

September 13, 2010

Mr. Steve B. Adams  
Project Manager  
Michigan Department of Transportation  
Construction and Technology Division  
P.O. Box 30049  
Lansing, Michigan 48909

RE: Preliminary Site Investigation  
Revision of July 8, 2010 Report, with additional sampling results  
Kalamazoo River at M-222, Allegan, Allegan County, Michigan  
MDOT CS No. 03041, Job No. 107575C  
AECOM Project No. 60155126

Dear Mr. Adams:

This letter report presents the results of the sediment and soil sampling in the Kalamazoo River at the base of the river bank along M-222 in Allegan, Allegan County, Michigan. The work was performed as outlined in the Workplan and Cost Proposal to Conduct a Preliminary Site Investigation, submitted to your office by AECOM on May 5, 2010. Slope failure along the river bank below the roadway has prompted MDOT to perform stabilization activities at this location. Because the lower Kalamazoo River is known to contain polychlorinated biphenyls (PCBs), MDOT has contracted AECOM to collect sediment and soil samples from the river below M-222. These samples are intended to provide information as to the presence and/or absence of PCBs within the proposed work area. This report also provides guidance on the handling of excavated materials from the work area.

#### **SAMPLE COLLECTION PROCEDURES**

AECOM collected samples of the soil and sediment at the site on June 24, 2010. Sediment samples were collected from the bottom of the river along the north river bank using a Vibracore sampling device. This device allows for the sampling of saturated, soft sediment without loss of the sample during extraction from the river bottom. Samples were collected by ASci (subcontractor to AECOM) from a pontoon boat sampling platform. A total of five sediment samples were collected, labeled SED-1, SED-2, SED-3, SED-4, and SED-5. Samples were spaced along the north side of the river bank, within the area of slope instability. Due to the high water, swift current and abundant trees, samples were collected where access to the near shore was safely possible. Photographs of the sampling are contained in Attachment A. At the time of sampling, the locations of the samples were marked using a Trimble GeoXH hand-help GPS unit, with sub-foot accuracy. Figure 1 illustrates the location of collected samples. At each location, between 1 and 2 feet of bottom material was collected within the Vibracore sampling tube. This material was placed into a stainless steel pan and composited into a single sample at each location.

In addition to sediment, soil samples were also collected from the river bank along the north side of the river, very near the water surface (Figure 1) at the time of sampling. As a result of high river flow, samples were collected from locations which presented the safest work areas. Samples were not collected in areas of active erosion, where steep slopes and bare soil were present. Rather, samples were collected where vegetation and therefore organic-rich soil was present. A total of four soil samples were collected using a round-point shovel. Soil samples were labeled Bank-1, Bank-2, Bank-3, and Bank-4. A representative composite sample from each location was removed from the shovel of soil using a putty knife, and placed into labeled sample containers. All soil samples were collected from the upper 6 inches of soil. Table 1 contains a summary of sediment and soil sample characteristics and sampling information.

Based on the proposed expansion of the area for stabilization activities, additional samples were collected on August 24, 2010. Three additional sediment (SED-6, SED-7, and SED-8) were collected within the river, and three additional soil samples (Bank-6, Bank-7, and Bank-8) were collected along the river bank. The sediment samples were collected from a boat, using a clamshell-type sediment sampling device. The location of these samples are illustrated on Figure 1.

Samples from each location were placed into laboratory-supplied sample containers, and placed on ice in a cooler. Chain of custody procedures were initiated in the field at the time of sampling and accompanied the samples to the laboratory. Samples were submitted to Fibertec Environmental Services Laboratory in Holt, Michigan, for analysis of polychlorinated biphenyls (PCBs).

### **ANALYTICAL RESULTS AND COMPARISON TO CRITERIA**

Table 2 contains a summary of sediment and soil sample analytical results. A copy of the laboratory report is included in Attachment B.

