

**Worldwide Facilities Group
Remediation Team**

MC 483-520-190
2000 Centerpoint Parkway
Pontiac, Michigan 48341

January 10, 2007

Mr. Daniel Patulski, DP-8J
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604-3507

Dear Mr. Patulski:

RE: AOI 37 and Area 3 Additional Investigation and Excavation Documentation
13000 Eckles Road Site (U.S. EPA ID No. MID 005 356 621)
Livonia, Michigan

This letter has been prepared to document the additional soil sampling and excavation activities conducted in AOI 37 and Area 3 at the 13000 Eckles Road Site (Site) located in Livonia, Michigan. The Site location is presented on figure 1. A Site Plan is presented on figure 2.

1.0 BACKGROUND

General Motors Corporation (GM) has completed the remedial actions for the entire Site that were described in United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act (RCRA) Final Decision and Response to Comments dated March 13, 2006, document, except for implementation of certain institutional controls which are in progress. GM decided to perform additional soil excavation at AOI 37 and Area 3 to expedite redevelopment activities at the Site. These additional excavation activities were not required as part of the Final Decision and are not necessary for protection of human health and the environmental.

AOI 37 - Historical Coal Pile

AOI 37 is located in the north central portion of the Site and consisted of the historical coal pile area. As described in the RCRA Facility Investigation (RFI) Report (CRA, March 2005) and Supplement to the RFI Report (CRA, April 2005), the Powerhouse historically generated power through the burning of coal which was stored on uncovered soil north of the Powerhouse. Following conversion of the powerhouse to fuel oil, two 1,000,000-gallon fuel oil storage tanks were constructed in the vicinity of the former coal pile. Interim measures conducted in AOI 37 during 2005 included additional soil sampling and excavation of impacted soils. As described in the Interim Measure Completion Report (Revision 1) for AOI 27 and AOI 37 (CRA, June 2006), based on the results of the soil samples collected during implementation of the interim measure, there was no unacceptable risk for current or reasonably expected future exposures at AOI 37.

In order to facilitate redevelopment activities at the Site, additional activities were performed in AOI 37 in 2006 as described below. The additional activities conducted in AOI 37 included soil

January 10, 2007

Arcadis

2

Reference No. 12607

Jun 18, 2009 08:15

sample collection, the excavation and disposal of the soil at and around the sample locations that were identified with PCBs at concentrations greater than 50 ppm, and backfilling.

Area 3 – Subsurface Conditions beneath the existing concrete slab

Subsurface investigations were performed as part of the RFI Stages IX and X to investigate the soil conditions beneath the remaining concrete slab at the Site which was part of the former main manufacturing area. The subsurface soil beneath the remaining concrete slab was designated as Area 3. As presented in the Supplement to the RFI Report, PCBs were detected at a concentration of 55.3 ppm in a soil sample collected from SB-SL-12. Based on the risk assessment conducted during the RFI, there is no unacceptable risk for current or reasonably expected future land uses at Area 3.

In order to facilitate redevelopment activities at the Site, additional activities were performed in Area 3 in 2006 as described below. The additional activities conducted in AOI 37 included soil sample collection, the excavation and disposal of the soil at and around SB-SL-12, and backfilling.

2.0 SCOPE OF WORK - ON-SITE ACTIVITIES

To expedite redevelopment of the Site, GM collected additional soil samples in AOI 37 and Area 3 and excavated additional shallow soil in areas containing PCBs at concentrations greater than 50 ppm. These areas were small and the concentrations would not pose a significant health risk as presented in the Supplement to the RFI Report when the 95% UCL of the mean of PCB concentrations in the area was used in the risk evaluation.

Additional Soil Delineation

Additional soil samples were collected in AOI 37 and Area 3 to refine the extents of shallow soil containing PCBs at concentrations greater than 50 ppm. A summary of the additional soil samples collected in 2006 is presented in Table 1. PCB-impacted soil at AOI 37 was previously delineated by soil samples collected during the RFI and previous IM sampling. The additional soil sample locations from 2006 to refine the horizontal delineation of PCB-impacted soils in AOI 37 are presented on Plan 1. PCB-impacted soil at Area 3 in the vicinity of SB-SL-12 was previously delineated horizontally during the RFI. The additional soil sample locations from 2006 to vertically delineate and refine the horizontal delineation of PCB-impacted soils in the vicinity of SB-SL-12 are presented on Plan 2. All soil samples collected were analyzed for Target Compound List (TCL) PCBs. A summary of the analytical results of the additional soil samples collected in 2006 is presented in Table 2. As a result of this additional delineation, it was determined that the area of PCBs above 50 ppm was actually smaller than what would have been assumed based on RFI data. The delineated area of PCBs above 50 ppm was excavated as discussed below. A data validation memorandum is presented in Attachment A.

Surveying

Prior to mobilization, the excavation areas were surveyed and marked based on RFI, IM, and additional soil sampling locations.

Mobilization/Site Preparation

Inland Waters Pollution Control (IWPC) mobilized to the Site October 9 and 10, 2006 for excavation activities. Activities completed included the following: establishing the exclusion,

January 10, 2007

Arcadis

3

Reference No. 12607

Jun 18, 2009 08:15

contaminant reduction, and support zones, and a laydown area for equipment and materials; establishing sanitary facilities; and constructing a decontamination pad.

Soil Excavation

Soils identified for removal were excavated using a Caterpillar 330 hydraulic excavator. The limits of each excavation were marked in the field prior to excavation. Plans 1 and 2 show the final excavation area and depths. Excavated soils were transferred directly from the excavation into a loader. The loader placed soil into haul trucks, which were lined with polyethylene sheeting. The polyethylene sheeting was also draped over the side of the haul truck to prevent contact with the soil during transfer from the excavation.

A total of approximately 239 tons of excavated soils were disposed of at EQ Wayne Disposal in Belleville, Michigan. Analytical results of the soil samples representing the excavated soil are presented in Table 3.

Verification Sampling

Post excavation verification sampling was not necessary since the excavation limits extended right up to the nearest location and depth with PCBs at concentrations less than 50 ppm. Analytical results of soil remaining in place following the excavation activities at AOI 37 and Area 3 are presented on Plans 1 and 2, respectively.

Transportation and Off-Site Disposal

Transportation and disposal was completed in accordance with 40 CFR 761.61. The excavated soils from AOI 37 and Area 3 were managed as PCB remediation waste containing PCBs greater than or equal to 50 ppm. The soils removed during additional excavation activities were disposed of at EQ Wayne Disposal in Belleville, Michigan. The waste manifests for these soils were prepared in accordance with 40 CFR 761 Subpart K *PCB Waste Disposal Records and Reports* and are contained in Attachment B.

Backfilling

The excavations were backfilled on October 10, 2006 with clean fill imported from Edward Levy Co.'s American Aggregate - Bruno Road Plant in Wixom, Michigan. As the fill was placed into the excavation, it was spread by a dozer in approximate 1-foot lifts and compacted. Borrow source documentation is presented in Attachment C.

Decontamination

Decontamination was completed in accordance with the Work Plan and the self-implementing procedures described in 40 CFR 761.79(c)(2). Equipment which contacted PCB-impacted material, including the excavator and front end loader buckets, was decontaminated by scraping any materials from the equipment while positioned over a haul truck destined for EQ Wayne Disposal in Belleville, Michigan, then rinsed with Hotsy Power Washer. Decontamination materials were disposed of consistent with 40 CFR 761.61 (a)(5).

Site Restoration and Demobilization

All temporary fencing, the decontamination pad, equipment, and other materials and supplies brought onto the Site for the cleanup activities were removed following the final stage of the backfilling activities.

Brad Saunders

January 10, 2007

Arcadis

Reference No. 12607

Jun 18, 2009 08:15

Documentation

During completion of the soil sampling and excavation activities, a logbook was maintained to document all activities completed on Site including weather, personnel participating in the sampling and excavating activities, cleanup activities conducted, and other relevant information.

3.0 CONCLUSION

Based on the additional activities completed including soil sample collection, soil excavation, and backfilling, soils identified to have PCB concentrations greater than 50 ppm were removed and disposed of at an appropriately licensed facility.

Please feel free to contact me at (248) 753-5800 if you have any questions regarding this letter or if you require any further information.

