Buffalo Business Park

ERIE COUNTY, NEW YORK

Site Management Plan

NYSDEC Site Number: V00663-9

Prepared for:

Buffalo Business Park

1800 Broadway Street

Buffalo, New York

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Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

SEPTEMBER 2010

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List of Acronyms

BBP- **Buffalo Business Park**
BGS- **Below Ground Surface**
EC- **Engineering Controls**
ESA- **Environmental Site Assessment**
FER- **Final Engineering Report**
HASP - **Health and Safety Plan**
IC- **Institutional Controls**
IRM- **Interim Remedial Measures**
NYCRR- **New York Code of Rules and Regulations**
NYSDEC- **New York State Department of Environmental Conservation)**
NYSDOH- **New York State Department of Health**
OM&M- **Ooperation Maintenance and Monitoring Plan**
OU #1- **Operable Unit #1**
OU #2- **Operable Unit #2**
PVC- **Polyvinyl Chloride**
RAWP- **Remedial Action Work Plan**
SMP- **Site Management Plan**
SSDS- **Sub Slab Depressurization System**
SVI- **Soil Vapor Intrusion**
SVOCs- **Semi-volatile Organic Compounds**
TAGM - **Technical Administrative Guidance Memorandum**
TOGS- **Technical & Operational Guidance Series**
USEPA- **United States Environmental Protection Agency**
VCA- **Voluntary Cleanup Agreement**
VCP- **Voluntary Cleanup Program**
VOCs- **Volatile Organic Compounds**

SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at Buffalo Business Park (BBP) under the New York State (NYS) Voluntary Cleanup Program (VCP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with Voluntary Cleanup Agreement (VCA) Index No. B9-0637-03-06, Site #V00663-9, which was executed on May 23, 2003.

1.1.1 General

Buffalo Business Park entered into a VCA with the NYSDEC to remediate a 1.004 acre portion of property located in Buffalo, New York. This VCA required the Remedial Party, Buffalo Business Park, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of the area subject to this plan is provided in Figures 1 and 2. The boundaries of the site are more fully described in the metes and bounds site description that is part of the Deed Restriction.

After completion of the remedial work described in the Remedial Action Work Plan, some contamination was left in the subsurface at this site, which is hereafter referred to as 'remaining contamination." This Site Management Plan (SMP) was prepared to manage remaining contamination at the site until the Deed Restriction is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by American Consulting Professional of New York, PLLC, on behalf of Buffalo Business Park in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, and the guidelines provided by NYSDEC. This SMP addresses the means for

implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Deed Restriction for the site.

1.1.2 Purpose

The site contains contamination left in bedrock groundwater after completion of the remedial action. Engineering Controls have been incorporated into the site remedy to control exposure to remaining groundwater .contamination during the use of the site to ensure protection of public health and the environment. A Deed Restriction recorded with the Erie County Clerk, will require compliance with this SMP and all ECs and ICs placed on the site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary ensure compliance with all ECs and ICs required by the Deed Restriction for contamination that remains at the site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Deed Restriction and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) OM&M of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems.

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.

It is important to note that:

- This SMP details the site-specific implementation procedures that are required at the site. Failure to properly implement the SMP is a violation of the Deed Restriction, New York StateEnvironmental Conservation Law and

Regulations, and the VCA Index No. B9-0637-03-06 for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Deed Restriction for the site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.1.4 Remedial Action Objectives and Shut down Criteria

The overall objective of the remedial program is to reduce groundwater contaminant levels below applicable New York State Ambient Water Quality Standards/Guidance Values (TOGS 1.1.1). It is assumed that once contaminant levels are below these values, there will be no need to continue either the pumping program or the soil vapor intrusion remedial actions. Should these conditions occur, notification would be made to the Department as part of the routine reporting program. As part of the reporting, BBP would propose a continuation of the monitoring program for some period of time after shut down of the system to assure that there is no rebound in contaminant levels.

Alternatively, should the monitoring program results show that contaminant levels have reached a steady state such that ongoing pumping no longer results in any additional decreases in contaminant levels, BBP may request that the pumping program be terminated. As noted above, monitoring would be continued for some period of time following the discontinuation of pumping to assure that there is no rebound in contaminant levels.

Upon approval of the NYSDEC, once the post pumping monitoring period noted above is completed and verification is obtained that contaminant levels have not increased, the monitoring , pumping and sub-slab depressurization systems may be removed.

1.2 SITE BACKGROUND

Operable Unit #1 (OU #1) in the southwest central area of the entire Buffalo Business Park Property is specified in the VCP and consists of an area where soil

contamination was delineated. OU#1 underwent remedial activities in mid April, 2006 in the form of excavation and removal of contaminated soils.

Operable Unit #2 (OU #2) is generally located in the southwest portion of the BBP property, and consists of an area where previous investigations have encountered contaminated groundwater. OU#2 (shown on Figure 7) also includes an area on the adjacent property west of the site and an area underneath the front building on the Buffalo Business Park site. Golder Associates, Inc. (Golder) implemented an investigative work plan to further characterize and delineate the groundwater contamination associated with OU#2. Additionally, NYSDEC conducted an off-site investigation to determine the extent of contamination and is issuing a separate report of the findings

For groundwater issues related to OU#2, the work plan specified the installation and sampling of four (4) additional bedrock wells, three of which were located on the adjacent property west of the site. Groundwater levels were also measured in all bedrock wells and potentiometric contour maps were developed to characterize bedrock groundwater flow and direction. The conclusion of the Golder report did not specify additional remedial action.

In response to the report, NYSDEC indicated that they did not agree with the Golder conclusions and that additional remedial action was required to prevent contaminant migration. Further, there were discussions as to the need for additional data to determine if sub slab venting was required for the western portion of the building closest to Broadway (New York Frame Building). Both issues appeared to require additional study. In order to expedite completion of the voluntary cleanup activities, and in lieu of additional studies, BBP elected to implement interim remedial measures to effect control of contaminant migration and to provide venting of the west end of the New York Frame Building.

These interim remedial measures, along with the conversion of MW2-BR into a pumping well and installation and operation of an additional pumping well (MW5A-BR) are expected to be effective in achieving the goals of the remedial actions and will remain in place until the NYSDEC determines action is no longer required for the site.

1.2.1 Site Location and Description

The Buffalo Business Park property is located in the Buffalo, New York, County of Erie (see Figure 1, site location map) and is identified as Block 1, Lots 5.1 and 5.2 on the County of Erie Tax Map. The Buffalo Business Park property is an approximately 22 acre area bounded by NYSDOT property to the north and east, Broadway Street to the south, and TOPS Market to the west.

The boundaries of the original project area (1.004 acres)within the site that are identified in the Voluntary Cleanup Agreement (VCA) as, "ALL THAT TRACT OF LAND situated in the City of Buffalo, County of Erie and State of New York, being part of Lot 42, Township 11, Range 7 of the Holland Land Company's survey, and being more particularly bounded and described as follows:

Beginning at a point on the north line of Broadway (99 feet wide, and formerly known as Batavia Street), which point is 1,380.94 feet east of the east line of Bailey Avenue (66 feet wide); thence northerly at an interior angle of 89º 41' 18" a distance of 74.40 feet to the TRUE POINT OF BEGINNING; thence easterly at an interior angle of 89º 51' 07" a distance of 190.86 feet to a point; thence northerly, along the west face of a brick building, at an interior angle of 90º 52' 19" a distance of 16.67 feet to a point; thence easterly, along the north face of a brick building, at an interior angle of 269º 06' 19" a distance of 57.01 feet to a point, thence northerly at an interior angle of 90 degrees 10 minutes and 15 seconds a distance of 162.91 feet, thence westerly at an interior angle of 90º07' 58" a distance of 248.09 feet to a point; thence southerly at an interior angle of 89º52' 02" a distance of 180.81 feet to the point and place of beginning."

A survey map of the site area described in the BSCA is provided as Figure 2.

The original area of the site designated as OU-1 abovewas a 1.004 acre area where soil contamination was found. This area was called out in the VCA. Based on data from monitoring wells MW-4, MW-3 and MW-2 collected as part of subsequent investigations it was found that there was groundwater contamination in the southwest corner of the site beyond the originally defined area. Installation of additional wells revealed that groundwater contamination was present on the adjacent property (MW-5and MW-7. Monitoring wells MW-1 and MW-6 showed that contamination did not extend eastward on the property.

Because of the presence of contaminated groundwater in the vicinity of the New York Frame building, sub-slab venting was installed in the western most part of the building. In view of this venting system and existing groundwater contamination, the original property bounds as outlined in the VCA do not cover all the area of the site that is covered by this SMP.

The boundaries of the site covered by this SMP are shown on Figure 2A and are:

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 42,Township 11, Range 7 of the Holland Land Company's Survey, bounded and described as follows;

Beginning at a point in the northerly line of Broadway (as a street 99 feet wide), a distance of 1380.94 feet easterly of the intersection of same with the easterly line of Bailey Avenue (as a street 66 feet wide), said point of beginning being the southwesterly corner of land deeded to Robert Boasberg by deed recorded in the Erie County Clerk's Office in Liber 7796 of Deeds at page 119;

Thence northerly and along the westerly line of said lands so deeded to Robert Boasberg, said line forming an exterior angle of 89°41' 18" as measured in the northwesterly quadrant with the northerly line of Broadway, a distance of 250.00 feet;

Thence easterly on a line parallel with the northerly line of Broadway and forming an interior angle of 89°41' 18" as measured in the southeasterly quadrant with the last described line, a distance of 250.00 feet;

Thence southerly on a line parallel with the westerly line of the aforementioned lands deeded to Robert Boasberg, forming an interior angle of 90°18'42" as measured in the southwesterly quadrant with the last described line, a distance of 240.49 feet to a point in the northerly line of lands acquired by the State of New York for highway purposes, designated as Map No. 3, Parcel No.3 on a map recorded in the Erie County Clerk's Office in Liber 6400 of Deeds at page 329;

Thence southwesterly and along the northerly line of the aforesaid lands, forming an interior angle of 92°31' 18" as measured in the northwesterly quadrant with the last described line, a distance of 192.41 feet to a point in the aforementioned northerly line of Broadway (as a street 99 feet wide);

Thence westerly and along said northerly line of Broadway, forming an interior angle of 177°10'00" with the last described line, a distance of 57.77 feet to the point or place of beginning.

Containing an area of 61,580± Sq. Ft. or 1.4137 ± Acres

1.2.2 Site History

According to historic Sanborn maps, as described in Golder's report entitled, "Remedial Activities at Operating Unit #1; Buffalo Business Park, 1800 Broadway

Avenue, Buffalo, New York; July 26, 2006", the Site and the vicinity were historically used for railroad transport/tracks associated with the Pullman Car Company from 1900 until at least 1950. Starting in 1961, the Site and vicinity were converted to the Buffalo Industrial Park, followed by conversion to the Buffalo Business Park. Golder's report is included in the Final Engineering Report for the site.

In December 1999, a Phase I Environmental Site Assessment (ESA) was reportedly completed which led to the recommendation and completion of a Phase II soil and groundwater investigation. During 2001 and 2002, additional soil and groundwater investigations were completed, consisting of the advancement of 27 test borings that subsequently were converted to 27 groundwater monitoring points (three permanent and 24 temporary). Soil and groundwater samples were collected and analyzed for volatile organic compounds (VOCs). In addition, some of these samples were also analyzed for RCRA metals and semi-volatile organic compounds (SVOCs). The investigations identified the presence of VOCs in site soils and groundwater including tetrachloroethene in soil, and tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, methylene chloride and vinyl chloride in groundwater. Based on this information, the site was divided into two operable units for purposes of investigation and remediation:

- Operable Unit #1, consisting of that area of site with defined contaminated soils; and

- Operable Unit #2, consisting of that area of the site with defined groundwater contamination.

In October 2003, a remedial action work plan (RAWP) was prepared to excavate soils from Operable Unit #1 at the site, described as an area of soil contamination. This remedy proposed the excavation of impacted soils and treatment in an ex-situ soil vapor extraction system. This RAWP was submitted to the NYSDEC for review and was subsequently approved on August 10, 2005. The approved remedy was subsequently reviewed and modified to consist of excavation of contaminated soil with off-site disposal. The revised RAWP was subsequently approved by the NYSDEC on January 10, 2006.

1.2.3 Site Geologic and Hydrogeologic Setting

1.2.3.1 Geology

Several environmental studies have previously been conducted at BBP from which subsurface conditions have been generally characterized. The overburden materials are approximately 14 feet in thickness at BBP. They generally consist of fill materials that are variable in thickness to a depth of approximately two feet. Fill material is generally described as sands and gravel with some ash, brick, wood and railroad ties which is consistent with its past use as a rail yard. This is underlain by native materials consisting of brown gravelly sands with some silt. This material is laterally variable, but is generally 14 to 16 feet in thickness. Bedrock is at approximately 14 feet below ground surface (BGS), and consists of gray, crystalline Limestone (Onondaga Limestone.)

In Western New York, Onondaga escarpment parallels Route 5 and continues east and it crosses under the Peace Bridge into Ontario and can be seen along the northern shore of lake Erie. The Onondaga Limestone underlies the rest of Western New York in the subsurface across NY to the
Hudson River Valley and down into Pennsylvania. It is a very extensive rock unit. In the Kensington area, as well as in the Delaware Park and in Central Park areas, basements often had to be blasted because the bedrock was so close to the surface, i.e., next to no soil on top of the limestone.

1.2.3.2 Hydrogeology

Groundwater is present in the overburden with groundwater flow direction reportedly to the south. Groundwater in bedrock reportedly flows to the southeast; however, the overburden and bedrock hydraulic zones are likely connected given the highly permeable nature of the overburden gravelly sands.

Monitoring Well Logs depicting the geologic features are provided in Appendix D

Groundwater flow figures for both pumping and non pumping conditions is shown in Figures 8 and 4.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

1.3.1 REMEDIAL ACTIVITIES AT OPERABLE UNIT #1

The remedial investigation of OU#1 showed that there was an area of contamination in the subsurface below the existing parking lot (see Figure 3). The contamination was above NYSDEC guidance values for concentrations of chlorinated organic compounds. Details of the remedial actions taken to remove this contamination are presented in section 1.4.

1.3.2 INVESTIGATIVE ACTIVITIES AT OPERATING UNIT #2

1.3.2.1 Groundwater Investigation

In 2007, a groundwater investigation was completed to further characterize groundwater conditions as part of Operable Unit #2, and was comprised of the following scope of work:

- Installation and survey of four additional groundwater monitoring wells into bedrock;
- Develop and sample the four newly installed bedrock wells;
- Collect groundwater elevation information from the four newly installed bedrock wells and four existing bedrock wells;
- Evaluate groundwater analytical results for the four newly installed wells; and
- Prepare a site investigation/remedial alternatives report (SI/RAR) summarizing work performed with recommendations for a remedial alternative for groundwater (OU #2).

It should be noted that in selecting the location of the four new wells one of the desirable locations selected was between the front building and Broadway. Upon field investigation it was determined that the corridor between Broadway and the building was a heavily used utility corridor (Sewer, telephone, water, electric etc.) and that drilling in this area would risk disruption of services and potential damage to these utilities. The final selected location for the well in this area (MW6-BR) was selected to get as close to the utility corridor as possible. In order to install this well a special drill rig was mobilized that would enable the well to

be installed inside the warehousing area of the building. The well was located as far west as possible within the building.

The four new groundwater monitoring wells were subsequently developed and sampled. Groundwater samples were analyzed for target compound list VOCs by USEPA method 8260 with NYSDEC ASP Category B deliverable reporting. Groundwater sample results were compared to New York State Ambient Water Quality Standards/Guidance Values (TOGS 1.1.1).
Analytical results indicated six organic compounds were noted as exceeding TOGS 1.1.1 values in at least one sample. 1,2-dichloroethene (total), tetrachloroethene, and trichloroethene were detected in samples MW5-BR and MW7-BR at concentrations in exceedance of TOGS 1.1.1 guidance values. 1,1-Dichloroethene and vinyl chloride were detected in sample MW-5-BR at concentrations in exceedance of TOGS 1.1.1 guidance values. Methylene chloride was detected in sample MW7-BR at concentrations in exceedance of TOGS 1.1.1 guidance values.

Golder's summary report entitled, "Draft Report on Remedial Activities at Operating Unit #2, Buffalo Business Park, November 2007" provides a detailed discussion of the procedures that were used to install the monitoring wells, sample the wells, and the results of groundwater sampling analysis.

A potentiometric surface map was also constructed to illustrate groundwater flow conditions in the project area (Figure 4). Golder's report concluded that the groundwater table is relatively flat with a low gradient across most of the Site with flow from north to south. As groundwater approaches the southernmost portion of the Site, groundwater flow direction turns toward the southeast. The groundwater table is steeply inclined in the southeast corner of the Site with very high gradients, likely in response to the Broadway Underpass, which is approximately 15 to 20 feet lower than the Site along the southeastern corner of the Site. This area of Broadway likely acts as a groundwater sink, and therefore, contaminated groundwater from OU #2 is not likely to reach residents across Broadway Avenue.

1.3.2.2 Soil Vapor Intrusion Investigation

Per the NYSDEC approved Investigative Work Plan, a soil vapor intrusion study was also completed, consisting of:

- One sub-slab vapor sample;
- One indoor air sample; and
- One outdoor background sample.

Sample collection locations are described on Figure 5 and details of onsite conditions and methods used to complete the soil vapor intrusion study are found in Golder's draft report on remedial activities at OU #2 .

Twenty-seven VOCs were detected in the sub-slab sample, 23 VOCs were detected in the indoor air sample, and 15 VOCs were detected in the outdoor sample. At the time of the study, the TAGM vapor intrusion document provided guidance for seven VOCs, as described on two matrices within the 2006 New York State Department of Health (NYSDOH) Guidance document for vapor intrusion. There were three VOCs that were addressed by the NYSDOH vapor intrusion Matrix #1. Trichloroethene (Matrix 1) was detected in the sub slab, indoor air, and outdoor air samples. cis-1,1-Dichloroethene (Matrix 2) was detected in the sub-slab sample, but was not detected in the indoor air or outdoor samples. Tetrachloroethene (Matrix 2) was detected in both the sub-slab and indoor air samples.

1.4 SUMMARY OF REMEDIAL ACTIONS

1.4.1 Removal of Contaminated Soil OU #1

LTP Services acted as the Field Team leader for the project and Golder provided field personnel for remedial activities to:

- Observe and document the removal activities' conformance to those described within thework plan;
- For soil screening/sampling purposes during remedial activities;
- For the evaluation of the analytical results; and
- To provide a field summary report of the removal activities.

1.4.1.1 Excavation

Wargo Enterprises, Inc. of Akron, NY, was directly contracted by BBP to provide excavation services. Determination of the extent of excavation was the decision of LTP/BBP, and not Golder.

LTP arranged for the disposal of contaminated soils in advance of remedial activities, permits for the discharge of groundwater to the Buffalo Sewer Authority, and for the completion of all other preremedial, remedial and site restoration activities in Section 3.0 - Remedial Action and Remedial Technology Description of the remedial action work plan (RWP) for Operable Unit #1. The zone targeted for excavation and removal was form 10 to 14 feet below ground surface (BGS), and was determined from previous work in advance of the start excavation activities.

Field activities at the site commenced on April 11, 2006. At this time, the asphalt, fill, and uncontaminated overburden soils were excavated to a depth of 10 feet within the work area using a Komatsu PC400LC excavator, and were stockpiled on site. Following removal of the overlying asphalt, removal of overburden soils was excavated three phases:

• Shallow non-impacted overburden soils;

• Medium depth non-impacted overburden soils to be sampled and analyzed for potential
impacts; and

• Contaminated overburden soils directly overlying bedrock.

The first phase consisted of the excavation of the upper approximately six feet of non-impacted overburden soil (shallow overburden soils). This material was stockpiled in an area northeast of the excavation and is referred to in this report as Pile #1. The second phase of removal consisted of the excavation of soils from six to 10 feet in depth below ground surface (BGS). The soils from this interval were also stockpiled on plastic sheeting immediately south of Pile #1. Pile #2 soils were kept separate from Pile #1 since they would be sampled and analyzed to confirm they were not impacted. The third phase of removal consisted of the excavation of contaminated overburden soils from a depth of 10 to 14 feet BGS directly overlying bedrock. During excavation activities, three abandoned municipal sewer lines were struck and breached, causing a small volume of water to be discharged into the excavation. The two sewer lines on the western side of

the excavation and one sewer line on the south side of the excavation were discovered to be abandoned, and ran empty after approximately 20 minutes. Wargo personnel placed a submersible pump and hose into the excavation, and pumped the water into the Buffalo Municipal Sewer via an onsite manhole, as per the discharge permit . At the close of activities on April 11, the excavation closely resembled an ellipse, measuring approximately 55 feet wide from west to east, approximately 40 feet wide from north to south, and approximately 10 feet in depth, with a circumference of approximately 157 linear feet .

