

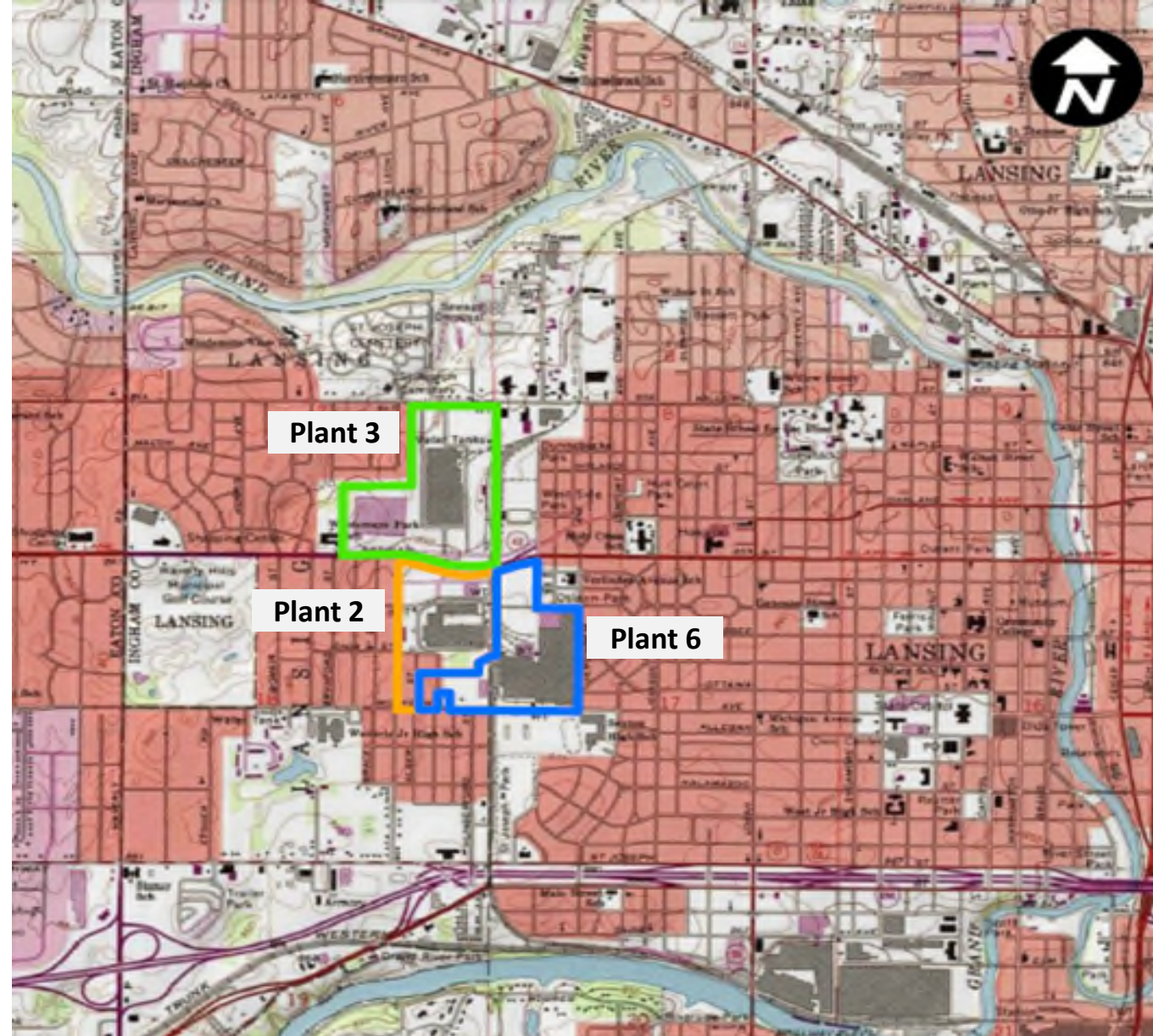
RACER TRUST LANSING PLANTS 2, 3, & 6

1Q 2020 Quarterly Progress Report | April 15, 2020

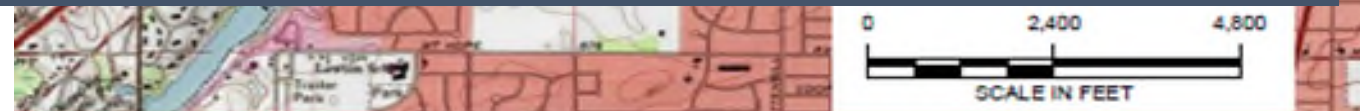


Site Introduction

- Remediation at the RACER Lansing Site is being performed through the RCRA Corrective Action program under the oversight of EGLE. Current activities include focused site characterization, interim actions, and evaluation of remedial alternatives.
- There is currently no known exposure pathways for area residents associated with the site contaminants.
- Characterization of the 1,4-dioxane plume in weathered bedrock at a depth of approximately 60 to 75 feet below the ground surface is complete. Interim actions for 1,4-dioxane include continued operation of the Plant 3 biosparge system and construction of the Plant 2 biosparge system. It is anticipated that portions of the Plant 2 biosparge system may need to operate for 10 to 15 years.
- Characterization of PFAS is ongoing. Interim actions for PFAS include storm sewer modifications on Plants 2, 3 and 6 to eliminate PFAS discharge offsite through the storm sewers.
- Vapor intrusion characterization is ongoing and will continue on Plant 6.
- Routine groundwater monitoring on Plants 2, 3, and 6 in the shallow (perched) zone, weathered bedrock, shallow bedrock and deep bedrock is ongoing and is anticipated to continue for 25 to 30 years.



