DECISION DOCUMENT

170 Jamison Road
Brownfield Cleanup Program
Elma, Erie County
Site No. C915315
November 2020

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

170 Jamison Road
Brownfield Cleanup Program
Elma, Erie County
Site No. C915315
November 2020

Statement of Purpose and Basis

This document presents the remedy for the 170 Jamison Road site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the 170 Jamison Road site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. A site cover will be required to allow for commercial use of the site in the area of Building 1 where soil above bedrock and less than 15 feet below ground surface will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs. This portion of the site would achieve a Track 4 commercial remedy. Areas which do not require a site cover would achieve a Track 2 commercial remedy.

3. In-situ chemical reduction (ISCR) will be implemented to treat chlorinated organics in overburden and bedrock groundwater. A permeable reactive barrier (PRB) will be constructed in the subsurface to destroy contaminants in the northwestern portion of the site to prevent the off-site migration of contaminated groundwater. The PRB will be designed as a funnel and gate system, with impermeable walls being constructed along the northern and western site boundaries to direct groundwater flow through the permeable/reactive portion of the wall. The exact reactive media, depth construction, and monitoring criteria will be determined during the remedial design. Installation of the barrier into the bedrock will be required to treat groundwater impacted by the site.

4. In-situ phytoremediation using hybrid poplar trees or equivalent will be employed to treat 1,4-dioxane in overburden and upper bedrock groundwater proximate to the PRB described in remedial element 3. The exact number and placement of trees will be determined during the remedial design. Long-term groundwater monitoring will be required to assess the effectiveness of the phytoremediation. Additional remedial actions may be required if monitoring shows that the remedy is not effective.

5. On-site Buildings 1, 1A, 3, and 3A will be required to have sub-slab depressurization systems, or other acceptable measures, to mitigate the migration of vapors into the building from soil and/or groundwater.

A soil vapor intrusion assessment will be completed in off-site Buildings 4 and 4A. This assessment will include provisions for implementing actions recommended to address exposures related to soil vapor intrusion, if any are identified.

6. Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial use or industrial

use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

7. A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in remedial element 6, above.
Engineering Controls: The cover system in the Building 1 area discussed in remedial element 2, the PRB and phytoremediation systems in remedial elements 3 and 4, and the sub-slab depressurization systems discussed in remedial element 5, above

This plan includes, but may not be limited to:
o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
o a provision that should a building foundation or building slab be removed in the future, a cover system will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs (only in the area a Track 2 commercial cleanup is not achieved);
o a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
o provisions for the management and inspection of the identified engineering controls;
o maintaining site access controls and Department notification; and
o the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
o monitoring of overburden and bedrock groundwater to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
o monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
o procedures for operating and maintaining the remedy;
o compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;

- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

11/3/2020

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

170 Jamison Road
Elma, Erie County
Site No. C915315
November 2020

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C915315

Buffalo and Erie County Public Library - Elma Branch
1860 Bowen Road
Elma, NY 14059
Phone:

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The 170 Jamison Road Site is located in a residential, commercial, and industrial area of the Town of Elma, southeast of the intersection of Seneca Street and Jamison Road. The site is approximately 4.48 acres in size and is a small portion of the Moog Inc. campus. Cazenovia Creek is located approximately 1.43 miles west of the site.

Site Features: The site is improved with four buildings, identified as Building 1, Building 1A, Building 3, and Building 3A. The areas surrounding the buildings consist of asphalt parking lots, open areas, and landscaped areas. Building 1 is a one-story building constructed in 1955 and Building 3 is a one-story building, with a basement, constructed in 1963. Buildings 1A and 3A are newly constructed in 2019 and have multiple floors and basements.

Current Zoning and Land Use: The site is currently active and zoned for commercial and industrial use. Building 1 is currently unoccupied, and Buildings 1A, 3, and 3A are currently utilized for assembly and testing, maintenance, chemical storage, and office space. Land-use surrounding the site includes residential, commercial, and industrial properties.

Past Use of the Site: From 1905 to about 1948, the site and surrounding area was partially developed with small structures, likely residential homes. Historic records indicate that the Proner Airport was developed on-site prior to 1948 and was improved with a landing strip, one large structure, and two or three small structures. In approximately 1950 Mr. William C. Moog founded Moog Inc. Building 1 was historically utilized as an airplane hangar for the Proner Airport and was converted by Moog to a mix of office space and production areas. Building 3 has been utilized as parts storage, maintenance, receiving and shipping, testing and assembly, and a materials and processes laboratory from 1963 until present. The materials and processes laboratory operations include aluminum etching and parts cleaning. Parts were etched with nitric acid or hydrochloric acid and cleaned by various organic solvents.

Site Geology and Hydrogeology: The overburden material is clayey silt with sand of variable thickness, underlain by a thin layer of silty sand followed by a layer of silty fine sand above shale bedrock. Bedrock generally occurs between 4 and 23 feet below grade. There are numerous utility lines across the site that contain various sizes of gravel or sand fill. Sandy soil is present in the former leach field area along the downgradient portion of Outfall 006.

Both the overburden/bedrock interface and upper bedrock groundwater have been investigated at the site. Groundwater in both strata flows north and west towards the intersection of Jamison Road and Seneca Street. The average depth to groundwater in the overburden is 6 feet, though this can

vary with surface topography. Dry weather flow has been observed in the Outfall 006 storm sewer, indicating that overburden/bedrock groundwater can infiltrate into overburden sewer systems.

