

**SUBJECT**

RACER Trust Pontiac North Campus  
Fiero Temporary Monitoring Plan

**TO**

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U.S. Environmental Protection Agency  
Region 5  
77 West Jackson Boulevard LU-9J  
Chicago, Illinois 60604-3590

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30112891

**DEPARTMENT**

Environment

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This memorandum describes the approach for temporary groundwater monitoring at the former Fiero property of the Revitalizing Auto Communities Environmental Response Trust (RACER) Pontiac North Campus properties (Site) located in Pontiac, Michigan (**Figure 1**). The Fiero Temporary Monitoring Plan (FTMP) supplements the Pontiac North Campus Site Groundwater Monitoring Plan (GMP) that was presented as part of the Environmental Indicators (EI) CA 750 determination (ENVIRON 2002) as modified in 2009 and 2018. The objective of the FTMP is to collect data over the next four calendar quarters to further evaluate the potential for chlorinated volatile organic compound (cVOC) migration, as well as concentration trends for cVOCs in groundwater. The FTMP includes additional historical monitoring wells, newly installed monitoring wells and soil vapor monitoring points (SVMPs) installed at the perimeter of the former Fiero facility. The proposed monitoring locations, monitoring frequency and analytical parameters are summarized on **Table 1** and shown on **Figure 1**. The FTMP will be completed in parallel with the GMP and **Table 1** includes wells and parameters included in the GMP.

Groundwater gauging and sampling methodology of the FTMP will be consistent with the GMP, which utilizes the USEPA Low-Stress (or Low-Flow) Purging and Sampling Procedure (USEPA 2017). Gauging will be completed using an electronic water level meter accurate to 0.01-foot and sampling will be completed using low-flow sampling techniques. During sampling, purge water will be monitored for dissolved oxygen (DO), temperature, specific conductivity, turbidity, oxygen reduction potential (ORP), and pH. These water quality measurements will be used to determine groundwater sample stability prior to collection of the groundwater samples. All samples will be submitted for laboratory analysis of the RACER Pontiac North Campus site-specific volatile organic compounds (VOCs) via USEPA Method 8260. Additional compounds, including 1,4-dioxane and select metals, will continue to be sampled and analyzed annually consistent with the GMP.

In addition to groundwater monitoring, soil vapor monitoring will be completed as part of the FTMP. The methodology for collecting soil vapor samples will include completing a helium leak test to verify the seal of the sampling point and a “shut-in” test will be completed on the sampling train to verify that a closed system is in place prior to sampling. Following a passed helium leak test and shut-in test, a SUMMA® canister, with attached pre-set flow regulator, will be used to collect the sample for laboratory analysis of the Fiero site-specific VOCs in accordance with the USEPA Method TO-15. Following sampling, an additional three volumes of air will be purged into a Tedlar® bag. Oxygen, carbon dioxide, and methane readings will be collected from the Tedlar® bag containing purged air at the sample point.

Mr. Peter Ramanauskas  
US Environmental Protection Agency, Region 5  
February 23, 2022

This FTMP will be executed for four quarters at which time an assessment will be completed to determine appropriate changes or modifications for 2023.

## **References**

ENVIRON International Corporation (ENVIRON). 2002. Resource Conservation and Recovery Act Environmental Indicators Report, General Motors Corporation, Pontiac North Campus Facility, Pontiac, Michigan. July, 2002.

U.S. Environmental Protection Agency (USEPA; Region I). 2017. Low-Stress (Low-Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells – Revision 4. July 30, 1996; Revised September 19, 2017.

## **Enclosures**

Table 1 – Fiero Temporary Monitoring Plan Matrix

Figure 1 – Fiero Temporary Monitoring Plan Locations







February 2022  
RACER Trust Pontiac North, Pontiac, Michigan

Well	Gauging	Analyte			Primary Function
		VOCs	1,4-Dioxane	Select Metals**	
MW-02-17	Q	Q	A*		SW perimeter well to monitor for downgradient migration of CVOC impacts
MW-05-18	Q	Q	A*		SW perimeter well to monitor for downgradient migration of CVOC impacts
MW-06-20	Q	Q			SW perimeter well to monitor for downgradient migration of CVOC impacts
MW-07-20	Q	Q			SW perimeter well to monitor for downgradient migration of CVOC impacts
MW-08-21	Q	Q			SW perimeter well to monitor for downgradient migration of CVOC impacts
MW-09-22	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MW-10-22	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MW-13-22	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MW-11-22	Q	SA			SW perimeter well to monitor plume boundary
MWF12-01R	Q	SA	A*	A*	S perimeter well to monitor plume boundary
MWF12-02R	Q	SA		A*	S perimeter well to monitor plume boundary
MWF15-01	Q				Guaging only to assist with GW elevation contour
MWF16-01	Q				Guaging only to assist with GW elevation contour
MWF16-05	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MWF16-06	Q	Q	A*		Monitoring well to monitor the concentration and stability of the CVOC plume core
MWF16-07	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-09	Q				Guaging only to assist with GW elevation contour
MWF16-10	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-11	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-12	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-15	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-16	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MWF16-17	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-18	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MWF16-19	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-20	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-22	Q	Q			Monitoring well to monitor the concentration and stability of the CVOC plume core
MWF16-23	Q	Q	A*		SW perimeter well to monitor for downgradient migration of CVOC impacts
MWF16-24	Q	SA			Delineation well to monitor and define the plume boundary
MWF16-25	Q	Q	A*		perimeter well to monitor for migration of CVOC impacts
MWF16-26	Q				Guaging only to assist with GW elevation contour
MWF7-02	Q	Q	A*		Monitoring well to monitor the concentration and migration of the CVOC plume core
MWF7-03	Q	SA			Delineation well to monitor and define the plume boundary
MWF8-01	A*	A*			perimeter well to monitor for migration of CVOC impacts (GMP well)
MWOS-08	Q	Q			Offsite well to monitor for downgradient migration of CVOC impacts
MWOS-09	Q	Q			Offsite well to monitor for downgradient migration of CVOC impacts
MWOS-10	Q	Q			Offsite well to monitor for downgradient migration of CVOC impacts
PZF17-02	Q				Guaging only to assist with GW elevation contour
PZF17-04	Q				Guaging only to assist with GW elevation contour
PZF17-05	Q				Guaging only to assist with GW elevation contour
TW-12-22	Q	Q			Monitoring well to monitor the concentration and migration of the CVOC plume core
Unknown-01	Q	SA			Delineation well to monitor and define the plume boundary
SV-01-21		Q			SW perimeter - soil vapor monitoring
SV-02-21		Q			SW perimeter - soil vapor monitoring
SV-03-21		Q			SW perimeter - soil vapor monitoring
SV-04-21		Q			SW perimeter - soil vapor monitoring
SV-05-21		Q			SW perimeter - soil vapor monitoring
SV-06-21		Q			SW perimeter - soil vapor monitoring

**Notes:**  
SV locations will be monitored for soil vapor only.  
\* Well included in the Site Groundwater Monitoring Plan (GMP) and will include noted parameters annually.  
\*\* Select metals includes arsenic, nickel, lead, vanadium, chromium, and copper.  
Semi-annual wells will alternate monitoring between second quarter (2Q) and fourth quarter (4Q) and first quarter (1Q) and third quarter (3Q).  
Q = Quarterly  
SA = Semi-annual (2Q and 4Q in even years or 1Q and 3Q in odd years)  
A = Annual