Final Engineering Report

Former City of Poughkeepsie Sewage Treatment Plant Site

Poughkeepsie, New York

August 2006

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FINAL ENGINEERING REPORT
FORMER CITY OF POUGHKEEPSIE
SEWAGE TREATMENT PLANT SITE

AUGUST 2006

Prepared for:
Poughkeepsie Waterfront Development, LLC

For submittal to:
New York State Department of Environmental Conservation
Division of Environmental Remediation
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1.0 INTRODUCTION

This report summarizes the remedial construction activities that Fuss & O'Neill observed on behalf of the Poughkeepsie Waterfront Development, LLC during 2005 Former City of Poughkeepsie Sewage Treatment Plant (STP). This work was done through the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) under Brownfield Cleanup Agreement (BCA) for site # C314109. A copy of the BCA is attached in Appendix A.

The site is located at the intersection of Rinaldi Boulevard and Hurlihe Street in Poughkeepsie, New York (Figure 1). Remediation at the site involved excavating impacted soil from three areas of environmental concern (AOCs) and either disposing excavated soil off-site or consolidating it on-site within one of two soil consolidation zones (SCZ). A sub-slab venting system was also installed under the floor slab of the southern portion of the newly constructed building. Remedial construction activities were conducted in general accordance with the Remedial Action Work Plan (RAWP) and RAWP Amendment dated February 2005 and April 15, 2005, respectively. Both the RAWP and associated amendment were reviewed and approved by the NYSDEC shortly after the documents were submitted (Appendix B).

The remedial activities conducted were intended to achieve a Track 4 cleanup under the BCP. The specific remedial actions performed included the following:

- Excavating and transporting impacted soil containing the highest level of the constituents of concern (e.g., sludge layers from the Southern Landfill and Northeast Soil Mound Areas) to a permitted off-site disposal facility

- Excavating and consolidating soil containing low levels of the constituents of concern to the Primary SCZ located within the foundation walls and under the southern portion of the new on-site building

- Excavating and consolidating impacted soil containing leafy waste within the Secondary SCZ located south of the new on-site building

- Installing a 6 oz/SY geotextile demarcation layer, a minimum of two feet of clean fill and a sub-slab venting system over the Primary SCZ and under the floor slab of the new on-site building

- Installing a 6 oz/SY geotextile demarcation layer and one foot of clean fill over the Secondary SCZ

The goals of the remedial work conducted at the former STP site were to protect the future users of the facility from potential exposure to the contaminants of concern present at the site and to consolidate the impacted material into well defined areas. The selected remedy has accomplished both of these goals by eliminating or substantially reducing exposure pathways, which, in turn, protect human health and the environment.

2.0 SITE BACKGROUND

The Former City of Poughkeepsie STP site is comprised of two parcels totaling approximately 7.1 acres. The western parcel is approximately 1.4 acres and the eastern parcel is approximately 5.7 acres. The two parcels are bounded to the west by the Hudson River, to the north by Hurlihe Street, to the east by Rinaldi Boulevard and to the south by the former DeLaval Separator property (Figure 1).

Historically, the site had been used for industrial purposes and as the City of Poughkeepsie's Sewage Treatment Plant. However, the site has been vacant since the City shut the plant down in 1977. The only active building is the Pine Street Pump Station. This building is situated on the smaller 1.4 acre parcel that is adjacent to the Hudson River. The City of Poughkeepsie owns the parcel and will continue to operate the pump station. No remedial activities under the BCP were conducted on this parcel.

The 5.7-acre parcel adjacent to Rinaldi Boulevard owned by Poughkeepsie Waterfront Development, LLC is currently being developed into a restaurant and catering facility. The planned development is consistent with the City of Poughkeepsie's Master Plan and has received approval from the City's Common Council.

2.1 Site History

Historical resources reviewed during the Phase I Environmental Site Assessment (ESA) (Chazen, 1999) indicated that the STP parcel was first developed for industrial purposes in 1885. The Adriance Platt & Company and Buckeye Mower and Reaper Works occupied the site. In 1913 the plant was sold to the Moline Plow Company, which operated until 1936 when the City foreclosed on the plant and took over the land. A fire destroyed many of the Moline Plow buildings in 1939; however, the City leased an undamaged portion of the Moline Plow facility to U.S. Hoffman Machinery Company. U.S. Hoffman reportedly manufactured metal components including primer parts of artillery shells for the U.S. Navy. Hoffman operated at the site until 1959.

In 1959, the City took the property over and began construction and eventual use of the facility as the wastewater treatment plant for the City. The site operated in this capacity until 1977 when the plant was permanently closed and the City moved its operation to the new plant located on North Water Street in Poughkeepsie.

2.2 Geology

The Surficial Geologic Map of New York, prepared by Cadwell (1989), identifies the unconsolidated deposits in the vicinity of the site as either fluvial sand and gravel deposits (along the Hudson River) or glacial till consisting of sand, silt and gravel and exhibiting variable texture. The till deposits are typically poorly sorted and consist primarily of clay, silt-clay and boulder-clay mixes with sporadic bedrock outcrops intertwined.

The majority of the material encountered at the site would be interpreted as fill material. In those instances when native soils were encountered, the material was a silty sand mixture with varying percentages of gravel and cobble sized particles.

According to the Geologic Map of New York, Lower Hudson Sheet, prepared by Fisher et al. (1970), bedrock below the site is likely to consist of the Taconic Melange Formation or the Austin Glen Formation. The Taconic Melange is characterized as a chaotic mix of pebble to block sized Cambrian to Middle Ordivician Age rocks in a pelitic matrix. The Austin Glen formation consists of interbedded layers of greywacke and shale. The outcrops observed on site were more consistent with interbedded greywacke and shales. The outcrops appeared to consist of interbedded competent siltstone layers alternating with less competent shale.

Seventy-two test pits have been excavated on the property throughout the course of the various subsurface investigations (Sheet 1). The geologic information obtained from the test pitting activity allowed creation of a subsurface geologic model for the site. The fill boundaries as well as the nature and extent of the affected soil appear to be well defined. Native undisturbed soil consists mainly of silty, fine to coarse sand mixed with varying percentages of gravel, cobbles and boulders. The fill material typically includes a matrix of native soils intermixed with concrete slabs, boulders, bricks, household refuse, miscellaneous metal, glass, ash, slag, asphalt, and wood construction debris. It is also apparent that some material had been imported to cover the fill/disposal areas. There was also a contiguous to semi-contiguous layer of strongly odorous soil/sludge buried in the southern landfill area (Fuss & O'Neill, 2004a).

Depth to bedrock varies throughout the site. Outcrops were observed on the southern portion of the site and encountered in the test pits at depths ranging from 7 to 16 feet below ground surface beneath the southern portion of the site (Fuss & O'Neill, 2004a). Based on excavations conducted during remediation, bedrock shallows to the west to within one to two feet of the ground surface.

2.3 Groundwater Conditions

Groundwater was typically not encountered in the unconsolidated sediments during previous site investigations. In a few instances, soil was observed to be moist but appreciable quantities of water were not encountered in any of the previous test pits.

Groundwater beneath the site appears to be confined primarily to the bedrock. Shallow groundwater flow is likely to be directly towards the Hudson River; however, it is likely that there is a slight southward radial component that mimics site topography. Based on the depth to groundwater observed in the two monitoring wells, groundwater is estimated to be between 12 and 30 feet below ground surface across the site (Fuss & O'Neill, 2004a).

Since the development will obtain public water from the City of Poughkeepsie, on-site groundwater will not be used for drinking water. In addition, the current environmental easement (refer to Section 6.1) prohibits the use of groundwater from the site for any purpose. Therefore, risks associated with impacts to groundwater, if any, would be minimal.

2.4 Previous Investigations

Several investigations have been performed at the former STP site that has resulted in the following reports:

- Phase I Environmental Site Assessment (ESA) (Chazen, 1999)
- Phase II Subsurface Investigation (Chazen, 2001)
- Supplemental Phase II Subsurface Investigation (Chazen, 2003)
- Site Characterization and Remedial Investigation Report (Fuss & O'Neill, 2004a)
- Alternatives Analysis and Remedial Action Plan (Fuss & O'Neill, 2004b)
- Remedial Action Work Plan (Fuss & O'Neill, February 2005)
- RAWP Amendment No. 1 prepared by Fuss & O'Neill, dated April 15, 2005

Sample and test pit locations from the Site Characterization and Remedial Investigation Report are shown on Sheet 1. The data generated by the various phases of investigation were used to develop the RAWP described in Section 1.0 and throughout this document.

2.5 Areas of Concern

As a result of the previous investigations, three primary areas of concern were identified. They are 1) the Southern Landfill Area, 2) the Northeast soil mound and 3) the former UST area (Sheet 2). The Southern Landfill and Northeast Soil Mound Areas primarily contain metals and petroleum contaminated soil while the former UST Area primarily contains petroleum-contaminated soil. The areas of concern are discussed further in Section 4.0, which summarizes the soil excavation activities conducted at the site.

2.6 Groundwater Remediation

As stated previously in Section 2.3, groundwater was not encountered in the unconsolidated sediments during the course of this investigation. Some moist soil was encountered during previous investigations, however, no obvious evidence of saturated conditions appear to be present anywhere beneath the site. Precipitation infiltrates quickly through the relatively permeable fill material and enters the bedrock aquifer system. Groundwater is likely to be present between 12 and 30 feet below ground surface across much of the site. Groundwater is not used as a drinking water resource in this region so impacts, if present, are not a significant issue. It is also important to note that samples obtained from two down gradient monitoring wells from previous investigations were not affected by the contaminants of concern at levels exceeding the standards put forth in NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1.

No further action is proposed for groundwater at the site.

3.0 STATE AND LOCAL APPROVALS/PERMITS

Prior to the commencement of construction activities, various State and local approvals were needed.

3.1 Remedial Action Work Plan Approval

In January 2005, Fuss & O'Neill finalized the RAWP based on comments received from the NYSDEC. Poughkeepsie Waterfront Development, LLC obtained authorization to proceed

with the remedy outlined in the RAWP from the NYSDEC on January 18, 2005. A copy of the NYSDEC approval letter is presented in Appendix B.

During remedial activities, RAWP Amendment No. 1 (dated April 15, 2005) was prepared and submitted to NYSDEC. The purpose of the document was to 1) create a Secondary SCZ for the placement of soil mixed with leaves and 2) modify the sub-slab venting system. The rationale for this request is discussed in further detail in Sections 4.4 and 5.1. A copy of the NYSDEC's May 5, 2005 approval letter is also included in Appendix B.

3.2 Permits

Prior to commencing the remedial action, the Volunteer, Poughkeepsie Waterfront Development, LLC obtained the required permits and approvals from the City of Poughkeepsie to implement the remedial alternative. Permits associated with the project include but are not limited to:

- Demolition Permit (dated September 29, 2004)
- Construction Permit (dated May 3, 2005)
- General SPDES Permit (GP-02-01)

Copies of the Local Permit approvals are included in Appendix C.

4.0 SOIL REMEDIATION SUMMARY

Poughkeepsie Waterfront Development, LLC hired GAP Excavating & Grading, Inc. of Highland, New York to perform remedial construction activities. Fuss & O'Neill provided part-time construction observation. The goal of remediation was for each AOC to meet TAGM 4046 soil cleanup criteria to the extent practical and feasible. Select Construction Photographs are included in Appendix D.

4.1 Soil Excavation Activities

As discussed in previous reports submitted to the NYSDEC, there were remnant buildings and structures from the former STP operation remaining at the site. Prior to remedial soil activities, these structures were demolished. The residual construction debris was stockpiled on the site to be processed and used as on-site backfill material. All debris not suitable as backfill (e.g., metal, wood, etc.) was stockpiled separately for off-site recycling or disposal. We understand that asbestos-containing and hazardous materials within the site structures were mitigated prior to demolition under a separate contract monitored by the owner. Throughout demolition and soil remediation activities, dust levels were not observed to migrate beyond the site boundary. The bulk of the work was done during the Winter or Spring season and the soils were generally moist from precipitation. While water was available on-site, dust suppression techniques during consolidation and construction efforts at the site were determined to be unnecessary.

Excavation work began during the week of February 20, 2005. Soil impacted with metals, total petroleum hydrocarbons (TPH) and polynuclear aromatic compounds (PAHs) were excavated from the following three AOCs:

- The Southern Landfill Area
- The Northeast Soil Mound Area
- The Former UST Area

Initial horizontal and vertical excavation limits at each AOC were established based on historic soil sampling data. Previous soil sampling locations are shown in Sheet 1. A summary of previous sampling results from Fuss & O'Neill's Site Characterization and Remedial Investigation Report is presented in Table 1.

Impacted soil was staged temporarily at the soil management zone for either off-site disposal or future re-use at the site. Soil at the soil management zone was stockpiled on two layers of 6-mil polyethylene sheeting and covered with 6-mil polyethylene sheeting. Metal, concrete, brick and other materials unsuitable for use as backfill encountered during excavation activities were stockpiled separately. The brick and concrete were processed with the building demolition debris using a crusher and stockpiled for used as clean backfill. Metal pipes, I-beams, rebar, etc. were taken to an off-site recycling facility. Leafy debris not suitable as backfill under the building was also stockpiled separately for on-site reuse in the Secondary SCZ.

Based on owner records, the approximate quantity of soil that was either disposed off-site or relocated on-site is presented in the table below.

Impacted Soil Quantity Summary Table [1]

	Soil Volume Relocated to the Primary SCZ (Approximate)	Soil Volume Relocated to the Secondary SCZ (Approximate)	Soil Weight Disposed Off-Site [2]
Southern Landfill Area	300 cubic yards	1,500 cubic yards [3]	246.54 tons
Northeast Soil Mound Area	2,000 cubic yards	0 cubic yards	249.59 tons
Former UST Area	100 cubic yards	0 cubic yards	0 tons

Notes:

1. **Does not include metal, brick or concrete material.**
2. **Disposed off-site at the Clean Earth facility located in Philadelphia, Pennsylvania.**
3. **Soil contains leafy waste.**

Additional soil remediation information for each of the three AOCs is presented in Sections 4.1.1, 4.1.2 and 4.1.3.

4.1.1 Southern Landfill Area

The Southern Landfill Area consists of approximately 19,000 square feet and extends to a depth of up to approximately 10 feet below ground surface. Actionable levels of metals and petroleum-contaminated soil were encountered in the Southern Landfill Area during previous

investigations. The bulk of soil that required action was confined primarily to a layer of organic rich sludge or road sweepings that were buried in a thin contiguous layer across the eastern half of the Southern Landfill Area. The sludge layer was buried by approximately six to ten feet of miscellaneous fill consisting mainly of sand and gravel material interspersed with construction and demolition debris. In addition, soil in the vicinity of PWD-05 and PWD-06 exhibited levels of heavy metals slightly above the TAGM 4046 values. The area in proximity to PWD-05 and PWD-06 was where the slag material was buried (Sheet 1). There were also pockets of ash and slag, leaf waste and some household refuse that may have resulted from convenience dumping in the Southern Landfill Area.

Soil excavation activities began at the site in the Southern Landfill Area on February 22, 2005. Excavation of this AOC occurred in stages. The first step was to expose the impacted sludge layer by removing and stockpiling the overlying material. Soil located above the sludge layer in the Southern Landfill Area was temporarily stockpiled at the edge of excavation prior to moving it to the Soil Management Zone. During removal of this overlying material, large volumes of soil mixed with plastic trash bags full of leaves were encountered. This leaf-containing waste was stockpiled separately in the Soil Management Zone.