Volume calculations indicate that approximately 1017 cubic yards of material were removed from the excavation and stockpiled onsite; Pile 1 was calculated as containing approximately 727 cubic yards, while Pile 2 was calculated as containing approximately 590 cubic yards.

Field activities at the site continued on April 12, 2006. The second day of removal activities focused on removal of contaminated soils form 10 feet BGS down to competent bedrock, which was expected to be present at approximately 14 feet BGS. Golder screened excavated overburden materials for volatile organic vapors with a photo-ionization detector (PID) equipped with the appropriate lamp and calibrated to manufacturer's specifications. Upon removal from the excavation, soils were placed in trucks for transport to an off-site disposal facility. Excavation was discontinued upon exposure of the underlying bedrock, which was encountered as expected at approximately 14 feet BGS. An additional 290 cubic yards were excavated from this interval.

Once bedrock was encountered, confirmation soil samples were collected from the side walls of the excavation . Soil samples were collected from the bucket of the excavator, and were placed in individual sample containers and sent to the contract laboratory for analysis. Soil samples were analyzed for volatile organic compounds (VOCs) at a contract analytical laboratory to verify that the area of contaminated soils had been removed. Following review of laboratory analytical results, additional excavation was completed in the southeast andsouthwest areas of the excavation.

1.4.1.2 Additional Excavation

Excavation activities resumed at the site on April 17, 2006. Excavation continued at the southwest and southeast "corners" of the excavation. The additional soils removed consisted of soil columns measuring approximately six to eight feet back

from the previous edge of the excavation, and approximately 10 feet below ground surface. Removed soils were added to the existing on-site stockpiles; the upper six feet of soil and asphalt were added to Pile 1, and the lower four feet was added to Pile 2. The remaining four feet of contaminated soils were placed in trucks for transport to an off-site disposal facility, while periodically being screened for volatile organic vapors. Excavation was once again discontinued upon exposure of the underlying bedrock.

Confirmation soil samples were collected as per previously referenced methods for analytical purposes from side walls of the newly excavated areas of the pit side walls of the excavation. soil samples were analyzed for VOCs at the same contract analytical laboratory to verify that the area of contaminated soils had been removed.

Following review of laboratory analytical results from the newly excavated area, the stockpiled overburden soils in Pile #1 and Pile #2 were placed back into the excavation in lifts by Wargo and compacted with a pavement roller. Recycled concrete fill was then placed over the non-impacted overburden soils to bring the excavation back to grade.

1.4.2 REMEDIAL ACTIVITIES AT OU #2

In December 2007, a meeting took place between the NYSDEC and BBP, wherein the NYSDEC requested additional investigative work be completed. In order to expedite completion of the voluntary cleanup activities, BBP agreed instead to implement interim remedial measures to effect control of groundwater contaminant migration, and to provide venting of the west end of the New York Frame building. An Interim Remedial Measures Work Plan (LTP Services, Inc., April 2007) was submitted to the NYSDEC for approval.

1.4.2.1 Groundwater Contaminant Levels

Upon approval of the Interim Remedial Measures Work Plan by the NYSDEC, BBP implemented a groundwater interim remedial measure consisting of:

- Additional groundwater sampling;

- Installation of a pumping system in existing groundwater monitoring well (MW4-BR);
- Ongoing groundwater pumping from MW4-BR; and
- Follow up monitoring to demonstrate contaminant control by either reduction in contamination levels, hydraulic control, or both.

The following provides details of these work elements.

Additional Sampling

Additional groundwater sampling events were completed on the following dates to assess if the IRM has been effectively containing the residual contamination:

- May, 2008;
- October 2008; and
- April 2009
- October 2009

Groundwater elevations measurements for the April 2009 sampling event are presented on Figure 8. Three key VOCs are present in MW4-BR (cis-1,2-dichloroethene, Trichloroethene, and Tetrachloroethene). These three compounds have historically been present at the highest concentrations of all detected VOCs, and are part of the chlorinated solvent decomposition process. These compounds are considered indicator compounds when evaluating for the effectiveness of the IRM. Comparison of the three VOCs indicates a general reduction in concentrations as summarized in Table 1 below. A summary of all detected compound concentrations is presented in Table 2 at the end of this report. The laboratory analytical report for April 2009 is provided in Appendix F.

Table 1

	Before GW Pumping	**Before GW Pumping**	**After GW Pumping**	**After GW Pumping**
Location Identifier	MW4-BR	MW4-BR	MW4-BR	MW4-BR
Sample Date	2/15/2006	5/1/2008	10/13/2008	4/13/2009
Compound				
cis-1,2-dichloroethene	1,400	1,000	620	630
Trichloroethene	3,600	3,500	980	1,400
Tetrachloroethene	30,000	31,000	4,300	14,000

All concentrations are reported in ug/L.

The results of the groundwater analysis indicate that the system has been effective in containing the residual contamination on-site. The two sampling events prior to implementing the IRM indicated the following average contaminant concentrations:

- 1,200 ug/L cis-1,2-dichloroethene
- 3,550 ug/L Trichloroethene
- 30,500 ug/L Tetrachloroethene

The average contaminant concentrations of the same compounds in the last two sampling events following IRM were:

- 625 ug/L cis-1,2-dichloroethene (a 48% reduction)
- 1,190 ug/L Trichloroethene (a 66.5% reduction)
- 9,150 ug/L Tetrachloroethene (a 70% reduction)

Table 2

	Before GW Pumping	**Before GW Pumping**	**After GW Pumping**	**After GW Pumping**
Location Identifier	MW2-BR	MW2-BR	MW2-BR	MW2-BR
Sample Date	9/17/2004	2/15/2006	4/13/2009	10/2/2009
Compound				
cis-1,2-dichloroethene	ND	ND	ND	ND
Trichloroethene	ND	30	75	64
Tetrachloroethene	4,600	2,600	9,600	5,200

Note: Detection limits for the 9/17/2004 sampling event were 500ug/L

A review of data for well MW-2 BR (Table 2) showed that there was a decrease of contaminant levels from 2004 to 2006 (without any pumping) and an increase in contaminant levels from 2006 to 2009 (after pumping had begun). It is not uncommon to see variability in groundwater contamination levels in bedrock pumping systems for wells that are located some distance from the pumping well. Because of the noted increase in levels, an additional sample was taken on

10/2/2009. Results for this sample showed a decrease in contaminant levels, although not to the levels shown in the 2006 sampling but close to the levels found in the results from 9/17/2004. Because of this variability in contaminant levels and to assure that any residual contamination in the vicinity of MW2-BR would be controlled, it was determined that MW2-BR would be converted into a pumping well (see section 1.4.3.2 below).

1.4.2.2 Installation of pump in Monitoring Well MW4-BR

BBP converted groundwater monitoring well MW4-BR into a pumping well on August 7, 2008. The following work elements were implemented to convert MW4-BR into a pumping well:

- The area around the well was excavated and a precast vault was installed around the well;
- A submersible pump (Grundfos REDI-FLO3-100) and associated controller was installed in the well (Figure 6);
- A discharge line with a totalizer was installed from the pumping well to a location at the northwest corner of the New York Frame building where a Buffalo Sewer Authority manhole is available (Figure 7); and
- A discharge permit from the Buffalo Sewer Authority (dated August 11, 2008) was acquired for purposes of discharging groundwater to the Buffalo sewer system.

The pumping system was adjusted to achieve a maximum sustainable pumping rate from the well. Since installation an average of 460 gallons per day, or 0.32 gallons per minute has been pumped. Groundwater analytical results from the pumping well suggest that groundwater contamination is decreasing, as shown on Table 1.

Groundwater table information suggests that pumping activities at MW4-BR are capturing contaminated groundwater in the southwest corner of the Site. Using groundwater table elevation information for October 2008, a potentiometric surface map was constructed that shows a cone of depression in the water table from groundwater pumping activities at MW4-BR. When compared to the potentiometric surface prior to pumping activities, Figure 8 shows groundwater capture along the western site boundary, as well as capture of contaminated from the area of OU #1, both areas of the site with the highest concentrations of groundwater contamination.

1.4.2.3 Installation of pump in Monitoring Well MW2-BR

Although the potentiometric contour map clearly shows capture in the vicinity of MW-4BR, the contour lines also show there is a small potential for groundwater to cross the site property line between MW2-BR and MW3-BR. Because of this small potential, coupled with the variability of contaminant concentrations at MW2-BR (i.e. increase after initiation of pumping and subsequent decrease) Buffalo Business Park has elected to convert MW2-BR into a pumping well with the same configuration and pump as MW4-BR. Installation of a pump will be accomplished as described in section 4.3.1 above. MW2-BR will be operated in a fashion similar to MW4-BR. Construction activities for this conversion were complete in December of 2009.

1.4.2.4 Installation of new Monitoring/pumping Well -MW5A-BR

Although the potentiometric contour map clearly shows capture in the vicinity of MW-4BR, the available data is not conclusive with regard to contaminant levels downgradient of MW4-BR. To address this uncertainty, Buffalo Business Park has elected to install an additional bedrock well (MW5A-BR) in the same hydraulic horizon as MW2-BR and MW4-BR. It will be operated as a pumping well with the same configuration and pump as MW4-BR and will be operated in a fashion similar to MW4-BR. MW5A-BR is located approximately 15 to 20 feet due east of MW5-BR as shown in Figure 11. It is anticipated that the installation of this additional well will provide highly effective capture of any contaminated groundwater along the western and southwestern property line of Buffalo Business Park property.

1.4.2.5 Installation of the Vapor Intercept System

A sub slab depressurization system was installed in the western end of the New York frame building consisting of two active vents approximately equidistant

from the north and south walls of the building and spaced approximately 60 and 120 feet east of the west wall of the building (Figure 9).

Each vent is comprised of a four-inch hole through the concrete floor slab that is extended approximately one-foot below the slab. Once drilled, the one-foot distance below the slab was filled with #1 washed stone. A four-inch PVC pipe was then installed in the hole and run through the suspended ceiling. The joint between the concrete slab and the PVC was then sealed with silicone adhesive sealant (Figure 10). A Festa Radon technology extraction fan (Model AMG Fury) was then installed above the ceiling and below the roof line. The outlet of the extraction fan was then connected to another four- inch PVC pipe which penetrates the roof. A 180º elbow was installed at the end of the PVC pipe to prevent rain intrusion.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

Since remaining contaminated soil and groundwater/soil vapor exists beneath the site, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the site;
- The basic implementation and intended role of each EC/IC;

- A description of the key components of the ICs set forth in the Deed Restriction;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Soil Management Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Vapor Intercept System

Construction details of the sub slab depressurization system are provided in section 1.4.2.5.

Procedures for operating and maintaining the Vapor Intercept System are documented in the OM&M Plan (Section 4 of this SMP). Procedures for monitoring the system are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the site, occurs.

2.2.1.2 Pumping System

Groundwater monitoring wells MW4-BR, MW2-BR and MW5A-BR are operated as pumping wells.

Installation details are provided in section 1.4.2.2

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives.

2.2.2.1 Sub Slab Depressurization System (SSDS)

The active SSD system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSD system is no longer required, a proposal to discontinue the SSD system will be submitted by the property owner to the NYSDEC and NYSDOH.

2.2.2.2 Groundwater Pumping System

The groundwater pumping system will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the groundwater pumping system is no longer required, a proposal to discontinue the system will be submitted by Buffalo Business Park. Conditions that warrant discontinuing the groundwater pumping system include contaminant concentrations in groundwater that: (1) reach levels that are consistently below ambient water quality standards, (2) have become asymptotic to a low level over an extended period of time as accepted by the NYSDEC, or (3) the NYSDEC has determined that the groundwater pumping system has reached the limit of its effectiveness. This assessment will be based in part on post-remediation contaminant levels in groundwater collected from monitoring wells located throughout the site. Systems will remain in place and operational until permission to discontinue their use is granted in writing by the NYSDEC.

2.3 INSTITUTIONAL CONTROLS

A series of Institutional Controls are required to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to commercial/industrial uses only. Adherence to these Institutional Controls on the site is required by the Deed Restriction and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Deed Restriction and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Restricted Property must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Deed Restriction may not be discontinued without an amendment to or extinguishment of the Deed Restriction as approved by the NYSDEC.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Deed Restriction. Site restrictions that apply to the Restricted Property include:

- The property may only be used for commercial/industrial use. The long-term Engineering and Institutional Controls included in this SMP must be employed.
- The property may not be used for a higher level of use, such as unrestricted/ restricted residential use without additional remediation and amendment of the Deed Restriction, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP; Any excavated soils should be handled as specified in the Soil Management Plan (Appendix A)
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed in the area noted on Figure 2, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;

- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Restricted Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Restricted Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

2.3.1 Soils Management Plan

The site has been remediated for restricted industrial/commercial use. Any future intrusive work that will encounter contaminated groundwater will be performed in compliance with the Soils Management Plan that is attached as Appendix A to this SMP. Any work conducted pursuant to the Soils Management Plan must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP). It is not anticipated that any excavation to the depth of groundwater will occur. If excavation is required, a HASP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations will be submitted with the notification provided in Section A-1 of the Soils Management Plan. The HASP will consist of use of the site specific HASP outlined in Appendix A of the "Draft Investigative Work Plan, Operable Unit #2; May 2006" (updated as required) previously submitted as part of the site investigation work plan Any intrusive construction work will be performed in compliance with the Soils Management Plan and HASP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations and bridge footings). The site owner will ensure that site development activities will not interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located over areas that contain remaining contamination and the potential for soil vapor intrusion (SVI) has been identified (see Figure 2), an SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation.

2.4 Inspections and Notifications

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule (monthly). A comprehensive site-wide inspection will be conducted annually and, along with the monthly inspection reports, be the basis for the Annual Certification Report . The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;

- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Deed Restriction;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;
- Inspections will be conducted in accordance with the procedures set forth in the

Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the Voluntary Cleanup Agreement (VCA), and/or Environmental Conservation Law.
- 15-day advance notice of any proposed ground-intrusive activities that will encounter groundwater pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Notice within 48-hours of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, including a summary of actions

taken, or to be taken, and the potential impact to the environment and the public.

- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the site or the responsibility for implementing this SMP will include the following notifications:

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the Voluntary Cleanup Agreement (VCA)], and all approved work plans and reports, including this SMP

- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

Given that the engineering controls are pumps in groundwater wells and sub slab venting systems it is not anticipated that any significant emergencies will occur. Failure of well pumps or vent fans will result in system shutdown and cannot lead to any type of environmental release or incident. Routine inspections will detect these occurrences and corrective action will be taken.

Should the routine inspections show the need for corrective action, replacement pumps and fans are readily available and can be installed quickly. Tenants would be notified as part of he corrective action response.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to a qualified environmental professional. These emergency contact lists must be maintained in an easily accessible location at the site.

Table 3: Emergency Contact Numbers

Medical, Fire, and Police:	**911**
One Call Center:	**(800) 272-4480** **(3 day notice required for utility markout)**
Poison Control Center:	**(800) 222-1222**
Pollution Toxic Chemical Oil Spills:	**(800) 424-8802**
NYSDEC Spills Hotline	**(800) 457-7362**

Table 4: Qualified Environmental Professional Contact Numbers

LTP Services, Inc. Peter Tarnawskyj	**716-523-1796**

*** Note: Contact numbers subject to change and should be updated as necessary**

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 1800 Broadway Street, Buffalo, NY

Nearest Hospital Name: Erie County Medical Center

Hospital Location: 462 Grider Street, Buffalo, NY

Hospital Telephone: (716) 898-3000

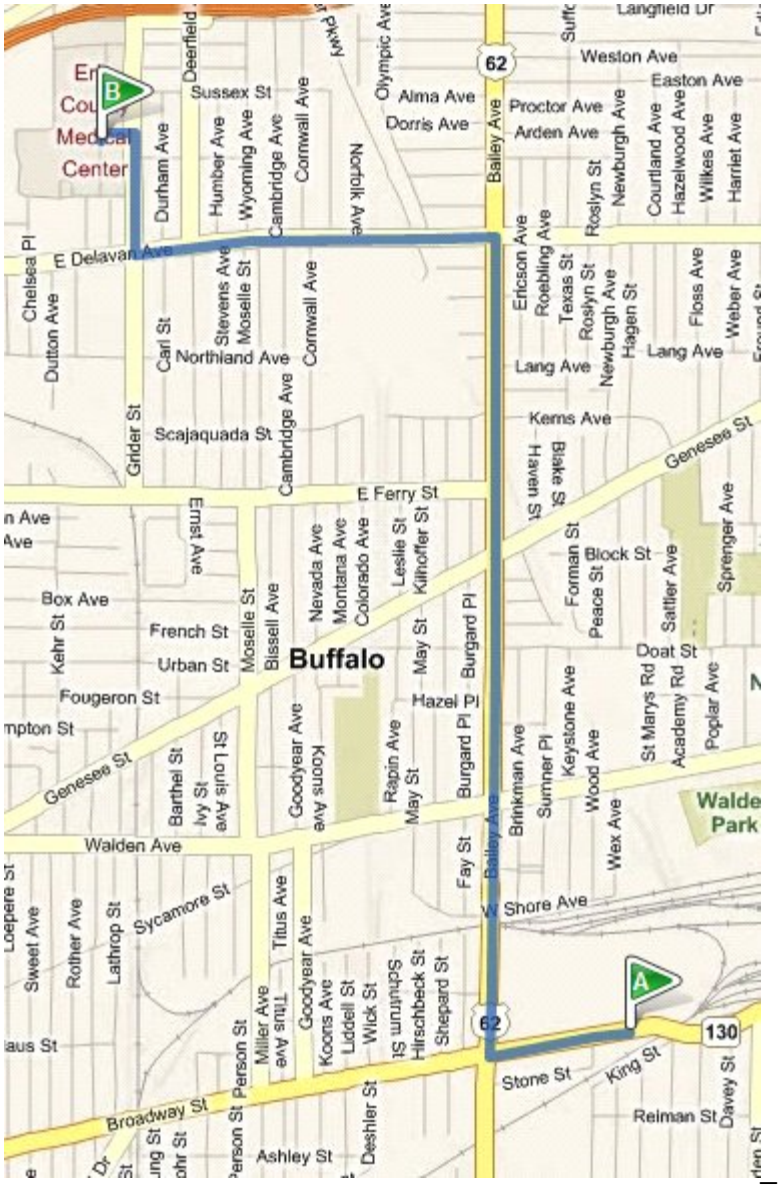
Directions to the Hospital:

1. **Turn Left onto Broadway from site**
2. **Turn right on Bailey**
3. **Turn left at Delevan**
4. **Turn right on Grider**

Total Distance: 3.2 miles

Total Estimated Time: 9 minutes

Map Showing Route from the site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response group will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 4.) The list will also be posted prominently at the site and made readily available to all personnel at all times.

3.0 Site Monitoring Plan

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site and all affected site media identified below. Monitoring of other Engineering Controls is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of groundwater.
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards;
- Assessing achievement of the remedial performance criteria.
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;
- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;

- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site will be conducted on an ongoing basis. Trends in contaminant levels groundwater in the affected areas, will be evaluated to determine if the remedy continues to be effective in achieving remedial goals (NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998(June2004 Addendum)). The monitoring program is summarized in Table 5 and outlined in detail in Sections 3.3 below.

Table 5: Monitoring Schedule

Monitoring Program	Frequency*	Matrix	Analysis
Groundwater	**Annual**	**Water**	**VOCs**
Groundwater	**Semi-Annual**	**Water**	**GW Elevation**

- The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH
- The sampling frequency may be modified with the approval NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC

3.3 Media Monitoring Program

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on an annual basis to assess the performance of the remedy.

The network of monitoring wells has been installed to monitor groundwater conditions at the site. The network of on-site and off-site wells has been designed based on the following criteria:

Wells were initially installed based on the location of OU#1 (MW1-BR – MW4-BR). After it was determined that groundwater contamination exceeded regulatory standards, a second series of wells (MW5-BR- MW8-BR) were installed to determine the extent of contamination. MW5A-BR was installed since BBP does not have regular access to MW5-BR and a pumping well was required in the area near MW5-BR.

