



Mary Vanderlaan
Supervisor, Lansing District
Michigan Department of Environmental Quality
Water Resources Division
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Lansing, MI 48909

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ENVIRONMENT

Subject:
NPDES Permit No. MI0001597
2013 Annual Pollutant Minimization Program Report for PCBs
RACER Trust Buick City – Flint, Michigan

Date:
April 16, 2014

Dear Ms. Vanderlaan:

Contact:
Christopher S. Peters

This 2013 Annual Pollutant Minimization Program (PMP) Report for polychlorinated biphenyls (PCBs) is being submitted by ARCADIS on behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust for the Buick City Site (the Site), which is located at 902 E. Leith Street in Flint, Michigan, to comply with Part 1, Section A(6) of the National Pollutant Discharge Elimination System (NPDES) permit for the Site (No. MI0001597). The goal of the PMP is to maintain the effluent concentration of total PCBs at or below 0.026 nanograms per liter (ng/L) at Monitoring Point 003A. As required per the above referenced NPDES permit, the permittee shall submit on or before May 15 of each year a status report to the Michigan Department of Environmental Quality (MDEQ) that includes 1) the monitoring results for the previous year, 2) an updated list of potential sources, and 3) a summary of all actions taken to reduce or eliminate identified sources of PCBs.

Phone:
517.324.5052

Email:
Chris.Peters@arcadis-us.com

Our ref:
B0064410.4014

List of Potential PCB Sources

The sources of PCBs at the Site are the Light Non-Aqueous Phase Liquid (LNAPL) plumes. Previously known potential sources of PCBs are present at seven discrete areas of the Site, as follows:

- former Factory 10/Scrapyard Area
- former Factory 81 Area

Imagine the result

- former Factory 05 Area
- former Building 86/Leith Street Overpass Area
- former Factory 83/84 Area,
- former Building 12 Area
- former Factory 40 Tunnel Area

A Site location map showing these areas is included as **Figure 1**.

In 2013 ARCADIS identified an additional potential source of PCBs in the former Building 30 Area (Area of Interest [AOI] 03-1). This area is likely associated with a historic release in the southern portion of former Building 30A. In November 2013 LNAPL believed to be related to this release was identified in a downgradient monitoring well. A LNAPL sample collected from this well detected PCBs at a concentration of 6 parts per million. This area is also shown on **Figure 1**.

Oil Releases to the Flint River

In 2013 two oil releases to the Flint River were reported to the National Response Center (NRC), MDEQ and City of Flint Water Pollution Control Facilities (January 29 at Outfalls 002, 003, and 004 and February 27 at Outfalls 003 and 004). These releases were likely caused by weather related events (an increase in outfall flow rates due to a combined rain event and snow melt causing migration of contained material to crest over the booms and ice buildup interfering with containment booms causing migration of the contained material to escape from beneath the booms). Releases were minimal and immediately addressed. Notifications of Release summary letters and associated response actions are included as **Attachment 1**.

PCB Detections in Outfalls

PCBs were detected at 0.2 micrograms per liter in monitoring point MP003A on April 24, 2013 and reported to Mr. Charles Bennett of the MDEQ in an April 29, 2013 letter. The Outfall 003/004 Storm Water Diversion and Treatment System (Outfall 003/004 System), located upstream of the detection, was serviced immediately following the detection. Oil and sediment were removed for off-site disposal. The

letter notifying the MDEQ of PCB detection and associated response actions are included as **Attachment 1**.

Actions Taken to Reduce or Eliminate PCB Sources and to Maintain PCB Effluent Concentrations Below NPDES Criterion

Oil Absorbent Booms

RACER maintains oil absorbent booms and oil containment booms at Outfalls 002, 003, 004 and 005 in order to contain periodic oil sheens at the Flint River. The booms at each outfall consist of an initial line of oil absorbent booms to contain and absorb oil during normal outfall flow and an oil containment boom set farther out into the river to contain any discharge during high flow events. A secondary oil containment boom line is set up on an as needed basis to provide an additional level of protection. All booms are installed in such a manner that allows them to adjust to the fluctuating river level. The outfall containment areas are currently inspected at a minimum of once per week for oil/debris accumulation, absorbent boom saturation, and that the containment booms are in good condition and functioning properly. Based on visual observations, the booms are changed on an as-needed basis to ensure proper working order. In addition, accumulated oil and debris in the outfall containment areas are cleaned via vacuum extraction and oil absorbent slabs on an as-needed basis to prevent potential environmental releases.

Outfalls 003 and 004

Construction of the Outfall 003/004 System was completed in January 2011 and it continues to remove oils and sediment in the Outfall 003 and 004 storm sewers prior to reaching the Flint River. During dry weather flow conditions, water, oil and debris from both storm sewers 003 and 004 are diverted into a common manhole at the BaySeparator™, from which oil and water are discharged to an oil/water separator, and subsequently water is discharged back into storm sewer 003 for discharge to the Flint River. Therefore, at dry weather flow conditions the only flow discharging to Outfall 004 is whatever infiltrates the storm sewer between the diversion structure and the outfall. The Outfall 003/004 System is design to capture dry weather and first flush stormwater flow. During stormwater conditions, water in the sewers is diverted around the Outfall 003/004 System and discharges directly to both outfalls.

The Outfall 003/004 System is maintained at least once per week. Water levels and oil levels are actively being monitored in vaults, the BaySeparator™ manholes, and

the oil-water separator. Storm water downstream of the System is also being monitored in manholes as well as the Flint River Outfalls to check for accumulating oils. Routine maintenance events were scheduled based on field observations and include the following tasks: removal of debris and trash racks from the diversion structures, jetting of HDPE piping to clear blockage, and a cleaning event of the BaySeparator™ system. The BaySeparator™ cleaning event was performed in June and July 2013 and included removal of approximately 5,000 gallons of oil and sediment and approximately 15,500 gallons of water.

In addition to the Outfall 003/004 System, Oil Interceptor #2, which is located upstream of the Outfall 003/004 System, continues to function as an in-line oil water separator along one of the Outfall 003 storm sewer mains to prevent oil and debris from reaching the Flint River. RACER maintains Oil Interceptor #2 by utilizing two rows of oil absorbent booms spanned perpendicular to the direction of flow. The booms are inspected on a weekly basis for oil/debris accumulation, absorbent boom saturation, and that the absorbent booms are in good condition and functioning properly. Based on visual observations, the booms are changed and debris removed on an as-needed basis to ensure proper working order. In 2013 two maintenance events were performed on Oil Interceptor #2, resulting in the collection and disposal of 21 drums (an estimated 1,640 kilograms) of Toxic Substances Control Act (TSCA) PCB waste.

Outfall 005

P-traps previously installed in the Leith Street Overpass under drain system continue to be monitored quarterly to verify their continued operation and check for the presence of LNAPL.

In 2012 boom studies were performed along the Outfall 005 storm sewer at select locations to determine oil infiltration locations and identify potential bulkheading locations. Bulkheading of Outfall 005 was completed in May 2013, which eliminated the Site's contribution to the Outfall, only leaving the drainage from Leith Street and the adjacent property owner as contributors to this storm sewer.

Monitoring Results


Monitoring results for the previous year are provided in attachments to this document and include:

- **Attachment 2** – Presents the quarterly progress reports submitted to the Environmental Protection Agency (EPA) concerning work completed as part of the RCRA Corrective Action program. The four reports (Quarterly Progress Report No. 7, 8, 9 and 10) submitted in accordance with Section VI (18b) of the RACER Trust's Administrative Order on Consent, Docket Number RCRA-05-2011-0024, cover the timeframe from January 1, 2013 through December 31, 2013.
- **Attachment 3** – Presents the analytical results from the Monitoring Point 003A weekly dry weather and yearly wet weather samples submitted for PCB analysis, as well as the analytical results from Outfall 005 monthly samples (prior to install of the bulkhead) submitted for PCB analysis. PCBs were not detected.
- **Attachment 4** – Presents the inspection notes from the Outfall 003/004 BaySaver separation system.

Please contact me at 517.324.5052 at your convenience if you have any questions or require further information regarding this submittal.

Sincerely,

ARCADIS US, Inc.

A handwritten signature in dark ink, appearing to read "Chris S. Peters".

Christopher S. Peters, P.G.
Vice President

Copies:

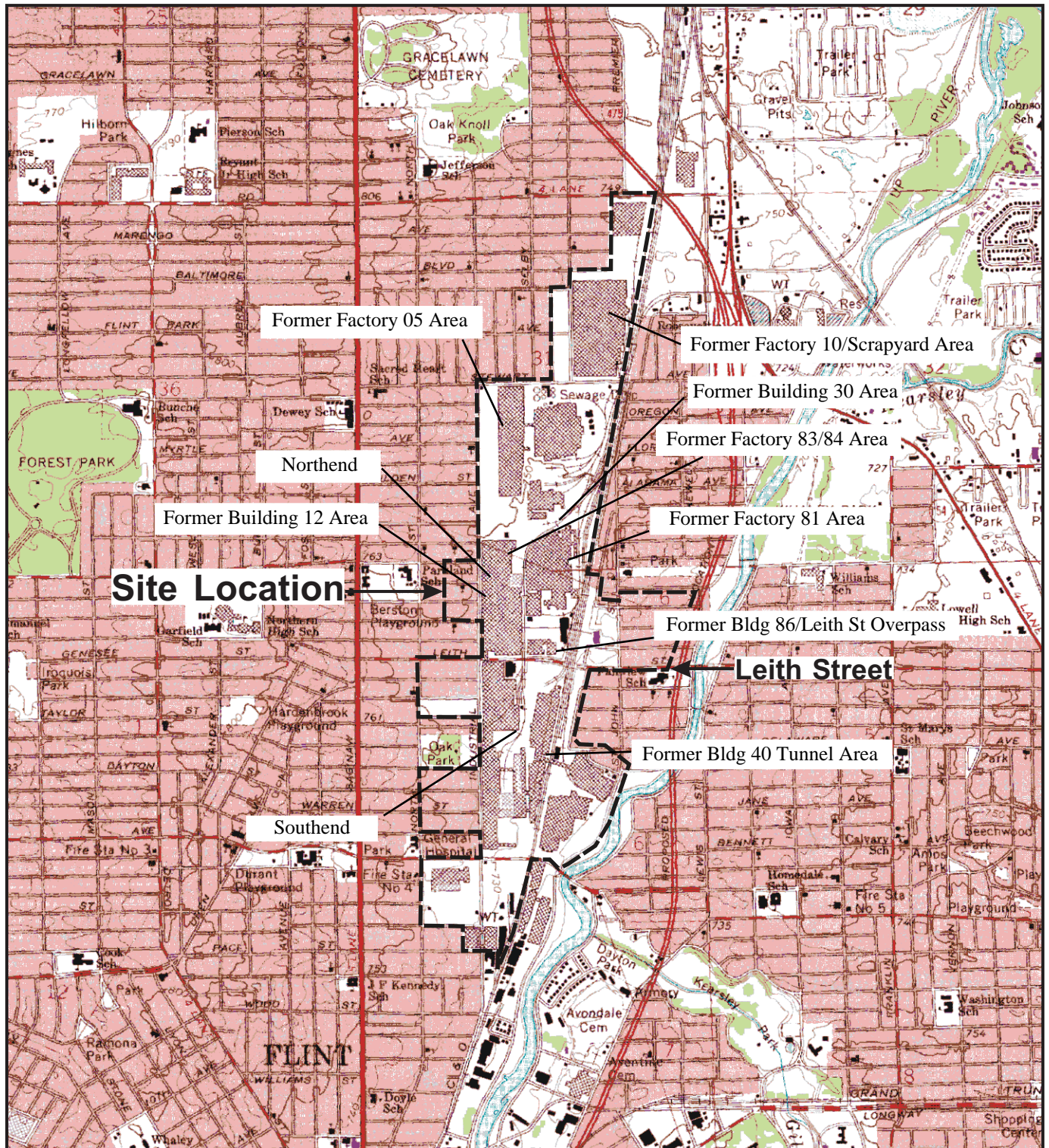
Chris Black, USEPA Region 5
Grant Trigger, RACER Trust
Dave Favero, RACER Trust

Attachments:

Figure 1	Site Location Map
Attachment 1	Notifications of Release Summary Letters
Attachment 2	RCRA Corrective Action Program - Quarterly Progress Reports
Attachment 3	2013 Outfall 003 Dry and Wet Weather Storm Water Sampling Results
Attachment 4	2013 Field Inspection Notes – Outfall 003/004 BaySaver Separation System

Figure 1

Site Location Map



REFERENCE: Base Map Source: USGS 7.5 Min. Topo. Quad., Flint North, Mich. (1969, Photorevised 1975).

2000' 0 2000'

Approximate Scale: 1" = 2000'



Area Location

RACER TRUST
BUICK CITY - FLINT, MICHIGAN

SITE LOCATION



FIGURE

1



Attachment 1

Notifications of Release Summary
Letters



Mr. Charles Bennett
Michigan Department of Environmental Quality
Water Division, Field Operations/Lansing District
525 West Allegan Street
Lansing, Michigan 48933

and

Mr. Tom Hutchings
City of Flint
Environmental Compliance Unit
Water Pollution Control Facilities
G-4652 Beecher Road
Flint, MI 48432

Subject:

Suspected Oil Release Outfalls 002, 003 and 004 – January 29, 2013
NPDES Permit Number MI0001597
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site - Flint, Michigan

Dear Messrs Bennett and Hutchings:

On behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS reported the above referenced suspected release on January 30, 2013 at 9:00 AM to the National Response Center (NRC), Report No. 1037034. This letter provides a follow-up summary of the reported conditions and associated corrective actions.

In anticipation of a forecasted heavy rain event (and related snow melt) ARCADIS performed proactive inspections and boom maintenance on Monday, January 28, 2013. Past experience had proven that this type of weather condition historically indicate an increase in the potential of a release. The outfall maintenance included changing of the booms and removing any accumulated debris and sheens from within the boom areas. Despite these best efforts, at approximately 9:30 AM on January 29, 2013, ARCADIS again inspected the outfalls and observed conditions suggesting potential releases from Outfalls 002, 003 and 004. An approximate 20 foot by 30 foot rainbow colored sheen and emulsified oil was observed outside of the boom located at Outfall 002, an approximate 20 foot by 20 foot rainbow colored sheen and emulsified oil was observed outside of the boom located at Outfall 003

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Environmental

Date:
February 1, 2013

Contact:
Christi Kiker

Phone:
810.225.1908

Email:
Christi.Kiker@arcadis-us.com

Our ref:
B0064410.4013.00200

and an approximate 5 foot by 15 foot rainbow colored sheen and emulsified oil was observed outside of the boom located at Outfall 004.

Ms. Bethany Nanzer of ARCADIS, on behalf of RACER Trust, contacted the NRC to report a suspected release to the Flint River observed near Outfalls 002, 003 and 004 on January 30, 2013 at 9:00 AM. Following the notification call to the NRC, Ms. Nanzer contacted Mr. Chuck Bennett of the Michigan Department of Environmental Quality (MDEQ) and Mr. Hutchings at 9:10 AM and 9:15 AM, respectively. Mr. Bennett and Mr. Hutchings were notified of the call made to the NRC as well as the report number and the outfall maintenance being performed in response to the suspected release.

ARCADIS believes that the suspected release at Outfalls 002, 003, and 004 if originating from those outfalls was likely caused by an extraordinary increase in outfall flow rates due to the combined rain event and snow melt causing migration of the contained material to crest over the booms. Due to inclement weather conditions and river flow it was not possible to perform further outfall maintenance until the following morning, Wednesday January 30, 2013. Maintenance included changing out the booms and removing accumulated debris and sheens from the boom area as well as outside the boom area.

ARCADIS and RACER Trust will continue to perform inspections at the outfalls and respond appropriately as required.

Should you have any questions regarding the information presented above, please feel free to contact me at 810.225.1908.

Sincerely,

ARCADIS G&M of Michigan, LLC



Christi Kiker
Principal Engineer

Copies:

Chris Black, USEPA
Grant Trigger/Dave Favero, RACER Trust
Micki Maki, ARCADIS



Mr. Charles Bennett
Michigan Department of Environmental Quality
Water Division, Field Operations/Lansing District
525 West Allegan Street
Lansing, Michigan 48933

and

Mr. Tom Hutchings
City of Flint
Environmental Compliance Unit
Water Pollution Control Facilities
G-4652 Beecher Road
Flint, MI 48432

Subject:

Oil Release Outfalls 003 and 004 – February 27, 2013
NPDES Permit Number MI0001597
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site - Flint, Michigan

Dear Messrs Bennett and Hutchings:

On behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS reported the above referenced release on February 27, 2013 at 4:35 PM to the National Response Center (NRC), Report No. 1039609. This letter provides a follow-up summary of the reported conditions and associated corrective actions.

At approximately 12:40 PM on February 27, 2013, the City of Flint notified ARCADIS that a release was observed from Outfalls 003 and 004. ARCADIS immediately mobilized a technician to the outfalls to perform an inspection. At approximately 1:30 PM on February 27, 2013, ARCADIS observed a release from Outfalls 003 and 004. A minimal amount of brown emulsified sheen was observed outside of the containment booms at the time of the inspection. An approximate 1 foot by 10 foot brown emulsified sheen was observed outside of the boom located at Outfall 003, and two 3 foot diameter circles of brown emulsified sheen were observed outside of the boom located at Outfall 004. Prior to the release ARCADIS had performed outfall inspections on Monday February 25, 2013. At that time the containment booms were functioning normally (i.e. they were not twisted or otherwise positioned such that they would allow for a release).

Imagine the result

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Environmental

Date:
March 1, 2013

Contact:
Chris Peters

Phone:
810.225.1905

Email:
Chris.Peters@arcadis-us.com

Our ref:
B0064410.4013.00200

Ms. Bethany Nanzer of ARCADIS, on behalf of RACER Trust, contacted the NRC to report the release to the Flint River observed near Outfalls 003 and 004 on February 27, 2013 at 4:35 PM. Following the notification call to the NRC, Ms. Nanzer contacted Mr. Chuck Bennett of the Michigan Department of Environmental Quality (MDEQ) and Mr. Tom Hutchings of the City of Flint at 4:40 PM and 4:45 PM, respectively. Mr. Bennett and Mr. Hutchings were notified of the call made to the NRC as well as the report number and the outfall maintenance being performed in response to the suspected release.