No PCB congeners were detected above the laboratory reporting limit in any of the sediment or soil samples collected from the site. Of the PCB congeners, Aroclor 1242 is the most prevalent in the Kalamazoo River, the result of recycling of carbonless copy paper by paper mills during the 1970s. No concentrations of this congener were detected above the laboratory reporting limit.

The Part 201 Soil Direct Contact Cleanup Criteria for PCBs is 4,000  $\mu\text{g}/\text{Kg}$ . The federal Toxic Substances Control Act (TSCA) subpart D Cleanup Standard (soil) is 1,000  $\mu\text{g}/\text{Kg}$ . Neither of these criteria were exceeded with the samples collected as part of this PSI.

The absence of PCBs in the sediment within the portion of the Kalamazoo River sampled during this investigation is likely due to the flow characteristics of the river. The stretch of river beneath M-222 is located on the outside of a large bend in the river, where active erosion is occurring. The current in the river is swift, and the water at the base of the river bank is relatively deep. Erosion of the bank continues to provide fresh soil to the river along this portion of the river. Any fine-grained sediment would be moved downstream by the current. PCB-rich sediments are more likely trapped by the dam in Allegan, and any sediments downstream of the dam are not deposited in the section of the river sampled during this PSI.

### **RECOMMENDATIONS FOR FIELD PROCEDURES**

Sampling indicates that no sediment or soil is impacted with PCBs within the project area. Based on conversations regarding the nature of work to be performed by MDOT, sheet piling will be installed along the edge of the river, with rip rap stone placed behind the sheet piling. Any soil and/or sediment material excavated during the construction should be placed behind the sheet piling, and covered with stone armor. This will minimize movement of potential PCB-impacted material, and movement of soil into the river. Soil and sediment should be kept from entering the river (to the extent possible) to minimize sedimentation of the river downstream of the construction site.

Workers should wear the proper personal protective equipment (PPE) to minimize potential exposure. To comply with the OSHA Standard 29 CFR 1910.120 (e), all employees working at a site who are exposed to hazardous substances, health hazards, or safety hazards must receive appropriate training.

### **DUE CARE RESPONSIBILITIES**

Section 20107a of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), specifically requires that owners and operators take due care measures to ensure that existing contamination on a property does not cause unacceptable risks and is not exacerbated. Such measures include evaluating the contamination and taking necessary response actions. Due care requirements are not related to the owner or operator's liability for the contaminants; they apply to non-labile parties and liable parties alike.

An owner or operator of a facility shall do all of the following with respect to hazardous substances at a facility:

- Prevent exacerbation of the existing contamination,
- Prevent unacceptable human exposure and mitigate fire and explosion hazards to allow for the intended use of the facility in a manner that protect the public health and safety,



- Take reasonable precautions against the reasonably foreseeable acts or omissions of a third party, and
- Provide notifications to the DNRE and others.

A key provision of the due care responsibilities is that the property is considered a “facility” under Part 201 of the NREPA. The presence of hazardous substances at concentrations which exceed the residential criteria qualify a site as a “facility”.

Because no contaminants were detected in samples collected during this investigation, the portion of the Kalamazoo River investigated during this PSI does not qualify as a facility. Therefore, no due care obligations are necessary for the proposed construction at this site. General materials handling procedures as recommended above should suffice for the material characterized during this PSI.

Please feel free to call us at 517-913-5800 if you have any questions regarding the data presented in this PSI. We appreciate the opportunity to provide continued environmental studies to MDOT.

