = \frac{9}{5}C + 32$

03/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-9A-1
DATE COLLECTED 3/09/09 @1520
DATE PROCESSED 3/10/09 @ 0920
WATER 4.5
PEN. –
REL. –
METHOD HAND AUGER
PHOTO # 100-0001
COMMENTS

SAMPLE ID	INT	ANALYSIS
K56226	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" DK GRAY BLACK, F-C GRAVEL (SUB), TR F. SAND

03/10/09 FORMER PLASTIWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-9A-2
DATE COLLECTED 3/9/09 @ 1535
DATE PROCESSED 3/10/09 @ 0935
WATER 4.7'
PEN. –
REC. –
METHOD HAND AUGER
PHOTO # 100-0002
COMMENTS: LIMITED QUANTITY OF FINES FOR PCB/TOC 4oz JAR
(BL) ~~GRAVEL MA PARTICLE SIZE DIST. WILL BE SCANTY~~

SAMPLE ID	INT	ANALYSIS
K56227	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK ROUNDED C. GRAVEL, LITTLE F-M SUB-ROUNDED TO SUB ANGULAR GRAVEL, TRACE F SAND.

03/10/09 FORMER PLASTIWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: (BL) ~~PCS-9A-3~~ PCS-9B-3
DATE COLLECTED: 3/9/09 @ 1545
DATE PROCESSED 3/10/09 @ 1005
WATER 5.2'
PEN. –
REC. –
METHOD HAND AUGER
PHOTO # 100-0003
COMMENTS: PHOTO SHOWS PCS-9A-3 (Photo MISLABELED) (Correct sample in photo, wrong location ID on whiteboard in photo).

SAMPLE ID	INT	ANALYSIS
K56228	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" – BLACK F-M GRAVEL, LITTLE F. SAND, + C. ROUNDED GRAVEL TR. SILT

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-9B-1
DATE COLLECTED: 3/9/09 @ 1610
DATE PROCESSED: 3/10/09 @ 1015
WATER: 5.7'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100-0004
COMMENTS:

SAMPLE ID	INT	ANALYSIS
K56229	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" - BLACK F. SAND, F-M SAND, & F-M GRAVEL, TR. C. GRAVEL & ORG (SHELLS & TWIGS)

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONST

LOCATION: PCS-9B-2
DATE COLLECTED: 3/9/09 @ 1615
DATE PROCESSED: 3/10/09 @ 1035
WATER: 6.0'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO: 100-0005
COMMENTS: LIMITED QUANTITY OF FINES FOR PCB/TOC 4OZ JAR

SAMPLE	INT	ANALYSIS
K56230	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLK F-M GRAVEL, SOME C ROUNDED GRAVEL, LITTLE F-M SAND, TR (ORG) SHELLS

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: ~~PCS-9B-3~~ PCS-9A-3

DATE COLLECTED: 3/9/09 1545

DATE PROCESSED: 3/10/09 1050

WATER DEPTH: 5.2'

PEN: –

REC: –

METHOD: HAND AUGER

PHOTO #: 100-0006

COMMENTS:

SAMPLE ID	INT	ANALYSIS
K56231	0-2"	PCB/TOC/GRAINSIZE

DESCRIPTION

0-2" – DK GRAY, F-C GRAVEL (SUB-ROUND-ROUND), TR. F-M SAND, + TR. ORG (SHELLS) TR. SILT

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-10A-1

DATE COLLECTED 3/9/09 @ 1635

DATE PROCESSED 3/10/09 @ 1100

WATER DEPTH: 5.5'

PEN: –

REC: –

METHOD: HAND AUGER

PHOTO #: ~~100-0006~~ 0007

COMMENTS:

SAMPLE ID	INT	ANALYSES
K56232	0-2"	PCB/TOC/GRAINSIZE

DESCRIPTION

0-2" BROWN, F-M GRAVEL, SOME C. GRAVEL, TR. F-SAND, SILT + SHELLS

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-10A-2
DATE COLLECTED: 3/9/09 @ 1645
DATE PROCESSED: 3/10/09 @ 1130
WATER DEPTH: 5.8'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100-0008
COMMENTS:

SAMPLE ID	INT	ANALYSIS
K56233	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" DK GRAY, F. GRAVEL, SOME MED. GRAVEL, TR. C. GRAVEL, F. TO M. SAND, & SILT, TR. SHELLS

3/10/09 FORMER PLAINWELL IMPOUNDMENT CONSTRUCTION SAMPLING

LOCATION: PCS-10A-3
DATE COLLECTED: 3/9/09 @ 1655
DATE PROCESSED: 3/10/09 @ 1140
WATER DEPTH: 5.0'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100-0009
COMMENTS:

SAMPLE ID	INT	ANALYSIS
K56234	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" – LT GRAY, F. TO M. GRAVEL, LITTLE F. TO C. SAND, TR. C. GRAVEL, & F. SAND
TR. SILT

3/10/09 FORMER PLATTWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-10B-1
DATE COLLECTED: 3/9/09 @ 1730
DATE PROCESSED: 3/10/09 @ 1150
WATER DEPTH: 5.8'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100-0010
COMMENTS: LIMITED QUANTITY OF FINE GRAINED MATERIAL FOR PCB/TOC 4oz JAR

SAMPLE ID	INT	ANALYSIS
K56235	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" - MULTI COLORED - M. TO C. GRAVEL, SOME F. GRAVEL, TR. F. SAND, SILT, TR. ORG - (SHELLS)

3/10/09 FORMER PLATTWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-10B-2
DATE COLLECTED: 3/9/09 @ 1742
DATE PROCESSED: 3/10/09 @ 1200
WATER DEPTH: 5.7'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100-0011
COMMENTS:

~~ANALYSIS~~ SAMPLE ID	INT	ANALYSIS
K56236	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" GRAY, C. GRAVEL, SOME TO LITTLE M. GRAVEL, TR. SILT, F. SAND, TR. ORG (SHELLS) (Possible concrete fragments) NB

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION

LOCATION: PCS-10B-3
DATE COLLECTED: 3/9/09 @ 1753
DATE PROCESSED: 3/10/09 @ 1210
WATER DEPTH: 5.6'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100-0012
COMMENTS: NO FINE MAT'L PRESENT, SUBMITTED TO LAB FOR FINAL DETERMINATION OF ABILITY TO ANALYZE FOR PCB/TOC

SAMPLE ID	INT	ANALYSIS
K56237	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" – MULTI COLORED, F. TO C. GRAVEL, TR. SHELLS

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION

LOCATION: ~~PCS-11A-1~~ PCS-MCC-1
DATE COLLECTED: 3/10/09 @ 1438
DATE PROCESSED: 3/10/09 @ 1605
WATER DEPTH: 6.2'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO # 100-0013
COMMENTS

SAMPLE ID	INT	ANALYSIS
K56238	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" GRAY F. GRAVEL, LITTLE MED GRAVEL, TR C. GRAVEL, TR F. TO M. SAND, TR. SILT, (Possible concrete fragments) NPS

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-MCL-2
DATE COLLECTED: 3/10/09 @ 1447
DATE PROCESSED: 3/10/09 @ 1615
WATER DEPTH: 6.3'
PEN: –
REC: –
METHOD: HAND AUGER
PHOTO #: 100-0014
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56239	0-2"	PCB/TOC/GRAIN SIZE (MS/MSD)

DESCRIPTION:
0-2' DK GRAY - BLK, F. TO M. GRAVEL, LITTLE C. GRAVEL, TR. F TO M. SAND, SILT (Possible concrete fragments) NPB

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-MCL-3
DATE COLLECTED: 3/10/09 @ 1453
DATE PROCESSED: 3/10/09 @ 1630
WATER DEPTH: 6.2'
PEN: –
REC: –
METHOD: HAND AUGER
PHOTO #: 100-0015
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56240	0-2"	PCB/TOC/GRAIN SIZE
~~K56241~~	" "	~~MUP-01~~ BL