Following removal of the overlying material, the sludge layer was excavated and stockpiled in a separate area of the Soil Management Zone for off-site disposal. Soil excavation below the sludge continued until either refusal on bedrock or native soils were encountered. Soil that was temporarily stored in the Soil Management Zone, but not scheduled for off-site disposal was later brought to either the Primary or Secondary Soil Consolidation Area, as appropriate. The approximate boundaries of the excavation in the Southern Landfill Area are shown in Sheet 2.

4.1.2 Northeast Soil Mound Area

The Northeast Soil Mound Area affected approximately 12,500 square feet of surface area and extends to a depth of up to approximately 15 feet below ground surface. The mound of soil located in the northeast corner of the site covers a former building that was demolished and buried in place. Information provided by the City suggests that this building was used for the burning of sludge. During previous investigations, a layer of coal ash or possibly burned sludge material was discovered adjacent to the foundation of the former building. Samples of this material contained metal contamination at levels slightly exceeding the soil cleanup guidance values provided in TAGM 4046. Petroleum-contaminated soil was encountered in an area where used oil filters and other old automobile parts were discovered.

During remedial excavation activity, the concrete floor slab and bottom portion of the walls of the buried building were unearthed. Material located within the former buildings walls was excavated and stockpiled in the Soil Management Zone. Petroleum-impacted soil, soil mixed with ash, coal fragments and other visibly impacted material were stockpiled separately in the Soil Management Zone. Per discussions with the NYSDEC, it was determined that since no visible staining was observed, the basement floor did not need to be excavated. The approximate area excavated from the Northeast Soil Mound Area is shown in Sheet 2.

4.1.3 Former UST Area

As discussed in Chazen's Phase II and Supplemental Phase II site investigation reports, the former UST area contained petroleum impacted soil. Levels of PAHs above the respective TAGM 4046 criteria had been detected in a limited area around the former UST area (Sheet 2). To remove the potential PAH-impacted soil, excavation activities were conducted beyond the boundaries of the former UST grave. For simplicity, the clean backfill that was previously used by others to fill the void left by removing the UST was removed with the PAH-impacted soil. Approximately 100 cubic yards of soil was excavated from this area and stockpiled in the Soil Management Zone.

4.2 Post Remediation Sampling

Following soil excavation from each of the AOCs, post remediation (A.K.A. confirmatory) soil samples were collected from the sidewalls and bottom of the excavations. The Field Sampling Plan (FSP) outlined in the RAWP describes the sampling protocol that was followed. Samples were submitted to Severn Trent Laboratories located in Newburgh, New York and analyzed for constituents of concern detailed in the RAWP. Analytical parameters were selected based on the constituents observed during previous investigations. Confirmatory sample locations are presented in Sheet 2. A summary of the analytical results is presented in Tables 2 and 3. Copies of the analytical data on a computer CD are included as Appendix E.

In accordance with DER-10, post remediation samples were collected at a rate of approximately one sample per 900 square feet of excavation bottom area. Sidewall samples were collected at a rate of approximately one sample per 30 linear feet of sidewall. Sidewall samples were biased to depths of previous investigation results and/or results of field screening. A summary of the number of confirmatory samples collected per Area of Concern is provided below:

Post Remediation Sampling Summary Table

	Bottom Samples	Sidewall Samples
Northeast Soil Mound Area [1,3]	4 samples	6 samples
Southern Landfill Area [2,3]	4 samples	10 samples
Former UST Area [4]	1 sample	4 samples

Notes:

1. **Per discussions with the NYSDEC, sidewalls samples and bottom samples were not collected in areas where the basement floor or building walls were located.**
2. **Bottom samples were only collected outside the footprint of the Primary SCZ.**
3. **Samples analyzed for PAHs (ASP Category B - Method 8270C), Target Analyte List (TAL) metals (ASP Category B - Method 6010B and Method 7471/7470 for Hg), and Target Compound List (TCL) VOCs (ASP Category B - Method 8260B).**
4. **Samples analyzed for STARS Memo VOCs and SVOCs.**

4.3 Analytical Results

4.3.1 Southern Landfill and Northeast Soil Mound Areas

Analytical results indicate that low concentrations of metals and PAHs (Table 2) above TAGM 4046 values were reported in post-remediation samples collected from both the Northeast Soil Mound and Southern Landfill Areas. However, levels observed are believed to be indicative of background concentrations found in many urban areas. In addition, the majority of the post-remediation samples were collected from apparently native underlying soils and no visible signs of impact were noted. Therefore, no further excavation was deemed necessary in either area. This concept was discussed with and agreed to by the NYSDEC during an April 8, 2005 progress meeting at the site.

4.3.2 Former UST Area

One PAH, benzo(a)pyrene, was reported in a sample collected from the Former UST Area at a concentration equal to the TAGM 4046 value (Table 3). No odor was detected and there was no visible sign of petroleum impacted soil. However, no further soil excavation was possible along this post-remediation sidewall because excavation was conducted to the limits of the former two-story building foundation wall located to the west of the excavation grave. Thus, no further action was considered necessary in the area of the Former UST.

4.4 Stockpile Sampling

Following removal of soil from the above-specified AOCs, samples were collected from the sludge/ash/petroleum-impacted soil stockpiled within the Soil Management Zone. A total of three samples were collected and analyzed with the following parameters:

- VOCs - ASP Category B - Method 8260B
- SVOCs - ASP Category B - Method 8270C
- Metals - ASP Category B - Method 6010B and Method 7471/7470 for Hg.
- Herbicides - ASP Category B - Method 8151
- PCB & Pesticides - ASP Category B - Method 8081
- TPH - ASP - Category B - Method 418.1
- TCLP - Method 1311
- Flashpoint, Corrossivity & Reactivity - Method SW-846 Chapter 7 and Method ASTM 393/40 CFR 261.21

Based on these results, no constituents were observed at concentrations that would classify any of the stockpiled material as a hazardous waste. Therefore, stockpiled soil was disposed of off-site at the Clean Earth facility located in Philadelphia, Pennsylvania. Copies of the waste manifests documenting the removal of this soil from the site are included in Appendix F.

An additional three samples (SLA-SP-01, SLA-SP-02 and SLA-SP-03) were collected from the soil mixed with the leafy waste and analyzed for PAHs, metals and VOC to determine if the soil could be reused. Elevated levels of PAHs and metals were observed indicating that this soil is not appropriate for off-site use as topsoil. In addition, from a geotechnical engineering

perspective performed by others, the soil could not be placed under the proposed building due to its high organic content. Therefore, a Secondary SCZ located to the south of the proposed building was created.

At the request of the NYSDEC, two stockpile samples (IMP-SP-01 and IMP-SP-02) were also collected from a large pile of suspected clean fill that was located on the site along Rinaldi Boulevard. The soil originated on-site from the "construction fill borrow area" shown in Sheet 2. Analytical results indicated that the soil contained concentrations of metals slightly above TAGM 4046 values. However, per discussion with the NYSDEC, it appears that the concentrations reported are likely indicative of background concentrations at the site and for the surrounding urban area. Thus, the NYSDEC allowed the soil to be used as backfill at depth within the Primary SCZ even though the soil does not meet TAGM 4046 criteria as specified in the RAWP.

Analytical results from the stockpiled soil are summarized in Table 4.

4.5 On-Site Relocation of Impacted Soil

Soil temporarily stockpiled in the Soil Management Zone was brought to either the Primary or Secondary Soil Consolidation Zones. The metes and bounds of both areas were surveyed by Chazen Engineering and Land Survey Company, as shown in Sheet 3. As discussed in Section 6.0, this survey was used to prepare the environmental easement for the site.

4.5.1 Primary Soil Consolidation Zone

The Primary SCZ is an approximately 0.7 acre area located within the footprint of the proposed building. Low-level impacted soil was relocated to this area so that it could be capped by the future building and to 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).

4.5.2 Secondary Soil Consolidation Zone

As stated previously, approximately 1,500 cubic yards of soil mixed with leaves was discovered in the southwest corner of 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 all soil was relocated to this area and compacted, a 6 oz./SY geotextile layer overlain with one foot of clean topsoil was placed over the impacted soil. The topsoil layer was seeded to establish turf.

5.0 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.

5.1 System Installation

Along with the creation of a Secondary SCZ, RAWP Amendment No. 1 was also used to modify the sub-slab depressurization system specified in the February 2005 RAWP (Appendix B). The major differences between the two systems included relocating the exhaust vent to the roof and replacing the Liquid Boot® layer with a 6 mil polyethylene vapor barrier. The revised system was designed in general accordance with the US Environmental Protection Agency document entitled "Radon Prevention in the Design and Construction of Schools and Other Large Buildings" dated June 1994.

Work on the sub-slab venting system began on September 18th, 2005. 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 in November 2005.

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).

A record drawing of the sub-slab venting system pipe network is included as Sheet 4.

5.2 System Testing

A preliminary test to confirm the effectiveness of the sub-slab venting system was performed by R.C. Harris, Plumbing, Heating, Air Conditioning, Inc. of Pleasant Valley, New York on October 27, 2005. This test was performed prior to the installation of the concrete floor slab in case alterations to the system were required. The test results indicated the presence of negative

pressure in the sub-slab venting system, but the radius of influence could not be ascertained because there were too many perforations in the then uncompleted vapor barrier. The vapor barrier was installed and the floor slab was subsequently poured and construction on the remainder of the building proceeded.

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.

6.0 POST-CLOSURE REQUIREMENTS

6.1 Environmental Easement

Institutional controls in the form of an environmental easement will also be used to place additional requirements on the site owner. These requirements include, but are not necessarily limited to, restricting intrusive activities, prohibiting groundwater use and complying with the approved Site Management Plan (refer to the following section). An environmental easement has been executed in cooperation with NYSDEC counsel and filed on the Dutchess County Property records. A copy of this document is included as Appendix G.

6.2 Site Management Plan

A Site Management Plan has been developed for the site to describe the tasks necessary to monitor and maintain the engineered control. The plan also describes the procedures and processes necessary for any invasive activities occurring within the environmental easement as well as NYSDEC reporting requirements. A copy of the Site Management Plan is included in Appendix H.

7.0 CERTIFICATION

Pursuant to the requirements of Section 5.8(e) of DER-10 Technical Guidance for Site Investigation and Remediation, Poughkeepsie Waterfront Development, LLC acknowledges:

1. The data submitted demonstrates that the remediation requirements set forth in the Remedial Action Work Plan dated February 2005 have been achieved as described in Sections 4 through 6 of this report.

2. Any use restrictions, institutional controls, engineering controls and/or operation and maintenance requirements applicable to the site are contained in the environmental easement and the Site Management Plan. The Site Management Plan is mandated and required to be implemented by the environmental easement created and recorded for the site as outlined in Section 6 of this report.

3. As stated previously, a Site Management Plan has been prepared in accordance with Section 6 of DER-10 and approved by the NYSDEC Division of Environmental Remediation (DER).

4. No financial assurance mechanisms were required by the NYSDEC.

Pursuant to the requirements of Section 1.5(a) of DER-10 Technical Guidance for Site Investigation and Remediation this report has been stamped and signed by a professional engineer licensed to practice in New York State, in accordance with Education Law Section 7200 et seq.

8.0 REFERENCES

Cadwell, D.H., and E.H. Muller, 1989. Surficial Geologic Map of New York consisting of five sheets: Finger Lakes, Hudson-Mohawk, Niagara, Lower Hudson and Adirondack New York State Museum, Map Series No. 40.

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3. The observations described and upon which the work product was based were made under the conditions stated therein. Any conclusions presented in the work product were based solely upon the services described therein, and not on scientific or engineering tasks or procedures beyond the scope of described services.

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5. If the purpose of this project was to assess the physical characteristics of the subject site with respect to the presence in the environment of hazardous substances, waste or petroleum and chemical products and wastes as defined in the work product, unless otherwise noted, no specific attempt was made to check the compliance of present or past owners or operators of the subject site with Federal, state, or local laws and regulations, environmental or otherwise.

6. If water level readings have been made, these observations were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in water levels may occur due to variations in rainfall, passage of time and other factors and such fluctuations may effect the conclusions and recommendations presented herein.

7. Except as noted in the work product, no quantitative laboratory testing was performed as part of the project. Where such analyses have been conducted by an outside laboratory, Consultant has relied upon the data provided, and has not conducted an independent evaluation of the reliability of these tests.

8. If the conclusions and recommendations contained in the work product are based, in part, upon various types of chemical data, then the conclusions and recommendations are contingent upon the validity of such data. These data (if obtained) have been reviewed and interpretations made by Consultant. If indicated in the work product, some of these data may be preliminary or screening-level data and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time and other factors.

9. Chemical analyses may have been performed for specific parameters during the course of this project, as described in the work product. However, it should be noted that additional chemical constituents not included in the analyses conducted for the project may be present in soil, groundwater, surface water, sediments or building materials at the subject site.

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13. Any use of or reliance on the work product shall constitute acceptance of the terms hereof.

TABLES

Table 1
Summary of Historic Soil Analytical Data

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		PWD-1	PWD-2	PWD-2	PWD-3	
Sample I.D.:		624040323-01	624040323-02	624040323-03	624040323-04	
Date:		3/23/2004	3/23/2004	3/23/2004	3/23/2004	TAGM
Depth (ft)*:		4.5' - 6.5'	3' - 5'	composite	7' - 9'	4046
CONSTITUENT	UNITS					
Total Metals						
Mercury	mg/Kg	**0.3**	0.1	**0.16**	**1**	0.1
Arsenic	mg/Kg	4.5	4	6	5.7	7.5 or SB
Barium	mg/Kg	49.9	48.9	44.9	191	300 or SB
Cadmium	mg/Kg	0.09(u)	0.10(u)	0.094(u)	0.11(u)	1 or SB
Chromium	mg/Kg	**14.2**	**10.4**	**11.8**	**12.7**	10 or SB
Lead	mg/Kg	59.1	27.4	92.2	405	SB (400)
Selenium	mg/Kg	**3.8**	**5.1**	**3.1**	**1.8**	2 or SB
Silver	mg/Kg	1.3	0.55(u)	0.8	0.62(u)	SB (2-6)
TCLP Metals						
Mercury	mg/L	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	---
Arsenic	mg/L	ND<0.2	0.485	0.431	ND<0.2	---
Barium	mg/L	ND<0.4	ND<0.4	ND<0.4	ND<0.4	---
Cadmium	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
Chromium	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
Lead	mg/L	ND<0.2	ND<0.2	ND<0.2	ND<0.2	---
Selenium	mg/L	ND<0.05	ND<0.05	ND<0.05	ND<0.05	---
Silver	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
VOCs						
Trichloroethylene (TCE)	mg/kg	NA	NA	NA	NA	0.7
Methylene Chloride	mg/kg	NA	NA	NA	NA	0.1

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NY DEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria
3. NA = not applicable or not analyzed
4. ND = not detected
5. * = midpoint of sampling depth

Table 1
Summary of Historic Soil Analytical Data

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		PWD-3	PWD-4	PWD-4	PWD-5	
Sample I.D.:		624040323-05	624040323-06	624040323-07	624040323-08	
Date:		3/23/2004	3/23/2004	3/23/2004	3/23/2004	TAGM
Depth (ft)*:		10' - 12'	0.5' - 4'	6' - 8'	1' - 3'	4046
CONSTITUENT	UNITS					
Total Metals	Units					
Mercury	mg/Kg	0.054	**0.11**	0.5	0.05	0.1
Arsenic	mg/Kg	2.7	6.1	3.3	6.7	7.5 or SB
Barium	mg/Kg	25.6	129	40.2	22.9	300 or SB
Cadmium	mg/Kg	0.091(u)	0.098(u)	0.091(u)	0.094(u)	1 or SB
Chromium	mg/Kg	7.9	**12.2**	9.4	**18.6**	10 or SB
Lead	mg/Kg	15.7	182	44.3	20.1	SB (400)
Selenium	mg/Kg	2.2	**6.4**	2.3	4.6	2 or SB
Silver	mg/Kg	0.5(u)	0.54(u)	0.5(u)	0.52(u)	SB (2-6)
TCLP Metals						
Mercury	mg/L	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	---
Arsenic	mg/L	ND<0.2	ND<0.2	ND<0.2	ND<0.2	---
Barium	mg/L	ND<0.4	ND<0.4	ND<0.4	ND<0.4	---
Cadmium	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
Chromium	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
Lead	mg/L	ND<0.2	ND<0.2	ND<0.2	ND<0.2	---
Selenium	mg/L	ND<0.05	ND<0.05	ND<0.05	ND<0.05	---
Silver	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
VOCs						
Trichloroethylene (TCE)	mg/kg	NA	NA	NA	NA	0.7
Methylene Chloride	mg/kg	NA	NA	NA	NA	0.1

