August Mack
ENVIRONMENTAL

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4401 Rockside Road, Suite 300 ▪ Independence, Ohio 44131

January 14, 2025

Christopher Biro
Ohio Environmental Protection Agency
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

Re: TCE Interim Measure Plan
Material Sciences Corporation
460 W Main Street
Canfield, Ohio 44406
OHD000810283
August Mack Project Number: JY2380.372

Dear Mr. Biro,

On behalf of Material Sciences Corporation, August Mack Environmental, Inc. (August Mack) is submitting the attached Trichloroethene (TCE) Interim Measure Plan. This submittal was prepared in accordance with the Director's Final Findings and Orders, which were effective on December 31, 2024.

Should you have any questions or need any additional information, please do not hesitate to contact us,

Sincerely,

Brandon C. Lewis, CP, CHMM
Regional Director, Ohio Offices

Charles T. Gomez, LPG
Principal of Closure Services

OBJECTIVE

August Mack Environmental, Inc. (August Mack), on behalf of Material Sciences Corporation (MSC), is proposing to collect soil gas and/or grab groundwater samples at and in the vicinity of the MSC Canfield property (Site) in Canfield, Ohio. This Trichloroethene (TCE) Interim Measure Plan (TCE IM Plan) is required in accordance with the Director's Final Findings and Orders (DFFO) for the Site, which were effective December 31, 2024. This scope of work is intended to address potential data gaps associated with TCE in groundwater and soil gas at the MSC Site. The data collected from this TCE IM Plan will be incorporated into the overall remedial strategy for the Site and used to determine if additional sampling is necessary to further evaluate the TCE impacts.

BACKGROUND

The Site is a metal galvanizing and coil coating facility located in Canfield, Ohio and has been operating since the 1950s under various entities including Canfield Steel and Pittsburgh Steel. MSC acquired the facility in 2013 and has operated the Site since then. In July 2024, MSC conducted a cleaning of process lines and equipment during its regularly scheduled maintenance operations, which appeared to dislodge dark brown process water with a high pH that contained cyanide and metals. The process water breached a previously abandoned drainage pipe and was released to the Adjacent Ditch located northeast of the facility along the Mill Creek Metro Park Bikeway. On July 11, 2024, the process water was visually observed in the ditch by a pedestrian on the bikeway who notified the local Canfield Fire Department. The Canfield Fire Department then notified MSC and Ohio Environmental Protection Agency (Ohio EPA) of the discharge. Approximately 1,200 feet of the Adjacent Ditch was impacted by the process water and MSC was issued a Notice of Violation (NOV) from the Ohio EPA on October 11, 2024 for unlawful disposal of hazardous waste. The DFFO were established to address the NOV and future actions at the Site. The DFFO was effective on December 31, 2024, and the Site is currently undergoing Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) through the RCRA FIRST pathway.

Initial Site investigations have been conducted on-Site during 2024, which have included assessment of soils, groundwater, and/or surface water on and off -Site. The Initial Site Investigation report, which summarized the investigation methods and results, was submitted to Ohio EPA on December 9, 2024. The initial investigation identified five grab groundwater sample locations that contained TCE impacts above the United States EPA (U.S. EPA) Maximum Contaminant Level on-Site (SB-7, SB-8, SB-9, SB-13, and SB-22). Based on the elevated TCE impacts in groundwater, five on-Site indoor air grab samples were collected at the Site on December 13, 2024. The indoor air sampling locations were within the northern portion of the building near areas with reported concentrations of

elevated TCE in groundwater. The lab report for these indoor air samples was received January 6, 2024 and the results were non-detect for all compounds analyzed. The indoor air sampling methods and results will be submitted to Ohio EPA under a separate cover.

As part of the DFFO, this TCE IM Plan outlines the additional investigation approach to further delineate the TCE impacts in groundwater and soil gas. The proposed scope of work, investigation locations, and methodologies are detailed below.