DUPLICATE SAMPLE WAS NOT COLLECTED DUE TO ABSENCE (LITTLE IF ANY) FINE MAT'L

DESCRIPTION:
0-2" MULTI COLORED, C. GRAVEL, F. TO M. GRAVEL, TR. SILT, LITTLE SAND F. TO M SAND

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-11A-1
DATE COLLECTED: 3/10/09 @ 1458
WATER DEPTH
DATE PROCESSED: 3/10/09 @ 1650
WATER DEPTH: 3.1'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100-0016
COMMENTS: –

SAMPLE ID:	INT.	ANALYSIS:
K56241	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" – MULTI COLORED C. GRAVEL, SOME F. TO M. GRAVEL, LITTLE F. TO M. SAND, SILT TR. ORG (SHELLS)

3/10/09 FORMER PLAINWELL IMPOUNDMENT CONSTRUCTION SAMPLING

LOCATION: PCS-11A-2
DATE COLLECTED: 3/10/09 @ 1505
DATE PROCESSED: 3/10/09 @ 1700
WATER DEPTH: 7.4'
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO # 100-0017
COMMENTS: – LIMITED QUANTITY OF FINE GRAINED MAT'L FOR PCB/TOC 4OZ JAR

SAMPLE ID:	INT:	ANALYSIS:
K56242	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" MULTI-COLORED, C GRAVEL, LITTLE F. TO M. GRAVEL, TR ORG (SHELLS)

3/10/09 FORMER PLAINFIELD IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: ~~#~~ PCS-11A-3
DATE COLLECTED: 3/10/09 @ 1513
DATE PROCESSED: 3/10/09 @ 1710
WATER DEPTH: 6.3'
PEN.: -
REC.: -
METHOD: Hand Auger
PHOTO # 100-0018
COMMENTS: Limited quantity of fine grained material for PCB/TOC 4oz jar.

SAMPLE ID	INT:	ANALYSIS:
KS6243	0-2"	PCB/TOC/Grainsize

DESCRIPTION
0-2" - Multi-colored coarse GRAVEL, ~~some~~ little f-m Gravel, tr. organics (shells).

3/10/09 FORMER PLAINFIELD IMPOUNDMENT POST CONSTRUCTION

LOCATION: PCS-12B-2
DATE COLLECTED: 3/10/09 @ 1610
DATE PROCESSED: 3/10/09 @ 1725
WATER DEPTH: 5.4'
PEN.: -
REC.:
METHOD: HAND AUGER
PHOTO # 100-0019
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
KS6244	0-2"	PCB/TOC/GRAINSIZE

DESCRIPTION:
0-2" - BROWN TO DK GRAY, F. GRAVEL, SOME SILT, TR. C. GRAVEL, F TO M SAND, TR ORG SHELLS

3/10/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-12B-3
DATE COLLECTED: 3/10/09 @ 1559
DATE PROCESSED: 3/10/09 @ 1735
WATER DEPTH: 7.3'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO # 100-0020
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56245	0-2"	PCB/TOC/GRAIN SIZE
K56246	"	DUP-01
K56247	HAND AUGER	RINSE BLANK 01

DESCRIPTION: 0-2" BLK, SILT, F. TO C. GRAVEL, TR ORG (ROOTLETS)

3/11/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

- NO SAMPLE COLLECTION TOOK PLACE DUE TO HIGH FLOW CONDITIONS AND SUSTAINED WIND SPEEDS OF 25-35 MPH W/GUSTS TO 50MPH. ARCADIS UNABLE TO MANUEVER BOAT TO ACCURATEL OCCUPY SAMPLE LOCATION
- M. SCOVILLE NOTIFIED, EPA SUBCONTRACTED OVERSIGHT INFORMED + AGREE IF IT IS UNSAFE, DO NOT PROCEED
- ALL SAMPLES TO THIS POINT PROCESSED + SHIPPED
- GREN TO PERFORM BOAT MAINTENANCE + PREP FOR WORK LATER IN WEEK

Benjamin J. [illegible]

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-11B-1
DATE COLLECTED: 3/12/09
DATE PROCESSED: 3/12/09 1245
WATER DEPTH: 6.0
PEN: –
REC: –
METHOD: HAND AUGER
PHOTO # 100-2577 (NEW CAMERA)
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56248	0-2"	PCB/TOC/GRAIN SIZE (MS/MSD)

DESCRIPTION
0-2" – BLACK SILT, TR. – MED. RD. GRAVEL, ORG (ROOTLETS)

IN ATTENDANCE:			
ARCADIS –	B. LAWRENCE	EDI – KRISTEN TEMPLIN	PROCESSING
"	N. SMITH	–	"
"	M. KOHAGEN	CH2MHILL – M. MITSCHUK	COLLECTION
"	N. HARMER	–	"

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-11B-2
DATE COLLECTED: 3/12/09
DATE PROCESSED: 3/12/09 1310
WATER DEPTH: 7.2
PEN: –
REC: –
METHOD: HAND AUGER
PHOTO # 100_2578
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56249	0-2	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK SILT, F. TO M. SAND, LITTLE F. GRAVEL, TR C. TO M. GRAVEL TR. ORG (LEAVES, ROOTLETS)

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-11B-3
DATE COLLECTION: 3/12/09
DATE PROCESSED: 3/12/09 1320
WATER DEPTH: 6.2'
PEN: –
REC: –
METHOD: HAND AUGER
PHOTO #: 100_2579
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56250	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" - BROWN F. SAND, SOME BLK SILT, LITTLE M. TO C. SAND, TR. ORG (SHELLS & ROOTLETS)

3/12/09 FORMER PLAINWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-12A-1
DATE COLLECTED: 3/12/09
DATE PROCESSED: 3/12/09 1325
WATER DEPTH: 7.7'
PEN: –
REC: –
METHOD:
PHOTO #: 100_2580
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56251	0-2"	PCB/TOC/GRAIN SIZE
K56252	"	DUP-02

DESCRIPTION:
0-2" - BLK SILT, ~~COMPLETE~~ TR. ROOT HAIRS

3/12/09 POST CONSTRUCTION SAMPLING

Loc. LOCATION: PCS-12A-2
Dt. DATE COLLECTED: 3/12/09
Dt. DATE PROCESSED: 3/12/09 1340
W. WATER DEPTH: 9.2
Pe. PEN.: –
Rec. REC.: –
M. METHOD: HAND AUGER
Ph. PHOTO #: 100_2581 (w/FLASH ON) 100_2582 (w/FLASH OFF)
Com. COMMENTS:

Sa. SAMPLE ID:	INT:	ANALYSIS:
K K56253	0-2"	PCB/TOC/GRAIN SIZE

De. DESCRIPTION:
0-2" BLK SILT, TR ROOT HAIRS

3/12/09 FORMER PLASTIWELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

LOCATION: PCS-12A-3
DATE COLLECTED: 3/12/09
DATE PROCESSED: 3/12/09 1345
WATER DEPTH: 10.0
PEN.: –
REC.: –
METHOD: HAND AUGER
PHOTO #: 100_2583
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56254	0-2	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLK SILT, TR. F. SAND, TR M. GRAVEL, TR SHELLS & TWIGS

3/12/09 FORMER PLASTNELL IMPOUNDMENT POST CONSTRUCTION SAMPLING

Lo. LOCATION: PCS-13B-3
Da. DATE COLLECTED: 3/12/09
Da. DATE ~~COLLECTED~~ PROCESSED: 3/12/09 1355
W. WATER DEPTH: 3.2
Pe. PEN: -
Re. REC: -
M. METHOD: HAND AUGER
Ph. PHOTO #: 100_2584
Co. COMMENTS:

Sa. SAMPLE ID:	INT:	ANALYSIS:
K56255	0-2"	PCB/TOC/GRAIN SIZE

De. DESCRIPTION:
0-2" - BLK SILT, SOME C. ROUNDED GRAVEL, TR. F. SAND

3/13/09 FORMER PLASTNELL IMPOUNDMENT POST CONSTRUCTION SAMPLE

LOCATION: PCS-13B-2 (REVISED)
DATE COLLECTED: 3/12/09 1304
DATE PROCESSED: 3/13/09 0720
WATER DEPTH: 4.5'
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: ~~100_2585~~ 100_2611 (NEW MEMORY CARD)
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56256	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" - BLK SILT, LITTLE C. GRAVEL

3/13/09 FMR PLAINWELL IMP. POST CONS. SAMPLING

LOCATION: PCS-13B-1 (REVISED)
DATE COLLECTED: 3/12/09 1312
DATE PROCESSED: 3/13/09 0730
WATER DEPTH: 11.0'
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO # 100_2612
COMMENTS:

Sample ID:	INT:	ANALYSIS:
KS6257	0-2"	PCB/TOC/GRAINSIZE

DESCRIPTION:
0-2" BLACK SILT, TR F. TO M. SAND, TR. M. TO C. GRAVEL

3/13/09 FMR PLAINWELL IMP. POST CONS. SAMPLING

LOCATION: PCS-13A-3
DATE COLLECTED: 3/12/09 1520
DATE PROCESSED: 3/13/09 1020
WATER DEPTH: 2.9'
PEN.: 0.3 w/ PROBE ROD
REC.: 0.6'
METHOD: ~~LEANE~~ LEXANE
PHOTO #: ~~100_2613~~
COMMENTS: WILL PROCESS LAST ON 3/13/09
0-2" SUBMITTED FOR LAB ANALYSIS
2-6" NOT SUBMITTED FOR LAB ANALYSIS, HOWEVER CLASSIFIED BELOW - PER M. SCOVILLE

SAMPLE ID	INT:	ANALYSIS
KS6258	0-2	PCB/TOC/GRAINSIZE
KS6274		
KS6275	HAND AUGER	RINSE BLANK-02

DESCRIPTION:
0-2" DK BROWN SILT + F. SAND, TR F. GRAVEL,
2-6" BROWN, F TO M SAND, LITTLE SILT, TR F. GRAVEL

3/13/09 FMR PLAINWELL IMP. POST CONS. SAMPLING

LOCATION: PCS-13A-2
DATE COLLECTED: 3/12/09 1523
DATE PROCESSED: 3/13/09 0740
WATER DEPTH: 7.5'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100_2613
COMMENTS:

SAMPLE ID:	INT:	ANALYSES:
K56258	0-2"	PCB/TOC/GRAIN SIZE ANALYSES

DESCRIPTION:
0-2" BLACK SILT, LITTLE F. GRAVEL, TR. F. TO M. GRAVEL, TR SHELLS

3/13/09 FMR PLAINWELL IMP. POST CONS. SAMPLING

LOCATION: PCS-13A-1
DATE COLLECTED: 3/12/09 1532
DATE PROCESSED: 3/13/09 0745
WATER DEPTH: 5.9'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100_2614
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56259	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK SILT, TR F. TO C GRAVEL, TR (SHELLS + ROOT MASSES)

3/13/09 FMR PRAINWELL IMP. POST CONS SAMPLING

LOCATION: PLS-12B-1 (REVISED)
DATE COLLECTED: 3/12/09 1257
DATE PROCESSED: 3/13/09 0755
WATER DEPTH: 7.2'
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100-2615
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56260	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" Brown f GRAVEL, little Silt and m Gravel, tr. Shells

3/13/09 FMR PRAINWELL IMP. POST CONS. SAMPLING

LOCATION: PLS-CM1-1
DATE COLLECTED: 3/12/09 1449
DATE PROCESSED: 3/13/09 0820
WATER DEPTH: 3.7
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100-2616
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56261	0-2"	PCB

DESCRIPTION
0-2" BLACK SILT, LITTLE M. TO C. GRAVEL, TR F. GRAVEL, TR F. TO M. SAND

3/13/09 FMR. PLAINWELL IMP. POST CONSTRUCTION SAMPLING

LOCATION: PCS-CD1-2
DATE COLLECTED: 3/12/09
DATE PROCESSED: 3/13/09 0825
WATER DEPTH: 6.5
PEN: —
REC.: —
METHOD: HAND AUGER
PHOTO #: ~~100-2616~~ 100-2617
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56262	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK SILT, TR F. TO M. GRAVEL, TR. F. SAND

3/13/09 FMR PLAINWELL IMP POST CONS. SAMPLING

LOCATION: PCS-CD1-3
DATE COLLECTED: 3/12/09 1442
DATE PROCESSED: 3/13/09 0835
WATER DEPTH: 7.5'
PEN: —
REC: —
METHOD: HAND AUGER
PHOTO #: 100-2618
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56263	0-2"	PCB/TOC/GRAIN SIZE
K56264		DUP-03

DESCRIPTION:
0-2" F. TO M GRAVEL, SOME F. TO C. SAND, SOME SHELLS

3/13/09 FMR PRAINWELL IMP. POST CONS SAMPLING

LOCATION: PCS-CM2-1
DATE COLLECTED 3/12/09 1438
DATE PROCESSED: 3/13/09 0845
WATER DEPTH: 8.2
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100-2619
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
KS6265	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" F. GRAVEL, LITTLE F. TO M. SAND, TR. SHELLS + SILT

3/13/09 FMR PRAINWELL IMP POST CONS. SAMPLING

LOCATION: PCS-CM2-2
DATE COLLECTED: 3/12/09 1435
DATE PROCESSED: 3/13/09 0855
WATER DEPTH: 7.0'
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100-2620
COMMENTS-

SAMPLE ID:	INT:	ANALYSIS:
KS6266	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK SILT, F. TO M. SAND, TR F. TO M. GRAVEL, TR. ORG (TWIGS)

3/13/09 FMR PW SMP POST CONS SAMPLING

LOCATION: PCS-CMZ-3
DATE COLLECTED: 3/12/09 1436
DATE PROCESSED: 3/13/09 0900
WATER DEPTH: 7.2
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100_2621
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
KS6267	0-2"	PCB/TOC/~~AMA~~ GRAIN SIZE MS/MSD

DESCRIPTION:
0-2" DK BROWN F. TO M. SAND, LITTLE SILT, TR ORG (TWIGS)

3/13/09 POST CONS SAMPLING

LOCATION: PCS-MCA-1
DATE COLLECTED: 3/12/09 1415
DATE PROCESSED: 3/13/09 0915
WATER DEPTH: 9.2
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100_2622
COMMENTS: LIMITED QUANTITY FOR OC FINE GRAINED MAT'L FOR PCB/TOC HOLD JAR

SAMPLE ID:	INT:	ANALYSIS:
KS6268	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION
0-2" F. TO M. GRAVEL, SOME F. TO M. SAND, TR. SHELL, TR. C GRAVEL TR. SILT

3/13/09 POST CONS. SAMPLING

LOCATION: PCS-MCA-2
DATE COLLECTED: 3/12/09 1412
DATE PROCESSED: 3/13/09 0920
WATER DEPTH: 9.8
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100_2623
COMMENTS:

SAMPLE ID:	INT:	ANALYSIS:
K56269	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLACK SILT, F. GRAVEL, LITTLE M. TO C. GRAVEL, TR. M. TO F. SAND, TR. SHELLS

3/13/09 POST CONS. SAMPLING

LOCATION: PCS-MCA-3
DATE COLLECTED: 3/12/09 1408
DATE PROCESSED: 3/13/09 0935
WATER DEPTH: 8.4
PEN.: -
REC.: -
METHOD: HAND AUGER
PHOTO #: 100_2624
COMMENTS: LIMITED QUANTITY OF FINE GRAINED MAT'L FOR PCB/TOC 4OZ JAR