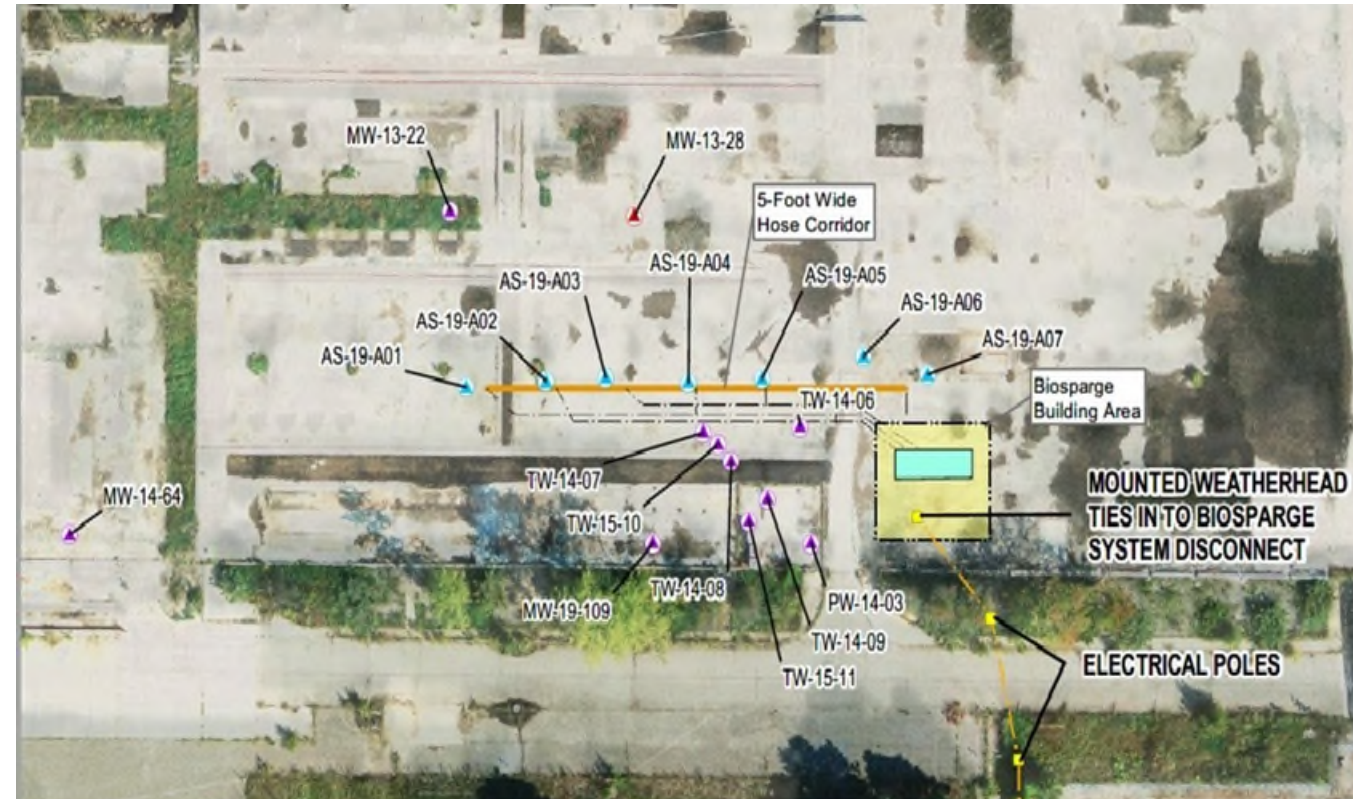
Activities completed during this period move the Site forward in the RCRA Corrective Action process



Biosparge System – Plant 3

The existing Plant 3 biosparge system is estimated to need to operate between 4 and 5 years to achieve it's remedial objective.

- The Plant 3 biosparge system continued operations throughout the 1Q of 2020.
- Nutrient injections were completed in March 2020.
- Performance monitoring of the Plant 3 system was completed during the 1Q 2020 (performance monitoring is completed quarterly).
- Results indicate a 97% reduction in 1,4-dioxane concentrations within the systems radius of influence. Complete results will be available in the 2020 Semi-Annual Groundwater Report which is scheduled to be completed during 3Q 2020.



Biosparge System – Plant 2

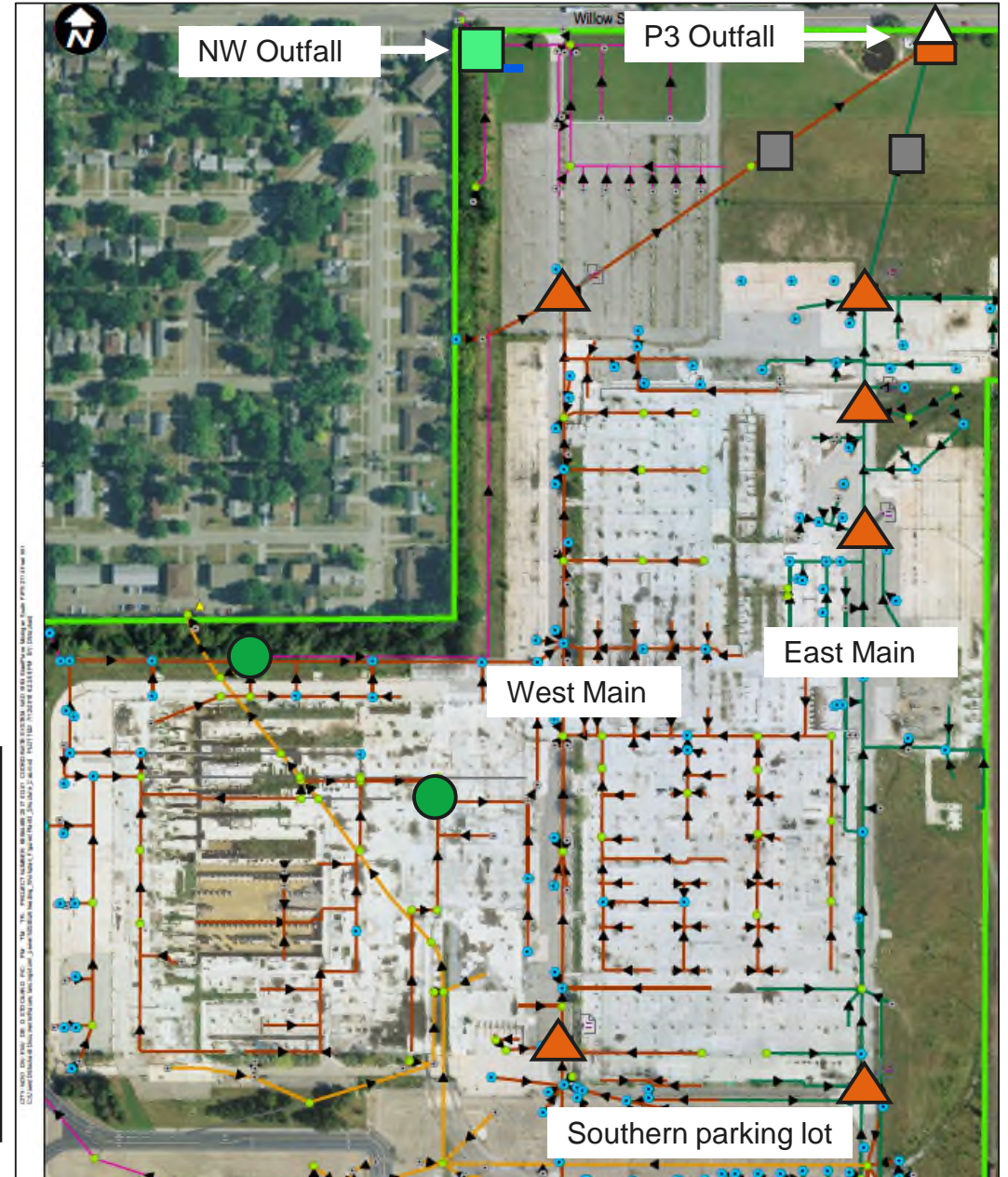
- System mechanical construction bid was awarded in late 2019.
- System building is being constructed off site and is approximately 75% built, site installation planned for 2Q 2020.
- System on-site construction bid recently awarded.
- On-site construction planned for 2Q 2020.