Yours truly,

GENERAL MOTORS CORPORATION,

Kim D. Tucker-Billingslea

Kim D. Tucker-Billingslea
Project Manager

KTG/cm/12607/23/Det.
Encl.

c.c.: Richard Conforti (MDEQ)
Jean Caufield (GM)
Chris Meincke (CRA)
Ian Richardson (CRA)

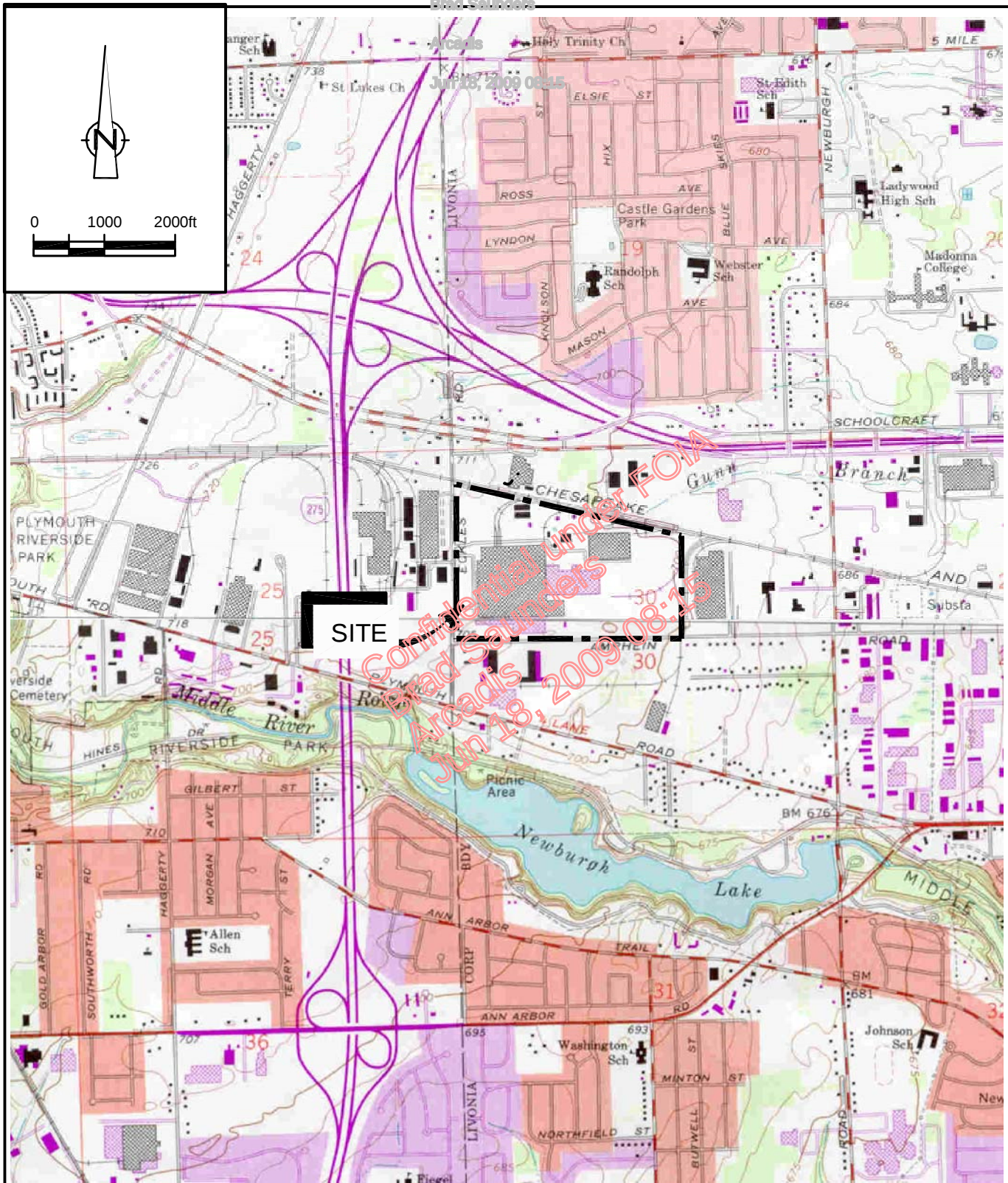
Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders



SOURCE: USGS QUADRANGLE MAPS;
NORTHVILLE AND WAYNE, MICHIGAN

figure 1



LIVONIA

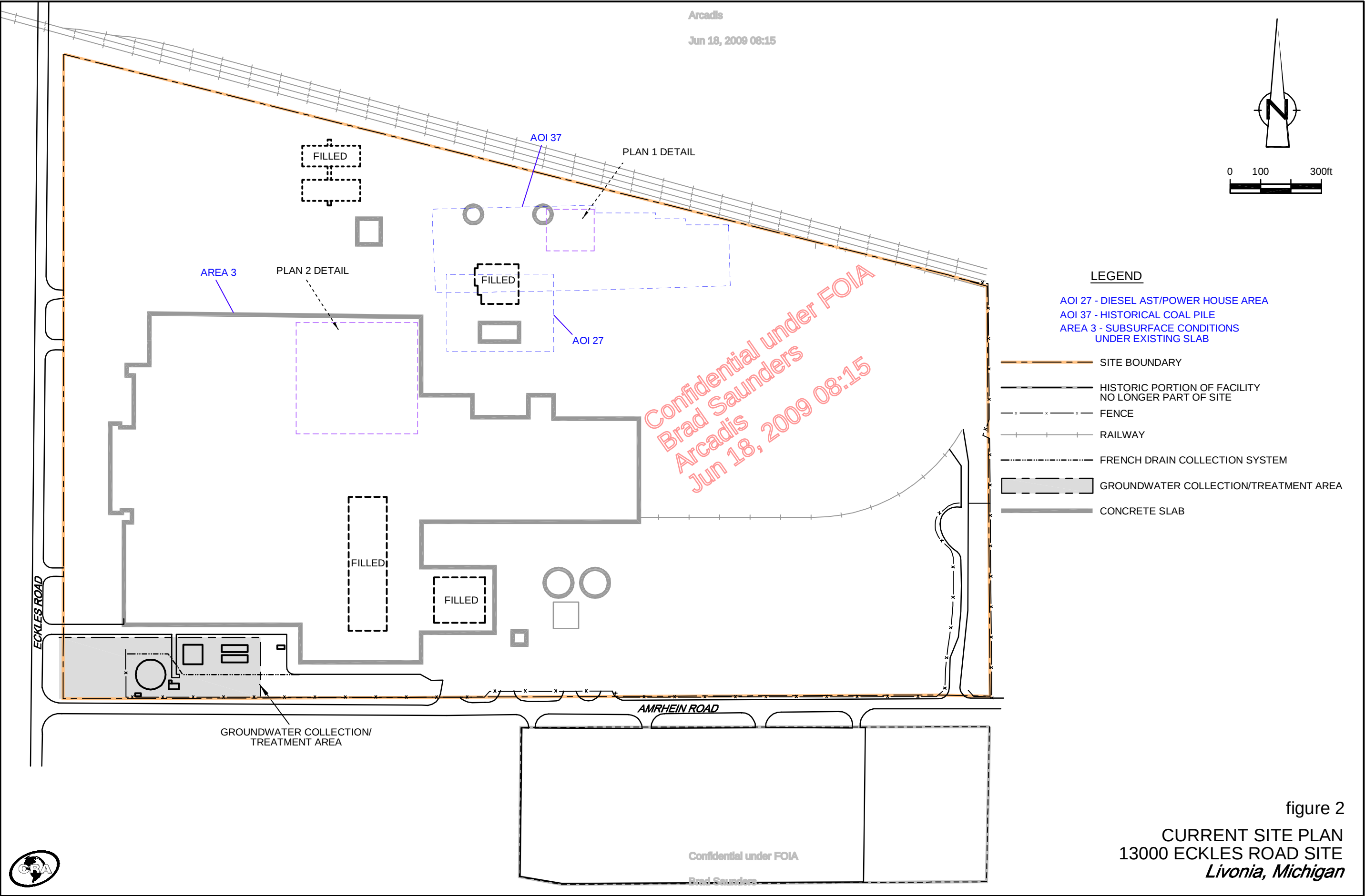
Confidential under FOIA

Brad Saunders

SITE LOCATION
13000 ECKLES ROAD SITE
Livonia, Michigan

Arcadis

Jun 18, 2009 08:15





NOTES:

ND - NO AROCLORS WERE DETECTED ABOVE THE REPORTING LIMITS.

J - THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED QUANTITY

U - PARAMETER WAS ANALYZED BUT NOT DETECTED ABOVE PROVIDED DETECTION LIMIT

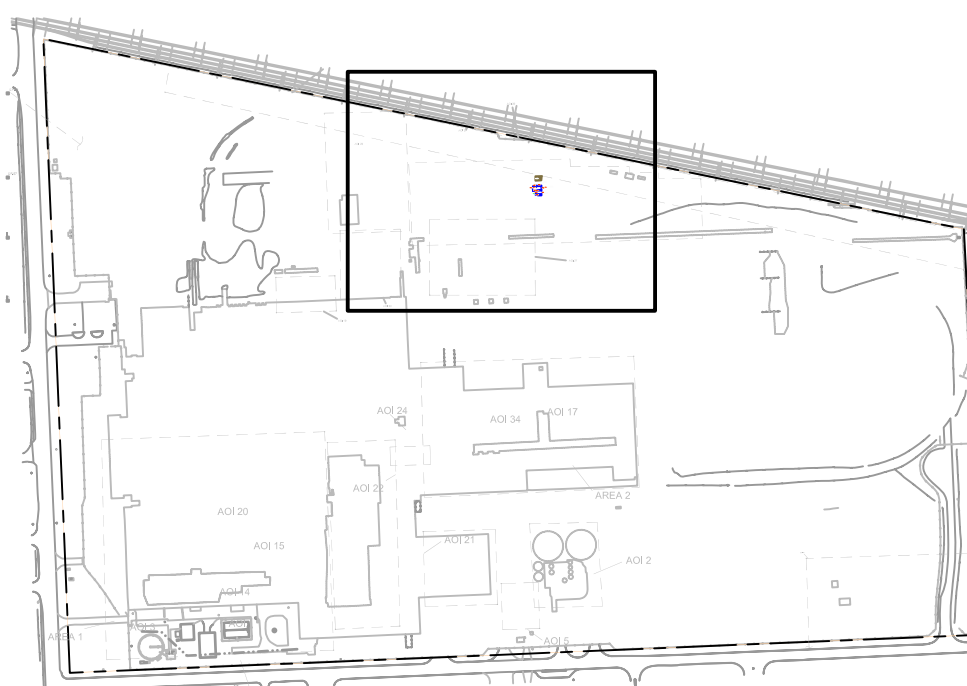
B - THE REPORTED ANALYTE WAS DETECTED IN THE ASSOCIATED METHOD

BLANK AS WELL AS THE SAMPLE

R - THE DATA IS UNUSABLE. (NOTE: ANALYTE MAY OR MAY NOT BE PRESENT.)