SAMPLE ID:	INT	ANALYSIS:
K56270	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" MULTI COLORED C. GRAVEL, LITTLE F. TO M. GRAVEL, TR. M. SAND TR. SHELLS

3/13/09 POST CONS SAMPLING

LOCATION: PLS- MCB-1
DATE COLLECTED: 3/12/09 1404
DATE PROCESSED: 3/13/09 0940
WATER DEPTH: 8.4
PEN.: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100_2625
COMMENTS:

SAMPLE ID:	INT	ANALYSIS:
K56271	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" DK BROWN, F TO M SAND, F. TO M. GRAVEL, TR. SILT

3/13/09 POST CONS. SAMPLING

LOCATION: PLS - MCB-2
DATE COLLECTED: 3/12/09 1355
DATE PROCESSED: 3/13/09 0950
WATER DEPTH: 9.8
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100_2626
COMMENTS: LIMITED QUANTITY OF FINE GRAINED MAT'L FOR PCB/TOC 4OZ JAR IF ANY SUBMITTED TO LAB FOR FINAL DETERMINATION OF ABILITY TO ANALYZE FOR PCB/TOC

SAMPLE ID:	INT:	ANALYSIS:
K56272	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" MULTI COLORED L. GRAVEL, LITTLE F. TO M. GRAVEL

3/13/09 POST CONS SAMPLING

LOCATION: MCB-3
DATE COLLECTED: 3/12/09 1348
DATE PROCESSED: 3/13/09 0955
WATER DEPTH: N.D
PEN: -
REC: -
METHOD: HAND AUGER
PHOTO #: 100_2627
COMMENTS:

SAMPLE ID	INT.	ANALYSIS:
K56273	0-2"	PCB/TOC/GRAIN SIZE

DESCRIPTION:
0-2" BLK SILT, → TR. M. GRAVEL, TR. ORG (ROOT HAIRS)

ARCADIS

March 2009 Photo Log

ARCADIS
Infrastructure, environment, facilities

Project No.:	B0064539.500
Project Name:	TCRA Post Construction Sediment Sampling
City/State	Plainwell, Michigan

Photo No.: 1
File Name: 100-0001.jpg
Date: March 10, 2009
Location ID: PCS-9A-1
Sample ID: ~~K56226~~ K56250
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 2
File Name: 100-0002.jpg
Date: March 10, 2009
Location ID: PCS-9A-2
Sample ID: ~~K56227~~ K56251
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 3
File Name: 100-0003.jpg
Date: March 10, 2009
Location ID: PCS-9B-3
Sample ID: ~~K56228~~ K56252
Interval: 0-2 inches

Notes:
The location ID shown in photo is incorrect, however, the sample shown is correct.

ARCADIS
Project No.: B0064539.500

Photo No.: 4
File Name: 100-0004.jpg
Date: March 10, 2009
Location ID: PCS-9B-1
Sample ID: ~~K56229~~ K56253
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 5
File Name: 100-0005.jpg
Date: March 10, 2009
Location ID: ~~PCS-9B-2~~ K56254
Sample ID: K56230
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 6
File Name: 100-0006.jpg
Date: March 10, 2009
Location ID: PCS-9A-3
Sample ID: ~~K56231~~ K56255
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 7
File Name: 100-0007.jpg
Date: March 10, 2009
Location ID: PCS-10A-1
Sample ID: ~~K56232~~ K56256
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 8
File Name: 100-0008.jpg
Date: March 10, 2009
Location ID: PCS-10A-2
Sample ID: ~~K56233~~ K56257
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

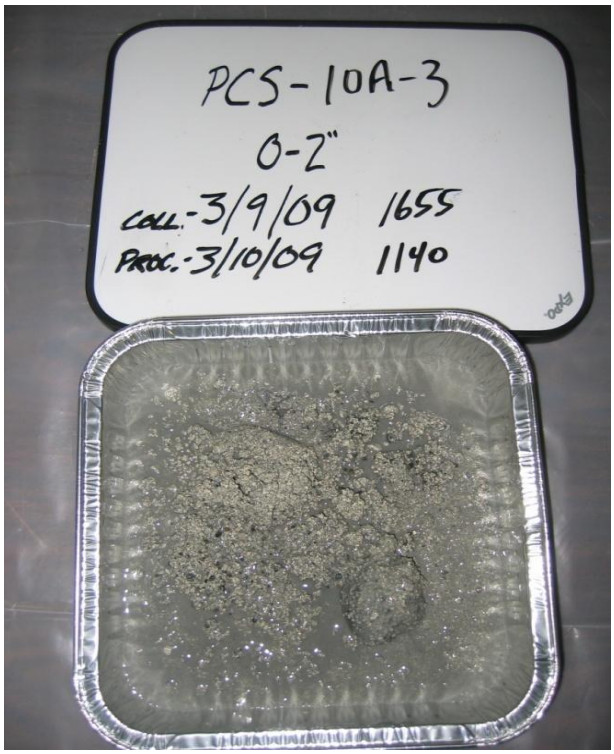


Photo No.: 9
File Name: 100-0009.jpg
Date: March 10, 2009
Location ID: PCS-10A-3
Sample ID: ~~K56234~~ K56258
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 10
File Name: 100-0010.jpg
Date: March 10, 2009
Location ID: PCS-10B-1
Sample ID: ~~K56235~~ K56259
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 11
File Name: 100-0011.jpg
Date: March 10, 2009
Location ID: PCS-10B-2
Sample ID: ~~K56236~~ K56260
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 12
File Name: 100-0012.jpg
Date: March 10, 2009
Location ID: PCS-10B-3
Sample ID: ~~K56237~~ K56261
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

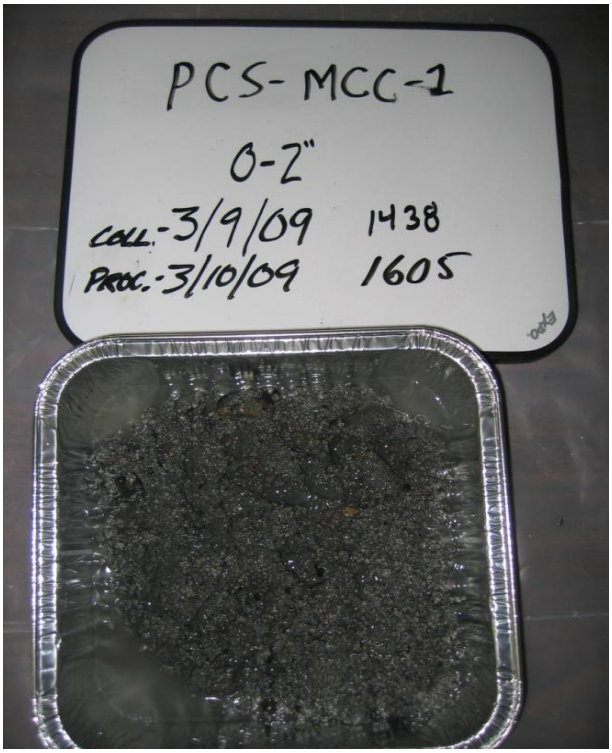


Photo No.: 13
File Name: 100-0013.jpg
Date: March 10, 2009
Location ID: PCS-MCC-1
Sample ID: ~~K56238~~ K56262
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