A site location map is attached as Figure 1A and 1B.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Participant. The Applicant has an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- air
- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

1,1,1-trichloroethane(TCA)
cis-1,2-dichloroethene
1,1,2-trichloro-1,2,2-triflouroethane
1,4-dioxane
tetrachloroethene (PCE)
trans-1,2-dichloroethene
trichloroethene (TCE)
carbon tetrachloride
1,1-dichloroethane
vinyl chloride
chloroethane

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion
- indoor air

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

New Building Soils Management

IRMs were completed during Building 1A and 3A construction to address contamination encountered during construction. The major components of the IRM included:

- Excavation and off-site disposal of approximately 2,430 tons of soil exhibiting olfactory indications of chlorinated solvent contamination from the Building 1, Near Building 1, and South Annex excavations. Confirmation samples indicate that the excavation generally meets protection of groundwater soil cleanup objectives (SCOs) for volatile organic compounds (VOCs);
- Removal of approximately 150-gallons of emulsified machine oil and water from an abandoned sewer line discovered in the building excavation. Recovered oil and water were disposed of off-site. The portion of the sewer piping within the building footprint was removed and the remaining sewer piping was filled with concrete;
- Recovery of approximately 10-gallons of hydraulic oil from steel pipes encountered in the South Annex Excavation. Recovered oil was disposed of off-site and the steel piping was removed to the edge of the excavation and disposed of off-site as solid waste;
- Collection, on-site treatment, and discharge of approximately 1,100,000-gallons of groundwater and precipitation water from the building excavations; and
- Backfill of excavation areas with crushed stone for structural fill beneath the building foundations.

The IRM excavations were completed between October 2017 and October 2018. These IRM activities are documented in the IRM Construction Completion Report dated May 2020.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

The RI sampled surface and subsurface soils, groundwater, storm sewers, soil vapor, and sub-slab soil vapor/indoor air. The primary contaminants of concern are chlorinated VOCs and 1,4-dioxane related to improper management of solvents formerly used at the site. Off-site groundwater and sub-slab soil vapor/indoor air were also sampled as part of the investigation. A select summary figures from the RI report are shown on Figures 2A, 2B, and 2C.

Surface Soil: Five samples were collected from 0 to 2 inches below the vegetative cover across the entire site and analyzed for semi-volatile organic compounds (SVOCs), pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals. No metals or pesticides were detected at levels exceeding commercial use SCOs. SVOCs, PCBs, and herbicides were not detected in any samples exceeding unrestricted use SCOs. Investigation results do not indicate that off-site surface soil is impacted by the site.

Near Surface Soil: Fourteen samples were collected from 2 to 12 inches below the vegetative cover across the entire site and analyzed for VOCs, SVOCs, pesticides, herbicides, polychlorinated biphenyls (PCBs), and metals. An additional three samples were also analyzed for per- and polyfluoroalkyl substances (PFAS) using Modified EPA Method 537. No metals or pesticides were detected exceeding commercial use SCOs. VOCs, SVOCs, PCBs, and herbicides were not detected in any samples exceeding unrestricted use SCOs. PFAS were detected in all three of the samples analyzed for the compounds, with both perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) detected below the current screening level of 1 part per billion (ppb). Investigation results do not indicate that off-site near-surface soil is impacted by the site.

Subsurface Soil: Samples were collected from forty-nine locations at depths generally ranging from 5 to 18 feet below ground surface (fbgs). A majority of subsurface soil samples were collected from approximately 8 to 12 fbgs. Samples were analyzed for VOCs, SVOCs, pesticides, herbicides, PCBs, and metals. Arsenic, which was found up to 19.2 parts per million (ppm) was the only contaminant detected at concentrations exceeding its commercial use SCO of 16 ppm. This exceedance limited to one location at a depth of 4 to 6 fbgs.

Soil borings completed beneath Building 1 indicate that there are several VOCs that exceed their respective protection of groundwater SCOs (PGWSCOs), and this area is likely the source of groundwater contamination. The VOCs 1,1,1-trichloroethane (TCA) (up to 1.6 ppm, PGWSCO 0.68 ppm),1,1-dichloroethane (DCA) (up to 1.9 ppm, PGWSCO 0.27 ppm), tetrachloroethene (PCE) (up to 2.3 ppm, PGWSCO 1.3 ppm), and cis-1,2-dichloroethene (cis-DCE) (up to 0.35 ppm, PGWSCO 0.25 ppm)all exceed their PGWSCO in at least one soil boring. 1,1,2-trichloro-1,2,2-trifluoroethane (Freon-113) (up to 5.9 ppm) was also detected but does not currently have a PGWSCO. Acetone, benzene, toluene, and total xylenes were also detected in at least one soil boring at levels exceeding their respective PGWSCOs, but these exceedances are not indicative of source material as these contaminants are not as widely detected in groundwater at the site. Investigation results do not indicate that off-site subsurface soil is impacted by the site.

Groundwater: Samples were collected from twenty-three monitoring wells screened at the overburden/bedrock interface and nine monitoring wells screened in the upper shale bedrock. All wells were analyzed for VOCs and 1,4-dioxane, with select overburden/bedrock interface wells also being analyzed for SVOCs, pesticides, herbicides, PCBs, and metals. Four overburden/bedrock interface monitoring wells were analyzed for PFAS. There were no SVOCs, pesticides, herbicides, or PCBs detected above groundwater quality standards (GWQS) in any of the wells analyzed for those compounds. The metals iron (up to 2,900 ppb, GWQS 300 ppb), magnesium (up to 41,200 ppb, GWQS 35,000 ppb), manganese (up to 320 ppb, GWQS 300 ppb),

and sodium (up to 229,000 ppb, GWQS 20,000 ppb) were detected above GWQS in at least one well, but are likely attributed to natural aquifer conditions, not the contamination at the site.