Sincerely,

Allan R. Blaske, P. G., CPG  
Senior Project Geologist

Jamie S. Matus, CPG  
Vice President

Attachments:

Figure 1 – Project Site Location and Location of Sampling Points

Table 1 – Sediment and Soil Sample Descriptions

Table 2 – Sediment and Soil Sample Analytical Results

Attachment A – Photographs

Attachment B – Laboratory Report

**PROJECT SITE LOCATION AND LOCATION OF SAMPLING POINTS  
PRELIMINARY SITE INVESTIGATION  
KALAMAZOO RIVER AT M-222, ALLEGAN COUNTY, MICHIGAN**



Aerial Photo-April 2009  
Obtained from Allegan County

Drawn: KGK 8/31/2010

Approved: ARB 8/31/2010

Scale: AS SHOWN

PROJECT NUMBER 60155126

FIGURE NUMBER 1

**TABLE 1**  
**Sediment and Soil Sample Descriptions**  
**Kalamazoo River at M-222, Allegan, Allegan County, Michigan**  
**Samples collected June 24, 2010**

SED-1	Sediment is 2-inches brown fine silty sand underlain by black silty clay with gravel. Total sample length recovered of approximately 8 inches. Water depth approximately 13 feet.
SED-2	Sediment 0 to 4 inches comprised of rocks, bricks, and glass, underlain by gray silty clay. Total sample length recovered of approximately 30 inches. Water depth approximately 5.5 feet.
SED-3	Sediment 0 to 3 inches a brown silty clay with gravel, underlain by brown fine sand with some silt. Total sample length recovered of approximately 12 inches. Water depth approximately 10 feet.
SED-4	Sediment brown silty clay, trace fine sand and gravel for entire thickness. Total sample length recovered of approximately 12 inches. Water depth approximately 9.75 feet.
SED-5	Sediment 0 to 3 inches sand and gravel, underlain by clay with trace gravel. Total sample length recovered of approximately 19 inches. Water depth approximately 10.25 feet.
SED-6	Sediment sand and gravel.
SED-7	Sediment fine sand.
SED-8	Sediment fine sand.
Bank-1	Dark brown silty clay with trace sand and organic material. Collected from river bank adjacent to water. Sample from 0 to 3 inches depth.
Bank-2	Tan to brown silty clay with black organic material. Collected from river bank adjacent to water. Sample from 0 to 6 inches depth.
Bank-3	Brown silty sand with some clay and organic material. Collected from river bank adjacent to water. Sample from 0 to 6 inches depth.
Bank-4	Brown silty sand with organic material (topsoil). Collected from river bank adjacent to water. Sample from 0 to 6 inches depth.
Bank-6	Silt, clay, and fine sand. Collected from river bank adjacent to water.
Bank-7	Clay and silt, collected from river bank adjacent to water.
Bank-8	Silt, clay and fine sand. Collected from river bank adjacent to water.

**TABLE 2**  
**SAMPLE ANALYTICAL RESULTS - PCBs**  
**Kalamazoo River at M-222, Allegan, Allegan County, Michigan**

									Part 201 Direct Contact Cleanup Criteria*
Sample ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	Direct
Date Collected	6/24/10	6/24/10	6/24/10	6/24/10	6/24/10	8/24/10	8/24/10	8/24/10	Contact
									Criteria
PCBs by 8082 (µg/Kg)	Conc.								
Aroclor-1016	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1221	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1232	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1242	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1248	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1254	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1260	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1262	<450	<410	<410	<450	<400	<470	<430	<480	4,000
Aroclor-1268	<450	<410	<410	<450	<400	<470	<430	<480	4,000

									Part 201 Direct Contact Cleanup Criteria*
Sample ID	Bank-1	Bank-2	Bank-3	Bank-4	Bank-6	Bank-7	Bank-8		Direct
Date Collected	6/24/10	6/24/10	6/24/10	6/24/10	8/24/10	8/24/10	8/24/10		Contact
									Criteria
PCBs by 8082 (µg/Kg)	Conc.								
Aroclor-1016	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1221	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1232	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1242	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1248	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1254	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1260	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1262	<410	<410	<440	<470	<470	<420	<610		4,000
Aroclor-1268	<410	<410	<440	<470	<470	<420	<610		4,000

\* Part 201 Residential and Commercial I Generic Cleanup Criteria and Screening Levels, MDEQ Administrative Rules, January 23, 2006

Shaded cell indicates concentration exceeds one or more applicable criteria.