SCOPE OF WORK

August Mack proposes the following to address potential data gaps and further delineate TCE in groundwater and soil gas at the MSC Site and the adjacent Canfield High School property.

- Install 12 temporary soil gas sampling points
    - Six temporary soil gas sampling points will be installed on-Site (SGe-1 through SGe-6).
    - Six temporary soil gas sampling points will be installed off-Site on the Canfield High School property (SGe-7 through SGe-12).
- Collect two indoor air and sub-slab samples from two structures on the western portion of the Canfield High School property to ensure no potential indoor air exposures are occurring. These structures include a locker/weight room and a concession stand.
- Collect eight grab groundwater samples off-Site to further delineate TCE concentrations in groundwater.
    - Five grab groundwater samples will be collected on the Metroparks property adjacent to the Bikeway (SB-43 through SB-47).
    - Three grab groundwater samples will be collected on the Canfield High School property (SB-48 through SB-50).

The Quality Assurance/Quality Control (QA/QC) samples will also be collected during the TCE IM Plan at the minimum frequency described below:

- One duplicate sample per 10 samples
- One MS and one MSD sample per 20 samples (for the grab groundwater samples)
- One trip blank per cooler per day

The proposed sampling locations are shown on **Figure 1** and the investigation methodology is detailed below.

METHODOLOGY

Temporary Soil Gas Probe Installation & Soil Gas Sampling:

- A private and public utility locate will be conducted to verify that all utilities have been identified prior to any drilling activities.
- August Mack will utilize a Geoprobe® direct-push drill rig to advance a total of 12 soil gas probes across the Site to a depth of 10 ft bg.
    - Soil will be continuously logged at 2-foot intervals, and the soils will be screened using a photoionization detector and visual inspection (staining and/or odor).
    - The saturated zone on-Site is between 15-25 ft bg, a probe set at 10 ft bg makes water intrusion into the sampling points unlikely but still puts the probe below the OEPA recommended depth of > 5 ft bg.
- Each Soil gas probe will be constructed using 3/16" to 1/4 " nylon tubing secured to a 1/2 " wide by six (6) inch long vapor implant.
- A screen filter pack consisting of coarse washed No. 5 filter sand and a hydrated bentonite seal around the riser tubing will complete each well to the surface.
- Prior to surface finishing the soil gas probes vacuum conditions will be tested utilizing an unused syringe to determine if the location is viable for soil gas sampling.
    - If the syringe plunger pulls back upon release the sampling location is likely in a vacuum state and is not viable as a sampling location.
    - In this case the soil gas probe will be stepped off once and an attempt to reinstall the sampling point will be made.
- Newly installed and/or recently purged permanent soil gas sampling probes, that remain viable, will be allowed to equilibrate for a minimum of four (4) hours. After equilibration the sampling trains and SGe sample ports will be leak tested prior to sampling.
- Following leak testing soil gas sampling locations will be purged, at least three volumes using dedicated syringes.
- Soil gas samples will be collected using 1L Summa canisters with 15-minute regulators.
- The samples will be submitted to Eurofins Environment Testing, LLC, Barberton and analyzed for TCE and its breakdown products (cis-Dichloroethene, trans-Dichloroethene, 1,1-Dichloroethene, Vinyl Chloride) via method TO-15.
- Care will be taken to note the beginning and finishing vacuum pressures of the summa canister.
    - If the canister vacuum is lost (0 mm Hg) before the end of the 15-minute sampling period, the Summa canister will be sealed, and this will be noted on the field form.
- Upon completion of the sampling, boreholes will be backfilled with soil cuttings and/or bentonite. The surface will then be restored to its original condition.

- The drilling equipment will be properly decontaminated on-Site, and decontamination fluids will be containerized for characterization and disposal.

