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Subject:

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

This memo summarizes the results of additional per- and poly-fluoroalkyl substances (PFAS) outfall sampling conducted in June and July 2019 at the RACER Buick City Site (the Site) located in Flint, Michigan. Sampling was conducted pursuant to the Michigan Department of Environment, Great Lakes, and Energy (EGLE) March 13, 2019 letter requiring a Short-Term Water Characterization (STWC) to assess the potential impacts. Due to weather conditions all of the sampling required by EGLE was not completed by the initial deadline of July 1, 2019. Sampling will continue for both EGLE required purposes and for site investigation purposes. Future progress reports will be provided as the work moves forward.

Samples from the following events are discussed in this memo:

- June 28, 2019 – Dry weather samples were collected at manhole MH 2-1 (Outfall 002 alternate) and MH 13-2 (Outfall 013 alternate).
- July 3, 2019 – Wet weather samples were collected at Outfall 001, MH 2-1 (Outfall 002 alternate), MH 3-1 (Outfall 003 alternate), MH 10-1 (Outfall 010 alternate), and MH 11-6 (Outfall 011 alternate).

These sample results are also presented on **Figure 1**.

DRY AND WET WEATHER SAMPLES

Dry and wet weather results for each outfall are provided below. The shaded cells show results not previously reported.

Outfall 001

In July 2019 a wet weather sample was collected from Outfall 001 at the Flint River, located approximately 3,000 feet downgradient of the ASW property and analyzed for PFAS. The table below presents the results of all samples collected at Outfall 001. This outfall is also about 1600 feet upstream from the City of Flint water intake.

Analyte	Outfall 001		
	Dry Weather Result (ng/L) 4/3/19	Wet Weather Result (ng/L) 4/29/19	Wet Weather Result (ng/L) 7/2/19
PFOA	32	6.2	32
PFOS	30	7.9	30

Outfall 002

In June/July 2019 both a dry and wet weather samples were collected from Manhole 2-1 near the discharge point to the Flint River, more than 4,000 feet downgradient of the Site and submitted for PFAS analysis. Manhole MH 2-1 was selected as an alternate location representative of the actual outfall because the outfall was below water level at the river. The laboratory reported the following results:

Analyte	Outfall 002	
	Dry Weather Result (ng/L) 6/28/19	Wet Weather Result (ng/L) 7/2/19
PFOA	38	12
PFOS	620	400

Outfall 003

In July 2019 a wet weather sample was collected from alternate location MH 3-1, located approximately 400 feet downgradient of the Site and analyzed for PFAS. Manhole MH 3-1 was also selected as an alternate location representative of the actual outfall because the outfall was below water level at the river. The table below presents the results of the samples collected. Please note that the dry weather sample was collected from Outfall 003, while the wet weather samples were collected from the alternate location.

Analyte	Outfall 003		
	Dry Weather Result (ng/L)	Wet Weather Result (ng/L)	Wet Weather Result (ng/L)
	11/20/18	6/5/19	7/2/19
PFOA	10	10	9.8
PFOS	120	60	36

Outfall 010

In July 2019 a wet weather sample was collected from alternate location MH 10-1, located approximately 300 feet downgradient of the Site and analyzed for PFAS. Manhole MH 10-1 was selected as an alternate sampling location representative of the actual outfall because the outfall was below water level at the river. The table below presents the results of the samples collected. Please note that the dry weather sample was collected from Outfall 010, while the wet weather samples were collected from the alternate location.

Analyte	Outfall 010		
	Dry Weather Result (ng/L)	Wet Weather Result (ng/L)	Wet Weather Result (ng/L)
	2/27/19	6/5/19	7/2/19
PFOA	200	150	150
PFOS	2000	1500	1500

Outfall 011

In July 2019 a wet weather sample was collected from alternate location MH 11-6, located approximately 1,800 feet downgradient of the Site and analyzed for PFAS. Manhole MH 11-6 was selected as an alternate sampling location representative of the actual outfall because the outfall was below water level at the river. The table below presents the results of the samples collected. Please note that the dry weather sample was collected from Outfall 011, while the wet weather samples were collected from the alternate location.

Analyte	Outfall 011		
	Dry Weather Result (ng/L)	Wet Weather Result (ng/L)	Wet Weather Result (ng/L)
	2/27/19	6/5/19	7/2/19
PFOA	10	7.2	24
PFOS	100	70	170

Outfall 013

In June/July 2019 both dry and wet weather samples were collected from alternate location MH 13-2 near the discharge point to the Flint River, downgradient of the Site and submitted for PFAS analysis. Manhole

MH 13-2 was selected as an alternate sampling location representative of the actual outfall because the outfall was below water level at the river. The table below presents the results of the samples collected.

Analyte	Outfall 013	
	Dry Weather Result (ng/L) 6/28/19	Wet Weather Result (ng/L) 6/5/19
PFOA	9.1	37
PFOS	85	630

NEXT STEPS

The remaining required wet weather samples will continue to be collected as weather permits. In addition, as the sample results are received the Short-Term Water Characterization data will be evaluated along with Site investigation data to better understand potential source areas and options for how to address each. Follow up final report to EGLE on the requested STWC work is planned for October 1, 2019..