MEMO

ARCADIS Design & Consultancy for natural and built assets

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From:

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Date:

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Arcadis Project No.:

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Subject:

PFAS Short-Term Water Characterization Update
RACER Buick City Site Flint, Michigan

This memo provides a status update of the sampling conducted pursuant to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) March 13, 2019 letter requiring a Short-Term Water Characterization (STWC) for the Buick City Site (Site) to assess potential per- and poly-fluoroalkyl substances (PFAS) impacts associated with the Site.

RECENT WET WEATHER SAMPLE RESULTS

On October 21, 2019 wet weather sampling was completed at four outfalls (002, 005, 006, and 013), as shown on **Figure 1**. An attempt was made to collect a wet weather sample from Outfall 004; however, no flow was present.

During the event 0.21 inches of precipitation was received over 6 hours. The samples were collected between hour 2 and 3 of the event.

Outfall 002

During this sampling event the level of the Flint River had dropped sufficiently for the sample to be collected from the Outfall 002 discharge point. The analytical results detected PFOA at a concentration of 50 ng/L and PFOS at a concentration of 2,490 ng/L (**Figure 1**). The previous wet weather sample was

collected from manhole MH 2-1 and detected PFOA at a concentration of 12 ng/L and PFOS at a concentration of 400 ng/L.

Outfall 005

During this sampling event the level of the Flint River had dropped sufficiently for the sample to be collected from the Outfall 005 discharge point. The analytical results detected PFOA at a concentration of 8.7 ng/L and PFOS at a concentration of 111 ng/L (**Figure 1**). The previous wet weather sample was collected from manhole MH 5-1 and detected PFOA at a concentration of 11 ng/L and PFOS at a concentration of 51 ng/L.

Outfall 006

The wet weather samples for the Outfall 006 Drainage Area were both collected from the outfall discharge point at the Flint River. During the October 2019 event PFOA was detected at a concentration of 19.3 ng/L and PFOS at a concentration of 106 ng/L (**FIgure 1**). The previous wet weather sample detected PFOA at a concentration of 2.8 ng/L and PFOS at a concentration of 11 ng/L.

Outfall 013

The wet weather samples for the Outfall 013 Drainage Area were both collected from manhole MH 13-2. Due to high water levels in the river a sample could not be collected from the outfall. During the October 2019 event PFOA was detected at a concentration of 5.05 ng/L and PFOS at a concentration of 32.9 ng/L (**Figure 1**). The previous wet weather sample detected PFOA at a concentration of 37 ng/L and PFOS at a concentration of 630 ng/L.

NEXT STEPS

Remaining work required to complete the STWC includes collecting two rounds of wet weather samples from Outfalls 007, 007A, 008 and 012 and one wet weather sample from Outfalls 004, 004A, and 005A.

Future progress reports will be provided as the work moves forward.

Attachments:

Figure 1 – Storm Sewer Sample Locations
Table 1 - Wet Weather Outfall Sampling Summary

Table 1 - Wet Weather Outfall Sampling Summary
RACER Trust, Buick City Site, Flint, Michigan

Outfall	Sampling Location	Wet Weather Result	Wet Weather Result
001	Outfall	PFOA - 6.2 ng/L PFOS - 7.9 ng/L	PFOA - 32 ng/L PFOS - 30 ng/L
002	MH 2-1/Outfall	PFOA - 12 ng/L PFOS - 400 ng/L	PFOA - 50 ng/L PFOS - 2,490 ng/L
003	MH 3-1	PFOA - 10 ng/L PFOS - 60 ng/L	PFOA - 9.8 ng/L PFOS - 36 ng/L
004	MH 4-2	PFOA - ND PFOS - 1.8 ng/L	--
004A	MH 4A-1	PFOA - 12 ng/L PFOS - 46 ng/L	--
005	MH 5-1	PFOA - 11 ng/L PFOS - 51 ng/L	PFOA - 8.7 ng/L PFOS - 111 ng/L
005A	Outfall	PFOA - 0.86 JI ng/L PFOS - ND	--
006	Outfall	PFOA - 2.8 ng/L PFOS - 11 ng/L	PFOA - 19.3 ng/L PFOS - 106 ng/L
007	Outfall	--	--
007A	Outfall	--	--
008	MH 8-1	--	--
010	MH 10-1	PFOA - 150 ng/L PFOS - 1,500 ng/L	PFOA - 150 ng/L PFOS - 1500 ng/L
011	MH 11-6	PFOA - 7.2 ng/L PFOS - 70 ng/L	PFOA - 24 ng/L PFOS - 170 ng/L
012	Outfall	--	--
013	MH 13-2	PFOA - 37 ng/L PFOS - 630 ng/L	PFOA - 5.05 ng/L PFOS - 32.9 ng/L

Notes:
ND - Not detected
ng/L - nanograms per liter

APPROXIMATE LOCATION
OF WATER INTAKE

LEGEND:

- PROPERTY BOUNDARY
- PROPERTY PREVIOUSLY OWNED BY RACER
- AREA ASSUMED TO BE PART OF OUTFALL DRAINAGE AREA
- AREAS WITH NO DIRECT DRAINAGE TO THE STORM SEWER
- 001 OUTFALL DRAINAGE AREA AND NUMBER
- STORM SEWER SAMPLE LOCATIONS

ASW Property

Lear Property 1

Lear Property 2

ANDREW STREET

INDUSTRIAL AVENUE

NORTH STREET

FIREFIGHTING TRAINING AREA

FORMER PAINTING AREA

FORMER WWTP AREA

PICKLING AND ENAMELING

ASSEMBLY AND PAINT PAINT SHOP

AOI 36-2, AOI 36-1 GP, AOI 36-5, AOI 36-1 MS, AOI 81-2, AOI 10-4, AOI 10-1, AOI 03-1, AOI 02-B, AOI 40-A, AOI 40-B, AOI 16-C, AOI 05-5, AOI 05-1, AOI 83/84-2, AOI 83/84-4

1 MILE 1 MILE

0 450' 900'
APPROXIMATE SCALE IN FEET

NOTES:

1. BASE MAP INFORMATION FROM A SURVEY BY BMJ, INC. DATED APRIL 2001, AT A SCALE OF 1:100. AERIAL IMAGE FROM ARCGIS 10 ONLINE MAPPING, ACCESSED 6/12/2013.
2. BASED ON INFORMATION AVAILABLE AS OF JUNE 2016.
3. MH4-20-2 DOWN GRADIENT PLUG'S 24-INCH LINE WAS BLOCKED WITH SEDIMENT, YIELDING NO FLOW PRIOR TO PLUG INSTALLATION. PLUG IS MADE UP OF NATURALLY PACKED SEDIMENT IN PIPE.
4. BULKHEADS AND PLUGS INSTALLED DECEMBER 2017.

RACER TRUST
BUICK CITY
FLINT, MICHIGAN

STWC PFAS UPDATE MEMO

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FIGURE
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