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NY DEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria
3. NA = not applicable or not analyzed
4. ND = not detected
5. * = midpoint of sampling depth

Table 1
Summary of Historic Soil Analytical Data

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		PWD-6	PWD-6	PWD-9	PWD-11	
Sample I.D.:		624040323-09	624040323-10	624040323-11	624040323-12	
Date:		3/23/2004	3/23/2004	3/23/2004	3/23/2004	TAGM
Depth (ft)*:		1' - 4'	6' - 8'	composite	1.5' - 3.5'	4046
CONSTITUENT	UNITS					
Total Metals	Units					
Mercury	mg/Kg	**0.43**	0.063	**0.5**	0.076	0.1
Arsenic	mg/Kg	**8.2**	6.8	**14.2**	**9.4**	7.5 or SB
Barium	mg/Kg	115	42.2	170	82.1	300 or SB
Cadmium	mg/Kg	0.12	0.095(u)	0.89	0.091(u)	1 or SB
Chromium	mg/Kg	**22.5**	**14.6**	**14.6**	5.5	10 or SB
Lead	mg/Kg	213	21.5	**1030**	69.7	SB (400)
Selenium	mg/Kg	**5.7**	**4**	**4.1**	3.8	2 or SB
Silver	mg/Kg	**3.5**	0.52	0.53	0.50(u)	SB (2-6)
TCLP Metals						
Mercury	mg/L	ND<0.0005	ND<0.0005	ND<0.0005	ND<0.0005	---
Arsenic	mg/L	ND<0.2	ND<0.2	ND<0.2	ND<0.2	---
Barium	mg/L	0.68	ND<0.4	1.12	ND<0.4	---
Cadmium	mg/L	ND<0.02	ND<0.02	0.042	ND<0.02	---
Chromium	mg/L	ND<0.02	ND<0.02	0.512	ND<0.02	---
Lead	mg/L	0.212	ND<0.2	ND<0.2	ND<0.2	---
Selenium	mg/L	ND<0.05	ND<0.05	ND<0.05	ND<0.05	---
Silver	mg/L	ND<0.02	ND<0.02	ND<0.02	ND<0.02	---
VOCs						
Trichloroethylene (TCE)	mg/kg	0.0046	NA	NA	NA	0.7
Methylene Chloride	mg/kg	0.011	NA	NA	NA	0.1

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NY DEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria
3. NA = not applicable or not analyzed
4. ND = not detected
5. * = midpoint of sampling depth

Table 1
Summary of Historic Soil Analytical Data

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		PWD-11	PWD-12	PWD-14	TAGM 4046
Sample I.D.:		624040323-13	624040323-14	624040323-16	
Date:		3/23/2004	3/23/2004	3/23/2004	
Depth (ft)*:		composite	composite	6' - 7'	
CONSTITUENT	UNITS				
Total Metals	Units				
Mercury	mg/Kg	**0.17**	**0.13**	NA	0.1
Arsenic	mg/Kg	6.1	4.6	NA	7.5 or SB
Barium	mg/Kg	71.7	39.5	NA	300 or SB
Cadmium	mg/Kg	0.098(u)	0.087(u)	NA	1 or SB
Chromium	mg/Kg	**11.5**	9.5	NA	10 or SB
Lead	mg/Kg	151	80.6	NA	SB (400)
Selenium	mg/Kg	3.6	2.6	NA	2 or SB
Silver	mg/Kg	0.54(u)	0.55	NA	SB (2-6)
TCLP Metals					
Mercury	mg/L	ND<0.0005	ND<0.0005	NA	---
Arsenic	mg/L	ND<0.2	ND<0.2	NA	---
Barium	mg/L	0.649	0.477	NA	---
Cadmium	mg/L	ND<0.02	ND<0.02	NA	---
Chromium	mg/L	ND<0.02	ND<0.02	NA	---
Lead	mg/L	ND<0.2	ND<0.2	NA	---
Selenium	mg/L	ND<0.05	ND<0.05	NA	---
Silver	mg/L	ND<0.02	ND<0.02	NA	---
VOCs					
Trichloroethylene (TCE)	mg/kg	NA	NA	ND	0.7
Methylene Chloride	mg/kg	NA	NA	ND	0.1
Polynuclear Aromatic Hydrocarbons (PAHs)					
Phenanthrene	mg/kg	NA	NA	0.210 J	50
Anthracene	mg/kg	NA	NA	0.042 J	50
Fluoranthene	mg/kg	NA	NA	0.56	50
Pyrene	mg/kg	NA	NA	0.56	50
Benzo(a)anthracene	mg/kg	NA	NA	0.23 J	0.224
Chrysene	mg/kg	NA	NA	0.28 J	0.4
Benzo(b)fluoranthene	mg/kg	NA	NA	0.29J	1.1
Benzo(k)fluoranthene	mg/kg	NA	NA	0.11 J	1.1
Benzo(a)pyrene	mg/kg	NA	NA	**0.23 J**	0.061
Indeno(1,2,3-cd)pyrene	mg/kg	NA	NA	0.11 J	3.2
Benzo(g,h,i)perylene	mg/kg	NA	NA	0.12 J	50

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NY DEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria
3. NA = not applicable or not analyzed
4. ND = not detected
5. * = midpoint of sampling depth

Table 2
Summary of Detected Constituents in Soil
Southern Landfill and Northeast Soil Mound Areas

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		NESM-SW-01	NESM-SW-02	NESM-SW-03	NESM-SW-04	NESM-SW-05	
Sample I.D.:		STP-NESM-SW-01	STP-NESM-SW-02	STP-NESM-SW-03	STP-NESM-SW-04	STP-NESM-SW-05	
Date:		3/17/2005	3/17/2005	3/17/2005	3/17/2005	3/17/2005	TAGM
Depth (ft)*:		5.50	5.50	3.00	3.00	3.00	4046
		Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS						
Total Metals							
Mercury	mg/kg	0.017	0.032	0.041	0.019	0.072	0.1
Aluminum	mg/kg	11200	11500	10300	9060	8030	SB
Antimony	mg/kg	ND	ND	ND	ND	ND	SB
Arsenic	mg/kg	4.6	4.4	6.0	5.6	5.2	7.5 or SB
Barium	mg/kg	29.0	30.6	59.9	43.5	30.1	300 or SB
Beryllium	mg/kg	0.42	0.45	0.40	0.35	0.28	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	1 or SB
Calcium	mg/kg	1580	1440	26,000	4390	1690	SB
Chromium	mg/kg	14.0	14.3	13.4	11.8	9.9	10 or SB
Cobalt	mg/kg	11.3	11.1	10.2	10.6	10.3	30 or SB
Copper	mg/kg	30.9	30.5	31.9	36.0	31.9	25 or SB
Iron	mg/kg	26300	26600	23400	27200	21800	2,000 or SB
Lead	mg/kg	13.5	12.9	65.0	53.4	12.0	SB (400)
Magnesium	mg/kg	5360	5450	4970	4300	3550	SB
Manganese	mg/kg	722	697	647	724	818	SB
Nickel	mg/kg	22.7	22.9	19.7	20.4	19.6	13 or SB
Potassium	mg/kg	931	945	1,130	901	869	SB
Selenium	mg/kg	2.9	3.2	3.1	3.0	2.3	2 or SB
Sodium	mg/kg	125	122	215	189	153	SB
Silver	mg/kg	ND	ND	ND	ND	ND	SB (2-6)
Thallium	mg/kg	ND	ND	ND	ND	ND	SB
Vanadium	mg/kg	14.3	14.1	15.6	13.4	11.5	150 or SB
Zinc	mg/kg	83.0	81.5	110	125	93.2	20 or SB
VOCs							
Acetone	ug/kg	10	7.8	4.2	4.9	7.9	200
Methylene Chloride	ug/kg	ND	ND	ND	ND	ND	100
Toluene	ug/kg	ND	ND	ND	ND	ND	1,500
Total Xylenes	ug/kg	ND	ND	ND	ND	1.2	1,200
PAHs							
Naphthalene	ug/kg	ND	ND	ND	ND	42	13,000
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND	36,400
Acenaphthene	ug/kg	ND	ND	ND	ND	65	50,000
Flourene	ug/kg	ND	ND	ND	ND	76	50,000
Phenanthrene	ug/kg	63	53	310	ND	740	50,000
Anthracene	ug/kg	ND	ND	65	ND	190	50,000
Fluoranthene	ug/kg	89	97	460	ND	1300	50,000
Pyrene	ug/kg	91	85	380	ND	1100	50,000
Benzo(a)anthracene	ug/kg	43	43	230	ND	490	224
Chrysene	ug/kg	47	47	220	ND	520	400
Benzo(b)fluoranthene	ug/kg	60	65	310	ND	800	1,100
Benzo(k)fluoranthene	ug/kg	ND	ND	130	ND	360	1,100
Benzo(a)pyrene	ug/kg	42	44	220	ND	520	61
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	100	ND	190	3,200
Dibenzo(a,h)anthracene	ug/kg	ND	ND	ND	ND	61	14 or MDL
Benzo(ghi)perylene	ug/kg	ND	ND	99	ND	210	50,000

Notes:

1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria. However, these values are lower than the soil cleanup guidance values for commercial developments listed in New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (Public Review Draft, November 2005, NYSDEC and NYSDOH).
3. NA = not applicable or not analyzed; ND = not detected (detection limits shown on laboratory reports included in Appendix E)
4. * = midpoint of sampling depth
5. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value

Table 2
Summary of Detected Constituents in Soil
Southern Landfill and Northeast Soil Mound Areas

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		NESM-SW-06	NESM-PE-01	NESM-PE-02	NESM-PE-03	NESM-PE-04	
Sample I.D.:		STP-NESM-SW-06	STP-NESM-PE-01	STP-NESM-PE-02	STP-NESM-PE-03	STP-NESM-04	
Date:		3/17/2005	3/17/2005	3/17/2005	3/17/2005	3/17/2005	TAGM
Depth (ft)*:		4.50	0.50	0.50	0.50	0.50	4046
		Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS						
Total Metals	Units						
Mercury	mg/kg	0.019	0.048	0.030	0.019	0.018	0.1
Aluminum	mg/kg	11800	8840	10600	10500	10100	SB
Antimony	mg/kg	ND	ND	ND	ND	ND	SB
Arsenic	mg/kg	5.4	5.1	3.5	4.9	2.8	7.5 or SB
Barium	mg/kg	31.7	34.9	50.9	37.2	38.7	300 or SB
Beryllium	mg/kg	0.50	0.32	0.42	0.41	0.39	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	1 or SB
Calcium	mg/kg	1490	4340	1070	6660	918	SB
Chromium	mg/kg	14.3	12.2	11.6	13.5	11.4	10 or SB
Cobalt	mg/kg	9.9	10.3	9.0	11.3	7.3	30 or SB
Copper	mg/kg	28.9	30.9	16.3	35.4	15.1	25 or SB
Iron	mg/kg	27000	22700	20600	25500	19400	2,000 or SB
Lead	mg/kg	13.5	30.7	9.6	28.0	6.9	SB (400)
Magnesium	mg/kg	5050	4210	4730	5120	4110	SB
Manganese	mg/kg	583	676	530	713	330	SB
Nickel	mg/kg	22.0	19.6	20.7	21.9	19.2	13 or SB
Potassium	mg/kg	937	858	745	903	718	SB
Selenium	mg/kg	3.2	2.5	2.2	3.0	1.4	2 or SB
Sodium	mg/kg	135	175	166	180	121	SB
Silver	mg/kg	ND	ND	ND	ND	ND	SB (2-6)
Thallium	mg/kg	ND	ND	ND	ND	ND	SB
Vanadium	mg/kg	14.9	12.5	13.8	13.6	13.8	150 or SB
Zinc	mg/kg	84.5	97.9	49.8	90.8	45.7	20 or SB
VOCs							
Acetone	ug/kg	7.6	8.1	ND	ND	3.9	200
Methylene Chloride	ug/kg	ND	ND	ND	ND	ND	100
Toluene	ug/kg	ND	ND	ND	ND	ND	1,500
Total Xylenes	ug/kg	ND	ND	1.7	ND	ND	1,200
PAHs							
Naphthalene	ug/kg	ND	ND	ND	ND	ND	13,000
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND	36,400
Acenaphthene	ug/kg	ND	36	ND	ND	ND	50,000
Flourene	ug/kg	ND	39	ND	ND	ND	50,000
Phenanthrene	ug/kg	ND	450	ND	ND	ND	50,000
Anthracene	ug/kg	ND	140	ND	ND	ND	50,000
Fluoranthene	ug/kg	65	900	ND	ND	ND	50,000
Pyrene	ug/kg	57	850	ND	ND	ND	50,000
Benzo(a)anthracene	ug/kg	ND	360	ND	ND	ND	224
Chrysene	ug/kg	ND	370	ND	ND	ND	400
Benzo(b)fluoranthene	ug/kg	47	510	ND	ND	ND	1,100
Benzo(k)fluoranthene	ug/kg	ND	240	ND	ND	ND	1,100
Benzo(a)pyrene	ug/kg	39	350	ND	ND	ND	61
Indeno(1,2,3-cd)pyrene	ug/kg	ND	120	ND	ND	ND	3,200
Dibenzo(a,h)anthracene	ug/kg	ND	40	ND	ND	ND	14 or MDL
Benzo(ghi)perylene	ug/kg	ND	120	ND	ND	ND	50,000

Notes:

1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria. However, these values are lower than the soil cleanup guidance values for commercial developments listed in New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (Public Review Draft, November 2005, NYSDEC and NYSDOH).
3. NA = not applicable or not analyzed; ND = not detected (detection limits shown on laboratory reports included in Appendix E)
4. * = midpoint of sampling depth
5. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value

Table 2
Summary of Detected Constituents in Soil
Southern Landfill and Northeast Soil Mound Areas

