Former Nichol Inn Site STEUBEN COUNTY, NEW YORK Site Management Plan

NYSDEC Site Number: E851029

Prepared for:





Prepared by:



175 Sullys Trail, Suite 202 Corporate Crossings Office Park Pittsford, New York 14534 585-385-7417

"I, Susan A. Hilton, certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications".

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date

SEPTEMBER 2011

TABLE OF CONTENTS

TABLE OF CONTENTS II	I
LIST OF TABLESIV	7
LIST OF FIGURES V	7
LIST OF APPENDICES V	7
SITE MANAGEMENT PLAN 1	l
1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM 1	l
1.1 INTRODUCTION 1	1
1.1.1 General 1 1.1.2 Purpose 2 1.1.3 Revisions 3	1 2 3
1.2 SITE BACKGROUND	3
1.2.1 Site Location and Description31.2.2 Site History31.2.3 Geologic Conditions4	3 3 1
1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS	5
1.4 SUMMARY OF REMEDIAL ACTIONS	5
1.4.1 Removal of Contaminated Materials from the Site	7 3 3

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN	10
2.1 INTRODUCTION	10
2.1.1 General 2.1.2 Purpose	10 10
2.2 ENGINEERING CONTROLS	11
2.2.1 Engineering Control Systems2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems	11 11
2.3 INSTITUTIONAL CONTROLS	12
2.3.1 Excavation Work Plan2.3.2 Soil Vapor Intrusion Evaluation	13 14
2.4 INSPECTIONS AND NOTIFICATIONS	15
2.4.1 Inspections 2.4.2 Notifications	15 16
2.5 CONTINGENCY PLAN	17
2.5.1 Emergency Telephone Numbers2.5.2 Map and Directions to Nearest Health Facility2.5.3 Response Procedures	17 17 18
3.0 SITE MONITORING PLAN	19
3.1 INTRODUCTION	19
3.1.1 General 3.1.2 Purpose and Schedule	19 19
3.2 SOIL COVER SYSTEM MONITORING	20
3.3 MEDIA MONITORING PROGRAM	20
3.3.1 Groundwater Monitoring3.3.1.1 Sampling Protocol3.3.1.2 Monitoring Well Repairs, Replacement And Decommissioning	20 21 22

3.4 SITE-WIDE INSPECTION
3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL 23
3.6 MONITORING REPORTING REQUIREMENTS 24
4.0 OPERATION AND MAINTENANCE PLAN
5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS
5.1 SITE INSPECTIONS
5.1.1 Inspection Frequency
5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports
5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS
5.3 PERIODIC REVIEW REPORT
5.4 CORRECTIVE MEASURES PLAN 30
LIST OF TABLES
Table 1- Remedial Investigation Soil Contamination Summary

- Table 2 Remedial Investigation Groundwater Contamination Summary
- Table 3-Soil Cleanup Objectives for the Site
- Table 4 Summary of Remaining Soil Contamination Above Unrestricted

 Levels
 Levels
- Table 5-Emergency Contact Numbers- pg.17
- Table 6-Monitoring/Inspection Schedule- pg. 20
- Table 7-Schedule of Monitoring/Inspection Reports- pg. 25

LIST OF FIGURES

Figure 1.	Figure of Site and Site Boundaries	
Figures 2a-2c. Geologic Cross Section(s)		
Figure 3.	Groundwater Flow Figure & Contamination Summary (Feb. 2009)	
Figure 4.	Remedial Investigation Soil Contamination Summary	
Figure 5.	Extent of Remedial Excavation Performed & Location of	
	Remaining Soil Contamination Above Unrestricted Levels	
Figure 6.	Baseline Post-Remediation Groundwater Quality (January 2010)	
Map of Route from Site to Hospital – pg. 18		

LIST OF APPENDICES

Appendix A-	Excavation Work Plan
Appendix B-	Metes and Bounds
Appendix C-	Environmental Easement
Appendix D-	Health and Safety Plan and Community Air Monitoring Plan
Appendix E-	Monitoring Well Boring and Construction Logs
Appendix F-	Groundwater Monitoring Well Sampling Log Form

SITE MANAGEMENT PLAN

1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 INTRODUCTION

This document is required as an element of the remedial program at the Former Nichol Inn Site (hereinafter referred to as the "Site") under the New York State (NYS) Environmental Restoration Program (ERP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was remediated in accordance with State Assistance Contract (SAC) #C303144, Site #E851029, which was executed on November 6, 2006 and last amended on April 28, 2011.

1.1.1 General

Steuben County entered into a SAC with the NYSDEC to remediate a 0.4-acre property located in the Town of Pulteney, Steuben County, New York. This SAC required the Remedial Party, Steuben County, to investigate and remediate contaminated media at the site. A figure showing the site location and boundaries of this 0.4-acre "site" is provided in Figure 1. The boundaries of the site are more fully described in the metes and bounds site description (Appendix B) that is part of the Environmental Easement.

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

This SMP was prepared by Lu Engineers, on behalf of Steuben County, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 3, 2010, and the guidelines provided by NYSDEC. This SMP addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the site.

1.1.2 Purpose

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

This SMP provides a detailed description of all procedures required to manage remaining contamination at the site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; and (3) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring and (3) an Excavation Plan detailing the provisions for management of future excavations in areas of remaining contamination.

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

It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);
- Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and the SAC (Site #E851029) for the site, and thereby subject to applicable penalties.

1.1.3 Revisions

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

1.2 SITE BACKGROUND

1.2.1 SITE LOCATION AND DESCRIPTION

The site is located in the Town of Pulteney, Steuben County, New York and is identified as Block 37.2-1 and Lot 12 on the Town of Pulteney Tax Map. The site is an approximately 0.4-acre area bounded by County Route 74 to the north, a private residence to the south, State Route 54A to the east, and a drainage ditch and private residence to the west (see Figure 1). The boundaries of the site are more fully described in Appendix B – Metes and Bounds.

1.2.2 Site History

Steuben County foreclosed on the property in 2000. Prior to that, the site was owned by John Nichol and used as a bar/ restaurant/grocery store/gas station operated under the business name of Nichol Grocery, Inc. The site previously had two structures, a former restaurant/grocery store/gas station and a small storage building. The buildings were demolished in December 2008. Two closed-in-place 2,000-gallon underground gasoline storage tanks were located partially beneath the main building, and two abandoned 1,000-gallon underground tanks were located along the eastern property line. The tanks were removed in December 2008.

A series of environmental investigations and cleanup actions were conducted after the County took ownership in 2000. These activities included:

- Test Pit Excavations, Fagan Engineers, June 6, 2000
- Tank Closure, Marcor Remediation, August 15, 2000
- Geoprobe Investigation, Marcor Remediation, October 3, 2001
- Soil Vapor Extraction Trench Installation, Steuben County Highway Department, August 2002
- Groundwater Monitoring, Upstate Laboratories, Inc., June 2002 July 2003

Elevated concentrations of benzene, toluene, ethylbenzene, and xylene (BTEX) were detected onsite in exceedance of NYSDEC Soil Cleanup Objectives and NYS Ambient Groundwater Standards (6 NYCRR Part 703.5). The soil vapor extraction system installed in 2002 was later shut down since it proved to be ineffective in improving groundwater quality. A further description of findings and analytical results from previous investigations is provided in the *Remedial Investigation Report (January 2011)*, by Lu Engineers.

1.2.3 Geologic Conditions

The topography is gently sloping from the northeast to the southwest. Overburden soils are reworked alluvial deposits consisting primarily of silt and gravel with minor amounts of clay. Geologic cross sections are shown in Figures 2a-2c. The cross sections illustrate the lithology identified in test borings and wells that were advanced as part of this investigation.

Imported clean backfill material is present in the tank pit excavation area to a depth of 6 to 16 feet below grade. Bedrock was not encountered during the investigation (i.e., depth to rock is greater than 39 feet below ground surface). Based on USGS

bedrock maps, bedrock beneath the Site is likely shales and sandstones of the Upper Devonian Sonyea Group. The average depth to groundwater at the Site ranged between 6 and 8 feet. Groundwater generally flows east toward Keuka Lake. A groundwater flow figure is shown on Figure 3.

1.3 SUMMARY OF REMEDIAL INVESTIGATION FINDINGS

A Remedial Investigation (RI) was performed to characterize the nature and extent of contamination at the site. The results of the RI are described in detail in the following reports:

• *Remedial Investigation Report (Lu Engineers, January 2011)*

Generally, the RI determined that the primary contaminants of concern were petroleum-related volatile organic compounds (VOCs) detected in sub-surface soil and groundwater. Impacts were observed in the vicinity of and down-gradient from the underground gasoline storage tanks. Petroleum impacts extend off-site into the Route 54A right-of-way.

Below is a summary of site conditions when the RI was performed in 2008:

Soil

Petroleum-related VOCs including toluene, ethylbenzene, and xylene were detected above NYSDEC's soil cleanup objectives for the protection of groundwater at a depth of 8 to 12 feet below ground in the vicinity of the underground storage tanks (USTs). Total detected contaminant concentrations in sub-surface soils ranged from 0.009 to 32.6 ppm prior to the interim remedial measures (IRMs). Tabulated analytical results are shown on Table 1. Petroleum impacted sub-surface soils were identified off-site within the Route 54A right-of-way adjacent to the Site, however, no soil impacts were detected east of Route 54A. The extent of petroleum-impacted soil identified during the RI is shown on Figure 4.

No site-related surface soil contamination of concern was identified during the RI. All contaminants were detected below the restricted use soil cleanup objectives (SCOs) for restricted-residential use, which is consistent with the potential future use of the site. Therefore, no remedial work is required for surface soils; however, pesticides and metals

were detected above Unrestricted Use SCOs as indicated in the attached Table 4 and Figure 5.

Site-Related Groundwater

Benzene, toluene, ethylbenzene, and xylene (BTEX) and other petroleum-related compounds were detected at concentrations above NYS Ambient Groundwater Standards down-gradient of the USTs, within the adjacent Route 54A right-of-way, and in one well (MW-8) east of Route 54A as shown on Figure 3. The highest concentrations were detected in MW-5b located adjacent to the 2,000-gallon USTs. Total BTEX concentrations in the on-site wells ranged from 124 ppb to 8,250 ppb immediately following the IRM. Total BTEX concentration in the off-site well east of Route 54A (MW-8) was 12.4 ppb. Tabulated analytical results are shown on the attached Table 2. Groundwater impacts appear to be limited to the right-of-way, as no VOCs were detected in a down-gradient private well (PW-1).

Site-Related Soil Vapor Intrusion

No onsite soil vapor intrusion sampling was conducted since all Site buildings have been demolished.

Underground Storage Tanks

Two closed in place 2,000-gallon gasoline USTs were located partially beneath the onsite building, as depicted on Figure 1. Two additional 1,000-gallon USTs were discovered along the eastern property boundary during the tank removal. The tanks were empty and former contents are unknown, but are presumably associated with historical gas station operations.

1.4 SUMMARY OF REMEDIAL ACTIONS

The site was remediated in accordance with the NYSDEC-approved Interim Remedial Measures Work Plan dated January 2008. Remedial activities were completed at the site in December 2008. The following is a summary of the Remedial Actions performed at the site:

- 1. Abatement of asbestos-containing building materials and hazardous material removal in preparation for building demolition;
- 2. Demolition of all existing onsite structures and removal of four USTs;
- 3. Excavation and disposal of petroleum-impacted soil in the tank pit area, to a depth of 12 to 16 feet as shown on Figure 5.
- 4. Backfill and grading of clean soil/gravel fill to prevent human exposure to remaining contaminated soil/fill at the site;
- 5. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any contamination remaining at the site.
- Development and implementation of a Site Management Plan for long term management of remaining contamination as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) groundwater monitoring, and (3) reporting.

1.4.1 Removal of Contaminated Materials from the Site

The IRM included asbestos abatement, building demolition, tank and soil removal in December 2008. Four USTs were removed from the Site during the IRM: two 2,000gallon gasoline tanks, and two 1,000-gallon abandoned tanks. A total of 496 tons of petroleum-impacted soil was removed from the tank pits for off-site disposal at the Steuben County Landfill in Bath, New York. The goal of the soil excavation was to remove source area contaminants to the extent practicable during the tank removal IRM. A figure showing areas where excavation was performed is shown in Figure 5.

A list of the soil cleanup objectives (SCOs) for the primary contaminants of concern (COCs) and applicable land use for this site is provided in the attached Table 3. The Protection of Groundwater SCOs were selected for sub-surface soils with a land use of Restricted-Residential. For surface soils, the Restricted-Residential Use SCOs are applicable.

1.4.2 Site-Related Treatment Systems

No long-term treatment systems were installed as part of the site remedy.

1.4.3 Remaining Contamination

Due to the widespread nature of petroleum-impacted soil encountered during the IRM, excavation was limited to the area indicated on Figure 5. Based on tank pit closure sample analytical results and field observations, it is apparent that residual petroleum-impacted soil remains to the east and south of the tank pit excavation. Residual petroleum-impacted soil also exists within the Route 54A right-of-way down-gradient of the former USTs.

On-site in the vicinity of the former 2,000-gallon tanks (Tanks 001 and 002) impacted soils were observed at a depth of approximately 8 to 12 feet. In the vicinity of the former 1,000-gallon tanks (Tanks 003 and 004) and off-site in the right-of-way impacted soils were encountered at a depth range of approximately 6 to 14 feet. Petroleum-impacted soil also remains between the two tank pits at a depth of approximately 8 feet below grade.

Excavation areas where impacted soil was removed can be distinguished by the presence of sand/gravel fill material. The bottoms of the tank pits were filled with pieces of concrete from building demolition. Remaining petroleum-impacted soils present at that depth can be identified by a grey discoloration and odor.

Table 4 and Figure 5 summarize the results of all soil samples remaining at the site after completion of Interim Remedial Action that exceed the Track 1 (unrestricted) SCOs.

Inferred areas of surface soil that exceed the Unrestricted Use SCOs are shown on Figure 5. Detected exceedances include pesticides and metals that are not attributed to past use of the Site as a gasoline station, but most likely due to surrounding agricultural land uses and imported fill material. These areas were graded and covered with clean fill during the IRM.

Remaining groundwater contamination was evaluated during a second round of sampling in January 2010, approximately one year after the tank removal IRM. Contaminant concentrations on-site and off-site generally decreased from the first sampling round, as shown on the attached Table 2. Total BTEX concentrations in the on-

site wells ranged from 0 ppb to 30,700 ppb approximately one year after completion of the IRM. Total BTEX concentration in the off-site well east of Route 54A (MW-8) was 26 ppb. Off-site groundwater impacts appear to be limited to the right-of-way, as no VOCs were detected in a down-gradient private well (PW-1).

Post-IRM groundwater analytical results are shown in Table 2 and in Figure 6. The natural attenuation process of residual groundwater contamination will be monitored in accordance with the Media Monitoring Program Section 3.3 of this SMP.

2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 INTRODUCTION

2.1.1 General

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

2.1.2 Purpose

This plan provides:

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

2.2 ENGINEERING CONTROLS

2.2.1 Engineering Control Systems

2.2.1.1 Soil Cover

Exposure to remaining contamination in soil/fill at the site is prevented by a soil cover system placed over the site. This cover system is comprised of a minimum of 24 inches of clean soil, gravel, and asphalt pavement. The Excavation Work Plan that appears in Appendix A outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 4 of this SMP.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Composite Cover System

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.2.2.2 Monitored Natural Attenuation

Groundwater monitoring activities to assess natural attenuation will continue, as determined by the NYSDEC, until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

2.3 INSTITUTIONAL CONTROLS

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

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

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for restricted-residential use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted or residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;

- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed on the Site, and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;
- The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable; and
- Groundwater monitoring will be performed in accordance with the SMP.