At least two individual PFAS compounds (up to 50 parts per trillion (ppt) total PFAS) were detected in each well analyzed for PFAS. PFOA (up to 0.85 ppt) was originally reported as non-detect in all wells, but due to PFOA detections in the laboratory method blank the samples were reanalyzed outside of the method holding time. The reanalyzed samples detected PFOA (up to 4.8 ppt) in three of four wells. PFOS (up to 1.9 ppt) was detected in one of four wells. Neither PFOA nor PFOS were detected above the 10 ppt screening level.

In the overburden/bedrock interface and bedrock flow zones there is VOC contamination across the site, primarily TCA, DCA, chloroethane, PCE, trichloroethene (TCE), cis-DCE, vinyl chloride, Freon-113, and 1,4-dioxane. Benzene, ethylbenzene, toluene, and total xylenes were also detected above their respective GWQS in at least three wells, but the overall impact of these compounds is less severe than the chlorinated VOCs. In both the overburden/bedrock interface and bedrock zones there were many samples that had detection limits for VOCs above their respective GWQS that were reported as non-detect by the laboratory.

In the overburden/bedrock interface wells TCA (up to 110 ppb, GWQS 5 ppb), DCA (up to 1,000 ppb, GWQS 5 ppb), chloroethane (up to 1,700 ppb, GWQS 5 ppb), PCE (up to 77 ppb, GWQS 5 ppb), TCE (up to 56 ppb, GWQS 5 ppb), cis-DCE (up to 130 ppb, GWQS 5 ppb), vinyl chloride (up to 77 ppb, GWQS 2 ppb), and Freon-113 (up to 1,000 ppb, GWQS 5 ppb) were detected in multiple wells above their respective GWQS. 1,4-dioxane (up to 102 ppb) was also detected above its screening level of 1 ppb in seven overburden/bedrock interface wells.

In the bedrock wells TCA (up to 320 ppb, GWQS 5 ppb), DCA (up to 1,000 ppb, GWQS 5 ppb), chloroethane (up to 13 ppb, GWQS 5 ppb), PCE (up to 9.2 ppb, GWQS 5 ppb), cis-DCE (up to 130 ppb, GWQS 5 ppb), vinyl chloride (up to 52 ppb, GWQS 2 ppb), and Freon-113 (up to 3,300 ppb, GWQS 5 ppb) were detected in at least one well above their respective GWQS. 1,4-dioxane (up to 90 ppb) was also detected above its screening level of 1 ppb in seven bedrock wells.

Groundwater in both flow zones contains concentrations of one or more VOCs above their respective GWQS near the site boundary and is reasonably anticipated to migrate off-site to the northwest based on groundwater elevations. The immediately downgradient off-site area could not be directly investigated because access was denied by the property owner. Off-site concentrations of VOCs west and north of the site are near or below GWQS, except for 1,4-dioxane (up to 50 ppb) north of the site.

Storm Sewers: Water samples were collected during low-flow conditions from nineteen manholes along two different storm sewer lines. Both storm sewers discharge to a ditch along Seneca Street and are monitored according the facility's State Pollutant Discharge Elimination System (SPDES) permit. All manholes were analyzed for VOCs, with seven locations also analyzed for SVOCs, pesticides, herbicides, PCBs, and metals. Herbicides and PCBs were not detected above detection limits in any samples. Diethyl phthalate and alpha-benzenehexachloride were the only SVOC and pesticide, respectively, detected at low estimated values. Multiple metals were detected, with calcium, magnesium, potassium, and sodium exhibiting the highest concentrations. VOCs similar

to those present in groundwater were detected in the Outfall-006 storm sewer system, and to a lesser extent in the Outfall-002 storm sewer system. The most prevalent VOCs detected are TCA (up to 180 ppb), DCA (up to 970 ppb), chloroethane (up to 13 ppb), cis-DCE (up to 17 ppb), 1,1-dichloroethene (up to 25 ppb), and Freon-113 (up to 350 ppb). Both outfalls utilize inline air strippers to meet SPDES discharge criteria.

Soil Vapor: Six soil vapor samples and one ambient outdoor air sample were collected along the northern and western boundaries of the site and analyzed for VOCs using Method TO-15. The various chlorinated VOCs were detected in at least one soil vapor location, with TCA (up to 870 micrograms per cubic meter (ug/m^3)), DCA (up to 1,800 ug/m^3), PCE (up to 120 ug/m^3), and Freon-113 (up to 2,700 ug/m^3) exhibiting the highest levels. There are currently no standards for soil vapor.

Soil Vapor Intrusion: Soil vapor intrusion (SVI) assessments were completed in the on-site Building 1 and Building 3, and also off-site at a daycare facility north of the site. The assessments included the collection of concurrent sub-slab/indoor air pairs and an outdoor ambient air sample that were analyzed for VOCs using Method TO-15. Building 1A and Building 3A were not sampled during the RI as they were not built, however mitigations systems will be installed in the new buildings to protect against potential SVI.

Many VOCs were detected in the on-site sub-lab vapor samples. For Building 1 sub-slab soil vapor TCA (up to 93 ug/m^3), DCA (up to 360 ug/m^3), chloroethane (up to 39 ug/m^3), PCE (up to 25 ug/m^3), TCE (up to 520 ug/m^3), cis-DCE (up to 24 ug/m^3), carbon tetrachloride (up to 46 ug/m^3), and Freon-113 (up to 14,100 ug/m^3) exhibited the highest levels. Similar VOCs were detected in the Building 1 indoor air samples, with TCA (up to 0.27 ug/m^3), DCA (up to 0.53 ug/m^3), PCE (up to 0.74 ug/m^3), carbon tetrachloride (up to 0.41 ug/m^3), and Freon-113 (up to 3.5 ug/m^3) exhibited the highest levels.

