



ARCADIS of Michigan, LLC  
 10559 Citation Drive  
 Suite 100  
 Brighton  
 Michigan 48116  
 Tel 810.229.8594  
 Fax 810.229.8837  
 www.arcadis-us.com

Ms. Susan Kaelber-Matlock  
 Saginaw Bay District Office  
 Michigan Department of Environmental Quality  
 401 Ketchum Street, Suite B  
 Bay City, Michigan 48708

Subject:  
 2015 Supplemental RCRA Investigation Work Plan  
 RACER Trust Saginaw Malleable Iron (SMI) Plant Property  
 Saginaw, Michigan

ENVIRONMENT

Dear Ms. Kaelber-Matlock:

Date:  
 February 13, 2015

ARCADIS of Michigan, LLC (ARCADIS) is pleased to provide this general scope of work and plan to install up to 8 soil borings at the RACER Trust, SMI Plant Property in Saginaw, Michigan (Site). Based on the review of the PA/VS1 and RAP, there is potential that there is soil near solid waste management unit (SWMU) #1 (container waste storage area) and SWMU #13 (waste oil storage area) at the Site that is impacted by contaminants that were not previously analyzed for - semi-volatile organic compounds (SVOCs) and TAL metals. Additionally, volatile organic compounds (VOCs) were previously collected before methanol preservation methods, so it is recommended to obtain current data for VOCs.

Contact:  
 Scott Clearwater

Phone:  
 810-225-1921

Email:  
[Scott.Clearwater@arcadis-us.com](mailto:Scott.Clearwater@arcadis-us.com)

Our ref:  
 B0064434.2015

SWMU #	Stored Material	Historical Analysis	Proposed Analysis
1	<ul style="list-style-type: none"> <li>Solvent wastes from painting operations from area of interest (AOC) 2</li> <li>Sludge from a scrubber using sulfuric acid to absorb triethylamine vapors (SWMU #6)</li> </ul>	<ul style="list-style-type: none"> <li>VOCs</li> <li>lead</li> <li>polychlorinated biphenyls (PCBs)</li> </ul>	<ul style="list-style-type: none"> <li>VOCs</li> <li>SVOCs</li> <li>TAL metals</li> </ul>
13	Waste oil	<ul style="list-style-type: none"> <li>VOCs</li> <li>lead</li> <li>PCBs</li> </ul>	<ul style="list-style-type: none"> <li>VOCs</li> <li>SVOCs</li> <li>TAL metals</li> </ul>

Imagine the result

The goal of the additional soil sampling is to further characterize the soils near SWMU #1 and SWMU #13.

## SCOPE OF WORK

The locations of the proposed soil borings are provided on Figure 1. To further address potential impacts based on formerly stored wastes at SWMU #1 and SWMU #13, ARCADIS proposes the following scope of work:

- Advance up to 8 direct push soil borings to a depth that extends two feet into the native silt/clay, approximately 10 to 12 feet below ground surface (bgs) for supplemental investigation and vertical delineation.
- Soil borings will be continuously logged and based on field screening, up to two soil samples will be collected from each soil boring above the water table and analyzed for VOCs, SVOCs, and TAL Metals.
- If there is any indication of non-aqueous phase liquid (NAPL) in the soil borings, up to three two-inch groundwater monitoring wells will be installed.
- Soil borings will be backfilled using the soil cuttings to return the ground surface back to the previous grade.

## Methodology

The soil borings will be advanced using hand auger and direct push drilling methods. Continuous logging and screening from the ground surface to the final boring depth will be completed at each well location. During the drilling of each boring, soil samples will be visually described, logged, and screened using a photo-ionization detector (PID) to identify zones of potential impacts. Potentially-impacted soils (up to two samples per boring) will also be collected for dye and shake tests in the field, to assess the presence or absence of NAPL. Based on field screening, up to two soil samples per boring above the water table will be collected and submitted for analysis of VOCs, SVOCs, and TAL Metals. Samples collected for analysis will be shipped to TestAmerica Laboratories. Boring logs will be generated based on the field descriptions.

Any disturbance to the existing grade as a result of the soil borings will be restored to an acceptable condition.

**SCHEDULE**

Upon approval for the additional sampling, ARCADIS will contract Fibertec Environmental of Brighton, Michigan to provide the drilling services. Equipment will be mobilized to the Site when weather permits, likely not until the 2<sup>nd</sup> Quarter of 2015 and drilling will begin at the proposed locations.

Please contact me at 810-225-1921 if you have any questions regarding the enclosed report or its attachments.

