PERIODIC REVIEW REPORT

Site No. C314109
Former City of Poughkeepsie Sewage Plant
Rinaldi Blvd. and Hurlihe St.
NYSDEC, Division of Environmental Remediation

November 23, 2021

PREPARED FOR:
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Poughkeepsie Landing
176 Rinaldi Boulevard
Poughkeepsie, NY 12601

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INTRODUCTION

The site consists of approximately 5.7 acres and is located at 176 Rinaldi Boulevard within the City of Poughkeepsie(City). The site was historically used for industrial purposes as the City's Sewage Treatment Plant. The property is owned and developed by Poughkeepsie Waterfront Development, LLC and was remediated as a part of the New York State Department of Environmental Conservations (NYSDEC) Brownfield Cleanup Agreement (BCA) for site #C314109. Based on the Investigation Reports, three(3) areas of concern where generated. These areas contained metals and petroleum contaminated soils. The following is a history of Investigations and Reports that have been prepared:

- Phase I Environmental Assessment (ESA) (1999)
- Phase II Subsurface Investigation(2001); Supplemental Phase II (SI) (2003)
- Site Characterization and Remedial Investigation Report (RIR) (2004)
- Alternative Analysis and Remedial Action Plan (RAP) (2004)
- Remedial Action Work plan; RAWP Amendment No. 1 (RAWP) (2005)
- Final Engineers Report (FER) (2006)
- Site Management Plan (SMP) (2006)
- Periodic Review Report (PRR) (2008)

The remedial program appears to be working effectively and in full compliance with Site Management Plan. No recommendations for changes are made at this time. The owner may elect for termination of sub-slab depressurization system pending air-monitoring per NYSDEC requirements at the end of the next three year reporting period.

SITE OVERVIEW

The site existed as a Wastewater Treatment Plant until 1977 when the plant terminated operations. The site sat vacant until 1999. During the investigation phases beginning in 1999, three(3) areas of heavy contamination where identified and delineated (See RIR/RAWP). Two of these areas where found to contain metals and petroleum related VOC's, the third area was the location of an Underground Storage Tank (UST) and contained petroleum related VOC's only. The RIR and RAWP were approved by the NYSDEC and authorization to conduct remedial activities was granted in 2005. The RAWP was amended shortly following approval in 2005 and re-submitted to NYSDEC. The purpose for this document was for the placement of soil mixed with leaves and the modification of the sub-slab depressurization system. The RAWP as amended was approved and all work, according to the FER, was

conducted as per the approved RAWP and completed in early 2006. The FER was then prepared certifying remedial activities, submitted to and approved by, the NYSDEC in 2006.

EVALUATION

Pursuant to Section 6.5 of the Draft DER-10, Technical Guidance for Site Investigation and Remediation dated December 2002, Bell Engineering PLLC has conducted site investigation and prepared this Periodic Review Report(PRR). The report is submitted as the annual project evaluation and serves to certify current and existing Institutional and Engineering Controls.

The site was visited on November 21, 2021. An inspection was conducted addressing both the Institutional Controls and the Engineers controls as set fourth within the Soil Management Plan, prepared by Fuss & O'Neal , July, 2006. The Following items were addressed within each category:

Institutional Control Restrictions

- Restrictions to Site Use
- Soil Distribution inside the Soil Consolidation Zone
- Soil Distribution outside the Soil Conservation Zone
- Groundwater Usage

Engineered Controls

- Primary Soil Consolidation Zone Inspection
- Vapor Mitigation
- Cover System

It is our opinion the controls set forth above currently remain in place, are operational and have not been altered, modified or intruded upon in any way nor have the controls naturally degraded or eroded to the point of impeding functionality.

Based on the latest inspection, it appears as if the remedy has been effective and is stable. There is no evidence of dying plantings on the site, no indication of odorous vapors emitting around the perimeter of or within the footprint of the building structure and no sink holes in the areas of concern.

IC/EC PLAN COMPLIANCE REPORT

A site investigation was conducted on November 21st, 2021. The items as set forth in the operations portion of the Site Management Plan and outline on the Engineered Control Inspection Form where analyzed. Below are the following results:

Vapor Mitigation:

The requirement for an active SSDS was waived in 2015. The system of vapor barrier and passive venting to the roof is still in place. A walkthrough was conducted. There was no evidence of cracking in the concrete slab or failures within the building structure such as foundation walls.