PARAMETER NOT ANALYZED FROM SPECIFIED SAMPLE

TOTAL PCBs WERE SUMMED BY ADDING THE DETECTED AROCLORS.



SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY

SOIL SAMPLE LOCATIONS AND EXCAVATION LIMITS - AOI 37

AOI 37 ADDITIONAL EXCAVATION

13000 ECKLES ROAD
LIVONIA, MICHIGAN



Source References:

Project Manager:

C.M.

Scale:

Reviewed By:	Date:
--------------	-------

DECEMBER, 2006

Project N°:	Report N°:	Dra
-------------	------------	-----

12607-309	PATU023	PLAN 1
-----------	---------	--------

MW-19-5S

MW-19-6S

SB-SL-52	10/4/04 0-2 ft BGS mg/kg	10/4/04 2-4 ft BGS mg/kg
PCBs Total PCBs	ND	0.007 J

SB-SL-58	9/6/06 2.5-4.5 ft BGS mg/kg
PCBs Total PCBs	ND

SB-SL-53	10/4/04 0.3-2.3 ft BGS mg/kg
PCBs Total PCBs	16

SB-SL-57	10/4/04 0-2 ft BGS mg/kg	10/4/04 4-6 ft BGS mg/kg
PCBs		
Total PCBs	0.082 J	0.05 J

SB-SL-61	9/6/06 2.5-4 ft BGS mg/kg
PCBs Total PCBs	0.215 J

SB-SL-12B	9/21/06 5-6 ft BGS mg/kg	9/21/06 6-7 ft BGS mg/kg	9/21/06 7-8 ft BGS mg/kg	9/21/06 8-9 ft BGS mg/kg	9/21/06 9-10 ft BGS mg/kg
PCBs					
Total PCBs	ND	ND	ND	ND	ND

SB-SL-55	10/4/04 0-2 ft BGS mg/kg	10/4/04 2-4 ft BGS mg/kg
PCBs		
Total PCBs	0.3 J	0.22 J

SB-SL-59	9/6/06 2.5-4.5 ft BGS mg/kg
PCBs Total PCBs	ND

SB-SL-54	10/4/04 0-2 ft BGS mg/kg
PCBs Total PCBs	ND

SB-SL-60	9/6/06 2.5-4.5 ft BGS mg/kg
PCBs Total PCBs	0.027 J

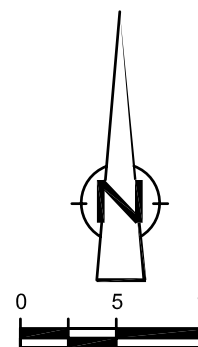
B-SL-12A

SB-SL-61

SB-SL-60

~~SB-SL-54~~

-60

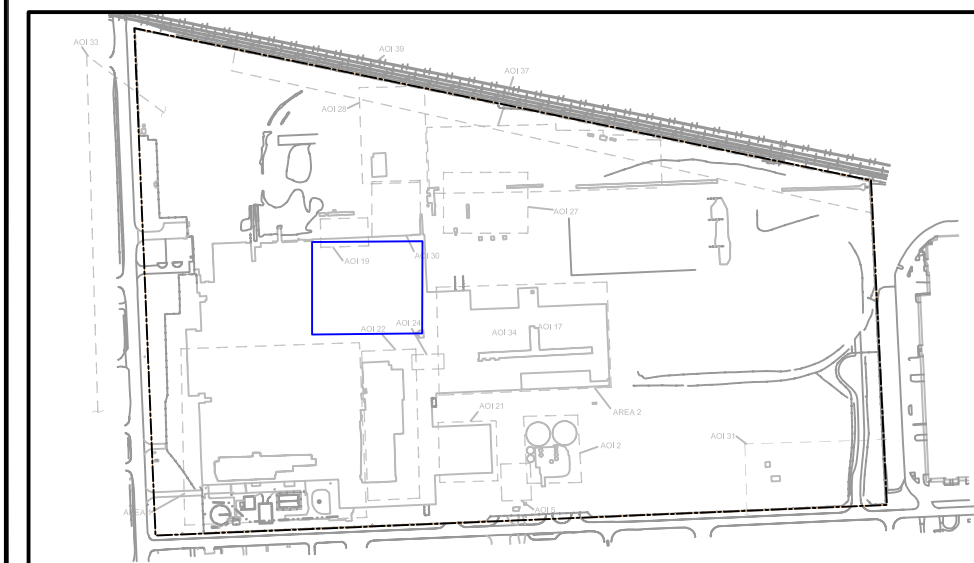


LEGEND

-

NOTES:

ND - NO AROCLORS WERE DETECTED ABOVE THE REPORTING LIMITS
 J - THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED QUANTITY
 U - PARAMETER WAS ANALYZED BUT NOT DETECTED ABOVE PROVIDED DETECTION LIMIT
 B - THE REPORTED ANALYTE WAS DETECTED IN THE ASSOCIATED METHOD
 BLANK AS WELL AS THE SAMPLE
 R - THE DATA IS UNUSABLE, (NOTE: ANALYTE MAY OR MAY NOT BE PRESENT.)
 -- PARAMETER NOT ANALYZED FROM SPECIFIED SAMPLE
 TOTAL PCBs WERE SUMMED BY ADDING THE DETECTED AROCLORS



SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

SOIL SAMPLE LOCATIONS AND EXCAVATION LIMITS - AREA 3

AREA 3 ADDITIONAL EXCAVATION

13000 ECKLES ROAD
LIVONIA, MICHIGAN



CONESTOGA-ROVERS & ASSOCIATES

Source Reference:

Project Manager: C.M.	Reviewed By: C.M.	Date: DECEMBER, 2006	
Scale: 1" = 10'	Project N ^o : 12607-309	Report N ^o : PATU023	Drawing N ^o : PLAN 2

12607-309(PATU023)GN-DE004 JAN 10/2007

Brad Saunders

Arcadis

TABLE 1

Jun 18, 2009 08:15

SAMPLE SUMMARY

AOI 37 AND AREA 3 ADDITIONAL EXCAVATION ACTIVITIES

13000 ECKLES ROAD SITE

LIVONIA, MICHIGAN

Sample Location	Sample ID	Area Of Interest	Sample Date	Depth (ft BGS)		Analysis
				Start	End	
SB-37-85	S-090606-NRS-009	AOI 37	9/6/2006	0	2	PCBs
SB-37-86	S-090606-NRS-008	AOI 37	9/6/2006	0	2	PCBs
SB-37-87	S-090606-NRS-015	AOI 37	9/6/2006	0	2	PCBs
SB-37-88	S-090606-NRS-017	AOI 37	9/6/2006	0	2	PCBs
SB-37-89	S-090606-NRS-007	AOI 37	9/6/2006	0	2	PCBs
SB-37-90	S-090606-NRS-006	AOI 37	9/6/2006	0	2	PCBs
SB-37-91	S-090606-NRS-016	AOI 37	9/6/2006	0	2	PCBs
SB-37-92	S-090606-NRS-010	AOI 37	9/6/2006	0	2	PCBs
SB-37-93	S-090606-NRS-014	AOI 37	9/6/2006	0	2	PCBs
SB-37-94	S-090606-NRS-011	AOI 37	9/6/2006	0	2	PCBs
SB-37-94	S-090606-NRS-012	AOI 37	9/6/2006	0	2	PCBs
SB-37-95	S-090606-NRS-013	AOI 37	9/6/2006	0	2	PCBs
SB-SL-12A	S-090606-NRS-001	General/Area 03	9/6/2006	4	5	PCBs
SB-SL-12B	S-12607-092106-EV-001	General/Area 03	9/21/2006	5	6	PCBs
SB-SL-12B	S-12607-092106-EV-002	General/Area 03	9/21/2006	6	7	PCBs
SB-SL-12B	S-12607-092106-EV-003	General/Area 03	9/21/2006	7	8	PCBs
SB-SL-12B	S-12607-092106-EV-004	General/Area 03	9/21/2006	8	9	PCBs
SB-SL-12B	S-12607-092106-EV-005	General/Area 03	9/21/2006	9	10	PCBs
SB-SL-58	S-090606-NRS-002	General/Area 03	9/6/2006	2.5	4.5	PCBs
SB-SL-59	S-090606-NRS-003	General/Area 03	9/6/2006	2.5	4.5	PCBs
SB-SL-60	S-090606-NRS-004	General/Area 03	9/6/2006	2.5	4.5	PCBs
SB-SL-61	S-090606-NRS-005	General/Area 03	9/6/2006	2.5	4	PCBs

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

TABLE 2
ANALYTICAL RESULTS OF SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN

<i>Area of Interest:</i>		AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37
<i>Location Name:</i>		SB-37-85	SB-37-86	SB-37-87	SB-37-88	SB-37-89	SB-37-90	SB-37-91	SB-37-92	SB-37-93
<i>Sample Name:</i>		S-090606-NRS-009	S-090606-NRS-008	S-090606-NRS-015	S-090606-NRS-017	S-090606-NRS-007	S-090606-NRS-006	S-090606-NRS-016	S-090606-NRS-010	S-090606-NRS-014
<i>Sample Date:</i>		9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006
<i>Sample Depth:</i>		0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS
<i>Parameters</i>	<i>Units</i>									
<i>Polychlorinated biphenyls</i>										
Aroclor-1016 (PCB-1016)	ug/kg	560 U	730 U	280 U	350 U	280 U	860 U	1400 U	280 U	550 U
Aroclor-1221 (PCB-1221)	ug/kg	560 U	730 U	280 U	350 U	280 U	860 U	1400 U	280 U	550 U
Aroclor-1232 (PCB-1232)	ug/kg	560 U	730 U	280 U	350 U	280 U	860 U	1400 U	280 U	550 U
Aroclor-1242 (PCB-1242)	ug/kg	380 J	730 U	280 U	330 J	280 U	9500	2000	280 U	550 U
Aroclor-1248 (PCB-1248)	ug/kg	560 U	4600	450	5200	410	860 U	1400 U	100 J	770
Aroclor-1254 (PCB-1254)	ug/kg	560 U	730 U	280 U	350 U	280 U	4000	1400 U	280 U	550 U
Aroclor-1260 (PCB-1260)	ug/kg	720	1700	270 J	1300	260 J	860 U	850 J	48 J	430 J

Notes:

U - Not present at or above the associated value

J - Estimated value.