Plant 3 PFAS Storm Sewer Work

The objective of the storm sewer work at Plants 2 & 3 is to prevent PFAS impacted storm water from migrating off site through the Sites storm sewer lines. Activities completed during this period included:

- Filled four additional manholes based on follow up inspections.
- Sealed inside and outside NE P3 outfall manhole.
- Placed boom and repaired leaks in NE P3 outfall manhole.
- Sampled NW outfall – results below criteria.
- Inspection of NE P3 manhole planned for mid-late April.
- A second round of sampling at the NW outfall is planned during 2Q 2020.
- Cleaning of the NE outfall pipe, north of the Site, is planned during 2Q 2020.




Dry Weather Sampling (ng/L or parts per trillion (ppt))

 Does not exceed criteria

 Trickle

Sewer Modifications

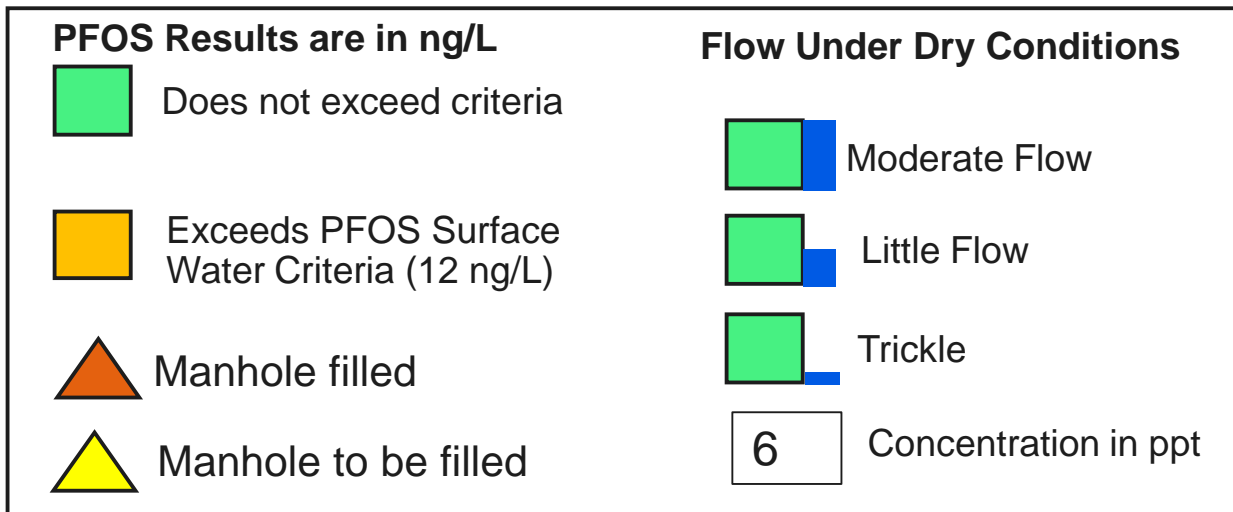
 Manhole filled with underwater concrete (Dec '19-Jan '20)

 Concrete monolith (2018)