Secondary Soil Consolidation Zone:

The Secondary soil consolidation zone is located to the south of the existing building under existing landscape beds. The area was inspected for evidence of digging, boring, natural erosion and failure. The landscaped areas are covered by a thick bed of mulch which protects the steep slopes against erosion along the southern and western portions of the site. The landscape areas are heavily planted contributing to erosion control. The plantings in this area show to be healthy and hearty and no signs of detriment was seen to any of the plantings. (See Photo Appendix B)

The north and eastern portion of the sites are relatively level and the landscape islands are untouched. There was no sign of activities involving ground disturbance throughout the site. The site is generally well maintained and in a finished, manicured state.

CONCLUSIONS AND RECOMMENDATIONS

It is the opinion of the Engineer that the site is within full compliance of the SMP. The institutional restrictions are being followed and the Engineering Controls are working effectively.

Based on the current inspection and to the extent practical from such inspection, the remedy as prescribed does appear to be undisturbed and functioning effectively.

There is no recommendation to change in the review period of three(3) years.

APPENDIX A

Institutional and Engineering Controls Forms

Enclosure 1

Certification Instructions

I. Verification of Site Details (Box 1 and Box 2):

Answer the three questions in the Verification of Site Details Section. The Owner and/or Qualified Environmental Professional (QEP) may include handwritten changes and/or other supporting documentation, as necessary.

II. Certification of Institutional Controls/ Engineering Controls (IC/ECs)(Boxes 3, 4, and 5)

1.1.1. Review the listed IC/ECs, confirming that all existing controls are listed, and that all existing controls are still applicable. If there is a control that is no longer applicable the Owner / Remedial Party should petition the Department separately to request approval to remove the control.

2. In Box 5, complete certifications for all Plan components, as applicable, by checking the corresponding checkbox.

3. If you cannot certify "YES" for each Control listed in Box 3 & Box 4, sign and date the form in Box 5. Attach supporting documentation that explains why the **Certification** cannot be rendered, as well as a plan of proposed corrective measures, and an associated schedule for completing the corrective measures. Note that this **Certification** form must be submitted even if an IC or EC cannot be certified; however, the certification process will not be considered complete until corrective action is completed.

If the Department concurs with the explanation, the proposed corrective measures, and the proposed schedule, a letter authorizing the implementation of those corrective measures will be issued by the Department's Project Manager. Once the corrective measures are complete, a new Periodic Review Report (with IC/EC Certification) must be submitted within 45 days to the Department. If the Department has any questions or concerns regarding the PRR and/or completion of the IC/EC Certification, the Project Manager will contact you.

III. IC/EC Certification by Signature (Box 6 and Box 7**):**

If you certified "YES" for each Control, please complete and sign the IC/EC Certifications page as follows:

- For the Institutional Controls on the use of the property, the certification statement in Box 6 shall be completed and may be made by the property owner or designated representative.

- For the Engineering Controls, the certification statement in Box 7 must be completed by a Professional Engineer or Qualified Environmental Professional, as noted on the form.

Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. C314109

Site Name Former City of Poughkeepsie Sewage Plant

Site Address: 176 Rinaldi Boulevard Zip Code: 12601-
City/Town: Poughkeepsie
County: Dutchess
Site Acreage: 5.470

Reporting Period: April 15, 2011 to April 15, 2022

	YES	NO
1. Is the information above correct?	X	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	X
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	X
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	X
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	X

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	X	☐
7. Are all ICs in place and functioning as designed?	X	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative Date

	Box 2A	
	YES	NO
8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	X
If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.		
9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)	X	☐
If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.		

SITE NO. C314109 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
131300-6061-26-744884	City of Poughkeepsie IDA	
		Ground Water Use Restriction Landuse Restriction Site Management Plan

NOW THEREFORE, in consideration of the covenants and mutual promises contained herein and the terms and conditions of Brownfield Cleanup Agreement Index No.: W3-1008-04-06, Grantor grants, conveys and releases to Grantee a permanent Environmental Easement pursuant to Article 7 1, Title 36 of the ECL in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement").

