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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:
Third Quarter 2014 Progress Report (No. 13)
Revitalizing Auto Communities Environmental Response (RACER) Trust
Buick City Site, Flint, Michigan

Date:
October 15, 2014

Contact:
Micki M. Maki

Dear Mr. Black:

Phone:
248.994.2271

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), ARCADIS is submitting this Third Quarter 2014 Progress Report (No. 13) 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:Micki.Maki@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 Third Quarter 2014 Progress Report (No. 13) covers the period of July 1, 2014 through September 30, 2014.

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 2014 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 typically consists of collecting monthly samples from the following Site storm sewers as access allows MP001, MP003, MP006, MP009, MP010, MP011, and MP013. Bulkheading activities were completed at Outfalls 009 and 010, eliminating the Site’s contributions to these outfalls; therefore, NPMP sampling is no longer conducted at these locations. The NPMP 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 2014 Yearly Pollutant Minimization Plan (PMP) for PCBs report, which will be submitted to the Michigan Department of Environmental Quality (MDEQ) as required in the NPDES permit.

1.2 AOI 09-B System Samples

ARCADIS continues to collect 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, monthly air samples were collected from the AOI 09-B MPE system as required by the MDEQ Permit # 165-11. Samples were collected from the Thermal Oxidizer influent piping. For endpoint verification, additional samples were collected on a weekly basis July 1, 2014 through August 15, 2014. 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 that document the work performed this quarter.

3. Problems Encountered

No problems were encountered.

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

A projected field work schedule for the fourth quarter of 2014 and first quarter of 2015 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 perform inspections of Oil Interceptor #2.

Task 8 *NPDES PLUS Monitoring*

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

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 Outfall 002 passive recovery trench.

4.2 Non-Routine Work

Task 1 Outfall 003/004 Oil Removal System

- Perform annual maintenance event of Outfall 003/004 Oil Removal System. Dispose of waste as necessary.

Task 2 LNAPL Investigation

- Complete additional investigation of LNAPL areas 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 treatability study activities for LNAPL infiltration elimination to EPA for approval.
- Conduct the AOI 36 MPE Pilot Test activities.

Task 6 Maintain Booms on Outfalls

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

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Complete the re-routing of Outfall 004 and 013 storm sewer.

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

- Complete OM&M phase of AOI 09-B 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 – 90%
- Northend Transmissivity Testing – 75%
- Additional LNAPL Investigation – 80%

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 – 100%
- Northern Parcel Investigation – 100%
- Northern Parcel Soil Removal – 100%

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%
- 2013 CMI Annual Report – 100%

Task 13 Outfall 002/005 Oil Minimization & Investigation

- Outfall 002 Storm Sewer Evaluation - 100%
- Outfall 003 Storm Sewer Evaluation – 60%
- Outfall 004 Re-route into Outfall 013 Evaluation - 90%
- Outfall 005 Storm Sewer Evaluation – 100%
- Outfall 002 Final Measure Implementation– 90%
- Outfall 003 Final Measure Implementation – 30%
- 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 – 30%
- Secondary LNAPL Remediation – 0%

6. Budget Status

- 2014 Budget – The 2014 Budget Request was approved by the EPA on December 16, 2013.
- 2014 Budget Amendment No. 1 – Budget Amendment No. 1 was approved by the EPA on March 7, 2014.

- 2014 Budget Modification – Budget Modification was approved by the EPA on May 23, 2014.
- 2014 Budget Amendment No. 2 – Budget Amendment No. 2 was approved by the EPA on September 9, 2014.

If you have any questions, please contact me.