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

TABLE 2
ANALYTICAL RESULTS OF SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN

Area of Interest:	AOI 37	AOI 37	AOI 37	General/Area 03	General/Area 03	General/Area 03	General/Area 03	General/Area 03
Location Name:	SB-37-94	SB-37-94	SB-37-95	SB-SL-12A	SB-SL-12B	SB-SL-12B	SB-SL-12B	SB-SL-12B
Sample Name:	S-090606-NRS-011	S-090606-NRS-012	S-090606-NRS-013	S-090606-NRS-001	S-12607-092106-EV-001	S-12607-092106-EV-002	S-12607-092106-EV-003	S-12607-092106-EV-004
Sample Date:	9/6/2006	9/6/2006	9/6/2006	9/6/2006	9/21/2006	9/21/2006	9/21/2006	9/21/2006
Sample Depth:	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	4-5 ft BGS	5-6 ft BGS	6-7 ft BGS	7-8 ft BGS	8-9 ft BGS
Parameters	Dupl.							
Units								
Polychlorinated biphenyls								
Aroclor-1016 (PCB-1016)	ug/kg	280 U	350 U	280 U	18000 U	310 U	310 U	300 U
Aroclor-1221 (PCB-1221)	ug/kg	280 U	350 U	280 U	18000 U	310 U	310 U	300 U
Aroclor-1232 (PCB-1232)	ug/kg	280 U	350 U	280 U	18000 U	310 U	310 U	300 U
Aroclor-1242 (PCB-1242)	ug/kg	280 U	3800	280 U	18000 U	310 U	310 U	300 U
Aroclor-1248 (PCB-1248)	ug/kg	50 J	350 U	150 J	230000	310 U	310 U	300 U
Aroclor-1254 (PCB-1254)	ug/kg	280 U	350 U	280 U	18000 U	310 U	310 U	300 U
Aroclor-1260 (PCB-1260)	ug/kg	12 J	1400 J	87 J	18000 U	310 U	310 U	300 U

Notes:

U - Not present at or above the associated value

J - Estimated value.

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

TABLE 2

Page 3 of 3

ANALYTICAL RESULTS OF SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN

<i>Area of Interest:</i>	<i>General/Area 03</i>	<i>General/Area 03</i>	<i>General/Area 03</i>	<i>General/Area 03</i>	<i>General/Area 03</i>
<i>Location Name:</i>	SB-SL-12B	SB-SL-58	SB-SL-59	SB-SL-60	SB-SL-61
<i>Sample Name:</i>	S-12607-092106-EV-005	S-090606-NRS-002	S-090606-NRS-003	S-090606-NRS-004	S-090606-NRS-005
<i>Sample Date:</i>	9/21/2006	9/6/2006	9/6/2006	9/6/2006	9/6/2006
<i>Sample Depth:</i>	9-10 ft BGS	2.5-4.5 ft BGS	2.5-4.5 ft BGS	2.5-4.5 ft BGS	2.5-4 ft BGS

*Parameters**Units**Polychlorinated biphenyls*

Aroclor-1016 (PCB-1016)	ug/kg	300 U	280 U	280 U	320 U	290 U
Aroclor-1221 (PCB-1221)	ug/kg	300 U	280 U	280 U	320 U	290 U
Aroclor-1232 (PCB-1232)	ug/kg	300 U	280 U	280 U	320 U	290 U
Aroclor-1242 (PCB-1242)	ug/kg	300 U	280 U	280 U	320 U	290 U
Aroclor-1248 (PCB-1248)	ug/kg	300 U	280 U	280 U	27 J	190 J
Aroclor-1254 (PCB-1254)	ug/kg	300 U	280 U	280 U	320 U	290 U
Aroclor-1260 (PCB-1260)	ug/kg	300 U	280 U	280 U	320 U	25 J

Notes:

U - Not present at or above the associated value

J - Estimated value.

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

**ANALYTICAL RESULTS OF EXCAVATED SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN**

Area of Interest:	AOI 27/AOI 37	AOI 27/AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	General/Area 03	General/Area 03	General/Area 03	
Location Name:	SB-27-68	SB-27-83	SB-37-9	SB-37-14	SB-37-14	SB-37-18	SB-37-20	SB-SL-12	SB-SL-12	SB-SL-12A	
Sample Name:	S-083105-DCR-091	S-083105-DCR-090	S-022803-DRD-829	S-022803-DRD-832	S-022803-DRD-833	S-071703-DRD-1202	S-071703-DRD-1190	S-061404-MM-1672	S-061404-MM-1673	S-090606-NRS-001	
Sample Date:	8/31/2005	8/31/2005	2/28/2003	2/28/2003	2/28/2003	7/17/2003	7/17/2003	6/14/2004	6/14/2004	9/6/2006	
Depth:	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	2.5-4.5 ft BGS	4-5 ft BGS	
Parameters	Units										
Metals											
Antimony	mg/kg	--	--	--	--	--	--	0.54 UJ	0.56 UJ	--	
Arsenic	mg/kg	--	--	--	--	--	--	1.6	2.0	--	
Barium	mg/kg	--	--	--	--	--	--	6.0	6.4	--	
Beryllium	mg/kg	--	--	--	--	--	--	0.21 U	0.23 U	--	
Cadmium	mg/kg	--	--	--	--	--	--	0.073	0.081	--	
Chromium III (Trivalent)	mg/kg	--	--	--	--	--	--	5.4	4.4	--	
Chromium Total	mg/kg	--	--	--	--	--	--	5.6	4.5	--	
Chromium VI (Hexavalent)	mg/kg	--	--	--	--	--	--	0.86 U	0.90 U	--	
Cobalt	mg/kg	--	--	--	--	--	--	2.4	2.4	--	
Copper	mg/kg	--	--	--	--	--	--	5.7	7.2	--	
Lead	mg/kg	--	--	--	--	--	--	2.9	3.1	--	
Manganese	mg/kg	--	--	--	--	--	--	128 J	168 J	--	
Mercury	mg/kg	--	--	--	--	--	--	0.11 U	0.11 U	--	
Nickel	mg/kg	--	--	--	--	--	--	7.1	5.8	--	
Selenium	mg/kg	--	--	--	--	--	--	0.21 U	0.23 U	--	
Silver	mg/kg	--	--	--	--	--	--	0.54 U	0.56 U	--	
Thallium	mg/kg	--	--	--	--	--	--	0.11 U	0.11 U	--	
Vanadium	mg/kg	--	--	--	--	--	--	6.5	7.2	--	
Zinc	mg/kg	--	--	--	--	--	--	15.4	17.9	--	
Polychlorinated biphenyls											
Aroclor-1016 (PCB-1016)	ug/kg	5500 U	3000 U	3700 U	7600 U	3700 U	17000 U	7000 U	350 U	7400 U	18000 U
Aroclor-1221 (PCB-1221)	ug/kg	5500 U	3000 U	3700 U	7600 U	3700 U	17000 U	7000 U	350 U	7400 U	18000 U
Aroclor-1232 (PCB-1232)	ug/kg	5500 U	3000 U	3700 U	7600 U	3700 U	17000 U	7000 U	350 U	7400 U	18000 U
Aroclor-1242 (PCB-1242)	ug/kg	840 J	2300 J	37000	7600 U	3700 U	110000	7000 U	350 U	7400 U	18000 U
Aroclor-1248 (PCB-1248)	ug/kg	5500 U	3000 U	3700 U	47000	64000	17000 U	85000	130 J	54000	230000
Aroclor-1254 (PCB-1254)	ug/kg	5500 U	3000 U	3700 U	7600 U	3700 U	17000 U	7000 U	350 U	7400 U	18000 U
Aroclor-1260 (PCB-1260)	ug/kg	2700 J	1600 J	11000	17000	19000	26000	23000	20 J	7400 U	18000 U
Semi Volatiles											
2,2'-oxybis(1-Chloropropane) (bis(2-chloroisopropyl) ether)	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2,4,5-Trichlorophenol	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2,4,6-Trichlorophenol	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2,4-Dichlorophenol	ug/kg	28000 UJ	24000 UJ	--	--	--	--	--	350 U	370 U	--
2,4-Dimethylphenol	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2,4-Dinitrophenol	ug/kg	140000 U	120000 U	--	--	--	--	--	1800 U	1900 U	--
2,4-Dinitrotoluene	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2,6-Dinitrotoluene	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2-Chloronaphthalene	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2-Chlorophenol	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2-Methylnaphthalene	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
2-Methylphenol	ug/kg	28000 U	24000 U	--	--	--	--	--	--	--	--
2-Nitroaniline	ug/kg	140000 U	120000 U	--	--	--	--	--	1800 U	1900 U	--
2-Nitrophenol	ug/kg	28000 UJ	24000 UJ	--	--	--	--	--	350 U	370 U	--
3,3'-Dichlorobenzidine	ug/kg	170000 U	150000 U	--	--	--	--	--	2100 U	2300 U	--
3-Nitroaniline	ug/kg	140000 U	120000 U	--	--	--	--	--	1800 U	1900 U	--
4,6-Dinitro-2-methylphenol	ug/kg	140000 U	120000 U	--	--	--	--	--	1800 U	1900 U	--
4-Bromophenyl phenyl ether	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
4-Chloro-3-methylphenol	ug/kg	28000 U	24000 U	--	--	--	--	--	350 U	370 U	--
4-Chloroaniline	ug/kg	140000 U	120000 U	--	--	--	--	--	1800 U	1900 U	--