2.3.1 Excavation Work Plan

The site has been remediated for restricted-residential use. Any future intrusive work that will penetrate the soil cover or cap, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix A to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the site. A sample HASP is attached as Appendix D to this SMP that is in current compliance with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and resubmitted with the notification provided in Section A-1 of the EWP. Any intrusive

construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

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

2.3.2 Soil Vapor Intrusion Evaluation

Prior to the construction of any enclosed structures located over areas that contain remaining VOC contamination and the potential for soil vapor intrusion (SVI) has been identified (see Figures 5 and 6), an SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

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

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will

be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation.

SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive sitewide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

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

2.4.2 Notifications

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

- 60-day advance notice of any proposed changes in site use that are required under the terms of the State Assistance Contract (SAC), 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

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

- At least 60 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the State Assistance Contract (SAC) and all approved work plans and reports, including this SMP
- Within 15 days after the transfer of all or part of the site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 CONTINGENCY PLAN

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

2.5.1 Emergency Telephone Numbers

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

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480(3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362
Lu Engineers	(585) 385-7417

Table 5: Emergency Contact Numbers

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

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 14719 West Lake Road, Pulteney, New York

Nearest Hospital Name: Ira Davenport Hospital

Hospital Location: 7174 State Route 54, Bath, New York

Hospital Telephone: (607) 776-8500

Directions to the Hospital:



Total Distance: 14 miles

Total Estimated Time: 21 minutes

2.5.3 Response Procedures

As appropriate, the fire department and other emergency response groups will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 5). The list will also be posted prominently at the site and made readily available to all personnel at all times.

3.0 SITE MONITORING PLAN

3.1 INTRODUCTION

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the site, the soil cover system, and all affected site media identified below. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria;
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

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

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

Annual monitoring of the performance of the remedy and overall reduction in contamination on-site and off-site will be conducted for the first three years. The frequency thereafter will be determined by NYSDEC. Trends in contaminant levels in groundwater in the affected areas will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in Table 6 and outlined in detail in Sections 3.2 and 3.3 below

Table 6:	Monitoring	Inspection	Schedule
----------	------------	-------------------	----------

Monitoring Program	Frequency*	Matrix	Analysis
1	Annually	Groundwater	VOCs (EPA Method 8260+STARS)

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

3.2 SOIL COVER SYSTEM MONITORING

A site cover currently exists and will be maintained to allow for restrictedresidential use of the site as a component of any site redevelopment. The cover will consist either of structures such as buildings, pavement, or sidewalks comprising the site development, or a soil cover of at least two feet in thickness meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted-residential use.

3.3 MEDIA MONITORING PROGRAM

3.3.1 Groundwater Monitoring

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy. The network of monitoring wells has been installed to monitor both up-gradient and down-gradient groundwater conditions at the site. The network of on-site and off-site wells has been designed to monitor conditions within the on-site source area, up-gradient, cross gradient, and off-site down-gradient locations. The location of all existing wells is shown on Figure 1.

Eight (8) groundwater monitoring wells were installed with 10-foot screens across the water table to monitor petroleum contaminants near the top of the saturated zone. On-site wells are installed to depths of 13 to 20 feet; off-site wells to the east of Route 54A are installed at depths of 15 to 17 feet. MW-10, 11, and 12 are one-inch diameter mini-wells; all other wells are two-inch diameter Schedule 40 PVC. Monitoring well construction logs are included in Appendix E. [Note: MW-3 and MW-4 were installed during a previous investigation and construction logs are not available].

PW-1 is a private domestic well located at 14728 Boyd Cove Road and is used only for non-potable water. During the RI, access was granted by the property owner to collect a sample from the well. The well depth was measured at 29.5 feet. No information regarding well construction was provided by the owner.

A second round of groundwater sampling was conducted in January 2010, approximately one year following the tank and soil removal IRM. This sampling data will be used as the baseline post-remedial groundwater quality conditions (see Table 3). Baseline water levels and flow pattern are indicated on Figure 6, and were similar to conditions noted during the first sampling round.

All ten existing wells will be sampled for VOCs (EPA Method 8260+Stars) only. A sample will also be collected from domestic well PW-1, provided that access is granted by the property owner.

Groundwater monitoring will be conducted annually for a duration of three years at which time the Department will determine whether additional monitoring is warranted. The sampling frequency thereafter will be determined by NYSDEC. The SMP will be modified to reflect changes in sampling plans approved by NYSDEC. Deliverables for the groundwater monitoring program are specified below.

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in Appendix F. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

Prior to sampling, the water level at each well will be measured with reference to the casing elevation and recorded on the sampling log. Groundwater sampling will be conducted in accordance with EPA Low-Flow (Minimal Drawdown) Groundwater

Sampling Procedures (Puls and Barcelona, 1995). Variable-speed peristaltic pumps with dedicated ¹/₄-inch diameter polyethylene tubing will be utilized for the collection of water samples. Field parameters including turbidity, pH, conductivity, and temperature will be measured during purging and recorded on the sampling log. Once these parameters have stabilized, the sample will be collected and immediately labeled and placed on ice in a cooler in preparation for delivery to the laboratory.

All groundwater samples will be analyzed for TCL VOCs plus STARS list compounds by EPA Method 8260. The analytical laboratory must be NYSDOH ELAP certified to perform the analysis.

Purge water from contaminated wells will be containerized for proper disposal/treatment. Based on previous sampling, the water would be classified as nonhazardous petroleum contaminated water.

3.3.1.2 Monitoring Well Repairs, Replacement And Decommissioning

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

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

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

3.4 SITE-WIDE INSPECTION

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix H). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;
- An evaluation of the condition and continued effectiveness of ECs;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection; and
- Confirm that site records are up to date.

3.5 MONITORING QUALITY ASSURANCE/QUALITY CONTROL

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the site (Appendix G). Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
 - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
 - Sample holding times will be in accordance with the NYSDEC ASP requirements.
 - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;

- Calibration Procedures:
 - All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
 - The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.
- Analytical Procedures;
- Preparation of a Data Usability Summary Report (DUSR), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. [note: a DUSR will only be completed for the final round of groundwater samples].
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.6 MONITORING REPORTING REQUIREMENTS

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report, subsequent to each sampling event. The report will include, at a minimum:

• Date of event;

- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC.

A summary of the monitoring program deliverables are summarized in Table 7 below.

Task	Reporting Frequency*
Groundwater Monitoring	Annual
Site-Wide Inspection	Annual

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

4.0 OPERATION AND MAINTENANCE PLAN

The site remedy does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/ soil vapor extraction systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not included in this SMP.

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 SITE INSPECTIONS

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in Section 3 Monitoring Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms which are contained in Appendices F and H. Additionally, a general site-wide inspection form will be completed during the site-wide inspection (see Appendix H). These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data, generated for the site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

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

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented; and, based on the above items,
- ٠
- The site remedy continues to be protective of public health and the environment and is performing as designed in the SMP.

5.2 CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

After the last inspection of the reporting period, a qualified environmental professional or Professional Engineer licensed to practice in New York State will prepare the following certification:

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

- The inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;
- If a financial assurance mechanism is required under the oversight document for the site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program; and
- The information presented in this report is accurate and complete.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A"

misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Steuben County's Designated Site Representative for the site."

The signed certification will be included in the Periodic Review Report described below.

5.3 PERIODIC REVIEW REPORT

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

- Identification, assessment and certification of all ECs/ICs required by the remedy for the site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the site during the reporting period in electronic format;
- A summary of any information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:

- The compliance of the remedy with the requirements of the site-specific ROD;
- Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
- Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
- The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in hard-copy format, to the NYSDEC Central Office and Region 8 Office, and in electronic format to NYSDEC Central Office, Region 8 Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 CORRECTIVE MEASURES PLAN

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




















Table 1- Remedial Investigation Soil Contamination Summary (Pre-IRM)

			Protection of										
Detected Parameters	Unrestricted Use ²	Residential Use ³	Groundwater ⁴	B-8-12	B-9-10	B-10-10	B-11-12	B-12-12	B-14-12.5	B-15-12	B-16-12	B-17-12	WB-11-9
			Date Sampled:	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008
Volatile Organics- EPA 8260 ¹													-
Acetone	50	100,000	50	9 J	ND	200	380	ND	ND	42	ND	ND	ND
Benzene	60	2,900	60	ND	ND	18 J	44	ND	8 J	ND	ND	ND	ND
Carbon Disulfide	N/A	N/A	N/A	ND	9 J	6 J	6 J	ND	6 J	1 J	ND	ND	ND
Cyclohexane	N/A	N/A	N/A	ND	1900 D	700 D	2200 D	2800	2400 D	5	1100	ND	ND
Ethylbenzene	1,000	30,000	1,000	ND	1000 D	2200 D	4600 D	1500	1300 D	3 J	690	ND	ND
Isopropylbenzene	N/A	N/A	N/A	ND	290	250	580	550	290	3 J	290	ND	ND
Methylcyclohexane	N/A	N/A	N/A	ND	3600 D	1300 D	4400 D	8000	8700 D	8	2200	ND	ND
Methylene chloride	50	51,000	50	8 B	ND	92 B	ND	ND	ND	6 B	ND	6 B	7 B
Toluene	700	100,000	700	ND	25 BJ	800 D	2000 D	130	210 B	2 BJ	ND	ND	ND
Total Xylenes	260	100,000	1,600	ND	3100 D	13000 D	26000 D	7700	6100 D	4 J	2100	ND	ND

1- Results presented in parts per billion (ppb)

2- NYSDEC Unrestricted Use Soil Cleanup Objectives [6 NYCRR Part 375-6.8(a)]

3- NYSDEC Residential Use Soil Cleanup Objectives [6 NYCRR Part 375-6.8(b)]

4- NYSDEC Protection of Groundwater Soil Cleanup Objectives [6 NYCRR Part 375-6.8(b)]

5- Results presented in parts per million (ppm)

ND- not detected above laboratory detection limits

D- value obtained from a dilution run

~value exceeds Unrestricted Use & Protection of Groundwater Soil Cleanup Objectives

Table 2- Remedial Investigation Groundwater Contamination Summary

	NYS Groundwater	MW	-3-14	MW	-4-14	MW-	5b-11	MW	-6-15	MW	-7-11	MW	-8-12	MW-	10-11	MW-	11-10	MW-	12-12	MW-	13-13	PV	N-1
Detected Parameters ¹	Standard ²	Feb-09	Jan-10																				
Acetone	50*	ND	3.7 J	5.8 J	11	ND	30	53	21 J	ND	4.4 J	ND	10	ND	ND	ND	2.8 J	ND	15	3.7 J	ND	ND	ND
Benzene	1	ND	ND	16	5.7	4,300	1,700	34	19	ND	ND	7.4	9.2	ND									
2-Butanone (MEK)	50*	ND	ND	ND	3.5 J	ND	10 J	ND															
n-Butylbenzene	5	-	ND	-	2.0	-	ND	-	11	-	ND												
sec-Butylbenzene	5	-	ND	-	3.3	-	ND	-	7.9	-	ND												
Chloroethane	5	ND	ND	ND	0.72 J	ND																	
Cyclohexane	N/A	-	ND	38 JN	19	-	450	230 JN	300	-	ND	4.4 JN	9.0	-	ND								
Dichlorodifluoromethane	5	-	1.2	51 JN	250	-	ND	-	220	-	ND	-	62	-	ND	-	ND	22 JN	3.3	-	ND	-	ND
1,2-Dichloroethane	0.6	ND	0.84 J	0.78 J	ND																		
Ethylbenzene	5	ND	ND	100	110	2,300	2,000	280	300	ND	ND	5.0 J	8.4	ND									
Isopropylbenzene	5	-	ND	-	17	-	79	-	50	-	ND	-	2.1	-	ND								
4-Isopropyltoluene	5	-	ND	-	ND	-	5.0	-	6.0	-	ND												
Methylcyclohexane	N/A	-	ND	38 JN	ND	-	230	170 JN	240	-	ND	-	1.7	-	ND								
Napthalene	10*	ND	ND	2.2 J	ND	130	420	-	46	ND	-	ND	-	ND									
n-Propylbenzene	5	-	ND	20 JN	30	-	170	110 JN	100	-	ND	-	1.8	-	ND								
Toluene	5	ND	ND	2.6 J	1.2	20,000	9,000	33	12	ND	ND	ND	2.0	ND									
1,3,5-Trimethylbenzene	5	-	ND	73 JN	ND	-	520	-	57	-	ND												
Xylenes, Total	5	ND	ND	14	1.4 J	20,000	18,000	550	390	ND	ND	ND	6.4	ND									

1- Results presented in parts per billion (ppb)

2- NYS Ambient Groundwater Standards (6 NYCRR Part 703.5)

J- compound detected below quantitation limit; value is estimated. N- tentatively identified compound (TIC) detected below the lab reporting limit.

*- NYSDEC Guidance Value (TOGS 1.1.1)

~ value detected above NYS Ambient Groundwater Standard or applicable NYSDEC Guidance Value

	Unrestricted Use	Restricted-Residential Use	Protection of Ground-
Contaminant	SCOs ²	SCOs ³	Water SCOs ⁴
EPA 8260 VOCs			
1 1 1 -Trichloroethane ¹	0.68	100	0.68
1.1- Dichloroethane	0.27	26	0.27
1.1- Dichloroethene	0.33	100	0.33
1.2- Dichlorobenzene	1.1	100	1.1
1.2- Dichloroethane	0.02	3.1	0.02
cis- 1.2- Dichloroethene	0.25	100	0.25
trans- 1.2- Dichloroethene	0.19	100	0.19
1.3- Dichlorobenzene	2.4	49	2.4
1.4- Dichlorobenzene	1.8	13	1.8
1.4- Dioxane	0.1	13	0.1
Acetone	0.05	100	0.05
Benzene	0.06	4.8	0.06
Butylbenzene	12	100	12
Carbon Tetrachloride	0.76	2.4	0.76
Chlorobenzene	1.1	100	1.1
Chloroform	0.37	49	0.37
Ehtylbenzene	1	41	1
Hexachlorobenzene	0.33	1.2	3.2
Methyl ethyl ketone	0.12	100	0.12
Methyl tert-butyl ether	0.93	100	0.93
Methylene chloride	0.05	100	0.05
n-Propylbenzene	3.9	100	3.9
sec-Butylbenzene	11	100	11
tert-Butylbenzene	5.9	100	5.9
Tetrachloroethene	1.3	19	1.3
Toluene	0.7	100	0.7
Trichloroethene	0.47	21	0.47
1,2,4- Trimethylbenzene	3.6	52	3.6
1,3,5- Trimethylbenzene	8.4	52	8.4
Vinyl chloride	0.02	0.9	0.02
Xylene (mixed)	0.26	100	1.6
EPA 8270 SVOCs			
Acenaphthene	20	100	98
Acenaphthylene	100	100	107
Anthracene	100	100	1000
Benzo(a)anthracene	1	1	1000
Benzo(a)pyrene	1	1	22
Benzo(b)fluoranthene	1	1	1.7
Benzo(ghi)perylene	100	100	1
Benzo(k)fluoranthene	0.8	1	1.7
Chrysene	1	1	1
Dibenzo(a,h)anthracene	0.33	0.33	1000
Fluoranthene	100	100	1000
Fluorene	30	100	386
Indeno(1,2,3-cd)pyrene	0.5	0.5	8.2
Naphthalene	12	12	12
Phenanthrene	100	100	1000
Pyrene	100	100	1000

Table 3- Soil Cleanup Objectives for the Site

	Unrestricted Use	Restricted-Residential Use	Protection of Ground-
Contaminant	SCOs ²	SCOs ³	Water SCOs ⁴
Metals			
Arsenic	13	16	16
Barium	350	400	820
Beryllium	7.2	72	47
Cadmium	2.5	4.3	7.5
Chromium, hexavalent	1	110	19
Chromium, trivalent	30	180	NA
Copper	50	270	1720
Total Cyanide	27	27	40
Lead	63	400	450
Manganese	1600	2000	2000
Total Mercury	0.18	0.81	0.73
Nickel	30	310	130
Selenium	3.9	180	4
Silver	2	180	8.3
Zinc	109	10000	2480
PCBs/Pesticides		· · · · · · · · · · · · · · · · · · ·	
PCBs	0.1	1	3.2
2,4,5- TP Acid (Silvex)	3.8	100	3.8
4,4'-DDE	0.0033	8.9	17
4,4'-DDT	0.0033	7.9	136
4,4'-DDD	0.0033	13	14
Aldrin	0.005	0.097	0.19
alpha-BHC	0.02	0.48	0.02
beta-BHC	0.036	0.36	0.09
Chlordane	0.094	4.2	2.9
delta-BHC	0.04	100	0.25
Dibenzofuran	7	59	210
Dieldrin	0.005	0.2	0.1
Endosulfan I	2.4	24	102
Endosulfan II	2.4	24	102
Endosulfan sulfate	2.4	24	1000
Endrin	0.014	11	0.06
Heptachlor	0.042	2.1	0.38
Lindane (gamma-BHC)	0.1	1.3	0.1

Table 3- Soil Cleanup Objectives for the Site

1- Results presented in parts per million (ppm)

2- NYSDEC Unrestricted Use Soil Cleanup Objectives [6 NYCRR Part 375-6.8(a)]

3- NYSDEC Restricted-Residential Use Soil Cleanup Objectives [6 NYCRR Part 375-6.8(b)]

4- NYSDEC Protection of Groundwater Soil Cleanup Objectives [6 NYCRR Part 375-6.8(b)]

Note: Restricted-Residential Use SCOs will be used for surface soils; Protection of Groundwater SCOs will be used for sub-surface soils.

|--|

Parameters	Unrestricted Use ³	B-9-10	B-10-10	B-12-12	B-14-12.5	B-16-12	TC-04	TC-06	TC-07	SS-1	SS-2	SS-3	SS-4	SS-5
	Date Sampled:	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	12/18/2008	12/18/2008	12/18/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008	9/4/2008
EPA 8260 - VOCs ¹														
1,2,4-Trimethylbenzene	3,600						2,100 D	15,000 D	33,000 D					
1,3,5-Trimethylbenzene	8,400						690 D	4,900	9,800					
Ethylbenzene	1,000	1000 D	2200 D	1500	1300 D	690	870 D	1,500	5,800					
n-Propylbenzene	3,900						240	1,500	4,300					
Styrene	N/A	ND	ND	ND	ND	ND								í de la companya de l
Tetrachloroethene	1300	ND	ND	ND	ND	ND								
Toluene	700	25 BJ	800 D	130	210 B	ND	330 D	ND	470					
Total Xylenes	260	3100 D	13000 D	7700	6100 D	2100	4,300 D	14,000	28,000					
Metals ²														
Copper - Total	50	26.7 EN	24.6 EN	16.1 EN	23.6 EN	16.4 EN				39 EN	32.1 EN	27.6 EN	27.9 EN	51.9 EN
Lead - Total	63	10.2 EN	20.4 EN	11.1 EN	10.6 EN	7.8 EN	16.3 E	21.5 E	18 E	40 EN	77.3 EN	40.1 EN	35.3 EN	351 EN
Mercury - Total	0.18	ND	ND	ND	ND	ND				ND	0.042	0.049	0.045	0.574
Nickel - Total	30	29.4 EN	34.1 EN	27.7 EN	34.8 EN	20 EN				17 EN	28.7 EN	20.9 EN	23.8 EN	20.1 EN
Selenium - Total	3.9	4.9 NU	4.3 NU	4.8 NU	4.8 NU	4.3 NU				5.1 NU	4.8 NU	5.5 NU	4.8 NU	4.6 NU
Zinc - Total	109	77.9 EN	71.6 EN	63.6 EN	84.7 EN	59.7 EN				95.9 EN	144 EN	99.4 EN	97.8 EN	367 EN
EPA 8081/8082 - PCBs &	& Pesticides ¹													
Aroclor 1254	100			ND	ND							ND	ND	510
4,4'-DDD	3			ND	ND							ND	ND	68 J
4,4'-DDE	3			ND	2.7 J							5.5 J	6.6 J	100
4,4'-DDT	3			ND	ND							14 J	14 J	110

1- Results presented in parts per billion (ppb)

2- Results presented in parts per million (ppm)

~value exceeds Unrestricted Use Cleanup Objectives

3- NYSDEC Unrestricted Use Soil Cleanup Objectives [6 NYCRR Part 375-6.8(a)]

ND- none detected above laboratory detection limit

D- result obtained from a dilution run

J,E- value is estimated



APPENDIX A – EXCAVATION WORK PLAN

A-1 NOTIFICATION

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

Matthew Gillette, P.E. Regional Hazardous Waste Remediation Engineer New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER), Region 8 6274 East Avon-Lima Road, Avon, New York 14414

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix D of this document,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

A-3 STOCKPILE METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC.

A-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

A-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Truck transport routes to the Steuben County Landfill are as follows:

- 1. NYS Route 54A south to Bath, NY or;
- 2. County Route 74 west to Prattsburg and then Route 53 south.

All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate route and takes into account:

(a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

A-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. Based on soil sample results, it is anticipated that this material can be disposed of as non-hazardous petroleum-contaminated soil to be used as cover material at an appropriate disposal facility (i.e., landfill). If disposal of soil/fill from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the preexcavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does

not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

A-7 MATERIALS REUSE ON-SITE

Materials originating from the Site during future excavation work may be re-used on-site if certain criteria are met. Suitability of soils for re-use will be determined by sampling and laboratory analysis for the presence of VOCs (EPA Method 8260+Stars). Analytical results will be compared to the Protection of Groundwater SCOs found in 6 NYCRR Part 375-6(b). Chemical criteria for on-site reuse of material have been approved by NYSDEC and are listed in Table 4.

Petroleum-impacted soils should be stockpiled and segregated from non-impacted soils. One (1) sample for every 50 cubic yards of staged material will be required to determine if the material is suitable for re-use onsite. Soils should be stockpiled on a level, impermeable surface such as asphalt, polyethylene sheeting, or tarps and covered with polyethylene sheeting while awaiting re-use. The size of the stockpile(s) will be dependent on the amount of excavation work planned and the availability of level, impermeable surfaces adequate for use.

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

A-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including excavation dewatering and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations.

Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, but will be managed off-site.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

Purge water from contaminated wells generated during groundwater monitoring events will be containerized for proper disposal/treatment. Based on previous sampling, the water would be classified as non-hazardous petroleum contaminated water.

A-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the Record of Decision. A demarcation layer, consisting of orange snow fencing material or equivalent material will be placed to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination'. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

A-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Based on an evaluation of the land use, protection of groundwater and protection of ecological resources criteria, the resulting soil quality

standards are listed in Table 4. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

A-11 STORMWATER POLLUTION PREVENTION

The site is less than one acre in total area; therefore, a Stormwater Pollution Prevention Plan is not required. General provisions shall be made to prevent run-off during minor excavation work at the site, including: covering of soil stockpiles, grading to prevent erosion, and installation of silt fence, as required.

A-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

A-13 COMMUNITY AIR MONITORING PLAN

Community air monitoring will follow the NYSDOH Generic Community Air Monitoring Plan (CAMP) requirements in Appendix 1A of NYSDEC's DER-10 guidance document (May 2010).

Continuous monitoring for VOCs and particulates will be required for all ground intrusive activities that may disturb remaining impacted soils, as shown on Figure 5. Ground intrusive activities include, but are not limited to, soil excavation and handling, test pitting, or trenching.

VOC Monitoring, Response Levels, and Actions

VOCs must be monitored at the downwind perimeter of the site. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. A figure showing the location of air sampling stations based on generally prevailing wind conditions is shown in Figure 1. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations.

The monitoring work should be performed using a photoionization detector (PID) or equivalent equipment appropriate to measure VOCs. The equipment should be calibrated at least daily. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

• If the ambient air concentration of total organic vapors at the downwind perimeter of site exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the site persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the site or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the site, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the site at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

• If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques (i.e., watering) must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not

exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.

• If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m³ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

A-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors offsite. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

A-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

A-16 OTHER NUISANCES

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.



PARCEL DESCRIPTIONS:

PARCEL "A"

ALSO "ENVIRONMENTAL EASEMENT DESCRIPTION" FOR DEC SITE #E851029 ALL THAT TRACT OR PARCEL OF PROPERTY SITUATE IN THE TOWN OF PULTENEY, COUNTY OF STEUBEN, STATE OF NEW YORK AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT IN THE INTERSECTION OF THE SOUTH LINE OF BOYD HILL ROAD ALSO KNOWN AS COUNTY ROUTE 74, WITH THE WESTERLY HIGHWAY BOUNDS OF NYS ROUTE 54A ALSO KNOW AS WEST LAKE ROAD (HAMMONDSPORT-BRANCHPORT ROAD) AND AS BEING PART OF LOT 7A AS SHOWN ON A MAP ENTITLED "PLAN OF SUBDIVISION OF THE LAND OF STERLING BOYD ESTATE" WHICH IS FILED IN STEUBEN COUNTY CLERKS OFFICE UNDER MAP #871 AND HAVING COORDINATES OF N 921,829.593 AND E 666,702.662; THENCE

1) SOUTH 70°30'06" WEST ALONG THE SOUTHERLY HIGHWAY BOUNDS OF COUNTY ROUTE 74 DESCRIBED ABOVE, A DISTANCE OF 152.76 FEET TO A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F NICHOL INN GROCERY, INC ON THE EAST AND THE PROPERTY OF N/F ROBERT W. KEMP & LYNDA Y. KEMP ON THE EAST; THENCE

2) SOUTH 04°40'05" EAST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 157.82 FEET TO A POINT: THENCE

3) SOUTH 28°48'59" EAST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 11.65 FEET TO A POINT ON THE WESTERLY HIGHWAY BOUNDS OF THE NYS ROUTE 54A DESCRIBED ABOVE; THENCE

4) NORTH 33°27'06" EAST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 20.28 FEET TO A POINT; THENCE

5) NORTH 01°56'54" WEST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 6.88 FEET TO A POINT; THENCE

6) NORTH 30°28'47" EAST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 225.92 FEET TO THE POINT OF BEGINNING.

CONTAINING 12,649.59± SQUARE FEET OR 0.290± ACRES OF LAND MORE OR LESS.

PARCEL "B" LAKE ACCESS PARCEL

LAND LAYING IN AND ALONG LAKE KEUKA.

ALL THAT TRACT OR PARCEL OF PROPERTY SITUATE IN THE TOWN OF PULTENEY, COUNTY OF STEUBEN, STATE OF NEW YORK AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F JAMES A. O'DELL ON THE EAST AND THE PROPERTY OF N/F NICHOL GROCERY, INC. ON THE WEST, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF N/F JAMES A. O'DELL AT THE HIGH WATER LINE OF LAKE KEUKA AS SHOWN ON A MAP ENTITLED "PLAN OF SUBDIVISION OF THE LAND OF STERLING BOYD ESTATE" WHICH IS FILED IN STEUBEN COUNTY CLERKS OFFICE UNDER MAP #871 AND HAVING COORDINATES OF N 921,469.075 AND E 666,569.192; THENCE 1) SOUTH 36°33'06" WEST A DISTANCE OF 10.00 FEET TO A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F NICHOL GROCERY, INC. ON THE EAST AND THE PROPERTY OF N/F WILLIAM CHARLES CASE & MARIAN ELAINE WAHL ON THE WEST: THENCE 2) NORTH 01°58'54" WEST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 27.98 FEET TO A POINT ON THE EASTERLY HIGHWAY BOUNDS OF NYS ROUTE 54A ALSO KNOWN AS WEST LAKE ROAD (HAMMONDSPORT-BRANCHPORT ROAD); THENCE 3) NORTH 44°28'36" ALONG THE LAST MENTIONED HIGHWAY BOUNDS A DISTANCE OF 8.59 FEET TO A POINT ON THE FIRST MENTIONED DIVISION LINE; THENCE 4) SOUTH 01°56'54" EAST ALONG THE FIRST MENTIONED DIVSION LINE A DISTANCE OF 26.08 FEET TO THE POINT OF BEGINNING. CONTAINING 168.26± SQUARE FEET OR 0.004± ACRES OF LAND MORE OR LESS. THIS PARCEL IS SUBJECT TO RIPARIAN RIGHTS FOR THE ACCRETION AND/OR AVULSION OF

Survey Notes .. & References:

Horizontal control, coordinates, and bearings ore based on New York State Pione Coordinates System, Centrai Zone, Transverse Mercator Projection, North Americon Datum (NAO) 1983, with ties to monuments GPS 170 & 170A from a Control Report for the NYSDOT Region 6, PiN 6802.40.101.

2. Vertical control is based on North American Vertical Dotam (NAVD) 1988, manument #5-2-129 on a south west wingwaii on bridge over Wagner Creek, provided by NYSDOT Region 6 with NGVD 1929 elevation converted to NAVD 1988 using the National Geodetic Survey program Vertcon Coversion Utility.

3. New York Sate DOT Acquistion Map No. 1 A-B & C for the Hommondsport-Branchpor Part 3, dated 1922, for State Highway No. 8191.

4. New York State DOT Acquisition Map No.'s 55, 56, 57, and 58 for the Hammondsport-Branchport Part 2, dated 1922, far State Highway No. 8147.

5. State of New York DOT Pion & Profile Sheet 12 of project 095798 for ondsport-Branchport Parts 2 & 3 for Sate Highway No.'s 8147 & 8191 for P.i.N. 8011.03 dated 1975-1978.

6. New York State DOT Acquisition Maps; Map 107 R-1 FEE ParcelS 109 & 110, P.E. Parcels 112 & 111; Map 107 P.E. Parcels 111 & 112, FEE Parcels 109 & 110; Map 109 P.E. Parcels 115 & 116, FEE Parcels 113 & 114; Map 105 R-1 FEE Parcel R-108, all dated 1975-1978.

7. Survey maps filed in Steuben County Clerk's Office under map no.'s 817 recorded 12-29-47 entitled "PLAN OF SUBDIVISION OF THE LAND OF STERLING BOYD ESTATE*, 5519 recorded 2-11-87, 10254 record 9-14-93, & 15735 ecorded 3-28-03.

8. Survey map entitled "Map of a Survey o Lond Belonging to Stephen V. Jr. & Liso J. Oaiba" by Craig Welch & Associates dated April 26, 1989.

9. Deeds ilated hereon.

10. Deeds in Liber 1015, Page 815 recorded 10. Deads in Liber 1015, Page 815 recorded 3-04-81; Liber 509, Page 497 dated 11-29-44; Liber 1578, Page 334 recorded 8-03-98; Liber 877, Page 239 recorded 6-23-69; Liber 1659, Page 95 recorded 5-16-00; Liber 846, Page 888 recorded 12-29-47; Liber 1863, Page 309 recorded 04-02-04; Liber 980, Page 441 recorded 11-10-77; Liber 1059, Page 539 recorded 02-01-85; Liber 1417, Page 188 recorded 5-19-94; Liber 1806, Page 275 recorded 03-28-03; Liber 1445, Page 281 recorded 03-10-95. 03-10-95.

11. Keuko Loke water elevation of 712.72' was measured on 01-13-2009.

12. NYS DOT High Water elevation is 714.80'.

13. Parcel "A" in it's entirety is subject to an "Environmental Easement" for DEC site #E851029 and its engineering controls that correspond to the Site Management Plan (SMP).

14. This map is subject to any easements ar encumbrances that an updated Abstract of Title may show.

15. Abstract of title by Empire State Abstract Corporation. Abstract No. ESAC23316 dated May 06, 2011.

16. Water Line Agreement in Liber 1263 of Deeds, Poge 25, the interest between the parties of the first part was terminated at the forclosure in Liber 1361 of Deeds, poge 83 between the parties of the second port and the still be in offect between the parties of the ond part and the parties of the third part.

17. Unable to plat the original water line agreement in Liber 570 of Deeds, Page 247.

by the New York Black Ass



PARCEL DESCRIPTIONS:

PARCEL "A"

DESCRIBED AS FOLLOWS THE EAST; THENCE

ALL THAT TRACT OR PARCEL OF PROPERTY SITUATE IN THE TOWN OF PULTENEY, COUNTY OF STEUBEN, STATE OF NEW YORK AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F JAMES A. O'DELL ON THE EAST AND THE PROPERTY OF N/F NICHOL GROCERY, INC. ON THE WEST, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF N/F JAMES A. O'DELL AT THE HIGH WATER LINE OF LAKE KEUKA AS SHOWN ON A MAP ENTITLED "PLAN OF SUBDIVISION OF THE LAND OF STERLING BOYD ESTATE" WHICH IS FILED IN STEUBEN COUNTY CLERKS OFFICE UNDER MAP (871 AND HAVING COORDINATES OF N 921.469.075 AND E 666.569.192: THENCE 1) SOUTH 36'33'06" WEST A DISTANCE OF 10.00 FEET TO A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F NICHOL GROCERY, INC. ON THE EAST AND THE PROPERTY OF N/F WILLIAM CHARLES CASE & MARIAN ELAINE WAHL ON THE WEST; THENCE 2) NORTH 01'58'54" WEST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 27.98 FEET TO A POINT ON THE EASTERLY HIGHWAY BOUNOS OF NYS ROUTE 54A ALSO KNOWN AS WEST LAKE ROAD (HAMMONDSPORT-BRANCHPORT ROAD); THENCE 3) NORTH 44'28'36" ALONG THE LAST MENTIONED HIGHWAY BOUNDS A DISTANCE 8.59 FEET TO A POINT ON THE FIRST MENTIONED DIVISION LINE; THENCE 4) SOUTH 01'56'54" EAST ALONG THE FIRST MENTIONED DIVSION LINE A DISTANCE OF 28.08 FEET TO THE POINT OF BEGINI CONTAINING 168,26± SQUARE FEET OR 0.004± ACRES OF LAND MORE OR LESS. THIS PARCEL IS SUBJECT TO RIPARIAN RIGHTS FOR THE ACCRETION AND/OR AVUI SION OF LAND LAYING IN AND ALONG LAKE KEUKA

ALSO "ENVIRONMENTAL EASEMENT DESCRIPTION" FOR DEC SITE #E851029 ALL THAT TRACT OR PARCEL OF PROPERTY SITUATE IN THE TOWN OF PULTENE'

NG AT A POINT IN THE INTERSECTION OF THE SOUTH LINE OF BOYD HILL RDAD ALSO KNOWN AS COUNTY ROUTE 74, WITH THE WESTERLY HIGHWAY BOUNDS OF NYS ROUTE 54A ALSO KNOW AS WEST LAKE ROAD

(HAMMONDSPORT-BRANCHPORT ROAD) AND AS BEING PART OF LOT 7A AS SHOWN ON A MAP ENTITLED "PLAN OF SUBDIVISION OF THE LAND OF STERLING

BOYD ESTATE" WHICH IS FILED IN STEUBEN COUNTY CLERKS OFFICE UNDER MAR #871 AND HAVING COORDINATES OF N 921,829.593 AND E 666,702.662; THENCE 1) SOUTH 70'30'08" WEST ALONG THE SOUTHERLY HIGHWAY BOUNDS OF COUNTY ROUTE 74 DESCRIBED ABOVE, A DISTANCE OF 152.78 FEET TO A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F NICHOL INN GROCERY, INC ON THE EAST AND THE PROPERTY OF N/F ROBERT W. KEMP & LYNDA Y. KEMP ON

2) SOUTH 04'40'05" EAST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 157.82 FEET TO A POINT: THENCE

실 국 3) SOUTH 28'48'58" EAST ALONG THE LAST MENTIONED DIVISION LINE A

THE NYS ROUTE 54A DESCRIBED ABOVE: THENCE

U A CONTAINING 12,649.59± SQUARE FEET OR 0.290± ACRES OF LAND MORE OR U L L ESS.

PARCEL "B" LAKE ACCESS PARCEL



THIS SURVEY IS SUBJECT TO THE FOLLOWING STATEMENT: "THE ENGINEERING AND INSTITUTIONAL CONTROLS FOR THIS EASEMENT ARE SET FORTH IN THE SITE MANAGEMENT PLAN (SMP). A COPY OF THE SMP MUST BE OBTAINED BY ANY PARTY WITH AN INTEREST IN THE PROPERTY. THE SMP CAN BE OBTAINED FROM NYS DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF ENVIRONMENTAL REMEDIATION. SITE CONTROL SECTION, 625 BROADWAY, ALBANY, NEW YORK, 12233 OR AT derweb@gw.dec.state.ny.us".



DATE	REVISIONS	BY
-		
		<u> </u>
-		
04-08	-11 UPDATED MAP PER DEC REGULATIONS	CJR
10-28	-08 EDITTED ROW & P.LINES	CAP
1D-15	-08 ADDED EAST SIDE TOPD	CJR
1-21-	08 ADDED SAMPLING POINTS	CJR
1-15-	OB ADDED WV'S AND NOTES	CJR
1-15-	08 ADDED WELL AND PIPES	CJR
or lon item i citere orchib and in their specifi	assure mysness, orcmutic, landscope orchuit de surveys to catter on item in any most it bearing in the stamp of a licensed professions d, the altering engineer, architect, landscop set or land surveyor shall stamp the docum actuate the notation "alterna the atterna the subpature, the date of such distribution, and is description of the distration.	an an aits e nont
	BY: Date:	_
		-
ENVIB		S
17 Pitt	5 Sullys Trail, Sulte 20 sford, New York 1453 (585) 385-7417 Fex: (585) 385-3741 luengineers.com	2
PROJEC		

FORMER NICHOL INN ERP SITE #E851029 SITUATE IN THE TOWN OF PULTENEY, COUNTY OF STEUBEN, STATE OF NEW YORK

STEUBEN COUNTY **3 EAST PULTENEY** SQUARE BATH, NEW YORK 14810

FIGURE #1 SHOWING EASEMENT PARCEL "A" AND LAKE ACCESS PARCEL "B"

DESIGNED BY: LN SCALE: AS-NOTED DRAWN BY: CJR DATE: 04-08-11 CHECKED BY: LN, CJR PROJECT No. 41101 SHEET DRAWING No. OF 1 SU-1



Copy of Receipt for recording Survey Map #19857

Indexed vs.:

Steuben County Nichol Grocery Inc. Nichol Inn

Map by: Daniel J. MacDonald

Steuben County, NY Judith/M. Hunter County Clerk 3 East Pulteney Square Bath, NY 14810 Phone Number: (607)664-2564 Fax Number: (607)664-2158 X Official Receipt: 2013-00014426 Reprinted on 05/15/2013 at 10:01:17 AM By: 45 on CC113 STEUBEN COUNTY TREASURER EAST PULTENEY SQUARE 3 **BATH NY 14810** Date Recorded: 05/15/2013 Instrument ID Recorded Time Amount 19857 09:58:44 AM \$0.00 MAP STEUBEN COUNTY TO: MACDONALD, DANIEL J \$0.00 Total Due: Change Tendered: \$0.00 HAVE A NICE DAY!

Judith M. Hunter, County Clerk 3 East Pulteney Square Bath, NY 14810 (607) 664-2564

Steuben County Clerk Recording Cover Sheet

Received From :

STEUBEN COUNTY TREASURER 3 EAST PULTENEY SQUARE BATH, NY 14810 Return To : STEUBEN COUNTY TREASURER 3 EAST PULTENEY SQUARE BATH, NY 14810

Method Returned : BOX

First GRANTOR

STEUBEN COUNTY

First GRANTEE

NYS DEPARTMENT ENVIRONMENTAL CONSERVATION COMMISSIONER

Index Type : Deeds

Book: 2430	Page :	322
Type of Instrument : Eas	ements	
Type of Transaction : East	sement	
Recording Fee :		\$0.00
Recording Pages :		10

Real Estate Tran	sfer Tax
RETT#:	2500
Deed Amount :	\$0.00
RETT Amount :	\$0.00
Total Fees :	\$0.00

State of New York
County of Steuben
I hereby certify that the within and foregoing was recorded in the Clerk's office for Steuben County New York
On (Recorded Date) : 04/18/2013

At (Recorded Time) : 11:13:49 AM

ditl M. Huster



Judith M. Hunter, County Clerk

This sheet constitutes the Clerks endorsement required by Section 319 of Real Property Law of the State of New York and conforms to Steuben County Local Law # 10 of 2003. DO NOT DETACH

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 21st day of March, 2013, between Owner(s) County of Steuben, having an office at 3 East Pulteney Square, Bath, New York 14810 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233.

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves 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 perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 14719 West Lake Road in the Town of Pulteney, County of Steuben and State of New York, known and designated on the tax map of the County Clerk of Steuben as tax map parcel numbers: Section 37.2 Block 1 Lot 12, being the same as that property conveyed to Grantor by deed dated October 27, 1992 and recorded in the Steuben County Clerk's Office in Liber 1361 at page 83. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 0.294 +/- acres, and is hereinafter more fully described in the Land Title Survey dated September 18, 2011 prepared by Lu Engineers, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

Book: 2430 Page: 322 Seg: 2

Rection County Treasure R+R TO: 3.E. Pultemer Squere Bails, New York 16320

County: Steuben

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of State Assistance Contract Number: C303144, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

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

2. <u>Institutional and Engineering Controls</u>. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Restricted Residential as described in 6 NYCRR Part 375-1.8(g)(2)(ii), Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv)

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP. [6/11]

Environmental Easement Page 2

County: Steuben

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section Division of Environmental Remediation NYSDEC 625 Broadway Albany, New York 12233 Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall periodically, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require,

[6/11]

Environmental Easement Page 3
(2)

that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved by the NYSDEC and that all controls are in the Department-approved format; and

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

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. <u>Right to Enter and Inspect.</u> Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. <u>Reserved Grantor's Rights</u>. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. 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.

B. If any person violates this Environmental Easement, the Grantee may revoke the [6/11]

Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. <u>Notice</u>. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:	Site Number: E851029
	Office of General Counsel
	NYSDEC
	625 Broadway
	Albany New York 12233-5500
With a copy to:	Site Control Section
	Division of Environmental Remediation
	NYSDEC
	625 Broadway
	Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. <u>Recordation</u>. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative 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. <u>Amendment</u>. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, 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.

[6/11]

County: Steuben

Site No: E851029

9. <u>Extinguishment.</u> This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, 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. <u>Joint Obligation</u>. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

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

Grantor: County of Steuben
By: Mulli
Print Name: PATRICK DONNelly
Title: TROMULAR Date: 3/01/2013

Grantor's Acknowledgment

STATE OF NEW YORK)) ss: COUNTY OF STEUBEN)

On the <u>l</u> day of <u>MARCH</u>, in the year 20 <u>l</u> before me, the undersigned, personally appeared <u>PAREICK NONNENG</u>, 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.

Notary Public - State of New York

CYNTHIA A SMITH NOTARY PUBLIC State of NY County of Steuber MY Commission expires 7/73/15

County: Steuben

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner.

By:

Røbert W. Schick, Director Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)) ss: COUNTY OF ALBANY)

On the 21^{3} day of 10^{3} , in the year 201^{3} , before me, the undersigned, personally appeared <u>Robert W. Schick</u>, 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/ executed the same in his/her/ capacity as Designer of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public - State of New York

David J. Chiusano Notary Public, State of New York No. 01CH5032146 Qualified in Schenectady County Commission Expires August 22, 20.

SCHEDULE "A" PROPERTY DESCRIPTION

Property Address: 14719 West Lake Road, Pulteney, New York Tax Map: 37.2-1-12

PARCEL DESCRIPTIONS:

PARCEL "A"

ALSO "ENVIRONMENTAL EASEMENT DESCRIPTION" FOR DEC SITE #E851029

ALL THAT TRACT OR PARCEL OF PROPERTY SITUATE IN THE TOWN OF PULTENEY, COUNTY OF STEUBEN, STATE OF NEW YORK AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE INTERSECTION OF THE SOUTH LINE OF BOYD HILL ROAD ALSO KNOWN AS COUNTY ROUTE 74, WITH THE WESTERLY HIGHWAY BOUNDS OF NYS ROUTE 54A ALSO KNOW AS WEST LAKE ROAD

(HAMMONDSPORT-BRANCHPORT ROAD) AND AS BEING PART OF LOT 7A AS SHOWN ON A MAP ENTITLED "PLAN OF SUBDIVISION OF THE LAND OF STERLING BOYD ESTATE" WHICH IS FILED IN STEUBEN COUNTY CLERKS OFFICE UNDER MAP #871 AND HAVING COORDINATES OF N 921,829.593 AND E 666,702.662; THENCE

1) SOUTH 70° 30'06" WEST ALONG THE SOUTHERLY HIGHWAY BOUNDS OF COUNTY ROUTE 74 DESCRIBED ABOVE, A DISTANCE OF 152.76 FEET TO A POINT ON THE DIVISION LINE BETWEEN THE PROPERTY OF N/F NICHOL INN GROCERY, INC ON THE EAST AND THE PROPERTY OF N/F ROBERT W. KEMP & LYNDA Y. KEMP ON THE WEST; THENCE

2) SOUTH 04°40'05" EAST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 157.82 FEET TO A POINT: THENCE

3) SOUTH 28°48'59" EAST ALONG THE LAST MENTIONED DIVISION LINE A DISTANCE OF 11.65 FEET TO A POINT ON THE WESTERLY HIGHWAY BOUNDS OF THE NYS ROUTE 54A DESCRIBED ABOVE; THENCE

4) NORTH 33°27'06" EAST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 20.28 FEET TO A POINT; THENCE

5) NORTH 01°56'54" WEST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 6.88

FEET TO A POINT; THENCE 6) NORTH 30°28'47" EAST ALONG THE LAST MENTIONED HIGHWAY BOUNDS IN ITEM 3 ABOVE A DISTANCE OF 225.92 FEET TO THE POINT OF BEGINNING.

CONTAINING 12,649.59± SQUARE FEET OR 0.290± ACRES OF LAND MORE OR LESS.

.

. ج. • ، • ، • .

٠

SURVEY





Environmental Restoration Program Former Nichol Inn Site (#E851029) 14719 West Lake Road Town of Pulteney Steuben County, New York

HEALTH AND SAFETY PLAN

Prepared For:

Steuben County County Office Building 3 East Pulteney Square Bath, New York 14810

Prepared By:



175 Sullys Trail, Suite 202 Corporate Crossings Office Park Pittsford, New York 14534

FORMER NICHOL INN SITE

HEALTH AND SAFETY PLAN

Table of Contents

Page

SECTION A:	GENERAL INFORMATION	
SECTION B:	SITE/WASTE CHARACTERISTICS	
SECTION C:	HAZARD EVALUATION	
SECTION D	SITE SAFETY WORK PLAN6	
SECTION E:	EMERGENCY INFORMATION	

APPENDICES

APPENDIX A	HEAT STRESS AND COLD EXPOSURE				
APPENDIX B	ADDITIONAL POTENTIAL PHYSICAL AND CHEMICAL HAZARDS				
APPENDIX C	EQUIPMENT CHECKLIST				

LU ENGINEERS SITE SAFETY PLAN

	A.	GENERAL IN	FORMATION		
Project Title:	Former Nicho Remedial Inv	l Inn Site	Project No.	41101	
Project Manager:	Steven A Can	npbell, CHMM	Project Direc	tor: Robert Hu	utteman, P.E.
Location:	14719 West I	ake Road			
	Town of Pulte	eney, Steuben Co	ounty, New York		
Prepared by:	Laura Neubau	ier	Date Prepare	d: <u>Septembe</u>	r 2011
Approved by:			Date Approv	ed:	
Site Safety Officer	Review:		Date Review	ed:	
Scope/Objective of site inspections.	f Work: Condu	ict groundwater i	nonitoring of on-s	ite and off-site v	vells; annual
-					
Proposed Date of H	Field Activities	: <u>2011- TBD</u>			
Background Inform	nation:	[X] Complete	[]		
Overall Chemical I	Hazard:	[] Serious [X] Low	[] Moderate [] Unknown		

Overall Physical Hazard:[] Serious[] Moderate[X]Low[] Unknown

B. SITE/WASTE CHARACTERISTICS

Waste Type(s):			
[X] Liquid	[X] Solid [] Sludge	[X] Gas/Vapor
Characteristic(s):			
[X] Flammable/Ignitable	[X] Volatile [] Corrosive	[] Acutely Toxic
[] Explosive (moderate) [] Reactive [X	X] Carcinogen	[] Radioactive
Other:			
Physical Hazards:			
[] Overhead	[] Confined Space [] Below Grade	[X] Trip/Fall
[X] Puncture	[] Burn [X	X] Cut	[X] Splash
[] Noise	[X] Other: Heat Stre	ss/Cold Stress	

Site History/Description and Unusual Features:

The site is located at the southwest corner of the intersection of County Route 74 and State Route 54A (West Lake Road). The property covers approximately 0.4 acres and is currently undevelopmed.

The Site previously operated as a restaurant/grocery store and gas station. Four underground tanks and impacted soils were removed as interim remedial measures during the remedial investigation. Petroleum-impacted soils remain onsite and within the Route 54A right-of-way at a depth of approximately 8-12 feet below grade. Petroleum contaminated groundwater has also been identified in several onsite wells near the source area.

Locations of Chemicals/Wastes: Soil and groundwater.

Estimated Volume of Chemicals/Wastes:

Site Currently in Operation:	[] Yes	[X] No	[] Not Applicable
------------------------------	--------	--------	-------------------

C. HAZARD EVALUATION

PHYSICAL HA	ZARD EVALUATION:	
TASK	HAZARD(S)	HAZARD PREVENTION
Groundwater monitoring/ Site inspections	Back strain and muscle fatigue due to lifting and sampling techniques.	Use proper lifting techniques to prevent back strain. Ask for assistance as necessary.
	Contact with or inhalation of preservation solutions.	Material Safety Data Sheets for all lab preservation solutions. Wear nitrile gloves. First aid equipment available.
	Heat stress / cold stress exposure.	Implement heat stress management techniques such as shifting work hours, increasing fluid intake, and monitoring employees.
	Slip / tripping / overhead / fall.	Observe terrain while walking to minimize slips and falls. Steel-toed boots provide additional support and stability. Use adequate lighting. Use caution when working within highway right-of-way.
	Native wildlife presents the possibility of insect bites and associated diseases.	Avoid wildlife when possible. Use insect repellant, as necessary.
	Sunburn.	Apply sunscreen, wear appropriate clothing.
	Weather Extremes.	Establish site-specific contingencies for severe weather situations. Discontinue work in severe weather.

Physical Hazard Evaluation: Basic health and safety protection (steel-toed boots, work clothes, and gloves) will be worn by all personnel at all times. Personnel should be made aware of area flora (poison ivy) and fauna. Snakes and other endemic wildlife should be avoided at all times. Any encounters that result in bites or scratches should be reported to the Site Safety Officer prior to the start of the project.

CHEMICAL HAZARD EVALUATION										
									PII	D
Task Number	Compound	Expos PEL	ure Limits (REL	(TWA) TLV	Dermal Hazard (Y/N)	Route(s) of Exposure	Acute Symptoms	Odor Threshold/ Description	Corr. Factor	Ioniz. Poten. (eV)
	Asbestos*	0.1 f/cc			N	Inh, Ing,	Irritation to eyes, nose, or throat	None		
	Benzene*	1 ppm		10 ppm	Y	Inh, Abs, Ing, Con	Irritation to eyes, skin, nose, respiratory system; headache, nausea, dizziness, drowsiness, unconsciousness, harmful, fatal if aspirated into lungs	Colorless to light yellow liquid, sweet aromatic odor	0.5	9.25
	Ethylbenzene	100 ppm		100 ppm	Y	Inh, Ing, Con	Irritation to eyes, skin, mucous membranes; dermatitis, narcosis, , trouble breathing, paralysis, headache, nausea, headache, dizziness, coma	Colorless liquid, aromatic odor	0.5	8.77
	Hydrochloric Acid*	7.0 mg/m ³		7.5 mg/m ³	Y	Inh, Ing, Abs, Con	Irritation to eyes, skin, mucous membrane, delayed pulmonary edema, conjunctivitis, and photosensitization	Colorless gas or colorless fuming liquid		
	Isopropylbenzene (syn. Cumene)	50 ppm		50 ppm	Y	Inh, Ing	Irritates the mucous membranes and upper respiratory tract. Affects the central nervous system, symptoms may include dizziness, drowsiness, slight incoordination and unconsciousness.	Colorless liquid, sharp penetrating aromatic odor		
	Lead	0.05 mg/m ³	0.1 mg/m ³	0.05 mg/m ³	Y	Inh, Ing, Con	Poison, abdominal pain, spasms, nausea, vomiting, headache, irritation to eyes; skin, weakness, metallic taste, anorexia/loss of appetite, insomnia, facial pallor, colic, anemia, tremor, "lead line" in gums, constipation, abdominal pain, paralysis in wrists and ankles, encephalopathy (inflammation of brain)	Odorless		

	CHEMICAL HAZARD EVALUATION									
									PII)
					Dermal			Odor	Corr.	Ioniz.
Task		Expos	<u>ure Limits (</u>	(TWA)	Hazard	Route(s) of		Threshold/	Factor	Poten.
Number	Compound	PEL	REL	TLV	(Y/N)	Exposure	Acute Symptoms	Description		(eV)
	Nitric Acid	2ppm / 5 mg/m ³		2ppm / 5 mg/m ³	Y	Inh, Ing, Con	Irritation to eyes, skin, and mucous membrane; delayed pulmonary edema; pneumontis; bronchitis; dental erosion	Strong odor Acrid		
	n-Propylbenzene (per mfg. Recommended exposure is 100 ppm)	N/A	N/A	N/A	Y	Inh, Ing, Con	Irritation to eyes, skin, respiratory tract, mucous membranes of nose & throat, depresses CNS, vertigo, fatigue, chest constriction, may invoke aspiration if swallowed	Clear colorless liquid, mild odor		
	Toluene	200 ppm		50 ppm	Y	Inh, Abs, Ing, Con	Irritation to eyes, skin, nose; upper respiratory tract, fatigue, weak, confusion, dizziness, headache, drowsiness, abdominal spasms, dilated pupils, euphoria	Colorless liquid, sweet pungent, benzene like odor	0.5	8.82
	Xylene	100 ppm	100 ppm	100 ppm	Y	Inh, Ing, Abs, Con	Irritation of eyes, nose, throat, skin; dizziness, excited, vomit	Aromatic		

KEY:

PEL = Permissible Exposure Limit REL = Recommended Exposure Limit --- = Information not available

TLV = Threshold Limit Value(ACGIH)

Inh = Inhalation

Ing = Ingestion mg/m³ = Milligrams per cubic meter * = Chemical is a known or suspected carcinogen

Abs = Skin Absorption Con = Skin and/or eye Contact ppm = Parts per million

D. SITE SAFETY WORK PLAN

Site Control:

Perimeter Identified?	[Y]	Site S	ecured?	[N]	
Work Areas Designated?	[Y]	Zone(s) of contamination identified?			
Anticipated Level of Prote	ection (cross-re	ference task numbers	in Section C):		
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	
All tasks	-	-	-	Х	

All site work will be performed at Level D (steel-toed boots, work clothes, and gloves) unless monitoring indicates otherwise.

See Appendices A, B and C for specific site safety requirements.

Air Monitoring:

<u>Contaminant</u>	Monitoring Device	Frequency
Organic Vapors	PID	as needed

Continuous air monitoring is not anticipated as part of long-term monitoring activities. If future site work shall disturb impacted subsurface media, a project specific HASP will be prepared.

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.

Disposable sampling equipment will be used where possible. If decon is necessary, distilled or deionized water and alconox will be used.

Personnel Decon Protocol

Soap, water and paper towels will be available for all personnel and will be used before eating, drinking or leaving the site. Personnel will shower upon return to home or hotel. Disposable PPE will be double bagged and disposed of in a sanitary waste dumpster.

Decon Solution Monitoring Procedures, if Applicable

Decon solution will be disposed of on-site with owner's permission.

Special Site Equipment, Facilities or Procedures

(Sanitary Facilities and Lighting Must Meet 29CFR 1910.120)

Sanitary facilities are available at the Pulteney Town Hall located near the Site at 9226 County Route 74.

Site Entry Procedures and Special Considerations

Level D protective equipment will be used based on the results of previous investigations.

Work Limitations (time of day, weather conditions, etc.) and Heat/Cold Stress Requirements All work will be completed during daylights hours.

General Spill Control, if Applicable

N/A

Investigation Derived Material (i.e., Expendables, Decon Waste, Cuttings) Disposal $\rm N/A$

Sampling Handling Procedures Including Protective Wear

At a minimum, Level D surgical gloves will be worn while handling samples during labeling, documentation and packaging.

Team Member*	Responsibility			
Susan Hilton, P.E,	Site Safety Officer			
Laura Neubauer	Field Team Leader			

* All entries into the work zone require "Buddy System" use. All Lu Engineers field staff participate in a medical monitoring program and have completed applicable training per 29CFR 1910.120. Respiratory protection program meets requirements of 29CFR 1910.134.

E. EMERGENCY INFORMATION

LOCAL RESOURCES

Ambulance:	911
Hospital Emergency Room:	Ira Davenport Hospital 7571 State Route 54 Bath, NY (607) 776-8500
Poison Control Center:	911
Police (include local, county sheriff, state):	911
Fire Department:	911
Local Laboratory:	N/A
UPS/Federal Express:	N/A

SITE RESOURCES

Site Emergency Evaluation Alarm Method:	Sound Car Horn for 10 seconds
Water Supply Source:	Bottled Water or Drill rig
Telephone Location, Number:	None available
Cellular Phone, if Available:	TBD
Radio:	None available
Other:	TBD

EMERGENCY CONTACTS

1.	Fire/Police:	911
2.	Lu Engineers, Project Manager Steve Campbell	(585) 377-1450, Ext 249 (office)
3.	Lu Engineers, Safety Director: Christine Davey	(585) 377-1450, Ext. 235 (office)

EMERGENCY ROUTES

(Note: Field team must know route(s) prior to start of work.)

Directions from the site to the hospital:

END

Directio	ns	Distance
Total E	st. Time: 21 minutes Total Est. Distance: 14.00 miles	
START	1: Start out going SOUTH on NY-54A toward ROFF HILL RD.	9.3 miles
\Leftrightarrow	2: Turn LEFT onto NY-54A / MAIN ST. Continue to follow NY-54A.	0.6 miles
\Leftrightarrow	3: Turn RIGHT onto NY-54.	4.0 miles

4: End at Ira Davenort Memorial Hospital: 7571 State Route 54, Bath, NY 14810, US



On-site Assembly Area:	Northeast Corner of the Site
Off site Assembly Area:	Steuben County, County Office Building, 3 East Pulteney Square, Bath, NY

Emergency egress routes to get off-site: Follow Route 54A, north or south

APPENDIX A

HEAT STRESS AND COLD EXPOSURE

THE HEAT EQUATION



HIGH TEMPERATURE + HIGH HUMIDITY + PHYSICAL WORK = HEAT ILLNESS

When the body is unable to cool itself through sweating, serious heat illnesses may occur. The most severe heatinduced illnesses are heat exhaustion and heat stroke. If actions are not taken to treat heat exhaustion, the illness could progress to heat stroke and possible death.



U.S. Department of Labor Occupational Safety and Health Administration

OSHA 3154 1998

HEAT EXHAUSTION

What Happens to the Body:

HEADACHES, DIZZINESS/LIGHT HEADEDNESS, WEAKNESS, MOOD CHANGES (irritable, or confused/can't think straight), FEELING SICK TO YOUR STOMACH, VOMITING/THROWING UP, DECREASED and DARK COLORED URINE, FAINTING/PASSING OUT, and PALE CLAMMY SKIN.

What Should Be Done:

- Move the person to a cool shaded area to rest. Don't leave the person alone. If the person is dizzy or light headed, lay them on their back and raise their legs about 6-8 inches. If the person is sick to their stomach lay them on their side.
- Loosen and remove any heavy clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are not feeling sick to their stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water or wet cloth.
- If the person does not feel better in a few minutes call for emergency help (Ambulance or Call 911).

(If heat exhaustion is not treated, the illness may advance to heat stroke.)

HEAT STROKE—A MEDICAL EMERGENCY

What Happens to the Body:

DRY PALE SKIN (no sweating), HOT RED SKIN (looks like a sunburn), MOOD CHANGES (irritable, confused/not making any sense), SEIZURES/FITS, and COLLAPSE/PASSED OUT (will not respond).

What Should Be Done:

- Call for emergency help (Ambulance or Call 911).
- Move the person to a cool shaded area. Don't leave the person alone. Lay them on their back and if the person is having seizures/fits remove any objects close to them so they won't strike against them. If the person is sick to their stomach lay them on their side.
- Remove any heavy and outer clothing.
- Have the person drink some cool water (a small cup every 15 minutes) if they are alert enough to drink anything and not feeling sick to their stomach.
- Try to cool the person by fanning them. Cool the skin with a cool spray mist of water, wet cloth, or wet sheet.
- If ice is available, place ice packs under the arm pits and groin area.

How to Protect Workers

- Learn the signs and symptoms of heat-induced illnesses and what to do to help the worker.
- Train the workforce about heat-induced illnesses.
- Perform the heaviest work in the coolest part of the day.
- Slowly build up tolerance to the heat and the work activity (usually takes up to 2 weeks).
- Use the buddy system (work in pairs).
- Drink plenty of cool water (one small cup every 15-20 minutes)
- Wear light, loose-fitting, breathable (like cotton) clothing.
- •. Take frequent short breaks in cool shaded areas (allow your body to cool down).
- Avoid eating large meals before working in hot environments.
- Avoid caffeine and alcoholic beverages (these beverages make the body lose water and increase the risk for heat illnesses).

Workers Are at Increased Risk When

- They take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you when working in hot environments).
- They have had a heat-induced illness in the past.
- They wear personal protective equipment (like respirators or suits).

Air Temperature



THE COLD STRESS EQUATION

LOW TEMPERATURE + WIND SPEED + WETNESS = INJURIES & ILLNESS

When the body is unable to warm itself, serious coldrelated illnesses and injuries may occur, and permanent tissue damage and death may result. Hypothermia can occur when land tempera*tures* are **above** freezing or water temperatures are below 98.6°F/ 37°C. Coldrelated illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds, or wet clothing.



U.S. Department of Labor Occupational Safety and Health Administration 0SHA 3156 1998



FROST BITE

What Happens to the Body:

FREEZING IN DEEP LAYERS OF SKIN AND TISSUE; PALE, WAXY-WHITE SKIN COLOR; SKIN BECOMES HARD and NUMB; USUALLY AFFECTS THE FINGERS, HANDS, TOES, FEET, EARS, and NOSE.

What Should Be Done: (land temperatures)

- Move the person to a warm dry area. Don't leave the person alone.
- Remove any wet or tight clothing that may cut off blood flow to the affected area.
- **DO NOT** rub the affected area, because rubbing causes damage to the skin and tissue.
- **Gently** place the affected area in a warm (105°F) water bath and monitor the water temperature to **slowly** warm the tissue. Don't pour warm water directly on the affected area because it will warm the tissue too fast causing tissue damage. Warming takes about 25-40 minutes.
- After the affected area has been warmed, it may become puffy and blister. The affected area may have a burning feeling or numbness. When normal feeling, movement, and skin color have returned, the affected area should be dried and wrapped to keep it warm. Note: If there is a chance the affected area may get cold again, do not warm the skin. If the skin is warmed and then becomes cold again, it will cause severe tissue damage.
- Seek medical attention as soon as possible.

HYPOTHERMIA - (Medical Emergency)

What Happens to the Body:

NORMAL BODY TEMPERATURE (98.6° F/37°C) DROPS TO OR BELOW 95°F (35°C); FATIGUE OR DROWSINESS; UNCONTROLLED SHIVERING; COOL BLUISH SKIN; SLURRED SPEECH; CLUMSY MOVEMENTS; IRRITABLE, IRRATIONAL OR CONFUSED BEHAVIOR.

What Should Be Done: (land temperatures)

- Call for emergency help (i.e., Ambulance or Call 911).
- Move the person to a warm, dry area. Don't leave the person alone. Remove any wet clothing and replace with warm, dry clothing or wrap the person in blankets.
- Have the person drink warm, sweet drinks (sugar water or sports-type drinks) if they are alert. **Avoid drinks with caffeine** (coffee, tea, or hot chocolate) or alcohol.
- Have the person move their arms and legs to create muscle heat. If they are unable to do this, place warm bottles or hot packs in the arm pits, groin, neck, and head areas. **DO NOT** rub the person's body or place them in warm water bath. This may stop their heart.

What Should Be Done: (water temperatures)

- Call for emergency help (Ambulance or Call 911). Body heat is lost up to 25 times faster in water.
- **DO NOT** remove any clothing. Button, buckle, zip, and tighten any collars, cuffs, shoes, and hoods because the layer of trapped water closest to the body provides a layer of insulation that slows the loss of heat. Keep the head out of the water and put on a hat or hood.
- Get out of the water as quickly as possible or climb on anything floating. **DO NOT** attempt to swim unless a floating object or another person can be reached because swimming or other physical activity uses the body's heat and reduces survival time by about 50 percent.
- If getting out of the water is not possible, wait quietly and conserve body heat by folding arms across the chest, keeping thighs together, bending knees, and crossing ankles. If another person is in the water, huddle together with chests held closely.

How to Protect Workers

- Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- Learn the signs and symptoms of cold-induced illnesses/injuries and what to do to help the worker.
- Train the workforce about cold-induced illnesses and injuries.
- Select proper clothing for cold, wet, and windy conditions. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, in addition to underwear that will keep water away from the skin (polypropylene).
- Take frequent short breaks in warm dry shelters to allow the body to warm up.
- Perform work during the warmest part of the day.
- Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- Use the buddy system (work in pairs).
- Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Eat warm, high-calorie foods like hot pasta dishes.

Workers Are at Increased Risk When...

- They have predisposing health conditions such as cardiovascular disease, diabetes, and hypertension.
- They take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you while working in cold environments).
- They are in poor physical condition, have a poor diet, or are older.

🥎 Wind Chill Chart 🐳

							Wi	nd	(mp	oh)						
			60	55	50	45	40	35	30	25	20	15	10	5	Calm	
			25	25	26	26	27	28	28	29	30	32	34	96	40	
Wind Chill			17	18	19	19	20	21	R	23	24	25	27	31	35	
	Frost ind Chill	Frost	10	1	12	12	13	14	15	16	17	19	2	25	30	
			w	4	4	S	6	7	00	9	-	13	15	19	25	
("F)		oite Ti	4	μ	ئ	ż	1	0	-	w	4	6	9	13	20	
= 35. ere, T=	L T	mes	-11	-11	-10	6	6	4	ŝ	4	Ň	0	w	7	15	
.74 + 0.6215T - 35.75(\ = Air Temperature (°F) V= Wind	4		-19	-18	4-17	-16	2	-14	-12	-	4	4	4	l	10	
) \	30 min	-26	-25	-24	-23	-22	-21	5 19	-13	-15	-13	-10	ۍ ۲	S	Ten
	1	rtes	د ن- 3	-32		-30	-29	-27	-26	-24	-22	-19		-11	0	npera
	r r		-40	-39	-38	-37	-36	-34	μ	÷	-29	-26	-22	-16	ς-	ature
	7517	0 minu	-48	-46	-45	-44	-43	-41	-39	-37	ι ω	-32	-28	-22	-10	≥ (°F)
Speec	0.16	tes	-55	-54	-52	-51	-50	-48	-46	-44	-42	-49	-35	-28	-15	
+ 0.	>	5 1	-62	-61	-60	-58	-57	-55	ង់	÷	-48	-45	-41	-34	-20	
4275T(V ⁽	4375	minute	-69	-68	-67	-65	-64	-62	-60	ហំក	-S Z	-51	-47	-40) -25	
		5	-76	-75	-74	-72	-71	-65	-67	-6-	-6	-58	-53	-46	-3(
E)	.16		-84	-8	-8	2 -79	-78	-70	-73	-7-	-68	3 -6 ¹	3 -59	5 -5	-3	
fective			-6- 1	-85	-83	-86	-8	5 -8	3 -8(-71	8 -74	-7	9 -6	-5	-4	
11/01/01			-98	-97	3 -95	5 -93	1-91	-89	0 -87	3 -84	4 -81	-77	5 -72	-63	-45	

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all <u>ground intrusive</u> activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during <u>non-intrusive</u> activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m₃) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m₃ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m₃ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m₃ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

APPENDIX B

ADDITIONAL POTENTIAL PHYSICAL AND CHEMICAL HAZARDS

POTENTIAL PHYSICAL HAZARDS	CONTROL METHODS
Overhead Hazards/Falling Objects	Overhead hazards will be identified prior to each task (i.e., inspecting drill rig mast, building structure). Hard hats will be required for each task that poses an overhead hazard.
Contact with Utilities	Prior to initiating site activities, all utilities will be located by the appropriate utility company and will be marked and/or barricaded to minimize the potential of accidental contact. A minimum distance of 25 feet between the derrick and overhead power lines must be maintained at all times.
Noise Exposure	Areas of potentially high sound pressure levels (>85 dBA) will be restricted to authorized personnel only. Engineering controls will be used to the extent possible. Hearing protection will be made available to all workers on site. Exposure to time-weighted average levels in excess of 85 dBA is not anticipated.
	· · · · · · · · · · · · · · · · · · ·
POTENTIAL CHEMICAL HAZARDS	GENERAL CONTROL METHODS
Contaminant Inhalation	Direct reading instruments will be used to monitor airborne contaminants. Established Lu Engineers' action levels will limit exposure to safe levels. Respiratory protection will be used as appropriate.
Contaminant Ingestion	Standard safety procedures such as restricting eating, drinking, and smoking to the support zone and utilizing proper personal decontamination procedures will minimize ingestion as a potential route of exposure.
Dermal Contaminant Contact	The proper selection and use of personal protective clothing and decontamination procedures will minimize dermal contaminant contact.
Potential contact with lower concentration waste and naturally occurring contaminants (i.e., methane)	Dermal contact with contaminants will be minimized by proper use of the following PPE: • Tyvex coveralls • Neoprene gloves • Booties (latex) or over-boots.

ADDITIONAL POTENTIAL PHYSICAL AND CHEMICAL HAZARDS

APPENDIX C

EQUIPMENT CHECKLIST

EQUIPMENT CHECKLIST

PROTECTIVE GEAR							
LEVEL A	N/A	LEVEL B	N/A				
SCBA		SCBA					
SPARE AIR TANKS		SPARE AIR TANKS					
ENCAPSULATING SUITE (Type)		PROTECTIVE COVERALL (Type)					
SURGICAL GLOVES		RAIN SUIT					
NEOPRENE SAFETY BOOTS		BUTYL APRON					
BOOTIES		SURGICAL GLOVES					
GLOVES (Type)		GLOVES (Type)					
OUTER WORK GLOVES		OUTER WORK GLOVES					
HARD HAT		NEOPRENE SAFETY BOOTS					
CASCADE SYSTEM		BOOTIES					
5-MINUTE COOLING VEST		HARD HAT WITH FACE SHIELD					
		CASCADE SYSTEM					
		MANIFOLD SYSTEM					
LEVEL C		LEVEL D					
ULTRA-TWIN RESPIRATOR		ULTRA-TWIN RESPIRATOR (available)					
POWER AIR PURIFYING RESPIRATOR		CARTRIDGES (Type GMC-H)(available)					
CARTRIDGES (Type GMC-H)		5-MINUTE ESCAPE MASK (available)					
5-MINUTE ESCAPE MASK		PROTECTIVE COVERALL (Type Tyvek/Saranax)					
PROTECTIVE COVERALL (Type Tyvek/Saranax)		RAIN SUIT (available)	Х				
RAIN SUIT		NEOPRENE SAFETY BOOTS					
BUTYL APRON		BOOTIES (available)	Х				
SURGICAL GLOVES		NITRILE					
GLOVES (Type: Nitrite/Neoprene)		HARD HAT WITH FACE SHIELD (available)					
OUTER WORK GLOVES		SAFETY GLASSES	Х				
NEOPRENE SAFETY BOOTS		GLOVES (Type: Surgical)	Х				
HARD HAT WITH FACE SHIELD		WORK GLOVES (Type:	Х				
		Neoprene/Nitrile)(available)					
BOOTIES		SAFETY BOOTS	X				
HARD HAT		BLAZE ORANGE VEST	Х				
EQUIPMENT CHECKLIST

INSTRUMENTATION	NO.	FIRST AID EQUIPMENT	NO.
PID	Х	FIRST AID KIT	Х
THERMAL DESORBER		OXYGEN ADMINISTRATOR	
O ₂ /EXPLOSIMETER W/CAL.KIT (Drilling)		STRETCHER	
PHOTOVAC TIP		PORTABLE EYE WASH	
MINIRAE (Probe 10.2)		BLOOD PRESSURE MONITOR	
MAGNETOMETER		FIRE EXTINGUISHER	
PIPE LOCATOR			
WEATHER STATION		DECON EQUIPMENT	
DRAEGER PUMP, TUBES ()		WASH TUBS	
BRUNTON COMPASS		BUCKETS	
MONITOX CYANIDE		SCRUB BRUSHES	
HEAT STRESS MONITOR		PRESSURIZED SPRAYER	
NOISE EQUIPMENT		DETERGENT (Type: Alconox) = TSP	
PERSONAL SAMPLING PUMPS		SOLVENT (HEXANE)	
MINI-RAM (Particulates) (Drilling)		PLASTIC SHEETING	
		TARPS AND POLES	
		TRASH BAGS	
RADIATION EQUIPMENT		TRASH CANS	
DOCUMENTATION FORMS		MASKING TAPE	
PORTABLE RATEMETER		DUCT TAPE	
SCALER/RATEMETER		PAPER TOWELS	
NaI Probe		FACE MASK	
ZnS Probe		FACE MASK SANITIZER	
GM Pancake Probe		FOLDING CHAIRS	
GM Side Window Probe		STEP LADDERS	
MICRO R METER		DISTILLED WATER	
ION CHAMBER			
ALERT DOSIMETER			
MINI-RAD			

EQUIPMENT LIST

SAMPLING EQUIPMENT	NO.	MISCELLANEOUS (cont.)	NO.
4-OZ BOTTLES		BUNG WRENCH	
1 LITER AMBER BOTTLES		SOIL AUGER	
VOA BOTTLES	Х	PICK	
SOIL SAMPLING (CORING) TOOL		SHOVEL	Х
SOIL VAPOR PROBE		CATALYTIC HEATER	
THIEVING RODS WITH BULBS		PROPANE GAS	
SPOONS		BANNER TAPE	
GENERAL TOOL KIT	X	SURVEYING METER STICK	
FILTER PAPER		CHAINING PINS AND RING	
PERSONAL SAMPLING PUMP SUPPLIES		TABLES	
4-OZ JARS		WEATHER RADIO	
		BINOCULARS	
VAN EQUIPMENT		MEGAPHONE	
TOOL KIT		PORTABLE RADIOS (4)	
HYDRAULIC JACK		CELL PHONE	Х
LUG WRENCH			
TOW CHAIN			
VAN CHECK OUT			
GAS		SHIPPING EQUIPMENT	
OIL		COOLERS	Х
ANTIFREEZE		PAINT CANS WITH LIDS, 7 CMIPS EACH	
BATTERY		VERMICULITE	
WINDSHIELD WASH		SHIPPING LABELS	Х
TIRE PRESSURE		DOT LABELS: "DANGER", "UP";	
		"INSIDE CONTAINER COMPLIES";	
MISCELLANEOUS		"HAZARD GROUP"	
PITCHER PUMP		STRAPPING TAPE	Х
SURVEYOR'S TAPE		BOTTLE LABELS	Х
100 FIBERGLASS TAPE		BAGGIES	Х
300 NYLON ROPE		CUSTODY SEALS	X
NYLON STRING		CHAIN-OF-CUSTODY FORMS	Х
SURVEYING FLAGS		FEDERAL EXPRESS FORMS	Х
DIGITAL CAMERA	Х	CLEAR PACKING TAPE	X
WHEEL BARROW			



					<u></u>	PROJECT			BORING MW	/-5B		
	LU ENO	GINEE	RS 2230 P	ENFIELD ROAD	2	Former Nichol ERP S	Site #E851()29	SHEET 1 OF	1		
	Civil and I	rmronine	nial PENFIE	LD, NEW YORK	14526	Remedial investigation	n		JOB #: 4110 ⁻	1		
CON	TRACTOR	R: TRE	C Environm	ental Inc					CHKD, BY: N	I/A		
DRIL	LER: Jim	Agar				GROUND SURFACE		ON: N/A	DAT	UM: N/A		
JCL	GEOLOGI	ST: JD	<u>M</u>			START DATE: Dec. 9	9, 2008	END D	ATE: Dec. 10,	2008		
TYPE			Geographe	Model 66201	DT with 4 25" A.		DATE		WATER LE	VEL DATA		
CAS	ING SIZE /	AND TY	PE: 2" PV		D1 WI(1 4.25 A	IGers	DATE		WAIER	CASING	REMARKS	
OVE	RBURDEN	SAMF	PLING MET	HOD: continue	ous/direct push						· · · · · · · · · · · · · · · · · · ·	
ROC	K DRILLIN	IG MET	HOD: N/A	···· <u> </u>								
E			SAMPL	ΕΠΔΤΔ								
P			0/ 0/11 21				SA		DESCRIPT			
Т	BLOW	NO.	DEPTH	N-VALUE	RECOVERY	1	0, 1		DECONT			
н	/6"	\vdash	(FT.)	/RQD(%)	(%)							
	N/A		1-4	<u>N/A</u>	95%	0 - 0.3' dark brown	(10YR2/2) moist	SILT and GF	RAVEL (top	soil) 3'	0 ppm
'		<u> </u>			· · · · · · · · · · · · · · · · · · ·	0.3 - 1' dark brown	(10YR3/2) dry SI	LT some SAI	VD and GR/	VEL	
2						- 1 - 4 5' medium ora	wish brow		24/2) day to a	noint CIL T	1'	
					<u> </u>	some GRAVEL little	e SAND tr	ace CL	(4/2) ury io n AY			
3						1						
]						
4												
	N/A	2	4-8	<u>N/A</u>	98%	same					4.5'	0 ppm
႞		<u> </u>								• • • • • •		
6					·	14.5 - 7.5 dark brow	n (10YR3	(4) mois	st SILT some	GRAVEL lit	tle CLAY	
ľ		<u> </u>				1						
7						1						
[petroleum odor at 7	.5'				7.5'	
8												4.2 ppm
	N/A	3	8-12	<u>N/A</u>	70%	7.5 - 15' dark yellow	ish browr	n (2.5Y3	/2) moist SIL	T some GR	AVEL little CLAY	(at 7.5')
9						becomes wet at 8'						707 ppm
10						10 10 21 10 10 6	adum CA					
							ieulum SP					
11						1						
						1						
12												
	<u>N/A</u>	4	12-16	N/A	63%	same						300 ppm
13												
14												
- 'T												
15											15'	
			_			15 - 16' light brown (10YR5/6	wet SI	LT some CLA	Y and GRA	VEL	
16											6'	
 _						Boring terminated at	t 16 feet B	GS				
-17F												
18												
Ť												
19												
		. –										
20	_	. 1										
	1	EGENE	2			A 2 inch well was set at 13	feet bgs with	10 feet o	f screen from 3-	13 feet bgs and	a riser to grade. A sand pack was	
	S- 3 (1- 1	INDIST	POON SOIL !	SAMPLE		installed to 2.5 feet bgs with	h a bentonite	seal to 1.	5 feet bgs. The	boring was finis	hed with a flush mount curb box	
	C- F	ROCKC	ORE SAMPI	E		mataneo with cement. Soil	colors descr	ided using	g the Munsell col	or system.		
G	ENERAL N	OTES:										
	1) 5	STRATIF	ICATION LIN	ES REPRESEN		BOUNDARY BETWEEN	SOIL TYPES	, TRANSI	TIONS MAY BE	GRADUAL.		
	2) V		LEVEL READ	NINGS HAVE BE	EN MADE AT TIN	ES AND UNDER CONDIT	IONS STAT	ED, FLUC	TUATIONS OF	GROUNDWATE	ER	
				S G THEN FAUL	STO THAN THUS	CONTACTNE UNE	= MEASURE	MENISV	WERE MADE.		W 6D	



		0.000			·	PROJECT			BORING MW	/-6		
P	Civit and I	GINEE	RS 2230 P ental PENFIEI	ENFIELD ROAD) 14526	Former Nichol ERP S Remedial investigation	Site #E851(029	SHEET 1 OF	1		
	TRACTO								CHKD, BY: N	/A		
DRIL	LER: Jim	Agar	C Environm	ental, inc.		BORING LOCATION GROUND SURFACE	: SEE PLA E ELEVATION	n on: n/a		IM [,] N/A		
JCL	GEOLOGI	ST: JC	M			START DATE: Dec. 9	9, 2008	END D	ATE: Dec. 10,	2008		
ТҮРІ	E OF DRIL	L RIG	Geoprobe	Model 66201	DT with 4.25" A	ugers	DATE	TIME	WATER LE		REMARKS	
CAS	ING SIZE	AND T	YPE: N/A							0/10/110		
ROC	K DRILLIN	IG ME	THOD: N/A	HOD: continue	bus/direct push							
D							•	L		L	L	
P			SAMPL	EDATA			54					
Т	BLOW	NO.	DEPTH	N-VALUÉ	RECOVERY	7	54		DESCRIPT	ION		PID
н	/6" N/A	$\frac{1}{1}$	(FT.) 1-4	/RQD(%)	(%)	0 0 d' dort brown	(40)/02/2	N	CII T			
1						0.4 to 0.5' tree root	(10183/3) moist	SILI some n	ne SAND (ti	op soil) '0.4'	0 ppm
2						0.5 - 3' medium bro	wn (10YF	₹4/3) dry	SILT some	SAND and	GRAVEL	
3		<u> </u>				-					31	
						3 - 6.5' medium bro	wn (10YF	R 5/3) dr	y to moist SII	LT little CLA	Y trace GRAVEL	
4	N/A	2	4-8	Ν/Δ	920/							
5	11/6	<u> </u>	4-0	N/A	03%	same						0 ppm
6			├│			_						
7			1						-		6.5'	
						6.5 - 9' medium bro	wn (10YR	(4/4) m	oist SILT son	ne GRAVEL	and SAND	
8		2	0 10	NI/A	000/	-						
9	IN/A		0-12		90%	Isame					0'	0 ppm
						9 - 10' dark gray (N:	3/) moist (CLAY so	ome SILT trac	ce GRAVEL	9	1
10						10 10					10'	
11						10 - 12 medium gra	iyish brow	n (2.5Y	5/2) moist SI	LT and GRA	VEL some CLAY	
						1						
12		4	12-16		020/	10 11		((0) /			12'	
13	11/1	4	12-10	N/A	03%	_12 - 14' medium gra	iyish brow	n (10YF	R5/2) wet SIL	T some CL/	AY little GRAVEL	0.5 ppm
ļ]						
14										-	14'	
15						- 14 - 16' medium bro	wn (10YR	(5/4) we	t Sil T some			
					· · · · · · · · · · · · · · · · · · ·]			011100110			
16	N/A	4	16-20		830/	16 17 ¹ modium	autat -		(4)		6'	
17			10-20	- 11/7	00%	110 - 17 medium yell	owish gra	y (SGY	wet CLA	r some SIL	 7'	1.2 ppm
										<u> </u>		
18						17 - 19' medium bro	wn (10YR	4/2) we	t SILT some	CLAY		
19						1				-	O'	
						19 - 20' dark reddish	brown (7	.5YR4/1) moist CLA	Y some SIL	and GRAVEL	
20		FGEN				E E	Boring ten	minated	at 20 feet bo	s 2	0'	
	S- 5	SPLIT S	₽ POON SOIL S	SAMPLE		installed to 11 feet bgs with	a bentonite	1 10 feet o seal to 9 f	r screen from 12 eet bgs and nativ	-20 feet bgs and re fill to 1.5 feet	a riser to grade. A sand pack was bgs. The boring was finished with	\$
	U- I		URBED SOIL	SAMPLE		a flush mount curb box inst	alled with ce	ment. So	il colors describe	d using the Mur	sell color system.	
G	ENERAL N	OTES:	JORE SAMPL	<u> </u>		L				-		
	1) 5		FICATION LIN	ES REPRESEN		E BOUNDARY BETWEEN	SOIL TYPES	, TRANSI	TIONS MAY BE	GRADUAL.		
	2) V	MAY OC	CUR DUE TO	OTHER FACT	ORS THAN THOS	MES AND UNDER CONDIT	E MEASURE	ED, FLUC	TUATIONS OF (GROUNDWATE	R	
									IB		W-6	



		SINEE	RS 2230 P			PROJECT	Site #E8510	20	BORING MW	-7	<u></u>	
2	Civil and I	(Mronine	ital PENFIE	LD, NEW YORK	14526	Remedial investigatio		29	JOB #: 41101	1 /A		
CON	TRACTOR	R: TRE	C Environm	ental, Inc.		BORING LOCATION				1A		
JCL (GEOLOGI	ST: JD	M			START DATE: Dec. 9	9, 2008	END D	ATE: Dec. 10,	2008		·
TYPE		L RIG:	Geoprobe	Model 6620E	DT with 4.25" A	ugers	DATE	TIME	WATER LE	VEL DATA CASING	REMARKS	
CASI OVEI	NG SIZE / RBURDEN	ND TY SAMP	YPE: 2" PV(PLING MET	C HOD: continuo	us/direct oush							
ROC		G MET	THOD: N/A									
E			SAMPLI	E DATA			SA					
Т Н	BLOW /6"	NO.	DEPTH (FT.)	N-VALUE /RQD(%)	RECOVERY (%)	-	34		DESCRIPT	IUN		PID
	N/A	1	1-4	N/A	80%	0 - 0.5' dark brown	(10YR3/3) moist	GRAVEL sor	ne SILT and	SAND (GRAVEL driveway)	0 ppm
'						1 - 1.5' dark brown	(10YR3/4) moist	SAND and S	ILT some G	RAVEL	
2											1.5'	
3					· · · · ·	1.5 - 3' dark brown	(10YR3/4)) moist	SILT some C	LAY and G	RAVEL	
						3 - 4.5' medium yell	owish bro	wn (10'	YR 4/6) mois	SILT trace	GRAVEL and SAND	
4	N/A	2	4-8		75%	same					4.5'	0
5						4.5 - 7.5' medium b	rown (10Y	'R4/4) n	noist SILT so	me SAND a	Ind GRAVEL	o ppin
6						-						
						1						
7						4						
8									··		7.5'	
q	N/A	3	<u>8-12</u>	N/A	55%	7.5 - 10' medium ye	llowish br	own (10)YR4/6) mois	t SILT and (CLAY little GRAVEL	0 ppm
Ĭ						_ 						
10											10'	
11					· · · · · ·	10 - 13' light gravish	brown (1	0YR6/2) wet SILT a			
12							(,			
12	N/A	4	12-16	N/A	70%	same						0
13											13'	lo ppm
14						13 - 14.5' dark gray	(N4/) wet	SILT co	arse SAND	some CLAY		
F											14.5'	
15						14.5 - 16' medium a	ray (NIS/) 9					
16						14.5 ° To medium g	Tay (1957) (16'	
17		-+				Boring terminated at	16 feet b	gs				1
Ē												
18												
19												
20												
201	I	EGENE	<u></u>			A 2 inch well was set at 15	feet bgs with	10 feet o	f screen from 5-	5 feet bos and	a riser to grade. A sand pack was	L
	S- 9 U- 1	SPLIT SI JNDISTI	POON SOIL : URBED SOIL	SAMPLE SAMPLE		Installed to 4 feet bgs with a	B bentonite s	eal to 1.5	feet bgs. The bo	ring was finishe	d with a flush mount curb box	
	C- F	ROCKC	ORE SAMPL	E		installed with cement. Suit	colors descri	ueu usak	f the Munsell Col	or system.		
G	ENERAL N 1) S	UTES: STRATIF	CATION LIN	ES REPRESEN						GRADUAL		
	2) \					ES AND UNDER CONDIT	IONS STAT	D, FLUC	TUATIONS OF	GROUNDWATE	ER	
	n		JUR DUE I	JUTHER FAUT	JKS THAN THOS	DE PRESENT AT THE TIME	= MEASURE	MENTS	VERE MADE.		10/ 7	



						PROJECT			BORING MM			
	LU ENG	GINEE	RS 2230 P	ENFIELD ROAD	2	Former Nichol ERP S	Site #E8510)29	SHEET 1 OF	1		
	Civil and I	Imronme	ntal PENFIE	LD, NEW YORK	(14526	Remedial investigation	on		JOB #: 41101	1		
CON	TRACTOR	R: TRE	C Environm	ental. Inc.		BORING LOCATION			CHKD. BY: N	I/A		
DRIL	LER: Jim	Agar				GROUND SURFACE		ON: N/A	DAT	UM: N/A		
JCL	GEOLOGI	ST: JD	<u>M</u>			START DATE: Dec. 9	9, 2008	END D	ATE: Dec. 10,	2008		
TYPE		I RIG	GeonrobeT	Model 6620	DT with 4 25" A	10000	DATE	The	WATER LE	VEL DATA		
CAS	ING SIZE	AND TY	(PE: 2" PV(D1 WI01 4.25 A	ugers	DATE		WATER	CASING	REMARKS	
OVE	RBURDEN	SAMF	LING MET	HOD: continue	ous/direct push			·		<u> </u>	·	
ROC	<u>k drillin</u>	IG MET	HOD: N/A									
E			SAMPL	E DATA								
Р							SA	MPI F	DESCRIPT	ION		
Т	BLOW	NO.	DEPTH	N-VALUE	RECOVERY	-			22001011			
н	/6" N/A	1	(FT.)	/RQD(%)	(%)							
1	<u> </u>	<u>- ' -</u>	1-4		05%	0 - 1' medium brow	n (10YR4	/4) mois	st SILT trace	SAND (top	soil)	0 ppm
		1	i			1 - 2 5' dark vellowi	sh brown		(6) majet SII	Tarma CD		
2							SILDIOWII	linina	no) moist SiL	. I some GR	AVEL and GLAY	
											2.5'	
3												
		<u> </u>				2.5 - 11' medium br	own (10Y	R 4/6) r	noist SILT ar	nd GRAVEL	little CLAY	
4		2	10		70%	4						
5			4-0	IN/A	70%	- como						0 ppm
Ĩ					· · · · · · · · · · · · · · · · · · ·	Same						
6						-						
]						
7]						
						4						
°	N/A	2	8-12		500/	4						
9			0-12	IN/A	50%	sama						0 ppm
Ī						Same						
10						1						
ļ]						
11											11'	
12						11 - 12' medium gra	yish brow	n (10YF	R 5/1) with lig	ht gray (10)	(R6/2) mottles wet SILT and	
' ²	N/A	4	12-16	N/A	68%	GRAVEL S	ome CLA	Y (DE/4)	unt Cill T and	OD AV/CL	12'	
13							iowit (101	(K5/4) V	ver SILT and	GRAVEL S	ome CLAY	0 ppm
						1					13.5'	
14						13.5 - 16' medium bl	luish gray	(5G5/1) wet CLAY s	ome SILT li	ttle GRAVEL	
18												
16				<u> </u>								
E						Boring terminated at	16 feet b	as			0	-
17]		3~				
Ļ												
18												
10												
_'"H												
20												
	i	EGEND	2			A 2" well was set at 15 feet	bgs with 10	feet of sc	reen from 5-15 fe	et bgs and a ris	er to grade. A sand pack was	<u> </u>
	S- 5	SPLIT SP	POON SOIL S	SAMPLE		installed to 4 feet bgs with a	a bentonite se	eal to 1.5	feet bgs. The bo	oring was finishe	d with a flush mount curb box	
	U- U C- P	NUISIL	URE SAMO	SAMPLE		installed with cement. Soil	colors descri	bed using	the Munsell cold	or system.		
G	ENERAL N	OTES:	UNE SAMPL	<u> </u>								
	1) 5	STRATIF	ICATION LIN	ES REPRESEN		BOUNDARY BETWEEN	SOIL TYPES	, TRANSI	TIONS MAY BE	GRADUAL.		
	2) V	NATER I		DINGS HAVE BE	EN MADE AT TIN	ES AND UNDER CONDIT	IONS STATE	D, FLUC	TUATIONS OF (GROUNDWATE	R	
	N			JUINER FACTO	URD THAN THOS	DE PRESENT AT THE TIME	MEASURE	MENTS V	VERE MADE.			
									18		VV-0	I



J:\Projects\41100 Steub

						PROJECT			BORING MA	. 10	<u> </u>	<u></u>	
	LU EN	GINEEI	RS 2230 P	ENFIELD ROAD	2	Former Nichol ERP S	Site #E8510	29	SHEET 1 OF	1			
	Civil and	l nuronme	nial PENFIE	LD, NEW YORK	14526	Remedial investigation	ก		JOB #: 4110	1			
	TRACTO								CHKD. BY: N	I/A			
DRI		Agar		ental, Inc.		BORING LOCATION	SEE PLA	N					
JCL	GEOLOG	ngai IST∷I⊓I	м			START DATE: SLOT		JN: N/A	DAT	UM: N/A			
		01.00	······			START DATE: Sept.	4,2008	END D	ATE: Sept. 5,	2008			
TYP	e of Dril	L RIG:	GeoprobeT	Model 6620	DT		DATE	TIME	WATER		DEMARKS		
CAS	ING SIZE	AND T	/PE: 1" PV(2						<u>UNDING</u>	INCIMANNO		
OVE	RBURDE	N SAMF	LING MET	HOD: continue	ous/direct push								
ROC	<u>K DRILLIP</u>	IG ME	HOD: N/A										
			SAMDU										
							0.4						
T	BLOW	NO.	DEPTH	N-VALUE	RECOVERY	. -	SA	WPLE	DESCRIPT	ION			PID
н	/6"		(FT.)	/RQD(%)	(%)								
	N/A	1	1-4	N/A	68%	0 - 1' medium brow	n (10YR4	(4) dry 5	SILT little GR				0
1								., ., .		ALL (Wh	3011) 1'		U ppm
						1 - 3' dark brown (1	0YR3/3)	drv to m	oist SILT so	me GRAVE	trace CLAY		
2						7 ·	,						
]							
3		<u> </u>							_		3'		
		ļ				3 - 6' medium yellov	wish brow	n (10YF	(4/6) moist S	SILT some C	LAY		
4		<u> </u>				trace GRAVEL			·				
	<u>N/A</u>	2	4-8	<u>N/A</u>	75%	4							0 ppm
5						same							
		<u> </u>				-							
6											6'		
_						6 - 7' medium brow	n (10YR4	/3) mois	st SILT some	GRAVEL			
											7'		
,						7 - 9' dark brown (1) 	0YR 3/3) r	noist Si	LT and GRA	VEL some (CLAY		
۲ ۱	NI/Å	2	9.12	NIZA	0.20/	4							
al			0-12	IN/A	03%	Isame							0 ppm
Ĭ						0 11' dork brown (01/00/01			A.V.(9'		
10							101R3/3)	moist S	ILT some CL	AY trace GI	RAVEL		
					· · · · · · · · · · · · · · · · · · ·	1							
11						-							
ľ						11 - 13 5' medium a	ravish bro	wn (10)	(P5/2) with p	andium brow	11 [.]		
12	0					vellow (10YR 5/8) m	ottles moi	et SILT	some CLAV				
[N/A	4	12-16	N/A	83%	becomes wet at 12'	01100 11101		Some OLAT		EL ANU SAND		
13						same							U ppm
						2 inch SILT CLAY se	am at 13.	5' bas			35		
14						13.5 - 16' dark gray	(N3/) mois	t SILT	some fine SA	ND trace G	RAVE		
L													
15													
16										1	6'		
ŀ						Boring terminated at	16 feet bo	js					1
-17F													
'°F													
10													
'" -													
201		+											
			······				15 fact has						
	S- 5	SPLIT SP	POON SOIL S	SAMPLE		installed to 4 feet has with a	hentonite er	with 10 fe	et of screen from	n 5-15 feet bgs i	and a riser to grade.	A sand pack was	
	U- I	JNDIST	JRBED SOIL	SAMPLE		Soil colors described using	the Munsell o	color syste	un.				
	C- I	ROCKC	ORE SAMPL	E									
G	ENERAL N	OTES:											
	1) 5		ICATION LIN	ES REPRESEN		BOUNDARY BETWEEN S	SOIL TYPES,	TRANSI	IONS MAY BE	GRADUAL.			
	2) V M		CUR DUE TO	OTHEP EACT	EN MADE AT TIN	E DRESENT AT THE	ONS STATE	D, FLUC	UATIONS OF C	GROUNDWATE	R		
	L.			CITEN FAUL	JING THAN THUS	CERCORNI AT THE TIME	MEASURE	MENTSW	IERE MADE.	0000 #			

	LU EN	GINEE	RS 2230 P)	PROJECT	Site #E851(129	BORING MW	/-11	<u>, </u>	<u> </u>
	Civil and I	monne	mal PENFIE	LD, NEW YORK	14526	Remedial investigation	n		JOB #: 4110	1 1/A		
DRIL JCL	LER: Jim J	R: TRE(Agar ST: JD(C Environm M	ental, Inc.		BORING LOCATION GROUND SURFACE	ELEVATIO	N DN: N/A	DAT	UM: N/A		
						OTANT DATE. Sept.	5,2008	END D	WATER LE	VEL DATA		
CAS	NG SIZE	L RIG: AND TI	Geoprobe " PE: 1" PV	Model 66201	DT		DATE	TIME	WATER	CASING	REMARKS	
OVE				HOD: continue	ous/direct push	i						
DE			SAMPLI	E DATA								
Р Т	BLOW	NO.	DEPTH	N-VALUE	RECOVERY	~	SA	MPLE	DESCRIPT	ION		PID
н	/6"		(FT.)	/RQD(%)	(%)							
1	A		1-4	N/A	90%	0 - 1' medium brow	n (10YR4/	(4) dry S	SILT some SA	AND (top so		0 ppm
2						1 - 2' dark brown (1	0YR3/4)	dry to m	oist SILT so	me little GR	AVEL	
3						2 - 4.5' medium gra	yish brow	n (10YF	(5/2) moist S	ILT some C	LAY little GRAVEL	
4						-						
_	N/A	2	4-8	N/A	100%	same					4.5'	0 ppm
ိ						4.5' - 7 medium yell	owish bro	wn (10)	(R4/6) SILT :	some CLAY	trace GRAVEL	
6						-1						
7						-					7'	
8						7 - 8' medium browr	n (10YR4/	3) mois	SILT some	CLAY and C	, GRAVEL	
9	N/A	3	8-12	N/A	65%	8 - 10' medium gray	ish brown	(10YR	5/2) wet SAN	D and GRA	» VEL	0 ppm
10												
						10 - 12' medium gra	yish brow		5/2) SILT an	d CLAY	10'	
						1						
12	N/A	4	12-16	N/A	100%	12 -14' medium brow		(2) mai		1	12 ⁴	
13								HO) 1101	SIGRAVEL	SAND SOME	SILT and CLAY	0 ppm
14										1	4'	
15						14 - 16' dark gray (1)	0YR2/1) m	ioist SIL	T and CLAY	some GRA	VEL	
16		_								1	6'	
17		_				Boring terminated at Soil from 9' bos was	16 feet bo retained for	js or the fr		ratory analy	sio:	
18						-8260 TCL VOCs			nowing labo	atory analy	515.	
						-TAL Metais						
20	<u> </u>	EGEND				A temporary well was set at	15 feet bas	with 10 fee	at of screen from	5-15 feet box	nd a riser to grado	
	S- S U- U	IPLIT SF	POON SOIL S	SAMPLE SAMPLE		installed to 4 feet bgs with a Soil colors described using	bentonite se	al to grad	e. m.		inia a naci to grade. A sand pa	ICK Was
G	C- R ENERAL NO	OCK CO	DRE SAMPLE	<u> </u>								
	1) S 2) W	TRATIF	CATION LIN	ES REPRESENT	T APPROXIMATE	E BOUNDARY BETWEEN S MES AND UNDER CONDITI	OIL TYPES, ONS STATE	TRANSIT D, FLUCI	IONS MAY BE O	GRADUAL.	R	
		AY OCC	JUR DUE TO	OTHER FACTO	ORS THAN THOS	E PRESENT AT THE TIME	MEASUREN	MENTS W	ERE MADE.	DRING # 1	A1 44	

				-		PROJECT				1 4 9		
	LU EN	GINEE	RS 2230 P	ENFIELD ROAD)	Former Nichol ERP S	Site #E8510)29	ISHEFT 1 OF	V-13 1		
IL.	Civil and	I IMPORT	intal PENFIE	LD, NEW YORK	14526	Remedial investigation	ло II <u>—</u> со I (JOB #: 4110	1		
	1701070								CHKD. BY: N	i/A		
		R: TRE	C Environm	ental, Inc.		BORING LOCATION	SEE PLA	N				
		Agar IST: PF				GROUND SURFACE	ELEVATIO	DN: N/A	DAT	UM: N/A		
	OLOLOG	101. RF				START DATE: 3/31/0) <u>9</u>	END D	ATE: 3/31/09			
TYP	E OF DRIL	L RIG:	Geoprobe	Model 6620I	DT with 4 25" A	liners	DATE	TIME	WATER LE	EVEL DATA		
CAS	ING SIZE	AND T	YPE: N/A	11.0001 00201	D1 wia1 4.20 A	uyers	DATE		WATER	CASING	REMARKS	
OVE	RBURDE	N SAMP	LING MET	HOD: continue	ous/direct push	l				<u> </u>	<u> </u>	
ROC	K DRILLI	NG MET	THOD: N/A		· · · · ·			· · · ·		<u> </u>		
D										I		
E			SAMPL	E DATA								
Ι Ļ	DI OW		DEPT		T		SA	MPLE	DESCRIPT	ION		PID
	BLUW	NO.	DEPTH	N-VALUE	RECOVERY							
<u> </u>		1 1			(%)							
1		+	1-4		15%	0 - 0.5' medium bro	wn SILT t	race S/	ND (top soil	<u>}</u>		0.0 ppm
'					<u> </u>	10.5-2 medium brow	n SILT ar	nd GRA	VEL, some S	SAND		
	, ——					4						
1 6							<u> </u>					
					<u> </u>	2-4° meaium brown	n SILT, litt	e GRA	VEL, trace Cl	LAY		0.0 ppm
"												
	├───				<u> </u>	4						
7		2	1.0	NI/A	750/							
5		<u> </u>		19/74	15%	4-6' same as above	9					0.0 ppm
1 3		╉───				-						
6		<u>+</u>				-						
ľ	<u> </u>	 										
7		- -				16-8' medium brown	SILT and	GRAV	EL, trace CL	AY, moist		0.0 ppm
'						4						
8						-1						
ľ	N/A	3	8-12		750/	- 0 101 come en et u						
q		- <u> </u>	0-12		15%	-18-12" same as abov	/e; wet at	11' bgs				0.0 ppm
						-						
10						-						
						4						
11				¥0.		4						
						-1						
12						-						
	N/A	4	12-16	- N/Δ	50%	12 16' modium heav	CUT -					
13				NA			VI SILI, S	ome G	RAVEL, trace	e CLAY; satu	rated at 12' bgs.	0.0 ppm
						4						
14												
						1						
15						1						
						1						
16						1						
-		- +			······	1						
17		- +				1						
ľ						Total Denth= 17 for						
18		- +					21					
F		- +				1						
19		-+				1						
F												
20												
		LEGEND	,			A 2-inch diameter well was	ent at 17 foo	has with	10 feet of a rest			
	S- 5	SPLIT SP	POON SOIL S	SAMPLE	ĺ	Installed to 5 feet bas with a	bentonite er	al to 1.54	eet has The he	n morn /-1/ teet	ogs and a riser to grade. A sand	l pack was
	U- (UNDISTU	JRBED SOIL	SAMPLE	i	installed with cement.			ooroga. me bo	my was inishe	u wiul a flush mount curb box	1
	<u> </u>	ROCK C	ORE SAMPLI	Ε								
C	SENERAL N	OTES:										
	1) 5	STRATIF	ICATION LIN	ES REPRESEN		E BOUNDARY BETWEEN S	OIL TYPES,	TRANSI	NONS MAY BE	GRADUAL.		
	2) \			INGS HAVE BE	EN MADE AT TIN	MES AND UNDER CONDITI	ONS STATE	D, FLUC	UATIONS OF C	GROUNDWATE	R	1
	I.		JUE TU	OTHER PACIL	JRS IMAN INOS	DE PRESENT AT THE TIME	MEASURE	MENTSW	ERE MADE.			
									(B)	CH21682.44 LAN	AI 43	







Low Flow Groundwater Sampling **Field Record**

Project I Locatior Activity	Name n ID Time			Field Samp	Sample ID ble Time)		Job Sai Da	o # mpling Event # te
SAMPL	ING NOTI	ES							
Initial D Final De Screen I Total Vo [purge volu Volume of PURGE	epth to Wa epth to Wa Length olume Purg ume (milliliter Water in casin DATA	ater ter ged s per minute) x ng – 2" diamete	$\frac{feet}{feet}$	Meas Well Pump ons PID (minutes) x (ons per foot o	Depth Depth D Intake De Well Head 0.00026 gal/mi of depth, 4" dia	pint <u>TOI</u> pth Illiliter] ameter = 0.653	<u>feet</u>	We	ell Diameter ell Integrity: Cap Casing Locked Collar
Time	Depth to Water (ft)	Purge Rate (ml/min)	Temp. (deg. C)	pH (units)	Dissolved O2 (mg/L)	Turbidity (NTU)	Cond. (mS/cm)	ORP (mV)	Comments
l T	urge Obse Purge Wate	er Containe	rized:						
1	uige wu								_
<u>EQUIPN</u>	<u>AENT DO</u>	CUMENTA	<u>TION</u>						

Type of Tubing: <u>1/4" HDPE</u> Type of Pump:_____ Type of Water Quality Meter: <u>Horiba U-22; LaMotte 2020</u>

ANALYTICAL PARAMETERS

Parameter	Volumes	Sample Collected
VOCs	3 x 40 ml	-

Calibrated: _____

LOCATION NOTES

Signature: ______ Checked By: ______

	1		r					r	
	Depth to	Purge Rate	Temp.	pH	Dissolved	Turbidity	Cond.	Redox	G
ime	Water (ft)	(ml/min)	(deg. C)	(units)	O2 (mg/L)	(NTU)	(mS/cm)	(mV)	Comments
								<u> </u>	
	+								
	1	ļ				ļ		ļ	
	1								