

April 19, 2018

Mr. Ben McPherson
NYSDEC Division of Environmental Remediation
270 Michigan Avenue
Buffalo, NY 14203

**Re: Emerging Contaminants Groundwater Sampling Work Plan
Moog 170 Jamison Road Site, Elma, NY (Site)
NYSDEC Site No. 915315**

Dear Mr. McPherson:

On behalf of our client, Moog Inc. (Moog), Benchmark Environmental Engineering and Science, PLLC (Benchmark) has prepared this emerging contaminants groundwater sampling work plan for the above referenced Site. Moog received a letter from the Department requiring the Site be sampled as part of the State-wide initiative to better understand the risk posed by 1,4-dioxane and per- and polyfluoroalkyl substances (PFAS).

Benchmark proposes to conduct the emerging contaminant sampling in April 2018. The emerging contaminants sampling will be completed in four monitoring wells within the overburden/bedrock interface flow regime: MW-17 (upgradient), MW-13 and MW-11 (proximate Building 1, former potential source area) and MW-6 (downgradient) as shown on Figure 1 attached.

Sampling Preparation

Sampling equipment, components, and containers will be handled to avoid contact with aluminum foil, low density polyethylene (LDPE), glass, or polytetrafluoroethylene (PTFE, aka. teflon) materials including sample bottle cap liners with a Teflon layer. Clothing to be worn by sampling personnel will be laundered multiple times and will not contain PTFE material (including GORE-TEX®) or that which has been waterproofed with perfluorinated compounds (PFC) materials.

Many food and drink packaging materials contain PFCs. If consumption of food and drink occurs prior to and/or during the sampling event, sample personnel will use a standard two (2) step decontamination procedure using detergent and clean water rinse to wash hands prior to starting and/or resuming sampling.

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Sampling Procedures

Prior to well purge sample collection, static water levels will be measured and recorded. The groundwater wells will be developed using a plastic submersible pump (containing nitrile seals) and PVC tubing prior to sampling the groundwater at the sample locations, starting with the upgradient location first (MW-17). The wells will be purged using low-flow sampling techniques to minimize water level draw down within the well until groundwater quality parameters (pH, temperature, turbidity, DO, ORP, specific conductance) stabilize or at least a minimum of one (1) well volume has been removed.

In general, stability is defined as variation between field measurements of 10 percent or less and no overall upward or downward trend in the measurements. Upon stabilization of field parameters, groundwater samples for the emergent contaminants will be collected from the submersible pump and PVC tubing. Sampling personnel will wear nitrile gloves while handling empty sample containers, filling sample containers, sealing sample containers, and placement into sample coolers. Samples will be placed on ice prior to transportation to the laboratory.

If sampling equipment and/or sampling personnel's hands come in contact with PFC materials, a standard two (2) step decontamination process using detergent and clean water rinse will be performed on the equipment prior to reuse or the sampling personnel's hands prior to continuing with the sampling. Clean nitrile gloves will be worn while handling sample containers, during the groundwater sampling, and sealing/placement of samples into the laboratory supplied cooler.

Sample Analysis

Groundwater samples will be analyzed by an Environmental Laboratory Accreditation Program (ELAP) certified laboratory which will provide a Category B deliverable package for preparation of a Data Validation Usability Summary Report (DUSR) by a third party data validator.

Samples collected for 1,4-dioxane analysis will be collected into laboratory provided containers: two (2) 500 milliliter (ml) unpreserved amber bottles for each well location. The samples will be analyzed via EPA Method 8270 Selective Ion Monitoring (SIM) mode. The method detection limit (MDL) for the 1,4-dioxane analysis will be no higher than 0.28 micrograms per liter ($\mu\text{g}/\text{l}$), assuming there is no sample matrix interference. The samples have a holding time of 7 days till extraction and 40 days for the extract. Standard turnaround time will be used for the analysis.

Samples collected for PFAS analysis will be collected into laboratory provided containers: three (3) 250 ml plastic bottles preserved with Trizma for each well location. The samples will be analyzed via a modified EPA Method 537 to achieve reporting limits of 2 nanograms per liter (ng/l). The samples have a holding time of 14 days for analysis. Standard turnaround time will be used for the analysis.

Field-specific quality assurance/quality control (QA/QC) samples will be collected and analyzed to ensure the reliability of the generated data and to support the required third-party data usability assessment effort. QA/QC samples will include an equipment blank, and a field blank.

Sample Reporting

The sample results will be tabulated and included as a separate table within the RI/IRM/AA Report. An electronic data deliverable (EDD) will also be provided to NYSDEC. The detection limits will be provided within the table in lieu of “non-detect” or “ND” reporting. Any matrix interferences reported for the sampling will also be noted.

Please contact us if you have any questions or require additional information.

