

September 21, 2018

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

**Re: Response to NYSDEC comments #8 and #23 on RI/IRM/AA Report
Additional 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 letter response to the New York State Department of Environmental Conservation's (NYSDEC) August 6, 2018 comment letter to the Remedial Investigation/Interim Remedial Measures/Alternative Analysis (RI/IRM/AA) Report dated July 2018. These responses address comments 8 and 23 of your letter and are consistent with those discussed between you, Moog and Benchmark during our conference call on August 31, 2018. These responses also address your email dated September 13, 2018.

Comment #23- Building 1 Investigation

NYSDEC commented that based on the soil conditions observed during the IRM it is likely that impacted soil remains beneath Building 1 and that additional investigation is needed to definitively determine if the soil beneath Building 1 is either a continuing source or would otherwise require remedial action.

As we discussed on August 31, 2018, when the new building additions (Building 1A and Building 3A) are completed and ready for occupancy, Moog plans to transfer workers from Building 1 into the new buildings. At that time, Moog plans to remove and replace the floor slab in Building 1 to the approximate limits shown on Figure 1. Instead of attempting to investigate within Building 1 now with the building fully occupied and with significant access

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limitations, Moog agrees to address any potential impacts that may exist in soil beneath the Building 1 floor slab at the time the floor is removed, soil is accessible, and the building is not occupied. Moog will include a section within the Remedial Design Work Plan (RDWP) that specifically addresses potential impacts beneath Building 1. That section of the RDWP will discuss specific tasks such as field screening, soil handling, excavation, transportation, and/or disposal. Furthermore, Moog plans to install an active subslab depressurization system as a part of the Site remedy. That task will also be completed during the Building 1 renovations.

Comment #8- Additional Groundwater Sampling

Regarding Comment #8, the NYSDEC has indicated the complete extent of 1,4-dioxane contamination remains undetermined, and additional sampling of all site related monitoring wells for 1,4-dioxane is required. The NYSDEC has requested that additional groundwater sampling for 1,4-dioxane conform with the emerging contaminant sampling guidance previously provided by the Department.

Moog will collect groundwater samples for 1,4-dioxane analysis from seventeen monitoring wells (MWs) as follows: MW-6, MW-7, MW-7D, , MW-8, MW-9, MW-9D, MW-11, MW-11D, MW-12, MW-13, MW-13D, MW-20, MW-20D, MW-21, MW-22, MW-22D, MW-23 and MW-23D (Refer to Figure 1 attached).

Benchmark proposes to conduct the sampling in September 2018 upon NYSDEC approval of this work plan.

Sampling Procedures

Prior to well purge sample collection, static water levels will be measured and recorded from all accessible wells related to the BCP Site to update the Site-wide groundwater contour map. 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. 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 1,4-dioxane 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.

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.

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, a field blank, and a matrix spike/matrix spike duplicate.

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.

We are prepared to complete the additional groundwater sampling upon NYSDEC approval to proceed as described in this letter. 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



MW-3D	
TCA	190
FREON 113	240
1,1 DCA	1000
CHLOROETHANE	13
CIS 1,2 DCE	130
VC	41

MW-3	
FREON 113	20
1,1 DCA	440
CHLOROETHANE	55
VC	13

MW-4	
1,1 DCA	3.3
CHLOROETHANE	4.2

MW-15	
FREON 113	22
1,1 DCA	110
CHLOROETHANE	8.3
VC	7.3

MW-9D	
TCA	26
1,1 DCA	450
CHLOROETHANE	9.9
CIS 1,2 DCE	12
VC	14

MW-9	
1,1 DCA	450
CIS 1,2 DCE	22
VC	36

MW-23	
1,1 DCA	4.5
CHLOROETHANE	2.6
VC	2.5

MW-23D	
1,1 DCA	1.4
BDCMA	1.3
CHLOROFORM	5.8

MW-6	
1,1 DCA	330
VC	40

MW-7D	
TCA	26
FREON 113	350
1,1 DCA	980
CIS 1,2 DCE	51
VC	40

MW-7	
FREON 113	680
1,1 DCA	1000
CIS 1,2 DCE	72
VC	77

MW-2	
1,1 DCA	12
CHLOROETHANE	4.9
VC	1.7

MW-8	
FREON 113	130
1,1 DCA	240
CIS 1,2 DCE	27
VC	25

MW-10	
1,1 DCA	1.4
CHLOROETHANE	2.3
VC	7.7

MW-20D	
FREON 113	1.4
1,1 DCA	2.3
VC	19

MW-20	
VC	52

MW-21	
ND	

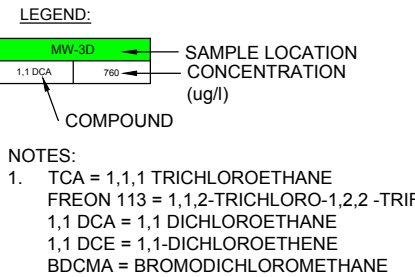
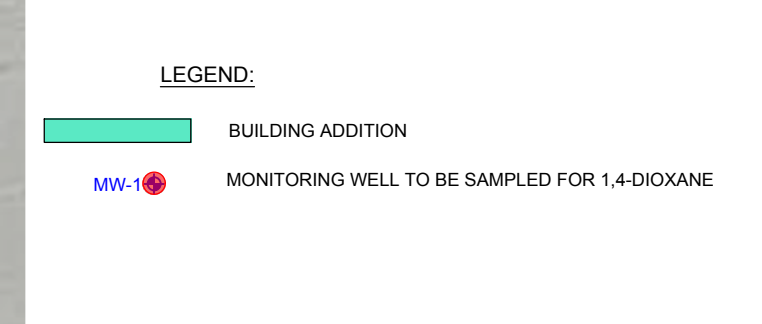
MW-19	
ND	

MW-13	
TCA	110
FREON 113	810
1,1 DCA	120
CIS 1,2 DCE	53
TCE	96

MW-13D	
TCA	6.6
FREON 113	62
1,1 DCA	91
1,1 DCE	0.75
CHLOROFORM	0.66
CIS 1,2 DCE	12
TCE	1.9

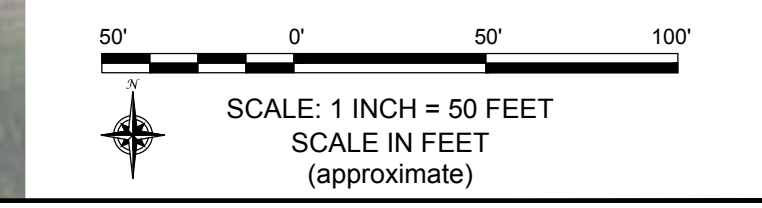
MW-17	
ND	

MW-17D	
ND	



NOTES:

- WELLS MW-1, MW-2, MW-3 & 3D, AND MW-15 WERE REMOVED AS PART OF THE REDEVELOPMENT.
- OVERBRIDGMENT TOP OF BEDROCK WELL (OB-108N).
- WELL MW-19 WAS DAMAGED DURING CONSTRUCTION.
- WELL MW-22 WAS DAMAGED AND HAS BEEN REPLACED.



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PLANNED GROUNDWATER SAMPLING WELL FOR 1,4-DIOXANE

170 JAMISON ROAD SITE
BCP SITE NO. C918315
ELMA, NEW YORK
PREPARED FOR
MOOG INC.

FIGURE 1