Youngstown Cold Storage Site

NIAGARA COUNTY, NEW YORK

Final Engineering Report

NYSDEC Site Number: E932122

Prepared for:

Village of Youngstown

Village Center

240 Lockport Street, P.O. Box 168

Youngstown, New York 14174

Prepared by:

TVGA Consultants

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FEBRUARY 2011

CERTIFICATIONS

I, Edward M. Schiller, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities, and I certify that the Remedial Design/Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Design/Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in Remedial Design/ Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in for the remedy.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Edward M. Schiller, of TVGA Consultants, 620 Main Street, Buffalo, NY 14202, am certifying as Owner's Designated Site Representative for the site.

066247	9/13/11	
NYS Professional Engineer #	Date	Signature

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LIST OF ACRONYMS

Acronym	Definition
ACMs	Asbestos Containing Materials
AST	Aboveground Storage Tank
CAMP	Community Air Monitoring Plan
CPP	Community Participation Plan
CQAP	Construction Quality Assurance Plan
Russo	Russo Development Inc.
HASP	Health and Safety Plan
IC	Institutional Controls
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objectives
RI/AA	Remedial Investigation/Alternatives Analysis
RD/RAWP	Remedial Design/Remedial Action Work Plan
ROD	Record of Decision
SAC	State Assistance Contract
SCG	Standards Criteria and Guidance
SCO	Soil Cleanup Objectives
S/MMP	Soil/Materials Management Plan
SMP	Site Management Plan
SOP	Site Operation Plan
SVOCs	Semi-volatile Organic Compounds
SWPPP	Storm Water Pollution Prevention Plan
TAGM	Technical Assistance and Guidance Memorandum
TCL	Target Compound List
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

The Village of Youngstown entered into an Order on Consent with the New York State Department of Environmental Conservation (NYSDEC) in May, 2009 to investigate and remediate a 2.4-acre property located in Village of Youngstown, New York. The property was remediated to residential use.

The site is located in the County of Niagara, New York and is identified as Block 0003 and Lot 006 on the Village of Youngstown Tax Map # 59.06. The site is situated on an approximately 2.4-acre area bounded by Ellicott Street to the north, a Niagara Mohawk substation and a residential property to the south, Nancy Price Drive to the east, and 2nd Street to the west (see Figure 1). The project site is currently occupied by two structures that include: a deteriorating three-story stone building (warehouse) occupying approximately 23,000 square feet and a single-story brick building (ice house) approximately 4,500 square feet in size. As summarized in Section 4.3 the compressor room and metal sided structure which comprised approximately 6,300 square feet were demolished in early 2010. Figure 2 depicts the locations of the existing buildings/structures as well as the buildings/structures demolished in early 2010. The boundaries of the site are fully described in Appendix A: Survey Map, Metes and Bounds.

An electronic copy of this FER with all supporting documentation is included on a Compact Disc (CD) labeled Supporting Documents for the Final Engineering Report for the Environmental Remediation of the Former Youngstown Cold Storage Site, created September 2010. A copy of this CD is included as Appendix B.

2.0 SUMMARY OF SITE REMEDY

2.1 REMEDIAL ACTION OBJECTIVES

Based on the results of the Remedial Investigation, the following Remedial Action Objectives (RAOs) were identified for this site. The selected remedies to address these RAOs were identified in the February 2007 Record of Decision (ROD) prepared by the NYSDEC.

2.1.1 Soil RAOs

The RAO for surface soil/fill is to prevent exposure of human and environmental receptors to semi-volatile organic compounds (SVOCs), primarily polynuclear aromatic hydrocarbons (PAHs), via dermal contact, incidental ingestion or inhalation of particulates, and to prevent the discharge of contaminated storm water runoff and eroded surface soil/fill to off-site locations or into adjacent storm sewers.

The contaminants of concern in the subsurface soil/fill consist of arsenic and volatile organic compounds (VOCs), primarily petroleum hydrocarbons. Nuisance characteristics including petroleum odors and staining are also a concern. The RAO for subsurface soil/fill is to prevent the exposure of humans and environmental receptors to contaminated subsurface soil/fill via dermal contact, incidental ingestion or inhalation of particulates or vapors. Preventing the leaching of contaminants into groundwater from the subsurface soil/fill is also an RAO, as the VOCs at the project site have high solubilities.

The soil cleanup objectives (SCOs) utilized for the contaminants of concern for this project consisted of the Residential Use SCOs listed in 6 NYCRR Part 375-6.8(b).

2.1.2 Building Materials and Associated Components RAOs

Contaminants were identified in the subslab soil/fill samples and stained surfaces of the compressor room within the warehouse building, as well as in the sediments collected from the on-site sump. Additionally, an aboveground storage tank (AST) that was not accessible was identified in the basement of the warehouse building.

Contaminants identified in the subslab soil/fill sample included lead. Polychlorinated biphenyls (PCBs) were identified on the stained equipment and concrete surfaces in the compressor room. The sediments collected from the on-site sump contained PAHs. The RAO for these media is to prevent the exposure of humans and environmental receptors to the contamination in these media via dermal contact, incidental ingestion or inhalation of particulates. The RAO for the AST is the prevention of exposure of humans and environmental receptors to petroleum contamination via dermal contact, incidental ingestion or inhalation of vapors, as well as to prevent the future release of the tank contents.

2.2 DESCRIPTION OF SELECTED REMEDY

The site was remediated in accordance with the remedy selected by the NYSDEC in the February 2007 ROD and the RD/RAWP dated July 2009.

The factors considered during the selection of the remedy are those listed in 6NYCRR 375-1.8. The following are the components of the selected remedy:

1. Demolition of the spray wash structure and partial demolition of the warehouse building to facilitate remediation;
2. Excavation and off-site disposal of petroleum contaminated subsurface soil/fill in the former underground storage tank and do a search and make all spray wash areas, PAH- contaminated surface soil near the northwest corner of the warehouse building, and arsenic contaminated subsurface soil/fill in the vicinity of TP-9;
3. Removal and off-site disposal of sediments in the valve pit;
4. Removal and off-site disposal of compressors and other PCB-contaminated equipment/concrete;
5. Removal and off-site disposal of contaminated subslab material from under the compressor room;
6. Removal and off-site disposal of the AST, any contents and any impacted soil under the AST within the basement of the warehouse;
7. Backfill of excavations and valve pit with clean material.

In order to comply with the requirements of 12 NYCRR Part 56, the abatement and off-site disposal of all asbestos-containing materials within buildings/structures demolished as part of the remediation was performed.

Also, as discussed in Section 4.10, one additional AST was encountered during the remedial activities and the AST and its contents were properly removed from the site.

3.0 INTERIM REMEDIAL MEASURES, OPERABLE UNITS AND REMEDIAL CONTRACTS

The remedy for this site was performed as a single project, and no interim remedial measures, operable units or separate construction contracts were performed.

4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in accordance with the NYSDEC-approved Remedial Design/Remedial Action Work Plan (RD/RAWP) for the Youngstown Cold Storage Site (July, 2009). All deviations from the RD/RAWP are noted below.

4.1 GOVERNING DOCUMENTS

4.1.1 Site Specific Health & Safety Plan (HASP)

All remedial work performed under this Remedial Action (RA) was in full compliance with governmental requirements, including Site and worker safety requirements mandated by Federal OSHA.

The Health and Safety Plan (HASP) was complied with for all remedial and invasive work performed at the Site.

4.1.2 Quality Assurance Project Plan (QAPP)

Due to the limited scope of activities performed during this RA, an RA-specific QAPP was not prepared as part of the RD/RAWP. However, quality assurance procedures were handled in general accordance with those included in the NYSDEC-approved January 2006 Remedial Investigation/Alternatives Analysis Work Plan (RI/AAWP).

4.1.3 Construction Quality Assurance Plan (CQAP)

Due to the limited scope of activities performed during the RA, a CQAP was not prepared as part of the RD/RAWP. However, the quality assurance procedures for construction observation were handled in general accordance with those included in the NYSDEC-approved January 2006 RI/AAWP. TVGA and NYSDEC personnel were on-site to visually observe the work, which was not accepted until the work was satisfactory to both the NYSDEC and TVGA personnel on-site.

4.1.4 Soil/Materials Management Plan (S/MMP)

A Soil/Materials Management Plan (S/MMP) was not created for this RA. However, the Technical Specifications included in the September 2009 Contract Documents for the Environmental Remediation at the Former Youngstown Cold Storage Site (Contract Documents) detail the procedures for managing all soils/materials that were disturbed at the site, including excavation, handling, storage, transport and disposal. Specifications to address soil/materials management as well as a general summary of the activities covered included:

- Temporary Site Controls: Addresses site security, dust control, residue control, noise control, water pollution control and vapor and odor control
- Building Demolition: Required the removal, salvaging and/or proper disposal of construction and demolition debris generated from the building demolition to go an approved disposal facility in accordance with state and federal regulations

- Waste Characterization, Removal and Disposal: Identifies the characterization and disposal requirements for all waste materials generated as part of the RA
- Decommissioning Existing Equipment: Required the examination of equipment for liquids, decommissioning of the equipments and the salvaging and/or disposal in accordance with applicable local, state and federal laws
- Decommissioning of Drainage Structures, Sumps, Pits and Below Grade Voids: Includes the dewatering, removal, classification, and proper disposal of contaminated sediments; fracturing the bottom of the valve pit; and backfilling of the pit
- Removal and Disposal of Contaminated Soil/Fill: Addresses the excavation, transportation and disposal of contaminated soil/fill at the project site and required these activities be conducted in accordance with applicable local, state and federal regulations
- Asbestos Abatement: Addresses the removal and disposal of the asbestos from the buildings subject to demolition and required these activities be conducted in accordance with applicable local, state and federal regulations
- Temporary Soil Erosion Water Pollution Control: Identified the requirements for controlling the erosion of soil and pollution of water through the use of temporary devices which were outlined in this specification

Additionally, these specifications include all of the controls that were applied to these efforts to assure effective, nuisance free performance in compliance with all applicable Federal, State and local laws and regulations. Copies of the above listed specifications are included in the Contract Documents included in Appendix B.

4.1.5 Storm-Water Pollution Prevention Plan (SWPPP)

Based on the fact that the areas of disturbance on the project site were significantly less than one acre, a Storm Water Pollution Prevention Plan was not developed for this project.

4.1.6 Community Air Monitoring Plan (CAMP)

Real-time air monitoring was performed at downwind locations during remedial action activities in accordance with the requirements for community air monitoring at remediation and demolition sites as established by the New York State Department of Health (NYSDOH) and the NYSDEC.

A site-specific Community Air Monitoring Plan (CAMP) was developed for the Site that generally follows the procedures and practices outlined under the NYSDOH's generic Community Air Monitoring Plan dated June 20, 2000 and the NYSDEC Technical Assistance and Guidance Memorandum (TAGM) 4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites. Air monitoring

conducted during the remediation activities was performed in accordance with the site-specific CAMP.

Continuous real-time air monitoring for particulate levels and organic vapors at the perimeter of the work area was performed by Russo during ground intrusive activities. The equipment utilized by Russo consisted of a TSI Dust Trak real-time airborne particulate monitor and Mini-RAE 2000 total organic vapor meter, each of which was equipped with data logging capabilities. Additionally, the particulate meter was capable of monitoring particulate matter less than 10 microns in size (PM-10).

During ground intrusive activities, particulate and organic meters were situated at the upwind and downwind perimeters of the work area. Each meter was programmed to continuously monitor and log particulate levels throughout the duration of ground intrusive activities.

4.1.7 Contractors Site Operations Plans (SOPs)

TVGA reviewed all plans and submittals for this remedial project (i.e., those listed above plus contractor and subcontractor submittals) and confirmed that they were in compliance with the RD/RAWP and the project Contract Documents. All remedial documents were submitted to NYSDEC in a timely manner and prior to the start of work.

4.1.8 Community Participation Plan

A Community Participation Plan (CPP) was implemented as part of the RI/AA program, and the participation procedures associated with the RA were handled in general accordance with those included in the NYSDEC-approved January 2006 RI/AAWP.

4.2 REMEDIAL PROGRAM ELEMENTS

4.2.1 Contractors and Consultants

- Russo Development., Prime Contractor, performed the demolition, excavation, compressor room equipment and AST removal, cleaning, waste/materials disposal, backfilling and topsoil application services.
- Watts Architecture & Engineering, P.C. performed the additional pre-demolition asbestos surveying tasks required by the New York State Department of Labor.
- Stohl Environmental, LLC performed the abatement of asbestos from the buildings, structures and equipment prior to the performance of demolition activities.
- Islechem LLC., performed the project air monitoring and final visual inspections associated with the asbestos abatement work.
- Bates Landscaping hyroseeded the areas of the project site disturbed by demolition and excavation activities.

- TVGA Consultants prepared the RD/RAWP and Contract Documents for the project and, with exception to the building demolition and asbestos abatement activities, provided full-time observation of the remediation activities

4.2.2 Site Preparation

A pre-construction meeting was held with NYSDEC and all contractors on March 4, 2010. Prior to conducting any demolition and/or ground intrusive activities, Russo performed all appropriate utility stakeout requirements.

Documentation of agency approvals required by the RD/RAWP is included in Appendix C.

All SEQRA requirements and all substantive compliance requirements for attainment of applicable natural resource or other permits were achieved during this Remedial Action.

4.2.3 General Site Controls

Remedial activities were conducted between the hours of 7:00 AM and 3:30 PM. Russo was responsible for guarding all work, materials, equipment and property during the remedial activities from loss, theft, damage and vandalism. Temporary barricades (i.e., orange snow fencing) were erected around all excavations and building openings to provide the required security and prevent unauthorized entry. Additionally, all equipment was locked at the end of each day's activities.

The erosion and sediment controls for all remedial construction was performed in general conformance with requirements presented in the New York State Guidelines for Urban Erosion and Sediment Control. A Master Erosion Control Plan was developed and included in the RD/RAWP for use by Russo. Erosion control and dust suppression techniques were be employed as necessary to limit erosion and mitigate fugitive dust in disturbed areas during remediation and redevelopment activities. Techniques utilized during this remedial program included the following:

- Transporting materials in covered containers and vehicles;
- Directly loading contaminated materials onto trucks for off-site disposal and backfilling excavations immediately following the receipt of confirmatory samples within guidance values (i.e., no materials were stockpiled on-site);
- Limiting vehicle speed on the project site;
- Covering excavated areas and materials following excavation; and
- Limiting the size of excavations.

Following the completion remedial activities, all areas disturbed by these activities were covered by approximately six inches of topsoil and were hydroseeded.

Water (i.e., storm and perched groundwater that accumulated in the two excavation areas southeast of the warehouse) was pumped the Town of Lewiston

sanitary sewer system.

4.2.4 Nuisance Controls

Vapor and odor control was accomplished by directly loading all contaminated materials excavated/removed as part of the remedial action onto trucks for off-site disposal. Additionally, all excavations were backfilled following the receipt of confirmatory samples within guidance values.

Russo maintained off-site paved surfaces by routinely sweeping dirt and dust with a Bobcat sweeper broom. Additionally, a stabilized construction entrance (i.e., a gravel driveway) was constructed to prevent the tracking of materials off-site.

4.2.5 CAMP Results

The average downwind particulate levels did not exceed the guidance level (i.e., 100 ug/m^3 above the upwind background level). The average downwind organic vapor levels were below 5 parts per million.

Copies of all field data sheets relating to the CAMP are provided in electronic format on a CD included as Appendix B.

4.2.6 Reporting

As discussed below, the site remedial activities were generally completed over the course of four weeks. Site inspection and observation was performed by TVGA Consultants. Daily inspection reports include personnel on site, working hours, equipment used, and a description of remedial activities performed.

All daily inspection reports, project photographs, waste disposal manifests and bills of landing are included in Appendix B.

4.3 CONTAMINATED MATERIALS REMOVAL

Russo mobilized to the project site on April 26, 2010 to conduct the asbestos abatement and completed this work on May 3, 2010; demolition of the buildings/structured was performed during the week of May 3, 2010; and the contaminated soil/fill excavation and subsequent backfilling activities were conducted during the weeks of May 10 and 17, 2010. Lastly, a fuel oil AST was removed from the site on July 29, 2010. A detailed summary of the remedial activities conducted at the project site is described below.

A list of the soil cleanup objectives (SCOs) utilized for the contaminants of concern for this project consisted of the Residential Use SCOs listed in 6 NYCRR Part 375-6.8(b) and is provided as Table 1.

4.3.1 Buliding Materials and Assoicated Componments

In order to facilitate the remediation of contaminated subsurface soil/fill and subslab fill, the spray wash structure was demolished and partial demolition of the warehouse (i.e., the metal-sided structure and compressor room) was performed. The

locations of the buildings/structures demolished are shown on Figure 2. Prior to any demolition activities, all asbestos containing materials (ACMs) were abated from these buildings/structures.

PCBs were identified on stained equipment and floor surfaces in the compressor room. Following demolition of the compressor room, the PCB-contaminated stained equipment and concrete floor was removed and disposed of off-site. An excavator ram was used to break the concrete. The concrete floor pieces were directly loaded onto trucks with an excavator for off-site disposal. Fluids within the compressor room equipment were drained into a 55-gallon drum for subsequent off-site disposal. The equipment was taken off-site and processed as scrap metal.

Contaminants of concern detected in the subslab soil/fill samples collected from underneath the concrete floor of the warehouse building were limited to lead. This area is depicted on Figure 3. Following the removal of the concrete floor, the subslab soil/fill was removed with an excavator and the material was directly loaded on to trucks for off-site disposal.

Contaminants were also identified in the sediments collected from a valve pit located adjacent to the northeast corner of the warehouse, as depicted on Figure 3. Contaminants of concern detected in the sediment collected from the on-site valve pit were limited to PAHs. The sediment was removed from the pit by manual means and the loaded into a roll-off container for off-site disposal. Following the removal of the sediments, the concrete bottom of the pit was fractured using a hoe ram. No inlet or outlet pipes were identified in the valve pit.

The AST located in the within the northeast corner warehouse basement was removed on December 29, 2010. The approximate location of this AST is depicted on Figure 3. The AST was accessed by cutting a hole in the overlying wooden floor. Fluids within the AST were measured through the fill port and it was determined that approximately 1-inch of a liquid sludge was in the bottom of the AST. A hole was cut into the side of the AST and an absorbent material was added to the interior to solidify the sludge. The solidified sludge was then loaded into a 55-gallon drum for off-site disposal. The AST and associated piping was then removed from the basement area, taken off-site and processed as scrap metal.

4.3.1.1 Disposal Details

All construction and demolition debris (C&D) and PCB-stained concrete flooring resulting from the demolition of these buildings/structures was transported by Modern Corporation to their landfill located at Harold and Pletcher Road, Lewiston, New York. A total of 211.08 tons of C&D debris was generated from the demolition of these buildings/structures. Copies of the manifests that identify the weight and location of final disposition of the C&D debris are included in Appendix B.

The friable ACM was transported to the Chaffee Landfill located 10860 Olean Road, Chaffee, New York, 14030. A total of 26 bags of friable ACM was generated from the abatement of these buildings/structures. The non-friable ACM was transported to the Allied Niagara Falls NY Landfill located 5600 Niagara Falls Boulevard, Niagara Falls, New York, 14304. A total of 30 tons of non-friable ACM was generated from the abatement of these buildings/structures. A copy of the Asbestos Abatement Closeout submittals, including the waste shipment records, abatement contractor daily logs, employee paperwork and the applicable disposal facility information, can be found on the CD included as Appendix B.

Fluids within the compressor room equipment were drained into a 55-gallon drum and transported by Russo for subsequent off-site disposal at the Noco Recovery facility located in Tonawanda, New York, 14151. This drum was included as part a bulk waste oil shipment to this facility by Russo. The compressor equipment was taken off-site and processed as scrap metal at Metalico Buffalo Inc. located at 127 Fillmore Avenue, Buffalo, New York, 14120. A copy of the purchase receipt from Metalico for this equipment is included in Appendix B.

The contaminated subslab soil/fill excavated from the compressor room was combined with the subsurface soil/fill excavated from the former UST area and was directly loaded onto trucks for off-site disposal and transported by Modern Corporation to their landfill located at Harold and Pletcher Road, Lewiston, New York, 14107. Approximately 19 tons of subslab soil/fill was disposed of at the Modern Landfill. The electronic copies of the manifests that identify the location of final disposition of the contaminated subslab soil/fill are included in Appendix B.

All contaminated sediment removed from the valve pit was directly loaded into a general refuse roll-off container which was transported by Modern Corporation to their landfill located at Harold and Pletcher Road, Lewiston, New York, 14107. Approximately, 0.5 ton of contaminated sediment was disposed of at the Modern Landfill. The roll-off was identified as C&D material, and copies of the manifest that identify the weight and location of final disposition of the contaminated surface soil/fill can be found on the CD included as Appendix B.

The solidified sludge was removed from the AST (approximately 0.5 cubic feet) was directly loaded into a 55-gallon drum for off-site disposal. The 55-gallon drum was transported off-site by Russo to the American Recyclers Corp located at 177 Wales Avenue in Tonawanda, New York, 14150. The AST was taken off-site and processed as scrap metal at Twin Village Recycling located at 4153 Broadway Avenue, Depew, New York, 14043. Copies of the waste manifest for the sludge and the purchase receipt from Twin Village Recycling for this AST are included in Appendix B.

4.3.2 Surface Soil/Fill

The RI identified one area of surface soil/fill that required remediation adjacent to a former loading dock located on the northwest side of the warehouse. Contaminants

of concern detected in the surface soil/fill consisted of SVOCs, primarily PAHs. A soil sampling program, discussed in Section 4.4, was implemented prior to the initiation of the remedial activities to pre-determine the actual extent of impacted soils. This sampling program determined the areal extent of the contaminated surface soil/fill to be depicted on Figure 3, and the depth of contamination was determined to be two feet below the existing ground surface. An excavator was used to remove the impacted surface soil/fill from the designated excavation area and directly load the material onto trucks for off-site disposal.

4.3.2.1 Disposal Details

All contaminated surface soil/fill excavated from this area was directly loaded onto trucks for off-site disposal and transported by Modern Corporation to their landfill located at Harold and Pletcher Road, Lewiston, New York, 14107. A total of 197.35 tons of contaminated surface soil/fill was disposed of at the Modern Landfill. The electronic copies of the manifests that identify the weight and location of final disposition of the contaminated surface soil/fill are included in Appendix B.

4.3.3 Subsurface Soil/Fill

Contaminated subsurface soil/fill was identified in three separate areas. The areal extents of these areas are depicted on Figure 3. Two of the areas consisted of VOC-contaminated soil/fill, primarily petroleum hydrocarbons, and include the area of the former UST located adjacent to the southeast corner of the warehouse and the spray wash area located east of the icehouse. The third area consisted of arsenic-contaminated subsurface soil/fill located in the northwest portion of the project site.

During the excavation of the two VOC-impacted areas, on-site screening was performed to determine the limits of excavation. A photoionization detector (PID) was used as a field-screening tool to evaluate the excavated materials and in-place soils for organic vapors. Once the apparent limits of the impacted subsurface soil/fill were reached, verification samples were collected from the sidewalls and bottom of the excavation. A discussion of the verification sample results from these three areas is included in Section 4.4. The total depth of the former UST area excavation was 9.5 feet below the existing ground surface and the total depth of the spray wash area excavation was 9 feet below the existing ground surface.

A soil sampling program was implemented prior to the initiation of the remedial activities to pre-determine the actual extent of the arsenic-impacted subsurface soil/fill. The elevated concentrations of arsenic were present in a black, cinder-like material encountered at a depth of three feet in a three-inch thick layer, as well as in a nine-inch layer of soil underlying this material. Approximately three feet of clean material was excavated to access the underlying contaminated material. As discussed in Section 4.5, this material was reused as backfill in the bottom of the former UST excavation area on the project site. The estimated volume of the clean material that was removed and reused as backfill was approximately 33 cubic yards.

An excavator was used to remove the impacted subsurface soil/fill from the three designated excavation areas. Contaminated soil/fill excavated from these areas was directly loaded onto trucks for off-site disposal.

4.3.3.1 Disposal Details

All contaminated subsurface soil/fill excavated from these areas was directly loaded onto trucks for off-site disposal and transported by Modern Corporation to their landfill located at Harold and Pletcher Road, Lewiston, New York, 14107. A total of 1,115.89 tons of contaminated subsurface soil/fill (564.25 tons from the former UST and subslab areas, 492.74 tons from the spray wash area and 58.9 tons from the arsenic area) was disposed of at the Modern Landfill. The electronic copies of the manifests that identify the weight and location of final disposition of the contaminated subsurface soil/fill are included in Appendix B.

4.4 REMEDIAL PERFORMANCE/DOCUMENTATION SAMPLING

A soil sampling program was implemented prior to the initiation of the remedial activities to pre-determine the actual extents of contaminated surface soil/fill and the arsenic-contaminated subsurface soil/fill. The samples for the surface soil/fill area were analyzed for Target Compound List (TCL) SVOCs. The results from each area were compared to the SCOs. Five verification samples were collected from each of the excavation areas to confirm that the actual extent of impacted soil/fill had been reached. The sample identifications, sampling depths collected, date of collection and a comparison of the detected surface soil/fill and arsenic area results to the SCOs are summarized in Tables 2 and 3, respectively. The locations of the samples are depicted on Figure 3. The analytical results for all five of the verification samples from each area were below the SCOs; therefore, the excavation in these areas was performed out to these sampling points. The analytical laboratory results report and the chain of custody forms for the verification samples are included in Appendix B.

On-site screening was performed during the excavation in the two VOC-impacted areas (i.e., the former UST area and the spray wash area), to determine the limits of excavations. A photoionization detector (PID) was used as a field-screening tool to evaluate the excavated materials and in-place soils for organic vapors. Once the apparent limits of the impacted subsurface soil/fill were reached, verification samples were collected from the sidewalls and bottom of the excavation. Five verification samples were collected from each of the excavations areas to confirm that the actual extents of impacted subsurface soil/fill had been reached. The sample identifications, sampling depths collected, date of collection and a comparison of the detected surface soil/fill and arsenic area results to the SCOs are summarized in Table 4. The locations of the samples are depicted on Figure 3. The samples collected from the former UST area were analyzed for TCL VOCs and SVOCs while the analysis of the samples collected from the spray wash area was limited to TCL SVOCs. No VOCs or SVOCs were detected in any of the five verification samples collected from the former UST area excavation.

Only two SVOCs fluoranthene and pyrene were detected in the verification sample collected from the spray/wash area. These concentrations are well below the SCOs of 100,000 ug/Kg for these analytes.

The lead contamination was limited to the subbase material below the compressor room and the material underlying the subbase consisted of native soil; therefore, verification samples were not collected from this area. Also, because all contaminated materials were removed from the valve pit, verification sampling was not required.

The quality assurance procedures for sample collection were handled in general accordance with those included in the NYSDEC-approved January 2006 RI/AAWP.

4.5 IMPORTED BACKFILL AND SITE RESTORATION

The overlying clean material from the arsenic impacted subsurface soil/fill area (approximately 33 cubic yards) was placed in the bottom of the former UST area excavation. Additionally, approximately five cubic yards of demolished concrete (pieces with less than a 12-inch diameter) were placed in the bottom of the spray wash excavation area. The remaining void space in these excavation areas as well as in the excavations in the surface soil/fill, arsenic impacted subsurface soil/fill, the subslab and the valve pit areas were backfilled with imported backfill material. The imported backfill material was obtained from the MKB, Inc. Sand and Gravel Quarry located on Wilson Road, Lockport, New York, 14094, which is an NYSDEC permitted facility (Mine ID No. 90659). A total of 954 cubic yards of backfill material from this source was utilized on the project site. This material consisted of a red-brown gravelly sand with varying silt and clay content. The material was placed in the excavations in approximately 18-inch loose lifts spread with a bulldozer and subsequently compacted with a vibratory roller. Each excavation was backfilled to a depth of six inches below the surrounding grade to accommodate the placement of topsoil in the upper six inches. Six inches of topsoil was placed in each excavation area, with the exception of the subslab soil/fill excavation area within the southeast portion of the warehouse. The subslab soil/fill excavation area was backfilled to the surrounding grade with the imported backfill material. Additionally, six inches of topsoil was placed in areas disturbed by the removal of the metal-sided and the spray wash structures. The topsoil was obtained from Modern Cooperation located at 4746 Model City Road, Model City, New York, 14107 which consisted of the overburden at their landfill facility. Gravel was replaced in the stone driveways (Figure 3) that were removed from the overlapping excavations northwest and southeast of the warehouse. The gravel was obtained from the LaFarge quarry located at 400 Hinman Avenue, Lockport, New York, 14094. Following the placement of topsoil, areas that received topsoil were hydroseeded.

Soil samples were collected from the source material for the backfill and topsoil and submitted for chemical analysis prior to delivery to the project site. The chemical analytical results for these samples are included in Tables 4 and 5. As summarized in

these tables, none of the contaminants identified in 6NYCRR Part 375 exceeded the SCOs for the project site. A slightly elevated concentration of calcium was identified in the backfill material; however, this concentration is consistent with the Eastern USA Background concentration identified in TAGM 4046. The concentrations of calcium, iron and magnesium were slightly elevated in the topsoil sample. Comparisons to the Eastern USA Background concentrations identified in TAGM 4046 revealed that the detected concentrations for iron and calcium are consistent with these concentrations and the concentration of magnesium was only slightly above the background concentration range.

4.6 CONTAMINATION REMAINING AT THE SITE

The site was remediated in accordance with the remedy selected by the NYSDEC in the February 2007 ROD and each of the remedial components listed in the ROD was addressed by above listed remedial actions.

Abatement of the asbestos containing materials within the warehouse was not performed due to the historical significance of the building.

4.7 SOIL COVER/CAP SYSTEM

A soil cover/cap was not included as part of the site remedy.

4.8 OTHER ENGINEERING CONTROLS

The remedy for the site did not require the construction of any other engineering control systems.

4.9 INSTITUTIONAL CONTROLS

The site remedy did not require any institutional controls be placed on the property.

4.10 DEVIATIONS FROM THE REMEDIAL ACTION WORK PLAN

No deviations from the RA were completed during this remedial action; however, several additional remedial actions were performed at the site during the course of the planned actions. A 250-gallon UST that was identified during the excavation of contaminated subsurface soil/fill within the former UST excavation area. The approximate location of this UST is depicted on Figure 3. Approximately 250 gallons of petroleum product was removed from this UST by means of vacuum truck. The petroleum vacuumed from the UST was transported off-site by Russo as part of a bulk shipment to Industrial Oil Tank Service Corporation located a 120 Dry Road, Oriskany, New York, 13054. The UST was removed from the excavation with the excavator and staged on plastic. The UST was taken off-site and processed as scrap metal at Metalico Buffalo Inc. located at 127 Fillmore Avenue, Buffalo, New York, 14120. Copies of the waste manifest for the petroleum and the purchase receipt from Metalico that included this UST are included on the CD included in Appendix B.

Additionally, a 250-gallon AST was identified in a concrete trench underneath a wooden porch on the south side of the warehouse. The approximate location of this AST is depicted on Figure 3. This AST became visible following the collapse of the wooden porch due to deteriorating conditions. Prior to removing the AST, approximately 155 gallons of petroleum product was removed by means of vacuum truck. The petroleum vacuumed from the AST was transported off-site by Russo as part of a bulk shipment to Noco Recovery facility located in Tonawanda, New York, 14151. After the AST was pumped out, the tank was removed from the trench and approximately 0.25 cubic yards of dark stained soil was removed and directly loaded onto a truck for off-site disposal. The stained soil was transported off-site by Pariso Trucking and was included as part of a bulk shipment to the Town of Tonawanda Landfill located on East Park Road in Tonawanda, New York, 14151. The AST was taken off-site and processed as scrap metal at Metalico Buffalo Inc. located at 127 Fillmore Avenue, Buffalo, New York, 14120. Copies of the waste manifests for the petroleum product and stained soil and the purchase receipt from Metalico for this AST are included in Appendix B.

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Appendix A: Survey Map, Metes and Bounds

Appendix B: Supporting Documents for the Final Engineering Report for the Environmental Remediation of the Former Youngstown Cold Storage Site and Digital Copy of the FER

Appendix C: NYSDEC Approval of RD/RA Work Plan

TABLES

TABLE 1:
RESIDENTIAL SOIL CLEANUP OBJECTIVES

PARAMETER	RESIDENTIAL SOIL CLEANUP OBJECTIVES
TAL - Metals	
Arsenic*	16
Barium	350
Beryllium	14
Cadmium	3
Chromium - hexavalent*	22
Chromium - triavalent*	36
Copper	270
Total Cyanide*	27
Lead	400
Manganese*	2,000
Total Mercury*	0.81
Nickel	140
Selenium	36
Silver	36
Zinc*	2,200
Volatiles	
1,1,1-Trichloroethane	100
1,1-Dichloroethane	19
1,1-Dichloroethene	100
1,2-Dichlorobenzene	100
1,2-Dichloroethane	2
cis-1,2-Dichloroethene	59
trans-1,2-Dichloroethene	100
1,3-Dichlorobenzene	17
1,4-Dichlorobenzene	9.8
1,4-Dioxane	9.8
Acetone	100
Benzene	3
Butylbenzene	100
Carbon Tetrachloride	1
Chlorobenzene	100
Chloroform	10
Ethylbenzene	30
Hexachlorobenzene	0.33
Methyl ethyl ketone	100
Methyl tert-butyl ether	62
Methylene chloride	51
n-Propylbenzene	100
sec-Butylbenzene	100
tert-Butylbenzene	100
Tetrachloroethene	6
Toluene	100
Trichloroethene	10
1,2,4-Trimethylbenzene	47
1,3,5-Trimethylbenzene	47
Vinyl chloride	0.21
Total Xylenes	100

PARAMETER	RESIDENTIAL SOIL CLEANUP OBJECTIVES
Semi-Volatiles	
Acenaphthene	100
Acenaphthylene	100
Anthracene	100
Benzo(a)anthracene	1
Benzo(a)pyrene	1
Benzo(b)fluoranthene	1
Benzo(ghi)perylene	100
Benzo(k)fluoranthene	1
Chrysene	1
Dibenzo(a,h)anthracene	0.33
Fluoranthene	100
Fluorene	100
Indeno(1,2,3-cd)pyrene	0.5
m-Cresol	100
Naphthalene	100
o-Cresol	100
p-Cresol	34
Pentachlorophenol	2.4
Phenanthrene	100
Phenol	100
Pyrene	100
Pesticides / PCBs	
2,4,5-TP Acid (Silvex)	58
4,4'-DDD	2.6
4,4'-DDE	1.8
4,4'-DDT	1.7
Aldrin	0.019
alpha-BHC	0.097
alpha-Chlordane	0.91
Aroclor 1016	1
Aroclor 1221	1
Aroclor 1232	1
Aroclor 1242	1
Aroclor 1248	1
Aroclor 1254	1
Aroclor 1260	1
beta-BHC	0.072
delta-BHC	100
Dibenzofuran	14
Dieldrin	0.039
Endosulfan I	4.8
Endosulfan II	4.8
Endosulfan Sulfate	4.8
Endrin	2.2
Heptachlor	0.42
Lindane	0.28

Notes:

1. Source is 6 NYCRR Part 375 Environmental Remediation Remediation Programs.
2. The Maximum Allowable Concentration was dervived from Table 375-6.8(b) utilizing the Residential soil cleanup objectives as required by Part 375(d)(1).
3. All soil cleanup objectives (SCOs) are in parts per million (ppm)
4. The residential use SCOs for VOCs, SVOCs and PCB/Pesticides were capped at a maximum value of 100 ppm
5. The residential use SCOs for metals were capped at a maximum value of 10,000 ppm

* Refer to Part 375 for special notes regarding this analyte

TABLE 2
YOUNGSTOWN COLD STORAGE SITE
Verification Sampling Results
Surface Soil/Fill Area

	SOIL CLEANUP OBJECTIVE - RESIDENTIAL USE	Sample ID				
		SURFACE SOIL/FILL EXCAVATION AREA				
		SS04-E1	SS04-N1	SS04-W4	SS04-D2	SS04-SW1
Interval Sampled (bgs):		0-2 inches	0-2 inches	0-2 inches	2 feet	0-2 inches
Date Collected		7/23/2009	7/23/2009	9/30/2009	8/11/2009	9/30/2009
Semi-Volatile Organic Compounds (ug/Kg)						
Chrysene	1,000					343
Fluoranthene	100,000	636	3,630			729
Phenanthrene	100,000	549				356
Pyrene	100,000	559				530
2,6-Dinitrotoluene	100,000	638				
Total SVOCs	-	2,382	3,630	0	0	1,958

1. Source for Soil Cleanup Objectives is 6NYCRR Part 375 Environmental Remediation Programs December 14, 2006 Edition
2. ug/Kg = micrograms per Kilogram (equivalent to parts per billion or ppb)
3. Blank space indicates parameter not detected
4. Only parameters with detected concentrations in one or more locations are shown
5. As per Part 375(6.8) Soil Cleanup Objectives for VOCs and SVOCs are capped at a maximum individual concentration of 100,000 ppb

TABLE 3
YOUNGSTOWN COLD STORAGE SITE
Verification Sampling Results
Arsenic Excavation Area

	Sample ID				
	ARSENIC AREA				
	TP-9S1	TP-9N1	TP-9W1	TP-9E1A-D2.75	TP-9E3
Interval Sampled (feet bgs):	3	3	3	2.75	1
Date Collected	7/23/2009	7/23/2009	7/23/2009	8/11/2009	7/23/2009
Arsenic (mg/kg)	5.17	5.9	4.44	5.65	7.93

1. Residential Soil Cleanup Objective for arsenic is 16 mg/kg
2. Source for Soil Cleanup Objective is 6NYCRR Part 375 Environmental Remediation Programs December 14, 2006 Edition
3. mg/Kg = milligrams per Kilogram (equivalent to parts per million or ppm)
4. Only parameters with detected concentrations in one or more locations are shown

TABLE 4
YOUNGSTOWN COLD STORAGE SITE
Verification Sampling Results
Spray Wash and Former UST Areas

	SOIL CLEANUP OBJECTIVE - RESIDENTIAL USE	Sample ID				
		SPRAY WASH EXCAVATION AREA				
		SW-Floor	SW-S1	SW-N1	SW-E1	SW-W1
Interval Sampled (bgs):		9 feet	2 - 9 feet	2 - 9 feet	2 - 9 feet	2 - 9 feet
Date Collected		5/13/2010	5/13/2010	5/13/2010	5/13/2010	5/13/2010
Semi-Volatile Organic Compounds (ug/Kg)						
Fluoranthene	100,000					449
Pyrene	100,000					371
Total SVOCs	-	0	0	0	0	820

1. Source for Soil Cleanup Objectives is 6NYCRR Part 375 Environmental Remediation Programs December 14, 2006 Edition
2. ug/Kg = micrograms per Kilogram (equivalent to parts per billion or ppb)
3. Blank space indicates parameter not detected
4. Only parameters with detected concentrations in one or more locations are shown
5. As per Part 375(6.8) Soil Cleanup Objectives for VOCs and SVOCs are capped at a maximum individual concentration of 100,000 ppb
6. **NO** VOCs or SVOCs were detected in any of the five verification samples collected from the former UST area excavation

TABLE 5
YOUNGSTOWN COLD STORAGE SITE
Chemical Analytical Results
Imported Backfill Material

	SOIL CLEANUP OBJECTIVE - RESIDENTIAL USE	Sample ID
		YOUNGSTOWN BACKFILL SAMPLE
Interval Sampled (bgs):		
Date Collected		5/5/2010
Metals (mg/Kg)		
Aluminum*	10,000	4,620
Arsenic	16	2.02
Barium	350	42.6
Calcium*	10,000	24,100
Chromium*	10,000	6.3
Cobalt*	10,000	4.43
Copper	270	9.54
Total Cyanide	27	1.11
Iron*	10,000	10,000
Lead	400	2.32
Magnesium*	10,000	4,070
Manganese	2,000	390
Nickel	140	7.34
Potassium*	10,000	946
Sodium*	10,000	128
Vanadium*	10,000	15.2
Zinc	2,200	15.4

1. Source for Soil Cleanup Objectives is 6NYCRR Part 375 Environmental Remediation Programs December 14, 2006 Edition
2. mg/Kg = miligrams per Kilogram (equivalent to parts per million or ppm)
3. Only parameters with detected concentrations in one or more locations are shown
4. As per Part 375(6.8) Soil Cleanup Objective for metals are capped at a maximum individual concentration of 10,000 ppm

Shaded represents exceedance of the capped maximum individual analytical concentration

(*) A Soil Cleanup Objective was not established for this parameter in Part 375(6.8)

TABLE 6
YOUNGSTOWN COLD STORAGE SITE
Chemical Analytical Results
Topsoil

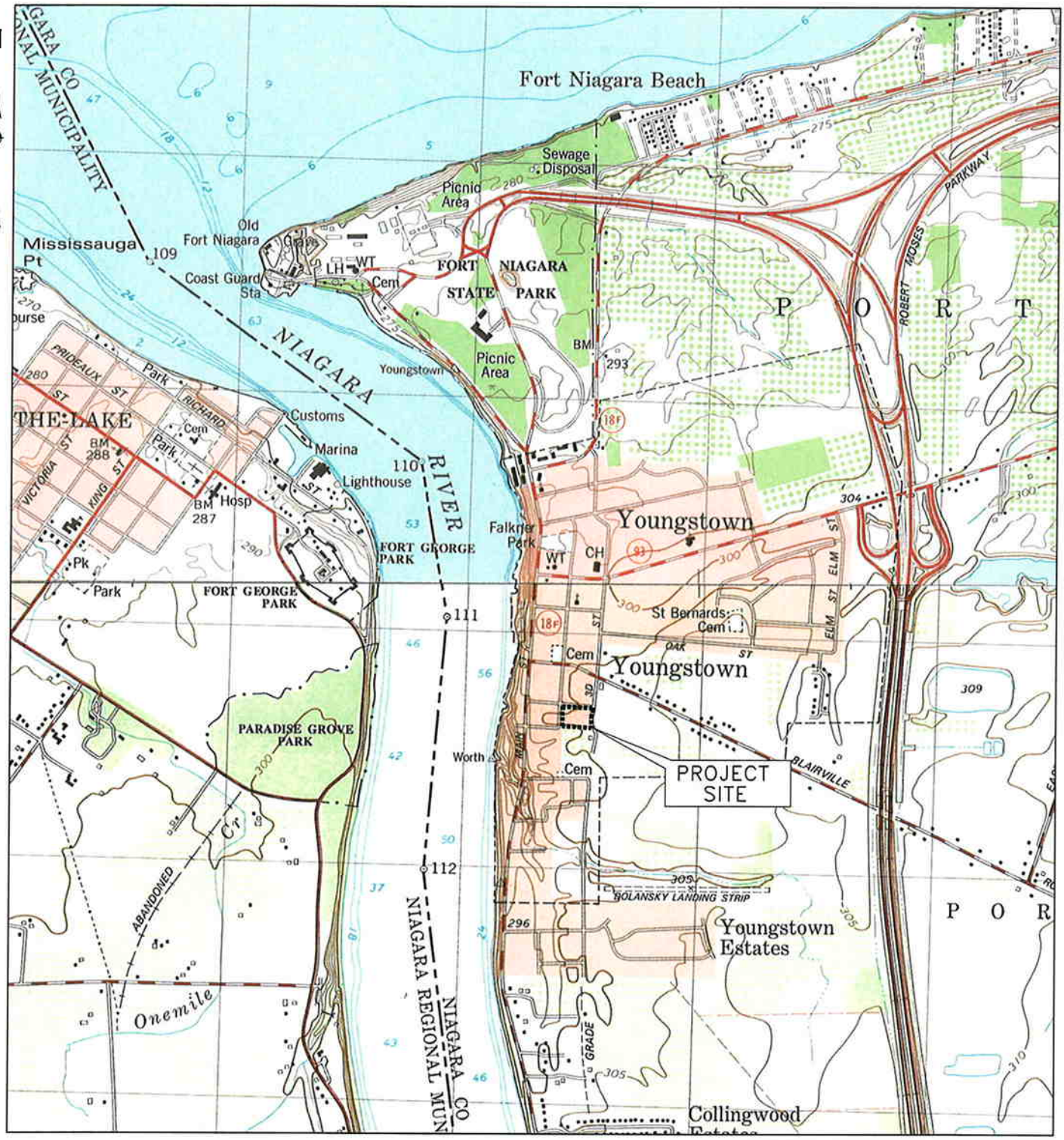
	SOIL CLEANUP OBJECTIVE - RESIDENTIAL USE	Sample ID
		YOUNGSTOWN TOPSOIL SAMPLE
Interval Sampled (bgs):		
Date Collected		5/20/2010
Metals (mg/Kg)		
Aluminum*	10,000	8,460
Arsenic	16	2.04
Barium	350	70.4
Beryllium	14	0.345
Calcium*	10,000	28,900
Chromium*	10,000	6.79
Cobalt*	10,000	4.79
Copper	270	27.4
Total Cyanide	27	0.92
Iron*	10,000	11,500
Lead	400	11.5
Magnesium*	10,000	10,300
Manganese	2,000	451
Total Mercury	0.81	0.0301
Nickel	140	7.62
Potassium*	10,000	2,370
Sodium*	10,000	263
Vanadium*	10,000	18.4
Zinc	2,200	52.7
Pesticides / PCBs (ug/Kg)		
4,4'-DDE	1,800	7.91
4,4'-DDT	1,700	6.76

1. Source for Soil Cleanup Objectives is 6NYCRR Part 375 Environmental Remediation Programs December 14, 2006 Edition
2. mg/Kg = miligrams per Kilogram (equivalent to parts per million or ppm)
3. ug/Kg = micrograms per Kilogram (equivalent to parts per billion or ppm)
4. Blank space indicates parameter not detected
5. Only parameters with detected concentrations in one or more locations are shown
6. As per Part 375(6.8) Soil Cleanup Objective for metals are capped at a maximum individual concentration of 10,000 ppm

Shaded represents exceedance of the capped maximum individual analytical concentration

(*) A Soil Cleanup Objective was not established for this parameter in Part 375(6.8)

FIGURES



U.S.G.S LEWISTON QUADRANGLE

PROJECT SITE LOCATION MAP

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YOUNGSTOWN COLD STORAGE
VILLAGE OF YOUNGSTOWN, NEW YORK
NIAGARA COUNTY

PROJECT NO. 2008.0203.00	SCALE: 1" = 2000'	DATE: JANUARY 2011	FIGURE NO. 1

SECOND STREET (66.0' WIDE)

ELLIOTT STREET (66.0' WIDE)

THIRD AVENUE (NANCY PRICE DRIVE)

LEGEND

SYMBOL	DESCRIPTION
1	DEMOLISHED BUILDINGS/STRUCTURES WITHIN DEMOLITION LIMITS.
2	REMOVED STAINED CONCRETE FLOOR/EQUIPMENT PADS AND DISPOSED OFF-SITE.
3	REMOVED AND DISPOSED COMPRESSORS AND PCB STAINED EQUIPMENT.
	AREA OF STAINED CONCRETE FLOOR/ EQUIPMENT PADS AND STAINED EQUIPMENT/COMPRESSORS REMOVED.
	DEMOLITION LIMITS

STONE DRIVEWAY
CONCRETE DRIVE
STONE DRIVEWAY
CONCRETE PAD
CONCRETE PAD AND RAMP
STONE DRIVEWAY
STONE DRIVEWAY
CONCRETE PAD
WAREHOUSE 3-STORY STONE & BLOCK BUILDING
FRAME DECK
ICEHOUSE 1-STORY BRICK BUILDING
COMPRESSOR ROOM
OVERHEAD PIPING
CONCRETE WALK
VALVE PIT
METAL SIDED STRUCTURE
STONE AREA
OVERHEAD PIPING
CONCRETE PAD
STONE DRIVEWAY
CONCRETE PAD
BLACKTOP PAD
CONCRETE PAD
SAN MH RIM: 98.75
SPRAY WASH STRUCTURE
N

FIGURE 2

VILLAGE OF YOUNGSTOWN — STATE OF NEW YORK

ENVIRONMENTAL REMEDIATION AT THE FORMER YOUNGSTOWN COLD STORAGE SITE

BUILDING/STRUCTURES DEMOLISHED

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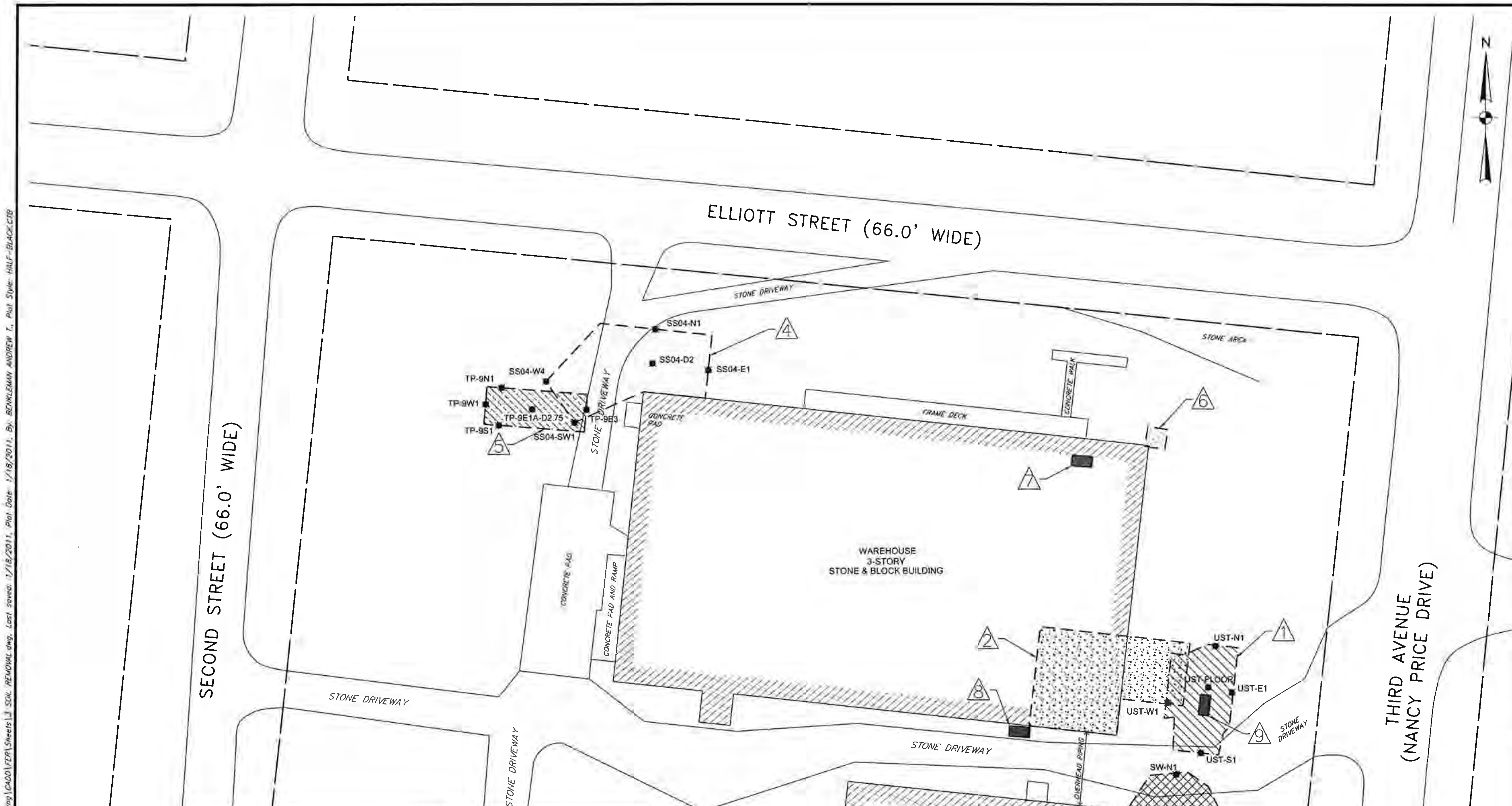
Designed by: J. MANZELLA	Date: JANUARY 2011
Drawn by: A. BENKLEMAN	Job No. 2008.0203.00
Checked by: D. RIKER	Dwg Scale: Horiz: 1" = 40' Vert: NA

REV	DESCRIPTION	DATE	BY



LEGEND

SYMBOL	DESCRIPTION
1	REMOVED SUBSURFACE SOIL/FILL TO 9.5 FEET BELOW THE EXISTING GRADE.
2	FOLLOWING DEMOLITION AND REMOVAL OF OVERLYING CONCRETE FLOOR AND EQUIPMENT REMOVED THE UNDERLYING SUB-SLAB MATERIAL WHICH WAS APPROXIMATELY 6 INCHES THICK.
3	REMOVED SUBSURFACE SOIL/FILL TO 9 FEET BELOW THE EXISTING GRADE.
4	REMOVED SURFACE SOIL/FILL TO 2 FEET BELOW THE EXISTING GRADE.
5	AFTER REMOVING AND STOCKPILING THE OVERLYING CLEAN SOILS (APPROXIMATELY 2.5 FT) REMOVED THE 3 INCH THICK LAYER OF BLACK CINDER-LIKE MATERIAL AS WELL AS NINE (9) INCHES OF SOIL UNDER THIS MATERIAL. THE OVERLYING SOIL WAS PLACED AT THE BOTTOM OF THE EXCAVATION EAST OF THE COMPRESSOR ROOM.
6	DEWATERED, REMOVED SEDIMENT/SLUDGE, GROUTED INLET AND OUTLET PIPES, FRACTURED PIT BOTTOM AND BACKFILLED VALVE PIT.
7	APPROXIMATE LOCATION OF ABOVEGROUND STORAGE TANK REMOVED FROM BASEMENT OF WAREHOUSE DURING REMEDIAL ACTIVITIES.
8	APPROXIMATE LOCATION OF ABOVEGROUND STORAGE TANK REMOVED DURING REMEDIAL ACTIVITIES
9	APPROXIMATE LOCATION OF UNDERGROUND STORAGE TANK REMOVED DURING REMEDIAL ACTIVITIES
■	VERIFICATION SAMPLES

HATCH	DESCRIPTION
	LIMITS OF UST SOIL/FILL EXCAVATION AREA.
	LIMITS OF SURFACE SOIL/FILL EXCAVATION AREA.
	LIMITS OF CONTAMINATED SUB-SLAB MATERIAL.
	LIMITS OF ARSENIC EXCAVATION AREA.
	LIMITS OF SPRAYWASH EXCAVATION AREA.
	VALVE PIT REMEDIAL AREA.

NOTES:
1. EXCAVATIONS AND AREAS DISTURBED BY DEMOLITION AND RESTORATION ACTIVITIES WERE BACKFILLED AND TOPSOIL AND TURF WAS PLACED.

REV	DESCRIPTION	DATE	BY
1	REVISED TO REFLECT REMOVAL OF AST FROM WAREHOUSE STRUCTURE	1/18/2011	AJB

NOTE:
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Designed by: J. MANZELLA	Date: JANUARY 2011
Drawn by: A. BENKLEMAN	Job No.: 2008.0203.00
Checked by: D. RIKER	Dwg Scale: Horiz: 1" = 40' Vert: N/A

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VILLAGE OF YOUNGSTOWN STATE OF NEW YORK

ENVIRONMENTAL REMEDIATION AT THE FORMER YOUNGSTOWN COLD STORAGE SITE

EXCAVATION AND REMOVAL AREAS

FIGURE 3

File: n:\2008.0203.00 youngstown cold storage rd ra\engineering\CADD\FER\Sheets\3 SOIL REMOVAL.dwg, Last saved: 1/18/2011, Plot Date: 1/18/2011, By: BENKLEMAN ANDREW T., Plot Style: HALF-BLACK.CTB

N

ELLIOTT STREET

SECOND STREET

THIRD AVENUE
(NANCY PRICE DRIVE)

STONE DRIVEWAY

CONCRETE PAD

CONCRETE PAD AND RAMP

FRAME DECK

CONCRETE WALK

VALVE PIT

WAREHOUSE
3-STORY
STONE & BLOCK BUILDING

AIR COND. UNIT

ICEHOUSE
1-STORY
BRICK BUILDING

BROKEN CONC.

CONCRETE DRIVE

FENCE

TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP15

SP1 SP2 SP3 SP4 SP5 SP6 SP7 SP8 SP9 SP10 SP11 SP12 SP13

MICRO 01 MICRO 02 MICRO 03

LEGEND

	SANITARY MANHOLE
	UTILITY POLE
	GAS MARKER
■	SURFACE SOIL (SS) LOCATION
▲	SOIL PROBE (SP) LOCATION
	TEST PIT (TP) LOCATION
	MICRO WELL LOCATION
□	SURFACE WATER/ SEDIMENT
⊠	BUILDING COMPONENT SAMPLE LOCATION

NOTES:
SCG - STANDARDS, CRITERIA, AND GUIDANCE
FULL HATCHED AREAS REPRESENT AREAL EXTENT OF SUSPECTED CONTAMINATION

TP09-D3		
PARAMETER	SCG mg/KG	CONCENTRATION mg/KG
ARSENIC	7.5	41.3
ANTICIPATED THICKNESS	–	3 INCHES

SUMP01-SED		
PARAMETER	SCG ug/KG	CONCENTRATION ug/KG
BENZO (a) ANTHRACENE	224	1,200
BENZO (a) PYRENE	61	1,200
BENZO (b) FLUORANTHENE	1,100	2,200
CHRYSENE	400	1,400
DIBENZO (a,h) ANTHRACENE	14	140
ESTIMATED VOLUME	–	2/3 CUBIC YARD

TP02-D8		
PARAMETER	SCG ug/KG	CONCENTRATION ug/KG
TOTAL VOCS	10,000	12,536
MAX. PID	–	1,875 ppm @ 8' bgs
VISUAL	NO STAINING	STAINING
OLFACTORY	NO ODOR	PETROLEUM ODOR
ANTICIPATED DEPTH	–	10 FEET

TP04-D235 AND TP04-D6		
PARAMETER	SCG ug/KG	CONCENTRATION ug/KG
MAX. PID	–	45 ppm @ 6' bgs
VISUAL	NO STAINING	SLIGHT STAINING
OLFACTORY	NO ODOR	PETROLEUM ODOR
ANTICIPATED DEPTH	–	9 FEET

SUBSLAB 01		
PARAMETER	SCG mg/KG	CONCENTRATION mg/KG
LEAD	87.1	1,830
ANTICIPATED THICKNESS	–	6 INCHES

40' 20' 0 40'

SCALE: 1"=40'-0"

SUB-SURFACE SOIL/FILL AREAL EXTENT OF CONTAMINATION

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REMEDIAL INVESTIGATION/
ALTERNATIVES ANALYSIS PROGRAM
YOUNGSTOWN COLD STORAGE
VILLAGE OF YOUNGSTOWN, NEW YORK
NIAGARA COUNTY

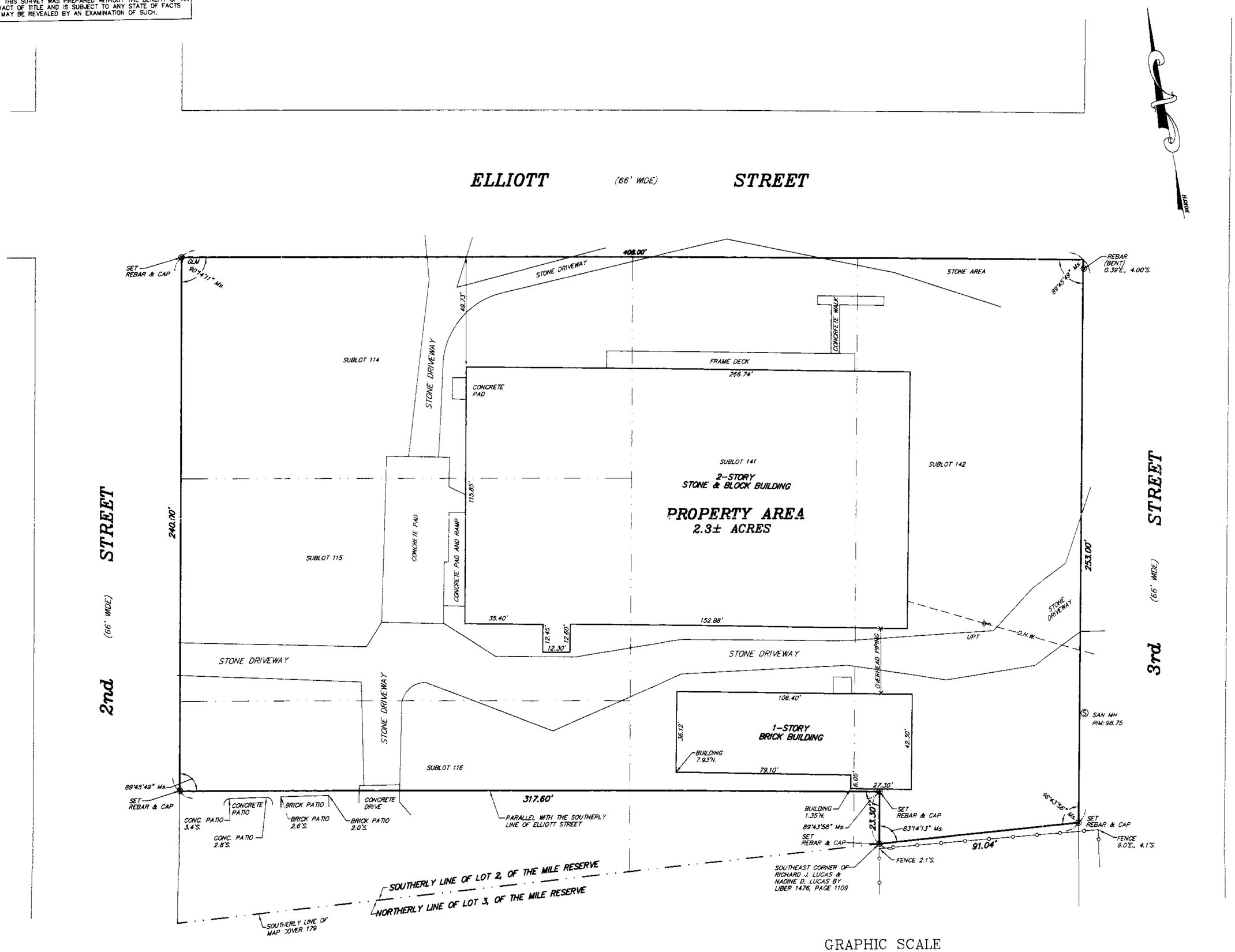
PROJECT NO. 2004.0279.03 | SCALE: 1" = 40' | DATE: JUNE 2006 | **FIGURE NO. 4**

N:\2004\0279.03-Youngstown Cold Storage\CAD\FIGURE 11.dwg 8/8/2006 9:52:22 AM EDT

APPENDIX A

SURVEY MAP, METES AND BOUNDS

NOTE: THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS SUBJECT TO ANY STATE OF FACTS THAT MAY BE REVEALED BY AN EXAMINATION OF SUCH.



GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

LEGEND

- SANITARY MANHOLE
- UTILITY POLE
- GAS MARKER

REV	DESCRIPTION	DATE	BY
1	REVISED TO REFLECT DEMOLITION OF ON-SITE STRUCTURES	1/18/11	AJP

NOTE:
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Field Date: 03/01/06
Office Date: 03/06/06

Job No. 2008.0203.00

Book: 390
Page: 34
Map: 59534

File Name: 59534-24.dwg

Designed by:
Drawn by: GLM
Checked by: DHH

Dwg Scale:
Horiz: 1" = 30'
Vert:

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BOUNDARY SURVEY
No. 701 THIRD STREET
VILLAGE OF YOUNGSTOWN, TOWN OF PORTER
COUNTY OF NIAGARA, STATE OF NEW YORK
BEING PART OF LOT 2 OF THE MILE RESERVE
ALL OF SUBLOT'S 114, 115, 142 & PART OF SUBLOT'S 116 & 141
MAP COVER 179

MAP NUMBER: 59534

N:\2008.0203.00 Youngstown Cold Storage RD RA\Engineering\CADD\FER59534-xt.dwg, 1/18/2011 10:00:38 AM, \\Tvga-Printserv2\KW-480WP

Property Description

Youngstown Cold Storage Co., Inc.

701 Third Street, Village of Youngstown

ALL THAT TRACT OR PARCEL OF LAND, situate in the Village of Youngstown, Town of Porter, County of Niagara and State of New York, being part of Lot No. 1 of the Mile reserve and according to a map made by Jesse P. Haines file in the Niagara County Clerk's Office March 3, 1890 under Cover No. 179 is known as Lot Nos. 114, 115, 142 and part of Lot Nos. 116 and 141, bounded and described as follows;

BEGINNING at the intersection of the south line of Elliott Street with the east line of Second Street, said point is also the northwest corner of Lot No. 114;

Thence easterly along the south line of Elliott Street, a distance of 408 feet to the west line of Third Street, which point is also the northeast corner of Lot No. 142;

Thence southerly along the west line of Third Street, a distance of 253 feet to the southeast corner of Lot No. 142;

Thence westerly along the south lone of Lot No. 142, a distance of 91.04 feet to the southeast corner of land conveyed to Richard J. Lucas and Nadine D. Lucas, his wife, by deed recorded in Liber 1476 of Deeds at page 1109;

Thence northerly along the east line of Lucas, a distance of 23.30 feet to the north line of Lucas;

Thence westerly along the north line of Lucas, a distance of 317.60 feet to the east line of Second Street;

Thence northerly along the east line of Second Street, a distance of 240 feet to the south line of Elliott Street and the point of beginning.

APPENDIX B

SUPPROTING DOCUMENTS AND DIGITAL COPY OF THE FER (CD)

APPENDIX C

NYSDEC APPROVAL LETTER FOR THE RD/RA WORK PLAN

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.ny.gov

June 26, 2009

Honorable Neil C. Riordan
Mayor, Village of Youngstown
P.O. Box 168
Youngstown, New York 14174

Dear Mayor Riordan;

Youngstown Cold Storage
Village of Youngstown, Niagara County
ERP Site #E932122
Remedial Design/Remedial Action Work Plan

The New York State Department of Environmental Conservation (NYSDEC), in cooperation with the New York State Department of Health (NYS DOH), has reviewed the draft Remedial Design/ Remedial Action (RD/RA) Work plan. The following comments are presented for inclusion into the final RD/RA work plan:

1. **Page 1, Section 1.1 Overview** - Add a sentence at the end of the paragraph indicating that the ROD can be found at the Village Library or at the NYSDEC office,

2. **Page 4, Section 2.1.1.2 backfill Materials** - First bullet all excavated on-site soil contemplated for reuse on site must meet the Part 375 Residential SCO's. Existing data may be used to document suitability of site soil for on-site re-use. Additional soil data may be required depending on the volume of soil to be reused. Third bullet, all imported off-site soil must comply with the Allowable Constituent Levels for Imported Soil table. A copy of the table is enclosed for your use. Fifth and Sixth bullet, please delete these two bullets. All imported soil must meet the Imported soil criteria therefore the reference to virgin soil is unnecessary,

3. **Page 12, Section 2.3.3 Planned Remedial Action and Page 15 Section 2.4.4.3 Planned Remedial Action** - All excavated soil areas will require confirmatory soil sampling to document that the Residential SCO's are met,

4. **Page 15, Erosion and Dust Controls** - At the completion of the remedial action it is not clear what the final restoration will be. Will the excavated areas be topsoil and seed? Or will stone be placed? Please indicate what final erosion control methods will be used while the site waits further development,

5. **Page 17, Section 7.2 Reporting** - The Final Engineering Report (FER) must be prepared in accordance with procedures in place at time of the FER submittal. DER-10 is a draft guidence document with updates and revisions occurring periodically.

   Attached for your reference is the current FER checklist that is used to evaluate the adequacy of any FER. Please review this guidance checklist to ensure all appropriate provisions of the FER are addressed in your submittal. In addition, I suggest at the time of the FER preparation, that an updated checklist is obtained for guidance,

6. **Figures 2, 3 and 4** - Please remove the old house from the SW corner of the site, it is no longer there,

7. The size of the excavated areas are estimated at this point. Are there plans for the collection of additional design data to determine the size of the excavated areas and predetermine excavation limits to preclude the necessity of confirmation samples?

If you have any questions please call me at 716-851-7220.

Sincerely,

Michael J. Hinton P.E.
Division of Environmental Remediation

MJHi\dcg
hinton\riordan-wpcomments

Enclosure

cc: Mr. Gregory P. Sutton P.E. NYSDEC Buffalo office
Mr. Robert Knizdek P.E. NYSDEC Albany office (Code 7013)
Mr. Matthew Forcucci, NYS DoH, Western Regional Office, Buffalo
Mr. Fred Stephens, Youngstown NY 14174
Mr. Daniel Riker TVGA Consultants, Elma, NY 14059-0264