- Locations of the monitoring wells is shown in Figure 11;
- All wells are completed into bedrock with the casing socketed into the rock. In general, well depths are 24-32 feet below grade.

3.3.1.1 Analytical Parameters

All samples will be analyzed for TCL volatiles (Method 8260).

3.3.1.2 Wells Sampled

Samples will be collected from the following wells:

- MW2-BR
- MW3-BR
- MW4-BR
- MW5-BR
- MW5A-BR
- MW4-BR:Duplicate Sample; and
- Matrix spike/matrix spike duplicate.

3.3.1.3 Groundwater Elevation

Groundwater elevations will be collected from the following wells:

- MWl-BR
- MW2-BR
- MW3-BR
- MW4-BR
- MW5-BR
- MW5A-BR
- MW6-BR
- MW7-BR
- MW8-BR

Note: Past nomenclature for wells has been either VCA-MW4-BR or MW4-BR. The latter is used throughout this report. Past reports may use either nomenclature.

Monitoring well construction logs are included in Appendix D.

3.3.1.4 Sampling Protocol

A. Water Level Measurements

Static water level from the groundwater wells will be measured from the top of the well casing/riser, with a weighted electronic water level indicator (QED). Well bottoms are sounded with a weighted tape measure. All measurements are recorded to the nearest hundredth of a foot (0.01 feet). The length of the measuring device, which contacts the water, must be cleaned between wells with liquinox, deionized water rinse and paper towel wipe.

B. Well Evacuation

The well are evacuated using a continuous running dedicated pump. Purge water will be collected in either 55 gallon drums or a portable tank. Purge water will be discharged to the municipal sewer system at the time of the sampling event.

C. Sampling

Each well is sampled using a dedicated PVC bailer. When using the dedicated PVC bailer for sampling, the bailer is slowly lowered into the water volume, to minimize agitation and devolatization. Sample containers are then filled directly from the bailer.
An additional sample is collected from each well in order to facilitate the measurement of field parameters.

D. Field Measurement

On site field measurements include pH, specific conductivity, temperature,

eH, and turbidity. This data is recorded on the Field Observation Form. All instruments, which contacted groundwater and surface water, are cleaned after each measurement by rinsing with deionized water and wiping dry with paper towels.

E. Equipment Calibration

Prior to mobilization, all field equipment and instrumentation is checked for condition, in field calibrations are done before field measurements are facilitated. A calibration check is performed at the start of the day and a recalibration of the field instruments is performed if necessary.
pH / eH meters are two-point calibrated with 7.00 S.U. and 10.00 S.U. buffer solutions.
Conductivity meters are three-point calibrated with 180, 1000 and 18000 umhos/cm buffer solutions.
Turbidity meters are two-point calibrated with 1.0 NTU and 5.0 NTU standards.

F. Sample Container Preparation

All containers used in the collection of samples for this project were provided new and clean from the analytical laboratory. The bottles are stored in a clean environment at the sampling contractor prior to their use.

Table 6
AQUEOUS SAMPLE PARAMETER/CONTAINER TABLE

Parameter Group	Analytical Method	Required Volume (ml)	Container Type	Preservative	Holding Time
VOCs	8260	4 x 40	G	Cool to 4^{0}C, HCL to pH<2	14 days[2]

Notes:
G: Glass, Teflon-lined septum
1: Holding times begin at the time of sample receipt in the laboratory. Samples are to be received at the laboratory within 24 hours of collection.
2: From verified time of sample receipt (VTSR).
Analytical Methods are USEPA SW846.

VOCs = Volatile Organic Compounds

G. Sample Control and Chain of Custody

Samples will be shipped to the laboratory in coolers with ice packs.A chain of custody manifest is initiated at the time of sample collection and accompanies the samples through delivery to the analytical laboratory.

H. Laboratory Analysis

All samples will be analyzed by a NYSDOH certified Laboratory.

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3.3.1.5 Monitoring Well Repairs, Replacement And Decommissioning

If biofouling or silt accumulation occurs in the on-site and/or off-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

The NYSDEC will be notified prior to any repair or decommissioning of monitoring wells for the purpose of replacement, and the repair or decommissioning and replacement process will be documented in the subsequent periodic report. Well decommissioning without replacement will be done only with the prior approval of NYSDEC. Well abandonment will be performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells that are decommissioned because they have been rendered unusable will be reinstalled in the nearest available location, unless otherwise approved by the NYSDEC.

3.4 INSPECTION

3.4.1 Pumping wells

Pumping wells (MW2-BR, MW4-BR and MW5A-BR)will be inspected on a monthly basis to assure the wells are functioning. During these inspections, an inspection form will be completed (Appendix F). The form will compile sufficient information to assess the following:

- Pump operational
- Total gallons pumped;

3.4.1 Sub Slab Depressurization System

Ventilation systems will be inspected on a monthly basis to assure the vents are functioning.

During these inspections, an inspection form will be completed (Appendix F). The form will compile sufficient information to assess the following:

- Power on
- Fan operational

3.5 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP. In addition to the Annual Periodic Review Report, a semi-annual letter report will be submitted. This letter report will document any additional actions taken during the preceding 6 month period and will also provide the results of the semi-annual water level measurements. If either the groundwater pumping system or the sub slab depressurization system is found to be out of service for more than two weeks

notification must be provided to the NYSDEC region 9 office. Notification shall be made via telephone to 716-851-7220.

All monitoring results will be reported to NYSDEC on an annual basis in the Periodic Review Report.

Table 7: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Groundwater Monitoring/ Chemistry and Water Elevations	**Annual**
Water Elevations	**Semi-Annual**

*** The frequency of events will be conducted as specified until otherwise approved by NYSDEC**

4.0 Operation, Monitoring and Maintenance Plan

4.1 Introduction

This OM&M Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the site. This OM&M Plan:

- Includes the steps necessary to allow site personnel to operate and maintain the sub slab depressurization and groundwater pumping systems;
- Includes an OM&M contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the systems are operated and maintained.

A copy of this OM&M Plan, along with the complete SMP, will be kept at the site. This OM&M Plan is not to be used as a stand-alone document, but as a component document of the SMP**.**

4.2 Engineering Control System OM&M

4.2.1 Sub slab depressurization system

During operation, the sub-slab depressurization system will be checked monthly. Checks will consist of observations to assure that the power is on and that the fan is working. Should the power be off or the fan not be operating, the facility maintenance department will take steps to correct the problem and bring the system back on-line.

If notified of a problem by the tenant, the facility maintenance department will take steps to correct the problem and bring the system back on-line. Subsequent to the repair, the system will be checked the following week and then monthly.

4.2.2 Groundwater Pumping System

During operation the pumping system (MW2-BR, MW4-BR and MW5A-BR) will be checked monthly. Checks will consist of observations to assure that the power is on and that the pump is working.Totalizer readings will be taken monthly. Should the monthly totalizer reading be significantly different from the pump rate that was initially established, further action will be taken to verify that the difference in readings is not caused by a malfunctioning pumping system. Documentation of pumping system inspections will be maintained using the Pumping Well Log Sheet (Appendix F).

4.2.3 Out of Services Reporting

Notification must be made to the NYSDEc if either the depressurization system or the pumping system is out mof service for more than 2 weeks.

5. Inspections, reporting and certifications

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3, Monitoring Plan (annually) and Section 4 Operation, Monitoring and Maintenance Plan (monthly)of this SMP. Inspections of remedial components will be performed monthly. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on forms A and B (see appendix F) for their respective system as noted previously. All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the site during the reporting period will be

provided in electronic format (.pdf or other format specified by the NYSDEC) in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;
- OM&M activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the Interim Remedial Measures (IRM) and FER.

5.2 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification:

For each institutional or engineering control identified for the site, I certify that all of the following statements are true:

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;

- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;

- Use of the site is compliant with the Deed Restriction;

- The engineering control systems are performing as designed and are effective;

- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program; and

- The information presented in this report is accurate and complete**.**

- **I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as [Owner or Owner's Designated Site Representative] The signed certification will be included in the Periodic Review Report described below.**

.

5.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department every year, beginning eighteen months after the approval of the FER is issued. In the event that the site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the site described in Appendix B (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;

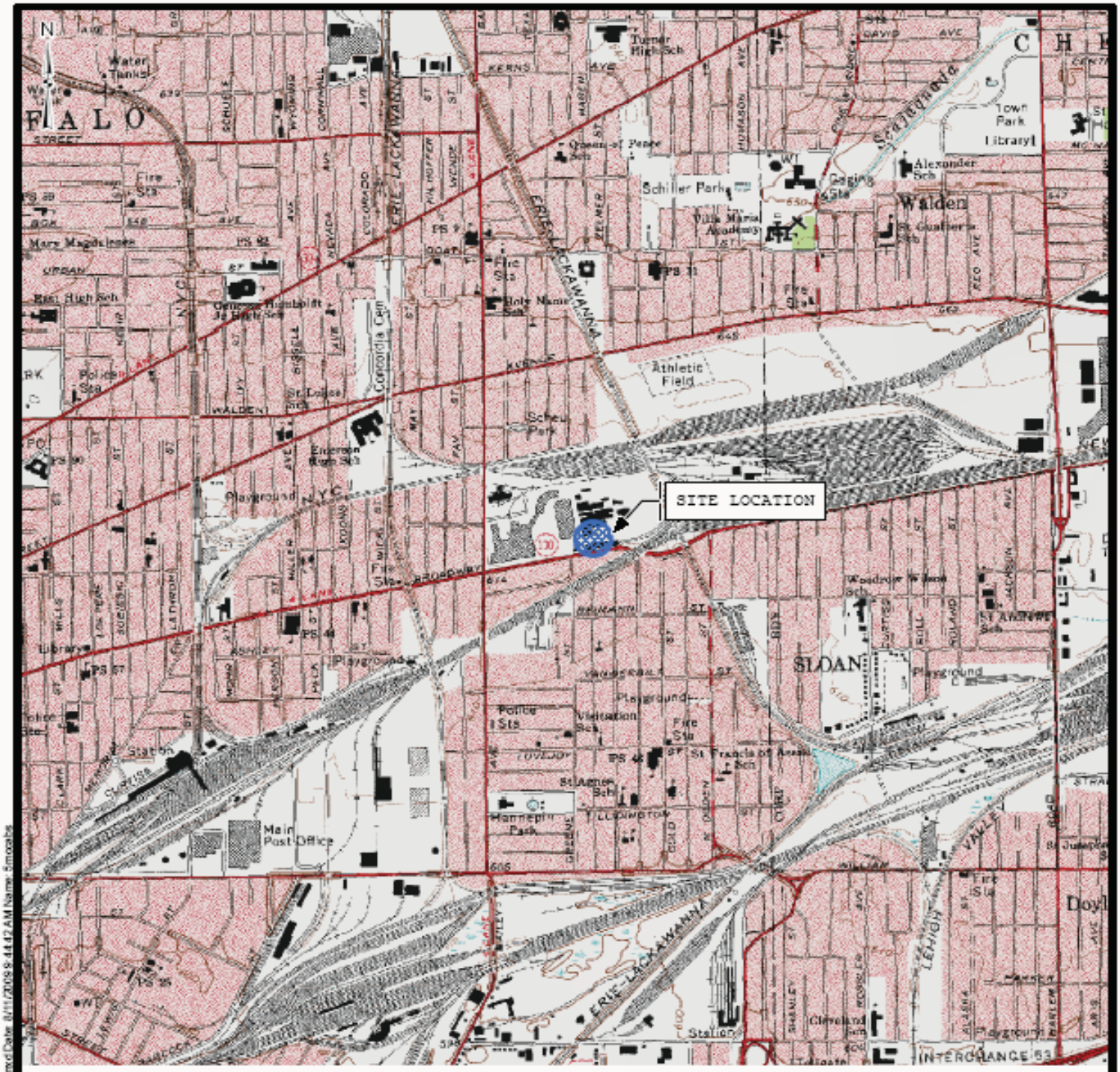
- Results of the required inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:
    - The compliance of the remedy with the requirements of the site-specific Plan;
    - The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
    - Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
    - Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
    - The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Regional Office in which the site is located, and in electronic format to NYSDEC Regional Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

Figure 1- Site Location Map



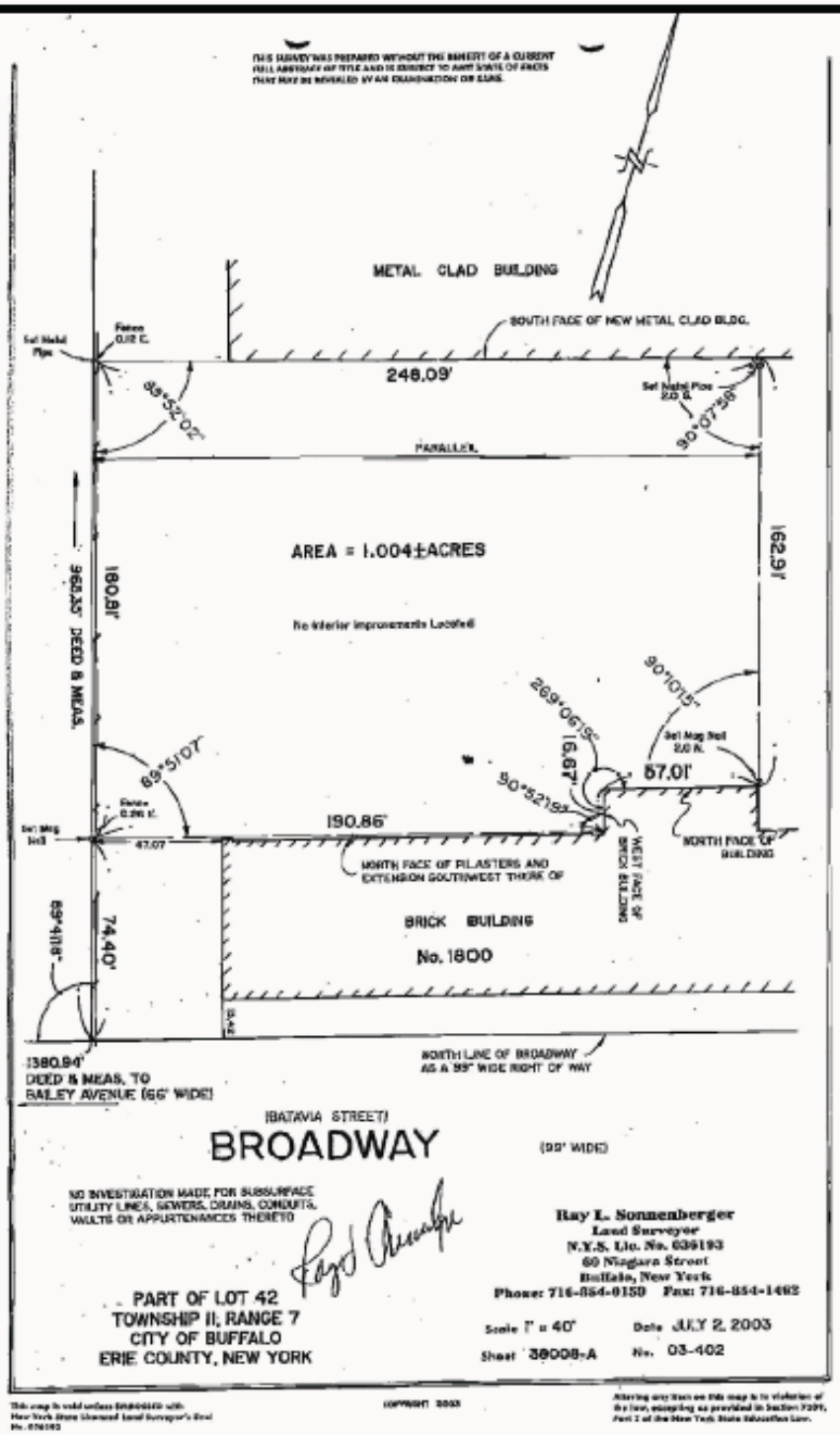
SOURCE: USGS 7.5' Quadrangle - Buffalo NE, New York - 1965.

0 1,000 2,000 4,000 Feet

BUFFALO BUSINESS PARK	SITE LOCATION MAP	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 1

ACP-NY F:\PROJECTS\50x\0037 BBP\GIS\ArcMap\Site Location.mxd Date: 4/11/2008 4:44:42 AM Name: Smoake

Figure 2- VCA Site Map



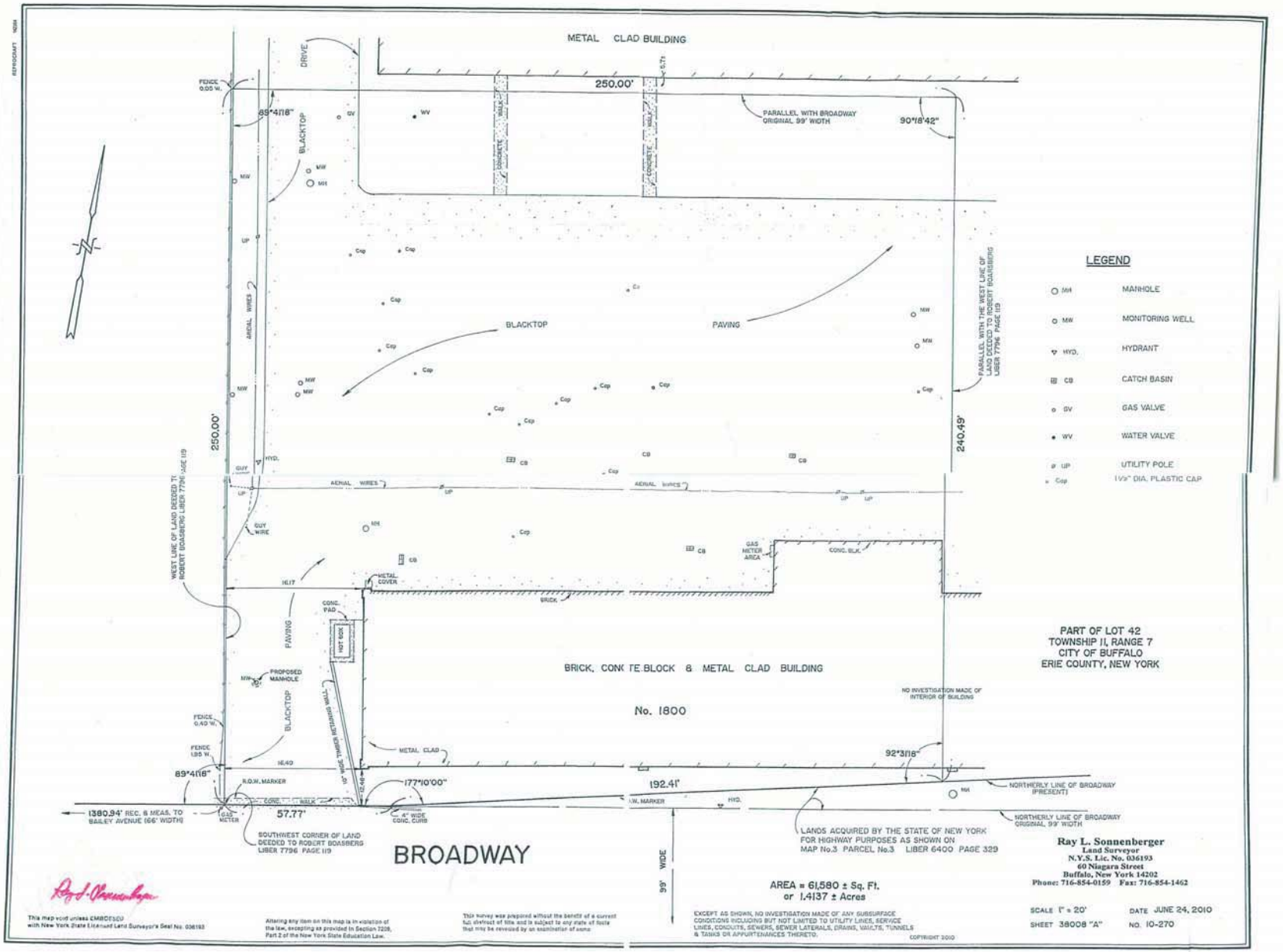
SOURCE: Brownfields Site Cleanup Agreement (BSCA) - 2003.