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		SLA-SW-01	SLA-SW-02	SLA-SW-03	SLA-SW-04	SLA-SW-05	
Sample I.D.:		STP-SLA-SW-01	STP-SLA-SW-02	STP-SLA-SW-03	STP-SLA-SW-04	STP-SLA-SW-05	
Date:		3/17/2005	3/17/2005	3/17/2005	3/17/2005	3/17/2005	TAGM
Depth (ft)*:		3.00	3.00	3.00	3.00	2.50	4046
		Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS						
Total Metals	Units						
Mercury	mg/kg	0.043	0.039	0.069	0.074	0.034	0.1
Aluminum	mg/kg	10100	12500	8760	11700	10400	SB
Antimony	mg/kg	ND	ND	ND	ND	ND	SB
Arsenic	mg/kg	4.6	4.5	3.0	5.6	3.9	7.5 or SB
Barium	mg/kg	41.6	49.4	38.8	52.5	31.8	300 or SB
Beryllium	mg/kg	0.53	0.46	0.35	0.48	0.45	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	1 or SB
Calcium	mg/kg	1230	1540	1180	1830	1300	SB
Chromium	mg/kg	11.7	15.4	9.1	14.7	10.8	10 or SB
Cobalt	mg/kg	10.5	16.1	7.9	14.6	8.4	30 or SB
Copper	mg/kg	31.2	28.0	26.8	30.4	24.7	25 or SB
Iron	mg/kg	23100	27800	19500	26900	20700	2,000 or SB
Lead	mg/kg	11.4	15.6	8.8	13.6	8.7	SB (400)
Magnesium	mg/kg	3540	5430	3010	4300	3190	SB
Manganese	mg/kg	785	768	299	390	204	SB
Nickel	mg/kg	18.1	27.3	17.6	26.4	15.6	13 or SB
Potassium	mg/kg	820	971	749	1040	750	SB
Selenium	mg/kg	1.8	2.9	2.0**	2.5	1.8	2 or SB
Sodium	mg/kg	128	97.9	189	153	140	SB
Silver	mg/kg	ND	ND	ND	ND	ND	SB (2-6)
Thallium	mg/kg	ND	ND	ND	ND	ND	SB
Vanadium	mg/kg	13.2	15.2	11.4	14.9	15.5	150 or SB
Zinc	mg/kg	87.4	87.5	78.3	91.4	50.4	20 or SB
VOCs							
Acetone	ug/kg	ND	6.6	8.4	6.6	ND	200
Methylene Chloride	ug/kg	ND	ND	ND	ND	ND	100
Toluene	ug/kg	ND	ND	ND	ND	ND	1,500
Total Xylenes	ug/kg	ND	ND	ND	1.7	ND	1,200
PAHs							
Naphthalene	ug/kg	ND	ND	ND	ND	ND	13,000
2-Methylnaphthalene	ug/kg	ND	ND	ND	ND	ND	36,400
Acenaphthene	ug/kg	ND	ND	ND	ND	ND	50,000
Flourene	ug/kg	ND	ND	ND	ND	ND	50,000
Phenanthrene	ug/kg	ND	ND	ND	ND	ND	50,000
Anthracene	ug/kg	ND	ND	ND	ND	ND	50,000
Fluoranthene	ug/kg	ND	ND	ND	ND	ND	50,000
Pyrene	ug/kg	ND	ND	ND	ND	ND	50,000
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	224
Chrysene	ug/kg	ND	ND	ND	ND	ND	400
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	ND	ND	1,100
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	1,100
Benzo(a)pyrene	ug/kg	ND	ND	ND	ND	ND	61
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	ND	ND	3,200
Dibenzo(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	14 or MDL
Benzo(ghi)perylene	ug/kg	ND	ND	ND	ND	ND	50,000

Notes:

1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria. However, these values are lower than the soil cleanup guidance values for commercial developments listed in New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (Public Review Draft, November 2005, NYSDEC and NYSDOH).
3. NA = not applicable or not analyzed; ND = not detected (detection limits shown on laboratory reports included in Appendix E)
4. * = midpoint of sampling depth
5. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value

Table 2
Summary of Detected Constituents in Soil
Southern Landfill and Northeast Soil Mound Areas

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

	Sample Location:	SLA-SW-06	SLA-SW-07	SLA-SW-08	SLA-SW-09	SLA-SW-10	TAGM 4046
	Sample I.D.:	STP-SLA-SW-06	STP-SLA-SW-07	STP-SLA-SW-08	STP-SLA-SW-09	STP-SLA-SW-10	
	Date:	3/17/2005	3/17/2005	3/17/2005	3/17/2005	3/17/2005	
	Depth (ft)*:	4.00	5.50	5.50	6.50	6.50	
		Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS						
Total Metals	Units						
Mercury	mg/kg	**0.19**	0.038	0.026	0.086	**0.57**	0.1
Aluminum	mg/kg	11500	11000	10600	9510	9380	SB
Antimony	mg/kg	ND	ND	ND	ND	ND	SB
Arsenic	mg/kg	3.2	4.2	4.0	5.3	5.3	7.5 or SB
Barium	mg/kg	46.5	33.5	36.5	51.1	52.6	300 or SB
Beryllium	mg/kg	**0.40**	**0.51**	**0.46**	**0.39**	**0.43**	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	1 or SB
Calcium	mg/kg	1030	1340	1270	11200	16000	SB
Chromium	mg/kg	**13.5**	[illegible]	**11.6**	**13.6**	**12.9**	10 or SB
Cobalt	mg/kg	9.5	9.1	9.2	11.3	11.6	30 or SB
Copper	mg/kg	20.8	19.1	17.8	[illegible]	**30.5**	25 or SB
Iron	mg/kg	**23200**	**22400**	**21700**	**23600**	**23500**	2,000 or SB
Lead	mg/kg	102	7.5	7.3	41.8	28.0	SB (400)
Magnesium	mg/kg	4350	3270	3150	5410	5620	SB
Manganese	mg/kg	343	187	168	718	685	SB
Nickel	mg/kg	**19.6**	**17.0**	**16.1**	**20.7**	**21.1**	13 or SB
Potassium	mg/kg	677	812	761	1010	661	SB
Selenium	mg/kg	**2.5**	1.9	1.6	**2.7**	2.0**	2 or SB
Sodium	mg/kg	137	114	123	293	206	SB
Silver	mg/kg	ND	ND	ND	ND	0.43	SB (2-6)
Thallium	mg/kg	ND	ND	ND	ND	1.2	SB
Vanadium	mg/kg	14.5	16.1	15.4	14.9	13.1	150 or SB
Zinc	mg/kg	**63.8**	**57.3**	**53.0**	**101**	**84.3**	20 or SB
VOCs							
Acetone	ug/kg	4.8	7.3	3.6	ND	14	200
Methylene Chloride	ug/kg	ND	ND	ND	ND	8.1	100
Toluene	ug/kg	ND	ND	ND	ND	0.93	1,500
Total Xylenes	ug/kg	ND	ND	ND	ND	ND	1,200
PAHs							
Naphthalene	ug/kg	ND	ND	ND	94	ND	13,000
2-Methylnaphthalene	ug/kg	ND	ND	ND	530	ND	36,400
Acenaphthene	ug/kg	ND	ND	ND	ND	ND	50,000
Flourene	ug/kg	ND	ND	ND	ND	ND	50,000
Phenanthrene	ug/kg	ND	ND	ND	280	360	50,000
Anthracene	ug/kg	ND	ND	ND	52	90	50,000
Fluoranthene	ug/kg	ND	ND	ND	630	700	50,000
Pyrene	ug/kg	ND	ND	ND	350	600	50,000
Benzo(a)anthracene	ug/kg	ND	ND	ND	190	**280**	224
Chrysene	ug/kg	ND	ND	ND	230	300	400
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	360	380	1,100
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	130	160	1,100
Benzo(a)pyrene	ug/kg	ND	ND	ND	**210**	**280**	61
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	77	140	3,200
Dibenzo(a,h)anthracene	ug/kg	ND	ND	ND	ND	**44**	14 or MDL
Benzo(ghi)perylene	ug/kg	ND	ND	ND	90	140	50,000

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria. However, these values are lower than the soil cleanup guidance values for commercial developments listed in New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (Public Review Draft, November 2005, NYSDEC and NYSDOH).
3. NA = not applicable or not analyzed; ND = not detected (detection limits shown on laboratory reports included in Appendix E)
4. * = midpoint of sampling depth
5. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value

Table 2
Summary of Detected Constituents in Soil
Southern Landfill and Northeast Soil Mound Areas

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		SLA-PE-01	SLA-PE-02	SLA-PE-03	SLA-PE-04	SLA-PE-03	
Sample I.D.:		STP-SLA-PE-01	STP-SLA-PE-02	STP-SLA-PE-03	STP-SLA-PE-04	STP-SLA-PE-05	
Date:		3/17/2005	3/17/2005	3/17/2005	3/17/2005	3/17/2005	TAGM
Depth (ft)*:		0.50	0.50	0.50	0.50	0.50	4046
		Primary	Primary	Primary	Primary	Duplicate	
CONSTITUENT	UNITS						
Total Metals	Units						
Mercury	mg/kg	0.045	0.041	0.029	0.026	0.04	0.1
Aluminum	mg/kg	10800	7260	8020	10400	8590	SB
Antimony	mg/kg	ND	ND	ND	ND	ND	SB
Arsenic	mg/kg	5.4	1.5	2.5	4.0	3.4	7.5 or SB
Barium	mg/kg	44.9	42.9	41.5	35.4	42.1	300 or SB
Beryllium	mg/kg	0.51	0.34	0.38	0.44	0.40	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	1 or SB
Calcium	mg/kg	1330	925	1010	2810	1060	SB
Chromium	mg/kg	16.8	8.6	10.1	18.6	10.4	10 or SB
Cobalt	mg/kg	10.6	6.1	7.0	9.8	7.8	30 or SB
Copper	mg/kg	33.6	12.5	15.3	21.8	16.5	25 or SB
Iron	mg/kg	24200	14300	17200	24800	19000	2,000 or SB
Lead	mg/kg	11.5	8.7	15.1	16.0	15.9	SB (400)
Magnesium	mg/kg	3620	2630	2930	4780	3030	SB
Manganese	mg/kg	758	375	446	639	440	SB
Nickel	mg/kg	19.3	12.6	14.2	20.9	14.8	13 or SB
Potassium	mg/kg	849	728	824	864	873	SB
Selenium	mg/kg	1.7	ND	2.4	1.8	2.1	2 or SB
Sodium	mg/kg	89.8	121	142	138	111	SB
Silver	mg/kg	ND	ND	ND	ND	ND	SB (2-6)
Thallium	mg/kg	1.8	ND	ND	ND	ND	SB
Vanadium	mg/kg	14.8	11.5	13.9	13.4	13.9	150 or SB
Zinc	mg/kg	90.3	37.0	42.3	82.2	44.2	20 or SB
VOCs							
Acetone	ug/kg	4.7	12	4.8	8.1	6.7	200
Methylene Chloride	ug/kg	ND	ND	ND	2.1	ND	100
Toluene	ug/kg	ND	ND	ND	ND	ND	1,500
Total Xylenes	ug/kg	ND	ND	ND	ND	ND	1,200
PAHs							
Naphthalene	ug/kg	45	ND	ND	ND	ND	13,000
2-Methylnaphthalene	ug/kg	65	ND	ND	ND	ND	36,400
Acenaphthene	ug/kg	ND	ND	ND	ND	ND	50,000
Flourene	ug/kg	ND	ND	ND	ND	ND	50,000
Phenanthrene	ug/kg	ND	ND	ND	62	ND	50,000
Anthracene	ug/kg	ND	ND	ND	ND	ND	50,000
Fluoranthene	ug/kg	ND	ND	ND	100	ND	50,000
Pyrene	ug/kg	ND	ND	ND	62	ND	50,000
Benzo(a)anthracene	ug/kg	ND	ND	ND	ND	ND	224
Chrysene	ug/kg	ND	ND	ND	49	ND	400
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	57	ND	1,100
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	ND	ND	1,100
Benzo(a)pyrene	ug/kg	ND	ND	ND	40	ND	61
Indeno(1,2,3-cd)pyrene	ug/kg	ND	ND	ND	ND	ND	3,200
Dibenzo(a,h)anthracene	ug/kg	ND	ND	ND	ND	ND	14 or MDL
Benzo(ghi)perylene	ug/kg	ND	ND	ND	ND	ND	50,000

Notes:

1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria. However, these values are lower than the soil cleanup guidance values for commercial developments listed in New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (Public Review Draft, November 2005, NYSDEC and NYSDOH).
3. NA = not applicable or not analyzed; ND = not detected (detection limits shown on laboratory reports included in Appendix E)
4. * = midpoint of sampling depth
5. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value

Table 3
Summary of Detected Constituents in Soil
Former Underground Storage Tank Area

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		UST-SW-01	UST-SW-02	UST-SW-03	UST-SW-04	UST-Bottom-01	
Sample I.D.:		STP-UST-SW-01	STP-UST-SW-02	STP-UST-SW-03	STP-UST-SW-04	STP-UST-Bottom-01	
Date:		5/19/2005	5/19/2005	5/19/2005	5/19/2005	5/19/2005	TAGM
Depth (ft)*:		6.00	6.00	6.00	6.00	8.00	4046
		Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS						
VOCs							
sec-Butylbenzene	ug/kg	ND	ND	0.75	ND	ND	NE
Total xylenes	ug/kg	ND	ND	ND	ND	1.99	1,200
1,2,4-Trimethylbenzene	ug/kg	ND	ND	1.2	ND	ND	NE
n-butylbenzene	ug/kg	ND	ND	1.1	ND	ND	NE
PAHs							
Phenanthrene	ug/kg	ND	ND	ND	80	ND	50,000
Fluoranthene	ug/kg	ND	ND	ND	200	ND	50,000
Pyrene	ug/kg	ND	ND	ND	120	ND	50,000
Benzo(a)anthracene	ug/kg	ND	ND	ND	71	ND	224
Chrysene	ug/kg	ND	ND	ND	82	ND	400
Benzo(b)fluoranthene	ug/kg	ND	ND	ND	310	ND	1,100
Benzo(k)fluoranthene	ug/kg	ND	ND	ND	48	ND	1,100
Benzo(a)pyrene	ug/kg	ND	ND	ND	61**	ND	61

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC.
2. ND = not detected (detection limits shown on laboratory reports included in Appendix E)
3. * = midpoint of sampling depth
4. ** Indicates value was reported at concentration equal to the TAGM 4046 Exceedance Value. In addition, no further excavation was possible since sidewall excavation was conducted to the limits of the former two-story building foundation wall located to the west of the excavation grave.
5. NE = None Established

Table 4
Summary of Detected Constituents in Soil
Site Soil Stockpile Sampling

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		SLA-SP-01**	SLA-SP-02**	SLA-SP-03**	SLA-SP-04	NESM-SP-01	NESM-SP-02	IMP-SP-01**	IMP-SP-02	
Sample I.D.:		STP-SLA-SP-01	STP-SLA-SP-02	STP-SLA-SP-03	STP-SLA-SP-04	STP-NESM-SP-01	STP-NESM-SP-02	STP-IMPORT-SP-01	STP-IMPORT-SP-02	
Date:		2/24/2005	2/24/2005	2/24/2005	3/7/2005	3/7/2005	3/7/2005	3/17/2005	3/17/2005	TAGM
Depth (ft)*:		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	4046
		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS									
Total Metals	Units									
Mercury	mg/kg	0.45	0.26	0.60	1.2	1.1	0.50	0.037	0.018	0.1
Aluminum	mg/kg	8,760	7,140	9,590	NA	NA	NA	8830	9690	SB
Antimony	mg/kg	ND	ND	ND	NA	NA	NA	ND	ND	SB
Arsenic	mg/kg	5.0	4.4	6.3	3.7	12.6	6.9	6.8	3.7	7.5 or SB
Barium	mg/kg	138	64.0	72.1	48.9	1610	494	66.8	26.7	300 or SB
Beryllium	mg/kg	0.45	0.32	0.47	NA	NA	NA	0.36	0.37	0.16 (Heast) or SB
Cadmium	mg/kg	ND	ND	ND	ND	ND	0.20	ND	ND	1 or SB
Calcium	mg/kg	5,920	24,200	1,460	NA	NA	NA	27800	1170	SB
Chromium	mg/kg	22.4	12.3	13.0	11.8	17.7	33.8	12.5	11.9	10 or SB
Cobalt	mg/kg	8.3	7.1	8.9	NA	NA	NA	10.5	9.8	30 or SB
Copper	mg/kg	88.6	49.0	60.0	NA	NA	NA	33.2	36.2	25 or SB
Iron	mg/kg	20,300	19,300	26,300	NA	NA	NA	21500	22200	2,000 or SB
Lead	mg/kg	259	134	109	97.3	3570	1360	43.5	10.3	SB (400)
Magnesium	mg/kg	4,610	9,310	4,030	NA	NA	NA	5780	4680	SB
Manganese	mg/kg	599	482	379	NA	NA	NA	689	686	SB
Nickel	mg/kg	22.0	15.6	19.2	NA	NA	NA	18.6	17.2	13 or SB
Potassium	mg/kg	763	658	628	NA	NA	NA	1040	864	SB
Selenium	mg/kg	2.6	3.8	3.7	1.1	5.0	5.9	2.5	2.0	2 or SB
Sodium	mg/kg	271	379	172	NA	NA	NA	198	146	SB
Silver	mg/kg	3.2	0.48	ND	0.66	0.39	0.51	ND	ND	SB (2-6)
Thallium	mg/kg	1.9	ND	ND	NA	NA	NA	0.82	ND	SB
Vanadium	mg/kg	17.4	13.4	14.8	NA	NA	NA	14.1	12.6	150 or SB
Zinc	mg/kg	202	135	89.6	NA	NA	NA	98.6	76.9	20 or SB
TCLP Metals										
Barium	ug/L	NA	NA	NA	571	1950	1180	NA	NA	NE
Cadmium	ug/L	NA	NA	NA	ND	ND	82.3	NA	NA	NE
Lead	ug/L	NA	NA	NA	ND	2070	3100	NA	NA	NE