Indoor Air and Sub-slab Vapor Sampling:

- A utility locate will be conducted to verify that all utilities in the building have been identified prior to any drilling activities.
- August Mack personnel will utilize a rotary hammer drill to create a 1 ¼-inch diameter outer hole, which will penetrate approximately 1 and ½-inches into the concrete slab floor.
    - A second hole will be drilled through the center of the first hole using a 5/8-inch diameter drill bit until the slab is penetrated.
    - August Mack will then install a VaporPin® (or similar equipment) assembly into the drilled holes.
- After the VaporPin® (or similar equipment) is installed, the integrity of the vapor port will be verified by conducting a helium shroud test.
- Once the helium shroud leak test is conducted and passes, August Mack will wait 24 hrs. or more for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.
    - Prior to sampling, a shut-in test will also be conducted on the sample train to verify that there are no leaks.
- After equilibration, sampling locations will be purged, at least three volumes using dedicated syringes to ensure an appropriate collection of sub-slab vapors.
- Prior to sampling the indoor and sub-slab air, August Mack personnel will conduct a building survey describing building construction, any nearby ambient air sources, and the presence of any chemicals in the building.
- Indoor air and sub-slab vapor samples will be collected using batch certified clean laboratory-supplied 6L stainless-steel Summa® canisters equipped with a laboratory-supplied batch certified clean 8-hour regulators. The Summa® canister flow controller will also be equipped with a laboratory-supplied 0.2-micron air filter to prevent clogging of the canister opening during sample collection.
- Indoor air samples will be collected from the breathing zone (~four to six feet from the ground) and the beginning and finishing vacuum pressures of the summa canisters will be noted prior to and following sampling.
- Care will be taken to note the beginning and finishing vacuum pressures of the summa canister.
    - If the canister vacuum is lost (0 mm Hg) before the end of the 8-hour sampling period, the Summa canister will be sealed, and this will be noted on the field form.
- The indoor air and sub-slab vapor samples will be submitted to Eurofins Environment Testing, LLC, Barberton and analyzed for TCE and its breakdown products (cis-Dichloroethene, trans-Dichloroethene, 1,1-Dichloroethene, Vinyl Chloride) via method TO-15.