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the potential restriction of future uses of the land that are
inconsistent with the above-stated purpose.

2. Institutional and Engineering: Controls. The following controls apply to the use of the Controlled Property, run with the land are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property,
any lessees, and any person using the Controlled Property:

A. The Controlled Property may be used for commercial use as long as the following long-term engineering controls are employed:
a) the use of the groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
b) any soil disturbance on the Controlled Property must be in a manner'specified in the NYSDEC-approved Site Management Plan;
c) any soil contain within the primary soil consolidation zone and the secondary soil consolidation zone (collectively the "Soil Consolidation Zone") comprised of
approximately 0.45 acres lying within the Controlled Property, and hereinafter more fully described in Schedule B attached hereto and made part hereof, must remain covered as specified in the NYSDEC-approved Site Management Plan by the barrier system consisting of a demarcation fabric (e.g. geotextile) and covered with one foot of soil or the concrete slab of the commercial building, as designed and constructed as part of the
approved remedial action under the Brownfield Cleanup Agreement.
B. The Controlled Property may not be used for a higher level of use such as restricted residential use and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.
C. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state
in at least fifteen-point bold-faced type:
This property is subject to an environmental easement held
by the New York State Department of Environmental Conservation pursuant of Title 36 to Article 71 of the Environmental Conservation Law.
D. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.
E. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury that the controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls employed at the Controlled Property were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such control to protect the public health and environment or constitute a violation or failure to comply with any Site Management Plan for such controls and giving access to such Controlled Property to evaluate continued maintenance of such controls.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
131300-6061-26-744884	Vapor Mitigation Cover System

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the Engineering Control certification;

   b) 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 generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
X	☐

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

   (a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was 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) 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;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
X	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

_____ _____

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. C314108

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 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 Joseph A Bonura Jr. (print name) at JM Development Group, LLC (print business address),

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Joseph A Bonura Jr.

Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

11/22/2021

Date

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 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 Philip Bell (print name) at 334 North Fostertown Drive (print business address),

am certifying as a Qualified Environmental Professional for the Owner (Owner or Remedial Party)

Philip Bell

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

11/22/2021

Date

Enclosure 3
Periodic Review Report (PRR) General Guidance

I. Executive Summary: (1/2-page or less)
   A. Provide a brief summary of site, nature and extent of contamination, and remedial history.
   B. Effectiveness of the Remedial Program - Provide overall conclusions regarding;
      1. progress made during the reporting period toward meeting the remedial objectives for the site
      2. the ultimate ability of the remedial program to achieve the remedial objectives for the site.
   C. Compliance
      1. Identify any areas of non-compliance regarding the major elements of the Site Management Plan (SMP, i.e., the Institutional/Engineering Control (IC/EC) Plan, the Monitoring Plan, and the Operation & Maintenance (O&M) Plan).
      2. Propose steps to be taken and a schedule to correct any areas of non-compliance.
   D. Recommendations
      1. recommend whether any changes to the SMP are needed
      2. recommend any changes to the frequency for submittal of PRRs (increase, decrease)
      3. recommend whether the requirements for discontinuing site management have been met.

II. Site Overview (one page or less)
   A. Describe the site location, boundaries (figure), significant features, surrounding area, and the nature and extent of contamination prior to site remediation.
   B. Describe the chronology of the main features of the remedial program for the site, the components of the selected remedy, cleanup goals, site closure criteria, and any significant changes to the selected remedy that have been made since remedy selection.

III. Evaluate Remedy Performance, Effectiveness, and Protectiveness
   Using tables, graphs, charts and bulleted text to the extent practicable, describe the effectiveness of the remedy in achieving the remedial goals for the site. Base findings, recommendations, and conclusions on objective data. Evaluations and should be presented simply and concisely.

IV. IC/EC Plan Compliance Report (if applicable)
   A. IC/EC Requirements and Compliance
      1. Describe each control, its objective, and how performance of the control is evaluated.
      2. Summarize the status of each goal (whether it is fully in place and its effectiveness).
      3. Corrective Measures: describe steps proposed to address any deficiencies in ICECs.
      4. Conclusions and recommendations for changes.
   B. IC/EC Certification
      1. The certification must be complete (even if there are IC/EC deficiencies), and certified by the appropriate party as set forth in a Department-approved certification form(s).