ARCADIS believes that despite best efforts and a maintenance inspection 2 days earlier the release at Outfalls 003 and 004 was likely caused by ice buildup interfering with the containment booms causing migration of the contained material to escape from beneath the booms. Young's Environmental Cleanup, Inc. was contacted immediately to perform outfall maintenance. Maintenance was initiated and completed on the afternoon of February 27, 2013 the same day the incident was identified. Maintenance included changing out the booms and removing accumulated debris and sheens from within and outside of the boom area.

ARCADIS and RACER Trust will continue to perform inspections at the outfalls and respond appropriately as required.

Should you have any questions regarding the information presented above, please feel free to contact me at 810.225.1905.

Sincerely,
ARCADIS G&M of Michigan, LLC



Christopher S. Peters, P.G.
Vice President

Copies:

Chris Black, USEPA
Grant Trigger, RACER Trust
Dave Favero, RACER Trust
Micki Maki, ARCADIS



Mr. Charles Bennett
Michigan Department of Environmental Quality
Water Division, Field Operations/Lansing District
525 West Allegan Street
Lansing, Michigan 48933

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ENVIRONMENT

Subject:
PCB Detection at NPDES Monitoring Point MP003A
NPDES Permit Number MI0001597
Revitalizing Auto Communities Environmental Response Trust
Buick City
Flint, Michigan

Date:
April 29, 2013

Contact:
Christopher S. Peters

Phone:
810.225.1905

Email:
Chris.Peters@arcadis-us.com

Dear Mr. Bennett:

On behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS verbally reported the referenced detection to you on Wednesday April 24, 2013. This letter provides a follow-up summary of the reported conditions and associated corrective actions.

At approximately 1:30 P.M. EST on Wednesday, April 24, 2013, the Michigan Department of Environmental Quality (MDEQ) was contacted via telephone by Mr. Chris Peters of ARCADIS, on behalf of RACER, to inform the MDEQ of a detection of total polychlorinated biphenyls (PCBs) at a concentration of 0.2 micrograms per liter ($\mu\text{g/L}$) in the weekly effluent sample collected from monitoring point MP003A. Although heavy rains were experienced during this period we collected our routine 24-hour composite sample from Monday April 15 to Tuesday April 16, 2013. The analytical results were reported on Tuesday April 23, 2013. Laboratory analytical results are included in **Attachment 1**.

Our ref:
B0064410.4013.00100

We are reporting these results in accordance with the Site National Pollutant Discharge Elimination System (NPDES) permit. However, under this permit weekly MP003A samples are to be collected during a period when there is no storm water discharge (Part I Section A2b of the permit). As noted above the reported sample was collected when the Site has received a lot of rain over the past couple of weeks. Thus, while it was not raining at the Site when the sample was collected, given the

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significant rainfalls prior to sample collection, we do not believe that the sample meets the requirement as an actual dry weather sample. Please note that PCB detections have been observed in the past in wet weather samples. A summary of yearly wet weather laboratory analytical results collected from MP003A between 2006 and 2012 is included in **Attachment 2**.

Currently river levels at the Site remain high, and Outfall 003A is submerged. As previously mentioned, samples are required to be collected on a weekly basis from Outfall 003A, but only during dry weather conditions. The next likely chance of non-storm water discharge will be Monday April 29 or Tuesday April 30, 2013. At that time ARCADIS will attempt to collect the required dry weather sample from MP003A for PCB analysis.

ARCADIS and RACER Trust are working diligently to identify and remove potential sources of releases to the river. We will continue to perform inspections, collect weekly samples at MP003A, and implement appropriate corrective actions, as needed. Should you have any questions regarding the information presented above, please feel free to contact me at 810.225.1905.

Sincerely,

ARCADIS



Christopher S. Peters, P.G.
Vice President

Enclosure:

Attachment 1 – Laboratory Analytical Report
Attachment 2 – Summary of Yearly Wet Weather Results

Copies:

Grant Trigger, RACER Trust
Dave Favero, RACER Trust
Chris Black, USEPA

ARCADIS

Attachment 1

Laboratory Analytical Report



Analytical Laboratory Report

Report ID: S56136.01(01)
Generated on 04/23/2013

Report to

Attention: Beth Nanzer, Erin Kozak, D. Newcom
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56136.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 04/16/2013
Submitted Date/Time: 04/18/2013 15:40
Sampled by: Deb Newcom
P.O. #: B0064410.4013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56136.01	Outfall003A_04162013	Water	04/16/2013 07:30



Analytical Laboratory Report

Lab Sample ID: S56136.01
Sample Tag: Outfall003A_04162013
Collected Date/Time: 04/16/2013 07:30
Matrix: Water
COC Reference: BC041613.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	04/23/13 10:13	ADB		
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Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	12672-29-6	
PCB-1254	0.2	ug/L	0.1	E608	04/23/13 11:49	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	04/23/13 11:49	JAN	1336-36-3	

[illegible]



Attachment 2

Summary of Yearly Wet Weather
Results

Storm Water Sampling Summary
NPDES Permit No. MI0001597
Yearly Trend Monitoring - Outfalls 003A

RACER
Buick City
Flint, Michigan

Outfall	Parameter	Units	Date						
			9/12/2006	9/10/2007	9/3/2008	9/28/2009	9/28/2010	9/27/2011	10/18/2012
003	PCB-1016	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
003	PCB-1221	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
003	PCB-1232	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
003	PCB-1242	µg/L	< 0.10	< 0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10
003	PCB-1248	µg/L	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
003	PCB-1254	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	0.2	< 0.10	< 0.10
003	PCB-1260	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
003	Total PCB	µg/L	0.14	< 0.10	0.16	< 0.10	0.2	< 0.10	< 0.10



Mr. Charles Bennett
Michigan Department of Environmental Quality
Water Division, Field Operations/Lansing District
525 West Allegan Street
Lansing, Michigan 48933

Subject:

PCB Detections at NPDES Monitoring Point MP003A
NPDES Permit Number MI0001597
Revitalizing Auto Communities Environmental Response Trust
Buick City
Flint, Michigan

Dear Mr. Bennett:

On behalf of the Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this summary letter to document the sample collection dates, laboratory analytical results and associated corrective action implemented in regards to the recent total polychlorinated biphenyl (PCB) detections at monitoring point MP003A. As discussed by telephone on May 6, 2013 with Ms. Bethany Nanzer of ARCADIS, this summary letter will satisfy the requirement in the Site National Pollutant Discharge Elimination System (NPDES) permit that a written report must be submitted within 5 days of notification of the detection to the Michigan Department of Environmental Quality (MDEQ).

As indicated in our letter correspondence with the MDEQ dated April 29, 2013, at approximately 1:30 P.M. EST on Wednesday, April 24, 2013, the MDEQ was contacted via telephone by Mr. Chris Peters of ARCADIS, on behalf of RACER, to inform the MDEQ of a detection of PCBs at a concentration of 0.2 micrograms per liter ($\mu\text{g/L}$) in the weekly effluent sample collected from monitoring point MP003A. The 24-hour composite sample was collected from Monday April 15 to Tuesday April 16, 2013 (Sample Outfall003A_04162013). The analytical results were reported on Tuesday April 23, 2013. Laboratory analytical results are included in **Attachment 1**.

Due to multiple rain events, the next opportunity to collect a sample during a period when there was no storm water discharge (Part I Section A2b of the permit) was from Monday April 29 through Tuesday April 30, 2013 (Sample Outfall003A_04302013). PCBs were detected in that sample at 0.2 $\mu\text{g/L}$. A third sample was collected from

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ENVIRONMENT

Date:
July 17, 2013

Contact:
Christopher S. Peters

Phone:
810.225.1905

Email:
Chris.Peters@arcadis-us.com

Our ref:
B0064410.4013.00100

Wednesday May 1 through Thursday May 2, 2013 (Sample Outfall003A_05022013). PCBs were detected in that sample at 0.2 µg/L. A fourth sample was collected from Thursday May 2, through Friday May 3, 2013 (Sample Outfall003A_05032013). PCBs were detected at 0.2 µg/L. Due to another rain event, the next opportunity to collect a sample during a period when there was no storm water discharge was from Monday May 6 through Tuesday May 7, 2013 (Sample Outfall003A_05072013). PCBs were detected at 0.2 µg/L. Samples were submitted to Merit Laboratories in East Lansing, Michigan for analysis of PCBs at 24-hour turn-around time. Laboratory analytical results are included in **Attachment 1**.

ARCADIS notified the MDEQ of the above mentioned laboratory results as they were received. On May 9, 2013 ARCADIS informed the MDEQ that a cleaning of the Outfall 003/004 system was in process of being scheduled for the following week (Monday May 13, 2013) and that additional MP003A samples would not be collected until after the completion of cleaning. The cleaning was performed by The Environmental Quality Company and began on Monday May 13 and wrapped up on Thursday May 23, 2013. A sample from monitoring point MP003A was collected from Friday May 24 through Saturday May 25, 2013 (Sample Outfall003A_05282013). Due to the Memorial holiday sample results were not available until Wednesday May 29, 2013. PCBs were not detected in the sample. Subsequent dry weather samples were collected during the months of June and July (June 6, June 19, and July 2, 2013). PCBs were not detected in those samples either. Laboratory analytical results are included in **Attachment 1**.

ARCADIS will resume dry weather sample collection on a weekly basis from MP003A for PCB analysis, as well as, continue to perform inspections, and implement appropriate corrective actions, as needed. Should you have any questions regarding the information presented above, please feel free to contact me at 810.225.1905.

Sincerely,

ARCADIS



Christopher S. Peters, P.G.
Vice President



Mr. Charles Bennett
July 17, 2013

Enclosure:

Attachment 1 – Laboratory Analytical Report

Copies:

Grant Trigger, RACER Trust

Dave Favero, RACER Trust

Chris Black, USEPA

Page:

3/3

ARCADIS

Attachment 1

Laboratory Analytical Reports



Analytical Laboratory Report

Report ID: S56136.01(01)
Generated on 04/23/2013

Report to

Attention: Beth Nanzer, Erin Kozak, D. Newcom
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56136.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 04/16/2013
Submitted Date/Time: 04/18/2013 15:40
Sampled by: Deb Newcom
P.O. #: B0064410.4013

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56136.01	Outfall003A_04162013	Water	04/16/2013 07:30



Analytical Laboratory Report

Lab Sample ID: S56136.01

Sample Tag: Outfall003A_04162013

Collected Date/Time: 04/16/2013 07:30

Matrix: Water

COC Reference: BC041613.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	1L Amber	None	Yes	4.7	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	04/23/13 10:13	ADB		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	12672-29-6	
PCB-1254	0.2	ug/L	0.1	E608	04/23/13 11:49	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	04/23/13 11:49	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	04/23/13 11:49	JAN	1336-36-3	

[illegible]



Analytical Laboratory Report

Report ID: S56248.01(01)
Generated on 05/01/2013

Report to

Attention: Beth N/Erin Kozak/Deb N/C Kiker
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 810-229-8837
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56248.01
Project: B0064410.2013.00801 / Buick City -Site # 12950, Task # 00801
Collected Date: 04/30/2013
Submitted Date/Time: 04/30/2013 14:00
Sampled by: Deb Newcom
P.O. #: B0064410.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56248.01	MP003A_04302013	Water	04/30/2013 13:45



Analytical Laboratory Report

Lab Sample ID: S56248.01

Sample Tag: MP003A_04302013

Collected Date/Time: 04/30/2013 13:45

Matrix: Water

COC Reference: BC043013.3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.9	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	04/30/13 20:00	ADB		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	11141-16-5	
PCB-1242	0.2	ug/L	0.1	E608	05/01/13 11:23	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	05/01/13 11:23	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	05/01/13 11:23	JAN	1336-36-3	



Analytical Laboratory Report

Report ID: S56280.01(01)
Generated on 05/03/2013

Report to

Attention: Beth Nanzer, Erin Kozak, D. Newcom
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56280.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 05/02/2013
Submitted Date/Time: 05/02/2013 14:00
Sampled by: Deb Newcom
P.O. #: B0064410.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56280.01	Outfall003A_05022013	Water	05/02/2013 13:45



Analytical Laboratory Report

Lab Sample ID: S56280.01

Sample Tag: Outfall003A_05022013

Collected Date/Time: 05/02/2013 13:45

Matrix: Water

COC Reference: BC050213.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	05/02/13 17:00	ADB		
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Inorganics

Total Suspended Solids	10	mg/L	1	2540 D	05/02/13 18:00	ASB		
------------------------	----	------	---	--------	----------------	-----	--	--

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	11141-16-5	
PCB-1242	0.2	ug/L	0.1	E608	05/03/13 13:53	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	05/03/13 13:53	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	05/03/13 13:53	JAN	1336-36-3	

[illegible]



Analytical Laboratory Report

Report ID: S56307.01(01)
Generated on 05/06/2013

Report to

Attention: Beth Nanzer, Erin Kozak, D. Newcom
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56307.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 05/03/2013
Submitted Date/Time: 05/03/2013 16:45
Sampled by: Deb Newcom
P.O. #: B0064410.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
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Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56307.01	Outfall003A_05032013	Water	05/03/2013 15:45



Analytical Laboratory Report

Lab Sample ID: S56307.01
Sample Tag: Outfall003A_05032013
Collected Date/Time: 05/03/2013 15:45
Matrix: Water
COC Reference: 81461

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	05/06/13 8:36	ADB		
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Inorganics

Total Suspended Solids	7	mg/L	1	2540 D	05/05/13 14:10	ASB		
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Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	11141-16-5	
PCB-1242	0.2	ug/L	0.1	E608	05/06/13 11:11	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	05/06/13 11:11	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	05/06/13 11:11	JAN	1336-36-3	



81461

INVOICE TO

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications

☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York☐ Other _____

Special Instructions

24 HR TAT

RELINQUISHED BY:

SIGNATURE/ORGANIZATION

RECEIVED BY:

SIGNATURE/ORGANIZATION

SEAL NO.

SEAL INTACT

INITIALS

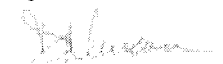

SEAL NO.

SEAL INTACT

INITIALS

NOTES:

TEMP. ON ARRIVAL 5.0

Send Results To:	Contact & Company Name: Beth Nanzer, Erin Kozak, Deb Newcom		Telephone: 248.994.2314		Preservative	E											Preservation Key: A. H ₂ SO ₄ B. HCL C. NaOH D. HNO ₃ E. None F. G. H. Matrix Key: SE = Sediment SO = Soil Wipe W = Water Container Information Key: 1. 40 mL VOA 2. 1 L Amber 3. 125 mL Plastic 4. 250 mL Plastic 5. 500 mL Plastic 6. 1 L Plastic 7. 2 oz. Glass 8. 4 oz. Glass 9. 8 oz. Glass 10. Other A = Air NL = NAPL / Oil SL = Sludge SW = Surface T = Tissue											
	Address: 28550 Cabot Drive Ste 500		Fax: 248.994.2241		Filtered (✓)																							
	City State Zip Novi, MI 48377		Email bethany.nanzer@arcadis-us.com erin.kozak@arcadis-us.com deborah.newcom@arcadis-us.com		# of Containers	1																						
	Project Name/Location (City, State): Buick City Site #1295 Task 1		Project #: B0064410.4013.00100		Container Information	2																						
	Sampler's Printed Name: D. Newcom		Sampler's Signature: 		PARAMETER ANALYSIS & METHOD																							
Sample ID		Collection Date Time		Type Comp Grab		Matrix	Total PCB's	TSS									REMARKS											
Outfall003A_05032013		5/3/13		x		w												x	x									24 TAT
Special Instructions/Comments: Buick City Site #1295 Task 1 - Please also send copy of Invoicing to Beth Nanzer (ARCADIS). Bill directly to ARCADIS WA-01										Special QA/QC Instructions: EDD Requested, 24 hr TAT, Level 2																		
Laboratory Information and Receipt				Relinquished By				Received By				Laboratory Received By																
Lab Name: Merit		Cooler Custody Seal		Printed Name: D. Newcom				Printed Name:				Printed Name:																
<input checked="" type="checkbox"/> Cooler packed with ice (✓)		<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact		Signature: 				Signature:				Signature:																
Specify Turnaround Requirements:		Sample Receipt:		Firm ARCADIS				Firm: Merit				Firm:																
Fed-Ex Tracking #:		Condition/Cooler Temp:		Date/Time: 5/3/2013				Date/Time:				Date/Time:																



Analytical Laboratory Report

Report ID: S56328.01(01)
Generated on 05/08/2013

Report to

Attention: Beth Nanzer, Erin Kozak, D. Newcom
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Andy Ball (andyball@meritlabs.com)
Tabitha Faust (tfaust@meritlabs.com)

Report Summary

Lab Sample ID(s): S56328.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task 1
Collected Date: 05/07/2013
Submitted Date/Time: 05/07/2013 15:30
Sampled by: D. Newcom
P.O. #: B0064410.2013.0

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
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Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56328.01	Outfall003A_05072013	Water	05/07/2013 08:00



Analytical Laboratory Report

Lab Sample ID: S56328.01
Sample Tag: Outfall003A_05072013
Collected Date/Time: 05/07/2013 08:00
Matrix: Water
COC Reference: BC050713.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.0	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	05/08/13 9:12	ADB		
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Inorganics

Total Suspended Solids	3	mg/L	1	2540 D	05/07/13 16:30	ASB		
------------------------	---	------	---	--------	----------------	-----	--	--

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	11141-16-5	
PCB-1242	0.2	ug/L	0.1	E608	05/08/13 12:05	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	05/08/13 12:05	JAN	11096-82-5	
PCB, Total	0.2	ug/L	0.1	E608	05/08/13 12:05	JAN	1336-36-3	