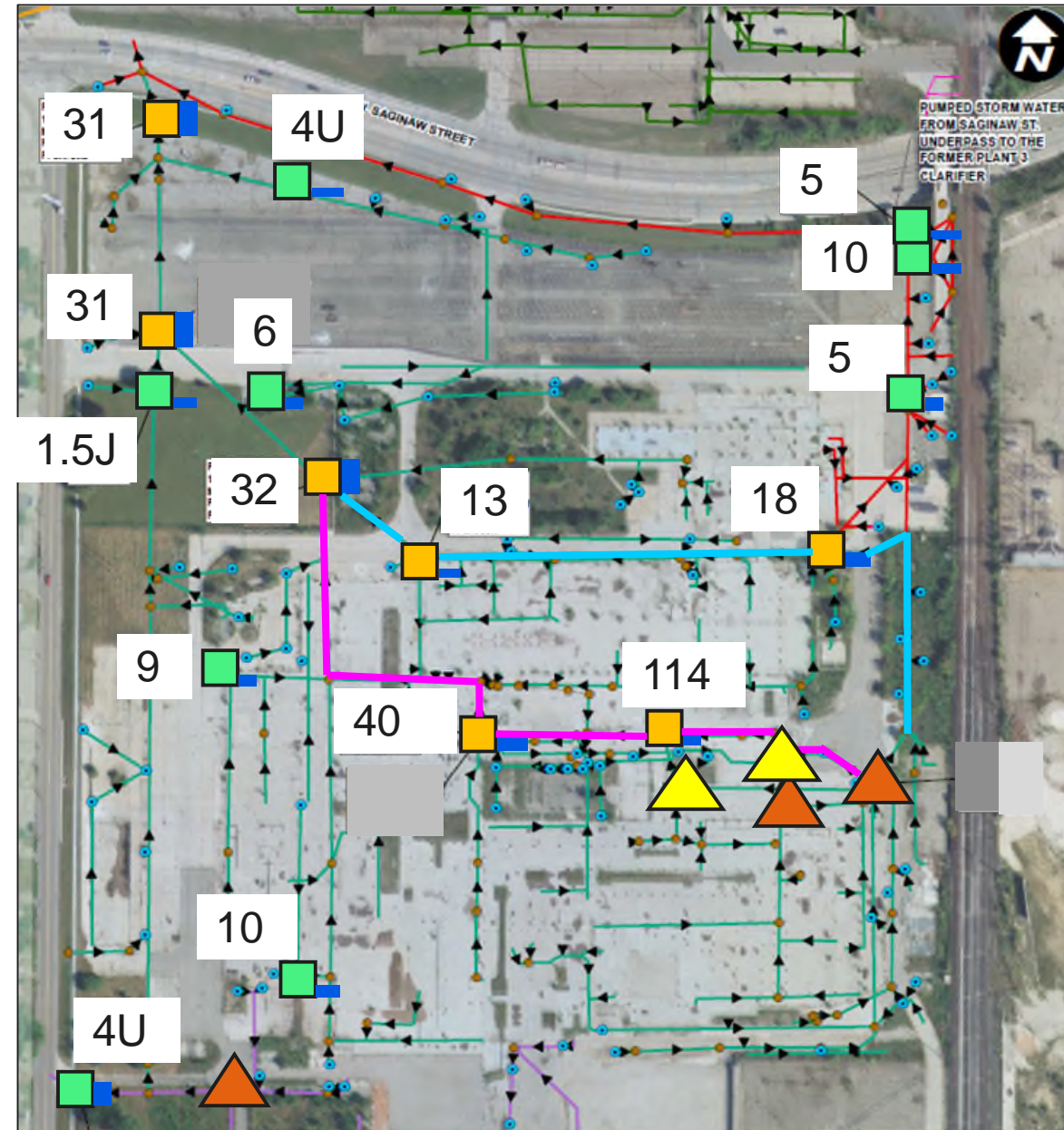
 Concrete bulkhead (2018)

Plant 2 PFAS Storm Sewer Work

- Sampled 16 manholes during 1Q 2020.
- A 75% reduction in PFOS concentrations was observed at the northern outfall, with an order of magnitude reduction in PFAS concentrations in half of the locations sampled, compared to sampling results before the modifications were completed in 4Q 2019.
- Filling of additional manholes is planned during 2Q 2020.
- Additional storm sewer sampling is planned during 2Q 2020.

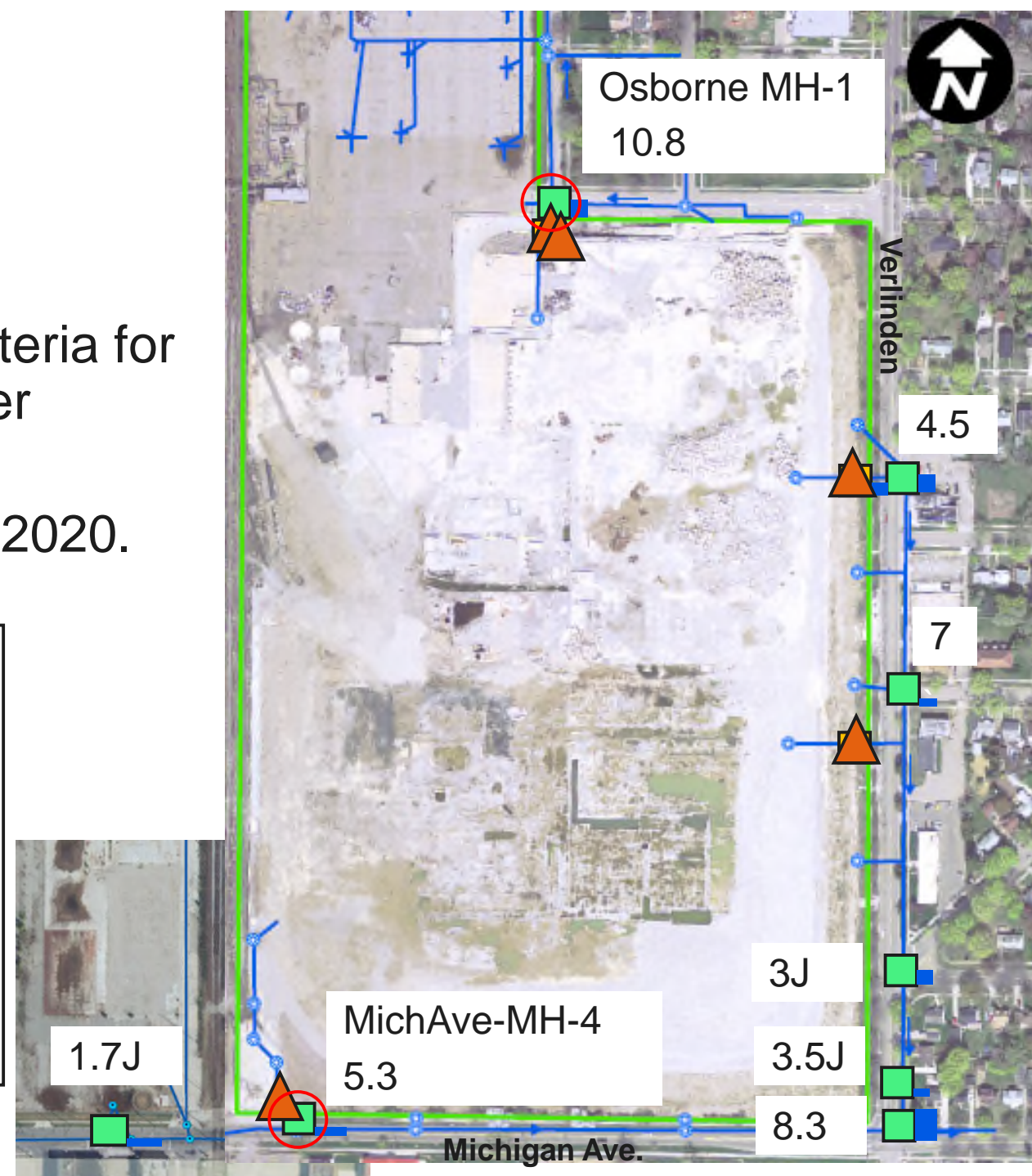
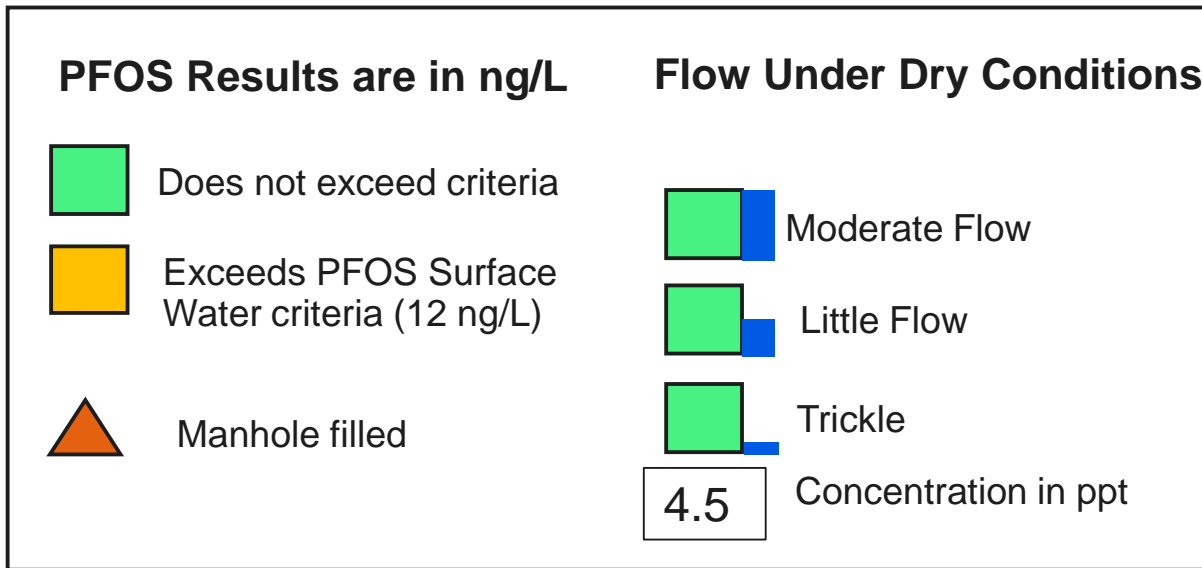