V. Monitoring Plan Compliance Report (if applicable)
   A. Components of the Monitoring Plan (tabular presentations preferred) - Describe the requirements of the monitoring plan by media (i.e., soil, groundwater, sediment, etc.) and by any remedial technologies being used at the site.
   B. Summary of Monitoring Completed During Reporting Period - Describe the monitoring tasks actually completed during this PRR reporting period. Tables and/or figures should be used to show all data.
   C. Comparisons with Remedial Objectives - Compare the results of all monitoring with the remedial objectives for the site. Include trend analyses where possible.
   D. Monitoring Deficiencies - Describe any ways in which monitoring did not fully comply with the monitoring plan.
   E. Conclusions and Recommendations for Changes - Provide overall conclusions regarding the monitoring completed and the resulting evaluations regarding remedial effectiveness.

VI. Operation & Maintenance (O&M) Plan Compliance Report (if applicable)
   A. Components of O&M Plan - Describe the requirements of the O&M plan including required activities, frequencies, recordkeeping, etc.
   B. Summary of O&M Completed During Reporting Period - Describe the O&M tasks actually completed during this PRR reporting period.
   C. Evaluation of Remedial Systems - Based upon the results of the O&M activities completed, evaluated

the ability of each component of the remedy subject to O&M requirements to perform as designed/expected.

D. O&M Deficiencies - Identify any deficiencies in complying with the O&M plan during this PRR reporting period.

E. Conclusions and Recommendations for Improvements - Provide an overall conclusion regarding O&M for the site and identify any suggested improvements requiring changes in the O&M Plan.

VII. Overall PRR Conclusions and Recommendations

A. Compliance with SMP - For each component of the SMP (i.e., IC/EC, monitoring, O&M), summarize;
   1. whether all requirements of each plan were met during the reporting period
   2. any requirements not met
   3. proposed plans and a schedule for coming into full compliance.

B. Performance and Effectiveness of the Remedy - Based upon your evaluation of the components of the SMP, form conclusions about the performance of each component and the ability of the remedy to achieve the remedial objectives for the site.

C. Future PRR Submittals
   1. Recommend, with supporting justification, whether the frequency of the submittal of PRRs should be changed (either increased or decreased).
   2. If the requirements for site closure have been achieved, contact the Departments Project Manager for the site to determine what, if any, additional documentation is needed to support a decision to discontinue site management.

VIII. Additional Guidance

Additional guidance regarding the preparation and submittal of an acceptable PRR can be obtained from the Departments Project Manager for the site.

APPENDIX B

Inspection Photographs

Photo 1: Area of consolidation Zone to south of building

Photo 2: Front portion of facilties.

APPENDIX C

Site Management Plan

1.0 INTRODUCTION

This Site Management Plan describes the operation, maintenance and monitoring (OM&M) measures that are required at the Former City of Poughkeepsie Sewage Treatment Plant (STP) site located at the intersection of Rinaldi Boulevard and Hurlihe Street in Poughkeepsie, New York (Figure 1). These requirements are a part of the remedial activities conducted by Poughkeepsie Waterfront Development, LLC during 2005 and 2006. Additional information regarding the specific remedial activities that were performed is presented in the *Final Engineering Report* prepared by Fuss & O'Neill.

2.0 REMEDIATION SUMMARY

Three primary areas of concern (AOCs) were identified during the investigation phase of this project. They were 1) the Southern Landfill Area, 2) the Northeast soil mound and 3) the former UST area. Remediation at the site involved excavating impacted soil from these three areas and either disposing excavated soil off-site or consolidating it on-site within one of two soil consolidation zones (SCZ). In addition, a sub-slab venting system was installed under the floor slab of the newly constructed building. The remedial activities conducted were intended to achieve a Track 4 cleanup under the Brownfields Cleanup Program (BCP). The specific remedial actions performed included the following:

- **Soil Excavation and Off-Site Disposal** - Impacted soil containing the highest level of the constituents of concern (e.g., sludge layers from the Southern Landfill and Northeast Soil Mound Areas) was excavated and transported to a permitted off-site disposal facility.