Send Results To:	Contact & Company Name: Beth Nanzer, Erin Kozak, Deb Newcom	Telephone: 248.994.2314	Preservative E														PRESERVATION KEY : A. H ₂ SO ₄ B. HCL C. NaOH D. HNO ₃ E. None F. G. H.	KEYS Container Information Key: 1. 40 mL VOA 2. 1 L Amber 3. 125 mL Plastic 4. 250 mL Plastic 5. 500 mL Plastic 6. 1 L Plastic 7. 2 oz. Glass 8. 4 oz. Glass 9. 8 oz. Glass 10. Other	
	Address: 28550 Cabot Drive Ste 500	Fax: 248.994.2241	Filtered (✓)																Matrix Key: SE = Sediment A = Air SL = Sludge SO = Soil NL = NAPL / Oil SW = Surface Wipe W = Water T = Tissue
	City State Zip	Email bethany.nanzer@arcadis-us.com erin.kozak@arcadis-us.com deborah.newcom@arcadis-us.com	# of Containers 1																
			Container Information 2																
			PARAMETER ANALYSIS & METHOD																
			Total PCB's	TSS															
Project Name/Location (City, State): Buick City Site #1295 Task 1		Project #: B0064410.4013.00100																	
Sampler's Printed Name: D. Newcom		Sampler's Signature: 																	
Sample ID	Collection Date Time	Type Comp Grab	Matrix														REMARKS 24 TAT		
Outfall003A_05072013	5/7/13 0800	x	w																
Special Instructions/Comments: Buick City Site #1295 Task 1 - Please also send copy of Invoicing to Beth Nanzer (ARCADIS). Bill directly to ARCADIS WA-01										Special QA/QC Instructions: EDD Requested, 24 hr TAT, Level 2									
Laboratory Information and Receipt			Relinquished By			Received By			Laboratory Received By										
Lab Name:	Cooler Custody Seal	Printed Name:	D. Newcom			Printed Name:				Printed Name:	Barbara Ball								
Merit	<input type="checkbox"/> Cooler packed with ice (✓)	<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact	Signature:			Signature:				Signature:									
Specify Turnaround Requirements:	Sample Receipt:	Firm	ARCADIS			Firm:				Firm:	Merit								
Fed-Ex Tracking #:	Condition/Cooler Temp:	Date/Time:	5/7/2013			Date/Time:	5/7/13			Date/Time:	5/7/13								
	5.0	1300				1300				15:30									



Analytical Laboratory Report

Report ID: S56595.01(01)
Generated on 05/29/2013

Report to

Attention: Beth Nanzer
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Additional Contacts: Deb Newcom, Erin Kozak

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56595.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 05/28/2013
Submitted Date/Time: 05/28/2013 13:35
Sampled by: Deb Newcom
P.O. #: B0064410.4013.00100

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
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Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56595.01	Outfall003A_05282013	Water	05/28/2013 12:00



Analytical Laboratory Report

Lab Sample ID: S56595.01

Sample Tag: Outfall003A_05282013

Collected Date/Time: 05/28/2013 12:00

Matrix: Water

COC Reference: BC052813.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	05/29/13 8:50	ADB		
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Inorganics

Total Suspended Solids	3	mg/L	1	2540 D	05/28/13 17:00	ASB		
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Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	11096-82-5	
PCB, Total	Not detected	ug/L	0.1	E608	05/29/13 11:35	JAN	1336-36-3	

[illegible]



Analytical Laboratory Report

Report ID: S56792.01(01)
Generated on 06/11/2013

Report to

Attention: Beth Nanzer
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Additional Contacts: Deb Newcom, Erin Kozak

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56792.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 06/06/2013
Submitted Date/Time: 06/07/2013 15:30
Sampled by: Deb Newcom
P.O. #: B0064410.4013.00100

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56792.01	Outfall003A_06062013	Water	06/06/2013 10:00



Analytical Laboratory Report

Lab Sample ID: S56792.01

Sample Tag: Outfall003A_06062013

Collected Date/Time: 06/06/2013 10:00

Matrix: Water

COC Reference: BC060613.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.1	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	06/10/13 11:49	ADB		
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Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	11096-82-5	
PCB, Total	Not detected	ug/L	0.1	E608	06/11/13 12:49	JAN	1336-36-3	

[illegible]



Analytical Laboratory Report

Report ID: S56971.01(01)
Generated on 06/24/2013

Report to

Attention: Beth Nanzer
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Additional Contacts: Deb Newcom, Erin Kozak

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S56971.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 06/19/2013
Submitted Date/Time: 06/20/2013 14:05
Sampled by: Deb Newcom
P.O. #: B0064410.4013.00100

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S56971.01	Outfall003A_06192013	Water	06/19/2013 09:00



Analytical Laboratory Report

Lab Sample ID: S56971.01

Sample Tag: Outfall003A_06192013

Collected Date/Time: 06/19/2013 09:00

Matrix: Water

COC Reference: BC061913.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			3510C	06/21/13 17:00	ADB		
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Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	11096-82-5	
PCB, Total	Not detected	ug/L	0.1	E608	06/24/13 11:38	JAN	1336-36-3	

[illegible]



Analytical Laboratory Report

Report ID: S57125.01(01)
Generated on 07/08/2013

Report to

Attention: Beth Nanzer
Arcadis
28550 Cabot Drive
Suite 500
Novi, MI 48377

Phone: 248-994-2314 FAX: 248-994-2241
Email: Bethany.Nanzer@arcadis-us.com

Additional Contacts: Deb Newcom, Erin Kozak

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

Tabitha Faust (tfaust@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S57125.01
Project: B0064410.4013.00100 / Buick City Site # 1295, Task # 1
Collected Date: 07/02/2013
Submitted Date/Time: 07/02/2013 15:00
Sampled by: Deb Newcom
P.O. #: B0064410.4013.00100

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).
Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc..

Laboratory Certifications:

Michigan DNRE (#9956), DOD/ISO 17025 (#69699), WBENC (#2005110032), Ohio EPA (#CL0002), IN Drinking Water (#C-MI-07), NELAC NY (#11814)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S57125.01	Outfall003A_07022013	Water	07/02/2013 09:00



Analytical Laboratory Report

Lab Sample ID: S57125.01

Sample Tag: Outfall003A_07022013

Collected Date/Time: 07/02/2013 09:00

Matrix: Water

COC Reference: BC070213.1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	5.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Extraction, PCB	Completed			3510C	07/03/13 18:00	ADB		
-----------------	-----------	--	--	-------	----------------	-----	--	--

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	12674-11-2	
PCB-1221	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	11104-28-2	
PCB-1232	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	11141-16-5	
PCB-1242	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	53469-21-9	
PCB-1248	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	12672-29-6	
PCB-1254	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	11097-69-1	
PCB-1260	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	11096-82-5	
PCB, Total	Not detected	ug/L	0.1	E608	07/08/13 12:47	JAN	1336-36-3	

Send Results To:	Contact & Company Name: Beth Nanzer, Erin Kozak, Deb Newcom		Telephone: 248.994.2314		Preservative E												KEYS Preservation Key: A. H ₂ SO ₄ B. HCL C. NaOH D. HNO ₃ E. None F. G. H. Matrix Key: SE = Sediment SO = Soil Wipe W = Water Container Information Key: 1. 40 mL VOA 2. 1 L Amber 3. 125 mL Plastic 4. 250 mL Plastic 5. 500 mL Plastic 6. 1 L Plastic 7. 2 oz. Glass 8. 4 oz. Glass 9. 8 oz. Glass 10. Other A = Air NL = NAPL / Oil SL = Sludge SW = Surface T = Tissue		
	Address: 28550 Cabot Drive Ste 500		Fax: 248.994.2241		Filtered (✓)														
	City State Zip Novi, MI 48377		Email bethany.nanzer@arcadis-us.com erin.kozak@arcadis-us.com deborah.newcom@arcadis-us.com		# of Containers 2														
	Project Name/Location (City, State): Buick City Site #1295 Task 1		Project #: B0064410.4013.00100		Container Information 2														
	Sampler's Printed Name: D. Newcom		Sampler's Signature: 		PARAMETER ANALYSIS & METHOD <div style="display: flex; justify-content: space-around;"> <div>Total PCB's</div> <div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div> </div>														
Sample ID		Collection		Type													Matrix		
		Date Time		Comp Grab													REMARKS		
Outfall003A_07022013		7/2/13 0900		x		w		x											
Special Instructions/Comments: Buick City Site #1295 Task 1 - Please also send copy of Invoicing to Beth Nanzer (ARCADIS). Bill directly to ARCADIS WA-01										Special QA/QC Instructions: EDD Requested, Level 2									
Laboratory Information and Receipt				Relinquished By				Received By				Laboratory Received By							
Lab Name:				Cooler Custody Seal				Printed Name:				Printed Name:							
Merit				<input type="checkbox"/> Intact <input type="checkbox"/> Not Intact				D. Newcom				Chris Gauthier							
<input checked="" type="checkbox"/> Cooler packed with ice (✓)								Signature:				Signature:							
Specify Turnaround Requirements:				Sample Receipt:				Firm:				Firm:							
								ARCADIS				Merit							
Fed-Ex Tracking #:				Condition/Cooler Temp:				Date/Time:				Date/Time:							
				5.3				7/2/13 1200				7/2/13 1500							



Attachment 2

RCRA Corrective Action Program -
Quarterly Progress Reports



Transmitted via Electronic Mail

Mr. Chris Black
U.S. Environmental Protection Agency – Region 5
Land and Chemicals Division
77 W. Jackson Blvd. DE-97
Chicago, IL 60604-3590

Subject:

First Quarter 2013 Progress Report (No. 7)
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Dear Mr. Black:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this First Quarter 2013 Progress Report (No. 7) in accordance with Section VI (18b) of the RACER Trust's Administrative Order on Consent (Consent Order), Docket Number RCRA-05-2011-0024 for the Buick City Site located in Flint, Michigan (the Site), which was effective on September 29, 2011.

Please note that in accordance with General Motors Corporation's Administrative Order on Consent Number R8H-5-00-02 for the North American Operations [NAO] Flint Operations Site (also known as Buick City) Quarterly Progress Reports No.1 through 46 were submitted to the United States Environmental Protection Agency (EPA) documenting Site activities from January 1, 2000 through June 30, 2011.

This First Quarter 2013 Progress Report (No. 7) covers the period of January 1, 2013 through March 31, 2013.

The following briefly summarizes the work performed and data collected, problems encountered, project schedule, and estimated percent complete for a list of activities.

ARCADIS
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810.229.8594
Fax 810.229.8837
www.arcadis-us.com

ENVIRONMENT

Date:

April 12, 2013

Contact:

Micki M. Maki, P.E.

Phone:

810.225.1905

Email:

[Micki Maki@arcadis-us.com](mailto:Micki.Maki@arcadis-us.com)

Our ref:

B0064410.2012

1. Data Collected This Quarter

The samples collected as part of Site investigation or monitoring activities during this quarter are discussed below. This data will be presented to the EPA in the 2013 Annual CMI Report, except as noted below.

1.1 Storm Sewer Water Samples

In January, February, and March ARCADIS conducted the "NPDES Plus" Monitoring Program (NPMP) as described in the 2011 Annual Corrective Measures Implementation (CMI) Report. The NPMP consists of collecting monthly samples from the 11 Site storm sewers to monitor groundwater infiltrating into the Site storm sewers. The following 11 monitoring points were sampled as access allowed: MP001, MP002, MP003, MP004, MP005, MP006, MP007, MP009, MP010, MP011, and MP013.

From January to March 2013, as required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A. The samples were submitted to the laboratory for analysis of total PCBs. This data will be included in the 2013 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the MDEQ as required in the NPDES permit.

1.2 Soil Samples

In March ARCADIS collected soil samples as part of the Northern Parcel Investigation to delineate exceedances of criteria. Soil samples were collected from 12 soil boring locations and submitted for laboratory analysis of manganese. This data will be submitted in a brief memo report.

1.3 LNAPL Samples

In March ARCADIS collected LNAPL samples from nine monitoring wells as part of the LNAPL Investigation plan. The LNAPL samples were submitted for laboratory analysis of volatile organic compounds (VOCs), metals, and/or PCBs. This data will be included in the LNAPL remedy selection memos.

2. Work Performed This Quarter

Attachments 1, 2, and 3 present the monthly Site progress reports for January, February, and March which document the work performed this quarter.

3. Problems Encountered

While coordinating the installation of the AOI 09-B MPE treatment system there have been significant delays while securing natural gas service. The system has been installed; however, it cannot be operated until the gas service has been connected and temperatures return above freezing. Startup of the system has been scheduled for April 9, 2013.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Quarter

A projected field work schedule for the second and third quarter is included in Attachment 4.

4.1 Routine Work

Task 1 Outfall 003/004 Oil Removal Systems

- Continue OMM inspections of system.

Task 6 Maintain Booms on Outfalls

- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to performed inspections of Oil Interceptor #2.

Task 7 Enhanced Groundwater Monitoring

- Conduct Annual Groundwater Monitoring Event.

Task 8 NPDES PLUS Monitoring

- Perform NPMP monitoring in April, May, and June.

Task 10 Maintain Select Surface Covers

- Perform quarterly inspection of surface cover.

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- Continue to participate in regulatory agency calls.
- Prepare Quarterly Report for submittal to EPA.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Continue quarterly P-trap inspections.

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- Begin OM&M phase of AOI 09-B LNAPL remediation system.

4.2 Non-Routine Work

Task 1 Outfall 003/004 Oil Removal Systems

- Perform a system maintenance and waste disposal event.

Task 2 LNAPL Investigation

- Perform transmissivity testing at the Northend of the Site.
- Perform NSZD testing at the Northend of the Site.
- Complete additional investigation boring/monitoring well installation at AOI 5-01/5-05, AOI 10-1/10-4, and Factory 83/84.
- Complete delineation of AOI 83/84-3 Lead Soil Investigation and former Factory 31 Basement Investigation.

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- Complete evaluation of Site data to aid in selecting methods and locations for additional LNAPL pilot testing.
- Develop a matrix of remedial alternatives and costs for LNAPL areas and meet with EPA to review.
- Conduct respirometry testing.

Task 7 Enhanced Groundwater Monitoring

- Complete sampling of select additional wells to characterize the current conditions of the dissolved phase plumes associated with the Site LNAPL plumes.

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Conduct additional delineation of the WMU #3 Investigation.
- Coordinate with the EPA and MDEQ to transfer open LUST issues to RCRA Corrective Action.

Task 10 Maintain Select Surface Covers

- Sample and characterize the AOI 09-B soil pile.
- Install additional surface cover as required.

Task 11 Lead Soil Removal

- Begin lead soil removal activities.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Complete bulkhead activities along the Outfall 002, 003, 005 and 007 storm sewers.
- Complete evaluation of possible re-routing options for Outfall 004 storm sewer.
- Investigate additional bulkheading location options.

Task 14 Address 15 Areas of Subsurface LNAPL

- Conduct startup and shakedown of AOI-9B LNAPL remediation system.

5. Estimated Percent Complete

Task 1 Outfall 003/004 Oil Removal Systems

- Outfall 003/004 Oil removal System OM&M - Ongoing

Task 2 LNAPL Investigation

- LNAPL LIF Investigations – 100%
- Southend Natural Source Zone Depletion Study – 100%

- Southend Transmissivity Testing – 100%
- Northend Natural Source Zone Depletion Study – 0%
- Northend Transmissivity Testing – 2%
 - LNAPL Investigation Work Plan Submitted to the USEPA on 2/26/13.
 - USPEA Approval of LNAPL Investigation Work Plan Received on 3/27/13.
- Additional LNAPL Investigation – 2%
 - LNAPL Investigation Work Plan Submitted to the USEPA on 2/26/13.
 - USPEA Approval of LNAPL Investigation Work Plan Received on 3/27/13.

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- LNAPL Bench Scale Testing – 100%
- LNAPL Pilot Scale Testing – 33%

Task 7 Enhanced Groundwater Monitoring

- Groundwater Monitoring – Ongoing
 - Notices of Migration Contamination (NOM) for three offsite property owners were sent out on 3/12/13.

Task 8 NPDES PLUS Monitoring

- NPDES PLUS Monitoring – Ongoing

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Northend RCRA WMU Closures – 90%
 - Received Acceptance of Northend Certification of Closure Response Activities at RCRA Waste Management Units from the Michigan department of Environmental Quality (MDEQ) on 1/17/13.
- Southend RCRA WMU Closures – 90%
 - Received Acceptance of Southend Certification of Closure Response Activities at RCRA Waste Management Units from the MDEQ on 1/17/13.

- Northend Restrictive Covenant – 0%
- Southend Restrictive Covenant – 90%
- Monitoring Well Abandonments – 5%
- UST Issue Resolution – 10%

Task 10 Maintain Select Surface Covers

- Maintain Select Surface Covers – Ongoing
- Installation of Additional Surface Cover – Southend – 35%

Task 11 Lead Soil Removal

- Lead Soil Removal – 15%
- Northern Parcel Investigation – 85%
 - Completed Delineation Field Work on 3/21/13.

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- RFI Phase I Report - 100%
- RFI Phase II Report - 100%
- Human Health Exposure Control EI Report - 100%
- CA 750 Report - 100%
- Revised Corrective Measures Proposal (CMP), May 1, 2008 – 100%
- Revised CMP Addendum No. 1 – 100%
- Southend Corrective Measures Implementation (CMI) Work Plan – 100%
- Revised CMP Addendum No. 2 – Northend and Site-wide Groundwater - 100%
- Revised CMP Addendum No. 2-1 – Response to EPA Comments - 100%
- 2012 CMI Annual Report – 100%
 - Submitted to USEPA on 3/29/12.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Outfall 002 Storm Sewer Evaluation - 100%

- Outfall 003 Storm Sewer Evaluation – 40%
- Outfall 004 Re-route into Outfall 013 Evaluation - 35%
- Outfall 005 Storm Sewer Evaluation – 100%
- Outfall 002 Final Measure Implementation– 90%
 - Began Outfall 002 Bulkheading on 2/26/13.
- Outfall 003 Final Measure Implementation – 25%
 - Began Outfall 003 Bulkheading at select locations on 2/26/13.
- Outfall 005 Final Measure Implementation – 90%
 - Began Outfall 005 Bulkheading on 2/26/13.
- Outfall 007 Final Measure Implementation – 90%
 - Began Outfall 007 Bulkheading on 2/26/13.

Task 14 Address 15 Areas of Subsurface LNAPL

- Address 15 Areas of LNAPL – 7%
 - AOI 09-B System Design, Permitting, and Construction – 100%
 - System Construction completed on 1/4/13.

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- LNAPL Recovery OM&M – 5%
- Secondary LNAPL Remediation – 0%

6. Budget Status

- 2013 Budget – The 2013 Budget Request has been approved by the EPA.

If you have any questions, please call me.

Sincerely,

A handwritten signature in blue ink that reads "Micki M. Maki".

Micki M. Maki, P.E.
Certified Project Manager

Copies:

Peter Quackenbush, Michigan Department of Environmental Quality, (via email)
William Yocum, Michigan Department of Environmental Quality (via email)
Flint Public Library
Grant Trigger, RACER Trust (via email)
Dave Favero, RACER Trust (via email)
Chris Peters, ARCADIS (via email)
Christi Kiker, ARCADIS (via email)

Attachments:

Attachment 1 – January 2013 Project Update - RACER Buick City Site
Attachment 2 – February 2013 Project Update - RACER Buick City Site
Attachment 3 – March 2013 Project Update - RACER Buick City Site
Attachment 4 – RACER Buick City Field Schedule – Second and Third Quarter



Attachment 1

January 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS
Chris Peters, ARCADIS

From:
Micki Maki

Date:
February 14, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
January 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this January 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from January 1, 2013 through January 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Reviewed LIF data and begin development of LNAPL sampling plan.
- Reviewed existing transmissivity/NSZD data to determine applicability at the Northend of the Site.
- Evaluated third quarter of NSZD data to determine whether a fourth quarter of sampling should be recommended for the Southend of the Site.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Reviewed data for Northend AOI's and developed next step and technology/remedy options.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
- Performed inspections of Oil Interceptor #2.
- Performed manhole boom inspections.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- Performed validation of the data from the annual groundwater monitoring event.