BUFFALO BUSINESS PARK	SITE MAP

American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 2

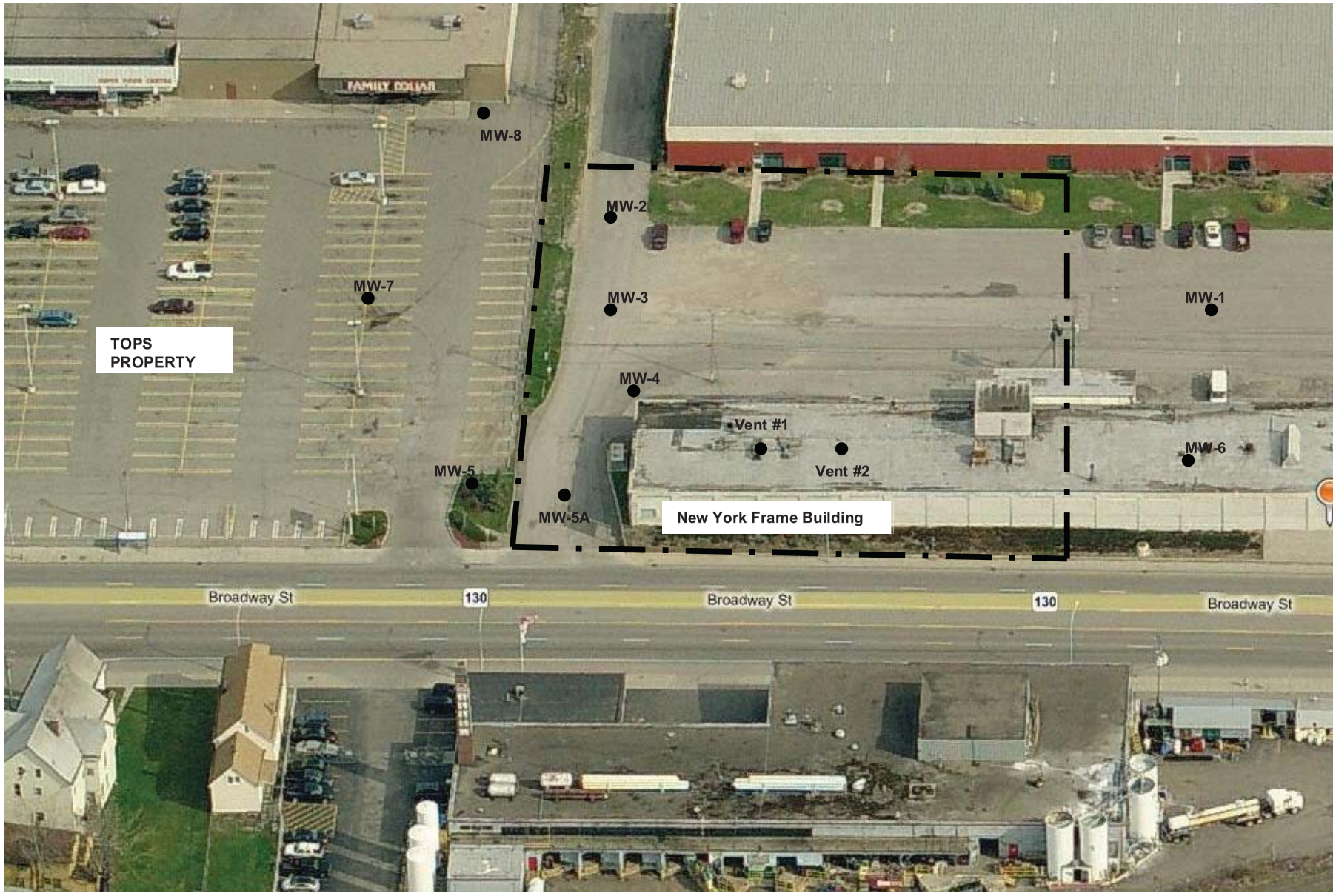
ACP-NY F:\PROJECTS\BSNY\GIS_BBP\GIS\Arcdoc\SiteMap.mxd Date: 8/11/2009 @ 9:12 AM Name: Smoaks

Figure 2A- Area Subject to SMP and Deed Restriction



Buffalo Business Park	Survey of Area Subject to Deed Restriction	
	BUFFALO BUSINESS PARK/VCP	Figure 2A

Figure 2B- Aerial Photograph of Area Subject to SMP and Deed Restriction



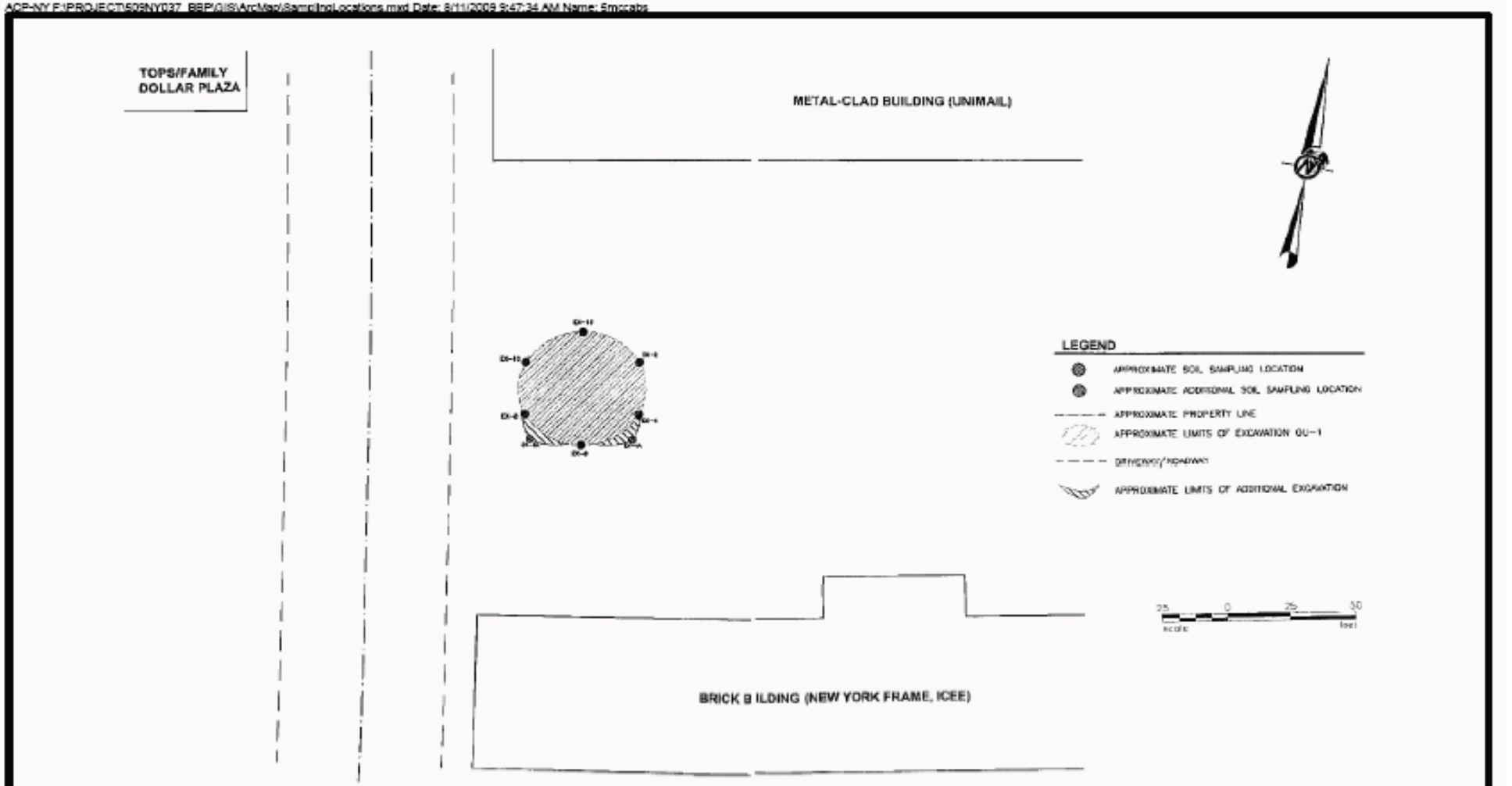
MW-7 Well/ Building Vent

Limits On-Site OU#2

Figure 2B

Figure 3- Limits of Excavation and Confirmation Sampling Locations

ACP-NY F:\PROJECT\509NY037_BBP\GIS\ArcMap\SamplingLocations.mxd Date: 8/11/2009 9:47:34 AM Name: Smccabe

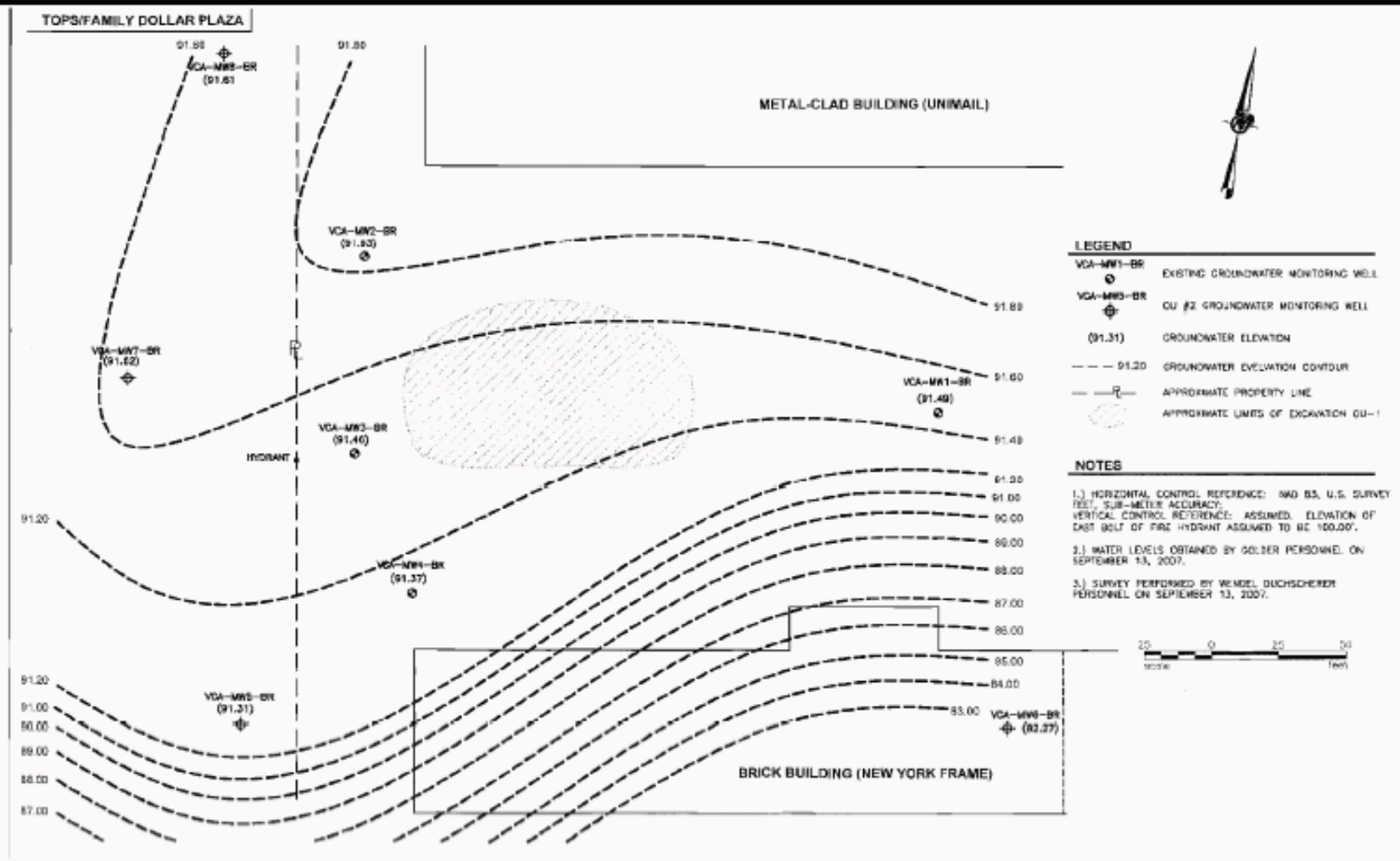


SOURCE: Remedial Activities at Operating Unit #1 - Golder Associates Inc. (July 2006).

BUFFALO BUSINESS PARK	LIMITS OF EXCAVATION AND CONFIRMATION SAMPLING LOCATIONS	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 3

Figure 4- Groundwater Potentiometric Surface – OU #2 (Prior to Pumping)

ACP-NY F:\PROJECT\609NY037_BBP\GIS\ArcMap\GroundwaterContours.mxd Date: 8/11/2009 9:48:50 AM Name: Smccabe

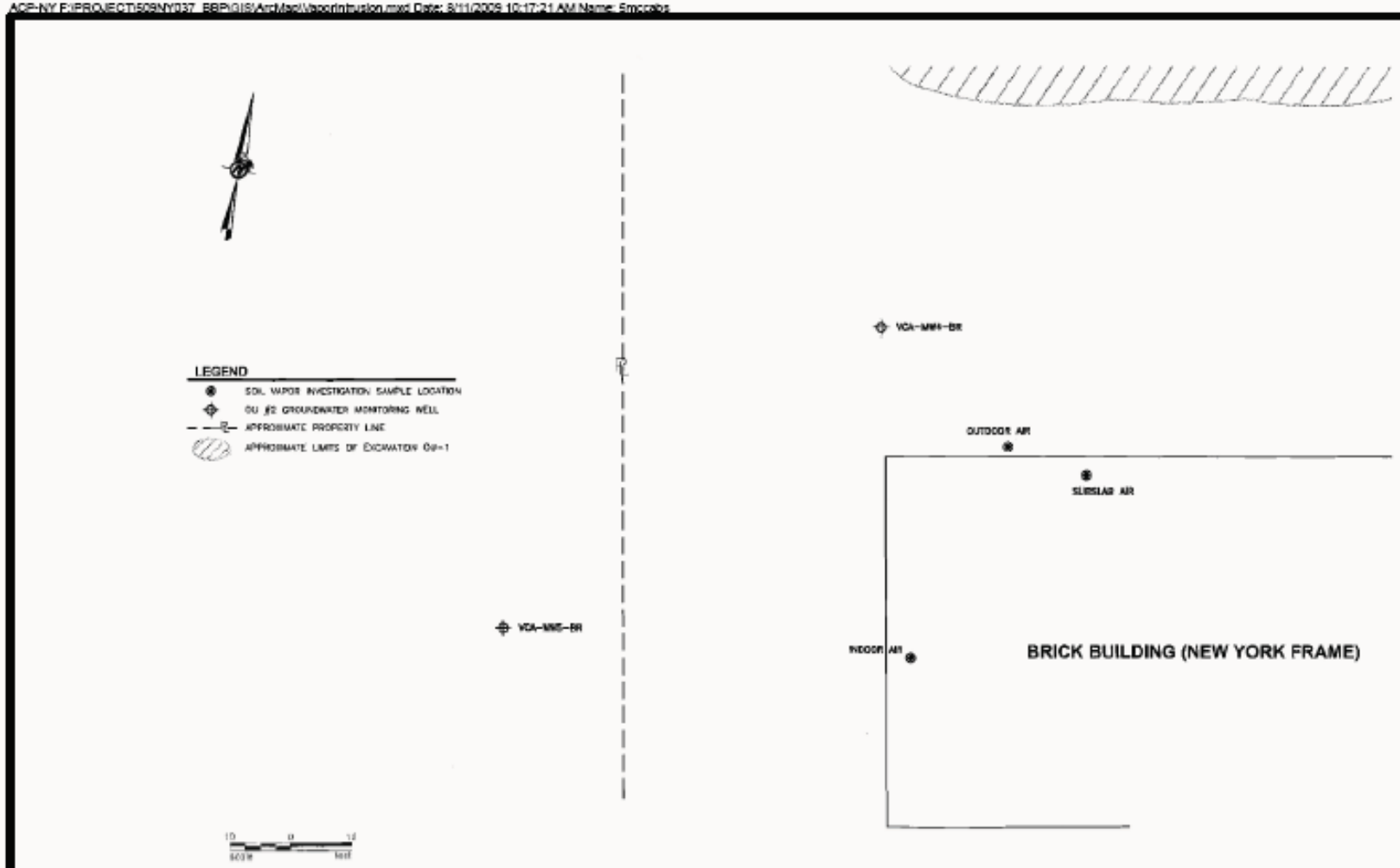


SOURCE: Remedial Activities at Operating Unit #2 - Golder Associates Inc. (November 2007).

BUFFALO BUSINESS PARK	GROUNDWATER POTENTIOMETRIC SURFACE OPERABLE UNIT #2 (PRIOR TO PUMPING)
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP — FIGURE 4

Figure 5- Vapor Intrusion Sample Locations

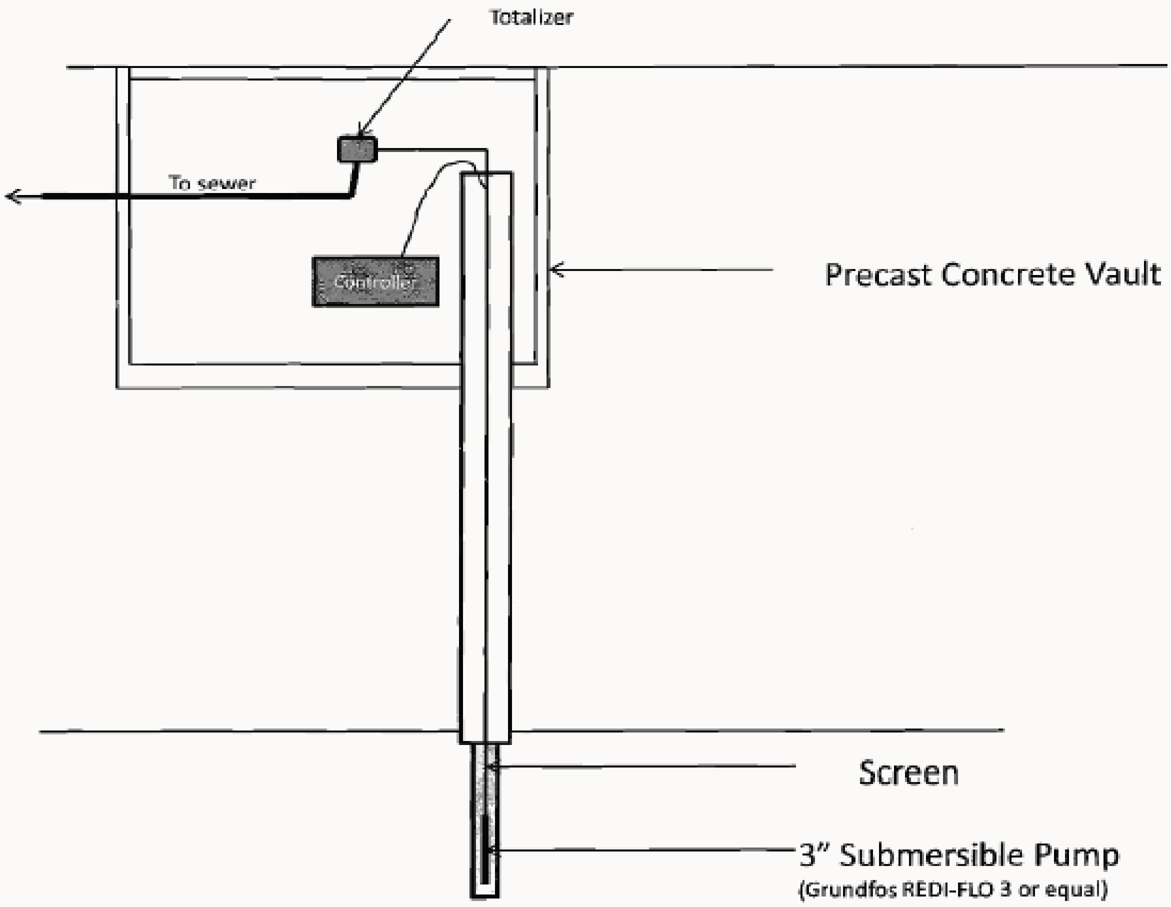
ACP-NY F:\PROJECT\50NY037_BBP\GIS\ArcMap\VaporIntrusion.mxd Date: 8/11/2009 10:17:21 AM Name: Smcoyle



SOURCE: Remedial Activities at Operating Unit #2 - Golder Associates Inc. (November 2007).