Sincerely,
ARCADIS



Micki Maki
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 2014 Project Update - RACER Buick City Site
Attachment 2 – August 2014 Project Update - RACER Buick City Site
Attachment 3 – September 2014 Project Update - RACER Buick City Site
Attachment 4 – RACER Buick City Field Schedule –4th Quarter 2014 and 1st Quarter 2015



Attachment 1

July 2014 Monthly Update



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MEMO

To:
Chris Black, USEPA

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

From:
Micki M. Maki

Date:
August 26, 2014

ARCADIS Project No.:
B0064410.2014.01202

Subject:
July 2014 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this July 2014 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from July 1, 2014 through July 31, 2014. Please note that format of the report has been changed slightly to provide more detailed description of activities completed. Also, the summary of routine operations, maintenance, and monitoring (OMM) tasks has been moved to the end of the document.

Task 1 - Outfall 003/004 Oil Removal Systems

- One weekly inspection of the 003/004 system concluded that a blockage was present in the diversion lines. Line jetting was performed to remove the blockage and optimize system performance.
- An email request was submitted to USEPA requesting a determination allowing the waste from the Outfall 003/004 system to be disposed of as a Non-TSCA material.

Task 2 - LNAPL Investigation

- A vapor intrusion evaluation was conducted to identify exceedances and to determine areas of concern.
- Work continued on the Remedy Recommendation Report. Memos and figures were updated to incorporate comments.
- Preparation of the 2014 Supplemental Corrective Measures Implementation (CMI) Work Plan was continued.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

- The MPE pilot test work plan was prepared, finalized and delivered to USEPA for review. This task also included determining pilot test costs and evaluating data to determine proper placement of well locations for performing the pilot test at the AOI-36-1/36-2 LNAPL Area.

Task 4 - Operate Fact. 10 LNAPL/GW System

This task was previously completed prior to the month of July 2014. No work was performed during this month for this task.

Task 5 - Operate Fact. 36 LNAPL/GW System

This task was previously completed prior to the month of July 2014. No work was performed during this month for this task.

Task 7 - Enhanced Groundwater Monitoring

- Work consisted of continued preparation of annual groundwater monitoring report, which is part of the 2013 CMI Annual Report. This work included reviewing groundwater monitoring text, tables and figures.

Task 8 - NPDES PLUS Monitoring

- The monthly NPMP sampling event for July was completed. This required coordinating access to Spiral Weld property prior to performing the sampling event. As bulkhead activities have been completed downstream of the Outfall 010 monitoring point, this point has been removed from the monthly NPMP sampling.
- Based on a review of the June Additional NPMP Sampling event results, up to two more events may be conducted, following completion of the planned outfall sampling. Activities also included development of a budget amendment and revisions to the sampling plan.
- Preparation of the GSI strategy memo was also performed. This included evaluation of the metals exceedances, revising the memo to include direct GSI discharge, updating tables to incorporate 2014 data, review of corresponding figures, and development of a budget amendment.

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

- Work completed consisted of an onsite meeting with CSX to discuss potential deed restrictions and miscellaneous site activities.

Task 10 – Maintain Select Surface Covers

- Completed routine inspections of select surface covers and documentation of surface cover status was performed. Inspections and documentation were performed to ensure no breach in surface cover had occurred since the previous inspection.
- Completed review and finalization of AOI-40 surface cover work plan to address direct contact concerns. The AOI-40 surface cover plan was submitted to the EPA for review.

Task 11 - Lead Soil Removal

- Prepared the Northern Parcel Manganese Soil Removal documentation report and submitted to the USEPA for review.

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

- Developed and presented a Buick City LNAPL summary to the MDEQ.
- Prepared and submitted the June Monthly USEPA update memo, the Quarterly USEPA progress report, and the RACER Buick City Settlement Agreement Update Report.
- Continued preparation of the 2013 CMI Annual Report including report, figures and table review.
- Participated in a meeting with the EPA in Chicago to review the Remedy Recommendation Memo.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

- Drafted an outfall exit strategy memo for RACER review, including a review of tables, figures and text.
- Began preparation of the 2014 Outfall 003 boom study work plan that will allow better delineation of where LNAPL is infiltrating the storm sewers.

Task 14 - Address 15 Areas of Subsurface LNAPL

- Continued evaluation of potential remedies for Outfall 003 LNAPL infiltration elimination. The evaluation identified potential data gaps and a ranking of the elimination options based on a variety of effectiveness and implementability criteria.