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

**ANALYTICAL RESULTS OF EXCAVATED SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN**

Area of Interest:	AOI 27/AOI 37	AOI 27/AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	General/Area 03	General/Area 03	General/Area 03
Location Name:	SB-27-68	SB-27-83	SB-37-9	SB-37-14	SB-37-14	SB-37-18	SB-37-20	SB-SL-12	SB-SL-12	SB-SL-12A
Sample Name:	S-083105-DCR-091	S-083105-DCR-090	S-022803-DRD-829	S-022803-DRD-832	S-022803-DRD-833	S-071703-DRD-1202	S-071703-DRD-1190	S-061404-MM-1672	S-061404-MM-1673	S-090606-NRS-001
Sample Date:	8/31/2005	8/31/2005	2/28/2003	2/28/2003	2/28/2003	7/17/2003	7/17/2003	6/14/2004	6/14/2004	9/6/2006
Depth:	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	2.5-4.5 ft BGS	4-5 ft BGS
Parameters	Units									
4-Chlorophenyl phenyl ether	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
4-Methylphenol	ug/kg	28000 U	24000 U	--	--	--	--	--	--	--
4-Nitroaniline	ug/kg	140000 U	120000 U	--	--	--	--	1800 U	1900 U	--
4-Nitrophenol	ug/kg	140000 U	120000 U	--	--	--	--	1800 U	1900 U	--
Acenaphthene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Acenaphthylene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Acetophenone	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Anthracene	ug/kg	27000 J	17000 J	--	--	--	--	350 U	370 U	--
Atrazine	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Benzaldehyde	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Benzo(a)anthracene	ug/kg	130000	67000	--	--	--	--	350 U	370 U	--
Benzo(a)pyrene	ug/kg	120000	61000	--	--	--	--	350 U	370 U	--
Benzo(b)fluoranthene	ug/kg	120000	84000	--	--	--	--	350 U	370 U	--
Benzo(g,h,i)perylene	ug/kg	65000	32000	--	--	--	--	350 U	370 U	--
Benzo(k)fluoranthene	ug/kg	83000	41000	--	--	--	--	350 U	370 U	--
Biphenyl	ug/kg	4200 J	3600 J	--	--	--	--	350 U	370 U	--
bis(2-Chloroethoxy)methane	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
bis(2-Chloroethyl)ether	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
bis(2-Ethylhexyl)phthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	45 J	--
Butyl benzylphthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Caprolactam	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Carbazole	ug/kg	12000 J	7800 J	--	--	--	--	350 U	370 U	--
Chrysene	ug/kg	110000	56000	--	--	--	--	350 U	370 U	--
Dibenz(a,h)anthracene	ug/kg	16000 J	9500 J	--	--	--	--	350 U	370 U	--
Dibenzofuran	ug/kg	3600 J	2400 J	--	--	--	--	350 U	370 U	--
Diethyl phthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Dimethyl phthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Di-n-butylphthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Di-n-octyl phthalate	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Fluoranthene	ug/kg	210000	140000	--	--	--	--	350 U	370 U	--
Fluorene	ug/kg	7000 J	4600 J	--	--	--	--	350 U	370 U	--
Hexachlorobenzene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Hexachlorobutadiene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Hexachlorocyclopentadiene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Hexachloroethane	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Indeno(1,2,3-cd)pyrene	ug/kg	54000	26000	--	--	--	--	350 U	370 U	--
Isophorone	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Methylphenol (Cresol)	ug/kg	--	--	--	--	--	--	350 U	370 U	--
Naphthalene	ug/kg	1700 J	1400 J	--	--	--	--	350 U	370 U	--
Nitrobenzene	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
N-Nitrosodi-n-propylamine	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
N-Nitrosodiphenylamine	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Pentachlorophenol	ug/kg	67000 U	58000 U	--	--	--	--	860 U	900 U	--
Phenanthrene	ug/kg	95000	61000	--	--	--	--	350 U	370 U	--
Phenol	ug/kg	28000 U	24000 U	--	--	--	--	350 U	370 U	--
Pyrene	ug/kg	180000	99000	--	--	--	--	350 U	370 U	--
Volatiles										
1,1,1-Trichloroethane	ug/kg	--	--	--	--	--	--	58 U	47 U	--
1,1,2,2-Tetrachloroethane	ug/kg	--	--	--	--	--	--	120 U	95 U	--
1,1,2-Trichloroethane	ug/kg	--	--	--	--	--	--	58 U	47 U	--

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

TABLE 3

Page 3 of 3

**ANALYTICAL RESULTS OF EXCAVATED SOIL SAMPLES
AOI 37 AND AREA 3 ADDITIONAL EXCAVATION
13000 ECKLES ROAD SITE
LIVONIA, MICHIGAN**

Area of Interest:	AOI 27/AOI 37	AOI 27/AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	AOI 37	General/Area 03	General/Area 03	General/Area 03
Location Name:	SB-27-68	SB-27-83	SB-37-9	SB-37-14	SB-37-14	SB-37-18	SB-37-20	SB-SL-12	SB-SL-12	SB-SL-12A
Sample Name:	S-083105-DCR-091	S-083105-DCR-090	S-022803-DRD-829	S-022803-DRD-832	S-022803-DRD-833	S-071703-DRD-1202	S-071703-DRD-1190	S-061404-MM-1672	S-061404-MM-1673	S-090606-NRS-001
Sample Date:	8/31/2005	8/31/2005	2/28/2003	2/28/2003	2/28/2003	7/17/2003	7/17/2003	6/14/2004	6/14/2004	9/6/2006
Depth:	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	0-2 ft BGS	2.5-4.5 ft BGS	4-5 ft BGS
					Dupl.					
Parameters	Units									
1,1-Dichloroethane	ug/kg	--	--	--	--	--	--	58 U	47 U	--
1,1-Dichloroethene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
1,2,4-Trichlorobenzene	ug/kg	--	--	--	--	--	--	290 U	240 U	--
1,2-Dibromo-3-chloropropane (DBCP)	ug/kg	--	--	--	--	--	--	290 U	240 U	--
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	--	--	--	--	--	--	290 U	240 U	--
1,2-Dichlorobenzene	ug/kg	--	--	--	--	--	--	120 U	95 U	--
1,2-Dichloroethane	ug/kg	--	--	--	--	--	--	58 U	47 U	--
1,2-Dichloropropane	ug/kg	--	--	--	--	--	--	58 U	47 U	--
1,3-Dichlorobenzene	ug/kg	--	--	--	--	--	--	120 U	95 U	--
1,4-Dichlorobenzene	ug/kg	--	--	--	--	--	--	120 U	95 U	--
2-Butanone (Methyl Ethyl Ketone)	ug/kg	--	--	--	--	--	--	880 U	710 U	--
2-Hexanone	ug/kg	--	--	--	--	--	--	2900 U	2400 U	--
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/kg	--	--	--	--	--	--	2900 U	2400 U	--
Acetone	ug/kg	--	--	--	--	--	--	880 U	710 U	--
Benzene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Bromodichloromethane	ug/kg	--	--	--	--	--	--	120 U	95 U	--
Bromoform	ug/kg	--	--	--	--	--	--	120 U	95 U	--
Bromomethane (Methyl Bromide)	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Carbon disulfide	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Carbon tetrachloride	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Chlorobenzene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Chloroethane	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Chloroform (Trichloromethane)	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Chloromethane (Methyl Chloride)	ug/kg	--	--	--	--	--	--	290 U	240 U	--
cis-1,2-Dichloroethene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
cis-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Cyclohexane	ug/kg	--	--	--	--	--	--	1400 U	1100 U	--
Dibromochloromethane	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Dichlorodifluoromethane (CFC-12)	ug/kg	--	--	--	--	--	--	120 U	95 U	--
Ethylbenzene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Isopropylbenzene	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Methyl acetate	ug/kg	--	--	--	--	--	--	1400 U	1100 U	--
Methyl cyclohexane	ug/kg	--	--	--	--	--	--	1400 U	1100 U	--
Methyl Tert Butyl Ether	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Methylene chloride	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Styrene	ug/kg	--	--	--	--	--	--	34 J	25 J	--
Tetrachloroethene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Toluene	ug/kg	--	--	--	--	--	--	120 U	95 U	--
trans-1,2-Dichloroethene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
trans-1,3-Dichloropropene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Trichloroethene	ug/kg	--	--	--	--	--	--	58 U	47 U	--
Trichlorofluoromethane (CFC-11)	ug/kg	--	--	--	--	--	--	120 U	95 U	--
Trifluorotrichloroethane (Freon 113)	ug/kg	--	--	--	--	--	--	290 U	240 U	--
Vinyl chloride	ug/kg	--	--	--	--	--	--	120 U	95 U	--
Xylene (total)	ug/kg	--	--	--	--	--	--	180 U	140 U	--
Confidential under FOIA										
General Chemistry										
Cyanide (total)	mg/kg	--	--	--	--	--	--	0.21 U	0.23 U	--

Notes:

U - Not present at or above the associated value

J - Estimated value.