Sincerely,

ARCADIS of Michigan, LLC

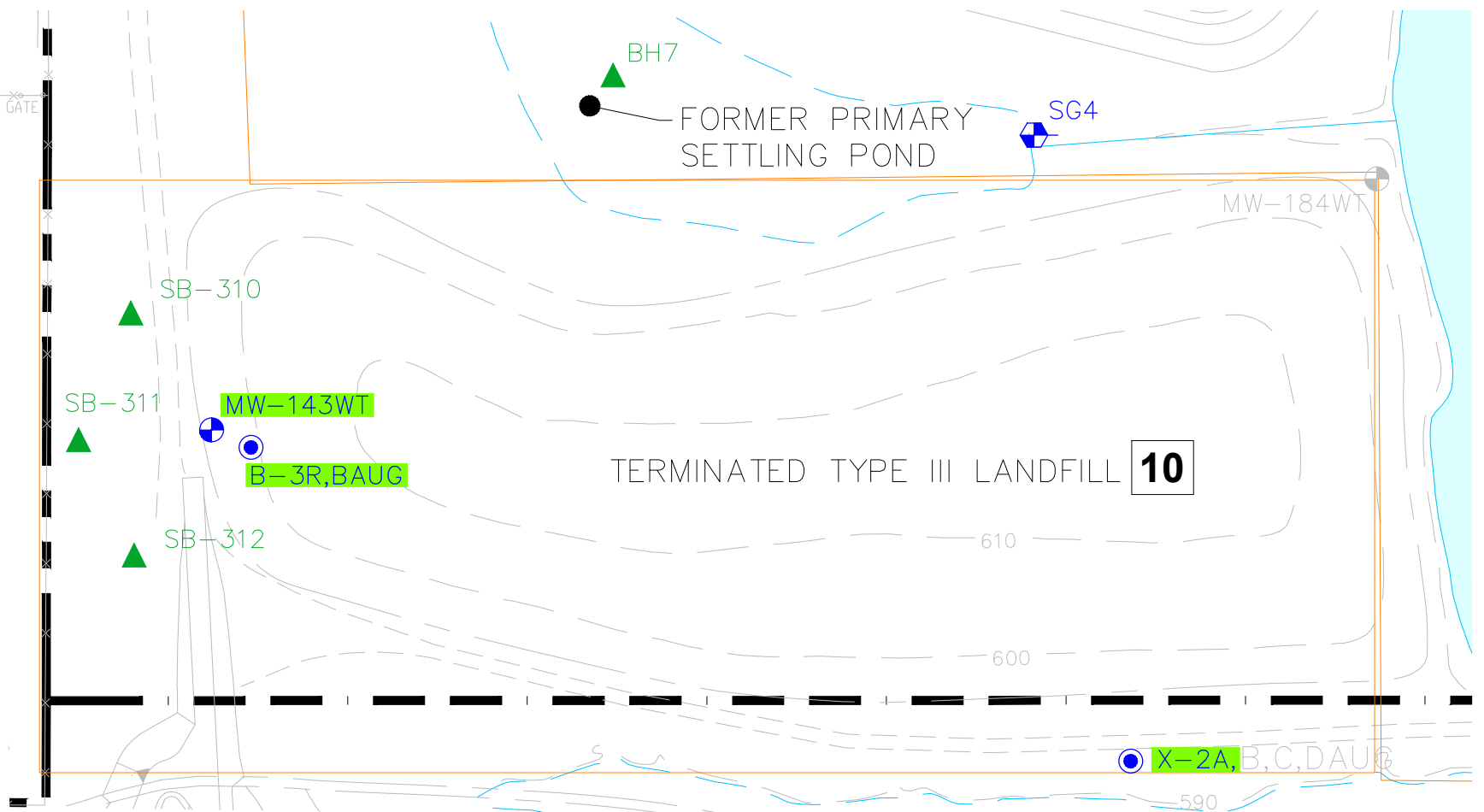
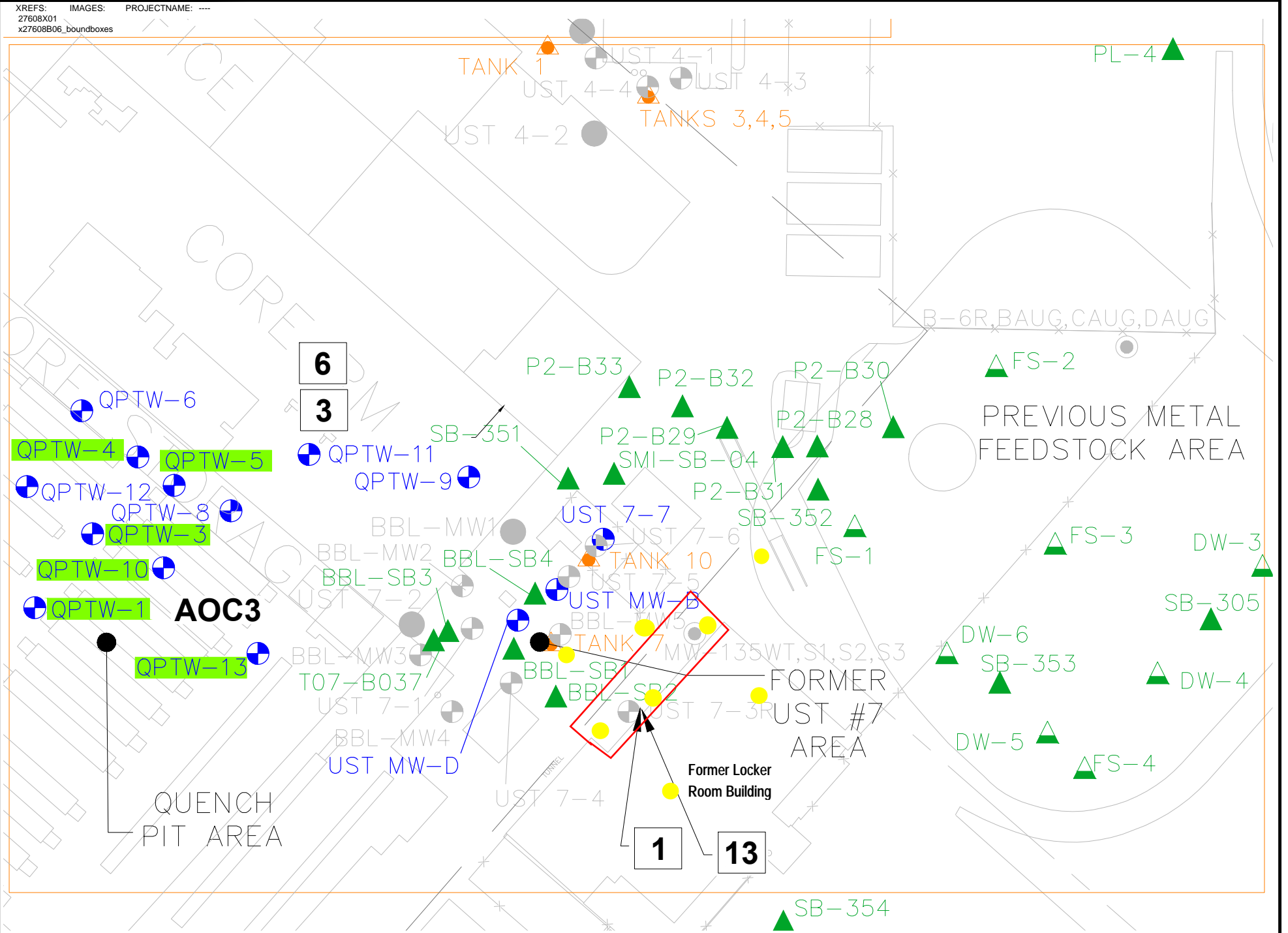


Scott Clearwater  
Certified Project Manager

*Attachment:*

Figure 1 – Proposed Boring Location Map

XREFS: IMAGES: PROJECTNAME: ---  
 27608X01  
 x27608B06\_boundboxes



NOTE:  
 SEE FIGURE 1 FOR FULL LEGEND AND NOTES.

LEGEND: ● Proposed Soil Boring

**10** SWMU LOCATION

▲ SOIL BORING

▲ SOIL SAMPLE

■ TEST PIT

▲ UNDERGROUND STORAGE TANK

**SWMU AND AOC LOCATION DESCRIPTIONS**

**1** CONTAINER (DRUM) STORAGE AREA

**3** AIR POLLUTION CONTROL EQUIPMENT

**6** TEA ABSORPTION TOWER

**10** TERMINATED TYPE III LANDFILL

**13** WASTE OIL STORAGE AREA

**AOC3** CORE DEPARTMENT

0 60' 120'  
 GRAPHIC SCALE

SAGINAW MALLEABLE IRON PLANT PROPERTY,  
 GREEN POINT LANDFILL, AND DRUM REMEDIATION AREA  
 SAGINAW, MICHIGAN

Proposed Soil Boring Locations



FIGURE

1