Routine OMM Work

Task 1 - Outfall 003/004 Oil Removal Systems

- Continued OMM activities on the 003/004 system. Activities included inspection of the 003/004 interceptor, weekly gauging, and weekly sampling. 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.

Task 6 - Maintain Booms on Outfalls

- Completed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, 005 and of Oil Interceptor #2. Inspections of the outfalls were performed once per week, prior to forecasted rain events, and following rain events to ensure booms were functioning properly and identify when maintenance events were necessary.
- Completed inspections at Oil Interceptor #2 once a week to ensure that the booms are in good order and identify when maintenance events are necessary.

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

- Completed routine O&M and reporting for the AOI-09B system.
- Performed weekly O&M visits, monthly monitoring well gauging, monthly system groundwater sample collection, monthly and weekly vapor sample collection at the AOI-09B system. Weekly vapor sample collections were performed to provide additional data sets to better determine whether system operations are nearing asymptotic conditions.
- In addition, the June monthly POTW report to the City of Flint and June monthly air report to USEPA for the AOI-09B system were generated and submitted. Completed monthly 002 passive recovery trench inspection and gauging.



Attachment 2

August 2014 Monthly Update



ARCADIS of Michigan, LLC
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MEMO

To:
Chris Black, USEPA

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

From:
Micki M. Maki

Date:
October 13, 2014

ARCADIS Project No.:
B0064410.2014.01202

Subject:
August 2014 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust, ARCADIS is submitting this August 2014 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from August 1, 2014 through August 31, 2014. Please note that format of the report has been changed slightly to provide more detailed description of activities completed. Also, the summary of routine operations, maintenance, and monitoring (OMM) tasks has been moved to the end of the document.

Task 1 - Outfall 003/004 Oil Removal Systems

- One weekly inspection of the 003/004 system concluded that a blockage was present in the diversion lines. Line jetting was performed to remove the blockage and optimize system performance.
- Received USEPA waste approval for the Outfall 003/004 system on August 20, 2014. Began modifying the Outfall 003/004 System Cleaning RFP to reflect the USEPA approval.

Task 2 - LNAPL Investigation

- Continued evaluating vapor intrusion pathway to determine areas of concern that may need additional investigation or evaluation.
- Continued finalizing the Remedy Recommendation Report. Memos and figures were updated to incorporate comments.
- Continued preparation of the 2014 Supplemental Corrective Measures Implementation (CMI) Work Plan, which outlines additional field work needed to further characterize and delineate the extent of the impacts at the site.

Task 3 - LNAPL Recovery Bench and Field-Scale Testing

- Reviewed data for the development of an Outfall 003 treatability study and selected locations based on representative groundwater and LNAPL data.

Task 4 - Operate Fact. 10 LNAPL/GW System

This task was previously completed prior to the month of August 2014. No work was performed during this month for this task.

Task 5 - Operate Fact. 36 LNAPL/GW System

This task was previously completed prior to the month of August 2014. Specifications for the former system were provided for potential use at other sites, with no other work related to this task performed.

Task 7 - Enhanced Groundwater Monitoring

- Continued preparation of annual groundwater monitoring report, which is part of the 2013 CMI Annual Report. This work included development of future monitoring plan, reviewing groundwater monitoring text, tables and figures.
- Initiated planning and coordination of annual 2014 groundwater monitoring and sampling activities

Task 8 - NPDES PLUS Monitoring

- Coordinated and completed the monthly NPMP sampling event. This required coordinating access to American SpiralWeld property prior to performing the sampling event. As bulkhead activities have been completed downstream of the Outfall 010 monitoring point, this point has been removed from the monthly NPMP sampling.
- Preparation of the GSI strategy memo was also performed. This included evaluation of the metals exceedances, revising the memo to include direct GSI discharge, updating tables to incorporate 2014 data, and review of corresponding figures.