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

ATTACHMENT A

DATA VALIDATION MEMORANDUM

Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

**CONESTOGA-ROVERS
& ASSOCIATES**Arcadis
Jun 18, 2009 08:1545 Farmington Valley Drive
Plainville, Connecticut 06062
Telephone: (860) 747-1800
www.CRAworld.com

Fax: (860) 747-1900

MEMORANDUM

TO: James Reid REF. NO.: 12607

FROM: Kathy Shaw/kms/2/CT *[Signature]* DATE: October 26, 2006

RE: Data Quality Assessment and Validation - Full Validation SSOW: 12650-007010
AOI 37 and Area 3
General Motors-Delphi C Livonia Site, Livonia, Michigan

The following details a quality assessment and validation of the analytical data resulting from the September 2006 collection of 21 soil samples and one (1) quality control sample from the General Motors-Delphi C Livonia Site in Livonia, Michigan. The sample summary detailing sample identification, sample location, quality control samples, and analytical parameters is presented in Table 1. Sample analysis was completed at Severn Trent Laboratories, Inc. in North Canton, Ohio (STL) in accordance with the methodologies presented in Table 2.

The quality control criteria used to assess the data were established by the methods and the quality assurance project plan (QAPP). Application of quality assurance criteria was consistent with following guidance documents:

- i. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-99/008, October 1999; and

These guidelines are collectively referred to as "NFGs" in this Memorandum.

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

CRA MEMORANDUM

Brad Saunders

Page 2

Arcadis

The following elements are addressed in this memorandum with qualification if necessary in the identified tables:

Jun 18, 2009 08:15

	Data Review Element	Qualification Table
1	Sample Quantitation	NA
2	Sample Preservation and Holding Times	NA
3	Initial Calibration – Organic Analyses	NA
4	Continuing Calibration – Organic Analyses	NA
5	Method Blank Samples	NA
6	Surrogate Compounds – Organic Analyses	NA
7	Matrix Spike/Matrix Spike Duplicate Analyses	NA
8	Laboratory Control Sample Analysis	NA
9	Target Compound Identification	NA
10	Target Compound Quantitation	NA
11	Field Quality Assurance/Quality Control	Table 3
12	System Performance	NA

Sample Quantitation

The laboratory reported detected concentrations of polychlorinated biphenyls (PCB) below the laboratory's report limit (RL) but above the laboratory's method detection limit (MDL). The laboratory flagged these sample concentrations with a "J". These concentrations should be qualified as estimated (J) values unless qualified otherwise in this memorandum.

Sample Preservation and Holding Times

Sample holding time periods and preservation requirements are presented in Table 2. The samples were prepared and/or analyzed within the specified holding time periods.

The samples were shipped and maintained in accordance with the sample preservation requirements.

Initial Calibration – Organic Analyses

Initial calibration data are used to demonstrate that each instrument is capable of generating acceptable quantitative data. A five point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each over a specific concentration range.

Initial calibration criteria for organic analyses are evaluated against the following criteria:

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

CRA MEMORANDUM

Brad Saunders

Page 3

Arcadis

Initial Calibration – Organic Analyses (Cont'd)

Jun 18, 2009 08:15

- i. GC (all compounds using an average for multi-response compounds) – the percent RSD must not exceed 20 percent or a correlation coefficient of 0.995 when linear regression calibration curves are used.

Calibration standards were analyzed at the required frequency and the results met the above criteria for linearity and sensitivity.

Continuing Calibration – Organic Analyses

To ensure that each instrument was capable of producing acceptable quantitative data over the analysis period, continuing calibration standards must be analyzed every 10 samples by GC. The following criteria are employed to evaluate the continuing calibration data:

- i. GC (all compounds using average for multi-response compounds) – the percent difference between mean initial calibration factor and the continuing calibration factor must not exceed 15 percent; and

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response and sensitivity.

Method Blank Samples

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect. The method blank samples were reported to be free from detectable levels of target analytes, indicating no laboratory-attributable contamination occurred.

Surrogate Compounds – Organic Analyses

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report. The surrogate recovery acceptance criteria were met for all samples.

Matrix Spike/Matrix Spike Duplicate Analyses

To assess the long term accuracy and precision of the analytical methods on various matrices, matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and the relative percent difference (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The MS/MSD percent recoveries and associated RPD acceptance criteria were met.

Laboratory Control Sample Analysis

The laboratory control sample (LCS) analyses serve as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS/LCD percent recoveries were evaluated against method and laboratory established control limits. The LCS percent recoveries were

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

CRA MEMORANDUM

Brad Saunders

Page 4

Arcadis

Laboratory Control Sample Analysis (Cont'd)

Jun 18, 2009 08:15

within the laboratory control limits or did not warrant qualification, indicating that an acceptable level of overall performance was achieved.

Target Compound Identification

To minimize erroneous compound identification during organic analyses, qualitative criteria including compound retention time and mass spectra (if applicable) were evaluated according to identification criteria established by the methods. The organic compounds reported adhered to the specified identification criteria.

Target Compound Quantitation

The reported quantitation results and detection limits were checked to ensure results reported were accurate. No discrepancies were found between the raw data and the sample results reported by the laboratory.

Field Quality Assurance/Quality Control

The field quality assurance/quality control consisted of one (1) field duplicate sample set. Overall precision for the sampling event and laboratory procedures were monitored using the results of the field duplicate sample sets. The RPDs associated with these duplicate samples must be less than 100 percent for soil samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the RL, the evaluation criteria is two times the RL value for soil samples. Table 3 presents the RPDs of detected analytes in duplicate sample sets with qualifiers. The data indicate that an adequate level of precision was achieved for the remainder of the sampling event.

System Performance

System performance between various quality control checks was evaluated to monitor for changes that may have caused the degradation of data quality. No technical problems or chromatographic anomalies were observed which would require qualification of the data.

Overall Assessment

- The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders
TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
 AOI 37 & AREA 3 ADDITIONAL INVESTIGATION
 GENERAL MOTORS - DELPHI C LIVONIA
 LIVONIA, MICHIGAN

Sample Identification	Sample Depth ft-bgs	Sample Location	Matrix	QC Sample	Parameter
					PCB
S-090606-NRS-001	--	SB-SL-12A	Soil	MS/MSD	X
S-090606-NRS-002	--	SB-SL-58	Soil		X
S-090606-NRS-003	--	SB-SL-59	Soil		X
S-090606-NRS-004	--	SB-SL-60	Soil		X
S-090606-NRS-005	--	SB-SL-61	Soil		X
S-090606-NRS-006	--	SB-37-90	Soil		X
S-090606-NRS-007	--	SB-SL-89	Soil		X
S-090606-NRS-008	--	SB-37-86	Soil		X
S-090606-NRS-009	--	SB-37-85	Soil		X
S-090606-NRS-010	--	SB-37-92	Soil		X
S-090606-NRS-011	--	SB-37-94	Soil		X
S-090606-NRS-012	--	SB-37-94	Soil	Duplicate (011)	X
S-090606-NRS-013	--	SB-37-95	Soil		X
S-090606-NRS-014	--	SB-37-96	Soil		X
S-090606-NRS-015	--	SB-37-87	Soil		X
S-090606-NRS-016	--	SB-37-91	Soil		X
S-090606-NRS-017	--	SB-37-88	Soil		X
S-12607-092106-EV-001	5' - 6'	SB-SL-12B	Soil		X
S-12607-092106-EV-002	6' - 7'	SB-SL-12B	Soil		X
S-12607-092106-EV-003	7' - 8'	SB-SL-12B	Soil		X
S-12607-092106-EV-004	8' - 9'	SB-SL-12B	Soil		X
S-12607-092106-EV-005	9' - 10'	SB-SL-12B	Soil		X

PCB - Polychlorinated biphenyls

QC - Quality Control

MS/MSD - Matrix Spike /Matrix Spike Duplicate

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
GENERAL MOTORS - DELPHI C LIVONIA
LIVONIA, MICHIGAN

<i>Parameter</i>	<i>Method</i>	<i>Matrix</i>	<i>Holding Time</i>	<i>Preservation</i>
PCB	SW-846 8082	Soil	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, 4 ± 2° C

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

TABLE 3

SUMMARY OF DETECTED ANALYTES IN THE FIELD DUPLICATE SAMPLE SET
GENERAL MOTORS - DELPHI C LIVONIA
LIVONIA, MICHIGAN

Parameter	Analyte	Original Sample ID	Original Result	Duplicate Sample ID	Duplicate Result	RPD	Units	Qualifier
PCB	PCB-1260	S-090606-NRS-011	12 J	S-090606-NRS-012	1400 J	200.00	µg/kg	J
	PCB-1248		50		350 U	NC	µg/kg	
	PCB-1242		280 U		3800	NC	µg/kg	

Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Notes:

- RPD - Relative Percent Difference
- J - Estimated Concentration
- U - Not present at or above the associated value
- NC - Not calculable