For Building 3 sub-slab soil vapor TCA (up to 500 ug/m^3), DCA (up to 960 ug/m^3), PCE (up to 18 ug/m^3), TCE (up to 4 ug/m^3), and Freon-113 (up to 17,000 ug/m^3) exhibited the highest levels. Similar VOCs were detected in the Building 3 indoor air samples, with DCA (up to 0.50 ug/m^3), PCE (up to 19 ug/m^3), TCE (up to 0.30 ug/m^3), and Freon-113 (up to 11 ug/m^3) exhibited the highest levels. TCA was not detected in the indoor air samples.

Building 1 requires actions to address potential exposures from SVI due to TCE and actions should be taken at Building 3 to address PCE impacts.

The off-site SVI assessment at the neighboring daycare included two rounds of sampling, one before and one during the heating season. Off-site sub-slab soil vapor concentrations were significantly lower than those observed on-site, with TCA (up to 4.6 ug/m^3), PCE (up to 4.6 ug/m^3), and TCE (up to 0.75 ug/m^3) being the only contaminants of concern detected. Similar results were observed for the indoor air samples, with TCA (up to 0.16 ug/m^3) and PCE (up to 0.19 ug/m^3) being the only contaminants of concern detected above ambient air concentrations. No further action is recommended at the off-site daycare with respect to SVI. Further investigation of potential SVI in Buildings 4/4A is needed to determine if groundwater contamination proximate to the building is causing SVI.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

People will not come into contact with contaminated soil or groundwater unless they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Sampling indicates that soil vapor intrusion is a concern for the four current on-site buildings. Sub-slab depressurization systems (systems that ventilate/remove the air from beneath the building) have been installed in two of the buildings. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for the remaining two onsite buildings and two immediately adjacent offsite buildings (4 and 4A). Environmental sampling indicates that soil vapor intrusion is not a concern for one offsite building.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Multiple Cleanup Tracks remedy.

The selected remedy is referred to as the Multi Track: Groundwater Treatment, Vapor Mitigation, and Soil Cover remedy.

The elements of the selected remedy, as shown in Figure 3, are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. A site cover will be required to allow for commercial use of the site in the area of Building 1 where soil above bedrock and less than 15 feet below ground surface will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other

materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs. This portion of the site would achieve a Track 4 commercial remedy. Areas which do not require a site cover would achieve a Track 2 commercial remedy.

3. In-situ chemical reduction (ISCR) will be implemented to treat chlorinated organics in overburden and bedrock groundwater. A permeable reactive barrier (PRB) will be constructed in the subsurface to destroy contaminants in the northwestern portion of the site to prevent the off-site migration of contaminated groundwater. The PRB will be designed as a funnel and gate system, with impermeable walls being constructed along the northern and western site boundaries to direct groundwater flow through the permeable/reactive portion of the wall. The exact reactive media, depth construction, and monitoring criteria will be determined during the remedial design. Installation of the barrier into the bedrock will be required to treat groundwater impacted by the site.

4. In-situ phytoremediation using hybrid poplar trees or equivalent will be employed to treat 1,4-dioxane in overburden and upper bedrock groundwater proximate to the PRB described in remedial element 3. The exact number and placement of trees will be determined during the remedial design. Long-term groundwater monitoring will be required to assess the effectiveness of the phytoremediation. Additional remedial actions may be required if monitoring shows that the remedy is not effective.

5. On-site Buildings 1, 1A, 3, and 3A will be required to have sub-slab depressurization systems, or other acceptable measures, to mitigate the migration of vapors into the building from soil and/or groundwater.

A soil vapor intrusion assessment will be completed in off-site Buildings 4 and 4A. This assessment will include provisions for implementing actions recommended to address exposures related to soil vapor intrusion, if any are identified.

6. Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

7. A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

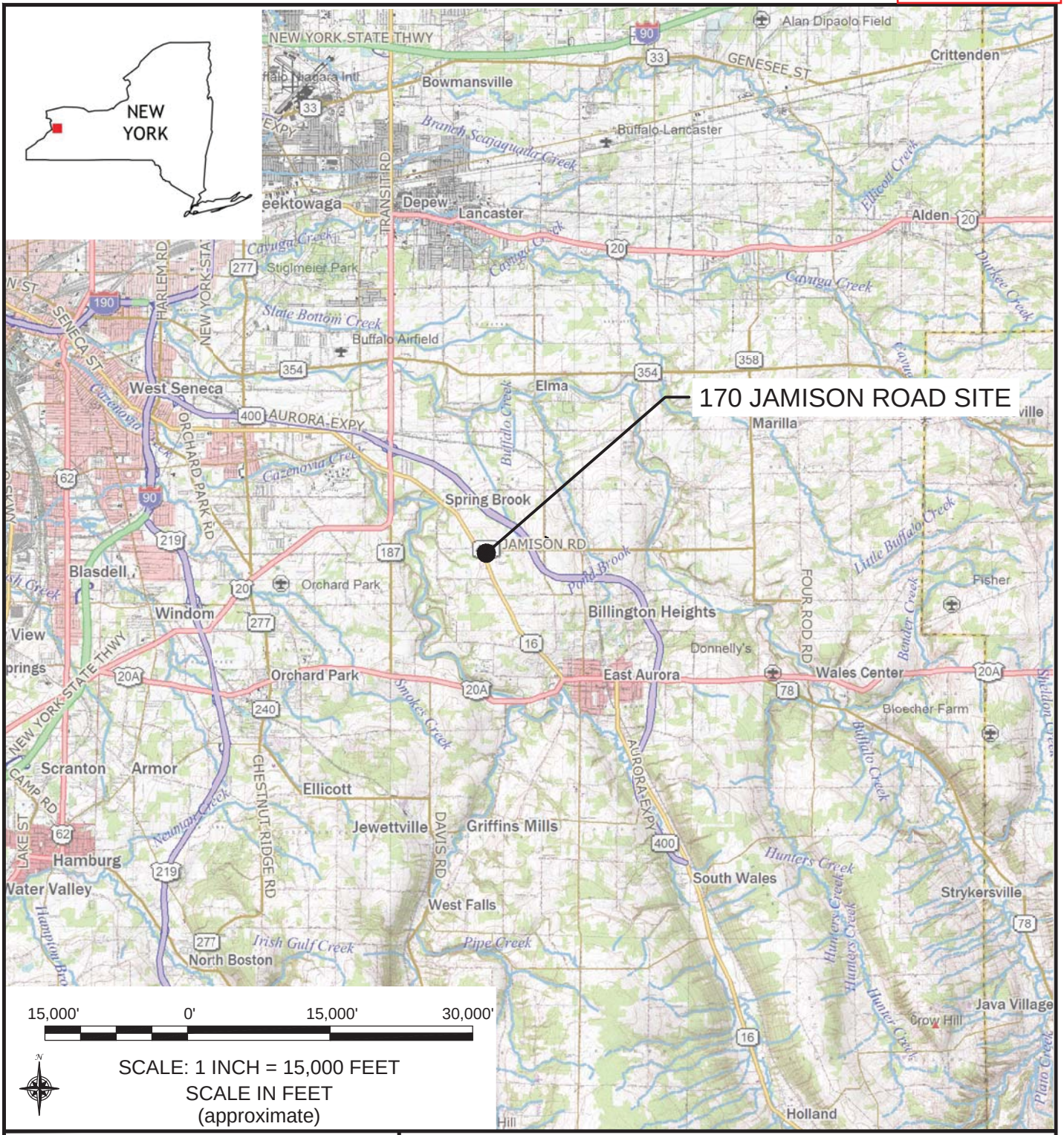
Institutional Controls: The Environmental Easement discussed in remedial element 6, above.
Engineering Controls: The cover system in the Building 1 area discussed in remedial element 2, the PRB and phytoremediation systems in remedial elements 3 and 4, and the sub-slab depressurization systems discussed in remedial element 5, above

This plan includes, but may not be limited to:
o an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
o descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
o a provision that should a building foundation or building slab be removed in the future, a cover system will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs (only in the area a Track 2 commercial cleanup is not achieved);
o a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
o provisions for the management and inspection of the identified engineering controls;
o maintaining site access controls and Department notification; and
o the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
o monitoring of overburden and bedrock groundwater to assess the performance and effectiveness of the remedy;
o a schedule of monitoring and frequency of submittals to the Department;
o monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:
o procedures for operating and maintaining the remedy;
o compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
o maintaining site access controls and Department notification; and
o providing the Department access to the site and O&M records.

FIGURE 1A



BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

PROJECT NO.: 0400-017-001

DATE: OCTOBER 2018

DRAFTED BY: RFL

SITE LOCATION & VICINITY MAP

RI/AA REPORT

170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR

MOOG INC.

F:\CAD\Benchmark\Moog\170 Jamison Road\05 - RI-AAR Report\Figure 2; Site Plan\REVNov15.dwg, DWG To PDF.pc3

LEGEND:

BCP SITE BOUNDARY

PARCEL BOUNDARY

N

100' 0' 100' 200'

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

DATE: NOVEMBER 2018
DRAFTED BY: RFL

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0400-017-001

SITE PLAN

RI/AA REPORT

170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

FIGURE 1B

LEGEND:

- BCP SITE BOUNDARY
- PROPOSED BUILDING ADDITION
- EXISTING STORM SEWER
- MW-1 — PRE-RI MONITORING WELLS OB/TOBR
- MW-9 — RI MONITORING OB/TOBR WELL; "D" MEANS BEDROCK WELL.
- 897.11 — GROUNDWATER ELEVATION (DECEMBER 5, 2017)
- OF-006 — STORMWATER OUTFALL
- INV. W: 904.03 MH-U — STORMWATER MANHOLE AND PIPE INVERT ELEVATION IN DIRECTION OF FLOW
- 904 — GROUNDWATER ISOPOTENTIAL
- GROUNDWATER FLOW DIRECTION

NOTES:
1. GROUNDWATER ISOPOTENTIALS BASED ON LINEAR INTERPOLATION BETWEEN MONITORING WELLS, LOCATION AND INVERT ELEVATION OF THE SEWER SYSTEM, AND ENGINEERING JUDGEMENT. DASHED WHERE INFERRED.
2. MANHOLE INVERT ELEVATIONS FOR THE STORM WATER SYSTEM ADAPTED FROM A DRAWING PROVIDED BY NUSSBAUMER AND CLARKE DATED 2017.
3. OVERBURDEN/TOP OF BEDROCK WELL (OB-TOBR).
5. OF-002 MOOG REFERS TO THE SPDES SAMPLING LOCATION.
6. OF-002 BM REFERS TO THE DISCHARGE LOCATION INTO THE DRAINAGE DITCH