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

- Began well survey for groundwater restrictive zone in coordination with the City of Flint.
- Completed a summary of damaged or missing monitoring wells.
- Completed Remedy Recommendation Memo edits through final review of WMU #3, 7, and 10 closures.

Task 11 - Lead Soil Removal

- Finalized Northern Parcel Completion Memo revisions and submitted completed memo to USEPA.
- Developed costs of surface cover versus excavation for the direct contact exceedances at AOI-40-1.

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

- Prepared and submitted the July Monthly USEPA update memo.
- Continued preparation of the 2013 CMI Annual Report including report, figures and table review.
- Prepared annual scope and budget for 2015 site activities.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

- Continued to update the outfall exit strategy memo for RACER review, including a review of tables, figures and text and incorporation of RACER comments to memo.
- Continued preparation of the 2014 Outfall 003 boom study work plan to refine the delineation of where LNAPL is infiltrating the storm sewers.
- Performed oversight of subcontractor BMJ completing GPS survey of select manholes at Outfall 004 and preparation of reroute activities.
- Initiated Outfall 004 sewer reroute design and task coordination, including drafting a scope of work, discussions with City of Flint and review of existing sewer structural analysis.

Task 14 - Address 15 Areas of Subsurface LNAPL

- Continued evaluation of potential remedies for Outfall 003 LNAPL infiltration elimination. The evaluation identified potential data gaps and a ranking of the elimination options based on a variety of effectiveness and implementability criteria.

Routine OMM Work

Task 1 - Outfall 003/004 Oil Removal Systems

- Continued OMM activities on the 003/004 system. Activities included inspection of the 003/004 interceptor, weekly gauging, and weekly sampling. 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.

Task 6 - Maintain Booms on Outfalls

- Completed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, 005 and of Oil Interceptor #2. Inspections of the outfalls were performed once per week, prior to forecasted rain events, and following rain events to ensure booms were functioning properly and identify when maintenance events were necessary.
- Completed inspections at Oil Interceptor #2 once a week to ensure that the booms are in good order and identify when maintenance events are necessary.

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

- Completed routine O&M and reporting for the AOI-09B system. As part of routine maintenance it was determined that the blowers were leaking oil. This issue was addressed.
- Performed weekly O&M visits, monthly monitoring well gauging, monthly system groundwater sample collection, monthly and weekly vapor sample collection at the AOI-09B system. Weekly vapor sample collections were performed to provide additional data sets to better determine whether system operations are nearing asymptotic conditions.
- The July monthly POTW report to the City of Flint and July monthly air report to USEPA for the AOI-09B system were generated and submitted.
- Completed monthly 002 passive recovery trench inspections and gauging.



Attachment 3

September 2014 Monthly Memos



ARCADIS of Michigan, LLC
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MEMO

To:
Chris Black, USEPA

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

From:
Micki M. Maki

Date:
October 14, 2014

ARCADIS Project No.:
B0064410.2014.01202

Subject:
September 2014 Project Update - RACER Buick City Site, Flint, Michigan

On behalf of Revitalizing Auto Communities Environmental Response Trust (RACER), ARCADIS is submitting this September 2014 Project Update to provide a brief summary of work performed at the Buick City Site (the Site) from September 1, 2014 through September 30, 2014. Please note that format of the report has been changed slightly to provide more detailed description of activities completed. Also, the summary of routine operations, maintenance, and monitoring (OMM) tasks has been moved to the end of the document.

Task 1 - Outfall 003/004 Oil Removal Systems

- Developed the Outfall 003/004 system maintenance event RFP and waste characterization samples were collected.

Task 2 - LNAPL Investigation

- Finalized and submitted the Final Draft Remedy Recommendation Report.
- Continued preparing the 2014 Supplemental Corrective Measures Implementation (CMI) Work Plan.

Task 4 - Operate Fact. 10 LNAPL/GW System

This task was previously completed prior to the month of September 2014. No work was performed during this month for this task.