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

ATTACHMENT B

WASTE MANIFESTS

Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

55

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved, OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 005 356 621	2. Page 1 of 1	3. Emergency Response Phone 800 535-5053	4. Manifest Tracking Number 001902321 JJK
5. Generator's Name and Mailing Address 2008 CENTERPOINT PKWY #483-620-180 PONTIAC, MI 48341 Generator's Phone: 248-753-5600		6. Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48151			
6. Transporter 1 Company Name BERNER TRUCKING, INC.		U.S. EPA ID Number (330) 343-6617		OHID 049 371 693	
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address 49330 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111 Facility's Phone: (800) 592-5488		U.S. EPA ID Number MID 048 090 839			
9a. HM	9b. U.S. DOT Description (including proper shipping name, hazard class, ID number, and packing group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
X	1. RQ, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN3432, PGIII	001	PT	23	F
	2.				
	3.				
	4.				
13. Waste Codes PCB1					
14. Special Handling Instructions and Additional Information G1. 100705PAF / PCB SOILS GMM422 EQ / ERG #171 OUT OF SERVICE DATE: October 10, 2006 #55					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/packaged, and are in full respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Officer's Printed/Typed Name KIM O. TUCKER - BILLINGSLEY		Signature Kim O. Tucker - Billingsley		Month Day Year 10/10/06	
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit Date leaving U.S.:			
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name LEAHY McQUINNIST					
Transporter 2 Printed/Typed Name		Signature Leahy McQuinnist		Month Day Year 10/10/06	
18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number: U.S. EPA ID Number:					
19. Alternate Facility (or Generator) Facility's Phone: 19c. Signature of Alternate Facility (or Generator)					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 2. 3. 4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a Printed/Typed Name Signature Month Day Year 10/10/06					

Arcadis

Jun 18, 2009 08:15

CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as PCB Sludge
and specified on Manifest # 001912321 jjk, Line Item 1 has been landfilled on
10-10-06, 200 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWAL-FAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: [Signature]

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009

Brad Saunders

Arcadis

Jun 18, 2009 08:15



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

135

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Arcadis

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 008 356 621	2. Page 1 of 1	3. Emergency Response Phone 1-800-424-6343-5053	4. Manifest Tracking Number 001902322 JJK	
5. Generator's Name and Mailing Address GENERAL MOTORS 2000 CENTERPOINT PKWY #483-820-180 PONTIAC, MI 48341		6. Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48161				
7. Generator's Phone: (248) 898-5451		8. Transporter 1 Company Name BERNER TRUCKING, INC.		U.S. EPA ID Number (330) 343-5812		U.S. EPA ID Number OH0 049 371 893
9. Transporter 2 Company Name		U.S. EPA ID Number		U.S. EPA ID Number		
10. Designated Facility Name and Site Address WAYNE DISPOSAL SITE #2 LANDFILL 48350 N. I-84 SERVICE DRIVE BELLEVILLE, MI 48111		U.S. EPA ID Number MID 048 090 633		Facility's Phone: (800) 592-3488		
9a. HM.	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN3432	001	DT	EST 28	T	PCB1
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information 01. 100705PAF / PCB SOILS-GMM422 EQ / ERG #171 OUT OF SERVICE DATE - OCTOBER 10, 2006						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Officer's Printed/Typed Name KIM D TUCKER-BILLINGSLEA		Signature <i>[Signature]</i>		Month Day Year 10 10 06		
16. International Shipments ☐ Import to U.S.		☐ Export from U.S.		Port of entry/exit: ON 10/10/06 GM		
Transporter signature (for exports only):		Date leaving U.S.:				
17. Transporter Acknowledgment of Receipt of Materials		Signature <i>[Signature]</i>		Month Day Year 10 10 06		
Transporter 1 Printed/Typed Name Scott Hadden		Signature <i>[Signature]</i>		Month Day Year 10 10 06		
Transporter 2 Printed/Typed Name		Signature		Month Day Year		
18. Discrepancy						
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
Manifest Reference Number:						
18b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)		Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.	H132	2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name Deane Price		Signature <i>[Signature]</i>		Month Day Year 10 10 06		

Arcadis

Jun 18, 2009 08:15

CERTIFICATE OF DISPOSAL

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15



FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as

and specified on Manifest # 01902322, Line Item 10 has been landfilled on 10/10/2006 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWAL-FAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: _____

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

28

Use print or type: (Form designed for use on elite (12-pitch) typewriter)

Form Approved OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 005 355 621	2. Page 1 of 1	3. Emergency Response Phone 313-535-5053	4. Manifest Tracking Number 001902323 JJK
5. Generator's Name and Mailing Address GENERAL MOTORS 2000 CENTERPOINT PKWY. #483-520-180 PONTIAC, MI 48341		Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48151			
6. Transporter 1 Company Name BERNER TRUCKING INC.		U.S. EPA ID Number (330) 343-5612		U.S. EPA ID Number OH 049 371 683	
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address WAYNE DISPOSAL SITE #2 LANDFILL 48350 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111		U.S. EPA ID Number MID 048 090 833			
Facility's Phone: (800) 592-5489					
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity
			No.	Type	12. Unit Wt./Vol.
	1.	X RQ, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN3315, PGIII UN3432	001	DT	EST 15 0-5 T
	2.				
	3.				
14. Special Handling Instructions and Additional Information 01. 100765PAF / PCB SOILS-GMM422 EQ / ERG #171 OUT OF SERVICE DATE: OCTOBER 10, 2006					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(e) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Officer's Printed/Typed Name KIM O TUCKER-BILLINGSLEA		Signature <i>[Signature]</i>		Month Day Year 10 10 06	
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: GM			
Transporter signature (for exports only):		Date leaving U.S.:			
TRANSPORTER INTL	17. Transporter Acknowledgment of Receipt of Materials				
	Transporter 1 Printed/Typed Name TIM TRITH		Signature <i>[Signature]</i>		Month Day Year 10 10 06
	Transporter 2 Printed/Typed Name		Signature		Month Day Year
DESIGNATED FACILITY	18. Discrepancy				
	18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection				
	changed per Nicole Royals @ WM 10-12-06 es				
	18b. Alternate Facility (or Generator)		Manifest Reference Number: U.S. EPA ID Number		
	Facility's Phone:				
18c. Signature of Alternate Facility (or Generator)		Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1. H132		2.		3.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a					
Printed/Typed Name Bleda Price		Signature <i>[Signature]</i>		Month Day Year 10 10 06	

Arcadis

Jun 18, 2009 08:15

CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as PCB Solid

and specified on Manifest # 001902323jk, Line Item 10 has been landfilled on

10/10, 2006 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWAL-FAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: [Signature]

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

Arcadis

156

Form Approved, OMB No. 2050-0039

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 005 356 621	2. Page 1 of 1	3. Emergency Response Phone 800 535-5053	4. Manifest Tracking Number 001902324 JJK
5. Generator's Name and Mailing Address GENERAL MOTORS 2000 CENTERPOINT PKWY #133-320-180 PONTIAC, MI 48341 Generator's Phone: 248-753-5800			Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48151		
6. Transporter 1 Company Name BERNER TRUCKING INC			U.S. EPA ID Number PA0487347 SIL		
7. Transporter 2 Company Name U.S. Bulk transport			U.S. EPA ID Number (800) 643-8910 (330) 343-5512		
8. Designated Facility Name and Site Address WAYNE DISPOSAL SITE #2 LANDFILL 45350 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111 Facility's Phone: (800) 582-5489			U.S. EPA ID Number MID 048 090 833		
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type	11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes
X	1. RO, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN338, PCB UN3432	001 DT	1	KG	PCB1
	2.				
	3.				
	4.				
14. Special Handling Instructions and Additional Information 01. 100705PAF / PCB SOILS-GMM422 EQ / ERG #171 OUT OF SERVICE DATE: OCTOBER 10, 2006					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a); (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Officer's Printed/Typed Name KIM D. TUCKER-BILLINGSLEA		Signature <i>[Signature]</i>		Month Day Year 10/10/06	
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit LAKE CHARLES, LA Date leaving U.S.: 10/10/06			
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Larry Wood Transporter 2 Printed/Typed Name		Signature <i>[Signature]</i> <i>[Signature]</i>		Month Day Year 10/10/06 10/10/06	
18. Discrepancy 18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection changed per Nicole Boya P@WM 10-12-06 eg Manifest Reference Number: 001902324 JJK U.S. EPA ID Number					
18b. Alternate Facility (or Generator) Facility's Phone: (800) 582-5489 Month Day Year					
18c. Signature of Alternate Facility (or Generator) <i>[Signature]</i> Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 2. 3. 4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest as sent or noted in Item 18a Printed/Typed Name Tanya Cuyar Signature <i>[Signature]</i> Month Day Year 10/10/06					

Arcadis

Jun 18, 2009 08:15

CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as pcb solid
and specified on Manifest # 01902324 JJK, Line Item 1 has been landfilled on
10/10, 200 1 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

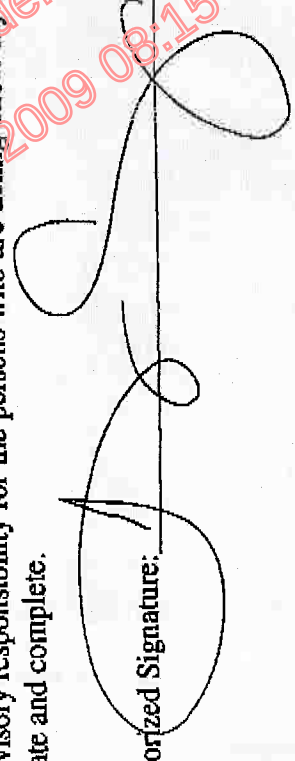
(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWALIFAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: 