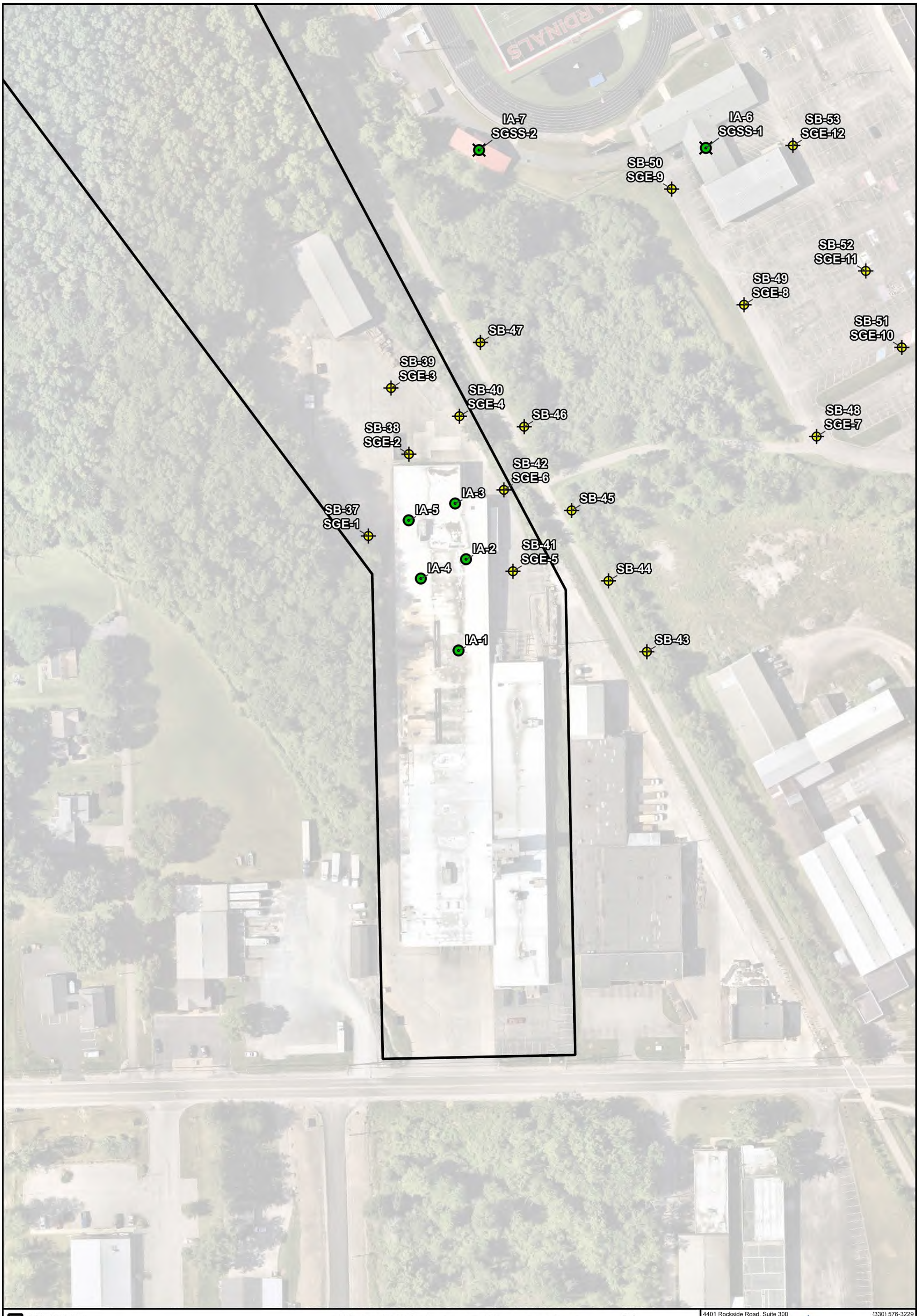
Grab Groundwater Sampling

- Eight soil borings will be advanced to approximately 15-25 feet below ground surface (bgs) using a Geoprobe® direct-push sampling system to collect additional grab groundwater samples.
- Soil will be continuously logged at 2-foot intervals, and the soils will be screened using a photoionization detector and visual inspection (staining and/or odor).
- Once groundwater is discovered, temporary 1-inch groundwater sampling piezometers will be installed at each boring.
- Groundwater samples will then be collected using a peristaltic pump with dedicated tubing.
    - Groundwater samples will be transferred to clean, labeled sample containers (provided by the laboratory) and placed on ice in a cooler for preservation in the field.
    - Groundwater samples will be submitted to Eurofins Environment Testing, LLC, Barberton and analyzed for TCE and its breakdown products (cis-Dichloroethene, trans-Dichloroethene, 1,1-Dichloroethene, Vinyl Chloride) via U.S. EPA method 8260.
- Upon completion of the sampling, boreholes will be backfilled with soil cuttings and/or bentonite. The surface will then be restored to its original condition.
- The drilling equipment will be properly decontaminated, and decontamination fluids will be containerized for characterization and disposal.

Data collected from this TCE IM Plan will be included in a forthcoming report, and will include sampling records, lab data, and other appropriate information.

FIGURE 1

Proposed Sampling Locations



Subject Property

Proposed Soil Boring Location

Proposed Indoor Air/Sub Slab Sample Location

On-Site Indoor Air Sample Location

Nearmap Aerial Imagery:
June 15, 2024

Material Sciences Corporation
Canfield

Proposed Sample Location Map

460 West Main Street
Canfield, Ohio 44406

N

0 50 100 ft

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PROJECT NO.: JY2380.372	DATE: 01/14/2025
	SCALE: 1:1,250
FIGURE: 1	CREATED BY: CC