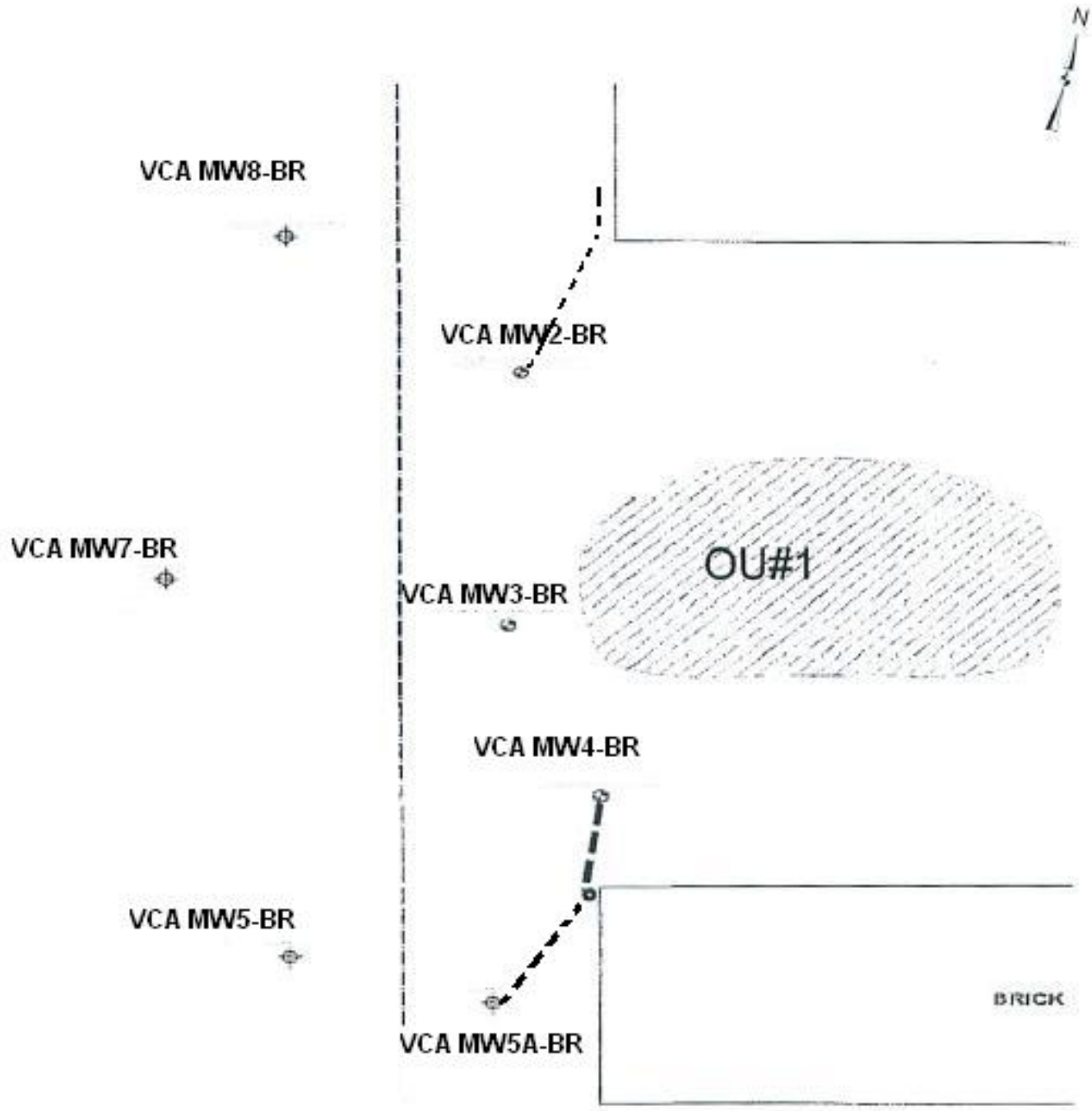
BUFFALO BUSINESS PARK	VAPOR INTRUSION SAMPLING LOCATIONS	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 5

Figure 6- Pumping Well Schematic



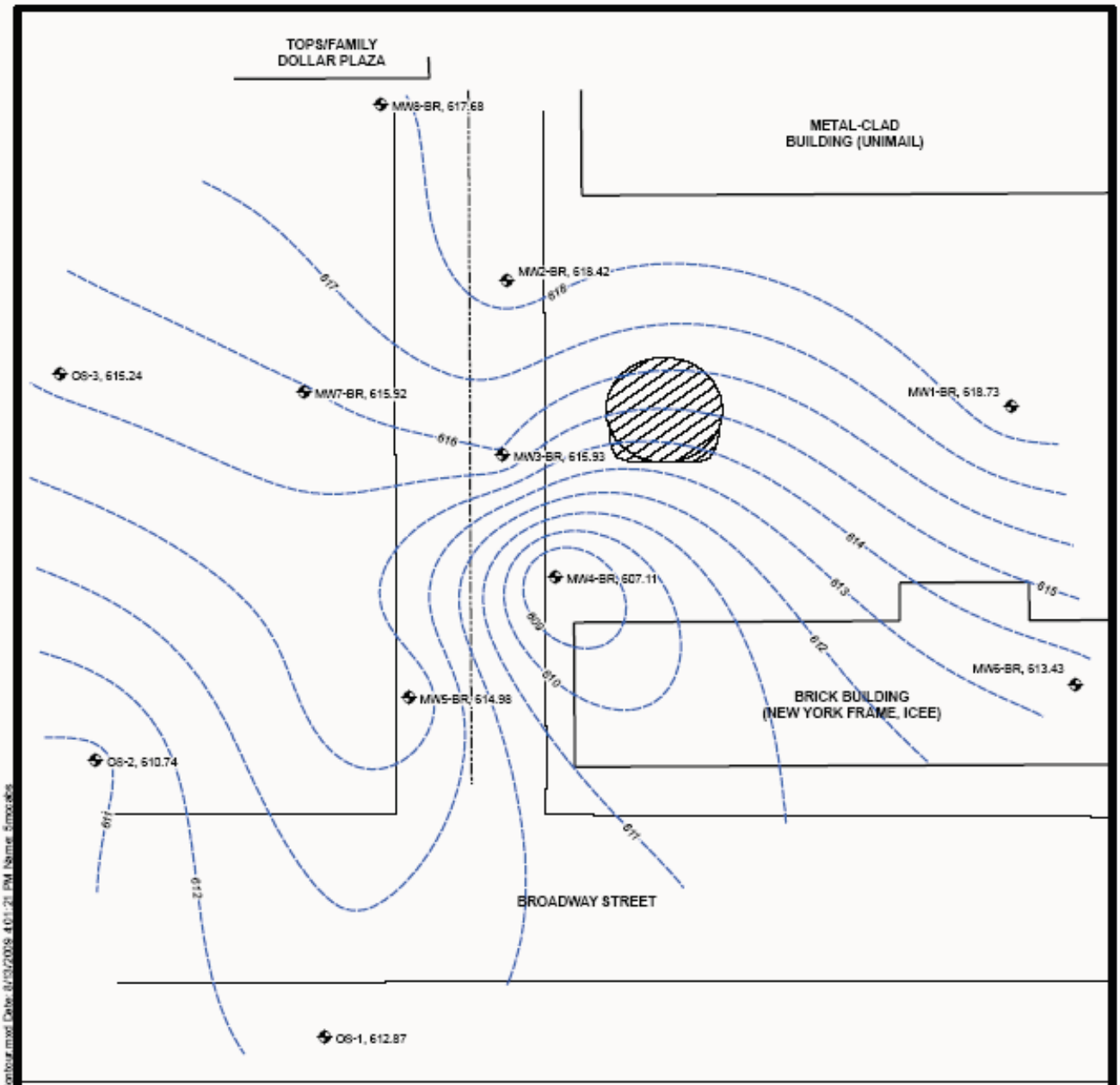
BUFFALO BUSINESS PARK	PUMPING WELL SCHEMATIC	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 6

Figure 7- Schematic of Sewer Discharge Line



BUFFALO BUSINESS PARK	SCHEMATIC OF SEWER DISCHARGE LINE	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 7

Figure 8- Groundwater Potentiometric Surface – April 13, 2009
(Post Pumping)



Legend

- Monitoring Well
- 612 — Groundwater Elevation Contour
- Approximate Limits of Excavation

MW5-BR, 614.98
Location ID
Groundwater Elevation (ft amsl)

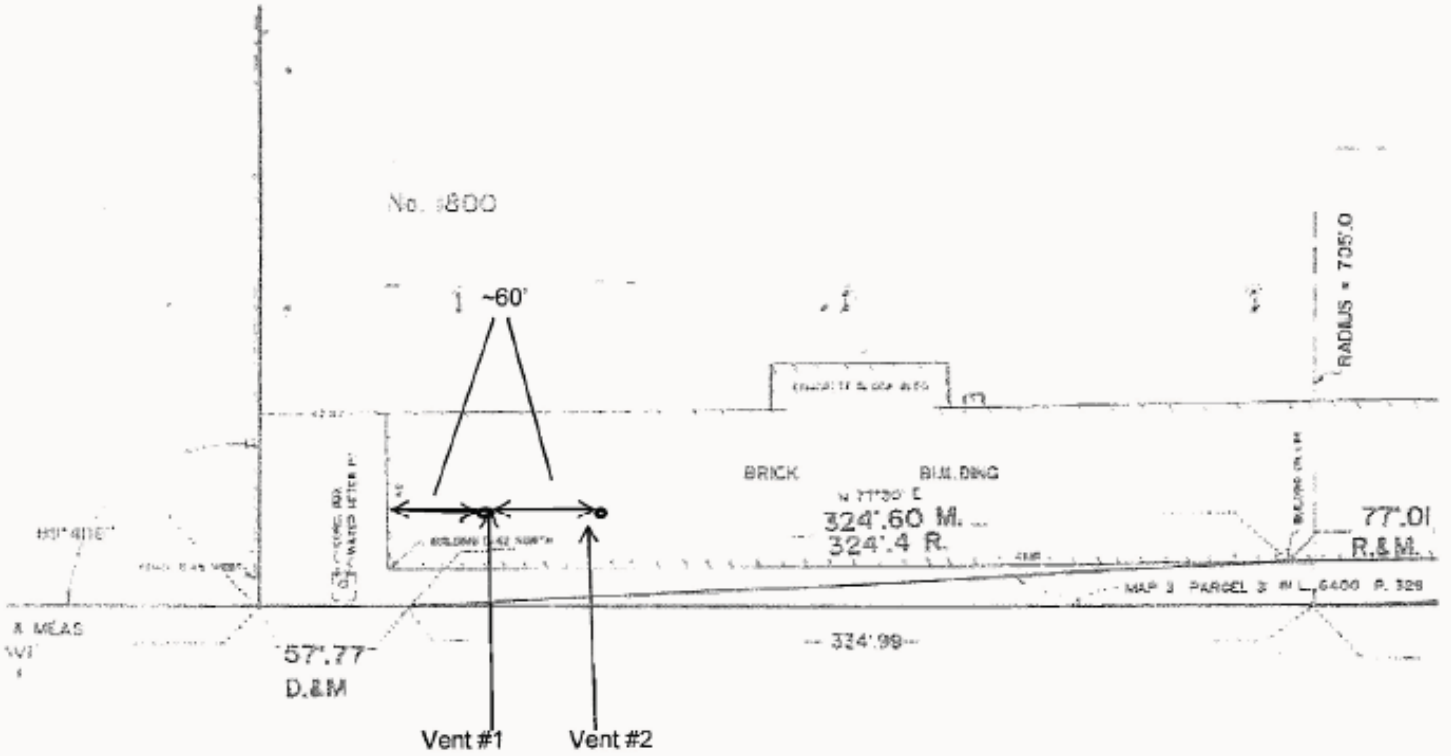
SOURCE: Basemap from - Remedial Activities at Operating Unit #2 - Golder Associates Inc. (November 2007).

BUFFALO BUSINESS PARK	GROUNDWATER POTENTIOMETRIC SURFACE APRIL 13, 2009	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 8

ACP-NY F:\PROJECT\2009\Y017 BBP\GIS\ArcMap\041309_GroundwaterContour.mxd Date: 8/13/2009 4:01:21 PM fahmer Associates

Figure 9- Sub-Slab Depressurization Locations

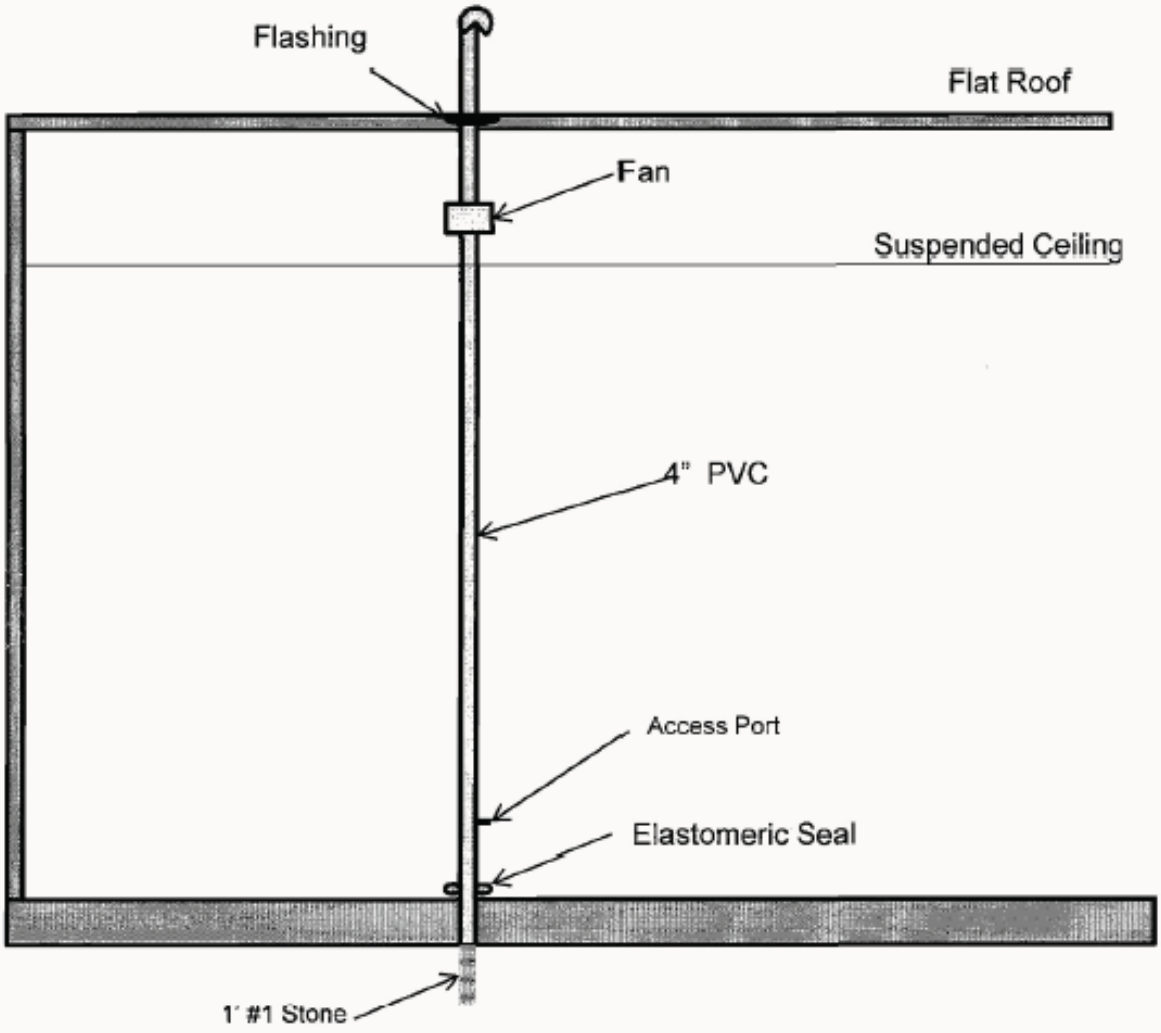
ACP-NY F:\PROJECT\509NY037_BBP\GIS\ArcMap\SbSlabLocMps.mxd Date: 5/27/2009 10:4:26 AM Name: Smccabe



Sub slab depressurization vents
Located no closer than 20 feet from
outside wall

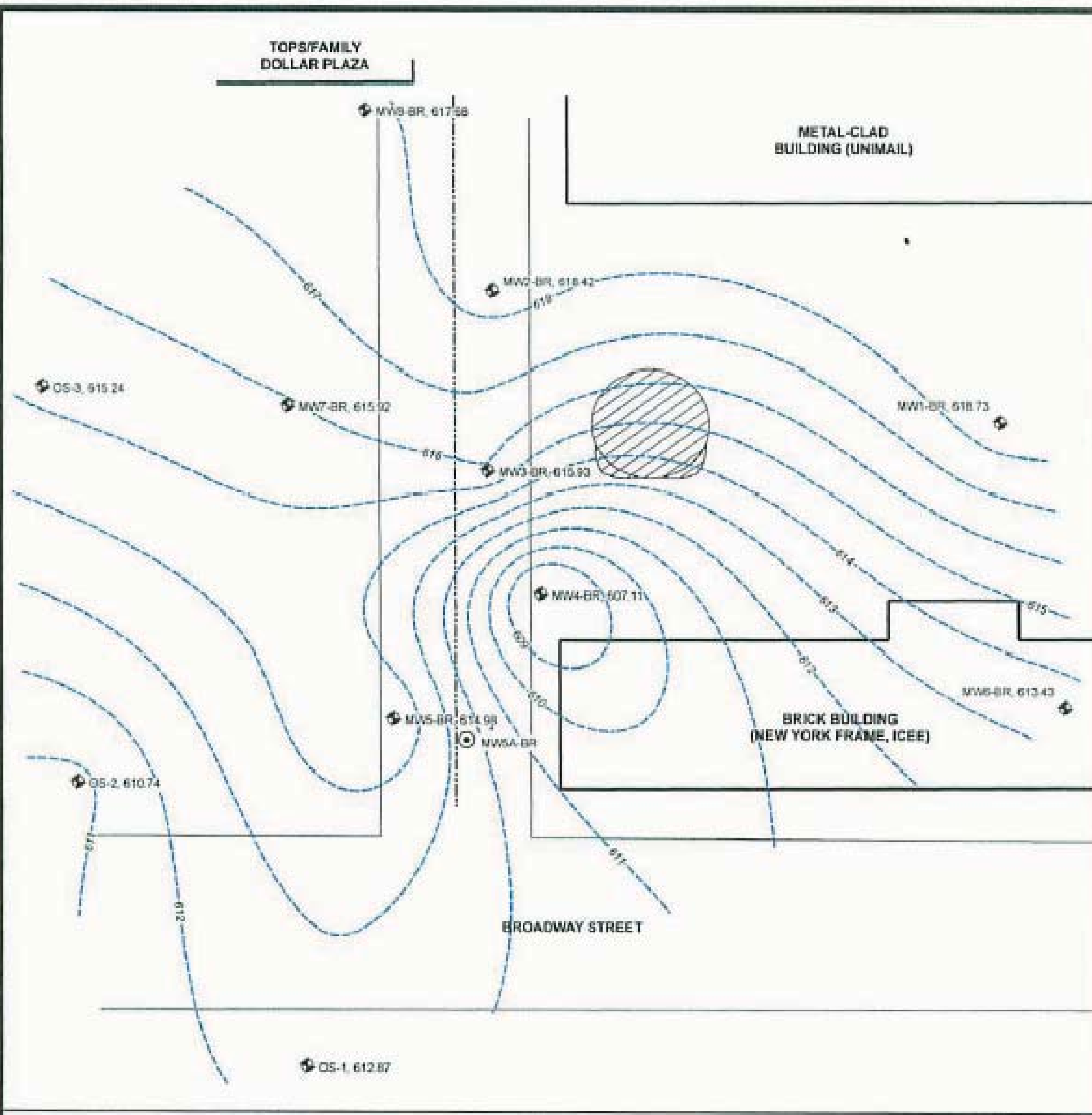
BUFFALO BUSINESS PARK	SUB-SLAB DEPRESSURIZATION LOCATIONS	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 9

Figure 10- Depressurization Vent Schematic



BUFFALO BUSINESS PARK	DEPRESSURIZATION VENT SCHEMATIC	
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP	FIGURE 10

Figure 11- Location of new pumping well MW5A-BR



Legend

- Monitoring Well
- 612 — Groundwater Elevation Contour
- Approximate Limits of Excavation
- MW5-BR, 614.98 — Location ID / Groundwater Elevation (ft amsl)
- Proposed Pumping Well

SOURCE: Basemap from - Remedial Activities at Operating Unit #2 - Golder Associates Inc. (November 2007).