Task 5 - Operate Fact. 36 LNAPL/GW System

This task was previously completed prior to the month of September 2014. Specifications for the former system were provided for potential use at other sites, with no other work related to this task performed.

Task 7 - Enhanced Groundwater Monitoring

- Continued planning and coordination of annual 2014 groundwater monitoring and sampling activities.

Task 8 - NPDES PLUS Monitoring

- Coordinated and completed the monthly NPMP sampling event.
- Completed investigation to identify acceptable alternate outfall sampling locations. This required coordinating access to Spiral Weld property prior to performing the sampling event.
- Continued to prepare the GSI strategy memo, including; evaluation of the metals exceedances, revising the memo to include direct GSI discharge, updating tables to incorporate 2014 data, review of corresponding figures, and development of a budget amendment.
- Developed a sampling plan to investigate the direct discharge pathway between AOI 40 and the Flint River, which was included in the SCMI Work Plan.

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

- Completed neighborhood well survey for groundwater restrictive zone in coordination with the City of Flint, and preparation of the well survey memo and attachments.

Task 11 - Lead Soil Removal

- Developed a draft notification letter to the MDEQ regarding the sale of Northern Parcel to ASW.
- Developed costs of surface cover versus excavation for the direct contact exceedances at AOI-40-1.

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

- Finalized and Submitted the Remedy Recommendation Report to the USEPA.
- Updated and submitted the draft annual scope and budget for 2015 site activities to RACER for review.

Task 13 - Outfall 002/005 Oil Minimization & Investigation

- Continued to develop an outfall exit strategy memo for RACER review, including a review of tables, figures and text and implementation of RACER comments to memo.
- Finalized and submitted 2014 Outfall 003 boom study work plan that will allow better delineation of where LNAPL is infiltrating the storm sewers.
- Finalized and submitted Outfall 004 sewer reroute design packet to the City of Flint.
- Completed the Outfall 006, 009, and 010 bulkheading scope of work.

Task 14 - Address 15 Areas of Subsurface LNAPL

- Continued evaluation of potential remedies for Outfall 003 LNAPL infiltration elimination. The evaluation identified potential data gaps and a ranking of the elimination options based on a variety of effectiveness and implementability criteria.

Routine OMM Work

Task 1 - Outfall 003/004 Oil Removal Systems

- Continued OMM activities on the 003/004 system. Activities included inspection of the 003/004 interceptor, weekly gauging, and weekly sampling. 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.

Task 6 - Maintain Booms on Outfalls

- Completed inspections and maintenance (as necessary) of Outfalls 002, 003, 004, 005 and of Oil Interceptor #2. Inspections of the outfalls were performed once per week, prior to forecasted rain events, and following rain events to ensure booms were functioning properly and identify when maintenance events were necessary.
- Completed inspections at Oil Interceptor #2 once a week to ensure that the booms are in good order and identify when maintenance events are necessary.

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

- Completed routine O&M and reporting for the AOI-09B system. As part of routine maintenance it was determined that the blowers were found to be leaking oil. This issue was addressed.
- Performed weekly O&M visits, monthly monitoring well gauging, monthly system groundwater sample collection, monthly and weekly vapor sample collection at the AOI-09B system. Weekly vapor sample collections were performed to provide additional data sets to better determine whether system operations are nearing asymptotic conditions.
- Completed and submitted the August monthly POTW report to the City of Flint and August monthly air report to MDEQ for the AOI-09B system.
- Completed monthly 002 passive recovery trench inspections and gauging.