JAMISON ROAD
SENECA STREET
BUILDING No. 1
BUILDING No. 1A
BUILDING No. 3A
BUILDING No. 3
BUILDING No. 4A
BUILDING No. 4
892.48 MW-23
893.76 MW-6
894.08 MW-7
893.40 MW8
893.52 MW-20
895.13
895.13 MW-21
894.00 MW-9
895.90 MW-22R
898.70 MW-10
902.49 MW-11
901.64 MW-12
902.38 MW-13
904.92 MW-14
903.76 MW-16
901.99 MW-19
905.41 MW-17
905.21 MW-18
INV. 892.41 OF-001
OF-002 (BM)
OF-002 (MOOG) INV. NW: 894.97
INV. W: 893.47 MH-U
INV. W: 894.97 MH-T
INV. W: 896.78 MH-S
INV. W: 897.23 MH-R
INV. W: 897.88 MH-AA
INV. W: 898.85 MH-AB
MH-AC
INV. SW: 898.34 MH-BB
INV. N: 900.68 MH-UNK
INV. N: 905.69 MH-N
INV. S: 906.05
INV. N: 906.09 MH-M
INV. S: 905.82 MH-M(E)
INV. N: 906.63 MH-L
INV. S: 905.45 MH-L(E)
INV. N: 906.56 MH-K
INV. W: 904.03 MH-K (E)
MH-D
903.01 MH-E
INV. W: 902.58
MH-F
INV. W: 901.96
MH-G
MH-H
895 897 899 901 903 905
DI

100' 0' 100' 200'
SCALE: 1 INCH = 100 FEET
SCALE IN FEET
(approximate)

DATE: NOVEMBER 2018
DRAFTED BY: RFL

F:\CAD\Benchmark\Moog\170 Jamison Road\05 - RI-AAR Report\Figure 7B; Shal Groundwater IsopotentialsDec2FTREV.dwg, 4/15/2019 12:36:47 PM, DWG To PDF.pc3

2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

JOB NO.: 0400-017-001

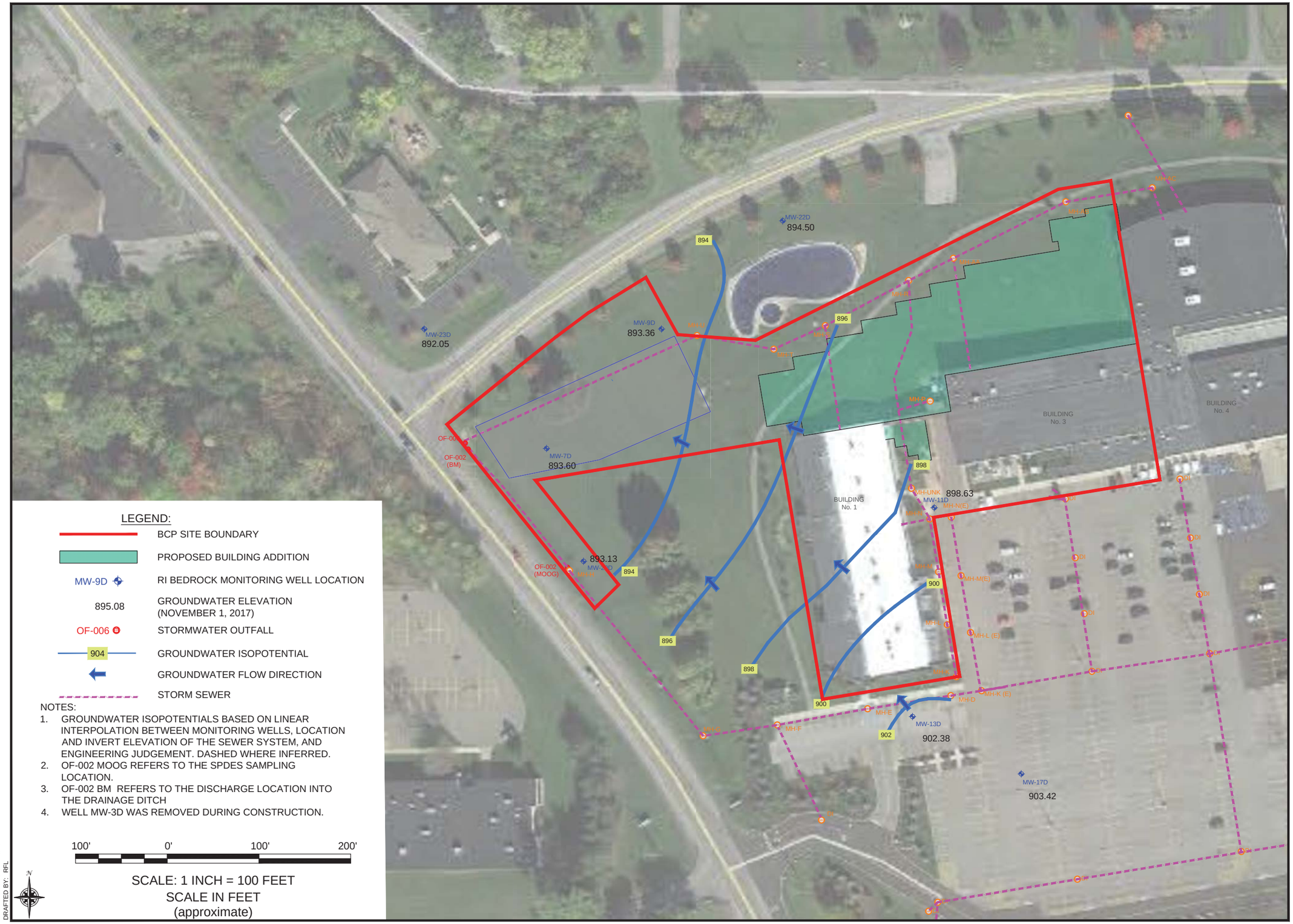
OVERBURDEN/TOP OF ROCK GROUNDWATER ISOPOTENTIALS (DECEMBER 5, 2017)

RI-AA REPORT

170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

FIGURE 2A



LEGEND:

- BCP SITE BOUNDARY
- PROPOSED BUILDING ADDITION
- MW-9D — RI BEDROCK MONITORING WELL LOCATION
- 895.08 — GROUNDWATER ELEVATION (NOVEMBER 1, 2017)
- OF-006 — STORMWATER OUTFALL
- 904 — GROUNDWATER ISOPOTENTIAL
- GROUNDWATER FLOW DIRECTION
- STORM SEWER

NOTES:

1. GROUNDWATER ISOPOTENTIALS BASED ON LINEAR INTERPOLATION BETWEEN MONITORING WELLS, LOCATION AND INVERT ELEVATION OF THE SEWER SYSTEM, AND ENGINEERING JUDGEMENT. DASHED WHERE INFERRED.
2. OF-002 MOOG REFERS TO THE SPDES SAMPLING LOCATION.
3. OF-002 BM REFERS TO THE DISCHARGE LOCATION INTO THE DRAINAGE DITCH
4. WELL MW-3D WAS REMOVED DURING CONSTRUCTION.

100' 0' 100' 200'

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

DATE: NOVEMBER 2018
DRAFTED BY: RFL

BEDROCK GROUNDWATER ISOPOTENTIALS (DECEMBER 5, 2017)

RI-AA REPORT

170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

FIGURE 2B

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0400-017-001

F:\CAD\Benchmark\Moog\170 Jamison Road\05 - RI-AAR Report\Figure 7D; Bedrock Groundwater IsopotentialsDECREV.dwg, 4/15/2019 12:46:06 PM, DWG To PDF.pc3

JAMISON ROAD

JAMISON ROAD

SENECA STREET

BUILDING No. 1

BUILDING No. 1A

BUILDING No. 3A

BUILDING No. 4A

BUILDING No. 3

BUILDING No. 4

APPROXIMATE LOCATION OF FORMER LEACH FIELD

APPROXIMATE LOCATION OF ORPHAN UST REMOVED IN JULY 1994. EXACT LOCATION UNKNOWN.

OF-6 AIR STRIPPER

OF-2 AIR STRIPPER

OF-002 (BM)

OF-002 (MOOG)

MW-7 (4' - 8')		
SAMPLE DATE	CSCO	6/26/2017
ARSENIC	16.0	19.2

TP-11 (5' - 10')		
PARAMETER	POGW SCO	6/28/2017
VC	0.02	0.03

TP-25 (5' - 8')		
SAMPLE DATE	POGW SCO	6/26/2017
MECL	0.05	0.45

IB-13 (7' - 8')		
SAMPLE DATE	POGW SCO	9/16/2019
PCE	1.3	1.8

IB-14 (7' - 8')		
SAMPLE DATE	POGW SCO	9/16/2019
1,1 DCA	0.27	1.9
TCA	0.68	1.6
CIS 1,2 DCE	0.25	0.35
PCE	1.3	2.3

IB-17 (7' - 8')		
SAMPLE DATE	POGW SCO	9/16/2019
PCE	1.3	1.8

LEGEND:

- BCP SITE BOUNDARY
- PROPOSED BUILDING ADDITION
- EXISTING STORM SEWER PRIOR TO REDEVELOPMENT
- MW-1 PRE-RI MONITORING WELLS OB/TOBR (MW-1 TO MW-6)
- MW-9 RI MONITORING OB/TOBR WELL; "D" MEANS BEDROCK WELL.
- PZ-1 RI PIEZOMETER
- TMW-3 BUILDING 1 TEMPORARY MONITORING WELL
- TP-1 RI TEST PIT
- OF-006 STORMWATER OUTFALL
- MH-T STORMWATER MANHOLE/DROP INLET

NOTES:
1. OF-002 MOOG REFERS TO THE SPDES SAMPLING LOCATION.
2. OF-002 BM REFERS TO THE DISCHARGE LOCATION INTO THE DRAINAGE DITCH

LEGEND:

TP-11 (VC: 0.02 / TCE: ND) — SAMPLE LOCATION / CONCENTRATION (mg/kg) / COMPOUND

NOTES:
1. TCA = 1,1,1 TRICHLOROETHANE
   FREON 113 = 1,1,2-TRICHLORO-1,2,2 -TRIFLUOROETHANE
   1,1 DCA = 1,1 DICHLOROETHANE
   1,1 DCE = 1,1-DICHLOROETHENE
   BDCMA = BROMODICHLOROMETHANE
   DBCMA = DIBROMOCHLOROMETHANE
   CIS 1, 2 DCE = CIS-1,2-DICHLOROETHENE
   FREON 12 = DICHLORODIFLUOROMETHANE
   MECL = METHYLENE CHLORIDE
   TRANS 1,2 DCE = TRANS-1,2-DICHLOROETHENE
   PCE = TETRACHLOROETHENE
   TCE = TRICHLOROETHENE
   VC = VINYL CHLORIDE
2. mg/kg = MILIGRAMS PER KILOGRAMS
3. cVOC MEANS CHLORINATED VOLATILE ORGANIC COMPOUNDS LISTED ABOVE IN NOTE 1
4. CSCO = COMMERCIAL SOIL CLEANUP OBJECTIVE
5. POGW SCO = PROTECTION OF GROUNDWATER SOIL CLEANUP OBJECTIVE

50' 0' 50' 100'

SCALE: 1 INCH = 50 FEET
SCALE IN FEET
(approximate)

BENCHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0400-017-001

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY:	RFL
DATE:	AUGUST 2020
CHECKED BY:	THF
APPROVED BY:	MAL

SUBSURFACE SOIL EXCEEDANCES (JUNE 2017)