BUFFALO BUSINESS PARK	Location of new pumping well MW5A-BR
American Consulting Professionals of New York, PLLC	BUFFALO BUSINESS PARK/VCP — FIGURE 11

APPENDIX A – SOILS MANAGEMENT PLAN

A-1 NOTIFICATION

Based on previous excavation and testing of soils at the site, all soils above regulatory levels have been removed as part of the remediation of OU #1. The contamination remaining at the site is related to contaminated groundwater. This Soils Management Plan is applicable for any excavation activities conducted within the area shown on Figure 2 that will extend below groundwater.

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination (i.e. contaminated groundwater), the site owner or their representative will notify the Department. Currently, this notification will be made to:

Martin Doster

Regional Hazardous Waste Remediation Engineer

270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this SMP,

- A statement that the work will be performed in compliance with this SMP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format,
- Identification of disposal facilities for potential waste streams (i.e. BSA discharge of contaminated groundwater)

A-2 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

A-3 EXCAVATED SOILS MANAGEMENT

If any soils are excavated they will be sampled based on the volume in the table below:

Soil Quantity (cubic yards)	Number of Grab Samples	Number of Composite Samples
0-50	1	1
50-100	2	1
100-200	3	1
200-300	4	1
300-400	4	2
400-500	5	2
500-800	6	2
800-1,000	7	2

Soil samples will be analyzed for VOCs using USEPA method 8260. Results will be compared to Soil Cleanup Objectives outlined in NYSDEC Technical and Administrative Guidance Memorandum 4046 (TAGM 4046) dated January 24, 1998. Any soils with concentrations greater than the guidance values will be sent off-site for disposal. Any soils below the TAGM guidance values will be used for backfill if appropriate. NYSDEC will be notified prior to

sampling and will be provided a copy of the analytical report along with proposed disposal and/or re-use of the excavated soil.

APPENDIX B – METES AND BOUNDS

PARCEL DESCRIPTION 1800
BROADWAY

ALL THAT TRACT OR PARCEL OF LAND, situate in the City of Buffalo, County of Erie and State of New York, being part of Lot No. 42,Township 11, Range 7 of the Holland Land Company's Survey, bounded and described as follows;

Beginning at a point in the northerly line of Broadway (as a street 99 feet wide), a distance of 1380.94 feet easterly of the intersection of same with the easterly line of Bailey Avenue (as a street 66 feet wide), said point of beginning being the southwesterly corner of land deeded to Robert Boasberg by deed recorded in the Erie County Clerk's Office in Liber 7796 of Deeds at page 119;

Thence northerly and along the westerly line of said lands so deeded to Robert Boasberg, said line forming an exterior angle of 89°41' 18" as measured in the northwesterly quadrant with the northerly line of Broadway, a distance of 250.00 feet;

Thence easterly on a line parallel with the northerly line of Broadway and forming an interior angle of 89°41' 18" as measured in the southeasterly quadrant with the last described line, a distance of 250.00 feet;

Thence southerly on a line parallel with the westerly line of the aforementioned lands deeded to Robert Boasberg, forming an interior angle of 90°18'42" as measured in the southwesterly quadrant with the last described line, a distance of 240.49 feet to a point in the northerly line of lands acquired by the State of New York for highway purposes, designated as Map No. 3, Parcel No.3 on a map recorded in the Erie County Clerk's Office in Liber 6400 of Deeds at page 329;

Thence southwesterly and along the northerly line of the aforesaid lands, forming an interior angle of 92°31' 18" as measured in the northwesterly quadrant with the last described line, a distance of 192.41 feet to a point in the aforementioned northerly line of Broadway (as a street 99 feet wide);

Thence westerly and along said northerly line of Broadway, forming an interior angle of 177°10'00" with the last described line, a distance of 57.77 feet to the point or place of beginning.

Containing an area of 61,580± Sq. Ft. or 1.4137 ± Acres

APPENDIX C-DEED RESTRICTION

APPENDIX D-Monitoring Well Boring and Construction Logs

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York PROJECT No. 99B509.26

CLIENT: Buffalo Business Park WELL/BORING No. VCA-MW1-BR

DATE STARTED: 6/10/04 DATE COMPLETED: 6/15/04 RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: NA AFTER COMPLETION: ~7 ft. bgs

WEATHER: ~70F, Cloudy DRILL RIG: CME-55 DRILLER: C & W Environmental

DRILL SIZE/TYPE: NQ SAMPLE HAMMER: WEIGHT NA FALL NA

Sample No.	Depth (Feet)	Type *	RQD (Percent)	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
R1	16.4-19.4	C	68.8	93.0	16.4-19.4ft: Gray, fair, excellent, bedded, sound limestone rock, crystalline
R2	19.4-23.1	C	44.6	97.3	17.3-27.3ft: Gray, poor, good, bedded, sound limestone rock, crystalline,
R3	23.1-30	C	67.0	106.9	23.1-30.0ft: Gray, hard, fair, bedded, sound limestone rock, crystalline, chert

NOTES NA = Not Applicable

ft. bgs = feet below ground surface

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York | PROJECT No. 99B509.26

CLIENT: Buffalo Business Park | WELL/BORING No. VCA-MW1-OB/AP-01

DATE STARTED: 6/7/04 | DATE COMPLETED: 6/8/04 | RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: ~6 ft. bgs | AFTER COMPLETION: NA

WEATHER: ~70F, Sunny | DRILL RIG: CME55 | DRILLER: C&W Environmental

DRILL SIZE/TYPE: Split Spoon | SAMPLE HAMMER: WEIGHT 140 lbs. | FALL 30 in.

Sample No.	PID/HNu Reading (ppm)	Depth (Feet)	Type*	Blows/6"	N	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
S1	2.5	0-2	U	9, 10, 13, 3	23	75	0-0.3ft: Asphalt
S2	1.1	2-4	U	1, 2, 2, 4	4	12.5	0.3-1ft: Brownish black sandy gravel (angular to sub-angular, coarse, loose, moist)
S3	26.9	4-6	U	3, 5, 5, 10	10	58.3	1-4ft: Blackish brown gravelly sand (coarse, medium, fine, medium dense, moist)
S4	3.8	6-8	U	3, 2, 2, 1	4	54.2	4-6.5ft: Light brown sandy gravel (coarse, angular, medium dense, moist to wet)
S5	4.1	8-10	U	3, 2, 2, 1	5	50	6.5-8ft: Brown sandy silt (low plasticity, moist)
S6	1.2	10-12	U	4, 11, 23, 25	34	54.2	8-12ft: Brown gravelly silty sand (fine, medium dense, moist)
S7	4.6	12-14	U	23, 25, 27,25	52	75	12-15ft: Brown gravelly silty sand (fine, medium dense, moist)
S8	0.6	14-15.8	U	14,14,26,50/3	-	75	15-15.8ft: Gray silty sand (coarse, medium, fine, medium dense, wet)
							Refusal @ 15.8 ft. bgs

NOTES NA = Not Applicable

ft. bgs = feet below ground surface

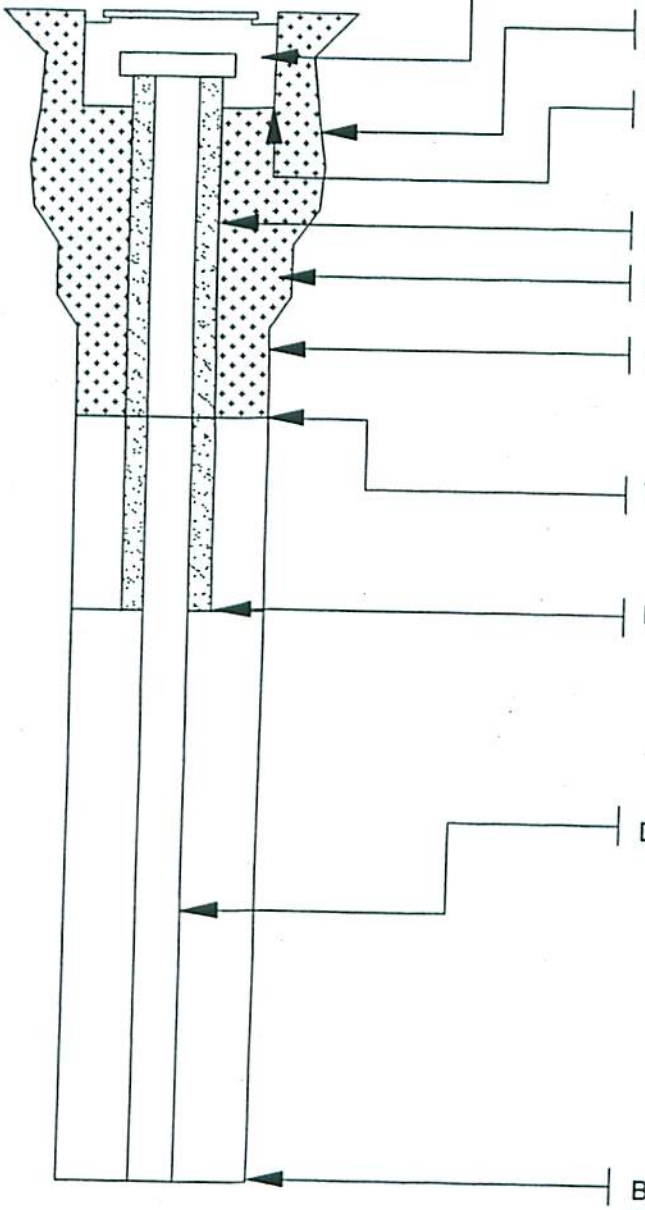
Fill to ~6.5 ft. bgs

No suspect odors detected

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS, Inc. WELL CONSTRUCTION DETAIL

PROJECT/LOCATION:	1800 Broadway, Buffalo, New York	PROJECT No.	99B509.26
CLIENT:	Buffalo Business Park	WELL No.	VCA-MW1-BR
DATE COMPLETED:	6/15/04	SUPERVISED BY:	JMR



REFERENCE POINT
Elevation/Depth: 624.44 feet

SURFACE SEAL
Type/Depth: Concrete/14 inches

DEPTH OF SURFACE CASING: 12 inches

OVERBURDEN CASING Size/Type: 4 inch diameter steel

DIAMETER OF BOREHOLE: 11 inches

TYPE OF SEAL: Concrete / Bentonite Grout

TOP OF BEDROCK Depth: 16.4 feet

BOTTOM OF OVERBURDEN CASING Depth: 19.4 feet

DIAMETER OF BOREHOLE 3.0 inches

BOTTOM OF BOREHOLE
Depth: 30.0 feet

NOTES

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York PROJECT No. 99B509.26

CLIENT: Buffalo Business Park WELL/BORING No. VCA-MW2-BR

DATE STARTED: 6/14/04 DATE COMPLETED: 6/16/04 RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: NA AFTER COMPLETION: ~7 ft. bgs

WEATHER: ~60F, Sunny DRILL RIG: CME-55 DRILLER: C & W Environmental

DRILL SIZE/TYPE: NQ SAMPLE HAMMER: WEIGHT NA FALL NA

Sample No.	Depth (Feet)	Type *	RQD (Percent)	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
1	16.8-19.9	C	88.7	99.5	16.8-19.9ft: Gray hard-very hard, excellent, bedded to thickly bedded sound limestone rock, occasional fossils, crystalline texture, occasional chert
2	19.9-22.7	C	86.3	104.2	19.9-22.7ft: Gray hard, good, bedded, sound limestone rock, crystalline texture
3	22.7-30.0	C	47.9	86.8	22.7-30ft: Gray hard, poor, bedded, sound limestone rock, crystalline texture

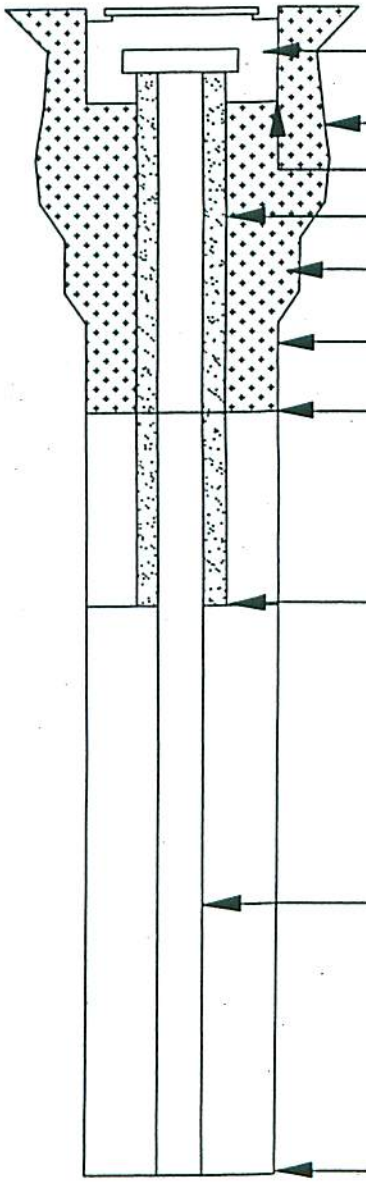
NOTES NA = Not Applicable

ft. bgs = feet below ground surface

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS, Inc. WELL CONSTRUCTION DETAIL

PROJECT/LOCATION:	1800 Broadway, Buffalo, New York	PROJECT No.	99B509.26
CLIENT:	Buffalo Business Park	WELL No.	VCA-MW2-BR
DATE COMPLETED:	6/16/04	SUPERVISED BY:	JMR



REFERENCE POINT
Elevation/Depth: 625.04 feet

SURFACE SEAL
Type/Depth: Concrete / 14 inches

DEPTH OF SURFACE CASING: 12 inches

OVERBURDEN CASING Size/Type: 4 inch diameter steel

DIAMETER OF BOREHOLE: 11 inches

TYPE OF SEAL: Concrete / Bentonite Grout

TOP OF BEDROCK Depth: 16.8 feet

BOTTOM OF OVERBURDEN CASING Depth: 19.9 feet

DIAMETER OF BOREHOLE 3.0 inches

BOTTOM OF BOREHOLE
Depth: 30.0 feet

NOTES

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York PROJECT No. 99B509.26

CLIENT: Buffalo Business Park WELL/BORING No. VCA-MW3-BR

DATE STARTED: 6/11/04 DATE COMPLETED: 6/15/04 RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: NA AFTER COMPLETION: ~7 ft. bgs

WEATHER: ~60F, Cloudy DRILL RIG: NA DRILLER: C & W Environmental

DRILL SIZE/TYPE: NQ SAMPLE HAMMER: WEIGHT NA FALL NA

Run No.	Depth (Feet)	Type *	RQD (Percent)	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
1	14.3-17.3	C	84.7	91.6	14.2-17.3ft: Gray, hard, excellent, thickly bedded, sound limestone rock, crystalline
2	17.3-27.3	C	79.9	89.6	17.3-27.3ft: Gray, hard, good, bedded, sound limestone rock, crystalline, occasional fossils, occasional crystal-filled vugs
3	27.3-30	C	73.3	91.4	27.3-30.0ft: Gray, hard, fair, bedded, sound limestone rock, crystalline, chert

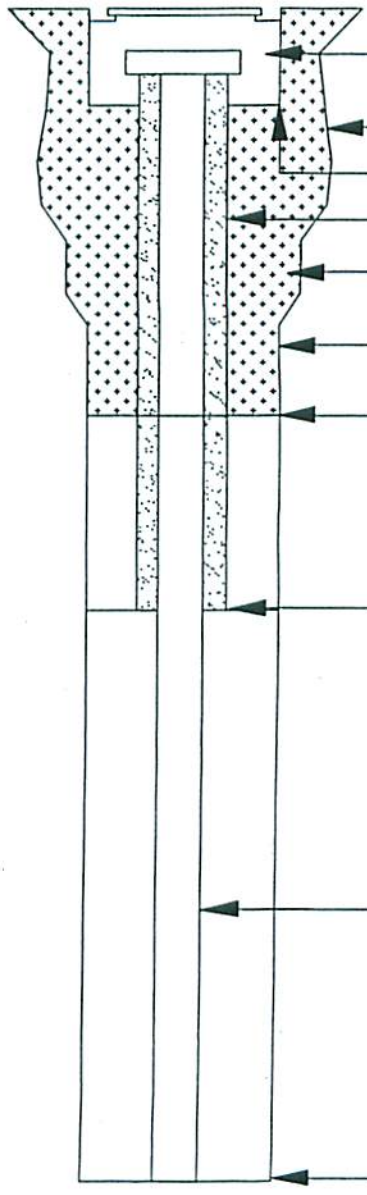
NOTES NA = Not Applicable

ft. bgs = feet below ground surface

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS, Inc. WELL CONSTRUCTION DETAIL

PROJECT/LOCATION:	1800 Broadway, Buffalo, New York	PROJECT No.	99B509.26
CLIENT:	Buffalo Business Park	WELL No.	VCA-MW3-BR
DATE COMPLETED:	6/15/04	SUPERVISED BY:	JMR



REFERENCE POINT
Elevation/Depth: 623.99 feet

SURFACE SEAL
Type/Depth: Concrete / 14 inches

DEPTH OF SURFACE CASING: 12 inches

OVERBURDEN CASING Size/Type: 4 inch diameter steel

DIAMETER OF BOREHOLE: 11 inches

TYPE OF SEAL: Concrete / Bentonite Grout

TOP OF BEDROCK Depth: 14.3 feet

BOTTOM OF OVERBURDEN CASING Depth: 17.3 feet

DIAMETER OF BOREHOLE 3.0 inches

BOTTOM OF BOREHOLE
Depth: 30.0 feet

NOTES

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York PROJECT No. 99B509.26

CLIENT: Buffalo Business Park WELL/BORING No. VCA-MW4-BR

DATE STARTED: 6/9/04 DATE COMPLETED: 6/11/04 RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: NA AFTER COMPLETION: ~7 ft. bgs

WEATHER: ~60F, Sunny DRILL RIG: NA DRILLER: C & W Environmental

DRILL SIZE/TYPE: NQ SAMPLE HAMMER: WEIGHT NA FALL NA

Sample No.	Depth (Feet)	Type *	RQD (Percent)	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
1	14.2-17.2	C	73.6	95.8	14.2-17.2ft: Gray, hard, fair, thickly bedded, sound limestone rock, crystalline, chert
2	17.2-22.8	C	73.6	100.4	17.2-22.8ft: Gray, hard, fair, thickly bedded, sound limestone rock, crystalline, occasional fossils, occasional crystal-filled vugs (sediment filled void @ ~19.9-20.1 ft)
3	22.8-30	C	65.7	106.8	22.8-30.0ft: Gray, hard, fair, thickly bedded, sound limestone rock, crystalline, occasional fossils, occasional crystal-filled vugs

NOTES NA = Not Applicable

ft. bgs = feet below ground surface

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS Inc. SUBSURFACE LOG

PROJECT/ LOCATION: 1800 Broadway, Buffalo, New York | PROJECT No. 99B509.26

CLIENT: Buffalo Business Park | WELL/BORING No. VCA-MW4-BR/GP2

DATE STARTED: 6/7/04 | DATE COMPLETED: 6/8/04 | RECORDED BY: JMR

GROUNDWATER DEPTH WHILE DRILLING: ~10 ft. bgs | AFTER COMPLETION: NA

WEATHER: ~70F, Sunny | DRILL RIG: CME55 | DRILLER: C&W Environmental

DRILL SIZE/TYPE: Split Spoon | SAMPLE HAMMER: WEIGHT 140 lbs. | FALL 30 in.

