Memo



SUBJECT

Buick City Oil Interceptor #2 Decommissioning Work Plan

DATE November 13, 2021

DEPARTMENT Environment

COPIES TO Grant Trigger, RACER Trust Micki Maki, Arcadis Chris Peters, Arcadis **TO** Kevin Lund, EGLE

PROJECT NUMBER 30075935

NAME Tony Maffeo

This Oil Interceptor #2 Decommissioning Work Plan (Work Plan) has been prepared on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust by Arcadis. The purpose of this Work Plan is to provide the approach to decommission the former inline Oil Interceptor #2, which is no longer in use as a result of the Outfall 003 storm sewer reroute (Outfall 003 reroute) at the RACER Buick City Site (the Site) located in Flint, Michigan (**Figure 1**). This oil interceptor historically managed infiltrating light non-aqueous phase liquid (LNAPL) from the releases of various oils used in Site-related manufacturing operations, which resulted in infiltration of LNAPL into select Site storm sewers and subsequent discharge to the Flint River. Per and poly-fluorinated alkyl substances (PFAS) were observed in water samples collected from the Outfall 003 storm sewer system upgradient of this oil interceptor. The Outfall 003 reroute was completed earlier this year resulting in the rerouting of off-Site storm water drainage around the LNAPL-impacted area north of Leith Street and south of Stewart Avenue (**Figure 1**) eliminating any flow through this oil interceptor.

Historically, samples collected from Oil Interceptor #2 have exhibited metals, SVOCs, VOCs, PCBs (at TSCA Levels [50 ppm]), and PFAS. Three samples were collected from Oil Interceptor #2 on May 20, 2021 to confirm the presence of PCBs and other constituents. One sample was collected of the sludge scraped from the interior of the superstructure, one sample was collected of the sediment from the bottom of the structure, and one sample was collected of the water/oil mixture in the structure. The results are included in **Table 1**.

The goal of this Work Plan is to decommission Oil Interceptor #2 and prevent future release of any contaminants remaining in the structure.

INITIAL STEPS

Prior to beginning decommissioning on Oil Interceptor #2, the following steps will be taken:

- Three manholes connected to the interceptor will be filled with concrete to hydraulically disconnect the system from the abandoned Outfall 003 storm sewer system.
- The cover on the oil interceptor will be removed.
- Sediment thickness and water depth at various points throughout the structure will be measured to confirm quantities.
- The water will be sampled at four locations and sediment sampled at two locations and analyzed for SVOCs, VOCs, Metals, PCBs, and PFAS. Sediment samples will be collected by Ponar sampler via the access point on the oil interceptor cover.

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- If residual sludge material is present on the outer walls, it will be sampled at up to six locations (depending on actual presence). Residual sludge present on sheet pile walls will be scraped/wiped to generate enough material.
- Wipe samples of will be collected from up to six locations
- Following sampling activities the cover on the oil interceptor will be reinstalled.

Upon receipt of the sampling results waste profiles will be generated and treatment will be design as necessary.

DECOMMISSIONING ACTIVITIES

Storm water pollution control measures will be installed around the anticipated disturbed areas. The need for a Soil Erosion and Sediment Control (SESC) permit will be determined with the contractor based on the anticipated size of the disturbed area.

The superstructure including roof, catwalk, and building area will be demolished, processed, and taken for off Site disposal. Based on preliminary samples, the residual sludge on the superstructure had detections of PCBs above TSCA levels. Building areas with residual sludge will be transported and disposed of at a TSCA landfill. Building materials without sludge will be transported for offsite at the appropriate disposal facility. Structural bracing will remain in place until it is deemed safe to remove.

The remaining oil/water mixture stored in the interceptor will be removed and possibly treated, for off Site disposal or discharge to the City of Flint Sanitary sewer. Any discharge would be permitted through the city and completed in accordance with their regulations. Should residual sludges be found on the sheet pile, they would be scraped off containerized for sampling and disposal.

Once the water has been removed the remaining sediment (initial sample detected 2 ppm PCB) would be regraded to allow for imported fill (from the I-69/475 road project) to be placed in compacted lifts to approximately 7 feet below final grade. Any remaining internal components of the oil interceptor will be removed at this time. Existing soils along the perimeter of the oil interceptor would be excavated one bucket wide and to a depth of five and a half feet and temporarily stockpiled for reuse. The sheet pile would be cut 5 feet below grade and transported for offsite at the appropriate disposal facility.

Imported clay (from the I-69/475 road project) will be placed in compacted lifts to six inches above top of the cut sheet pile wall extending outside the perimeter over the excavated area. A geomembrane will be placed over the area and keyed into the side to prevent water infiltration into the interceptor. A 1-foot buffer layer of clay will be installed to protect the geomembrane, a demarcation geotextile installed, and the stockpiled excavated material and general fill will be used to complete backfill the area to grade.

As an additional preventative measure, the abandoned storm sewer lines connected to the filled manholes will be excavated and broken to physically disconnect the system. Bulkheads will be installed on either side of the break.

POST DECOMMISSIONING ACTIVITIES

Following the completion of the project the survey data for the actual extents will be utilized to generate a restrictive covenant to be filed at the site for future owner's knowledge. A documentation report including photos and as-built drawing set will also be generated. A TSCA restrictive covenant will be filed for Oil Interceptor #2 for any residual PCBs and other contaminants remaining inside the structure. Excavation activities will be prohibited at this location.