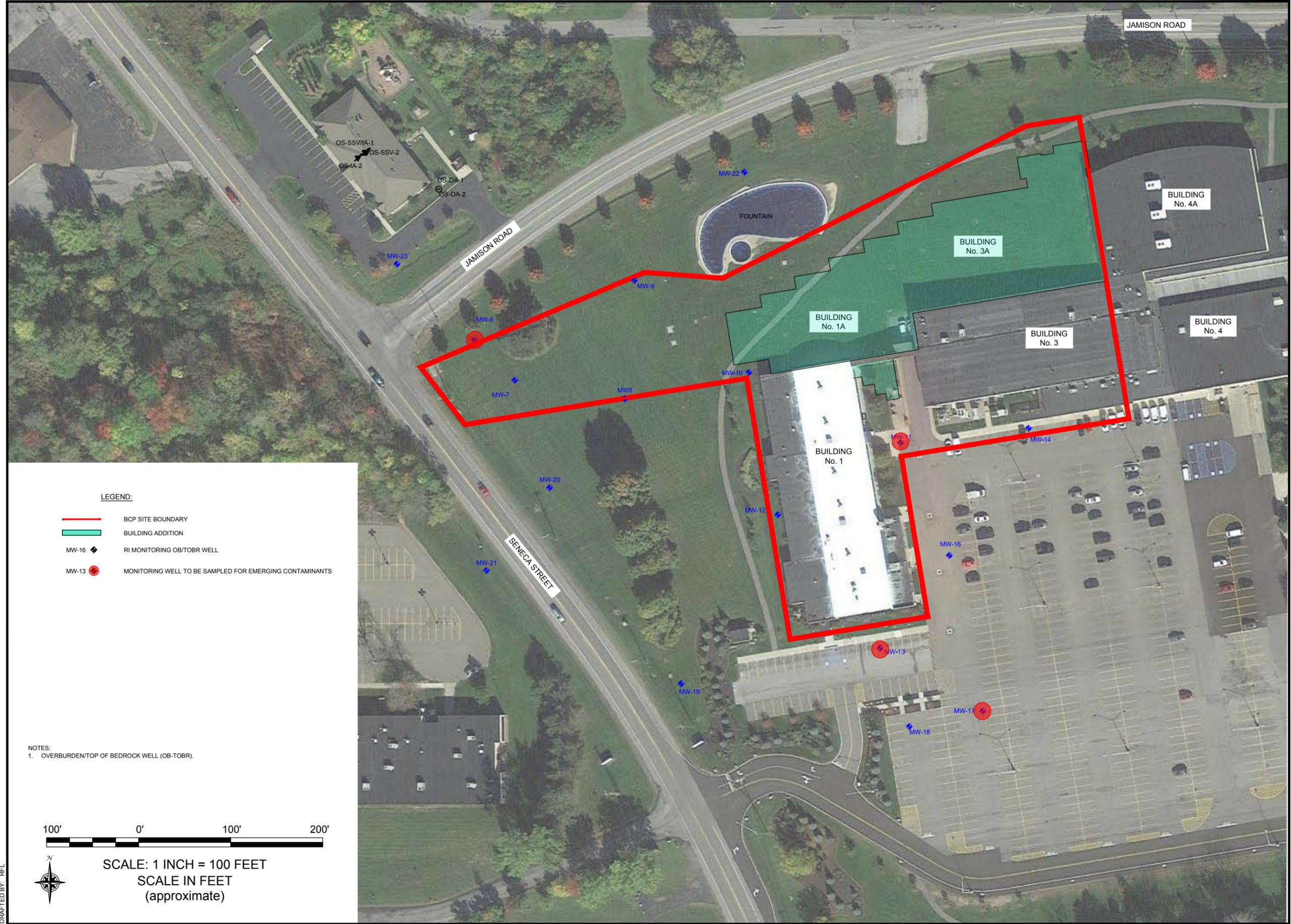
Sincerely,

BENCHMARK ENVIRONMENTAL ENGINEERING AND SCIENCE, PLLC



Mike A. Lesakowski
Sr. Project Manager

File: 0400-017-001



LEGEND:

- BCP SITE BOUNDARY
- BUILDING ADDITION
- MW-16 ◆ RI MONITORING OB/TOBR WELL
- MW-13 ● MONITORING WELL TO BE SAMPLED FOR EMERGING CONTAMINANTS

NOTES:
1. OVERBURDEN/TOP OF BEDROCK WELL (OB-TOBR).



SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)



**PLANNED GROUNDWATER SAMPLING
EMERGING CONTAMINANTS**

RI-IRM-AAR REPORT
170 JAMISON ROAD SITE
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

JOB NO.: 0400-017-001

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FIGURE 1

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