**ATTACHMENT A**

Site Photographs

**PHOTOGRAPH LOG**  
**Sediment and soil sampling activities**



Lifting sampling boat into river



Sampling boat on Kalamazoo River below M-222

**Preliminary Site Investigation**  
**Kalamazoo River, M-222, Allegan, Allegan County, MI**  
**AECOM Project No: 60155126**

**PHOTOGRAPH LOG**  
**Sediment and soil sampling activities**



Collecting sediment sample from north bank of river below M-222, at location SED-1



Sampling boat secured in trees along north river bank, at location SED-2

**Preliminary Site Investigation**  
**Kalamazoo River, M-222, Allegan, Allegan County, MI**  
**AECOM Project No: 60155126**

**PHOTOGRAPH LOG**  
**Sediment and soil sampling activities**



Collecting sediment sample using vibracore device, location SED-2



Sampling vessel at location SED-3, below eroded river bank

**Preliminary Site Investigation**  
**Kalamazoo River, M-222, Allegan, Allegan County, MI**  
**AECOM Project No: 60155126**

**PHOTOGRAPH LOG**  
**Sediment and soil sampling activities**



Sampling vessel at location SED-3, looking downstream (west)



Close-up of sampling at location SED-3

**Preliminary Site Investigation**  
**Kalamazoo River, M-222, Allegan, Allegan County, MI**  
**AECOM Project No: 60155126**

**ATTACHMENT B**

Laboratory Data

Friday, July 02, 2010

Fibertec Project Number: 39790  
Project Identification: MDOT Allegan M-222 /  
Submittal Date: 06/25/2010

Mr. Al Blaske  
AECOM - Lansing  
401 S. Washington Square  
Suite 103  
Lansing, MI 48933

Dear Mr. Blaske,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh  
Laboratory Director

DPS/kc

Enclosures

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>SED-1</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>1</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	27		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628

**Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
2. Aroclor-1221	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
3. Aroclor-1232	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
4. Aroclor-1242	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
5. Aroclor-1248	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
6. Aroclor-1254	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
7. Aroclor-1260	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
8. Aroclor-1262 (NN)	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
9. Aroclor-1268 (NN)	U	J,G-	µg/kg	450	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B

Client Identification: **AECOM - Lansing** Sample Description: **SED-2** Chain of Custody: **88379**  
Client Project Name: **MDOT Allegan M-222** Sample No: **2** Collect Date: **06/24/10**  
Client Project No: **NA** Sample Matrix: **Soil/Solid** Collect Time: **NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: **Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.**

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-002			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	<b>20</b>		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-002			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
2. Aroclor-1221	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
3. Aroclor-1232	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
4. Aroclor-1242	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
5. Aroclor-1248	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
6. Aroclor-1254	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
7. Aroclor-1260	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
8. Aroclor-1262 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	
9. Aroclor-1268 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B	

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>SED-3</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>3</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Parameter(s)	Aliquot ID: 39790-003				Matrix: Soil/Solid		Analyst: BMG		
	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	19		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628

**Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)**

Parameter(s)	Aliquot ID: 39790-003				Matrix: Soil/Solid		Analyst: BDA		
	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
2. Aroclor-1221	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
3. Aroclor-1232	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
4. Aroclor-1242	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
5. Aroclor-1248	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
6. Aroclor-1254	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
7. Aroclor-1260	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
8. Aroclor-1262 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B
9. Aroclor-1268 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SB10F30B

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8660 S. Mackinaw Trail

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Brighton, MI 48116  
Cadillac, MI 49601

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T: (810) 220-3300  
T: (231) 775-8368

F: (517) 699-0388  
F: (810) 220-3311  
F: (231) 775-8584

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>SED-4</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>4</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>
Sample Comments: <b>Soil results have been calculated and reported on a dry weight basis unless otherwise noted.</b>		
Definitions: <b>Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.</b>		