Attachment 4

4th Quarter 2014 and 1st Quarter
2015 Field Schedule

RACER Buick City Quarterly Report #13 Fourth Quarter 2014 and First Quarter 2015 Schedule

ID	Task Name	Duration	Start	Finish	1st Quarter			
					Sep	Nov	Jan	Mar
1								
2	Task 1 - Outfall 003/004 Oil Removal Systems	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
3	Outfall 003/004 System OMM	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
4	Annual Outfall 003/004 System Maintenance 2014 Event	30 days	Mon 11/3/14	Fri 12/12/14	[Gantt bar in Nov]			
5								
6	Task 2 - Supplemental Investigations	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
7	Supplemental Corrective Measures Implementation (SCMI) Work Plan #1 Development	8 days	Wed 10/1/14	Fri 10/10/14	[Gantt bar in Sep]			
8	EPA Review and Approval Process	30 days	Mon 10/13/14	Fri 11/21/14	[Gantt bar in Sep/Oct]			
9	SCMI Work Plan #1 Planning and Coordination	10 days	Mon 10/13/14	Fri 10/24/14	[Gantt bar in Sep]			
10	SCMI Work Plan #1 Implementation	10 days	Mon 10/27/14	Fri 11/7/14	[Gantt bar in Oct]			
11								
12	SCMI Work Plan #2 Development	30 days	Mon 1/5/15	Fri 2/13/15	[Gantt bar in Jan]			
13	EPA Review and Approval Process	30 days	Mon 2/16/15	Fri 3/27/15	[Gantt bar in Feb]			
14								
15	Vapor Intrusion Investigation	107 days	Mon 11/3/14	Tue 3/31/15	[Gantt bar from Nov to Mar]			
16								
17	Task 3 - LNAPL Recovery Bench and Field Scale Pilot Testing	87 days?	Mon 12/1/14	Tue 3/31/15	[Gantt bar from Dec to Mar]			
18	Conduct AOI 36-1/36-2 Pilot Test	15 days	Mon 12/1/14	Fri 12/19/14	[Gantt bar in Dec]			
19	AOI 36-1/36-2 Pilot Test Summary/Basis of Design (BOD) Report	20 days	Mon 1/5/15	Fri 1/30/15	[Gantt bar in Jan]			
20	EPA Approval of AOI 36-1 BOD Recommendations	20 days	Mon 2/2/15	Fri 2/27/15	[Gantt bar in Feb]			
21								
22	Additional Pilot Test	42 days	Mon 2/2/15	Tue 3/31/15	[Gantt bar in Feb/Mar]			
23								
24	Task 6 - Maintain Booms on Outfalls	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
25	Standard OMM	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
26	Oil Interceptor #2 Maintenance	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
27								
28	Task 7 - Enhanced Groundwater Monitoring	23 days	Wed 10/1/14	Fri 10/31/14	[Gantt bar in Sep]			
29	Annual Groundwater Sampling Event -2015	23 days	Wed 10/1/14	Fri 10/31/14	[Gantt bar in Sep]			
30	Planning/Coordination	13 days	Wed 10/1/14	Fri 10/17/14	[Gantt bar in Sep]			
31	Field Event	10 days	Mon 10/20/14	Fri 10/31/14	[Gantt bar in Oct]			
32								
33	Task 8 - NPDES Plus Monitoring	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
34	Monthly Sampling Events	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
35								
36	Address Metal Impact in Site Storm Sewers	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
37								
38	Task 12 - Agency Coordination/Negotiation, Reporting, Project Management	157 days	Wed 10/1/14	Thu 5/7/15	[Gantt bar from Sep to May]			
39	Agency Meetings and Negotiations	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			
40	Project Management and Administration	130 days	Wed 10/1/14	Tue 3/31/15	[Gantt bar from Sep to Mar]			

RACER Buick City Quarterly Report #13 Fourth Quarter 2014 and First Quarter 2015 Schedule