Non - Routine Work

- No work performed.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for January.

Non - Routine Work

- Continued evaluation of the GSI pathway and began drafting a sampling plan to determine whether the pathway is applicable.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Received Closure Letters for the Northend and Southend WMUs from the MDEQ. Reviewed letters to determine next steps required to complete the closures.
- Completed draft summary memo of 12 historic Leaking Underground Storage Tank (LUST) releases to facilitate transfer to RCRA Corrective Action.

Task 10 – Maintain Select Surface Covers

Routine Work

- Performed quarterly select surface cover inspections.

Non - Routine Work

- Reviewed AOI 29-A laboratory data and prepared a draft select surface cover area memo to document the results and the areas of AOI 29-A requiring cover.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Revised Northern Parcel Memo to include historic and RFI data.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Conducted an onsite meeting with Chris Black (EPA), Tetra Tech, and RACER to tour the Site and reviewed the current status of tasks.
- Finalized purchase order for 2013 budget.
- Began development of Annual CMI report.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Began engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Completed Bulkheading RFP Addendum #2 incorporating the additional scope of work identified in Addendum No. 1 to the Outfall 002 and 005 Storm Sewer Bulkheading Work Plan (ARCADIS December 2012).

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Not Applicable.

Non - Routine Work

- Performed minor maintenance at AOI 09-B MPE treatment system. System startup is anticipated for spring 2013.



Attachment 2

February 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
April 10, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
February 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this February 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from February 1, 2013 through February 28, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Continued development of LNAPL investigation work plan including gauging, sampling, transmissivity testing, and additional soil boring locations for delineation at AOI 10-1/10-4 and AOI 05-1/05-4.
- Developed a work plan for additional investigation of LIF impact beneath Factory 83/84. The work plan also included additional delineation of the AOI 83/84-3 Lead Soil impacts and the Factory 31 Basement Investigation.
- Completed the Draft Southend Transmissivity Report.
- Completed the Draft Natural Source Zone Depletion (NSZD) Report.
- Completed the draft LIF extent of impact Figures.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Continued reviewing data for Northend AOI's and developed next step and technology/remedy options.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
- Performed inspections of Oil Interceptor #2.
- Performed manhole boom inspections.

Non - Routine Work

- Removed booms from manholes effected by the bulkheading activities

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- Performed validation of the data from the annual groundwater monitoring event.

Non - Routine Work

- Submitted Notification of Validated Laboratory Analytical Results of Annual Groundwater Sampling Event memorandum to CSX.
- Began developing Notices of Migration Contamination (NOM) for three offsite property owners: City of Flint, Consumers Energy and Howell Farms. NOM had previously been submitted to the City of Flint in 2003 and 2006. The NOM for the City of Flint properties are being updated to include additional analytes based on the results of the 2012 Annual Sampling Event. The NOMs being drafted for Consumer's Energy and Howells Farms were the first notices submitted to these property owners.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for February.

Non - Routine Work

- Continued evaluation of the GSI pathway and prepared a sampling plan to determine whether the pathway is applicable.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- Finalize Select Surface Cover AOI 29-A Investigation Summary of Results memorandum.

- Revised the Select Surface Cover RFP.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Finalized draft of the Northern Parcel Summary Memo.
- Developed a work plan to delineate the Northern Parcel exceedances of inhalation criteria for manganese.
- Revised the AOI 09-A Soil Removal RFP.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Continued development of Annual CMI report.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continued engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Began the bulkheading construction activities including identification of manhole locations and covering activities.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Not Applicable.

Non - Routine Work

- Performed minor maintenance at AOI 09-B MPE treatment system. System startup is anticipated for spring 2013.



Attachment 3

March 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
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Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
April 10, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
March 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this March 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from March 1, 2013 through March 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Completed gauging and sampling identified in the LNAPL Investigation Work Plan. Due to a 1 to 2 foot increase in groundwater elevations in the Northend of the Site, LNAPL was no longer present at some of the proposed sampling locations. These locations will be gauged again for LNAPL during the summer.
- Coordinated upcoming field efforts to complete transmissivity testing, and additional soil boring/monitoring well installation at AOI 05-1/05-5, AOI 10-1/10-4, and investigations at AOI 83/84 scheduled to be performed in April.
- Finalized Southend Transmissivity Report.
- Finalized Natural Source Zone Depletion (NSZD) Report.
- Finalized LIF extent of impact Figures.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Continued reviewing data for Northend AOI's and developed next step and technology/remedy options.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- Perform cleaning of Oil Water Interceptor #2.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Finalized and submitted Notices of Migration Contamination (NOM) for three offsite property owners: City of Flint, Consumers Energy and Howell Farms. NOM had previously been submitted to the City of Flint in 2003 and 2006. The NOM for the City of Flint properties were updated to include additional analytes based on the results of the 2012 Annual Sampling Event. The NOMs submitted to Consumer's Energy and Howells Farms were the first notices submitted to these property owners.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for March.

Non - Routine Work

- Continued evaluation of the GSI pathway and prepared a sampling plan to determine whether the pathway is applicable.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- Completed the Select Surface Cover RFP and performed Bid walk.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Completed delineation field work for the Northern Parcel investigation of inhalation criteria exceedances for manganese.
- Revised the AOI 09-A Soil Removal RFP.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Completed and submitted the Annual CMI report.
- Revise the site specific Health and Safety Plan (HASP) for changed conditions at the site.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continue engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Completed the initial bulkheading construction activities at Outfall storm sewers 002, 003, 005, and 007.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Not Applicable.

Non - Routine Work

- Performed minor maintenance at AOI 09-B MPE treatment system. System startup is scheduled for April 2013.



Attachment 4

RACER Buick City Field Schedule
2013 – Second and Third Quarter

[illegible]

Transmitted via Electronic Mail

Mr. Chris Black
U.S. Environmental Protection Agency – Region 5
Land and Chemicals Division
77 W. Jackson Blvd. DE-97
Chicago, IL 60604-3590

Subject:

Second Quarter 2013 Progress Report (No. 8)
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Dear Mr. Black:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this Second Quarter 2013 Progress Report (No. 8) in accordance with Section VI (18b) of the RACER Trust's Administrative Order on Consent (Consent Order), Docket Number RCRA-05-2011-0024 for the Buick City Site located in Flint, Michigan (the Site), which was effective on September 29, 2011.

Please note that in accordance with General Motors Corporation's Administrative Order on Consent Number R8H-5-00-02 for the North American Operations [NAO] Flint Operations Site (also known as Buick City) Quarterly Progress Reports No. 1 through 46 were submitted to the United States Environmental Protection Agency (EPA) documenting Site activities from January 1, 2000 through June 30, 2011.

This Second Quarter 2013 Progress Report (No. 8) covers the period of April 1, 2013 through June 30, 2013.

The following briefly summarizes the work performed and data collected, problems encountered, project schedule, and estimated percent complete for a list of activities.

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ENVIRONMENT

Date:
July 15, 2013

Contact:
Micki M. Maki, P.E.

Phone:
248.994.2271

Email:
[Micki Maki@arcadis-us.com](mailto:Micki.Maki@arcadis-us.com)

Our ref:
B0064410.2013



1. Data Collected This Quarter

The samples collected as part of Site investigation or monitoring activities during this quarter are discussed below. This data will be presented to the EPA in the 2013 Annual CMI Report, except as noted below.

1.1 Storm Sewer Water Samples

In April, May and June ARCADIS conducted the "NPDES Plus" Monitoring Program (NPMP) sampling program. In April the sampling was completed as described in the 2011 Annual Corrective Measures Implementation (CMI) Report; however the program was modified in May following bulkheading activities as described below.

On May 3, 2013 the bulkheading activities were completed at the Buick City Site along storm sewer Outfalls 002, 003, 005, and 007. At Outfalls 002, 005, and 007 bulkheads/plugs were installed at the last on Site manholes (2-18, 5-12-1, 5-13, and 7-1, respectively), eliminating the Sites contribution to those outfalls. Therefore, these locations will no longer be sampled during the NPMP monthly sampling event. The NPMP currently consists of collecting monthly samples from the following Site storm sewers as access allowed: MP001, MP003, MP006, MP009, MP010, MP011, and MP013. Also, the June NPMP event was performed on July 2 due to multiple rain events during the last two weeks in June.

As required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A, except as follows. Following a detection of PCBs in the April 16th sample, maintenance and cleaning of the Outfall 003/004 System was implemented. During the period from April 16th to May 24th weekly sampling was suspended due to rain events and the system maintenance activities; however, four samples were collected during this time period to confirm that the PCBs were no longer being detected. Normal weekly sampling resumed on May 24th. This data will be included in the 2013 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the MDEQ as required in the NPDES permit.

1.2 Soil Samples

In April and May, ARCADIS collected soil samples as part of the Waste Management Unit (WMU) #3, AOI 83/84-3 Lead Soil Investigation and the Factory 31 Basement Investigation to delineate exceedances and/or area of impact. A total of 19 soil



samples were collected from 10 soil boring locations and submitted for laboratory analysis of volatile organic compounds (VOCs), semi volatile toxic organics (SVOCs), metals, and/or PCBs. This data will be included in the LNAPL remedy selection memos.

In June, ARCADIS collected soil samples as part of the Northern Parcel Investigation to delineate exceedances of criteria. Soil samples were collected from 12 soil boring locations and submitted for laboratory analysis of manganese. This data will be submitted in a brief memo report.

1.3 LNAPL Samples

In May, ARCADIS collected four LNAPL samples as part of the LNAPL Investigation plan. The LNAPL samples were submitted for laboratory analysis of VOCs, SVOCs, metals, and/or PCBs. This data will be included in the LNAPL remedy selection memos.

1.4 Groundwater Samples

In May, ARCADIS collected four groundwater samples as part of the Waste Management Unit (WMU) #3 investigation. The groundwater samples were submitted for laboratory analysis of VOCs. This data will be submitted in a brief memo report.

In June, 46 monitoring wells were sampled as part of the annual groundwater sampling event. The groundwater samples were submitted for laboratory analysis of VOCs, metals, and/or PCBs.

In June, eight monitoring wells were sampled to provide a current snapshot of select dissolved phase plumes at the Site. The groundwater samples were submitted for laboratory analysis of VOCs, SVOCs, metals, and/or PCBs.

1.5 AOI 09-B System Samples

In April, May, and June ARCADIS collected samples from the AOI 09-B Multiphase Extraction (MPE) system as required by the City of Flint Sanitary Use Permit #2-02-RBC001. In accordance with the permit four grab samples and one composite sample are collected from the system effluent line on a monthly basis. The composite sample is submitted for laboratory analysis of ammonia-nitrogen, BOD, total phosphorous, total suspended solids, metals, SVOCs, and PCBs and the grab

samples were submitted for laboratory analysis of hexane extractable material (HEM), amenable cyanide, and VOCs plus xylenes. This data is submitted to the City of Flint on a monthly basis in the AOI 09-B Monthly Discharge Report.

In April, May and June additional system samples were collected to monitor system performance. Grab samples were collected from the carbon influent, carbon midfluent, and system influent sample ports. Samples from these three locations are submitted on a monthly basis for laboratory analysis of BTEX, VOCs, xylenes, and/or gasoline range organics.

In April, during system startup activities, an additional 14 grab samples were collected at various process locations for treatment process verification. These samples were submitted for laboratory analysis of ammonia-nitrogen, BOD, total phosphorous, total suspended solids, metals, SVOCs, HEM, amendable cyanide, VOCs, xylenes, BTEX, gasoline range organics, and/or PCBs.

In April, May, and June ARCADIS collected air samples from the AOI 09-B Multiphase Extraction (MPE) system as required by the Michigan Department of Environmental Quality (MDEQ) Permit # 165-11. Samples were collected from the Thermal Oxidizer influent piping. The samples were collected on a weekly basis from April 16, 2013 to May 17, 2013 for the startup period. A sample was collected on June 11, 2012 to begin the monthly sampling frequency as the weekly samples were within criteria of the permit.

2. Work Performed This Quarter

Attachments 1, 2, and 3 present the monthly Site progress reports for April, May, and June which document the work performed this quarter.

3. Problems Encountered

During the AOI 09-B MPE system startup, four Non-Compliance Advisories were issued in relation to the City of Flint Sanitary Use Permit #2-02-RBC001. The violations were due to: discharge criteria exceedances (ethylbenzene, xylenes, and zinc); hold time exceedances; and an event not completed on time. These issues were discussed with the City of Flint compliance officer and adjustments have been made to address these issues.

On June 24, 2013, a power surge to the AOI 09-B MPE system damaged some electrical components and shut down the system. The system was down for 3 days

before the components could be replaced. The system was restarted on June 27, 2013 upon completion of the replacement.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Quarter

A projected field work schedule for the third and fourth quarter is included in Attachment 4.

4.1 Routine Work

Task 1 Outfall 003/004 Oil Removal Systems

- Continue OMM inspections of system.

Task 6 Maintain Booms on Outfalls

- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to performed inspections of Oil Interceptor #2.

Task 8 NPDES PLUS Monitoring

- Perform NPMP monitoring in July, August, and September.

Task 10 Maintain Select Surface Covers

- Perform quarterly inspection of surface cover.

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- Continue to participate in regulatory agency calls.
- Prepare Quarterly Report for submittal to EPA.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Continue quarterly P-trap inspections.

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- Continue OM&M phase of AOI 09-B LNAPL remediation system.

4.2 Non-Routine Work

Task 2 LNAPL Investigation

- Perform transmissivity testing at the Northend of the Site, if appropriate locations are identified.
- Complete NSZD testing at the Northend of the Site.
- Complete additional LNAPL investigation for plumes located at the Northend of the Site.
- Complete evaluation of Site data to aid in selecting methods and locations for additional LNAPL pilot testing.

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- Begin pilot testing activities at one or more LNAPL plumes.
- Conduct respirometry testing.

Task 7 Enhanced Groundwater Monitoring

- Complete sampling of select additional wells to characterize the current conditions of the dissolved phase plumes associated with the Site LNAPL plumes.

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Coordinate with the EPA and MDEQ to transfer open LUST issues to RCRA Corrective Action.

Task 10 Maintain Select Surface Covers

- Dispose of the AOI 09-B soil pile.
- Install additional surface cover as required.

Task 11 Lead Soil Removal

- Begin lead soil removal activities.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Complete bulkhead activities at select locations.

- Complete evaluation of possible re-routing options for Outfall 004 and 003 storm sewer.
- Investigate additional bulkheading location options.

5. Estimated Percent Complete

Task 1 Outfall 003/004 Oil Removal Systems

- Outfall 003/004 Oil removal System OM&M - Ongoing

Task 2 LNAPL Investigation

- LNAPL LIF Investigations – 100%
- Southend Natural Source Zone Depletion Study – 100%
- Southend Transmissivity Testing – 100%
- Northend Natural Source Zone Depletion Study – 50%
- Northend Transmissivity Testing – 15%
- Additional LNAPL Investigation – 65%

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- LNAPL Bench Scale Testing – 100%
- LNAPL Pilot Scale Testing – 33%

Task 7 Enhanced Groundwater Monitoring

- Groundwater Monitoring – Ongoing

Task 8 NPDES PLUS Monitoring

- NPDES PLUS Monitoring – Ongoing

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Northend RCRA WMU Closures – 90%
- Southend RCRA WMU Closures – 90%
- Northend Restrictive Covenant – 0%

- Southend Restrictive Covenant – 90%
- Monitoring Well Abandonments – 5%
- UST Issue Resolution – 10%

Task 10 Maintain Select Surface Covers

- Maintain Select Surface Covers – Ongoing
- Installation of Additional Surface Cover – Southend – 50%

Task 11 Lead Soil Removal

- Lead Soil Removal – 25%
- Northern Parcel Investigation – 90%

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- RFI Phase I Report - 100%
- RFI Phase II Report - 100%
- Human Health Exposure Control EI Report - 100%
- CA 750 Report - 100%
- Revised Corrective Measures Proposal (CMP), May 1, 2008 – 100%
- Revised CMP Addendum No. 1 – 100%
- Southend Corrective Measures Implementation (CMI) Work Plan – 100%
- Revised CMP Addendum No. 2 – Northend and Site-wide Groundwater - 100%
- Revised CMP Addendum No. 2-1 – Response to EPA Comments - 100%
- 2012 CMI Annual Report – 100%

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Outfall 002 Storm Sewer Evaluation - 100%
- Outfall 003 Storm Sewer Evaluation – 40%
- Outfall 004 Re-route into Outfall 013 Evaluation - 35%
- Outfall 005 Storm Sewer Evaluation – 100%

- Outfall 002 Final Measure Implementation– 90%
 - Began Outfall 002 Bulkheading on 2/26/13.
- Outfall 003 Final Measure Implementation – 25%
 - Began Outfall 003 Bulkheading at select locations on 2/26/13.
- Outfall 005 Final Measure Implementation – 90%
 - Began Outfall 005 Bulkheading on 2/26/13.
- Outfall 007 Final Measure Implementation – 90%
 - Began Outfall 007 Bulkheading on 2/26/13.

Task 14 Address 15 Areas of Subsurface LNAPL

- Address 15 Areas of LNAPL – 7%
 - AOI 09-B System Design, Permitting, and Construction – 100%

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- LNAPL Recovery OM&M – 8%
- Secondary LNAPL Remediation – 0%

6. Budget Status

- 2013 Budget – The 2013 Budget Request has been approved by the EPA.



If you have any questions, please call me.

Sincerely,
ARCADIS

A handwritten signature in blue ink that reads "Micki Maki".

