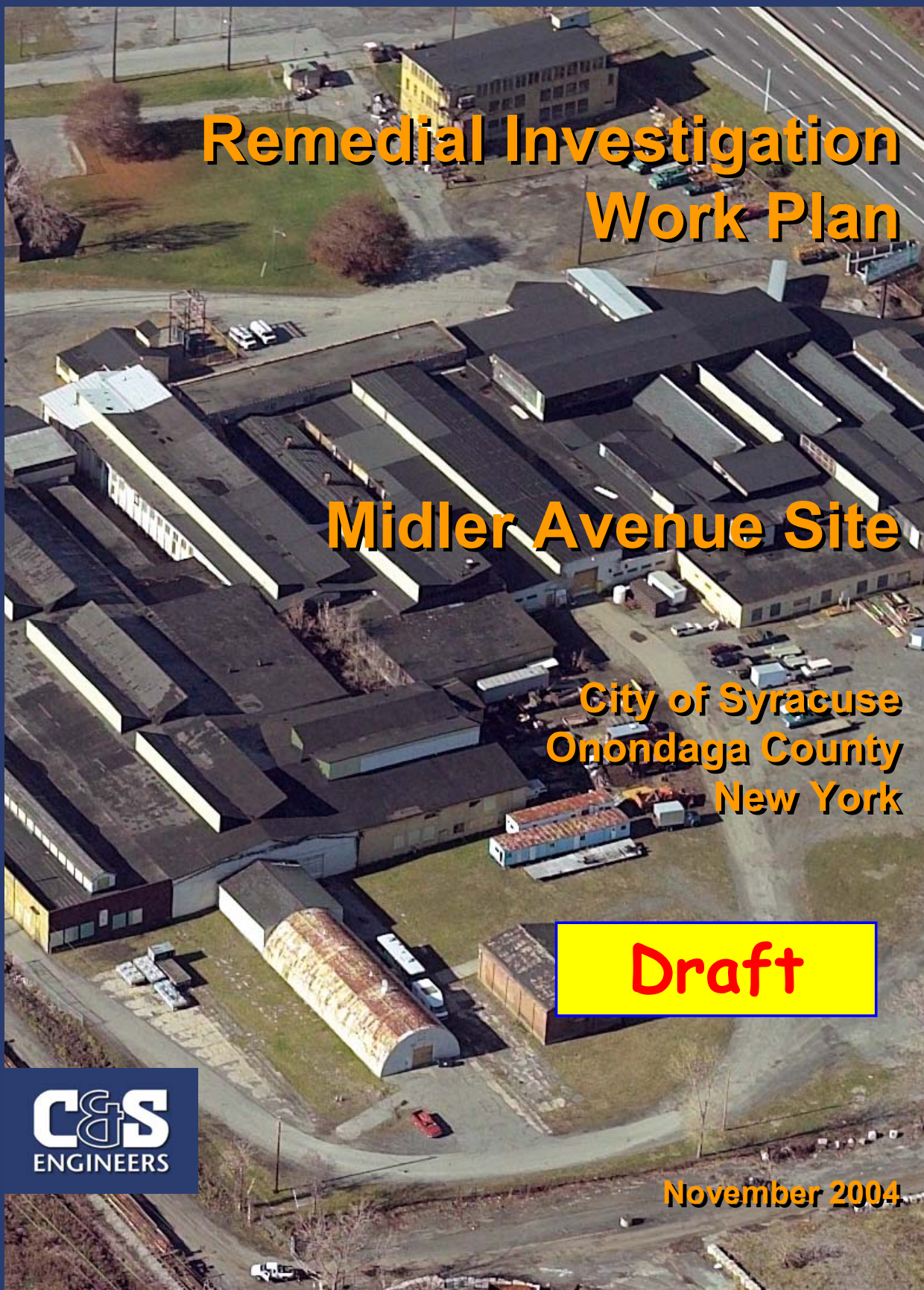


Remedial Investigation Work Plan

Midler Avenue Site

City of Syracuse
Onondaga County
New York

Draft

C&S ENGINEERS

November 2004

C&S COMPANIES
ENGINEERS
DESIGN BUILD
TECHNICAL RESOURCES
OPERATIONS

C&S Engineers, Inc.
499 Col. Eileen Collins Boulevard
Syracuse, NY 13212
phone 315-455-2000
fax 315-455-9667
www.cscos.com

November 8, 2004

Ms. Karen A. Cahill
Project Manager
Division of Environmental Remediation
New York State Department of Environmental Conservation
615 Erie Boulevard West
Syracuse, New York 13204-2400

Re: Revised BCP work Plan

File: C81.001.001

Dear Ms. Cahill:

On behalf of our client, Pioneer Midler Avenue, LLC, enclosed is the revised Remedial Investigation work plan for the Midler Avenue Brownfield Cleanup Program Site. The revised plan address comments in your November 5, 2004 letter. In addition, some sampling locations were renumbered to correspond to the numbering being utilized in the geotechnical boring program being conducted at the site.

Please call Jed Schneider of the Pioneer Companies of us if there are any questions.

Sincerely yours,

C&S ENGINEERS, INC.

for

Thomas A. Barba
Senior Project Scientist

TAB:cah
Attachments

cc: Jed Schneider, Pioneer Midler Avenue, LLC
Ken Kamlet, Esq., Newman Development Group, LLC
Henriette Hamel, NYSDOH Syracuse
James Charles, Esq., NYSDEC Buffalo
Debra Moloughney, NYSDEC Central Office, Office of Site Control (4 copies)
Steve Vinci, C&S Engineers, Inc.

Remedial Investigation Work Plan

Midler Avenue Site
Brownfield Cleanup
Syracuse, Onondaga County, New York

Prepared for: **Pioneer Midler Avenue, LLC**
by

C&S Engineers, Inc.
499 Colonel Eileen Collins Blvd.
Syracuse, New York 13212

November 2004

MIDLER AVENUE BROWNFIELD CLEANUP PROJECT
REMEDIAL INVESTIGATION WORK PLAN

Table of Contents

SECTION 1: INTRODUCTION

1.1 General

This work plan, submitted on behalf of Pioneer Midler Avenue, LLC ("PMA"), identifies activities and tasks associated with a Brownfield Remedial Investigation (RI) to be conducted at the former Midler City Industrial Park site ("Midler Site"), located in the City of Syracuse, Onondaga County, New York. The project is being conducted consistent with the New York State Brownfield Cleanup Program (BCP). Figure 1 shows the location of the facility. This work plan addresses elements, as appropriate, established within the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) Program Policy DER-97-4058 (currently under review and revision) and other applicable guidance - including NYSDEC's draft guidance manual *Technical Guidance for Site Investigation and Remediation* (DER-10, 12/25/02) and the May 2004 draft version of the *Brownfield Cleanup Program Guide*. C&S Engineers, Inc. (C&S) has developed this work plan based on the results of a Phase I Environmental Site Investigation and a limited sampling and analysis program conducted at the site.

Appendices to this work plan include the following:

- Sampling and Analysis Plan (Appendix A)
- Health and Safety Plan (Appendix B)
- Citizen Participation Plan (Appendix C)
- Text of Phase I Environmental Site Assessment (Appendix D)
- July 2004 Test Pit Excavation report (Appendix E)

1.2 Site Description and History

"The Site" is approximately 21.59 acres in size. As shown on the Figure 1, the Site is located along the east side of South Midler Avenue. A divided highway, Interstate 690, creates the northern boundary of the Site. Adjoining the east side of the Site is a yard waste composting facility operated by the City of Syracuse Department of Public Works. The southern boundary of the Site (after acquisition of a small strip of City-owned property) is a CSX rail line.

Prior to being acquired by its present owner, Sutton Investing Corporation ("Sutton") in 1961, the Site was utilized for close to 70 years for various manufacturing purposes by Pierce, Butler & Pierce Manufacturing Company, Pierce Butler Radiator Corporation, Prosperity Company, Inc., and Ward Industries Corporation.

A Phase I Environmental Site Assessment performed in 1994 revealed that the entities named above were involved with the manufacture of boilers, radiators, other heavy iron wares, lead pipe, automatic laundry and dry cleaning equipment, air-operated pressing machines, and steam garment pressing machines. Currently the site includes a complex of buildings, a majority of which are interconnected. There are also four free standing buildings. Based on previous research, it appears that many of these buildings remain from the historic manufacturers identified above. For the most part, these buildings are wood framed or of wood truss construction. Notable exceptions to this are a Quonset hut type building at the east end of the interconnected complex and a freestanding brick building located east of the interconnected complex.

Presently the site is occupied by several tenants. The nature of these tenants is varied and includes, but is not limited to:

- Auto dealer storage of new and used vehicles
- Electrical contractor
- Landscape contractor
- Rack/storage/pallet system vendor
- Hardwood/plywood storage
- General contractors

The 1994 Phase I Environmental Site Assessment by C&S Engineers (attached as Appendix D of this work plan) identified a number of areas associated with petroleum storage, areas which had some type of containerized chemical storage, and areas which contained transformers and associated electrical switchgear.

Prior to submitting the BCP application, Pioneer Midler, LLC undertook a preliminary investigation

in July 2004. The objective of this investigation was to assess specific areas of the Site that were identified in the 1994 Phase I Environmental Site Assessment. The areas of interest for the July 2004 investigation included:

- The former pond
- The former C&D fill area
- Area Q – former location of a 12,000 gallon fuel oil underground storage tank (UST)
- Area S – former location of four fuel oil USTs ranging in size from 900 gallons to 20,000 gallons
- Existing electrical powerhouse and maintenance building

The former pond and C&D areas as well as Area Q and Area S were investigated by making a series of test trench explorations with a track mounted excavator. At the electrical powerhouse, wipe samples were obtained for laboratory analysis to assess the presence or absence of polychlorinated biphenyls (PCBs). In addition to the test pit explorations made to assess specific environmental areas of potential concern, three additional trenches were made along the western boundary of the site. Those excavations were dug to assess shallow groundwater levels in the location where stormwater retention basins have been proposed for the future site development.

Documentation of field observations and analytical laboratory results was presented in a letter report prepared by C&S Engineers, Inc. for Pioneer Midler LLC. A copy of that report, dated July 30, 2004, is attached as Appendix E of this work plan. The following is a summary of findings relative to the July 2004 investigation.

Former Pond Area

- Ground surface to four feet below grade consisted of soil intermixed with scrap wood, foundry sand, bricks, asphalt, concrete, a cast iron sink, and discarded metal cans.
- 3.5 to 5.5 feet below grade, silty clay, marl, and peat were found.
- Laboratory analysis of two samples for PCBs and volatile organic compounds (VOCs) did not detect the presence of these compounds.

Former C&D Fill Area

- Ground surface to three feet below grade was fill material which did not exhibit discoloration, staining, or odors.
- Below three feet were foundry sands, slag, glass, scrap wood, metal, concrete, asphalt, and tar.
- Six feet below grade, white marl was encountered with peat above.
- Conventional headspace analysis performed in the field revealed the presence of volatile organic vapors in one test trench.
- Laboratory analysis of samples taken from this area indicated the presence of acetone, 2-butanone, and tetrachloroethene. The tetrachloroethene was reported at a concentration of 160 µg/kg.

Area Q – Former 12,000 Gallon UST Location

- Foundry sand, slag, and marble stone fragments were encountered.
- No evidence of a UST was found.
- No physical evidence of staining or discoloration was detected. A petroleum odor was noted in the shallow soils of the boring.
- No samples for laboratory analysis were obtained.

Area S – Former Location of Four USTs

- Foundry sand and slag were observed.
- No physical evidence of a UST was found.
- No volatile organic vapors, stained soil, or sheens were detected.

Electrical Powerhouse

- Wipe samples of surfaces within the Electrical Powerhouse revealed the presence of Aroclor 1260 at 5.5 µg/100 cm^2 on the floor and 1.3 µg/100 cm^2 on the front of one of the transformers.

West Area Trenches

- Fill materials consisting of slag, foundry sand, rocks, and a sand/silt mixture were found to a depth of approximately six feet below grade.
- Marl was encountered at depths ranging from three feet to ten feet below ground surface.
- No samples for laboratory analysis were obtained.

SECTION 2: SCOPE OF WORK

2.1 Introduction

Consistent with the NYSDEC requirements for BCP RI projects, this work plan was developed to meet the following goals:

- Define the nature and extent of contamination.
- Identify contaminant source areas.
- Produce data of sufficient quantity and quality to support the development of an acceptable Remedial Work Plan.

Figure 2 provides a map of the site with key sample locations noted. A table summarizing the samples to be collected and the associated analysis is provided in Table 1. The Sampling and Analysis Plan for this project is provided in Appendix A. The rationale for the sampling locations in the proposed investigation plan is set forth in the following tables.

Monitoring Well	Location/Area of Concern
MW–1	Area A, previously identified in the 1994 Phase I ESA. Former location of a 500 gallon fuel oil tank as shown on the 1960 mapping.
MW–2	Perimeter monitoring well location.
MW-3	Area F, previously identified in the 1994 Phase I ESA as the location of a drum storage area and stained soil.
MW–4	Area G, previously identified in the 1994 Phase I ESA as the location of 55-gallon drums of flammable liquid in 1960.
MW–5	This well is to assess groundwater quality in the vicinity of the following areas identified in the 1994 Phase I ESA: Area J Paint Storage (1960 mapping)

	Area L Lacquer and Thinner Storage (1960 mapping) Area M Electrical Transformer Storage observed in 1994 Area N Previously identified ash/cinder debris. Area O Storage of containers holding roof tar, epoxy paint, and concrete additives as observed in 1994. Area P Previously identified ash/cinder debris.
MW–6	This monitoring well has been placed adjacent to C&D fill area identified in the 1994 Phase I ESA. In addition, it will used to monitor the presence of tetrachloroethene that was detected during the July 2004 investigation.
MW–7	Area U, previously identified in the 1994 Phase I ESA as being the location of storage tanks situated on the ground surface. The origin of these tanks was suspected to be Area S. This is also a perimeter well and adjacent to the previously described C&D fill area. Additionally, the 1960 mapping shows this area as the location of a 275 gallon fuel oil aboveground storage tank (AST).
MW–8	Perimeter well and assessment of Area W previously identified in the 1994 Phase I ESA as the location of electrical transformers (1960 mapping). The 1960 mapping also shows a "Dip Tank" at the interior northwest corner of the current day "Building No. 2."

Soil Borings/	**Location/Area of Concern**
B–1	Areas D and E previously identified in the 1994 Phase I ESA as the locations of an oil tank (1930 mapping) and an 8,000 gallon oil tank (1960 mapping).
B–2	Former "Spray Oven and Dip Tank Degreaser" as shown on the 1960 mapping.
B–3	Former "Paint House" as shown on the 1960 mapping.
B–4	Interior courtyard area. 1960 mapping shows plating room was situated immediately south of courtyard.
B–5	Area J previously identified in the 1994 Phase I ESA as being the location of "Paint Storage" as shown on the 1960 mapping.
B–6	Area Q, previously identified in the Phase I ESA as the location of a 12,000 gallon fuel oil tank as shown on the 1960 mapping. This area was also investigated by test pit explorations in July 2004.
B–7, B–8, B–9	Fill area previously identified in 1994 Phase I ESA. This area was also investigated by test trench explorations in July 2004. VOC's detected.
B–10	Plating Building as shown on the 1960 mapping.
PB3, PB4, PB7, PB12.	Samples collected from geotechnical borings in west portion of site.

Test Pits	Location/Area of Concern
TP-7	Area C, previously identified in the 1994 Phase I ESA as the location of an aboveground fuel oil tank, as shown on the 1930 mapping.
TP-12	Area R, previously identified in the Phase I ESA as being the location of two 500-gallon skid mounted tanks. One tank was labeled as gasoline and the other "Diesel Off Road."
TP-13	Area I, previously identified in the 1994 Phase I ESA as being the location of "Open Incinerators" as shown on the 1960 mapping.
TP -14	Area B, previously identified as the location of an underground storage tank.

Surface Soil / Sediment for PCBs Only	Location/Area of Concern
P–1	Area Y, previously identified in the 1994 Phase I ESA as the location of "Transformer Poles".
P–2	Area W - former transformer area.
P–3	Existing exterior electrical transformer yard.
P-4	Existing electrical vault.

Sediment and Water Sample from Catch Basin/Sump	Location/Area of Concern
S–1, S–2, S–3	Stormwater catch basins
S–4	Sump in southeast corner of "Compressor Room"
S–5	Trench drain
S–6, S–7	Stormwater catch basins in alley
S–8	Diamond plate covered trench east of the overhead door.

S–9	Diamond plate covered trench and sump in former "Plating Building" as shown on 1960 mapping.

2.2 Subsurface Soil Investigations

A total of 18 boreholes will be made at the site with eight (MW-1 through MW-8) being completed as groundwater monitoring wells. Borings B-1 through B-10 will be backfilled. It is expected that each borehole will be advanced using rotary drilling techniques and hollow stem augers. Air or drilling fluids will not be used. Depending on site accessibility and location of a particular boring, the drilling equipment may be mounted on a truck, an all-terrain vehicle, or a custom fabricated unit made for interior buildings or small space applications.

Drilling spoils created at each borehole (except those completed as groundwater monitoring wells) will be placed into the borehole of origin as backfill. Excess spoils including those generated at boreholes completed as groundwater monitoring wells will be placed in 55 gallons drums. Those containers will be then moved indoors to a heated location until characterized and disposed. Note that disposal may be accomplished by emptying the drums on-site subsequent to the receipt of analytical results for the borings. If off-site disposal is needed, it will be accomplished within 90 days of the accumulation date.

During the field effort, each borehole for the contaminant investigation will be sampled continuously (i.e., split spoons) in accordance with ASTM D1586-99. Retrieved soil samples will be visually examined to assess subsurface conditions and physical properties of the strata. These properties include: color, moisture content, and visual evidence of discoloration or sheens. Additionally, all soil samples will be field screened for evidence of volatile organic vapors via conventional headspace analysis techniques using a photoionization detector equipped with a 10.0 eV lamp.

As indicated earlier, eight boreholes will be completed as groundwater monitoring wells. Presently, it is anticipated that the these borings will be completed to the sand-clay layer just below the marl layer. However, the actual depth of the well screen will be determined in the field, depending on subsurface conditions. Each well will be constructed using 2-inch diameter PVC flush joint screen

and riser. Given the anticipated fine grained soils, 10 slot screen and '0' quartz sand will be used. Depending on the location of a particular well, the protective casing will either be terminated flush with the ground surface or stick up above ground surface. Regardless, each well will have a cover and locking caps or J-plugs. Upon completion of the drilling program, each borehole and completed well will be surveyed to establish horizontal locations. Additionally, the measuring point of each completed groundwater monitoring well will be surveyed. This information will be used to identify local groundwater flow direction and to create a groundwater contour map.

One soil sample from each of the borings will be collected for analysis. The sampling interval will be determined in the field based on visual examination of the samples and the results of PID screening. In the absence of evidence of contamination, samples will be retrieved from just above the water table. Analysis of the soil samples will be for the Superfund Target Compound List (TCL) of parameters as specified in Exhibit C of the NYSDEC ASP.

2.3 Groundwater Sampling

To assess the existence of potential shallow groundwater quality impacts at the site, eight monitoring wells will be installed in the borings discussed above. When it is determined that a boring has reached an appropriate depth for well screening that will straddle the water table within the shallow aquifer, the well will be constructed. Subsequent to well construction, at least 24 hours will be allowed to elapse prior to development of each well. Given the shallow depth of the wells, it is expected that well development will be performed via manual bailing or pumping. The objective of well development will be to remove gross fines from the well and surrounding sand pack. All development water will be discharged in the vicinity of the well.

In the event more than 24 hours elapse between well development and sampling, 3 to 5 well volumes will be purged prior to sampling, unless the well is bailed dry. Purged water generated from the monitoring wells will be discharged in the vicinity of the well. Groundwater samples will be collected from the wells once the water level reaches 95% of prepurge levels. Analysis of the groundwater samples will be for the Superfund TCL parameters as specified in Exhibit C of the NYSDEC ASP.

2.4 Surface Soil Sampling

As shown on Figure 2, there are three areas where electrical transformers had historically existed or are currently located. Those locations are identified as P-1 through P-3. At these areas, no more than three grabs will be obtained to create one composite sample for PCB analysis. Unless there is visual evidence of staining or discoloration at ground surface, the sample interval for each grab sample will be approximately the top six inches. Should staining be evident at the ground surface, the grab sample interval will be modified accordingly. However, the vertical length of the sample interval will not exceed six inches.

2.5 Catch Basin and Sump Sampling

Several structures are present where sediment, water and perhaps other fluids are present. Based on the information available at the time of this work plan preparation, nine locations have been selected for sampling. The location of those structures selected are shown on Figure 2. Assuming that both liquids and solid are presented at the time of the sampling event, a water and sediment sample will be collected at each location. Analysis of these samples will be for the Superfund TCL parameters as specified in the NYSDEC ASP.

2.6 PCB Sampling

A number of PCB wipe samples will be collected as needed on electrical equipment such as transformers. Analysis will be for PCBs only. In addition, one subsurface vault will be sampled for PCBs. The sample will be either a wipe or sediment samples depending on conditions in the vault.

2.7 Additional Monitoring

As part of the geotechnical investigation of the site for building design purposes, a variety of borings and test pits will be conducted to gather information about subsurface conditions (see Figure 3). An environmental geologist will be monitoring these activities. For the borings, continuous soil cores will be collected down to the confining clay layer. The samples will be screened for VOCs and the samples will be logged. The VOC screening will be open air monitoring with a PID instrument. If contamination is noted (staining, visible evidence of free product, or PID reading 5 ppm or higher above background on the PID instrument), drilling will be stopped and the NYSDEC representative will be contacted.

At four locations, a sample will be collected during the geotechnical boring program. These locations are: PB3, PB4, PB7, and PB12. Analysis of these samples will be for the Superfund TCL parameters as specified in the NYSDEC ASP. At the remaining geotechnical boring locations, analytical laboratory testing is not planned, but field personnel will be prepared to collect and preserve samples if physical evidence of contamination is noted (i.e., staining, visible evidence of free product, or PID reading 5 ppm or higher above background on the PID instrument).

2.8 Sample Analyses

The analysis of samples for parameters or category of parameters for which laboratory certification exists under the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) will be performed by an ELAP-certified laboratory. Sample analysis will be conducted by an Analytical Services Protocol certified laboratory. Reports will be for the ASP Category B deliverables to provide for a third-party data usability review.

2.9 Data Usability

A Data Usability Summary Report (DUSR) will be prepared by Data Validation Services (120 Cobble Creek Road, P.O. Box 208, North Creek, NY 12853). The DUSR will be prepared consistent with the NYSDEC's *Guidance for the Development of Quality Assurance Plans and Data Usability Summary Reports* as given in Appendix 2B of the draft DER-10.

2.10 Qualitative Exposure Assessment

To assess potential site impacts on human health, PMA will complete a qualitative human health exposure assessment consistent with the NYSDOH guidance in Appendix 3B of the Draft DER-10. This assessment consists of characterizing the exposure setting (including the physical environment and potentially exposed human populations), identifying exposure pathways, and evaluating contaminant fate and transport. Site contaminants will be selected for further evaluation based on consideration of the following factors:

- Concentrations of contaminants in environmental media both on-site and off-site;
- Field data quality, laboratory data quality, and sampling design; and
- Comparison of on-site and off-site contaminant concentrations in environmental media with typical background levels.

A Fish and Wildlife exposure assessment will not be conducted because the site is an intensively developed industrial area with little or no fish or wildlife habitat.

2.11 Site Survey

A New York State licensed surveyor will be retained to complete a property survey of the project site. This will include a metes and bounds description and location and elevation of key site landmarks. Sample locations and monitoring well location / elevations will be included. The final survey will be provided in AutoCAD format.

2.12 Additional Sampling and Analysis

The specific type and number of samples to be collected as part of a follow-up investigation, if needed, to complete the characterization of primary areas of environmental concern will be detailed after completion of the site characterization efforts covered by this scope of work.

2.13 Report Preparation

Upon completion of the previously mentioned tasks, Pioneer Midler will prepare a Draft RI Report that will be consistent with the general requirements for RI reports set forth in Section 3.14 of *Technical Guidance for Site Investigation and Remediation.* The report will include enough information to address the following:

- Identify and characterize the sources of contamination
- Describe the amount, concentration, environmental fate and transport (as necessary), location, and other significant characteristics of the substances present
- Define hydrogeological factors as needed
- Identify routes of exposure and human populations at risk

Upon completion of the Draft RI Report, a meeting with NYSDEC and NYSDOH personnel can be held to discuss the results of the RI as well as recommended preliminary remedial action measures.

SECTION 3: INTERIM REMEDIAL MEASURE

3.1 Planning and Design

PMA will develop a plan and design for implementation of Interim Remedial Measures (IRM) for

the Pioneer Midler Brownfield site if IRMs are deemed appropriate or expedient. For the purpose of developing this work plan, it has been assumed that IRMs could consist of the following:

- Possible removal and off-site disposal of petroleum-contaminated soils.
- Removal of other contaminated waste or soil.
- Removal of oily water and/or sediments in on-site manholes and sewer systems.

SECTION 4: ADDITIONAL INFORMATION

4.1 Health and Safety Plan

The site-specific Specific Health and Safety Plan for the Pioneer Midler Brownfield Project is provided in Appendix B.

4.2 Citizen Participation Plan

The Citizen Participation (CP) Plan for the Midler Avenue Project is provided in Appendix C. The CP Plan is consistent with the requirements of 6 NYCRR Part 375 and the applicable guidance set forth in the May 2004 draft version of the *Brownfield Cleanup Program Guide*.

4.3 Project Schedule

The planned project schedule is provided in Figure 4.

m:\private\barba\pioneer midler\work plan\revised\work plan 110704.doc

TABLES

C&S ENGINEERS

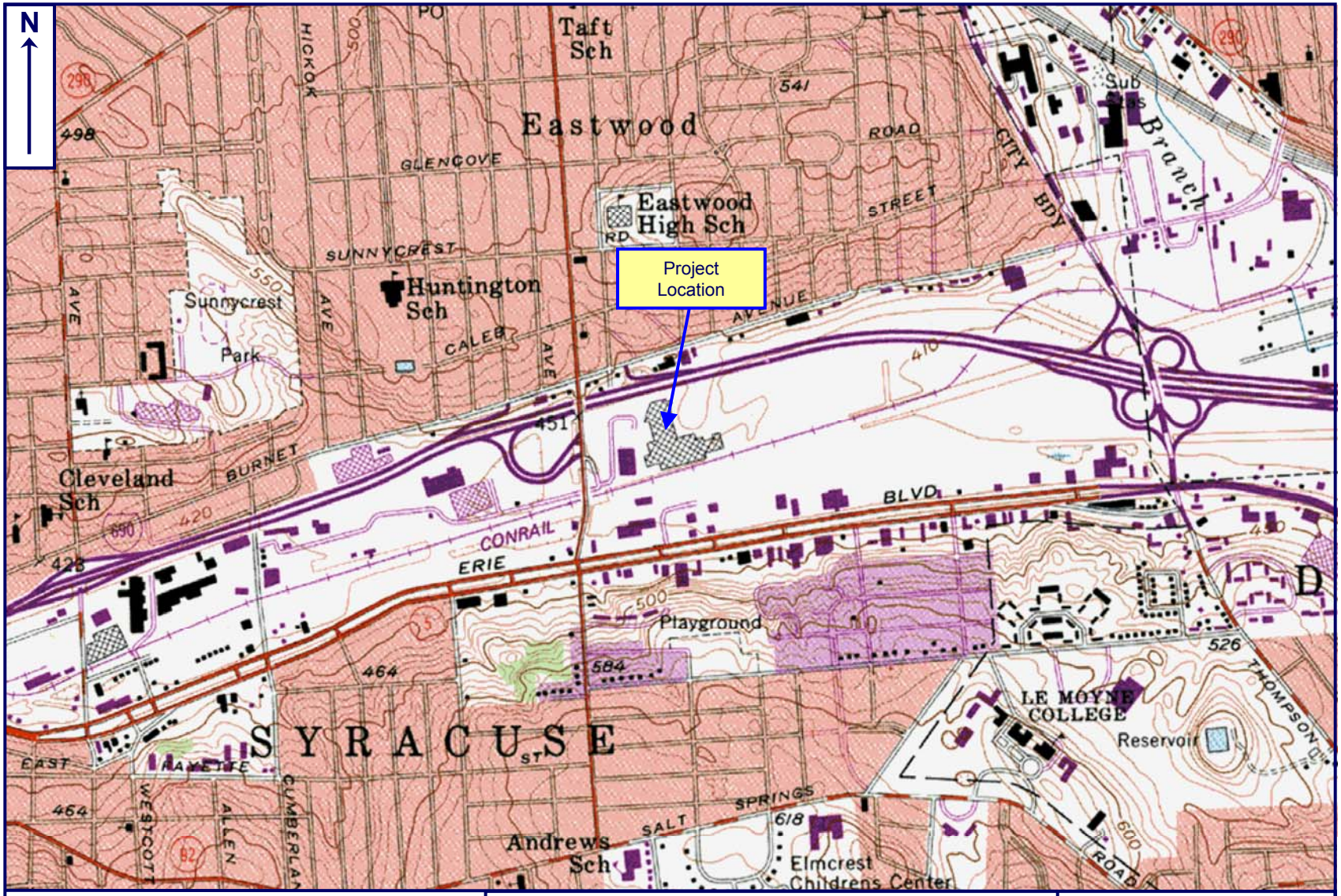
Table 1
Sampling and Analysis Matrix
Midler Site Brownfield Remedial Investigation

Media	No. of Samples Collected	QA Samples	Parameters
Groundwater	8	1D, 1MS, 1MSD, 1 TB	Volatiles, Semivolatiles, Pesticides/PCBs, TAL inorganics
Subsurface soil (borings)	18	1 D, 2 MS, 2 MSD	Volatiles, Semivolatiles, Pesticides/PCBs, TAL inorganics
Subsurface soil (test pits)	3	Note 2	Volatiles, Semivolatiles, Pesticides/PCBs, TAL inorganics
Surface (shallow)	3	Note 2	PCBs
Vault oily sediment	1	Note 2	PCBs
Sediment (catch basins & sumps)	9	1 D, 1 MS, 1 MSD	Volatiles, Semivolatiles, Pesticides/PCBs, TAL inorganics
Water (catch basins & sumps)	9	1 D, 1 MS, 1 MSD	Volatiles, Semivolatiles, Pesticides/PCBs, TAL inorganics
PCB Wipes	10	0	PCBs

Notes: 1. D = Dupliacate, MS = Matrix Spike, MSD = Matrix Spike Duplicate, TB = Trip Blank
2. Included with subsurface soil (borings)

FIGURES

C&S ENGINEERS



Source: USGS Topographic Maps (Terrain Navigator)
Syracuse East, NY

Figure 1
Site Location Map
Pioneer Milder LLC Brownfield Project
City of Syracuse, Onondaga County, New York

C&S COMPANIES
ENGINEERS
DESIGN BUILD
TECHNICAL RESOURCES
OPERATIONS

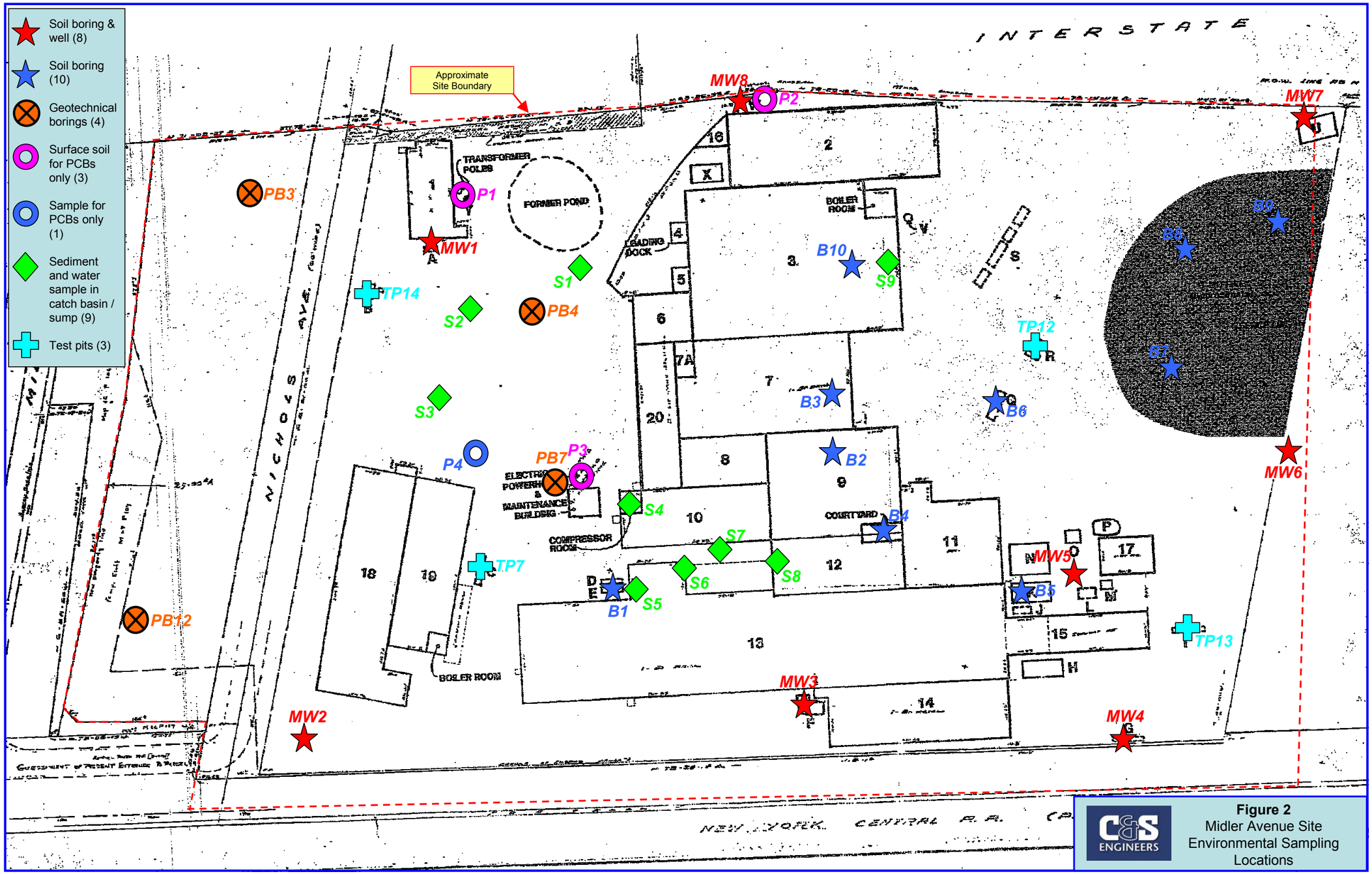


Figure 2
Midler Avenue Site
Environmental Sampling Locations

M:\Private\Barba\Pioneer Midler\Work plan\revised\Figure 2 env 2.ppt

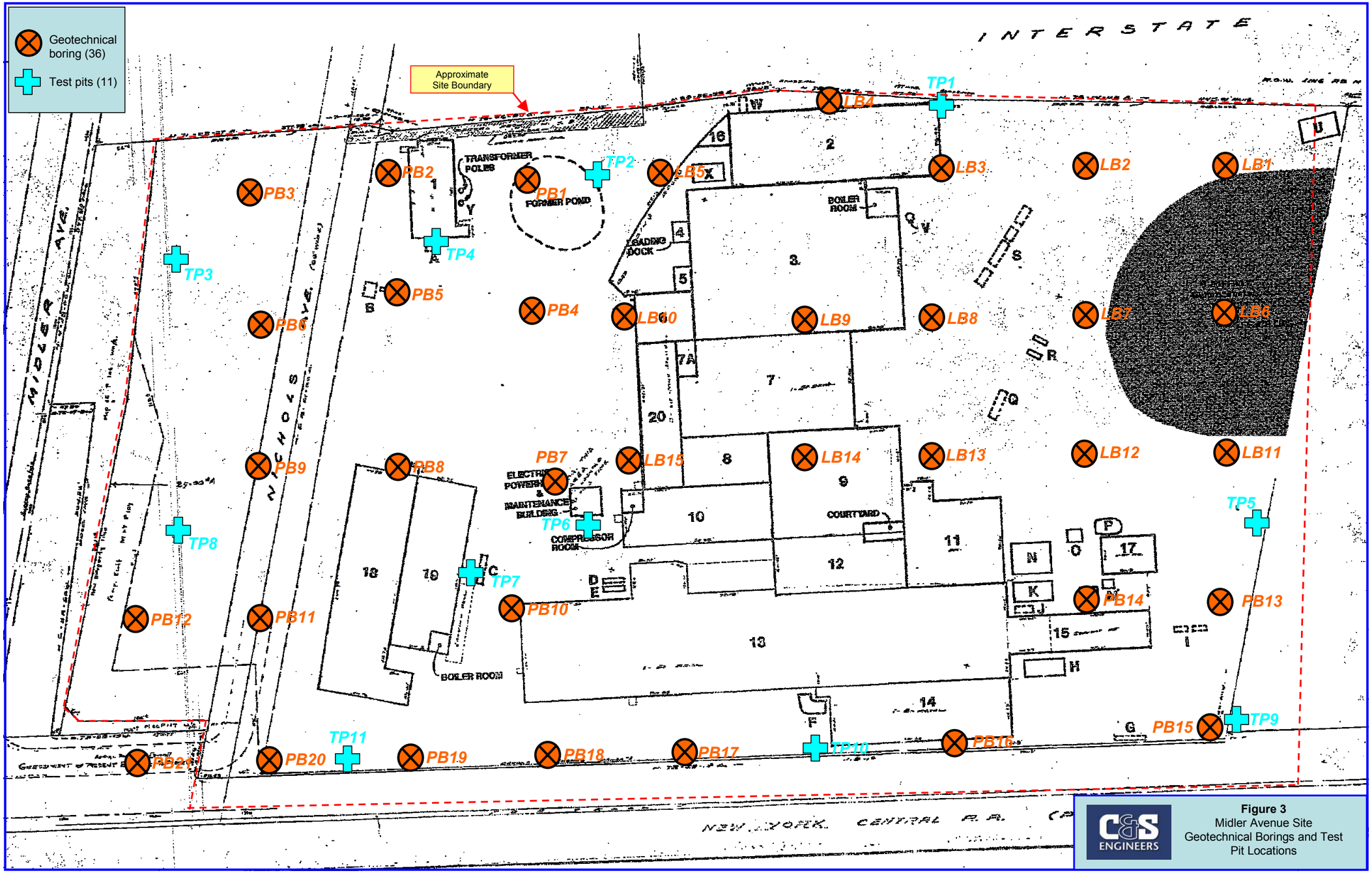
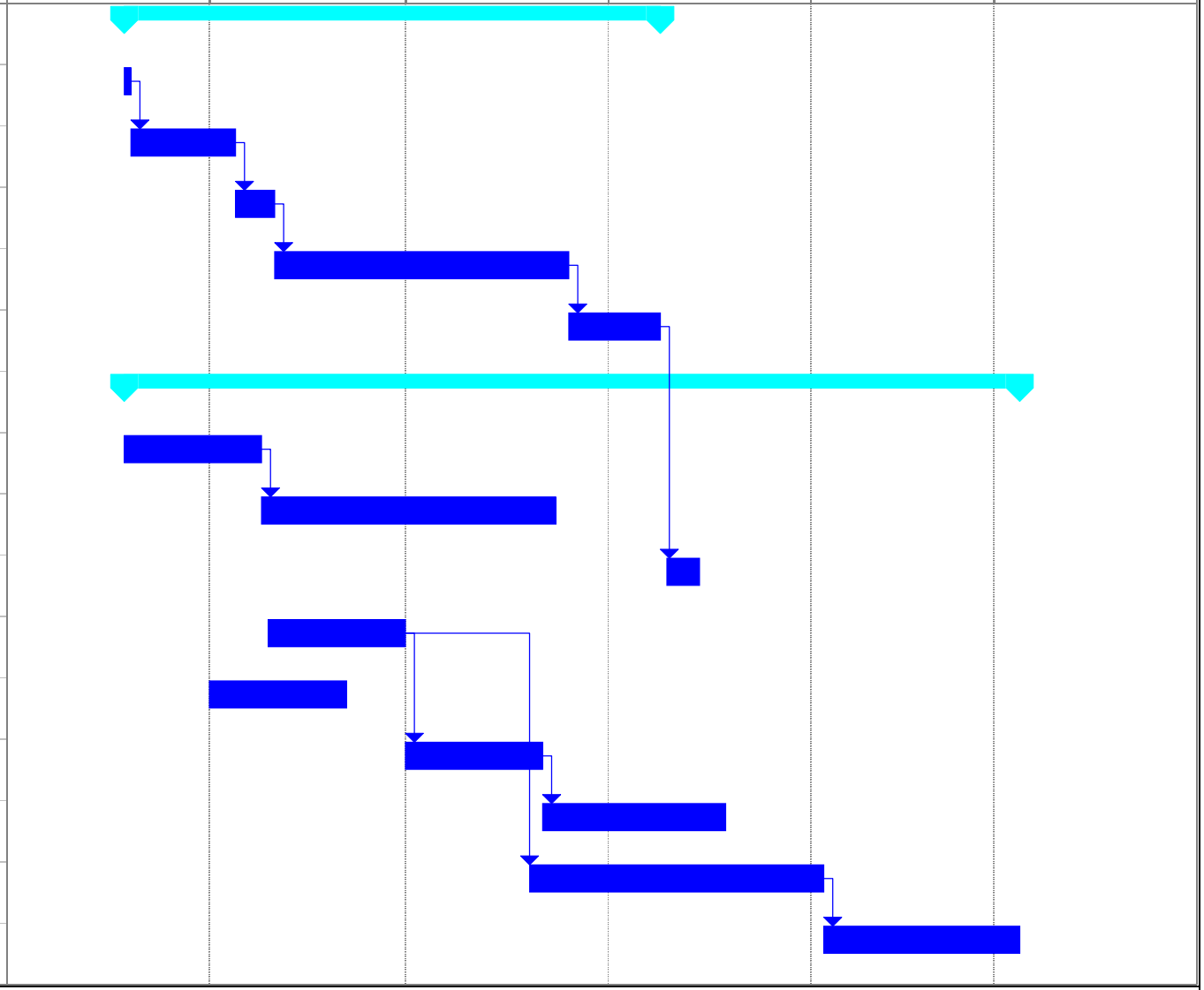


Figure 3
Midler Avenue Site
Geotechnical Borings and Test Pit Locations

M:\Private\Barba\Pioneer Midler\Work plan\Revised\Figure 3 geotech 2.ppt

Pioneer Midler Avenue, LLC Project Schedule

ID	Task Name
1	**Pre-Remedial Investigation Activities**
2	Application submittal to State
3	State completeness review
4	Public notice
5	Public comment period
6	Negotiation and signing of BCP agreement
7	**Remedial Investigation**
8	State review of RI work plan
9	Public comment period
10	State approval of RI work plan
11	C&S field work
12	Pioneer geotech borings
13	Analytical
14	Data validation
15	RI report preparation
16	State review of RI report



Project: Figure 4 Schedule
Date: Thu 8/17/06

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

Figure 4
Figure 4 Schedule.mpp

APPENDIX A

Sampling and Analysis Plan

C&S ENGINEERS

Sampling and Analysis Plan

Midler Avenue Site
Brownfield Cleanup
Syracuse, Onondaga County, New York

Prepared for: **Pioneer Midler Avenue, LLC**

C&S Engineers, Inc.
- - -
499 Colonel Eileen Collins Blvd.
Syracuse, New York 13212

October 2004

Sampling and Analysis Plan

Table of Contents

SECTION 1 INTRODUCTION

This Sampling and Analysis Plan is for the Pioneer Midler Avenue, LLC ("PMA") Brownfield Cleanup Project in the City of Syracuse, Onondaga County, New York. The project involves a Remedial Investigation (RI) to further define contamination at the former Midler Industrial Park Site ("Midler Site"). Note that this plan describes procedures for a variety of sampling situations. Not all of these situations may exist at the Midler Site. The Work Plan for the RI details the specific sampling and analysis for the PMA Brownfield project.

SECTION 2 QUALITY ASSURANCE PROJECT PLAN (QAPP)

2.1 Project Description

This Sampling and Analysis Plan includes identification of sampling locations and media, method of collection, handling, and preservation, and the protocol used for sample analysis. Environmental media to be sampled include soils and groundwater. The data will be utilized to form conclusions as to the presence, transport, and fate of site specific contaminants.

2.2 Project Organization and Responsibilities

The sampling and analysis plan will utilize the following project organization and the associated responsibilities:

Project Administration	Robert M. Palladine, Jr., P.E.
Project Management	Thomas Barba
Quality Assurance/Quality Control	Thomas Barba
Laboratory Coordinator	Christen M. Craig
Field Investigations	Rory Woodmansee

2.3 Data Quality Objectives

Data Quality Objectives (DQOs) are statements which describe the desired quality of data necessary

to meet the objectives of the sampling program. The DQOs for the Midler Site sampling program were formulated during the scoping effort and developed as part of this Sample and Analysis Plan. The general steps followed in preparation of the DQOs were as follows:

- *Identification of the media to be sampled* - Identifies the media being investigated (e.g., ground water, surface soil).
- *Identification of the data uses* - Identifies the intended use of the data according to the following:
  - Site Characterization - Data are used to determine the composition, nature, and extent of contamination.
  - Risk Assessment - Data are used to evaluate the actual or potential risks posed by contaminants determined to be present on-site. Particular attention is given to sampling at locations where human exposure is possible.
  - Health and Safety Plan - Data are used to establish the level of protection needed for on-site workers during site characterization activities.
  - Monitoring - Data are used during the monitoring of the remedial action to access the effectiveness of such action.
  - Evaluation of Alternatives - Data are used to evaluate various proposed remedial technologies and assist in proper design of alternatives.
- *Identification of the data types* - Identifies what types of analyses are to be performed.
- *Samples Collected* - Describes the sample types to be collected.
  - Environmental - Refers to a specific media sampled such as water, soil, air, or biological.
  - Source - Refers to sampling an actual contamination source.
  - Grab - A discrete sample representative of a specific location.
  - Composite - A sample that represents a mixture of a number of grab samples that represents the average properties over the extent of areas sampled.
  - Biased - Sampling that focuses on a specific area of expected contamination or uncontaminated area (background).
- *Identification of the data quality needs* - Identifies the analytical options available to support data collection activities and are identified as follows:
  - Level I: *Field Screening* - portable type instruments which provide real-time data.

- Level II: *Field Analysis* - portable analytical instruments in an on-site lab or transported to the site.
- Level III: *Standard Analytical Protocols* - standard analytical protocols or without the NYSDEC Analytical Services Protocol (ASP) (2000) deliverables/reportables documentation.
- Level IV: *NYSDEC ASP Reportables/Deliverables* - rigorous QA/QC protocols and reportables/deliverables documentation; NYSDEC ASP (2000) Category B deliverables.
- Level V: *Non-Standard* - methods which have been modified to meet specific site study or remediation needs or by use of some other specialized analytical methods that cannot be obtained through standard or typical avenues of analytical support.

► *Identification of Data Quality Factors* - Describes factors which influence the quality or quantity of data to be collected. Primary contaminants and associated levels of concern are identified. The required quantitation limit are also given or referenced.

► *Identification of QA/QC Samples* - Specifies additional samples to be collected to support Quality Assurance/Quality Control (QA/QC) procedures. Additional samples to be collected could include:

- *Matrix Spike/Matrix Spike Duplicates* - Matrix spike and matrix spike duplicate samples are collected as a duplicate sample to which the analytical laboratory will add known amounts of target analytes. These QA/QC samples are intended to assess the extraction procedure used by the laboratory.
- *Field Blanks* - Field (equipment) blanks are samples which are obtained by running analyte-free water through the sample collection equipment in a way that is identical to the sample collection procedures. Field blanks may be used during QA/QC procedures to evaluate if sampling equipment has contributed contaminants to the samples.
- *Trip Blanks* - Trip blanks are samples which are prepared prior to the sampling event in the same type of sample container and are kept with the collected samples throughout the sampling event unit analysis. Trip blank vials are not opened in the field and are analyzed for volatile organics only.

2.4 Sampling Procedures

All sampling objectives, locations, and procedures have been included as the Field Sampling Plan and described in Section 3.0 of this Sampling and Analysis Plan. Items including Field Measurement Techniques, General Field Decontamination, and Sample Management have also been included within the Field Sampling Plan.

2.5 Laboratory Certification and Coordination

Contract Laboratory Protocol (CLP) certification is a tier of accreditation issued by the New York State Department of Health (NYSDOH) within the Solid and Hazardous Waste category. Such laboratories have demonstrated that they meet the requirements of the NYSDEC Analytical Services Protocol. All chemical analyses for samples from the site will be completed by a CLP laboratory capable of performing project specific analyses as indicated in this QA/QC plan. The project Quality Assurance / Quality Control (QA/QC) Officer will also be responsible for all project related laboratory coordination.

2.6 Analytical Methodologies

Analysis of samples collected during the project will be consistent with the NYSDEC ASP 2000, Category B requirements. Sampling and analysis will be performed for the Superfund Target Compound List (TCL) parameters including volatiles, semivolatiles, PCBs/pesticides, and inorganics. The specific analyses will be conducted according to the following NYSDEC ASP 2000 methodologies:

Parameter Group	**Analysis Method**
Volatiles	ASP 00-1
Semivolatiles	ASP 00-2
PCBs/Pesticides	ASP 00-3
Metals	CLP M-series 200.7 (ICP Methodology) or
	CLP M-series (202.1 - 289.2) (AA Methodology)
Mercury	CLP M-245.1
Cyanide	CLP M-335.2

Trip blanks will accompany each shipment of aqueous samples for volatiles analysis. Trip blanks

are not necessary for soil samples. If several samples are collected for volatiles analysis on any one day, all volatiles samples will be packed in the same cooler with the trip blank. Trip blanks will be analyzed according to NYSDEC ASP (2000) protocol for volatile organics. Data will be presented in Category B reportables / deliverables format.

Duplicate samples will be obtained from groundwater or aqueous and soil samples (solids). A guideline of one matrix spike/matrix spike duplicate (MS/MSD) sample in twenty for each matrix will receive a duplicate sample. The ASP provides the following definitions for MS and MSD samples:

- Matrix spike - An aliquot of a sample (water or soil) spiked with known quantities of specific compounds (target analytes) and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery. The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.
- Matrix spike duplicate - A second aliquot of the same matrix as the Matrix Spike that is spiked with identical concentrations of target analytes as the Matrix Spike, in order to document the precision and bias of the method in a given sample matrix.

2.7 Analytical Quality Control

Analytical quality control for this Project will be consistent with the methodology and quality assurance/quality control requirements in the NYSDEC ASP 2000. The following holding times calculated from the verified time of sample receipt (VTSR) at the laboratory will be required from the contracted analytical laboratory, regardless of sample matrix:

Parameter	Task	Holding Time

Volatiles	Analysis	7 days from VTSR
Semivolatiles	Extraction	5 days from VTSR
	Sample clean-up	5 days from VTSR
	Analysis	40 days from VTSR
Pesticides/PCBs	Extraction	5 days from VTSR
	Sample clean-up	5 days from VTSR
	Analysis	40 days from VTSR
Mercury	Analysis	26 days from VTSR
Cyanide	Analysis	12 days from VTSR
Metals	Analysis	180 days from VTSR

2.8 Reportables and Deliverables Documentation

The Remedial Investigation analytical data which will be subjected to data usability review will be presented in NYSDEC ASP 2000 Category B reportables/deliverables format. The RI Report will be a stand-alone document that will include the results and an interpretation of the RI sampling, as well as the summary data from the previous RI sampling activities. If Interim Remedial Measures are implemented, the IRM confirmation analytical data will be presented in Standard Laboratory reporting format; the IRM analytical data will be subjected to data usability review.

2.9 Data Validation, Usability, and Acceptability

A Data Usability Summary Report (DUSR) will be prepared by Data Validation Services (120 Cobble Creek Road, P.O. Box 208, North Creek, NY 12853). The DUSR will be prepared consistent with the NYSDEC's *Guidance for the Development of Quality Assurance Plans and Data Usability Summary Reports* as given in Appendix 2B of the draft DER-10.

SECTION 3 FIELD SAMPLING PLAN

3.1 Sampling Objectives

Field sampling at the Midler Site will be designed to obtain representative samples of environmental media to assess the impact that the site may have upon human health and the environment. The field sampling plan will include sampling of groundwater, subsurface soils, water and sediment from catch basins and sumps, and PCB wipes.

3.2 Sampling Locations

Sample locations arew shown on Figire 2 of the RI work plan. Samples to be collected and the associated analysis are summarized in Table 1 of the RI work plan.

3.3 Sampling Procedures

3.3.1 Preparation for Sampling

The sample collection technique is of prime importance to assure the integrity of the collected sample. The following techniques include provisions so that:

- A representative sample is obtained;
- Contamination of the sample is minimized;
- The sample is properly preserved; and
- An acceptable Chain-of-Custody record is maintained.

The QA/QC Sampling Component of the Plan includes:

- Incorporation of accepted sampling techniques referenced in the sampling plan;
- Procedures for documenting any field actions contrary to the QA/QC Plan;
- Documentation of all preliminary activities such as equipment check-out, calibrations, and container storage and preparation;
- Documentation of field measurement quality control data (quality control procedures for such measurements shall be equivalent to corresponding QC procedures);
- Documentation of field activities;
- Documentation of post-field activities including sample shipment and receipt, field team debriefing, and equipment check-in;
- Generation of quality control samples including duplicate samples, field blanks, equipment blanks, and trip blanks; and
- The use of these samples in the context of data evaluation with details of the methods employed (including statistical methods) and of the criteria upon which the information generated will be judged.

The personnel responsible for collection of groundwater, soil, miscellaneous media, and petroleum spill remediation/verification samples will be familiar with standard sampling procedures and follow

the appropriate protocol. Field records will be maintained in bound notebooks with numbered pages to document daily instrument calibration, locations sampled, field observations, and weather conditions. Each page will be dated and signed by the sampler. Each notebook will be numbered and a log of notebooks will be maintained by the project manager.

Prior to sampling, all equipment must be procured and accommodations for sample container delivery, and sample shipment must be made. The following is a list of general equipment that would be on hand for sampling events. Special equipment for each sampling event is presented in the section describing that specific sampling event.

General Field Sampling Equipment

- Field Data Sheets
- Chain-of-Custody forms
- Engineers tape and folding ruler with 0.01 foot intervals
- Field Record Sheets
- Latex gloves
- Face-safety shield
- Tyvek coveralls
- Respirators
- Photoionization detector
- Bio-degradable phosphate free detergent
- Coolers (with ice)
- 55 gallon drums
- Sample bottles
- Aluminum foil
- Duct and filament tape
- Tap water
- Distilled water
- 5 gallon wash buckets
- Decontamination cloths
- Large disposal containers
- Large plastic sheets

3.3.2 Groundwater Sample Collection

Groundwater samples will be collected using dedicated, disposable HDPE bailers following evacuation of three borehole volumes or complete purging of the well. All other related sampling equipment will be properly decontaminated in the field. The following equipment will be required for sampling of monitoring wells in addition to the general sampling equipment list:

- Well Data Sheets
- Dedicated, disposable HDPE bailers (new wells)
- Electronic water level indicator
- Conductivity meter with calibration standards
- pH meter (portable)
- Thermometer
- Sample preservatives
- Acid resistant gloves
- pH paper
- Redox meter
- Dissolved oxygen meter

The following activities will be completed before going into the field every day before the start of

sampling:

1. Fill out appropriate section on Well Data Sheet for the wells to be sampled;
2. Obtain the sampling schedule for each well to be sampled;
3. Calibrate the Photoionization Detector (PID) with the calibration gas;
4. Calibrate the conductivity meter prior to each day's sampling;
5. Calibrate the pH meter with standard buffer solutions of pH 4, 7, and 10. The meter is calibrated again at each well site using only the buffer solution of pH 7;
6. Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;
7. Each well to be sampled will have designated coolers containing the pre-labeled, certified clean, sample bottles. The groundwater samples will be placed in the cooler labeled for the well from which they were taken. The bottle shall be labeled with large distinguishable letters, so that the groundwater samples will be placed in the proper cooler; and
8. Select the appropriate sample bottles for the day's sampling. The bottles shall be pre-marked with a sample parameter and preservatives. Reusable glass bottles will have been cleaned and prepared at the laboratory. The bottles for the various parameters to be analyzed from each well location will then be placed in a cooler.

The following steps describe the sample collection of groundwater:

1. Unlock and remove the well cap;
2. Test the air at the wellhead with the calibrated PID. If the gases from the well have caused the local outside air to read organics greater than 5 ppm, stop work and refer to the Health and Safety Plan. Record the reading on the Well Data Sheet;
3. Calibrate the pH meter with standard buffer solution of pH 7. Rinse probes and sample cups carefully with distilled water before and after use;
4. Record the standard solutions used to calibrate, the date, and the time on the Well Data Sheets;
5. In order to obtain a representative sample of the formation water, the well must be purged of the static water within the well. Prior to purging, the static water level within

the well must be measured and the measurement recorded on the Well Data Sheet. To determine the amount of water necessary to purge, find the liquid column height in the well to determine the total volume (three liquid column borehole volumes) of liquid to be purged;

6. Attach the polypropylene rope to the sample bailer. A different dedicated rope will be used for each well.
7. Purge the well; lower bailer slowly into the well until it is below the water surface. In accordance with NYSDEC Guidance, purge waters will be disposed within the vicinity of the respective well.
8. During purging: Periodically rinse and fill a sample cup with purged water. Insert calibrated pH, conductivity, and temperature probes in cup. Read the initial pH, conductivity, and temperature and record each measurement in the field logbook. The well is ready to sample when the evacuation volume has been removed and the above parameters have stabilized for three successive measurements. Record the amount of water purged, the final pH, conductivity, and temperature readings in the field logbook and on the Well Data Sheet.
9. If the well goes dry during bailing, allow for full recovery (measure the water level) and then sample. If recovery takes more than twenty minutes, proceed to next well but return to sample within 24 hours.
10. Fill the appropriate sample bottles according to the sampling schedule for each well. While filling the sample bottles, record the well number, type, volume of container, and the preservatives used on the Ground Water Sampling Analyses form.
11. Commence sample collection with the following sample collection order: volatiles, semivolatiles, PCBs/pesticides, cyanide, mercury, and metals. If the well should go dry during sampling and the well needs to be re-sampled the next day, the second attempt to sample the well will proceed in the following order: volatiles, metals, semivolatiles, PCBs/pesticides, cyanide, and mercury.
12. The preservatives for the various sampling parameters were previously added to the clean sample bottles by the laboratory. Some parameters may require additional special handling.

- Volatile organics analyses samples must be free of air bubbles. When a bubble-free sample has been obtained, it must be immediately chilled.
- All samples collected for metals analysis will be preserved with nitric acid to a pH less than 2.

13. Collect the matrix spike duplicates and trip blanks. Take samples according to sampling schedule presented in the Work Plan. Duplicate samples will include the field splitting of at least one groundwater sample for each sampling visit. This may require the extraction of twice the amount of water needed for duplication purposes. The creation of trip/field blanks and duplicates shall be performed at least once with each field batch with a minimum of once every twenty samples.
14. Record all pertinent information in field logbook and on the Well Data Sheet (include color, odor, sediment content of sample, etc.). Any situations at the site that have the potential to interfere with the analytical results should also be recorded here.
15. Lock well, inspect well site, and note any maintenance required.
16. Dispose of potentially contaminated materials in designated container for contaminated solids.

3.3.3 Soil Sampling

Soil samples will be collected using disposable or dedicated stainless steel spoons or hand trowels from the area(s) of test trenches were evidence of potential contaminants or residues are encountered. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved soil sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. The following equipment will be required for the sampling of soil samples, in addition to the general sampling equipment list:

- dedicated or disposable stainless steel spoons or hand trowels; and
- photoionization detector (PID).

The following activities will be completed prior to field sampling everyday:

- Fill out appropriate section on Soil Sample Sheet for the sites/trenches to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;

- Select the appropriate sample bottles for the day's sampling. Soil samples will be collected within unpreserved glass, parameter specific, containers.

Sampling for matrix spike/matrix spike duplicates shall be performed at least once with each field batch with a minimum of one for each twenty samples.

3.3.4 Miscellaneous Media Samples

Drain, sump, and/or pit sludge/solid residue media samples will be collected using disposable or dedicated stainless steel spoons or hand trowels. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved solid/sludge sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. If applicable, liquid miscellaneous media samples will be sampled using an intermediate, disposable, certified clean, glass-pint sampling container. Parameter specific liquid media sample containers will then be filled. Upon filling parameter specific containers, each container will be capped, with a minimum amount of head-space, and placed within specific sample coolers for delivery to the laboratory. Upon completing miscellaneous media sampling, each parameter and location specific sample will be logged within the appropriate samplers field book and chain-of-custody sheet. Prior to field sampling of miscellaneous media samples, the following activities will be completed:

- Locate each miscellaneous (sump, pit, and/or drain) location within the field using a facility site map and site markers;
- Flag and/or mark, with identification, each sampling location;
- Locate, identify and photograph each sampling location and record such information on field data sheets and field map;
- Plan sampling schedule;
- Calibrate Photoionization Detector (if used for screening); and
- Collect, label, and organize appropriate disposable trowels, spoons, intermediate sample containers, and final laboratory containers.
- Fill out appropriate section on Miscellaneous Media Sample Sheet for the site area/location to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number

of coolers;

- Select the appropriate sample bottles for the day's sampling.

The following activities will be completed during the Miscellaneous Media sampling process:

- Collect appropriate media sample from predesignated location at each sampling location using dedicated or disposable spoons/trowels (solids) or certified clean, intermediate sampling containers (liquids);
- For liquid media, transfer each sample to the appropriately labeled container noting observed characteristics on field data sheet;
- Where possible, analyze a subsample of each sample for organic vapors using a PID;
- Cap container and complete proper chain-of-custody sheets and field data sheet; and
- Transport containers and chain-of-custody sheets to laboratory.

3.3.5 IRM Confirmation Samples

IRM confirmation soil samples will be collected using disposable or dedicated stainless steel spoons or hand trowels from the area(s) of test trenches and/or excavation walls/floor where evidence of potential contaminants or residues are encountered and/or were previously removed. To minimize volatilization, confirmation samples will be collected from the soils located 2 to 4 inches inside the walls or floor of the excavation. The use of disposable or dedicated sampling equipment will eliminate the need for collection of field (equipment) blanks. The retrieved soil sample will be placed directly into parameter specific glass containers. Each sample container will be appropriately labeled and transported to the contracted laboratory in appropriate coolers. The following equipment will be required for the sampling of soil samples, in addition to the general sampling equipment list:

- dedicated or disposable stainless steel spoons or hand trowels; and
- photoionization detector (PID).

The following activities will be completed prior to field sampling everyday:

- Fill out appropriate section on Confirmation Soil Sample Sheet for the excavation wall or floor locations to be sampled;
- Determine the amount of sampling to be done for the day and prepare the necessary number of coolers;

- Select the appropriate sample bottles for the day's sampling. Soil samples will be collected within unpreserved glass, parameter specific, containers.

Duplicate samples shall be collected at least once with each field batch with a minimum of one for each twenty samples. The on-site NYSDEC representative will be allowed the opportunity to split any sample taken.

3.3.6 Background Samples

Background soil and groundwater samples have been incorporated within the respective matrix sampling plan as off-site soil/upgradient samples, respectively.

3.3.7 QA/QC Samples

Matrix Spike Duplicates

Additional samples from each of the following environmental sampling media will be collected as matrix spike/matrix spike duplicates:

Groundwater	(downgradient well)
Subsurface Soils	(specific/random test trench soils)

Trip Blanks

Separate trip blanks will be carried into the field on each of the sampling days. The trip blank vials will be prepared by the contracted laboratory and handled in the field similar to the other sampling containers with the exception that the vials will not be opened.

3.4 Field Measurement Techniques

Water Level Measurement - Water elevations will be taken on all wells prior to purging and sampling. All measurements will be taken within a 24 hour period to obtain consistent elevations and recorded on well data sheets. The procedure for measuring water levels in the monitoring wells is:

- Unlock and remove well cap;
- Test the atmosphere of the well with the calibrated PID. If the gases from the well have caused the outside air to read organics greater than 5 ppm, work will be stopped and samplers will refer to the Health and Safety Plan.
- Measure water level to nearest 0.01 foot with a water level indicator (electronic).

- Water level indicators will be decontaminated before moving to next well. The tape and cable are decontaminated by washing in a bucket of distilled water-biodegradable phosphate free-detergent solution, followed by a rinse with distilled water.

pH Measurement - The pH will be determined using a portable pH meter, 100 ml disposable beakers, and pH calibration standards. The pH meter will be calibrated to within 0.05 pH units of the reference standard. Sample pH will be recorded to the nearest 0.05 pH units and readings will be repeated so that meter readings do not fluctuate more than 0.03 pH units. Upon completion of pH measurements the probe will be washed, rinsed, and re-calibrated.

Temperature Measurement - A field thermometer will be pre-calibrated in the lab to within one degree centigrade and will be re-calibrated weekly.

Specific Conductance Measurement - A specific conductance meter will be field calibrated daily, using a 1M KCl reference solution, to 1413 μmhos/cm at 25 degrees centigrade. Sample aliquots for specific conductance and temperature will be obtained directly from the sampling point in 100 ml disposable beakers.

Photoionization Detector (PID) - The PID will be calibrated daily (and more often as required by the manufacturer's data) prior to use in the field, using calibration test gases.

3.5 General Decontamination

The following procedures will be performed for the decontamination of exploration equipment, sampling equipment, and personnel after each drilling/sampling event:

Drill rig, backhoe, and excavator - The drill rig, backhoe, and/or excavator will be steam cleaned prior to their entrance and exit of the site. Greases and oils will not be used on any down hole equipment during drilling or exploration activities.

Exploration equipment - To avoid cross contamination, use of a PID meter and cleaning between each sampling site will be employed on backhoe arms, buckets, hollow stem augers, casing drill rods, and appurtenant equipment.

Split spoon sampler - The split spoon sampler will be scrubbed, cleaned, and put through a series of rinses between each sampling event. A number of split spoon samplers will be used so that one can be utilized for sampling while the others are being cleaned.

Reusable equipment - The following steps will be employed to decontaminate reusable equipment:

- Rinse equipment of soil or foreign material with potable water;
- Immerse and scrub equipment with bio-degradable phosphate-free detergent and potable water;
- Immerse and scrub in a potable water rinse without detergent;
- Immerse and scrub in deionized/distilled water;
- Air dry and wrap cleaned equipment in foil to carry to next monitoring site to prevent contamination of equipment during transfer; and
- The decontamination wash and rinse water will not be considered hazardous unless visual inspection or monitoring by the PID and other equipment indicate that contaminants may be present. The rinse waters can be discharged on-site if they are not contaminated. If contaminants are expected to be present, the rinsate waters should be placed in 55 gallon drums and stored on-site.

Disposable equipment - The following steps will be employed to decontaminate disposable equipment:

- Rinse with potable water;
- Remove all standing liquid from the piece of equipment;
- Dispose of the equipment in a dedicated container for contaminated solids; and
- Dispose of rinse water in 55 gallon drums if contaminants are found to be present.

Sample containers - upon filling and capping sample bottles, the outside of the bottle will be wiped off with a clean paper towel. These towels will be disposed of in a dedicated container for contaminated solids.

Personnel decontamination - The following procedures will be used to decontaminate sampling personnel.

- After each sampling event plastic gloves will be disposed of in a dedicated container for contaminated solids;
- At the end of each sampling day, Tyvek™ coveralls will be disposed of in a dedicated container for contaminated solids;
- Boots will be rinsed off with water to remove mud, clay, or any other contaminants; and
- Personnel will be required to follow procedures outlined in the Health and Safety Plan.

3.6 Sample Management Plan

3.6.1 Sample Management

The Sample Management Plan provides procedures to document and track samples and results obtained during this work effort. A series of pre-printed forms with the appropriate information serves as a vehicle for documentation and tracking.

In order to accomplish this task, the documentation materials will include sample labels, sample characterization and Chain-of-Custody sheets, daily field reports, and a sample log.

Sample Label - A sample label will be completed for each sample obtained and will be affixed to the sample container. The label is configured in a way to address various types of mediums. Information on the label includes, at a minimum, client name, location, sample description, sample number, date, time, grab sample, composite sample, notes, and sampler's name.

Sample Characterization & Chain-of-Custody Sheet - All pertinent field information will be entered onto the sample characterization and chain-of-custody sheets including client name, sample ID, sample description, location of sample, sampling method, number of containers, container type, analysis required, and preservation. The monitoring well form has space allotted for entering information regarding the well including depth to water, well volume, sample pH, temperature, color, etc. The Chain-of-Custody section of the form will document the sample's pathway of sample shipment which will include names of persons delivering/receiving, dates, and times. The reverse side of this form will be used by the laboratory to document analysis performed on the sample. Copies of the completed forms will be retained by the Engineer and the analytical laboratory. The original sample characterization and Chain-of-Custody sheets will be submitted in the Remedial Investigation report along with the laboratory results.

Daily Field Reports - Daily activities will be recorded on the Inspection Report form. The purpose of this form will be to summarize the work performed on the site each day. The completed forms will be submitted to the Project Manager on a daily basis for short term site activity and on a weekly basis for site activities of a longer duration.

Sample Log - The sample log will be utilized to track each individual sample obtained at the site. The upper portion, "Field Identification" will be completed the day the sample is taken. The form will accompany the sample characterization and Chain-of-Custody form to the laboratory. Personnel

at the laboratory will complete the middle section of this form and return it to the Engineer, who will use the document to track incoming results. The bottom of the sheet has space allocated to enter "Recommended Actions" based on laboratory results.

3.6.2 Sample Designation

Each sample will have a unique sample code that will include, where appropriate, the sample media, and the sample location. The following codes will be used in the sample designation:

Sample Media	Code	Sample Location	Example
Groundwater	MW	Monitoring well	1D, 2S, etc.
Soil	SL	Test trench	TT-#1; SL
Miscellaneous Media			
Liquid	IL	Pit/sump/drain	IL-1 (Sump #1)
Solid/Residue	IS	Pit/sump/drain	IS-1 (Pit #1)
IRM Confirmation Soils	E	Excavation-wall/floor	UST site #; wall/floor
Background Samples	-	All	B1, B2, etc.
Field Blank	-	All	FB1, FB2, etc.
Matrix Spike Duplicate	-	All	MSD1, MSD2, etc.
Trip Blanks	-	-	TB1, TB2, etc.

As an example of a sample designation, sample MW-3S represents a groundwater sample obtained from monitoring well MW-3S.

3.6.3 Sample Handling

Each collected sample will be dispensed into the appropriate sample containers for the type of analysis to be performed. Appropriate sample preservatives will be added to the sample containers by the contracted analytical laboratory prior to the delivery into the field, except in cases where the sample preservative must be added after sample collection. All samples that require cool storage will be immediately placed in coolers with appropriate packaging materials so as to protect the breakage of sample containers during shipment. The sample coolers will be filled with cubed ice (no "Blue Ice") prior to leaving the sample collection location. In the instance that a local analytical laboratory is contracted, the samples will be hand delivered to the laboratory each sampling day. The chain-of-custody forms will be signed by the laboratory personnel picking up the samples and placed within the coolers. In the instance that an analytical laboratory is contracted which is not based locally and a common carrier is used for sample shipment, the chain-of-custody forms will be

signed by the sampler and the carrier personnel and placed inside of the coolers. Careful packaging techniques will be used to prevent sample containers from breakage during shipment. Materials such as cardboard, foam wrap, or Styrofoam may be used as packaging materials. All samples will be delivered to the contracted analytical laboratory on the day they were collected and will be received by the laboratory within 24 hours of sample collection. The samples will be collected with sufficient time allowed at the end of the day for the analytical laboratory to properly process the sample chain-of-custody form.

m:\private\barba\pioneer midler\work plan\revised\sap 1 revised.doc

APPENDIX B

Health and Safety Plan

C&S ENGINEERS

Health and Safety Plan for Brownfield Remedial Investigation

Midler Avenue Site Brownfield Cleanup Syracuse, Onondaga County, New York

Prepared for: **Pioneer Midler Avenue, LLC**
by

C&S Engineers, Inc.
- - -
499 Colonel Eileen Collins Blvd.
Syracuse, New York 13212

October 2004

Table of Contents

Figures

Appendices

SECTION 1 – GENERAL INFORMATION

The Health and Safety Plan (HASP) described in this document will address health and safety considerations for all those activities that personnel employed by C&S Engineers, Inc., may be engaged in during Remedial Investigation at the PMA site in the City of Syracuse, New York and will be implemented by the Health and Safety Officer (HSO) during site work.

Compliance with this HASP is required of all C&S personnel who enter this site. The content of a HASP may change or undergo revision based upon additional information made available to health, safety, and training (H&S) committee, monitoring results or changes in the technical scope of work. Any changes proposed must be reviewed by the H&S committee. This HASP was written specifically for those employees of C&S Engineers, Inc., and is not intended for use by others.

Responsibilities

Project Manager:	Thomas Barba	Work Phone: (315) 455-2000
Site Health and Safety Officer:	Steve Vinci	Work Phone: (315) 455-2000
Site Emergency Coordinator:	Rory Woodmansee	Work Phone: (315) 455-2000

Emergency Phone Numbers

Fire Department:	911 - City of Syracuse Fire Department
Ambulance:	911 - Rural Metro Ambulance
Police:	911 - City of Syracuse Police Department
Hospital:	315-464-5611 - University Hospital Emergency Department
	(Hospital Route included as HASP Figure 1)
Poison Control Center:	1-800-252-5655
Oil Spills and Hazardous Material Spills:	1-800-457-7362

Written Directions from the Site to University Hospital

- Start out going north on South Midler Ave. towards Burnet Ave.
- Turn left onto Burnet Ave

- Merge onto I-690 west via the ramp on the left.
- Take the Townsend Street exit - exit 13
- Turn left onto North Townsend Street
- Turn left onto E Adams Street
- The Emergency Room is on the right just as you start up the hill.

SECTION 2 — HEALTH AND SAFETY PERSONNEL

2.0 Health and Safety Personnel Designations

The following information briefly describes the health and safety designations and general responsibilities which may be employed for this Project.

2.1 Project Manager (PM)

The PM is responsible for the overall project including the implementation of the HASP. Specifically, this includes allocating adequate manpower, equipment, and time resources to conduct site activities safely.

2.2 Health and Safety Officer (HSO)

The HSO is the person on-site responsible for assuring that personnel under direction comply with the requirements of the HASP and that personnel protective equipment needed for site work is available.

2.3 Emergency Coordinator

The Emergency Coordinator is responsible for implementation of the Emergency Plan as presented in Section XIII of this HASP, establishment and supervision of the emergency response team, and conducting training programs for personnel assigned duties on the emergency response team.

SECTION 3 — PERTINENT SITE INFORMATION

3.1 Site Location and General History

The Site is approximately 21.59 acres in size. As shown on the Figure 1 of the RI work plan, the Site is located along the east side of South Midler Avenue. A divided highway, Interstate 690, creates the northern boundary of the Site. Adjoining the east side of the Site is a yard waste composting facility operated by the City of Syracuse Department of Public Works. The southern boundary of the Site (after acquisition of a small strip of City-owned property) is a CSX rail line. Prior to being acquired by its present owner, Sutton Investing Corporation ("Sutton") in 1961, the Site was utilized for close to 70 years for various manufacturing purposes by Pierce, Butler & Pierce Manufacturing Company, Pierce Butler Radiator Corporation, Prosperity Company, Inc., and Ward Industries Corporation.

A Phase I Environmental Site Assessment performed in 1994 revealed that the entities named above were involved with the manufacture of boilers, radiators, other heavy iron wares, lead pipe, automatic laundry and dry cleaning equipment, air-operated pressing machines, and steam garment pressing machines. Currently the site has situated upon it a complex of buildings, a majority of which are interconnected. There are also four free standing buildings. Based on previous research, it appears that many of these buildings remain from the historic manufacturers identified above. For the most part, these buildings are wood framed or of wood truss construction. Notable exceptions to this are a Quonset hut type building at the east end of the interconnected complex and a freestanding brick building located east of the interconnected complex.

Detailed information on the site history can be found in the RI work plan.

SECTION 4 — HAZARD ASSESSMENT AND HAZARD COMMUNICATION

The most likely routes of exposure during Remedial Investigation tasks and Interim Remedial Measures (IRM) at the site include skin adsorption and inhalation due to exposure to contaminated soil. During warm weather, contact with vectors (e.g., bees, wasps) is also a concern.

It is difficult to draw a correlation between the concentrations of contaminants found in one media and the potential for exposure to these contaminants to site workers. However, their presence may indicate that some potential for exposure to these compounds exist, and the requirements for protective measures and monitoring of exposure is based on this potential.

SECTION 5 — TRAINING

5.1 Basic Training Required

Completion of the 40-hour Health and Safety Training for Hazardous Waste Operations and three days on the job training under the supervision of a qualified person is required for C&S employees who will perform work in areas where the potential for a toxic exposure exists.

5.2 Advanced Training

Advanced training, as necessary, will be provided to any personnel who will be expected to perform site work utilizing Level A protection or other specialized operation to be undertaken at the site.

5.3 Site-Specific Training

Training will be provided that specifically addresses the activities, procedures, monitoring, and equipment for the site operations prior to going on site. Training will include familiarization with site and facility layout, known and potential hazards, and emergency services at the site, and details all provisions contained within this HASP. This training will also allow field workers to clarify anything they do not understand and to reinforce their responsibilities regarding safety and operations for their particular activity.

5.4 Safety Briefings

C&S project personnel will be given briefings by the HSO on a daily or as needed basis to further assist site personnel in conducting their activities safely. Pertinent information will be provided when new operations are to be conducted. Changes in work practices must be implemented due to new information made available, or if site or environmental conditions change. Briefings will also be given to facilitate conformance with prescribed safety practices. When conformance with these

practices is not occurring or if deficiencies are identified during safety audits, the project manager will be notified.

5.5 First Aid and CPR

The HSO will identify those individuals requiring this training in order to oversee emergency treatment if so required during field activities. It is expected that a selected number of field workers will have First Aid training and some members of the field team will have CPR training. These courses will be consistent with the requirements of the American Red Cross Association.

SECTION 6 — ZONES

6.1 Site Zones

Three types of site activity zones are identified for the brownfield investigation activities, including the Exclusion Zone, Contamination Reduction Zone, and the Support Zone.

6.1.1 Exclusion Zone

The Exclusion Zone is the area where contamination is known to be or likely to be present or where activity is being conducted which has the potential to cause harm. The Exclusion Zone will be any area in the general vicinity of active site work or intrusive activities. It is anticipated that the location of the Exclusion Zone will change as various investigating activities change. No one may enter the Exclusion Zone without the necessary protective equipment and without permission from the HSO.

6.1.2 Contamination Reduction Zone

This is the transition area between the Exclusion Zone and the Support Zone. It is the area where the decontamination of equipment and personnel takes place. Its purpose is to keep the Support Zone free of contamination

6.1.3 Support Zone

The Support Zone is considered the uncontaminated area. This area may include a field office, trailer, command post, or pre-work area/personnel vehicles which will provide for communications

and emergency response. Appropriate safety and support equipment also will be located in this zone.

SECTION 7 — PERSONAL PROTECTIVE EQUIPMENT

7.1 General

The level of protection to be worn by field personnel will be defined and controlled by the HSO. Depending upon the type and levels of waste material present at the site, varying degrees of protective equipment will be needed. If the possible hazards are unknown, a reasonable level of protection will be taken until sampling and monitoring results can ascertain potential risks. The levels of protection listed below are based on USEPA Guidelines. A list of the appropriate clothing for each level is also provided.

Level A protection must be worn when a reasonable determination has been made that the highest available level of respiratory, skin, eye, and mucous membrane protection is needed. It should be noted that while Level A provides maximum available protection, it does not protect against all possible hazards. Consideration of the heat stress that can arise from wearing Level A protection should also enter into the decision making process. Level A protection includes:

- Open circuit, pressure-demand self-contained breathing apparatus (SCBA)
- Totally encapsulated chemical resistant suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level B protection must be used when the highest level of respiratory protection is needed, but hazardous material exposure to the few unprotected areas of the body (e.g., the back of the neck) is unlikely. Level B protection includes:

- Open circuit, pressure-demand SCBA or pressure airline with escape air bottle
- Chemical protective clothing: Overalls and long sleeved jacket; disposal chemical resistant coveralls; coveralls; one or two piece chemical splash suit with hood

- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level C: must be used when the required level of respiratory protection is known, or reasonably assumed to be, not greater than the level of protection afforded by air purifying respirators; and hazardous materials exposure to the few unprotected areas of the body (e.g.., the back of the neck) is unlikely. Level C protection includes:

- Full or half face air-purifying respirator
- Chemical protective clothing: Overalls and long-sleeve jacket; disposable chemical resistant coveralls; coveralls; one or two piece chemical splash suit
- Gloves, inner (surgical type)
- Gloves, outer, chemical protective
- Boots, chemical protective

Level D is the basic work uniform. It cannot be worn on any site where respiratory or skin hazards exist. Level D protection includes:

- Safety boots/shoes
- Safety glasses
- Hard hat with optional face shield

Note that the use of SCBA and airline equipment is contingent upon the user receiving special training in the proper use and maintenance of such equipment.

7.2 Personal Protective Equipment - Specific

Level D with some modification will be required when working in the work zone on this site. In addition to the basic work uniform specified by Level D protection, chemical protective gloves with a surgical type inner liner will be required when contact with soil is likely. An upgrade to a higher level (Level C) of protection may occur if determined necessary by the HSO.

SECTION 8 — MONITORING PROCEDURES

8.1 Monitoring During Site Operations

All site environmental monitoring should be accompanied by meteorological monitoring of appropriate climatic conditions.

8.1.1 Drilling Operations (Monitoring Well Installation and Subsurface Borings)

Monitoring will be performed by the HSO or drilling observer during the conduct of work. A photoionization detector (PID) will be utilized to monitor the breathing zone, the borehole, and geological samples upon their retrieval. Drill cuttings will also be monitored. A combustible gas indicator (CGI) with oxygen alarm may also be used to monitor the borehole for the presence of combustible gases. Similar monitoring of fluids produced during well development will also be conducted.

8.1.2 Interim Remedial Measures

Monitoring will be performed during excavation and sampling operations when C&S personnel are within the work zone. Since the presence of volatile organic compounds (VOCs) is not anticipated at the site (based on historical data), no specific instrumentation will be required.

8.2 Action Levels

If readings on the PID exceed 10 ppm for more than fifteen minutes consecutively, then personal protective equipment should be upgraded to Level C. The air purifying respirator used with Level C protective equipment must be equipped with organic vapor cartridges. If readings on the explosive gas meter are within a range of 10% to 25% of the LEL then continuous monitoring will be implemented. Readings above 25% of the LEL indicate the potential for an explosive condition. Sources of ignition should be removed and the site should be evacuated.

8.3 Personal Monitoring Procedures

Personal monitoring will be performed as a contingency measure in the event that monitoring as described in Section 8.1 indicates VOC concentrations consistently above the 1.0 ppm (above background) as detected by the PID. If the concentration of VOCs in the personal monitoring is

detected above 1.0 ppm VOCs, then amendments to the HASP must be made before work can continue at the site.

8.4 Medical Surveillance Procedures for Evidence of Personal Exposure

All C&S Engineers Inc. personnel who will be performing field work at the Site must be medically qualified. Additional medical testing may be required by the HSO in consultation with the company physician if an overt exposure or accident occurs, or if other site conditions warrant further medical surveillance.

8.5 Heat Stress Monitoring

It is anticipated that heat stress may be a concern. Guidance relating to heat stress control is presented in Appendix A of this HASP.

SECTION 9 — COMMUNICATIONS

A telephone will be located within vehicles utilized by C&S conducting investigation efforts at the site for communication with emergency support services/facilities. Guidance relating to site communications which may be implemented depending on conditions and circumstances is presented in Appendix B of this HASP.

SECTION 10 — SAFETY CONSIDERATIONS FOR SITE OPERATIONS

10.1 General

Standard safe work practices that will be followed include:

- Do not climb over/under drums, or other obstacles.
- Do not enter the work zone alone.
- Practice contamination avoidance, on and off-site.
- Plan activities ahead of time, use caution when conducting concurrently running activities.
- No eating, drinking, chewing or smoking is permitted in work zones.

- Due to the unknown nature of waste placement at the site, extreme caution should be practiced during excavation activities.
- Apply immediate first aid to any and all cuts, scratches, abrasions, etc.
- Be alert to your own physical condition. Watch your buddy for signs of fatigue, exposure, etc.
- A work/rest regimen will be initiated when ambient temperatures and protective clothing create a potential heat stress situation.
- No work will be conducted without adequate natural light or without appropriate supervision.
- Task safety briefings will be held prior to onset of task work.
- Ignition of flammable liquids within or through improvised heating devices (barrels, etc.) or space heaters is forbidden.
- Entry into areas of spaces where toxic or explosive concentrations of gases or dust may exist without proper equipment is prohibited.
- Any injury or unusual health effect must be reported to the site health and safety officer.
- Prevent splashing or spilling of potentially contaminated materials.
- Use of contact lenses is prohibited while on site.
- Beards and other facial hair that would impair the effectiveness of respiratory protection are prohibited if respiratory protection is necessary.
- Field crew members should be familiar with the physical characteristics of investigations, including:
  - Wind direction in relation to potential sources
  - Accessibility to co-workers, equipment, and vehicles
  - Communication
  - Hot zones (areas of known or suspected contamination)
  - Site access
  - Nearest water sources
- The number of personnel and equipment in potentially contaminated areas should be minimized consistent with site operations.

10.2 Field Operations

10.2.1 Intrusive Operations

An HSO or designee will be present on-site during all intrusive work, e.g., drilling operations, excavations, trenching, and will provide monitoring to oversee that appropriate levels of protection and safety procedures are utilized by C&S Engineers, Inc., personnel. The use of salamanders or other equipment with an open flame is prohibited and the use of protective clothing, especially hard hats and boots, will be required during drilling or other heavy equipment operations.

10.2.2 Excavations and Excavation Trenching

Guidance relating to safe work practices for C&S employees regarding excavations and excavating/trenching operation is presented in Appendix C of this HASP.

SECTION 11 — DECONTAMINATION PROCEDURES

Decontamination involves physically removing contaminants and/or converting them chemically into innocuous substances. Only general guidance can be given on methods and techniques for decontamination. Decontamination procedures are designed to:

- Remove contaminant(s).
- Avoid spreading the contamination from the work zone.
- Avoid exposing unprotected personnel outside of the work zone to contaminants.

Contamination avoidance is the first and best method for preventing spread of contamination from a hazardous site. Each person involved in site operations must practice the basic methods of contamination avoidance listed below. Additional precautions may be required in the HASP.

- Know the limitations of all protective equipment being used.
- Do not enter a contaminated area unless it is necessary to carry out a specific objective.
- When in a contaminated area, avoid touching anything unnecessarily.
- Walk around pools of liquids, discolored areas, or any area that shows evidence of possible contamination.
- Walk upwind of contamination, if possible.

- Do not sit or lean against anything in a contaminated area. If you must kneel (e.g., to take samples), use a plastic ground sheet.
- If at all possible, do not set sampling equipment directly on contaminated areas. Place equipment on a protective cover such as a ground cloth.
- Use the proper tools necessary to safely conduct the work.

Specific methods that may reduce the chance of contamination are:

- Use of remote sampling techniques.
- Opening containers by non-manual means.
- Bagging monitoring instruments.
- Use of drum grapplers.
- Watering down dusty areas.

Equipment which will need to be decontaminated includes tools, monitoring equipment, and personal protective equipment. Items to be decontaminated will be brushed off, rinsed, and dropped into a plastic container supplied for that purpose. They will then be washed with a detergent solution and rinsed with clean water. Monitoring instruments will be wrapped in plastic bags prior to entering the field in order to reduce the potential for contamination. Instrumentation that is contaminated during field operations will be carefully wiped down. Heavy equipment, if utilized for operations where it may be contaminated, will have prescribed decontamination procedures to prevent hazardous materials from potentially leaving the site. The on-site contractor will be responsible for decontaminating all construction equipment prior to demobilization.

SECTION 12 – DISPOSAL PROCEDURES

All discarded materials, waste materials, or other objects shall be handled in such a way as to reduce or eliminate the potential for spreading contamination, creating a sanitary hazard, or causing litter to be left on-site. All potentially contaminated materials, e.g., clothing, gloves, etc., will be bagged or drummed as necessary and segregated for proper disposal. All contaminated waste materials shall be disposed of as required by the provisions included in the contract and consistent with regulatory provisions. All non-contaminated materials shall be collected and bagged for appropriate disposal.

SECTION 13 — EMERGENCY PLAN

As a result of the hazards at the site, and the conditions under which operations are conducted, there is the possibility of emergency situations. This section has established procedures for the implementation of an emergency plan.

13.1 Emergency Coordinator

Site Emergency Coordinator: Rory Woodmansee Work Phone: (315) 455-2000

The Site Emergency Coordinator will implement the emergency plan whenever conditions at the site warrant such action. The Site Emergency Coordinator will be responsible for assuring the evacuation, emergency treatment, emergency transport of site personnel as necessary, and notification of emergency response units (refer to phone listing in the beginning of this HASP) and the appropriate management staff.

13.2 Evacuation

In the event of an emergency situation, such as fire, explosion, significant release of toxic gases, etc., all personnel will evacuate and assemble in a designated assembly area (most likely the project trailer or personnel vehicles). The Emergency Coordinator will have authority to contact outside services as required. Under no circumstances will incoming personnel or visitors be allowed to proceed into the area once the emergency signal has been given. The Emergency Coordinator must see that access for emergency equipment is provided and that all ignition sources have been shut down once the alarm has been sounded. Once the safety of all personnel is established, the Fire Department and other emergency response groups will be notified by telephone of the emergency.

13.3 Potential or Actual Fire or Explosion

Immediately evacuate the site and notify local fire and police departments, and other appropriate emergency response groups, if LEL values are above 25% in the work zone or if an actual fire or explosion has taken place.

13.4 Environmental Incident (spread or release of contamination)

Control or stop the spread of contamination if possible. Notify the Emergency Coordinator and the Project Manager. Other appropriate response groups will be notified as appropriate.

13.5 Personnel Injury

Emergency first aid shall be applied on-site as necessary. Then, decontaminate (en route if necessary) and transport the individual to nearest medical facility if needed. The ambulance/rescue squad shall be contacted for transport as necessary in an emergency. The directions to the hospital and a map are found in Figure 1.

13.6 Personnel Exposure

- *Skin Contact*: Use copious amounts of soap and water. Wash/rinse affected area thoroughly, then provide appropriate medical attention. Eyes should be thoroughly rinsed with water for at least 15 minutes.
- *Inhalation*: Move to fresh air and/or, if necessary, decontaminate and transport to emergency medial facility.
- *Ingestion*: Decontaminate and transport to emergency medical facility.
- *Puncture Wound/Laceration*: Decontaminate, if possible, and transport to emergency medical facility.

13.7 Adverse Weather Conditions

In the event of adverse weather conditions, the HSO will determine if work can continue without sacrificing the health and safety of C&S field workers.

13.8 Incident Investigation and Reporting

In the event of an incident, procedures discussed in the C&S incident investigation and reporting guidance, which is presented in Appendix D of this HASP, shall be followed.

SECTION 14 — COMMUNITY RELATIONS

14.1 Community Relations

Community relations may be a sensitive matter. All C&S employees should be aware of issues associated with this specific site. Conversations with community members not involved in activities at the site should be limited. Conversations between site workers off the site, in restaurants, etc.,

should not include discussions of the potential hazards on the site nor should negative statements be made regarding the site. Jed Schneider, representing PMA, is the designated spokesperson for the PMA Project.

14.2 Community Health and Safety Plan

14.2.1 Site Access

In general, the majority of active and/or intrusive efforts to be completed as part of the Remedial Investigation will occur during the completion of monitoring well borings and excavations completed for purposes of removing contaminated soil at the site. Community residences are located adjacent to the site. During completion of the Remedial Investigation and IRM activities, site access will be limited to only those personnel (field sampling technicians, geologists, engineers, and subcontractors) who are scheduled to be involved with site specific investigation.

14.2.2 Community Health and Safety Monitoring

As part of the Remedial Investigation, three general types of efforts are scheduled, including, non-intrusive reconnaissance tasks, sampling or monitoring tasks (monitoring point sampling), and intrusive tasks (test trenching, subsurface borings, monitoring point/well installation, and UST removal excavations). During completion of general reconnaissance and sampling or monitoring tasks, potential for health and safety risks to off-site landowners or the local community are not anticipated. During completion of intrusive efforts at or adjacent to the site, health and safety monitoring efforts will be concentrated immediately adjacent to the area or areas in which intrusive efforts are being completed. Since the air pathway is the most available and likely avenue for the release of potential contaminants to the atmosphere at or near the site, in addition to limiting public or community access to the areas in which intrusive efforts are completed, health and safety measures will primarily consist of monitoring the air pathway for worker exposure.

14.2.3 Community Air Monitoring Plan

During completion of site investigation activities, efforts will be taken to complete field work in a manner which will minimize the creation of airborne dust or particulates. Under dry conditions, work areas may be wetted to control dust. During periods of extreme wind or rain, intrusive field

work may be halted until such time as the potential for creating airborne dust or particulate matter is limited. Periodic monitoring following the guidelines of the New York State Department of Health's (NYSDOH) Generic Community Air Monitoring Plan (see Appendix E) will be implemented during all non-intrusive SI activities, including surface soil and sediment sampling, and collection of groundwater samples from existing monitoring wells.

During completion of Remedial Investigation and IRM intrusive activities (soil borings and earthwork), a community air monitoring plan meeting the requirements of the NYSDOH's Generic Community Air Monitoring Plan (see Appendix E) will be implemented for the duration of intrusive activities. These additional air monitoring activities will include establishment of background conditions, continuous monitoring for volatile organic compounds and/or particulates at the downwind work area (exclusion zone) perimeter, recording of monitoring data, and institution and documentation of Response Levels and appropriate actions in accordance with NYSDOH guidance.

SECTION 15 — AUTHORIZATIONS

C&S personnel authorized to enter the Site while operations are being conducted must be approved by the HSO. Authorization will involve completion of appropriate training courses, medical examination requirements, and review and sign-off of this HASP. No C&S personnel should enter the work zone alone. Each C&S employee should check in with the HSO or Project Manager prior to entering the work zones.

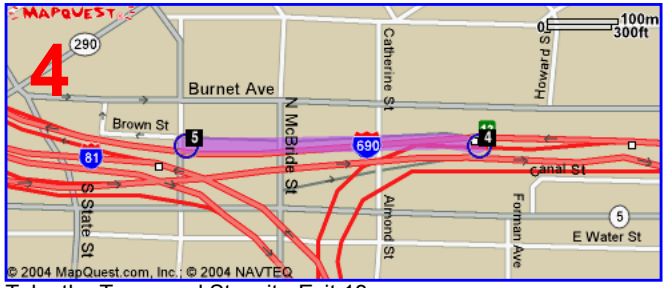
m:\private\barba\pioneer midler\work plan\revised\hasp 1.doc

HASP Figure

Route to the Hospital

C&S ENGINEERS

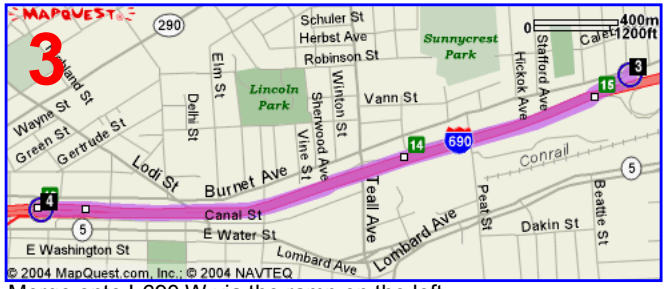
Start out going north on South Midler Ave. toward Burnet Ave.



Take the Townsend St. exit - Exit 13.

Turn left onto Burnet Ave.

Turn left onto North Townsend St.



Merge onto I-690 W via the ramp on the left.

Turn Left onto East Adams St. The Emergency Room is on the right.

Source: Mapquest.com

HASP Figure 1
Route to the Hospital
Pioneer Milder LLC Brownfield Project
City of Syracuse, Onondaga County, New York

C&S COMPANIES
ENGINEERS
DESIGN BUILD
TECHNICAL RESOURCES
OPERATIONS

HASP Appendix A

Guidance on Heat Stress Control

C&S ENGINEERS

C&S ENGINEERS, INC.

HEALTH & SAFETY GUIDELINE #15

HEAT STRESS CONTROL

TABLE OF CONTENTS

C&S ENGINEERS, INC.
HEAT STRESS CONTROL

1.0 PURPOSE
To establish procedures for the implementation and operation of a heat stress prevention, evaluation, and response program.

2.0 SCOPE
Applies to all activity where employees may be exposed to environments exceeding 71 degrees Fahrenheit (WBGT) performing Levels C and B work, and environments exceeding 77 degrees Fahrenheit (WBGT) for Level D work.

3.0 DEFINITIONS
Acclimatization — Acclimatization is the process of the body becoming accustomed to extremes in temperature.

ACGIH TLV 1997 — Heat Stress Threshold Limit Values (TLVs) are intended to protect workers from the severest effects of heat stress and heat injury and to describe exposures to hot working conditions under which it is believed that nearly all workers can be repeatedly exposed without adverse health effects. The TLV objective is to prevent the deep body core temperature from exceeding 38°C (100.4°F).

Wet-Bulb Globe Temperature (WBGT) — This is the simplest and most suitable technique to measure the environmental factors associated with heat stress. The value is calculated by using the equations shown in Appendix A.

Work/Rest Regimen — This is a ratio of time spent working versus time spent resting. The ratio applies to one (1) hour periods. For example, a work/rest regiment of 75% work, 25% rest corresponds to 45 minutes work, 15 minutes rest each hour.

4.0 RESPONSIBILITIES
Employees — All employees must be alert to signs of development of symptoms of heat stress in themselves and in those working with them. They must also be aware of emergency corrective action.

Health and Safety Coordinator (HSC) — The HSC is responsible for establishing and enforcing the work/rest regimen to control heat stress.

5.0 GUIDELINES

Acclimatization to heat involves a series of physiological and psychological adjustments that occur in an individual during his/her first week of exposure to hot environmental conditions. The work-rest regimen in this procedure is valid for acclimated workers who are physically fit.

5.1 Effects of Heat Stress

Hot weather can cause physical discomfort, loss of efficiency, and personal injury. Wearing personal protective equipment puts a worker at considerable risk of developing heat stress because protective clothing decreases natural body ventilation. Heat stress is probably one of the most common (and potentially serious) illnesses at hazardous waste sites. Regular monitoring and preventive measures are essential to the health and safety of personnel conducting field work.

Early symptoms of heat stress may include fatigue, irritability, anxiety, and decreased concentration, dexterity, or movement. If not recognized or treated, heat stress may be serious, even fatal.

Heat-related problems include:

1. **Heat Rash** — caused by continuous exposure to hot and humid air and aggravation of the skin by chafing clothes. As well as being a nuisance, this decreases the ability to tolerate heat.
2. **Heat Cramps** — caused by profuse perspiration with inadequate fluid intake and chemical replacement (especially salts). Signs: muscle spasm and pain in the extremities and abdomen.
3. **Heat Exhaustion** — caused by increased stress on various organs to meet increased demands for body cooling. Signs: shallow breathing; pale, cool, moist skin; profuse sweating; dizziness; fatigue.
4. **Heat Stroke —** the most severe form of heat stress. Heat stroke is considered an Immediately Dangerous to Life or Health (IDLH) condition and as such must be treated as an emergency. Any person suffering from heat stroke must be cooled down immediately and brought to a hospital. Decontamination procedures should not be implemented. Signs and symptoms are: red, hot, dry skin; no perspiration; nausea; dizziness and confusion; strong, rapid pulse; coma.

   It is important to note that individuals vary in their susceptibility and their reactions to heat-related conditions. Factors that may predispose someone to a heat condition include:

   - Lack of physical fitness
   - Lack of acclimatization
   - Age
   - Dehydration
   - Obesity
   - Alcohol and drug use
   - Infection
   - Sunburn
   - Diarrhea
   - Chronic disease

5.2 First Aid/Medical Treatment

The following first aid and medical treatments are recommended. First aid training is recommended.

1. **Heat Rash** — Apply mild drying lotions and use cool, dry sleeping quarters to allow skin to dry between heat exposures.
2. **Heat Cramps** — Administer commercially-available electrolyte-balanced liquids. Seek medical attention if serious.
3. **Heat Exhaustion** — Remove to cooler environment; rest in reclining position. Drink plenty of fluids.
4. **Heat Stroke** — Immediate and rapid cooling by immersion in chilled water with massage, or wrapping in wet sheet and fanning. These steps are to be taken while waiting for emergency response to arrive, or while transporting the victim to an emergency medical facility. This is a **life-threatening** situation.

5.3 Heat Stress Prevention

One or more of the following will help prevent or reduce heat stress:

1. Drinking water shall be available to employees to encourage frequent small drinks (i.e., one cup every 15-20 minutes {about 150 ml or 1/4 pint}). The water shall be kept reasonably cool (55-60°F) and shall be placed outside the contaminated areas. Employees shall be encouraged to salt their foods and maintain well-balanced diets. If employees are unacclimatized, a commercially available product such as Gatorade or Exceed may be used for electrolyte replacement.
2. Cooling devices may be used to aid natural body ventilation. These devices, however, add weight, and their use should be balanced against worker efficiency.
3. Long cotton underwear should be worn. It acts as a wick to help absorb moisture and protect the skin from direct contact with heat-absorbing protective clothing.
4. Provide air-conditioned shelter or shaded areas to protect employees during rest periods.
5. Install mobile showers and/or hose-down facilities to reduce body temperature and cool protective clothing.
6. Conduct operations in the early morning or evening.
7. Rotate shifts of workers.
8. Add additional employees to work teams.
9. Mandate work slowdowns.
10. Good hygienic standards must be maintained by frequent change of clothing and daily showering. Clothing should be permitted to dry during rest periods.

11. Employees shall be instructed in hot weather procedures. The training program shall include, as a minimum, instruction in:

    a. Proper cooling procedures and appropriate first aid treatment.

    b. Proper clothing practices.

    c. Proper eating and drinking habits.

    d. Recognition of impending heat exhaustion.

    e. Recognition of signs and symptoms of impending heat stroke.

    f. Safe work practices.

5.4 Heat Stress Monitoring

Specific procedures will be established by the HSC and/or in the site specific HASP. Appendices A and B discuss the use of WBGT values.

5.5 Work/Rest Regimen

A work/rest regimen will be established for field work where personnel may be exposed to environments exceeding 77 degrees Fahrenheit (WBGT) for Level D work and environments exceeding 71 degrees Fahrenheit (WBGT) for Levels C and B work. The American Conference of Governmental Industrial Hygienists' TLV Heat Stress Threshold Limit Values will be used as a guideline.

If any heat stress symptoms are identified by the employee or buddy, the HSC should be notified immediately and all work activity should cease until the situation is corrected.

5.6 Biological Monitoring

Always monitor signs and symptoms of heat-stressed employees. When WBGT-TLV criteria are exceeded or water vapor impermeable clothing is worn, discontinue any environmentally-induced or activity-induced heat stress for a person when:

- Sustained heart rate is greater than 160 beats per minute for those under age 35; 140 beats for 35 years of age and older.
- Deep body temperature is more than $100^{O}F$.
- Blood pressure falls more than 40 torr in about 3.5 minutes.
- There are complaints of sudden and severe fatigue, nausea, dizziness, lightheadedness, or fainting.
- There are periods of inexplicable irritability, malaise, or flu-like symptoms.
- Sweating stops and the skin becomes hot and dry.
- Daily urinary sodium ion excretion is less than 50 mmoles.

6.0 REFERENCES

ACGIH TLV Booklet, 1997

7.0 ATTACHMENTS

TABLE 1 — Permissible Heat Exposure Threshold Limit Values

APPENDIX A — Wet-Bulb Globe Temperature Index

APPENDIX B — Manual Measurement of WBGT Factors

TABLE 1

PERMISSIBLE HEAT EXPOSURE THRESHOLD LIMIT VALUES

INTENDED CHANGES LISTED

(values are given in °F WBGT)

WORK LOAD

Work/Rest Regimen	Light	Moderate	Heavy
Continuous Work	86	80	77
75% Work 25% Rest, Each Hour	87	82.5	79
50% Work 50% Rest, Each Hour	89	85	82.5
25% Work 75% Rest, Each Hour	89.5	88	86

Water vapor impermeable or thermally insulating clothing, encapsulating suits, and similar convective and evaporative barriers can severely restrict heat loss and produce life-threatening heat strain, even when the ambient air temperature, radiant heat, and humidity are low. Whenever employees wear such restrictive clothing, it is essential that extra caution be exercised. Project managers and supervisors must evaluate heat stress conditions at each job site, taking into account specific job activities, protective clothing being used, and WBGT readings.

APPENDIX A

WET-BULB GLOBE TEMPERATURE INDEX

A baseline work-rest regimen is selected using the WBGT procedure. The WBGT in conjunction with the work load required to perform each task is used to determine work-rest regimen. **Light** work examples include such tasks as sitting or standing to control machines or performing light hand or arm work. **Moderate** work includes walking about in coated coveralls and respirators doing moderate lifting and pushing. **Heavy** work corresponds to pick and shovel-type work or the use of full body protective clothing. *It must be assumed that any activity involving this type of clothing will be considered heavy work.*

In order to determine the WBGT the following equations are used:

- Outdoors with solar load:
  WBGT = 0.7 NWB + 0.2 GT + 0.1 DB

- Indoors or outdoors with no solar load:
  WBGT = 0.7 NWB + 0.3 GT

  NWB = Natural Wet-Bulb Temperature
  DB = Dry-Bulb Temperature
  GT = Globe Thermometer Temperature

The factors involved in the above equations can be measured using a direct reading instrument or manually measuring each factor.

- An example of a direct-reading heat stress monitor is the Reuter-Stokes Wibget No. RSS-214 heat stress monitor.

- Measurement of the individual factors requires the following equipment:
  - ~ Dry-bulb thermometer
  - ~ Natural wet-bulb thermometer
  - ~ Globe thermometer
  - ~ Stand

APPENDIX B

MANUAL MEASUREMENT OF WBGT FACTORS

The range of the dry and the natural wet-bulb thermometers shall be -5ºC to 50ºC with an accuracy of 0.5º C. The dry-bulb thermometer must be shielded from the sun and the other radiant surfaces of the environment without restricting the airflow around the bulb. The wick of the natural wet-bulb thermometer shall be kept wet with distilled water for at least 1/2 hour before the temperature reading is made. It is not enough to immerse the other end of the wick into a reservoir of distilled water and wait until the whole wick becomes wet by capillary action. The wick shall be wetted by direct application of water from a syringe 1/2 hour before each reading. The wick shall extend over the bulb of the thermometer, covering the stem about one additional bulb length. The wick should always be clean and new wicks shall be washed before using.

A globe thermometer, consisting of a 15 cm (6-inch) diameter hollow copper sphere painted on the outside with a matted black finish or equivalent, shall be used. The bulb or sensor of a thermometer (range -5ºC to 100 C with an accuracy of 0.5ºC) must be fixed in the center of the sphere. The globe thermometer shall be exposed at least 25 minutes before it is read.

A stand shall be used to suspend the three thermometers so that they do not restrict free airflow around the bulbs.

It is permissible to use any other type of temperature sensor that gives a reading identical to that of a mercury thermometer under the same conditions.

The thermometers must be placed so that the readings are representative of the condition where the employees work or rest, respectively. All readings shall be recorded on the site log.

In many cases WBGT is the simplest and most suitable technique to measure heat. However, this system is only valid for light summer clothing. When special personal protective clothing is required for performing a particular job, the worker's heat tolerance is reduced and the permissible heat exposure limits are not applicable because this clothing is heavier, impedes sweat evaporation, and/or has higher insulation value.

HASP Appendix B

Guidance on Site Communications

C&S ENGINEERS

C&S ENGINEERS, INC.
HEALTH & SAFETY GUIDELINE #13
SITE COMMUNICATIONS

TABLE OF CONTENTS

C&S ENGINEERS, INC.
SITE COMMUNICATIONS

1.0 PURPOSE
This guideline contains information and requirements necessary to make sure field activities are conducted with adequate provision for communications among field personnel and to emergency agencies.

2.0 SCOPE
The guideline applies to all field activities conducted by C&S. Additional provisions for communications will be addressed in each Site-Specific Health and Safety Plan (HASP), as needed. Field communications must be provided not only to make sure field personnel can communicate with one another, but also to contact off-site technical and emergency assistance.

3.0 DEFINITIONS
None

4.0 RESPONSIBILITIES
Employees — All employees are responsible for knowing and using the specified communications to make sure fieldwork is safely completed and/or to respond to emergencies.

Health and Safety Coordinator (HSC) — The HSC is responsible for determining the proper methods of communication required at a particular site; for training site personnel in the use of these communications; and for providing and maintaining the communications as specified.

5.0 GUIDELINES

5.1 On-Site Communications
Each person shall be able to communicate with other personnel at all times. This communication may be via sound (air horn), electronic (two-way radio, bullhorn, etc.), or visual means.

A set of hand signals shall be designated and agreed upon by all personnel at each site activity, for use in case electronic communications fail. The site-specific training shall include explanation of the following standard hand signals:

Signal	Meaning
Hand gripping throat	Out of air; can't breath
Grip partner's wrist or place both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK; I'm all right; I understand
Thumbs down	No; negative

Whichever communication system is selected as a primary system, a backup system must be provided. For example, hand signals may be used as a backup if radio communications fail. All internal systems should be:

- Clearly understood by all personnel
- Checked and practiced daily
- Intrinsically safe (spark-free)

A special set of emergency signals should be set up. These should be:

- Different from ordinary signals
- Brief and exact
- Limited in number so that they are easily remembered

When designing and practicing communication systems, remember that:

- Background noise on site will interfere with talking and listening
- Wearing personal protective equipment will impede hearing and limit vision (i.e., the ability to recognize hand and body signals)
- Inexperienced radio users may need practice in speaking clearly

5.2 Off-Site Communications

Every field task shall provide for off-site communications to be able to contact local emergency agencies. Acceptable methods include mobile telephone, radio (CB, other) on a frequency monitored by emergency agencies; on-site telephone (portable or land-line); or a phone (booth or private home) within one-mile of the site. Where a private home phone is to be used, personnel shall make sure access to the home is guaranteed by the owner. Explicit directions and a map shall be prominently displayed. Adequate change shall be conveniently provided where a phone booth is specified for off-site communications.

6.0 REFERENCES

None

7.0 ATTACHMENTS

None

HASP Appendix C

Guidance on Excavation / Trenching Operations

C&S ENGINEERS

C&S ENGINEERS, INC.
HEALTH & SAFETY GUIDELINE #14
EXCAVATION/TRENCHING OPERATIONS

TABLE OF CONTENTS

C&S ENGINEERS, INC.
EXCAVATION/TRENCHING OPERATIONS

1.0 PURPOSE
To establish safe operating procedures for excavation/trenching operations at C&S work sites.

2.0 SCOPE
Applies to all C&S activity where excavation or trenching operations take place.

3.0 DEFINITIONS
Excavation — Any manmade cavity or depression in the earth's surface, including its sides, walls, or faces, formed by earth removal and producing unsupported earth conditions by reasons of the excavation.

Trench — A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench is not greater than 15 feet.

4.0 RESPONSIBILITY
Employees — All employees must understand and follow the procedures outlined in this guideline during all excavation and trenching operations.

Health and Safety Coordinator (HSC) - The HSC is responsible for ensuring that these procedures are implemented at each work site.

5.0 GUIDELINES
5.1 Hazards Associated With Excavation/Trenching
The principal hazards associated with excavation/trenching are:

- Suffocation, crushing, or other injury from falling material.
- Damage/failure of installed underground services and consequent hazards.
- Tripping, slipping, or falling.
- Possibility of explosive, flammable, toxic, or oxygen-deficient atmosphere in excavation.

5.2 Procedures Prior to Excavation
1. Underground utilities

- Determine the presence and location of any underground chemical or utility pipes, electrical, telephone, or instrument wire or cables.
- Identify the location of underground services by stakes or markers.
- De-energize or isolate underground services during excavation. If not possible, or if location is not definite, method of excavation shall be established to minimize hazards by such means as:
  1) Use of hand tools in area of underground services.
  2) Insulating personnel and equipment from possible electrical contact.
  3) Use of tools or equipment that will reduce possibility of damage to underground services and hazard to worker.

2. Identify Excavation Area — Areas to be excavated shall be identified and segregated by means of barricades, ropes, and/or signs to prevent access of unauthorized personnel and equipment. Suitable means shall be provided to make barriers visible at all times.

3. Surface Water Provide means of diverting surface water from excavation.

4. Shoring/Bracing — Shoring or bracing that may be required for installed equipment adjacent to the excavation shall be designed by a competent person.

5. Structural Ramps — Structural ramps that are used solely by employees as a means of access to or egress from the excavation shall be designed by a competent person.

5.3 Procedures For Doing The Excavation

1. **Determine the need for shoring/sloping** — the type of soil will establish the need for shoring, slope of the excavation, support systems, and equipment to be used. The soil condition may change as the excavation proceeds. Appendices A, B, C, D, E, and F of the OSHA Excavation Regulation, 29 CFR 1926 Subpart P (Attachment 1), are to be used in defining shoring and sloping requirements.

2. **Mobile equipment** — For safe use of mobile industrial equipment in or near the excavation, the load carrying capacity of soil shall be established and suitable protection against collapse of soil provided by the use of mats, barricades, restricting the location of equipment, or shoring.

3. Excavated material (spoil) shall be stored at least two (2) feet from the edge of the excavation.

4. All trench (vertical sides) excavations greater than five (5) feet deep shall be shored.

5. Ladders or other means of access to or egress from excavations shall be provided at a maximum spacing of:
   1) 100 feet on the perimeter of open excavations, and

2) 25 feet for trench excavations greater than four (4) feet in depth.

6. The excavation shall be inspected daily for changes in conditions, including the presence of ground water, change in soil condition, or effects of weather such as rain or freeze. A safe means of continuing the work shall be established based on changes in condition.

7. Appropriate monitoring for gas, toxic, or flammable materials will be conducted to establish the need for respiratory equipment, ventilation, or other measures required to continue the excavation safely.

8. Adequate means of dewatering the excavation shall be provided as required.

9. A signal person shall be provided to direct powered equipment if working in the excavation with other personnel.

10. A signal person shall be provided when backfilling excavations to direct powered equipment working in the excavation with other personnel.

11. Warning vests will be worn when employees are exposed to public vehicular traffic.

12. Employees shall stand away from vehicles being loaded or unloaded, and shall not be permitted underneath loads handled by lifting or dragging equipment.

13. Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available if hazardous atmospheric conditions exist or may be expected to develop. The specifics will be determined by the HSC/HSM.

14. Walkways or bridges with standard guardrail shall be provided where employees or equipment are required or permitted to cross over excavations.

5.4 Entering the Excavation

No C&S Engineers employee shall enter an excavation which fails to meet the requirements of Section 5.3 of this guideline.

6.0 REFERENCES

29 CFR 1926, Subpart P - Excavations

7.0 ATTACHMENTS

None

HASP Appendix D

Guidance on Incident Investigation and Reporting

C&S ENGINEERS

C&S ENGINEERS, INC.
HEALTH & SAFETY GUIDELINE #2
INCIDENT INVESTIGATION & REPORTING

TABLE OF CONTENTS

C&S ENGINEERS, INC.
INCIDENT INVESTIGATION AND REPORTING

1.0 PURPOSE
To prevent the occurrence or reoccurrence of accidents on C&S Engineers work sites and to establish a procedure for investigation and reporting of incidents occurring in, or related to C&S Engineers' work activities.

2.0 SCOPE
Applies to all incidents related to C&S Engineers' work activities.

3.0 DEFINITIONS
Accident - An undesired event resulting in personal injury and/or property damage, and/or equipment failure.

Fatality - An injury resulting in death of the individual.

Incident - Any occurrence which results in, or could potentially result in, the need for medical care or property damage. Such incidents shall include lost time accidents or illness, medical treatment cases, unplanned exposure to toxic materials or any other significant occurrence resulting in property damage or in "near misses."

Incidence Rate - the number of injuries, illnesses, or lost workdays related to a common exposure base of 100 full-time workers. The rate is calculated as:

$$N/EH \times 200{,}000$$

N = number of injuries and illnesses or lost workday cases; EH = total hours worked by all associates during calendar year. 200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

Injury - An injury such as a cut, fracture, sprain, amputation, etc. which results from a work accident or from a single instantaneous event in the work environment.

Lost Workday Case - A lost workday case occurs when an injured or ill employee experiences days away from work beginning with the next scheduled work day. Lost workday cases do not occur unless the employee is effected beyond the day of injury or onset of illness.

Recordable Illness - An illness that results from the course of employment and must be entered on the OSHA 200 Log and Summary of Occupational Injuries and Illnesses. These illnesses require medical treatment and evaluation of work related injury. For example, dermatitis, bronchitis, irritation of eyes, nose, and throat can result from work and non-work related incidents.

Recordable Injury - An injury that results from the course of employment must be entered on the OSHA 200 Log and Summary of Occupational Injuries and Illnesses (the "OSHA 200 Log"). These injuries require medical treatment; may involve loss of consciousness; may result in restriction of work or motion or transfer to another job; or result in a fatality.

Near Miss - An incident which, if occurring at a different time or in a different personnel or equipment configuration, would have resulted in an incident.

4.0 RESPONSIBILITIES

Employees - It shall be the responsibility of all C&S Engineers employees to report all incidents as soon as possible to the HSC, regardless of the severity.

Human Resources - Has overall responsibility for maintaining accident/incident reporting and investigations according to current regulations and recording injuries/illness on the OSHA 200 Log.

Health and Safety Coordinator (HSC*)* - It is the responsibility of the HSC to investigate and prepare an appropriate report of all accidents, illnesses, and incidents occurring on or related to C&S work. The HSC shall complete Attachment A within 24 hours of the incident occurrence.

Health and Safety Manager (HSM) - It is the responsibility of the HSM to investigate and prepare an appropriate report of all lost time injuries and illnesses and significant incidents occurring on C&S's property or related to C&S work. The HSM shall maintain the OSHA 200 Log.

Project Managers (PM) - It shall be the PM's responsibility to promptly correct any deficiencies in personnel, training, actions, or any site or equipment deficiencies that were determined to cause or contribute to the incident investigated.

5.0 GUIDELINES

5.1 Incident Investigation

The HSC will immediately investigate the circumstances surrounding the incident and will make recommendations to prevent reoccurrence. The HSM shall be immediately notified by telephone if a serious accident/incident occurs. The incident shall be evaluated to determine whether it is OSHA recordable. If the incident is determined to

be OSHA 200 recordable, it shall be entered on the OSHA 200 Log.

The following minimum information should be gathered in an accident investigation.

- Where and when the accident occurred
- Who and what were involved, operating personnel and witnesses
- How the accident or illness exposure occurred
- List of objects or substances involved
- The nature of the injury or illness and the part(s) of the body affected
- Discussion of the causes, and recommendations for prevention of recurrence.

5.2 Incident Report

The completed incident report must be completed by the HSC within 24 hours of the incident and distributed to the PM, HSM, and Human Resources. This form shall be maintained by Human Resources for at least five years for all OSHA recordable cases. This form serves as an equivalent to the OSHA 101 Supplementary Record of Occupational Injuries and Illnesses.

5.3 Incident Follow-up Report

The Incident Follow-up Report (Attachment B) shall be distributed with the Incident Report within one week of the incident. Delay in filing this report shall be explained in a brief memorandum.

5.4 Reporting of Fatalities or Multiple Hospitalization Accidents

Fatalities or accidents resulting in the hospitalization of five or more employees must be reported to OSHA verbally or in writing within 48 hours. The report must contain: 1) circumstances surrounding the accident(s); 2) the number of fatalities; and 3) the extent of any injuries.

5.5 OSHA 200 Summary Form

Recordable cases must be entered on the log within six workdays of receipt of the information that a recordable case has occurred. The OSHA log must be kept updated to within 45 calendar days.

OSHA 200 forms must be updated during the 5 year retention period, if there is a change in the extent or outcome of an injury or illness which affects an entry on a log. If a change is necessary, the original entry should be lined out and a corrected entry made on that log. New entries should be made for previously unrecorded cases that are discovered or for cases that initially weren't recorded but were found to be recordable after the end of the year. Log totals should also be modified to reflect these changes.

5.5.1 Posting

The log must be summarized at the end of the calendar year and the summary must be posted from February 1 through March 1.

5.6 OSHA 200S

Facilities selected by the Bureau of Labor Statistics (BLS) to participate in surveys of occupational injuries and illnesses will receive the OSHA 200S. The data from the annual summary on the OSHA 200 Log should be transferred to the OSHA 200S, other requested information provided and the form returned as instructed by the BLS.

5.7 Access to OSHA Records

All OSHA records (accident reporting forms and OSHA 200 log) shall be available for inspection and copying by authorized federal and state government officials.

Employees, former employees, and their representatives must be given access for inspection and copying to only the log, OSHA 200 Log, for the establishment in which the employee currently works or formerly worked.

6.0 REFERENCES

29 CFR Part 1904

7.0 ATTACHMENTS

Attachment A - Incident Investigation Form

Attachment B – Incident follow-up report

Attachment C – Establishing Recordability

ATTACHMENT A

INCIDENT INVESTIGATION FORM

Accident investigation should include:

Location

Time of Day

Accident Type

Victim

Nature of Injury

Released Injury

Hazardous Material

Unsafe Acts

Unsafe Conditions

Policies, Decisions

Personal Factors

Environmental Factors

ATTACHMENT B

INCIDENT FOLLOW-UP REPORT

Date _____

Date of Incident: _____

Site: _____

Brief description of incident: _____

_____

Outcome of incident: _____

_____

_____

_____

_____

_____

Physician's recommendations: _____

_____

_____

_____

Date the injured employee returned to work: _____

ATTACH ANY ADDITIONAL INFORMATION TO THIS FORM

ATTACHMENT C

ESTABLISHING RECORDABILITY

1. Deciding whether to record a case and how to classify the case.

   Determine whether a fatality, injury or illness is recordable.

   A fatality is recordable if:
   - results from employment

   An injury is recordable if:
   - results from employment and
   - it requires medical treatment beyond first aid or
   - results in restricted work activity or
   - results in lost work day

   An illness is recordable if
   - it results from employment

2. Definition of "Resulting from Employment"

Resulting from employment is when the injury or illness results from an event or exposure in the work environment. The work environment is primarily composed of: 1) The employer's premises, and 2) other locations where associates are engaged in work-related activities or are present as a condition of their employment.

The employer's premises include company rest rooms, hallways, and cafeterias. Injuries occurring in these places are generally considered work related.

The employer's premises EXCLUDES employer controlled ball fields, tennis courts, golf courses, parks, swimming pools, gyms, and other similar recreational facilities used by associates on a voluntary basis for their own benefit, primarily during off work hours.

Company parking facilities are generally not considered part of the employer's premises for OSHA recordkeeping purposes. Therefore, injuries to associates on these parking lots are not presumed to be work related, and are not recordable unless the associate was engaged in some work related activity.

Associates who travel on company business are considered to be engaged in work related activities all the time they spend in the interest of the company. This includes travel to and from customer contacts, and entertaining or being entertained for purpose of promoting or discussing business. Incidents occurring during normal living activities (eating, sleeping, recreation) or if the associate deviates from a reasonably direct route of travel are not considered OSHA recordable.

3. Distinction between Medical Treatment and First Aid.

First aid is defined as any one-time treatment, and any follow up visit for the purpose of observation, of minor scratches, cuts, burns, splinters, etc., which do not ordinarily require medical care. Such one time treatment, and follow up visit for the purpose of observation, is considered first aid even though provided by a physician or registered professional personnel.

Injuries are not minor if

a) They must be treated only by a physician or licensed medical personnel;

b) They impair bodily function (i.e. normal use of senses, limbs, etc.)

c) They result in damage to physical structure of a non superficial nature (fractures)

d) They involve complications requiring follow up medical treatment.

HASP Appendix E

NYSDOH Generic Community

Air Monitoring Plan

C&S ENGINEERS

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 ground intrusive 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 non-intrusive 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.

June 20, 2000

H:\Southern\gCAMPr1.doc

APPENDIX C

Citizen Participation Plan

C&S ENGINEERS

CITIZEN PARTICIPATION PLAN for Brownfield Cleanup of Former Midler City Industrial Park Site, Syracuse, Onondaga County, NY

November 2004

Prepared by Pioneer Midler Avenue, LLC

Table of Contents

1. Introduction and Objectives of CPP

- Project: Investigation, Cleanup, and Redevelopment of the 21.808±-acre Midler City Industrial Park Site ("Midler Site") under the DEC Brownfield Cleanup Program ("BCP")
- Project Objective: Revitalize the Site by beneficially redeveloping it as an open-air commercial retail center

1. Introduction & Objectives--2

- CP Plan Objective: Inform and involve the public
  - Inform the public of planned or ongoing actions, nature of environmental conditions, environmental and/or public health issues, responses under consideration, and progress being made
  - Create opportunities for the public to provide information, opinions and perspectives
  - Ensure open communication among the public, the project sponsor(s), & state and local decisionmakers

1. Introduction & Objectives--3

- Objective: Inform and involve the public—cont'd
  - Coordinate public outreach efforts with the involved government agencies to best serve the public and promote informed decision-making

Interested parties are encouraged at any time to discuss their ideas and suggestions with the project contacts listed in Section 5

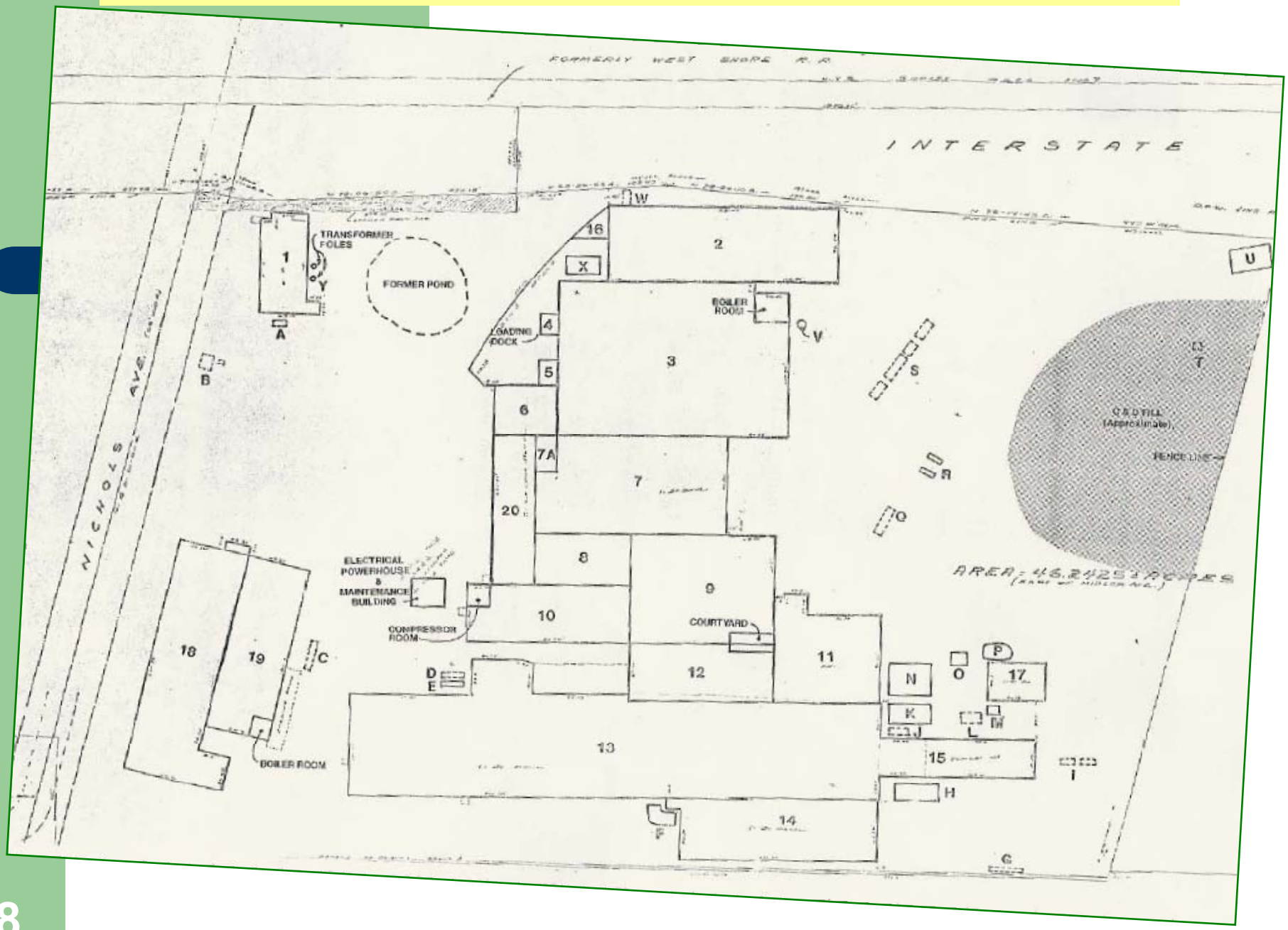
2. Background

- For at least 70 years (1892 -1961), the site was operated as an industrial site—involved at various times in the manufacture of: boilers, radiators, other heavy iron ware for steam and hot water heating systems, as well as laundry, dry cleaning, and garment pressing equipment.
- For the past 43 years (1961-2004), the site has been owned by Sutton Investing Corporation as a real estate asset, operated by numerous small tenants.

AREAS OF POTENTIAL CONCERN ON MIDLER SITE

Area (or Bldg.) Designation	Description	Potential Contam-ination	Notes
A,B,C,D,E,(F),Q,R,**S**,T,U, boiler rooms, compressor room	Present or former petroleum storage tank locations (USTs & ASTs)	Fuel oil (**A,C,D,E,Q,R,S,T,U**) Gasoline (**B,R,U**)	**Q** = location of former 12,000-gal. AST (closed 4/02) **S** = location of 4 former fuel oil USTs (removed as of 1966?) **E,R**(AST), **U**(AST) = only remaining tanks
Y	Former pole-mounted transformers	PCBs?	Transformers were owned and operated by Niagara Mohawk (NIMO)
Electrical Powerhouse & Maint. Bldg., Building #4, and M, W,X	Transformers	PCBs?	**Former powerhouse** contained 3 active and 1 inactive transformers. Wipes of two stained areas yielded low levels of Aroclor 1260. **M** = former transformer carcasses – non-PCB containing.
F,G,I,J,L,O,(V), courtyard	Drum, paint, and solvent storage		**V** = two 5-gal. plastic containers containing waste oil(?) observed in 1994; **J** = paint storage; **L** = lacquer & thinner drums; **G** = 17 55-gal. drums of flammable liquid (1960); **F** = 2 drums with oily like substance (1994)
Bldgs. 3 & 9	Former degreaser locations	Solvents?	
H,N,P,(V)	Ash & cinder debris	Non-mobile PAHs?	Debris noted on ground surface in 1994
Construction & Demolition Debris Fill	C&D Fill	VOCs, slag, asphalt, tar	VOC vapors encountered 7/23/04 at one location during trenching (275 ppm PID reading). Tetrachloroethene detected at 160 ug/kg—well below SCO of 1,400 ug/kg. Stained soils or sheens, VOCs, also encountered elsewhere.
Former Pond (betw. Bldgs. 1 & 3)	4 feet of fill covers former pond	No PCBs or VOCs detected	Fill included scrap wood, bricks, asphalt, concrete, rocks, and miscellaneous refuse.

Site Plan Showing Areas of Potential Concern on Midler Site

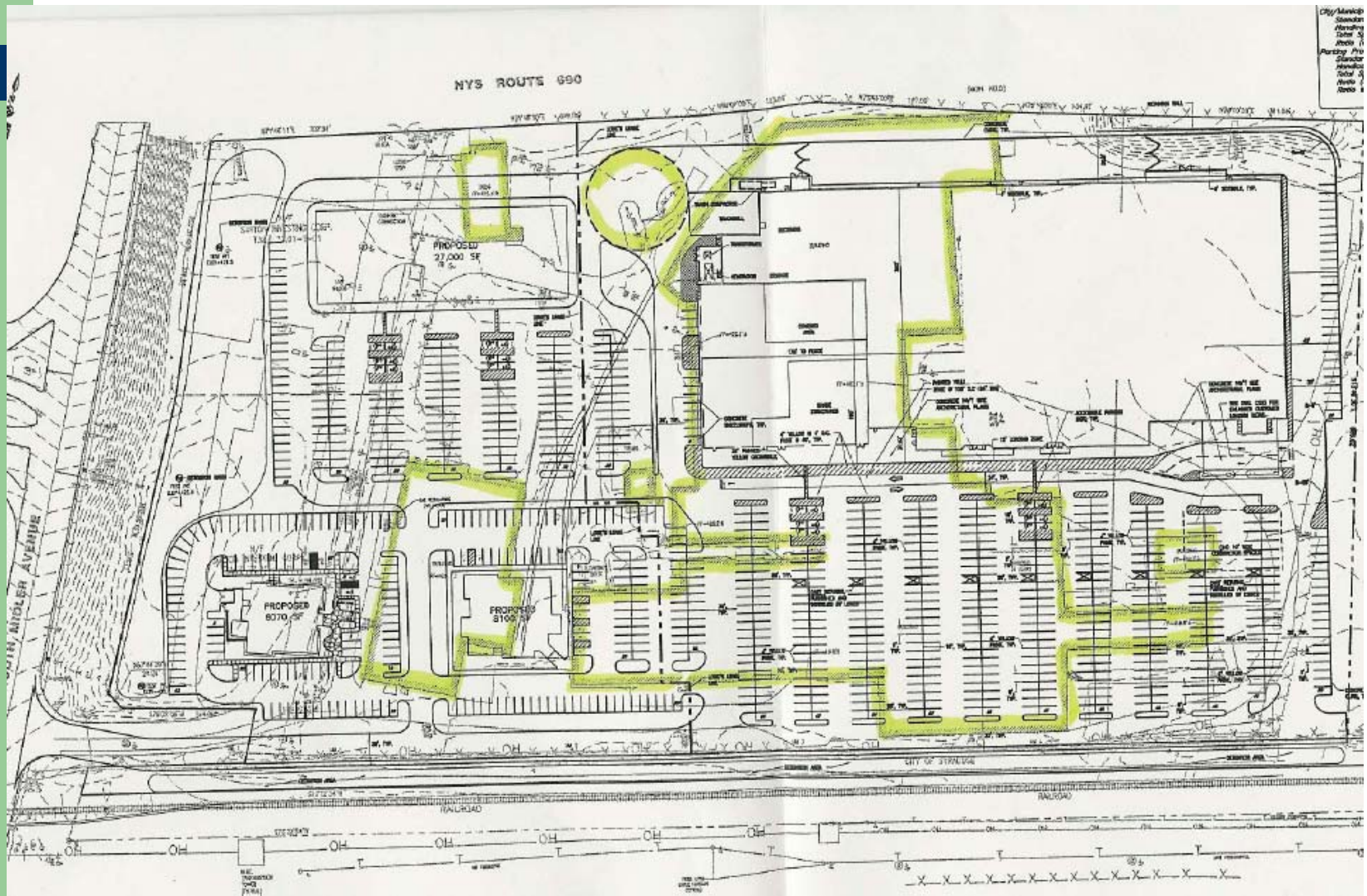


3. Project Description

- **The purpose of the project is to clean up and revitalize a prime brownfield site in Onondaga County**: the nearly 22-acre former Midler City Industrial Park site.
- Although once an active manufacturing site, **this site** (along with other remnants of a bygone industrial era) **has been allowed to deteriorate for the past four decades**. Located in a prominent, easily accessed location east of Downtown Syracuse, the site is located just south of Interstate-690 and is also visible from the Erie Boulevard commercial corridor to the south. **Its cleanup and redevelopment will give a major economic boost**, not only to surrounding neighborhoods, but to the entire Greater Syracuse region.

3. Project Description – 2

Anticipated footprint of redeveloped site—with existing structures overlaid in yellow



4. Citizen Participation Activities

- Completed to date:
  - Public notice on BCP application
  - Public information Fact Sheet on Draft Remedial Investigation Work Plan
  - Draft CP Plan (this document)

4. Citizen Participation Activities -2

- **Planned Outreach**
  - Document repository: City of Syracuse, Department of Community Development, Division of Code Enforcement, 201 E. Washington Street, Rm. 203, Syracuse, NY. Phone: 315-448-8695
  - Public Notice Mailing List: Submitted to DEC with Brownfield Cleanup Program application (see also Section 7)

4. Citizen Participation Activities -3

- Notice to contact list (and in ENB) describing the Brownfield Cleanup Program application when DEC deems it complete
- Notice and fact sheet to contact list describing proposed Remedial Investigation Work Plan; 30-day public comment period
- Notice and fact sheet to contact list before approval of RI work plan; 30-day public comment period
- Notice to contact list before approval of RI report
- Notice and fact sheet to contact list before approval of Remedial Action work plan; 45-day public comment period
- Notice to contact list announcing start of (remedial) construction

4. Citizen Participation Activities- 4

- Notice and fact sheet to contact list before approval of the engineering report (including any institutional or engineering controls included in the remedy)
- Notice and fact sheet to contact list describing institutional/engineering controls within 10 days of issuance of Certificate of Completion

5. Project Contacts

- Developer Contact:
  - Jed S. Schneider, Sr. VP of Construction, Pioneer Midler Avenue, LLC, 250 South Clinton Street, Syracuse, NY 13202-1258; 315-471-2181; jschneider@thepioneercompanies.com
- Environmental Attorney:
  - Kenneth S. Kamlet, Newman Development Group, LLC, 3101 Shippers Road, PO Box 678, Vestal, NY 13851-0678; 607-770-0155, x-229; kkamlet@hotmail.com
- Environmental Consultant:
  - Thomas A. Barba, Sr. Project Scientist, Environmental Services Group, C&S Engineers, Inc., 499 Col. Eileen Collins Blvd., Syracuse, NY 13212; 315-455-2000; tbarba@cscos.com

5. Project Contacts - 2

- NYS DEC Contact:
  - Karen A. Cahill, Project Manager, NYS Department of Environmental Conservation, Region 7, 615 Erie Boulevard West, Syracuse, NY 13204-2400; 315-426-7432; email: kacahill@gw.dec.state.ny.us
- NYS DOH Contact:
  - Henriette M. Hamel, NYS DOH, Central New York Regional Office, 217 South Salina Street, 3rd Floor, Syracuse, NY 13202; 315-477-8154; email: hmh01@health.state.ny.us

6. Available Documents

- Brownfield Cleanup Program (BCP) application (October 19, 2004)
- *BCP Remedial Investigation Work Plan* (C&S Engineers, October 19, 2004* [rev. _____])
- Phase I Environmental Site Assessment (C&S Engineers, August 9, 1994)*
- Pre-BCA Report (C&S Engineers, July 30, 2004)*

**Included with submitted BCP application*

7. Contact List

THE CHIEF EXECUTIVE OFFICER AND ZONING BOARD CHAIRPERSON OF EACH COUNTY, CITY, TOWN AND VILLAGE IN WHICH THE SITE IS LOCATED

- **a. *City of Syracuse*—**
  - Office of the Mayor
    - Mayor Matthew J. Driscoll City Hall
      233 E. Washington Street, Room 203
      Syracuse, NY 13202 (315) 448-8005
  - Zoning Board of Appeals
    - Chairperson: Ms. Linda DeFischy
      201 E. Washington Street, Room 211
      Syracuse, NY 13202 (315) 448-8640

b. *Onondaga County*—

- OFFICE OF THE COUNTY EXECUTIVE
  - Nicholas J. Pirro, County Executive
    14th Floor, John H. Mulroy Civic Center
    Syracuse, New York 13202
    Telephone 315-435-3516
    FAX 315-435-8582

7. Contact List - 2

RESIDENTS, OWNERS, AND OCCUPANTS OF THE SITE AND PROPERTIES ADJACENT TO THE SITE

- *Residents, Owners and Occupants of the Site—*
  - **SUTTON INVESTING CORPORATION** (Owner), Attn: Mr. Terry McHugh 621 S. Midler Ave.
    Syracuse, NY 13206
    (315) 463-0133 Fax: (315) 234-5010

    CITY OF SYRACUSE (Owner of southern parcel)

7. Contact List--3

Midler City Industrial Park Tenants with Existing Leases (as provided by Sutton)
[Bracketed information was obtained from On-Line Yellow Pages]—

- **A & B ABRASIVES**, Attn: Allen Blair
  P.O. Box 218
  DeWitt, NY 13214-0218
  [6937 LYMEKILN RD,
  FAYETTEVILLE, NY 13066
  Phone: (315) 446-6166]
- **ASR SYSTEMS GROUP INC**
  126 METROPOLITAN PARK DR,
  LIVERPOOL, NY 13088 [Phone: (607) 722-4778]
- **John Chen, Class V Inc.**
  4213 Oran Delphi Road
  Manlius, NY 13104
- **City of Syracuse**
  Department of Public Works
  1200 Canal Street Extension
  Syracuse, NY 13206
- **A & R INDUSTRIAL REPAIR INC**
  621 S MIDLER AVE,
  SYRACUSE, NY 13206
  [Phone: (315) 463-7191]
- **BRIDGE RESTORATION & PRESERVATION UNLTD**
  Attn: James Tracy101 Knollwood Rd.Fayetteville, NY 13066[6785 KNOLLWOOD RD, FAYETTEVILLE, NY 13066
  Phone: (315) 446-4145]
- **CNY Development Co.** , Attn: Alan Roland
  P.O. Box 341
  Syracuse, NY 13211
- **Jeffrey P. DeFuria, Jr.**
  1217 S. Glencove Road
  Syracuse, NY 13206FALK

7. Contact List--4

- **PRECISION INC** Attn: James Falk5869 FISHER RD, EAST SYRACUSE, NY 13057 [Phone: (315) 437-4545]
- **Fuccillo Hyundai of Syracuse, Inc.** Attn: Bill Hendry
  2601 Erie Boulevard
  East Syracuse, NY 13224
- **Homeland Energy Resources Development,** Attn: John Fox
  1 Snowden Avenue
  Delmar, NY 12054
- **LAMAR OUTDOOR ADVERTISING**
  745 W. GENESEE STREET
  SYRACUSE, NY 13204
  [Phone: (315) 422-5174]
- **Mini Fini Ltd**,.Attn: Mary Anne Ferrigan7000 Thames CourtMatthews, NC 28104
- **FITZSIMMONS CAPITAL EQUIPMENT CORPORATION** Attn: John Fitzsimmons
  228 MAPLE DR,
  FAYETTEVILLE, NY 13066
  [Phone: (315) 449-0978]
- **GROUND EFFECTS,** Attn: Cliff White
  1631 WHITING RD,
  MEMPHIS, NY 13112
  [Phone: (315) 689-1470]
- **Robert Serafini**
  1 Edgewood Court
  Baldwinsville, NY 13027
  Formerly KAY-R ELECTRIC [CORP ELECTRIC CONTRS 112 PICKARD DR E, MATTYDALE, NY 13211 Phone: (315) 454-4459]
- **Mickey's Fresh Cuts, Inc**, .Attn: Graziano Zazzara
  5030 Bridle Path
  Fayetteville, NY 13066

7. Contact List--5

- **Derek Potocki**
  120 Wally Road
  North Syracuse, NY 13212
- **Tri City Auto Recovery Inc.**
  309 Union Street
  Post Office Box 992
  Schenectady, NY 12305
- **Skyway Motors**, Attn: Leonard Shapiro
  109 Suburban Park Drive, Apt J
  Manlius, NY 13104
- **Dog Watch Fence of CNY**, Attn: Matthew O'Brien
  2833 Nunnery Road
  Skaneateles, NY 13152-8916
- **Newspapers Plus**, Attn: William Banuski
  1107 Walnut Grove Road
  Bridgeport, NY 13030
- **POWER LINE CONSTRUCTORS INCORPORATED**
  Post Office Box 385
  [24 ROBINSON RD,]
  CLINTON, NY 13323
  [Phone: (315) 853-6183]
- **Thruway Hardwood & Plywood Corp.**
  47 Anderson Road
  Buffalo, NY 14225
- **Canal Corner Landscape**, Attn: Daniel Nappi
  621 South Midler Avenue
  Syracuse, NY 13206
  [CANAL CORNER NURSERY AND GARDEN CENTER 2015 ERIE BLVD E, SYRACUSE, NY 13224 Phone: (800) 585-6422]
- **NATIONAL PAD & PAPER CO**, Attn: David Carroll
  Post Office Box 572
  Fayetteville, NY 13066
  [6361 THOMPSON RD, SYRACUSE, NY 13206 Phone: (315) 432-0565]

7. Contact List--6

- **KOCHER-O'BRIEN CONSTRUCTION CO., INC**
  Attn: William O'Brien
  621 S MIDLER AVE,
  SYRACUSE, NY 13206
  [Phone: (315) 414-0398]

- **Skills USA-VICA NY**
  Attn: Richard E. Jones
  342 Union Valley Road
  Mahopac, NY 10541

7. Contact List--7

- *Residents, Owners and Occupants of Adjacent Properties—*

- **PRICE CHOPPER**
  2515 Erie Blvd.
  East Syracuse, NY 13224
  (315) 449-2314
  Tax Map #033.1-01-14.1

- **SALVATION ARMY**
  2433 Erie Blvd.
  East Syracuse, NY 13224
  (315) 445-0520
  Tax Map #032-03-05.3

- **FUCILLO HYUNDAI OF SYRACUSE**
  2601 Erie Blvd. East
  Syracuse, NY 13224
  (315) 445-7900
  Tax Map #033.1-01-13.0

HEALTH SERVICES ASSOCIATION
2775 Erie Blvd. East
Syracuse, NY 13224
(315) 446-6102
Tax Map #033.1-01-08

- **MICRO INC.**
  2509 Erie Blvd.
  East Syracuse, NY 13224
  Tax Map #033.1-01-15

- **SAM'S CLUB**
  2649 Erie Blvd.
  East Syracuse, NY 13224
  (315) 449-9233
  Tax Map #033.1-01-12.0

- **CITY OF SYRACUSE, DEPT. OF PUBLIC WORKS**
  1200 Canal Street Ext.
  Syracuse, NY 13210
  (315) 448-2489
  Tax Map #032-03-02

7. Contact List - 8

LOCAL NEWS MEDIA FROM WHICH THE COMMUNITY TYPICALLY OBTAINS INFORMATION.

- **The Post Standard** (Syracuse newspaper)
  Clinton Square
  Syracuse, NY 13202
  Executive Editor: (315) 470-2169
  Business: (315) 470-2220
  Metro Desk: (315) 470-2265

  WIXT News Channel 9 (Channel 9)
  5904 Bridge Street
  East Syracuse, NY 13057
  (315) 446-9999

  WSTM-TV3 Television Center (Channel 3)
  1030 James Street
  Syracuse, NY 13203
  (315) 477-9400 or 477-9446

  WSYT-FOX 68 (Channel 8)
  1000 James Street
  Syracuse, NY 13203
  (315) 472-6800

- **WTVH CHANNEL 5** (Channel 5)
  980 James Street
  Syracuse, NY 13203
  (315) 425-5555

- **Time Warner Cable News 10 Now** (Channel 10)
  815 Erie Blvd.
  East Syracuse, NY 13210
  (315) 234-0640

- **WBBS - 104.7 FM** (Radio)
  500 Plum Street
  Syracuse, NY 13202
  (315) 448-1047

- **WSYR - 570 AM** (Radio)
  500 Plum Street
  Syracuse, NY 13202
  (315) 472-9797

- **WYYY - Y94FM** (Radio)
  500 Plum Street
  Syracuse, NY 13202
  (315) 422-4636

7. Contact List--8

- **THE PUBLIC WATER SUPPLIER WHICH SERVICES THE AREA**

  City of Syracuse Water Department
  101 N. Beech Street
  Syracuse, NY 13210
  (315) 473-2609

- **ANY PERSON WHO HAS REQUESTED TO BE PLACED ON THE SITE CONTACT LIST**
  - None to date.

- **THE ADMINISTRATOR OF ANY SCHOOL OR DAY CARE FACILITY LOCATED ON OR NEAR THE SITE**
  - Not applicable.

- **THE LOCATION OF A DOCUMENT REPOSITORY FOR THE PROJECT**

  City of Syracuse
  Department of Community Development
  Division of Code Enforcement
  201 E. Washington Street, Room 203
  Syracuse, NY 13202
  315) 448-8695

Exhibit 1: Qualitative Exposure Assessment

- An evaluation of the potential for a “complete pathway” to exist by which humans may be exposed to site contaminants.
- A complete pathway requires:
  - A contaminant source in soil, air, or water (or biota)
  - Contaminant release and transport mechanisms
  - A point of exposure
  - A route of exposure
  - A receptor population

APPENDIX D

Phase I Environmental Site Assessment Report Text

C&S ENGINEERS

C&S
Engineers, Inc.
1020 Seventh North Street, Liverpool, New York 13088-6199
(315) 457-6711 Fax (315) 457-9803

August 9, 1994

Mr. David Norcross
P & C Food Markets
1200 State Fair Boulevard
P.O. Box 4965
Syracuse, New York 13221-4965

Re: Phase I Environmental Site Assessment
26± Acre Former Industrial Property
Midler City Industrial Park
Syracuse, New York

File: 631.001.079

Dear Mr. Norcross:

Pursuant to our agreement dated July 6, 1994, C&S Engineers, Inc., has completed the Phase I Environmental Site Assessment on the Prosperity Company manufacturing complex property located in Syracuse, New York. The scope of work for this assessment included:

- Review of Site History
- Review of Regulatory Status
- Facility Visit and Interview
- Assessment Report

1.0 INTRODUCTION

The subject parcel is located to the east of Midler Avenue immediately south of Interstate Route 690 in the City of Syracuse. Figure 1 identifies the general location of the subject parcel and Figure 2 is a general layout of the subject parcel. The parcel is approximately 26 acres in size with a number of buildings. It is bounded on the north by Interstate 690, the east by property reportedly held by Sutton Investing Corporation (currently being utilized by the City of Syracuse Department of Public Works), the south by CONRAIL, and the west by Midler Avenue. The buildings on the property are generally wood framed and wood truss with concrete slab on grade. The property was reportedly occupied as early as 1889 by Pierce, Butler & Pierce Manufacturing Co., which manufactured boilers, radiators, and other heavy iron ware for steam and hot water heating systems. As early as 1941, the property was occupied by The Prosperity Company, which manufactured laundry, dry cleaning, and garment pressing equipment. It is unknown when manufacturing operations ceased at the site.

1.1 AUDIT METHODOLOGIES AND OBJECTIVES

Our assessment included contacting appropriate local and state regulatory agencies to determine if available records indicate non-compliance with applicable environmental statues. C&S also reviewed the New York State Department of Environmental Conservation (NYSDEC) Region 7 database regarding reported spill events, as well as the petroleum bulk storage (PBS) and chemical bulk storage (CBS) registries.

In addition, C&S retained the services of Environmental Data Resources, Inc., to generate a Radius Search/Plus Report which is in conformance with ASTM E1527-93. This report which is presented in Appendix A contains information pertaining to the subject parcel and vicinity derived from a variety of state and federal databases including the United States Environmental Protection Agency (USEPA) National Priorities List (NPL); Emergency Response Notification System (ERNS) which records information on reported releases of oil and hazardous substances; Hazardous Materials Incident Report System (HMIRS) which contains hazardous material spill incidents reported to the USDOT; Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list of known or suspected uncontrolled or abandoned hazardous waste sites; Resource Conservation and Recovery Information System (RCRIS) information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA); Facility Index System (FINDS) which contains facility information and "pointers" to other sources that contain more detail; Toxic Release Inventory System (TRIS) identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313; PCB Activity Database (PADS) identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities; RCRA Administration Action Tracking System (RAATS) which contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA; Toxic Substances Control Act (TSCA) which identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory List; State Hazardous Waste Sites (SHWS); Solid Waste Facilities/Landfill Sites (SWF/LF); Registered Underground Storage Tanks (UST); and Leaking Underground Storage Tank incident reports (LUST).

Additional inquiry regarding the subject parcel was accomplished through Freedom of Information Law (FOIL) request letters to the NYSDEC Central office in Albany, New York, the New York State Department of Health (NYSDOH) in Albany and Syracuse, New York, the Onondaga County Health Department, and the City of Syracuse Corporation Council Records Access Officer. FOIL request letters and responses are presented in Appendix B.

A walkover of the site was conducted on July 28, 29, and August 9, 1994, to gather information regarding present conditions at the subject parcel, and to visually identify evidence of environmental concerns such as dead vegetation, stained or discolored soil, drums, and vent pipes or fill pipes associated with underground storage tanks. In addition, a historical search was conducted to assist in identifying former uses of the site and to assess the potential for past activities which may indicate an environmental concern. A variety of information resources

were consulted to determine historical use of the property including historical aerial photographs located at the United States Department of Agriculture Soil Conservation Service field office in Syracuse, New York; files located at the Onondaga Historical Association (OHA) in Syracuse, New York; Sanborn Fire Insurance Rate Maps obtained from the OHA and the Bird Library at Syracuse University; Hopkins Atlas maps of the City of Syracuse dated 1924 and 1938, which are a part of the C&S collection; and aerial photographs from the Onondaga County Planning Department. C&S also was allowed to borrow historical drawings of the facility from representatives of the Sutton Investing Corporation.

The historical land use of the area was generated by utilizing information resources that are believed to be reliable. However, C&S Engineers, Inc., did not attempt to independently verify the accuracy or completeness of all information reviewed or obtained during the course of this Phase I Environmental Site Assessment. In order to execute tasks listed above, the following agencies and individuals were contacted:

Agency	Contact Person	Date Contacted
NYSDEC - Region 7 Syracuse, New York	FOIL Request Coordinator	FOIL Request: 6/17/94 FOIL Response: Pending
NYSDOH Albany, New York	Donald Macdonald	FOIL Request: 7/14/94 FOIL Response: Pending
NYSDOH Syracuse, New York	Henrietta Hamel	FOIL Request: 7/14/94 FOIL Response: 7/19/94
Onondaga County Health Dept. Syracuse, New York	Lisa Letteney	FOIL Request: 7/14/94 FOIL Response: 7/25/94
City of Syracuse Corporation Counsel Syracuse, New York	Records Access Officer	FOIL Request: 7/14/94 FOIL Response: Pending
Sutton Investing Corporation	Don Temple Maintenance Foreman	Personal Communication: 7/28/94
Sutton Investing Corporation	William Stoutenberg	Personal Communication: 7/21/94

2.0 AREA GEOLOGY/HYDROGEOLOGY

Land forms and soils in Onondaga County are generally the result of continental glaciation which receded from the area approximately 11,000 to 12,000 years ago. In the area of the subject parcel, the land surface elevation rises to the north and south. Based on topographic information presented on the United States Geological Survey 7.5 minute Syracuse East quadrangle, the

surface elevation at the subject parcel is estimated to be 410 NGVD, whereas the elevation of Burnet Avenue which is approximately 500 feet north of the parcel center, is estimated to be 450 NGVD. At a distance of approximately 1,000 feet south, at a location just south of Erie Boulevard, the surface elevation rises to approximately 450 NGVD. Based on this information, it would appear that shallow groundwater flow originates from the north and south and converges beneath the relatively flat area that is presently occupied by Erie Boulevard (formerly the Erie Canal), which is at an estimated surface elevation of 400 NGVD.

Information presented in the Soil Survey of Onondaga County, New York, prepared by the United States Department of Agriculture Soil Conservation Service dated 1973, indicates the subject parcel is located within an area classified as "Cut and Fill Land". More specific information pertaining to soil condition was obtained from test boring logs prepared by Parratt-Wolff, Inc., which were part of a subsurface investigation conducted for Sutton Investing Corporation in December 1993. The test boring logs indicate that 5 to 10 feet of fill material consisting of cinders, sand, and rubble ash are present at the site. Beneath this fill layer is peat and a naturally occurring calcium carbonate deposit referred to as marl. These types of soils are generally associated with either swamp or lacustrine environments. At depths ranging from 15 to 20 feet below ground surface, the soils transition to either clay or sand depending on the location of the test boring. The test boring logs also show that groundwater was encountered at a depth of approximately 3 to 5 feet below ground surface.

3.0 REVIEW OF SITE HISTORY

Files at the Onondaga Historical Association Research Center, located at 311 Montgomery Street, Syracuse, New York, were reviewed to determine a history of the subject parcel. Files were reviewed as a source of information regarding past use of the property. These files consisted of mostly newspaper articles and photographs.

Pierce, Butler & Pierce Manufacturing Co.

These files indicated the property was occupied by the Pierce Manufacturing Company (founded 1866) which made boilers, radiators and other heavy iron wares. Later articles indicate that the Pierce, Butler & Pierce Manufacturing Co. manufactured systems for steam and hot water heating and "modern" sanitary plumbing. Of note was a 1914 reference to the purchase of a lead press for the manufacturing of lead pipe.

Prosperity Company

Other newspaper articles indicate that as early as 1941 the property was utilized by the Prosperity Company. This company manufactured process machines for laundry and dry cleaning equipment including automatic cleaning equipment, air operated pressing machines, and steam garment pressing machines.

There were not any articles in the files that headlined an incident that would be an environmental concern. Also, none of the articles viewed disclosed information regarding waste disposal practices.

3.1 AERIAL PHOTOGRAPHS

Historical aerial photographs of the subject parcel and surrounds were located at the United States Department of Agriculture Soil Conservation Service field office in Syracuse, New York. Prints of aerial photographs were reviewed to obtain information regarding the subject property and adjoining properties for the years 1938, 1951, 1990, and 1991. Our observations are summarized as follows:

- 1938: The 1938 high altitude aerial photograph of the subject parcel revealed that at the time of the photograph the site was bounded by railroad tracks to the north, railroad tracks to the south, South Midler Avenue to the west, and vacant land to the east. A bridge for passage over the railroad system to the north and south exists on South Midler Avenue at the northwest and southeast corners of the subject parcel. Two buildings, which were subsequently demolished for the construction of Route 690, were identified in the aerial photograph and were located north of the present location of Central New York Golf and the Prosperity Company complex. Based on information on the Sanborn maps, the buildings were used as a stock room and building supply storage. Access to the west side of the property was provided by a road which connected South Midler Avenue to South Nichols Avenue. Although buildings were located on South Nichols Avenue, it had no outlet to the north or south due to the presence of the railroad tracks. Two relatively small buildings were identified northwest of the present location of Central New York Golf. These two buildings do not currently exist at the site. A few paths and/or dirt roads were identified on the 1938 photograph which connected the vacant land, located to the east of the subject parcel, to the main industrial complex.

- 1951: The 1951 high altitude aerial photograph revealed that significant changes had not occurred on the subject site since 1938. The two buildings identified on the 1938 photograph which were located northwest of the Central New York Golf building do not appear on the 1951 photograph. The area located between South Nichols Avenue and South Midler Avenue was identified as being used as a parking lot. A barren area was identified on the photograph and was located east of the main complex within the central portion of the parcel. This area was connected to the industrial complex by two or three dirt roads. Parcels to the east of this barren area consisted of vacant land.

- 1966 — The United States Department of Agriculture Soil Conservation Service office has a collection of aerial photographs taken in 1966. However, the area of interest was not photographed at that time. Therefore, no 1966 aerial photograph was available for review.

- 1990 — The 1990 aerial photograph revealed significant changes that had occurred on or adjacent to the subject parcel since 1951. The New York W.S.& B. Railroad located along the north boundary of the property was replaced with Interstate Route 690, and the bridge on South Midler Avenue, at the southwest corner of the parcel, which provided access over the New York Central Railroad, had been taken down. The access road off of South Midler Avenue to the Prosperity complex was moved to the south and entered the property approximately 100 feet north of the southern alignment of railroad tracks. The barren area located on the 1951 photograph was not identified on the 1990 photograph and appeared to be overgrown with trees and shrubs. Approximately 2 to 3 billboards were also identified on the site and were located along the south side of Route 690. A portion of the vacant land to the east was occupied by a site that appeared to contain several piles of material.

- 1991 — The features on the 1991 aerial photograph appear to be unchanged in comparison to the 1990 aerial photographs.

3.3 SANBORN MAPS & HISTORICAL DRAWINGS

Sanborn fire insurance maps and historical drawings were reviewed and utilized as a reference during the site walkover. Sanborn maps for the periods 1941, 1953, 1964, 1968, 1971, and 1990 were reviewed. Additionally, drawings of the site structures and surroundings were provided by Mr. Temple and Mr. Stoutenberg prior to the site walkover. These historical drawings included a May 1930 Pierce, Butler & Pierce Manufacturing Co. drawing showing underground water pipe lines and sewer lines; a March 1960 Factory Insurance Association drawing of the facility when it was occupied by the Prosperity Company, showing the building locations, elevations, and associated water distribution system; a 1966 drawing provided by Bill Stoutenberg showing site features; and a hand drawn sketch of the buildings showing the current building numbering system. Copies of these drawings are contained in Appendix C.

These maps confirmed the presence of the two manufacturing companies: Pierce, Butler & Pierce and the Prosperity Company. Additionally, these maps contained information indicating historical use of the buildings and areas of potential environmental concern including locations of underground storage tanks or areas utilized for storage of drummed wastes. Discussion of these areas is presented along with the visual information obtained during the walkover of the property.

4.0 SITE VISIT

A site walkover was performed concurrently with personal discussions with Don Temple, Maintenance Foreman for Sutton Investing Corporation, on July 28, 1994. Topics of interest during these discussions included a summary of operations, products used, wastes generated, wastewater, floor drains, storage tanks, and environmental permits held. As previously stated, the purpose of the walkover was to also identify visual evidence of environmental concern such as dead vegetation, stained or discolored soil, drums, and vents or fill pipes associated with underground storage tanks.

4.1 EXTERIOR AREA, HISTORICAL USES, AND WALKOVER OBSERVATIONS

Figure 2 presents the buildings and surrounding structures and is provided as a reference while reading this section. The following discussion describes the observations made during the walkover around the outside of the buildings. Letters in parenthesis following a description of a site feature are referenced on Figure 2. The location of lettered items on Figure 2 are approximate. As mentioned previously, historical drawings were reviewed prior to the walkover. If historical drawings showed a feature of concern, such as a tank or drum storage area, efforts were made during the walkover to observe whether evidence of such features still existed or if there were signs of environmental concern associated with such a features.

Observations - East Side of Property

The east side of the property may be considered the back of the property. This area is characterized as generally open to facilitate traffic flow around the back of the building and parking. In the center of this area are two 500 gallon above ground skid mounted tanks, one labeled "diesel off road" and the other labeled "gas" (R). There was no staining or discoloration of soil beneath or adjacent to these tanks. It appears that the northeastern portion of this area close to Route 690 has been filled with cinders, ash, and slag. The far eastern portion of this area has been filled with what appears to be approximately 2 to 3 feet of construction and demolition debris.

At the far northeastern portion of the property (U), four steel tanks are situated on the ground surface. Next to these tanks to the north are several abandoned 5 gallon pails that may have contained roofing tar material. Also, next to these tanks to the south are several 55 gallon drums that have their tops cut out and are generally empty with the exception of one which felt partially full when tipped. Information from historical drawings indicate that these tanks were originally in the center portion of this area and partially buried (S). Notes on the 1960 drawing show these tanks as an 11,000 gallon fuel oil, a 900 gallon fuel oil, a 20,000 gallon fuel oil, and a 10,000 gallon fuel oil. Notes on the 1966 drawing show these tanks as being removed. The exact use of the tanks is unknown. However, it is suspected based on their former location that they were used to hold fuel to fire boilers at the plant. If so, it is unknown as to how the fuel was conveyed from the tanks to the boilers.

The 1960 drawing also shows the former locations of a 12,000 gallon fuel oil tank (Q) and a 275 gallon fuel oil tank (T) both above ground. The northwestern portion of this area, just east of Building 2, is utilized for outside storage of materials belonging to a cable television company which is one of the tenants of the property. The majority of this material consists of spools of plastic wire wrapping and cable utility boxes.

Outside the eastern wall of the Boiler Room of Building 3 there is a smoke stack constructed of masonry (V). Information presented on the 1960 drawing indicates the stack is 85 feet high. Around this stack there is dark discolored soil and two five gallon plastic containers that appear to contain waste oil. There is also a small capped vertical pipe that may be associated with a tank or an abandoned underground utility.

On the east side of the property in the vicinity of Building 17 and Building 15, there are several items of note. Area (O) is the location of several one gallon and five gallon containers sitting on wood pallets. Labels on the containers indicate the contents may be roof tar, epoxy paint, and concrete admixture. The area around the wood pallets is heavily vegetated making observations of the ground conditions difficult.

To the north (P) and west (N) of Building 17, and to the south of Building 15 (H), there is ash and cinder debris on the ground surface.

On the north and south side of Building 15, immediately to the east of Building 13, there are discarded store fixtures reportedly owned by P&C Markets (K). These fixtures consist of disassembled showcases, shelving, awning structures, and other similar material.

The 1960 drawing shows three areas in the vicinity of Building 15. These are a 6x15 foot area labeled as "PAINT STGE" (J), an area of unknown dimension labeled "Lacquer & Thinner Stage in Drums" (L), and an area labeled "Open Incinerators" (I). All three of these areas are currently paved over.

Outside the southwest corner of Building 17, there are three transformer carcasses (M). Mr. Stoutenberg and Mr. Temple both indicated that these transformers have been sampled, which is consistent with stickers on the outside of the transformers which are labeled "Oil Sample Taken For PCB Test". Both Mr. Stoutenberg and Mr. Temple indicated these transformers were non-PCB. The location of data records for the sampling is unknown.

Observations - South Side of Property

The south side of the property mainly consists of a paved road that travels in a east-west direction along the southern side of Building 13 and Building 14. Immediately to the south of this road is the fence line, which is the property boundary. This fence line is overgrown with vegetation. Further south on the other side of the fence is a road that is the through-road to the adjoining Sutton property being used by the City of Syracuse DPW, and next to this road are railroad tracks.

On the northern side of the fence, south of Building 15, the 1960 drawing shows an area labeled "17 - 55 Gal Drums Flam. Liquid" (G). This area, along the fence, is heavily vegetated making ground observations difficult.

At the exterior southwest corner area of Building 13 and 14 (F), there are two 55 gallon drums which appear to have contained an oily like substance but are now partially filled with rain water. On the ground near the drums are numerous discarded fluorescent light fixture ballasts, many of which appear broken. It was also noted that the ground surface in this area was somewhat darkened.

Observations - West Side of Property

The west side of the property is occupied by Buildings 1, 18, 19, a former guard shack, and the open grassy area west of the main building complex. To the west of Building 18 is Nichols Avenue, which travels in a north-south direction and is the access-road to Building 1. Building 1 is currently occupied by Central New York Golfing Center, a golf equipment retailer. Outside and immediately to the south of this building historical drawings show an underground 500 gallon fuel oil tank (A). This area is presently paved and there is no evidence of this tank. At the exterior side of Building 1 are two poles on which historical drawings show three 25 KV transformers. However, these transformers are currently not present. During the walkover, a pipe was observed protruding through the east exterior wall of the building. The purpose of this pipe is not known. Also on the east side of the building there is an above ground pre-cast concrete structure with no top. Within this structure are several inches of water and trash. Although the purpose of this tank is not known, it is the type of pre-cast concrete structure commonly used for the installation of underground utilities and sewers. On the southern portion of the exterior east wall of the building, there is the foundation of a structure shown on historical drawings as a 70 foot high stack. Just south of this stack foundation there is a two story high brick structure. Historical drawings show this as the location of a vault. During the walkover, this was observed to be a walk-in safe on the second floor of the building and storage room on the first floor. Lastly, next to the vault there are two 55 gallon drums that appear to be empty.

The area between the east side of Building 1 and the west side of the loading dock of the main building complex is open and generally grass covered. Historical drawings of this area shown that a reservoir or pond was once present. However, at the time of the site visit there was no evidence of the ponding present.

Southwest of Building 1, there is a guard shack. Just to the south of this guard shack, the 1960 drawing showed a 500 gallon gas tank and pump (B). The area where the items are located are covered with grass. It is not known whether the tank has been removed. At the time of the site visit, a flush mounted fill pipe and vent pipe was observed. Also noted was a small concrete pad which may have been the location of the former dispensing pump. An unsuccessful attempt was made to remove the cap on top of the fill pipe to measure suspected tank contents.

East of Building 19 is a paved area with an abandoned railroad bed. Just to the west of the old rail road bed and north of Building 19 there is a 3 feet increase in elevation. The 1930 drawing shows this area as a loading platform associated with Building 19 and a building immediately north of Building 19 which is no longer present. Also, along the east side of East of Building 19, the 1930 drawing shows an oil tank (C). This area is paved over and it is not known if this tank currently exists.

Along the northwest side of Building 13 there is an above ground storage tank resting on a concrete cradle. Historical drawings show this tank as an 8000 gallon fuel oil tank (E). Mr. Temple reports that this tank is empty. Immediately next to and to the north of this tank is an empty concrete tank cradle of similar size (D). The 1930 drawings showed this as an oil tank. At the time of the walkover, no streaking or staining indicative of a petroleum overfill was observed on the surface of the tank. Since the area is overgrown, it is difficult to evaluate whether residual petroleum contamination is present in the soil adjacent to the tanks. In addition, these tanks are not listed on the NYSDEC Region 7 Petroleum Bulk Storage Registry.

The electrical power house/maintenance facility, which also serves as the Mr. Temple's office, is located between the east side of Building 19 and the west side of Building 10. Next to this building on the exterior north side there are three 1,250 KV transformers, and on the west side of the building, one 450 KV transformer. These transformers rest on a concrete pad inside a fenced area and are currently being used. Mr. Temple indicated that the group of three transformers are owned by Niagara Mohawk and the single one on the west side is owned by Sutton Investing Corporation. Each of the three transformers which are reportedly owned by Niagara Mohawk have affixed to them a blue label which says "Non-PCB". The transformer at the exterior west side of this building is not labeled. However, Mr. Temple believes this unit does not contain PCB dielectric fluid.

Along the western side of Building 2 and Building 3, there is a covered loading platform with concrete floor. A variety of abandoned equipment is on this platform, immediately west of Building 2, including three transformers, two gas fired heater units, one electric furnace, and one gas/oil fired boiler (X). The three transformers are suspected to have formerly been located outside the northwest corner of Building 2 (W). No signs of leakage were observed at area (X).

Also visible in the grassy and paved areas of this portion of the property are metal covers on top of various underground vaults associated with storm drainage, electrical conduit, or other type structures. A number of covers for the storm drains were lifted and observations were made. Generally, the storm drain vaults contained a large volume of sediment, with some to the extent of almost filling the complete diameter of the pipe.

Observations - North Side of Property

The north side of the property is bordered by the right-of-way for Interstate Route 690. This right of way travels in an east-west direction just to the north of Building 2. The northern property line is marked by a chain link fence. This fence line is heavily overgrown, so observations along this side were impossible without removal of vegetation.

Observations - Site Drainage

Mr. Temple reported that he believed site drains generally flowed in a southerly direction and discharge in the vicinity of the southern railroad track alignment. Furthermore, according to information presented on the 1930 drawings, it would appear that storm water sewers discharge to an area parallel to the south railroad alignment. This observation is consistent with Mr. Temple's understanding of site drainage.

Other information regarding drainage utilities in the vicinity of the subject parcel was obtained from Mile Square city sewer maps. Review of maps indicate that a 15-inch vitrified clay pipe is present along the south side of the parcel which flow in an easterly direction. According to the map, this line conveys sanitary sewage and was installed in 1929.

An 8-inch sanitary line, which flows into the 15-inch line, appears to be present beneath the roadway which was once known as Nichols Street. Information on the drawing indicates this line was installed in 1936. A storm sewer, which conveys stormwater in a southward direction from Interstate 690, parallels this line. The discharge point for this storm sewer line is identified as a ditch which appears to be either located along the southern property line or parallel to the railroad alignment.

Given the above information, it is our opinion that waste water generated at the facility, including discharges into floor drains, either entered the sanitary sewer or the stormwater sewer system.

4.2 INTERIOR AREA OBSERVATIONS

Generally, the interior of the buildings have been gutted in preparation for use by tenants. As such, there is little physical evidence of past practices which occurred in the buildings. Therefore, the historical drawings were used as a reference to make observations regarding site conditions. The information presented in the following table is based on information contained on the historical drawings and observations or information obtained during the site walkover.

Building No.	**Historical** *Current Use*	**Potential Environmental or Constructability Concerns**
1	Office *Central New York Golf*	Floor tiles may contain asbestos
2	Welding/Machine Shop *NewChannels*	Pipe wrapping may contain asbestos Johns Manville Asbestos Flexboard on walls Floor drain sump along southern wall

Building No.	Historical *Current Use*	Potential Environmental or Constructability Concerns
3	Sheet Metal/Machine Shop Boiler Room *Storage*	Boiler room to the east of Building 3 Pipe wrapping that may contain asbestos Fuel oil spills and stained floor
4	Storage *Vacant*	None Observed
5	Storage *Vacant*	None Observed
6	Sheet Metal Storage Spray Paint Booth *Theater Chair Storage*	None Observed
7	Machine Shop *Courtyard Area*	Inner-Courtyard Area has the potential for discrete waste disposal via man door access from Building 9 and Building 12.
8	Vacant	None Observed
9	Paint Spray/Casting Shop *Vacant*	None Observed
10	Machine Shop Compressor Room *Vacant*	Stained floor near compressor. Sump at southeast corner of compressor room. Pipe wrapping may contain asbestos.
11	Plating *Vacant*	Wood planked floor, beneath the floor is sand. Potential soil contamination associated with former plating operations.
12	Plating & Grinding *P&C Storage*	Pipe wrapping may contain asbestos. Floor Drains
13	Assembly & Storage *P&C Storage*	Florescent fixtures may contain PCB ballast. Pipe wrapping may contain asbestos. Floor drains

Building No.	Historical *Current Use*	Potential Environmental or Constructability Concerns
14	Assembly & Storage *Vacant*	None Observed
15	Storage *Automobile Storage*	None Observed
16	Loading Dock *Onondaga News Agency Storage*	Room not available at time of walkover; however, it is reported that display racks for magazines/newspapers are stored in room.
17	Storage *P&C Storage*	Large quantity of unused pipe wrap stored in boxes may contain asbestos.
18	Wood/Metal Pattern Shop *Abandoned Flea Market*	None Observed
19	Storage/Boiler Room *Abandoned Flea Market*	Boiler room at far south end - oil spills Pipe wrapping may contain asbestos
Loading Dock	Storage *Storage*	Three transformers may contain PCB oil
Maintenance Building	Electrical Power House *Electrical Power House Property Maintenance*	Transformers and switch gear may contain PCB oil.

Asbestos Containing Materials

Although an asbestos survey, as defined by New York State Labor Law Code Rule 56, was not performed as part of this Phase I Environmental Site Assessment, C&S did attempt to visually identify those building materials which typically contain asbestos. Based on our observations made during the site walkover, a number of building elements have been identified as suspected asbestos containing material, which for a structure of this age would not be unusual. A summary of the suspected asbestos containing materials is presented as follows:

BUILDING NO.	OBSERVATION
1	9 x 9 Floor Tiles
2	Pipe insulation and wall with transite type panels. Panels are labeled "Johns Manville Asbestos Flexboard".
3	Pipe insulation and pipe fittings in boiler room.
10	Pipe insulation in compressor room.
12	Pipe Insulation
13	Pipe Insulation
17	Upper levels of storage building contain several boxes of pipe insulation which has the appearance of a product knows as "Aircell".
19	Pipe insulation and fittings in boiler room.
All Buildings	Roofing Materials

The above preliminary inventory of potential asbestos containing materials should not be considered as comprehensive. Should demolition of the complex or modifications to the structure be contemplated, it is recommended that an experienced laboratory or environmental service company perform an asbestos survey and laboratory analysis of representative samples in accordance with 12NYCRR Part 56.

5.0 REVIEW OF REGULATORY STATUS

The EDR-Radius Map/Plus Report generated as part of this investigation was reviewed to evaluate the environmental condition of the subject parcel and surrounding properties as required by ASTM E 1527-93. The EDR report is included in Appendix A of this report. EDR presents their search findings on a map and summary table according to the database searched. In addition to the summary report, EDR provides a listing of orphan sites. The orphan sites are those records where the location information of the orphan site is not detailed enough in the data base to determine its location with respect to the subject parcel.

According to the Summary of Finding by EDR, the subject parcel does not appear on any of the databases searched. In addition, the summary report indicates that there are no NPL, New York State listed inactive hazardous waste sites, CERCLIS, RAATS, HMIRS, PADS, ERNS, TRIS, TSCA, or coal gasification sites within the specified search radii. The EDR report did identify a number of properties within the following databases: state landfill, LUST, UST, RCRIS Small Quantity Generator, RCRIS Large Quantity Generator, and FINDS.

Detail sheets provided as part of the report indicate that a majority of the identified sites are located along Erie Boulevard, which appears to be hydraulically downgradient of the site and should not be a concern.

Potential upgradient sites north of the subject parcel include the following:

Location	Distance/Direction from Subject Parcel	Database(s)
Tobins Refinishing 2512 Burnet Avenue	< 1/8 Mile/NNE	RCRIS - Small Qty. Generator, FINDS
City of Syracuse C&D Transfer Station 701 Nichols Avenue	< 1/8 Mile/NNE	Solid Waste/ Landfill
Former Eastwood School 351 Nichols Avenue	1/2 - 1 Mile/North	RCRIS - Large Qty. . Generator, FINDS
Kilian Manufacturing Corporation 1728 Burnet Avenue	1/2 - 1 Mile/West	RCRIS - Small Qty. Generator, FINDS, TRIS, UST
Roth Brothers Smelting Corporation 6223 Thompson Road	> 1 Mile/NNE	FINDS, RCRIS - Large Qty. Generator, TRIS, RCRIS-TSD, UST, RAATS

Given the subject parcel is isolated from Burnet Avenue to the north by Interstate I-690 and that none of the above identified properties are found within the LUST database, it is our opinion that these properties, except for the C&D transfer station, should not be cause for a significant environmental concern.

The Orphan Summary of properties in or near the subject parcel disclosed that the subject parcel does not appear on this listing. Based on the information provided on the Orphan Summary, it is our opinion that none of the sites listed are in the immediate vicinity of the subject parcel and should not be cause for an environmental concern.

C&S also reviewed the April 1993 NYSDEC Registry of Inactive Hazardous Waste Sites and the NYSDEC Region 7 Petroleum Bulk Storage (PBS) and Chemical Bulk Storage (CBS) registers dated January 1994. The review of these regulatory databases and registries indicated that the subject parcel and immediately adjoining properties do not appear on these inventories. However, a review of the NYSDEC Region 7 database of spill files, dating from 1985 through March 1993, disclosed that several spills have been reported as occurring at the City of Syracuse DPW garage on Canal Street, approximately 1,500 feet west of the subject parcel. It was also learned that a spill had taken place on Midler Avenue at the railroad tracks and at the subject

parcel, apparently by Spano Paving, who reportedly was a tenant at 701 Midler Avenue. Information contained within the NYSDEC spill file database indicates that each of the spills at the City of Syracuse DPW garage and the spill on Midler Avenue at the railroad tracks have been cleaned and the file closed by the NYSDEC. The exception to this is Spill No. 9310994 which names the reported spiller to be Spano Paving and the spill location to be 701 South Midler.

C&S contacted the NYSDEC Region 7 office to obtain additional information on this spill. Documents contained in the spill file consisted of the original spill report data form completed by the state when a spill is first called in. Information provided by the NYSDEC indicated that supplemental details may be available from Mr. Christopher Mannes, the NYSDEC spill responder in charge of the file. However, it was learned that Mr. Mannes was out of the office until August 15, 1994. C&S will contact Mr. Mannes upon his return and inquire about the history and status of this spill report.

6.0 CONCLUSIONS

A quantitative assessment of hazardous waste contamination can only be provided through actual material testing using procedures defined under 40 CFR Part 261 and applicable sections of 6 NYCRR Part 371. An assessment of groundwater quality would require a series of groundwater monitoring wells to be installed and then analyzed for standards prescribed under 6 NYCRR Section 703.5. Based on the information gathered during this Phase I Environmental Site Assessment, including the site walkover and responses from individuals and agencies identified in this report, it is our opinion that this information provides a reasonable cause for additional investigation at the subject parcel. It is recommended that additional investigations be conducted in the following areas listed below. These areas are identified under a heading which represents the medium of concern or other type of issue.

Petroleum

The following areas are locations which currently or historically were associated with some type of petroleum storage. The soils in these areas have the potential for petroleum contamination due to tank or appurtenance leakage or spillage.

Area	Concern
A	500 gallon fuel tank
B	500 gallon gas tank and pump
C	fuel tank
D	oil tank
E	8000 gallon fuel oil tank
F	stained soil, broken light fixture ballasts
Q	12,000 gallon fuel oil tank
R	275 gallon gas and diesel tanks
S	fuel oil tanks (10,000; 20,000; 900; 11,000 gallon)
T	275 gallon fuel oil tank
U	fuel oil tanks from area T
Boiler Rooms	fuel oil
Compressor Room	stained floor near compressor

Chemical

The following areas are areas which currently or historically had some type of chemical storage in drums, pails, or other type of container. The soils in these areas have the potential for chemical contamination due to container leakage or spillage.

Area	Concern
G	historical storage of flammable liquid in 17 - 55 gallon drums
I	historical use of an open incinerator
J	historical storage of paint
L	historical storage of lacquer and thinner in drums
O	current storage of roofing tar, epoxy paint, and concrete additives in pails or other containers
Court Yard	improper waste disposed

Transformers

The following areas are either the location of an existing transformer and associated electrical switchgear, or the location of a transformer which is no longer present. Depending on the age of the transformer and past maintenance practices, there is a potential that a release of dielectric fluid containing PCB may have occurred, or the equipment itself may contain PCB dielectric fluid. To evaluate these concerns, each transformer or switchgear unit which is suspected to hold dielectric fluid should be inspected or sampled for laboratory analysis to determine the presence of PCB containing oils. In addition, those historic transformer locations which are presently grass covered or overgrown should be further examined for evidence of staining.

M	unconnected transformer carcasses
W	historical transformers
X	unconnected transformers
Y	historical pole mounted transformers
Inside Power House	oil filled transformers and switchgear

CONSTRUCTBILITY

Asbestos

Several locations on the site are constructed with materials which typically contain asbestos. These are the pipe wrapping material, Johns Manville Flexboard, and floor tiles. In the event that building modifications are contemplated or the structure is to be demolished, an asbestos survey as required under 12 NYCRR Part 56 should be performed.

Ash/Cinder Areas/C&D Area

These areas are important to characterize in the case that the material is excavated or otherwise removed and require disposal.

H	Ash/Cinder debris
N	Ash/Cinder debris
P	Ash/Cinder debris
V	Ash/Cinder debris

PRELIMINARY APPROACH: PHASE II INVESTIGATIONS

Based on site observations, it would appear that subsurface investigations in the petroleum and chemical areas of concern could be conducted through the use of track mounted excavating equipment to make a series of test pits. This method allows a practical means to visually classify material encountered in the subsurface and as a way to obtain soil samples for either field or laboratory analysis.

As an alternative approach, once the earthwork limits of the project are established and the geotechnical test boring investigation plan prepared, soil samples may be retrieved in conjunction with the geotechnical boring program to visually evaluate the presence of petroleum contamination or other signs of waste disposal.

Thank you for this opportunity to provide environmental site assessment services to PennTraffic and P&C Foods. Upon your review of this report, C&S is available at your convenience to discuss its contents and provide you with preliminary costs associated with the Phase II Site Investigation. If you have any questions or are in need of additional technical assistance, please contact Mr. Steven Vinci at this office.

Very truly yours,

C&S ENGINEERS, INC.

Scot McClintock, P.E., CVS
Environmental Division Manager

SM/SV:cl
Attachments

APPENDIX E

July 2004 Test Pit
Excavation Report

C&S ENGINEERS

C&S COMPANIES
ENGINEERS
DESIGN BUILD
TECHNICAL RESOURCES
OPERATIONS

C&S Engineers, Inc.
499 Col. Eileen Collins Boulevard
Syracuse, NY 13212
phone 315-455-2000
fax 315-455-9667
www.cscos.com

July 30, 2004

Mr. Jed S. Schneider
Senior Vice President of Construction
Pioneer Midler Avenue, LLC
250 South Clinton Street
Syracuse, New York 13202

Re: PRE-BCA REPORT

File: C81.001.001

Dear Mr. Schneider:

This letter summarizes the findings of pre-BCA activities conducted by C&S Engineers, Inc. at the Pioneer Midler LLC site in Syracuse, New York. The project was undertaken based on the C&S proposal dated June 24, 2004. The objective of this proposed scope of work was to conduct an assessment of specific potentially significant areas of concern as previously identified in reports and discussions. This assessment included excavation of test pits, visual observation, physical screening using field instrumentation, and laboratory analysis of select samples to identify the presence of residual contaminants. The intent of this effort was to provide you with information to assist in making decisions on moving forward with the project and the BCP process. Subsequent to the acceptance of the original scope of work, Pioneer requested the excavation of three additional test pits in the western portion of the property to provide information for the design of a retention basin.

The following sections describe the activities and findings for each area. Copies of the test pit logs are provided in Attachment A and a copy of the analytical report is provided in Attachment B. A figure depicting the site is also attached.

C&D fill area located in the northeastern quadrant of the subject parcel

Three test trenches were excavated in this area: T-1 north zone, T-2 central zone, and T-3 south zone. Each test trench was started as near to the east property boundary as practicable. T-1 was 100-ft long, T-2 was 130-ft, and T-3 was 100-ft. Each test trench was approximately five feet to six feet deep. Water was encountered in each trench at approximately five feet below grade. Material encountered in the trenches consisted of clean fill in the upper three feet; this was predominantly soil and gravel. Below this a variety of material was encountered including foundry sands, foundry slag and glass, scrap wood and metal, concrete, asphalt, and tar. At approximately six feet below grade, a white marl was identified. A six inch stratum of brown peat was found atop the marl in most places. Trenching did not extend more than one foot into the marl.

Volatile organic vapors were encountered in the first trench (T-1) approximately 70 feet from the east end of the trench. This material registered 275 ppm on the field photoionization detector during a head space evaluation. The material exhibited a black stain and a slight sheen developed on the surface of the water proximate to the material. A sample of the material was collected for laboratory analysis for volatile organic compounds (VOCs) via EPA method 8260 and PCBs via EPA method 8082.

Volatile organic vapors, stained soil, or sheens were encountered elsewhere in the former C&D area. A composite soil sample from T-2 and T-3 was collected for laboratory analysis for VOCs and PCBs.

Results of the analytical work showed that PCBs were not detected in either sample. The composite sample from trenches T-2 and T-3 also showed no detectable levels of VOCs (other that the laboratory contaminant acetone, which is a common laboratory solvent)). The sample from T-1 showed three detectable VOCs: acetone (a laboratory contaminant), 2-butanone (another probable laboratory contaminant), and tetrachloroethene. The level of tetrachloroethene detected (160 ug/kg) is lower than the State recommended soil cleanup objective of 1,400 ug/kg (TAGM 4046) for this compound.

Former pond area located between Building 1 and Building 3 Loading Dock

One test trench was excavated in the former pond area located between Buildings 1 and 3. The upper four feet of the trench consisted of fill which included scrap wood, bricks, asphalt, concrete, rocks, and miscellaneous refuse (cast iron sink, metal pail, metal cans). At approximately four feet below grade, a gray organic silty clay was encountered that was moist to wet and had a very plastic nature. It appeared to be the bottom of the former pond where silt, clay, and natural organic matter had settled over time. Groundwater was encountered above this silt/clay and varied from three feet below grade in the north end of the trench to as deep as seven feet below grade near the middle of the trench. Groundwater at the southern extent of the trench was four feet below grade.

Two composite soil samples were collected from the Pond trench; one from the southern extent and one from the more northerly extent where marl was encountered. The samples were submitted for laboratory analysis for VOCs and PCBs.

The analytical results did not show the presence of PCBs or VOCs. A reported detection of acetone in both samples is suspected to be laboratory contamination.

Area Q - Former petroleum storage tank location

Two trenches were made across the assumed location of the UST. Both trenches were approximately six feet deep. The northeasterly trench consisted mostly of foundry sand and slag. Water was found at five feet below grade. The southwesterly trench consisted of foundry sand and marble stone fragments with some occurrences of slag. Groundwater was also found at five feet below grade at this location.

No laboratory samples were collected from these trenches.

Area S - Former petroleum storage tanks location
The area was trenched in several places. No volatile organic vapors, stained soil, or sheens were encountered in any of the trenches. Foundry sands and slag were the predominant materials found in this area, and water was encountered at approximately four feet below the surface. There was no indication of imported fill material such as clean crushed stone. No samples were collected.

Former Powerhouse
Two wipe samples were collected from the former power house. Three active and one inactive transformers were present in the building. The first sample (Power Bldg Floor - grab) was collected from the floor in an area of oil staining in front of the left-most transformer in the building. The second sample (Power Bldg Transformer - Grab) was collected from an oil-stained area on the front of the middle transformer. Samples were submitted to the laboratory for PCB analysis.

The sample from the floor showed a level of 5.5 µg/wipe of Aroclor 1260. The sample from the front of the transformer was reported as 1.3 µg/wipe of Aroclor 1260.

West Area Extra Trenches
Three trenches were excavated for the purpose of determining groundwater levels in the area at the west end of the Property. No samples were collected in this area. The following describes the findings in that area.

South Trench (Midler T-1): Total depth of ten feet. 0-5 feet below the surface consisted of fill composed of slag, foundry sand, and sand/silt. 5-10 feet consisted of black to gray sand; wet at eight feet below grade. A white to pinkish marl was encountered at ten feet below grade. Groundwater entered the trench at eight feet below grade.

Middle Trench (Midler T-2): Total depth of six feet. 0-3 feet below the surface consisted of a brown, dry mixture of top soil and rocks. 4-6 ft consisted of black to gray sand and foundry sand mixed with rocks. Groundwater entered the trench at six feet below grade.

North Trench (Midler T-3): Total depth of three feet. 0-3 below the surface feet consisted of fill composed of slag, foundry sand, sand/silt. Wet marl was encountered at three feet below grade. Groundwater entered the trench at three feet below grade.

Summary
Investigations were conducted at several locations to evaluate potential significant environmental issues relative to future development qt the site. Tasks included excavation of test trenches, observation of excavated materials, analytical testing of soil, and sampling and analysis of oil-stained areas in the powerhouse.

Based on the results of this evaluation, we do not believe that there are environmental issues at the site that would be prohibitively costly to correct or that would prevent development.

Thank you for the opportunity to assist Pioneer Midler Avenue, LLC with this project. We are available to meet at your convenience to discuss these findings. Please call us if there are any questions.

Sincerely yours,

C&S ENGINEERS, INC.

Thomas A. Barba
Senior Project Scientist

TAB:cah
Attachments

cc: Ken Kamlet, Esq. - Newman Development

m:\private\barba\pioneer midler\pre bca report 1.doc

ATTACHMENT A

Test Pit Logs

C&S ENGINEERS

C&S
Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: C&D Area T-1 Date: 7-23-04 Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC

Contractor: CRAL Contracting, Inc. Start: 0730

Equipment: Kobelco SK160 LC Finish: 0900

Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 5			Foundry sand and slag, some construction/ demolition debris, moist	PID Reading 275ppm in soil encountered approx 70-ft east of property boundary in trench 3-ft to 5-ft below grade. Black stain soil.
	5.5			White marl, wet	
				Wet at 5-ft. Groundwater 5-ft below grade	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%

Boulders (greater than 10 inches diameter):
none

C&S Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: C&D Area T-2 Date: 7-23-04 Page: 1 of 1
Project: Midler Avenue Pre-BCA Investigation
Client: Pioneer Midler Avenue, LLC Start: 0900
Contractor: CRAL Contracting, Inc. Finish: 1100
Equipment: Kobelco SK160 LC Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 5			Foundry sand and slag, some construction/ demolition debris, scrap wood and metal, moist	
	5.5			Wet at 5-ft. Groundwater 5-ft below grade	
	9.0			Marl	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%
Boulders (greater than 10 inches diameter):
none

C&S Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: C&D Area T-3 Date: 7-23-04 Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC Start: 1100

Contractor: CRAL Contracting, Inc. Finish: 1200

Equipment: Kobelco SK160 LC Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 3			Foundry sand and slag, some construction/ demolition debris, scrap wood and metal, moist, root zone at 3-ft	
	3 - 5			Black to gray, medium sand, some foundry sand moist Wet at 4-ft. Groundwater 4-ft below grade	
	5 - 6			Brown peat, wet	
	6			White marl, wet	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%

Boulders (greater than 10 inches diameter):
none

C&S
Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Pond North Date: 7-22-04 Page: 1 of 1
Project: Midler Avenue Pre-BCA Investigation
Client: Pioneer Midler Avenue, LLC Start: 1300
Contractor: CRAL Contracting, Inc. Finish: 1600
Equipment: Kobelco SK160 LC Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 3.5			Brown to black, sand and silt, some misc construction/demolition debris, moist	
	3.5 - 4.5			White marl, wet, groundwater at 3-ft	
	4.5 - 5.5			Brown peat, wet	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%
Boulders (greater than 10 inches diameter):
< 1%

C&S
Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Pond South | Date: 7-22-04 | Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC | Start: 1300

Contractor: CRAL Contracting, Inc. | Finish: 1600

Equipment: Kobelco SK160 LC | Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 4			Foundry sand and slag, scrap wood, metal, brick misc construction/demolition debris, moist	
	4			Black to gray, organic silt/clay, wet Groundwater at 4-ft below grade	PID Reading 0 ppm

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%

Boulders (greater than 10 inches diameter):
< 1%

C&S
Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Area S (Former ASTs) Date: 7-23-04 Page: 1 of 1
Project: Midler Avenue Pre-BCA Investigation
Client: Pioneer Midler Avenue, LLC Start: 1400
Contractor: CRAL Contracting, Inc. Finish: 1500
Equipment: Kobelco SK160 LC Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 4			Foundry sand and slag, crushed stone, moist Wet at 4-ft. Groundwater 4-ft below grade	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%
Boulders (greater than 10 inches diameter):
none

C&S Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Area Q (12,000 gal UST) Date: 7-22-04 Page: 1 of 1
Project: Midler Avenue Pre-BCA Investigation
Client: Pioneer Midler Avenue, LLC Start: 0900
Contractor: CRAL Contracting, Inc. Finish: 1030
Equipment: Mini-Excavator Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 5			Foundry sand and slag, marble stone cobbles, moist. Wet at 5-ft. Groundwater 5-ft below grade	PID Reading - 20 ppm

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%
Boulders (greater than 10 inches diameter):
none

C&S

499 Col Eileen Collins Blvd, Syracuse, New York 13212

Engineers, Inc.

TEST PIT LOG

(315) 455-2000 Fax: (315) 455-9667

Test Pit No: Midler Ave T-1 Date: 7-22-04 Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC

Contractor: CRAL Contracting, Inc. Start: 1100

Equipment: Kobelco SK160 LC Finish: 1130

Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 5			Foundry sand and slag	
	5 - 10			Black to gray, medium sand	
	10			White marl	
				Water entering above marl at 8-ft below grade	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%

Boulders (greater than 10 inches diameter):
none

C&S Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Midler Ave T-2 Date: 7-22-04 Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC

Contractor: CRAL Contracting, Inc. Start: 1130

Equipment: Kobelco SK160 LC Finish: 1200

Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 3			Brown, top soil and rock cobbles, dry	
	3 - 6			Black to gray, medium sand, foundry sand and slag, some rock cobbles Groundwater at 6-ft below grade	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%

Boulders (greater than 10 inches diameter):
none

C&S
Engineers, Inc.
499 Col Eileen Collins Blvd, Syracuse, New York 13212
(315) 455-2000 Fax: (315) 455-9667

TEST PIT LOG

Test Pit No: Midler Ave T-3 Date: 7-22-04 Page: 1 of 1

Project: Midler Avenue Pre-BCA Investigation

Client: Pioneer Midler Avenue, LLC Start: 1200

Contractor: CRAL Contracting, Inc. Finish: 1215

Equipment: Kobelco SK160 LC Inspector: J. Holmquist

Scale in Feet	Strata Depth Change	Sample No.	Sample Depth Range	Description of Materials	Remarks
	0 - 3			Brown to black, medium sand, foundry sand and slag, moist	
	3			White marl Groundwater at 3-ft below grade	

Groundwater		
Date	Time	Depth
	see above	

Cobbles (2.5 to 10 inches diameter):
< 5%
Boulders (greater than 10 inches diameter):
none

ATTACHMENT B

Analytical Report

C&S ENGINEERS

Tom Barba
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd
N. Syracuse, NY 13212

Phone: (315) 455-2000
FAX: (315) 455-9667

Laboratory Analysis Report

For

C&S Engineers, Inc.

Client Project ID:

Pioneer Midler

LSL Project ID: **0412284**

Receive Date/Time: 07/23/04 15:20

Project Received by: MW

Life Science Laboratories, Inc.

LSL Central Lab
5854 Butternut Drive
East Syracuse, NY 13057
Tel. (315) 445-1105
Fax (315) 445-1301
NYS DOH ELAP #10248
PA DEP #68-2556

LSL North Lab
131 St. Lawrence Avenue
Waddington, NY 13694
Tel. (315) 388-4476
Fax (315) 388-4061
NYS DOH ELAP #10900

LSL Finger Lakes Lab
16 N. Main St., PO Box 424
Wayland, NY 14572
Tel. (585) 728-3320
Fax (585) 728-2711
NYS DOH ELAP #11667

LSL Southern Tier Lab
30 East Main Street
Cuba, NY 14727
Tel. (585) 968-2640
Fax (585) 968-0906
NYS DOH ELAP #10760

LSL MidLakes Lab
699 South Main Street
Canandaigua, NY 14424
Tel. (585) 396-0270
Fax (585) 396-0377
NYS DOH ELAP #11369

This report was reviewed by: Linda Waters QC *Date:* 7/28/04

Life Science Laboratories, Inc.

A copy of this report was sent to:

Date Printed: 7/28/04

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: Power Bldg Floor -Grab **LSL Sample ID:** 0412284-001

Location: Pioneer Midler

Sampled: 07/22/04 10:15 **Sampled By:** JH

Sample Matrix: Wipe

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) NYSDOH 312-3M/EPA 8082 PCB's in Wipes					
Aroclor-1016	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1221	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1232	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1242	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1248	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1254	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1260	5.5	ug/wipe	7/26/04	7/27/04	AMW
This target analyte appears to be biologically degraded and/or environmentally weathered.					
Surrogate (DCB)	91	%R	7/26/04	7/27/04	AMW

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: Power Bldg Transformer -Grab **LSL Sample ID:** 0412284-002

Location: Pioneer Midler

Sampled: 07/22/04 10:16 **Sampled By:** JH

Sample Matrix: Wipe

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) NYSDOH 312-3M/EPA 8082 PCB's in Wipes					
Aroclor-1016	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1221	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1232	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1242	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1248	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1254	<0.5	ug/wipe	7/26/04	7/27/04	AMW
Aroclor-1260	1.3	ug/wipe	7/26/04	7/27/04	AMW
This target analyte appears to be biologically degraded and/or environmentally weathered.					
Surrogate (DCB)	95	%R	7/26/04	7/27/04	AMW

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: Pond A 3'-4' - Comp **LSL Sample ID:** 0412284-003

Location: Pioneer Midler

Sampled: 07/22/04 15:00 **Sampled By:** JH

Sample Matrix: SHW Dry Wt

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8082 PCB's					
Aroclor-1016	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1221	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1232	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1242	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1248	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1254	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1260	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Surrogate (DCB)	90	%R	7/26/04	7/28/04	AMW
(1) EPA 8260B TCL Volatiles					
Acetone	190	ug/kg dry		7/26/04	LEF
Benzene	<40	ug/kg dry		7/26/04	LEF
Bromodichloromethane	<40	ug/kg dry		7/26/04	LEF
Bromoform	<40	ug/kg dry		7/26/04	LEF
Bromomethane	<40	ug/kg dry		7/26/04	LEF
2-Butanone (MEK)	<80	ug/kg dry		7/26/04	LEF
Carbon disulfide	<40	ug/kg dry		7/26/04	LEF
Carbon tetrachloride	<40	ug/kg dry		7/26/04	LEF
Chlorobenzene	<40	ug/kg dry		7/26/04	LEF
Chloroethane	<40	ug/kg dry		7/26/04	LEF
Chloroform	<40	ug/kg dry		7/26/04	LEF
Chloromethane	<40	ug/kg dry		7/26/04	LEF
Dibromochloromethane	<40	ug/kg dry		7/26/04	LEF
1,1-Dichloroethane	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloroethane	<40	ug/kg dry		7/26/04	LEF
1,1-Dichloroethene	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloroethene, Total	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloropropane	<40	ug/kg dry		7/26/04	LEF
cis-1,3-Dichloropropene	<40	ug/kg dry		7/26/04	LEF
trans-1,3-Dichloropropene	<40	ug/kg dry		7/26/04	LEF
Ethyl benzene	<40	ug/kg dry		7/26/04	LEF
2-Hexanone	<80	ug/kg dry		7/26/04	LEF
Methylene chloride	<80	ug/kg dry		7/26/04	LEF
4-Methyl-2-pentanone (MIBK)	<80	ug/kg dry		7/26/04	LEF
Styrene	<40	ug/kg dry		7/26/04	LEF
1,1,2,2-Tetrachloroethane	<40	ug/kg dry		7/26/04	LEF
Tetrachloroethene	<40	ug/kg dry		7/26/04	LEF
Toluene	<40	ug/kg dry		7/26/04	LEF
1,1,1-Trichloroethane	<40	ug/kg dry		7/26/04	LEF
1,1,2-Trichloroethane	<40	ug/kg dry		7/26/04	LEF
Trichloroethene	<40	ug/kg dry		7/26/04	LEF
Vinyl chloride	<40	ug/kg dry		7/26/04	LEF
Xylenes (Total)	<40	ug/kg dry		7/26/04	LEF
Surrogate (1,2-DCA-d4)	99	%R		7/26/04	LEF
Surrogate (Tol-d8)	106	%R		7/26/04	LEF
Surrogate (4-BFB)	117	%R		7/26/04	LEF

Elevated detection limit due to matrix interference.

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID:	Pond A 3'-4' - Comp	**LSL Sample ID:**	0412284-003
Location:	Pioneer Midler		
Sampled:	07/22/04 15:00 **Sampled By:** JH		
Sample Matrix:	SHW Dry Wt		

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) Modified EPA 160.3 Total Solids					
Total Solids @ 103-105 C	57	%	7/28/04	7/28/04	LEF

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: Pond B 3'-5' - Comp **LSL Sample ID:** 0412284-004

Location: Pioneer Midler

Sampled: 07/22/04 16:00 **Sampled By:** JH

Sample Matrix: SHW Dry Wt

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8082 PCB's					
Aroclor-1016	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1221	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1232	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1242	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1248	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1254	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1260	<0.4	mg/kg dry	7/26/04	7/28/04	AMW
Surrogate (DCB)	104	%R	7/26/04	7/28/04	AMW
(1) EPA 8260B TCL Volatiles					
Acetone	160	ug/kg dry		7/26/04	LEF
Benzene	<40	ug/kg dry		7/26/04	LEF
Bromodichloromethane	<40	ug/kg dry		7/26/04	LEF
Bromoform	<40	ug/kg dry		7/26/04	LEF
Bromomethane	<40	ug/kg dry		7/26/04	LEF
2-Butanone (MEK)	<80	ug/kg dry		7/26/04	LEF
Carbon disulfide	<40	ug/kg dry		7/26/04	LEF
Carbon tetrachloride	<40	ug/kg dry		7/26/04	LEF
Chlorobenzene	<40	ug/kg dry		7/26/04	LEF
Chloroethane	<40	ug/kg dry		7/26/04	LEF
Chloroform	<40	ug/kg dry		7/26/04	LEF
Chloromethane	<40	ug/kg dry		7/26/04	LEF
Dibromochloromethane	<40	ug/kg dry		7/26/04	LEF
1,1-Dichloroethane	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloroethane	<40	ug/kg dry		7/26/04	LEF
1,1-Dichloroethene	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloroethene, Total	<40	ug/kg dry		7/26/04	LEF
1,2-Dichloropropane	<40	ug/kg dry		7/26/04	LEF
cis-1,3-Dichloropropene	<40	ug/kg dry		7/26/04	LEF
trans-1,3-Dichloropropene	<40	ug/kg dry		7/26/04	LEF
Ethyl benzene	<40	ug/kg dry		7/26/04	LEF
2-Hexanone	<80	ug/kg dry		7/26/04	LEF
Methylene chloride	<80	ug/kg dry		7/26/04	LEF
4-Methyl-2-pentanone (MIBK)	<80	ug/kg dry		7/26/04	LEF
Styrene	<40	ug/kg dry		7/26/04	LEF
1,1,2,2-Tetrachloroethane	<40	ug/kg dry		7/26/04	LEF
Tetrachloroethene	<40	ug/kg dry		7/26/04	LEF
Toluene	<40	ug/kg dry		7/26/04	LEF
1,1,1-Trichloroethane	<40	ug/kg dry		7/26/04	LEF
1,1,2-Trichloroethane	<40	ug/kg dry		7/26/04	LEF
Trichloroethene	<40	ug/kg dry		7/26/04	LEF
Vinyl chloride	<40	ug/kg dry		7/26/04	LEF
Xylenes (Total)	<40	ug/kg dry		7/26/04	LEF
Surrogate (1,2-DCA-d4)	111	%R		7/26/04	LEF
Surrogate (Tol-d8)	103	%R		7/26/04	LEF
Surrogate (4-BFB)	111	%R		7/26/04	LEF

Elevated detection limit due to matrix interference.

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID:	**Pond B 3'-5' - Comp**	**LSL Sample ID:**	**0412284-004**
Location:	Pioneer Midler		
Sampled:	07/22/04 16:00 **Sampled By:** JH		
Sample Matrix:	SHW Dry Wt		

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) Modified EPA 160.3 Total Solids					
Total Solids @ 103-105 C	58	%	7/28/04	7/28/04	LEF

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: C+D T1 70' West 5'-6' - Grab **LSL Sample ID:** 0412284-005

Location: Pioneer Midler

Sampled: 07/23/04 9:00 **Sampled By:** JH

Sample Matrix: SHW Dry Wt

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8082 PCB's					
Aroclor-1016	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1221	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1232	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1242	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1248	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1254	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1260	<0.6	mg/kg dry	7/26/04	7/28/04	AMW
Surrogate (DCB)	105	%R	7/26/04	7/28/04	AMW
(1) EPA 8260B TCL Volatiles					
Acetone	1500	ug/kg dry		7/26/04	LEF
Benzene	<70	ug/kg dry		7/26/04	LEF
Bromodichloromethane	<70	ug/kg dry		7/26/04	LEF
Bromoform	<70	ug/kg dry		7/26/04	LEF
Bromomethane	<70	ug/kg dry		7/26/04	LEF
2-Butanone (MEK)	370	ug/kg dry		7/26/04	LEF
Carbon disulfide	<70	ug/kg dry		7/26/04	LEF
Carbon tetrachloride	<70	ug/kg dry		7/26/04	LEF
Chlorobenzene	<70	ug/kg dry		7/26/04	LEF
Chloroethane	<70	ug/kg dry		7/26/04	LEF
Chloroform	<70	ug/kg dry		7/26/04	LEF
Chloromethane	<70	ug/kg dry		7/26/04	LEF
Dibromochloromethane	<70	ug/kg dry		7/26/04	LEF
1,1-Dichloroethane	<70	ug/kg dry		7/26/04	LEF
1,2-Dichloroethane	<70	ug/kg dry		7/26/04	LEF
1,1-Dichloroethene	<70	ug/kg dry		7/26/04	LEF
1,2-Dichloroethene, Total	<70	ug/kg dry		7/26/04	LEF
1,2-Dichloropropane	<70	ug/kg dry		7/26/04	LEF
cis-1,3-Dichloropropene	<70	ug/kg dry		7/26/04	LEF
trans-1,3-Dichloropropene	<70	ug/kg dry		7/26/04	LEF
Ethyl benzene	<70	ug/kg dry		7/26/04	LEF
2-Hexanone	<100	ug/kg dry		7/26/04	LEF
Methylene chloride	<100	ug/kg dry		7/26/04	LEF
4-Methyl-2-pentanone (MIBK)	<100	ug/kg dry		7/26/04	LEF
Styrene	<70	ug/kg dry		7/26/04	LEF
1,1,2,2-Tetrachloroethane	<70	ug/kg dry		7/26/04	LEF
Tetrachloroethene	160	ug/kg dry		7/26/04	LEF
Toluene	<70	ug/kg dry		7/26/04	LEF
1,1,1-Trichloroethane	<70	ug/kg dry		7/26/04	LEF
1,1,2-Trichloroethane	<70	ug/kg dry		7/26/04	LEF
Trichloroethene	<70	ug/kg dry		7/26/04	LEF
Vinyl chloride	<70	ug/kg dry		7/26/04	LEF
Xylenes (Total)	170	ug/kg dry		7/26/04	LEF
Surrogate (1,2-DCA-d4)	115	%R		7/26/04	LEF
Surrogate (Tol-d8)	110	%R		7/26/04	LEF
Surrogate (4-BFB)	103	%R		7/26/04	LEF

Elevated detection limits due to the presence of a petroleum hydrocarbon pattern in the sample.

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID:	C+D T1 70' West 5'-6' - Grab	**LSL Sample ID:**	**0412284-005**
Location:	Pioneer Midler		
Sampled:	07/23/04 9:00 **Sampled By:** JH		
Sample Matrix:	SHW Dry Wt		

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) Modified EPA 160.3 Total Solids					
Total Solids @ 103-105 C	35	%	7/28/04	7/28/04	LEF

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID:	C+D T2 and T3 2'-5' - Comp	**LSL Sample ID:**	0412284-006
Location:	Pioneer Midler		
Sampled:	07/23/04 11:00 **Sampled By:** JH		
Sample Matrix:	SHW Dry Wt		

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) EPA 8082 PCB's					
Aroclor-1016	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1221	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1232	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1242	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1248	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1254	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Aroclor-1260	<0.2	mg/kg dry	7/26/04	7/28/04	AMW
Surrogate (DCB)	101	%R	7/26/04	7/28/04	AMW
(1) EPA 8260B TCL Volatiles					
Acetone	80	ug/kg dry		7/26/04	LEF
Benzene	<30	ug/kg dry		7/26/04	LEF
Bromodichloromethane	<30	ug/kg dry		7/26/04	LEF
Bromoform	<30	ug/kg dry		7/26/04	LEF
Bromomethane	<30	ug/kg dry		7/26/04	LEF
2-Butanone (MEK)	<60	ug/kg dry		7/26/04	LEF
Carbon disulfide	<30	ug/kg dry		7/26/04	LEF
Carbon tetrachloride	<30	ug/kg dry		7/26/04	LEF
Chlorobenzene	<30	ug/kg dry		7/26/04	LEF
Chloroethane	<30	ug/kg dry		7/26/04	LEF
Chloroform	<30	ug/kg dry		7/26/04	LEF
Chloromethane	<30	ug/kg dry		7/26/04	LEF
Dibromochloromethane	<30	ug/kg dry		7/26/04	LEF
1,1-Dichloroethane	<30	ug/kg dry		7/26/04	LEF
1,2-Dichloroethane	<30	ug/kg dry		7/26/04	LEF
1,1-Dichloroethene	<30	ug/kg dry		7/26/04	LEF
1,2-Dichloroethene, Total	<30	ug/kg dry		7/26/04	LEF
1,2-Dichloropropane	<30	ug/kg dry		7/26/04	LEF
cis-1,3-Dichloropropene	<30	ug/kg dry		7/26/04	LEF
trans-1,3-Dichloropropene	<30	ug/kg dry		7/26/04	LEF
Ethyl benzene	<30	ug/kg dry		7/26/04	LEF
2-Hexanone	<60	ug/kg dry		7/26/04	LEF
Methylene chloride	<60	ug/kg dry		7/26/04	LEF
4-Methyl-2-pentanone (MIBK)	<60	ug/kg dry		7/26/04	LEF
Styrene	<30	ug/kg dry		7/26/04	LEF
1,1,2,2-Tetrachloroethane	<30	ug/kg dry		7/26/04	LEF
Tetrachloroethene	<30	ug/kg dry		7/26/04	LEF
Toluene	<30	ug/kg dry		7/26/04	LEF
1,1,1-Trichloroethane	<30	ug/kg dry		7/26/04	LEF
1,1,2-Trichloroethane	<30	ug/kg dry		7/26/04	LEF
Trichloroethene	<30	ug/kg dry		7/26/04	LEF
Vinyl chloride	<30	ug/kg dry		7/26/04	LEF
Xylenes (Total)	<30	ug/kg dry		7/26/04	LEF
Surrogate (1,2-DCA-d4)	110	%R		7/26/04	LEF
Surrogate (Tol-d8)	117	%R		7/26/04	LEF
Surrogate (4-BFB)	103	%R		7/26/04	LEF

Elevated detection limit due to matrix interference.

-- LABORATORY ANALYSIS REPORT --

C&S Engineers, Inc. *N. Syracuse, NY*

Sample ID: C+D T2 and T3 2'-5' - Comp **LSL Sample ID:** 0412284-006

Location: Pioneer Midler

Sampled: 07/23/04 11:00 **Sampled By:** JH

Sample Matrix: SHW Dry Wt

Analytical Method / Analyte	Result	Units	Prep Date	Analysis Date & Time	Analyst Initials
(1) Modified EPA 160.3 Total Solids					
Total Solids @ 103-105 C	83	%	7/28/04	7/28/04	LEF

SURROGATE RECOVERY CONTROL LIMITS FOR ORGANIC METHODS

Method	Surrogate(s)	Water Limits, %R	SHW Limits, %R
EPA 504	TCMX	80-120	NA
EPA 508	DCB	70-130	NA
EPA 515.4	DCAA	70-130	NA
EPA 524.2	1,2-DCA-d4, 4-BFB	80-120	NA
EPA 525.2	1,3-DM-2-NB, TPP, Per-d12	70-130	NA
EPA 526	1,3-DM-2-NB, TPP	70-130	NA
EPA 528	2-CP-3,4,5,6-d4, 2,4,6-TBP	70-130	NA
EPA 551.1	Decafluorobiphenyl	80-120	NA
EPA 552.2	2,3-DBPA	80-120	NA
EPA 601	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 602	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 608	DCB	30-150	NA
EPA 624	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	NA
EPA 625, AE	2-Fluorophenol	21-110	NA
EPA 625, AE	Phenol-d5	10-110	NA
EPA 625, AE	2,4,6-Tribromophenol	10-123	NA
EPA 625, BN	Nitrobenzene-d5	35-114	NA
EPA 625, BN	2-Fluorobiphenyl	43-116	NA
EPA 625, BN	Terphenyl-d14	33-141	NA
EPA 8010	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8020	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8021	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8081	TCMX, DCB	30-150	30-150
EPA 8082	DCB	30-150	30-150
EPA 8151	DCAA	30-130	30-120
EPA 8260	1,2-DCA-d4, Tol-d8, 4-BFB	70-130	70-130
EPA 8270, AE	2-Fluorophenol	21-110	25-121
EPA 8270, AE	Phenol-d5	10-110	24-113
EPA 8270, AE	2,4,6-Tribromophenol	10-123	19-122
EPA 8270, BN	Nitrobenzene-d5	35-114	23-120
EPA 8270, BN	2-Fluorobiphenyl	43-116	30-115
EPA 8270, BN	Terphenyl-d14	33-141	18-137
DOH 310-13	Dodecane	40-110	40-110
DOH 310-14	Dodecane	40-110	40-110
DOH 310-15	Dodecane	40-110	40-110
DOH 310-34*	4-BFB	50-150	50-150
8015M_GRO*	4-BFB	50-150	50-150
8015M_DRO	Terphenyl-d14	50-150	50-150

*Run by GC/MS.

Units Key:	ug/l = microgram per liter ug/kg = microgram per kilogram mg/l = milligram per liter mg/kg = milligram per kilogram %R = Percent Recovery

Life Science Laboratories, Inc.

CHAIN OF CUSTODY RECORD

LSL Central Lab
5854 Butternut Drive
E. Syracuse, N.Y. 13057
Phone: (315)445-1105
Fax: (315)445-1301

LSL North Lab
131 St. Lawrence Ave.
Waddington, N.Y. 13694
Phone: (315)388-4476
Fax: (315)388-4061

LSL Finger Lakes

LSL Southern Tier Lab
30 East Main St.
Cuba, N.Y. 14727
Phone: (585)968-2640
Fax: (585)968-0906

Report Address:
Name: TOM BARBA
Company: C&S Engineers
Street: 499 Col Eileen Collins Blvd
City/State: Syracuse NY
Zip: 13212
Phone: 455-2000
Fax: 455-9667
Email:

Turnaround
Normal: 14 DAY ☐
Pre-Authorized: Next Day* ☐ 2-Day * ☐ 3-Day * ☒ 7-Day* ☐
*Additional Charges may apply

Date Needed or Special Instructions:

Authorization or P.O. #

Client Project ID/Client Site ID: Pioneer Midler

LSL Project Number:

Client's Sample Identifications	Sample Date	Sample Time	Type grab/comp	Matrix	Preserv Added	Containers #	Containers size/type	Analyses	Preserv Check	LSL ID#
Power Bldg Floor	7-22	10:15	grab	—	—	1	wipe	PCB Wipe		001 A
Power Bldg Transformer	7-22	10:16	grab	—	—	1	wipe	PCB Wipe		002 A
POND A 3'-4'	7-22	3 PM	comp	soil	—	2	8oz glass	EPA 8260 Totals EPA 8082 Totals		003 AB
POND B 3'-5'	7-22	4PM	comp	soil	—	2	↓	↓		004
C+D T1 70' West 5'-6'	7-23	9AM	grab	soil	—	2	↓	↓		005
C+D T2 and T3 2'-5'	7-23	11AM	comp	soil	—	2	↓	↓		006

LSL use only:

Containers this C-O-C

Custody Transfers

		Date	Time
Sampled By: JOHN HOLMQUIST	Received By:		
Relinquished By: John Holmquist	Received By:		
Relinquished By:	Rec'd for Lab By:	07-23-04	15:20 RCVD
Shipment Method:	Received Intact: Y N	Sample Temp	

*** All areas of this Chain of Custody Record MUST be filled out in order to process samples in a timely manner IN PEN ONLY***

Reg COC

13.6° OT