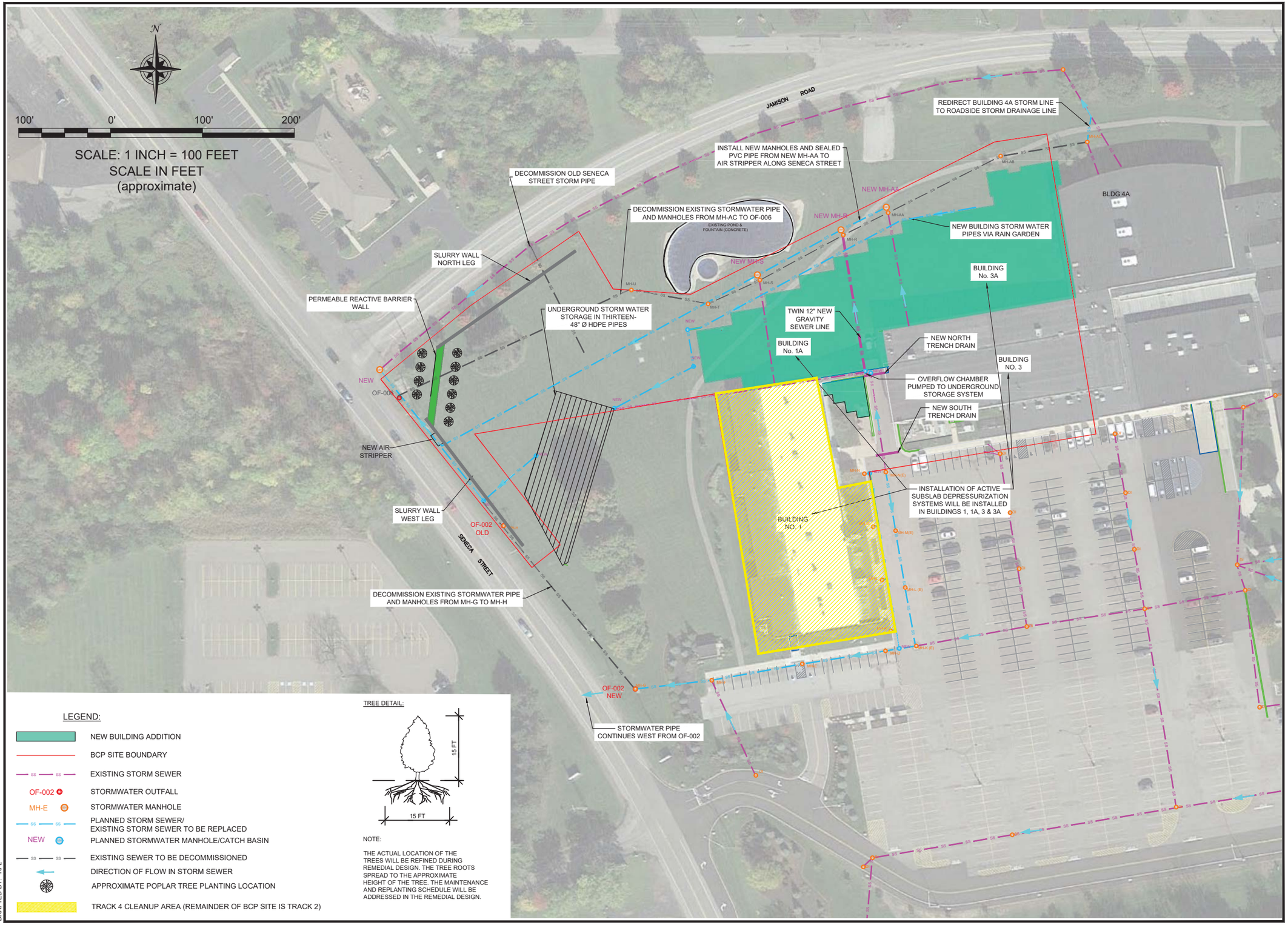
RI-AA REPORT
170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

FIGURE 2C

F:\CAD\Benchmark\Moog\170 Jamison Road\05 - RI-AAR Report\Figure 8A; Soil Contamination.dwg, 8/10/2020 11:04:54 AM, DWG To PDF.pc3

F:\CAD\Benchmark\Moog\170 Jamison Road\05 - RI-AAR Report\Figure 108; Conceptual RemediationREV.dwg, 9/15/2020 12:57:14 PM



LEGEND:

- NEW BUILDING ADDITION
- BCP SITE BOUNDARY
- EXISTING STORM SEWER
- OF-002 — STORMWATER OUTFALL
- MH-E — STORMWATER MANHOLE
- PLANNED STORM SEWER/ EXISTING STORM SEWER TO BE REPLACED
- NEW — PLANNED STORMWATER MANHOLE/CATCH BASIN
- EXISTING SEWER TO BE DECOMMISSIONED
- DIRECTION OF FLOW IN STORM SEWER
- APPROXIMATE POPLAR TREE PLANTING LOCATION
- TRACK 4 CLEANUP AREA (REMAINDER OF BCP SITE IS TRACK 2)

TREE DETAIL:

NOTE:

THE ACTUAL LOCATION OF THE TREES WILL BE REFINED DURING REMEDIAL DESIGN. THE TREE ROOTS SPREAD TO THE APPROXIMATE HEIGHT OF THE TREE. THE MAINTENANCE AND REPLANTING SCHEDULE WILL BE ADDRESSED IN THE REMEDIAL DESIGN.

DATE: SEPTEMBER 2020
DRAFTED BY: RFL

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0400-017-001

CONCEPTUAL REMEDIAL PLAN - PERMEABLE REACTIVE BARRIER

RI-AA REPORT

170 JAMISON ROAD SITE
BCP SITE NO. C915315
ELMA, NEW YORK

PREPARED FOR
MOOG INC.

FIGURE 3