REQUEST FOR PROPOSALS
BENGART AND MEMEL SCRAP METAL SITE (#9-15-115)
BUFFALO, NEW YORK

1. PROJECT DESCRIPTION

The New York State Department of Environmental Conservation (NYSDEC) is requesting cost proposals from Stand-By Investigation and Remediation (I&R) contractors to demolish an existing building, decommission an existing groundwater remediation system, excavate PCB impacted soils, and perform nominal site restoration at the Bengart and Memel (B&M) site in Buffalo, New York. All work to be conducted on the site must be carefully coordinated with adjoining property owners to minimize disturbance to their operations. Based on recent information, soil and accumulations inside the building at the site are contaminated with PCBs at levels requiring hazardous waste disposal. Site information and date is presented in the Limited Site Data Report.

The former B&M business operations included the use of Lot 2.1 (SBL #112.77-4-2.1 current address of record is 1079 Clinton St.) and a larger adjoining lot identified as Lot 2.2 (SBL #112.77-4-2.2 current address of record is 1091 Clinton St.). Lots 2.1 and 2.2 were part of a single lot which were subsequently subdivided and separately sold. An asphalt cap system and groundwater collection and treatment system installed at the site (Lot 2.1) under a previous Order on Consent have not been maintained and kept operational. The current owner and respondent have abandoned the site. A limited site investigation conducted in 2006 revealed that significant environmental threats exist at the site. Based upon the results of this investigation, there is widespread PCB contamination of surface and subsurface soil/fill materials that are above TAGM 4046 and Part 375 standards for soil and sediment. Water collected at various points also indicated PCB contamination of groundwater and potential surface water discharges above applicable groundwater and surface water standards. Additionally, there are PCB levels in surface soils, sediments and subsurface soil/fill that render the material as characteristically hazardous waste.

The area (Lot 2.1) previously remediated by the owner under the Order consists of an asphalt capped area, storm water management and treatment, and shallow groundwater collection and treatment system. The elevation of the asphalt capped is sloped to allow drainage of surface water to a storm drain in the capped area which is connected to an oil/water separator which drains into the Buffalo Sewer Authority (BSA) combined sewer on Clinton Street. The oil/water separator serves as a treatment device for storm water runoff from the asphalt capped area. The groundwater water collection and treatment system consists of a shallow groundwater interceptor trench along the northern and western perimeter of Lot 2.1. The interceptor trench extends onto Lot 2.2. The interceptor trench contains a perforated 6-inch PVC drainpipe that directs intercepted groundwater to a sump. The sump originally contained a submersible pump which pumped collected water to two storage tanks for temporary storage. The water in the tanks was batch treated by pumping stored water through two carbon adsorption vessels to remove residual PCBs. The treated water was stored in a third tank for sampling prior to discharge to the BSA combined sewer. The treatment system is located on a concrete containment pad that straddles Lots 2.1 and 2.2. The treatment system

is exposed to the elements and none of the system piping and pumps were insulated for cold weather operation.

In order to address the environmental threats at the site, a feasibility evaluation was conducted. The results of the evaluation determined that removal of the threat was the desired feasible long term option.

2. SCOPE

The work consists of furnishing all labor, materials, supervision, equipment, and services necessary to complete the scope of work detailed in the Specifications and Contract Drawings. The work includes, but is not limited to, the following:

1. Develop a Site Specific Health and Safety Plan and Project Work Plan, and conduct all work activities in accordance with the approved plan.
2. Obtain all required permits necessary to perform the work.
3. Coordinate utility mark-out.
4. Coordinate transportation and disposal of regulated wastes with permitted disposal facilities in accordance with all applicable regulations and requirements.
5. Provide all necessary temporary support facilities and control.
6. Provide all personal protective equipment (PPE) appropriate for this work.
7. Perform Community Air Monitoring during all stages of the project until all wastes and hazardous materials have been removed from the site.
8. Protection of adjoining property improvements and on-site improvements not identified for removal and disposal.
9. Asbestos abatement and appropriate disposal of asbestos containing building materials identified in the asbestos survey prior to building demolition.
10. Demolition and appropriate disposal of the concrete block building, floor and foundations.
11. Decommissioning and removal of the groundwater collection and treatment system.
12. Partial removal of the storm drain system.
13. Removal and appropriate disposal of the asphalt cap system within limits indicated on the plans.
14. Excavation and appropriate disposal of impacted soils within limits indicated on the plans.
15. Restoration of site features including the placement of an aggregate base over the excavated areas indicated on the plans and placement of topsoil and seed to disturbed areas containing turf grass.
16. Installation of security features to limits indicated on the plans.

3. PROPOSAL INFORMATION

NYSDEC reserves the right to request price quotes or Bids from the Contractor on special/unique jobs such as, but not limited to, large jobs, routine monitoring of sites, long term jobs, and non-emergency jobs. NYSDEC will use these quotes as a basis for Contractor selection. These price quotes may be in the form of a lump sum, cost plus fixed fee or unit price basis depending on the type of job. However, billings must be submitted using the time,

equipment and material rates and the bid multiplier from this Contract. If a Contractor responds to a request, it must demonstrate that its quote would yield the same or a lower price than if the work were done according to the general terms of this Contract. If NYSDEC accepts such a quote, and the work is done accordingly, and upon later NYSDEC review or audit, it is determined that the quoted price exceeded the price of the work, if done under the terms of the Contract, payments to the Contractor will be adjusted to the Contract price. If this adjustment results in an overpayment by the State to the Contractor, the Contractor shall refund such overpayment with interest as provided in Article 2 of Schedule 3 of the Standby Investigation and Remediation Contract.

NYSDEC is requesting a Bid Proposal for the above scope of Work, which shall include the following items:

1. A signed cost estimate to include all materials, equipment, labor, and incidentals for completing the work described above. This cost estimate will also include all applicable taxes, fees and surcharges. **(Sign and date all pages of the Bid Form)**.

2. Time is of the essence. Contractor shall complete all of the work included in this RFP within 60 calendar days of the award of the Contract. There shall be no work on weekends or holidays.

3. Contractor will be selected based on the lowest responsive bid/quote.

4. Availability of your firm to start the project. It is anticipated that this work will begin in April/May of 2009.

5. A statement of qualifications for the proposed work.

6. A statement of compliance with all applicable licenses, certifications, and permits.

7. A completed Conflict of Interest form (Appendix B).

9. A signed Bidder's/Proposer's Certification **(Sign both page 1 and page 2)**.

APPENDIX A

SPECIFICATIONS

NYSDEC STANDARD SPECIFICATIONS

00003 Minimum Requirements for Health and Safety

DIVISION 1 - GENERAL REQUIREMENTS

01000 General Requirements
01001 Basic Requirements
01010 Summary of Work
01025 Measurement for Payment
01210 Allowances
01510 Community Air Monitoring

DIVISION 2 – SITEWORK

02060 Building Demolition
02061 Waste Characterization, Removal and Disposal
02065 Decommissioning Existing Equipment
02077 Decommissioning of Drainage Structures, Sumps and Pits.
02080 Asbestos Abatement
02270 Temporary Erosion Control
02830 Chain Link Fence and Gates
02990 Finish Grading, Topsoil and Seeding

DRAWINGS

Figure 1 Existing Site Plan
Figure 2 Demolition Plan
Figure 3 Excavation Plan
Figure 4 Restoration Plan

APPENDIX B

Conflict of Interest Form

BID FORM

Contract/WA No. _____
Site/Spill/PIN _____

New York State Department of Environmental Conservation
Division of Environmental Remediation
Conflict of Interest Certification
for
Standby Contract Work Assignment

I. Potential Responsive Parties

To the best of the New York State Department of Environmental Conservation's knowledge, the potential responsible parties (PRPs) listed on the attachment are the known PRPs, as of the date of the work assignment issuance letter.

II. Conflict of Interest

Please check the appropriate boxes below and provide the necessary explanations:

□ The Contractor believes there are no potential organization or personal conflicts of interest with the PRPs listed and is accepting the above referenced work assignment.

□ The Contractor believes there are potential organizational and/or personal conflict(s) as indicated below:

a) □ The Contractor believes the conflicts would not prohibit the Contractor from excepting the work assignment

b) □ The Contractor believes the conflicts would prohibit the Contractor from excepting the work assignment .

Please explain and include as an attachment what the organizational and/or personal conflicts may be. Please note that organizational and personal conflicts of interest issues that must be addressed are defined in Appendix B, Section III, Conflict of Interest, in the executed standby contract. Additional items to address include the estimated percentage and dollar value that the contractor's business with the PRP bears to the contractor's business as a whole, whether there are mechanisms in place that allow for adequate independent quality assurance such as Professional Engineer certifications, quality assurance quality control of data, independent periodic inspections of work.

III. Certification

The undersigned authorized representative for the contractor indicated below hereby certifies that the information provided in this form or as an attachment to this form is a accurate representation of the relevant facts or circumstances which would give rise to an organizational or personal conflict of interest as defined in Appendix B, Section III, Conflict of Interest, of the executed standby contract indicated below, except as disclosed herein.

_____

Signature of Contractor's Authorized Representative Date

_____

Contractor Name

Please e-mail completed form to DEC Contract Manager within 5 calendar days of the date of the Work Assignment Issuance/Notice to Proceed Letter.

SEPTEMBER 2009 BID FORM
BENGART AND MEMEL SCRAP METAL SITE (#9-15-115)
BUFFALO, NEW YORK

DESCRIPTION	ESTIMATED QUANTITIES	COMPUTED TOTALS
ITEM 1. Mobilization(s) and demobilization(s), the lump sum price of _____ Dollars and _____ Cents ($)	Lump Sum	$_____
ITEM 2. Site Specific Health and Safety Plan (HASP), and Project Work Plan, the lump sum price of _____ Dollars and _____ Cents ($)	Lump Sum	$_____
ITEM 3. Health and Safety Services, the per day unit rate of _____ Dollars and _____ Cents ($) per day	15 Days	$_____
ITEM 4. Site Preparation, the lump sum price of _____ Dollars and _____ Cents ($)	Lump Sum	$_____
ITEM 5. Asbestos Abatement, the lump sum price of _____ Dollars and _____ Cents ($)	Lump sum	$_____

_____ _____ _____
Corporation Name Date Signature

ITEM 6. Building Demolition, the lump sum price _____ Dollars and _____ Cents ($)	Lump sum	$_____
ITEM 7. Treatment System Decommissioning, the lump sum price of _____ Dollars and _____ Cents ($)	Lump Sum	$_____ _____
ITEM 8. Excavation of Impacted Soil/Fill, Transportation and Disposal as Hazardous Waste, the per ton unit rate of _____ Dollars and _____ Cents ($) per ton	900 Tons	$_____ $_____
ITEM 9. Excavation of Impacted Soil/Fill, Transportation and Disposal as Solid Waste, the per ton unit rate of _____ Dollars and _____ Cents ($) per ton	3600 Tons	$_____
ITEM 10. Imported Select Granular Fill, the per ton unit rate of _____ Dollars and _____ Cents ($) per ton	1100 Tons	$_____

_____ _____ _____
Corporation Name Date Signature

ITEM 11. Topsoil and Seeding, the square yard unit rate of _____ Dollars and _____ Cents ($) per square yard	45 Sq. Yd.	$_____
ITEM 12. Fencing, the lineal foot unit rate of _____ Dollars and _____ Cents ($) per lineal foot	230 Lineal Feet	$_____
ITEM 13. Allowance – Independent Asbestos Abatement Compliance Air Monitoring and Inspection _____ Dollars and _____ Cents ($) per lineal foot	Allowance	$10,000.00
TOTAL BID _____ Dollars and _____ Cents	TOTAL BID	$_____

_____ _____ _____
Corporation Name Date Signature

Notes: 1. The unit prices stated above shall include all applicable taxes, fees and surcharges.
2. Refer to Section

For_____
(Corporation Name)

In_____
(State of Incorporation)

By_____
(Signature of Authorized Representative)

Business Address:_____

_____

Phone No.:_____FAX No._____

e-Mail address.:_____

_____	_____	_____
Corporation Name	Date	Signature

SPEC 00003
Minimum Requirements for Health and Safety

Table of Contents

MINIMUM REQUIREMENTS FOR HEALTH AND SAFETY

1. GENERAL

1.01 Description

A. The **CONTRACTOR** is solely responsible and liable for the health and safety of all on-site personnel and any off-site community potentially impacted by the remediation.

B. This section describes the minimum health and safety requirements for this project including the requirements for the development of a written Health and Safety Plan (HASP). All on-site workers must comply with the requirements of the HASP. The **CONTRACTOR's** HASP must comply with all applicable federal and state regulations protecting human health and the environment from the hazards posed by activities during this site remediation. The HASP is a required deliverable for this project. The HASP will be reviewed by the **ENGINEER**. The **CONTRACTOR** will resubmit the HASP, addressing all review comments from the **ENGINEER**. The **CONTRACTOR** shall not initiate on-site work in contaminated areas until an acceptable HASP addressing all comments has been developed.

C. Consistent disregard for the provision of these health and safety specifications shall be deemed just and sufficient cause for immediate stoppage of work and/or termination of the Contract or any Subcontract without compromise or prejudice to the rights of the **DEPARTMENT** or the **ENGINEER**.

D. Any discrepancies between this HASP and the specifications (or OSHA requirements) shall be resolved in favor of the more stringent requirements as determined by the **ENGINEER**.

1.02 Basis

A. The Occupational Safety and Health Administration (OSHA) Standards and Regulations contained in Title 29, Code of Federal Regulations, Parts 1910 and 1926 (20 CFR 1910 and 1926) and subsequent additions and/or modifications, the New York State Labor Law Section 876 (Right-to-Know Law), the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (EPA), Office of Emergency and Remedial Response and the Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH, OSHA, USCG, and EPA) provide the basis for the safety and health program. Additional specifications within this section are in addition to OSHA regulations and reflect the positions of both the EPA and the National Institute for Occupation Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

B. The safety and health of the public and project personnel and the protection of the environment will take precedence over cost and schedule considerations for all project work. Any additional costs will be considered only after the cause for suspension of operations is addressed and work is resumed. The **ENGINEER's** on-site representative and the **CONTRACTOR's** Superintendent will be kept appraised, by the Safety Officer, of conditions which may adversely affect the safety and health of project personnel and the community. The **ENGINEER** may stop work for health and safety reasons. If work is suspended for health and/or safety reasons, it shall not resume until approval is obtained from the **ENGINEER**. The cost of work stoppage due to health and safety is the responsibility of the **CONTRACTOR** under this Contract.

1.03 Health and Safety Definitions

A. The following definitions shall apply to the work of this Contract:

1. Project Personnel: Project personnel include the **ENGINEER**, the **ENGINEER's** On-site Representatives, **CONTRACTOR**, Subcontractors, and Federal and State Representatives, working or having official business at the Project Site.

2. Authorized Visitor: Authorized visitors who work for the State of New York shall receive approval to enter the site from the **DEPARTMENT**. The Safety Officer has primary responsibility on determining who is qualified and may enter the site. The Site Safety Officer will only allow authorized visitors with written proof that they have been medically certified and trained in accordance with 29 CFR 1910.120 to enter the contamination reduction zone and/or exclusion area.

3. Health and Safety Coordinator (HSC): The HSC shall be a Certified Industrial Hygienist (CIH) or Certified Safety Professional (CSP) retained by the **CONTRACTOR**. The HSC will be responsible for the development and implementation of the HASP.

4. Safety Officer (SO): The SO will be the **CONTRACTOR's** on-site person who will be responsible for the day-to-day implementation and enforcement of the HASP.

5. Health and Safety Technicians (HST): The HST(s) will be the **CONTRACTOR's** on-site personnel who will assist the SO in the implementations of the HASP, in particular, with air monitoring in active work areas and maintenance of safety equipment.

6. Medical Consultant (MC): The MC is a physician retained by the **CONTRACTOR** who will be responsible for conducting physical exams as specified under the Medical Monitoring Programs in this section.

7. Project Site: The area designated on the Site Sketch, which includes the Contractor Work Area.

8. Contractor Work Area: An area of the project site including the Support Zone, access road, staging area, and Exclusion Zone.

9. Contractor Support Zone: An area of the Contractor Work Area outside the Exclusion Zone, accessible for deliveries and visitors. No persons, vehicles, or equipment may enter these areas from the Exclusion Zone without having gone through specified decontamination procedures in the adjacent Contamination Reduction Zone.

10. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.

11. Exclusion Zone: The innermost area within the Contractor Work Area that encloses the area of contamination. Protective clothing and breathing apparatus as specified in the health and safety requirements and in the **CONTRACTOR's** approved HASP must be worn.

12. Contamination Reduction Zone: An area at the Exit Point of the Exclusion Zone through which all personnel, vehicles, and equipment must enter and exit. All decontamination of vehicles and equipment and removal of personal protective clothing and breathing apparatus must take place at the boundary between the Exclusion Zone and the Contamination Reduction Zone.

13. **ENGINEER's** on-site representative: The **ENGINEER's** representative assigned responsibility and authority by the **ENGINEER** for day-to-day field surveillance duties.

14. Work: Work includes all labor, materials, and other items that are shown, described, or implied in the Contract and includes all extra and additional work and material that may be ordered by the **ENGINEER**.

15. Monitoring: The use of direct reading field instrumentation to provide information regarding the levels of gases and/or vapor, which are present during remedial action. Monitoring shall be conducted to evaluate employee exposures to toxic materials and hazardous conditions.

1.04 Responsibilities

A. The **ENGINEER** will be responsible for the following:

1. Reviewing the HASP for the acceptability for its personnel and the impact on the site and human health.

2. Reviewing modifications to the HASP.

B. The **CONTRACTOR** will be responsible for the following:

C. The **CONTRACTOR** will perform all work required by the Contract Documents in a safe and environmentally acceptable manner. The **CONTRACTOR** will provide for the safety of all project personnel and the community for the duration of the Contract.

D. The **CONTRACTOR** shall:

1. Employ an SO who shall be assigned full-time responsibility for all tasks herein described under this HASP. In the event the SO cannot meet his responsibilities, the **CONTRACTOR** shall be responsible for obtaining the services of an "alternate" SO meeting the minimum requirements and qualifications contained herein. No work will proceed on this project in the absence of an approved SO.

2. Ensure that all project personnel have obtained the required physical examination prior to and at the termination of work covered by the contract.

3. Be responsible for the pre-job indoctrination of all project personnel with regard to the HASP and other safety requirements to be observed during work, including but not limited to (a) potential hazards, (b) personal hygiene principles, (c) personal protection equipment, (d) respiratory protection equipment usage and fit testing, and (e) emergency procedures dealing with fire and medical situations.

4. Be responsible for the implementation of this HASP, and the Emergency Contingency and Response Plan.

5. Provide and ensure that all project personnel are properly clothed and equipped and that all equipment is kept clean and properly maintained in accordance with the manufacturer's recommendations or replaced as necessary.

6. Alert appropriate emergency services before starting any hazardous work and provide a copy of the Emergency Contingency Plan to the respective emergency services.

7. Have sole and complete responsibility of safety conditions for the project, including safety of all persons (including employees).

8. Be responsible for protecting the project personnel and the general public from hazards due to the exposure, handling, and transport of contaminated materials. Barricades, lanterns, roped-off areas, and proper signs shall be furnished in sufficient amounts and locations to safeguard the project personnel and public at all times.

9. Ensure all OSHA health and safety requirements are met.

10. Maintain a chronological log of all persons entering the project site. It will include organization, date, and time of entry and exit. Each person must sign in and out.

1.05 Health and Safety Plan

A. The HASP is a deliverable product of this project. The **ENGINEER** will review and comment on the **CONTRACTOR's** HASP. Agreed upon responses to all comments will be incorporated into the final copy of the HASP. The HASP shall govern all work performed for this contract. The HASP shall address, at a minimum, the following items in accordance with 29 CFR 1910.120(I)(2):

1. Health and Safety Organization.

2. Site Description and Hazard Assessment.

3. Training.

4. Medical Surveillance.

5. Work Areas.

6. Standard Operating Safety Procedures and Engineering Controls.

7. Personal Protective Equipment (PPE).

8. Personnel Hygiene and Decontamination.

9. Equipment Decontamination.

10. Air Monitoring.

11. Emergency Equipment/First Aid Requirements.

12. Emergency Response and Contingency Plan.

13. Confined-Space Entry Procedures.

14. Spill Containment Plan.

15. Heat & Cold Stress.

16. Record Keeping.

17. Community Protection Plan.

B. The following sections will describe the requirements of each of the above-listed elements of the HASP.

1.06 Health and Safety Organization

A. The **CONTRACTOR** shall list in the HASP a safety organization with specific names and responsibilities. At a minimum, the **CONTRACTOR** shall provide the services of a Health and Safety Coordinator, SO, Health and Safety Technician, and a Medical Consultant.

B. Health and Safety Coordinator: The **CONTRACTOR** must retain the services of a Health and Safety Coordinator (HSC). The HSC must be an American Board of Industrial Hygiene (ABIH) Certified Industrial Hygienist (CIH) or a Certified Safety Professional (CSP). The HSC must have a minimum of two years experience in hazardous waste site remediations or related industries and have a working knowledge of federal and state occupational health and safety regulations. The HSC must be familiar with air monitoring techniques and the development of health and safety programs for personnel working in potentially toxic atmospheres.

In addition to meeting the above requirements the HSC will have the following responsibilities:

1. Responsibility for the overall development and implementation of the HASP.

2. Responsibility for the initial training of on-site workers with respect to the contents of the HASP.

3. Availability during normal business hours for consultation by the Safety Officer.

4. Availability to assist the Safety Officer in follow-up training and if changes in site conditions occur.

C. Safety Officer: The designated SO must have, at a minimum, two years of experience in the remediation of hazardous waste sites or related field experience. The SO must have formal training in health and safety and be conversant with federal and state regulations governing occupational health and safety. The SO must be certified in CPR and first aid and have experience and training in the implementation of personal protection and air monitoring programs. The SO must have "hands-on" experience with the operation and maintenance of real-time air monitoring equipment. The SO must be thoroughly knowledgeable of the operation and maintenance of air-purifying respirators (APR) and supplied-air respirators (SAR) including SCBA and airline respirators.

In addition to meeting the above qualifications, the SO will be responsible for the following minimum requirements:

1. Responsibility for the implementation, enforcement, and monitoring of the health and safety plan.

2. Responsibility for the pre-construction indoctrination and periodic training of all on-site personnel with regard to this safety plan and other safety requirements to be observed during construction, including:

   a. Potential hazards.

   b. Personal hygiene principles.

   c. PPE.

   d. Respiratory protection equipment usage and fit testing.

   e. Emergency procedures dealing with fire and medical situations.

   f. Conduct daily update meetings in regard to health and safety.

3. Responsibility for alerting the **ENGINEER's** on-site representative prior to the **CONTRACTOR** starting any particular hazardous work.

4. Responsibility for informing project personnel of the New York State Labor Law Section 876 (Right-to-Know Law).

5. Responsibility for the maintenance of separation of Exclusion Zone (Dirty) from the Support Zone (Clean) areas as described hereafter.

D. Health and Safety Technicians: The Health and Safety Technician (HST) must have one year of hazardous waste site or related experience and be knowledgeable of applicable occupational health and safety regulations. The HST must be certified in CPR and first aid. The HST will be under direct supervision of the SO during on-site work. The HST must be familiar with the operations, maintenance and calibration of monitoring equipment used in this remediation. An HST will be assigned to each work crew or task in potentially hazardous areas.

E. Medical Consultant: The **CONTRACTOR** is required to retain a Medical Consultant (MC) who is a physician, certified in occupational medicine. The physician shall have experience in the occupational health area and shall be familiar with potential site hazards of remedial action projects. The MC will also be available to provide annual physicals and to provide additional medical evaluations of personnel when necessary.

1.07 Site Description and Hazard Assessment

A. The **CONTRACTOR** shall perform a hazard assessment to provide information to assist in selection of PPE and establish air monitoring guidelines to protect on-site personnel, the environment, and the public. The **CONTRACTOR** shall provide a general description of the site, its location, past history, previous environmental sampling results, and general background on the conditions present at the site.

1. Chemical Hazards: A qualitative evaluation of chemical hazards shall be based on the following:

   - Nature of potential contaminants;
   - Location of potential contaminants at the project site;
   - Potential for exposure during site activities; and
   - Effects of potential contaminants on human health.

2. Biological Hazards: A qualitative evaluation of biological hazards consisting of the elements listed for chemical hazards.

3. Physical Hazards: The **CONTRACTOR** shall assess the potential for physical hazards affecting personnel during the performance of on-site work.

B. The **CONTRACTOR** shall develop a hazard assessment for each site task and operation established in the HASP.

1.08 Training

A. OSHA Training

1. The **CONTRACTOR** is responsible to ensure that all project personnel have been trained in accordance with OSHA 1910.120 regulations.

2. The **CONTRACTOR** shall ensure that all employees are informed of the potential hazards of toxic chemicals to the unborn child and of the risks associated with working at the project site.

3. The **CONTRACTOR** shall be responsible for, and guarantee that, personnel not successfully completing the required training are not permitted to enter the project site to perform work.

B. Safety Meetings

1. The SO will conduct daily safety meetings for each working shift that will be mandatory for all project personnel. The meetings will provide refresher courses for existing equipment and protocols, and will examine new site conditions as they are encountered.

2. Additional safety meetings will be held on an as-required basis.

C. Should any unforeseen or site-specific safety-related factor, hazard, or condition become evident during the performance of work at this site, the **CONTRACTOR** will bring such to the attention of the SO in writing as quickly as possible for resolution. In the interim, the **CONTRACTOR** will take prudent action to establish and maintain safe working conditions and to safeguard employees, the public, and the environment.

1.09 Medical Surveillance

A. The **CONTRACTOR** shall utilize the services of a Physician to provide the minimum medical examinations and surveillance specified herein. The name of the Physician and evidence of examination of all **CONTRACTOR** and Subcontractor on-site personnel shall be kept by the SO.

B. **CONTRACTOR** and Subcontractor project personnel involved in this project shall be provided with medical surveillance prior to onset of work. Immediately at the conclusion of this project, and at any time there is suspected excessive exposure to substances that would be medically detectable, all project personnel will be medically monitored. The costs for these medical exams, including state field representatives, (four maximum) are to be borne by the **CONTRACTOR**.

C. Physical examinations are required for:

1. Any and all personnel entering hazardous or transition zones or performing work that required respiratory protection.

2. All **CONTRACTOR** personnel on site who are dedicated or may be used for emergency response purposes in the Exclusion Zone.

3. **CONTRACTOR** supervisors entering hazardous or transition zones, or on site for more than 16 hours during the length of the contract.

D. Physical examinations are not required for people making periodic deliveries provided they do not enter hazardous or transition zones.

E. In accordance with good medical practice, the examining Physician or other appropriate representative of the Physician shall discuss the results of such medical examination with the individual examined. Such discussion shall include an explanation of any medical condition that the Physician believes required further evaluation or treatment and any medical condition which the Physician believes would be adversely affected by such individual's employment at the project site. A written report of such examination shall be transmitted to the individual's private physician upon written request by the individual.

F. The examining Physician or Physician group shall notify the SO in writing that the individual has received a medical examination and shall advise the SO as to any specific limitations upon such individual's ability to work at the project site that were identified as a result of the examination. Appropriate action shall be taken in light of the advice given pursuant to this subparagraph.

G. The physical examination shall also include but not be limited to the following minimum requirements:

1. Complete blood profile;

2. Blood chemistry to include: chloride, CO_2, potassium, sodium, BUN, glucose, globulin, total protein, albumin, calcium, cholesterol, alkaline phosphatase, triglycerides, uric acid, creatinine, total bilirubin, phosphorous, lactic dehydrogenase, SGPT, SGOT;

3. Urine analysis;

4. "Hands on" physical examination to include a complete evaluation of all organ systems including any follow-up appointments deemed necessary in the clinical judgement of the examining physician to monitor any chronic conditions or abnormalities;

5. Electrocardiogram;

6. Chest X-ray (if recommended by examining physician in accordance with good medical practice);

7. Pulmonary function;

8. Audiometry - To be performed by a certified technician, audiologist, or physician. The range of 500 to 8,000 hertz should be assessed.

9. Vision screening - Use a battery (TITMUS) instrument to screen the individual's ability to see test targets well at 13 to 16 inches and at 20 feet. Tests should include an assessment of muscle balance, eye coordination, depth perception, peripheral vision, color discrimination, and tonometry.

10. Tetanus booster shot (if no inoculation has been received within the last five years); and

11. Complete medical history.

1.10 Site Control

A. Security

1. Security shall be provided and maintained by the **CONTRACTOR**.

2. The **CONTRACTOR** shall contact law enforcement officials, emergency medical care units, local fire departments and utility emergency teams to ascertain the type of response required in any emergency situation and to coordinate the responses of the various units. A standard operating procedure describing security force response to foreseeable contingencies shall be developed. The **CONTRACTOR** shall also prepare and update a list of emergency points of contact, telephone numbers, radio frequencies, and call signs to ensure dependable responses.

3. Security personnel shall record their presence while patrolling the site using a watchman's clock. The Tapes or punch cards shall be delivered to the **ENGINEER** once a week.

4. Security identification, specific to the project site, shall be provided by the **CONTRACTOR** for all project personnel entering the project site. The **CONTRACTOR** shall be responsible for and ensure that such identification shall be worn by each individual, visible at all times, while the individual is on the site. Vehicular access to the site, other than to designated parking areas, shall be restricted to authorized vehicles only.

5. Use of on-site designated parking areas shall be restricted to vehicles of the **ENGINEER**, **ENGINEER's** on-site representative, **CONTRACTOR**, subcontractor, and service personnel assigned to the site and actually on duty but may also be used on short-term basis for authorized visitors.

6. The **CONTRACTOR** shall be responsible for maintaining a log of security incidents and visitor access granted.

7. The **CONTRACTOR** shall require all personnel having access to the project site to sign-in and sign-out, and shall keep a record of all site access.

8. All approved visitors to the site shall be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit.

9. Site visitors shall not be permitted to enter the hazardous work zone unless approved by the **DEPARTMENT** with appropriate site access agreement.

10. Project sites shall be posted, "Warning Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence or equal at a minimum. Warning signs shall be posted at a minimum of every 500 feet.

B. Site Control

1. The **CONTRACTOR** shall provide the following site control procedures as a minimum:

   - A site map;
   - A map showing site work zones;
   - The use of a "buddy system"; and
   - Standard operating procedures or safe work practices.

C. Work Areas

1. The **CONTRACTOR** will clearly lay out and identify work areas in the field and will limit equipment, operations and personnel in the areas as defined below:

   a. Exclusion Zone (EZ) - This will include all areas where potential environmental monitoring has shown or it is suspected that a potential hazard may exist to workers. The level of PPE required in these areas will be determined by the SO after air monitoring and on-site inspection has been conducted. The area will be clearly delineated from the decontamination area. As work within the hazardous zone proceeds, the delineating boundary will be relocated as necessary to prevent the accidental contamination of nearby people and equipment. The Exclusion Zone will be delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing).

   b. Contamination Reduction Zone - This zone will occur at the interface of "Hazardous" and "Clean" areas and will provide for the transfer of equipment and materials from the Support Zone to the Exclusion Zone, the decontamination of personnel and clothing prior to entering the "Clean" area, and for the physical segregation of the "Clean" and "Hazardous" areas. This area will contain all required emergency equipment, etc. This area will be clearly delineated by fencing (e.g., chain link, snow fencing, or orange plastic fencing). It shall also delineate an area that although not contaminated at a particular time may become so at a later date.

   c. Support Zone - This area is the remainder of the work site and project site. The Support Zone will be clearly delineated and procedures implemented to prevent active or passive contamination from the work site. The function of the Support Zone includes:

      1. An entry area for personnel, material and equipment to the Exclusion Zone of site operations through the Contamination Reduction Zone;

      2. An exit for decontamination personnel, materials and equipment from the "Decontamination" area of site operations;

      3. The housing of site special services; and

      4. A storage area for clean, safety, and work equipment.

1.11 Standard Operating Safety Procedures (SOSP), Engineering Controls

A. General SOSP

1. The **CONTRACTOR** will ensure that all safety equipment and protective clothing is kept clean and well maintained.

2. All prescription eyeglasses in use on this project will be safety glasses and will be compatible with respirators. No contact lenses shall be allowed on site.

3. All disposable or reusable gloves worn on the site will be approved by the SO.

4. During periods of prolonged respirator usage in contaminated areas, respirator filters will be changed upon breakthrough. Respirator filters will always be changed daily.

5. Footwear used on site will be covered by rubber overboots or booties when entering or working in the Exclusion Zone area or Contamination Reduction Zone. Boots or booties will be washed with water and detergents to remove dirt and contaminated sediment before leaving the Exclusion Zone or Contamination Reduction Zone.

6. All PPE used on site will be decontaminated or disposed of at the end of the work day. The SO will be responsible for ensuring decontamination of PPE before reuse.

7. All respirators will be individually assigned and not interchanged between workers without cleaning and sanitizing.

8. **CONTRACTOR**, subcontractor and service personnel unable to pass a fit test as a result of facial hair or facial configuration shall not enter or work in an area that requires respiratory protection.

9. The **CONTRACTOR** will ensure that all project personnel shall have vision or corrected vision to at least 20/40 in one eye.

10. On-site personnel found to be disregarding any provision of this plan will, at the request of the SO, be barred from the project.

11. Used disposable outerwear such as coveralls, gloves, and boots shall not be reused. Used disposable outerwear will be removed upon leaving the hazardous work zone and will be placed inside disposable containers provided for that purpose. These containers will be stored at the site at the designated staging area and the **CONTRACTOR** will be responsible for proper disposal of these materials at the completion of the project. This cost shall be borne by the **CONTRACTOR**.

12. Protective coveralls that become torn or badly soiled will be replaced immediately.

13. Eating, drinking, chewing gum or tobacco, smoking, etc., will be prohibited in the hazardous work zones and neutral zones.

14. All personnel will thoroughly cleanse their hands, face, and forearms and other exposed areas prior to eating, smoking or drinking.

15. Workers who have worked in a hazardous work zone will shower at the completion of the work day.

16. All personnel will wash their hands, face, and forearms before using toilet facilities.

17. No alcohol, firearms or drugs (without prescriptions) will be allowed on site at any time.

18. All personnel who are on medication should report it to the SO who will make a determination whether or not the individual will be allowed to work and in what capacity. The SO may require a letter from the individual's personal physician stating what limitations (if any) the medication may impose on the individual.

B. Engineering Controls - Air Emissions

1. The **CONTRACTOR** shall provide all equipment and personnel necessary to monitor and control air emissions.

1.12 Personal Protective Equipment

A. General

1. The **CONTRACTOR** shall provide all project personnel with the necessary safety equipment and protective clothing, taking into consideration the chemical wastes at the site. The **CONTRACTOR** shall supply the **ENGINEER's** on-site personnel (average two people for the project duration) with PPE as specified. The **ENGINEER** will require specific manufacturers and styles of PPE, which are detailed in the Safety Equipment Specifications portion of this section. At a minimum, the **CONTRACTOR** shall supply
all project personnel with the following:

   a. Two (2) sets of cotton work clothing to include underwear, socks, work shirts, and work pants. Leather steel-toed work boots, and such other clothing and outer garments as required by weather conditions (e.g., insulated coveralls and winter jacket);

   b. Sufficient disposable coveralls;

   c. One pair splash goggles;

   d. Chemical-resistant outer and inner gloves;

   e. Rubber overshoes (to be washed daily);

   f. Hard hat;

   g. One full-face mask with appropriate canisters. The **ENGINEER** and the **DEPARTMENT** will supply their own full-face mask. The **CONTRACTOR** will supply the appropriate canisters to all on-site project personnel including the **ENGINEER** and the **DEPARTMENT**. The **CONTRACTOR** shall supply MSA canisters; and

h. For all project personnel involved with Level B protection, a positive-pressure SCBA or in-line air. A 5-minute escape bottle must be included with the in-line air apparatus.

B. Levels of Protection

1. It is planned that Levels C and D PPE will be required in this remediation. Although Levels A and B are not planned, site conditions may be encountered that require their use. The following sections described the requirements of each level of protection.

a. Level A Protection

1. PPE:

a. Supplied-air respirator approved by the Mine Safety and Health Administration (MSHA) and NIOSH. Respirators may be:

- Positive-pressure SCBA; or
- Positive-pressure airline respirator (with escape bottle for Immediately Dangerous to Life and Health [IDLH] or potential for IDLH atmosphere).

b. Fully encapsulating chemical-resistant suit.

c. Coveralls.

d. Cotton long underwear.*

e. Gloves (inner), chemical-resistant.

f. Boots, chemical-resistant, steel toe and shank. (Depending on suit construction, worn over or under suit boot.)

g. Hard hat (under suit).*

h. Disposal gloves and boot covers (worn over fully encapsulating suit).

i. Cooling unit.*

j. Two-way radio communications (inherently safe).*

* Optional

2. Criteria for Selection:

Meeting any of these criteria warrants use of Level A protection:

a. The chemical substance has been identified and requires the highest level of protection for skin, eyes, and the respiratory system based on:

- Measures (or potential for) high concentration of atmospheric vapors, gases, or particulates, or

- Site operations and work functions involves high potential for splash, immersion, or exposure to unexpected vapors, gases, or particulates of materials highly toxic to the skin.

b. Substances with a high degree of hazard to the skin are known or suspected to be present, and skin contact is possible.

c. Operations must be conducted in confined, poorly ventilated areas until the absence of substances requiring Level A protection is determined.

d. Direct readings on field Flame Ionization Detectors (FID) or Photoionization Detectors (PID) and similar instruments indicate high levels of unidentified vapors and gases in the air.

3. Guidance on Selection:

a. Fully encapsulating suits are primarily designed to provide a gas- or vapor-tight barrier between the wearer and atmospheric contaminants. Therefore, Level A is generally worn when high concentrations of airborne substances could severely effect the skin. Since Level A requires the use of SCBA, the eyes and respiratory system are also more protected.

Until air surveillance data become available to assist in the selection of the appropriate level of protection, the use of Level A may have to be based on indirect evidence of the potential for atmospheric contamination or other means of skin contact with severe skin affecting substances.

Conditions that may require Level A protection include:

- Confined spaces: Enclosed, confined, or poorly ventilated areas are conducive to the buildup of toxic vapors, gases, or particulates. (Explosive or oxygen-deficient atmospheres are also more probable in confined spaces). Confined-space entry does not automatically warrant wearing Level A protection, but should serve as a cue to carefully consider and to justify a lower level of protection.

- Suspected/known highly toxic substances: Various substances that are highly toxic, especially skin

absorption, for example, fuming corrosives, cyanide compounds, concentrated pesticides, Department of Transportation Poison "A" materials, suspected carcinogens, and infectious substances may be known or suspected to be involved. Field instruments may not be available to detect or quantify air concentrations of these materials. Until these substances are identified and concentrations measured, maximum protection may be necessary.

- Visible emissions: Visible air emissions from leaking containers or railroad/vehicular tank cars, as well as smoke from chemical fires and others, indicate high potential for concentrations of substances that could be extreme respiratory or skin hazards.

- Job Functions: Initial site entries are generally walk-throughs, in which instruments and visual observations are used to make a preliminary evaluation of the hazards.

In initial site entries, Level A should be worn when:

- There is a probability for exposure to high concentrations of vapors, gases, or particulates; and

- Substances are known or suspected of being extremely toxic directly to the skin or by being absorbed.

Subsequent entries are to conduct the many activities needed to reduce the environmental impact of the incident. Levels of protection for later operations are based not only on data obtained from the initial and subsequent environmental monitoring, but also on the probability of contamination and ease of decontamination.

Examples of situations where Level A has been worn are:

- Excavating of soil to sample buried drums suspected of containing high concentrations of dioxin;

- Entering a cloud of chlorine to repair a valve broken in a railroad accident;

- Handling and moving drums known to contain oleum; and

- Responding to accidents involving cyanide, arsenic, and undiluted pesticides.

b. The fully encapsulating suit provides the highest degree of protection to skin, eyes, and respiratory system if the suit material resists chemicals during the time the suit is worn. While Level A provides maximum protection, all suit material may be rapidly permeated and degraded by certain chemicals from extremely high air concentrations, splashes, or immersion of boots or gloves in

concentrated liquids or sludges. These limitations should be recognized when specifying the type of fully encapsulating suit. Whenever possible, the suit material should be matched with the substance it is used to protect against.

b. Level B Protection

1. PPE:

a.. Positive-pressure SCBA (MSHA/NIOSH approved); or

b. Positive-pressure air line respirator (with escape bottle for IDLH or potential for IDLH atmosphere) MSHA/NIOSH approved;

c. Chemical-resistant clothing (overalls and long-sleeved jacket; coveralls or hooded, one- or two-piece chemical-splash suit; disposable chemical-resistant, one-piece suits);

d. Cotton long underwear;*

e. Coveralls;

f. Gloves (outer), chemical-resistant;

g. Gloves (inner), chemical-resistant;

h. Boots (inner), leather work shoe with steel toe and shank;

I. Boots (outer), chemical-resistant, (disposable);

j. Hard hat (face shield*);

k. 2-way radio communication;* and

l. Taping between suit and gloves, and suit and boots.

*Optional

2. Criteria for Selection:

Any one of the following conditions warrants use of Level B Protection:

a. The type and atmospheric concentration of toxic substances have been identified and require a high level of respiratory protection, but less skin protection than Level A. These atmospheres would:

- Have IDLH concentrations; or
- Exceed limits of protection afforded by an air-purifying mask; or

- Contain substances for which air-purifying canisters do not exist or have low removal efficiency; or

- Contain substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard.

b. The atmosphere contains less than 19.5% oxygen.

c. Site operations make it highly unlikely that the work being done will generate high concentrations of vapors, gases or particulates, or splashes of material that will affect the skin of personal wearing Level B protection.

d. Working in confined spaces.

e. Total atmospheric concentrations, sustained in the breathing zone, of unidentified vapors or gases range from 5 ppm above background to 500 ppm above background as measured by direct reading instruments such as the FID or PID or similar instruments, but vapors and gases are not suspected of containing high levels of chemicals toxic to skin.

3. Guidance on Selection Criteria:

Level B equipment provides a reasonable degree of protection against splashes and to lower air contaminant concentrations, but a somewhat lower level of protection to skin than Level A. The chemical-resistant clothing required in Level B is available in a wide variety of styles, materials, construction detail, permeability, etc. Taping joints between the gloves, boots and suit, and between hood and respirator reduces the possibility for splash and vapor or gas penetration. These factors all affect the degree of protection afforded. Therefore, the SO should select the most effective chemical-resistant clothing based on the known or anticipated hazards and/or job function. (It is anticipated that Level B protection will not be required under this contract.)

Level B does provide a high level of protection to the respiratory tract. Generally, if SCBA is required, Level B clothing rather than a fully encapsulating suit (Level A) is selected based on needing less protection against known or anticipated substances affecting the skin. Level B skin protection is selected by:

a. Comparing the concentrations of known or identified substances in air with skin toxicity data;

b. Determining the presence of substances that are destructive to or readily absorbed through the skin by liquid splashes, unexpected high levels of gases, vapor or particulates, or other means of direct contact; and

c. Assessing the effect of the substance (at its measured air concentrations or splash potential) on the small area of the head and neck left unprotected by chemical-resistant clothing.

For initial site entry at an open site, Level B protection should protect site personnel, providing the conditions described in selecting Level A are known or judged to be absent.

c. Level C Protection

1. PPE

a.. Full-face, air-purifying, cartridge- or canister-equipped respirator (MSHA/NIOSH approved) with cartridges appropriate for the respiratory hazards;

b. Chemical-resistant clothing (coveralls, hooded, one-piece or two-piece chemical splash suit; chemical-resistant hood and apron; disposable chemical-resistant coveralls);

c. Coveralls;

d. Cotton long underwear;*

e. Gloves (outer), chemical-resistant;

f. Gloves (inner), chemical-resistant;

g. Boots (inner), leather work shoes with steel toe and shank;

h. Boots (outer), chemical-resistant (disposable);*

i. Hard hat (face shield);*

j. Escape SCBA of at least 5-minute duration;

k. 2-way radio communications (inherently safe);* and

l. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection

Meeting all of these criteria permits use of Level C protection:

a. Measured air concentrations of identified substances will be reduced by the respirator to, at or below, the substance's Threshold Limit Value (TLV) or appropriate occupational exposure limit and the concentration is within the service limit of the canister.

b. Atmospheric contaminant concentrations do not exceed IDLH levels.

c. Atmospheric contaminants, liquid splashes, or other direct contact will not adversely affect the small area of the skin left unprotected by chemical-resistant clothing.

d. Job functions do not require SCBA.

e. Total readings register between background and 5 ppm above background as measured by instruments such as the FID or PID.

f. Oxygen concentrations are not less than 19.5% by volume.

g. Air will be monitored continuously.

3. Guidance on Selection Criteria

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing air-purifying devices. The air-purifying device must be a full-face mask (MSHA/NIOSH approved) equipped with a cartridge suspended from the chin or on a harness. Cartridges must be able to remove the substances encountered.

A full-face, air-purifying mask can be used only if:

a. Oxygen content of the atmosphere is at least 19.5% by volume;

b. Substance(s) is identified and its concentrations(s) measured;

c. Substance(s) has adequate warning properties;

d. Individual passes a qualitative fit-test for the mask; and

e. Appropriate cartridge is used, and its service limits concentration is not exceeded.

An air monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators (Level C). Continual surveillance using direct-reading instruments and air sampling is needed to detect any changes in air quality necessitating a higher level of respiratory protection. Total unidentified vapor/gas concentrations exceeding 5 ppm above background require Level B.

d. Level D Protection

1. PPE:

a. Coveralls, chemical resistant;

b. Gloves (outer), chemical resistant;

c. Gloves (inner), chemical resistant;*

d. Boots (inner), leather work shoes with steel toe and shank;

e. Boots (outer), chemical resistant (disposable);*

f. Hard hat;

g. Face shield;*

h. Safety glasses with side shields or chemical splash goggles;* and

i. Taping between suit and boots, and suit and gloves.

* Optional

2. Criteria for Selection:

a. No atmospheric contaminant is present.

b. Direct reading instruments do not indicate any readings above background.

c. Job functions have been determined not to require respirator protection.

3. Guidance on Selection Criteria:

Level D protection is distinguished from Level C protection in the requirement for respiratory protection. Level D is used for non-intrusive activities or intrusive activities with continuous air monitoring. It can be worn only in areas where there is no possibility of contact with contamination.

e. Anticipated Levels of Protection

1. It is anticipated that most of the work shall be performed in Level D. A respirator shall be immediately available in the event that air monitoring indicates an upgrade to Level C is required. The determination of the proper level of protection for each task shall be the responsibility of the **CONTRACTOR**. These task specific levels of protection shall be stated in the **CONTRACTOR's** HASP.

C. Safety Equipment Specifications

Note: Prior to purchasing any equipment or supplies required by this HASP, the **CONTRACTOR** shall notify the **ENGINEER** of the type, model and manufacturer/supplier of that particular safety equipment he is proposing to use or purchase for use on this project. The specifications for PPE that the **CONTRACTOR** is to supply to the **ENGINEER** and which differ from the minimum requirements shown below are provided at the end of this section.

D. Self-Contained Breathing Apparatus

1. The **CONTRACTOR** shall provide positive-pressure SCBA for possible upgrades in respiratory protection. The **CONTRACTOR** shall further supply all the SCBA for all field personnel for the duration of normal work activities. The units must be a MSHA/NIOSH-approved pressure-demand type with a 30-minute service life, manufactured/supplied by Scott, MSA, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators in accordance with OSHA regulations (29 CFR 1910.13-4) and as recommended by the manufacturer.

E. Disposable Coveralls

1. The **CONTRACTOR** shall provide, as necessary, protective coveralls for all project personnel each day with extra sets provided for authorized visitors. The coveralls shall be of the disposable type made of Tyvek or equivalent material, and shall be manufactured/supplied by Durafab, Koppler, or other appropriate manufacturers. To protect project personnel from exposure to liquids, splash-resistant suits (Saranex suits, from appropriate manufacturers) shall be provided. Ripped suits will be immediately replaced after all necessary decontamination has been completed to the satisfaction of the SO.

F. Hard Hat

1. The **CONTRACTOR** shall provide and maintain one hard hat per person on site (authorized visitors included). The hard hats shall comply with OSHA Health and Safety Standards (29 CFR 1910.135).

G. Face Shields

1. The **CONTRACTOR** shall provide and maintain one face shield per person on site. The face shields shall be of the full face type meeting OSHA Health and Safety Standards (29 CFR 1910.133) and shall have brackets for mounting on hard hats. Hard hats and face shields shall be from the same manufacturer to ensure proper fit and shall be manufactured/supplied by Bullard, Norton, or other appropriate manufacturers.

H. Work Clothing

1. The **CONTRACTOR** shall provide a minimum of two sets of work clothing per personnel to allow for changing if contaminated. The work clothing shall include a minimum of underwear, socks, work shirts, work pants, and other clothing as weather conditions dictate. All work clothes shall be put on clean, before entering the site and shall not be kept in same lockers as the workers street clothes. All project personnel shall shower and change to street clothing prior to leaving the site. All contaminated work clothing shall be laundered on site with wash water drained to the decontamination water holding tank.

I. Escape-Type Respirator

1. The **CONTRACTOR** shall provide and maintain one self-contained breathing escape-type respirator per person working on site. The small self-contained device shall be capable of providing oxygen to the worker while protecting an escaping worker from toxic gases. The respirator shall be made by Scott, MSA, or other appropriate manufacturer. The **CONTRACTOR** shall inspect and ensure all devices are in working order before issuing to personnel. Employees must be trained to use equipment prior to being allowed to work on site and carry the escape-type respirator with them. An escape-type respirator must be provided if positive-pressure SCBA are not part of the ensemble worn by each person on site.

J. Full Face Organic Vapor Respirator

1. The **CONTRACTOR** shall provide and maintain a dedicated air-purifying organic vapor respirator per person working in hazardous work and neutral work zones. The respirator shall be of the full-face canister type with cartridges appropriate for the respiratory hazards. Respirators and cartridges shall be MSHA/NIOSH approved, manufactured/supplied by MSA, Scott, or other appropriate manufacturers. The **CONTRACTOR** shall inspect and maintain respirators and canisters in accordance with OSHA regulations (29 CFR 1910.134) and in accordance with manufacturer's instructions. The **CONTRACTOR** shall ensure that proper fit testing training and medical surveillance of respirator users is in accordance with OSHA regulations (29 CFR 1910.134).

K. Gloves (outer)

1. The **CONTRACTOR** shall supply a minimum of one pair of gloves per workman in areas where skin contact with hazardous material is possible. Work gloves shall consist of nitrile (NCR) or Neoprene material. Other gloves may be selected if required based on the potential chemical present. Cotton liners will be provided by the **CONTRACTOR**
during cold weather.

L. Gloves (inner)

1. The **CONTRACTOR** shall supply Latex or equivalent surgical gloves to be worn inside the outer gloves.

M. Boots (inner)

1. The **CONTRACTOR** shall supply one pair of safety shoes or boots per workman and shall be of the safety-toe type meeting the requirements of 29 CFR 1910.136.

N. Boots (outer)

1. The **CONTRACTOR** shall provide and maintain one pair of overshoes for the on-site person entering a hazardous work area. The overshoes shall be constructed of rubber and shall be 12 inches high minimum.

PERSONAL PROTECTIVE EQUIPMENT SPECIFICATIONS				
Description	**Manufacturer**	**Model Number**	**Size**	**Comments**
Tyvek coveralls	Kappler/Abanda	1427/1428	xl/lg	NA
Saranex coveralls	Kappler/Abanda	77427/77428/77434	xl/lg	NA
Sijal acid suit	Chemtex Bata	91522-G	xl/lg	NA
Surgical gloves	Best	7005	xl/lg	NA
Neoprene gloves	Edmont	8-354	xl/lg	NA
Nitrile gloves	Granet	1711	10	NA
Butyl gloves	North	B-161	10	NA
Viton gloves	North	F-124	10/11	NA
Long gauntlet neoprene	Edmont	19-938	xl	NA
Cotton work gloves	North	Grip-N/K511M	men's	or equal
Latex booties	Rainfair	1250-Y	xl	NA
PAPR pesticide cartridges	Racal	AP-3	NA	NA
PAPR asbestos cartridges	Racal	SP-3	NA	NA
APR organic cartridges	MSA	GMC-H	NA	NA
APR asbestos cartridges	MSA	Type H	NA	NA
APR pesticide cartridges	MSA	GMP	NA	NA

1.13 Personnel Hygiene and Decontamination

A. On-Site Hygiene Facility

1. The **CONTRACTOR** shall provide a hygiene facility on site. The hygiene facility shall include the following:

   - Adequate lighting and heat;
   - Shower facilities for project personnel;
   - Laundry facilities for washing work clothes and towels;
   - Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
   - Clean and "dirty" locker facilities; and

- Storage area for work clothing, etc.

a. Portable "Boot Wash" Decontamination Equipment

1. The **CONTRACTOR** shall provide a portable decontamination station, commonly referred to as a "Boot Wash" facility for each hazardous work zone requiring decontamination for project personnel. These facilities shall be constructed to contain spent wash water, contain a reservoir of clean wash water, a power supply to operate a pump for the wash water, a separate entrance and exit to the decontamination platform, with the equipment being mobile, allowing easy transport from one hazardous work zone to the next. All such wash water shall be disposed of at the dewatering facility. An appropriate detergent such as trisodium phosphate shall be used.

b. Personnel Decontamination

1. The **CONTRACTOR** shall provide full decontamination facilities at all hazardous zones. Decontamination facilities must be described in detail in the HASP.

c. Disposal of Spent Clothing and Material

1. Contaminated clothing, used respirator cartridges and other disposable items will be put into drums/containers for transport and proper disposal in accordance with TSCA and RCRA requirements.

2. Containers/55-gallon capacity drums shall conform to the requirements of 40 CFR Part 178 for Transportation of Hazardous Materials. The containers/drums containing excavated and other hazardous material shall be transported by the **CONTRACTOR** to the staging area.

3. The **CONTRACTOR** is responsible for the proper container packaging, labeling, transporting, and disposal.

1.14 Equipment Decontamination

A. General

1. All equipment and material used in this project shall be thoroughly washed down in accordance with established federal and state procedures before it is removed from the project. With the exception of the excavated materials, all other contaminated debris, clothing, etc. that cannot be decontaminated shall be disposed at the **CONTRACTOR's** expense by a method permitted by appropriate regulatory agencies. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization the unit prices bid for disposal of decontamination liquids or as otherwise directed on this project. All vehicles and equipment used in the "Dirty Area" will be decontaminated to the satisfaction of the SO in the decontamination area on site prior to leaving the project. The **CONTRACTOR** will certify, in writing, that each piece of equipment has been decontaminated prior to removal from the site.

2. Decontamination shall take place within the designated equipment and materials decontamination area. The decontamination shall consist of degreasing (if required), followed by high-pressure, hot-water cleaning, supplemented by detergents as appropriate. Wash units shall be portable, high-pressure with a self-contained water storage tank and pressurizing system (as required). Each unit shall be capable of heating wash waters to 180 degrees Fahrenheit and providing a nozzle pressure of 150 psi.

3. Personnel engaged in vehicle decontamination will wear protective clothing and equipment as determined in the HASP. If the **CONTRACTOR** cannot or does not satisfactorily decontaminate his tools or equipment at the completion of the project, the **CONTRACTOR** will dispose of any equipment which cannot be decontaminated satisfactorily and will bear the cost of such tools and equipment and its disposal without any liability to the **ENGINEER**. At the completion of the project the **CONTRACTOR** shall completely decontaminate and clean the decontamination area.

B. Decontamination Station

1. The **CONTRACTOR** shall construct a decontamination station as described. The decontamination station shall be located in the Contamination Reduction Zone and shall be used to clean all vehicles leaving the Exclusion Zone prior to entering the Support Zone or leaving the site.

2. Each decontamination pad will be equipped with a drain system and holding tank on a properly graded area that has no deleterious material. The **CONTRACTOR** shall obtain and analyze one soil sample at the area where the decontamination pad is to be built and one soil sample after the pad has been dismantled, as directed by the Engineer. The cost associated with the samples shall be included in the cost of providing health and safety at the site.

3. Shop drawings of the decontamination pad shall be submitted to the **ENGINEER** for approval.

4. The **CONTRACTOR** shall be responsible for the provision of an adequately equipped decontamination pad which shall meet the following requirements:

   a. Adequate dimensions to contain wash water and debris from the largest sized vehicles to be utilized in this contract. All vehicles and construction equipment leaving a contaminated zone shall be decontaminated.

   b. Perimeter to be curbed and provided with splash guards.

   c. 40 mil impervious HDPE membrane is required to prevent seepage into the ground.

   d. Sumps, pumping facilities, and temporary storage facilities to be adequate for anticipated use.

   e. Temporary storage facility may be mobile tankers or suitable fixed tanks. Fixed tanks shall be located within secondary containment areas capable of containing 100% of the tank capacity, or 110% of the largest tank where the secondary containment area holds more than one tank. The secondary containment area shall have a permeability of not more than 1.0×10^{-7} cm/sec.

f. The decontamination pad is to be located at the exit of each contaminated zone such that previously non-contaminated areas are not contaminated during remedial activities. This may require the construction and use of multiple decontamination pads.

g. The **CONTRACTOR** shall place a minimum of six (6) inches of sand under the decontamination pad.

h. There shall be side wall panels, six (6) feet high minimum on two sides to prevent over spray.

C. The **CONTRACTOR** shall clean the decontamination pad after daily use. No contamination shall be left behind. The **CONTRACTOR** will be required to dismantle, remove and properly dispose of the pad at their own expense.

1.15 Air Monitoring Program

A. General

1. The **CONTRACTOR** shall develop, as part of the HASP, an air monitoring program (AMP). The purpose of the AMP is to determine that the proper level of personnel protective equipment is used, to document that the level of worker protection is adequate, and to assess the migration of contaminants to off-site receptors as a result of site work.

2. The **CONTRACTOR** shall supply all personnel, equipment, facilities, and supplies to develop and implement the air monitoring program described in this section. Equipment shall include at a minimum real-time aerosol monitors, depending on work activities and environmental conditions.

3. The **CONTRACTOR's** AMP shall include both real-time and documentation air monitoring (personal and area sampling as needed). The purpose of real-time monitoring will be to determine if an upgrade (or downgrade) of PPE is required while performing on-site work and to implement engineering controls, protocols, or emergency procedures if **CONTRACTOR**-established action levels are encountered.

4. The **CONTRACTOR** shall also use documentation monitoring to ensure that adequate PPE is being used and to determine if engineering controls are mitigating the migration of contamination to off-site receptors. Documentation monitoring shall include the collection and analysis of samples for total nuisance dust.

5. To protect the public in the neighboring residential neighborhood, the **CONTRACTOR** must include in the AMP provisions for suspending work and implementing engineering controls based upon detectable odors, as well as upon instrument monitoring results.

6. During the progress of active remedial work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation with real-time instrumentation prior to personnel entering these areas. Sampling at the hazardous work site will be conducted on a continuous basis. Any departures from general background will be reported to the SO prior to entering the area. The SO will determine when and if operations should be shut down.

7. Air monitoring (both real time and documentation monitoring) shall be conducted by a minimum of one dedicated person with communication to the foreman whenever intrusive activities (such as excavation, tank removal, and soil treatment) are performed in an exclusion zone. After completion of intrusive activities involving contaminated materials and removal of the exclusion zone, air monitoring may be discontinued.

8. Air monitoring equipment will be operated by personnel trained in the use of the specific equipment provided and will be under the control of the SO. A log of the location, time, type and value of each reading and/or sampling will be maintained. Copies of log sheets will be provided on a daily basis to the **ENGINEER's** on-site representative.

B. Action Levels

1. The **CONTRACTOR** is responsible for developing level of protection site action levels for organic vapors and/or inorganic species.

2. The SO, **CONTRACTOR**, and their personnel will be responsible for implementing, maintaining and enforcing the respirator program.

3. In addition to these on-site action levels, the following action levels will be established for work area and perimeter monitoring of particulates. If the following levels are attained at the perimeter of the exclusion zone, then work will cease until engineering controls bring levels down to acceptable limits. These levels are general and shall be used as minimum action levels. The **CONTRACTOR** shall develop site-specific work area and perimeter monitoring action levels based on contaminants found in the work areas.

Parameter	Action Level	Action
Total particulates	2.5 times background and/or greater than 150 $\mu g/m^3$	Work ceases until mitigated
Visible Dust	Visible dust as determined by the **ENGINEER**.	Work ceases until mitigated

The following action levels shall be used as minimum action levels for organic vapors and odors.

Parameter	Action Level	Action
Total Organic Vapors	5 ppm at work zone	Workers use respirators
	25 ppm at work zone	Work ceases until mitigated
Odors	Noticeable odors outside the exclusion zone as determined by the **ENGINEER**.	Work ceases until mitigated

C. Real-Time Monitoring

1. The **CONTRACTOR** shall submit a written copy of the real time air monitoring results for each Workday, by 10:00 a.m. the following Workday, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

2. Real-time monitoring shall be conducted using the following equipment:

3. Organic vapor photoionizers shall be Photovac TIP, total organic vapor analyzer as manufactured by Photovac International, 739B Park Avenue, Huntington, New York 11743 or equal. The **CONTRACTOR** shall provide one Photovac TIP for each and every hazardous work zone operation.

4. Particulate monitoring must be performed using real-time particulate monitors (MiniRam Model MIEPDM-3, or equal) and shall monitor particulate matter in the range of 0-10 microns diameter (PM_{10}) with the following minimum performance standards:

   Object to be measured: Dust, Mists, Aerosols
   Measurement Ranges: 0.001 to 400 mg/m³ (1 to 400,000 µg/m³)
   Precision (2-sigma) at constant temperature:
   +/- 10 µg/m³ for one second averaging; +/- 1.5 µg/m³ for sixty second averaging
   Accuracy:
   +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 µm, g= 2.5, as aerosolized)
   Resolution: 0.1% of reading or 1 µg/m³, whichever is larger
   Particle Size Range of Maximum Response: 0.1-10 µ
   Total Number of Data Points in Memory: 10,000
   Logged Data:
   Each Data Point: average concentration, time/date, and data point number
   Run Summary:
   overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
   Alarm Averaging Time (user selectable):
   real-time (1-60 seconds) or STEL (15 minutes)
   Operating Time: 48 hours (fully charged NiMH battery); continuously with charger
   Operating Temperature: -10 to 50°C (14 to 122°F)

   Automatic alarms are suggested.

5. Particulate levels will be monitored and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task. A monitor such as the personal DataRAM, manufactured by Monitoring Instruments for the Environment, Inc., or equivalent, can be used as a real time particulate screening tool. Although the instrument's design does not allow it to make a sharp differentiation of particulates at the PM_{10} standard, the instrument could be used in the passive mode without a pump to provide readings in the 0.1 to 10µ range in the immediate vicinity of construction activities.

6. Monitor the air, using the same equipment, for 10-15 minutes upwind of the work site to establish background level. The background level shall be established before the start of each shift every day. In the event that downwind particulates are detected at levels in excess of 150 ug/m^3 or 2.5 times the established background level at the work site, re-measure the background concentrations upwind of the work zone using the same equipment. If the measured particulate level at the work zone is 100 ug/m^3 above background, monitor the downwind site perimeter and implement additional dust controls in the work zone. Continue to take hourly measurements of the upwind background concentrations and compare such concentrations with the particulate level at the work zone, until the downwind level at the work zone is less than 100 ug/m^3 above the upwind level. If at any time the measured particulate level at the work zone is more than 150 ug/m^3 over background concentration, the CONTRACTOR shall immediately suspend work at the site, promptly notify the Safety Officer, and implement suitable corrective action or engineering controls before work resumes.

7. Real-time monitoring will be conducted at any excavation of contaminated soil or sediments. Real-time monitoring will also be conducted at perimeter locations including an upwind (background) and three downwind locations. A background reading will be established daily at the beginning of the work shift. If the wind direction changes during the course of the day, a new background reading will be made. Downwind readings at the perimeter will be made when **CONTRACTOR** action levels have been exceeded at the excavation face or at a minimum of twice a day.

8. If action levels are exceeded at the perimeter location for fugitive dust, work must be suspended and engineering controls must be implemented to bring concentrations back down to acceptable levels.

9. Construction activities generate dust which could potentially transport contaminants off site. There may be situations when visible dust is being generated and leaving the site and the monitoring equipment does not measure PM_{10} at or above the action level. Therefore, if dust is observed leaving the working site, additional dust suppression techniques must be employed by the **CONTRACTOR**.

D. Documentation Monitoring

1. Documentation monitoring will be conducted at the perimeter at a minimum of four locations (one upwind and three downwind) for total dust. Documentation monitoring will be conducted only during excavation, consolidation, staging, removal, or decontamination activities (i.e., intrusive activities).

   a. Collect total nuisance dust using PVC collection filter and personnel sampling pump and analyze gravimetrically according to NIOSH 89-127 Method 0500.

   b. Documentation samples will be collected at established perimeter locations. The four locations will be chosen according to site activities and expected wind direction.

   c. The perimeter locations will be established and marked with high visibility paint or flagging at approximately equidistant points around the site. Samples will be collected at a height of 6 feet above ground surface.

d. Documentation samples will be collected continuously, during the normal work hours when activities are occurring on site. At the end of the week, one days worth of sampling (i.e. three downwind locations and one upwind location) will be selected by the Engineer for analysis by the Contractor.

e. The documentation samples will be collected over an eight (8) hour work period.

f.. In addition to perimeter monitoring, personnel documentation samples will be collected on site once a week. On-site samples will be collected by choosing "high risk" workers to wear appropriate collection media for pesticides, metals, and particulate. "High risk" workers are those who are most likely to encounter contamination on a particular task. At a minimum, two high risk workers will be chosen to wear collection media for a particular day each week and the media will be analyzed with the documentation air monitoring samples.

g. The **CONTRACTOR** shall submit a written copy of the documentation air monitoring results within 7 days of sampling, which shall include an appropriately scaled map of the Work area depicting sample locations, wind direction and other pertinent meteorological data: date; time; analytical results; applicable standards and engineering controls implemented (if necessary).

h. The documentation sampling submitted shall also identify the "high risk" workers chosen to wear appropriate collection media for contaminants; date media was worn; task involved; analytical results and applicable standards.

i. Payment for air monitoring will not be approved until the above submittals have been received and approved by the **ENGINEER**.

E. Community Air Monitoring

1. Real-time air monitoring, for particulate levels at the perimeter of the work area is necessary:

   a. Particulates should be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 150 ug/m^3 greater than the upwind particulate level, then dust suppression techniques must be employed. All readings must be recorded and be available for **ENGINEER**'s review.

2. The **CONTRACTOR** shall install a meteorological station on site that will be capable of recording, at a minimum, wind velocity and direction.

1.16 Emergency Equipment and First Aid Requirements

A. Communications

1. The **CONTRACTOR** shall provide telephone communication at the site field office. Emergency numbers, such as police, sheriff, fire, ambulance, hospital, poison control, NYSDEC, EPA, NYSDOH, and utilities, applicable to this site shall be prominently posted near the telephone.

2. The **CONTRACTOR** shall establish a signaling system for emergency purposes.

B. Emergency Shower and Emergency Eye Wash

1. The **CONTRACTOR** shall supply and maintain one portable eyewash/body wash facility per active hazardous work zone. The facility shall have a minimum water capacity of 10 gallons and shall conform to OSHA regulations 29 CFR 1910.151. The portable eyewash/body wash facility shall be manufactured/ supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

C. Fire Extinguishers

1. The **CONTRACTOR** shall supply and maintain at least one fire extinguisher in the **CONTRACTOR's** office and one at each hazardous work zone. The fire extinguisher shall be a 20-pound Class ABC dry fire extinguisher with UL-approval per OSHA Safety and Health Training Standards 29 CFR 1910.157. The fire extinguisher shall be manufactured/supplied by Direct Safety Company, Lab Safety Supply Company, or other appropriate suppliers.

D. First Aid Kit

1. The **CONTRACTOR** shall supply and locate in his project office and at each and every hazardous work zone one 24-unit (minimum size) "industrial" or "Contractor" first aid kit, required by OSHA requirements 29 CFR 1910.151. The first aid kit shall be manufactured/supplied by Norton, Scott, or other appropriate suppliers.

E. Emergency Inventory

1. In addition to those items specified elsewhere, the SO will maintain the following inventory of equipment and protective clothing for use at the site in the event of emergencies.

    a. Washable coveralls;

    b. Gloves (outer);

    c. Gloves (inner);

    d. SCBA;

    e. Escape SCBA (authorized visitor use);

    f. Face shields;

    g. Safety glasses;

    h. Respirators and appropriate cartridges;

    i. Disposable coveralls;

    j. Chemical-resistant boots and latex boot covers;

    k. Hard hats;

    l. Bottled breathing air; and

m. Rain suits.

1.17 Emergency Responses/contingency Plan and Procedures

A. Daily Work

1. During the progress of work, the **CONTRACTOR** will monitor the quality of the air in and around each active hazardous operation prior to personnel entering these areas. Sampling shall be conducted on a continuous basis. Based on the air monitoring data, the proper level of protection will be chosen by the SO.

B. Emergency Vehicle Access

1. In the event that emergency services vehicles (police, fire, ambulance) need access to a location which is blocked by the working crew operations, those operations (equipment, materials, etc.) will be immediately moved to allow those vehicles access. Emergency crews will be briefed as to site conditions and hazards by the SO. All vehicles and personnel will be decontaminated prior to leaving the site.

2. The **CONTRACTOR** shall schedule a site briefing with the local Fire Department at the completion of mobilization to familiarize emergency response personnel with his operations and site layout.

C. Personal Injury Response Plan

1. In cases of personal injuries, the injured person or the crew personnel in charge will notify the SO. The SO will assess the seriousness of the injury, give first aid treatment if advisable, consult by telephone with a physician if necessary, and arrange for hospitalization if required. The SO will arrange for an ambulance if required.

2. If soiled clothing cannot be removed, the injured person will be wrapped in blankets for transportation to the hospital.

3. Personnel, including unauthorized personnel, having skin contact with chemically contaminated liquids or soils shall be flushed with water after any wet or soiled clothing has been removed.

4. These personnel should be observed by the SO to ascertain whether there are any symptoms resulting from the exposure. If there is any visible manifestation of exposure such as skin irritation, the project personnel will refer to a consulting physician to determine whether the symptoms were the result of a delayed or acute exposure, a secondary response to exposure such as skin infection, or occupational dermatitis. All episodes of obvious chemical contamination will be reviewed by the SO in order to determine whether changes are needed in work procedures.

D. Route to the Hospital

1. The **CONTRACTOR** shall post in conspicuous places in the Support Zone a map with written directions to the nearest hospital or emergency medical treatment facility.

E. Fire Service

1. The **CONTRACTOR** will make arrangements to take immediate fire fighting and fire protection measures with the local Fire Chief. If there is a fire, the crewmen or their person in charge will immediately call the SO. The SO will immediately call the fire personnel.

2. The air downwind from any fire or explosion will be monitored immediately in order to protect workers and the nearby community. If personal injuries result from any fire or explosion, the procedures outlined in the Personal Injury Response Plan are to be followed.

F. Master Telephone List

1. The attached master telephone list will be completed and prominently posted at the field office. The list will have telephone numbers of all project personnel, emergency services including hospital, fire, police, and utilities. In addition, two copies with telephone numbers are to be given to the **DEPARTMENT** for emergency reference purposes.

Emergency Service		Telephone Number
Fire Department		911
Police Department		911
Ambulance		911
Hospital/Emergency Care Facility		To be determined
Poison Control Center		(800) 336-6997
Chemical Emergency Advice (CHEMTREC)		(800) 424-9300
NYSDEC Albany Office	Work Hours	To be determined
	After Hours	To be determined
NYSDEC Regional Office	Work Hours	To be determined
County Dept. of Health		To be determined
New York State Dept. of Health - Albany		To be determined
New York State Dept. of Health - Regional		To be determined

1.18 Heat Stress Monitoring

A. Site personnel who wear protective clothing allow body heat to be accumulated with an elevation of the body temperature. Heat cramps, heat exhaustion, and heat stroke can be experienced, which, if not remedied, can threaten life or health. Therefore, an American Red Cross Standard First Aid book or equivalent will be maintained on site at all times so that the SO and site personnel will be able to recognize symptoms of heat emergencies and be capable of controlling the problem.

B. When protective clothing is worn, especially Levels A and B, the suggested guidelines for ambient temperature and maximum wearing time per excursion are:

Ambient Temperature (°F)	Maximum Wearing Time Per Excursion (Minutes)
Above 90	15
85 to 90	30
80 to 85	60
70 to 80	90
60 to 70	120
50 to 60	180

C. One method of measuring the effectiveness of employees' rest-recovery regime is by monitoring the heart rate. The "Brouha guideline" is one such method:

- During a 3-minute period, count the pulse rate for the last 30 seconds of the first minute, the last 30 seconds of the second minute, and the last 30 seconds of the third minute.
- Double the count.

D. If the recovery pulse rate during the last 30 seconds of the first minute is at 110 beats/minute or less and the deceleration between the first, second, and third minutes is at least 10 beats/minute, the work-recovery regime is acceptable. If the employee's rate is above that specified, a longer rest period is required, accompanied by an increased intake of fluids.

E. In the case of heat cramps or heat exhaustion, "Gatorade" or its equivalent is suggested as part of the treatment regime. The reason for this type of liquid refreshment is that such beverages will return much-needed electrolytes to the system. Without these electrolytes, body systems cannot function properly, thereby increasing the represented health hazard.

F. This liquid refreshment will be stored in a cooler at the edge of the decontamination zone in plastic squeeze bottles. The plastic bottles will be marked with individual's names. Disposable cups with lids and straws may be used in place of the squeeze bottles. Prior to drinking within the decontamination zone, the project personnel shall follow the following decontamination procedures:

1. Personnel shall wash and rinse their outer gloves and remove them.

2. Personnel shall remove their hard hats and respirators and place on table.

3. Personnel shall remove their inner gloves and place them on table.

4. Personnel shall wash and rinse their face and hands.

5. Personnel shall carefully remove their personal bottle or cup from the cooler to ensure that their outer clothes do not touch any bottles, cups, etc.

6. The used bottle or cups will not be returned to the cooler, but will be placed in a receptacle or container to be cleaned or disposed of.

7. Personnel shall replace their respirators, hard hats, gloves and tape gloves prior to re-entering the hazardous zone.

G. When personnel are working in situations where the ambient temperatures and humidity are high--and especially in situations where protection Levels A, B, and C are required--the SO must:

- Assure that all employees drink plenty of fluids ("Gatorade" or its equivalent);
- Assure that frequent breaks are scheduled so overheating does not occur; and
- Revise work schedules, when necessary, to take advantage of the cooler parts of the day (i.e., 5:00 a.m. to 1:00 p.m., and 6:00 p.m. to nightfall).

1.19 Cold Stress

A. Whole-body protection shall be provided to all site personnel that have prolonged exposure to cold air. The right kind of protective clothing shall be provided to site personnel to prevent cold stress. The following dry clothing shall be provided by the **CONTRACTOR** as deemed necessary by the SO:

- Appropriate underclothing (wool or other);
- Outer coats that repel wind and moisture;
- Face, head, and ear coverings;
- Extra pair of socks;
- Insulated safety boots; and
- Glove liners (wool) or wind- and water-repellant gloves.

B. The SO will use the equivalent chill temperature when determining the combined cooling effect of wind and low temperatures on exposed skin or when determining clothing insulation requirements.

C. Site personnel working continuously in the cold are required to warm themselves on a regular basis in the on-site hygiene facility. Warm, sweet drinks will also be provided to site personnel to prevent dehydration. The SO shall follow the work practices and recommendations for cold stress threshold limit values as stated by the 1991-1992 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices by the American Conference of Governmental Industrial Hygienists or equivalent cold stress prevention methods.

1.20 Logs, Reports and Record Keeping

A. Security Log

1. A daily log of security incidents and visitors granted access to the site will be maintained, as well as a log of all personnel entering and exiting the site.

2. All approved visitors to the site will be briefed by the SO on safety and security, provided with temporary identification and safety equipment, and escorted throughout their visit. Site visitors will not be permitted to enter a hazardous work zone.

3. Project site shall be posted, "Warning: Hazardous Work Area, Do Not Enter Unless Authorized," and access restricted by the use of a snow fence.

B. Safety Log

1. The **CONTRACTOR's** SO will maintain a bound safety logbook. The log will include all health and safety matters on site and include, but not be limited to, the following information:

- Date and weather conditions on site;
- A description of the proposed work for the day;
- Times when site personnel arrive and depart;
- Air monitoring data;
- Heat and/or cold stress monitoring;
- Decontamination procedures;
- Type and calibration of air sampling/monitoring equipment used;
- Safety meeting summaries; and
- Accidents.

C. Emergency Or Accident Report

1. Any emergency or accident will be reported immediately to the SO. The **ENGINEER** will also be notified. The **CONTRACTOR** will submit a written report immediately, but no later than 24 hours of its concurrence. The report will include, but not be limited to, the nature of the problem, time, location, areas affected, manner and methods used to control the emergency, sampling and/or monitoring data, impact, if any, to the surrounding community, and corrective actions the **CONTRACTOR** will institute to minimize future occurrences. All spills will be treated as emergencies.

D. Daily Work Report

1. The **CONTRACTOR** shall maintain a daily work report that summarizes the following:

   - Work performed,
   - Level of protection,
   - Air monitoring results,
   - Safety-related problems, and
   - Corrective actions implemented.

1.21 Posting Regulations

A. The **CONTRACTOR** will post signs at the perimeter of the Exclusion Zone that state "Warning, Hazardous Work Area, Do Not Enter Unless Authorized." In addition, a notice directing visitors to sign in will be posted at the project site. Also, the **CONTRACTOR** will post a sign stating that any questions about the site should be directed to the New York State Department of Environmental Conservation.

B. Safety regulations and safety reminders will be posted at conspicuous locations throughout the project area. The following safety regulations and safety reminders are at a minimum to be posted around the job site:

SAFETY REGULATIONS

(To be Posted for Project Personnel)

The main safety emphasis is on preventing personal **contact** with gases, soils, sludge and water. Towards that end, the following rules have been established.

Regulations

A. Eating, drinking and smoking on the site is PROHIBITED except in specifically designated areas.

B. All project personnel on the site must wear clean or new gloves daily.

C. If you get wet to the skin, you must wash the affected area with soap and water immediately. If clothes in touch with the skin are wet, these must be changed.

D. You must wash your hands and face before eating, drinking or smoking.

E. Observe regulations on washing and removing boots before entering the dressing room or a clean area and showering before going home.

Recommendations

A. Do not smoke on site with dirty hands; better yet, do not smoke.

B. Check for any personal habit which could get soil or water into your body.

   Examples: food off your fingers, wiping your face or nose with a dirty hand or running a dirty hand through your hair.

C. Check that any regularly worn clothing is clean. Examples include dirty watchbands, neck chains and a dirty liner on your safety helmet. Safety practices with poisonous chemicals can be summed up with a few words:

   Don't breathe in chemical odors and don't touch the water, soil, and sludge.

   If you do get dirty or wet, clean up as soon as possible.

SAFETY REMINDER FOR TOXIC CHEMICALS

(Post for Project Personnel)

Chemicals can't cause problems unless you breathe them, eat them, or put them on your skin.

Chemicals in Gases, Soils, Sludge, and Water

Don't let them go into your mouth, nose, or stay on your skin.

Use common personal hygiene.

A. Don't eat or drink on the site.

B. No smoking in the area of work.

C. Wear protective clothing.

D. Glove liners must be **clean**.

E. Wash your hands whenever practical. Wash before eating, drinking, or smoking.

F. Don't carry chemicals home to your family. (For example, on clothing, mud in the car, dirty hands.)

G. Follow strictly the HASP.

1.22 Community Protection Plan

A. General

1. Develop, as part of this HASP, a Community Protection Plan (CPP). The CPP shall outline those steps to be implemented to protect the health and safety of surrounding human population and the environment.

B. Air Monitoring

1. As part of the Air Monitoring Program, use real-time monitoring and documentation sampling as described in the Subpart "Air Monitoring Program" of this section to determine if off-site emission, as a result of site work, poses a threat to the surrounding community.

2. Provide real-time air monitoring for volatile compounds and particulate levels as the perimeter of the work area as necessary. Include the following:

   a. Volatile organic compounds must be monitored at the downwind perimeter of the work area on a continuous basis. If total organic vapor levels exceed 5 ppm above background, work activities shall be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.

   b. Particulates shall be continuously monitored at the 4 documentation sampling stations for a total of 4 dust monitors. If the downwind particulate level is 150 ug/m^3 greater than the upwind particulate level, dust suppression techniques shall be employed. All readings shall be recorded and be available for State (DEC & DOH) personnel to review.

C. Vapor Emission Response Plan

1. If the ambient air concentration of organic vapors exceed 5 ppm above background at the perimter of the work area, activities shall be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities may resume. If the organic vapor levels are greater than 5 ppm over background but less than 225 ppm over background at the perimeter of the work area, activities may resume provided the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

2. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities shall be shutdown. When work shutdown occurs, downwind air monitoring as directed by the SO shall be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

D. Major Vapor Emission

1. If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities shall be halted.

2. If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, the air quality shall be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

3. If efforts to abate the emission source are unsuccessful and if organic vapor levels are approaching 5 ppm above background and persist for more than 30 minutes in the 20 Foot Zone, the Major Vapor Emission Response Plan shall automatically be placed into effect.

4. However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background levels.

E. Major Vapor Emission Response Plan

1. Upon activation, the following shall be undertaken:

   a. All Emergency Response Contracts as listed in the Subpart titled "Emergency Response and Contingency Plan" paragraph titled "Telephone List."

   b. The local police authorities shall immediately be contacted by the SO and advised of the situation. Coordinate with local officials to arrange for notification and evacuation of the surrounding community.

   c. Frequent air monitoring shall be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring say be halted or modified by the SO.

2. The Air Monitoring Program shall include real-time air monitoring and shall be conducted at the perimeter of the site. Particulates should be continuously monitored upwind, downwind and within the Exclusion Zone at temporary particulate monitoring stations. If the downwind particulate level is more than 2.5 times greater than the upwind particulate level and greater than 150 ug/m^3, then dust suppression techniques shall be employed. This is a general action level. A site-specific action level shall be developed based on available analytical data. All readings shall be recorded and be available for ENGINEER, NYSDEC, and NYSDOH personnel to review.

3. Coordinate with local officials to arrange for notification and evacuation of the surrounding community in the event that off-site emissions pose a threat.

F. Odor

1. Foam active work areas to reduce odors if odor complaints are received from nearby residences during site activities. Odor masking agents or other odor control methods may be used subject to **ENGINEER's** review. Continue odor suppression during each day that odor complaints are received.

G. Off-Site Spill Response

1. Produce as part of the HASP a Spill Response Plan, also coordinated with local officials, in case of an off-site spill of either liquid or solid wastes. The plan shall include transportation routes and times, as well as the minimum requirements set forth in the Subpart titled "On-Site Spill Containment Plan." The driver shall be supplied with Material Safety Data Sheets (MSDSs), a 24-hour emergency phone number, and instructions for reporting emergencies to local agencies and the project site.

1.23 Confined Space Work

A. Evaluate the work areas and determine if there are any permit-required confined spaces. If the **CONTRACTOR** determines that personnel will not need to enter a permit-required confined space, appropriate measures to prevent personnel from entering such shall be taken. If the **CONTRACTOR** determines that personnel will need to enter a permit-required confined space, develop and implement a written permit-required confined space program.

B. The written program shall comply with 29 CFR 1910.146 and shall include the following:

1. Implement methods to prevent unauthorized entry;
2. Identify and evaluate the hazards of permit-required confined spaces before personnel entry;
3. Develop and implement procedures for safe permit-required confined space entry;
4. Provide the appropriate equipment to evaluate permit-required confined spaces;
5. Evaluate permit-required confined spaces when entry operations are conducted;
6. Provide at least one attendant outside the permit-required confined space which will be entered;
7. Designate the personnel who will have active roles in entry operations;
8. Develop and implement procedures for obtaining rescue and emergency services;
9. Develop and implement a system for the preparation, issuance, use, and collection of entry permits;
10. Develop and implement procedures to coordinate entry operations when personnel from more than one employer are working;
11. Develop and implement procedures for concluding the entry;
12. Review and revise entry operations if measures may not protect personnel; and
13. Review the permit-required confined space program to ensure personnel are protected from the hazards present.

C. Copes of the permit-required confined space program and employee training certificates shall be included with the HASP.

2. PRODUCTS

Not Used.

3. EXECUTION

Not Used.

*** END OF SECTION ***

SECTION 01000

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Summary of Work.

B. Owner furnished products. Not Used

C. Contractor use of site and premises.

D. Owner occupancy.

E. Contract Considerations:
   1. Application for Payment.
   2. Change procedures.]

F. Coordination.

G. Submittals:
   1. Submittal procedures.
   2. Shop drawings.
   3. Product data.

H. Quality Control:
   1. Quality assurance and control of installation.
   2. References.

I. Construction Facilities And Temporary Controls:
   1. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.
   2. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.
   3. Construction Facilities: Parking, progress cleaning, project signage, and temporary buildings.

J. Material And Equipment:
   1. Products.
   2. Storage and protection.

K. Starting Of Systems: Not Used

L. Contract Closeout:
   1. Closeout procedures.
   2. Final cleaning.
   3. Adjusting.

1.02 SUMMARY OF WORK

A. Refer to Section 01010 for Summary of Work.

1.03 OWNER FURNISHED PRODUCTS - NOT USED

1.04 CONTRACTOR USE OF SITE AND PREMISES

A. Limit use of site and premises
   1. Do not interfere with the operations of adjoining businesses.

B. Maintain emergency egress during entire contract period.

1.05 OWNER OCCUPANCY

A. The facility has been abandoned by the legal Owner. Coordination with Owner operations and schedules is not required

1.06 CONTRACT CONSIDERATIONS

A. Applications For Payment:
   1. Submit four copies of each application on form approved by the Department.
   2. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
   3. Payment Period: Once per month on work completed, or when a bid item is complete or one single payment at the end of the Contract.

B. Change Procedures:
   1. The Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by the Conditions of the Contract by issuing supplemental instructions.
   2. The Engineer may issue a Proposal Request or Notice of Change or Change Order which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 5 days.
   3. The Contractor may propose changes by submitting a request for change to the Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation. Document any requested substitutions in accordance with Article entitled Materials and Equipment in this Section.
   4. Stipulated Sum Change Order: Based on a Proposal Request or Notice of Change or Change Order and Contractor's fixed price quotation or Contractor's request for a Change Order as approved by Engineer.
   5. Work Directive Change: Engineer may issue a directive, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change

Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.

6. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
7. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
8. Change Order Forms: Provided by the Engineer.
9. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
10. Payment Includes: Full compensation for required labor, Products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.07 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation.

B. Coordinate completion and clean up of Work of separate Sections in preparation for Substantial Completion..

1.08 SUBMITTALS

A. Submittal Procedures:
1. Transmit each submittal with Engineer provided form.
2. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.
3. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and specification Section number, as appropriate.
4. Apply Contractor's stamp, signed or initialed certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
5. Schedule submittals to expedite the Project, and deliver to Engineer at address established in the Contract Documents. Coordinate submission of related items.
6. Identify all variations from Contract Documents, and product or system limitations which may be detrimental to successful performance of the completed Work.
7. Provide space for Contractor and Engineer review stamps.
8. Revise and resubmit submittals as required, identify changes made since previous submittal.
9. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report inability to comply with provisions.

B. Shop Drawings: Submit in the form of one reproducible transparency and three opaque reproduction. The reproducible and one opaque reproduction will be returned to the Contractor with comments.

C. Product Data:

1. Submit the number of copies which the Contractor requires, not to exceed 3, plus two copies which will be retained by the Engineer.
2. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.
3. After review, distribute in accordance with Submittal Procedures above and provide copies for Record Documents.

D. Manufacturer's Instructions:
1. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.
2. Identify conflicts between manufacturers' instructions and Contract Documents.

E. Manufacturer's Certificates:
1. When specified in individual specification Sections, submit two copies of manufacturers' certificate to Engineer for review, in quantities specified for Product Data.
2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
3. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

1.09 QUALITY CONTROL

A. Quality Assurance/Control of Installation:
1. Monitor quality control to produce Work of specified quality over:
   a. Subcontractors, Suppliers, and other persons or organizations employed by Contractor.
   b. products, services, site conditions, and workmanship.
2. Comply fully with manufacturers' instructions, including each step in sequence.
3. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
4. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
5. Perform Work by persons qualified to produce workmanship of specified quality, and with qualifications required by individual Sections.
6. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

B. References:
1. Conform to reference standard by date of issue current on date of Bid opening or date specified in product Sections.
2. Obtain copies of standards when required by Contract Documents.
3. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
4. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in reference documents.

C. Inspection and Testing Laboratory Services; The Department will appoint, employ, and pay for services of an independent firm to perform confirmatory testing. The Department shall emply full time inspection services during the performance of the work.

D. Manufacturers' Field Services and Reports:
   1. Submit qualifications of observer to Engineer 10 days in advance of required observations. Observer subject to approval of Engineer.
   2. When specified in individual specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, and adjust and balance of equipment as applicable, and to initiate instructions when necessary.
   3. Individuals to report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
   4. Submit report in duplicate within 30 days of observation to Engineer for review.

1.10 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

A. Temporary Electricity:
   1. Electric power service is not available at the site. Provide and pay for power service, as needed, from Utility source or by portable generator. No extra compensation will be paid for electrical generators

B. Temporary Lighting; Provide and maintain lighting , as needed, for construction operations and provide routine repairs.

C. Temporary Heat; Provide and pay for heat devices and heat as required to maintain specified conditions for construction operations.

D. Temporary Ventilation; Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

E. Telephone Service:
   1. The Contractor is to provide, maintain and pay for mobile telephone service to field as needed by the Contractor to complete the work.

F. Temporary Water Service; Provide, maintain and pay for suitable temporary water service required. as required to complete the work Exercise measures to conserve water. Provide temporary pipe insulation and heat tracing to prevent freezing whenever required.

G. Temporary Sanitary Facilities:
   1. Provide and maintain required facilities and enclosures. [Existing facilities shall not be used.]

H. Barriers:
   1. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
   2. Provide protection for plant life designated to remain. Replace damaged plants and shrubs.
   3. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

I. Water Control:

1. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
2. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

J. Exterior Enclosures:
1. Provide temporary weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for Products and Owners facility, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

K. Interior Enclosures:
1. Provide temporary partitions as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.
2. Construction: Temporary enclosures shall have closed joints and sealed edges at intersections with existing surfaces; maintain code required fire ratings.

L. Protection of Installed Work:
1. Protect installed Work and provide special protection where specified in individual specification Sections.
2. Provide temporary and removable protection for installed Products. Control activity in immediate work area to minimize damage.
3. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
4. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
5. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
6. Prohibit traffic from landscaped areas.

M. Security:
1. Provide security and facilities to protect Work, and existing facilities, and neighboring operations from unauthorized entry, vandalism, or theft.
2. Coordinate with neighbor’s security program.

N. Parking:
1. Arrange for/provide temporary surface parking areas to accommodate construction personnel.
2. When site space is not adequate, provide additional off- site parking.
3. Designate one parking space for the Engineer.

O. Progress Cleaning:
1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

3. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
4. Remove waste materials, debris, and rubbish from site not less than weekly and dispose off-site.

P. Field Offices and Sheds:
1. Field offices will not be required or provided, unless the Contractor deems necessary.
2. Locate offices and contractor required sheds at areas designated by the Engineer.

Q. Removal of Utilities, Facilities, and Controls:
1. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
2. Remove underground installations to a minimum depth of 2 feet. Seal all openings and grade site as indicated.
3. Clean and repair damage caused by installation or use of temporary work.
4. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.11 MATERIAL AND EQUIPMENT

A. Products:
1. Products: Means new material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components required for reuse.
2. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
3. Provide interchangeable components of the same manufacturer, for similar components.

B. Storage and Protection:
1. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
2. For exterior storage of fabricated products, place on sloped supports, above ground.
3. Provide off-site storage and protection when site does not permit on-site storage or protection.
4. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
5. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
6. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
7. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

1.12 STARTING OF SYSTEMS – NOT USED

1.13 CONTRACT CLOSEOUT

A. Closeout Procedures
   1. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's inspection.
   2. Provide submittals to Engineer that are required by governing or other authorities.
   3. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Final Cleaning:
   1. Execute final cleaning prior to final inspection.
   2. Clean debris from roofs, gutters, downspouts, and drainage systems.
   3. Clean site; sweep paved areas, rake clean landscaped surfaces.
   4. Remove waste and surplus materials, rubbish, and construction facilities from the site.

C. Adjusting:
   1. Adjust operating Products and equipment to ensure smooth and unhindered operation.

D. Operation and Maintenance Data: NOT USED.

E. Warranties: NOT USED

F. Spare Parts and Maintenance Materials: NOT USED

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION 01000

SECTION 01001

BASIC REQUIREMENTS

PART 1 GENERAL

1.01 PROJECT MEETINGS

The Engineer shall schedule weekly project meetings to discuss progress of the work for the site. Additional meetings may be scheduled as needed. Topics shall include an update of the project schedule, status of submittals, Quality Control and Quality Assurance, change orders, safety, payments, and other items pertinent to the work.

The Contractor shall be represented at all project meetings by (a) responsible member(s) of its organization.

Meeting minutes shall be prepared by the Engineer and one copy shall be distributed to each person in attendance. The Engineer conducting the meetings and preparing/distributing meeting minutes shall not be construed as coordinating or scheduling the Contractor's work.

If a change of meeting date, time, or location is required, the Engineer shall advise the concerned parties in advance of such change.

1.02 DAILY REPORTS

The Contractor shall prepare and submit to Engineer daily project reports detailing equipment, manpower, work completed, health and safety items, discussions with the Owner and the Engineer, visitors, changed conditions, and any other items pertaining to the work. The Contractor shall prepare a written weekly progress report to be submitted at the weekly project meeting.

1.03 PERMITS

The Contractor shall obtain and pay for all permits required to perform the work.

1.04 PROGRESS SCHEDULE

A. Fifteen (15) days before the date established for "commencement of the work", submit five (5) copies of a comprehensive progress schedule indicating a time bar for each significant category of work to be performed. Arrange schedule to indicate required sequencing and to show time allowances for submittals, inspections, weather allowances, and similar time margins. The schedule shall indicate the estimated dates for the start and completion of the various stages of the work and shall include information regarding man-loading and equipment-loading required to progress the work as shown. Following the initial revision of the schedule after the Engineer's review, print and distribute the schedule to concerned parties, including three (3) copies to the Engineer. The schedule shall be revised and redistributed as determined with each monthly pay requisition, subject to the Owner's approval, at intervals matching application for payment requests.

B. If at any time it appears to the Engineer that the rate of progress of the work being made is insufficient to insure completion of the Work by the scheduled completion date, the Authorized Representative may require the Contractor to take such steps as are necessary to insure completion as scheduled. Any additional costs incurred shall be the sole obligation of the Contractor.

1.05 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

A. Contractor shall submit, to the Engineer for his review, two copies of shop drawings, six copies of product data, and three sets of samples (when requested) of all materials and equipment furnished by Contractor. On specified items for which no substitution may be made, Contractor shall submit two copies of shop drawings, six copies of product data, and three sets of samples to the Engineer for record purposes.

B. The purpose of having schedules and shop drawings reviewed by the Engineer is to assist the Contractor in interpreting the Contract Drawings. The review given by the Engineer shall be considered as accomplishing this and shall not relieve the Contractor of any liability or responsibility for proper construction or compliance with the Contract Drawings and Detailed Specifications. Such schedules and shop drawings shall become part of the Contract Documents.

C. The Contractor shall submit, to the Engineer for his approval, shop drawings, engineering information, product data, and samples on all borrow material, erosion control fabrics, fencing, geotextile materials, and any and all other similar items to those listed above.

1.06 SUBSTITUTIONS

A. No item listed on the Contract Drawings, Contractor's shop drawings, or the Detailed Specifications by trade name or by name of manufacturer may be substituted for without the prior approval of the Engineer. Any such substitution or refusal of substitution shall not cause delay or increased costs. In the event the Contractor claims the inability to obtain a specified or indicated item at the proper time, the Owner or Engineer may make inquiries at the Contractor's expense to establish such claim.

B. Within thirty (30) days after the Contract is awarded, the Contractor shall submit to the Engineer any proposals for substitutions, together with samples and complete data. The Engineer shall consider all such proposals and render decisions as promptly as possible.

C. All applications for substitutions shall be accompanied by statement of credit or extra cost attributed to the substitution.

D. Contractor shall carefully verify and shall be fully responsible for determining that the equipment it proposes to provide and install shall fit into the confines indicated on the Contract Drawings, Contractor's shop drawings or Detailed Specifications.

1.07 TEMPORARY FACILITIES

The Contractor shall provide such temporary facilities as are required to complete its portion of the Work. Such facilities may include the following:

A. Pumps and hoses required to convey all water.

B. Toilets and sanitary facilities.

C. As needed, commercial electrical power, if not available, or portable electric generators capable of meeting electric demand requirements of equipment used on the project.

D. Compressed air, (as required).

E. Signs and barricades.

F. Temporary storage sheds (as required).

1.08 STORAGE

The Contractor may store material, machinery and equipment in an area designated by the Engineer. The Company shall not be responsible for damage or loss of such materials, machinery and equipment.

1.09 SAFETY

A. The Contractor shall assume the responsibility for site safety of its employees and subcontractors working on the project or within the project limits. The Contractor shall be solely responsible for performing the work in a safe manner and must comply with all applicable permit and construction conditions and requirements. The Contractor must prepare and submit a Health and Safety Plan in accordance with Federal, State, local Standards for review by the Engineer. Weekly safety meetings will be mandatory.

B. The Contractor shall take all necessary safety precautions and shall comply with all applicable provisions of federal, state and municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. The Contractor shall provide approved protective devices and other protection required by codes and safe operating practice.

C. The Contractor shall require its employees to use appropriate protective devices and to observe safe working practices.

D. The Contractor shall provide such equipment and medical facilities as are necessary to supply first aid to anyone who may be injured in connection with the Work and shall provide for the capability for immediate removal and hospitalization if required.

1.10 SUBCONTRACTORS AND EMPLOYEES

A. The Contractor is responsible for the acts and omissions of its employees and subcontractors in connection with the performance of the Work.

B. No visitors are allowed on-site without prior approval of the Owner or Engineer.

C. The Contractor's personnel and its subcontractor's personnel shall sign in and out at the site daily.

1.11 HOUSEKEEPING

A. The Contractor shall maintain the premises and working areas in a reasonably clean and orderly condition and perform cleanups when necessary or as ordered by the Engineer, and in no event less frequently than once per week. The Contractor shall keep affected local roadways free of dust and debris at all times.

B. The Contractor shall leave all surfaces free from any contamination resulting from operations. The Contractor shall remove from the work site and from all public and private property, at its own expense, all temporary structures, tools and excess construction materials, waste materials, rubbish, etc., resulting from its operations.

C. The work site shall be prepared for occupancy by a thorough cleanup. If the Contractor does not adequately cleanup within sixteen working hours after ordered by the Owner, the Owner reserves the right to clean the premises and withhold this expense from payments due the Contractor.

D. Should the Owner occupy the work site or any portion thereof prior to its completion by the Contractor and Final Acceptance by the Owner, responsibilities for interim and final cleanup of the occupied areas shall be as determined by the Engineer.

1.12 PROTECTION OF THE WORK

The Contractor shall continuously maintain adequate protection of his work from damage and shall at all times provide protection against rain, wind storms, snow, frost or heat so as to maintain all work, materials, and equipment free from injury or damage. At the end of each day's work, all new work likely to be damaged shall be covered. The Owner may protect the work and deduct the cost thereof from the payment due the Contractor, if the Contractor fails to protect the work upon notice from the Engineer.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 01001

SECTION 01010

SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 IDENTIFICATION

The work shall be performed at the former Bengart and Memel, Inc, metal scrapping facility located at 1079 Clinton Street, Buffalo, New York.

1.02 CONTRACT DOCUMENTS

A. Requirements of the work are contained in the Contract Documents, and include cross-references herein to published information, which is not necessarily bound therewith.

B. Included in the general contract are building demolition and disposal, excavation of impacted soil, treatment plant decommissioning, site grading and restoration, general construction, electrical, mechanical, and all other operations and work as required to complete the remedial construction according to the intent of the Contract Documents.

1.03 SITE BACKGROUND

The former B&M business operations included the use of Lot 2.1 (SBL #112.77-4-2.1 current address of record is 1079 Clinton St.) and a larger adjoining lot identified as Lot 2.2 (SBL #112.77-4-2.2 current address of record is 1091 Clinton St.). Lots 2.1 and 2.2 were part of a single lot which were subsequently subdivided and separately sold. An asphalt cap system and groundwater collection and treatment system installed at the site (Lot 2.1) under a previous Order on Consent have not been maintained and kept operational. The current owner and respondent have abandoned the site. A limited site investigation conducted in 2006 revealed that significant environmental threats exist at the site. Based upon the results of this investigation, there is widespread PCB contamination of surface and subsurface soil/fill materials that are above TAGM 4046 and Part 375 standards for soil and sediment. Water collected at various points also indicated PCB contamination of groundwater and potential surface water discharges above applicable groundwater and surface water standards. Additionally, there are PCB levels in surface soils, sediments and subsurface soil/fill that render the material as characteristically hazardous waste.

The area (Lot 2.1) previously remediated by the owner under the Order consists of an asphalt capped area, storm water management and treatment, and shallow groundwater collection and treatment system. The elevation of the asphalt capped is sloped to allow drainage of surface water to a storm drain in the capped area which is connected to an oil/water separator which drains into the Buffalo Sewer Authority (BSA) combined sewer on Clinton Street. The oil/water separator serves as a treatment device for storm water runoff from the asphalt capped area. The groundwater water collection and treatment system consists of a shallow groundwater interceptor trench along the northern and western perimeter of Lot 2.1. The interceptor trench extends onto Lot 2.2. The interceptor trench contains a perforated 6-inch PVC drainpipe that directs intercepted groundwater to a sump. The sump originally contained a submersible pump which pumped collected water to two storage tanks for temporary storage. The water in the tanks was batch treated by pumping stored

water through two carbon adsorption vessels to remove residual PCBs. The treated water was stored in a third tank for sampling prior to discharge to the BSA combined sewer. The treatment system is located on a concrete containment pad that straddles Lots 2.1 and 2.2. The treatment system is exposed to the elements and none of the system piping and pumps were insulated for cold weather operation.

In order to address the environmental threats at the site, a feasibility evaluation was conducted. The results of the evaluation determined that removal of the threat was the desired feasible long term option.

1.04 SUMMARY OF WORK

A. The work consists of furnishing all labor, materials, supervision, equipment, and services necessary to complete the scope of work detailed in the Specifications and Contract Drawings. The work includes, but is not limited to, the following:
   1. Develop a Site Specific Health and Safety Plan and Project Work Plan, and conduct all work activities in accordance with the approved plan.
   2. Obtain all required permits necessary to perform the work.
   3. Coordinate utility mark-out.
   4. Coordinate transportation and disposal of regulated wastes with permitted disposal facilities in accordance with all applicable regulations and requirements.
   5. Provide all necessary temporary support facilities and control.
   6. Provide all personal protective equipment (PPE) appropriate for this work.
   7. Perform Community Air Monitoring during all stages of the project until all wastes and hazardous materials have been removed from the site.
   8. Protection of adjoining property improvements and on-site improvements not identified for removal and disposal.
   9. Asbestos abatement and appropriate disposal of asbestos containing building materials identified in the asbestos survey prior to building demolition.
   10. Demolition and appropriate disposal of the concrete block building, floor and foundations.
   11. Decommissioning and removal of the groundwater collection and treatment system.
   12. Partial removal of the storm drain system.
   13. Removal and appropriate disposal of the asphalt cap system within limits indicated on the plans.
   14. Excavation and appropriate disposal of impacted soils within limits indicated on the plans.
   15. Restoration of site features including the placement of an aggregate base over the excavated areas to limits indicated on the plans and placement of topsoil and seed to restore turf grass areas.
   16. Installation of security features to limits indicated on the plans..

1.05 USE OF SITE

The Contractor shall limit his use of the premises to the work indicated.

A. Use of the Site: Confine operations at the site to the areas permitted. Portions of the site beyond areas on which work is indicated are not to be disturbed.

B. Keep existing driveways and entrances serving the adjoining premises clear and available at all times. Do not use for parking or storage of materials.

C. Do not encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas indicated or as directed by the Engineer.

D. Lock automotive type vehicles and other mechanized or motorized construction equipment, when parked and unattended. Do not leave vehicles or equipment unattended with the motor running or ignition key in place.

E. Contractor to provide employee parking on or adjacent to public roadways.

1.06 SITE SECURITY

The Contractor shall install a secure 4-foot, high-strength polyethylene orange plastic fence and/or the temporary fencing to provide site security where a permanent fence has not been installed. Temporary plastic fencing shall be Tenax “Sentry” diamond mesh safety fence or equal with 5-foot minimum length posts set at a maximum of 10-feet apart. Fencing shall be installed prior to beginning construction of other work items and shall be repaired in an expeditious manner as necessary. One main entrance/exit gate shall be established, with optional gate for delivery.

If required by adjoining property owners, breaches in existing chain link security fencing shall be secured with portable chain link fence sections fastened and secured to the existing fencing.

1.07 ACCESS ROADS

NOT USED

1.08 SIGNS

The Contractor shall post the work zone with signs reading "Warning, Hazardous Work Area, Do Not Enter Unless Authorized". Warning signs shall be posted at a minimum of every 50 feet along the perimeter fencing.

1.09 DUST CONTROL

An erosion/dust control agent can be used with approval of Engineer. Accomplish dust control by water sprinkling or by other methods approved by the Engineer. The use of petroleum products for dust control shall not be permitted.

END OF SECTION 01010

SECTION 01025

MEASUREMENT FOR PAYMENT

PART 1 – GENERAL

1.01 SUMMARY

A. This section covers the methods and procedures that will be used to measure **CONTRACTOR's** work to provide payment to **CONTRACTOR** for work performance. All work elements necessary to complete the work may not be described in this section. It is the responsibility of the bidder to make a thorough investigation of the Contract Documents and the site to determine the scope of work needed or required in each bid item. Payments shall be made to **CONTRACTOR** based on the quantities or work successfully completed and accepted as measured in accordance with the specified methods of measurement and the prices stipulated as shown on the Bid Form. This method of payment shall constitute complete compensation for all work shown on the drawings and provided in the specifications, for all costs of accepting the general risks, and liabilities, and shall include compensation for overhead, profit, materials and services, and performing all work required to accomplish and complete the work specified under each item and all other work required.

1.02 SUBMITALS

A. Preliminary items to be submitted in response to Notice of Intent:

1. Bid breakdowns

B. Pay Requests:

1. Submit in accordance with standard terms and conditions of the NYSDEC Standby Investigation and Remediation Agreement."

1.03 PAYMENT PROCEDURES

A. Under this Contract, **CONTRACTOR** shall provide all labor, equipment and materials and shall complete all work as shown and described in the Contract Documents and as directed by **ENGINEER**, in accordance with the expressed intent of the contract to secure a complete construction of a functionally complete project. The following bid items shall together include all work set forth in the Contract Documents or required to properly complete the work. Any necessary work that is not described shall be considered included in the item to which it properly belongs. Where used in the Contract Documents, the word "including" ("includes", "include") shall mean "including (includes, include) but not restricted to."

Each item includes:

1. All labor, material, equipment, bonds and insurance, tests, adjustments, warranties, overhead, and other expenses required to perform the work.

2. All accessories, manuals, and services pertinent to the proper installation of materials and equipment.

3. All accessories, manuals, and services pertinent to the materials and equipment.

B. Lump Sum Items

1. The quantities of work performed under lump sum items shall not be measured except for the purpose of determining reasonable interim payments. Interim payments shall be made in accordance with the estimated value of work performed and found acceptable as determined by **ENGINEER**, or as specified in this section.

2. Where indicated for a lump sum item, **CONTRACTOR** shall provide a schedule of values. The schedule of values shall include a breakdown of major cost items included within the lump sum. The schedule of values shall be provided to **ENGINEER** prior to initiation of work.

C. Unit Price Items

1. Payments shall be made for unit items in accordance with the measurement methods set forth in this section or, where specified payment limits are unclear, as determined reasonable by **ENGINEER**, at the unit prices entered in the Bid Form. Interim measurements and/or payments may be adjusted to account for partially completed work.

D. Measurement for payment shall be made only for work that has been acceptably performed within the limits shown on the Plans, as specified, or directed by **ENGINEER**.

E. The work of the contract shall be paid in separate items as described below.

1. Bid Item 1 – Mobilization/Demobilization

a. Bid Item 1 shall be a lump sum amount for mobilization and demobilization as specified and directed herein.

b. Submit a separate bid breakdown for this item that shows individual cost of providing items in the scope of work for this bid item as described below plus mobilization, demobilization, and miscellaneous items on-site and off-site not specified elsewhere but necessary for a complete and proper remediation and site restoration.

i. Permits and fees, insurance, bonds, and other expenses directly related to and required by the Contract Documents.

ii. Mobilization of personnel, equipment and project facilities.

iii. Installation of staging areas, as necessary.

iv. Setup temporary utilities (if necessary) and sanitary facilities.

v. Capital expenses for all health and safety equipment required by the HASP, including decontamination and personal hygiene facilities.

vi. All OSHA HAZWOP training and medical monitoring and USEPA/NYSDOL asbestos worker training and certification requirements.

vii. Underground utility clearance/notifications.

viii. Installation of erosion, surface water and sedimentation controls.

ix. Temporary fencing and traffic controls.

x. Handling and disposal of **CONTRACTOR** generated wastes.

xi. Demobilization.

xii. Other work not specifically included under other items including compliance with applicable regulatory requirements; preconstruction and construction period planning, scheduling, submittals, reporting, meetings, administration, and documentation; quality control; and environmental protection and spill control.

c. Measurement for payment shall be up to 60% of the lump sum for mobilization items installed and properly functioning. Following demobilization, measurement for payment shall be up to a maximum of 100% based on actual completion of the bid item. Payment shall be lump sum bid for each individual item described above, including mobilization, demobilization, and miscellaneous, as submitted in the **CONTRACTOR's** Bid Breakdown.

2. Bid Item 2 – Site Specific Health and Safety Plan, and Project Work Plan

a. Bid Item 2 shall be a lump sum amount for all cost associated with preparing a complete Site Specific Health and Safety Plan, and Project Work Plan as specified and directed herein.

b. Prepare a complete Site Specific Health and Safety Plan in accordance with Standard Specification Section X-00003, and Project Work Plan in accordance with Supplemental Specification Section 02060. Submit a separate bid breakdown for this item that shows individual cost preparing the respective work plans.

c. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item. No additional payments will be made for revisions to the originally submitted Health and Safety Plan and Project Work Plan or any subsequent submission required by the ENGINEER or other regulatory authority.

3. Bid Item 3 – Health and Safety Services

a. Bid Item 3 shall be the unit price per calendar day amount for health and safety as specified and directed herein.

b. Provide all materials, equipment, incidentals, and labor necessary to perform all applicable work and requirements as described in Section 00003 (Minimum Requirements for Health and Safety) of the Specifications, and as shown on the Contract Drawings. Submit a separate bid breakdown for this item that shows individual cost for providing, operating, and maintaining items in the scope of work for this bid item as described below. and implementing the work plan requirements

   i. Providing a full-time Health and Safety Officer (HSO) at the site.

   ii. Community air monitoring, sampling, analysis and reporting during the project period.

   iii. Operating and maintaining all health and safety equipment and decontamination reduction equipment.

   iv. Sampling, analyses, handling, transportation, and disposal of personal protective equipment (PPE) and decontamination wastes not specifically included in another bid item.

c. Measurement for payment shall be for each work day for health and safety services are required meeting all health and safety requirements specified Section 00003 (Minimum Requirements for Health and Safety) and approved Health and Safety Plan (HASP). Payment shall be for period the HASP has been adhered to in the opinion of **ENGINEER** beginning after satisfactory establishment of an exclusion zone and shall be considered completed when there is no longer an exclusion zone in the project area or at the end of the Contract Time specified in the Scope of Work, whichever is sooner. All daily maintenance costs for health and safety are part of this bid item including all requirements of the HASP.

4. Bid Item 4 – Site Preparation

a. Bid Item 4 shall be bid lump sum price to clear and prepare the work area as specified and directed herein.

b. Provide all labor, equipment, materials and incidentals necessary to clear the fringe areas of vegetation, and grub, and perform all applicable work and requirements as described below. Measurement of payment for Bid Item 4 shall be up to 100% of the lump sum based on satisfactory completion of the bid item as determined by the **ENGINEER**. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item. Payment Shall include but not limited to:

   i. Removal and disposal of existing security fencing along the northern and western property boundary,

   ii. Clearing and disposal of brush.

iii. Decommissioning site utilities as indicated on the site drawing by plugging inlet and outlet pipes as noted on the drawing.

c. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item.

5. Bid Item 5 – Asbestos Abatement

a. Bid Item 4 shall be the bid lump sum price to completely and properly perform asbestos abatement as specified and directed herein.

b. Provide all labor, equipment, materials and incidentals necessary to perform all applicable work and requirements as described in Section 02080 (Asbestos Abatement) of the Specifications. Submit a separate bid breakdown for this item that shows individual cost for providing, operating and maintaining items in the scope of work for this bid item, and miscellaneous items not specified elsewhere, but necessary for asbestos abatement.

c. Measurement of payment for Bid Item 5 shall be up to 100% of the lump sum based on satisfactory completion of the bid item as determined by the **ENGINEER**. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item. Payment Shall include but not limited to:

i. Providing all documentation (e.g. reporting, record keeping, waste manifests, etc. as required by Section 02080.

ii. Asbestos exposure prevention measures for **CONTRACTOR's** employees, and personal protective measures required to protect other individuals on the site and in the surrounding community.

iii. Removal of all asbestos containing materials (ACM) within the or on the building to be demolished.

iv. Proper containment and disposal of ACM.

v. The cost of any independent additional ACM testing the **CONTRACTOR** desires to perform to further characterize on-site ACM.

vi. Applying for variances if determined to be necessary.

6. Bid Item 6 – Building Demolition

a. Bid Item 6 shall be lump sum price for providing all materials, equipment, incidentals and labor to completely demolish the building and dispose of all debris as directed and specified herein.

b. Provide all labor, equipment, materials and incidentals necessary to perform all applicable work and requirements as described in Section 02060 (Building Demolition) of the Specifications. Submit a separate bid breakdown for this item that shows individual cost for providing, operating and maintaining items in the scope of work for this bid item, and miscellaneous items not specified elsewhere, but necessary for building demolition and disposal.

c. Measurement of payment for Bid Item 6 shall be up to 100% of the lump sum based on satisfactory completion of the bid item as determined by the **ENGINEER**. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item. Payment Shall include but not limited to:

i. Protecting improvements on adjoining property.

ii. Cleaning of the floor slab of dust and debris and disposal as hazardous waste.

iii. Dismantling the building indicated to be demolished.

iv. Hauling and properly disposing/salvaging of all demolition debris.

v. Providing dust control measures.

vi. Providing particulate monitoring.

vii. Providing erosion control measures.

viii. Sampling and characterizing the debris as required by the disposal facility.

ix. Tipping or disposal fees required by the disposal facility.

x. Acquisition of all necessary permits.

xi. Removal and disposal of the concrete floor slab as industrial solid waste.

xii. Removal of foundation walls to one foot below ground elevation.

7. Bid Item 7 – Treatment System Decommissioning

a. Bid Item 7 shall be lump sum price for providing all materials, equipment, incidentals and labor to completely decommission the groundwater collection and treatment system and dispose of all debris as directed and specified herein.

b. Provide all labor, equipment, materials and incidentals necessary to perform all applicable work and requirements as described in Section 02065 (Decommissioning Existing Treatment System Equipment). Submit a separate bid breakdown for this item that shows individual cost for providing, operating and maintaining items in the scope of work for this bid item, and miscellaneous items not specified elsewhere, but necessary for building demolition and disposal.

c. Measurement of payment for Bid Item 7 shall be up to 100% of the lump sum based on satisfactory completion of the bid item as determined by the **ENGINEER**. Measurement for payment shall be made in accordance with the **CONTRACTOR's** approved Schedule of Values by the total price of the work completed at the time of the payment request by the total contract price and multiplying that percentage by the total bid amount for this item. Payment Shall include but not limited to:

i. Protecting improvements on adjoining property.

ii. Flushing of the three process tanks and properly disposal of the flush water.

iii. Removal the activated carbon from the two carbon vessels and disposal of carbon as a hazardous waste.

iv. Flushing of the two carbon vessels and properly disposal of the flush water.

v. Salvaging or disposal of the process tanks and carbon vessels after flushing.

vi. Removal and disposal of all above ground process piping and mechanical devices.

vii. Removal and disposal of the control panel and supports.

viii. Draining and flushing of the concrete containment pad, and proper disposal of flush water.

ix. Demolition of the concrete containment pad and disposal of the concrete as industrial solid waste.

x. Flushing of the collection sump, and properly disposing of the flush waters.

xi. Excavation of the concrete collection sump and disposal as industrial solid waste.

8. Bid Item 8 – Excavation of Impacted Soil/Fill and Disposal as Hazardous Waste

a. Bid Item 8 shall be bid unit price per ton of impacted soil/fill excavated, transported and disposed of off-site as a hazardous waste as directed and specified herein.

b. Provide all labor, equipment, materials and incidentals necessary to completely and properly transport and dispose of impacted soil/fill as hazardous waste and provide characterization sampling as necessary, and perform all applicable work and requirements as described in Section 02061, Waste Characterization, Transportation and Disposal, of the Specifications.

c. Measurement for payment of Bid Item 8 shall be the actual quantity in tons of impacted soil/fill that has been removed, staged, loaded, transported and disposed of as specified by the unit price amount for this item. Payment will be based upon actual certified weigh scale slips issued by the disposal facility. Payment shall be limited to:

i. Reporting, record keeping, waste manifests, etc.

ii. Waste exposure prevention measures including personal protective measures required to protect workers on the site and surrounding community.

iii. Proper containment and disposal of said material.

iv. Proper erosion control and dust mitigation measures.

v. Proper decontamination measures.

9. Bid Item 9 – Excavation of Impacted Soil/Fill and Disposal as Industrial Solid Waste

a. Bid Item 9 shall be bid unit price per ton of impacted soil/fill excavated, transported and disposed of off-site as an industrial solid waste as directed and specified herein.

b. Provide all labor, equipment, materials and incidentals necessary to completely and properly transport and dispose of impacted soil/fill as industrial solid waste and provide characterization sampling as necessary, and perform all applicable work and requirements as described in Section 02061, Waste Characterization Transportation and Disposal, of the Specifications.

c. Measurement for payment of Bid Item 9 shall be the actual quantity of impacted soil/fill in tons that has been removed, staged, loaded, transported and disposed of as specified by the unit price amount for this item. Payment will be based upon actual certified weigh scale slips issued by the disposal facility. Payment shall be limited to:

i. Reporting, record keeping, disposal weigh lading, etc.

ii. Waste exposure prevention measures including personal protective measures required to protect workers on the site and surrounding community.

iii. Proper containment and disposal of said material.

iv. Proper erosion control and dust mitigation measures.

v. Proper decontamination measures.

10. Bid Item 10 – Imported Select Granular Fill

a. Bid Item 10 shall be bid unit price per ton of imported select granular fill installed as directed and specified herein.

b. Provide all labor, materials, equipment, services, incidentals and other items provided or stored to install a minimum 12-inch layer of granular fill within the defined limits indicated on the site plan as required and as specified and directed herein, and perform all applicable work and requirements as described in the specifications and as shown on the Contract Drawings.

c. Measurement for payment of Bid Item 10 shall be the actual tonnage of granular fill as determined by certified weigh slips.

11. Bid Item 11 – Topsoil and Seeding

    a. Bid Item 11 shall be bid unit price per square yard of 3 inches of topsoil installed, seeded and fertilized as directed and specified herein.

    b. Provide all labor, materials, equipment, services, incidentals and other items provided or stored to install, topsoil as specified and directed herein, and perform all applicable work and requirements as described in Section 02990 (Finish Grading, Topsoil and Seeding) of the Specifications and as shown on the Contract Drawings.

    c. Measurement for payment of Bid Item 12 shall be the actual square yard of topsoil, fertilized and seeded as determined by **ENGINEER's** review of **CONTRACTOR's** measurements.

12. Bid Item 12 – Fencing

    a. Bid Item 12 shall be bid unit price per linear foot of actual 6 foot high chain link fence and gates installed as directed and specified herein.

    b. Provide all materials, equipment, incidentals, and labor necessary to completely and properly install a 6 foot high chain link fence and gates, and perform all applicable work and requirements as described in Section 02830 (Fencing) of the Specifications, and shown on the Contract Drawings. This shall include, but not be limited to, the work items described below.

        i. Furnishing and installing fence fabric, posts, rails, braces, wire ties and concrete footings.

    c. Measurement for payment of Bid Item 13 shall be the actual length in feet of fencing installed as determined by **ENGINEER's** review of **CONTRACTOR's** measurements.

13. Bid Item 13 – Allowance: Independent Asbestos Abatement Compliance Air Monitoring and Inspection

    a. Bid Item 13 shall be for actual cost plus allowable profit for providing a Certified Asbestos Project Monitor and requisite asbestos abatement air monitoring as directed and specified herein.

        1. A **CONTRACTOR** not qualified or certified by NYSDOL to conduct asbestos abatement, shall subcontract a Certified Asbestos Project Monitor to perform requisite asbestos abatement air monitoring. Payment shall be made to the **CONTRACTOR** for the completion of the requisite asbestos abatement air monitoring by the Certified Asbestos Project Monitor **SUBCONTRACTOR**.

        2. A **CONTRACTOR** qualified and certified by NYSDOL to conduct asbestos abatement is not allowed to perform requisite asbestos abatement air monitoring. The **NYSDEC ENGINEER** will contract an independent Certified Asbestos Project Monitor to perform requisite asbestos abatement air monitoring. Payment to the **NYSDEC** contracted Certified Asbestos Project Monitor shall be made through this

project contract. **NYSDEC** will submit an approved invoice by the **NYSDEC** contracted independent Certified Asbestos Project Monitor to the **CONTRACTOR** for the payment to the **NYSDEC** contracted independent Certified Asbestos Project Monitor. The **CONTRACTO**R shall then submit a cost application for payment to the **NYSDEC** contracted independent Certified Asbestos Project Monitor.

b. Provide all materials, equipment, incidentals, and labor necessary to necessary to provide independent asbestos abatement applicable work and requirements as described in Section 02080 (Asbestos Abatement) of the Specifications.

c. Measurement for payment of Bid Item 14 shall be the actual cost plus allowable profit for providing a Certified Asbestos Project Monitor and requisite asbestos abatement air monitoring as determined by **ENGINEER's** review of **CONTRACTOR's** invoice as described in Section 01210 (Allowances) of the Specifications. Depending on the qualifications and status of the **CONTRACTOR** as a qualified and certified by NYSDOL to conduct asbestos abatement, payment shall be as followed:

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

+ + END OF SECTION 01025+ +

SECTION 01210

ALLOWANCES

PART 1 GENERAL

1.01 DESCRIPTION

A. Include in the contract sum the allowances stated in this Section.

B. Should the net cost be more than the specified amount of the allowance, the contract sum will be adjusted by Order on Contract in accordance with the General Conditions. No Work in excess of the allowance will be permitted except by Order on Contract. Should the net cost be less than the specified amount of the allowance, the balance will be deducted from the final payment.

1.02 TOTAL FOR ALLOWANCES

A. The sum of allowances required by this Contract is $10,000.00.

1.03 ALLOWANCE FOR ASBESTOS ABATEMENT AIR MONITORING AND INSPECTION

A. Include in the contract sum the amount of $10,000.00 to cover the cost of providing Asbestos Abatement Air Monitoring and Inspection Services as specified in Section 02080 paragraphs 3.3 and 3.4. Payment for services shall be as followed:

1. A **CONTRACTOR** who is a general contractor who will sub-contract Asbestos Abatement Services shall also sub-contract a Certified Asbestos Project Monitor to monitor the asbestos abatement work and conduct the required air monitoring and reporting in accordance with applicable sections of 12 NYCRR Part 56-9.1(d)(1) and 17. The Contractor awarded the project shall be compensated in sub-paragraphs presented below.
2. A **CONTRACTOR** qualified and certified by NYSDOL to conduct asbestos abatement is not allowed to perform requisite asbestos abatement air monitoring. The **NYSDEC ENGINEER** will contract an independent Certified Asbestos Project Monitor to perform requisite asbestos abatement air monitoring and reporting in accordance with applicable sections of 12 NYCRR Part 56-9.1(d)(1). Payment to the **NYSDEC** contracted Certified Asbestos Project Monitor shall be made through this project contract. **NYSDEC** will submit an approved invoice by the **NYSDEC** contracted independent Certified Asbestos Project Monitor to the **CONTRACTOR** for the payment to the **NYSDEC** contracted independent Certified Asbestos Project Monitor. The **CONTRACTO**R shall then submit a cost application for payment to the **NYSDEC** contracted independent Certified Asbestos Project Monitor.

B. The cost of providing the Work of this allowance will be paid, up to the amount specified, based on documentation of actual costs. The actual amount will be

determined, by the **ENGINEER**, by evaluating the accuracy and completeness of the cost or pricing data submitted. Costs above the allowance amount, if any, will be paid by means of a Change Order.

C. Include overhead and profit for administering this allowance separately in the contract sum, not in the allowance.

D. Cause the products covered by this allowance to be provided by such persons or firm and for such amount as designated by the **ENGINEER**.

E. The amount of the allowance includes furnishing and installing the products in accordance with the requirements of referenced specification section.

F. On notification, execute agreement with designated persons or firm. Arrange for and process Samples, Shop Drawings, and Product Data as required. Make arrangements for delivery and installation. Coordinate the services of the designated persons or firm.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

END OF SECTION

SECTION 01505

TEMPORARY SITE CONTROLS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work

The Contractor shall provide all necessary temporary site controls as described in this section for the protection of the site and the surrounding community. This shall include, but not limited to, site security, dust control, residue control, noise control, rodent control, and vapor and odor control.

B. Related Sections

1. Division 1 – General Requirements
2. Section 01510 – Community Air Monitoring
3. Section 02060 – Building Demolition
4. Section 02065 – Decommissioning Existing Site Equipment and Machines
5. Section 02080 – Asbestos Abatement

1.2 REFERENCE STANDARDS

A. Complete all work in accordance with applicable requirements. Comply with all applicable local, state, and federal laws pertaining to dust controls, residue control, noise control, rodent and vector control, water pollution control, vapor control, and odor control..

PART 2- PRODUCTS

2.1 ABSORBENT MATERIALS

A. Materials for temporary site controls shall be of sufficient quality to function effectively for an intended use. These materials when used must not create unsafe conditions or violate applicable local, state, or federal laws.

B. Products for Dust Control
1. Potable water.
2. Other approved materials acceptable to the Engineer.

PART 3- EXECUTION

3.1 SITE SECURITY

A. The Contractor shall safely guard all Work, materials, equipment and property from loss, theft, damage and vandalism. Contractor’s duty to safely guard property shall include the

Owner's property and adjoining private property from injury or loss in connection with the performance of the contract.

B. Contractor shall erect temporary barricades and fencing around the perimeter of the site and around all excavations to provide the security and prevent unauthorized entry at no additional cost to the Owner

C. The Contractor may make no claims against the Owner damage resulting from trespass.

D. The Contractor shall be responsible for repairing, replacing or rectifying damages or losses to the Owner resulting from trespass.

E. If existing fencing or barriers are breached or removed for purposes of construction, the Contractor shall provide and maintain temporary security fencing equivalent to the existing in manner satisfactory to the Engineer and Owner.

F. Maintain necessary security throughout construction until the Owner's acceptance and occupancy precludes the need for the Contractors security program

3.2 DUST CONTROL

A. The Contractor shall take necessary measures to minimize the migration of dust offsite in accordance with all local, state, or federal laws, regulations and requirements. If any conflicts with the laws and requirements conflict with project requirements, the laws and regulations shall take precedence.

B. The Contractor shall provide real time air monitoring of dust migration in accordance with Section 01510.

C. Water Application.

1. Dust generating surfaces shall be sufficiently sprayed with water to moisten the soil. Dust generating surfaces shall be defined as surfaces of disturbed soil, surfaces of soil stockpiles, surfaces of structures to be demolished, surfaces of construction and demolition (C&D) debris stockpiles, and other surfaces that could potentially generate dust as determined by the Engineer in the field.

2. The Contractor shall provide fresh, uncontaminated water OR potable water for the project from an offsite source.

3. Water shall be applied using a fogging nozzle and in such a pattern that provides complete coverage of the surface to be wetted.

3.3 RESIDUE CONTROL

A. The Contractor shall take necessary measures to minimize offsite tracking of any deleterious materials including, but not limited to, dirt, dust, contaminant impacted materials, C&D debris and asbestos from the construction zone to both on-site and off-site paved surfaces.

B. The Contractor shall employ measures to prevent the tracking of deleterious materials such as employing a stabilized construction entrances, placing tarps and liners in areas where spillage of material handling may occur, routine sweeping, etc.

C. The Contractor shall maintain clean and hazard free onsite-or off-site paved driving surfaces by inspecting and remove any deleterious materials tracked to these surfaces resulting from work at the site.

3.4 NOISE CONTROL

A. The Contractor shall comply with all local, state and federal laws regarding the generation of noise and minimizing noise impacts to the surrounding community. If any laws and requirements conflict with project requirements, the laws and regulations shall take precedence.

B. The Contractor shall keep noise generating operations between the hours of 7:30 AM and 6:00 PM unless prior written consent is given by the Engineer.

1. An exception shall be granted in the event of an emergency where work must be performed to restore or maintain the safety of the project site or surrounding community.

3.5 WATER POLLUTION CONTROL

A. The Contractor shall comply with all local, state and federal laws regarding water pollution. If any laws and requirements conflict with project requirements, the laws and regulations shall take precedence.

B. The Contractor shall not pollute any wetlands, streams, rivers, creeks or other waterways with fuels, lubricants, chemical products, spent products, liquid wastes or other harmful materials.

C. The Contractor shall establish temporary erosion controls in accordance with Section 02270 to prevent the off-site migration of sediment.

D. Water from dewatering operations shall be properly disposed of off-site in accordance with all local, state and federal requirements.

3.6 VAPOR AND ODOR CONTROL

A. The Contractor shall comply with all local, state and federal laws regarding vapor and odor control. If any laws and requirements conflict with project requirements, the laws and regulations shall take precedence.

B. The Contractor shall minimize site odors to minimize odor impacts to the surrounding community. The Contractor shall employ all necessary means to prevent the generation of site odors including, but not limited to, promptly removing debris, storing odor producing materials in stored containers, and treating odorous materials with a deodorant

or odor suppressant foam.

C. In the event that odors are detected off-site by the Engineer and/or complaints are received by the surrounding community, and the odors are deemed to be emanating from the site or from site activities, the Contractor shall stop all activities generating the odors and employ additional odor control measures at no additional cost to the Owner. The work causing the odors shall remain suspended until such controls are determined to be effective by the Engineer. The Contractor shall not make claims for additional payment as a result of work stoppage.

END OF SECTION 01505

SECTION 01510

COMMUNITY AIR MONITORING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work

1. The Contractor shall provide all provide all labor, materials, equipment, and services necessary for, and incidental to, the community air monitoring program. This includes but is not limited to continuous air monitoring throughout the duration of the contract and the implementation of measures necessary to prevent the airborne release of contaminants hazardous to health and/or the environment into the surrounding community.

2. Air monitoring during asbestos removal activities will be performed by the Owner's representative.

B. Related Sections

1. Division 1 – General Requirements.

1.2 SUBMITTALS

A. The Contractor will submit weekly the results of all air monitoring that occurs on site. Minimally, this submittal will include the date, time, location, and reading for each sample.

B. Within 48 hours of a sample reading exceeding any action level, the Contractor will submit a written report of the event. Minimally, this report will include the:

1. Time, date, and location of the exceeding sample;
2. The action taken to reduce the airborne contaminant; and
3. The time, date, and location of the sample taken displaying that the airborne contaminant levels no longer exceed action levels.

1.3 QUALITY ASSURANCE

A. Reference Standards

1. The latest edition of the following standards, as referenced herein, shall be applicable:

a. Occupational Health and Safety Administration
b. American National Standards Institute
c. New York State Department of Health's (NYSDOH) Generic Community Air Monitoring Plan
d. NYSDEC Technical Assistance and Guidance Memorandum (TAGM) 4031: Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites

B. Calibration

The particulate monitors will be calibrated daily according to the manufacturer's requirements.

PART 2 – PRODUCTS

2.1 PARTICULATE MONITORS

A. The particulate monitors shall conform to the following specifications:

1.	Size Range	<0.1 to 10 microns
2.	Sensitivity	1 ug/m^3
3.	Range	0.001 to 10 mg/^{3}
4.	Overall Accuracy	±10% as compared to gravimetric analysis of stearic acid or reference dust
5.	Battery Ranges	8-hours continuous operation
6.	Operating Temperature	0 – 40 º C
7.	Operating Humidity	0 – 99 % Relative Humidity

PART 3 – EXECUTION

3.1 SAMPLING SCHEDULE

A. Sampling shall occur as follows:

1. Continuously during all demolition activities. Demolition activities include, but are not limited to, asbestos removal, structure teardown, moving demolition debris within the site, and loading demolition debris into trucks.

2. Periodically during all other activities in which the Contractor is present on the site. "Periodically" is defined as once at mid-morning, once after work resumes after the lunch break, and once before leaving the site.

3.2 PARTICULATE MONITORING

A. Particulate monitoring shall be preformed as described in Part 3.1 at the upwind and downwind perimeters of the site.

B. If the downwind particulate level is 100 micrograms per cubic meter (ug/m^3) greater than the upwind level, then the Contractor must employ dust suppression techniques as described in Section 01505. Work may continue provided these techniques reduce the downwind particulate level.

C. If the downwind particulate level is 150 micrograms per cubic meter (ug/m^3) greater than the upwind level, then the Contractor must stop all activities and employ dust suppression techniques as described in Section 01505. The Contractor shall re-evaluate the prosecution of his work obtain approval by the Engineer on a new course of action before continuing.

D. Additionally, the Contractor, Engineer, and Owner shall be responsible for visually assessing fugitive dust migration from the project site. If airborne dust is observed leaving the project site, the work will be stopped. Work shall not continue until dust suppression techniques are employed as described in Section 01505 and the Engineer and Owner are satisfied that dust is no longer visually migrating from the site.

END OF SECTION 01510

SECTION 02060

BUILDING DEMOLITION

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work

The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to demolish all structures within the contract limits indicated on the Plans. Exterior foundation walls shall be demolished and removed to one foot below grade. The floor slab and all pits and sumps shall also be removed. Remove, salvage and/or properly dispose of construction and demolition debris generated from the building demolition at an approved disposal facility in accordance with State and Federal regulations.

B. Related Sections

1. Division 1 – General Requirements
2. Section 02061 – Waste Characterization Removal and Disposal
3. Section 02065 – Decommissioning Existing Site Equipment and Machines
4. Section 02077 – Decommissioning of Drainage Structures, Sumps, Pits and Below Grade Voids
5. Section 02080 – Asbestos Abatement

1.2 SUBMITTALS

A. The Contractor shall prepare and submit a Demolition Work Plan identifying the procedures and equipment to be employed, critical sequencing, temporary protection and control methods, and scheduling.

B. The Contractor shall submit the following in accordance with Section 01000:

1. Name, location, and registration information for the disposal site(s) to be used.
2. Name and license information of any haulers to be used.
3. Demolition permit issued by the City of Buffalo.

C. Permits

D. Temporary shoring plans, where required, designed by a licensed professional engineer.

1.3 QUALITY ASSURANCE

A. Reference Standards

1. 29 CFR 1910 and 1926 – Occupational Safety and Health Administration (OSHA) Standards

1.4 PROJECT CONDITIONS

A. The Contractor shall perform the following tasks prior to commencing demolition activities:

1. Asbestos Abatement
2. Waste characterization and disposal
3. Abandon site drainage features
4. Abandon existing utilities
5. Decommission and remove all mechanical equipment

B. Permits

1. The Contractor shall obtain a building demolition permit from the City of Buffalo. The Contractor shall pay all fees associated with this permit and shall take all measures necessary to comply with it fully.

2. The Contractor shall be responsible for obtaining any other permits required for the project and for paying fees associated with those permits.

C. Occupancy: Structure to be demolished is vacant.

D. Condition of Structures:

1. DEC assumes no responsibility for actual condition of structures to be demolished.
2. Conditions existing at time of inspection for bidding purpose will be maintained by DEC insofar as practicable.
3. The Contractor is advised that the property was formerly used as a metal scrapping facility. Floor surfaces are contaminated with PCBs, metals or other contaminants. The concrete floor surface has been wipe sampled and the results are included in the Supplemental Information Available to Bidders.
4. The Contractor is advised that the sumps and pits that are to be removed contain sediment and debris. The sediment has been sampled and the results are included in the Supplemental Information Available to Bidders.
5. The Contractor is advised that the building contains asbestos at various locations. The Contractor shall have all asbestos containing materials removed prior to initiating demolition activities. A copy of the Asbestos Survey is included in the Supplemental Information Available to Bidders.

E. Salvaged Materials: Items of salvageable value to Contractor may be removed from structures as work progresses. Transport Contractor salvaged items from

project site as they are removed. Storage or sale of removed items will not be permitted on-site.

F. Explosives: Use of explosives will not be permitted for building demolition.

G. Traffic: Conduct demolition operations and removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.

H. Protections:

1. Conduct operations to prevent damage to adjacent trees, grassed areas, utilities, properties, buildings, sidewalks, and other facilities that are designated to remain.
2. Ensure safe passage of persons around area of demolition. Erect temporary passageways as required by authorities having jurisdiction.

I. Damages: Promptly repair damages caused to adjacent facilities and properties by demolition operations, at no additional cost to the DEC.

PART 2- PRODUCTS (Not Applicable)

PART 3- EXECUTION

3.1 DEMOLITION

A. Pollution Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust from rising and scattering in the air. Comply with applicable governing regulations pertaining to environmental protection.

1. Do not use water for dust suppression when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

2. Clean roadways and adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to the condition existing prior to start of work.

B. Building Demolition: Demolish buildings down to the level of the bottom of the concrete floor slab and remove from the site. Use such methods as required to complete work within limitations of governing regulations.

1. Small structures may be removed intact when acceptable to Engineer and approved by authorities having jurisdiction.

2. Proceed with demolition in systematic manner, from top of structure to ground. Complete demolition work above each floor or tier before disturbing supporting members on lower levels.

3. Demolish concrete and masonry in small sections.

4. Remove structural framing members and lower to ground by hoists, demolition equipment capable of gripping framing members, or other suitable methods.

5. Concrete floor slabs, pits and sumps shall be removed. The concrete floor slab inside the building contains asbestos containing building roof debris, and the "floor dust"is contaminated with PCBs at a level above the hazardous waste threshold limit. The roof debris will be removed prior to initiation of demolition work. The "floor dust" will also be removed prior to initiation of demolition work. The means and methods of the pre-removal of this material will be determined by the Contractor, but subject to approval by the Engineer. These materials will be disposed of accordingly to their characteristics at permitted disposal facilities.

6. Locate demolition equipment throughout structure and remove materials so as to not impose excessive loads to supporting walls, floors, or framing.

7. Upon completion of the demolition, regrade the ground surface around the perimeter of the building to the Engineer's satisfaction to avoid sharp drop-offs between the ground surface and the void remaining from the demolition of the building. The void will be filled select granular fill.

3.2 REMOVING SUMPS, PITS, AND OTHER BELOW GRADE STRUCTURES

A. Remove all liquids, sediment, debris, and equipment from sumps, pits, and other below grade structures and dispose at a permitted disposal facility prior to demolition.

B. Completely remove sumps, pits, and other below-grade structures.

C. After structure has been removed, place security fencing around the perimeter of the remaining hole. Fencing shall remain in place upon completion of the project.

3.3 SALVAGED MATERIALS

A. All salvaged materials shall become Contractor's property and shall be removed from the site and shall be managed in accordance with applicable Federal and Sate regulations and requirements.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. On a regular basis remove from the site accumulated debris, rubbish, and other materials resulting from demolition operations.

B. Burning of combustible materials from demolished structures is prohibited.

C. Removal: Transport materials removed from demolished structures and dispose of properly.

END OF SECTION 02060

SECTION 02061

WASTE CHARACTERIZATION, REMOVAL AND DISPOSAL

PART 1 – GENERAL

1.1 DESCRIPTION

A. The Contractor shall furnish all labor, materials, supplies, equipment, power, facilities and incidentals necessary to remove, label, sample, test, manifest, transport and dispose of all waste and materials identified in the site plan and scope of work and as generated by the Work designated for removal from the site, and any other materials as shown on the Contract Drawings and as directed by the Engineer.

B. The Contractor shall be aware that the following materials which may present special waste characterization and disposal requirements may exist within the project.

1. Debris and sediment in pits, sumps, and floor drains throughout the facility may contain unspecified contaminants.
2. PCB impacted soil and fill, and hard surfaces.
3. Substances and fluids contained within PCB treatment system equipment.
4. Asbestos containing materials and debris.

Refer to the Supplemental Information available to Bidders for detailed materials, sampling and analytical information.

C. Remove impacted soils from PCBs and other contaminants to specified levels on the site plan.

D. Carefully and deliberately plan the work to avoid danger to workers and the public. Employ other contractor and equipment as required to support the structure during the demolition

E. The Contractor shall prepare a truck routing plan, describing how the Contractor will transport contaminated materials throughout the site to minimize contamination. The Work shall be performed in accordance with all the approved plans.

F. The Contractor shall prepare and issue all notifications, and apply for and obtain all permits and approvals required to complete the Work. All fees for licenses, permits, tolls, approvals, taxes, etc. shall be the responsibility of the Contractor.

G. Materials removed from the site shall be transported directly to facilities which have received prior approval of the Department.

H. The Contractor is not required to pay the Hazardous Waste Special Assessment (generator tax). Remedial work which generates hazardous waste from inactive hazardous waste disposal sites (as defined in 27-1301 of the Environmental Conservation Law (ECL)) are not subject to the special assessment “tax” because of the exemption found in 27-0923(3)(c) of the ECL. The Contractor remains responsible for paying any local and/or county taxes which may be applicable to the disposal of wastes from the remedial work.

I. In addition to the wastes specifically described in this Section and referenced documents, other unanticipated wastes (which cannot be classified as clean fill or uncontaminated construction and demolition debris) may be encountered during this work which may require reporting, notification, and characterization prior to removal or disposal. Refer to Part 3.2 D for procedures in the event of the encounter of such wastes.

J. Provide security as required to protect facilities. Remove segregated waste materials each day to a secure location to prevent vandalism of containers.

K. Related Section

1. Division 1 – General Requirements
2. Section 02060 – Building Demolition
3. Section 02065 – Decommissioning Existing Equipment
4. Attachments

1.2 SUBMITTALS

A. Prior to starting work, submit and receive Engineer's approval for the documents described in this part. These documents shall be submitted in a separate section of the Contractor's Health and Safety Plan.

1. A complete description of the Contractor's work plan, laying out the sequencing and phasing of the work to ensure the proper removal, and disposal of all special wastes.
2. Submit the name and location and a copy of the operating permit for each offsite disposal facility to be utilized for this project. Provide a statement of acceptability from each facility for each waste to be received from this project.
3. Evidence of the completion of 40-hour OSHA training by Contractor's personnel.
4. Copies of insurance certificates for all contractors on site, with limits identified elsewhere in these specifications.
5. Proof that all required permits, disposal site locations, and arrangements for transportation and disposal of wastes have been addressed and obtained.

B. At the end of the removal, and disposal of all special wastes provide records (as described in Part 3.4) showing final disposition of all special wastes removed from the project site. These records shall be provided to the Engineer prior to the Contractor's application for payment of special waste removal.

1.3 QUALITY ASSURANCE

A. Regulations

Comply with applicable federal, state, and local regulations including, but not limited to:

1. U.S. Environmental Protection Agency (EPA), including Title 40, Code of Federal Regulations.
2. Occupational Safety and Health Administration (OSHA), including Title 29, Code of Federal Regulations, including Parts 1910 and 1926, U.S. Department of Labor.

3. State of New York Rules and Regulations, including 6 NYCRR Part 360 and 364 regarding transport and disposal.
4. Recommendations of the National Institute of Occupational Safety and Health.
5. Transportation regulations, including U.S. Department of Transportation regulations, including Title 29 Parts 171 and 172 and New York State Department of Transportation regulations.
6. Industrial Code Rule 56.
7. Labeling, sampling, testing, manifesting, transporting and disposing of solid and hazardous wastes shall be performed in accordance with all applicable federal, state and local laws and regulations, including NYSDEC solid waste regulations (6 NYCRR Part 360) and NYSDEC hazardous waste regulations (6 NYCRR Parts 370-376) and the requirements of the disposal facility.

B. Whenever there is a conflict or overlap of the above regulations, the most stringent provision is applicable.

C. Disposal sites for all wastes shall be appropriately permitted by the State in which the facility is located to accept such materials.

D. In the event that any requirement of this specification contradicts any such requirement, immediately notify the Engineer and the Owner of such conflict or contradiction. In such cases, the regulation or law shall apply.

E. Post all applicable regulation signage in a conspicuous place at the jobsite. Assure that the regulation signage is not altered, defaced or covered by other materials.

1.4 PROTECTIONS

A. The Contractor is solely responsible for the protection of his work force, in accordance with federal, state, and local regulations. Worker protection shall include personnel protective equipment (including respiratory protection), at a minimum. Personnel protective equipment provided to Contractor's personnel shall also be made available to the Engineer, at no additional cost to the Owner. In addition, protection to all on-site personnel from other hazards inherent in demolition projects shall be provided, including temporary shoring and support for structural elements including buildings and retaining walls.

B. The Contractor shall protect utilities to be preserved and adjoining property improvements from damage as a result of the demolition and excavation work. Any damage shall be repaired in-kind at the expense of the Contractor.

C. The Contractor shall protect the surrounding environment from pollution as a result of his work under this Section. The Contractor shall adhere to the spill prevention plan accepted by the Owner as part of the Contractor's Health and Safety Plan to contain and clean any spills.

PART 2 – MATERIALS

Not Used

PART 3 – EXECUTION

3.1 GENERAL

A. Demolition and excavation activities at the structures will generate spoil materials that will require proper handling procedures for reuse or disposal. In accordance with 6 NYCRR Part 360 and 6 NYCRR Part 371, spoils materials can be classified as "clean fill" (unregulated solid waste) or into several categories, as follows:

1. Construction and Demolition Debris (C&D)
2. Non-hazardous Industrial Solid Waste
3. Hazardous Solid Waste

B. Contaminated materials removed from the site shall not be combined with non-contaminated material. Material characterized as hazardous waste shall not be combined with any other materials or wastes.

C. Equipment used for the excavation of waste materials shall be decontaminated prior to its reuse on clean material. Equipment shall be decontaminated between distinct areas of contamination regardless of the type of contamination.

D. The Contractor shall establish exclusion zones for each work area in accordance with the Contractor's HASP

3.2 IDENTIFICATION OF WASTES

A. Sampling information of several wastes accessible at the time of bidding is included within the Appendices for the Contractor's information.

B. A as part of the base bid, it is the responsibility of the Contractor to test all materials for disposal purposes when waste characterization data not available. The results of all analyses arranged by the Contractor shall be submitted to the Department prior to removal of any material from the site. The time and date of collection and sample identification numbers shall be clearly indicated on the results of analyses furnished to the Department.

C. It is possible that the Contractor will encounter additional wastes during the progress of his work. The Contractor will be responsible for the initial identification of this waste material as it relates to on-site personnel and environmental protection. The Contractor shall employ personnel-protective equipment and/or environmental protective measures as required.

D. The Contractor shall notify to Engineer immediately of the discovery of additional waste. The Engineer will inspect the waste using visual observation, olfactory observation, and/or field screening using a photoionization detector (PID), or similar procedure as appropriate to the circumstance.

E. Based on this inspection, the Engineer will formulate an opinion of the waste material in question. This opinion will fall into two cases; (1) the waste appears to be uncontaminated C&D debris, and (2) the waste does not appear to be uncontaminated and requires additional testing.

F. If material is deemed to be C&D debris, then it shall be disposed of in accordance with Section 02060 at no additional cost to the Owner.

G. If material requires additional testing, then the Contractor shall arrange and pay for laboratory testing as necessary. However, the Owner reserves the right to use the Owner's own qualified persons or laboratories at any time to exclude certain areas or materials from the Contract scope, or to take other similar cost-savings measures as determined prudent by the Owner at any time.

3.3 EXCAVATION OF IMPACTED MATERIALS, WASTE AND DEBRIS

A. The Contractor shall excavate to the lines and grades shown on the Contract Drawings. The final extent of excavation shall be determined by confirmatory sampling performed by the Engineer. The Contractor shall allow a minimum of 24 hours for results of confirmatory sampling performed by the Engineer.

B. The Contractor shall not over-excavate any area without the prior approval of the Engineer. Excavation, disposal, and backfilling costs due to unapproved over-excavation shall be at the Contractor's expense.

C. Conduct excavation operations to provide continuous drainage and minimal ponding. Direct surface water away from the excavation areas. Surface water and groundwater seepage which collect in the excavation areas shall be removed and handled accordingly to applicable regulation and requirements.

D. Transportation of excavated materials shall be performed in a manner that will prevent spills and the spread of contamination and in accordance with all Federal, State and Local requirements. Construct decontamination pads as needed to clean trucks moving between contaminated and non-contaminated areas. Provide lined or sealed trucks to prevent the spillage of liquids from trucks hauling wastes.

E. Excavation shall be performed in a manner that prevents migration of contaminants from one area to another. Contamination that spreads beyond the existing contamination limits shall be removed and disposed of in accordance with this section at the Contractor's expense.

F. Keep varying contaminant types and concentrations segregated from each other.

G. Weigh materials to be disposed offsite at a local offsite truck scale, onsite temporary truck scale or with truck axle gauges. Do not exceed legal load limits for truck weight. Payment for materials disposed offsite shall be based on the scales at the disposal facility

IMMEDIATE CLEAN-UP RESPONSE

A. Should an immediate clean-up or removal response be required in order to reduce the likelihood of further waste migration or to allow completion of critical construction tasks, the Contractor shall perform this clean-up.

B. The Contractor shall be prepared with the appropriate personnel, equipment, and materials for any of the following three types of immediate responses:

1. Application of sorbents or neutralizers for liquid wastes.
2. Pumping and containerizing of liquid wastes
3. Removal and containerizing of solid wastes.

C. Based on the effectiveness of the immediate clean-up response and appropriate analytical testing, as required, the Engineer or Owner will determine whether operation can continue in the vicinity of the waste.

3.4 WASTE MANIFEST RECORD KEEPING

A. The Contractor shall acquire and complete all required manifest forms and bills of lading as required by applicable laws and regulations for transportation and disposal of materials off-site. The EPA-required generator identification number for the site will be provided. The Contractor shall provide all required manifests and bills of lading to the Department along with all requested backup documentation. The Engineer shall sign manifests and bills of lading for the Department. However, the Contractor shall be responsible for assuring that all notifications, labeling, documentation, sampling, analysis, transportation and disposal requirements of the disposal facility, and federal, state and local requirements are complied with and properly documented. Establish a manifest system that accounts for all wastes identified in this Section.

B. Provide final manifest and documents to the Owner within three (3) working days of the removal of waste from the site by the waste hauler. Waste manifests submitted to the Department and Engineer shall be furnished with a certification signed by the Contractor stating that all requirements of the disposal facility and federal, state and local governments are complied with.

3.5 DISPOSAL

A. In accordance with the approved Work Plan, the Contractor shall provide letters of commitment from all disposal facilities to the Department. The letters of commitment shall state that the facility is able to accept the waste which the Contractor intends to ship to the facility.

B. Remove all waste from the site as soon as practical and legal to do so.

C. It is the responsibility of the Contractor to comply with current federal, state and local regulations concerning the waste handling, transportation, and disposal of all wastes removed as part of this project. Vehicles used to haul materials shall be designed, equipped, operated and maintained to prevent leakage, spillage or airborne emissions during transport. The containers shall be lined with 6-mil polyethylene sheeting prior to loading. All vehicles shall be decontaminated including truck tires and undercarriages, prior to leaving the site. The Contractor shall be responsible for supplying all labor, materials, equipment and supplies for decontaminating the vehicles used and shall be responsible for disposal of wastes resulting from decontamination.

D. Prior to departure from the site of each vehicle transporting waste, a decontamination certificate signed by the Contractor's site superintendent shall be submitted to the Department. The certificate shall include:

1. The date and time of departure and the vehicle license number;

2. A statement that no contaminated soil or other contaminated material is adhered to the vehicle body, tires or undercarriage and no soil will be tracked off site onto public roadways;

3. A statement that the vehicle container is lined with plastic sheeting and/or is not leaking or dripping liquids;

4. A statement that the contents of the vehicle are covered or completely enclosed so as to prevent any releases of vapors or particulate matter; and

5. The route of transport and location where the waste is being transported to.

E. Certified weigh tickets showing the weight of the vehicle at the time of arrival and departure from the contract work site and the disposal facility shall be provided as a prerequisite to payment for all material transported off-site. The weight tickets shall be signed and dated by a representative of the Contractor certifying to the accuracy of all measurements, the date and time of arrival and departure of each vehicle, the disposal location and the vehicle identification number.

F. The Contractor shall provide a certified letter at the conclusion of work stating that all special wastes removed from the project site were disposed properly, and with attachment to that letter providing proof of actual disposal of the waste at a permitted disposal facility.

3.6 BACKFILLING

A. Excavated material shall be backfilled with clean imported fill or crushed aggregate as shown on the Contract Drawings, specified, or directed by the Engineer. No backfilling operations shall be performed without acceptance by the Engineer.

END OF SECTION 02061

SECTION 02065

DECOMMISSIONING EXISTING TREATMENT EQUIPMENT

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work

The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to, decommissioning existing treatment system equipment at the site. This shall include, but not be limited to, examining equipment for liquids, solids, and removing, containerizing and properly disposing of the contents of the equipment.

B. Related Sections

1. Division 1 – General Requirements
2. Section 02060 – Building Demolition

1.2 QUALITY ASSURANCE

A. Regulations

Comply with applicable federal, state, and local regulations including, but not limited to:

1. U.S. Environmental Protection Agency (EPA), including Title 40, Code of Federal Regulations.
2. Occupational Safety and Health Administration (OSHA), including Title 29, Code of Federal Regulations, including Parts 1910 and 1926, U.S. Department of Labor.
3. State of New York Rules and Regulations, including 6 NYCRR Part 360 and 364 regarding transport and disposal.
4. Recommendations of the National Institute of Occupational Safety and Health.
5. Transportation regulations, including U.S. Department of Transportation regulations, including Title 29 Parts 171 and 172 and New York State Department of Transportation regulations.
6. Labeling, sampling, testing, manifesting, transporting and disposing of solid and hazardous wastes shall be performed in accordance with all applicable federal, state and local laws and regulations, including NYSDEC solid waste regulations (6 NYCRR Part 360) and NYSDEC hazardous waste regulations (6 NYCRR Parts 370-376) and the requirements of the disposal facility.

B. Whenever there is a conflict or overlap of the above regulations, the most stringent provision is applicable.

C. Disposal sites for all wastes shall be appropriately permitted by the State in which the facility is located to accept such materials.

D. In the event that any requirement of this specification contradicts any such requirement, immediately notify the Engineer and the Owner of such conflict or contradiction. In such cases, the regulation or law shall apply.

1.3 PROJECT REQUIREMENTS

A. All equipment to be disposed of shall be decommissioned in accordance with Part 3.1. Equipment that is to be salvaged may have fluids left in it provided the Contractor takes precautions to not allow these fluids to be discharged on site. Any such discharge shall be cleaned to the satisfaction of the Engineer at no additional cost to the Owner.

B. Condition of Equipment: Owner assumes no responsibility for actual condition of equipment to be demolished.

1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner insofar as practicable. However, variations within equipment may occur by Owner's removal and salvage operations prior to start of demolition work.

PART 2 – MATERIALS (Not Used)

PART 3 – EXECUTION

3.1 LIQUIDS/SOLIDS REMOVAL

A. All equipment shall be visually inspected by the Contractor for the presence of liquids or solids. The Contractor will be responsible for dismantling equipment as required to inspect the entire machine.

B. Any liquid or solid found within the equipment shall be removed and properly containerized.

C. All liquids or solids removed shall be properly disposed of in accordance with applicable local, state, and federal laws. The Contractor shall be responsible for any testing or sampling required for disposal at no additional cost to the Owner.

D. The contents of the carbon adsorption vessels (granular activated carbon) shall be removed and flushed out of the vessels prior to removal. The activated carbon shall be managed as PCB TSCA wastes. The carbon adsorption vessels shall be flushed with a surfactant solution and rinsed prior to salvaging as scrap metal. The rinse solutions shall be collected and treated prior to disposal.

E. Any liquids in treatment system holding tanks shall be managed as PCB impacted water and shall be collected and treated prior to disposal. The holding tanks shall be flushed with a surfactant solution and rinsed prior to salvaging as scrap metal. The rinse solutions shall be collected and treated prior to disposal.

F. The Engineer shall have final approval for the proper decommissioning of equipment. Any disapproved equipment shall be completely decommissioned to the satisfaction of the Engineer at no additional cost to the Owner.

3.2 DECOMMISSIONING OF ELECTRICAL COMPONENTS

A. The Contractor shall disconnect the equipment from electrical connections. The wiring to the equipment shall be safely covered or the wire removed to prevent contact between workers (Contractor's and others) and the exposed wiring.

B. Neither the Owner nor the Engineer guarantees the nature of the electrical service within the buildings to be demolished. All electrical wiring shall be assumed to be live. The Contractor shall take all precautions necessary to protect individuals from electrocution.

3.3 EQUIPMENT SALVAGING

A. All equipment at the site to be decommisioned and removed shall become the property of the Contractor. The Contractor may salvage the metals at a metal scrap recycling facility. Disposal receipts from the metal scrap facility will be required in order to receive payment for the work.

B. Any equipment to be salvaged shall be decommissioned and dismantled by the Contractor and removed off-site in a timely fashion. Salvaged equipment shall not be stockpiled on-site awaiting sale.

C. All salvaging shall commence in accordance with applicable local, state, and federal laws.

END OF SECTION 02065

SECTION 02077

DECOMMISSIONING OF DRAINAGE STRUCTURES, SUMPS, PITS AND BELOW GRADE VOIDS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Scope of Work

The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to decommissioning of sumps pits and below grade voids inside the building and site areas indicated on the Plans. This includes but not limited to dewatering; removing, classifying and properly disposing of sediments, and removal of the structure. Remove, salvage and/or properly dispose of construction and demolition debris generated from the decommissioning at an approved disposal facility in accordance with State and Federal regulations.

B. Related Sections

1. Division 1 – General Requirements
2. Section 02061 – Waste Characterization Removal and Disposal
3. Section 02060 – Building Demolition
4. Section 02065 – Decommissioning Existing Site Equipment and Machines
5. Section 02080 – Asbestos Abatement

1.2 SUBMITTALS

A. The Contractor’s Health and Safety Plan, submitted in accordance with Section X, Standard Specifications, and shall include requirements for confined space entry.

B. The Contractor shall submit the following in accordance with Section 01300:

1. Name, location, and registration information for the disposal site(s) to be used.
2. Name and license information of any haulers to be used.
3. Absorbent Materials.
4. Select Granular Materials
5. Any other materials required to complete the work.

1.3 QUALITY ASSURANCE

A. Reference Standards

1. 29 CFR 1910 and 1926 – Occupational Safety and Health Administration (OSHA) Standards

1.4 PROJECT REQUIREMENTS

A. Complete all work in accordance with applicable requirements.

B. Coordinate the work with other site work.

C. Conduct operations to prevent damage to adjacent trees, grassed areas, utilities, properties, buildings, sidewalks, and other facilities that are designated to remain.

D. Damages: Promptly repair damages caused to adjacent facilities and properties by demolition operations, at no additional cost to the DEC.

E. Salvaged Materials: Items of salvageable value to Contractor may be removed from structures as work progresses. Transport Contractor salvaged items from project site as they are removed. Storage or sale of removed items will not be permitted on-site.

PART 2- PRODUCTS

2.1 ABSORBENT MATERIALS

A. Absorbent material shall be as follows:
   1. "Kitty Litter"
   2. Other approved materials acceptable to the Engineer.

B. Select granular fill shall be sound, durable, sand gravel, stone or blends free from slag, organic, frozen, or other deleterious materials, conforming to the requirements of NYSDOT Section 304 and meeting the following approximate gradation requirements (NYSDOT Type 4):

SIEVE	PERCENT PASSING
2-inch	100
¼-inch	20 – 65
No. 40	5 – 40
No. 200	0 - 10

As an alternate to select granular fill, crushed concrete aggregate (recycled concrete) may be considered providing that the material is sourced from vendor that processes concrete for aggregate that is accepted for use on NYSDOT roadway projects, is of similar gradation, is free of deleterious materials and excess fines, and free of contaminants.

PART 3- EXECUTION

3.1 DEWATERING

A. Remove any standing water found within sumps, pits and pipes. Exercise care so that sediment is not removed with the water. If sediment is removed, the water shall be considered as contaminated and shall be properly disposed of at no additional cost.

B. If sump water exhibits evidence of contaminants, (i.e. sheen, odors, etc.), it may be necessary to analyze and treat the water prior to discharge into the sanitary system. The following conditions apply:

1. Any discharge into the municipal sanitary system must be preceded by written approval, submitted to the Engineer, by the owner of the system.

2. The Contractor shall be responsible for laboratory testing and providing treatment as required if this situation occurs.

3. Treatment methods shall be approved by the Engineer and appropriate regulatory agency.

4. The additional cost shall be negotiated between the Contractor and DEC.

C. No water that is collected shall be discharged into or onto the ground or allowed to run off the project site. No water from sumps shall be discharged to any existing municipal storm sewers.

D. Remaining aqueous material shall be solidified with an adsorbent material.

3.2 SUMPS AND DRAINAGE STRUCTURE DECOMMISSIONING

A. Remove all liquids, sediment, debris, and equipment from sumps, pits, and other below grade structures and dispose at a permitted disposal facility prior to removal.

B. Completely remove sumps, pits, and other below-grade structures as noted on the drawings. Dispose of excavated materials dispose as industrial solid waste at a permitted solid waste disposal facility.

C. Remove all associated piping to within project limits or as indicated on the site drawing. Any pipe sections that are to be abandoned in place shall have grout placed in the end of the abandoned-in-place pipe to form a water tight seal.

D. Once the structure has been removed and any abandoned-in-place pipes, the excavation pit that contained the former sump or drainage structure shall be backfilled with select granular fill.

END OF SECTION 02077

SECTION 02080

ASBESTOS ABATEMENT

PART 1 - GENERAL

1.1 SUMMARY

A. This section specifies the procedures for the removal, handling and disposal of existing asbestos-containing materials within buildings to be demolished. The asbestos work covered by these Contract Specifications includes supplying the labor, equipment, supplies and materials for the removal of asbestos-containing materials from the designated building located at 1079 Clinton Street, Buffalo, NY. Asbestos-containing material (ACM) includes but is not limited to roofing felts, window glaze and caulk, and debris as identified in the *Asbestos Inspection – Bengart & Memel, Inc. Site dated December 26, 2008* (See Bengart and Memel Limited Site Data Report, March 2009, NYSDEC). The structural condition of the building to be demolished represents a safety concern for pre-demolition ACM abatement. As such, the City of Buffalo, Department of Economic Development, Permit and Inspection Services, having jurisdiction over the assessment of the structural and functional condition of the said building has condemned the building due to the structural safety concerns. A copy of the condemnation notice is contained in the Bengart and Memel Limited Site Data Report, March 2009, NYSDEC.

B. Remove all asbestos-containing materials according to the most current Federal, State and local regulations.

C. The asbestos removal may occupationally expose the Contractor's employees to asbestos above the OSHA PEL and is considered OSHA Class I and Class II asbestos work. The EPA NESHAP regulates the removal as those for regulated asbestos-containing materials (friable material), Category 1 non-friable asbestos-containing material, and Category 2 non-friable asbestos-containing materials.

D. Equipment, supplies and materials brought to site shall meet all applicable regulatory and governmental requirements, codes, and rules.

E. Conduct all asbestos removal in a minimum of Level C personal protective equipment as defined by OSHA or as site conditions dictate and regulatory permits require. Respiratory protection equipment will comply with 42 CFR Part 84 and will have NIOSH approval number for particulate respirators prefix TC.

F. Interior surfaces to be cleaned include, but are not limited to, all floors, walls, ceilings, stairs, windows and associated sills/casements, structural elements, piping systems, lights and electrical equipment, elevator units, fixtures, fixed equipment, semi fixed equipment, and non-fixed equipment.

H. An area or surface will be considered clean when all visual quantities of asbestos-containing materials have been removed and the area has been examined by the Owner, or Owner's Representative. The Owner, or Owner's Representative, reserves the option of implementing a surface wipe-sampling program to ensure a building area has been appropriately cleaned.

I. An asbestos removal project area will be cleared by applying the NYSDOL Air Sampling,

Monitoring, and Analysis protocols. The Owner shall retain an independent third party air monitoring subcontractor for this purpose.

J. The removed debris shall be handled, transported and disposed of as asbestos waste according to the applicable Federal, State and Local regulations.

K. Obtain written approval from the Owner, or Owner's Representative, prior to petitioning for variance from the Federal, State or local regulations.

L. Contractor shall perform no additional independent asbestos sampling or testing without receiving prior permission to do so from the Owner. Any additional sampling and testing that is performed shall be at the Contractor's expense and shall be witnessed by the Owner's representative. Any independent testing performed without the Owner's permission shall be cause for termination of the contract.

1.2 REFERENCES

A. NYSDOL Industrial Code Rule 56/12 NYCRR 56.

1. The Contractor may petition the NYSDOL for relief of relevant sections of Industrial Code Rule 56 for the portion of the Work of this project involving asbestos containing materials. This petition, if approved, is subject to all conditions imposed by the NYSDOL. The Owner reserves the right to approve variance petitions prior to submission to the NYSDOL. In the case where variance from multiple regulatory agencies is sought, and approval is granted, the most stringent will apply where conflicts exist.

B. New York State Department of Environmental Conservation: 6NYCRR Part 364.

C. Occupational Safety and Health Administration (OSHA): Asbestos Regulations (29 CFR Part 1926.1101).

1. The Contractor may petition the OSHA Department of Labor for approval of alternative work methods for relief from relevant sections of the Asbestos Standard. This petition, is subject to all conditions imposed by OSHA. The Owner, or Owner's Representative, reserves the right to approve variance petitions prior to submission. In the case where variance from multiple regulatory agencies is sought, and approval is granted, the most stringent will apply where conflicts exist.

D. U.S. Environmental Protection Agency (EPA): National Emissions Standards for Hazardous Air Pollutants; Asbestos NESHAP Revision; Final Rule.

E. The EPA Asbestos Hazard Emergency Response Act (AHERA) (40 CFR 763).

1.3 SUBMITTALS

A. In addition to other specified requirements, submit the following asbestos related submittals:

1. Notification Compliance Data: Submit a copy of the Asbestos Project Notification required by the EPA under NESHAPs 40 CFR 61.145 (1,), and written evidence that it has been forwarded and received by the EPA within ten (10) days prior to asbestos removal work.

Any changes in notification will be resubmitted with evidence of EPA notification.

2. Notification to NYSDOL: Submit a copy and written evidence that it has been forwarded and received by the NYSDOL, within 10 days prior to asbestos removal work of the Asbestos Project Notification required by 12 NYCRR 56-1.6 and a copy of the Occupant Notification required by 12 NYCRR 56-1.8

3. Asbestos Removal Company Data: Name, address and experience of proposed asbestos removal company. Submit valid, current asbestos certificates and licensing of training for the company and each employee to be used on site. Submit current asbestos certificate and license for the Asbestos Supervisor who will be in a supervisory position. Training certificates must be issued by a training provider approved by the EPA and NYSDOH.

4. Submit an exposure assessment determination, as outlined in 29 CFR 1926.1101 indicating whether employees may be exposed to asbestos at or above the PELs.

5. Submit a copy of the multi-employer work site asbestos notification outlining the nature of the employer's work with asbestos and the areas that are, or will be, regulated.

B. Waste Transporter Permit: One copy of transporter's current waste transporter permit, shall be submitted to the engineer.

C. Notify the Owner and his representatives at least 48 hours prior to the start of any asbestos removal operations

D. Contract Closeout Submittals:

1. Daily air monitoring test reports.

2. Post abatement air monitoring results indicating acceptable area clearance.

3. Disposal Site Receipts: Copy of each fully complete waste manifest showing the ACM has been properly disposed.

4. Contractor's Asbestos Abatement Report: Upon completion of the asbestos work, submit to the owner, or owner's representative, documentation demonstrating that the work had been completed according to the applicable Federal, State and local regulations. The documentation will at a minimum contain the work area logs, analytical air sampling results, waste characterization results, personnel monitoring, the completed waste manifests, and all other information required by the contract documents.

1.4 DELIVERY AND STORAGE

A. Post required signs and warnings on all vehicles and containers used for ACM transportation and storage with required signs and warnings

B. Store equipment to prevent cross contamination of non-asbestos work areas.

1.5 PROJECT CONDITIONS

A. The Contractor shall employ (either directly or through subcontract) the services of a certified "Asbestos Project Designer" as defined in the 12 NYCRR Part 56-3.2(d)(7). The Asbestos Project Designer shall be responsible for carrying out the duties defined in 12 NYCRR Part 56-3.2(d)(7).

B. The Specifications do not purport to show and describe all aspects of the work involved, but rather, they outline the work for general informative purposes.

C. The Contractor shall visit the site and become acquainted with, and conform to, all existing conditions.

D. All work area buildings will be unoccupied during the project activities. Coordinate the removal of any equipment or items with the Owner, or the Owner's Representative.

E. Buildings adjacent to the work area will be occupied throughout the duration of the contract. The Contractor shall take all measures necessary to protect individuals working within those building from exposure to asbestos.

F. Do not interrupt electric services to the occupied buildings and neighboring facilities that are not a part of the project. Remaining utility services to the buildings may not have been terminated according to the regulations. Coordinate regulatory compliant lockout/tag out of the building with the Owner or Owners Representative. Bring electricity in the work area from an outside source, in series with a ground fault interrupter.

G. The only known permitted confined spaces within the project building are the interior sumps and pits. Notify the Owner, or Owners Representative, of any other confined spaces are discovered.

H. Evaluate all building areas and roof areas for safety prior to work. Moisture within the buildings may create slip/trip-fall hazards.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use OSHA compliant glovebags as stipulated in 29 CFR 1926.1101(g).

B. Polyethylene sheeting shall be fire-retardant of at least 6-mil thickness and in sheet sizes to minimize the frequency of seams.

C. Polyethylene bags shall be at least 6 mil thick, large enough for the intended application, and have the following label imprinted on them:

DANGER
Contains Asbestos Fibers
Avoid Creating Dust
Cancer and Lung Disease Hazard

Lettering and format shall be in accordance with OSHA requirements as outlined in 29 CFR 1926.1101 (k).

D. Impermeable containers, such as fiberboard or plastic drums, may be used to receive and retain

asbestos-containing or contaminated materials awaiting disposal at an acceptable site. Imprinted labels shall be in accordance with OSHA requirements as outlined in 29 CFR 1926.1101(k).

E. Plastic sheeting of at least 6 mil thickness may be used to wrap asbestos containing materials provided that the material is wrapped with at least two (2) layers of the sheeting, sealed air tight with duct tape and labeled in accordance with OSHA regulations as outlined in 29 CFR 1926.1101 (k).

G. All containers used for project area and/or manual transportation or disposal of asbestos containing waste shall be covered air tight and labeled in accordance with OSHA standards 1929.1001 and 1926.1101.

H. Utility duct tape of either two inch or three inch widths shall be used and must be capable of sealing joints in adjacent plastic sheets, attaching plastic sheets to finished or unfinished surfaces, and maintaining adhesive properties under both wet and dry conditions.

I. Surfactants (wetting agents) shall be used in a concentration of one-ounce surfactant to five gallons of water, or in accordance with manufacturer's instructions.

J. Labels and warning signs shall meet all requirements of OSHA standards 1929.1001 and 1926.1101.

K. Protective clothing consisting of coverall, head cover, and foot cover shall be supplied in sufficient quantities for all phases of work.

2.2 EQUIPMENT

A. Respiratory protection shall meet the requirements of OSHA as presented in 29 CFR 1910.134 titled "Respiratory Protection," 29 CFR 1910.1001 and 1926.1101 titled "Asbestos." In addition to the requirements of the said regulations, the employer shall provide:

1. A tight-fitting powered air purifying respirator (PAPR) with high efficiency filters; or,

2. A full facepiece supplied air respirator operated in the pressure demand mode equipped with REPA egress cartridges; or,

3. An auxiliary positive pressure self-contained breathing apparatus (SCBA), for all employees within the asbestos removal area for which a negative exposure assessment has not been produced and, the exposure assessment indicates the exposure level will not exceed 1 f/cc as an 8-hour time weighted average. A full facepiece supplied air respirator operated in the pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus shall be provided under such conditions, if the exposure assessment indicates exposure levels above 1 f/cc as an 8-hour time weighted average

B. Provide a large personal and waste decontamination enclosure system, as described in 12 NYCRR 56-9 and 12 NYCRR 56-10, respectively. The decontamination enclosure systems shall be established before any Removal Area preparation.

PART 3- EXECUTION

3.1 ASBESTOS-CONTAINING MATERIAL HANDLING AND REMOVAL PROCEDURES

A. Comply with the most recent versions of all applicable local, state and federal regulations governing the removal of asbestos containing materials.

B. Where variances from the applicable regulations have been approved by the associated governmental agency and the Owner, or Owner's Representative, comply with all provisions and conditions made by the agency.

C. Ensure that non-authorized personnel are not allowed access to the work area at any time after the areas become regulated. Secure all entrances and exits to the work area at all times. The areas are considered removal areas after any area is posted.

D. Do not allow personnel to enter the work area without a respirator and protective clothing. Personal protective clothing must be made available to all authorized visitors by the Contractor. Only medically cleared and properly fit tested personnel, as defined by OSHA 29 CFR 1926.1101, shall don respirators and enter work area.

E. Each time a worker or authorized visitor leaves the Work Area, they shall: vacuum gross contamination from clothing; proceed to the Equipment Room and remove all clothing except respirator; still wearing the respirator proceed to the showers; clean the outside of the respirator with soap and water while showering; remove the respirator; thoroughly shampoo and wash themselves; remove and dispose of filters in the container provided for the purpose; and wash and rinse the inside of the respirator. After showering, the individual shall proceed to the Clean Room.

F. Spray asbestos materials with amended water, using airless spray equipment capable of providing a "mist" application. An OSHA competent person shall determine the quantity of amended water that is appropriate in consideration of worker safety as to avoid slipping/falling hazards.

G. Remove gross ACMs in accordance with applicable regulations. Materials shall not be allowed to dry. Clean-up of accumulations of loose asbestos material shall be performed whenever enough loose asbestos material has been removed to fill a single leak tight container. In no case shall clean up be performed less than once prior to the close of each work day. Standard, commercially available glovebags may be utilized for mudded joint fittings or interlocking multiple glovebag for pipe length removal when complying with the 29 CFR 1926.1101(g). Individual glovebags shall be used no more than once during the course of an asbestos removal project and shall not be moved or reused and shall comply with the Specifications outlined in 29 CFR 1926.1101(g).

H. Remove all non-friable asbestos-containing materials intact according to Federal and State regulations. ACM is considered non-intact if it has crumbled, been pulverized, or has otherwise deteriorated so that the asbestos fibers are no longer likely to be bound within their matrix. Use manual methods to slice, cut, strip-off or pry-up non-friable ACM such as use of spud, spade, flat blade, axe, mattock, pry bar, shovel, flat-blade knife, utility knife. Do not use sanding, abrasive or grinding methods to remove non-friable ACM.

I. Clean the work areas using HEPA vacuum equipment and wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

J. Dispose of all contaminated clothing, respirator filters and other debris in appropriately labeled, sealed containers.

K. Seal filled containers. Place labels on containers in accordance with OSHA Standard 29 CFR 1910.1001 and 29CFR 1926.1101 if not already pre-printed on containers. Clean external surfaces of containers by thoroughly by wet sponging in the designated area of the waste decontamination. Move containers to washroom, wet clean each container thoroughly, re-containerize, and move to Holding Area by workers who have entered from uncontaminated areas dressed in clean coveralls. Do not allow containerized waste to accumulate in the work area. Ensure that work area personnel leave the work area through the personnel decontamination facility.

L. After completion of removal work, all surfaces from which asbestos has been removed shall be wet brushed, using a nylon brush, wet wiped and sponged or cleaned by an equivalent method to remove all visible material (wire brushes are not permitted). During this work, the surfaces being cleaned shall be kept wet.

M. Comply with all settling/drying periods established by 12 NYCRR *56.*

N. Vacuum and wet clean the waste decontamination enclosure system and the personal decontamination enclosure system at the end of each work shift of abatement activities.

O. Maintain the site in a neat and orderly condition at all times.

P. Workers shall not eat, drink, smoke, apply cosmetics, or chew gum or tobacco while in the Work Area.

Q. Workers shall be fully protected with respirators and protective clothing while in the Work Area, immediately prior to the first disturbance of asbestos containing or contaminated materials and until clearance criteria is achieved.

3.2 ENCAPSULATION PROCEDURES

A. Comply with 12 NYCRR 56.

3.3 CLEAN UP CRITERIA

A. Comply with procedures outlined in 12 NYCRR 56-15.

B. A visual inspection by a certified Asbestos Project Monitor employed by the Owner, will be conducted in accordance with 12 NYCRR Part 56-9.1(d)(1). If the project monitor finds any portions of the Work Area to not be in accordance with 12 NYCRR Part 56, then repeat the cleaning until the work area is in compliance. Such re-cleaning shall be at the Contractor's expense.

3.4 AIR SAMPLING, MONITORING, AND ANALYSIS

A. Air Monitoring Tests: The Owner will employ the services of an air monitoring contractor to perform air sample monitoring tests complying with 12 NYCRR 56-17. The Contractor shall coordinate with the air monitoring contractor throughout the duration of the work so that delays

are not caused. Any delay caused by the abatement contractor on the air monitoring contractor shall be paid for by the abatement contractor.

B. The air monitor or project monitor (if applicable) shall record all on-site inspections, observations, and required activities of the Contractor. This record shall be in a permanently bound log book separate from the Contractors required daily log and include, but not be limited to, daily inspections on containment area, observations of worker entry and exit to containment area, waste removal from containment, air monitoring equipment calibration, air monitoring results, containment breeches, and all problems encountered in the abatement process.

C. Air Sample Assembly. Conductive filter holders shall consist of a 25mm diameter, 3-piece cassette having 50mm long electrically conductive extension cowl. Back-up pad shall be 25mm, cellulose. Membrane filter shall be a mixed cellulose ester, 25 mm, plain white with a 0.8 to 1.2 μm pore size.

1. Air sampling filters are to be specified for asbestos counting.

2. Air sampling filter shall be discarded if more than 4 fibers per 100 fields are found through laboratory analysis.

3. Air sampling cassettes shall not be re-used.

4. Air sampling cassettes shall be sealed with gel-bands.

D. Samples will have a chain of custody associated with them.

E. Phase Contrast Microscopy (PCM) is the minimally acceptable method of analysis that may be elected. Transmission Electron Microscopy (TEM) and Scanning Electron Microscopy (SEM) are other acceptable methods of analysis. Whichever methodology is selected, it must be used consistently for all asbestos air monitoring. However, where the use of PCM has resulted in fiber counts that exceed the air clearance levels, TEM may be utilized to obtain a more accurate asbestos fiber count. Where such election is made, both the PCM and TEM results must be made available to the Owner or the Owner's Representative.

F. Documentation of sample analysis must include as a minimum: sample identification; total sample duration; sample flow rate; total air volume; total fibers counted (with work sheets); total fields counted; blank filter analysis; reticule field area; and concentration of fibers per cubic centimeter. Analytical results must include calculation of detection limits as given in Appendix G of Environmental Protection Agency Publication EPA 560/5-85-024, June 1985 Guidance for Controlling Friable Asbestos-Containing Materials in Building; of any typical environmental conditions (or most recent standard).

3.5 DISPOSAL OF ASBESTOS-CONTAINING MATERIAL AND RELATED DEBRIS

A. Ensure and document all waste is properly containerized and labeled in accordance with all applicable state and federal regulations. This shall include the labeling of all containers of asbestos waste with the name and location of the abatement site and the Contractor who generated the waste as outlined in NESHAPS Revision 40 CFR61, Subpart M, 1990.

B. Ensure and document that the proposed waste hauler is licensed and certified to transport asbestos

waste.

C. Ensure and document that the landfill to be utilized for disposal is approved for asbestos disposal by the EPA and/or the appropriate State and local agency governing asbestos waste disposal.

D. All wastewater shall be properly containerized, characterized and disposed of according to the characterization.

E. All landfills accepting the wastes must be notified before shipping for scheduling to ensure that adequate personnel and apparatus are available at the time of disposal.

F. Transport asbestos waste in accordance with applicable local, state and federal regulations. Asbestos materials must be delivered in separate shipments, and must not be transported with other non-hazardous materials.

G. Do not transport disposal bags or drums in open trucks.

H. At the burial site, sealed plastic bags will be carefully removed from the truck. If bags are broken or damaged, leave in the truck and clean entire truck contents.

I. Retain all waste manifests and receipts, and submit to the Owner.

3.6 RESTORATION

A. Remove temporary decontamination facilities and restore area original condition or better.

END OF SECTION 02080

SECTION 02270

TEMPORARY EROSION CONTROL

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope of Work

The Contractor shall provide all labor, materials, equipment, and services necessary for, and incidental to, the installation of temporary erosion control measures. This shall include, but not be limited to, installation of silt fence, hay bales and other measures required to prevent exposed soil from eroding from the site.

B. Related Sections

1. Division 1 – General Requirements.

1.2 SUBMITTALS

A. Provide manufacturer's product data and/or certifications that each material to be used complies with the Contract Documents in all respects. The following materials shall be submitted in accordance with the General Requirements for Submittals:

1. Silt Fence
2. Any other materials as ordered by the Engineer.

1.3 QUALITY ASSURANCE

A. Reference Standards

1. New York State Guidelines for Urban Erosion and Sediment Control (Blue Book) April 1997.

1.4 PROJECT REQUIREMENTS

A. The Contractor shall be solely responsible for the installation and maintenance of temporary erosion control measures as required by the project. The Engineer retains the right to direct additional measures to be employed should on-site project conditions present the potential for sediment eroding off-site. There shall be no extra cost to the Owner should the Engineer deciding that additional measures need to be employed.

B. Plan and execute construction and earth work by methods to control surface drainage to prevent erosion and sedimentation.

1. Hold the area of bare soil exposed at one time to a minimum
2. Provide temporary control measures such as berms, dikes, drains and siltation control devices.

C. Construct fills by selective placement to eliminate surface silts or clays that will erode. Periodically inspect earthwork to detect any evidence of the start of erosion, apply corrective measures as required to control erosion.

D. Do not remove erosion control measures until approved by the Engineer.

PART 2 - MATERIALS

2.1 SILT FENCE

A. Silt Fence shall be 2' high and conform to the following:

Property	**Unit**	**Test Method**	**Average Value**
Grab Strength	Lbs	ASTM D-4632-86	100
Grab Elongation	%	ASTM D-4632-86	30 (max)
Trapazoid Tear Strength	Lbs	ASTM D-4533-85	65
Mullen Burst Strength	Psi	ASTM D-3786-80a	280
Coeff. Of Permeability	Cm/sec	ASTM D-4491-85	0.01
Water Flow Rate	Gal/min/ft^2	ASTM D-4491-85	35
Ultraviolet Stability	%	ASTM D-4355-84	90

B. Stakes shall be 1-1/2-inch square wooden stakes of adequate strength to support the silt fence.

1. Rolls of silt fence may be provided with the stakes attached to the silt fence or separately at the Contractor's discretion.

C. Approved products

1. Mirafi 100 x
2 Approved equal acceptable to the Engineer.

PART 3 – EXECUTION

3.1 SILT FENCE

A. Silt fence shall be installed prior to initiating any demolition work as indicated on the Contract Drawings or at the toe of any slope that presents the possibility for off-site runoff.

B. Create a 6-inch by 6-inch trench in the line of the silt fence.

C. Pound the stakes into the ground at the downgradient wall of the trench so that they will adequately support the silt fence.

D. Roll out the silt fence and attach it to the stake such that 6-inches of the silt fence is below the surrounding grade. Backfill the trench with compacted soil.

E. Periodically inspect the silt fence and remove any silt build up.

F. If at any time the silt fence has to be moved to accommodate work or becomes damaged in any way, it shall be repaired or replaced the same day. Silt fence shall not be left down overnight.

3.2 Any other erosion control measures employed shall be installed in accordance with the manufacturer's specifications and the Engineer's instructions.

END SECTION 02270

SECTION 02500

CRUSHED AGGREGATE PAVING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope:
   1. CONTRACTOR shall furnish all labor, materials, equipment, and incidentals required to provide a crushed aggregate paving as shown and specified.
   2. Crushed aggregate paving includes covering the area indicated on the restoration plan.
   3. The Work includes the following:
      a. Sub-grade preparation.
      b. Placing and compacting crushed aggregate.

B. Related Work Specified Elsewhere:
   1. Section 02061,Waste Characterizaton, Removal and Disposal

1.02 SUBMITTALS

A. Shop Drawings: Submit for approval data on materials, including source, location, percentages, and all other pertinent data.

1.03 JOB CONDITIONS

A. Grade Control: Establish and maintain the required lines and grades, including crown and cross-slope during construction.

B. CONTRACTORS shall maintain permanent access driveway and install temporary access driveways as required.

PART 2 - PRODUCTS

2.01 CRUSHED AGGREGATE PAVING

A. Access driveway paving shall consist of "run-of-crusher" stone conforming to the following:
   1. All materials furnished shall be well graded from coarse to fine and shall be free of organic or other deleterious material.
   2. Material shall conform to NYSDOT Type2, Item No. 304.03.
   3. Provide certified copies of test reports.
   4. No segregation of large and fine particles will be allowed, but the material as spread shall be well graded with no pockets of fine materials.
   5. Blast furnace slag shall not be used.

6. “Recycled concrete” from NYSDEC permitted concrete recycling facilities capable of manufacturing a well graded product suitable for use on NYSDOT roadway projects as an aggregate base may be used in quarried and process rock or stone.

PART 3 - EXECUTION

3.01 PLACEMENT

A. Verify that fill materials to be used are acceptable to that specified. Any crushed stone stockpiles which have undergone excessive particle segregation shall be removed prior to backfilling.

B. Verify that all subsurface installations for the project have been inspected and are ready for backfilling.

C. Generally, compact subgrade to density requirements for subsequent backfill materials. Cut out soft areas of subgrade not capable of in-situ compaction. Backfill with a material as specified in Part 2 (above) and compact to density equal to or greater than requirements for subsequent backfill material.

D Notify the ENGINEER in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to the ENGINEER.

END OF SECTION 02500

SECTION 02830

CHAIN LINK FENCE AND GATES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Provide new six-foot high chain link fencing and gates as complete units including necessary erection accessories, fittings, and fastenings as indicated on drawings.

B. Related work specified in other sections:
   1. Section 01500 - Construction Facilities and Temporary Controls
   2. Section 01545 - Protection of the Work and Property
   3. Section 02222 - Excavation

1.02 SUBMITTALS

Submit manufacturer's technical product data, shop drawings, and installation instructions for metal fencing, fabric, gates and accessories.

A. Dimensions indicated for pipe are outside dimensions, exclusive of coatings.

B. Manufacture: Subject to compliance with requirements, provide products of equal value to the following:
Galvanized Steel Fencing and Fabric
Allied Tube and Conduit Corp.
American Fence Corp.
Anchor Fence, Inc.

PART 2 - PRODUCTS

2.01 FABRIC

A. Aluminized fabric shall be manufactured in accordance with ASTM A-491 and coated before weaving with a minimum of 0.4 ounces of aluminum per square foot of surface area. The steel wire and coating shall conform to ASTM A-81. Fabric to be 9 gauge woven in a 2” diamond mesh. Top selvage to be twisted and barbed. Bottom salvage to be knuckled.

2.02 FRAMING

Pipe manufactured from steel conforming to ASTM A 569, cold-formed, high frequency or induction welded and having a minimum yield strength of 50,000 PSI. External surface triple coating per ASTM F-1234, Type B & Type D with 1.0 ounce +/- 0.1 ounce of zinc per square foot, 30 +/- 15 micrograms of chromate per square inch and high performance polymer and shall demonstrate the ability to resist 1,000 hours of exposure to salt spray with a maximum of 5 percent red rust in a test conducted in accordance with ASTM B-117. Internal surface coated, after welding, with a zinc-rich based organic coating having a 91 percent zinc powder loading

capable of providing the ability to withstand 650 hours of exposure to salt fog with a maximum of 5 percent red rust, when conducted in accordance with ASTM B-117. All coatings are to be applied inside and out after weldings.

Pipe shall be straight, true to section and conform to the following weights:

Pipe Size Outside Diameter	Weight Lbs./Ft.
1-5/8 inches	1.84
2 inches	2.28
2-1/2 inches	3.12
3 inches	4.64
3-1/2 inches	5.71
4 inches	6.56
6-5/8 inches	

1. End, Corner and Pull Posts: Minimum sizes and weights as follows: 2.5-inches OD, 3.12 lbs. per linear foot.
   Pull post to be installed at a maximum of 100 feet on straight runs. Corner posts to be installed at all horizontal changes in direction and all vertical changes in direction 5 percent or greater.
2. Line Posts: Space 10 feet o.c. maximum, unless otherwise indicated, of following minimum sizes and weights. 2-inch OD, 2.28 pounds per linear foot.
3. Gate Posts: Furnish posts for supporting for single gate leaf, or one leaf of a double gate installation, for nominal gate widths as follows: 4-inches OD, 6.56 pounds per linear foot.
4. Post Brace Assembly: Manufacturer's standard adjustable brace at end and gate posts and at both sides of corner and pull posts with horizontal brace located at mid-height of fabric. Use same material as line posts for brace, and truss to line posts with 3/8-inch diameter rod and adjustable tightener.

2.03 GATES

Gates: Fabricate perimeter frames of gates from metal and finish to match fence framework. Assemble gate frames by welding or with special fittings and rivets for rigid connections, providing security against removal of breakage connections. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware and accessories. Space frame members maximum of 8 feet apart unless otherwise indicated.

1. Provide same fabric as for fence, unless otherwise indicated. Install fabric with stretcher bars at a vertical edges and at top and bottom edges. Attach stretcher bars to gate frame at not more than 15 inches o.c.

2. Install diagonal cross-bracing consisting of 3/8-inch diameter adjustable length truss rods on gates to ensure frame rigidity without sag or twist.

2.04 GATE HARDWARE

Provide hardware and accessories for each gate, galvanized per ASTM A 153, and in accordance with the following:

1. Hinges: Size and material to suit gate size, non-life type, offset to permit 180° gate opening, (90° both in and out). Provide 1 pair of hinges for each leaf.
2. Latch: Forked type or plunger-bar type to permit operation from either side of gate, with padlock eye as integral part of latch.
3. Double Gates: Provide gate stops for double gates, consisting of mushroom type flush plate with anchors, set in concrete, and designed to engage center drop rod or plunger bar. Include locking device and padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock.

2.05 FITTINGS AND ACCESSORIES

Galvanized, ASTM A 153, with a minimum of 0.80 ounces of zinc per square foot of wire surface.

1. Wire Ties: For tying fabric to line posts, use wire ties spaced 12 inches o.c. For tying fabric to rails and braces, use wire ties spaced 24 inches o.c. For tying fabric to tension wire, use hog rings spaced 24 inches o.c. Manufacturer's standard procedure will be accepted if of equal strength and durability.
2. Tension Wire: 7-gage, coated coil spring wire, metal and finish to match fabric. Locate as shown on the drawings.
3. Barbed Wire Supporting Arms: Manufacturer’s standard barbed wire supporting arms, metal and finish to match framework, with provision for anchorage to posts and attaching 3 rows of barbed wire to each arm. Supporting arms may be wither attached to posts or integral with post top weather cap and must be capable of withstanding 250 lbs. Downward pull at outermost end.
4. Barbed Wire: 2 strand, 12-1/2 ga. Wire with 14 ga. 4-point barbs spaced not more than 5” o.c.; metal and finish to match fabric.

2.06 CONCRETE

Provide concrete consisting of Portland cement, ASTM C 150, aggregates ASTM C 33, and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 2500 psi using at least 4 sacks of cement per cubic yard, 1 inch maximum size aggregate, maximum 3 inch slump, and 2 percent to 4 percent entrained air.

PART 3 EXECUTION

3.01 EXCAVATION

Auger post holes to the minimum depth and diameter as shown on the drawings. Provide forms as needed to prevent mushrooming of the top of the post holes.

3.02 INSTALLATION

Install in accordance with ASTM F 567 and written installation instructions of fencing manufacturer to provide secure, aligned installation. Do not overfill the past holes with concrete.

3.03 SITE SECURITY

The permanent fence may be used in lieu of, or in addition to, the temporary fence to provide site security as required in Section 01505. Any damage to the permanent fence during construction shall be repaired prior to final acceptance.

END OF SECTION

SECTION 02990

FINISH GRADING, TOPSOIL, AND SEEDING

PART 1 GENERAL

1.01 WORK SPECIFIED

A. The work specified herein includes the material, equipment, and labor necessary to provide finish grading and to place topsoil, fertilizer, seed, mulch, and erosion control fabric. The mulch and erosion control fabric shall be placed as follows:
   1. Mulch - shall be utilized on all slopes.
   2. Natural and synthetic erosion control fabrics - shall be utilized as indicated on the Drawings.

1.02 SUBMITTALS

A. Materials and Products: Submit for approval data.
   1. Topsoil Source: The Contractor shall submit for approval by the Engineer, a written statement giving location of topsoil source. If soil amendments are proposed, submit amendment types, quantities, mixes and test results.
   2. Grass Seed Vendors Certificate: The Contractor shall submit the seed vendor's certified statement for the grass seed mixture required, stating common name, percentage by weight, and percentages of purity, and germination.
   3. Fertilizer: Submit manufacturer's product data showing contents and test results.
   4. Hydroseeders: The Contractor shall submit for approval by the Engineer, all data concerning hydroseeding equipment (if used) including all material application rates.

B. Installer - Submit the name of subcontractors (if used) and Qualification Statements.

C. Manufacturer's Certification - Certify that products meet or exceed specified requirements.

1.03 QUALITY ASSURANCE

A. All plants shall conform to or surpass minimum quality standards as defined by the American Association of Nurserymen. All plant materials must be clearly labeled with genus, species, and common name. These plants may be inspected for conditions of root ball, disease, insects, or injury. All rejected plant materials must be removed immediately from the job site and must be replaced by the Contractor at no cost to the Owner within 5 working days. The Engineer has the right to inspect and reject plant materials up to the final acceptance.

B. Certificates. In addition to any other certificates specified, the Contractor shall furnish a certificate with each delivery of material, in containers or bulk, the analysis of the material, together with the date of delivery. All certificates shall be delivered to the Engineer, who will inspect the materials prior to its use.

C. Seeding. Seed shall be labeled in accordance with USDA Rules and Regulations under the Federal Seed Act and applicable State seed laws. Seed shall be furnished in sealed bags or containers bearing the date of the last germination which shall be within a period of six (6) months prior to commencement of planting operations. Seeding material shall be inspected upon arrival at the job site, and unacceptable material shall be removed from the job site. Seed shall be from same or previous year's crop; each variety of seed shall have a purity of not less than 85%, a percentage of germination not less than 90%, shall have a weed content of not more than 1% and contain no noxious weeds.

D. Topsoil
1. The Contractor shall provide the services of an Engineer and an independent soils testing laboratory to conduct quality assurance testing.
2. The following material property test methods and frequency shall be conducted for soil:

Material Property	Test Method	Frequency
Grain-size Analysis with Fines	ASTM D-422	10,000 cubic yards
Soil pH	ASTM D-4972	10,000 cubic yards
Organic Content	ASTM D-2974	10,000 cubic yards

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3. Additional testing will required if alternate sources are proposed or utilized.

PART 2 - PRODUCTS

2.01 TOPSOIL

A. Topsoil shall be natural, friable, fertile soil of loamy character, capable of sustaining healthy plant life, and reasonably free from subsoil, roots, heavy or stiff clay, stones larger than 2 inches in greatest dimension, noxious weeds, sticks, brush, litter, and other deleterious matter. Topsoil as delivered to the site or stockpiled shall meet the following requirements:
1. shall be well graded with a maximum particle size of 2 inches, 85 to 100 percent passing 1 inch, 65 to 95 percent passing 1/4 inch, and 20 to 80 percent passing a Number 200 sieve. Clay content of material passing the Number 200 sieve shall not be greater than 30 percent, as determined by hydrometer analysis;
2. pH between 6.0 and 7.5;
3. shall contain not less than 3 percent organic matter nor more than 20 percent as determined by loss of ignition of moisture-free samples dried at 100° to 110° Celsius;
4. free of pest larvae; and
5. soluble salt content not greater than 500 ppm.

2.02 FERTILIZER

A. Fertilizer shall be a starter fertilizer of commercial stock, of neutral character, with elements derived from organic sources. It shall be a complete, prepared and packaged material and shall contain a minimum of 18 percent nitrogen, 24 percent phosphoric acid, and 6 percent potash. Other fertilizer mixes may be acceptable provided the application rate is adjusted to provide equal quantities. Each bag of fertilizer shall bear the manufacturer's guaranteed statement of analysis.

1. Product and Manufacturers:
    a. Scotts Starter Fertilizer by Scott and Son
    b. or equal

2.03 GRASS SEED

The seed mixture will consist of the following proportions or approved equal.

Common Name	% By Weight
Red, Chewing, and Tall Fescue	40
Perennial Ryegrass	25
Annual Ryegrass	15
Climax Timothy	15
White Clover	05

2.04 MULCH

A. Straw Mulch

Mulch shall be comprised of clean, threshed straw of oats, wheat, barley, or rye that is free from noxious weeds, mold or other objectionable material. The straw mulch shall contain at least 50 percent by weight of material to be 10 inches or longer. Straw shall be in an air-dry condition and suitable for placement with blower equipment.

B. Hydromulch

Hydromulch - Wood Cellulose Fiber Pulp.

1. Provide a specially prepared wood cellulose fiber, processed to contain no growth or germination inhibitor factors, and dyed an appropriate color to facilitate visual metering of application of the materials.
2. Hydromulch manufactured from recycled paper products will be acceptable.
3. Product and Manufacturer:
    a. Conwed Virgin Wood Fiber Mulch by Conwed, Inc.
    b. Silva Fiber by Weyerhaeuser Co.
    c. or equal

PART 3 - EXECUTION

3.01 APPLICATION PROCEDURES

A. All final grade surfaces shall receive six (6) inches minimum of compacted topsoil, seeding, mulch/or erosion control fabric, and fertilizer in accordance with this section.

B. All final grade surfaces outside the cover limits that have been disturbed or damaged during completion of the work shall be reseeded using a mixture of seed which shall produce similar vegetative growth as existed prior to commencement of the work.

C. The Contractor shall place mulch or erosion control fabric as follows:
   1. Mulch on all slopes less than or equal to 15 percent.

3.02. TOPSOIL

A. The Contractor shall place a minimum of three (3) inches of compacted topsoil over excavated areas and the disturbed areas as directed by the Engineer.

B. The underlying soil shall be tilled to a depth of 2 inches by disking or harrowing before topsoil placement. Tillage shall be parallel to contours, and shall not be performed when the cover is frozen or excessively wet.

C. Topsoil shall be placed to a depth sufficiently greater than required so that after compaction, the complete work will conform to the lines, grades, and elevations indicated on the Drawings and the three (3) inch minimum requirement. No topsoil shall be spread in water or while frozen or muddy.

D. The topsoil shall then be rolled or compacted with a cultipacker weighing not more than 100 pounds per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional topsoil, and the surface shall be regraded and rolled until a smooth and even finished grade is created.

3.03. FERTILIZER

A. The fertilizer shall be applied with a mechanical spreader at a minimum rate of 200 lbs/acre or in accordance with the manufacturer's suggested rate.

B. After topsoil has been spread and the fertilizer applied, it shall be carefully prepared by scarifying or harrowing to a depth of 2 inches and left in a roughened condition for seeding. All stiff clods, lumps, roots, litter and other foreign material shall be removed from the area and disposed of by the Contractor.

3.04. SEEDING

A. The seed mixture shall be applied uniformly upon the prepared surface with a hand or mechanical spreader at a minimum rate of 100 lbs/acre. The seed shall be raked lightly into the surface and rolled. Seeding shall be conducted from April 1 to May 30 or from August 15 to October 1.

3.05. MULCH

A. Mulch or erosion control fabric shall be placed immediately after the application of fertilizer and seed.

B. Areas that have been seeded and have a slope less than or equal to 15 percent shall be protected from erosion by the placement of straw mulch or hydromulch. Straw mulch shall be applied with a mulch blower at a uniform rate of 1500 lbs/acre and anchored by use of a tackifier.

3.06. WATERING

A. Following applications of the mulch or erosion control fabric, the seed bed shall be moistened. A muddy soil condition will not be acceptable. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a satisfactory growth. Watering shall be done in such a manner to prevent washing out of seed.

B. The stand of grass resulting from the seeding shall not be considered satisfactory until accepted by the Owner. If areas are determined to be unacceptable, the remaining mulch or erosion control fabric will be removed and all areas shall be reseeded, refertilized and remulched and erosion control fabric replaced as per the above application procedures at the Contractor's expense.

3.07 MAINTENANCE

A. The Contractor shall begin a maintenance period immediately after planting of grass and landscape materials.

B. The Contractor shall maintain grass areas, for the periods required to establish an acceptable growth, but not less than 60 days, after seeding. If seeded in the fall and not given a full 60 days of maintenance, or if not considered acceptable by the Owner and the Engineer at that time, continue maintenance during following spring until acceptable grass stand is established.

C. Seeded areas shall be watered as often as required to obtain germination and to obtain and maintain a satisfactory sod growth. Watering shall be in such a manner as to prevent washing out of seed.

3.08 WARRANTY

A. The warranty period shall be one year from the date of substantial completion or correction period. Areas of erosion shall be immediately repaired, re-seeded, re-mulched and maintained until an acceptable grass stand is established. Areas to be repaired shall also include areas failing to produce a full, uniform strand of grass.

END OF SECTION 02990

Scale: 1" = 40' (approx.)

NOTES:

1. Base Map adapted from an aerial photgraph (approx. circa 2007) from LiveMaps.com.
2. The size and location of existing site features are approximate.
3. Electrical power to the building and treatment system is disconnected.
4. The building does not have a water service.
5. There is no known or observed natural gas service to the building.

NYSDEC **Division of** **Environmental Remediation**	**Existing Site Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** | **Feb-09**	**Figure No.** **1**

NOTES

1. Remove debris from building interior prior to demolition and dispose as ACM waste.
2. Sweep/vacuum building floor area prior to demolition and dispose as PCB contaminated hazardous waste.

Scale: 1" = 30' (approx.)

NYSDEC **Division of** **Environmental Remediation**	**Demolition Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** **Feb-09**	**Figure No.** **2**

NOTES:

1. Excavate hatched areas to native soil (3.0 - 4.0 feet below ground surface) and dispose as hazardous waste.
2. Excavate areas to native soil (3.0 - 4.0 feet below ground surface) and dispose as solid waste.

Scale: 1" = 30' (approx.)

NYSDEC **Division of** **Environmental Remediation**	**Excavation Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** **Feb-09**	**Figure No.** **3**

NOTES:

1. Any adjoining areas containing turf grass that are disturbed or incorporated in the work shall be restored by placing topsoil and seed per specs

Scale: 1" = 30' (approx.)

NYSDEC **Division of Environmental Remediation**	**Restoration Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** **Feb-09**	**Figure No.** **4**

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E, 12th Floor
625 Broadway, Albany, New York 12233-7017
Phone: (518) 402-9814 • **Fax:** (518) 402-9819
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

This letter was sent to the attached list of people:

OCT 19 2009

«name»
«company»
«address»
«csz»

RE: Bengart and Memel Scrap Metal Site
Site No. 9-15-115

Dear «salutation»:

Enclosed is Addendum No. 1 for the referenced site. Please remember that bids are due October 27, 2009 at 1:00 p.m.

If you have any questions, please call me at (518) 402-9814.

Sincerely,

Michael A. Mason

Michael A. Mason, P.E.
Project Manager
Remedial Section A, Remedial Bureau E
Division of Environmental Remediation

Enclosure

name	company	address	csz	salutation
Mr. Stanley Blas	Empire Geo-Services, Inc.	5167 South Park Avenue	Hamburg, New York 14075	Mr. Blas
Mr. Tony Fiorentine	EnviroTrac, Ltd.	5 Old Dock Road	Yaphank, New York 11980	Mr. Fiorentine
Mr. Greg Weber	Nature's Way Environmental Consultants & Contractors, Inc.	3553 Crittenden Road	Crittenden, New York 14038	Mr. Weber
Mr. Stephen Kenney	Op-Tech Environmental Services, Inc.	6392 Deere Road	Syracuse, New York 13206	Mr. Kenney

ADDENDUM NO. 1 TO
REQUEST FOR PROPOSAL

BENGART AND MEMEL SCRAP METAL SITE
SITE NO. 9-15-115

The following clarifications were made during the October 13, 2009 bid-walk meeting:

1. PERSONNEL DECON: No onsite trailers necessary, use and dispose of PPE on a daily basis.

2. SAFETY OFFICER: The tech level employee classification should be used for bidding.

3. CONFIRMATION SAMPLES: NYSDEC will collect the soil confirmation samples.

4. AIR MONITORING: Contractor required to perform the camp.

5. MANIFESTS: NYSDEC will sign the manifests.

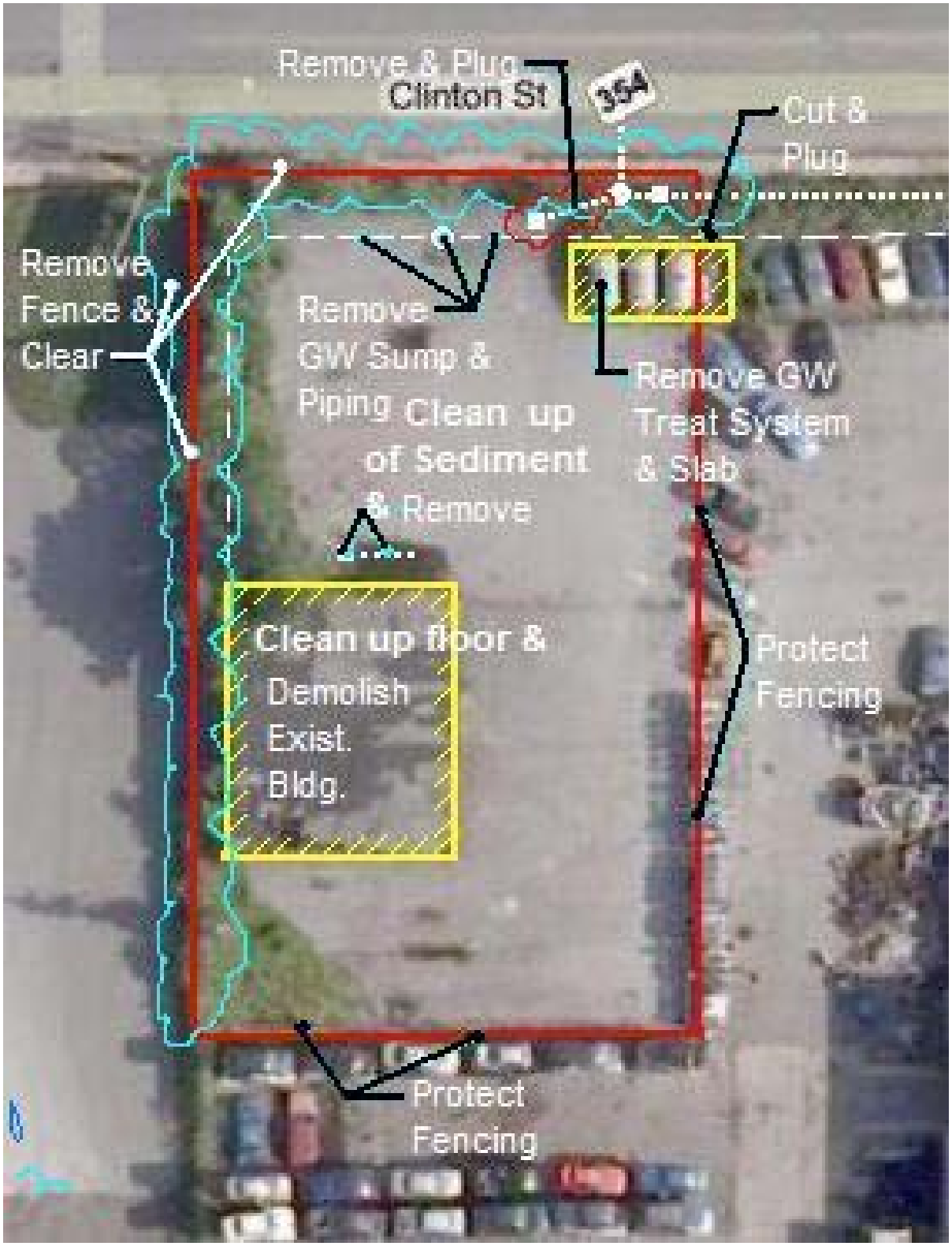
6. TREATMENT SYSTEM DECOMMISSIONING: Assume the water in the tanks is PCB contaminated.

7. FLOOR SLAB: The floor slab quantity is paid under Bid Item 6 – Building Demolition as industrial solid waste. If the slab tests out as TSCA, it will be paid for under Bid Item 8.

8. WASTE PROFILING: Contractor is responsible to profile the waste as required by the disposal facility.

9. ACCESS: Agreements are in-place for both property owners.

10. FIGURES: Replace Figure No. 2 and Figure No. 3 with new Figure No. 2 and Figure No. 3 for the Demolition and Excavation Plan.



NOTES

1. Remove debris from building interior prior to demolition and dispose as ACM waste.
2. Sweep/vacuum building floor area prior to demolition and dispose as PCB contaminated hazardous waste.

Scale: 1" = 30' (approx.)

NYSDEC **Division of** **Environmental Remediation**	**Demolition Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** **Feb-09**	**Figure No.** **2** **Rev 1, 10/16/09**

NOTES: **Scale: 1" = 30' (approx.)**

1. Excavate hatched areas to native soil (3.0 - 4.0 feet below ground surface - bgs) and dispose as hazardous waste.
2. Excavate areas to native soil (3.0 - 4.0 feet below ground surface) and dispose as solid waste.
3. Excavate surface soil in hatched areas to 1.0 feet below ground surface and dispose as hazardous waste. Additional soil may require excavation for disposal as a soild waste per note 2.
4. Excavate hatched area to 2.0 feet bgs and dispose as hazardous waste. Continue excavation per note 2.

NYSDEC **Division of** **Environmental Remediation**	**Excavation Plan** **Bengart & Memel** **Site No: 915115** **Demolition and PCB Remediation** **Date** **Feb-09**	**Figure No.** **3** **Rev 1. 10/16/09**