Sample No.	PID/HNu Reading (ppm)	Depth (Feet)	Type *	Blows/6"	N	Recovery (Percent)	Material Classification and Description (Unified Soil Classification System-Visual Manual Method)
1	4.0	0-2	U	19, 13, 10, 7	23	83.3	0-0.3ft: Asphalt
2	1.6	2-4	U	6, 3, 4, 5	7	83.3	0.3-1.5ft: Gray sandy gravel (coarse, angular, loose, moist)
3	4.1	4-6	U	1, 3, 5, 15	8	83.3	1.5-2.5ft: Black sandy gravel (coarse, angular, loose, moist)
4	2.3	6-8	U	15, 21, 22,24	43	100	2.5-4ft: Blackish brown gravelly silty sand (fine, dense, moist)
5	0.5	8-10	U	11, 15, 18,27	33	100	4-10ft: Reddish brown silty clay (no plasticity, hard, moist to wet)
6	0.8	10-12	U	6, 7, 11, 12	18	100	10-12.4ft: Brown silty gravelly sand (coarse, medium, fine, medium dense, moist)
7	0.4	12-12.4	U	100/0.4	>100	41.6	Refusal @ 12.4 ft. bgs

NOTES NA = Not Applicable

ft. bgs = feet below ground surface

Fill to ~2.5 ft. bgs

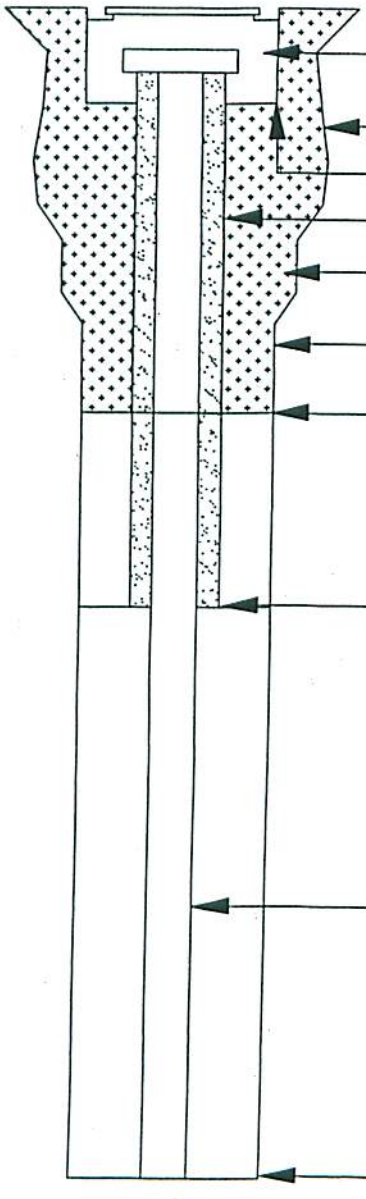
No suspect odors detected

* This test boring was advanced with the Auger Rig rather then the Direct Push Rig

*SS - SPLIT-SPOON SAMPLE U - UNDISTURBED TUBE P - PISTON TUBE C - CORE

LCS, Inc. WELL CONSTRUCTION DETAIL

PROJECT/LOCATION:	1800 Broadway, Buffalo, New York	PROJECT No.	99B509.26
CLIENT:	Buffalo Business Park	WELL No.	VCA-MW4-BR
DATE COMPLETED:	6/11/04	SUPERVISED BY:	JMR



REFERENCE POINT
Elevation/Depth: 623.74 feet

SURFACE SEAL
Type/Depth: Concrete / 14 inches

DEPTH OF SURFACE CASING: 12 inches

OVERBURDEN CASING Size/Type: 4 inch diameter steel

DIAMETER OF BOREHOLE: 11 inches

TYPE OF SEAL: Concrete / Bentonite Grout

TOP OF BEDROCK Depth: 14.2 feet

BOTTOM OF OVERBURDEN CASING Depth: 17.2 feet

DIAMETER OF BOREHOLE 3.0 inches

BOTTOM OF BOREHOLE
Elevation/Depth: 30.0 feet

NOTES

MONITORING WELL INSTALLATION LOG

JOB NO. 063-9477 PROJECT BUFFALO BUSINESS PARK VCP/OU#2 INVEST. WELL NO. VCA-MW5-BR SHEET 1 of 1

GA INSP. AJN DRILLING METHOD 4 1/4" I.D. HSA/HQ ROCK CORE GROUND ELEV. 97.1 ft. WATER DEPTH 5.81 ft. bgs

WEATHER MOSTLY CLOUDY DRILLING COMPANY SJB SERVICES, INC COLLAR ELEV. 3.0 ft. DATE/TIME 9/13/07 0830

TEMP. 76° F DRILL RIG CME-85 DRILLER R. BROWN STARTED 8/24/07 0815 (DATE / TIME) COMPLETED 8/24/07 0935 (DATE / TIME)

LOCATION / COORDINATES N1055924.8, E1087863.1

MATERIALS INVENTORY

WELL CASING 2.0 in. dia. 27.0 l.f. WELL SCREEN 2.0 in. dia. 10 l.f. BENTONITE SEAL MEDIUM BENTONITE CHIPS

CASING TYPE SCH. 40 PVC SCREEN TYPE MACHINE SLOT PVC INSTALLATION METHOD POUR THROUGH AUGERS

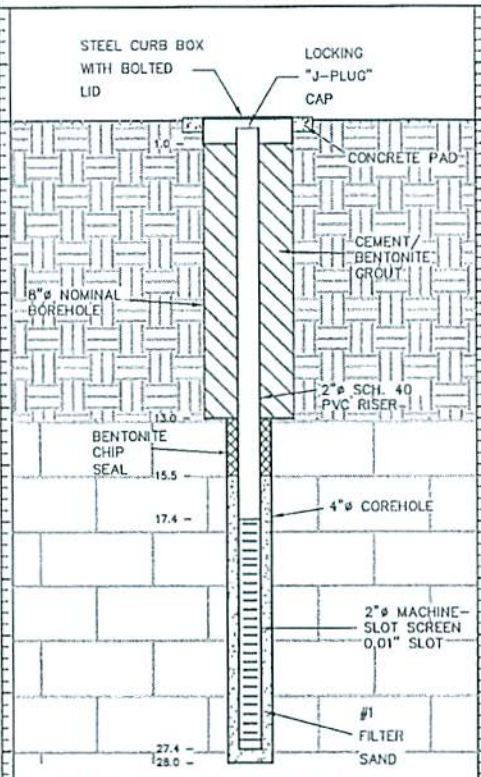
JOINT TYPE FLUSH THREADED SLOT SIZE 0.01" FILTER PACK QTY. 3.0

GROUT QUANTITY ---- CENTRALIZERS NOT USED FILTER PACK TYPE #1-SIZE QUARTZ SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE NOT USED INSTALLATION METHOD POUR THROUGH AUGERS

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
1464.18	GROUND SURFACE
0.0	**OVERBURDEN** **FILL UNIT** **0.0–3.0'** Stiff, brown, SILT, some fine to coarse sand and fine gravel, then broken rock fragments, coarse sand and gravel, some slag, some white staining, dry to slightly moist.
10.0	**SILT TILL UNIT** **3.0'–17.5'** Stiff to soft, brown, CLAYEY SILT to SILTY CLAY, trace to little fine sand, trace to some fine to coarse gravel, little gray clay infilling of fractures, trace yellow-orange mottling, moist.
	ONONDAGA LIMESTONE **13.0'–EOC** Fresh to slightly weathered, dark gray, calcitic LIMESTONE, horizontally to massively bedded, slightly fossiliferous, little sedimentation of fractures.
20.0	
30.0	

WELL SKETCH



END OF COREHOLE 28.0 FT. BGS

INSTALLATION NOTES

AUGERED WITH 4 1/4 I.D. HOLLOW STEM AUGER TO 13.0 FT. BELOW GROUND SURFACE (BGS). SAMPLED IN FIVE-FOOT INTERVALS FROM 0.0 FT TO 12.0 FT BGS. PLACED TEMPORARY STEEL CASING IN BOREHOLE AND ADVANCED IT 6" INTO BEDROCK. AUGERS REMOVED FROM BOREHOLE. CORED BEDROCK WITH HQ WIRELINE CORE TO 28.0 FT BGS. CORE BARRELS REMOVED FROM COREHOLE. SAND POURED INTO STEEL CASING FROM 28.0–27.4 FT BGS. WELL MATERIALS PLACED IN BOREHOLE USING 10 FT. OF WELL SCREEN, END CAP, 17.0 FT. OF WELL RISER AND LOCKING J-PLUG CAP FOR OVERALL LENGTH OF 27.0 FT. WELL MATERIALS PLACED TO 27.4 FT. BGS WITH THE TOP OF THE WELL APPROXIMATELY 0.3 FT BGS. SAND POURED INTO STEEL CASING 27.0–15.5 FT. BGS. BENTONITE CHIP SEAL PLACED 15.5–13.0 FT. BGS. TEMPORARY STEEL CASING REMOVED. CEMENT/BENTONITE GROUT ADDED 13.0–0.5 FT. BGS. 8-INCH DIAMETER STEEL CURB BOX PLACED INTO BOREHOLE TO GROUND SURFACE. 16"X16"X 6" CONCRETE PAD CONSTRUCTED AROUND CURB BOX. STEEL WELL COVER PLACED ON CURB BOX AND BOLTED INTO PLACE.

WELL DEVELOPMENT NOTES

DATE DEVELOPED: 8/30–8/31/07

DEVELOPMENT METHOD:
STAINLESS STEEL BAILER

VOLUME PURGED: 42.5 GALS.

FOR FURTHER DETAILS SEE ACCOMPANYING WELL DEVELOPMENT FIELD RECORD.

MONITORING WELL INSTALLATION LOG

JOB NO. 063-9477 PROJECT BUFFALO BUSINESS PARK VCP/OU#2 INVEST. WELL NO. VCA-MW6-BR SHEET 1 of 1

GA INSP. AJN DRILLING METHOD 4 1/4" I.D. HSA/HQ ROCK CORE GROUND ELEV. 98.0 ft. WATER DEPTH 15.73 ft. bgs

WEATHER N/A (INDOORS) DRILLING COMPANY SJB SERVICES, INC COLLAR ELEV. 3.0 ft. DATE/TIME 9/13/07 0845

TEMP. 76° F DRILL RIG CME-45 DRILLER S. WOLKIEWICZ STARTED 8/28/07 1320 (DATE / TIME) COMPLETED 8/28/07 1630 (DATE / TIME)

LOCATION / COORDINATES N1055978.3, E1088137.5

MATERIALS INVENTORY

WELL CASING 2.0 in. dia. 23.3 l.f. WELL SCREEN 2.0 in. dia. 5 l.f. BENTONITE SEAL MEDIUM BENTONITE CHIPS

CASING TYPE SCH. 40 PVC SCREEN TYPE MACHINE SLOT PVC INSTALLATION METHOD POUR THROUGH AUGERS

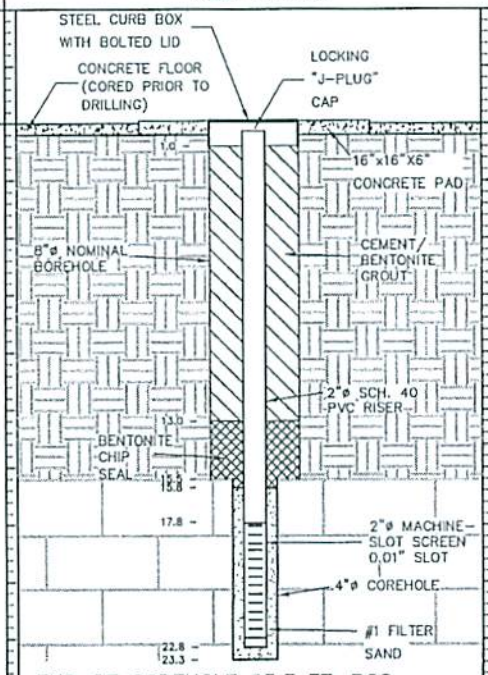
JOINT TYPE FLUSH THREADED SLOT SIZE 0.01" FILTER PACK QTY. 2.0 BAGS

GROUT QUANTITY —— CENTRALIZERS NOT USED FILTER PACK TYPE #1-SIZE QUARTZ SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE NOT USED INSTALLATION METHOD POUR THROUGH AUGERS

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
1464.18	GROUND SURFACE
0.0	**OVERBURDEN**
	FILL UNIT 0.6–3.0'
	Loose, brown, fine to coarse SAND AND GRAVEL, trace clay and silt, dry.
	SILT TILL UNIT 3.0'–15.5'
10.0	Compact to dense, light brown to brown to brown-gray, SILT and fine SAND to SILT, trace to some fine to coarse gravel, trace clay, moist.
	ONONDAGA LIMESTONE
20.0	15.5'–EOC
	Slightly weathered, dark gray, calcitic LIMESTONE, slightly fossiliferous, horizontally to massively bedded, slightly stylolitized.

WELL SKETCH



END OF COREHOLE 23.3 FT. BGS

INSTALLATION NOTES

AUGERED WITH 4 1/4 I.D. HOLLOW STEM AUGER TO 15.5 FT. BELOW GROUND SURFACE (BGS). SAMPLED IN FIVE-FOOT INTERVALS FROM 0.0 FT TO 12.0 FT BGS. PLACED TEMPORARY STEEL CASING IN BOREHOLE AND ADVANCED IT 6" INTO BEDROCK. AUGERS REMOVED FROM BOREHOLE. CORED BEDROCK WITH HQ WIRELINE CORE TO 23.3 FT BGS. CORE BARRELS REMOVED FROM COREHOLE. SAND POURED INTO STEEL CASING FROM 23.3–22.8 FT BGS. WELL MATERIALS PLACED IN BOREHOLE USING 5 FT. OF WELL SCREEN, END CAP, 17.6 FT. OF WELL RISER AND LOCKING J-PLUG CAP FOR OVERALL LENGTH OF 22.9 FT. WELL MATERIALS PLACED TO 23.3 FT. BGS WITH THE TOP OF THE WELL APPROXIMATELY 0.3 FT BGS. SAND POURED INTO STEEL CASING 22.8–15.8 FT. BGS. BENTONITE CHIP SEAL PLACED 15.8–13.0 FT. BGS. TEMPORARY STEEL CASING REMOVED. CEMENT/BENTONITE GROUT ADDED 13.0–0.5 FT. BGS. 8-INCH DIAMETER STEEL CURB BOX PLACED INTO BOREHOLE TO GROUND SURFACE. 16"X16"X 6" CONCRETE PAD CONSTRUCTED AROUND CURB BOX. STEEL WELL COVER PLACED ON CURB BOX AND BOLTED INTO PLACE.

WELL DEVELOPMENT NOTES

DATE DEVELOPED: 8/30/07

DEVELOPMENT METHOD:
STAINLESS STEEL BAILER

VOLUME PURGED: 5.0 GALS.

FOR FURTHER DETAILS SEE ACCOMPANYING WELL DEVELOPMENT FIELD RECORD.

MONITORING WELL INSTALLATION LOG

JOB NO. 063-9477 PROJECT BUFFALO BUSINESS PARK VCP/OU#2 INVEST. WELL NO. VCA-MW7-BR SHEET 1 of 1

GA INSP. AJN DRILLING METHOD 4 1/4" I.D. HSA/HQ ROCK CORE GROUND ELEV. 98.0 ft. WATER DEPTH 6.36 ft. bgs

WEATHER SUNNY, CLEAR DRILLING COMPANY SJB SERVICES, INC COLLAR ELEV. 3.0 ft. DATE/TIME 9/13/07 0835

TEMP. 72° F DRILL RIG CME-85 DRILLER R. BROWN STARTED 8/27/07 1025 (DATE / TIME) COMPLETED 8/27/07 1100 (DATE / TIME)

LOCATION / COORDINATES N1056043, E1087797.6

MATERIALS INVENTORY

WELL CASING 2.0 in. dia. 27.6 l.f. WELL SCREEN 2.0 in. dia. 10 l.f. BENTONITE SEAL MEDIUM BENTONITE CHIPS

CASING TYPE SCH. 40 PVC SCREEN TYPE MACHINE SLOT PVC INSTALLATION METHOD POUR THROUGH AUGERS

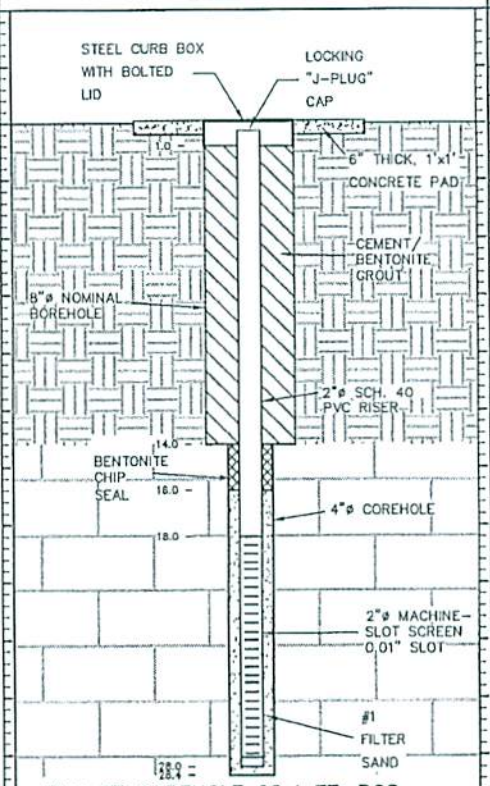
JOINT TYPE FLUSH THREADED SLOT SIZE 0.01" FILTER PACK QTY. 3.0

GROUT QUANTITY — CENTRALIZERS NOT USED FILTER PACK TYPE #1-SIZE QUARTZ SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE NOT USED INSTALLATION METHOD POUR THROUGH AUGERS

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
1464.18	GROUND SURFACE
0.0	**OVERBURDEN** FILL UNIT 0.0–3.0' Loose, brown–gray to brown, fine to coarse SAND and GRAVEL, little silt, slightly moist.
10.0	SILT TILL UNIT 3.0'–17.5' Stiff, brown, CLAYEY SILT to SILTY CLAY, trace to little fine to medium sand, trace fine gravel, trace organic clay, trace yellow–orange mottling, moist.
20.0	**ONONDAGA LIMESTONE** 14.0'–EOC Fresh to slightly weathered, dark gray, calcitic LIMESTONE, slightly fossiliferous, horizontally to massively bedded, slightly fossiliferous, slight sedimentation of fractures.
30.0	

WELL SKETCH



END OF COREHOLE 28.4 FT. BGS

INSTALLATION NOTES

AUGERED WITH 4 1/4 I.D. HOLLOW STEM AUGER TO 14.0 FT. BELOW GROUND SURFACE (BGS). SAMPLED IN FIVE–FOOT INTERVALS FROM 0.0 FT TO 12.0 FT BGS. PLACED TEMPORARY STEEL CASING IN BOREHOLE AND ADVANCED IT 6" INTO BEDROCK. AUGERS REMOVED FROM BOREHOLE. CORED BEDROCK WITH HQ WIRELINE CORE TO 28.4 FT BGS. CORE BARRELS REMOVED FROM COREHOLE. SAND POURED INTO STEEL CASING FROM 28.4–28.0 FT BGS. WELL MATERIALS PLACED IN BOREHOLE USING 10 FT. OF WELL SCREEN, END CAP, 17.3 FT. OF WELL RISER AND LOCKING J–PLUG CAP FOR OVERALL LENGTH OF 27.6 FT. WELL MATERIALS PLACED TO 28.0 FT. BGS WITH THE TOP OF THE WELL APPROXIMATELY 0.3 FT BGS. SAND POURED INTO STEEL CASING 28.0–16.0 FT. BGS. BENTONITE CHIP SEAL PLACED 16.0–14.0 FT. BGS. TEMPORARY STEEL CASING REMOVED. CEMENT/BENTONITE GROUT ADDED 14.0–0.5 FT. BGS. 8–INCH DIAMETER STEEL CURB BOX PLACED INTO BOREHOLE TO GROUND SURFACE. 16"X16"X 6" CONCRETE PAD CONSTRUCTED AROUND CURB BOX. STEEL WELL COVER PLACED ON CURB BOX AND BOLTED INTO PLACE.

WELL DEVELOPMENT NOTES

DATE DEVELOPED: 8/31/07

DEVELOPMENT METHOD:
STAINLESS STEEL BAILER

VOLUME PURGED: 30 GALS.

FOR FURTHER DETAILS SEE ACCOMPANYING WELL DEVELOPMENT FIELD RECORD.