Micki Maki, P.E.
Project Manager

Copies:

Peter Quackenbush, Michigan Department of Environmental Quality, (via email)
William Yocum, Michigan Department of Environmental Quality (via email)
Flint Public Library
Grant Trigger, RACER Trust (via email)
Dave Favero, RACER Trust (via email)

Attachments:

Attachment 1 – April 2013 Project Update - RACER Buick City Site
Attachment 2 – May 2013 Project Update - RACER Buick City Site
Attachment 3 – June 2013 Project Update - RACER Buick City Site
Attachment 4 – RACER Buick City Field Schedule – Third and Fourth Quarter



Attachment 1

April 2013 Project Update



ARCADIS G&M of Michigan, LLC
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Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki M. Maki

Date:
May 15, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
April 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this April 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from April 1, 2013 through April 30, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.
- Performed HDPE pipe maintenance to address blockage.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Developed seven monitoring wells in preparation for the Northend transmissivity testing. Additional transmissivity testing may be completed, if sufficient LNAPL is present during summer gauging activities.
- Completed the Northend transmissivity testing.
- Completed the LNAPL Investigation Work Plan #2 and submitted to the EPA for approval.
- Completed the scope of work presented in the Factory 83/84 Investigation Work Plan including installing boring/wells installation to delineate LNAPL; collecting soil samples to delineate lead at AOI 83/84-3; and completing shallow borings in the Former Factory 31 Basement to investigate the claim regarding buried drums. Additional delineation activities are planned to be completed in May.
- Completed the LNAPL investigation soil borings presented in the LNAPL Investigation Work Plan #1.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Continued reviewing data for Northend AOI's and developed next step and technology/remedy options.
- LNAPL samples were collected and shipped to TEA, Inc. for treatment testing.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.

- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Began planning and coordination of Annual groundwater event. The event will be conducted in June 2013.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for April.

Non - Routine Work

- Continued evaluation of the GSI pathway and prepared a sampling plan to determine whether the pathway is applicable.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Continued to address Waste Management Unit closure.
- Coordinated payment of the annual Hazardous Waste User fee.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- Contracted Select Surface Cover subcontractor and coordinated cover installation event.
- Collected and submitted the AOI 09-A soil pile waste characterization samples for analysis.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Completed the next phase of delineation field work for the Northern Parcel investigation of inhalation criteria exceedances for manganese. Additional delineation work is planned to be completed in May.
- Completed the draft AOI 09-A Soil Removal RFP.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Completed and submitted the EPA Quarterly Report.
- Revised the site specific Health and Safety Plan (HASP) for changed conditions at the Site.
- Completed Budget Amendment #1.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continue engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Attempted to complete bulkheading construction activities at Outfall storm sewers 002, 003, 005, and 007. The completion was rescheduled due to rainfall and increased flow through the sewer mains.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Not Applicable.

Non - Routine Work

- Performed startup of the AOI 09-B MPE treatment system.



Attachment 2

May 2013 Project Update



ARCADIS G&M of Michigan, LLC
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Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki M. Maki

Date:
June 18, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
May 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this May 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from May 1, 2013 through May 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- Planned and coordinated annual maintenance and clean out of BaySeparator and oil water separator (OWS).
- Completed annual clean out of BaySeparator and OWS.
- Completed waste characterization sampling and laboratory analysis.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Planned and coordinated Natural Source Zone Depletion study event scheduled to take place in June.
- Completed transmissivity test waste characterization, inspection/documentation, and removal.
- Completed analysis of transmissivity test data.
- Developed, gauged, and collected LNAPL samples from select wells.
- Completed proposed delineation investigations at the AOI 36-1 Mineral Seal/Hydraulic Oil plume and Factory 83/84.
- Completed development at monitoring wells to be sampled as part of the dissolved phase evaluation
- Drafting LNAPL Evaluation and Remedy Selection memos.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Continued planning and coordination of annual groundwater event. The event will be conducted in June 2013.
- Coordinated and completed development of wells that were added to annual groundwater sampling program.
- Submitted work plan to CSX for upcoming well abandonment, development, and sampling.
- Abandoned and re-installed two damaged monitoring wells located on CSX property.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for April.

Non - Routine Work

- Assessed revised NPMP sampling per bulkheading and removal of Outfalls 002, 005, and 007 from monthly sampling event.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- Completed delineation investigations at Waste Management Unit (WMU) #3.

Non - Routine Work

- Coordinated upcoming surveying event.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- Completed Select Surface Cover installation at locations between Leith Street and Hamilton Ave.
- Received and reviewed analytical data for AOI 09-A soil pile waste characterization.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Completed additional delineation work at the Northern Parcel.
- Prepared the waste characterization profiles for the AOI 09-A soil removal.
- Completed Bid Walk for AOI 09-A soil removal.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Prepared for and attended EPA meeting in Chicago, IL.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continued engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Prepared and attended meeting with City of Flint regarding rerouting of Outfall 004.

- Completed bulk heading construction activities at Outfall storm sewers 002, 003, 005, and 007

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system.

Non - Routine Work

- Not Applicable.



Attachment 3

June 2013 Project Update



ARCADIS G&M of Michigan, LLC
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Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki M. Maki

Date:
July 15, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
June 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this June 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from June 1, 2013 through June 30, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- Reviewed waste characterization data and planned for disposal of waste generated from the maintenance and clean out of BaySeparator and oil water separator (OWS).
- Completed segregation of the oil/sediment from water and collected additional characterization samples. Based on discussions with the EPA and results of the waste characterization sampling approximately 5,000 gallons of oil and sediment were shipped to Port Arthur, Texas for disposal. Approximately 15,500 gallons of segregated water was

sampled and did not detect PCBs. The water was disposed of at the EQ facility in Belleville, MI.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Installed carbon traps on the Northend of Buick City for the Natural Source Zone Depletion study.
- Drafted Evaluation and Remedy Recommendation memos and figures for AOI 12-A, B, and C, AOI 36-1, AOI 86-1, AOI 05-1/05-5, and AOI 10-1/10-4.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
 - As a result of the Bulkheading work previously performed at the site, Observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- Completed planning and coordination of annual groundwater event.
- Completed annual groundwater sampling event.

Non - Routine Work

- Completed monitoring well installation, development and well abandonment.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for June.

Non - Routine Work

- Evaluated manholes downgradient of Outfall 002 bulkhead for possible sampling locations as requested by the EPA.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Disposed of waste generated from the WMU #3 investigation.

Task 10 – Maintain Select Surface Covers

Routine Work

- Performed quarterly inspection of select surface covers.

Non - Routine Work

- No work performed.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Completed bid walk for AOI 09-A soil removal Request for Proposal.
- Received and reviewed bids for AOI 09-A soil removal.
- Completed delineation activities at the Northern Parcel and compiled analytical data.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Coordinated and prepared for EPA meeting in July.
- Prepared for and attended public meetings for the Buick City Site.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continued engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Installed flow monitors in Outfall 004 and Outfall 013 to collect data for the rerouting design.
- Initiated additional boom study activities along the Outfall 003 storm sewer.
- Complete video camera recording of Outfall 003 storm sewer sections to identify additional bulkheading locations and areas of infiltration.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Not Applicable.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system. Free product and groundwater removal is summarized below.
 - Removal as follows:

Substance	June Removal	Total Removal
Free Product (measured)	~43 gallons	103 gallons
Groundwater Discharge (Measured)	158,501 gallons	261,346 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 4

RACER Buick City Field Schedule
2013 Third and Fourth Quarter

RACER Buick City 2013
Field Schedule
Third and Fourth Quarters

ID	Task Name	Duration	Start	Finish	W	Jul 7, '13	T	M	Aug 4, '13	F	T	Sep 1, '13	W	S	Sep 29, '13	T	M	Oct 27, '13	F	T	S	Nov 24, '13	W	S	Dec 22, '13	T	M
1	REMEDIATION ACTIVITIES - Third and Fourth Quarter	132 days?	Mon 7/1/13	Tue 12/31/13																							
2	Task 1 - Outfall 003/004 Oil Removal Systems	131 days	Mon 4/1/13	Mon 9/30/13																							
3	Subtask 01 - Weekly Inspections	132 days	Mon 7/1/13	Tue 12/31/13																							
4	Subtask 03 - Maintenance Event	8 days	Mon 12/2/13	Wed 12/11/13																							
5	003/004 Maintenance Event	8 days	Mon 12/2/13	Wed 12/11/13																							
6	Task 2 - LNAPL Investigation	121 days	Mon 1/14/13	Sun 6/30/13																							
7	Subtask 04 - Natural Source Zone Depletion Study (Northend)	12 days	Mon 7/1/13	Tue 7/16/13																							
8	One Time Field Event	12 days	Mon 7/1/13	Tue 7/16/13																							
9	Subtask 05 - LNAPL Transmissivity Evaluation (Northend)	17 days	Mon 4/1/13	Tue 4/23/13																							
10	Well Development - Phase 2 Wells	3 days	Mon 7/15/13	Wed 7/17/13																							
11	Transmissivity Testing - Phase 2	7 days	Mon 8/12/13	Tue 8/20/13																							
12	Subtask 06- Miscellaneous LNAPL Evaluation/Testing	55 days	Mon 7/22/13	Fri 10/4/13																							
13	Respirometry Testing	5 days	Mon 8/19/13	Fri 8/23/13																							
14	Soil boring/well installation Investigation	10 days	Mon 7/22/13	Fri 8/2/13																							
15	Soil boring/well installation Investigation	10 days	Mon 8/19/13	Fri 8/30/13																							
16	Soil boring/well installation Investigation	10 days	Mon 9/23/13	Fri 10/4/13																							
17	Task 3 - Benchscale/pilot testing	131 days	Mon 4/1/13	Mon 9/30/13																							
18	Pilot testing for first 5 priority AOI's (if necessary)	27 days	Mon 8/12/13	Tue 9/17/13																							
19	Pilot testing for second 5 priority AOI's (if necessary)	30 days	Mon 9/9/13	Fri 10/18/13																							
20	Pilot testing for third 5 priority AOI's (if necessary)	43 days	Mon 10/14/13	Wed 12/11/13																							
21	Task 6 - Maintain Booms on Outfalls	132 days	Mon 7/1/13	Tue 12/31/13																							
22	Subtask 00 - Oil Interceptor #2 Inspection and Waste Removal	132 days	Mon 7/1/13	Tue 12/31/13																							
23	Subtask 01 - Outfall Boom Inspections and Maintenance - 2 hours per day	132 days	Mon 7/1/13	Tue 12/31/13																							
24	Task 7 - Enhanced Groundwater Sampling	12 days	Mon 9/16/13	Tue 10/1/13																							
25	Additional Sampling Event	12 days	Mon 9/16/13	Tue 10/1/13																							
26	Task 8 - NPDES PLUS Monitoring	115 days	Tue 7/2/13	Mon 12/9/13																							
27	July NPMP Sampling Event	1 day	Tue 7/2/13	Tue 7/2/13																							
28	August NPMP Sampling Event	1 day	Tue 8/6/13	Tue 8/6/13																							
29	September NPMP Sampling Event	1 day	Tue 9/3/13	Tue 9/3/13																							
30	October NPMP Sampling Event	1 day	Tue 10/8/13	Tue 10/8/13																							
31	November NPMP Sampling Event	1 day	Tue 11/5/13	Tue 11/5/13																							
32	December NPMP Sampling Event	1 day	Mon 12/9/13	Mon 12/9/13																							
33	Task 9 - RCRA Closures, Well Abandonment, Restrictive covenants, Resolve UST Issues	1 day?	Mon 7/1/13	Mon 7/1/13																							
34	Task 10 - Maintain Select Surface Covers	81 days	Mon 8/26/13	Mon 12/16/13																							
35	Subtask 00 - Surface Cover Inspections	70 days	Tue 9/10/13	Mon 12/16/13																							
36	3rd Quarter Inspection	1 day	Tue 9/10/13	Tue 9/10/13																							
37	4th Quarter Inspection	1 day	Mon 12/16/13	Mon 12/16/13																							
38	Subtask 01 - Surface Cover Implementation	5 days	Mon 8/26/13	Fri 8/30/13																							
39	Surface cover installation - Phase 2	5 days	Mon 8/26/13	Fri 8/30/13																							
40	Task 11 - AOI 09-A Soil Removal	45 days	Mon 7/1/13	Fri 8/30/13																							
41	Subtask 01 - Soil Removal	45 days	Mon 7/1/13	Fri 8/30/13																							
42	Planning	15 days	Mon 7/1/13	Fri 7/19/13																							
43	AOI 09-A Soil Removal	20 days	Mon 8/5/13	Fri 8/30/13																							
44	Task 13 - Outfall 002/005 Oil Minimization & Investigation	100 days	Mon 5/6/13	Fri 9/20/13																							
45	Subtask 01 - Outfall Bulkhead Design	34 days	Mon 5/6/13	Thu 6/20/13																							
46	Additional Bulkhead Investigations	15 days	Mon 7/15/13	Fri 8/2/13																							
47	Outfall 004 Reroute Investigation	60 days	Mon 7/1/13	Fri 9/20/13																							
48	Outfall 003 Boom Study	45 days	Mon 7/1/13	Fri 8/30/13																							
49	Subtask 03 - Outfall 002 & 005 Bulkhead implementation	3 days	Mon 9/9/13	Wed 9/11/13																							
50	Bulkhead Implementation	3 days	Mon 9/9/13	Wed 9/11/13																							
51	Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation	132 days	Mon 7/1/13	Tue 12/31/13																							
52	Outfall 002 Passive Recovery Trench	132 days	Mon 7/1/13	Tue 12/31/13																							
53	AOI 09-B NAPL Recovery O&M	132 days	Mon 7/1/13	Tue 12/31/13																							

Routine Task Non-Routine Task Drilling Events Construction Events

Transmitted via Electronic Mail

Mr. Chris Black
U.S. Environmental Protection Agency – Region 5
Land and Chemicals Division
77 W. Jackson Blvd. DE-97
Chicago, IL 60604-3590

Subject:

Third Quarter 2013 Progress Report (No. 9)
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Dear Mr. Black:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this Third Quarter 2013 Progress Report (No. 9) in accordance with Section VI (18b) of the RACER Trust's Administrative Order on Consent (Consent Order), Docket Number RCRA-05-2011-0024 for the Buick City Site located in Flint, Michigan (the Site), which was effective on September 29, 2011.

Please note that in accordance with General Motors Corporation's Administrative Order on Consent Number R8H-5-00-02 for the North American Operations [NAO] Flint Operations Site (also known as Buick City) Quarterly Progress Reports No. 1 through 46 were submitted to the United States Environmental Protection Agency (EPA) documenting Site activities from January 1, 2000 through June 30, 2011.

This Third Quarter 2013 Progress Report (No. 9) covers the period of July 1, 2013 through September 30, 2013.

The following briefly summarizes the work performed and data collected, problems encountered, project schedule, and estimated percent complete for a list of activities.

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ENVIRONMENT

Date:

October 16, 2013

Contact:

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Our ref:

B0064410.2013

1. Data Collected This Quarter

The samples collected as part of Site investigation or monitoring activities during this quarter are discussed below. This data will be presented to the EPA in the 2013 Annual CMI Report, except as noted below.

1.1 Storm Sewer Water Samples

In July, August, and September, ARCADIS conducted the “NPDES Plus” Monitoring Program (NPMP) sampling program. The NPMP consists of collecting monthly samples from the following Site storm sewers as access allowed: MP001, MP003, MP006, MP009, MP010, MP011, and MP013. This data will be included in the annual CMI Report.

As required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A. This data will be included in the 2013 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the MDEQ as required in the NPDES permit.

1.2 Soil Samples

In September, ARCADIS collected soil samples as part of the LNAPL area investigations to delineate and characterize the impacts in soil. A total of 97 soil samples were collected from 31 soil boring locations and submitted for laboratory analysis of volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), metals, and/or PCBs. This data will be included in the LNAPL remedy selection memos.

In September, ARCADIS collected soil samples as part of the Northern Parcel Investigation to investigate two former hydraulic lifts. Soil samples were collected from six soil boring locations and submitted for laboratory analysis of VOCs, SVOC, PCBs and selected metals. This data will be submitted in a brief memo report.

In September, ARCADIS also collected soil samples as part of the AOI 09-A Soil Removal event. A total of 73 soil samples were collected and submitted to Merit Laboratories located in East Lansing, Michigan for analysis of lead or polynuclear aromatics. Two samples were collected of the backfill material and analyzed for the CSX Backfill requirements.

1.3 LNAPL Samples

In August and September, ARCADIS collected a total of eight LNAPL samples as part of the LNAPL Investigation plan. The LNAPL samples were submitted for laboratory analysis of VOCs, SVOCs, metals, PCBs, and/or fingerprinting. This data will be included in the LNAPL remedy selection memos.

1.4 Groundwater Samples

In September 2013, groundwater samples from 10 monitoring wells were collected and analyzed at select monitoring wells to confirm results of the June 2013 sampling event. The groundwater samples were submitted for laboratory analysis of VOCs, cyanide and select metals. This data will be included in the annual CMI Report.

1.5 AOI 09-B System Samples

In July, August, and September, ARCADIS collected samples from the AOI 09-B Multiphase Extraction (MPE) system as required by the City of Flint Sanitary Use Permit #2-02-RBC001. In accordance with the permit four grab samples and one composite sample are collected from the system effluent line on a monthly basis. The composite sample is submitted for laboratory analysis of ammonia-nitrogen, BOD, total phosphorous, total suspended solids, metals, SVOCs, and PCBs and the grab samples were submitted for laboratory analysis of hexane extractable material (HEM), amenable cyanide, and VOCs plus xylenes. This data is submitted to the City of Flint on a monthly basis in the AOI 09-B Monthly Discharge Report.

In July, August, and September, additional system samples were collected to monitor system performance. Grab samples were collected from the carbon influent, carbon midfluent, and system influent sample ports. Samples from these three locations are submitted on a monthly basis for laboratory analysis of BTEX, VOCs, xylenes, and/or gasoline range organics.

In July, August, and September, ARCADIS collected monthly air samples from the AOI 09-B Multiphase Extraction (MPE) system as required by the Michigan Department of Environmental Quality (MDEQ) Permit # 165-11. Samples were collected from the Thermal Oxidizer influent piping. This data is submitted to the MDEQ on a monthly basis in the AOI 09-B Monthly Air Report.

2. Work Performed This Quarter

Attachments 1, 2, and 3 present the monthly Site progress reports for July, August, and September which document the work performed this quarter.

3. Problems Encountered

No problems encountered.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Quarter

A projected field work schedule for the fourth quarter of 2013 and first quarter of 2014 is included in Attachment 4.

4.1 Routine Work

Task 1 Outfall 003/004 Oil Removal Systems

- Continue OMM inspections of system.

Task 6 Maintain Booms on Outfalls

- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to performed inspections of Oil Interceptor #2.

Task 8 NPDES PLUS Monitoring

- Perform NPMP monitoring in October, November, and December.