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-004			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	<b>26</b>		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-004			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
2. Aroclor-1221	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
3. Aroclor-1232	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
4. Aroclor-1242	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
5. Aroclor-1248	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
6. Aroclor-1254	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
7. Aroclor-1260	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
8. Aroclor-1262 (NN)	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	
9. Aroclor-1268 (NN)	U		µg/kg	450	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A	

Client Identification: **AECOM - Lansing** Sample Description: **SED-5** Chain of Custody: **88379**  
Client Project Name: **MDOT Allegan M-222** Sample No: **5** Collect Date: **06/24/10**  
Client Project No: **NA** Sample Matrix: **Soil/Solid** Collect Time: **NA**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: **Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.**

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-005			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	17		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-005			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
2. Aroclor-1221	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
3. Aroclor-1232	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
4. Aroclor-1242	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
5. Aroclor-1248	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
6. Aroclor-1254	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
7. Aroclor-1260	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
8. Aroclor-1262 (NN)	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
9. Aroclor-1268 (NN)	U		µg/kg	400	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-1</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>6</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-006			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	19		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-006			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
2. Aroclor-1221	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
3. Aroclor-1232	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
4. Aroclor-1242	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
5. Aroclor-1248	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
6. Aroclor-1254	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
7. Aroclor-1260	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
8. Aroclor-1262 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
9. Aroclor-1268 (NN)	U		µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-2</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>7</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-007			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	20		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-007			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
2. Aroclor-1221	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
3. Aroclor-1232	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
4. Aroclor-1242	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
5. Aroclor-1248	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
6. Aroclor-1254	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
7. Aroclor-1260	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
8. Aroclor-1262 (NN)	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
9. Aroclor-1268 (NN)	U	J,G-	µg/kg	410	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-3</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>8</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-008			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	25		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628	

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-008			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
2. Aroclor-1221	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
3. Aroclor-1232	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
4. Aroclor-1242	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
5. Aroclor-1248	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
6. Aroclor-1254	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
7. Aroclor-1260	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
8. Aroclor-1262 (NN)	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	
9. Aroclor-1268 (NN)	U		µg/kg	440	1.0	06/30/10	PS10F30C	06/30/10	SA10F30A	

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-4</b>	Chain of Custody: <b>88379</b>
Client Project Name: <b>MDOT Allegan M-222</b>	Sample No: <b>9</b>	Collect Date: <b>06/24/10</b>
Client Project No: <b>NA</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>NA</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 39790-009			Matrix: Soil/Solid		Analyst: BMG
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	<b>30</b>		%	0.1	1.0	06/28/10	MC100628	06/29/10	MC100628

Polychlorinated Biphenyls (PCBs) (EPA 3550B/EPA 8082)				Aliquot ID: 39790-009			Matrix: Soil/Solid		Analyst: BDA
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
2. Aroclor-1221	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
3. Aroclor-1232	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
4. Aroclor-1242	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
5. Aroclor-1248	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
6. Aroclor-1254	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
7. Aroclor-1260	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
8. Aroclor-1262 (NN)	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A
9. Aroclor-1268 (NN)	U		µg/kg	470	1.0	06/30/10	PS10F30C	07/01/10	SB10G01A

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**Definitions/ Qualifiers:**

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- \*: Value reported is outside QA limits

**Exception Summary:**

- G- : Recovery of the associated Surrogate Compound exceeds the lower control limit. Results may be biased low.



Accreditation Number:

**100312**

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Analytical Laboratory  
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 Fax: 517 699 0388  
 email: lab@fibertec.us

Industrial Hygiene Services, Inc.  
 1914 Holloway Drive  
 Hoff, MI 48842  
 Phone: 517 699 0345  
 Fax: 517 699 0382  
 email: asbestos@fibertec.us

Chain of Custody #  
**88379**  
 PAGE 1 of 1

Client Name: <b>AFCO M</b>		Contact Person: <b>Allan Blasko</b>		Project Name/ Number: <b>MDOT Allegan M-222</b>	
Purchase Order#		Client Sample #		Client Sample Descriptor	
Lab Sample #	Date	Time	Client Sample #	Client Sample Descriptor	
	6/24/10			SED-1	
				SED-2	
				SED-3	
				SED-4	
				SED-5	
				Bank-1	
				Bank-2	
				Bank-3	
				Bank-4	
MATRIX (SEE RIGHT CORNER FOR CODE) # OF CONTAINERS PRESERVED (Y/N) PCB					
PARAMETERS		Turnaround		Matrix Code	
		24 hour RUSH (surcharge applies)		S Soil	
		48 hour RUSH (surcharge applies)		W Water	
		72 hour RUSH (surcharge applies)		SW Surface Water	
		Standard (5-7 bus. days)		WW Waste Water	
		Other: Specify		A Air	
				O Oil	
				P Wipe	
				Other: Specify <b>SEDIMENT</b>	
Remarks:					

Comments:

Relinquished By: **Allan R. Blasko** Date/Time: **7/18/10**

Relinquished By: **[Signature]** Date/Time: **6/25/10**

Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received By: **[Signature]** Date/Time: \_\_\_\_\_

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

LAB USE ONLY:  
 Fibertec project number:  
 Laboratory Tracking:  
 Temperature at Receipt:

12

RECEIVED SEP 08 2010

Tuesday, August 31, 2010

Fibertec Project Number: 40685  
Project Identification: MDOT Allegan /60155126.200  
Submittal Date: 08/25/2010

Mr. Al Blaske  
AECOM - Lansing  
401 S. Washington Square  
Suite 103  
Lansing, MI 48933

Dear Mr. Blaske,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,



Daryl P. Strandbergh  
Laboratory Director

DPS/kc

Enclosures

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>SED-6</b>	Chain of Custody: <b>101126</b>
Client Project Name: <b>MDOT Allegan</b>	Sample No: <b>1</b>	Collect Date: <b>08/24/10</b>
Client Project No: <b>60155126.200</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>10:10</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 40685-001			Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	<b>30</b>		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826	

Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)				Aliquot ID: 40685-001			Matrix: Soil/Solid		Analyst: BDA	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
2. Aroclor-1221	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
3. Aroclor-1232	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
4. Aroclor-1242	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
5. Aroclor-1248	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
6. Aroclor-1254	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
7. Aroclor-1260	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
8. Aroclor-1262 (NN)	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	
9. Aroclor-1268 (NN)	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A	

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-6</b>	Chain of Custody: <b>101126</b>
Client Project Name: <b>MDOT Allegan</b>	Sample No: <b>2</b>	Collect Date: <b>08/24/10</b>
Client Project No: <b>60155126.200</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>10:20</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	Aliquot ID: 40685-002	Matrix: Soil/Solid	Analyst: BMG
1. Percent Moisture (Water Content) (NN)	29		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826			

**Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	Aliquot ID: 40685-002	Matrix: Soil/Solid	Analyst: BDA
1. Aroclor-1016	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
2. Aroclor-1221	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
3. Aroclor-1232	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
4. Aroclor-1242	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
5. Aroclor-1248	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
6. Aroclor-1254	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
7. Aroclor-1260	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
8. Aroclor-1262 (NN)	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			
9. Aroclor-1268 (NN)	U		µg/kg	470	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A			

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>SED-7</b>	Chain of Custody: <b>101126</b>
Client Project Name: <b>MDOT Allegan</b>	Sample No: <b>3</b>	Collect Date: <b>08/24/10</b>
Client Project No: <b>60155126.200</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>10:40</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Aliquot ID: 40685-003

Matrix: Soil/Solid

Analyst: BMG

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	24		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826

**Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)**

Aliquot ID: 40685-003

Matrix: Soil/Solid

Analyst: BDA

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
2. Aroclor-1221	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
3. Aroclor-1232	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
4. Aroclor-1242	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
5. Aroclor-1248	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
6. Aroclor-1254	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
7. Aroclor-1260	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
8. Aroclor-1262 (NN)	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
9. Aroclor-1268 (NN)	U		µg/kg	430	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A

Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-7</b>	Chain of Custody: <b>101126</b>
Client Project Name: <b>MDOT Allegan</b>	Sample No: <b>4</b>	Collect Date: <b>08/24/10</b>
Client Project No: <b>60155126.200</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>10:45</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Aliquot ID: 40685-004

Matrix: Soil/Solid

Analyst: BMG

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	21		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826

**Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)**

Aliquot ID: 40685-004

Matrix: Soil/Solid

Analyst: BDA

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
2. Aroclor-1221	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
3. Aroclor-1232	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
4. Aroclor-1242	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
5. Aroclor-1248	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
6. Aroclor-1254	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
7. Aroclor-1260	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
8. Aroclor-1262 (NN)	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
9. Aroclor-1268 (NN)	U		µg/kg	420	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A

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Client Identification: **AECOM - Lansing** Sample Description: **SED-8** Chain of Custody: **101126**  
Client Project Name: **MDOT Allegan** Sample No: **5** Collect Date: **08/24/10**  
Client Project No: **60155126.200** Sample Matrix: **Soil/Solid** Collect Time: **10:55**

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Aliquot ID: 40685-005

Matrix: Soil/Solid

Analyst: BMG

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	32		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826

**Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)**

Aliquot ID: 40685-005

Matrix: Soil/Solid

Analyst: BDA

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
2. Aroclor-1221	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
3. Aroclor-1232	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
4. Aroclor-1242	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
5. Aroclor-1248	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
6. Aroclor-1254	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
7. Aroclor-1260	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
8. Aroclor-1262 (NN)	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A
9. Aroclor-1268 (NN)	U		µg/kg	480	1.0	08/27/10	PS10H27A	08/29/10	SB10H29A

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Client Identification: <b>AECOM - Lansing</b>	Sample Description: <b>BANK-8</b>	Chain of Custody: <b>101126</b>
Client Project Name: <b>MDOT Allegan</b>	Sample No: <b>6</b>	Collect Date: <b>08/24/10</b>
Client Project No: <b>60155126.200</b>	Sample Matrix: <b>Soil/Solid</b>	Collect Time: <b>11:00</b>

Sample Comments: **Soil results have been calculated and reported on a dry weight basis unless otherwise noted.**

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

**Dry Weight Determination (ASTM D 2974-87)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	Aliquot ID: 40685-006	Matrix: Soil/Solid	Analyst: BMG
1. Percent Moisture (Water Content) (NN)	46		%	0.1	1.0	08/26/10	MC100826	08/27/10	MC100826			

**Polychlorinated Biphenyls (PCBs) (EPA 3546/EPA 8082)**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	Aliquot ID: 40685-006	Matrix: Soil/Solid	Analyst: BDA
1. Aroclor-1016	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
2. Aroclor-1221	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
3. Aroclor-1232	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
4. Aroclor-1242	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
5. Aroclor-1248	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
6. Aroclor-1254	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
7. Aroclor-1260	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
8. Aroclor-1262 (NN)	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			
9. Aroclor-1268 (NN)	U		µg/kg	610	1.0	08/27/10	PS10H27A	08/30/10	SB10H30B			

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**Definitions/ Qualifiers:**

- A:** Spike recovery or precision unusable due to dilution.
- B:** The analyte was detected in the associated method blank.
- E:** The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J:** The concentration is an estimated value.
- U:** The analyte was not detected at or above the reporting limit.
- X:** Matrix Interference has resulted in a raised reporting limit or distorted result.
- W:** Results reported on a wet-weight basis.
- \*:** Value reported is outside QA limits

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**Exception Summary:**

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Accreditation Number:

**100312**

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