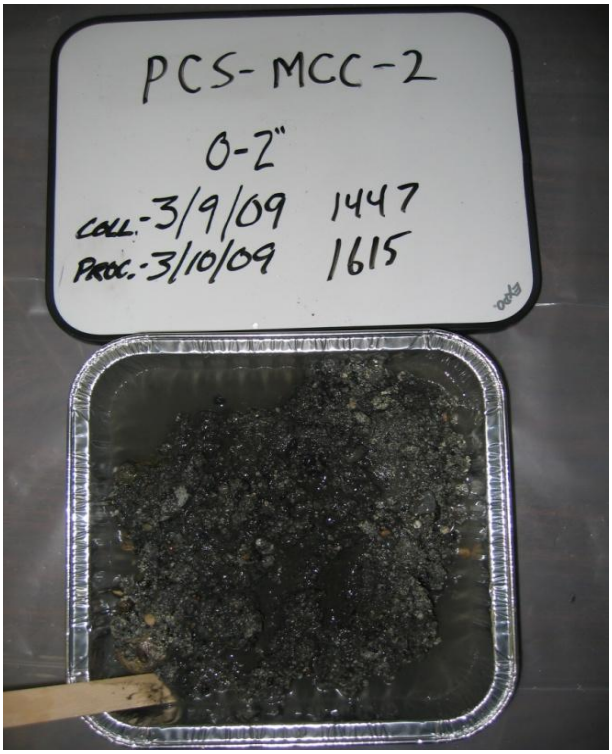


Photo No.: 14
File Name: 100-0014.jpg
Date: March 10, 2009
Location ID: PCS-MCC-2
Sample ID: ~~K56239~~ K56263
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 15
File Name: 100-0015.jpg
Date: March 10, 2009
Location ID: PCS-MCC-3
Sample ID: ~~K56240~~ K56264
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 16
File Name: 100-0016.jpg
Date: March 10, 2009
Location ID: PCS-11A-1
Sample ID: ~~K56241~~ K56265
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 17
File Name: 100-0017.jpg
Date: March 10, 2009
Location ID: PCS-11A-2
Sample ID: ~~K56242~~ K56266
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 18
File Name: 100-0018.jpg
Date: March 10, 2009
Location ID: PCS-11A-3
Sample ID: ~~K56243~~ K56267
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

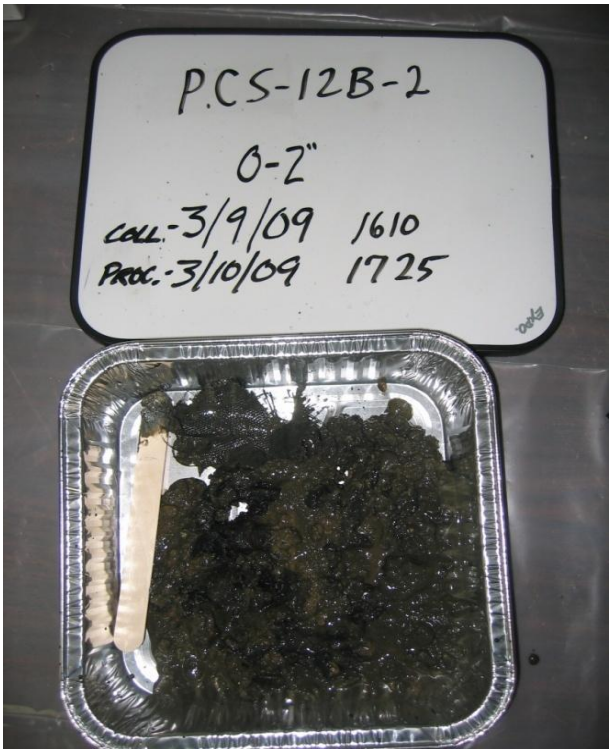


Photo No.: 19
File Name: 100-0019.jpg
Date: March 10, 2009
Location ID: PCS-12B-2
Sample ID: ~~K56244~~ K56268
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 20
File Name: 100-0020.jpg
Date: March 10, 2009
Location ID: PCS-12B-3
Sample ID: ~~K56245~~ K56269
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 21
File Name: 100_2577.JPG
Date: March 12, 2009
Location ID: PCS-11B-1
Sample ID: ~~K56248~~ K56272
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

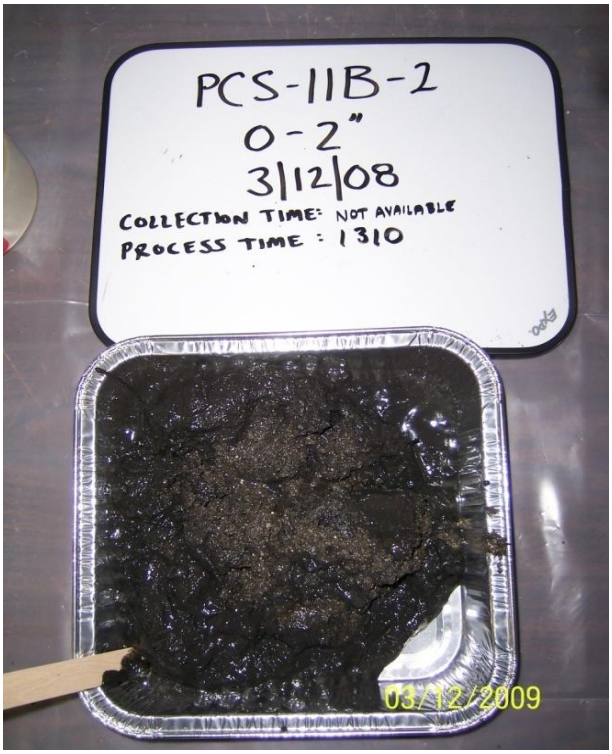


Photo No.: 22
File Name: 100_2578.JPG
Date: March 12, 2009
Location ID: PCS-11B-2
Sample ID: ~~K56249~~ K56273
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 23
File Name: 100_2579.JPG
Date: March 12, 2009
Location ID: PCS-11B-3
Sample ID: ~~K56250~~ K56274
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 24
File Name: 100_2580.JPG
Date: March 12, 2009
Location ID: PCS-12A-1
Sample ID: ~~K56251~~ K56275
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.:	B0064539.500
Project Name:	TCRA Post Construction Sediment Sampling
City/State	Plainwell, Michigan

Photo No.:	25
File Name:	100_2581.JPG
Date:	March 12, 2009
Location ID:	PCS-12A-2
Sample ID:	~~K56253~~ K56277
Interval:	0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.:	26
File Name:	100_2583.JPG
Date:	March 12, 2009
Location ID:	PCS-12A-3
Sample ID:	~~K56254~~ K56278
Interval:	0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

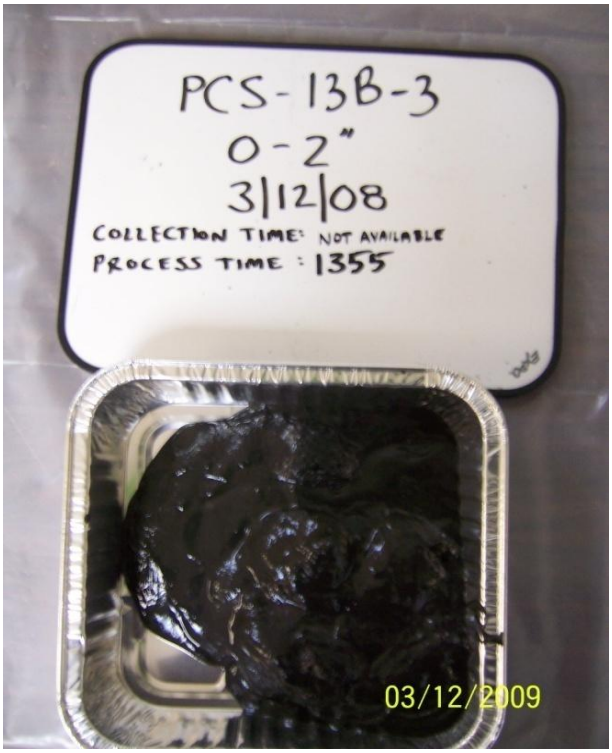


Photo No.: 27
File Name: 100_2584.JPG
Date: March 12, 2009
Location ID: PCS-13B-3
Sample ID: ~~K56255~~ K56279
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 28
File Name: 100_2611.JPG
Date: March 13, 2009
Location ID: PCS-13B-2
Sample ID: ~~K56256~~ K56280
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