MONITORING WELL INSTALLATION LOG

JOB NO. 063-9477 PROJECT BUFFALO BUSINESS PARK VCP/OU#2 INVEST. WELL NO. VCA-MW8-BR SHEET 1 of 1

GA INSP. AJN DRILLING METHOD 4 1/4" I.D. HSA/HQ ROCK CORE GROUND ELEV. 98.0 ft. WATER DEPTH 8.63 ft. bgs

WEATHER SUNNY, CLEAR DRILLING COMPANY SJB SERVICES, INC COLLAR ELEV. 3.0 ft. DATE/TIME 9/13/07 0840

TEMP. 82° F DRILL RIG CME-85 DRILLER R. BROWN STARTED 8/24/07 1250 (DATE / TIME) COMPLETED 8/24/07 1330 (DATE / TIME)

LOCATION / COORDINATES N1056167.7, E1087808.4

MATERIALS INVENTORY

WELL CASING 2.0 in. dia. 21.3 l.f. WELL SCREEN 2.0 in. dia. 10 l.f. BENTONITE SEAL MEDIUM BENTONITE CHIPS

CASING TYPE SCH. 40 PVC SCREEN TYPE MACHINE SLOT PVC INSTALLATION METHOD POUR THROUGH AUGERS

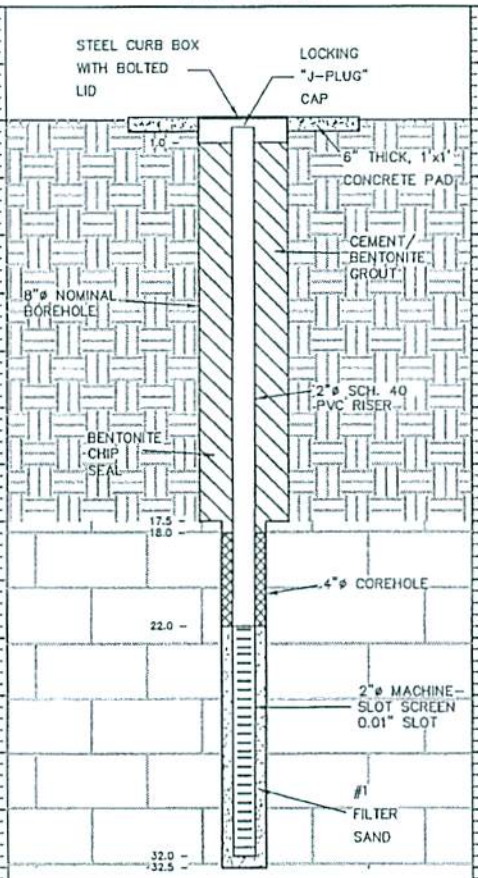
JOINT TYPE FLUSH THREADED SLOT SIZE 0.01" FILTER PACK QTY. 3.0

GROUT QUANTITY ——— CENTRALIZERS NOT USED FILTER PACK TYPE #1-SIZE QUARTZ SAND

GROUT TYPE CEMENT/BENTONITE DRILLING MUD TYPE NOT USED INSTALLATION METHOD POUR THROUGH AUGERS

ELEV./DEPTH	SOIL/ROCK DESCRIPTION
1464.18	GROUND SURFACE
0.0	**OVERBURDEN**
	FILL UNIT 0.0–8.0'
	Loose, brown to brown and gray mottled, medium to coarse SAND and fine to coarse GRAVEL, little fine to medium sand, trace clay, dry to slightly moist.
10.0	SILT TILL UNIT 3.0'–17.5'
	Compact to stiff, brown to brown–gray, CLAYEY SILT to SILT and fine SAND, trace to little fine gravel, trace fine sand, trace to some clay, moist to wet.
20.0	**ONONDAGA LIMESTONE**
	17.5'–EOC
	Slightly to moderately weathered, dark gray, calcitic LIMESTONE, slightly fossiliferous, horizontally to massively bedded, slightly stylolitized, slight sedimentation of fractures..
30.0	

WELL SKETCH



END OF COREHOLE 32.5 FT. BGS

INSTALLATION NOTES

AUGERED WITH 4 1/4 I.D. HOLLOW STEM AUGER TO 17.5 FT. BELOW GROUND SURFACE (BGS). SAMPLED IN FIVE-FOOT INTERVALS FROM 0.0 FT TO 17.0 FT BGS. PLACED TEMPORARY STEEL CASING IN BOREHOLE AND ADVANCED IT 6" INTO BEDROCK. AUGERS REMOVED FROM BOREHOLE. CORED BEDROCK WITH HQ WIRELINE CORE TO 32.5 FT BGS. CORE BARRELS REMOVED FROM COREHOLE. SAND POURED INTO STEEL CASING FROM 32.5–32.0 FT BGS. WELL MATERIALS PLACED IN BOREHOLE USING 10 FT. OF WELL SCREEN, END CAP, 21.3 FT. OF WELL RISER AND LOCKING J-PLUG CAP FOR OVERALL LENGTH OF 31.6 FT. WELL MATERIALS PLACED TO 32.0 FT. BGS WITH THE TOP OF THE WELL APPROXIMATELY 0.3 FT BGS. SAND POURED INTO STEEL CASING 32.0–20.0 FT. BGS. BENTONITE CHIP SEAL PLACED 20.0–18.0 FT. BGS. TEMPORARY STEEL CASING REMOVED. CEMENT/BENTONITE GROUT ADDED 18.0–0.5 FT. BGS. 8-INCH DIAMETER STEEL CURB BOX PLACED INTO BOREHOLE TO GROUND SURFACE. 16"X16"X 6" CONCRETE PAD CONSTRUCTED AROUND CURB BOX. STEEL WELL COVER PLACED ON CURB BOX AND BOLTED INTO PLACE.

WELL DEVELOPMENT NOTES

DATE DEVELOPED: 8/31/07

DEVELOPMENT METHOD: STAINLESS STEEL BAILER

VOLUME PURGED: 35 GALS.

FOR FURTHER DETAILS SEE ACCOMPANYING WELL DEVELOPMENT FIELD RECORD.

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations

1091 Jamison Road • Elma, NY 14059

(716) 655-1717 • FAX (716) 655-2915

14C10 HOLE NO. MW5A-BR SURF. ELEVATION _

PROJECT Buffalo Business Park - 1800 Broadway,Bedrock Well LOCATION _

City of Buffalo, Erie Co., NY

CLIENT LTP Services DATE STARTED 04/12/10 COMPLETED 04/13/10

DEPTH IN FT	SN	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WELL	WATER TABLE AND REMARKS
								Advanced bore hole without sampling to refusal.	(1)	(1) 8" DIAMETER FLUSH TO GRADE PROTECTIVE COVER INSTALLED IN CONCRETE
										Note: Advanced bore hole with 6 5/8 inch ID x 10 inch OD hollow stem auger casing to refusal at 13.2 feet. Drilled 6 inch rock socket with a tricone roller bit to 15.2 feet. Cement grouted 4 inch BIP in socket extending to ground surface. Completed open rock hole below with HQ core barrel and diamond bit.
5									4" SCHEDULE 40 BIP CEMENT/BENTONITE GROUT	
10								13.2		
								Top of rock.	(2)	← 13.2'
15										← 15.2'
									(3)	(2) 6" BEDROCK SOCKET
										(3) 4" OPEN BEDROCK HOLE
20										

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Phil Bence, Driller; Brian Bartron,Geologist, (mw)

EARTH DIMENSIONS, INC.

Soil and Hydrogeologic Investigations • Wetland Delineations
1091 Jamison Road • Elma, NY 14059
(716) 655-1717 • FAX (716) 655-2915

14C10 HOLE NO. MW5A-BR SURF. ELEVATION _

PROJECT Buffalo Business Park - 1800 Broadway,Bedrock Well LOCATION _
City of Buffalo, Erie Co., NY

CLIENT LTP Services DATE STARTED 04/12/10 COMPLETED 04/13/10

DEPTH IN FT	SN	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	LITH	DESCRIPTION AND CLASSIFICATION	WELL	WATER TABLE AND REMARKS
									4" OPEN BEDROCK HOLE	Note: Lost approximately 50 gallons of drill water to formation while coring. Note: Flushed rock hole with water until clean. Note: At completion, filled casing with water making sure bedrock took water. (rudimentary falling head test) ← 30.0'
25										
30										
35										
40										

N=NUMBER OF BLOWS TO DRIVE 2 " SPOON 12 " WITH 140 lb. WT. FALLING 30 " PER BLOW

LOGGED BY Phil Bence, Driller; Brian Bartron,Geologist, (mw)

APPENDIX E

Well Development Field Records

Golder Associates

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Buffalo Business Park VCP/OU#2
DEVELOPED BY: ADN
STARTED DEVEL.: 8/30/07 (DATE) / 1330 (TIME)
W.L. BEFORE DEVEL.: 4.9 (DEPTH) / 8/30 (DATE) / 1330 (TIME) 0842 6.07 8/31
WELL DEPTH: BEFORE DEVEL.: 25.3
STANDING WATER COLUMN (FT.): 20.4
SCREEN LENGTH: 10'

JOB NO.: 063-4477 WELL NO.: MW5
DATE OF INSTALL.: 8/24/07 SHEET: 1 OF 1
COMPLETED DEVEL.: 8/31/07 (DATE) / 0930 (TIME)
AFTER DEVEL.: 6.9 (DEPTH) / 8/31/07 (DATE) / 0910 (TIME)
AFTER DEVEL.: 25.3 WELL DIA. (In): 2
STANDING WELL VOLUME: 3.32/9.98 gal.
DRILLING WATER LOSS: ~20 gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS: SPEC. COND. (umhos/cm)	TEMP. (°F)	pH (s.u.)	OTHER	REMARKS
8/30 1350	4.0	940	61	*		turbid, gray
8/30 1407	5.0	930	65	*		turbid, gray
8/30 1419	6.0	960	64	*		
8/30 1440	7.0	960	64	*		turbid, lt. gray
8/30 1505	10.0	940	64	*		
8/31 0850	3.5	940	62	7.1		slightly turbid, lt. gray, color
8/31 0900	3.5	950	63	7.3		sl. turbid; lt. gray tint
8/31 0910	3.5	960	64	7.3		light gray tint
	42.5	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: stainless steel bailer
purged until parameters stabilized.

NOTES: * pH meter not working on 8/30

WELL DEVELOPMENT FIELD RECORD

JOB NAME Buffalo Business Park
JOB NO. 063-9477 WELL NO. MW16
DEVELOPED BY Anthony J. Notaro
DATE OF INSTALL. 8/30/07 SHEET 1 OF 1
STARTED DEVEL. 8/31/07 / 1350. (DATE / TIME)
COMPLETED DEVEL. 8/31/07 / 1630 (DATE / TIME)
W.L. BEFORE DEVEL. 10.09 / 8/31 / 1350 (DEPTH / DATE / TIME)
AFTER DEVEL. 21.89 / 8/31/07 / 1625 (DEPTH / DATE / TIME)
WELL DEPTH: BEFORE DEVEL. 22.63
AFTER DEVEL. 22.64 WELL DIA. (In) 2
STANDING WATER COLUMN (FT.) 12.54
STANDING WELL VOLUME 2.04 / 6.12 (3) gal.
SCREEN LENGTH 5'
DRILLING WATER LOSS unknown gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP. (°F)	pH (s.u.)	OTHER	REMARKS
8/31 1405	2.5	640	67	7.9		turbid, brown-gray
8/31 1525	1.5	760	59	7.9		" " "
8/31 1625	1.0	820	60	7.7		
	5.0	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD:
well purged dry @ 1405
well purged dry @ 1525
well purged dry @ 1625

NOTES: well installed with only 5' of screen due to conflict with building tenants

Golder Associates

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Buffalo Business Park
JOB NO.: 063-9477 WELL NO.: MW7
DEVELOPED BY: AJN
DATE OF INSTALL.: 8/27/07 SHEET: 1 OF 1
STARTED DEVEL.: 8/31/07 (DATE) / 0935 (TIME)
COMPLETED DEVEL.: 8/31/07 (DATE) / 1145 (TIME)
W.L. BEFORE DEVEL.: 6.09 (DEPTH) / 8/31/07 (DATE) / 0938 (TIME)
AFTER DEVEL.: 7.1 (DEPTH) / 8/31 (DATE) / 1145 (TIME)
WELL DEPTH: BEFORE DEVEL.: 27.48
AFTER DEVEL.: 27.50 WELL DIA. (In): 2
STANDING WATER COLUMN (FT.): 20.79
STANDING WELL VOLUME: 3.39 / 10.17(3) gal.
SCREEN LENGTH: 10'
DRILLING WATER LOSS: ~20 gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS: SPEC. COND. (umhos/cm)	TEMP. (°F)	pH (s.u.)	OTHER	REMARKS
8/31 1010	10.0	1040	66	7.4		turbid; lt. gray color.
8/31 1030	5.0	1120	71	7.5		turbid; lt. gray color
8/31 1045	5.0	1110	66	7.6		sl. turbid, lt. gray color
8/31 1100	5.0	1110	67	7.4		sl. turbid; lt. gray tint
8/31 1115	5.0	1140	67	7.4		sl. turbid; lt. gray tint
	30	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: purged until parameters stabilized.

NOTES:

Golder Associates

WELL DEVELOPMENT FIELD RECORD

JOB NAME: Buffalo Business Park
JOB NO.: 063-9477 WELL NO.: MW8
DEVELOPED BY: Anthony J. Notaro
DATE OF INSTALL.: 8/28/07 SHEET: 1 OF 1
STARTED DEVEL.: 8/31/07 (DATE) / 1205 (TIME)
COMPLETED DEVEL.: 8/31/07 (DATE) / 1600 (TIME)
W.L. BEFORE DEVEL.: 10.31 (DEPTH) / (DATE) / 1205 (TIME)
AFTER DEVEL.: 7.11 (DEPTH) / (DATE) / 1612 (TIME)
WELL DEPTH: BEFORE DEVEL.: 31.76
AFTER DEVEL.: 31.76 WELL DIA. (In): 2
STANDING WATER COLUMN (FT.): 21.45
STANDING WELL VOLUME: 3.50/10.50 gal.
SCREEN LENGTH: 10'
DRILLING WATER LOSS: ~20 gal.

DATE/TIME	VOLUME REMOVED (GALS)	FIELD PARAMETERS SPEC. COND. (umhos/cm)	TEMP. (°F)	pH (s.u.)	OTHER	REMARKS
8/31 1440	15.0	800	69	7.6		turbid; blue-gray color
8/31 1452	5.0	820	66	7.5		
8/31 1507	5.0	820	64	7.4		
8/31 1512	5.0	820	64	7.5		turbid, gray tint
8/31 1557	5.0	810	64	7.5		sl. turbid, gray tint
	37	= TOTAL VOLUME REMOVED (gal.)				

DEVELOPMENT METHOD: purged until parameters stabilized

NOTES: purge water had strong sulfur odor, and peak PID hit of 2.1 ppm. Water also had some black particulate matter which settled out.

APPENDIX F-INSPECTION FORMS

Form A
Buffalo Business Park
Sub Slab Depressurization System Log Sheet

Date: _____ Time: _____

Checked by: _____

Vent #1
Power on: Y____ N _____ If no provide reason:

_____
When was problem corrected?_____

Fan operational: Y____ N _____ If no provide reason:

_____

When was problem corrected?_____

Vent #2
Power on: Y____ N _____ If no provide reason:

_____
When was problem corrected?_____

Fan operational: Y____ N _____ If no provide reason:

_____

When was problem corrected?_____

Form B
Buffalo Business Park
Pumping Well Log Sheet

Date: _____ Time: _____Well No._____

Checked by: _____

Totalizer Reading: _____

Previous Totalizer Reading:_____ Date:_____

Time:_____

Total Gallons Pumped:_____

Total Hours Pumped: _____

Avg. Gallons / hr. pumped _____

Power on: Y____ N _____ If no provide reason:

_____

When was problem corrected?_____

Pump Operational: Y____ N _____ If no provide reason:

_____

When was problem corrected?_____

APPENDIX G-ANNUAL CERTIFICATION FORM

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

SITE DETAILS

SITE NO. X-XX-XXX

SITE NAME

SITE ADDRESS: ZIP CODE: XXXXX

CITY/TOWN:

COUNTY:

CURRENT USE:

CURRENT CERTIFICATION FREQUENCY: EVERY __ YEAR(S)

VERIFICATION OF SITE DETAILS

		YES	NO
1.	Are the SITE DETAILS above, correct?	☐	☐
	If NO, are changes handwritten above or included on a separate sheet?	☐	
2.	Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
3.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
4.	Has a change-of-use occurred since the initial/last certification?	☐	☐
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
5.	Has any new information come to your attention to indicate that assumptions made in the qualitative exposure assessment for offsite contamination are no longer valid (applies to non-significant threat sites subject to ECL 27-1415.7(c))?	☐	☐
	If YES, is the new information or evidence that new information has been previously submitted included with this certification?	☐	
6.	Are the assumptions in the qualitative exposure assessment still valid (must be certified every five years for non-significant threat sites subject to ECL 27-1415.7(c))?	☐	☐
	If NO, are changes in the assessment included with this certification?		

SITE NO. X-XX-XXX

Description of Institutional/Engineering Control	Control Certification	
	YES	NO
ENVIRONMENTAL EASEMENT	☐	☐
Type in Restriction here	☐	☐

CONTROL CERTIFICATION STATEMENT

For each institutional or engineering control listed above, I certify by checking "Yes" that all of the following statements are true:

(a) the institutional control and/or engineering control employed at this site is unchanged from the date the control was put in-place, or last approved by the Department;

(b) nothing has occurred that would impair the ability of such control to protect public health and the environment;

(c) nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and

(d) access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control.

(e) if a financial assurance mechanism is required under the remedial work plan for the site, the mechanism remains valid and sufficient for their intended purpose under the work plan.

CONTROL CERTIFICATIONS
SITE NO. X-XX-XXX

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name), _____

(print business address), am certifying as _____ (Owner or Owner's Designated Site Representative (if the site consists of multiple properties, I have been authorized and designated by all site owners to sign this certification) for the Site named in the Site Details section of this form.

_____ _____
Signature of Site Owner or Representative Rendering Certification Date

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE

I certify that all information and statements in this Certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____(print name), _____

(print business address), am certifying as a Qualified Environmental Professional for the_____

_____ (Owner or Owner's Representative) for the Site named in the Site Details section of this form.

_____ _____ _____
Signature of Qualified Environmental Professional, for the Owner or the Owner's Representative. Rendering Certification Stamp (if Required) Date

APPENDIX H-BUFFALO SEWER AUTHORITY PERMIT

AUTHORIZATION TO DISCHARGE UNDER THE BUFFALO POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT NO. 08-03-BU124
EPA CATEGORY 40 CFR 403

In accordance with the provisions of the Federal Water Pollution Control Act, as amended, and the Sewer Regulations of the Buffalo Sewer Authority, authorization is hereby granted to:

BUFFALO BUSINESS PARK, INC.

to discharge groundwater from a remediation facility located at:

1800 Broadway, Buffalo, New York, 14212

to the Buffalo Municipal Sewer System.

Issuance of this permit is based upon a permit application filed on **April 23, 2008** and analytical data. This permit is granted in accordance with discharge limitations, monitoring requirements and other conditions set forth in Parts I and II hereof.

Effective this 15th day of August, 2008
To Expire the 14th day of August, 2011

General Manager

Signed this 11th day of August, 2008

PART I: SPECIFIC CONDITIONS

A. DISCHARGE LIMITATIONS & MONITORING REQUIREMENTS

During the period beginning the effective date of this Permit and lasting until the expiration date, discharge from the permitted facility outfall(s) (see attached map) shall be limited and monitored by the permittee **semi-annually** as specified below.

Sample Point	Parameter	Discharge Limitations Daily Maximum	Sampling Requirements Period	Type
001	EPA Test Method 624[1]	Monitor only	1 day	Grab
	PH	5.0-12.0 S.U.	1 day	Grab
	Total Flow	monitor only	1 day	Flow Meter

1. The permittee must report any compound whose concentration is greater than 0.01 mg/l. The permittee is not authorized to discharge any of the parameters evaluated by this test procedure which may cause or contribute to a violation of water quality standards or harm the sewerage system. Any parameter detected may, at the discretion of the Buffalo Sewer Authority, be specifically limited and incorporated into the permit.

PART I: SPECIFIC CONDITIONS

B. DISCHARGE MONITORING REPORTING REQUIREMENTS

During the period beginning the effective date of this permit and lasting until the expiration date, discharge monitoring results shall be summarized and reported by the permittee semi-annually on the days specified below:

Sample Point	Parameter	Reporting Requirements	
		Initial Report	Subsequent Reports
001	All Parameters	Dec. 31, 2008	Dec.31st of 2008, June 30th & Dec.31st of 2009 & 2010, June 30th of 2011

Figure 1