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Plant 6 PFOS Results Summary

- Sampled 8 manholes during 1Q 2020.
- No structures exceed Surface Water criteria for PFOS, which is the result of storm sewer modifications completed in 4Q 2019.
- Additional sampling planned during 2Q 2020.



Quarterly Groundwater Monitoring – 1Q 2020

- Followed the revised Interim Groundwater Monitoring Program (IGMP), approved by the Michigan Department of Environment, Great Lakes and Energy (EGLE).
- Completed monitoring between March 2nd and 4th, 2020.
- Plant 2 – 18 wells gauged; 18 wells sampled for 1,4-dioxane.
- Plant 3 – 16 wells gauged; 6 wells sampled for 1,4-dioxane; 10 wells sampled for PFAS.
- Plant 6 – 6 wells gauged and sampled for PFAS.
- Data collected during the 1Q 2020 sampling event will be provided in the next semi-annual IGMP Summary report targeted for completion during 3Q 2020.

Deep Bedrock Well Sampling – Low Level 1,4-Dioxane

Deep bedrock wells MW-19-118 and MW-19-119 installed in 4Q 2019 were sampled March 2020.

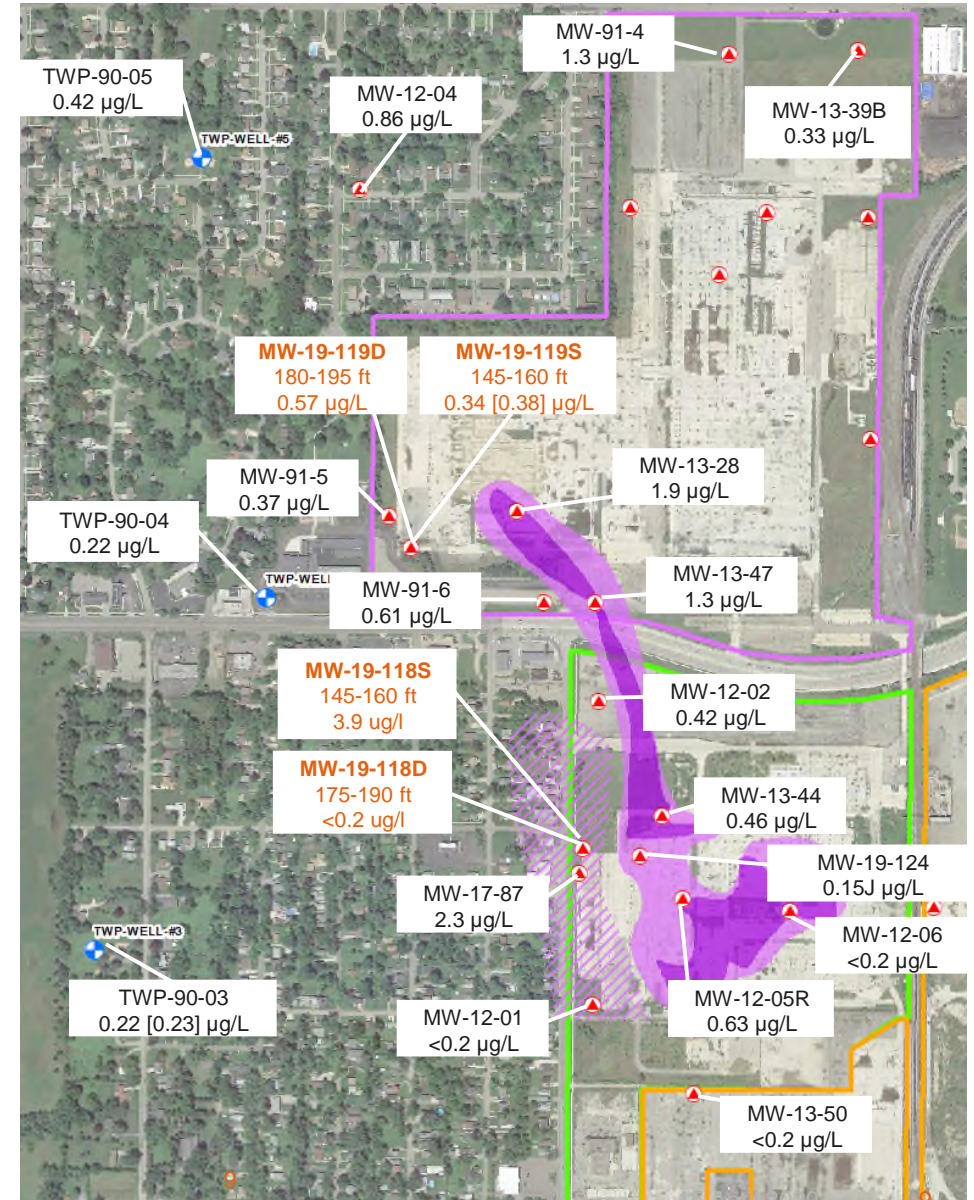
- Analyzed using USEPA Method 522 with a detection limit of 0.2 µg/L.
- All results below Michigan Part 201 Drinking Water Criteria or non-detect.
- New wells show similar concentrations as nearby bedrock wells sampled using the same methods in 2017.