Task 10 Maintain Select Surface Covers

- Perform quarterly/bi-annual inspection of surface cover.

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- Continue to participate in regulatory agency calls.
- Prepare Quarterly Report for submittal to EPA.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Continue quarterly P-trap inspections.

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- Continue OM&M phase of AOI 09-B LNAPL remediation system.
- Continue OM&M phase of Outfall 002 passive recovery trench.

4.2 Non-Routine Work

Task 2 LNAPL Investigation

- Complete additional investigation of LNAPL plumes and impacts.
- Complete evaluation of Site data to aid in selecting methods and locations for additional LNAPL pilot testing.

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- Propose pilot testing activities to EPA for approval.
- Conduct respirometry testing on samples collected from AOI 02-B.

Task 7 Enhanced Groundwater Monitoring

- Complete data evaluation for the June annual groundwater sampling event as well as the June and September 2013 sampling event from select additional wells to characterize the current conditions of the dissolved phase plumes associated with the Site LNAPL plumes.

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Complete remedy recommendations for waste management units (WMU) #3, #7, and #10.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Complete additional bulkhead activities at select locations.
- Complete evaluation of possible re-routing options for Outfall 004 and 003 storm sewer.

5. Estimated Percent Complete

Task 1 Outfall 003/004 Oil Removal Systems

- Outfall 003/004 Oil removal System OM&M – Ongoing

Task 2 LNAPL Investigation

- LNAPL LIF Investigations – 100%
- Southend Natural Source Zone Depletion Study – 100%
- Southend Transmissivity Testing – 100%
- Northend Natural Source Zone Depletion Study – 90%
- Northend Transmissivity Testing – 75%
- Additional LNAPL Investigation – 75%

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- LNAPL Bench Scale Testing – 25%
- LNAPL Pilot Scale Testing – 33%

Task 7 Enhanced Groundwater Monitoring

- Groundwater Monitoring – Ongoing

Task 8 NPDES PLUS Monitoring

- NPDES PLUS Monitoring – Ongoing

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Northend RCRA WMU Closures – 90%
- Southend RCRA WMU Closures – 90%
- Northend Restrictive Covenant – 0%
- Southend Restrictive Covenant – 90%
- Monitoring Well Abandonments – 5%
- UST Issue Resolution – 10%

Task 10 Maintain Select Surface Covers

- Maintain Select Surface Covers – Ongoing
- Installation of Additional Surface Cover – Southend – 100%

Task 11 Lead Soil Removal

- Lead Soil Removal – 90%

- Northern Parcel Investigation – 90%

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- RFI Phase I Report - 100%
- RFI Phase II Report - 100%
- Human Health Exposure Control EI Report - 100%
- CA 750 Report - 100%
- Revised Corrective Measures Proposal (CMP), May 1, 2008 – 100%
- Revised CMP Addendum No. 1 – 100%
- Southend Corrective Measures Implementation (CMI) Work Plan – 100%
- Revised CMP Addendum No. 2 – Northend and Site-wide Groundwater - 100%
- Revised CMP Addendum No. 2-1 – Response to EPA Comments - 100%
- 2012 CMI Annual Report – 100%

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Outfall 002 Storm Sewer Evaluation - 100%
- Outfall 003 Storm Sewer Evaluation – 40%
- Outfall 004 Re-route into Outfall 013 Evaluation - 40%
- Outfall 005 Storm Sewer Evaluation – 100%
- Outfall 002 Final Measure Implementation– 90%
- Outfall 003 Final Measure Implementation – 25%
- Outfall 005 Final Measure Implementation – 90%
- Outfall 007 Final Measure Implementation – 100%

Task 14 Address 15 Areas of Subsurface LNAPL

- Address 15 Areas of LNAPL – 7%
 - AOI 09-B System Design, Permitting, and Construction – 100%

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- LNAPL Recovery OM&M – 20%
- Secondary LNAPL Remediation – 0%

6. Budget Status

- 2013 Budget – The 2013 Budget Request has been approved by the EPA.
- 2013 Budget Amendments No.1 and 2 - Budget Amendments No. 1 and 2 have been approved by the EPA.
- 2013 Budget Amendment No. 3 – Budget Amendment No. 3 is currently being drafted for submittal to the EPA.
- 2014 Budget – The 2014 Budget request is being drafted for submittal to the EPA.

If you have any questions, please call me.

Sincerely,
ARCADIS



Micki Maki, P.E.
Project Manager

Copies:

Peter Quackenbush, Michigan Department of Environmental Quality, (via email)
William Yocum, Michigan Department of Environmental Quality (via email)
Flint Public Library
Grant Trigger, RACER Trust (via email)
Dave Favero, RACER Trust (via email)

Attachments:

Attachment 1 – July 2013 Project Update - RACER Buick City Site
Attachment 2 – August 2013 Project Update - RACER Buick City Site
Attachment 3 – September 2013 Project Update - RACER Buick City Site
Attachment 4 – RACER Buick City Field Schedule – 4th Quarter 2013 and 1st Quarter 2014



Attachment 1

July 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
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Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki M. Maki

Date:
August 17, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
July 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this July 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from July 1, 2013 through July 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- Completed decontamination, waste disposal, and demobilization activities associated with the Outfall 003/004 system maintenance event.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Removed carbon traps from the Northend of Buick City for the Natural Source Zone Depletion study and shipped to Colorado State University for analysis.
- Planned and coordinated the upcoming LNAPL transmissivity event planned for August.
- Drafted Evaluation and Remedy Recommendation memos and figures for AOI 12-A, B, and C, AOI 36-1, AOI 86-1, AOI 05-1/05-5, and AOI 10-1/10-4. Completed a senior level review of AOI 05-1/05-5 recommendation memo.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
 - As a result of the Bulkheading work previously performed at the site, Observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- Reviewed data collected from 2013 annual groundwater sampling event.
- Distributed laboratory analytical data from the 2013 annual groundwater sampling event to parties in accordance with existing access agreements.

Non - Routine Work

- Developed cost estimates for an additional limited groundwater sampling event planned for September.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for July.

Non - Routine Work

- No work performed.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Coordinated Subcontractor selection for the AOI 09-A soil removal with RACER.
- Revised Drafted Northern Parcel memo to incorporate delineation data..

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo and the quarterly progress report.

Non - Routine Work

- Prepared for and attended a meeting with the EPA in Chicago.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continued engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Reviewed data from flow monitors in Outfall 004 and Outfall 013 for the rerouting design.
- Continued boom study activities along the Outfall 003 storm sewer.
- Reviewed the video camera recordings of Outfall 003 storm sewer sections to identify additional bulkheading locations and areas of infiltration.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Began preparing 761.61(c) application for PCB waste disposal and remedy determinations.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system. Free product, vapor phase mass, and groundwater removal is summarized below.

Substance	June Removal	Total Removal
Free Product (measured)	~20.7 gallons	124.5 gallons
Vapor Phase Mass (Normalized)	463 pounds	1,446 pounds
Groundwater Discharge (Measured)	74,354 gallons	335,700 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 2

August 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
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Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Chris Peters, ARCADIS
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
September 19, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
August 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this August 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from August 1, 2013 through August 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Coordinated, scheduled, and prepared to complete field work presented in LNAPL Investigation Work Plan #3 and #4.
- Completed utility clearance for LNAPL investigation field work.
- Continued development of Evaluation and Remedy Recommendation memos.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
 - As a result of the Bulkheading work previously performed at the site, Observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Coordinated and prepared for the additional September groundwater event.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for August.

Non - Routine Work

- No work performed.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- Began updating Waste Management Unit #3 investigation memo.

Non - Routine Work

- No work performed.

Task 10 – Maintain Select Surface Covers

Routine Work

- Prepared for quarterly inspection of select surface covers.

Non - Routine Work

- Prepared for upcoming select surface cover installation.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Coordinated and prepared for AOI 09-A soil excavation construction event.

- Provided requested information regarding the Northern Parcel.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Prepared for and attended a meeting with the EPA in Chicago.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continued engineering evaluation of drainage areas and existing sewer pipe capacities for re-routing the Outfall 004 storm sewer at the upgradient Site property boundary into the Outfall 013 storm sewer.
- Completed flow monitoring study for rerouting design.
- Continued boom study activities along the Outfall 003 storm sewer.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Drafted the 761.61(c) application for PCB waste disposal and remedy determinations.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed OMM activities on the AOI-09B system. Free product and groundwater removal is summarized below.
 - Removal as follows:

Substance	August Removal	Total Removal
Free Product (Measured)	~5.4 gallons	129.9 gallons
Vapor Phase Mass (Estimated)	99 pounds	1545 pounds
Groundwater Discharge (Measured)	116,596 gallons	452,296 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 3

September 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
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Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
October 14, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
September 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this September 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from September 1, 2013 through September 30, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- Completed a line jetting event to eliminate blockages in HDPE piping.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Prepared draft Factory 31 basement memo and figures.
- Prepared draft 83/84 Lead Soil investigation memo.
- Coordinated and conducted LNAPL investigation activities for work plan #3.
- Coordinated and conducted LNAPL investigation activities for work plan #4.
- Continued development of Evaluation and Remedy Recommendation memos.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Investigated potential pilot test technologies.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
 - As a result of the Bulkheading work previously performed at the site, Observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Conducted the additional September groundwater event.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for September.

Non - Routine Work

- Developed draft upgradient contribution memo.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Prepared draft WMU #3 memo.

Task 10 – Maintain Select Surface Covers

Routine Work

- Prepared for quarterly inspection of select surface covers.

Non - Routine Work

- Completed the Select Surface Cover Installation at AOI 09-A and 09-B.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Began AOI 09-A soil excavation construction event.
- Completed former hydraulic lift investigation at the Northern Parcel.
- Provided requested information regarding the Northern Parcel.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Prepared for and attended a meeting with the EPA in Chicago.
- Prepared the 2014 Draft Budget and Schedule.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Continue flow monitoring study for Outfall 004 rerouting design.
- Continued boom study activities along the Outfall 003 storm sewer.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Begin estimating costs for design and implementation of remedy selections.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system. Free product and groundwater removal is summarized below.
 - Removal as follows:

Substance	September Removal	Total Removal
Free Product (Measured)	~2 gallons	132 gallons
Vapor Phase Mass (Estimated)	110 pounds	1,700 pounds
Groundwater Discharge (Measured)	85,658.34 gallons	567,513.21 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 4

RACER Buick City Field Schedule
4th Quarter 2013 and
1st Quarter 2014

Fourth Quarter 2013 and First Quarter 2014

ID	Task Name	Duration	Start	Finish																																																								
					Sep 29, '13	Oct 13, '13	Oct 27, '13	Nov 10, '13	Nov 24, '13	Dec 8, '13	Dec 22, '13	Jan 5, '14	Jan 19, '14	Feb 2, '14	Feb 16, '14	Mar 2, '14	Mar 16, '14	M																																										
1	REMEDIATION ACTIVITIES - Second and Third Quarter	130 days	Tue 10/1/13	Mon 3/31/14																																																								
2	Task 1 - Outfall 003/004 Oil Removal Systems	130 days	Tue 10/1/13	Mon 3/31/14																																																								
3	Subtask 01 - Weekly Inspections	130 days	Tue 10/1/13	Mon 3/31/14																																																								
4	Subtask 03 - Maintenance Event	8 days	Mon 12/2/13	Wed 12/11/13																																																								
5	003/004 Maintenance Event	8 days	Mon 12/2/13	Wed 12/11/13																																																								
6	Task 2 - LNAPL Investigation	18 days	Mon 10/14/13	Wed 11/6/13																																																								
7	Subtask 05 - LNAPL Transmissivity Evaluation (Northend)	3 days	Mon 11/4/13	Wed 11/6/13																																																								
8	Transmissivity Testing	3 days	Mon 11/4/13	Wed 11/6/13																																																								
9	Subtask 06- Miscellaneous LNAPL Evaluation/Testing	18 days	Mon 10/14/13	Wed 11/6/13																																																								
10	Respirometry Testing	3 days	Mon 11/4/13	Wed 11/6/13																																																								
11	Soil boring/well installation - Work Plan #4	14 days	Mon 10/14/13	Thu 10/31/13																																																								
12	Task 3 - Benchscale/pilot testing	75 days	Mon 12/2/13	Fri 3/14/14																																																								
13	Pilot testing for first 5 priority AOI's (if necessary)	10 days	Mon 12/2/13	Fri 12/13/13																																																								
14	Pilot testing for second 5 priority AOI's (if necessary)	20 days	Mon 2/17/14	Fri 3/14/14																																																								
15	Task 6 - Maintain Booms on Outfalls	130 days	Tue 10/1/13	Mon 3/31/14																																																								
16	Subtask 00 - Oil Interceptor #2 Inspection and Waste Removal	130 days	Tue 10/1/13	Mon 3/31/14																																																								
17	Subtask 01 - Outfall Boom Inspections and Maintenance - 2 hours per day	130 days	Tue 10/1/13	Mon 3/31/14																																																								
18	Task 8 - NPDES PLUS Monitoring	106 days	Mon 10/7/13	Mon 3/3/14																																																								
19	October NPMP Sampling Event	1 day	Mon 10/7/13	Mon 10/7/13																																																								
20	November NPMP Sampling Event	1 day	Mon 11/4/13	Mon 11/4/13																																																								
21	December NPMP Sampling Event	1 day	Mon 12/2/13	Mon 12/2/13																																																								
22	January NPMP Sampling Event	1 day	Mon 1/6/14	Mon 1/6/14																																																								
23	February NPMP Sampling Event	1 day	Mon 2/3/14	Mon 2/3/14																																																								
24	March NPMP Sampling Event	1 day	Mon 3/3/14	Mon 3/3/14																																																								
25	Task 10 - Maintain Select Surface Covers	1 day	Mon 12/16/13	Mon 12/16/13																																																								
26	Subtask 00 - Surface Cover Inspections	1 day	Mon 12/16/13	Mon 12/16/13																																																								
27	Inspection	1 day	Mon 12/16/13	Mon 12/16/13																																																								
28	Task 13 - Outfall 002/005 Oil Minimization & Investigation	170 days	Mon 5/6/13	Fri 12/27/13																																																								
29	Subtask 01 - Outfall Bulkhead Design (Southend)	34 days	Mon 5/6/13	Thu 6/20/13																																																								
30	Outfall 004 Reroute Investigation	23 days	Tue 10/1/13	Thu 10/31/13																																																								
31	Subtask 03 - Outfall 002 & 005 Bulkhead implementation	35 days	Mon 11/11/13	Fri 12/27/13																																																								
32	Bulkhead Implementation	35 days	Mon 11/11/13	Fri 12/27/13																																																								
33	Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation	130 days	Tue 10/1/13	Mon 3/31/14																																																								
34	Outfall 002 Passive Recovery Trench	130 days	Tue 10/1/13	Mon 3/31/14																																																								
35	AOI 09-B NAPL Recovery O&M - 2013	59 days	Tue 10/1/13	Fri 12/20/13																																																								
36	AOI 09-B NAPL Recovery O&M - 2013	21 days	Mon 3/3/14	Mon 3/31/14																																																								

Transmitted via Electronic Mail

Mr. Chris Black
U.S. Environmental Protection Agency – Region 5
Land and Chemicals Division
77 W. Jackson Blvd. DE-97
Chicago, IL 60604-3590

Subject:

Fourth Quarter 2013 Progress Report (No. 10)
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Dear Mr. Black:

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this Fourth Quarter 2013 Progress Report (No. 10) in accordance with Section VI (18b) of the RACER Trust's Administrative Order on Consent (Consent Order), Docket Number RCRA-05-2011-0024 for the Buick City Site located in Flint, Michigan (the Site), which was effective on September 29, 2011.

Please note that in accordance with General Motors Corporation's Administrative Order on Consent Number R8H-5-00-02 for the North American Operations [NAO] Flint Operations Site (also known as Buick City) Quarterly Progress Reports No.1 through 46 were submitted to the United States Environmental Protection Agency (EPA) documenting Site activities from January 1, 2000 through June 30, 2011.

This Fourth Quarter 2013 Progress Report (No. 10) covers the period of October 1, 2013 through December 31, 2013.

The following briefly summarizes the work performed and data collected, problems encountered, project schedule, and estimated percent complete for a list of activities.

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ENVIRONMENT

Date:

January 15, 2014

Contact:

Micki M. Maki, P.E.

Phone:

248.994.2271

Email:

[Micki Maki@arcadis-us.com](mailto:Micki.Maki@arcadis-us.com)

Our ref:

B0064410.2014

1. Data Collected This Quarter

The samples collected as part of Site investigation or monitoring activities during this quarter are discussed below. This data will be presented to the EPA in the 2013 Annual CMI Report, except as noted below.

1.1 Storm Sewer Water Samples

In October and November, ARCADIS conducted the "NPDES Plus" Monitoring Program (NPMP) sampling program. The December sampling event was unable to be completed due to weather. The NPMP consists of collecting monthly samples from the following Site storm sewers as access allows MP001, MP003, MP006, MP009, MP010, MP011, and MP013. This data will be included in the annual CMI Report.

As required per Part 1, Section A 2 in the current National Pollution Discharge Elimination System (NPDES) Permit No. MI0001597, weekly composite samples were collected from Monitoring Point 003A. In December only one weekly sample was able to be collected due to weather conditions. This data will be included in the 2013 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the MDEQ as required in the NPDES permit.

1.2 Soil Samples

In October, November, and December, ARCADIS collected soil samples as part of the LNAPL area investigations to delineate and characterize the impacts in soil. A total of 168 soil samples were collected from soil boring locations and submitted for laboratory analysis of volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), metals, and/or PCBs. This data will be included in the LNAPL remedy selection memos.

In October and December, ARCADIS collected soil samples as part of the Northern Parcel Investigation to delineate Manganese exceedances. Soil samples were collected from twenty soil boring locations and submitted for laboratory analysis of manganese. This data will be submitted in a brief memo report.

In November, ARCADIS also collected two samples of calcified materials located in the Outfall 003 storm sewer as part of the sewer infiltration investigation activities. The samples were collected and submitted to Merit Laboratories in East Lansing, Michigan for analysis of metals, oil and grease, and PCBs. This data will be included in the LNAPL remedy selection memos.

1.3 LNAPL Samples

In the fourth quarter, ARCADIS collected a total of one LNAPL sample as part of the LNAPL Investigation plan. The LNAPL sample was submitted for laboratory analysis of PCBs. This data will be included in the LNAPL remedy selection memos.