Table 4
Summary of Detected Constituents in Soil
Site Soil Stockpile Sampling

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

Sample Location:		SLA-SP-01**	SLA-SP-02**	SLA-SP-03**	SLA-SP-04	NESM-SP-01	NESM-SP-02	IMP-SP-01**	IMP-SP-02	TAGM 4046
Sample I.D.:		STP-SLA-SP-01	STP-SLA-SP-02	STP-SLA-SP-03	STP-SLA-SP-04	STP-NESM-SP-01	STP-NESM-SP-02	STP-IMPORT-SP-01	STP-IMPORT-SP-02	
Date:		2/24/2005	2/24/2005	2/24/2005	3/7/2005	3/7/2005	3/7/2005	3/17/2005	3/17/2005	
Depth (ft)*:		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
CONSTITUENT	UNITS	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
VOCs										
Acetone	ug/kg	5	8	2	NA	NA	NA	4.6	8.0	200
Methylene Chloride	ug/kg	8	44	16	3.9	10	14	1.8	ND	100
2-Butanone	ug/kg	ND	0.9	ND	NA	NA	NA	ND	ND	300
Vinyl Acetate	ug/kg	ND	ND	1	NA	NA	NA	ND	ND	NE
Toluene	ug/kg	ND	ND	ND	5.2	5.2	2.9	ND	ND	1,500
Ethylbenzene	ug/kg	ND	16	ND	2.3	3.4	3.2	ND	ND	5,500
1,3-Dichlorobenzene	ug/kg	2	ND	ND	1.1	ND	ND	ND	ND	1,600
1,4-Dichlorobenzene	ug/kg	2	ND	ND	1.4	ND	ND	ND	ND	8,500
1,2-Dichlorobenzene	ug/kg	4	ND	ND	1.9	ND	ND	ND	ND	7,900
Total Xylenes	ug/kg	ND	6	ND	12.2	19.4	11.9	ND	ND	1,200
Benzene	ug/kg	ND	ND	ND	1.5	2.0	2.5	ND	ND	60
n-propylbenzene	ug/kg	NA	NA	NA	0.80	0.87	ND	NA	NA	NE
1,3,5-Trimethylbenzene	ug/kg	NA	NA	NA	4.9	3.1	0.82	NA	NA	NE
1,2,4-Trimethylbenzene	ug/kg	NA	NA	NA	4.4	7.7	1.5	NA	NA	NE
p-isopropyltoluene	ug/kg	NA	NA	NA	0.95	0.85	ND	NA	NA	NE
1,2,4-Trichlorobenzene	ug/kg	NA	NA	NA	1.2	ND	ND	NA	NA	3,400
Naphthalene	ug/kg	NA	NA	NA	26	47	3.0	NA	NA	13,000
1,2,3-Trichloropropane	ug/kg	NA	NA	NA	ND	ND	4.3	NA	NA	400
TCLP VOCs										
Benzene	ug/L	NA	NA	NA	1.7	ND	ND	NA	NA	NE
PCBs										
Aroclor-1260	ug/Kg	NA	NA	NA	570	450	74	NA	NA	1,000

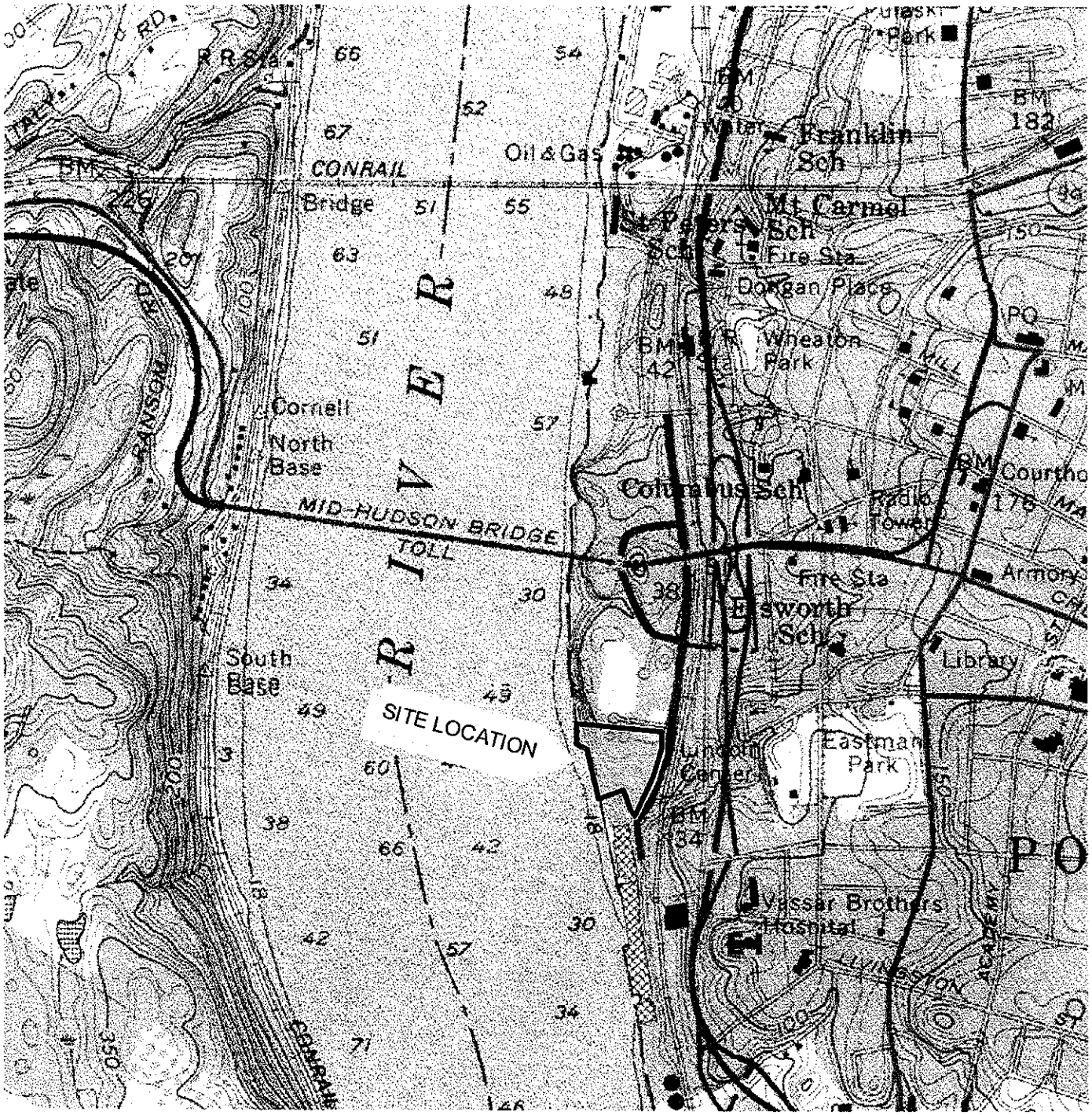
Table 4
Summary of Detected Constituents in Soil
Site Soil Stockpile Sampling

Final Engineering Report • Former City of Poughkeepsie STP Site • August 2006

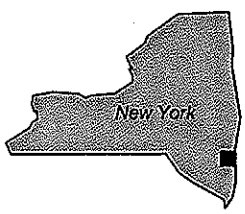
Sample Location:		SLA-SP-01**	SLA-SP-02**	SLA-SP-03**	SLA-SP-04	NESM-SP-01	NESM-SP-02	IMP-SP-01**	IMP-SP-02	TAGM 4046
Sample I.D.:		STP-SLA-SP-01	STP-SLA-SP-02	STP-SLA-SP-03	STP-SLA-SP-04	STP-NESM-SP-01	STP-NESM-SP-02	STP-IMPORT-SP-01	STP-IMPORT-SP-02	
Date:		2/24/2005	2/24/2005	2/24/2005	3/7/2005	3/7/2005	3/7/2005	3/17/2005	3/17/2005	
Depth (ft)*:		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	
CONSTITUENT	UNITS									
SEMI-VOCs										
Naphthalene	ug/kg	78	120	ND	**83000**	**5000**	400	ND	ND	13,000
2-Methylnaphthalene	ug/kg	130	58	ND	**59000**	9800	380	ND	ND	36,400
Acenaphthenylene	ug/kg	44	ND	ND	14000	3900	1200	ND	ND	41,000
Acenaphthene	ug/kg	200	150	ND	3800	780	270	ND	ND	50,000
Flourene	ug/kg	270	140	ND	27000	5500	1200	38	ND	50,000
Phenanthrene	ug/kg	2,300	1,300	77	**87000**	17000	8700	400	ND	50,000
Anthracene	ug/kg	630	320	ND	22000	4700	2100	150	ND	50,000
Fluoranthene	ug/kg	2,300	1,200	110	31000	7900	12000	630	ND	50,000
Pyrene	ug/kg	4,100	2,100	180	**92000**	21000	16000	1,000	ND	50,000
Benzo(a)anthracene	ug/kg	**1500**	**640**	73	**18000**	**5300**	**6000**	**340**	ND	224
Chrysene	ug/kg	**1500**	**670**	87	**19000**	**8100**	**6900**	340	ND	400
Benzo(b)fluoranthene	ug/kg	**2100**	840	110	**17000**	**5900**	**7300**	490	ND	1,100
Benzo(k)fluoranthene	ug/kg	780	400	46	**5900**	**2000**	**2400**	230	ND	1,100
Benzo(a)pyrene	ug/kg	**1300**	**670**	75	**14000**	**5100**	**5000**	**360**	ND	61
Indeno(1,2,3-cd)pyrene	ug/kg	590	250	63	**9900**	**3400**	**3900**	150	ND	3,200
Dibenzo(a,h)anthracene	ug/kg	**210**	**85**	ND	**3500**	**1200**	**1200**	**51**	ND	14 or MDL
Benzo(ghi)perylene	ug/kg	530	260	89	14000	4900	4600	160	ND	50,000
2-methylphenol	ug/kg	NA	NA	NA	**750**	**210**	ND	NA	NA	100 or MDL
4-methylphenol	ug/kg	NA	NA	NA	**1200**	280	ND	NA	NA	900
2,4-Dimethylphenol	ug/kg	NA	NA	NA	1000	230	ND	NA	NA	NE
Dibenzofuran	ug/kg	NA	NA	NA	2500	520	330	NA	NA	6,200
Di-n-butyl phthalate	ug/kg	NA	NA	NA	530	1000	49	NA	NA	8,100
Bis(2-ethylhexyl)phthalat	ug/kg	NA	NA	NA	ND	140	ND	NA	NA	50,000

Notes:
1. TAGM 4046 = Baseline recommended soil cleanup criteria as listed by the NYSDEC
2. Values shaded and in bold indicate an exceedance of TAGM 4046 Criteria
3. NA = not applicable or not analyzed
4. ND = not detected (detection limits shown on laboratory reports included in Appendix E)
5. * = midpoint of sampling depth
6. NE = None Established
7. ** Highest Result of Primary, Lab Rerun or Dilution Reported

FIGURES



MAP REFERENCE:
THIS MAP WAS PREPARED FROM THE FOLLOWING
7.5 MINUTE SERIES TOPOGRAPHIC MAP:
POUGHKEEPSIE, NEW YORK



Quadrangle Location

0 1000 2000
GRAPHIC SCALE

SCALE: 1"=2000'

FUSS & O'NEILL
Disciplines to Deliver

146 HARTFORD ROAD, MANCHESTER, CONNECTICUT 06040
860-646-2469 www.FandO.com

SITE LOCATION MAP
FORMER CITY OF POUGHKEEPSIE
SEWAGE TREATMENT PLANT SITE

POUGHKEEPSIE NEW YORK

PROJ. No: 20040267.A2N
DATE: AUGUST 2006

FIGURE 1

F:\P2004\0267\A2N\Final Eng Report\Site Loc.ppt

APPENDIX A

Brownfield Cleanup Agreement

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of a Remedial Program for the **Former City of Poughkeepsie Sewage Treatment Plant** Dutchess County, under Article 27, Title 14 of the Environmental Conservation Law by Volunteer **Poughkeepsie Waterfront Development, LLC**	AMENDED BROWNFIELD SITE CLEANUP AGREEMENT Index No. W3-1008-04-06 Site No. C314109

WHEREAS, Poughkeepsie Waterfront Development, LLC, a New York limited liability company with an office located at c/o Anthony's Pier 9, 2975 Route 9W, New Windsor, New York 12553, is currently participating in the Brownfield Cleanup Program relative to property located at Rinaldi Boulevard and Hurlihe Street, City of Poughkeepsie, County of Dutchess, New York 12601, latitude N 41° 41.942' and longitude W73° 56.347', and identified as property Tax Map number 31-6061-27-752894 ("Property" and/or "Site"); and

WHEREAS, the Site was originally described as containing 7.1 acres; and

WHEREAS, the Site was subdivided with the City of Poughkeepsie retaining the approximate 1.65 acres along the Hudson River which house the sewage pumping station; and

WHEREAS, Tax Map number 31-6061-27-752894 was retired and new tax map numbers were assigned to each of the new parcels; and

WHEREAS, Tax Map Number 131300-6061-26-744884 is assigned to the 5.47 acres which now comprises the Site.

NOW THEREFORE, in consideration of and in exchange for the mutual covenants and promises, the parties agree to the following:

1. The Site under the Brownfield Cleanup Agreement for the Former City of Poughkeepsie Sewage Treatment Plant contains 5.47 acres; and

2. The Tax Map Number for the Site under the Brownfield Cleanup Agreement for the Former City of Poughkeepsie Sewage Treatment Plant is 131300-6061-26-744884.

3. The Brownfield Cleanup Agreement and this Amendment to the Brownfield Cleanup Agreement shall constitute the entire Agreement between the parties with all the terms and conditions of the Agreement, except as herein provided, remaining in full force and effect.

4. The effective date of this Amendment to the Brownfield Agreement shall relate back to the date of the Dutchess County Tax Map amendment, notwithstanding the date it is executed

by the Commissioner or the Commissioner's designee.

DATED: AUG 23 2006

DENISE M. SHEEHAN
COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION AND
TRUSTEE OF THE STATE'S NATURAL
RESOURCES

By: _____

Dale A. Desnoyers
Director
Division of Environmental Remediation

CONSENT BY VOLUNTEER

Volunteer hereby consents to the issuing and entering of this Agreement, waives Volunteer's right to a hearing herein as provided by law, and agrees to be bound by this Agreement.