- Except for MW-19-118S (located downgradient from the former Adam’s Plating Company), concentrations are consistent with background levels identified to the north and west of the RACER site.
- Deep bedrock wells planned to be sampled again during 2Q 2020.

Legend

- ▲ BEDROCK MONITORING WELLS
- MUNICIPAL WELLS
- LOWER 1,4-DIOXANE**
- LOWER 1,4-DIOXANE > 7.2 ug/L
- LOWER 1,4-DIOXANE > 72 ug/L
- ▨ FORMER ADAM'S PLATING EST. LOWER 1,4-DIOXANE >7.2 ug/L

Notes:

Deep bedrock sentinel well results are from March 2020
 Municipal well results are from December 2019
 All other low level 1,4-dioxane results are from March 2017



Vapor Intrusion Evaluation Summary

Evaluation being completed now because of recent changes to how EGLE addresses the vapor intrusion pathway.

- Installed 4 sub slab monitoring point (SSMPs) inside the former maintenance building located at the southwest corner of plant 2.
- Completed two shallow soil borings at Plant 6.
- Resampled one former groundwater (GW) sampling location at Plant 6.
- Sampled two existing monitoring wells at Plant 6.
- Compared data against Site Specific Volatilization to Indoor Air Criteria (SSVIAC) provided by EGLE in 2019.

Plant 2 Building SSMP Sampling

Nearby historical soil and groundwater samples above SSVIAC for isopropyl benzene (soil), naphthalene (soil), and phenanthrene (GW)

- Installation of 4 SSMPs inside the building.

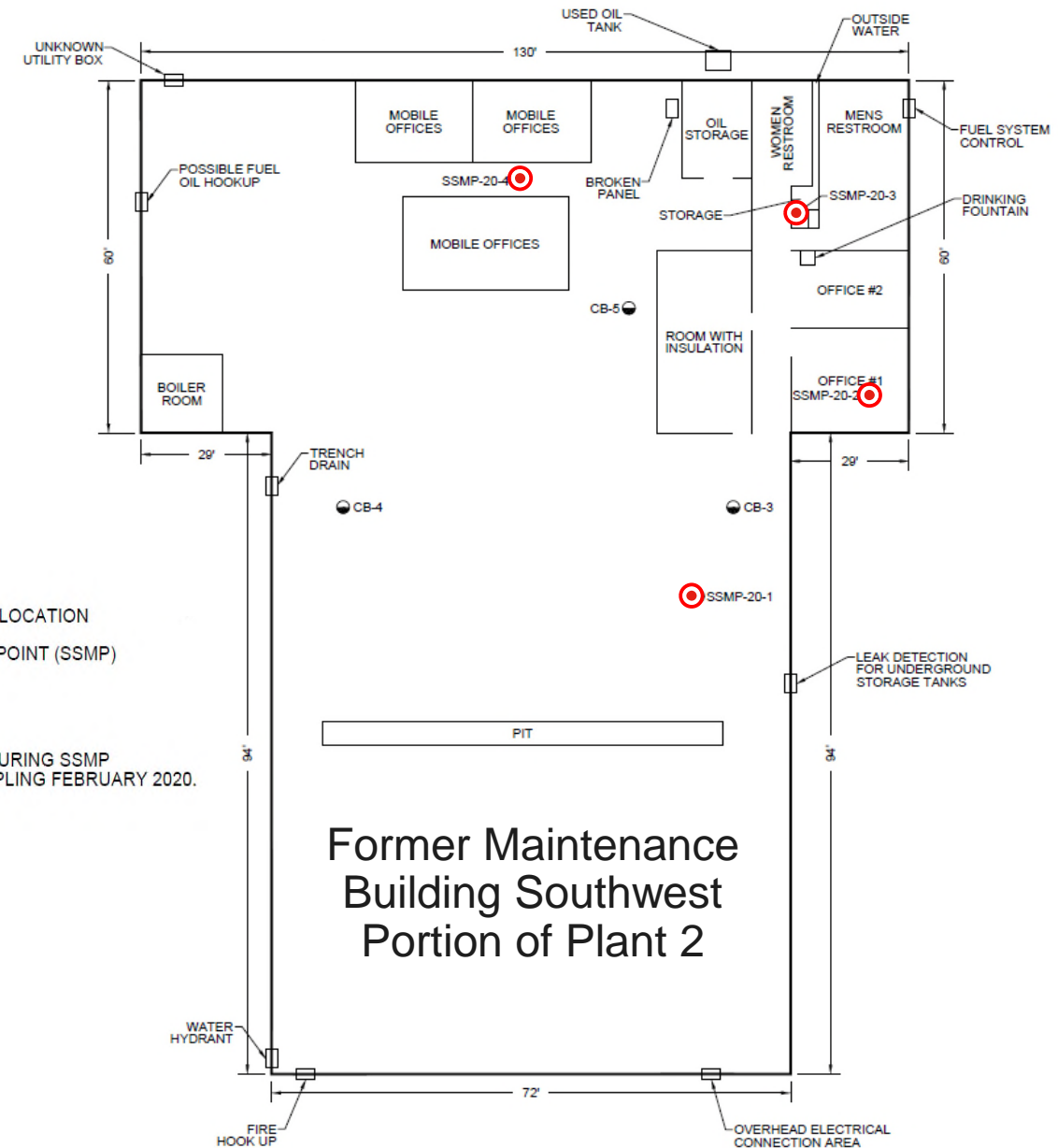
Detections include:

- Chloroform (SSMP-20-1): 11 ug/m³
- Dichlorodifluoromethane (Freon 12) (all): 2,000 to 4,000 ug/m³
- TCE (SSMP-20-3): 2 ug/m³

No exceedances of SSVIAC based on the following assumptions: <50,000 ft² building, slab on grade, groundwater >10 ft bgs

- Chloroform: 87 ug/m³
- TCE: 67 ug/m³
- No SSVIAC for Freon 12. Tier 3A VIAC Calculator: 17,000 ug/m³

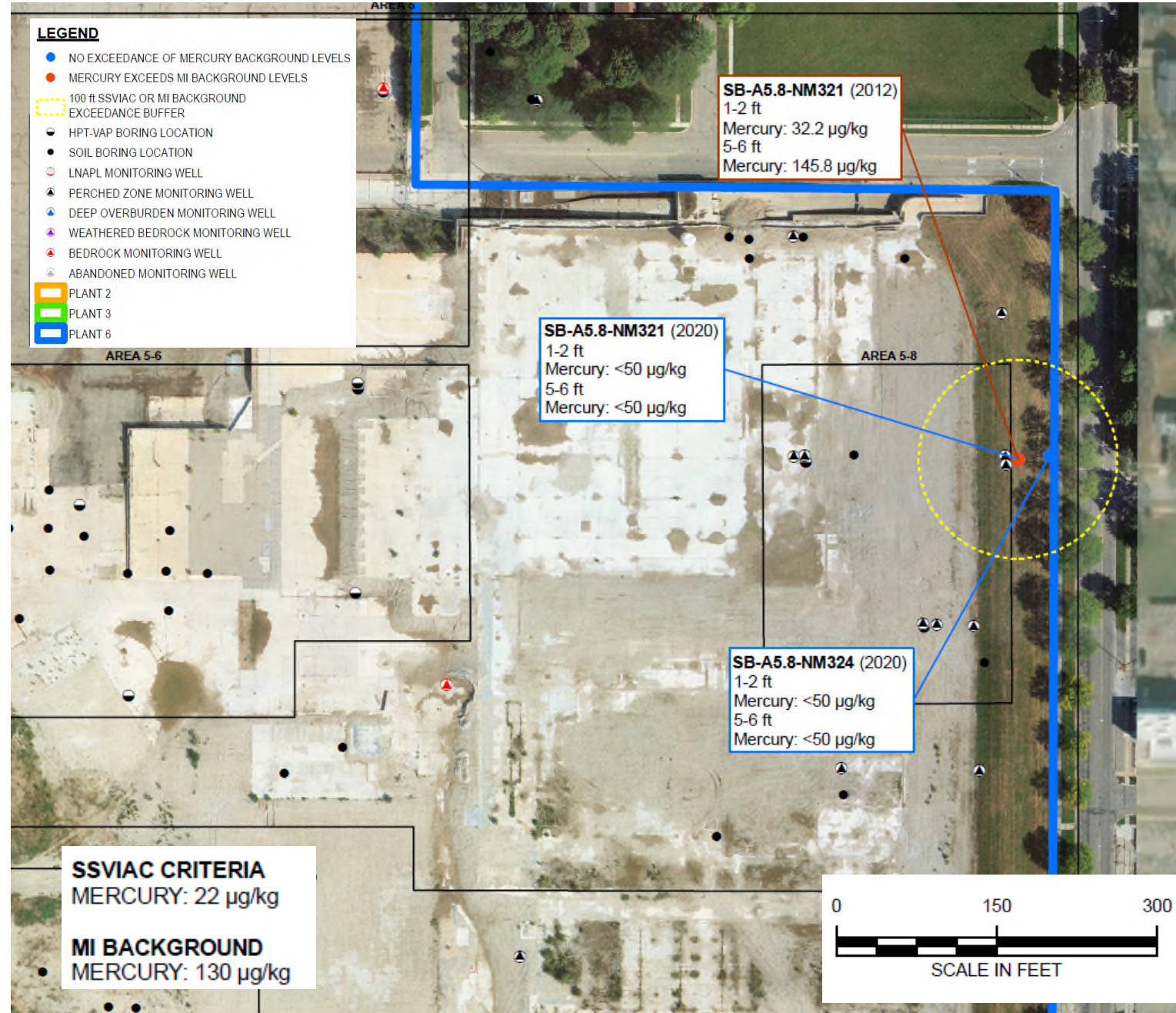
Quarterly sampling of the SSMPs will continue for a duration of one year in accordance with the approved work plan.



Mercury in Soil Plant 6

Resampling of soil did not detect mercury near the original exceedance, or at the property boundary.

Therefore, no further action proposed in this area.



GW SSVIAC Sampling - Plant 6

GW sampling did not detect phenanthrene in groundwater at the Plant 6 property boundary.

- The two wells will be resampled in 2Q 2020. If no phenanthrene is detected again no further action is warranted in this area.