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ATTACHED:

Figures

Tables



PLOTTED: 1/26/2018 8:52 PM 1 PLOTSTYLETABLE: I PAGESETUP: ACADVER: 20.1S (LMS TECH) RACUSE-NY DIV/GROUP-ENV DB/A.SANCHEZ LD/GMS PICC.S.PETERS PM:C/KIKER TM:C/KIKER LYR;(0.pt)ON+*0.FF=*REF* ålalsancheziOneDrive - ARCADISIBIII 380 Doss\RACER TRUST/2017 Buick City RCRA/201810064410.2017/101-DWG/RTBC-F-SITE LOCATION dwg LAYOUT: 1 SAVED: 4/11/2017 1:35 AM CITY:SYRACUSE-NY C:\Users\als

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Table 1Summary of Sample Analytical Results

	Sample Name:		BOB2CATWALK_052021	BOB2WATER_052021	BOB2SEDIMENT_052621
	Sample Depth():				
	Date Collected:	Units	05/20/21	05/20/21	05/26/21
SVOC					
2,4,5-Trichlorophenol		ug/L	1,000 U	1,000 U	1,000 U
2,4,6-Trichlorophenol		ug/L	1,000 U	1,000 U	1,000 U
2,4-Dinitrotoluene		ug/L	90 U	90 U	90 U
2-Methylphenol		ug/L	1,000 U	1,000 U	1,000 U
3&4-Methylphenol		ug/L	1,000 U	1,000 U	1,000 U
Hexachlorobenzene		ug/L	90 U	90 U	90 U
Hexachlorobutadiene		ug/L	100 U	100 U	100 U
Hexachloroethane		ug/L	100 U	100 U	100 U
Nitrobenzene		ug/L	100 U	100 U	100 U
Pentachlorophenol		ug/L	1,000 U	1,000 U	1,000 U
Pyridine		ug/L	100 U	100 U	100 U
TCLP SVOC					
1,1-Dichloroethene		ug/L	100 U	100 U	100 U
1,2-Dichloroethane		ug/L	100 U	100 U	100 U
1,4-Dichlorobenzene		ug/L	100 U	100 U	100 U
2-Butanone (Methyl ethyl ketone) (MEK)		ug/L	1,000 U	1,000 U	1,000 U
Benzene		ug/L	100 U	100 U	100 U
Carbon tetrachloride		ug/L	100 U	100 U	100 U
Chlorobenzene		ug/L	100 U	100 U	100 U
Chloroform (Trichloromethane)		ug/L	100 U	100 U	100 U
Tetrachloroethene		ug/L	100 U	100 U	100 U
Trichloroethene		ug/L	100 U	100 U	100 U
Vinyl chloride		ug/L	100 U	100 U	100 U
PCB					
Aroclor-1016 (PCB-1016)		mg/kg	9 UY	0.1 U	1 U
Aroclor-1221 (PCB-1221)		mg/kg	9 UY	0.1 U	1 U
Aroclor-1232 (PCB-1232)		mg/kg	9 UY	0.1 U	1 U
Aroclor-1242 (PCB-1242)		mg/kg	65 Y	0.2	2
Aroclor-1248 (PCB-1248)		mg/kg	9 UY	0.1 U	1 U
Aroclor-1254 (PCB-1254)		mg/kg	9 UY	0.1 U	1 U
Aroclor-1260 (PCB-1260)		mg/kg	9 UY	0.1 U	1 U
Inorganic					
Arsenic		ug/L	30	0.2	130
Barium		ug/L	180	20 U	590
Cadmium		ug/L	6	110	5 U
Chromium		ug/L	50 U	5 U	50 U
Cyanide (total)		mg/kg	0.6 U	50 U	0.6 U
Lead		ug/L	40	4 U	30 U

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Sample Depth():				
Date Collected:	Units	05/20/21	05/20/21	05/26/21
Mercury	ug/L	0.5 U	30 U	0.5 U
Selenium	ug/L	50 U	0.5 U	50 U
Silver	ug/L	5 U	50 U	5 U
Miscellaneous				
Flash point (closed cup)	mm/sec	2.2 U	5 U	2.2 U
рН	mg/kg	5.26	180 U	7.11
Sulfide	mg/kg	20 U	8.49	5
Total solids	mg/kg	880,000	40 U	360,000
PFAS				
Perfluorooctanoic acid (PFOA)	ng/kg	56 U	5.7	87 U
Perfluorooctane Sulfonic Acid (PFOS)	ng/kg	1,500	15	2,700
Perfluorooctane Sulfonic Acid - LN (PFOS-LN)	ng/kg	930	8	1,900
Perfluorooctane Sulfonic Acid - BR (PFOS-BR)	ng/kg	570	6.8	680

	Lab	
Qualifier Type	Qualifiers Definition	
Inorganic	U	Concentration below method detection limits
Inorganic	UY	Concentration below method detection limits and matrix interference
Inorganic	Y	Matrix interference
Organic	U	Concentration below method detection limits
Organic	UY	Concentration below method detection limits and matrix interference
Organic	Y	Matrix interference

Table Summary of SL Sample Analytical Results

Qualifier Type	Lab Qualifiers	Definition
Inorganic	U	Concentration below method detection limits
Inorganic	UY	Concentration below method detection limits and matrix interference
Inorganic	Y	Matrix interference
Organic	U	Concentration below method detection limits
Organic	UY	Concentration below method detection limits and matrix interference
Organic	Y	Matrix interference