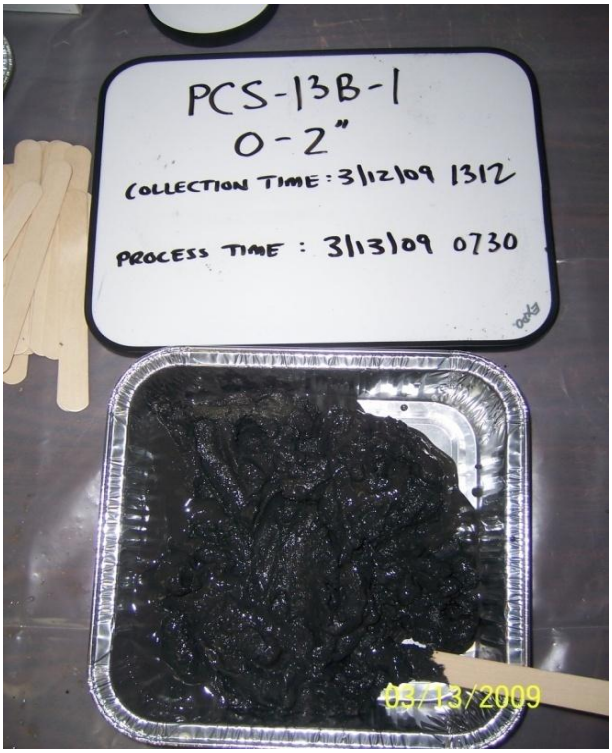


Photo No.: 29
File Name: 100_2612.JPG
Date: March 13, 2009
Location ID: PCS-13B-1
Sample ID: ~~K56257~~ K56281
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

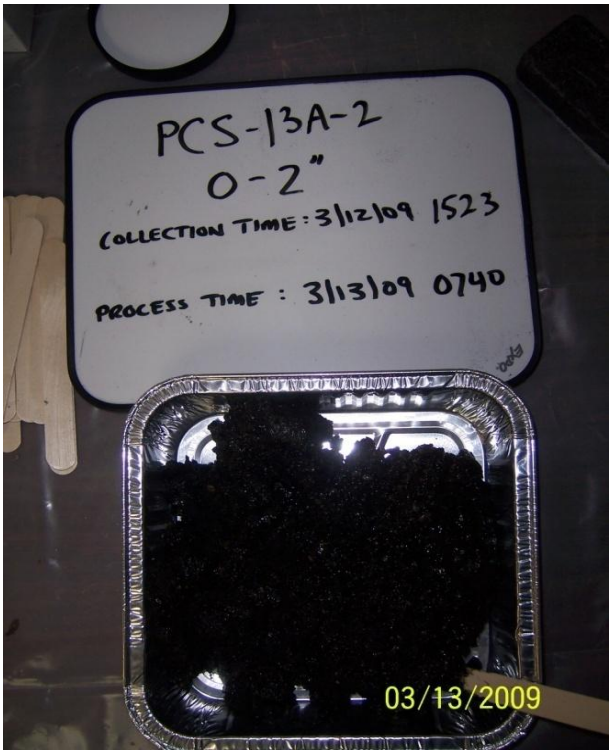


Photo No.: 30
File Name: 100_2613.JPG
Date: March 13, 2009
Location ID: PCS-13A-2
Sample ID: ~~K56258~~ K56282
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

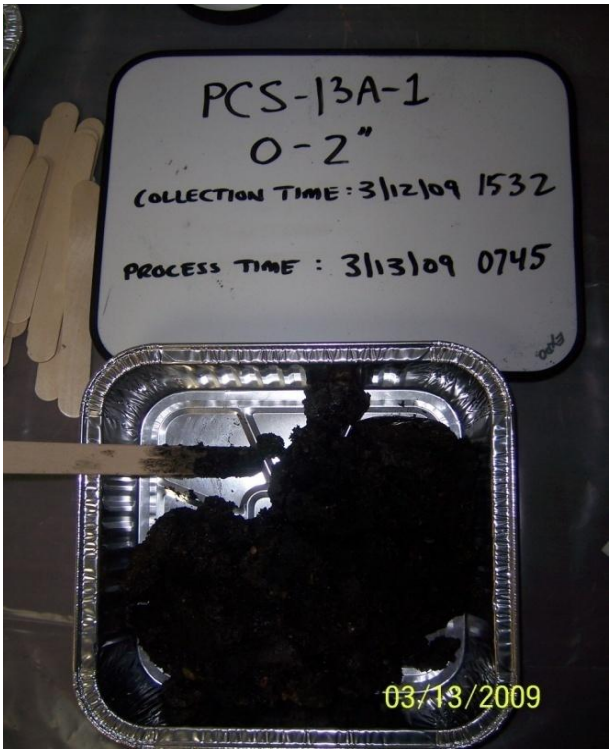


Photo No.: 31
File Name: 100_2614.JPG
Date: March 13, 2009
Location ID: PCS-13A-1
Sample ID: ~~K56259~~ K56283
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

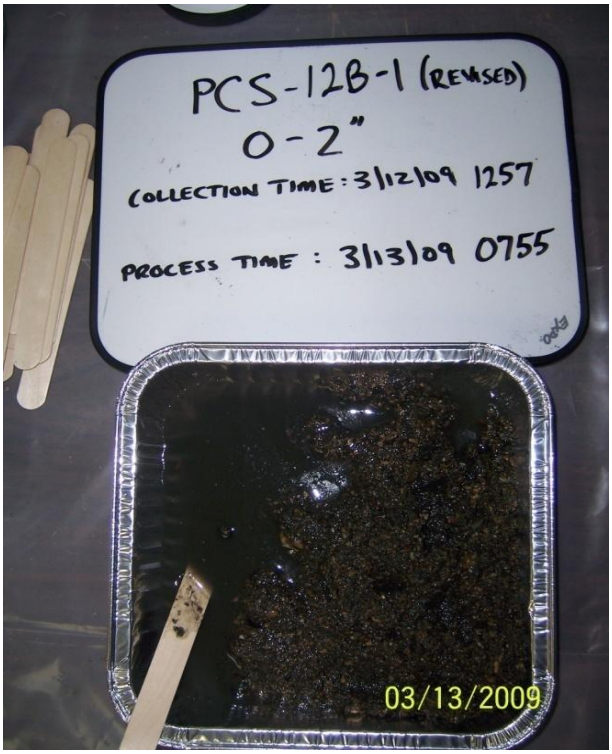


Photo No.: 32
File Name: 100_2615.JPG
Date: March 13, 2009
Location ID: PCS-12B-1 (Revised)
Sample ID: ~~K56260~~ K56284
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.:	B0064539.500
Project Name:	TCRA Post Construction Sediment Sampling
City/State	Plainwell, Michigan