1.4 Groundwater Samples

In November 2013, groundwater samples from two monitoring wells were collected and analyzed at select monitoring wells to confirm results of the June 2013 sampling event. The groundwater samples were submitted for laboratory analysis of VOCs, cyanide and select metals. This data will be included in the annual CMI Report.

1.5 AOI 09-B System Samples

In October and November, ARCADIS collected samples from the AOI 09-B Multiphase Extraction (MPE) system as required by the City of Flint Sanitary Use Permit #2-02-RBC001. The system was shut down November 30, 2013 for winterization. In accordance with the permit four grab samples and one composite sample are collected from the system effluent line on a monthly basis. The composite sample is submitted for laboratory analysis of ammonia-nitrogen, BOD, total phosphorous, total suspended solids, metals, SVOCs, and PCBs and the grab samples were submitted for laboratory analysis of hexane extractable material (HEM), amenable cyanide, and VOCs plus xylenes. This data is submitted to the City of Flint on a monthly basis in the AOI 09-B Monthly Discharge Report.

In October and November, additional system samples were collected to monitor system performance. Grab samples were collected from the carbon influent, carbon midfluent, and system influent sample ports. Samples from these three locations are submitted on a monthly basis for laboratory analysis of BTEX, VOCs, xylenes, and/or gasoline range organics.

In October and November, monthly air samples were collected from the AOI 09-B Multiphase Extraction (MPE) system as required by the Michigan Department of Environmental Quality (MDEQ) Permit # 165-11. Samples were collected from the Thermal Oxidizer influent piping. This data is submitted to the MDEQ on a monthly basis in the AOI 09-B Monthly Air Report.

2. Work Performed This Quarter

Attachments 1, 2, and 3 present the monthly Site progress reports for October, November, and December which document the work performed this quarter.

3. Problems Encountered

No problems encountered.

4. Project Schedule – Near-Term Milestone Activities Anticipated During the Next Quarter

A projected field work schedule for the first and second quarter of 2014 is included in Attachment 4.

4.1 Routine Work

Task 1 Outfall 003/004 Oil Removal Systems

- Continue OMM inspections of system.

Task 6 Maintain Booms on Outfalls

- Continue to perform inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Dispose of waste as necessary.
- Continue to performed inspections of Oil Interceptor #2.

Task 8 NPDES PLUS Monitoring

- Perform NPMP monitoring in January, February, and March.

Task 10 Maintain Select Surface Covers

- Perform quarterly/semi-annual inspection of surface cover.

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- Continue to participate in regulatory agency calls.
- Prepare Quarterly Report for submittal to EPA.
- Prepare Annual CMI report.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Continue quarterly P-trap inspections.

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- Restart OM&M phase of AOI 09-B LNAPL remediation system.
- Continue OM&M phase of Outfall 002 passive recovery trench.

4.2 Non-Routine Work

Task 2 LNAPL Investigation

- Complete additional investigation of LNAPL plumes and impacts.
- Complete evaluation of Site data to aid in selecting methods and locations for additional LNAPL pilot testing.

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- Propose pilot testing activities to EPA for approval.
- Complete respirometry testing on samples collected from AOI 02-B.

Task 6 Maintain Booms on Outfalls

- Perform maintenance event of Oil Interceptor #2. Dispose of waste as necessary.

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Complete remedy recommendations for waste management units (WMU) #3, #7, and #10.

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Complete additional bulkhead activities at select locations.
- Complete review of re-routing options for Outfall 004 and 013 storm sewer with the City of Flint.

5. Estimated Percent Complete

Task 1 Outfall 003/004 Oil Removal Systems

- Outfall 003/004 Oil removal System OM&M – Ongoing

Task 2 LNAPL Investigation

- LNAPL LIF Investigations – 100%
- Southend Natural Source Zone Depletion Study – 100%
- Southend Transmissivity Testing – 100%
- Northend Natural Source Zone Depletion Study – 90%
- Northend Transmissivity Testing – 75%
- Additional LNAPL Investigation – 75%

Task 3 LNAPL Recovery Bench and Field-Scale Testing

- LNAPL Bench Scale Testing – 25%
- LNAPL Pilot Scale Testing – 33%

Task 7 Enhanced Groundwater Monitoring

- Groundwater Monitoring – Ongoing

Task 8 NPDES PLUS Monitoring

- NPDES PLUS Monitoring – Ongoing

Task 9 RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

- Northend RCRA WMU Closures – 90%
- Southend RCRA WMU Closures – 90%
- Northend Restrictive Covenant – 0%
- Southend Restrictive Covenant – 90%
- Monitoring Well Abandonments – 5%
- UST Issue Resolution – 100%

Task 10 Maintain Select Surface Covers

- Maintain Select Surface Covers – Ongoing
- Installation of Additional Surface Cover – Southend – 100%

Task 11 Lead Soil Removal

- Lead Soil Removal – 95%
- Northern Parcel Investigation – 90%
- Northern Parcel Soil Removal – 15%

Task 12 Agency Coordination/Negotiation, Reporting, Project Management

- RFI Phase I Report - 100%
- RFI Phase II Report - 100%
- Human Health Exposure Control EI Report - 100%
- CA 750 Report - 100%
- Revised Corrective Measures Proposal (CMP), May 1, 2008 – 100%
- Revised CMP Addendum No. 1 – 100%
- Southend Corrective Measures Implementation (CMI) Work Plan – 100%
- Revised CMP Addendum No. 2 – Northend and Site-wide Groundwater - 100%
- Revised CMP Addendum No. 2-1 – Response to EPA Comments - 100%
- 2012 CMI Annual Report – 100%

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Outfall 002 Storm Sewer Evaluation - 100%
- Outfall 003 Storm Sewer Evaluation – 50%
- Outfall 004 Re-route into Outfall 013 Evaluation - 80%
- Outfall 005 Storm Sewer Evaluation – 100%
- Outfall 002 Final Measure Implementation– 90%
- Outfall 003 Final Measure Implementation – 25%
- Outfall 005 Final Measure Implementation – 90%
- Outfall 007 Final Measure Implementation – 100%

Task 14 Address 15 Areas of Subsurface LNAPL

- Address 15 Areas of LNAPL – 7%
 - AOI 09-B System Design, Permitting, and Construction – 100%

Task 15 LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

- LNAPL Recovery OM&M – 25%
- Secondary LNAPL Remediation – 0%

6. Budget Status

- 2013 Budget – The 2013 Budget Request was been approved by the EPA on December 26, 2012.
- 2013 Budget Amendments No.1, 2, and 3 - Budget Amendments No. 1 (05/16/13), 2 (09/03/13) and 3 (12/16/13) have been approved by the EPA.
- 2014 Budget – The 2014 Budget Request was been approved by the EPA ON December 16, 2013.
- 2014 Budget Amendment No. 1 – Budget Amendment No. 1 is currently being drafted for submittal to the EPA.

If you have any questions, please call me.

Sincerely,
ARCADIS



Micki Maki, P.E.
Project Manager

Copies:

Peter Quackenbush, Michigan Department of Environmental Quality, (via email)
William Yocum, Michigan Department of Environmental Quality (via email)
Flint Public Library
Grant Trigger, RACER Trust (via email)
Dave Favero, RACER Trust (via email)

Attachments:

Attachment 1 – October 2013 Project Update - RACER Buick City Site
Attachment 2 – November 2013 Project Update - RACER Buick City Site
Attachment 3 – December 2013 Project Update - RACER Buick City Site
Attachment 4 – RACER Buick City Field Schedule – 1st Quarter 2014 and 2nd Quarter 2014



Attachment 1

October 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
November 15, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
October 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this October 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from October 1, 2013 through October 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- Completed a line jetting event to eliminate blockages in the HDPE piping.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Coordinated and conducted LNAPL investigation activities for work plan #3.
- Coordinated and conducted LNAPL investigation activities for work plan #4.
- Continued development of Evaluation and Remedy Recommendation memos.
- Completed transmissivity data analysis and review.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Investigated potential pilot test technologies.
- Develop procedures for respirometry testing.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance of Outfalls 002, 003, 004, and 005 and disposed of waste, as necessary.
 - As a result of the bulkheading work previously performed at the site, observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Reviewed analytical data and prepared Notice of Migration documents.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for October.

Non - Routine Work

- No work Performed.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Finalized the WMU #3 memo.
- Drafted WMU #7 and #10 memos.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Completed the AOI 09-A soil excavation construction event.
- Prepared the Northern Parcel Sampling Results Memo.
- Coordinated and conducted additional delineation of manganese exceedances at the Northern Parcel.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Prepared for and attended a meeting with the EPA in Chicago.
- Completed the 2014 Draft Budget and Schedule and reviewed with RACER and USEPA.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Began developing strategy for Outfall 002.
- Concluded the flow monitoring study field portion for Outfall 004 rerouting design.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Continued evaluating possible remedy selections.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system. Free product and groundwater removal is summarized below.
 - Removal as follows:

Substance	October Removal	Total Removal
Free Product (Measured)	~1 gallons	~132 gallons
Vapor Phase Mass (Estimated)	227 pounds	1878 pounds
Groundwater Discharge (Measured)	67,284 gallons	630,161.2 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 2

November 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
December 21, 2013

ARCADIS Project No.:
B0064410.2013

Subject:
November 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this November 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from November 1, 2013 through November 30, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Coordinated and conducted PCB delineation investigation activities at Building 83/84.
- Continued development of Evaluation and Remedy Recommendation memos.
- Start development and drafting of Conceptual Site Model cross sections.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Investigated potential pilot test technologies.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance of Outfalls 002, 003, 004, and 005 and disposed of waste, as necessary.
 - As a result of the bulkheading work previously performed at the site, observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- Notice of Migration documents were finalized and submitted to applicable parties.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Completed the monthly NPDES Plus Monitoring event for November.

Non - Routine Work

- No work Performed.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- Prepared draft WMU #7 and #10 memos.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Prepared and finalize the Northern Parcel Sampling Results Memo.
- Prepared Figures for the Northern Parcel Sampling Memos

Task 12 - Agency Coordination/Negotiation, Reporting, Project ManagementRoutine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Drafted 2013 Buick City EPA Fact Sheet.

Task 13 - Outfall 002/005 Oil Minimization & InvestigationRoutine Work

- Not Applicable.

Non - Routine Work

- Began developing a strategy for Outfall 005.
- Analyze data from Outfall 004 flow monitoring study and begin drafting memo.
- Conduct CCTV sewer camera work at Outfalls 002, 003, and 013.

Task 14 - Address 15 Areas of Subsurface LNAPLRoutine Work

- Not Applicable.

Non - Routine Work

- Continued evaluative possible remedy selections.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed operations, maintenance, and monitoring (OMM) activities on the AOI-09B system. Free product and groundwater removal is summarized below.
 - Removal as follows:

Substance	November Removal	Total Removal
Free Product (Measured)	~2 gallons	~133 gallons
Vapor Phase Mass (Estimated)	36 pounds	1914 pounds
Groundwater Discharge (Measured)	86,755.1 gallons	721.552.3 gallons

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Not Applicable.



Attachment 3

December 2013 Project Update



ARCADIS G&M of Michigan, LLC
10559 Citation Drive
Suite 100
Brighton
Michigan 48116
Tel 810 229 8594
Fax 810 229 8837

MEMO

To:
Chris Black, USEPA

Copies:
Grant Trigger, RACER
Dave Favero, RACER
Christi Kiker, ARCADIS

From:
Micki Maki

Date:
January 15, 2013

ARCADIS Project No.:
B0064410.2014

Subject:
December 2013 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this December 2013 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from December 1, 2013 through December 31, 2013.

Task 1 - Outfall 003/004 Oil Removal Systems

Routine Work

- Continued operations, maintenance, and monitoring (OMM) activities on the 003/004 system. Inspections are being performed once per week to ensure that the system is running properly and to determine if any system modifications are warranted to optimize system performance.

Non - Routine Work

- No work performed.

Task 2 - LNAPL Investigation

Routine Work

- No work performed.

Non - Routine Work

- Coordinated and conducted PCB delineation investigation activities.
- Continued development of Evaluation and Remedy Recommendation memos.
- Continued development and drafting of cross sections.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

Routine Work

- No work performed.

Non - Routine Work

- Investigated potential pilot test technologies.

Task 4 - Operate Fact. 10 LNAPL/GW System

- Task Completed.

Task 5 - Operate Fact. 36 LNAPL/GW System

- Task Completed.

Task 6 - Maintain Booms on Outfalls

Routine Work

- Performed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, and 005. Disposed of waste as necessary.
 - As a result of the bulkheading work previously performed at the site, observations of sheen and product at Outfall 002 have dramatically decreased. Recent observations have noted that oxidized oil is very minimal and the amount of emulsified oil has steadily declined since bulkheading activities were completed.
- Performed inspections of Oil Interceptor #2.

Non - Routine Work

- No work performed.

Task 7 - Enhanced Groundwater Monitoring

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 8 - NPDES PLUS Monitoring

Routine Work

- Due to weather the monthly NPDES Plus Monitoring event for December could not be completed.

Non - Routine Work

- No work Performed.

Task 9 - RCRA Closures, Well Abandonment, Restrictive Covenants, Resolve UST Issues

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 10 – Maintain Select Surface Covers

Routine Work

- No work performed.

Non - Routine Work

- No work performed.

Task 11 - Lead Soil Removal

Routine Work

- No work performed.

Non - Routine Work

- Finalized and submitted the Northern Parcel Sampling Results Memo to the EPA.
- Drafted and reviewed Northern Parcel lease agreement and development plans.
- Developed draft Northern Parcel Soil Removal Work Plan.

Task 12 - Agency Coordination/Negotiation, Reporting, Project Management

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Attended EPA meeting to discuss remedy recommendations.
- Drafted 2013 Buick City EPA Fact Sheet.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

Routine Work

- Not Applicable.

Non - Routine Work

- Finalized draft Outfall 004 Flow Memo for RACER review.
- Finalized and submitted the Draft Outfall 005 investigation summary memo for RACER review.

Task 14 - Address 15 Areas of Subsurface LNAPL

Routine Work

- Not Applicable.

Non - Routine Work

- Continued evaluative possible remedy selections.

Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation

Routine Work

- Performed OMM activities on the Outfall 002 passive recovery trench.

Non - Routine Work

- Shut down and winterized AOI 09-B MPE system.



Attachment 4

RACER Buick City Field Schedule
– 1st Quarter 2014 and 2nd Quarter
2014

RACER Buick City 2014
Field Schedule
First and Second Quarter 2014

ID	Task Name	Duration	Start	12/15	January 1	1/5	1/26	February 21	2/16	3/9	3/30	April 11	4/20	5/11	June 1	6/1	6/22
1	REMEDIATION ACTIVITIES - First and Second Quarter	129 days	Wed 1/1/14														
2	Task 1 - Outfall 003/004 Oil Removal Systems	129 days	Wed 1/1/14														
3	Subtask 01 - Weekly Inspections	129 days	Wed 1/1/14														
4	Subtask 03 - Maintenance Event	8 days	Mon 4/21/14														
5	003/004 Maintenance Event	8 days	Mon 4/21/14														
6	Task 2 - LNAPL Investigation	75 days	Wed 1/1/14														
7	Subtask 05 - LNAPL Transmissivity Evaluation (Northend)	41 days	Wed 1/1/14														
8	Transmissivity Testing	3 days	Mon 2/24/14														
9	Subtask 06- Miscellaneous LNAPL Evaluation/Testing	75 days	Wed 1/1/14														
10	Respirometry Testing	18 days	Wed 1/1/14														
11	Additional LNAPL/PCB Delineation	75 days	Wed 1/1/14														
12	Task 3 - Benchscale/pilot testing	70 days	Mon 2/17/14														
13	Pilot Test 1 (if necessary)	90 days	Mon 2/17/14														
14	Pilot Test 2 (if necessary)	90 days	Mon 4/28/14														
15	Task 6 - Maintain Booms on Outfalls	129 days	Wed 1/1/14														
16	Subtask 00 - Oil Interceptor #2 Inspection and Waste Removal	129 days	Wed 1/1/14														
17	Subtask 01 - Outfall Boom Inspections and Maintenance - 2 hours per day	129 days	Wed 1/1/14														
18	Task 8 - NPDES PLUS Monitoring	129 days	Wed 1/1/14														
19	January NPMP Sampling Event	1 day	Wed 1/22/14														
20	February NPMP Sampling Event	1 day	Mon 2/3/14														
21	March NPMP Sampling Event	1 day	Mon 3/3/14														
22	April NPMP Sampling Event	1 day	Thu 4/3/14														
23	May NPMP Sampling Event	1 day	Tue 5/6/14														
24	June NPMP Sampling Event	1 day	Mon 6/2/14														
25	Task 10 - Maintain Select Surface Covers	1 day	Mon 6/16/14														
26	Subtask 00 - Surface Cover Inspections	1 day	Mon 6/16/14														
27	Inspection	1 day	Mon 6/16/14														
28	Task 11 - Soil Removal	10 days	Mon 2/17/14														
29	Northern Parcel Soil Removal	10 days	Mon 2/17/14														
30	Task 13 - Outfall 002/005 Oil Minimization & Investigation	30 days	Mon 2/3/14														
31	Subtask 02 - Outfall 002 & 005 Bulkhead implementation	30 days	Mon 2/3/14														
32	Bulkhead Implementation	30 days	Mon 2/3/14														
33	Task 15 - LNAPL Recovery OM&M Followed by Secondary LNAPL Remediation	129 days	Wed 1/1/14														
34	Outfall 002 Passive Recovery Trench	129 days	Wed 1/1/14														
35	AOI 09-B NAPL Recovery O&M - 2013	59 days	Tue 4/1/14														

Routine Task Non-Routine Task Drilling Events Construction Events



Attachment 3

2013 Outfall 003 Dry and Wet
Weather Storm Water Sampling
Results

2013 Outfall 005 Sampling Results

**2013 Outfall 003A Dry Weather Storm Water Sampling Data
2013 Yearly PMP Report**

**RACER Trust
Buick City
Flint, Michigan**

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 01/04/13 003	OUTFALL 003A 01/08/13 003	OUTFALL 003A 01/17/13 003	OUTFALL 003A 01/25/13 003	OUTFALL 003A 02/01/13 003	OUTFALL 003A 02/08/13 003	OUTFALL 003A 02/14/13 003	OUTFALL 003A 02/19/13 003	OUTFALL 003A 02/26/13 003
PCB										
Aroclor-1016 (PCB-1016)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1221 (PCB-1221)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1232 (PCB-1232)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1242 (PCB-1242)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1248 (PCB-1248)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1254 (PCB-1254)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1260 (PCB-1260)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total PCBs	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 03/07/13 003	OUTFALL 003A 03/13/13 003	OUTFALL 003A 03/20/13 003	OUTFALL 003A 03/27/13 003	OUTFALL 003A 04/04/13 003	OUTFALL 003A 04/10/13 003	OUTFALL 003A 04/16/13 003	OUTFALL 003A 04/30/13 003	OUTFALL 003A 05/02/13 003
PCB										
Aroclor-1016 (PCB-1016)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1221 (PCB-1221)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1232 (PCB-1232)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1242 (PCB-1242)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	0.2
Aroclor-1248 (PCB-1248)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1254 (PCB-1254)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	<0.10	<0.10
Aroclor-1260 (PCB-1260)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total PCBs	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	0.2	0.2