Poughkeepsie Waterfront Development, LLC

By: Joseph A Bonura Jr
Joseph A Bonura Jr

Title: Operating Manager

Date: 6-17-06

STATE OF NEW YORK)
) s.s.:
COUNTY OF Dutchess)

On the 17TH day of August, in the year 2006, before me, the undersigned, personally appeared Joseph A. Bonura, JR; personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Signature and office of individual
taking acknowledgment

JOSEPH P RONES
Notary Public, State of New York
Qualified in Orange County
Commission Expires June 30, 19 2010

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of a Remedial Program for the **Former City of Poughkeepsie Sewage Treatment Plant** Dutchess County, under Article 27, Title 14 of the Environmental Conservation Law by Volunteer **Poughkeepsie Waterfront Development, LLC**	BROWNFIELD SITE CLEANUP AGREEMENT Index No. W3-1008-04-06 Site No. C314109

WHEREAS, the Brownfield Cleanup Program Act was enacted to encourage the voluntary remediation of brownfield sites for reuse and redevelopment so as to advance the policy of the State of New York to conserve, improve, and protect its natural resources and environment, and control water, land, and air pollution; and

WHEREAS, the Department of Environmental Conservation (the "Department") is authorized to administer the Brownfield Cleanup Program ("BCP") contained in Article 27, Title 14 of the Environmental Conservation Law ("ECL"); and

WHEREAS, Poughkeepsie Waterfront Development, LLC (formerly Poughkeepsie Landing, LLC), a New York limited liability company, whose sole member is Joseph A. Bonura, with an office located at c/o Anthony's Pier 9, 2975 Route 9W, New Windsor, New York 12553, is currently participating in the Department's Voluntary Cleanup Program ("VCP") relative to property located at Rinaldi Boulevard and Hurlihe Street, City of Poughkeepsie, County of Dutchess, New York 12601, latitude N 41° 41.942' and longitude W73° 56.347', with property Tax Map number 31-6061-27-752894 ("Property" and/or "Site") under Voluntary Cleanup Agreement Site No. V-00639-3, Index No. W3-0954-03-03; and

WHEREAS, Poughkeepsie Waterfront Development, LLC requested transition from the VCP to the BCP for completion of the remedial program for the Site by submission of a sworn statement to the Department attesting to eligibility for participation in the BCP and such additional information as the Department determined necessary, with the understanding that the terms and conditions of the VCA will remain in effect until the BCA is fully executed or otherwise terminated and for the time period from the date of its execution until superceded by the BCA; and

WHEREAS, the prior use of the property was industrial and the intended use is restricted commercial excluding day care, child care and medical care uses; and

WHEREAS, the Department made a determination, based upon consideration of the original application for the VCP, the certified request for transition, the factors enumerated in ECL 27-1407(8) and (9), and additional relevant information, that the Site is eligible for the BCP and that Poughkeepsie Waterfront Development, LLC is eligible to participate in the BCP as a Volunteer as defined in ECL 27-1405(1)(b).

NOW, THEREFORE, IN CONSIDERATION OF AND IN EXCHANGE FOR THE MUTUAL COVENANTS AND PROMISES, THE PARTIES AGREE TO THE FOLLOWING:

I. Citizen Participation Plan

Within twenty (20) Days after the effective date of this Agreement, Volunteer shall submit a written citizen participation plan prepared in accordance with the requirements of ECL 27-1417 that, at a minimum (i) updates the names and addresses of the interested public and includes a brownfield site contact list; (ii) identifies major issues of public concern related to the Site; (iii) includes a description of citizen participation activities already performed; and (iv) includes a description and schedule of public participation activities that are either specifically required by law or are needed to address public concerns related to the Site. The Citizen Participation Plan shall be attached to and incorporated into this Agreement as Exhibit "A."

II. Development, Performance, and Reporting of Work Plans

A. Work Plan Requirements

The work plans ("Work Plan" or "Work Plans") under this Agreement shall be prepared and implemented in accordance with the requirements of ECL Article 27, Title 14 and all applicable laws, rules, regulations, and guidance documents. The Work Plans shall be captioned as follows:

1. "Remedial Investigation Work Plan" if the Work Plan provides for the investigation of the nature and extent of contamination within the boundaries of the Site;

2. "Remedial Work Plan" if the Work Plan provides for the development and implementation of a Remedial Program for contamination within the boundaries of the Site;

3. "IRM Work Plan" if the Work Plan provides for an interim remedial measure; or

4. "OM&M Work Plan" if the Work Plan provides for operation, maintenance, and/or monitoring.

B. Submission/Implementation of Work Plans

1. The first proposed Work Plan to be submitted under this Agreement shall be submitted within forty (40) Days after the effective date of this Agreement. Thereafter, the Volunteer can submit such other and additional work plans as it deems appropriate.

2. A proposed Work Plan shall be submitted for the Department's review and approval and shall include, at a minimum, a chronological description of the anticipated activities, a schedule for performance of those activities, and sufficient detail to allow the Department to evaluate that Work Plan. The Department shall use best efforts to approve, modify, or reject a proposed Work Plan within forty-five (45) Days from its receipt or within fifteen (15) Days from the close of the comment period, if applicable, whichever is later.

i) Upon the Department's written approval of a Work Plan, such Department-approved Work Plan shall be incorporated into and become an enforceable part of this Agreement as Exhibit "C" and shall be implemented in accordance with the schedule contained therein.

ii) If the Department modifies a Work Plan, the reasons for such modification shall be provided in writing. Within twenty (20) Days after receiving written notice of such disapproval, Volunteer shall elect in writing to (a) implement the Work Plan as modified; (b) implement any other Department-approved Work Plan(s); (c) invoke dispute resolution pursuant to Paragraph XIV; or (d) terminate this Agreement pursuant to Paragraph XIII.

iii) If the Department disapproves a Work Plan, the reasons for such disapproval shall be provided in writing. In the event the Department disapproves a Work Plan, within twenty (20) Days after receiving written notice of such disapproval, Volunteer shall elect in writing to (a) modify or expand it within thirty (30) Days of receipt of the written disapproval notice; (b) complete any other Department-approved Work Plan(s); (c) invoke dispute resolution pursuant to Paragraph XIV; or (d) terminate this Agreement pursuant to Subparagraph XIII.

3. An OM&M Work Plan, if necessary, shall be submitted in accordance with the schedule set forth in the IRM Work Plan or Remedial Work Plan.

4. During all field activities, Volunteer shall have on-Site a representative who is qualified to supervise the activities undertaken. Such representative may be an employee or a consultant retained by Volunteer to perform such supervision.

C. Revisions to Work Plans

If revisions to a Work Plan are required to satisfy the objectives of such Work Plan, the parties will negotiate revisions which shall be attached to and incorporated into the relevant Work Plan and which shall be enforceable under this Agreement. If the parties cannot agree upon revisions to the relevant Work Plan, then unless the Volunteer invokes dispute resolution pursuant to Paragraph XIV, either party may terminate this Agreement pursuant to Paragraph XIII.

D. Submission of Final Reports

1. In accordance with the schedule contained in a Work Plan, Volunteer shall submit a Final Report that shall include but not be limited to: all data generated relative to the Site and all other information obtained as part of the implementation of the subject Work Plan; all of the assessments and evaluations required by the subject Work Plan; a statement of any additional data that must be collected; and "as-built" drawings.

i) The Final Report for an Investigation Work Plan shall comply with the requirements set forth at ECL 27-1411(1) and shall contain a certification by the person with primary responsibility for the day to day performance of the activities under this Agreement that those activities were performed in full accordance with the Investigation Work Plan. If such Final Report concludes that no remediation is necessary, and the Site does not meet the

requirements for Track 1, Volunteer shall submit an Alternatives Analysis prepared in accordance with ECL 27-1413 that supports such determination.

ii) A Final Engineering Report certifying that remediation of the Site has been performed in accordance with this Agreement shall be prepared by a Professional Engineer (or other expert approved by the Department) with primary responsibility for the day to day performance of the activities under this Agreement. The Report shall be prepared in accordance with the requirements of ECL 27-1419(1) and (2) and shall contain a certification that all such activities were performed in accordance with the Department approved Work Plan. The Department shall review such Report, the submittals made pursuant to the Agreement, and any other relevant information regarding the Site and make a determination as to whether the goals of the remedial program have been or will be achieved in accordance with established timeframes; if so, a written Certificate of Completion will be issued in accordance with the requirements of ECL 27-1419. Such Certificate of Completion may be modified or revoked, after notice and an opportunity for hearing, upon a finding that (a) Volunteer failed to comply with this Agreement; (b) Volunteer made a misrepresentation of material fact in connection with its Application or its certification that cleanup levels required by this Agreement were reached; or (c) good cause exists for such modification or revocation.

iii) All other Work Plan Final Reports shall contain a certification by a Professional Engineer with primary responsibility for the day to day performance of the activities under this Agreement that all such activities were performed in full accordance with the Department approved Work Plan.

2. Within sixty (60) Days of the Department's approval of a Final Report, Volunteer shall submit such additional Work Plans as it proposes to implement. Failure to submit any additional Work Plans within such period shall, unless other Work Plans are under review by the Department or being implemented by Volunteer, result in the termination of this Agreement pursuant to Paragraph XIII.

E. Review of Submittals other than Work Plans

1. The Department shall timely notify Volunteer in writing of its approval or disapproval of each submittal other than a Work Plan. All Department-approved submittals shall be incorporated into and become an enforceable part of this Agreement.

2. If the Department disapproves a submittal covered by this Subparagraph, it shall specify the reasons for its disapproval and may request Volunteer to modify or expand the submittal. Within twenty (20) Days after receiving written notice that Volunteer's submittal has been disapproved, Volunteer shall elect in writing to either (i) modify or expand it within thirty (30) Days of receipt of the written notice of disapproval; (ii) complete any other Department-approved Work Plan(s); (iii) invoke dispute resolution pursuant to Paragraph XIV; or (iv) terminate this Agreement pursuant to Paragraph XIII. If Volunteer submits a revised submittal and it is disapproved, the Department and Volunteer may pursue whatever remedies may be available under this Agreement or under law.

F. Department's Determination of Need for Remediation

The Department shall determine upon its approval of each Final Report dealing with the investigation of the Site whether remediation, or additional remediation as the case may be, is needed for protection of public health and the environment.

1. If the Department makes a preliminary determination that remediation, or additional remediation, is not needed for protection of public health and the environment, the Department shall notify the public of such determination and seek public comment in accordance with ECL 27-1417(3)(e). The Department shall provide timely notification to the Volunteer of its final determination following the close of the public comment period.

2. If the Department determines that additional remediation is not needed and such determination is based upon use restrictions, Volunteer shall cause to be filed an Environmental Easement in accordance with Paragraph X within sixty (60) Days of receipt of the Department's determination.

3. If the Department determines that remediation, or additional remediation, is needed, Volunteer may elect to submit for review and approval a proposed Remedial Work Plan (or a revision to an existing Work Plan for the Site) for a remedy selected upon due consideration of the factors set forth in ECL 27-1415(3). A proposed Remedial Work Plan addressing the Site's remediation will be noticed for public comment in accordance with ECL 27-1417(3)(e) and the Citizen Participation Plan developed pursuant to Paragraph I of this Agreement. If the Department determines following the close of the public comment period that revisions are needed, Volunteer agrees to negotiate revisions to the proposed Remedial Work Plan in accordance with Paragraph II.C. If Volunteer elects not to develop a Work Plan under this Subparagraph or if either party concludes that a mutually acceptable Work Plan under this Subparagraph cannot be negotiated, then this Agreement shall terminate in accordance with Subparagraph XIII.

G. Submission of Annual Reports, if required

In the event that the remedy for the Site, if any, or any Work Plan for the Site requires operation, maintenance, and monitoring (OM&M), including reliance upon institutional or engineering controls, Volunteer shall file a report annually (unless a different frequency is specified in an approved Work Plan) on the 1st day of the month following the anniversary of the start of the OM&M and continuing until the Department notifies Volunteer in writing that such report may be discontinued. Such report shall be signed by a Professional Engineer or by an expert approved by the Department to perform that function and certified under penalty of perjury that the institutional and/or engineering controls are unchanged from the previous certification and that nothing has occurred that would impair the ability of such controls to protect public health and the environment or constitute a violation or failure to comply with the approved OM&M Plan. Volunteer shall notify the Department within twenty-four (24) hours of discovery of any upset, interruption, or termination of one or more controls without the prior approval of the Department. Further, Volunteer shall take all actions required by the Department to maintain conditions at the Site that achieve the objectives of the remedy and/or the Work Plan and are protective of public health and the environment. An explanation of such upset,

interruption, or termination of one or more controls and the steps taken in response shall be included in the foregoing notice and in the report required by this Subparagraph as well as in any progress reports required by Paragraph XI. Volunteer can petition the Department for a determination that the institutional and/or engineering controls may be terminated. Such petition must be supported by a Professional Engineer or other expert approved by the Department stating that such controls are no longer necessary. The Department shall not unreasonably withhold its approval of such petition.

III. Enforcement

This Agreement shall be enforceable as a contractual agreement under the laws of the State of New York. Volunteer shall not suffer any penalty or be subject to any proceeding or action if it cannot comply with any requirement of this Agreement as a result of a Force Majeure Event provided it notifies the Department in writing within ten (10) Days of when it obtains knowledge of any such event. Volunteer shall include in such notice the measures taken and to be taken to prevent or minimize any delays and shall request an appropriate extension or modification of this Agreement. Volunteer shall have the burden of proving by a preponderance of the evidence that an event qualifies as a Force Majeure Event pursuant to this Paragraph.

IV. Entry upon Site

A. Volunteer hereby agrees to provide access to the Site and to all relevant information regarding activities at the Site in accordance with the provisions of ECL 27-1431.

B. The Department shall have the right to periodically inspect the Site to ensure that the use of the property complies with the terms and conditions of this Agreement.

V. Payment of State Costs

A. Within forty-five (45) Days after receipt of an itemized invoice from the Department, Volunteer shall pay to the Department a sum of money which shall represent reimbursement for State Costs for negotiating this Agreement, and all costs associated with this Agreement up to and including the date upon which the Certificate of Completion is issued, the Department approves the Final Report relative to OM&M, or this Agreement is terminated pursuant to Paragraph XIII, whichever is later.

B. Personal service costs shall be documented by reports of Direct Personal Service, which shall identify the employee name, title, biweekly salary, and time spent (in hours) on the project during the billing period, as identified by an assigned time and activity code. Approved agency fringe benefit and indirect cost rates shall be applied. Non-personal service costs shall be summarized by category of expense (*e.g.*, supplies, materials, travel, contractual) and shall be documented by expenditure reports. The Department shall not be required to provide any other documentation of costs, provided however, that the Department's records shall be available consistent with, and in accordance with, Article 6 of the Public Officers Law.

C. Such invoice shall be sent to Volunteer at the following address:

Poughkeepsie Waterfront Development, LLC
Att.: Joseph A. Bonura
c/o Anthony's Pier 9
2975 Route 9W
New Windsor, New York 12553

D. Each such payment shall be made payable to the Department of Environmental Conservation and shall be sent to:

Bureau of Program Management
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233-7012

E. Each party shall provide written notification to the other within ninety (90) Days of any change in the foregoing addresses.

F. Volunteer may contest, in writing, invoiced costs under this Agreement if it believes (i) the cost documentation contains clerical, mathematical, or accounting errors; (ii) the costs are not related to the State's activities reimbursable under this Agreement; or (iii) the Department is not otherwise legally entitled to such costs. If Volunteer objects to an invoiced cost, Volunteer shall pay all costs not objected to within the time frame set forth in Subparagraph V.A and shall, within thirty (30) Days of receipt of an invoice, identify in writing all costs objected to and identify the basis of the objection. This objection shall be filed with the Director of the Bureau of Program Management ("BPM Director") who shall have the authority to relieve Volunteer of the obligation to pay invalid costs. Within forty-five (45) Days of the Department's determination of the objection, Volunteer shall pay to the Department the amount which the BPM Director or the BPM Director's designee determines Volunteer is obligated to pay or commence an action or proceeding seeking appropriate judicial relief.

G. In the event any instrument for the payment of any money due under this Agreement fails of collection, such failure of collection shall constitute a violation of this Agreement, provided (i) the Department gives Volunteer written notice of such failure of collection, and (ii) the Department does not receive from Volunteer a certified check or bank check within fourteen (14) Days after the date of the Department's written notification.

VI. Liability Limitation

Subsequent to the issuance of a Certificate of Completion pursuant to this Agreement, Volunteer shall be entitled to the Liability Limitation set forth at ECL 27-1421, subject to the terms and conditions stated therein. A Notice of the Liability Limitation shall be filed with the recording officer of the county in which the Site is located within thirty (30) Days of (i) the effective date of the Certificate of Completion or (ii) the date Volunteer acquires title to the Site, whichever is later.

VII. Reservation of Rights

A. Except as provided in Subparagraph VII.B, Volunteer reserves all rights and defenses under applicable law to contest, defend against, dispute, or disprove any action, proceeding, allegation, assertion, determination, or order of the Department, including any assertion of remedial liability by the Department against Volunteer, and further reserves all rights including the rights to notice, to be heard, to appeal, and to any other due process respecting any action or proceeding by the Department, including the enforcement of this Agreement. The existence of this Agreement or Volunteer's compliance with it shall not be construed as an admission of any liability, fault, wrongdoing, or violation of law by Volunteer, and shall not give rise to any presumption of law or finding of fact which shall inure to the benefit of any third party.

B. Notwithstanding the foregoing, Volunteer hereby waives any right it may have to make a claim pursuant to Article 12 of the Navigation Law with respect to the Site and releases the State and the New York Environmental Protection and Spill Compensation Fund from any and all legal or equitable claims, suits, causes of action, or demands whatsoever with respect to the Site that Volunteer may have as a result of Volunteer's entering into or fulfilling the terms of this Agreement.

VIII. Indemnification

Volunteer shall indemnify and hold the Department, the Trustee, the State of New York, and their representatives and employees harmless from any claim, suit, action, and cost of every name and description arising out of or resulting from the fulfillment or attempted fulfillment of this Agreement by Volunteer prior to the Termination Date except for those claims, suits, actions, and costs arising from the State's gross negligence or willful or intentional misconduct by the Department, the State of New York, and/or their representatives and employees during the course of any activities conducted pursuant to this Agreement. The Department shall provide Volunteer with written notice no less than thirty (30) Days prior to commencing a lawsuit seeking indemnification pursuant to this Paragraph.

IX. Change of Use

Volunteer shall notify the Department at least sixty (60) Days in advance of any change of use, as defined in ECL 27-1425, which is proposed for the Site. In the event the Department determines that the proposed change of use is prohibited, the Department shall notify Volunteer of such determination within forty-five (45) Days of receipt of such notice.

X. Environmental Easement

A. Within thirty (30) Days after the Department's approval of a Remedial Work Plan which relies upon one or more institutional and/or engineering controls, or within thirty (30) Days after the Department's determination pursuant to Subparagraph II.F.2 that additional remediation is not needed based upon use restrictions, Volunteer shall submit to the Department

for approval an Environmental Easement to run with the land in favor of the State which complies with the requirements of ECL Article 71, Title 36. The submittal shall be substantially similar to Exhibit "B." Volunteer shall cause such instrument to be recorded with the recording officer for the county in which the Site is located within thirty (30) Days after the Department's approval of such instrument. Volunteer shall provide the Department with a copy of such instrument certified by the recording officer to be a true and faithful copy within thirty (30) Days of such recording (or such longer period of time as may be required to obtain a certified copy provided Volunteer advises the Department of the status of its efforts to obtain same within such thirty (30) Day period).

B. Volunteer or the owner of the Site may petition the Department to modify or extinguish the Environmental Easement filed pursuant to this Agreement at such time as it can certify that the Site is protective of human health and the environment without reliance upon the restrictions set forth in such instrument. Such certification shall be made by a Professional Engineer or other expert approved by the Department. The Department will not unreasonably withhold its consent.

XI. Progress Reports

Volunteer shall submit a written progress report of its actions under this Agreement to the parties identified in Subparagraph XII.A.1 by the 10th day of each month commencing with the month subsequent to the approval of the first Work Plan and ending with the Termination Date, unless a different frequency is set forth in a Work Plan. Such reports shall, at a minimum, include: all actions relative to the Site during the previous reporting period and those anticipated for the next reporting period; all approved activity modifications (changes of work scope and/or schedule); all results of sampling and tests and all other data received or generated by or on behalf of Volunteer in connection with this Site, whether under this Agreement or otherwise, in the previous reporting period, including quality assurance/quality control information; information regarding percentage of completion; unresolved delays encountered or anticipated that may affect the future schedule and efforts made to mitigate such delays; and information regarding activities undertaken in support of the Citizen Participation Plan during the previous reporting period and those anticipated for the next reporting period.

XII. Communications

A. All written communications required by this Agreement shall be transmitted by United States Postal Service, by private courier service, or hand delivered.

1. Communication from Volunteer shall be sent to:

Ram Pergadia
Regional Hazardous Waste Remediation Engineer
New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, New York 12561-1696

Note: one copy is required to be sent.

Bradley Brown
Project Manager
New York State Department of Environmental Conservation
Divsion of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, New York 12233-7014

Note: three copies of work plans are required to be sent, one electronic, and two paper copies, one bound and one unbound.

Michael Rivara
Bureau of Environmental Exposure Investigation
New York State Department of Health
Flanigan Square
547 River Street
Troy, New York 12180-2216

Note: two copies of work plans are required to be sent, and

Denise J. D'Ambrosio
Project Attorney
New York State Department of Environmental Conservation
200 White Plains Road, 5th Floor
Tarrytown, New York 10591-5805

2. Communication from the Department to Volunteer shall be sent to:

Poughkeepsie Waterfront Development, LLC
Att.: Joseph A. Bonura
c/o Anthony's Pier 9
2975 Route 9W
New Windsor, New York 12553

Arthur Gellert, Esq.
Gellert & Quartararo
75 Washington Street
Poughkeepsie, New York 12601

B. The Department and Volunteer reserve the right to designate additional or different addressees for communication on written notice to the other.

C. Each party shall notify the other within ninety (90) Days after any change in the addresses listed in this Paragraph XII or in Paragraph V.

XIII. Termination of Agreement

Volunteer may terminate this Agreement at any time by providing written notification to the parties listed in Subparagraph XII.A.1. The Department may terminate this Agreement at any time pursuant to Subparagraph XV.A or in the event Volunteer fails to substantially comply with the Agreement's terms and conditions. The Department shall provide written notification to Volunteer setting forth the basis for termination of the Agreement. The termination shall be effective the 5th day after the non-terminating party's receipt of such written notification, except that such termination shall not affect the provisions contained in Paragraphs V, VII.B, and VIII.

XIV. Dispute Resolution

A. In the event disputes arise regarding any notice of disapproval of a submittal, proposed Work Plan or Final Report, or during the implementation of any Work Plan, Volunteer may, within thirty (30) Days of receipt of such notice, request in writing informal negotiations with the Department in an effort to resolve the dispute. The Department and Volunteer shall consult together in good faith and exercise best efforts to resolve any differences or disputes without resort to the procedures described in Subparagraph XIV.B. The period for informal negotiations shall not exceed thirty (30) Days from Volunteer's request for informal negotiations. If the parties cannot resolve a dispute by informal negotiations during this period, the Department's position shall be considered binding unless Volunteer notifies the Department in writing within thirty (30) Days after the conclusion of the thirty (30) Day period for informal negotiations that it invokes the dispute resolution provisions provided under Subparagraph XIV.B.

B. 1. Volunteer shall file with the Office of Hearings and Mediation ("OH&M") a request for formal dispute resolution and a written statement of the issues in dispute, the relevant facts upon which the dispute is based, factual data, analysis, or opinion supporting its position, and all supporting documentation upon which Volunteer relies (hereinafter called the "Statement of Position"). A copy of such request and written statement shall be provided contemporaneously to the Director of the Division of Environmental Remediation ("DER Director") and to the parties listed under Subparagraph XII.A.1.

2. The Department shall serve its Statement of Position no later than twenty (20) Days after receipt of Volunteer's Statement of Position.

3. Volunteer shall have the burden of proving by substantial evidence that the Department's position does not have a rational basis and should not prevail. The OH&M can conduct meetings, in person or via telephone conferences, and request additional information from either party if such activities will facilitate a resolution of the issues.

4. The OH&M shall prepare and submit a report and recommendation to the DER Director who shall issue a final decision resolving the dispute in a timely manner. The final decision shall constitute a final agency action and Volunteer shall have the right to seek judicial review of the decision pursuant to Article 78 of the CPLR provided that Volunteer notifies the Department within thirty (30) Days after receipt of a copy of the final decision of its intent to commence an Article 78 proceeding and commences such proceeding within sixty (60) Days after receipt of a copy of the Director's final decision. Volunteer shall be in violation of this Agreement if it fails to comply with the final decision resolving this dispute within sixty (60) Days after the date of such final decision, or such other time period as may be provided in the final decision, unless it seeks judicial review of such decision within the sixty (60) Day period provided. In the event that Volunteer seeks judicial review, Volunteer shall be in violation of this Agreement if it fails to comply with the final Court Order or settlement within thirty (30) Days after the effective date of such Order or settlement, unless otherwise directed by the Court. For purposes of this Subparagraph, a Court Order or settlement shall not be final until the time to perfect an appeal of same has expired.

5. The invocation of dispute resolution shall not extend, postpone, or modify Volunteer's obligations under this Agreement with respect to any item not in dispute unless or until the Department agrees or a Court determines otherwise. The invocation of the procedures set forth in this Paragraph XIV shall constitute a waiver of any and all other administrative remedies which may otherwise be available to Volunteer regarding the issue in dispute.

6. The Department shall keep an administrative record of any proceedings under this Paragraph XIV which shall be available consistent with Article 6 of the Public Officers Law.

7. Nothing in this Paragraph XIV shall be construed as an agreement by the parties to resolve disputes through administrative proceedings pursuant to the State Administrative Procedure Act, the ECL, or 6 NYCRR Part 622 or Section 375-2.1.

XV. Miscellaneous

A. If the information provided and any certifications made by Volunteer are not materially accurate and complete, this Agreement, except with respect to Volunteer's obligations pursuant to Paragraphs V, VII.B, and VIII, shall be null and void *ab initio* fifteen (15) Days after the Department's notification of such inaccuracy or incompleteness or fifteen (15) Days after issuance of a final decision resolving a dispute pursuant to Paragraph XIV, whichever is later, unless Volunteer submits information within that fifteen (15) Day time period indicating that the information provided and the certifications made were materially accurate and complete. In the event this Agreement is rendered null and void, any Certificate of Completion and/or Liability Limitation that may have been issued or may have arisen under this Agreement shall also be null and void *ab initio*, and the Department shall reserve all rights that it may have under law.

B. Volunteer shall allow the Department to attend, and shall notify the Department at least seven (7) Days in advance of, any field activities to be conducted pursuant to this Agreement, as well as any pre-bid meetings, job progress meetings, substantial completion meeting and inspection, and final inspection and meeting; nothing in this Agreement shall be construed to require Volunteer to allow the Department to attend portions of meetings where privileged matters are discussed.

C. The Department may exempt Volunteer from the requirement to obtain any state or local permit or other authorization for any activity conducted pursuant to this Agreement that (i) is conducted on the Site or on different premises that are under common control or contiguous to or physically connected with the Site and such activity manages exclusively hazardous waste and/or petroleum from such Site, and (ii) satisfies all substantive technical requirements applicable to like activity conducted pursuant to a permit, as determined by the Department.

D. Volunteer shall use "best efforts" to obtain all Site access, permits, easements, rights-of-way, rights-of-entry, approvals, institutional controls, or authorizations necessary to perform Volunteer's obligations under this Agreement. If, despite Volunteer's best efforts, any access, permits, easements, rights-of-way, rights-of-entry, approvals, institutional controls, or authorizations required to perform this Agreement are not obtained, Volunteer shall promptly notify the Department, and include a summary of the steps taken to obtain access. The Department may, as it deems appropriate and within its authority, assist Volunteer in obtaining same. If an interest in property is needed to implement an institutional control required by a Work Plan and such interest cannot be obtained, the Department may require Volunteer to modify the Work Plan pursuant to Subparagraph II.C of this Agreement to reflect changes necessitated by the lack of access and/or approvals.

E. All approved Work Plans, Final Reports, and other documents required under this Agreement shall be submitted to the Department in an electronic format acceptable to the Department within thirty (30) Days of approval. If any document cannot be converted into electronic format, Volunteer shall so advise the Department and, if the Department concurs, submit such document in an alternative format acceptable to the Department.

F. Volunteer shall provide a copy of this Agreement to each contractor hired to perform work required by this Agreement and shall condition all contracts entered into for the obligations identified in this Agreement upon performance in conformity with the terms of this Agreement. Volunteer or its contractor(s) shall provide written notice of this Agreement to all subcontractors hired to perform any portion of the work required by this Agreement. Volunteer shall nonetheless be responsible for ensuring that Volunteer's contractors and subcontractors perform the work in satisfaction of the requirements of this Agreement.

G. The paragraph headings set forth in this Agreement are included for convenience of reference only and shall be disregarded in the construction and interpretation of any provisions of this Agreement.

H. 1. The terms of this Agreement shall constitute the complete and entire agreement between the Department and Volunteer concerning the implementation of the activities required by this Agreement. No term, condition, understanding, or agreement purporting to modify or vary any term of this Agreement shall be binding unless made in writing and subscribed by the party to be bound. No informal advice, guidance, suggestion, or comment by the Department shall be construed as relieving Volunteer of Volunteer's obligation to obtain such formal approvals as may be required by this Agreement. In the event of a conflict between the terms of this Agreement and any Work Plan submitted pursuant to this Agreement, the terms of this Agreement shall control over the terms of the Work Plan(s) attached as Exhibit "C." Volunteer consents to and agrees not to contest the authority and jurisdiction of the Department to enter into or enforce this Agreement.

2. i. Except as set forth herein, if Volunteer desires that any provision of this Agreement be changed, other than a provision of a Work Plan or a time frame, Volunteer shall make timely written application to the Commissioner with copies to the parties listed in Subparagraph XII.A.1.

ii. Changes to the Work Plan shall be accomplished as set forth in Subparagraph II.C of this Agreement.

iii. Requests for a change to a time frame set forth in this Agreement shall be made in writing to the Department's project attorney and project manager; such requests shall not be unreasonably denied and a written response to such requests shall be sent to Volunteer promptly.

I. 1. If there are multiple parties signing this Agreement, the term "Volunteer" shall be read in the plural, the obligations of each such party under this Agreement are joint and several, and the insolvency of or failure by any Volunteer to implement any obligations under this Agreement shall not affect the obligations of the remaining Volunteer(s) under this Agreement.

2. If Volunteer is a partnership, the obligations of all general partners (including limited partners who act as general partners) under this Agreement are joint and several and the insolvency or failure of any general partner to implement any obligations under this Agreement shall not affect the obligations of the remaining partner(s) under this Agreement.

3. Notwithstanding the foregoing Subparagraphs XV.I.1 and 2, if multiple parties sign this Agreement as Volunteers but not all of the signing parties elect to implement a Work Plan, all Volunteers are jointly and severally liable for each and every obligation under this Agreement through the completion of activities in such Work Plan that all such parties consented to; thereafter, only those Volunteers electing to perform additional work shall be jointly and severally liable under this Agreement for the obligations and activities under such additional Work Plan(s). The parties electing not to implement the additional Work Plan(s) shall have no obligations under this Agreement relative to the activities set forth in such Work Plan(s).

Glossary of Terms

The following terms shall have the following meanings:

"Day": a calendar day. In computing any period of time under this Agreement, if the last day would fall on a Saturday, Sunday, or State holiday, the period shall run until the close of business of the next working day.

"Force Majeure Event": an event which is brought on as a result of fire, lightning, earthquake, flood, adverse weather conditions, strike, shortages of labor and materials, war, riot, obstruction or interference by adjoining landowners, or any other fact or circumstance beyond Volunteer's reasonable control.

"IRM": an interim remedial measure which is a discrete set of activities which can be undertaken without extensive investigation and evaluation to prevent, mitigate, or remedy environmental damage or the consequences of environmental damage attributable to a Site.

"OM&M": operation, maintenance, and monitoring.

"Professional engineer": an individual registered as a professional engineer in accordance with Article 145 of the New York State Education Law. If such individual is a member of a firm, that firm must be authorized to offer professional engineering services in the State of New York in accordance with Article 145 of the New York State Education Law.

"State Costs": all the State's expenses including, but not limited to, direct labor, fringe benefits, indirect costs, travel, analytical costs, and contractor costs incurred by the State of New York for negotiating, implementing, and administering this Agreement. Approved agency fringe benefit and indirect cost rates will be applied.

"Termination Date": the date upon which (i) the Department issues the Certificate of Completion or approves the Final Report relative to the OM&M at the Site, whichever is later, or (ii) the Agreement terminates pursuant to Paragraph XIII or Subparagraph XV.A,.

"Trustee": the Trustee of New York State's natural resources.

"Work Plan": a Department-approved work plan, as may be modified, that Volunteer shall implement and that is attached to this Agreement.

EXHIBIT "A"

Citizen Participation Plan

EXHIBIT "B"

Environmental Easement
(DRAFT/SUBJECT TO REVISION)

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO TITLE 36 OF ARTICLE 71 OF THE ENVIRONMENTAL CONSERVATION LAW

This environmental easement agreement is made this ____day of _____, 200_, between ***Name of title owner(s) of the site*** residing at (or having an office at) ***Title owner's address - no PO Boxes***, hereinafter referred to as the "Grantor", and the State of New York, acting through the New York State Department of Environmental Conservation with its headquarters located at 625 Broadway, Albany, New York 12233, hereinafter referred to as the "Grantee."

WHEREAS the Grantor, owner in fee of real property located in the Town of _____, _____County, New York known and designated on the tax map of the Town of _____ as ***insert tax map information***, being the same as that Property conveyed to Grantor by deed on _____, and recorded in the Land Records of the _____ County Clerk at ***insert Liber and page or computerized system tracking/ identification number***, comprised of approximately # acres, and more particularly described in Exhibit A attached hereto and incorporated herein by reference, hereinafter known as the "Property"; and;
Attach an adequate legal description of the property subject to the easement, or reference a recorded map showing its boundaries and bearing the seal and signature of a licensed land surveyor, or if the easement encumbers the entire property described in a deed of record, the description in such deed may be incorporated by reference. If the easement is on only a part of a parcel of land which is not subdivided into encumbered and unencumbered portions, a legal description needs to be created by a survey bearing the seal and signature of a licensed land surveyor.

WHEREAS the Legislature of the State of New York has declared that it is in the public interest to create environmental easements because such easements are necessary for the protection of human health and the environment; to achieve the requirements for remediation established at contaminated sites by providing a means to ensure the performance of operation, maintenance, and monitoring; and to ensure the enforcement potential restriction of future uses of the land; and

WHEREAS the Property is a contaminated site which has undergone an environmental remediation project which has left residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to be effective, or which requires groundwater use restrictions; and

WHEREAS the Grantor has furnished documentation to the Grantee to enable the Grantee to determine that this Environmental Easement is enforceable; and

WHEREAS Grantor has entered into Brownfield Site Cleanup Agreement Index No. _____ (the "Agreement") for the Property, Site No. _____. Pursuant to Paragraph X of the Agreement Grantor has agreed to record an Environmental Easement to run with the land in favor of the State which complies with the requirements of Environmental Conservation Law ("ECL") Article 71, Title 36; and

WHEREAS the Grantee agrees to accept this environmental easement for the protection of human health and the environment.

NOW THEREFORE, Grantor, on behalf of itself, its successors and assigns, in consideration of the terms of the Agreement and other valuable consideration, does hereby give, grant, covenant and declare in favor of the Grantee, pursuant to ECL Article 71 Title 36, that the Property shall be subject to this environmental easement; and with respect to the Property, does give, grant, and convey to the Grantee with general warranties of title the perpetual right to enforce this environmental easement which shall be of the nature and character, and to the extent set forth herein.

1. Purpose. It is the purpose of this environmental easement to convey to the Grantee real property rights, which will run with the land, to achieve the requirements for remediation established for the Property and to protect human health and the environment by reducing the risk of exposure to contaminants.

2. Restrictions. The following restrictions specifically apply to the property, run with the land and are binding on the Grantor:

a. Unless prior written approval by the Grantee is first obtained, there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property, which threatens the integrity of the soil cap, or which results in unacceptable human exposure to contaminated soils.

b. The owner of the Property shall maintain the cap covering the Property by maintaining its grass cover or, after obtaining the written approval of the Grantee, by capping the Property with another material.

c. The owner of the Property shall prohibit the Property from ever being used for purposes other than for **[the intended use as set forth in the approved remedial work plan]** without the express written waiver of such prohibition by the Grantee.

d. The owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Grantee.

e. The owner of the Property shall continue in full force and effect any institutional and engineering controls required under the Agreement and maintain such controls unless the owner first obtains permission to discontinue such controls from the Grantee. These controls include **[list specific controls required for this Property]**.

f. Any lease, license, or other instrument granting a right to use the Property shall incorporate, either in full or by reference, this environmental easement.

3. Right to Enter and Inspect. To assure compliance with the restrictions contained herein, the Grantee, its agents, employees, or other representatives of the State may enter and inspect the Property at reasonable times in a reasonable manner.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights accruing from its ownership of the Property, including, without limitation, the right to sell, transfer or encumber the Property, as owner, subject to the restrictions and covenants set forth in this environmental easement; and the right to engage in, or permit others to engage in, all uses of the property that are not expressly prohibited herein and are not inconsistent with the purposes of this environmental easement.

5. Enforcement. This environmental easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this environmental easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

6. Revocation of Certificate of Completion. If any person intentionally violates this environmental easement, the Grantee may revoke the Certificate of Completion provided under ECL Section 27-1419 with respect to the Property.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of Grantee's approval of the language contained herein, in the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Deed and Subsequent Instruments of Conveyance. The Property deed and all subsequent instruments of conveyance, including without limitation, transfer of title or mortgage, relating to the Property shall state in at least fifteen-point bold-faced type the following language until such time as the environmental easement is extinguished:

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.

Such deed and instrument shall reference, by book and page number or control number, the environmental easement and shall also specify that the property is subject to the restrictions contained in such easement.

9. Amendment. This environmental easement may be amended only by an amendment executed by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Extinguishment. This environmental easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

11. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

12. Costs and Liabilities. Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property, including the maintenance of adequate liability insurance coverage.

13. Taxes. Grantor shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the Property by competent authority.

14. Successors. The term "Grantor", wherever used herein, shall include the persons and/or entities named at the beginning of this document, identified as "Grantor" and their personal representatives, heirs, successors, and assigns.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

Grantor's Name

By:_____

Title:_____

Date:_____

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the _____ day of _____, in the year 200_, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Signature and Office of individual
taking acknowledgment

This instrument is accepted this ____ day of _____, 200_.

ERIN M. CROTTY, COMMISSIONER
NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

By:

_____
Dale A. Desnoyers, Director
Division of Environmental Remediation

STATE OF NEW YORK)
) ss:
COUNTY OF)

On the _____ day of _____, in the year 200_, before me, the undersigned, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Signature and Office of individual
taking acknowledgment

EXHIBIT "C"

Approved Work Plans

APPENDIX B

State of New York Permit Approvals

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9564 • FAX: (518) 402-9679
Website: www.dec.state.ny.us

RECEIVED 1/25/05

Erin M. Crotty
Commissioner

January 18, 2005

Mr. Joseph A. Bonura, Jr.
Poughkeepsie Waterfront Development, LLC
2975 Route 9W
New Windsor, New York 12553

Re: Former City of Poughkeepsie Sewage Treatment Plant Site, Poughkeepsie (C), Dutchess County, Site No. C314109

Dear Mr. Bonura:

This letter confirms and documents the Department's approval of the Remedial Work Plan, dated January 17, 2005, for the subject Brownfield Cleanup Program (BCP) site. Please provide an updated project schedule.

The Department understands your desire to start remedial field work as soon as possible. Please note that the BCP requires the issuance of a public information fact sheet to the site mailing list announcing the start of construction prior to the actual start of activities. The fact sheet should be prepared and submitted to this office for review at your earliest convenience.

Final review of the Remedial Action Work Plan (RAWP), which contains the construction design documents for the project, is near completion. Approval of the RAWP is not necessary prior to sending the fact sheet to the mailing list, however it is required prior to the start of remedial field activities.

If you have any questions or require additional information, please contact Mr. Bradley Brown at (518) 402-9564.

Sincerely,

Robert W. Schick, P.E.
Director
Remedial Bureau C
Division of Environmental Remediation

cc: A. Gellert, Esq.
J. McIver

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **FAX:** (518) 402-9679
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

May 5, 2005

Mr. Craig M. Lapinski, P.E.
Project Manager
Fuss & O'Neill, Inc.
146 Hartford Road
Manchester, CT 06040

Re: Former City of Poughkeepsie Sewage Treatment Plant Site, Poughkeepsie (C), Dutchess County, Site No. C314109

Dear Mr. Lapinski:

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have reviewed Fuss and O'Neill's April 15, 2005 request to modify the Remedial Work Plan for the above referenced site. The requested modifications include the expansion of the soil consolidation zone to accommodate approximately 2,100 cubic yards of soil discovered to include bagged leaves and revisions to the active sub-slab depressurization system design for the proposed building on the site. The modifications, as presented in your letter, are hereby approved.

Please note that the request must be included for reference in the Final Engineering Report, as well as certification that the modifications have been fully implemented as part of the remedy for the site.

If you have any questions, please contact me at (518) 402-9564.

Sincerely,

Bradley Brown

Bradley Brown
Engineering Geologist
Remedial Bureau C
Division of Environmental Remediation

cc: J. McIver
J. Bonura

APPENDIX C

Local Permit Approvals

Date Issued: 09/29/04 Property ID # 2/3450

City of Poughkeepsie

BUILDING PERMIT

Type of Work: DEMOLITION

Location: 1 HURLEY STREET Permit # 040573

Date Issued: 05/03/05 Property ID # 243450

City of Poughkeepsie

BUILDING PERMIT

Type of Work: FOUNDATION (SOUTH SIDE)

Location: 1 HUELTINE STREET Permit # 050213

APPENDIX D

Construction Photographs

Photo 1 – View of site prior to construction activities (February 2, 2005)

Photo 2 – View of site during initial site remediation preparation activities (February 15, 2005)

Photo 3 – Layout of soil management zone (February 21, 2005)

Photo 4 – Initial excavation activities in the southern landfill area (February 21, 2005)

Photo 5 – Excavation of soil mixed with trash bags full of leaves in the southern landfill area (February 22, 2005)

Photo 6 – View of metals impacted soil in the southern landfill area (February 22, 2005)

Photo 7 – View of soil stockpiled in the soil management zone (February 23, 2005)

Photo 8 – View of area excavated in southern landfill area (February 23, 2005)

Photo 9 – View of oil sludge layer exposed in the southern landfill area (February 23, 2005)

Photo 10 – View of excavation area in southern landfill area looking northwest (February 28, 2005)

Photo 11 – View of excavation of small area along the southern portion of the southern landfill area (February 28, 2005)

Photo 12 – view of covered stockpiles in the soil management zone (February 28, 2005)

Photo 13 – View of northeast soil mound area prior to excavation activities (March 2, 2005)

Photo 14 – Brick and building demolition debris excavated in the northeast soil mound area (March 3, 2005)

Photo 15 – Former building wall in northeast soil mound area (March 3, 2005)

Photo 16 – View of coal/dark impacted soil, northeast soil mound area (March 3, 2005)

Photo 17 – View of northeast soil mound area excavation (March 4, 2005)

Photo 18 – View of crushed bedrock along the north sidewall in the northeast soil mound area (March 7, 2005)

Photo 19 – Excavating residual soil on top of basement floor encountered in the northeast soil mound area (March 7, 2005)

Photo 20 – View of final excavation, northeast soil mound area (March 7, 2005)

Photo 21 – View of covered stockpiles in soil management area (May 19. 2005)

Photo 22 – View of process demolition debris to be relocated to the Primary Soil Consolidation Zone (May 19, 2005)

Photo 23 – Initial excavation in the former UST area (May 19, 2005)

Photo 24 – View after excavation in the former UST area (May 19, 2005)

Photo 25 – Initial construction of building foundation (June 22, 2005)

Photo 26 – Continued construction of building foundation and grading of soil in the Primary Soil Consolidation Zone (June 23, 2005)

Photo 27 – View of building foundation frame looking northeast (June 24, 2005)

Photo 28 – Compacted soil in the Primary Soil Consolidation Zone (July 1, 2005)

Photo 29 – Building foundation construction (July 19, 2005)

Photo 30 – View of the foundation looking northwest (July 25, 2005)

Photo 31 – Final grading and soil compacting in Primary Soil Consolidation Zone (July 28, 2005)

Photo 32 – Geotextile demarcation layer over the Primary Soil Consolidation Zone (July 28, 2005)

Photo 33 – View of soil relocated to the Secondary Soil Consolidation Zone (August 11, 2005)

Photo 34 – View of building construction (August 12, 2005)

Photo 35 – View of concrete building forms (August 16, 2005)

Photo 36 – View of building construction (September 16, 2005)

Photo 37 – View looking northwest of concrete building slab (September 23, 2005)

Photo 38 – View looking northwest of concrete building slab (October 7, 2005)

Photo 39 – Installation of stone for sub-slab venting system (October 2005)

Photo 40 – View of sub-slab venting system piping looking northeast (October 28, 2005)

Photo 41 – View of sub-slab venting system piping looking northeast (October 28, 2005)

Photo 42 – View of vapor barrier over coarse aggregate (November 4, 2005)

Photo 43 – Initial testing of the sub-slab venting system (November 4, 2005)

Photo 44 – View of building looking northeast (December 2, 2005)

Photo 45 – Laying of geotextile demarcation barrier over the Secondary Soil Consolidation Zone (December 12, 2005)

Photo 46 – View of building looking west (April 7, 2006)

Photo 47 – View of Secondary Soil Consolidation Zone looking west (June 9, 2006)

Photo 48 – View of Secondary Soil Consolidation Zone looking west (June 15, 2006)

Photo 49 – View of Secondary Soil Consolidation Zone looking west (June 20, 2006)

Photo 50 – Sub-slab venting system piping at manifold and inline centrifugal fan (June 20, 2006)

Photo 51 – Smoke test at sample port (July 7, 2006)

Photo 52 – Lighter test at sample port (July 7, 2006)

Photo 53 – View of Secondary Soil Consolidation Zone looking west (August 17, 2006)

Photo 54 – View of Secondary Soil Consolidation Zone looking north (August 17, 2006)