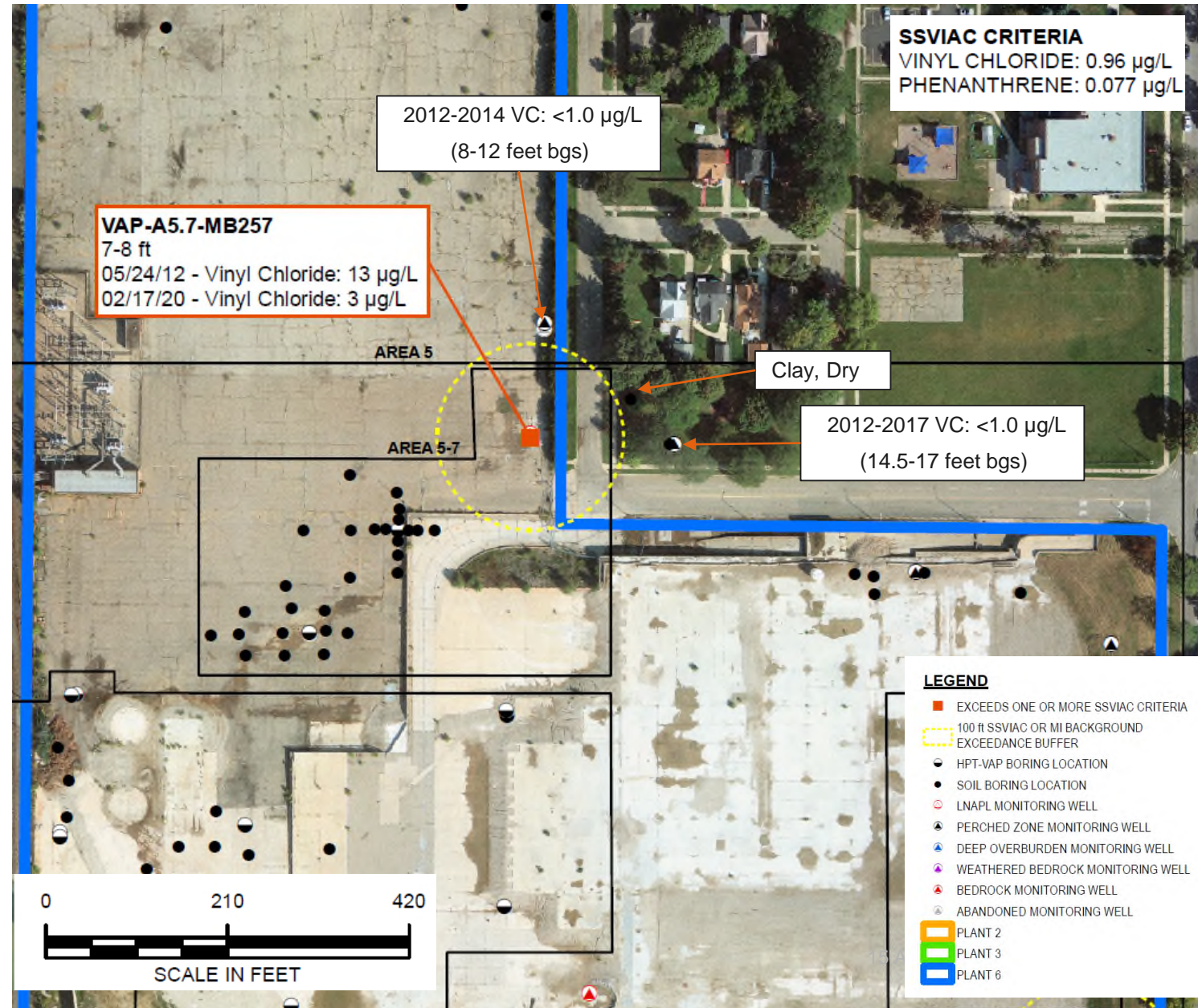
GW Exceedances Plant 6 Entrance

Resample at location identified as VAP-A5.7-MB257 indicates exceedance of vinyl chloride above residential GW SSVIAC:

- 1.7 ug/L – slab on grade
- 0.96 µg/L – basement

Also detections of TCE (1.0 µg/L) and cis-1,2-DCE (6 µg/L).

Currently evaluating next steps.



Work Plans, Reports, Data Submitted and Meetings

- January 15, 2020 – Submittal of 4Q 2019 Quarterly Progress Report.
- February 20, 2020 – Submittal of draft Plant 2 LNAPL conceptual site model (CSM) to EGLE.
- March 4, 2020 - Update meeting/presentation with EGLE.
- March 18, 2020- Storm sewer update meeting/presentation with Ingham County and the City of Lansing.
- March 26, 2020 – Submittal of Plants 2 and 3 Soils Corrective Measures Work Plan to EGLE.
- March 27, 2020 – Conference call with EGLE to discuss the results from the deep bedrock well low level 1,4-dioxane sampling.
- March 31, 2020 – Submittal of Summary of Results from groundwater sampling in Dunnebacke and West Side Park to the City of Lansing.

Work in Progress and Near-Term Milestones Anticipated During the 2nd Quarter 2020

Activity	Schedule
Biosparge	
Plant 2 Building Installation	May/June 2020
Plant 2 On-site construction	June/July 2020
Plant 2 System Startup	July/August 2020
Plant 3 Operations - continued operation and performance monitoring	Ongoing
Storm Sewer Corrective Actions	
Implementation of follow up storm sewer modifications on Plant 2 and Plant 3	May/June 2020
2Q Confirmation sampling on Plant 2, Plant 3, and Plant 6	June 2020
Investigations and Sampling	
2Q 2020 Routine Groundwater Monitoring Event	June 2020
Work Plans, Reports and Data Submitted, and Meetings	
Plant 2 PFAS Investigation Work Plan	April/May 2020
2019 Annual Groundwater Monitoring Report	April/May 2020
Additional VI Investigation Scope of Work	April 2020
Update Meeting with EGLE (Biosparge)	April 2020
2020 Semi-Annual Groundwater Monitoring Report	3Q 2020
Note: The timing of several activities are likely to be delayed due to the current Stay-Home Stay-In executive order.	