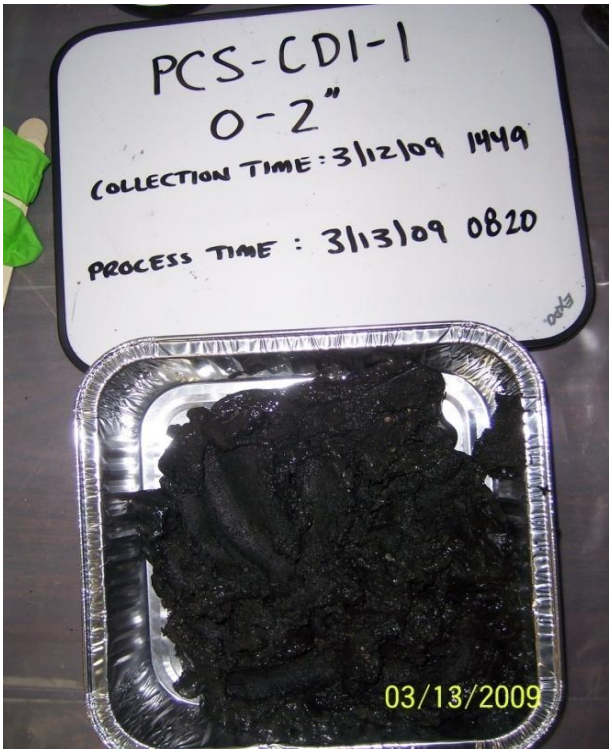


Photo No.:	33
File Name:	100_2616.JPG
Date:	March 13, 2009
Location ID:	PCS-CD1-1
Sample ID:	~~K56261~~ K56285
Interval:	0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

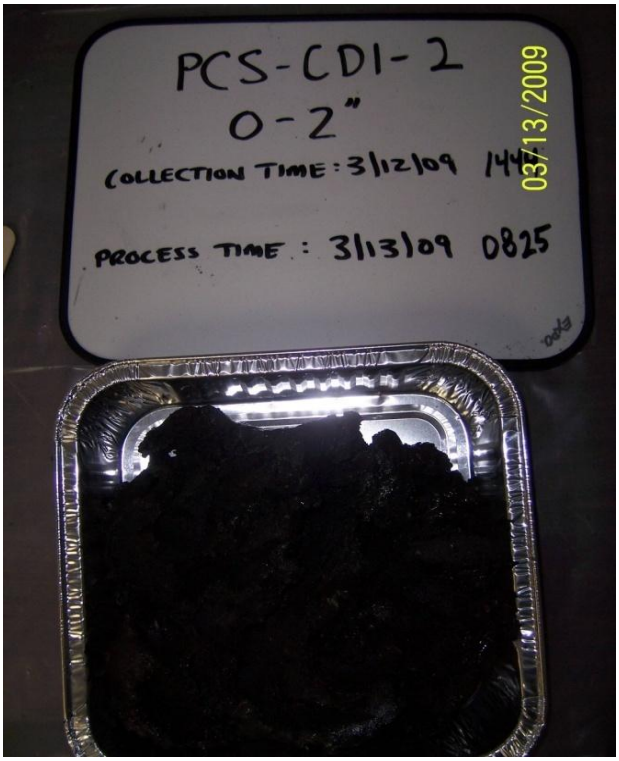


Photo No.:	34
File Name:	100_2617.JPG
Date:	March 13, 2009
Location ID:	PCS-CD1-2
Sample ID:	~~K56262~~ K56286
Interval:	0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 35
File Name: 100_2618.JPG
Date: March 13, 2009
Location ID: PCS-CD1-3
Sample ID: ~~K56263~~ K56287
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

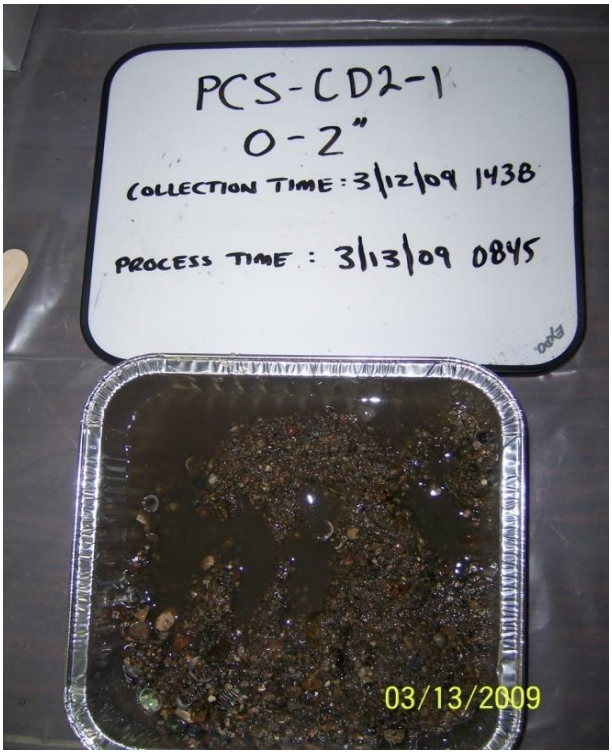


Photo No.: 36
File Name: 100_2619.JPG
Date: March 13, 2009
Location ID: PCS-CD2-1
Sample ID: ~~K56265~~ K56289
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 37
File Name: 100_2620.JPG
Date: March 13, 2009
Location ID: PCS-CD2-2
Sample ID: ~~K56266~~ K56290
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

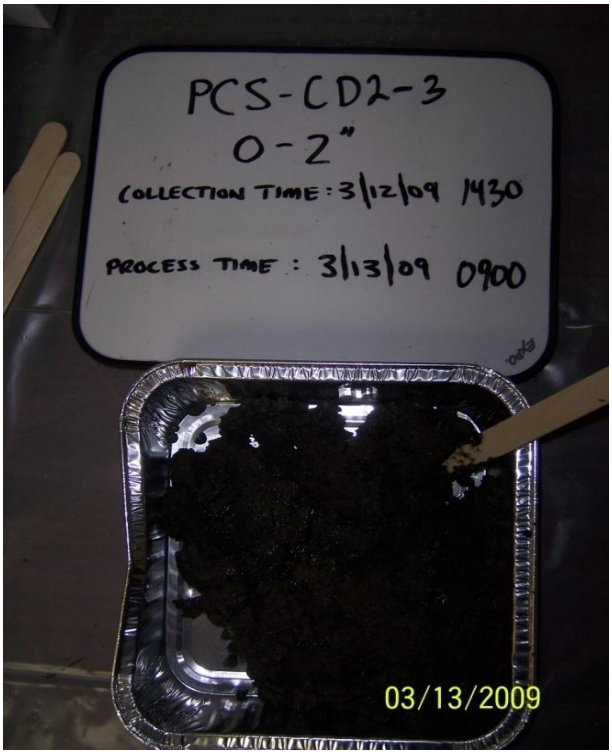


Photo No.: 38
File Name: 100_2621.JPG
Date: March 13, 2009
Location ID: PCS-CD2-3
Sample ID: ~~K56267~~ K56291
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

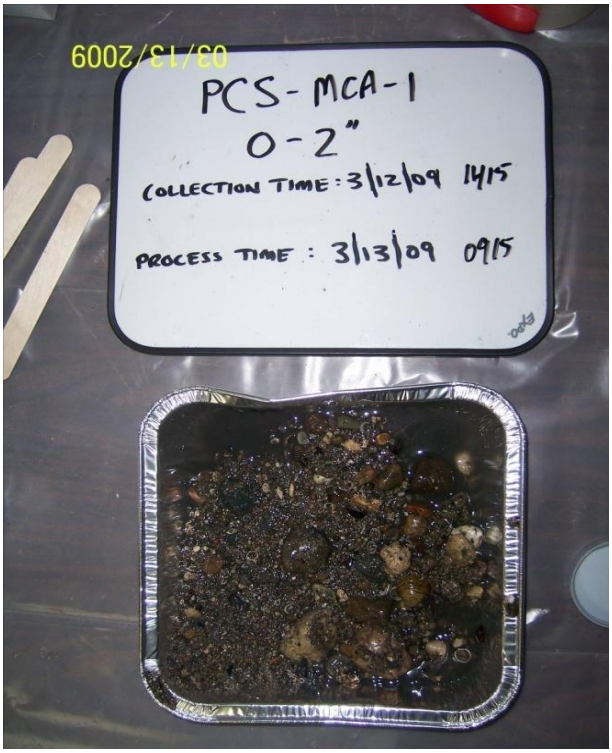


Photo No.: 39
File Name: 100_2622.JPG
Date: March 13, 2009
Location ID: PCS-MCA-1
Sample ID: ~~K56268~~ K56292
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 40
File Name: 100_2623.JPG
Date: March 13, 2009
Location ID: PCS-MCA-2
Sample ID: ~~K56269~~ K56293
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 41
File Name: 100_2624.JPG
Date: March 13, 2009
Location ID: PCS-MCA-3
Sample ID: ~~K56270~~ K56294
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 42
File Name: 100_2625.JPG
Date: March 13, 2009
Location ID: PCS-MCB-1
Sample ID: ~~K56271~~ K56295
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS
Infrastructure, environment, facilities

Project No.: B0064539.500
Project Name: TCRA Post Construction Sediment Sampling
City/State Plainwell, Michigan

Photo No.: 43
File Name: 100_2626.JPG
Date: March 13, 2009
Location ID: PCS-MCB-2
Sample ID: ~~K56272~~ K56296
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

Photo No.: 44
File Name: 100_2627.JPG
Date: March 13, 2009
Location ID: PCS-MCB-3
Sample ID: ~~K56273~~ K56297
Interval: 0-2 inches

Notes:

ARCADIS
Project No.: B0064539.500

ARCADIS

Attachment 2

Quality Assurance Review

Attachment 2 – Quality Assurance Review

All the results of the post-removal sampling were subjected to a standard data quality review process. As documented in the *Multi-Area Quality Assurance Project Plan for the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site* (Multi-Area QAPP; ARCADIS BBL 2007c), this process includes field duplicate analysis, which is used to assess the precision and accuracy of the field sampling procedures and analytical methods. A control limit of 100% for soil matrices is applied to the relative percent difference (RPD) between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the reporting limit (RL), the difference between the parent and duplicate sample concentrations is evaluated using a control limit of three times the RL for soil matrices.

For the samples collected in March 2009, there were five parent/duplicate sample pairs analyzed. Of the five duplicate sample pairs collected, all quality assurance/quality control (QA/QC) results were within applicable control limits for three pairs (PCS-CD1-3/PCS-CD1-3 DUP, PCS-8-1/PCS-8-1 DUP, and PCS-6B-1/PCS-6B-1 DUP). The results for two pairs (PCS-12A-1/PCS-12A-1 DUP and PCS-12B-3/PCS-12B-3 DUP) were not within the applicable control limits; therefore a detailed review of the standard quality assurance process proscribed in the Multi-Area QAPP (ARCADIS BBL 2007c) was initiated to assess the differences in results between the parent and duplicate samples collected at these locations.

The results for the duplicate samples are summarized in Table A (on the next page), and the results of the QA/QC review for PCS-12A-1/PCS-12A-1 DUP and PCS-12B-3/PCS-12B-3 DUP are described below.

Table A – Summary of Duplicate Sample Results

Sample ID/Duplicate ID	Compound	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD
PCS-12A-1/PCS-12A-1 DUP	Aroclor 1242	0.32 J	35 J	NC
	Aroclor 1248	0.15 UJ	4.9 J	NC
	Total PCBs	0.32 J	40 J	NC
PCS-CD1-3/PCS-CD1-3 DUP	Aroclor 1242	0.12	0.092	AC
	Aroclor 1248	0.061 U	0.058 J	AC
	Aroclor 1254	0.088	0.11	AC
	Total PCBs	0.21	0.26 J	AC
PCS-12B-3/PCS-12B-3 DUP	Aroclor 1242	0.082 UJ	0.71	NC
	Aroclor 1254	0.082 UJ	1.1 J	NC
	Aroclor 1260	0.082 UJ	0.15 J	AC
	Total PCBs	0.082 UJ	2.0 J	NC
PCS-8-1/PCS-8-1 DUP	All Aroclors	0.060 U	0.060 U	AC
PCS-6B-1/PCS-6B-1 DUP	Aroclor 1248	0.46	0.076 J	AC
	Aroclor 1254	0.077 J	0.13 UJ	AC
	Total PCBs	0.54	0.076 J	AC

NOTES:
U Compound was analyzed for but not detected. The associated value is the compound quantitation limit.
J Estimated Value
AC Acceptable RPD
NC Not Compliant RPD

Aroclors 1242, 1248, and Total PCBs associated with sample locations PCS-12A-1/PCS-12A-1 DUP exhibited a field duplicate RPD greater than the applicable control limit. The associated sample results from sample locations for the listed analytes were therefore qualified as estimated. Subsequent to the discovery of the significant deviation for the DUP result for this sample (Total PCB of 40 mg/kg in the DUP compared to 0.32 mg/kg in the original sample), a thorough inquiry was done during the validation process. This included a review of the associated QA/QC (holding times, method blanks, calibration, surrogates, laboratory control samples, matrix spike/matrix spike duplicates), checking sample calculations, review of the sample chromatograms, and contacting the laboratory. The TestAmerica Laboratory Project Manager, Jim Madison, reviewed the sample results and took pictures of the sample

jars and labels in question. He concluded that the results were valid and that no samples had been inadvertently switched at the laboratory during the analysis process.

The data quality indicators of the laboratory QA/QC analysis results for PCS-12A-1/PCS-12A-1 DUP, method blanks, instrument calibration, surrogate recoveries, matrix spike/matrix spike duplicate (MS/MSD) analysis, laboratory control sample (LCS) analysis, and field duplicate analysis were reviewed carefully during the validation process. The parent sample [PCS-12A-1] was analyzed at no dilution and exhibited surrogate recovery within control criteria. The duplicate sample [PCS-12A-1 DUP] was analyzed at a 20-fold dilution; therefore, the surrogate compounds were diluted below the calibration range. The laboratory performs a preliminary screen analysis with surrogates within calibration range to identify samples that require dilutions. The screen analyses are provided by the laboratory for those samples with surrogates diluted below the calibration range. The screen analysis of the duplicate sample exhibited surrogate recoveries above the upper control limit (150 percent). The surrogates, Tetra-chloro-m-xylene(TCX) and decachlorobiphenyl(DCB), were recovered at 157 percent and 160 percent, respectively. All detected Aroclors and the Total PCB content associated with the duplicate sample were qualified as estimated due to elevated surrogate recovery. The MS/MSD analysis performed on sample location PCS-11B-1 (the QA/QC sample associated with the sample delivery group that includes PCS-12A-1/PCS-12A-1 DUP) exhibited recoveries within control criteria and acceptable relative percent differences between the MS and MSD. Additionally, the LCS exhibited recoveries within control criteria. The outcome of the laboratory QA/QC analysis was that all data quality indicators yielded acceptable results with the exception of the surrogate recovery and field duplicate analysis associated with sample location PCS-12A-1. It appears that the difference in PCB concentrations between the parent and duplicate was likely variability in the sample matrix. There were relatively small variations in percent gravel, percent silt, percent solids, and percent total organic carbon suggesting variation in the physical composition of the samples may not have been a significant factor. The sample was characterized as black silt with a trace of root hairs, and apparently included some amount of PCB-containing material that was not completely homogenized with the predominately cleaner materials in the sample prior to analysis. As a result, the PCB concentrations for the parent/duplicate pair PCS-12A-1/PCS-12A-1 DUP are qualified as estimated.

Aroclors 1242, 1254, and Total PCBs associated with sample locations PCS-12B-3 and PCS-12B-3 DUP exhibited a field duplicate RPD greater than the applicable control limit. The associated sample results from sample locations for the listed analytes were qualified as estimated. Review of the associated sample QA/QC for this parent/duplicate pair did not reveal any data quality issues. Results for this particular sample have been qualified as estimated.