- **Soil Relocation to the Primary SCZ** - The Primary SCZ is an approximately 0.7 acre area located within the footprint of the newly constructed building. Low-level impacted soil was relocated to this area so that it could be capped by the future building and to help achieve final site grades.

  First, impacted material from the Southern Landfill Area (approximately 300 cubic yards), the Northeast Soil Mound Area (approximately 2,000 cubic yards) and the Former UST Area (approximately 100 cubic yards) was placed in compacted lifts in the bottom of the excavation. Next, stockpiled "construction fill borrow area" soil and crushed demolition debris was installed over the soil from the three AOCs. This crushed demolition debris material was graded to form a level grade at elevation 34, as referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29), and a geotextile demarcation layer was placed on the surface to define the upper boundary of the Primary SCZ. About six feet of clean materials (e.g., crushed concrete, coarse aggregate, concrete building slab) was placed over the demarcation layer. Crushed concrete was obtained from the Crainesville Block Co., Inc. of Amsterdam, New York and used above the demarcation layer with NYSDEC prior approval. The finished floor elevation of the building is at elevation 40 (NGVD 29).

- **Soil Relocation to the Secondary SCZ** - Approximately 1,500 cubic yards of soil mixed with leaves was discovered in the Southern Landfill area beneath the southwest corner of the proposed building footprint during remedial activities. In October 2005, this material was relocated to the approximately 0.3-acre Secondary SCZ located immediately adjacent to the southern foundation wall and inside a new four-foot segmental concrete block retaining wall. After soil was relocated to this area and compacted, a 6 oz./SY geotextile layer was installed over the impacted material and overlain with one foot of clean topsoil. The topsoil layer was seeded to establish turf.

- **Sub-Slab Venting System** - Prior to the installation of the building's concrete floor slab, a sub-slab venting system was constructed under the building. The system was installed as required by the NYSDOH to mitigate potential vapor intrusion from trace volatile organic compounds that may be present in the Primary SCZ. The sub-slab venting system consists of four rectangular loops of four-inch polyvinyl chloride (PVC) perforated pipe laterals placed in a 12 to 16-inch layer of ¾-inch stone. Six-inch solid PVC pipe headers connect each of the loops and penetrate through the building floor slab on the eastern side of the Primary SCZ. After all subsurface piping was in place, a 6-mil polyethylene vapor barrier was located over the stone and the concrete slab was poured over the vapor barrier. A layout of the piping network is included in the *Engineering Report.*

  The remaining components of the sub-slab venting system were installed as the building was constructed above the foundation. At the location where the four solid PVC pipe headers penetrate the floor slab, the pipes were manifolded together into one 12-inch PVC pipe that leads to the roof. Within this run of pipe, a Fantech Model FR 225 400 cfm inline centrifugal fan was installed and connected to a light to indicate when the fan is energized. PVC piping and the fan are contained within the walls of the facility's dish washing area. Sampling ports were installed on each of the six-inch headers just before the manifold and immediately after the manifold on the 12-inch pipe. In addition, sampling ports off of the outer subsurface loop were installed near the water heater (northeast corner of the Primary SCZ) and the utility room (western side of the Primary SCZ).

  On July 7, 2006, Fuss & O'Neill performed a diagnostic test to evaluate the ability of air to flow through the subsurface piping of the sub-slab venting system while the fan was in operation. A separate test was conducted at each of the two sample ports connected to the largest subsurface loop of the system, which is the loop with the least amount of suction due to head losses caused by the longest pipe runs. One at a time, each port was opened, smoke was released and Fuss & O'Neill personnel observed the smoke moving into the opened sample port. Therefore, suction within the subsurface was verified in the field.

The metes and bounds as well as elevations of both the Primary and Secondary SCZ, as surveyed by Chazen Engineering and Land Survey Company, are shown on Sheet 3 of the *Final Engineering Report*. The concrete building slab and sub-slab venting system within the Primary SCZ as well as the geotextile demarcation barrier with vegetated soil layer over the Secondary SCZ are "Engineered Controls" used for remediation. The NYSDEC also requires "Institutional Controls" (i.e., filing an environmental easement) to be used to limit site usage.

3.0 INSTITUTIONAL CONTROL RESTRICTIONS

This document is referenced in the environmental easement that was executed in cooperation with NYSDEC counsel and filed on the Dutchess County property records. This document will place restrictions on certain site uses. An overview is provided within this section below.