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 05/03/13 003	MH 3-3 05/07/13 003	OUTFALL 003A 05/28/13 003	OUTFALL 003A 06/06/13 003	OUTFALL 003A 06/19/13 003	OUTFALL 003A 07/02/13 003	OUTFALL 003A 07/11/13 003	OUTFALL 003A 07/18/13 003	OUTFALL 003A 07/25/13 003
PCB										
Aroclor-1016 (PCB-1016)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1221 (PCB-1221)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1232 (PCB-1232)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1242 (PCB-1242)	ug/L	0.2	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1248 (PCB-1248)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1254 (PCB-1254)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1260 (PCB-1260)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total PCBs	ug/L	0.2	0.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

**2013 Outfall 003A Dry Weather Storm Water Sampling Data
2013 Yearly PMP Report**

**RACER Trust
Buick City
Flint, Michigan**

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 08/09/13 003	OUTFALL 003A 08/16/13 003	OUTFALL 003A 08/21/13 003	OUTFALL 003A 08/30/13 003	OUTFALL 003A 09/04/13 003	OUTFALL 003A 09/12/13 003	OUTFALL 003A 09/19/13 003	OUTFALL 003A 09/25/13 003	OUTFALL 003A 10/03/13 003
PCB										
Aroclor-1016 (PCB-1016)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1221 (PCB-1221)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1232 (PCB-1232)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1242 (PCB-1242)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1248 (PCB-1248)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1254 (PCB-1254)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor-1260 (PCB-1260)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total PCBs	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 10/11/13 003	OUTFALL 003A 10/25/13 003	OUTFALL 003A 10/29/13 003	OUTFALL 003A 11/05/13 003	OUTFALL 003A 11/14/13 003	OUTFALL 003A 11/20/13 003	OUTFALL 003A 11/26/13 003	OUTFALL 003A 12/03/13 003	
PCB										
Aroclor-1016 (PCB-1016)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1221 (PCB-1221)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1232 (PCB-1232)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1242 (PCB-1242)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1248 (PCB-1248)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1254 (PCB-1254)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Aroclor-1260 (PCB-1260)	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
Total PCBs	ug/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	

2013 Outfall 003A Wet Weather Storm Water Sampling Data
2013 Yearly PMP Report

RACER Trust
Buick City
Flint, Michigan

Location ID: Date Collected: Outfall:	Units	OUTFALL 003A 10/07/13 003
PCB		
Aroclor-1016 (PCB-1016)	ug/L	<0.10
Aroclor-1221 (PCB-1221)	ug/L	<0.10
Aroclor-1232 (PCB-1232)	ug/L	<0.10
Aroclor-1242 (PCB-1242)	ug/L	<0.10
Aroclor-1248 (PCB-1248)	ug/L	<0.10
Aroclor-1254 (PCB-1254)	ug/L	<0.10
Aroclor-1260 (PCB-1260)	ug/L	<0.10
Total PCBs	ug/L	<0.10

**2013 Outfall 005 Sampling Data
2013 Yearly PMP Report**

**RACER Trust
Buick City
Flint, Michigan**

Location ID: Sample Depth(): Date Collected:	GSI	Units	MP005-C 01/23/13	MP005-C 02/20/13	MP005-C 03/14/13	MP005-C 04/29/13
PCB						
Aroclor-1016	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1221	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1232	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1242	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1248	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1254	--	ug/L	<0.10	<0.10	<0.10	<0.10
Aroclor-1260	--	ug/L	<0.10	<0.10	<0.10	<0.10
Total PCBs	0.2 {(M)}	ug/L	<0.10	<0.10	<0.10	<0.10



Attachment 4

2013 Field Inspection Notes – Outfall
003/004 BaySaver Separation
System

DATE	WEATHER		OUTFALL 003									SYSTEM COMPONENTS															OUTFALL 004					
	Temp (°F)	Conditions (rain, etc.)	MH 3-3		MH 3-6							Bay Saver Primary MH						Bay Saver Storage MH						Oil Water Separator			MH 4-6					MH 4-5
			Obstructions (Y/N)	Flow (Y/N)	Obstructions (Y/N)	Quantity of Debris	Flow (Y/N)	Depths		Cresting Weir (Y/N)	Pooling Oil (Y/N)	Obstructions (Y/N)	Qty. of Debris	Flow (Y/N)	Depths			Obstructions (Y/N)	Flow (Y/N)	Type of Debris	Depths			Obstructions (Y/N)	Depths		Visible Obstructions (Y/N)	Debris Quantity	Flow (Y/N)	Depths		Flow (Y/N)
								To Water	To Bottom						To LNAPL	To Water	To Bottom				To LNAPL	To Water	To Bottom		To LNAPL	To Water						
1/4/2013	25	Clear	No	Yes	No	NA	Yes	11.71	12.43	No	No	No	some trash	Yes	NA	11.43	19.77	No	Yes	EO	11.53	11.69	19.88	No	NA	10.01	No	None	Yes*	7.53	9.87	No
1/7/2013	40	Overcast	No	Yes	No	NA	Yes	11.68	12.44	No	No	No	some trash	Yes	NA	11.45	19.79	No	Yes	EO	11.52	11.68	19.87	No	NA	10.01	No	None	Yes*	7.55	9.89	No
1/18/2013	20	Overcast	No	Yes	No	NA	Yes	11.69	12.43	No	No	No	some trash	Yes	NA	11.41	19.81	No	Yes	EO	11.51	See notes		No	NA	10.01	No	None	Yes*	7.53	9.87	No
1/24/2013	30	Overcast	No	Yes	No	NA	Yes	11.71	12.41	No	No	No	some trash	Yes	NA	11.43	19.77	No	Yes	EO	11.45	See notes		No	NA	10	No	None	Yes*	7.49	9.96	No
2/7/2013	30	Overcast	No	Yes	No	NA	Yes	11.70	12.43	No	No	No	some trash	Yes	NA	11.41	19.79	No	Yes	EO	11.51	See notes		No	NA	10.02	No	None	Yes*	7.53	9.88	No
2/14/2013	25	Snow	No	Yes	No	NA	Yes	11.69	12.44	No	No	No	some trash	Yes	NA	11.41	19.80	No	Yes	EO	11.53	See notes		No	NA	10.01	No	None	Yes*	7.55	9.87	No
2/20/2013	25	Clear	No	Yes	No	NA	Yes	11.70	12.43	No	No	No	some trash	Yes	NA	11.41	19.78	No	Yes	EO	11.51	See notes		No	NA	10	No	None	Yes*	7.54	9.87	No
2/28/2013	35	Cloudy	No	Yes	No	NA	Yes	11.71	12.46	No	No	No	some trash	Yes	NA	11.42	19.79	No	Yes	EO	11.51	See notes		No	NA	10.02	No	None	Yes*	7.55	9.88	No
3/7/2013	30	Snow	No	Yes	No	NA	Yes	11.32	12.43	yes	No	No	some trash	Yes	NA	11.49	19.78	No	Yes	EO	11.53	See notes		No	NA	10.03	No	None	Yes*	7.22	9.87	yes
3/15/2013	40	Overcast	No	Yes	No	NA	Yes	11.71	12.42	No	No	No	some trash	Yes	NA	11.41	19.78	No	Yes	EO	11.51	See notes		No	NA	10	No	None	Yes*	7.54	9.87	No
3/20/2013	20	Snow	No	Yes	No	NA	Yes	11.72	12.43	No	No	No	some trash	Yes	NA	11.43	19.79	No	Yes	EO	11.52	See notes		No	NA	10.01	No	None	Yes*	7.55	9.87	No
3/28/2013	30	Overcast	No	Yes	No	NA	Yes	11.70	12.44	No	No	No	some trash	Yes	NA	11.41	19.78	No	Yes	EO	11.51	See notes		No	NA	10.01	No	None	Yes*	7.55	9.88	No
4/4/2013	50	Clear	No	Yes	No	NA	Yes	11.71	12.43	No	No	No	some trash	Yes	NA	11.41	19.79	No	Yes	EO	11.5	See notes		No	NA	10.01	No	None	Yes*	7.54	9.87	No
4/13/2013	35	Overcast	No	Yes	No	NA	Yes	11.71	12.43	No	No	No	some trash	Yes	NA	11.4	19.78	No	Yes	EO	11.52	See notes		No	NA	10.01	No	None	Yes*	7.55	9.87	No
4/15/2013	55	Clear	No	Yes	No	NA	Yes	11.70	12.44	No	No	No	some trash	Yes	NA	11.42	19.78	No	Yes	EO	11.51	See notes		No	NA	10.01	No	None	Yes*	7.54	9.88	No
4/23/2013	65	Clear	No	Yes	No	NA	Yes	11.36	12.43	No	No	No	some trash	Yes	NA	11.41	19.79	No	Yes	EO	11.51	See notes		No	NA	10.01	No	None	Yes*	7.23	9.87	yes
5/6/2013	77	Clear	No	Yes	No	NA	Yes	11.40	12.40	No	No	No	some trash	Yes	NA	11.4	19.80	No	Yes	EO	11.51	See notes		No	NA	10.01	No	None	Yes*	7.25	9.88	yes
5/14/2013	75	Lt Rain	EQ onsite performing cleaning of OWS. Visual inspection of system.																													
5/17/2013	68	Mostly Cloudy																														
5/21/2013	83	Mostly Sunny																														
6/3/2013	68	Mostly Cloudy	No	Yes	No	NA	Yes	11.42	12.40	No	No	No	some trash	Yes	NA	11.41	19.80	No	Yes	EO	11.51	See notes		No	NA	10.02	No	None	Yes*	7.4	9.89	No
6/10/2013	76	Lt Rain	No	Yes	No	NA	Yes	11.43	12.41	No	No	No	some trash	Yes	NA	11.4	19.79	No	Yes	EO	11.52	See notes		No	NA	10.01	No	None	Yes*	7.45	9.87	No
6/17/2013	86	Rain	No	Yes	No	NA	Yes	11.50	12.40	No	No	No	some trash	Yes	NA	11.45	19.78	No	Yes	EO	11.55	See notes		No	NA	10	No	None	Yes*	7.54	9.87	No
6/24/2013	90	Rain	No	Yes	No	NA	Yes	11.65	12.43	No	No	No	some trash	Yes	NA	11.46	19.80	No	Yes	EO	11.52	See notes		No	NA	10.02	No	None	Yes*	7.23	9.88	No
7/1/2013	72	Lt Rain	No	Yes	No	NA	Yes	11.60	12.44	No	No	No	some trash	Yes	NA	11.41	19.81	No	Yes	EO	11.53	See notes		No	NA	10.01	No	None	Yes*	7.25	9.87	No
7/8/2013	82	Rain	No	Yes	No	NA	Yes	11.63	12.42	No	No	No	some trash	Yes	NA	11.4	19.78	No	Yes	EO	11.45	See notes		No	NA	10.01	No	None	Yes*	7.31	9.88	No
7/16/2013	95	Clear	No	Yes	No	NA	Yes	11.70	12.41	No	No	No	some trash	Yes	NA	11.43	19.79	No	Yes	EO	11.5	See notes		No	NA	10.01	No	None	Yes*	7.35	9.87	No

Note:
NA indicates data not applicable
EO indicates emulsified oil

2013 Field Inspection Notes
Outfall 003/004 BaySaver Separation System
2013 Yearly PMP Report

RACER Trust
Buick City
Flint, Michigan

DATE	WEATHER		OUTFALL 003									SYSTEM COMPONENTS															OUTFALL 004					
	Temp (°F)	Conditions (rain, etc.)	MH 3-3			MH 3-6						Bay Saver Primary MH						Bay Saver Storage MH						Oil Water Separator			MH 4-6					MH 4-5
			Obstructions (Y/N)	Flow (Y/N)	Obstructions (Y/N)	Quantity of Debris	Flow (Y/N)	Depths		Cresting Weir (Y/N)	Pooling Oil (Y/N)	Obstructions (Y/N)	Qty. of Debris	Flow (Y/N)	Depths			Obstructions (Y/N)	Flow (Y/N)	Type of Debris	Depths			Obstructions (Y/N)	Depths		Visible Obstructions (Y/N)	Debris Quantity	Flow (Y/N)	Depths		Flow (Y/N)
								To Water	To Bottom						To LNAPL	To Water	To Bottom				To LNAPL	To Water	To Bottom		To LNAPL	To Water						
7/23/2013	82	Rain	No	Yes	No	NA	Yes	11.71	12.43	No	No	No	some trash	Yes	NA	11.4	19.81	No	Yes	EO	11.49	See notes	No	NA	10.01	No	None	Yes*	7.45	9.85	No	
7/30/2013	80	Overcast	No	Yes	No	NA	Yes	11.73	12.43	No	No	No	some trash	Yes	NA	11.41	19.80	No	Yes	EO	11.45	See notes	No	NA	10	No	None	Yes*	7.5	9.82	No	
8/5/2013	72	Mostly Cloudy	No	Yes	No	NA	Yes	11.72	12.44	No	No	No	some trash	Yes	NA	11.4	19.78	No	Yes	EO	11.5	See notes	No	NA	10	No	None	Yes*	7.4	9.8	No	
8/13/2013	70	Mostly Sunny	No	Yes	No	NA	Yes	11.70	12.43	No	No	No	some trash	Yes	NA	11.42	19.81	No	Yes	EO	11.52	See notes	No	NA	10	No	None	Yes*	7.45	9.78	No	
8/19/2013	85	Clear	No	Yes	No	NA	Yes	11.71	12.44	No	No	No	some trash	Yes	NA	11.4	19.78	No	Yes	EO	11.51	See notes	No	NA	10.01	No	None	Yes*	7.41	9.75	No	
8/29/2013	88	Overcast	No	Yes	No	NA	Yes	11.72	12.44	No	No	No	some trash	Yes	NA	11.42	19.79	No	Yes	EO	11.53	See notes	No	NA	10.01	No	None	Yes*	7.35	9.88	No	
9/3/2013	75	Mostly Sunny	No	Yes	No	NA	Yes	11.70	12.43	No	No	No	some trash	Yes	NA	11.41	19.81	No	Yes	EO	11.5	See notes	No	NA	10.01	No	None	Yes*	7.24	9.87	No	
9/11/2013	90	Rain	No	Yes	No	NA	Yes	11.71	12.42	No	No	No	some trash	Yes	NA	11.43	19.78	No	Yes	EO	11.52	See notes	No	NA	10	No	None	Yes*	7.37	9.86	No	
9/16/2013	62	Lt Rain	No	Yes	Yes	N/A	Yes	11.63	12.43	Yes	No	No	some trash	Yes	NA	11.4	19.79	No	Yes	EO	11.51	See notes	No	NA	10	No	None	Yes*	7.45	9.84	No	
9/23/2013	62	Mostly Sunny	No	Yes	No	NA	Yes	11.59	12.41	No	No	No	some trash	Yes	NA	11.43	19.79	No	Yes	EO	11.52	See notes	No	NA	10	No	None	Yes*	7.23	9.81	No	
10/4/2013	83	Mostly Sunny	No	Yes	No	NA	Yes	11.63	12.42	No	No	No	some trash	Yes	NA	11.41	19.81	No	Yes	EO	11.5	See notes	No	NA	10	No	None	Yes*	6.25	9.8	No	
10/7/2013	62	Lt Rain	No	Yes	No	NA	Yes	11.55	12.43	No	No	No	some trash	Yes	NA	11.4	19.79	No	Yes	EO	11.5	See notes	No	NA	10	No	None	Yes*	5.01	9.7	Yes	
10/30/2013	65	Lt Rain	No	Yes	No	NA	Yes	11.51	12.44	No	No	No	some trash	Yes	NA	11.43	19.79	No	Yes	EO	11.51	See notes	No	NA	10	No	None	Yes*	7.6	9.62	No	
11/4/2013	51	Clear	No	Yes	No	NA	Yes	11.51	12.44	No	No	No	some trash	Yes	NA	11.4	19.81	No	Yes	EO	11.5	See notes	No	NA	10	No	None	Yes*	7.51	9.6	No	
11/11/2013	43	Lt Snow	No	Yes	No	NA	Yes	11.60	12.44	No	No	No	some trash	Yes	NA	11.41	19.81	No	Yes	EO	11.49	See notes	No	NA	10	No	None	Yes*	7.35	9.6	No	
11/25/2013	34	Mostly Cloudy	No	Yes	No	NA	Yes	11.66	12.44	No	No	No	some trash	Yes	NA	11.4	19.79	No	Yes	EO	11.51	See notes	No	NA	10	No	None	Yes*	7.41	9.65	No	
12/3/2013	38	Rain	No	Yes	No	NA	Yes	11.00	12.44	No	No	No	some trash	Yes	NA	11.4	19.79	No	Yes	EO	11.53	See notes	No	NA	10	No	None	Yes*	7.45	9.6	No	
12/9/2013	30	Snow	No	Yes	No	NA	Yes	11.15	12.43	No	No	No	some trash	Yes	NA	11.41	19.80	No	Yes	EO	11.51	See notes	No	NA	10	No	None	Yes*	7.3	9.6	No	
12/16/2013	24	Snow	No	Yes	No	NA	Yes	11.19	12.43	No	No	No	some trash	Yes	NA	11.4	19.80	No	Yes	EO	11.5	See notes	No	NA	10	No	None	Yes*	7.25	9.61	No	
12/23/2013	20	Snow	No	Yes	No	NA	Yes	11.00	12.44	No	No	No	some trash	Yes	NA	11.42	19.81	No	Yes	EO	11.53	See notes	No	NA	10	No	None	Yes*	7.39	9.61	No	
12/30/2013	22	Snow	No	Yes	No	NA	Yes	11.10	12.43	No	No	No	some trash	Yes	NA	11.4	19.80	No	Yes	EO	11.5	See notes	No	NA	10.02	No	None	Yes*	7.3	9.61	No	

Note:
NA indicates data not applicable
EO indicates emulsified oil