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

196

Please print or type. (Form designed for use on alpha (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 005 356 621	2. Page 1 of 1	3. Emergency Response Phone Jun 18 2009 08:15 935-5052	4. Manifest Tracking Number 001902325 JJK
5. Generator's Name and Mailing Address GENERAL MOTORS 2000 CENTERPOINT PKWY PONTIAC, MI 48341 Generators Phone: (800) 838-5489		Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48161			
6. Transporter 1 Company Name EV BERNER TRUCKING, INC. U.S. Bulk Transport		(800) 642 6916 (530) 343 6842		U.S. EPA ID Number PA17987347515 QWD 849371897	
7. Transporter 2 Company Name				U.S. EPA ID Number	
8. Designated Facility Name and Site Address WAYNE DISPOSAL SITE #2 LANDFILL 48350 N. I-94 SERVICE DRIVE BELLEVILLE, MI 48111 Facility's Phone: (800) 682-5489				U.S. EPA ID Number MID 048 090 633	
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity
	X	1. RQ, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN2415, PGIII UN3432	001	DT	EST 31
12. Unit WL/Vol. * T					
13. Waste Codes PCB1					
14. Special Handling Instructions and Additional Information 01. 100705PAF / PCB SOILS-GMM422 EQ / ERG #171 OUT OF SERVICE DATE: OCTOBER 10, 2006 #196					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded; and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Officer's Printed/Typed Name: KIM D TUCKER-BILLINGSLEY Signature: Kim D Tucker-Billingsley Month: 10 Day: 10 Year: 06					
INTL	16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:				
	Transporter signature (for exports only):				
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name: Charles Hopper Signature: Charles Hopper Month: 10 Day: 10 Year: 06				
	Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:				
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space ☒ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Changed per Nicole Boyer to WM 10-12-06				
	18b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:				
	Facility's Phone:				
	18c. Signature of Alternate Facility (or Generator) Month: Day: Year:				
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. H132 2. 3. 4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name: Tanya Coward Signature: Brad Saunders Month: 10 Day: 10 Year: 06					

CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as pcb soil
and specified on Manifest # 201902325-UK, Line Item 1 has been landfilled on
10/10, 2006 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

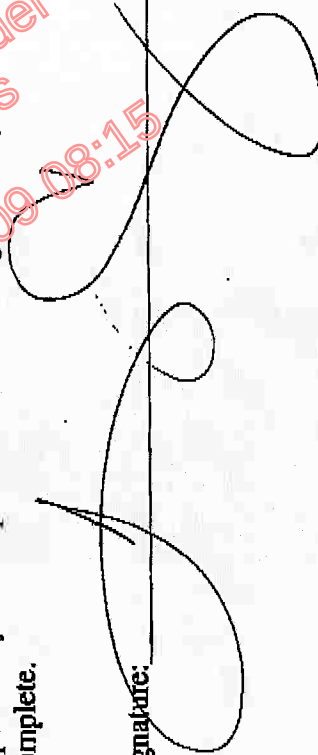
49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWALITY FAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature:



Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

Form Approved, OMB No. 2050-0039

base print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 003 350 821	2. Page of 1	3. Emergency Response Phone 1-800-555-5053	4. Manifest Tracking Number 001902331 JJK
5. Generator's Name and Mailing Address 2000 CENTERPOINT PKWY #483 520-180 PONTIAC, MI 48341 Generator's Phone: (248) 483-5200		6. Generator's Site Address (if different than mailing address) GMC-DELCO PRODUCTS-LIVONIA 13000 ECHOLS ROAD LIVONIA, MI 48151			
6. Transporter 1 Company Name BERNER TRUCKING, INC.		7. Transporter 2 Company Name		U.S. EPA ID Number OHD 049 371 693	
8. Designated Facility Name and Site Address WAYNE DISPOSAL SITE #2 LANDFILL 49350 N. I-94 SERVICE DRIVE SELLEVILLE, MI 48111 Facility's Phone: (800) 582-5469		U.S. EPA ID Number MID 048 090 633			
9a. 'HM'	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit WL/Vol.
X	1. RO, WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9, UN3315, PGIII UN3432	001	DT	EST 28	11
	2.				
	3.				
	4.				
13. Waste Codes PCB1					
14. Special Handling Instructions and Additional Information 01. 100705PAF / PCB SOILS-GMM422 EQ / EPG #171 OUT OF SERVICE DATE: OCTOBER 10, 2006 #445					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment add I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Offeror's Printed/Typed Name KIM D TUCKER-BILLINGSLEE		Signature Kim D Tucker-Billingslee		Month Day Year 10 10 06	
16. International Shipments ☐ Import to U.S. Transporter signature (for exports only):		☐ Export from U.S. Port of shipment: Port of entry: Date leaving U.S.:			
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name David Hursey		Signature David Hursey		Month Day Year 10 10 06	
Transporter 2 Printed/Typed Name		Signature		Month Day Year	
18. Discrepancy 18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection Manifest Reference Number:					
18b. Alternate Facility (or Generator) Facility's Phone:		U.S. EPA ID Number			
18c. Signature of Alternate Facility (or Generator)		Month Day Year			
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1. H132	2.	3.	4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Signature Month Day Year 10 10 06					

CERTIFICATE OF DISPOSAL

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as BB Safe
and specified on Manifest # 0090231 jk, Line Item 1 has been landfilled on
10-10-04, 200__ in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWAL-FAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: [Signature]

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

Jun 18, 2009 08:15



THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

Brad Saunders

#447

Form Approved. OMB No. 2050-0039

Use print or type. (Form designed for use on elite (12-pitch) typewriter.)

Arcadis

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID 005 356 821	2. Page 1 of 1	3. Emergency Response Phone 1-800-424-6343	4. Manifest Tracking Number 001902332 JJK
5. Generator's Name and Mailing Address 2000 CENTERPOINT PKWY #483-620-180 PONTIAC, MI 48341 Generator's Phone: (313) 693-5494		Generator's Site Address (if different than mailing address) GMC - DELCO PRODUCTS-LIVONIA 13000 ECKLES ROAD LIVONIA, MI 48151			
6. Transporter 1 Company Name BERNER TRUCKING, INC.		U.S. EPA ID Number (330) 343-5812		OHD 049 371 693	
7. Transporter 2 Company Name		U.S. EPA ID Number			
8. Designated Facility Name and Site Address 49350 N. I-84 SERVICE DRIVE BELLEVILLE, MI 48111 Facility's Phone: (800) 592-5489		U.S. EPA ID Number MID 048 090 833			
GENERATION	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity
	X	1. RQ. WASTE POLYCHLORINATED BIPHENYLS, SOLID, 9 UN3315 PGIII UN3442	001	DT	500 LBS
					12. Unit WL/Vol.
					13. Waste Codes PCB1
14. Special Handling Instructions and Additional Information 01. 100705PAF / PCB SOILS GMM422 EQ / ERG #171 OUT OF SERVICE DATE: OCTOBER 10, 2006 #447					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Officer's Printed/Typed Name KIND TUCKER-BILLINGSLEY		Signature [Signature]		Month Day Year 10/10/06	
TRANSPORTER INTL	16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit Date leaving U.S.:		
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Steven Burke		Signature [Signature] Month Day Year 10/10/06		
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication-Space changed per Nicole Royal (a.w.m.)		18b. Alternate Facility (or Generator) Facility's Phone: 18c. Signature of Alternate Facility (or Generator)		
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)		Manifest Reference Number U.S. EPA ID Number		
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest as noted in item 18a Printed/Typed Name Dedon Price		Signature [Signature] Month Day Year 10/10/06		

Arcadis

Jun 18, 2009 08:15

DESIGNATED FACILITY TO GENERATOR

CERTIFICATE OF DISPOSAL

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as Pcb solid
and specified on Manifest # 0090232JK. Line Item 12 has been landfilled on
10/10, 2002 in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWALIFAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: [Signature]



THE ENVIRONMENTAL QUALITY COMPANY · 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111

DESIGNATED FACILITY TO GENERATOR

CERTIFICATE OF DISPOSAL

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

FOR MANIFESTED PCB WASTE

This certificate is to verify the wastes identified as 0902333 JZ
and specified on Manifest # KB Seitz & Son, Line Item 1 has been landfilled on
10/10/06, 200__ in accordance with all local, state and federal regulations by:

Wayne Disposal, Inc.

(EPA I.D. # MID048090633)

49350 N. I-94 Service Drive, Belleville, Michigan 48111

Telephone: 1-800-KWALITY (592-5489)

Fax: 1-800-KWALIFAX (592-5329)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who are acting under my direct instructions made the verification that this information is true accurate and complete.

Authorized Signature: [Signature]

THE ENVIRONMENTAL QUALITY COMPANY 49350 N. I-94 SERVICE DRIVE BELLEVILLE MICHIGAN 48111



Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

ATTACHMENT C

BORROW SOURCE DOCUMENTATION

Confidential under FOIA
Brad Saunders
Arcadis
Jun 18, 2009 08:15

Confidential under FOIA

Brad Saunders

Arcadis

Jun 18, 2009 08:15

Brad Saunders

Arcadis

Jun 18, 2009 08:15



8800 DIX AVE., DETROIT, MICHIGAN 48209, (313) 429-5389

September 25th, 2006

Mr. Darwin Loyer
Inland Waters Pollution Control
2021 S. Schaeffer Hwy.
Detroit, MI 48217

Dear Darwin,

The Edw. C. Levy Co. is proud to be a supplier of quality aggregates to the construction industry. Thank you for your request for information about our products and I trust the following information will meet your requirement.

The Class II Natural Sand from our American Aggregate - Buno Road Plant (State Pit No. 47-16), is a virgin aggregate material, being both mined and processed on site at the Buno Road location. Additionally, this material currently satisfies all the specification requirements for Class II Granular Material outlined in the MDOT 2003 Standard Specification for Construction - Section 902 "Aggregates".

If I can be of any further assistance to you, please contact me directly.

Very truly yours,

A handwritten signature in black ink, appearing to read "Tony Johnson", written over a horizontal line.

Tony Johnson
Product Application Engineer

cc: Customer File