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*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

ENVIRONMENT

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

Date:  
January 15, 2014

Contact:  
Micki M. Maki, P.E.

Dear Mr. Black:

Phone:  
248.994.2271

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.

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

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.

Our ref:  
B0064410.2014

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.

## **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 Management**

Routine Work

- Prepared the Monthly EPA update memo.

Non - Routine Work

- Drafted 2013 Buick City EPA Fact Sheet.

**Task 13 - Outfall 002/005 Oil Minimization & Investigation**

Routine 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 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 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  
– 1<sup>st</sup> Quarter 2014 and 2<sup>nd</sup> Quarter  
2014

## RACER Buick City 2014 Field Schedule First and Second Quarter 2014

ID	Task Name	Duration	Start	Timeline													
				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	<b>Task 1 - Outfall 003/004 Oil Removal Systems</b>	<b>129 days</b>	<b>Wed 1/1/14</b>														
3	<b>Subtask 01 - Weekly Inspections</b>	129 days	Wed 1/1/14														
4	<b>Subtask 03 - Maintenance Event</b>	8 days	Mon 4/21/14														
5	003/004 Maintenance Event	8 days	Mon 4/21/14														
6	<b>Task 2 - LNAPL Investigation</b>	<b>75 days</b>	<b>Wed 1/1/14</b>														
7	<b>Subtask 05 - LNAPL Transmissivity Evaluation (Northend)</b>	<b>41 days</b>	<b>Wed 1/1/14</b>														
8	Transmissivity Testing	3 days	Mon 2/24/14														
9	<b>Subtask 06- Miscellaneous LNAPL Evaluation/Testing</b>	<b>75 days</b>	<b>Wed 1/1/14</b>														
10	Respirometry Testing	18 days	Wed 1/1/14														
11	Additional LNAPL/PCB Delineation	75 days	Wed 1/1/14														
12	<b>Task 3 - Benchscale/pilot testing</b>	<b>70 days</b>	<b>Mon 2/17/14</b>														
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	<b>Task 6 - Maintain Booms on Outfalls</b>	<b>129 days</b>	<b>Wed 1/1/14</b>														
16	<b>Subtask 00 - Oil Interceptor #2 Inspection and Waste Removal</b>	129 days	Wed 1/1/14														
17	<b>Subtask 01 - Outfall Boom Inspections and Maintenance - 2 hours per day</b>	129 days	Wed 1/1/14														
18	<b>Task 8 - NPDES PLUS Monitoring</b>	<b>129 days</b>	<b>Wed 1/1/14</b>														
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	<b>Task 10 - Maintain Select Surface Covers</b>	<b>1 day</b>	<b>Mon 6/16/14</b>														
26	<b>Subtask 00 - Surface Cover Inspections</b>	<b>1 day</b>	<b>Mon 6/16/14</b>														
27	Inspection	1 day	Mon 6/16/14														
28	<b>Task 11 - Soil Removal</b>	<b>10 days</b>	<b>Mon 2/17/14</b>														
29	Northern Parcel Soil Removal	10 days	Mon 2/17/14														
30	<b>Task 13 - Outfall 002/005 Oil Minimization &amp; Investigation</b>	<b>30 days</b>	<b>Mon 2/3/14</b>														
31	<b>Subtask 02 - Outfall 002 &amp; 005 Bulkhead implementation</b>	<b>30 days</b>	<b>Mon 2/3/14</b>														
32	Bulkhead Implementation	30 days	Mon 2/3/14														
33	<b>Task 15 - LNAPL Recovery OM&amp;M Followed by Secondary LNAPL Remediation</b>	<b>129 days</b>	<b>Wed 1/1/14</b>														
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	0%													

Routine Task 
Non-Routine Task 
Drilling Events 
Construction Events