ID	Task Name	Duration	Start	Finish	1st Quarter			
					Sep	Nov	Jan	Mar
41	Reporting	91 days	Thu 1/1/15	Thu 5/7/15	[Task bar spanning from Sep to Mar]			
42	Final Decision Issued by EPA	1 day	Mon 1/5/15	Mon 1/5/15	[Task bar at start of Jan]			
43	CMI Work Plan	88 days	Tue 1/6/15	Thu 5/7/15	[Task bar from start of Jan to Mar]			
44	CMI Annual Report -2015	63 days	Thu 1/1/15	Mon 3/30/15	[Task bar from start of Jan to Mar]			
45								
46	Task 13 - Outfall 002/005 Oil Minimization & Investigation	58 days	Wed 10/1/14	Fri 12/19/14	[Task bar from Oct to Dec]			
47	Outfall 004 Reroute Design and Work Plan development	20 days	Wed 10/1/14	Tue 10/28/14	[Task bar in Oct]			
48	EPA Review and Approval Process	20 days	Wed 10/29/14	Tue 11/25/14	[Task bar in Oct/Nov]			
49	Outfall 004 Reroute Planning and Coordination	15 days	Mon 11/3/14	Fri 11/21/14	[Task bar in Nov]			
50	Outfall 004 Reroute Implementation	20 days	Mon 11/24/14	Fri 12/19/14	[Task bar in Nov/Dec]			
51								
52	Task 17 - Compliance	130 days	Wed 10/1/14	Tue 3/31/15	[Task bar from Oct to Mar]			
53	Outfall 003A Weekly Sampling and eDMR's	130 days	Wed 10/1/14	Tue 3/31/15	[Task bar from Oct to Mar]			
54	SWPP annual review and Inspections	130 days	Wed 10/1/14	Tue 3/31/15	[Task bar from Oct to Mar]			
55	Yearly Trend Monitoring and PMP	130 days	Wed 10/1/14	Tue 3/31/15	[Task bar from Oct to Mar]			
56								
57	Task 18 - Addressing Soil Impacts	64 days	Thu 1/1/15	Tue 3/31/15	[Task bar from Jan to Mar]			
58	Surface Cover Installations	64 days	Thu 1/1/15	Tue 3/31/15	[Task bar from Jan to Mar]			
59	Addendum to Soil Cover Work Plan	40 days	Thu 1/1/15	Wed 2/25/15	[Task bar in Jan]			
60	EPA Review and Approval Process	24 days	Thu 2/26/15	Tue 3/31/15	[Task bar in Feb]			
61								
62	Task 19 - Remedy Design, Implementation, and OM&M	186 days	Wed 10/1/14	Wed 6/17/15	[Task bar from Oct to Jun]			
63	AOI 36-1/36-2 MPE System	120 days	Thu 1/1/15	Wed 6/17/15	[Task bar from Jan to Jun]			
64	System Design	30 days	Mon 3/2/15	Fri 4/10/15	[Task bar in Mar]			
65	Infrastructure Coordination	120 days	Thu 1/1/15	Wed 6/17/15	[Task bar from Jan to Jun]			
66								
67	Outfall 002 Passive Recovery Trench OM&M	130 days	Wed 10/1/14	Tue 3/31/15	[Task bar from Oct to Mar]			
68								
69	Remedy Design and Implementation	64 days	Thu 1/1/15	Tue 3/31/15	[Task bar from Jan to Mar]			
70								
71	Restrictive Covenants	64 days	Thu 1/1/15	Tue 3/31/15	[Task bar from Jan to Mar]			
72								
73	AOI 09-B MPE System	5 days	Mon 1/19/15	Fri 1/23/15	[Task bar in Jan]			
74	Submit AOI 09-B Completion Memo to EPA	1 day	Mon 1/19/15	Mon 1/19/15	[Task bar at start of Jan]			
75	EPA Review and Approval Process	4 days	Tue 1/20/15	Fri 1/23/15	[Task bar in Jan]			
76								
77	Task 20 - Outfall Exit Strategy	57 days	Mon 1/12/15	Tue 3/31/15	[Task bar from Jan to Mar]			
78	Outfall 005	57 days	Mon 1/12/15	Tue 3/31/15	[Task bar from Jan to Mar]			
79	Coord with MDEQ/City OF Flint	30 days	Mon 1/12/15	Fri 2/20/15	[Task bar in Jan]			
80	EPA Review and Approval Process	28 days	Sun 2/22/15	Tue 3/31/15	[Task bar in Feb]			