MACTEC

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March 1, 2011

Mr. Frank Sowers, Environmental Engineer 2
New York State Department of Environmental Conservation
Region 8 – Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414

Subject: **MACTEC's Response to NYSDEC Review Comments**
Revised Operations, Maintenance, and Monitoring Manual
Former Taylor Instruments Site #V00144-8
Rochester, New York
VCA Index #B8-0508-97-02
MACTEC Project Number 3031052006

Dear Mr. Sowers:

On behalf of ABB, Inc., MACTEC Engineering and Consulting, Inc. (MACTEC) is submitting this letter to respond to the New York State Department of Environmental Conservation (NYSDEC) review comments related to MACTEC's December 2010 Operations, Maintenance, and Monitoring (OM&M) Manual – revision 1.

The NYSDEC comments were contained in NYSDEC correspondence dated February 16, 2011. For clarity, each NYSDEC comment is shown below in italics, followed by the MACTEC responses.

NYSDEC Comment #1: *Section 5.0: Please specify that data collected under the OM&M Manual will be submitted to NYSDEC in format(s) acceptable to NYSDEC. This includes submitting data in the electronic data deliverable format provided at: hhtp://www.dec.ny.gov/chemical/62440.html.*

MACTEC Response to Comment #1: MACTEC has added the requested language to Section 5.0 of the OM&M Manual.

NYSDEC Comment #2: *Section 2.2.1: Specify that ASP Category B data deliverables and Data Usability Summary Reports will be provided prior to ceasing sampling at the site or an individual well.*

MACTEC Response to Comment #2: MACTEC has added the requested language to Section 2.2.1 of the OM&M Manual.

NYSDEC Comment #3: *Section 2.2: Indicate that groundwater monitoring wells will be properly decommissioned when they are no longer needed.*

MACTEC Response to Comment #3: MACTEC has added language to Section 2.2 stating that groundwater monitoring wells will be properly decommissioned once NYSDEC approves their removal from the sampling program.

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NYSDEC Comment #4: *Section 2.2, Step 7: Add that drums of purge water will be labeled and stored on-site in the former treatment system building, or other secure on-site location, prior to proper disposal.*

MACTEC Response to Comment #4: MACTEC has added language to Section 2.2, Step 7, stating that subject to the Site owner approval, purge water generated during sampling will contained in labeled drums and stored on-Site in the former treatment system building or at another secure Site location prior to proper disposal.

NYSDEC Comment #5: *Include a new section entitled Corrective Measures Plan that states: "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."*

MACTEC Response to Comment #5: MACTEC has added to the OM&M Manual Section a Corrective Measures Plan section (Section 5.3) that includes NYSDEC's above-requested language.

NYSDEC Comment #6: *Please include the previously approved Soil Management Plan as an appendix.*

MACTEC Response to Comment #6: The *Soil Management Plan* is now included in Appendix B of the OM&M Manual.

Mr. Sowers, we trust these responses satisfactorily address NYSDEC's comments on MACTEC's OM&M Manual. Should you have any questions regarding this deliverable, please contact me at (865) 588-8544 (ext. 1113 or 1149), or via email at RARyan@mactec.com

Sincerely,

MACTEC Engineering and Consulting, Inc.

Ricky A. Ryan, P.E.
Senior Principal Engineer/Project Manager

K. Joe Deatherage
Senior Environmental Engineer

[1042]

cc *(hard copy and electronic)*:
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Jeffrey Kosmala, MCHD
Melody Christopher, ABB

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Jean McCreary, Nixon Peabody LLP
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Joe Martens
Acting Commissioner

March 3, 2011

Mr. Ricky A. Ryan, P.E.
Senior Principal Engineer/Project Manager
MACTEC Engineering and Consulting, Inc
9725 Cogdill Road
Knoxville, TN 37932

Dear Mr. Ryan:

Subject: Former Taylor Instruments Site, Site #V00144-8
Operations, Maintenance, and Monitoring Manual – Revision 1; March 2011
City of Rochester, Monroe County

The New York State Department of Environmental Conservation has completed its review of the Operations, Maintenance, and Monitoring Manual – Revision 1, dated March 2011 (the OM&M Manual) and prepared by MACTEC Engineering and Consulting, Inc for the former Taylor Instruments site. Based on the information and representations made in the OM&M Manual, the OM&M Manual is hereby approved.

Please continue to notify me in advance of field activities and contact me at 585-226-5357 if you have any questions.

Sincerely,

Frank Sowers

Frank Sowers, P.E.
Environmental Engineer 2

ec:
B. Putzig
K. Comerford
J. Kosmala
J. McCreary
L. Ford
J. Conant

OPERATIONS, MAINTENANCE, AND MONITORING MANUAL

FORMER TAYLOR INSTRUMENTS SITE
MONROE COUNTY, NEW YORK
NYSDEC SITE NUMBER: V00144-8

PREPARED FOR:

ABB, INC.
5 WATERSIDE CROSSING
WINDSOR, CT 06095

PREPARED BY:

MACTEC ENGINEERING AND CONSULTING, INC.
9725 COGDILL ROAD
KNOXVILLE, TN 37932
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MACTEC PROJECT 3031052006

March 2011

Revision 1

MACTEC

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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June 15, 2020

Gray Rock Rochester, LLC
Joe Verdi
14150 Route 31
Savanah, NY 13146

Re: Site Management (SM) Periodic Review Report (PRR) Response Letter
Former Taylor Instruments Facility, Rochester
Monroe County, Site No.: V00144

Dear Joe Verdi (as the Certifying Party):

The Department has reviewed your Periodic Review Report (PRR) and IC/EC Certification for following period: February 14, 2019 to February 14, 2020.

The Department hereby accepts the PRR and associated Certification. The frequency of Periodic Reviews for this site is 1 year, your next PRR is due on **March 16, 2021**. You will receive a reminder letter and updated certification form 75-days prior to the due date. Regardless of receipt or not, of the reminder notice, the next PRR including the signed certification form, is still due on the date specified above.

In addition, the Operations, Maintenance, and Monitoring (OM&M) Manual dated March 2011, is modified as follows:

- The frequency of site-wide inspections, including the asphalt cap, is changed to annual.
- The frequency of groundwater monitoring is changed to annual for all wells that are part of the monitoring network. The groundwater monitoring event will be conducted during the second calendar quarter of each year, typically during May.

Please attach a copy of this letter to the OM&M Manual to document these changes.

If you have any questions, or need additional forms, please contact me at 585-226-5357 or e-mail: frank.sowers@dec.ny.gov.

Sincerely,

Frank Sowers
Project Manager

ec:
Justin Deming, NYSDOH
David Pratt, RHWRE
Joe Deatherage, Wood
Kourtney Verdi, Gray Rock

cc:
Roderick Nelson, Jr.

TABLE OF CONTENTS

Operations, Maintenance, and Monitoring Manual, Revision 1
Former Taylor Instruments Site
Monroe County, New York

LIST OF FIGURES

ACRONYMS

3DMe®	3-D Microemulsion®
ABB	ABB, Inc.
AR-CNTS	Assignable Release and Covenant Not to Sue
CCR	*Construction Completion Report*
CE	Combustion Engineering
COC	contaminant of concern
DCE	dichloroethene
Department	New York State Department of Environmental Conservation
DER-10	*DER-10/Technical Guidance for Site Investigation and Remediation*
DPVE	dual-phase vacuum extraction
EC	engineering control
EC/IC	Engineering and Institutional Control
EPA	Environmental Protection Agency
FER	*Final Engineering Report*
HRC	Hydrogen Release Compound
IC	Institutional Control
MACTEC	MACTEC Engineering and Consulting, Inc.
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	operations and maintenance
OM&M	Operations, Maintenance, and Monitoring
ORP	oxidation-reduction potential
PRR	Periodic Review Report
QA/QC	Quality Assurance/Quality Control
Site	former Taylor Instruments Site, located at 95 Ames Street in Rochester, New York
SMP	*Soil Management Plan*
SSD	sub-slab depressurization
SSIA	sub-slab vapor and indoor air
SVI	soil vapor investigation
TCE	trichloroethene
VCA	Voluntary Cleanup Agreement
VOC	volatile organic compound

1.0 INTRODUCTION

1.1 OBJECTIVES

This Revised Operations, Maintenance, and Monitoring (OM&M) Manual has been prepared to guide project personnel and any future Site owners in groundwater monitoring and in maintaining the Engineering Controls at the former Taylor Instruments Site, 95 Ames Street in Rochester, New York (Site), as well as, guiding project personnel and any future owners or occupants of the off-Site residential duplex located at 80 Ames Street and 215 Danforth Street, Rochester, New York, in operating and maintaining an off-Site sub-slab depressurization (SSD) system. This revised OM&M Manual replaces the original *Dual-Phase Vacuum Extraction Remediation System Operations and Maintenance Manual* prepared for the Site in March 2001 (Harding ESE, 2001). The 2001 Operations and Maintenance (O&M) Manual was prepared primarily for operation of an on-Site groundwater extraction and treatment system, which was recently decommissioned.

Section 1.0 of this manual provides general information about the Site. Section 2.0 describes the current groundwater monitoring program. Section 3.0 describes OM&M associated with the off-Site SSD system. Section 4.0 discusses the Engineering and Institutional Controls. Section 5.0 outlines the project reporting and certification requirements.

1.2 BACKGROUND

<u>On-Site Remedial Actions</u>

Combustion Engineering [CE, which was subsequently acquired by ABB, Inc. (ABB)] entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC or the Department) in November 1997, to investigate and remediate the Site. Figure 1 (Appendix A) is a Site Layout. The Site has been remediated to commercial/industrial use, and there is a recorded deed restriction notifying future owners to limit future uses of the Site to commercial/industrial purposes.

Comprehensive remedial actions implemented at the Site were previously detailed in the *Final Engineering Report, On-Site Storm Sewers* (Harding Lawson Associates, 2000a) [2000 FER], and the

Final Engineering Report (MACTEC Engineering and Consulting, Inc. [MACTEC], 2003) [2003 FER]. The 2003 FER also contained the *Soil Management Plan* (SMP) (MACTEC, 2005), which contains details on the Site Engineering and Institutional Controls that have been recorded at the Site. A copy of the SMP is provided in Appendix B. As detailed in the 2003 FER, a groundwater remedy was implemented from January 2001 to May 2006. This included an on-Site remedial treatment system which consisted of a dual phase vapor extraction (DPVE) and bedrock groundwater extraction and treatment system. This remedy and the associated remedial action objectives were described in detail in the *Remedial Work Plan* (Harding Lawson Associates, 2000b). The DPVE system extracted both vapor and overburden groundwater from the North and South Trichloroethene (TCE) Source Areas. The extracted vapor and groundwater were conveyed through subsurface piping to a treatment building. Two bedrock extraction wells also extracted deeper groundwater from beneath the Site, which was conveyed to the treatment building. Within the treatment building, all collected groundwater and vapor condensate was treated and then discharged to the Monroe County sewer system.

Upon reaching the conclusion that the remedial treatment system had reached asymptotic contaminant removal rates, and with NYSDEC's approval, in July 2006 MACTEC performed a pilot-scale application of Hydrogen Release Compound (HRC) Advanced®, a Regenesis product, near monitoring wells OB-08 in the North TCE Source Area and OB-04 in the South TCE Source Area of the Site to evaluate the effectiveness of HRC Advanced® in accelerating the biodegradation of the Site contaminants of concern (COCs) in lieu of further operation of the remedial treatment system. The results for the HRC Advanced® pilot-scale application were detailed in the *Accelerated Bioremediation Pilot Test Final Report* (MACTEC, 2008a).

Subsequent to the 2003 FER, the NYSDEC issued an *Assignable Release and Covenant Not to Sue* (AR-CNTS) (NYSDEC, 2005), subject to implementation of an O&M Plan that acknowledged the satisfactory implementation of the *Remedial Work Plan* (Harding Lawson Associates, 2000b). The AR-CNTS acknowledged satisfactory implementation of all Site remedial actions. The AR-CNTS indicated that:

> "*…no further investigation or response will be required at the Site respecting the Existing Contamination to render the Site safe to be used for the Contemplated Uses." …"The Department, therefore, hereby releases, …Volunteer for the further investigation and remediation of the Site, based on the release or threatened release of any Existing Contamination, provided that …Volunteer pursue to completion the Department-approved O&M Plan…"*

Pursuant to a letter from NYSDEC dated May 2, 2008 (NYSDEC, 2008) and subsequent discussions during a meeting on July 29, 2008 between ABB, MACTEC, ABB's legal counsel, and NYSDEC (MACTEC, 2008b), MACTEC prepared a *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remedial Treatment System for the Former Taylor Instruments Site* (hereinafter referred to as the Revised Work Plan) (MACTEC, 2010a). NYSDEC approved MACTEC's Revised Work Plan on June 29, 2010 (NYSDEC, 2010a).

At that July 29, 2008 meeting, it was agreed that additional remediation, in the form of an expansion of the accelerated bioremediation project which had been proven to be effective at the Site, would be implemented as the final step in remediating the Site.

ABB's proposed activities in the Revised Work Plan included:

- decommissioning the existing remedial treatment system and selected monitoring wells,
- an expanded application of accelerated bioremediation using HRC Advanced® (now known as 3-D Microemulsion [3DMe®]) in designated areas, and
- post-closure monitoring and report preparation schedules.

Beginning in August 2010, MACTEC implemented the Revised Work Plan (MACTEC, 2010a) which included an expanded bioremediation application using 3DMe®, which was completed on October 7, 2010. The work also included permanent decommissioning of the remedial treatment system, including removing all above-ground components of the system, plugging all system underground piping with silicone seal, and abandoning all extraction, vent, and monitoring wells that are not designated for post-closure monitoring. The permanent decommissioning of the remedial treatment system was completed on August 25, 2010. Complete details of the decommissioning activities and 3DMe® injection were provided in MACTEC's *Construction Completion Report* (CCR) (MACTEC, 2010b).

Off-Site Soil Vapor Investigation

During correspondence and communications with NYSDEC regarding MACTEC's aforementioned Revised Work Plan (MACTEC, 2010a), ABB was informed that the Department required an additional soil vapor investigation (SVI) as a precondition to approving the Revised Work Plan. The results of the SVI were presented in MACTEC's *Report of Soil Vapor Investigation* (MACTEC, 2009). Although no direct evidence that the selected volatile organic compounds (VOCs) were traveling from the Site onto adjacent

residential properties was obtained during the SVI, ABB, in cooperation with the NYSDEC and the New York State Department of Health (NYSDOH), agreed to investigate sub-slab vapor and indoor air (SSIA) at eight residences near the Ames Street soil vapor sample locations. The locations of the aforementioned residences in relation to the Site are shown on Figure 2 (Appendix A). The results from seven residences of the SSIA investigation were presented in MACTEC's *Vapor Mitigation Measure Work Plan* (MACTEC, 2010c). That Work Plan was approved by NYSDEC on August 17, 2010 (NYSDEC, 2010b). The results from the most recent residence sampled, 7 Lynchford Park B, will be presented in MACTEC's *Addendum to Vapor Mitigation Measure Work Plan* (MACTEC, 2011).

Based on the review of results from the SSIA investigation, only the residence at 80 Ames Street required further action. To ensure that TCE in sub-slab vapors does not cause future exceedances of indoor air guidance values, ABB elected to install an SSD system to mitigate vapors beneath the basement at 80 Ames Street as a precautionary measure. Additionally, since 80 Ames Street/215 Danforth Street is a duplex that share the same basement slab, the SSD system was designed to encompass the 215 Danforth Street basement.

2.0 ON-SITE GROUNDWATER MONITORING

2.1 OVERVIEW

This section details future Site semi-annual groundwater monitoring activities. After system decommissioning there remain a total of 14 monitoring wells on Site (see Figure 1, Appendix A) to be included in the groundwater monitoring program (unless a reduced monitoring program is agreed to by NYSDEC).

2.2 SITE GROUNDWATER MONITORING

Groundwater monitoring events initially will be conducted semi-annually on all 14 remaining monitoring wells. Construction details on the 14 monitoring wells remaining at the Site are provided in Appendix C. Groundwater samples will be submitted to TestAmerica, Inc. (New York State Lab ID# 11342), for analysis of the six primary COCs remaining at the Site: TCE; tetrachloroethene; cis-1,2-dichloroethene (DCE); trans-1,2-DCE; 1,1-DCE; and vinyl chloride. These VOCs will be analyzed for by Environmental Protection Agency (EPA) Method 8260B. Additionally, as requested by NYSDEC in an October 27, 2010 email (NYSDEC, 2010c), the groundwater samples will be tested for the full suite of 8260B constituents once every five years and prior to ending monitoring at any specified well. Results of the performance monitoring will be provided to NYSDEC in subsequent annual reports. Unless otherwise agreed by NYSDEC, performance monitoring will continue until COC concentrations are below the NYSDEC Class GA Standards. Groundwater monitoring wells will be properly decommissioned once NYSDEC approves their removal from the sampling program.

Consistent with the groundwater sampling procedures outlined in the original O&M Manual (Harding ESE, 2001), all samples will be collected using a low-flow purging technique. The sampling protocol consists of the following steps:

1. A "Field Data Record – Low Flow Groundwater Sampling" form will be completed for each sampled monitoring well. A copy of this form is provided in Appendix D.
2. The depth to water in the well will be measured and recorded prior to and during sampling.
3. A peristaltic pump capable of producing a flow rate of less than 400 milliliters per minute will be used to remove groundwater from a well. The pump intake will be located in the middle or slightly above the level of the screened interval. The depth

to water in the well will be monitored to minimize drawdown. Drawdown should remain less than 0.1 meter.

4. A flow-through cell (e.g., Horiba U-22) will be used to determine when the following parameters stabilize: pH, specific conductivity, oxidation-reduction potential (ORP), turbidity, dissolved oxygen, and temperature. Readings for these parameters will be taken at sufficient intervals so that each reading represents a separate, distinct volume of water. The interval will be based on the flow rate and the volume of the flow-through cell to ensure that enough water passes through the flow-through cell between readings. A parameter is considered stable when readings taken for three separate, successive volumes of water in the flow-through cell are within a certain range. Three successive readings should be within ±0.1 for pH, ±3 percent for conductivity, ±10 millivolts for ORP, and ±10 percent for turbidity, dissolved oxygen, and temperature.

5. Samples will be collected after the parameters stabilize. At a minimum, pH, conductivity, and turbidity or dissolved oxygen should stabilize. The flow-through cell will be disconnected during sample collection. Samples will be unfiltered and will be collected in containers appropriate for the analyses to be performed. Chain-of-custody forms that include all analytical samples will be completed. Samples will be placed on ice in coolers immediately and delivered to the analytical laboratory in a timely manner to allow for sample analysis within the required holding time.

6. If significant drawdown occurs, groundwater removal will continue at a low flow rate until the well is dry. As the well refills with water, samples will be collected when parameters become stable. Another option is to take water samples when the groundwater level in the well reaches the original level or 24 hours later, depending on the rate of refill.

7. Subject to the Site owner approval, purge water generated during sampling will contained in labeled drums and stored on-Site in the former treatment system building or at another secure Site location prior to proper disposal.

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

2.2.1 Quality Assurance/Quality Control (QA/QC)

During each groundwater monitoring event, one duplicate sample, one rinse blank sample, one field blank sample, and a matrix spike/matrix spike duplicate sample will be collected as part of QA/QC procedures. A trip blank will also be submitted with each cooler shipment. All QA/QC samples will be analyzed for VOCs by EPA Method 8260B.

Analytical Services Protocol Category B data deliverables and Data Usability Summary Reports will be provided prior to ceasing sampling at the Site or at an individual monitoring well.

3.0 OFF-SITE SSD SYSTEM OPERATION, MAINTENANCE, AND MONITORING

3.1 OVERVIEW

This section provides details on the SSD system that was installed at the off-Site residential duplex in September 2010, including the system components, as well as, system OM&M procedures.

3.2 SUB-SLAB DEPRESSURIZATION SYSTEM COMPONENTS

The SSD system consists of the following components:

- Two suction points located in the basement slab of the 215 Danforth Street residence.
- 4-inch Schedule 40 polyvinyl chloride system piping, with the discharge located above the southeastern roof eve. The system piping was installed such as to allow condensate to drain back to the sub-slab.
- A Radonaway model RP-145 vent fan. The fan has a weatherproof design, is mounted on the outside of the structure, and was sized to provide the pressure difference and air flow characteristics necessary to achieve the vapor reduction goals. The vent fan is equipped with a fan guard which drains condensate back to the sub-slab.
- A monitoring device consisting of a manometer pressure gauge indicating proper operation of the system.

The SSD system layout and construction details are provided in Appendix E. Complete details of the SSD system installation were provided in the CCR (MACTEC, 2010b).

3.3 SUB-SLAB DEPRESSURIZATION SYSTEM OM&M

Upon completion of SSD system installation and post mitigation testing, the duplex owner was provided with written system OM&M procedures in the form of a *Site Management Plan* (MACTEC, 2010d). These procedures were also discussed with the owner after installation of the System. The Plan was prepared to address the OM&M requirements for mitigation systems outlined in Section 4.4 of the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYSDOH, 2006). Included in the Plan were details of the system components, operating procedures, guidelines for periodic

system inspections, and guidelines for system repair. A copy of the *Site Management Plan* is provided in Appendix F. Copies of the *Site Management Plan* were also submitted to NYSDEC and NYSDOH.

The initial inspection and maintenance will be performed by the installation contractor, Mitigation Tech, approximately 18 months after system installation (i.e., approximately February 2012). Subsequent inspections will be performed by Mitigation Tech approximately annually thereafter.

4.0 ENGINEERING AND INSTITUTIONAL CONTROLS

4.1 OVERVIEW

A Deed Restriction was executed for the Site in 2003 (ABB, 2003) and amended in 2005 (ABB, 2005). A copy of the Deed Restriction is included as Appendix G. The Deed Restriction included requirements for the Site Engineering and Institutional Controls (ECs/ICs), which were put into place to ensure continued protection of human health and the environment and notice to future owners of the Site. These Site engineering controls (ECs) are shown on the Determination of Engineering Control Area figure attached with the Deed Restriction (Appendix G) and are described in the following sections.

Additionally, the SSD system is an EC that has recently been implemented at the previously-mentioned off-Site residential duplex.

As applicable, the long-term operation and maintenance of these ECs and monitoring of Site groundwater will be performed in accordance with this OM&M Manual once approved by NYSDEC.

4.1.1 Engineering Controls (ECs)

Asphalt Cap

Included in the Site Deed Restriction is a requirement to maintain an EC consisting of an asphalt cover in the area of previous soil excavations. The area designated as the "asphalt cap maintenance area" is shown on the Determination of Engineering Control Area figure in the Deed Restriction (Appendix G). Any alternative cover material must first be approved by the Department. Complete details of the soil asphalt cap were previously presented in the FER (MACTEC, 2003). Details on the future inspection of the asphalt cap are provided in Section 4.2.

Other Site Engineering Controls

As previously detailed in the FER (MACTEC, 2003), included in the Site Deed Restriction is a requirement that any new Site buildings constructed over a delineated area will require a vapor barrier or SSD system (Appendix G).

SSD System

As detailed in the *Vapor Mitigation Measure Work Plan* (MACTEC, 2010c), the SSD system located within the off-Site residential duplex is an EC that was implemented in September 2010. Details on the SSD system are provided in Section 3.0.

4.1.2 Institutional Controls (ICs)

Also included in the Site Deed Restriction are various ICs to ensure continued protection of human health and the environment. These ICs include:

- Future development will continue to be restricted to commercial and/or industrial (i.e., no residential or daycare) use as stipulated in the VCA.
- The Deed Restriction and/or other IC will prohibit future buildings constructed on the Site from having subsurface basements (i.e., slab on grade type construction will be necessary).
- The Deed Restriction will prohibit the use of the groundwater beneath the Site unless it does not affect the on-going remediation at the Site and the groundwater undergoes treatment that would render it safe for drinking or industrial purposes.
- The Site SMP (MACTEC, 2005) must be implemented prior to any future commercial and/or industrial development at the Site. This SMP addresses the proper health and safety-related measures, monitoring, and soils management associated with any future excavation or construction activity.
- Access to all Site monitoring wells must be given, and will be restricted, to authorized environmental personnel for the purposes of monitoring and related activities.
- A provision must be established requiring ABB or future property owners to continue the necessary ICs and/or ECs identified herein.

ICs identified in the Deed Restriction will not be discontinued without an amendment to or extinguishment of the Deed Restriction.

4.2 INSPECTIONS

4.2.1 Inspection Frequency

A Site-wide inspection, which will include the Site asphalt cap, will be performed during semi-annual groundwater monitoring events. The asphalt cap serves as an additional control intended to prevent direct

contact with residual impacted soils that may remain beneath 12 inches of clean fill that was placed under the cap in areas excavated during Site remediation. As recorded, the Deed Restriction does not specify the criteria for maintaining the cap. For purposes of this OM&M plan, the recommended maintenance activities for the cap are those which ensure that its integrity is adequate to prevent significant contact with subsurface soils.

The off-Site SSD System will be inspected by the installation contractor, Mitigation Tech (National Environmental Health Association National Radon Proficiency Program certification #100722), approximately every 12 to 18 months.

4.2.2 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;
- Operation and maintenance activities are being conducted properly, based on the above items; and
- The Site remedy continues to be protective of public health and the environment.

5.0 REPORTING AND CERTIFICATION

Data collected under this OM&M Manual will be submitted to NYSDEC in a format acceptable to NYSDEC, including submission of data in electronic data deliverable format provided at http://www.dec.ny.gov/chemical/62440.html.

5.1 REPORTING

Groundwater Monitoring Reports

MACTEC will submit groundwater monitoring reports to NYSDEC annually. Groundwater monitoring reports will include, but not be limited to:

- A summary of activities, such as wells sampled, type of sampling (e.g., low flow), analytical methods, field tests, and field measurements
- Map(s) showing the location of monitored wells
- Groundwater levels for the monitoring event
- Potentiometric surface map(s) and interpretation of groundwater flow direction(s) and gradient(s)
- Analytical results for COCs
- Interpretation and analysis of data, including:
  - comparison of analytical results for COCs to remediation goals
  - comparison of data to previous results
- A copy of laboratory analytical reports and chain of custody forms

Sub-Slab Depressurization System Inspection Report

MACTEC will submit the results of the inspection and testing of the SSD system to the NYSDEC. The SSD system installation contractor, Mitigation Tech, will perform the inspection.

Periodic Review Report

A Periodic Review Report (PRR) will be submitted to the Department annually. The PRR will be included in the annual progress report and will be prepared to address the requirements of the NYSDEC *DER-10/Technical Guidance for Site Investigation and Remediation* (NYSDEC, 2010d).

5.2 CERTIFICATION REQUIREMENTS

Submission of an annual certification to NYSDEC will be performed for the ECs and ICs detailed in Section 4.0. The certification of ECs/ICs will be prepared and submitted by a Professional Engineer or qualified environmental professional, as applicable, and affirm that the ECs/ICs are in place, are performing properly (for ECs), and remain effective. The ECs/ICs will be certified to meet the requirements of DER-10 (NYSDEC, 2010d). The SSD system will also be certified to meet the requirements of Section 4.6 of the NYSDOH Guidance (NYSDOH, 2006).

5.3 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.

6.0 REFERENCES

ABB, 2003. *Declaration of Covenants and Restrictions*. Executed by Mr. A.P. Karlbergs of ABB Prospects, Inc. (October 13).

ABB, 2005. *Amended Declaration of Covenants and Restrictions*. Executed by Mr. A.P. Karlbergs of ABB Prospects, Inc. (January 21).

Harding ESE, 2001. *Dual-Phase Vacuum Extraction Remediation System Operations and Maintenance Manual, Former Taylor Instruments Site, 95 Ames Street, Rochester, New York* (March).

Harding Lawson Associates, 2000a. *Final Engineering Report On-Site Storm Sewers, Taylor Instruments Site, Rochester, New York.* Prepared for Combustion Engineering (January).

Harding Lawson Associates, 2000b. *Remedial Work Plan, Taylor Instruments Site, 95 Ames Street, Rochester, New York.* Prepared for Combustion Engineering (April).

MACTEC, 2003. *Final Engineering Report, Former Taylor Instruments Site, Rochester, New York.* Prepared for Combustion Engineering (September).

MACTEC, 2005. *Soil Management Plan, Former Taylor Instruments Facility, 95 Ames Street, Rochester, New York 14611*. Prepared for Combustion Engineering (April).

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MACTEC, 2010a. *Revised Work Plan for Accelerated Bioremediation and Permanent Decommissioning of the Remedial Treatment System, Former Taylor Instruments Site, 95 Ames Street in Rochester, New York.* Prepared for the New York State Department of Environmental Conservation (June 11).

MACTEC, 2010b. *Construction Completion Report, Former Taylor Instruments Site, Monroe County, New York*. Prepared for ABB, Inc. (November).

MACTEC, 2010c. *Vapor Mitigation Measure Work Plan for 80 Ames Street and 215 Danforth Street, Former Taylor Instruments Site, Rochester, New York.* Prepared for ABB, Inc. (July).

MACTEC, 2010d. *Site Management Plan for Sub-Slab Vapor Mitigation System Operation and Maintenance, Duplex at 80 Ames Street and 215 Danforth Street in Rochester, New York.* Prepared for Mr. Kevin Carter, property owner (October 25).

MACTEC, 2011. *Addendum to Vapor Mitigation Measure Work Plan*. Prepared for the New York State Department of Environmental Conservation (January 17).

NYSDEC, 2005. Letter to Ms. Jean H. McCreary with Nixon Peabody LLC (September 2).

NYSDEC, 2008. Letter to Mr. Ricky A. Ryan with MACTEC Engineering and Consulting, Inc. (May 2).

NYSDEC, 2010a. Letter to Mr. Ricky A. Ryan with MACTEC Engineering and Consulting, Inc. (June 29).

NYSDEC, 2010b. Letter to Mr. Ricky A. Ryan with MACTEC Engineering and Consulting, Inc. Approval of Vapor Mitigation Measure Work Plan (August 17).

NYSDEC, 2010c. Email to Mr. Ricky A. Ryan with MACTEC Engineering and Consulting, Inc. (October 27).

NYSDEC, 2010d. New *York State Department of Environmental Conservation Program Policy DER-10/Technical Guidance for Site Investigation and Remediation* (May 3).

NYSDOH, 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York.* Prepared by the New York State Department of Health (October).

APPENDIX A

FIGURES

ROCHESTER GAS AND ELECTRIC

N

HAGUE STREET

RESIDENCES

WEST AVENUE

FORMER GROUNDWATER TREATMENT BUILDING

STORAGE SHED

N/F NEW YORK CENTRAL RAILROAD TRACKS

FORMER INDUSTRIAL FACILITY (VACANT)

BUILDING FOUNDATION

LEGEND

- OVERBURDEN MONITORING WELL (OB, MW, TW, W)
- BEDROCK MONITORING WELL (BR)

0 20' 40' 80'

SCALE: 1"=80'

W-5

OB-08

BR-15

BR-04

OB-04

BR-01

TW-17

BR-10

OB-06

TW-04

BR-03

TW-09

BR-02

TW-20

AMES STREET

RESIDENCE RESIDENCE RESIDENCE

MACTEC

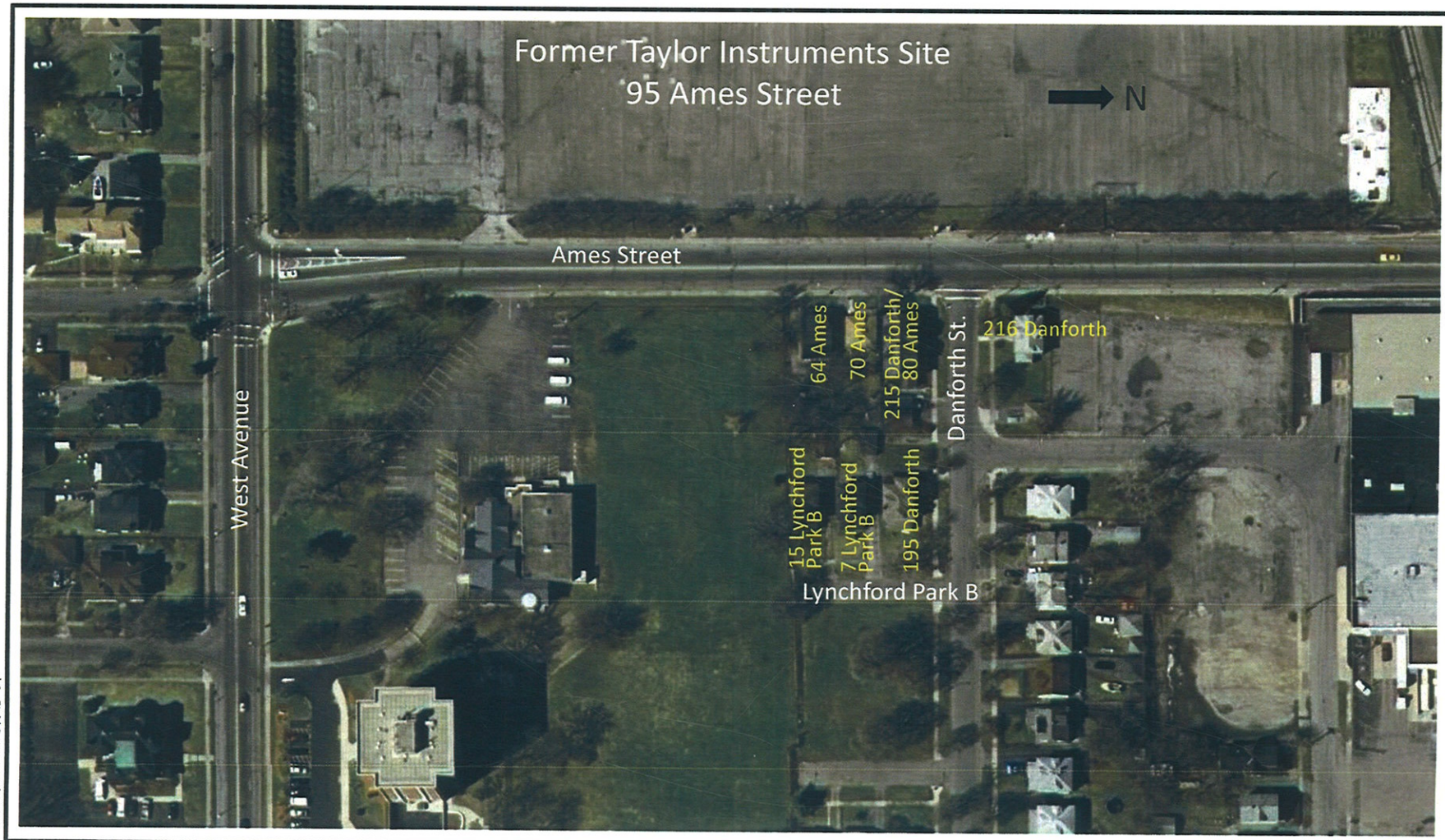
Engineering and Consulting, Inc.
9725 Cogdill Road
Knoxville, TN 37932
(865) 588-8544

SITE LAYOUT
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

1

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
	3031052006	JD	07/22/08	11/22/10

P:\ABB Business Services\3031052006 Rochester\9 - Drawings\MACTEC Drawings\3031052006 - Rochester\2010 november\3031052006_fig 1 (nov 2010).dwg Mon, 22 Nov 2010 - 2:12pm reverenc



Prepared by: MLV 3/9/2010
Checked by: KJD 3/9/2010

MACTEC

FIGURE 2: OFF-SITE RESIDENCES SUBJECT TO VAPOR INVESTIGATION

FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

Project 3031052006-12

...\6 - Field Documents\Soil Vapor\2010-02 SS and IA Investigation\

APPENDIX B

SOIL MANAGEMENT PLAN

SOIL MANAGEMENT PLAN

Former Taylor Instruments Facility
95 Ames Street
Rochester, NY 14611

Prepared for:

Combustion Engineering
501 Merritt 7
Norwalk, CT 06851

Prepared by:

MACTEC Engineering and Consulting, Inc.
1431 Centerpoint Boulevard, Suite 150
Knoxville, TN 37932

APRIL 2005

MACTEC
Engineering and Consulting, Inc.
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TABLE OF CONTENTS

Soil Management Plan
Former Taylor Instruments Site
Rochester, New York

ACRONYMS

bgs	below ground surface
C-E	Combustion Engineering
CFR	Code of Federal Regulations
DPVE	Dual-Phase Vapor Extraction
FER-Sewers	Final Engineering Report for On-Site Storm Sewers
FIR	Final Investigative Report
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
MCDOH	Monroe County Department of Health
MCPW	Monroe County Pure Waters
mg/m^3	milligrams per cubic meter
NYSDEC	New York Department of Environmental Conservation
NYSDOH	New York State Department of Health
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PID	Photo Ionization Detector
RWP	Remedial Work Plan
Site	Former Taylor Instruments Facility
SMP	Soil Management Plan
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
VCA	Voluntary Cleanup Agreement
VOC	volatile organic chemical

1.0 INTRODUCTION

This Soil Management Plan (SMP) has been prepared to outline soil management requirements that should be used by developers, designers, and construction personnel in conducting redevelopment activities at the former Taylor Instruments Facility (Site). The Site has undergone extensive investigation and cleanup under the direct oversight of the New York Department of Environmental Conservation (NYSDEC). These investigations and cleanup were intended to insure that no potentially hazardous materials were left at the Site that could cause a threat to human health or the environment. However, because the Site was used for heavy manufacturing for almost 100 years, there remains a possibility that, despite all the investigation and remedial work done, there may still be some level of hazardous Site-related constituents in the soil. This SMP has been prepared to ensure continued protection of human health and the environment during future construction and site occupation for commercial and/or industrial purposes.

1.1 SITE BACKGROUND

The Site is located at 95 Ames Street, Rochester New York. The Site, approximately 14 acres in size, is being considered for commercial and or industrial redevelopment (Figure 1-1). The Site was the location of the former Taylor Instruments Facility that began operation in 1904 and operated under a variety of owners until 1993 when C-E, the current owner, closed the facility. Taylor Instrument and its successors initially manufactured thermometers and other glass filled measuring instruments. In later years more sophisticated measuring instruments and control systems were manufactured at the Site. The facility was demolished in 1995.

Historic material handling practices associated with the facility produced the soil and ground-water contamination at the Site. The primary contaminants at the Site, prior to remedial activities, were volatile organic chemicals (VOCs) in soil and groundwater, mercury in soil, and mercury in the on-site storm sewers (sewers). All remedial work performed at the Site has been and is being performed under lead agency oversight from the NYSDEC with additional oversight from the New York State Department of Health (NYSDOH), Monroe County Department of Health (MCDOH), and Monroe County Pure Waters (MCPW).

1.2 VOLUNTARY CLEANUP AGREEMENT

C-E and NYSDEC entered into Voluntary Cleanup Agreement (VCA) Index Number B8-0508-97-02 to establish a framework within which C-E would implement the Investigative and Remedial Work Plans (RWP) to address the contamination at the Site (NYSDEC, 1997). Under this agreement, C-E investigated the contamination at the Site, proposed remedial goals, and performed remedial actions. The VCA also allows future Site redevelopment with applicable covenants and restrictions until the remedial goals for the Site are achieved. Through the VCA,

new owners and operators at the Site will receive transferable releases and covenants not to sue issued by NYSDEC.

1.3 SITE INVESTIGATION

The 1999 Final Investigative Report (FIR) describes the nature and extent of contamination at the Site prior to remediation (Harding Lawson Associates, 1999). The FIR described the principal contamination at the Site as VOCs in the soil and groundwater and mercury in the soil. The FIR also concluded that on-site sewers contained sediment that had been a contributing source of mercury contamination to the MCPW combined sewer system. This report, and others detailing the investigation and cleanup at the Site, are available at the locations listed in Section 2.1.

1.4 STORM SEWERS REMEDIATION

The Final Engineering Report for On-Site Storm Sewers (FER-Sewers), Taylor Instrument Site, Rochester, New York describes the remedial work performed on the on-site storm sewers (Harding Lawson Associates, 2000a). The FER for Sewers was approved by MCPW on March 14, 2000. The remedial work achieved the following: 1) eliminated the remaining connections to MCPW's combined sewer on Ames Street; 2) ensured that no mercury-containing sediment was present within the on-site sewers draining to MCPW's combined sewer on Hague Street; 3) replaced on-site clay tile storm sewers; and 4) brought the storm water collection and conveyance infrastructure up to City code (with respect to the current layout of the site).

C-E has an MCPW industrial user's discharge permit for the storm water collected by on-site sewers. The permit requires quarterly monitoring of the on-site storm sewers from the four manholes on the north side of the property over the next two years (Figure 1-1). C-E will maintain this permit and collect the required samples, even if the ownership of the Site is transferred before this permit (and these conditions) expire.

1.5 GROUNDWATER AND SOIL REMEDIATION

The Remedial Work Plan, Former Taylor Instruments Facility, Rochester, New York contains the remedial goals and describes the remedy for contaminated soil and groundwater at the Site as well the requirements for monitoring the effectiveness of the remedy (Harding Lawson Associates, 2000b). The remedy for VOC shallow soil and all mercury soil contamination was excavation. Approximately 29,000 tons of soil was excavated from the Site and disposed of off site. The areas from which contaminated soils were removed have been backfilled with gravel (after NYSDEC approved the results of confirmatory samples demonstrating that the remaining soils were sufficiently free of contaminants) are shown on Figure 1-2.

The remedy for VOC deeper soils and groundwater contamination is Dual-Phase Vapor Extraction (DPVE). The DPVE remedial system is currently operating at the Site and is expected to need to be operated for approximately 3 years. The DPVE system is pulling both air

and shallow groundwater from the nearby soils (as shown in Figure 1-3). This air and groundwater is conveyed through subsurface pipes to the new treatment building. With the exception of the new treatment building, this remedial system is entirely subsurface. A Site plan of the treatment building that contains the remedial system, associated conveyance piping, and well vaults are shown on Figure 1-3.

There are also several deep bedrock wells that have been installed on site that are expected to need to be pumped for many years. These wells, the locations of which are also shown on Figure 1-3, do not extend above the surface at the Site. The wells pump deep groundwater from beneath the Site to the treatment building where it is treated and then discharged to the MCPW sewer system.

C-E and its consultants/contractors will need access to the treatment and the wells until all the remedial goals have been achieved and NYSDEC has determined that no further action is required at the Site.

1.6 INSTITUTIONAL CONTROLS AND DEED RESTRICTIONS

As described in the RWP, various restrictions and controls are to be put into place prior to Site redevelopment to ensure continued protection of human health and the environment as the Site is developed. These must be reviewed by potential developers and/or owners to ensure that they understand the actions/restrictions that are required. In accordance with Section X of the VCA, C-E is responsible for putting into place Institutional Controls and Deed Restrictions. These controls and restrictions apply to the entire site except for those engineering controls requiring sub-slab depressurization systems and prohibiting subsurface basements which apply to the blue cross hatched areas appearing on the map dated July 2, 2004 entitled "Determination of Engineering Control Areas" which was filed with the amended deed restrictions and is included in the SMP's appendix. These boundaries may change depending on conditions discovered during any site development activities. The Institutional Controls and Deed Restrictions are as follows:

- Future development will continue to be restricted to commercial and/or industrial (i.e., no residential or daycare) use as stipulated in the VCA.
- Deed restriction and/or other institutional control will prohibit future buildings constructed on the site from having subsurface basements (i.e., slab on grade type construction will be necessary).
- A deed restriction prohibiting the use of the groundwater beneath the site unless it would not effect the on-going remediation at the site and the groundwater undergoes treatment that would render it safe for drinking or industrial purposes will be established.

- NYSDOH has determined that if a building's sub-slab air is impacted by contaminated groundwater and/or soil then the building must have a sub-slab depressurization system installed. Any new buildings constructed over or near residual contamination areas or contaminated groundwater will need a sub-slab depressurization system.

- Implementation of a SMP prior to any future commercial and/or industrial development at the Site. This Plan will address the proper health and safety-related measures, monitoring, and soils management associated with any future excavation or construction activity. This document is the required SMP.

- Access to all Site monitoring wells, extraction wells, vent wells, and remediation equipment must be given, and will be restricted, to authorized environmental personnel for the purposes of site inspection, operations, maintenance, monitoring, and related activities.

- As provided in the VCA, C-E will record the formal Deed Restrictions within 30 days of receipt of NYSDEC's approval of the FER for the Site.

- Establishment of a provision requiring C-E or future property owners to continue the necessary institutional and/or engineering controls identified herein.

- The asphalt cover in the area depicted by a blue circle on the above map must be maintained and any alternative cover material must first be approved by the Department.

2.0 DEVELOPMENT AND PRE-EXCAVATION PLANNING

Extensive records of previous work performed at the Site are available at various locations. A list of several summary investigation reports is appended to this document. Redevelopment planners should consider information from past investigations and remediation that is available for the Site. However, proposed development locations located near the edge or outside of remediated areas should consider existing data sources in the course of development planning, building, design, and construction planning.

2.1 SITE PLANNING AND EXISTING INFORMATION

Various records pertaining to the operating history of the Site, as well as investigations and remediation at the Site, may be accessed at the designated Document Repository and through the following agencies:

- Arnett Public Library (Document Repository)
  310 Arnett Boulevard
  Rochester, New York 14619

- New York State Department of Environment and Conservation
  Region 8 – Division of Environmental Remediation
  6274 East Avon-Lima Road
  Avon, New York 14414
  Attention: Mr. David Pratt, P.E.
  585-226-2466

- Monroe County Department of Health
  111 Westfall Road, Room 908
  Rochester, New York 14692
  Attention: Mr. Joe Albert
  585-274-6904

- New York State Department of Health
  584 Delaware Avenue
  Buffalo, NY 14202
  Attention Mr. Matthew J. Forcucci
  716- 847-4385

Information found at these locations generally includes reports of past investigation, historical information, subsurface exploration data, remedial action work plans and reports, and

environmental quality data. The environmental quality data includes laboratory analytical results and waste characterization information of material encountered at the Site.

2.2 CONSTRUCTION AND DESIGN CONSIDERATIONS

2.2.1 Schedules/Notifications

Scheduling of construction will need to allow for potential sampling, monitoring, and management of soil as described below in Section 3.3. Notification of proposed activities and schedule should be made to the agencies (not the Document Repository) listed in Section 2.1.

2.2.2 Sub-Slab Depressurization Systems

C-E and its environmental consultants do not expect that the VOCs which are being remediated through the DPVE and/or groundwater well pumping program are at levels that pose any threat to future occupants of the Site. However, the NYSDOH has determined that if a building's sub-slab air is impacted by contaminated groundwater and/or soil) then the building must have a sub-slab depressurization system installed. Indoor air monitoring and/or vapor barriers are no longer considered adequate since conditions can change. NYSDOH and NYSDEC have mandated that any new buildings constructed over or near residual contamination areas or contaminated groundwater will need sub-slab depressurization systems. All new Site owners/developers must insure that such sub-slab depressurization systems are included in their building designs.

2.2.3 Existing Subsurface Structures

2.2.3.1 On-site Storm Sewers

To prevent the further contamination of the storm sewer system, the integrity of the existing system must be maintained during construction activities. Also, erosion control measures must be taken to prevent excavated soil from entering the sewer system via on-site catchbasins and manholes. Additionally, the ability to access each of the four manholes near the northern boundary of the Site must be maintained because each manhole needs to be periodically sampled to comply with C-E's Industrial User's Permit for the Site as issued by MCPW (Figure 1-1).

2.2.3.2 Foundations and Footers

During remedial activities foundations, building footers, and miscellaneous subsurface structures were left in place and/or used as rubble fill. These fill material have the potential to slow future construction-related excavation.

2.2.3.3 Remediation System

The Site is currently undergoing active remediation of deeper soils and groundwater with a DPVE remediation system and a deeper well pumping system (remedial systems). **The integrity**

and operation of the remedial systems must be maintained during, and after, Site redevelopment (Figure 1-3). The remedial systems remove contaminated groundwater and soil vapor from a series of extraction wells, conveys the air/water through underground piping to the treatment system located in the treatment building, and then discharges treated water to the on-site sewer system.

In addition, there are monitoring wells that track the effectiveness of the remediation, which must be maintained during and after Site redevelopment. The location of these wells is shown on Figure 1-2.

3.0 MONITORING DURING CONSTRUCTION ACTIVITY

During excavation for Site redevelopment, there is the potential for soil to be encountered that may contain residual contamination. Monitoring during excavation is generally needed: 1) to protect the health and safety of site workers during excavation activities; and 2) to determine if the excavated soil needs to be managed consistent with this SMP.

3.1 AIR MONITORING

Continuous work zone air monitoring for mercury vapors and organic vapors will be required during any Site excavation activity to ensure construction worker safety. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for mercury is 0.05 milligrams per cubic meter (mg/m^3) and the PEL for trichloroethene (TCE) is 50 mg/m^3. Mercury vapors can be measured with a Jerome Vapor Analyzer, and organic vapors can be measured with a Photo Ionization Detector (PID). The subcontractor performing the excavation work can consult the C-E Health and Safety Plan (HASP) used during site remedial activities in developing their own Site-Specific HASP that complies with Hazardous Waste Operations and Emergency Response (HAZWOPER) as required by 29 Code of Federal Regulations (CFR) 1910.120. Additionally, all air monitoring activities must adhere to the NYSDOH Community Air Monitoring Plan (Subappendix B).

3.2 AREA OF REMEDIATED SOIL

The area of remediated soil covers approximately 2.8 acres with the depth of the excavation varying from 4 feet to 12 feet below ground surface (bgs) (Figure 1-2). Subappendix A contains the target soil cleanup levels established by NYSDEC.

In the area of remediated soil, the contaminated soil has been replaced with clean gravel backfill. The gravel backfill, if excavated, can be reused on site as non-cover material, or sent off site for unrestricted disposal.

3.3 EXCAVATION BEYOND AREAS OF REMEDIATED SOIL

During excavation beyond the areas of remediated soil, there is the possibility of encountering some residual contamination. The types of residual material in the subsurface that may be encountered are soil, thermometer (and other instrument) shards, and construction debris such as concrete, wood, and brick.

Evacuated on-site soil/fill shall not be used as cover material. If measurement of the vapors just above excavated soil/material exhibits no detectable organic or mercury vapors and shows no visible signs of contamination, then the soil can be reused on site as non-cover material, or sent off site for appropriate disposal, as appropriate. Non-cover material that is encountered or re-used at the site must have at least one foot of clean cover material placed over it.

Soil that contains either detectable organic vapors or mercury vapors (as measured by real-time air monitoring instruments); visible staining; or thermometer shards should be segregated. This segregated soil should be placed on heavy duty plastic sheeting and covered with heavy duty plastic sheeting (both of which should be anchored in place to prevent stormwater run on and/or blowing of the piled soil). The segregated soil should be sampled in order to determine appropriate disposition (see Section 3.4 below).

3.4 DISPOSITION SOIL SAMPLING

It is the responsibility of the new owner/operator and their consultants to establish appropriate sampling and analytical protocols for any segregated soil/material. The analytical results for this material should be evaluated and used to determine the appropriate soil/material management (i.e., available for use on site, sent off site as a nonhazardous waste, sent off site as a hazardous waste) method. All such segregated soil management decisions must be made in accordance with local, State, and Federal regulations.

During remediation, C-E collected two representative composite soil samples for every 370 cubic yards of excavated soil that met the segregation criteria listed in Section 3.3. The segregated soil was sampled and submitted to a NYSDEC-approved laboratory for analysis by United States Environmental Protection Agency (USEPA) Method 8260 for VOCs and USEPA Method 7471A for total mercury.

This segregated soil should be managed in accordance with USEPA Method 8260 for VOCs and USEPA Method 7471A for total mercury in accordance with local, State, and Federal regulations.

4.0 SUMMARY AND LIMITATIONS

In summary, clean up activities have been and are being performed to remediate the Site in accordance with VCA No. B8-0508-97-02 with oversight from NYSDEC, NYSDOH, MCHD, and MCPW. As future Site redevelopment occurs, this SMP is to be used by the new owner/ developer to ensure proper management of excavated soil. Accordingly, this guidance document has been developed to assist developers and designers in planning for development in general; for sampling materials that may be encountered during excavation; and for management of those materials, if necessary.

This document is intended for guidance purposes only. The information contained in the document is neither to be considered as specific direction or policy binding on the involved agencies or firms mentioned in this document. **Responsibility for planning for construction; properly characterizing excavated materials; and appropriate management of any materials encountered, generated, or handled during Site redevelopment is solely the responsibility of the Site developer, owner, and/or designer.**

5.0 REFERENCES

Harding Lawson Associates (HLA), 1999. Final Investigation Report (April).

HLA, 2000a. Final Engineering Report, On-Site Storm Sewers (January).

HLA, 2000b. Remedial Work Plan (April).

NYSDEC, 1994. Technical Guidance Assistance Manual 4046 – *Determination of Soil Cleanup Objectives and Cleanup Levels (January).*

NYSDEC, 1997. *Voluntary Cleanup Agreement Taylor Instruments Site # 828028a (November).*

SUBAPPENDIX A

NYSDEC TARGET SOIL CLEANUP LEVELS

Subappendix A
NYSDEC Target Soil Cleanup Levels

METALS [mg/kg]	CLEANUP GOAL
Cadmium**	**40**
Chromium**	**35**
Copper**	**25**
Cyanide**	**5**
Lead**	**270**
Mercury*	**100**
Nickel**	**115**
Silver**	**5**
Zinc**	**400**

* Mercury concentration is from 1 foot below ground surface and deeper.
** Metals concentrations are derived from site specific background concentrations.
Cleanup goals for other contaminants can be found in NYSDEC's TAGM 4046.

Harding Lawson Associates
1400 Centerpoint Boulevard, Suite 158
Knoxville, TN 37932
Telephone: 865/531-1922
Fax: 865/531-8226

Engineering, Environmental,
and Construction Services

August 31, 2000

David Pratt, P.E.
NYSDEC
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

RE: Confirmatory Sampling Results and
Request For Technical Impracticality Waiver/Equivalency Determination
Former Taylor Instruments Site
Rochester, New York 14611
Voluntary Cleanup Agreement (VCA) Index #B8-0508-97-02

Dear Dave:

As requested in your August 22, 2000 e-mail, this letter contains a formal request for grid-specific variances from the site-specific cleanup goals at the subject site. This request is divided into two parts:

- Part 1 contains most of the copper related requests. The majority of these requests have already been submitted by e-mail and/or via phone. Based on your approval, these grids have been backfilled. To insure a complete and formal record, these prior requests are also included in this letter. Also included in Part I are similar copper related requests for three additional cells for which analytical results were recently received; and

- Part II of this letter contains an Technical Impracticability Request Waiver/TAGM Equivalency determination request for three grids for which data has not yet been submitted to New York State Department of Environmental Conservation (DEC). In addition to copper, there are several SVOCs whose levels are slightly higher than TAGM 4046 levels. These grids have been excavated beyond the extent presented in the RWP. We request your concurrence that further remediation is technically impracticable and grant a determination that will allow us to backfill these cells. We believe our completed action will still leave the remediated site in a state which is equivalent (in terms of short and long term environmental safety) to that which would have been achieved if the TAGM-based clean up numbers had been achieved. See Remedial Work Plan ("RWP") Section 1.3 and 6 NYCRR S375-1.10 (C) (1)(c) and (d).

I. Copper Variance Requests

As we have previously discussed with you several times, the additional copper data we gathered during earlier investigations at the site has demonstrated that our current site-specific copper background level (which then became the TAGM 4046-based cleanup goal) is lower than the actual background concentration. As detailed in our submittal entitled "Defined Site Soil Background Levels To Meet TAGM 4046 For Inorganic Soil Constituents Former Taylor Instrument Site Rochester, NY" the Defined Site Background Levels, based on 10 data points, was 15 mg/kg. Because this was lower than the TAGM 4046 level (25 mg/kg or site background), 25 mg/kg was set as the clean up goal. However, during remediation, numerous samples collected at the site have indicated that the site background soil copper level is variable. As indicated in our "Defined Site Background" submittal, the USGS has indicated that the range of soil copper levels in the Eastern US is from <1 to 700 mg/kg. Based on the more extensive site data we believe that for the cells listed below, (as well as all the cells where Copper levels were 25 mg/kg or less) we have achieved the TAGM 4046 "soil background" clean up goal.

AREA 1

A1L03: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 46.7 mg/kg and the background number is 25 mg/kg. Based upon our previous conversations, we are requesting that 46.7 mg/kg be considered the grid specific background concentration for copper.

The E-mail notification above was sent to the DEC on 8/14/00 and the analytical results were sent by Federal Express on 8/14/00 to the DEC. HLA has backfilled this grid.

A1L05: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 66 mg/kg and the background number is 25 mg/kg. HLA is requesting a variance in the background number for copper.

The E-mail notification above was sent to the DEC on 8/1/00 and the analytical results were sent by Federal Express on 8/1/00 to the DEC. HLA has backfilled this grid.

A1L06: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 48.7 mg/kg and the background number is 25 mg/kg. HLA is requesting that this grid be considered below the TAGM for copper.

The e-mail notification above was sent to the DEC on 8/1/00 and the analytical results were sent by Federal Express on 8/1/00 to the DEC. HLA has backfilled this grid.

A1L08: Confirmatory sample results are below the TAGM with the exception of copper in the southwest wall. The copper concentration in the initial southwest lift wall was 65 mg/kg. Excavation of one additional foot on the southwest wall and resampling for copper yielded a

concentration of 104 mg/kg. A third excavation of 4 feet along the southwest wall and resampling for copper yielded a concentration of 132 mg/kg.

HLA is requesting a variance in the background concentration for copper on this grid wall. The analytical results above are to be sent to the DEC by Federal Express to DEC.

A1L12: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 60.6 mg/kg and the background number is 25 mg/kg. As above, we are requesting that 60.6 mg/kg be considered the grid specific background concentration for copper this grid.

The e-mail notification above was sent to the DEC on 8/14/00 and the analytical results were sent by Federal Express to the DEC on 8/14/00. HLA has backfilled this grid.

A1L13: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 33.1 mg/kg and the background number is 25 mg/kg. Based upon our previous conversations, we are requesting that 33.1 mg/kg be considered the grid specific background concentration for copper.

The e-mail notification was sent to DEC on 8/21/00 and the analytical results were sent to DEC by Federal Express on 8/21/00. HLA has backfilled this grid.

A1L16: Confirmatory sample results are below the TAGM with the exception of copper in the northeast wall. The copper concentration is 34.3 mg/kg and the background number is 25 mg/kg. As above, we are requesting that 34.3 mg/kg be considered the grid specific background concentration for copper.

The e-mail notification was sent to the DEC on 8/21/00 and the analytical results were sent to the DEC by Federal Express on 8/21/00. HLA has backfilled this grid.

AREA 2

A2L06: Confirmatory samples are below the TAGM with the exception of copper in the north wall with a concentration of 77.3 mg/kg and 39.2 mg/kg in the floor of the 8 feet deep section.

HLA is requesting a variance in the background copper concentrations of 25 mg/kg for this grid.

AREA 3

A3L02: Confirmatory samples are below the TAGM with the exception of copper in the south wall with a concentration of 53.2 mg/kg and the floor with a concentration of 59 mg/kg. DEC

notification and approval for a variance in the copper background number was made via telephone by HLA.

Analytical results were sent to the DEC on 7/26/00 and 7/28/00. HLA has backfilled this grid.

A3L03: Confirmatory samples are below the TAGM with the exception of copper in the south wall with a concentration of 67.2 mg/kg. DEC notification and approval for a variance in the copper background number was made via telephone by HLA

Analytical results were sent to the DEC on 7/26/00 and 7/28/00. HLA has backfilled this grid.

A3L06: Confirmatory sample results are below the TAGM with the exception of copper in the east wall with a concentration of 70.3 mg/kg and the south wall with a concentration of 67 mg/kg.

DEC Notification and approval for this variance was made via telephone by HLA. The analytical results were faxed to the DEC on 7/26/00. HLA has backfilled this grid.

II. Requested Waiver Based On Technical Impracticability

HLA has determined that additional excavation in the areas discussed below is technically impracticable and that backfilling these cells now would result in a remedy that was substantively equivalent to one that had reached the TAGM numbers in adjacent grids. The rationale for approving this request is: 1) multiple excavations performed for each grid has failed to yield concentrations of those few persistent SVOCs (and perhaps copper in one location) below the TAGM based cleanup level; 2) the observed lack of copper or these SVOCs in groundwater samples from previous investigations indicating their lack of mobility; 3) the remaining low concentrations do not pose a significant increased risk to human health or the environment when compared to the TAGM 4046 levels; and 4) the distance below ground surface (bgs) of these chemicals is at, or greater than, 5 feet bgs, thus preventing human and most wildlife contact with the residuals.

AREA 1

A1L14: Confirmatory sampling results indicate concentrations of chemicals above the TAGM as shown in Table 1. The floor, after multiple excavations, is at a depth of 9 feet bgs. Groundwater is found at approximately 6 feet bgs. The southeast wall has been excavated twice beyond the original boundary. The On-site Sampling Round 1 sampling results from 1997 and found in the Final Investigation Report (FIR) show no detections in groundwater for the SVOCs shown in Table 1.

HLA is requesting a Technical Impracticality Waiver/TAGM Equivalency Determination For the semi-volatile organic compounds (SVOCs) and copper in the floor and for copper in the southeast wall where these constituents are above TAGM 4046 levels.

A1L17: Confirmatory sample results are below the TAGM with the exception of copper in the floor. The copper concentration is 300 mg/kg. Currently the floor excavation is eight feet bgs and the water table six feet bgs.

Based upon the information above, we are requesting a grid-specific waiver/background number for copper of 300 mg/kg (which is still at levels in the lower half of the USGS eastern US soil typical range.)

AREA 2

A2L07: Confirmatory sample results are below the TAGM with the exception of SVOCs and copper in the floor. HLA is requesting a variance for the few SVOCs and copper that are above the TAGM in this grid. The SVOCs and their cleanup goals are as follows: benzo (a) anthracene 0.8 mg/kg and the TAGM is 0.224 mg/kg; benzo (a) pyrene 0.850 mg/kg and the TAGM is 0.061 mg/kg; and chrysene 0.780 mg/kg and the TAGM is 0.4 mg/kg. HLA believes that the request should be approved because the SVOCs in groundwater samples as shown in the On-site Sampling Round 1 performed in 1997 and found in the Final Investigation Report (FIR) show no detections in groundwater for SVOCs. The copper concentration in the floor is 65.8 mg/kg and the cleanup goal for copper is 25 mg/kg. The current depth of the excavation floor is 5 feet bgs.

We are requesting a Technical Impracticability Waiver/TAGM Equivalency Determination for the SVOCs and copper in the floor.

III. Closing

For the reasons set fourth above, HLA requests that the Site Background Level for copper be revised to a range (25-300 mg/kg) to reflect the actual site data and that a Technical Impracticability Waiver/TAGM Equivalency Determination be granted allowing HLA to backfill grids A1L14, A1L17, and A2L07.

Further, because the requested recognition of the inherent variability of site copper background levels and the requested Technical Impracticality Waiver/Equivalency Determinations do not change the fundamental nature of the approved remedy or amount to a significant modification of the approved remedy, these changes should be deemed "minor" in terms of TAGM 4059.

HLA is requesting, after review and approval of this letter, that verbal permission to backfill these grids be granted to allow field activities to continue and that formal approval in writing will follow.

If you have any additional questions, please contact me at (865) 531-1922.

Sincerely,

HARDING LAWSON ASSOCIATES

Ricky Ryan, P.E.
Principal Project Manager

[054]

TABLE 1

Soil Analytical Results Summary for Grid A1L14
Former Taylor Instruments Facility
Rochester, New York

	CG	A1L14										
		NW	SW	NE	NE2	Lift 1 NE3	SE	SE2	SE3	FLR	Lift 2 FLR2	Lift 3 FLR3
SVOCs (mg/kg)												
Benzo(a)anthracene	0.224	NA	NA	0.97	0.71	BDL	1.3	0.99	BDL	0.46	1.2	3.000
Benzo(a)pyrene	0.061	NA	NA	0.9	0.77	BDL	1.1	0.94	BDL	0.42	1.2	2.500
Benzo(b)fluoranthene	1.1	NA	NA	0.76	0.63	BDL	1.0	0.78	BDL	BDL	1.1	2.000
Benzo(k)fluoranthene	1.1	NA	NA	0.790	0.61	BDL	0.96	0.79	BDL	BDL	1.0	2.100
Chrysene	0.4	NA	NA	1.1	0.79	BDL	1.4	1.1	BDL	0.55	1.4	3.000
Dibenzo(a,h)anthracene	0.014	NA	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	0.660
METALS (mg/kg)												
Copper	25	NA	NA	68.6	680	24.9	38.4	36.4	33.9	107	61	264
Cyanide	5	NA	NA	BDL	NA	NA	BDL	NA	NA	BDL	NA	NA
Lead	270	NA	NA	53.6	NA	NA	29	NA	NA	41.1	NA	NA
Mercury	100	76.3	239	4.98	NA	NA	2.87	NA	NA	0.777	NA	NA

NW - Northwest Grid Wall
SW - Southwest Grid Wall
NE - Northeast Grid Wall
SE - Southeast Grid Wall
FLR - Floor
FLR2 - Indicates excavation beyond the initial grid boundaries
SVOCs - Semi-volatile Organic Compounds
BDL - Below Detection Limit
AGW - Adjacent Grid Wall
NA - Not Applicable (not analyzed)
CG - Cleanup Goal

Harding ESE
A MACTEC COMPANY

1400 Centerpoint Boulevard, Suite 158
Knoxville, TN 37932
865/531-1922
Fax: 865/531-8226

September 28, 2000

David Pratt, P.E.
NYSDEC
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

RE: BS27
Confirmatory Sampling Results and
Request For Technical Impracticality Waiver/Equivalency Determination
Former Taylor Instruments Site
Rochester, New York 14611
Voluntary Cleanup Agreement (VCA) Index #B8-0508-97-02

Dear Mr. Pratt:

As requested in your August 22, 2000 e-mail, this letter contains a second formal request for a grid-specific variance in grid BS27 from the site-specific cleanup goals at the subject site.

BS27 Confirmatory sample results are below the TAGM with the exception of copper in the south, north, and east walls and chromium and copper in the west wall. These concentrations are found after excavating beyond the original area proposed in the Remedial Work Plan (Table 1). Harding ESE (formerly Harding Lawson Associates) is requesting a variance for the copper and chromium that are above the TAGM in this grid. The TAGM for copper is 25 mg/kg and the concentration of copper in the north wall is 49.8 mg/kg, in the south wall 100 mg/kg, in the west wall 80.1 mg/kg, and in the east wall 41.7 mg/kg. Also chromium is above the TAGM of 35 mg/kg with a concentration of 36.2 mg/kg found in the west wall and 51.8 mg/kg in the floor. The current depth of the excavation is 12 feet and well below the water table. Harding ESE believes that the request should be approved for the same reasons given in our letter requesting a Technical Impracticability Waiver/Equivalency Determination, dated August 31, 2000, and subsequently approved by NYSDEC.

If you have any additional questions, please contact me at (865) 531-1922.

Sincerely,

HARDING ESE, Inc.

Ricky A. Ryan, P.E.
Principal Project Manager

[059]

Enclosure

Table 1

Confirmatory Sampling Results for BS27
Former Taylor Instruments Facility
Rochester, New York

		BS-27											
		Lift 1										Lift 2	Lift 3
Metals (mg/kg)	**CG**	**N**	**N2**	**S**	**S2**	**S3**	**E**	**E2**	**W**	**W2**	**FLR**	**FLR**	**FLR**
Cadmium	**40**	35.3	NA	**57.2**	4.42	NA	3.99	NA	**289**	BDL	2.38	NA	NA
Chromium	**35**	4.82	NA	3.81	NA	NA	4.42	NA	**1050**	**36.2**	**53.2**	232	**51.8**
Copper	**25**	**26.2**	**49.8**	**152**	**278**	**100**	**91.7**	**41.7**	**1140**	**80.1**	**361**	114	9.26
Cyanide	**5**	1.50	NA	1.85	NA	NA	BDL	NA	**23.4**	BDL	4.94	NA	NA
Lead	**270**	2.91	NA	1.73	NA	NA	4.40	NA	**439**	2.6	18.2	NA	NA
Mercury	**100**	0.16	NA	0.0763	NA	NA	0.0831	NA	35.8	NA	0.122	NA	NA
Nickel	**115**	**338**	54.4	108	NA	NA	15	NA	**1040**	9.62	50.1	NA	NA
Silver	**5**	BDL	NA	BDL	NA	NA	BDL	NA	2.98	BDL	BDL	NA	NA
Zinc	**400**	60.2	NA	110	NA	NA	27.4	NA	**680**	29.1	91.6	NA	NA

N - North Grid Wall

S - South Grid Wall

East Grid Wall

W - West Grid Wall

FLR - Floor

N2 - Indicates second excavation beyond the initial northern grid boundary

BDL - Below Detection Limit

NA - Not Applicable (not analyzed)

CG - Cleanup Goal

Harding Lawson Associates
1400 Centerpoint Boulevard, Suite 158
Knoxville, TN 37932
Telephone: 865/531-1922
Fax: 865/531-8226

Engineering, Environmental,
and Construction Services

September 8, 2000

David Pratt, P.E.
NYSDEC
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

RE: Grid A1L18
Confirmatory Sampling Results and
Request For Technical Impracticality Waiver/Equivalency Determination
Former Taylor Instruments Site
Rochester, New York 14611
Voluntary Cleanup Agreement (VCA) Index #B8-0508-97-02

Dear Mr. Pratt:

As requested in your August 22, 2000 e-mail, this letter contains a formal request for a grid-specific variance in grid A1L18 from the site-specific cleanup goals at the subject site.

A1L18: Confirmatory sample results are below the TAGM with the exception of SVOCs and copper in the southeast wall after excavating beyond the original area proposed in the Remedial Work Plan (Table 1). HLA is requesting a variance for the few SVOCs and copper that are above the TAGM in this grid. The copper concentration in the southeast wall is 26.5 mg/kg and the cleanup goal for copper is 25 mg/kg. The SVOCs measured and their cleanup goals are as follows: chrysene 0.43 mg/kg and the TAGM is 0. 4 mg/kg; and benzo(a)anthracene 0.41 mg/kg and the TAGM is 0.224 mg/kg. HLA believes that the request should be approved for the same reasons given in our letter requesting a Technical Impracticability Waiver/Equivalency Determination, dated August 31, 2000, and subsequently approved by NYSDEC. If you have any additional questions, please contact me at (865) 531-1922.

Sincerely,

HARDING LAWSON ASSOCIATES

Ricky Ryan, P.E.
Principal Project Manager

[057]

Enclosure

TABLE 1

Confirmatory Sample Results
Former Taylor Instrument Site
Ames Street
Rochester, New York

		A1L18									
SVOCS (mg/kg)	**CG**	**NW**	**SW**	**NE**	**NE2**	**NE3**	**NE4**	**NE5**	**SE**	**SE2**	**FLR**
Benzo(a)anthracene	**0.224**	AGW	AGW	NA	**2.8**	BDL	**7.4**	BDL	**9.4**	**0.41**	BDL
Benzo(a)pyrene	**0.061**	AGW	AGW	NA	**2.5**	BDL	**5.9**	BDL	**7.8**	BDL	BDL
Benzo(b)fluoranthene	**1.1**	AGW	AGW	NA	**2.0**	BDL	**4.7**	BDL	**6.8**	BDL	BDL
Benzo(g,h,i)perylene	**50**	AGW	AGW	NA	BDL	BDL	BDL	BDL	BDL	BDL	BDL
Benzo(k)fluoranthene	**1.1**	AGW	AGW	NA	2.000	BDL	**6.5**	BDL	**7.8**	BDL	BDL
Chrysene	**0.4**	AGW	AGW	NA	**2.6**	BDL	**6.3**	BDL	**8.4**	**0.43**	BDL
METALS											
Cadmium	**40**	AGW	AGW	NA	0.780	NA	NA	NA	1.22	NA	BDL
Chromium	**35**	AGW	AGW	NA	14	NA	NA	NA	22.4	NA	7.99
Copper	**25**	AGW	AGW	NA	**93.9**	**315**	**159**	4.97	**171**	**26.5**	14.8
Cyanide	**5**	AGW	AGW	NA	BDL	NA	NA	NA	BDL	NA	BDL
Lead	**270**	AGW	AGW	NA	109	NA	NA	NA	**2180**	47.1	5.50
Mercury	**100**	AGW	AGW	NA	**135**	**130**	44.6	BDL	24.8	NA	0.192
Nickel	**115**	AGW	AGW	NA	13.1	NA	NA	NA	21.4	NA	11.9
Silver	**5**	AGW	AGW	NA	1.20	NA	NA	NA	BDL	NA	BDL
Zinc	**400**	AGW	AGW	NA	233	NA	NA	NA	235	NA	27.5

NW - Northwest Grid Wall
SW - Southwest Grid Wall
NE - Northeast Grid Wall
SE - Southeast Grid Wall
FLR - Floor
NE2 - Indicates excavation beyond the initial grid boundaries
SVOCs - Semi-volatile Organic Compounds
BDL - Below Detection Limit
AGW - Adjacent Grid Wall
NA - Not Applicable (not analyzed)
CG - Cleanup Goal

New York State Department of Environmental Conservation
Division of Environmental Remediation
6274 East Avon-Lima Road, Avon, New York 14414
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Website: www.dec.state.ny.us

John P. Cahill
Commissioner

September 14, 2000

Ricky A. Ryan, P.E.
Harding Lawson Associates
1400 Centerpoint Blvd.
Suite 158
Knoxville, TN 37932-1968

Re: Taylor Instruments #828028a
Rochester (C), Monroe (C)

Dear Mr. Ryan:

The New York State Department of Environmental Conservation (NYSDEC) has received your letters dated August 31, 2000 and September 8, 2000 regarding grid-specific approval for backfilling. The NYSDEC hereby approves backfilling of the grids outlined in these letters since the proposed soil cleanup work is consistent with the "feasible" and "practicable" language in the RWP.

If you have any questions, please do not hesitate to contact me.

Sincerely,

David G. Pratt, P.E.
Environmental Engineer 2

Enclosure

cc: M.J. Peachey
J. Charles
R. Schick
Edward Hynes - H&A
D. Napier
J. Albert
J. McCreary / L. Ford
Peter Reckmeyer - Sybron

New York State Department of Environmental Conservation
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Environmental Conservation 30 YEARS
John P. Cahill
Commissioner

October 16, 2000

Ricky A. Ryan, P.E.
Harding Lawson Associates
1400 Centerpoint Blvd.
Suite 158
Knoxville, TN 37932-1968

Re: Taylor Instruments #828028a
Rochester (C), Monroe (C)

Dear Mr. Ryan:

The New York State Department of Environmental Conservation (NYSDEC) has received your letter dated September 28, 2000 regarding grid-specific approval for backfilling in grid BS27. The NYSDEC hereby approves backfilling of grid BS27 since the proposed soil cleanup work is consistent with the "feasible" and "practicable" language in the RWP.

If you have any questions, please do not hesitate to contact me.

Sincerely,

David G. Pratt, P.E.
Environmental Engineer 2

Enclosure

cc: M.J. Peachey
J. Charles
R. Schick
Edward Hynes - H&A
D. Napier
J. Albert
J. McCreary / L. Ford
Peter Reckmeyer - Sybron

New York State Department of Environmental Conservation
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John P. Cahill
Commissioner

Post-it® Fax Note 7671	Date 7/10	# of pages ▶ 2
To Jean McCreary	From Dave Pratt	
Co./Dept.	Co. NYSDEC	
Phone #	Phone #	
Fax #	Fax #	

July 10, 1998

Jean H. McCreary
Nixon, Hargrave, Devans & Doyle
Clinton Square
Post Office Box 1051
Rochester, NY 14603-1051

Re: Taylor Instruments Site #828028a
Rochester (C), Monroe (C)

Dear Ms. McCreary:

This is in response to your July 7, 1998 letter regarding the remediation of the Taylor Instruments site. For the most part, your July 7 letter represents an acceptable approach for remediation of the site; however, we do need you to agree to some clarifications:

1. There will be a requirement for post-excavation confirmatory sampling for mercury. However, comprehensive pre-excavation delineation during design will lead to acceptance of a less comprehensive post-excavation sampling program.

2. As stated in my June 25, 1998 letter, comment #2, the NYSDEC has not agreed to the definition of the TCE source areas as those areas with concentrations above 7 ppm TCE. All TCE soil concentrations above the TAGM level of 0.7 ppm are to be the focus of the remedial efforts. We understand your desire to put a cost cap on the remediation of these "expanded" areas; however, we are not in a position to do this. $50,000 may be a reasonable estimate but we cannot guarantee this would or should be the cap.

   Design phase investigation data around the source areas will be needed to further define the TCE contamination. We will review the design plans generated from these data and, if necessary, make a determination at that time whether the benefits of remediating outlying low level TCE contaminated areas are worthwhile. This determination will be made based on the same evaluation criteria that a normal Record of Decision is subject to (including cost-effectiveness and compliance with Standards, Criteria and Guidelines, among other things).

3. Please be aware that engineering controls on structures to ensure that soil VOC vapors do not pose a health risk may be necessary outside of "source areas" due to vapor migration under parking lots, etc.. This may be addressed in the soil management plan.

Please provide me with your acceptance or rejection of the above in writing by close of business July 14, 1998. I look forward to hearing from you and to successful resolution of this matter.

Sincerely,

David G. Pratt, P.E.
Environmental Engineer 2

cc: M.J. Peachey
J. Charles
M. Rivara
D. Napier
J. Harrington
R. Schick
J. Albert

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(202) 457-5[illegible]

July 7, 1998

VIA FAX AND U.S. MAIL

David G. Pratt
Environmental Engineer 2
New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

RE: Taylor Instruments Site #828028

Dear David:

On behalf of Combustion Engineering, this responds to the New York State Department of Environmental Conservation ("NYSDEC" or "Department") offer set forth in your letter of June 17 as clarified in your letter of June 25 and subsequent conversations regarding cleanup goals for the site pursuant to the Voluntary Cleanup Agreement between the parties. CE accepts the Department's offer as follows:

1. **Mercury** – CE will meet 10 ppm from 0'-1' below finished grade, and meet 100 ppm below 1'. CE will replace on-site clay-tile sewers. No additional site characterization is required, although during the design phase a confirmatory sampling program to demonstrate that the clean up goal has been met will be proposed.

2. **TCE/VOCs** – CE will institute an in-situ treatment system in the "source areas" designed to achieve the 0.7 mg/kg level (TAGM) in soils, and to achieve groundwater standards at the perimeter over time. The boundaries of the "source areas" to be encompassed by the in-situ treatment system will be defined during the design phase based on a limited screening investigation to determine areas affected by the two identified source area activities (TCE bulk storage and vapor degreasing). During the design phase, we are willing to explore extending the proposed "source area" boundaries beyond the 7.0 mg/kg limit contained in CE's original proposal, if that extension can be done at a cost of the order of magnitude estimated by NYSDEC (approx. $50,000). If the expanded remediation proposed by NYSDEC cannot be performed at the cost that NYSDEC has estimated, additional remediation in these "expanded" source areas of

soils above 0.7 mg/kg but below 7.0 mg/kg would not be cost-effective, would not yield significant benefits in terms of protectiveness of human health or the environment, and, therefore, would not be required. This approach is cost-effective and consistent with other RODs issued in this region in which remediation was limited to defined source areas. Other than data required to define "source areas," no additional site characterization will be required. Post-remediation monitoring will be conducted in overburden and bedrock groundwater and to assess NAPLs, as stated in your June 17 letter.

3. **Off-Site** – CE will address off-site mercury sewer conditions to the satisfaction of the Monroe County Pure Water Authority, and will propose a monitoring program which considers on- and off-site concerns raised by the Department of Health. There will be no additional off-site investigations or remediation.

4. **Institutional Controls / Deed Restrictions** – CE will commit to deed restrictions against residential development and institute engineering controls on structures to ensure that soil vapors (TCE) do not pose an inhalation health risk to construction over source areas and precluding the use of groundwater for any purpose. A soil management plan for future development will be prepared.

As you can see from the above offer, CE has made substantial compromises in its positions to accommodate concerns expressed by the Department at recent meetings and in your letters and calls. CE has done so in the interests of settling this matter and directing its resources towards remediation rather than towards defending an adversarial listing process.

Assuming this is acceptable to the Department, CE proposes a conference call to discuss matters such as scheduling submission of the Investigative Report and Remedial Plan. Please feel free to call me if you have any questions or comments.

Sincerely,

Jean H. McCreary

Jean H. McCreary

cc: M.J. Peachey
J. Charles, Esq.

R190630.1

bcc: A. Karlbergs
P. Reckmeyer
A. Harrington
E. Feldman
K. Blakeley
G. Knight
M.E. Ford

New York State Department of Environmental Conservation
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John P. Cahill
Commissioner

June 25, 1998

Jean H. McCreary
Nixon, Hargrave, Devans & Doyle
Clinton Square
Post Office Box 1051
Rochester, NY 14603-1051

Re: Taylor Instruments Site #828028a
Rochester (C), Monroe (C)

Dear Ms. McCreary:

This is in response to your June 18, 1998 letter regarding the New York State Department of Environmental Conservation's (NYSDEC) proposal for remediation of the Taylor Instruments site. For the most part, your June 18 letter presents NYSDEC's approach accurately; however, we do have some clarifications to make:

1) The 10 ppm goal should address 0' - 1' below finished grade, whether it is "current" grade or some future finished grade.

2) The NYSDEC has not agreed to the definition of the TCE source areas as those areas with concentrations above 7 ppm TCE. All TCE soil concentrations above the TAGM level of 0.7 ppm are to be the focus of the remedial efforts.

Also, cost will not be the only means of determining effectiveness of the system, although it will be taken into account.

Furthermore, reduced soil contaminant levels may not be indicative of the effectiveness of the treatment system. Non-aqueous phase liquids (NAPLs) in both the overburden and bedrock may or may not be effectively treated by the proposed system. Contaminant monitoring in perimeter overburden and bedrock groundwater will need to be supplemented by overburden and bedrock monitoring closer to the source areas. If either the overburden or bedrock system is turned off, NAPL may contribute to groundwater contaminant levels rising again. Wells closer to the source areas will be beneficial in determining whether the system has been effective or needs to be turned back on (pulsing systems on and off is not uncommon).

Finally, there was some discussion regarding construction over the TCE source areas. This construction will either need to be restricted or contain proper engineering controls.

3) We can not at this time commit to accepting "one or two on- or off-site monitoring wells or a soil gas monitoring program relating to ensuring that the overburden soil vapor levels of TCE/VOCs do not pose an inhalation health risk." Our discussion regarding off-site issues concluded that Combustion Engineering will provide a proposal to address off-site monitoring concerns. What is specifically acceptable will depend on NYSDEC and NYSDOH's satisfaction with the remediation on-site.

4) Groundwater should be restricted from any use, not just drinking water. Also, a soil management plan for future development should be developed.

Please contact myself or Mary Jane Peachey at (716) 226 - 2466 if you have any questions.

Sincerely,

David G. Pratt, P.E.
Environmental Engineer 2

cc: M.J. Peachey
J. Charles
M. Rivara
D. Napier
J. Harrington
R. Schick
J. Albert

Nixon, Hargrave, Devans & Doyle LLP
Attorneys and Counselors at Law
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June 18, 1998

VIA FAX AND U.S. MAIL

David G. Pratt, P.E.
Environmental Engineer 2
New York State Department of
Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414-9519

RE: Taylor Instruments Site #828028

Dear David:

Thank you for the prompt transmittal of your letter restating the State's proposal for remediation at the Taylor Instruments Site. Since our discussions during the meeting on June 16 ranged over a number of areas not explicitly addressed in your letter, I wanted to set forth what CE understands, based on those discussions, to be NYSDEC's offer on on-site and off-site cleanup levels which CE will convey to its management for a decision by July 7:

1) **On-site Mercury**: In soils, NYSDEC will require CE to meet 10 ppm from 0'-1' below current grade; and to meet 100 ppm below 1'. (At the meeting you indicated that the surface goal has been met based on the IRM performed during the demolition, which resulted in 6"-18" subbase and an asphalt layer being installed.) On-site clay-tile sewers will be replaced. No additional site characterization is required, but confirmatory sampling will be required to demonstrate the 100 ppm goal for below 1' has been met.

2) **On-site TCE/VOCs**: At the meeting the Department accepted CE's proposal to meet 0.7 mg/kg for soils in the two defined source areas (defined as areas which have TCE levels in excess of 7 mg/kg), and to achieve state groundwater standards at the perimeter of the site over time, through operation of an in-situ remedial system in the source areas as long as technically feasible with periodic reviews of system cost-effectiveness at TCE/VOC removal. No additional site characterization will be required. Monitoring will be conducted at the perimeter for overburden and bedrock groundwater.

3) **Off-site**: NYSDEC will require CE to address off-site sewer mercury conditions to the satisfaction of the Monroe County Pure Water Authority, and to propose a monitoring program which considers on-site and off-site concerns (generally consisting of one or two on- or off-site monitoring wells or a soil gas monitoring program relating to ensuring that overburden soil vapor levels of TCE/VOCs do not pose an inhalation health risk). No additional off-site investigations or remediation will be required.

4) **Institutional Controls / Deed Restrictions**: The Department will require CE to commit to deed restrictions against residential development and engineering controls on structures to ensure that overburden soil vapors do not pose an inhalation health risk and that groundwater is not used for drinking water purposes.

CE is presenting this offer to its management in the context of DEC's and DOH's representations at the meeting that those agencies has been revisiting cleanup levels at other sites previously negotiated and currently being negotiated to require a 100 ppm mercury level in soil for final remedies.

Please let me know promptly if CE has not correctly understood the substance of the discussions on June 16 and if the offer it is presenting to its management as described above does not accurately reflect what the Department will require CE to implement pursuant to the Voluntary Cleanup Agreement if the offer is accepted.

Whatever the outcome, I would like to thank you and all of the agency representatives who were present at the June 16 meeting for their efforts toward resolving this matter.

Sincerely,

Jean H. McCreary

cc: MJ. Peachey
J. Charles

R184941.1

Nixon, Hargrave, Devans & Doyle LLP

bcc: P. Reckmeyer
A. Harrington
E. Hynes
E. Feldman
D. Hamilton
K. Blakeley
A. Karlbergs
G. Knight
N. Walter
L. Ford

R184941.1

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 8
6274 East Avon-Lima Road, Avon, New York 14414-9519
Phone: (716) 226-2466 FAX: (716) 226-8696

John P. Cahill
Commissioner

June 17, 1998

Jean H. McCreary
Nixon, Hargrave, Devans & Doyle
Clinton Square
Post Office Box 1051
Rochester, NY 14603-1051

Re: Taylor Instruments Site #828028a
Rochester (C), Monroe (C)

Dear Ms. McCreary:

As per your request in our June 16, 1998 meeting, I am again forwarding the State's proposal for remediation of the Taylor Instruments site. A similar proposal was outlined in my December 31, 1997 letter to Mr. Knight, Ms. Ford and yourself.

Discussions between Combustion Engineering (CE) and the New York State Department of Environmental Conservation (NYSDEC) regarding a Voluntary Cleanup Agreement began in September 1995. Negotiations over cleanup levels for the Taylor Instruments site have been occurring for at least a year.

The NYSDEC is again proposing the following cleanup approach for the Taylor Instruments site: 10 ppm for mercury from 0' to 1' below grade and 100 ppm below 1'; and TAGM 4046 objectives for VOCs (with periodic reviews of system effectiveness). These are to be combined with deed restrictions against residential development, engineering controls on structures, and a monitoring program which considers both on-site and off-site concerns. Also, off-site sewer conditions must be addressed to Monroe County's satisfaction. This offer considers the commercial/industrial future use planned for the site, as opposed to what would likely be required for cleanup to a residential scenario. Furthermore, our proposal is consistent with previous and current negotiations at other sites around New York State. NYSDEC has, in the past, informed CE that deviation from established standards and guidance values is based on more than just risk, even when taking into account future use. Technical impracticality, site-specific conditions, precedent, and cost are other items of concern which drive cleanups.

The Taylor VCA calls for on-site cleanup levels to be agreed to by November 30, 1997. If cleanup levels were not reached by that time, the VCA states the Department may proceed with listing the site. The Department has reminded CE that we are under an obligation to list sites appropriately and in a timely manner. NYSDEC believes that CE has had sufficient opportunity to perform

remediation under the Voluntary Cleanup Program. This letter hereby serves to officially offer the above proposal to CE one final time. Please inform this office in writing by July 7, 1998 whether CE agrees to the above proposal.

Please contact myself or Mary Jane Peachey at (716) 226 - 2466 if you have any questions.

Sincerely,

David G. Pratt, P.E.
Environmental Engineer 2

cc: M.J. Peachey
J. Charles
M. Rivara
D. Napier
J. Harrington
R. Schick
J. Albert

SUBAPPENDIX B

NYSDOH GENERIC COMMUNITY AIR MONITORING PLAN

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 partculate 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.

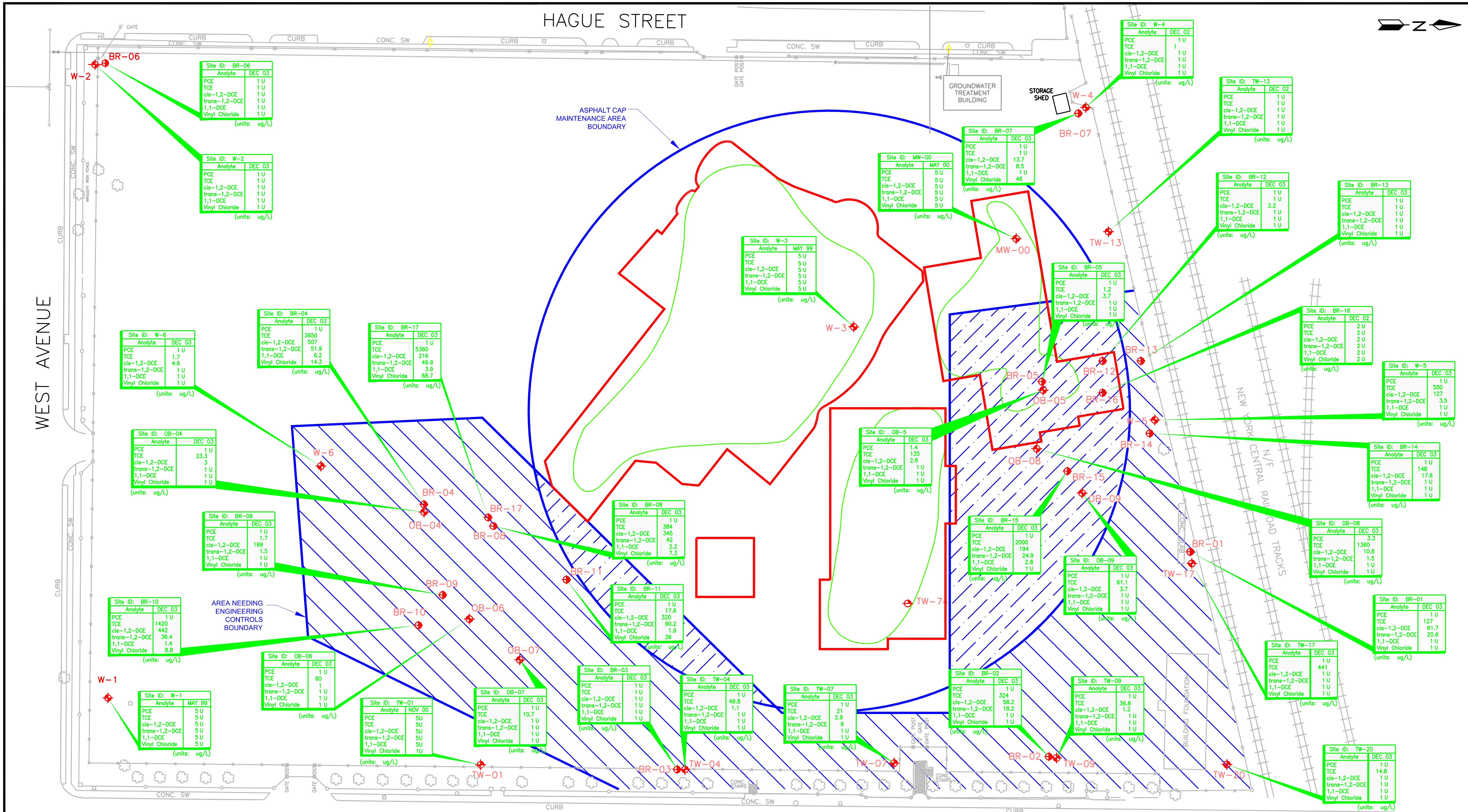
- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 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/m^3 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/m^3 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.

SUBAPPENDIX C

DETERMINATION OF ENGINEERING CONTROL AREAS



LEGEND

	OVERBURDEN MONITORING WELL (OB, MW, TW, W)
	BEDROCK MONITORING WELL (BR)
DCE	DICHLOROETHENE
PCE	TETRACHLOROETHENE (PERCHLOROETHENE)
TCE	TRICHLOROETHENE
J	ESTIMATED VALUE
U	NON DETECT
NS	NOT SAMPLED

	AREAL LIMIT EXCAVATION (PROPOSED IN REMEDIATION WORK PLAN)
	ACTUAL AREA OF EXCAVATION
	AREA NEEDING ENGINEERING CONTROLS
	OVERLAPPING OF: AREA NEEDING ENGINEERING CONTROLS BOUNDARY AND ASPHALT CAP AREA BOUNDARY

Site ID: BR-06

Analyte	DEC 03
PCE	1 U
TCE	1 U
cis-1,2-DCE	1 U
trans-1,2-DCE	1 U
1,1-DCE	1 U
Vinyl Chloride	1 U

(units: ug/L)

VOC's IN GROUNDWATER

B-47

MACTEC

MACTEC Engineering and Consulting, Inc.
1431 Centerpoint Boulevard, Suite 150
Knoxville, Tennessee 37932
865-531-1922 • Fax: 865-531-8226

DETERMINATION OF ENGINEERING CONTROL AREAS
95 AMES STREET
FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

DRAFTING BY:	PREPARED BY:	CHECKED BY:
JOB NUMBER: 51870	DATE: JULY 2, 2004	SCALE: 0 80'

CONTROL AREA 7-2-04.dwg Wed, 02 Feb 2005 - 3:58pm REVERENC

APPENDIX C

WELL CONSTRUCTION INFORMATION

Appendix C
Well Construction Information

Operations, Maintenance and Monitoring Plan
Former Taylor Instruments Site
Rochester, New York

						Screen Interval		Survey Coordinates			Well Material	Completion		
Well ID	Date Installed	Well Purpose/Type	Well Location	Boring Depth	Well Depth	Top	Bottom	Easting	Northing	Elevation	Riser/Screen	Flush-mount	Vault	Stick-up
BR-01	09/02/97	Monitor	Perimeter	42.2	42.2	NA	NA	750364.06	1150086.89	531.92	Stainless / Open	X		
BR-02	09/02/97	Monitor	Perimeter	44.0	44.0	NA	NA	750541.81	1149964.51	532.39	Stainless / Open	X		
BR-03	09/02/97	Monitor	Perimeter	40.1	40.1	NA	NA	750552.93	1149641.68	536.32	Stainless / Open			X
BR-04	09/03/97	Monitor	South Source	44.2	44.2	NA	NA	750322.96	1149422.13	532.68	Stainless / Open	X		
BR-10	07/28/00	Monitor	South Source	47.0	47.0	NA	NA	750426.90	1149411.76	532.29	Iron / Open	X		
BR-15	07/26/00	Monitor	North Source	72.0	72.0	NA	NA	750293.39	1149980.43	531.69	Iron / Open	X		
OB-04	09/05/97	Monitor	South Source	17.5	17.5	2.5	17.5	750329.65	1149422.19	532.80	PVC	X		
OB-06	07/19/00	Monitor	South Source	17.0	17.0	6.8	16.8	750421.89	1149461.50	532.60	PVC	X		
OB-08	07/28/00	Monitor	North Source	25.5	25.3	15.3	25.1	750279.00	1149957.45	531.64	PVC	X		
TW-04	03/15/96	Monitor	Perimeter	17.5	17.3	12.3	17.3	750552.18	1149648.54	536.34	PVC			X
TW-09	03/30/96	Monitor	Perimeter	16.0	16.0	11.0	16.0	750542.22	1149971.84	532.30	PVC	X		
TW-17	03/13/96	Monitor	Perimeter	15.0	15.0	10.0	15.0	750373.39	1150088.34	531.86	PVC			X
TW-20	03/13/96	Monitor	Perimeter	15.0	15.0	10.0	15.0	750547.88	1150118.75	532.42	PVC			X
W-5	09/15/82	Monitor	Perimeter	24.0	20.5	15.5	20.5	750248.88	1150056.27	531.52	PVC	X		

NA = not applicable, well is an open rock borehole with no screen

Prepared by/Date: KJD 11/19/10
Checked by/Date: CRW 11/23/10 CRW

APPENDIX D

GROUNDWATER SAMPLING FORM

Mactec Engineering and Consulting

FIELD DATA RECORD - LOW FLOW GROUNDWATER SAMPLING

PROJECT: Former Taylor Instruments Semi-Annual Sampling Event

DATE:

SITE ID:

SITE TYPE: Monitor Well

SITE ACTIVITY: START END

JOB NUMBER: 3031052006

WATER LEVEL / PUMP SETTINGS

MEASUREMENT POINT
- ☐ TOP OF WELL RISER
- ☐ TOP OF PROTECTIVE CASING
- ☐ OTHER _____

PROTECTIVE CASING STICKUP (FROM GROUND): FT

PROTECTIVE CASING / WELL DIFFERENCE: FT

INITIAL DEPTH TO WATER: FT

WELL DEPTH: FT

PID AMBIENT AIR: PPM

WELL DIAMETER: IN

FINAL DEPTH TO WATER: FT

SCREEN LENGTH: FT

PID WELL MOUTH: PPM

DRAWDOWN: FT

DRAWDOWN VOLUME: GAL

PRODUCT THICKNESS: FT

WELL INTEGRITY:	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

((initial - final) x 0.16 {2-inch} or x 0.65 {4-inch} or x 1.5 {6-inch})

PURGE RATE: L/MIN

BEGIN PURGING:

END PURGING:

TOTAL VOL. PURGED: GAL

(purge rate (L/min) x duration (min) x 0.26 gal/L)

PURGE DATA

Time	VOLUME PURGED (L)	pH (units)	SpC (cond) (mS/cm)	TURBIDITY (NTU)	DISSOLVED O_2 (mg/L)	TEMPERATURE (^oC)	REDOX POTENTIAL (mV)	Comments

EQUIPMENT DOCUMENTATION

TYPE OF PUMP	TYPE OF TUBING	TYPE OF PUMP MATERIAL	TYPE OF BLADDER MATERIAL (if applicable)
☒ PERISTALTIC	☐ TEFLON OR TEFLON LINED	☐ POLYVINYL CHLORIDE	☐ TEFLON
☐ SUBMERSIBLE	☒ HIGH DENSITY POLYETHYLENE	☐ STAINLESS STEEL	☐ OTHER _____
☐ OTHER _____	☐ OTHER _____	☐ OTHER _____	

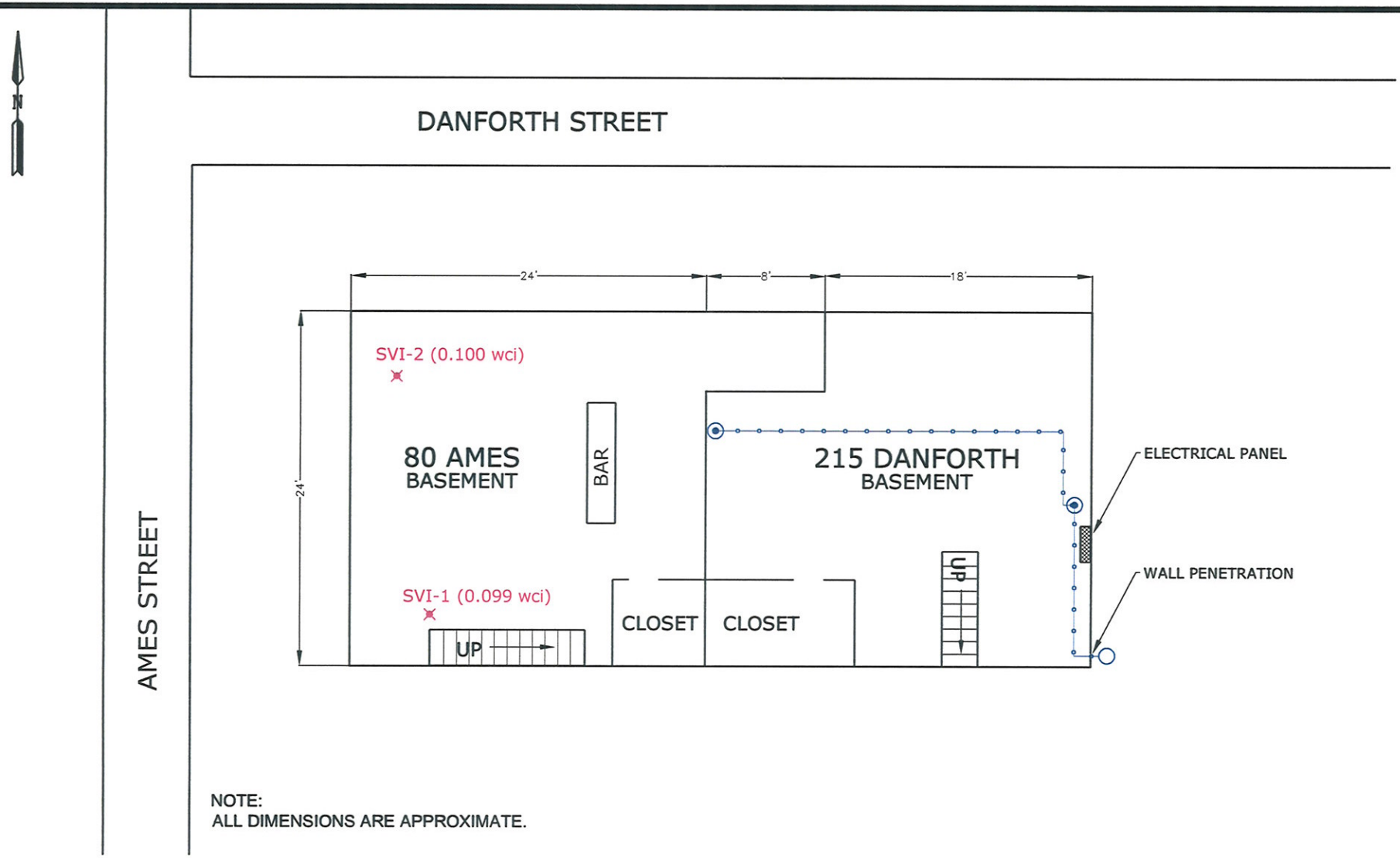
PURGE OBSERVATIONS

SIGNATURE: _____

NOTES

APPENDIX E

SSD SYSTEM LAYOUT AND CONSTRUCTION DETAILS



NOTE:
ALL DIMENSIONS ARE APPROXIMATE.

LEGEND

- ◉ - VAPOR EXTRACTION POINT
- ⊟ - 4" PVC OVERHEAD PIPING RUN
- ○ - FAN/BLOWER AND STACK
- ✕ - COMMUNICATION TESTING LOCATION
- wci - WATER COLUMN INCHES

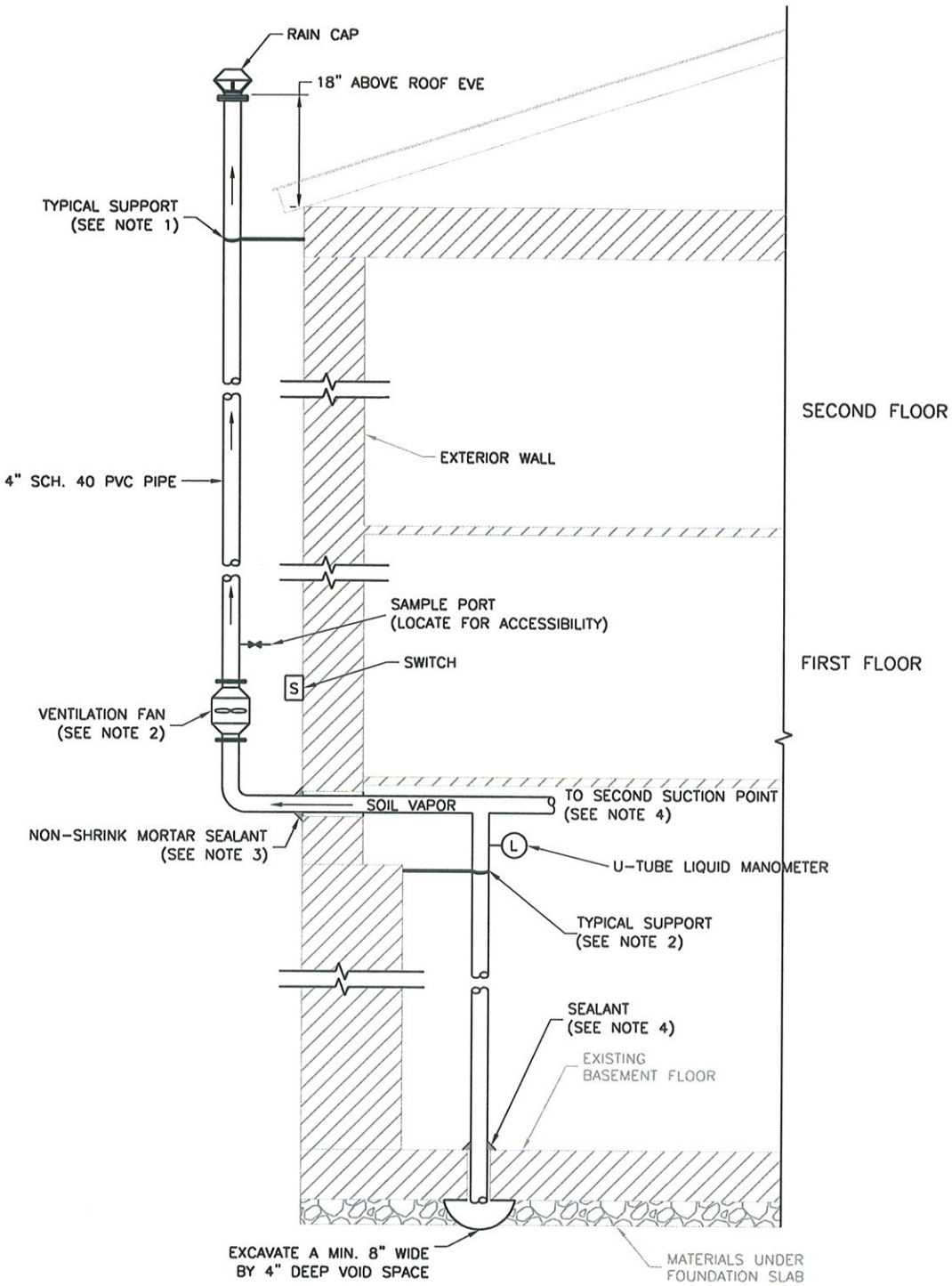
NOT TO SCALE

Drafted/Date: RAE 11-22-10 Checked/Date: KJD 11-22-10

80 Ames St. / 215 Danforth St. Duplex
Rochester, New York

MACTEC

SUB-SLAB
DEPRESSURIZATION SYSTEM
LAYOUT
Project 3031-05-2006-12



NOTES:

1. SUPPORTS WERE INSTALLED AT LEAST EVERY 6 FEET ON HORIZONTAL RUNS. VERTICAL RUNS WERE SECURED EITHER ABOVE OR BELOW THE POINTS OF PENETRATION THROUGH FLOOR, OR AT LEAST EVERY 8 FEET ON RUNS THAT DO NOT PENETRATE FLOOR.
2. THE VENTILATION FAN IS A RADONWAY RP-145. THE FAN IS CONNECTED ABOVE AND BELOW TO THE VENT PIPE WITH FLEXIBLE CONNECTORS AND CLAMPED IN PLACE.
3. OPENINGS AROUND THE SUCTION POINT PIPE WERE SEALED USING METHODS AND MATERIALS THAT ARE DURABLE AND PERMANENT. SEALANTS AND ADHESIVES ARE COMPATIBLE WITH PIPING MATERIALS AS SPECIFIED BY THE PIPING MANUFACTURER.
4. SEE FIGURE 4 FOR SSD SYSTEM LAYOUT.

SSD = SUB-SLAB DEPRESSURIZATION

NOT TO SCALE

Drafted/Date: RAE 11/09/10 Checked/Date: KJD 11/09/10

80 Ames St. / 215 Danforth St. Duplex
Rochester, New York

MACTEC

SSD SYSTEM DETAILS

Project 3031-05-2006-12

APPENDIX F

SSD SYSTEM SITE MANAGEMENT PLAN

MACTEC

engineering and constructing a better tomorrow

November 1, 2010

Mr. Kevin Carter
596 Paul Road
Rochester, New York 14624-4640

Subject: **Revised Site Management Plan for**
Sub-Slab Vapor Mitigation System Operation and Maintenance
Duplex at 80 Ames Street and 215 Danforth Street in Rochester, New York
MACTEC Project 3031052006-12

Dear Mr. Carter:

Enclosed is a Revised Site Management Plan containing operations and maintenance details for the sub-slab vapor mitigation system that was recently installed at the 80 Ames Street/215 Danforth Street duplex. This Revised Plan replaces the original Plan that was submitted on October 25, 2010. The original Plan inadvertently contained an extra page that has been removed.

As shown on the attached diagram, all components of the mitigation system are located in the basement of the 215 Danforth residence; however, the system is designed to provide sub-slab vapor mitigation for the entire duplex.

Should you or your tenants have questions or concerns related to the sub-slab vapor mitigation system, please contact Joe Deatherage with MACTEC Engineering and Consulting, Inc. at 865-588-8544 or kjdeatherage@mactec.com.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Ricky A. Ryan, P.E.
Senior Principal Engineer/Project Manager

K. Joe Deatherage
Senior Environmental Engineer

[1025]

Enclosure

cc w/enc: Frank Sowers, NYSDEC *(electronic)*
Katherine Comerford, NYSDOH *(electronic)*
Jean McCreary, Nixon Peabody LLP *(electronic)*
Nelson Walter, MACTEC *(electronic)*
John Conant, ABB *(electronic+hard copy)*

mitigation tech *soil vapor intrusion specialists*

Site Management Plan with Operation and Maintenance Details for Existing Sub-Slab Vapor Depressurization System

80 Ames Street & 215 Danforth Street, Rochester, NY
Installation Date: September 14, 2010

Standard Operating Procedure (SOP) for Existing Sub-Slab Depressurization System

The purpose of this SOP is to familiarize the homeowner or occupant with the sub-slab depressurization (SSD) system and to provide general instructions for operation of the system.

1. This system consists of an exterior vacuum fan located at the SE corner of the building, an on/ off switch located near the fan, piping, and a vacuum indicator gauge located on the basement SSD System pipe. This system creates a vacuum beneath the basement concrete slab.

2. Leave fan in continuous operation. The fan restarts automatically in event of power loss. In the event of unusual fan noise, failure to start, or repeated circuit breaker trip, turn fan off and call MACTEC Engineering and Consulting, Inc. (MACTEC) for service at 865-588-8544. Specifications for the fan are attached.

3. Regularly inspect fan gauge to verify the system continues to operate. This is indicated by an unequal level of colored fluid when comparing each side of the gauge, as shown in the attached figure. If the colored fluid on each side of the gauge is discovered to be at equal levels, call MACTEC for service at 865-588-8544.

4. Normal system operation requires unchanged structural conditions. Report any changes in structure, HVAC systems, slab conditions, etc. to MACTEC at 865-588-8544 so that the change can be evaluated for impact on the SSD System.

5. A periodic inspection will be performed by the installation subcontractor, to include the tasks identified in the subsequent maintenance procedure section.

55 SHUMWAY ROAD, BROCKPORT, NEW YORK, 14420 * OFFICE/FAX 585-637-7430

Inspection and Maintenance Procedures for Existing Sub-Slab Depressurization System

The purpose of this summary of inspection and maintenance procedures is to familiarize the occupant or owner with routine inspection and maintenance activities that will be performed by the installation contractor.

Initial Procedure – Performed by Mitigation Tech approximately 18 months after Installation/Operation

Subsequent Frequency – Performed by Mitigation Tech every 12 to 18 Months thereafter

1. Conduct a visual inspection of the complete SSD System (e.g., vent fans, piping, warning devices, labeling on systems, etc.).

2. Conduct an inspection of all surfaces to which vacuum is applied for integrity such as cracks in floor surface, subsidence of the vacuum point through the floor, deterioration of couplings or piping.

3. Inspect all components for condition and proper operation.

4. Identify and repair any leaks in accordance with Section 4.3.1(a) of the New York State Department of Health (NYSDOH) guidance[1] (i.e.; with the system running, smoke tubes will be used to check for leaks through concrete cracks, floor joints, and at the suction points and any leaks will be re-sealed until smoke is no longer observed flowing through the opening).

5. Inspect the exhaust or discharge point(s) of the SSD System to verify that no air intakes have been located nearby.

6. Conduct system repair checks including air stream velocity measurements of the ventilation system.

7. Conduct pressure field extension testing (to ensure that the system is maintaining a vacuum beneath the entire slab) in accordance with Section 4.3.1(c) of the NYSDOH guidance.

8. Interview an appropriate occupant or owner seeking comments and observations regarding the operation of the SSD System.

9. Record volatile organic readings from the sample port.

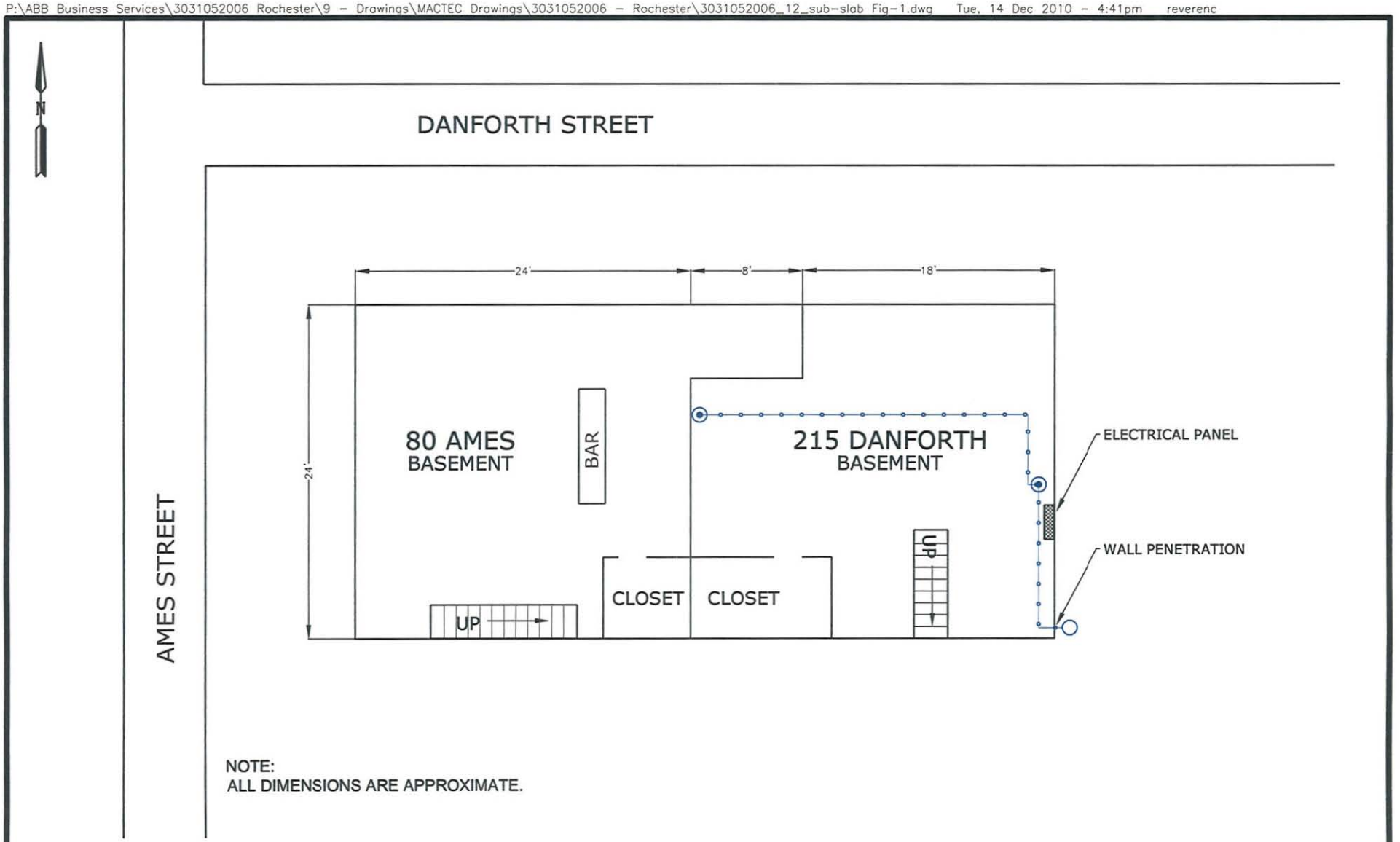
10. Submit a letter to the New York State Department of Environmental Conservation documenting the inspection findings.

---

[1] *Guidance for Evaluating Soil Vapor Intrusion in the State of New York.* Prepared by the New York State Department of Health. October 2006.

55 SHUMWAY ROAD, BROCKPORT, NEW YORK, 14420 * OFFICE/FAX 585-637-7430

P:\ABB Business Services\3031052006 Rochester\9 - Drawings\MACTEC Drawings\3031052006 - Rochester\3031052006_12_sub-slab Fig-1.dwg Tue, 14 Dec 2010 - 4:41pm reverenc



NOTE:
ALL DIMENSIONS ARE APPROXIMATE.

LEGEND

- ◉ - VAPOR EXTRACTION POINT
- ——— - 4" PVC OVERHEAD PIPING RUN
- ○ - FAN/BLOWER AND STACK

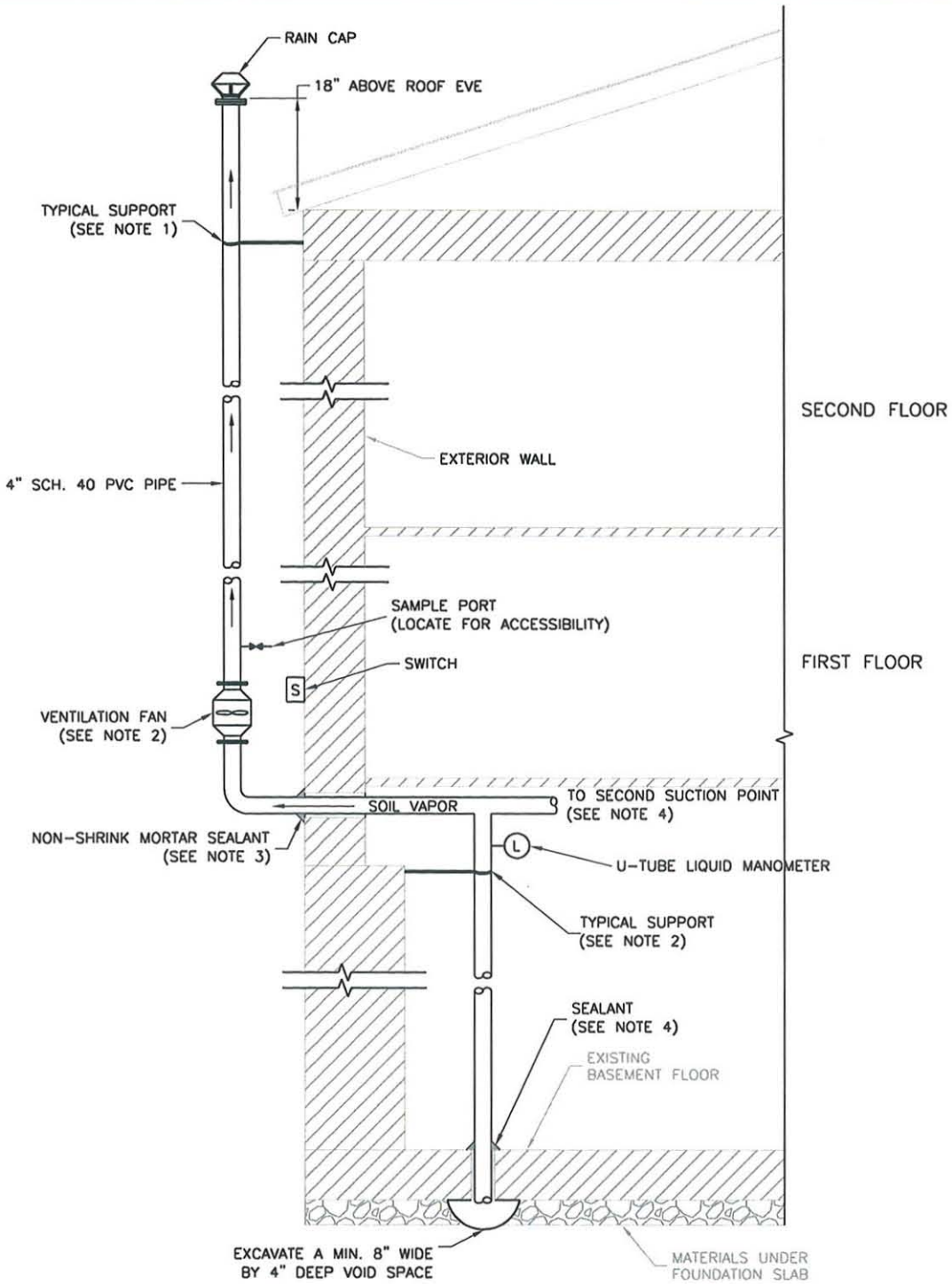
NOT TO SCALE

Drafted/Date: RAE 12-14-10 Checked/Date: KJD 12-14-10

80 Ames St. / 215 Danforth St. Duplex
Rochester, New York

MACTEC

SUB-SLAB
DEPRESSURIZATION SYSTEM
LAYOUT
Project 3031-05-2006-12
FIGURE 1



NOTES:

1. SUPPORTS WERE INSTALLED AT LEAST EVERY 6 FEET ON HORIZONTAL RUNS. VERTICAL RUNS WERE SECURED EITHER ABOVE OR BELOW THE POINTS OF PENETRATION THROUGH FLOOR, OR AT LEAST EVERY 8 FEET ON RUNS THAT DO NOT PENETRATE FLOOR.
2. THE VENTILATION FAN IS A RADONWAY RP-145. THE FAN IS CONNECTED ABOVE AND BELOW TO THE VENT PIPE WITH FLEXIBLE CONNECTORS AND CLAMPED IN PLACE.
3. OPENINGS AROUND THE SUCTION POINT PIPE WERE SEALED USING METHODS AND MATERIALS THAT ARE DURABLE AND PERMANENT. SEALANTS AND ADHESIVES ARE COMPATIBLE WITH PIPING MATERIALS AS SPECIFIED BY THE PIPING MANUFACTURER.
4. SEE FIGURE 1 FOR SSD SYSTEM LAYOUT.

SSD = SUB-SLAB DEPRESSURIZATION

NOT TO SCALE

Drafted/Date: RAE 10-06-10 Checked/Date: KJD 10-08-10

80 Ames St. / 215 Danforth St. Duplex
Rochester, New York

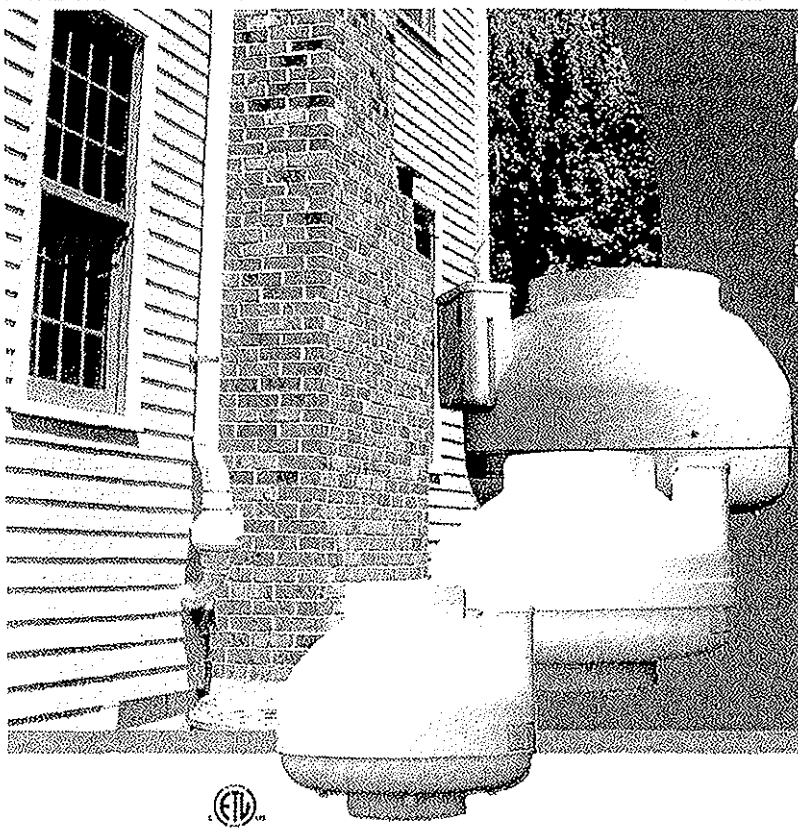
MACTEC

SSD SYSTEM DETAILS

Project 3031-05-2006-12
FIGURE 2

RadonAway™
The World's Leading Radon Fan Manufacturer

RP Series



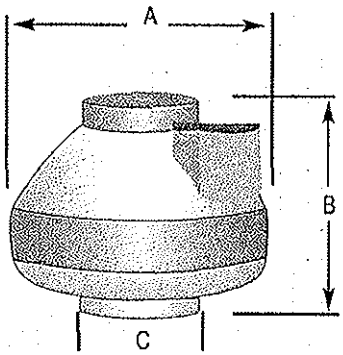
Radon Mitigation Fans

All RadonAway fans are specifically designed for radon mitigation. RP Series Fans provide superb performance, run ultra-quiet and are attractive. They are ideal for most sub-slab radon mitigation systems.

Features:

- Five-year hassle-free warranty
- Quiet and attractive
- Thermally protected
- Motorized impeller
- ETL Listed - for indoor or outdoor use
- Meets all electrical code requirements
- Rated for commercial and residential use

Model	Watts	Max. Pressure "WC	Typical CFM vs. Static Pressure WC 0"	.5"	1.0"	1.5"	2.0"	A"	B"	C"
RP140	14-20	0.8	134	68	-	-	-	9.7	7.9	4
RP145	37-71	2.1	173	132	94	55	11	9.7	7.9	4
RP260	52-72	1.8	275	180	105	20	-	11.8	9.9	6
RP265	86-140	2.5	327	260	207	139	57	11.8	9.9	6
RP380	103-156	2.3	510	393	268	165	35	13.41	10.53	8



Choice of model is dependent on building characteristics including sub-slab materials and should be made by a radon professional.

For Further Information Contact:

03/08
P/N 02008

Radon
uction System
Easy Read
Manometer

APPENDIX G

SITE DEED RESTRICTION

RECEIVED

DECLARATION of COVENANTS and RESTRICTIONS

03 NOV -6 AM 9:53

THIS COVENANT is made the 13th day of October, 2003, by ABB Prospects, Inc., a corporation organized and existing under the laws of the State of Connecticut, being the successor to the ownership interest of Combustion Engineering, Inc. in property situated at 95 Ames Street, Rochester, New York, 14611 known as the former Taylor Instruments Site, and having an office for the transaction of business at 501 Merritt 7, Norwalk, Connecticut.

WHEREAS, the former Taylor Instruments site is the subject of a Voluntary Agreement bearing Index B8-0508-97-02 executed by Combustion Engineering, Inc. as part of the New York State Department of Environmental Conservation's (the "Department") Voluntary Cleanup Program which Voluntary Cleanup Agreement was recorded in the Monroe County Clerk's Office on July 12, 2000, in Book 09334 of Deeds at Page 0524, namely that parcel of real property located on 95 Ames Street in the City of Rochester, County of Monroe, State of New York, bearing parcel number 120.410-0001-001.002/0000IH, and being more particularly described in Appendix "A", attached to this declaration and made a part hereof, and hereinafter referred to as the "Property"; and

WHEREAS, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination present at the Property and such remedy requires that the Property be subject to restrictive covenants.

NOW, THEREFORE, Combustion Engineering, Inc., for itself and its successors and/or assigns, covenants that:

FIRST, the Property subject to this Declaration of Covenants and Restrictions is more particularly described in Appendix "A" and is shown on a map attached to this declaration as Appendix "B" and made a part hereof;

SECOND, the owner of the Property shall, and hereby does, prohibit the Property from being used for purposes other than for restricted industrial or restricted commercial excluding daycare and health care uses unless the expressed written waiver of such prohibition is obtained from the Department or if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens (the "Relevant Agency");

THIRD, the owner of the Property shall, and hereby does, prohibit any disturbance of soil or fill at the Property without first complying with the Soils Management Plan approved per the Voluntary Agreement;

FOURTH, the owner of the Property shall maintain the cap covering the Property by maintaining its asphalt cover or, after obtaining the written approval of the Relevant Agency, by capping the Property with another material;

FIFTH, the owner of the Property shall, and hereby does, prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Relevant Agency;

SIXTH, the owner of the Property shall continue in full force and effect any institutional and engineering controls required under the Voluntary Agreement [specifically consisting of prohibiting future buildings constructed on the Property from having basements (i.e., must be slab-on-grade construction) and installation of passive vapor barriers, or, if required by NYSDEC, sub-slab depressurization systems, beneath all new buildings on the site to control potential exposures to indoor air spaces from VOC vapors] and maintain such controls unless the owner first obtains permission to discontinue such controls from the Relevant Agency;

SEVENTH, Combustion Engineering, Inc., and its successor, ABB Prospects, Inc.,

and/or its successors and assigns, retains for itself, and its authorized representatives, access to all Site monitoring wells, extraction wells, vent wells, and remediation equipment for purposes of site inspection, operations, maintenance, monitoring and related activities.

EIGTH, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Relevant Agency of the prohibitions and restrictions that Paragraph X of the Voluntary Agreement require to be recorded, and hereby covenant not to contest the authority of the Relevant Agency to seek enforcement; and

NINTH, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

ABB PROSPECTS, INC., as successor to
COMBUSTION ENGINEERING, INC.

By _____
A.P. KARLBERG'S
VICE PRESIDENT

STATE OF CONNECTICUT)
) SS.:
COUNTY OF FAIRFIELD)

On the 13th day of OCTOBER, in the year 2003 before me, the undersigned, personally appeared A.P. KARLBERG'S, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) 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

GAIL D. JOHNSON
Notary Public
My Commission Expires September 30, 2008

APPENDIX (A)

[redacted]

MONROE COUNTY CLERK'S OFFICE
County Clerk's Recording Page

Return To:

LAND AMERICA
2150 POST ROAD
FAIRFIELD CT 06430

Index DEEDS

Book 09286 Page 0065

No. Pages 0004

Instrument DEED

Date : 3/16/2000

Time : 11:45:00

Control # 200003160268

COMBUSTION ENGINEERING INC

ABB PROSPECTS INC

TT# TT 0000 014409

Employee ID CW

FILE FEE-S	$	26.75
FILE FEE-C	$	8.25
REC FEE	$	12.00
	$	.00
TRANS TAX	$	.00
MISC FEE-C	$	5.00
	$	.00
	$	.00
	$	.00
Total:	$	52.00

MORTGAGE TAX

MORTGAGE AMOUNT	$	.00
BASIC MORTGAGE TAX	$	.00
SPEC ADDIT MTG TAX	$	.00
ADDITIONAL MTG TAX	$	.00
Total	$	.00

STATE OF NEW YORK
MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH.

Maggie Brooks, County Clerk

TRANSFER AMT

TRANSFER AMT	$	.00
TRANSFER TAX	$	.00

D09286006 5

QUITCLAIM DEED

THIS INDENTURE, made the 26th day of January 2000, between COMBUSTION ENGINEERING, INC., a Delaware corporation, party of the first part, and ABB PROSPECTS INC., a Delaware corporation, party of the second part.
GRANTOR: Combustion Engineering, Inc., 2000 Day Hill Road, Windsor, CT, 06095
GRANTEE: ABB PROSPECTS Inc., 501 Merritt 7 Corporate Park, Norwalk, CT, 06856

WITNESSETH, that the party of the first part, for good and valuable consideration, paid by the party of the second part, does hereby remise, release and quitclaim unto the party of the second part and its successors and assigns, forever, all that certain piece, parcel or tract of land having an address of 95 Ames Street, in the City of Rochester, County of Monroe and State of New York, and more particularly described on Schedule A attached hereto and made a part hereof.

TOGETHER with the appurtenances and all the estate and rights of the party of the first part in and to said premises. TO HAVE AND TO HOLD the premises herein granted unto the party of the second part and its successors and assigns forever. The word "party" shall be construed as if it read "parties" whenever the sense of this indenture so requires. This deed is subject to the trust provisions of Section 13 of the Lien Law.

IN WITNESS WHEREOF, the party of the first part has duly executed this deed the day and year first above written.

IN PRESENCE OF:

Robert F. Auclair
ROBERT F. AUCLAIR

Lewis Segal
LEWIS SEGAL

COMBUSTION ENGINEERING, INC.

By Thomas N. Sacco L.S.
Thomas N. Sacco, Vice President

STATE OF CONNECTICUT)
) ss: Windsor January, 26 2000
COUNTY OF HARTFORD)

On this 26th day of January, 2000, before me, the undersigned officer personally appeared, Thomas N. Sacco, who acknowledged himself to be the Vice President of Combustion Engineering, Inc., a corporation, and that he, as such, being authorized to do so, executed the foregoing instrument for the purposes therein contained, by signing the name of the corporation by himself as Vice President.

In witness whereof I hereunto set my hand.

Carol L. Veilleux
Notary Public
My commission expires:

CAROL L. VEILLEUX
NOTARY PUBLIC
My Commission Expires Aug. 31, 2001

Section 120.410
Block 01
Lot 001.2
City of Rochester, County of Monroe
Street Address 95 Ames Street
Tax Billing Address 501 Merritt 7
Norwalk, CT 06851

SCHEDULE A

95 Ames Street

Beginning at a point, said point being the intersection of the northerly street line of West Avenue with the centerline of abandoned Hague Street;

1. Thence north 00°35'45" west along the centerline of abandoned Hague Street, a distance of 859.89 feet to a point;

2. Thence north 75°47'52" east, a distance of 356.20 feet to a point;

3. Thence south 00°43'25" east, a distance of 1.03 feet to a point;

4. Thence north 75°48'58" east, a distance of 322.45 feet to a point in the westerly street line of Ames Street;

5. Thence south 00°35'45" east along the westerly street line of Ames Street, a distance of 79.39 feet to a point;

6. Thence south 01°15'25" east along the westerly street line of Ames Street, a distance of 256.04 feet to a point;

7. Thence south 89°24'15" east, a distance of 5.00 feet to a point;

8. Thence south 00°35'45" east along the westerly street line of Ames Street, a distance of 680.26 feet to a point in the northerly street line of West Avenue;

9. Thence south 89°10'15" west along the northerly street line of West Avenue, a distance of 667.59 feet to the point of beginning.

The premises herein conveyed are conveyed together with the following:

1. All improvements located on said premises.

2. All right, title and interest that grantor herein may have in and to any and all roadways and rights-of-way located on or serving the premises.

3. Any and all easements, drainage rights, oil, gas and mineral rights, slope rights, rights of way, privileges, licenses and other rights and matters as appear of record, which benefit or serve the premises.

4. Reciprocal Easement Agreement by and between the grantor herein and The Hague Corporation, dated March 2, 1993 and recorded March 4, 1993 in Liber 8314 of Deeds at Page 401.

Said premises are conveyed subject to the following:

1. Unpaid real property taxes and assessments which become due and payable after the date hereof, which the grantee herein assumes and agrees to pay as part of the consideration for this deed.

2. Reciprocal Easement Agreement by and between the grantor herein and The Hague Corporation, dated March 2, 1993 and recorded March 4, 1993 in Liber 8314 of Deeds at Page 401.

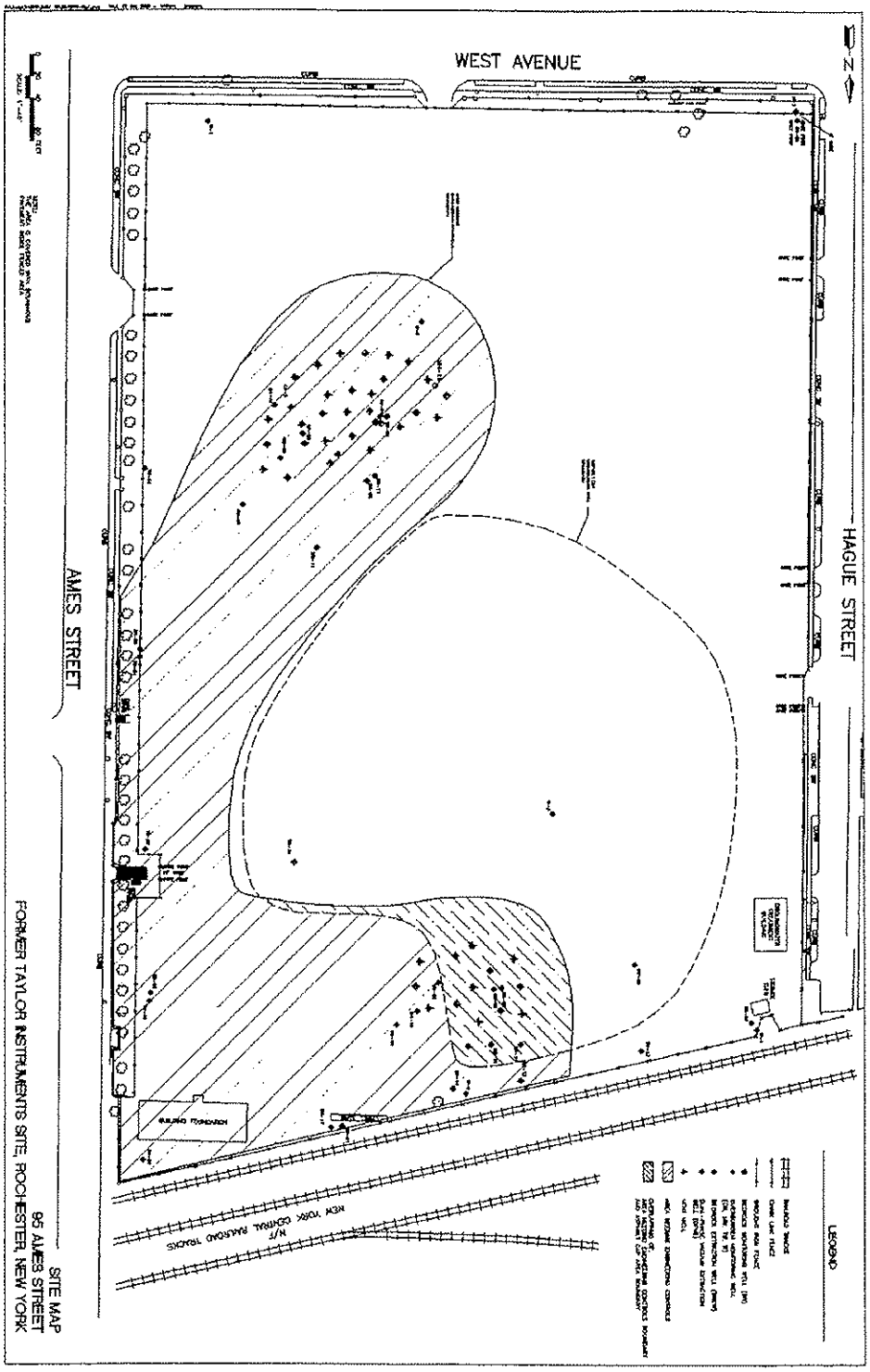
3. Building and zoning laws, rules, regulations and ordinances, public or private laws, and any restrictions or limitations imposed or to be imposed by governmental authority, to which the premises are subject.

4. Building, building line and municipal zoning restrictions, as of record may appear.

5. Any and all easements, drainage rights, slope rights, rights-of-way, restrictions, licenses, privileges, rights, encumbrances and other matters as appear of record, which affect or burden the premises or to which the premises are subject.

6. Any condition or state of facts which a physical inspection or survey of the premises would reveal.

APPENDIX (B)



SITE MAP
95 AMES STREET
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

AMENDED DECLARATION of COVENANTS and RESTRICTIONS

THIS AMENDED COVENANT is made the 21 day of January 2005, by ABB Prospects, Inc., a corporation organized and existing under the laws of the State of Connecticut, being the successor to the ownership interest of Combustion Engineering, Inc. in property situated at 95 Ames Street, Rochester, New York, 14611 known as the former Taylor Instruments Site, and having an office for the transaction of business at 501 Merritt 7, Norwalk, Connecticut.

WHEREAS, the former Taylor Instruments site is the subject of a Voluntary Cleanup Agreement recorded in the Monroe County Clerk's Office on July 12, 2000, in Book 09334 of Deeds at Page 0524, concerning that parcel of real property located on 95 Ames Street in the City of Rochester, County of Monroe, State of New York, bearing parcel number 120.410-0001-001.002/0000IH, hereinafter referred to as the "Property;" and

WHEREAS, an original Declaration of Covenants and Restrictions was executed on October 13, 2003 and recorded in the Monroe County Clerk's Office on November 6, 2003, at 9:53 AM, concerning the Property;

WHEREAS, the Department's final approval of the remedy implemented by the owner of the Property to eliminate or mitigate all significant threats to the environment presented by the contamination present at the Property has been conditioned upon revisions to clarify the original Declarations of Covenants and Restrictions;

NOW, THEREFORE, Combustion Engineering, Inc., for itself and its successors and/or assigns, modifies and amends the covenants and restrictions as follow:

The FIRST paragraph shall be modified as follows: The Property subject to the Declaration of Covenants and Restrictions was depicted on a map attached to the original declaration as Appendix "B" which map is hereby amended by the attached map, dated July 2, 2004, which specifically defines the areas referenced on the original map;

The FOURTH paragraph shall be modified as follows: The owner of the Property shall maintain the cap covering the Property in the area on the attached map circled in blue and referred to as "Asphalt Cap Maintenance Area Boundary" by maintaining its asphalt cover or, after obtaining the written approval of the Relevant Agency, by capping the Property with another material;

The SIXTH paragraph shall be modified as follows: The owner of the Property shall continue in full force and effect any institutional and engineering controls required under the Voluntary Agreement [specifically consisting of prohibiting future buildings constructed on the Property from having basements (i.e., must be slab-on-grade construction) and installation of passive vapor barriers, or, if required by NYSDEC, sub-slab depressurization systems, beneath all new buildings on the site to control potential exposures to indoor air spaces from VOC vapors] and maintain such controls unless the owner first obtains permission to

discontinue such controls from the Relevant Agency in the areas depicted by cross-hatching in blue on the attached map and referred to as "Areas Needing Engineering Controls Boundary:

All other provisions of the original Declaration of Covenants and Restrictions shall remain unaffected by this Amendment.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

ABB PROSPECTS, INC., as successor to
COMBUSTION ENGINEERING, INC.

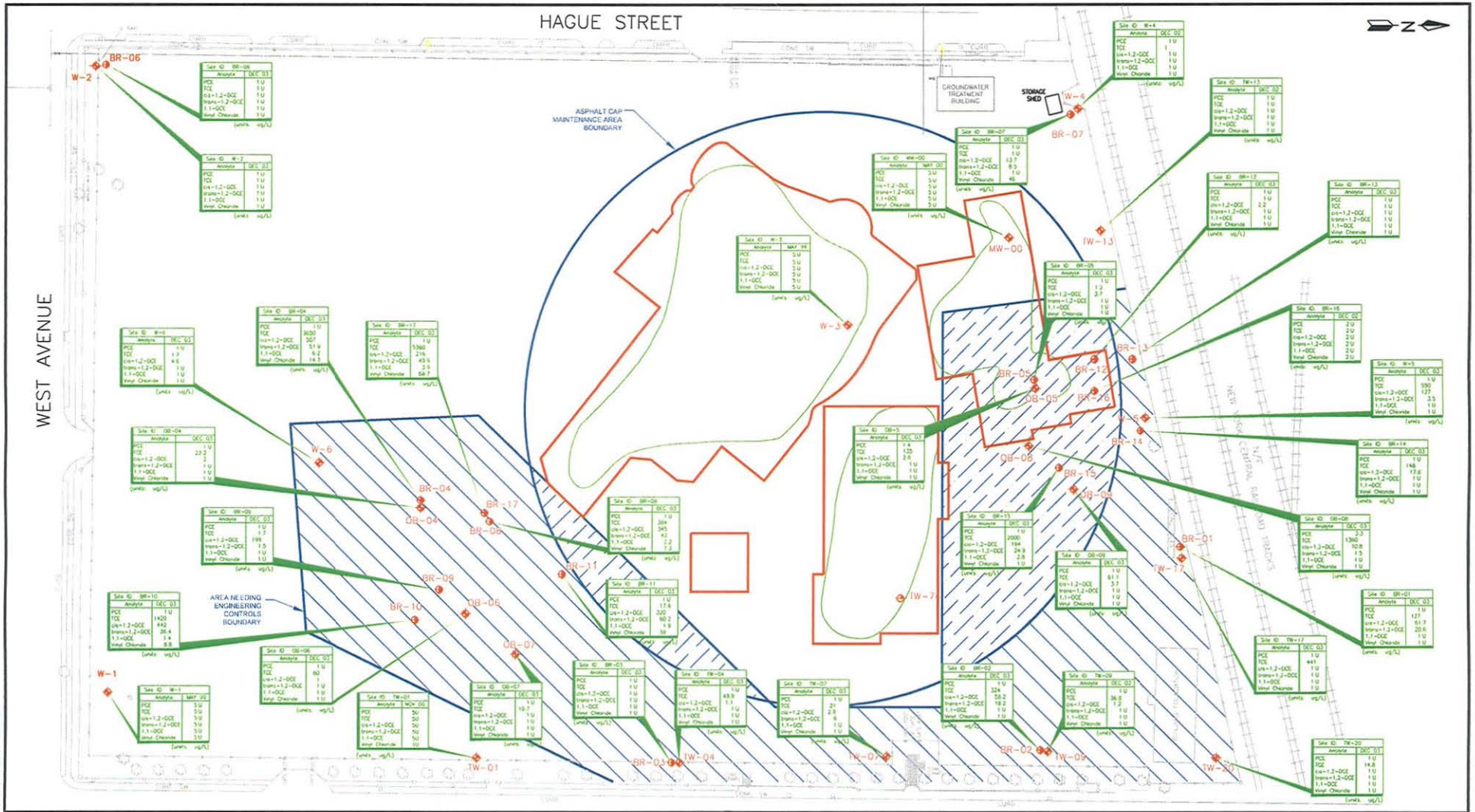
By _____
A.P. Kaarsberg
Vice President

STATE OF CONNECTICUT)
) SS:
COUNTY OF FAIRFIELD)

On the 31st day of January in the year 2005 before me, the undersigned, personally appeared AP Kaarsberg, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) 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

CHRISTINE S. PASTORE
NOTARY PUBLIC
MY COMMISSION EXPIRES SEP. 30, 2005



LEGEND

- OVERBURDEN MONITORING WELL (DB, MW, TW, W)
- BEDROCK MONITORING WELL (BR)
- DCE DICHLOROETHENE
- PCE TETRACHLOROETHENE (PERCHLOROETHENE)
- TCE TRICHLOROETHENE
- J ESTIMATED VALUE
- U NON DETECT
- NS NOT SAMPLED

- AREAL LIMIT EXCAVATION (PROPOSED IN REMEDIATION WORK PLAN)
- ACTUAL AREA OF EXCAVATION
- AREA NEEDING ENGINEERING CONTROLS
- OVERLAPPING OF: AREA NEEDING ENGINEERING CONTROLS BOUNDARY AND ASPHALT CAP AREA BOUNDARY

VOC's IN GROUNDWATER

MACTEC
MACTEC Engineering and Consulting, Inc.
1431 Centerpoint Boulevard, Suite 150
Knoxville, Tennessee 37932
865-531-1922 • Fax: 865-531-8226

DETERMINATION OF ENGINEERING CONTROL AREAS
95 AMES STREET
FORMER TAYLOR INSTRUMENTS SITE
ROCHESTER, NEW YORK

DRAFTING BY:	PREPARED BY:	CHECKED BY:
JOB NUMBER: 51870	DATE: JULY 2, 2004	SCALE: 0 80'

CONTROL_AREA 7-2-04.dwg Wed, 02 Feb 2005 - 3:58pm REVERENC