- **Restrictions to Site Use** - All future use of the entire site, as defined by the metes and bounds description referenced in the environmental easement, is restricted to commercial or industrial uses. The owner must notify the NYSDEC and other appropriate agencies if any changes to the facility are proposed within the environmental easement areas.

- **Soil Disturbance Inside of the SCZs** - Any disturbance of the soil beneath the demarcation barriers within the Primary SCZ at elevation 34 (NGVD 29) or the Secondary SCZ at a depth of one foot will require proper handling. Soil removed from this area for any purpose must either be relocated under the demarcation barrier or disposed of at a permitted off-site facility.

- **Soil Disturbance Outside of the SCZs** - Soil outside of the SCZs may be disturbed without prior approval of the NYSDEC. However, extra caution should be taken to be alert of any previously unidentified environmental conditions that may exist, which include stained soil, odors and fill material. If any suspect material is uncovered, work will be stopped and the NYSDEC shall be notified prior to proceeding with any additional work.

- **Groundwater Usage** - Groundwater from the site may not be used for any purpose.

4.0 ENGINEERED CONTROL INSPECTION AND MONITORING

Periodically, the owner must have an engineering professional inspect the Primary SCZ, the Secondary SCZ and the sub-slab venting system and fill out an inspection checklist (see Attachment A). In addition, the owner may use air quality sample results to petition the state to shut off the sub-slab venting system. The specifics of each are as follows:

- **Primary SCZ Inspection** - Visual inspection of the Primary SCZ shall be performed periodically. Specifically, this involves looking for cracking or other deterioration of the foundation walls (exterior inspection) and the concrete floor slab (interior inspection).

- **Secondary SCZ Inspection** - Visual inspection of the Secondary SCZ shall be performed periodically. Specifically, this involves looking for signs of disturbance, erosion, cracking, slumping and loss of vegetation over the Secondary SCZ.

- **Sub-Slab Venting System Inspection** - Visual inspection of the accessible portions of the sub-slab venting system will be performed on an annual basis. Components either buried under the concrete floor slab or located within the walls of the facility are not considered accessible. However, the engineering professional shall assess the system's operability by verifying that the fan is running and noting it on the inspection form.

- **Sub-Slab Venting System Air Quality Monitoring** - In the event that the site owner wishes to petition the state to shut off the sub-slab venting system, the owner will contact the NYSDEC and NYSDOH to determine the proper sampling methodology, collect a sample from the sampling port located immediately after the manifold and submit it to a certified off-site laboratory. Sampling will continue until no VOCs are observed in two consecutive sampling events. This data shall be provided to the NYSDEC with the petition for their review and approval.

5.0 ENGINEERED CONTROL MAINTENANCE

The various engineered controls require routine maintenance by the owner or the owner's representative as described below.

- **Primary SCZ Maintenance** - The Primary SCZ is contained within the building foundation and covered by a concrete floor slab. Any cracks to the slab or the foundation walls shall be repaired so that a seal is maintained between the building and the Primary SCZ.

- **Secondary SCZ Maintenance** - The vegetative cover (grasses and other shallow root plants) and slope will be maintained over the secondary SCZ. To limit root penetration, grass will be mowed regularly during the growing season and whenever it reaches a height of six inches. In addition, any erosion of the soil cap will be repaired to maintain a minimum of one-foot of cover over the demarcation layer.

- **Sub-Slab Venting System Maintenance** - The sub-slab venting system has been installed with a light that, when off, may indicate a loss of power to the inline centrifugal fan. When this occurs, necessary repairs shall be performed in an expeditious manner to return the system to working order. Product data for the Fantech Model FR 225 inline centrifugal fan is included in Attachment B.

6.0 REPORTING AND AMENDMENT PROCESS

One year after the Certificate of Completion is issued and every three years thereafter, a certification will be prepared and submitted to the NYSDEC. This certification will summarize the inspection and monitoring activities that occurred during the past monitoring period. Completed certification reports shall be sent to:

Mr. Bradley Brown
New York State Department of Environmental Conservation
Remedial Bureau C
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7014
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This Site Management Plan and the requirements contained within can only be amended with consent from the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH).