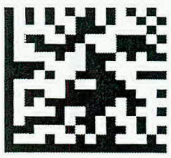

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FINAL

DESIGN REPORT FOR SITE 15 AT HANCOCK FIELD

Submitted to:

State of New York
Departments of Environmental Conservation and Health
Albany and Syracuse, NY

Submitted by:

Air National Guard Readiness Center
Andrews AFB, Maryland
and
174th Fighter Wing at Hancock ANG

Prepared By:

PARSONS ENGINEERING SCIENCE, INC.

Liverpool, New York 13088

REVIEWED AND APPROVED BY:

Project Manager: _____ 7 Nov. 2001 Date

Technical Manager: _____ 7 Nov. 2001 Date

NOVEMBER 2001

PARSONS

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SECTION 1

INTRODUCTION

1.1 REPORT OBJECTIVES AND BACKGROUND

This report documents the final design for the pending removal action at Hancock Site 15. The report includes Construction Drawings, Technical Specifications, and Project Plans for time-critical removal action at Site 15 as approved previously by the State of New York Department of Environmental Conservation. Site 15 is an upland former jet fuel and transformer storage area located in the Town of Salina immediately east of the Air National Guard's main gate along Molloy Road west of Thompson Road. This report is submitted in accordance with the work scope being implemented by Parsons Engineering Science, Inc. (Parsons ES), Liverpool, NY working for the Air National Guard.

Site 15 is located approximately three miles northeast of the City of Syracuse in Onondaga County, New York (see Figure 1-1). Surface water leaving the site drains two adjacent drainage swales and eventually to Ley Creek which flows into Onondaga Lake. The site is part of the Air National Guard facility owned by the Federal Government and 2 is not currently being used by people for any consistent purpose. Vegetation at the site consists of weeds among concrete rubble at the former pump house and a concrete pad south of the pump house.

Site 15 is approximately 2.5 acres in area consisting of brush vegetation, wooded vegetation in the southern portion adjacent to Molloy Road, a large concrete pad, a former pump house foundation, a bermed area where a jet fuel (JP-8) above-ground tank was formerly located, and two drainage swales. The entire site is fenced and located within the Air National Guard Base at Hancock Field directly adjacent to the Syracuse Hancock Airport. A site location map is given as Figure 1. The drainage swales contain water only intermittently following storm events.

Three drainage sumps and possibly an oil-water separator remain in place below the floor of the raised pump house. In addition, underground storage tanks remain in place outside the northeast end of the pump house, and one dry well remains outside the northwest end of the pump house. The underground storage tanks have been closed in place with concrete. Other than these underground tanks and some monitoring wells, no other subsurface structures remain at the site. The only remaining surface structures are the foundation of the pump house and a large concrete pad south of the pump house.

The sources of PCBs and BTEX in soil and groundwater are three historical spills in the vicinity of the pump house. The first was a spill of PCBs before 1980 presumably

associated with transformers in front (south) of the pump house. The second was a 4,000-gallon spill of JP-4 inside the pump house in April 1990. The third was a 150-gallon spill of JP-8 in June 1994. Both JP-4 and JP-8 are forms of jet fuel that are lighter than water. Fuel spilled in 1990 reportedly entered three sumps inside the pump house and mixed with PCB-contaminated sediment. Following the second spill, contaminated surface soils were removed, and the area was backfilled with gravel and crushed stone. Fuel from the third spill was contained before it was able to migrate.

Six different investigative efforts have been completed for this site between 1990 and 2001. Results from these investigations defined the nature and extent of impacted soil, groundwater, and drainage swale sediment at the site. Soil concentrations of polychlorinated biphenyls (PCBs) and volatile organics (BTEX) exceed State of New York statewide soil cleanup objectives. Soils impacted by volatile organic compounds from jet fuel extend over a larger area and overlaps with the area of soil impacted with PCBs. Groundwater impacted by volatile organic compounds extends over an even larger area of the site to the south to Molloy Road.

A draft feasibility study has been completed and submitted to the State to address the need for long-term remedial action that will follow the removal action described herein. The long-term remedial action will address residual volatile organic compounds from the jet fuel spills. Final elements of the long-term remedial action are being worked out with the State of New York over the next few months.

Swale sediment sampling was conducted by Parsons ES on October 1, 2001 to further delineate contamination in the drainage swale located west of Site 15 indicated concentrations of PCBs below the NYSDEC cleanup objective of 1 ppm for surface soils. Based on these most recent sampling results, excavation of swale sediments will not be completed as part of this remediation. The results will be explained in detail in conjunction with reporting results from the October 2001 groundwater monitoring work.

The scope of work for the Site 15 time-critical removal action is as follows:

- Excavate a maximum of 3,000-tons of soil exceeding statewide PCB cleanup objective of 10 ppm for subsurface soil and 1 ppm for surface soil immediately to the south of the former pump house. Load excavated soil to trucks for offsite disposal by the transport subcontractor.
- Remove all of the existing unused concrete pad, pump house foundation, and six 25,000-gallon underground storage tanks. Any scrap metal from the excavation will be removed and disposed offsite. Concrete debris from the excavation will be broken into less than 36 inches in any dimension, pieces and replaced within the excavation.
- Replace excavated soil to original grade with the concrete pad and former pump house foundation concrete and clean fill as required. Reseed area during April 2002 to establish vegetative cover.

- Load approximately 100 cubic yards of PCB-impacted soil previous staged at Site 1 (location shown on contract drawings) to trucks for offsite disposal by the transport subcontractor.

Based on available investigation results, a maximum soil excavation depth of approximately 14 feet below ground surface is anticipated. Parsons ES will sample the excavation bottom and sidewalls to determine if additional soil or sediment needs to be excavated and disposed offsite beyond the area and volume indicated in the design drawings. Analyses for PCBs will be done on site by Parsons ES using immunoassay test kits. Results from the test kit work and decisions whether to excavate further will be made within 48 hours of collecting the samples.

1.2 DESIGN REPORT ORGANIZATION

Including this introductory section, this report consists of six sections and four appendices. Section 2 summarizes agency requirements for the time-critical removal action that do not fall directly under CERCLA. These requirements are based on the remedy itself and on applicable or relevant and appropriate requirements that originate either from rules, regulations and other regulatory requirements or from steps essential for implementing a site remedy. Section 3 presents a summary of the design elements. Section 4 presents the organization of entities that will carry out the remedy and a schedule for conducting the Western Wetland portion of OU-2 remedial action within the 2000 construction season. Section 5 presents a listing of relevant site investigation and engineering references.

Appendix A presents design calculations for the volume of soil to be excavated from Site 15 based on investigation results. Appendix B presents the Technical Specifications for implementing the removal action. Appendix C is the Construction Drawings. Appendix D contains the three project plans that are incorporated from the Site 15 removal action work plan (Parsons, October 2001b) by reference: (A) Health and Safety Plan; (B) Analytical Quality Assurance/Quality Control Plan; and (C) Sampling and Analysis Plan.

1.3 SITE REMEDIAL ACTION OBJECTIVES AND REMOVAL ACTION ELEMENTS

The primary goal for Site 15 time-critical removal action is to remove PCBs from the site environment thereby minimizing impacts from PCBs to the local environment.

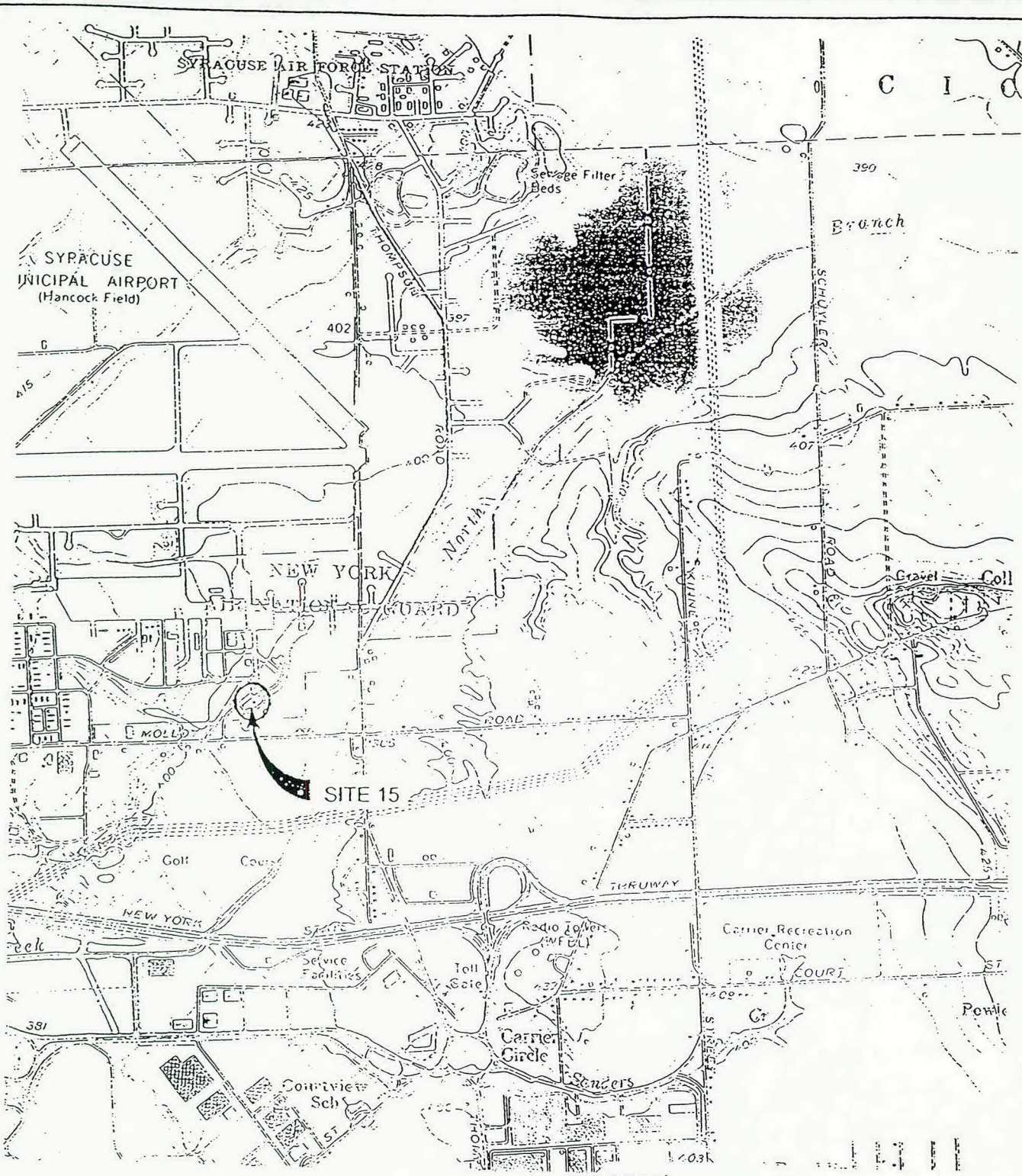
The following are the removal action elements for Site 15:

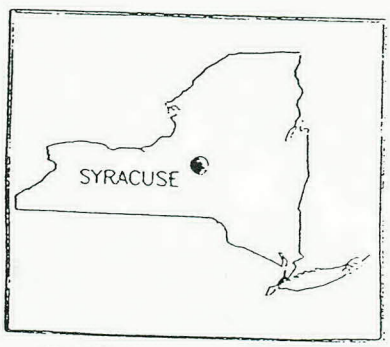
- Site preparation for the remediation effort (including clearing of vegetation) done in a manner that limits impacts of earthwork on adjacent areas;
- Monitoring well removal, as needed, within the excavation area;
- Excavation and grading including erosion control;

- Removing excavated PCB-impacted material offsite;
- Sampling and analysis by Parsons ES on site with PCB test kits to determine if the PCB removal action objectives have been met;
- Additional excavation if needed; and
- Site restoration due to soil removal.

The following are the removal action elements for Site 1:

- Remove previously excavated PCB-impacted material for offsite disposal; and
- Sweep decontamination of area following material removal.





QUADRANGLE LOCATION
NEW YORK

LATITUDE: N43° 06' 01"
LONGITUDE: W76° 06' 06"

SOURCE: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC) SYRACUSE EAST QUADRANGLE 1957

FIGURE 1.1

NATIONAL GUARD BUREAU
SITE 15 AT HANCOCK FIELD
SYRACUSE, NEW YORK

SITE VICINITY MAP

PARSONS
PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC.
PARSONS ENGINEERING SCIENCE, INC.
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

XREFs

SECTION 2

SITEWIDE REMEDIATION REQUIREMENTS AND CRITERIA

2.1 APPLICABLE OR RELEVANT AND APPROPRIATE REGULATORY REQUIREMENTS

Removal action requirements and criteria include regulatory and disposal facility requirements.

2.1.1 Chemical-Specific Requirements

These requirements include the following:

- Transport and disposal of excavated soil and sediment to meet State of New York Department of Transportation requirements and also requirements based on the operation permit held by the disposal location.
- Discharge requirements based on the State discharge permit held by the entity to receive site groundwater from excavation dewatering.
- Health and safety site requirements pertaining to dust and volatile compounds during excavation activities.

2.1.2 Location-Specific Requirements

These requirements are associated with protecting existing resources potentially impacted by site remediation activities.

Wetlands are not present at or adjacent to Site 15 based on available wetland mapping from the State and Federal government (ANG, 2000). The nearest Federal or State-designated wetland is located at least 2,000 feet from the site.

Cultural resources within the Air National Guard base at Hancock Field were recently reassessed as part of an Environmental Assessment for building construction proposed throughout Hancock Field (Parsons ES, 2001). No State-listed cultural resources are located within or adjacent to the Site 15 area based on April 2001 correspondence received from the State Historic Preservation Officer.

Floodplain information is available from the Federal Emergency Management Agency confirming that Site 15 is not within the floodplain of a 100-year or 500-year flood. Flood insurance rate maps indicate the entire site is outside the 500-year floodplain. The nearest floodplain is the north branch of Ley Creek located approximately 1,000 feet east of Site 15.

Checks for the presence of threatened and endangered species were made with the U.S. Fish and Wildlife Service and the NYSDEC Division of Fish, Wildlife, and Marine Resources as part of a 2001 Environmental Baseline Survey. No records of known occurrences of threatened or endangered species exist for the Hancock Field area.

3.1.0. . . . . @ @ Action-Specific Requirements

The NYSDEC has indicated a water quality certification under Section 401 of the Federal Clean Water Act is not needed for this remediation project

The Onondaga County Department of Drainage and Sanitation regulations do not allow for acceptance of discharges generated from areas covered by the NYSDEC Superfund Program, therefore groundwater collected from excavation areas will need to be hauled offsite for proper disposal. A copy of the letter from the Onondaga County Department of Drainage and Sanitation dated October 4, 2001 confirming this requirement is provided as Appendix E.

A stormwater discharge permit or authorization is not needed for this removal action since the area being excavated is less than one acre in size. No PCB-impacted excavated soil will be stockpiled on the ground surface. Instead, excavated PCB-impacted soil will be loaded directly from the excavation to transport trucks. Non PCB-impacted soil excavated from the above and around the six 25,000-gallon underground storage tanks will be stockpiled west and northeast of the tank excavation, as shown in the contract drawings.

3.1 NOTIFICATION REQUIREMENTS AND STATUS

While formal permits are not needed for a CERCLA site remediation, the applicable permit requirements will be met. Such requirements include disposal requirements for offsite disposal operations to be used as part of this removal action as well as Onondaga County water discharge requirements. No special local ANG or Town of Salina requirements have been identified that will need to be met other then Hancock security procedures.

The NYSDEC Syracuse regional manager for tanks has been notified of the project and will be kept up to date on the schedule as site work proceeds.

3.1 ACCESS NEEDS DURING REMEDIATION

Access is being obtained from the Air National Guard in order for the remediation work to be completed. Site 15 is directly to the east-northeast of the main gate off Molloy Road. Access permission will likely be needed in advance from ANG.

SECTION 3

DESIGN ELEMENTS

3.1 INTRODUCTION

This section provides a summary of design information for each aspect of the Site 15 Time Critical Removal Action: site preparation, excavation, restoration, stormwater/ erosion and sediment control, and water management.

Design calculations (Appendix A), specifications (Appendix B), drawings (Appendix C), and project plans (Appendix D) as the detailed design information that will be implemented.

A planimetric survey conducted during 2000 of site features and topography established the topography for the site and the locations of major features such as roads, buildings, fences, and monitoring wells.

3.2 DECONTAMINATION

The Contractor shall submit, for the Engineers approval, the proposed plan for decontamination of personnel and equipment a minimum of five (5) working days prior to commencement of work. The decontamination method shall include the use of a high temperature, high pressure washer and contaminated water collection and holding provisions.

3.3 SITE PREPARATION

Prior to beginning any excavation work, temporary silt fencing (Specification Section 01564) will be erected. The temporary silt fencing will be maintained throughout the project and will not be removed until permanent vegetation has been re-established during the Spring of 2002.

3.4 EXCAVATION PLAN

Maximum areas within Site 15 to be excavated are shown on the excavation plan (Drawing C-2). These excavation areas are based on locations where subsurface soil and surface soil contains PCBs at total concentrations above 10 and 1 ppm respectively.

Soil will be excavated to depths shown in Drawing C-2. Confirmatory sampling will be conducted on a 25-foot by 25-foot grid in accordance with the Sampling and Analysis Plan. Any additional soil or sediment found due to confirmatory sampling that exceeds either 1 or 10 ppm PCBs will be removed and confirmatory sampling will be repeated.

Small tree stumps and other vegetation not free of soil will be fed through a small grinder prior to being placed in transport trucks. Vegetation free of soil will be chipped and used for erosion control at the site.

Groundwater that needs to be removed from the excavation in order to allow excavation to proceed will be managed and disposed offsite at an approved treatment facility.

Excavated soil will be deposited onto temporary stockpiles or directly into transport trucks to be brought to Site 15 by the transport-disposal subcontractor. Excavation contractor is responsible for water management such that soil meets moisture content requirements for the disposal facility.

3.5 RESTORATION PLAN

Upon the completion of excavation activities, areas disturbed due to excavation will be restored in accordance with Specification Section 02990.

Topsoil will be provide by Hancock ANG. Trucking to Site 15 from a location on base, as shown on Figure C-1, will be provided by construction subcontractor.

Any berms or ditches installed temporarily by the construction contractor to divert upgradient clean water from the excavation areas will be removed upon completion of site work so as to return drainage to its general patterns prior to the start of remediation.

Temporary erosion and sediment control measures will be removed, and disturbed areas will be reseeded and refertilized as needed during the Spring of 2002.

Post-Remediation Monitoring

Visual checks will be conducted next year to ensure successful site restoration. Monitoring following excavation and restoration will be based on checks of runoff flow pattern, extent of vegetation cover, and vegetation types.

3.6 TRANSPORT AND DISPOSAL OF EXCAVATED SOIL

Specification Section 02219 describes offsite soil transport and disposal requirements for Site 15 and Site 1. Trucks will use Molloy Road and Thompson Road to get to the New York State Thruway Exit 35 located less than two miles south of Site 15.

3.7 STORM WATER / EROSION AND SEDIMENT CONTROL

Specifications for appropriate storm water controls during construction are included in Appendix B as specification Section 01564 and will be implemented as part of the Site 15 removal action.

Temporary erosion and sedimentation controls will consist of silt fencing so significant soil or sediment is not allowed to erode from the site. In addition, storm water from upgradient locations will be routed away from exposed materials, and storm water contact of exposed material with storm water will be minimized to the extent practical. Any temporary erosion control measures will be removed early during the Spring of 2002 following remediation so as to return drainage patterns to their general conditions prior to remediation.

The final grade is based on restoring pre-excavation slope and drainage.

Vegetation serves to reduce erosion, enhance evapotranspiration, and improve runoff water quality. A seed mixture has been selected to control erosion and to minimize long-term maintenance. In addition, mulch, mulch blankets, or synthetic fabric will be placed to prevent erosion during grass establishment. Drainage ditches and swales will be protected against erosion as well. Specifications 01564 and 02990 include topsoil and seeding requirements.

3.8 TREATMENT AND DISCHARGE OF CONSTRUCTION WATER DURING REMEDIATION

The Contractor shall submit, for the Engineers approval, a construction water management plan a minimum of five (5) working days prior to the commencement of site work. The selected treatment must meet discharge requirements of the selected offsite permitted treatment facility.

Onondaga County will not allow groundwater from a NYSDEC Superfund site to be released to its sanitary sewer system (Appendix E). The construction contractor will provide to the Engineer the location where the groundwater will be released and, for ANG approval, the extent of water pretreatment to be provided prior to release.

SECTION 4

REMEDIAL ACTION ORGANIZATION AND SCHEDULE

4.1 ORGANIZATION

The various tasks outlined herein are being implemented by the Air National Guard with Parsons ES as its remediation engineer. Parsons ES will provide constant site oversight during the removal action, quality assurance and confirmatory sampling efforts, and also prepare the completion report following the removal action. Parsons ES will also interface with Onondaga County as needed to address management of extracted groundwater during the removal action.

Parsons ES will use the design documentation herein to hire a construction subcontractor, a soil transport and disposal subcontractor, and a laboratory subcontractor. If needed, Parsons ES will also hire a surveying subcontractor. The overall construction quality assurance program as identified in the Construction Quality Assurance/Quality Control Plan will be implemented directly by Parsons ES.

Each work effort at Site 15 is overseen and reviewed by the State of New York Department of Environmental Conservation and the New York State Department of Health. This project organization is summarized in Figure 4.1.

4.2 PROPOSED SCHEDULE

The tentative schedule for the Site 15 removal action is the same schedule provided in the work plan (included herein as Figure 4.2). The Air National Guard wants to complete the soil removal work before the end of calendar year 2001. Topsoil and grass seed will be placed at the end of the earthwork, but maintenance will be required beginning in April 2002 once the 2002 growing season begins.

Figure 4.1
PROJECT ORGANIZATION
SITE 15 - HANCOCK FIELD

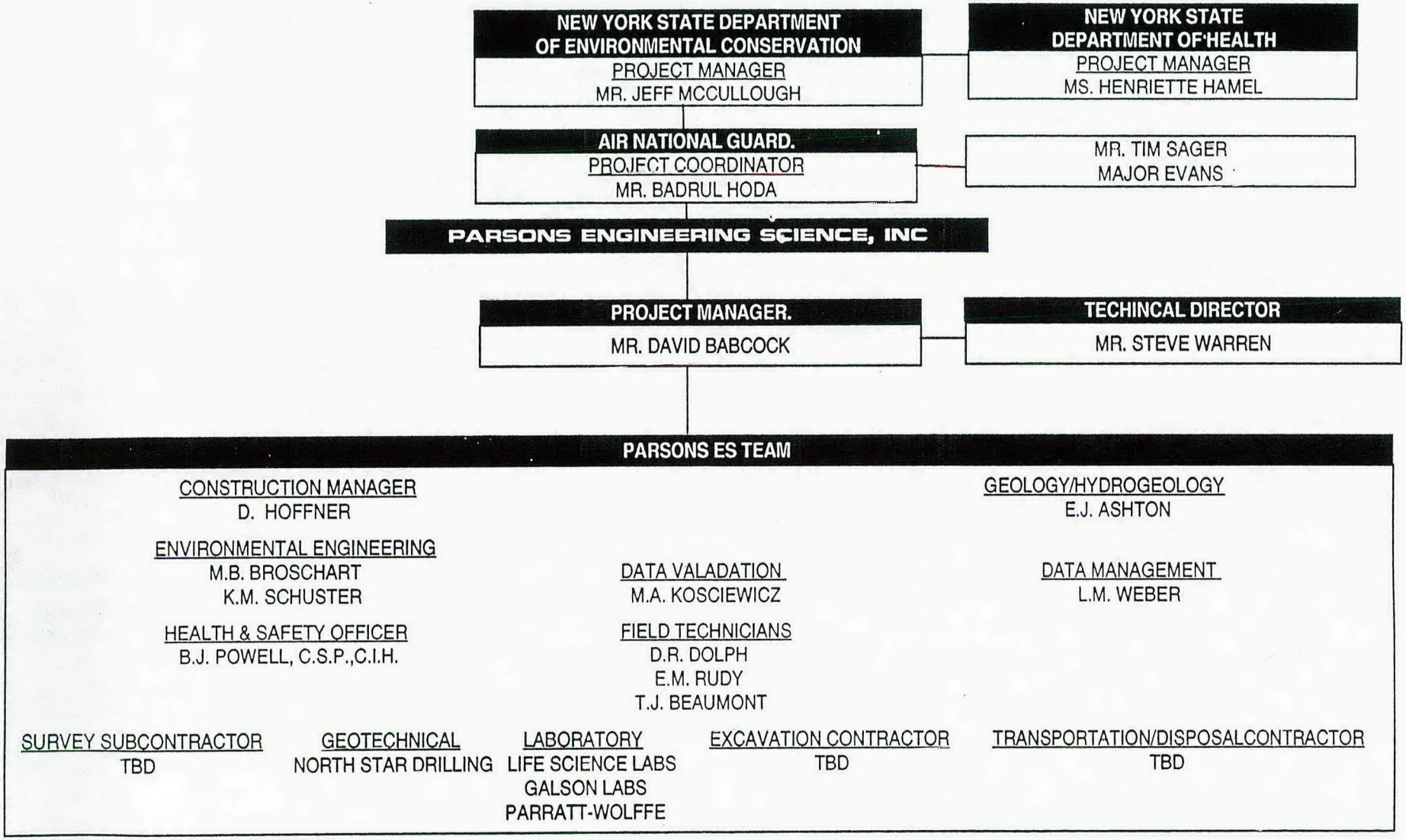
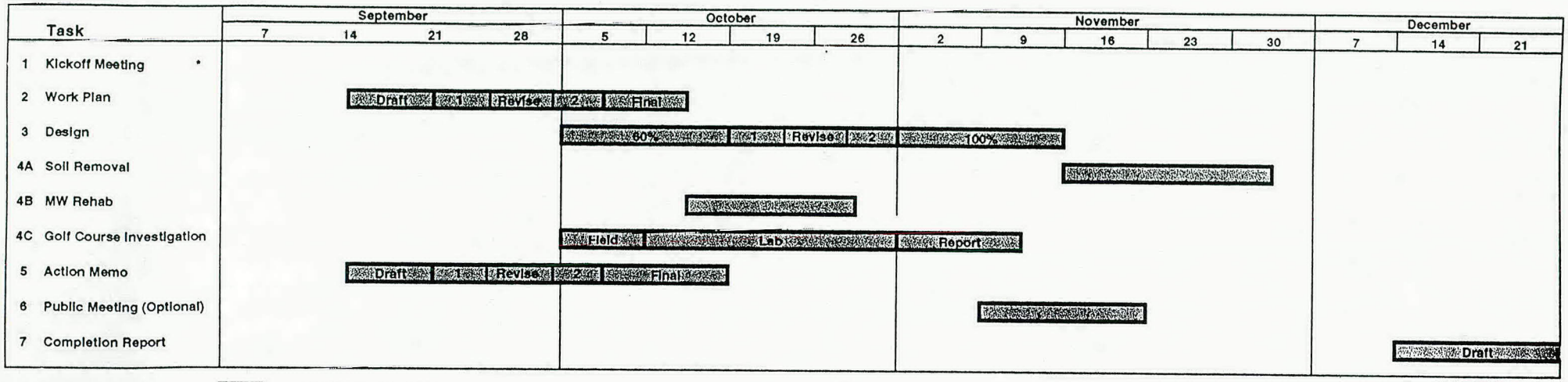


Figure 4.2
Remedial Action
Hancock Site 15 Timetable
Off-Site Disposal



1 - ANG / 174th FW Review

2 - State Review

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SECTION 5

REFERENCES

ANG, 2001. Environmental Baseline Survey, Tract 3 at Hancock Field. Syracuse, NY September 2001.

Parsons ES, 2001. Environmental Assessment for Construction, Upgrade, and Demolition of Buildings, 174th Fighter Wing, Hancock Field, Syracuse, NY. Prepared for the Air Force Center for Environmental Excellence and the Air National Guard Readiness Center. May 2001.

Parsons ES, 2001b. Work Plan for Time Critical Removal Action at Site 15 at Hancock Field. Prepared for the Air National Guard Readiness Center. October 2001. Final version.

APPENDIX A

DESIGN CALCULATIONS

PARSONS ENGINEERING SCIENCE, INC.

Client _____ Job No. 740741 Sheet 1 of 1

Subject DESIGN CALCULATIONS By DOH Date _____

EXCAVATION VOLUMES Checked DBB Rev. _____

SHALLOW EXCAVATIONS (0-2' BGS)

AREA

1	$\frac{1}{2}(70+40)25$	=	1375 #	SOUTH OF PAD
2	$\frac{1}{2}(70+130)55$	=	5500 #	UNDER PAD
3	$\frac{1}{2}(25+15)65$	=	1300 #	WEST OF PUMP HOUSE
4	65×25	=	1625 #	DIRECTLY SOUTH OF PUMPHOUSE
5	25×15	=	375 #	EAST OF PUMP HOUSE
			10,175 # x 2	= 754 CY

DEEP EXCAVATIONS (10-12' BGS)

AREA

6	$40' \times 20' \times 10'$	=	296 CY NEAT	DIRECTLY SOUTH OF PUMPHOUSE
	$160 \times \frac{1}{2}(10 \times 10)$	=	296 CY	1/1 SLOPE (10' BELOW 2' CUT)
7	$20' \times 20' \times 10'$	=	148 CY NEAT	EAST OF PUMPHOUSE
	$120 \times \frac{1}{2}(10 \times 10)$	=	222 CY	1/1 SLOPE (10' BELOW 2' CUT)
			962 CY	

ESTIMATED TOTAL 754 + 962 = 1716 CY

ADDS

100 CY SITE 1

100 CY SWALE

1916 CY ROUND UP TO 2000 CY

IN-PLACE DENSITY 1.5

TOTAL DISPOSAL = 3000 TONS

APPENDIX B

FINAL TECHNICAL SPECIFICATIONS

Specification No.	Description
01010	SUMMARY OF WORK
01025	MEASUREMENT AND PAYMENT
01105	HEALTH AND SAFETY
01300	SUBMITTALS
01310	PROGRESS SCHEDULE
01400	QUALITY ASSURANCE AND QUALITY CONTROL
01500	TEMPORARY FACILITIES AND FIELD OFFICE
01540	SITE SECURITY
01564	EROSION CONTROL
01700	PROJECT CLOSEOUT
02072	UNDERGROUND STORAGE TANK REMOVAL
02100	SITE PREPARATION/CLEARING
02219	TRANSPORT AND WASTE DISPOSAL
02222	EXCAVATION
02223	BACKFILLING
02990	FINISH GRADING AND SEEDING

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 IDENTIFICATION

The work shall be performed at the Hancock Site 15 Site located at Hancock Field two miles north-northeast of the City of Syracuse, in Onondaga County, 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. Contract documents consist of the subcontract agreement, Design Report, and appendices including drawings, specifications, and project plans.

C. Included in the general contract are site grading, excavation, soil removal, backfilling, and all other operations and work required to complete the soil removal action according to the intent of the Contract Documents.

1.03 SITE BACKGROUND

The 174th Fighter Wing of the New York State Air National Guard is based at Hancock Field, a former Air Force Base located two miles north-northeast of the City of Syracuse in Onondaga County in central New York. Site 15 is part of the land used by the 174th Fighter Wing and is comprised of approximately 2.5 acres in area consisting of brush vegetation, wooded vegetation in the southern portion adjacent to Molloy Road, a large concrete pad, a former pump house foundation, a bermed area where a JP-8 aboveground tank was formerly located, and two drainage swales. The entire site is fenced and located within the Air National Guard Base at Hancock Field directly adjacent to the Syracuse Hancock Airport.

Three drainage sumps and remain in place below the floor of the raised pump house. In addition, underground storage tanks remain in place outside the northeast end of the pump house, and one dry well remains outside the northwest end of the pump house. The underground storage tanks have been closed in place with concrete. Known underground utilities at the site consist of water supply and natural gas piping. Other than these underground tanks, utilities, and some monitoring wells, no other subsurface structures remain at the site. The only remaining surface structures are the foundation of the pump house and a concrete pad south of the pump house.

The sources of PCBs and BTEX in soil and groundwater are three historical spills in the vicinity of the pump house (HWRAP, 1997). The first was a spill of PCBs before 1980 presumably associated with transformers in front (south) of the pump house. The second was a 4,000-gallon spill of JP-4 inside the pump house in April 1990. The third was a 150-gallon spill of JP-8 in June 1994. Both JP-4 and JP-8 are forms of jet fuel that are lighter than water. Fuel spilled in 1990 reportedly entered three sumps inside the pump house and mixed with PCB-contaminated sediment. Following the second spill, contaminated surface soils were removed, and the area was backfilled with gravel and crushed stone. Fuel from the third spill was contained before it was able to migrate.

1.04 SUMMARY OF WORK

A. Construction 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. Preparation of contractor submittals;
2. Mobilization;
3. Install temporary facilities;
4. Install temporary decontamination pad;
5. Site clearing;
6. Surface water diversion/erosion control measures;
7. Treatment and/or disposal of excavation groundwater
8. Excavation of 3,000-tons of PCB-impacted soils with concentrations above the NYSDEC cleanup objectives for surface and subsurface soils in areas indicated on the contract drawings;
9. Backfill/compact PCB excavation with onsite soil;
10. Demolish existing pump house slab and foundation and use as backfill;
11. Excavate six 25,000-gallon underground storage tanks, demolish flowable grout inside tanks and use as backfill;
12. Demolish existing concrete pad and use as backfill;
13. Backfill/compact tank excavation with onsite soil as needed;
14. Restoration of disturbed areas;
15. Attend final inspection;
16. Perform punch list items identified during final inspection; and
17. Demobilization from the site;

1.05 USE OF SITE

The Contractor shall limit 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 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. Minimize stockpiling of excavated material under the Engineers direction. 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.

E. Hancock ANG will designate vehicle parking and equipment storage areas near the site.

1.06 SITE SECURITY

The Contractor shall utilize existing chainlink fence as shown on the Contract Drawings. One gate shall be designated as the main entrance/exit gate.

1.07 SIGNS

The Contractor shall post the work zone with signs reading "Warning, Hazardous Work Area, Do Not Enter Unless Authorized" at each entrance/exit gate.

1.08 DUST CONTROL

An erosion/dust control agent can be used with approval of Engineer. Accomplish dust control as needed 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 AND PAYMENT

PART 1 – GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

A. This section covers the methods and procedures that the ENGINEER will use to measure the Contractor's work and to provide payment. This general outline of the measurement and payment features will not in any way limit the responsibility of the Contractor for making a thorough investigation of the Contract Documents to determine the scope of the work included in each bid task.

B. Payment will be made to the Contractor in accordance with the specified methods of measurement and the unit or lump sum prices stipulated in the accepted bid. Payment will constitute complete compensation for all work required by the Contract Documents including all costs of accepting the general risks, liabilities and obligations, expressed or implied. Payment under all tasks will include, but not necessarily be limited to, compensation for furnishing all supervision, labor, equipment, overhead, profit, material, services, applicable taxes, and for performing all other related work required. No other payment will be made.

C. No payment shall be made for work performed by the Contractor to replace defective work, work which is not required by the Contract Documents, work outside the limits of the Contract and additional work necessary due to actions of the Contractor, unless ordered by the Engineer in writing.

1.02 INCIDENTAL ITEMS

A. Except for the items designated hereunder for measurement and payment, the costs of items necessary to complete the work as specified are considered incidental to the items specified for measurement and payment. The costs of incidental items shall be included in the prices of items specified for measurement and payment.

1.03 QUANTITIES

A. The estimated quantities indicated in the Bid Schedule are the quantities estimated for the evaluation of bids. The actual quantities of items to be paid for on a unit price basis may vary from the quantities indicated in the Bid Schedule.

1.04 RELATED PROVISIONS SPECIFIED ELSEWHERE

A. Payment to Contractor: Refer to General Conditions and Contract Agreement.

B. Changes in Contract Price: Refer to General Conditions and Contract Agreement.

1.05 SUBMITTALS

A. Schedule of Values: Submit two copies of the Schedule of values to the Engineer for approval at least 10 working days prior to submitting the first application for payment. Revise and resubmit the Schedule of Values as required. When requested by the Engineer, support values with data that will substantiate the submitted costs.

PART 2 - MEASUREMENT

2.01 TOTAL JOB BASIS

A. Measurement of all lump sum items will be on a total job basis.

2.02 VOLUME BASIS

A. Where items are specified to be measured on a volume basis, the volume will be determined on an in-place basis (prior to excavation for excavation or after placement and compaction for imported fill) between the existing and final ground surfaces or grade lines shown on the drawings.

B. Over-excavation, defined as excavation beyond the specified or approved limits, WILL NOT BE MEASURED FOR PAYMENT.

2.03 WEIGHT BASIS

A. Where items are specified to be measured on a weight basis, the weight will be determined by the sum of printed certified truck scale tickets. Scale tickets must be cross-referenced with the number of trucks and must be signed by the Engineer or his appointed representative once per day.

B. Lost scale tickets may be replaced by the vendor invoice only upon approval by the Engineer.

2.04 AREA BASIS

A. Where items are specified to be measured on an area basis, the area will be determined by a field survey of the quantity installed. The area will be calculated on a plan view with no adjustment for grade changes.

B. Quantities installed beyond the specified or approved limits will not be measured for payment.

C. No adjustments will be made for the required overlap of materials.

2.05 LENGTH BASIS

A. Where items are specified to be measured on a length basis, the length will be determined by a field survey of the length installed along the centerline. The length will be calculated on a plan view with no adjustment for grade changes.

B. Quantities installed beyond the specified or approved limits will not be measured for payment.

C. No adjustments will be made for the required overlap of materials.

2.06 UNIT BASIS

A. Where items are specified to be measured on a unit basis, excluding unit price items measured on a volume, area or length basis, measurement will be of each particular unit as specified.

PART 3 – BID ITEMS

A. Item 1 – Preparation of Contractor Submittals

1. Work Included. Furnish all contract submittals including required insurance as specified in the Contract Documents.

2. Measurement. Lump Sum

3. Payment. Payment shall be made upon acceptance of submittals.

B. Item 2 - Mobilization

1. Work Included. Furnish all materials, equipment and labor for all other work specified in the Contract Documents that is not included in other bid items, inclusive of, but not limited to: temporary access roads, security, staging areas, and collection and disposal of miscellaneous wastes; health and safety items including but not limited to related clothing, equipment, PPE disposal, facilities, required personnel, medical surveillance program including physical examinations and all project records and documents as specified in Section 01105, Health and Safety; project record drawings; and mobilizing construction crews and equipment.

2. Measurement. Lump Sum.

3. Payment: Payment shall be made on a progress basis, based on the percentage of mobilization completed, in accordance with the approved Schedule of Values. No payment shall be made until:

   a. The Contractor has physically occupied the site;

   b. Staging areas are established;

   c. Sufficient equipment is available to start clearing and excavation work.

C. Item 3 – Install Temporary Facilities

1. Work Included. Furnish all materials, equipment and labor required installation of temporary facilities as specified in the Contract Documents.

2. Measurement. Lump Sum

3. Payment. Payment shall be made upon project completion.

D. Item 4 – Install Decontamination Pad

1. Work Included. Furnish all materials, equipment and labor required installation of a decontamination pad, as specified in the Contract Documents.

2. Measurement. Lump Sum

3. Payment. Payment shall be made upon completion of pad

E. Item 5 – Site Clearing

1. Work Included: Clear the site work zones of all brush, miscellaneous debris and material above the ground surface and stage material on-site as directed by the Engineer. The work also includes any incidental clearing as required to facilitate construction activities.

2. Measurement: Lump Sum.

3. Payment: Payment shall be made upon completion of clearing

F. Item 6 – Surface Water Diversion/Erosion Control Measures

1. Work Included: Provide, install and maintain erosion control and surface water diversion structures.

2. Measurement: Lump Sum.

3. Payment: Payment shall be made upon project completion.

G. Item 7 – Treatment and Disposal of Excavation Groundwater

1. Work Included: Treat and/or dispose of excavation groundwater at an approved offsite disposal facility.

2. Measurement: Volume Basis.

3. Payment: Payment shall be made upon receipt of written documentation that water was treated or disposed of properly.

H. Item 8 – PCB-Impacted Soil Excavation

1. Work Included: Excavate and load 3000 tons of PCB-impacted soils onto vehicles for transport to a disposal facility.

2. Measurement: Weight basis.

3. Payment: Unit price per ton of soil.

I. Item 9 – Backfill PCB-Impacted Soil Excavation with Clean Fill (On-site)

1. Work Included: Transport on-site clean fill for use as backfill. Such work shall include, but not be limited to, transporting, backfilling, and compacting the on-site clean fill in accordance with the Contract Documents.

2. Measurement: Lump Sum.

3. Payment: Payment shall be made upon completion of backfill.

J. Item 10 – Demolish Existing Pump House Slab and Foundation and use as Backfill

1. Work Included: Break up existing pump house slab and foundation into pieces 36-inches (in any dimension) or smaller for use as backfill in the excavation areas.
2. Measurement: Lump Sum.
3. Payment: Payment shall be made upon completion of work scope for this item.

K. Item 11 – Excavate six 25,000-gallon underground storage tanks, demolish flowable grout inside tanks for use as backfill in excavation areas.

1. Work Included: Excavate six 25,000-gallon USTs. Remove steel from flowable concrete within tanks. Break up existing flowable concrete into pieces 36-inches (in any dimension) or smaller for use as backfill in the excavation areas. Dispose of steel at an approved facility.
2. Measurement: Lump Sum.
3. Payment: Payment shall be made upon completion of work scope for this item.

L. Item 12 – Demolish existing concrete pad for use as backfill in excavation areas.

1. Work Included: Break up existing concrete pad into pieces 36-inches (in any dimension) or smaller for use as backfill in the excavation areas.
2. Measurement: Lump Sum.
3. Payment: Payment shall be made upon completion of work scope for this item.

M. Item 13 – Backfill/compact tank excavation with onsite soil as needed.

1. Work Included. Transport on-site clean fill for use as backfill. Such work shall include, but not be limited to, transporting, backfilling, and compacting the on-site clean fill in accordance with the Contract Documents.
2. Measurement: Lump Sum.
3. Payment: Payment shall be made upon completion of work scope for this item.

N. Item 14 – Restoration of disturbed areas.

1. Work Included. Reseed and fertilize all disturbed areas during the Spring of 2002.
2. Measurement: Lump Sum.
3. Payment: Payment shall be made upon project completion.

O. Item 15 – Demobilization

1. Work Included. Furnish all materials, equipment and labor to demobilize and remove from the site including, but not limited to, all temporary field offices and facilities, temporary utilities, temporary access roads, security, staging areas, health and safety facilities, PPE disposal, waste disposal, soil processing pads and equipment. Included is the submission of

all project closeout documents, including but not limited to, record drawings, surveys, and disposal records.

2. Measurement. Lump Sum.
3. Payment: Payment shall be made upon project completion..

P. Item 16 – Bonds

1. Work Included: Furnish all required bonds in accordance with the Contract requirements.
2. Measurement: Separate lump sum payments for bonds based on the approved Schedule of Values.
3. Payment: Payment shall be lump sum after receipt of proper bonds.

Final Payment

Parsons will withhold 5% of the total project value until all deficient items identified during the final inspection have been corrected and the site restoration has been completed to the satisfaction of the Engineer and the Hancock ANG.

--END OF SECTION 01025--

SECTION 01105

HEALTH AND SAFETY

PART 1 GENERAL

1.01 DESCRIPTION

The Contractor shall develop and implement a Health and Safety Plan (HASP) to protect all site personnel including those of the Owner, Engineer, all site visitors, and the community. At a minimum, the Contractor can adapt the HASP developed for this project by the Engineer (See site project plans).

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) for the project site. 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 Contractor's HASP must be approved by a licensed industrial hygienist. The HASP shall be submitted by the Contractor to the Engineer within 10 days from the date of Notice of Intent to Award letter. The Contractor will resubmit the HASP as needed, addressing Engineer's review comments. The Contractor shall not initiate onsite work in contaminated areas until a HASP addressing Engineer's comments has been issued.

All onsite workers must comply with the requirements of the HASP. 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 Owner.

Any discrepancies between the Contractor's HASP and the specifications herein, and the project plans shall be resolved in favor of the more stringent requirements as determined by the Engineer.

1.02 BASIS

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) and the Standard Operating Safety Guidelines by the United States Environmental Protection Agency (USEPA), Office of Emergency and Remedial Response provides 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 USEPA and the National Institute for Occupational Safety and Health (NIOSH) regarding procedures required to ensure safe operations at abandoned hazardous waste disposal sites.

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 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 Owner and 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 Owner and the Engineer. The cost of work stoppage due to health and/or safety shall be borne entirely by the Contractor.

1.03 DEFINITIONS

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

A. Project Personnel: Project personnel include the Owner, Engineer, Contractor, Subcontractors, and Federal and State Representatives working or having official business at the Project Site(s).
B. Authorized Visitor: Visitors shall be prepared by the Contractor. Authorized Federal and State visitors shall receive approval to enter the site. The Safety Officer has primary responsibility on determining who is qualified and may enter the site.
C. Safety Officer (SO): The SO will be the Contractor's onsite person who will be responsible for the day-to-day implementation and enforcement of the HASP. The SO can also perform as the Contractor's site superintendent.
D. Medical Consultant (MC): The Medical Consultant 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.
E. Project Site: The area designated on the Drawings which includes the Contractor Work Area.
F. Contractor Work Area: An area of the project site including Support Zone, access road, staging area and Exclusion Zone.
G. 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.
H. Staging Areas: Areas within the Exclusion Zone for the temporary staging of contaminated soil and debris.
I. Exclusion Zone: An area within the Contractor Work Area which encloses the area of contamination. Protective clothing and breathing apparatus as specified in the health and safety requirements and in the Contractor's approved Health and Safety Plan must be worn.
J. 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 personnel protective clothing and breathing apparatus must take place in the Contamination Reduction Zone.

L. 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:

The Engineer will review modifications to the HASP for acceptability based on personnel qualifications, conformance with OSHA requirements, and the impact on the site and human health.

Contractor:

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.

The Contractor shall:

A. Designate a Health and Safety Officer for the project who shall be responsible for all tasks described under the Contractor's Health and Safety Plan. In the event the Health and Safety Officer cannot meet his responsibilities, the Contractor shall be responsible for obtaining the services of an "alternate" Health and Safety Officer meeting the minimum requirements and qualifications contained within these plans. No work will proceed on this project in the absence of an approved Health and Safety Officer.

B. Ensure that all Project Personnel have obtained the required physical examination prior to and at the termination of work covered by the contract in accordance with OSHA 1910.120 regulations.

C. Ensure that all Project Personnel have received OSHA 40-hour training prior to the commencement of work.

D. Responsibility for the pre-job indoctrination of all Project Personnel with regard to the Safety Plan and other safety requirements to be observed during work, including but not limited to: (1) potential hazard, (2) personal hygiene principles, (3) personal protection equipment, (4) respiratory protection equipment usage and fit testing, and (5) emergency procedures dealing with fire and medical situations.

E. Responsibility for the implementation of this Health and Safety Plan.

F. 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.

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

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

I. 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.
J. Ensure all OSHA health and safety requirements are met.
K. 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.
L. Post the work zone with signs reading "Warning, Hazardous Work Area, Do Not Enter Unless Authorized," and restrict access by the use of temporary and/or permanent fencing. Warning signs shall be posted at a minimum of every 500 feet along the perimeter fence.
M. Brief all approved visitors to the site on safety and security, provide with temporary identification and safety equipment, and escort throughout their visit.

PART 2 - HEALTH AND SAFETY PLAN

2.01 PERSONNEL HYGIENE AND DECONTAMINATION

The Contractor shall provide a hygiene facility at each site. The hygiene facility shall include the following:

A. Hand washing facilities for project personnel complete with hot water, soap, paper towels, and mirror;
B. Areas for changing into and out of work clothing. Work clothing should be stored separately from street clothing;
C. Clean and "dirty" locker facilities;
D. Disposal of spent clothing material;
E. Portable "boot wash" decontamination equipment. Clean water shall be provided once per day; and
F. First aid kit including a portable eye wash station.

2.02 EQUIPMENT DECONTAMINATION

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. The cost for this element of work shall be incorporated in the lump sum bid for mobilization/demobilization or as otherwise directed on this project.
2. All vehicles and equipment used in the "Dirty Area" will be decontaminated to the satisfaction of the Safety Officer 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.
3. 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 unit shall be portable high-pressure with a self-contained water storage tank and

pressurizing system (as required). The unit shall be capable of heating wash waters to 180 degrees and providing a nozzle pressure of 150 psi.

4. Personnel engaged in vehicle decontamination will wear appropriate protective clothing and equipment. If the Contractor cannot or does not satisfactorily decontaminate the tools or equipment at the completion of the project, the Contractor will dispose such and will bear the cost of such tools and equipment and its disposal without any liability to the Owner. At the completion of the project the Contractor shall completely decontaminate and clean the decontamination area.

2.03 SITE SPECIFIC INFORMATION

The Contractor is responsible for protection of project personnel and the community. Site-specific analytical data are available from past investigation efforts completed at the Site. This information can be supplied to the Contractor upon request.

2.04 REPORTING

A. The Contractor shall prepare a weekly report of the Contractor's health and safety procedures and corrective measures. The report shall include all analytical results and maps depicting work locations, and action limits. The report shall also include any information regarding the use/implementation of engineering controls to reduce emission and exposure levels. The report shall include a summary of the work performed, level of protection, safety related problems, and corrective actions implemented.

PART 3 – EXECUTION

Perimeter air monitoring shall be conducted by the Engineer at four down gradient locations during excavation.

END OF SECTION 01105

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Submittal procedures shall conform to requirements of General Conditions and as described in this Section.

1.02 SCHEDULE OF SUBMITTALS

A. Schedule of Submittals: The Contractor shall complete a schedule of submittals 10 days after award of contract. The schedule shall show necessary submission dates for all plans, schedules, etc.

1.03 SUBMITTALS

1. The Contractor shall provide submittals to the Engineer in accordance with Table 01300-1, Schedule of Submittals.
2. Project Plans shall include:
   - Decontamination pad and equipment methods - incorporate, at a minimum, a high-temperature, high-pressure washer, as well as contaminant water collection and containment provisions;
   - Dewatering and construction water management procedures - include methods for treatment of contaminated groundwater;
   - Training Certificates from Contractors;
   - Medical Monitoring Certificates from Contractors; and
   - Shop drawings - redlined drawings indicating underground utilities, limits of excavation, and other items not included in the original drawings.

1.04 PROCEDURES

A. A letter of transmittal shall accompany each submittal. At the beginning of each letter of transmittal, provide a reference heading indicating the following:
   1. Client Name _____
   2. Project Name _____
   3. Contract No. _____
   4. Transmittal No. _____
   5. Section No. _____

B. If a submittal deviates from the requirements of the Contract Documents, contractor shall specifically note each variation in his letter of transmittal.

C. A number shall be assigned to each submittal by Contractor starting with No. 1 and thence numbered consecutively. Resubmittals shall be identified by the original submittal number followed by the suffix "A" for the first resubmittal, the suffix "B" for the second resubmittal, etc.

D. After Engineer completes his review, submittals will be marked with one of the following notations:

1. Approved
2. Approved as Corrected
3. Revise and Resubmit
4. Not Approved

E. If a submittal is acceptable, it will be marked "Approved" or "Approved as Corrected". Two prints or copies of the submittal will be returned to Contractor.

F. If a submittal is unacceptable, 2 copies will be returned to Contractor with one of the following notations:

a. "Revise and Resubmit"
b. "Not Approved"

G. Upon return of a submittal marked "Revise and Resubmit", Contractor shall make the corrections indicated and repeat the initial approval procedure.

TABLE 01300-1. SCHEDULE OF SUBMITTALS

Section	Title	Submittals	Schedule
01025	Measurement and Payment	Schedule of Values	10 days prior to first application for payment
01105	Health and Safety	Health and Safety Plan (HASP) Weekly Health and Safety Reports	10 days after Notice of Award Weekly
01300	Submittals	Project Plans: Decontamination Pads/ Equipment - Methods Dewatering, Construction Water Management - Procedures Training Certificates Medical Monitoring Certificates Shop Drawings	 5 days prior to start of work 5 days prior to dewatering 2 days prior to start of work 2 days prior to start of work After end of construction
02990	Finish Grading, Topsoil and Seeding	Product Data - Seed Vendors Certification - Fertilizer - Erosion Control Fabrics Installation Subcontractor	 Prior to Use Prior to Use Prior to Use
END OF SECTION 01300			

SECTION 01310

PROGRESS SCHEDULE

PART 1 - GENERAL

1.01 SCOPE

A. This section covers requirements for submission, approval, and updating of progress schedules and related documents.

1.02 PROGRESS SCHEDULE

A. The Contractor shall submit a preliminary Progress Schedule with the bid.

B. At least five (5) days before the date established for "commencement of the work", submit a comprehensive progress schedule indicating an activity for each significant category of work to be performed. Arrange schedule to indicate required sequencing and to show time allowances for 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, dependencies between activities, critical path, float, and shall include information regarding man-loading and equipment-loading required to progress the work as shown. Following the initial review and revision of the schedule, print and distribute three (3) copies to the Engineer. The Contractor shall notify the Engineer immediately of any significant changes to the project schedule.

C. The Contractor shall revise and update the Progress Schedule whenever one of the following conditions apply:
   (1) When delays in completion of any work item or sequence of work items results in an indicated extension of the Project completion by three working days or more.
   (2) When delays in deliveries, or work stoppages are encountered which make replanning or rescheduling of the work necessary.
   (3) When the schedule does not represent the actual production and progress of the Project.

D. The Contractor shall submit copy of the Progress Schedule and each revision to the Engineer for review.

1.03 PROGRESS REPORT

A. The Contractor shall submit to the Engineer a copy of a brief progress report at the completion of each work week. This report can be combined with the weekly Health and Safety Report (see

Section 01105-1.05B). Each report shall include a description of the amount of progress during the past period in terms of completed activities in the Plan of Operation and Progress Schedule currently in effect, a description of problem areas, current and anticipated delay factors and their estimated impact on performance of other activities and completion dates, and an explanation of corrective actions taken or proposed. The progress report shall also include plans for the next week.

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 Engineer or NYANG 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.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION (NOT APPLICABLE)

END OF SECTION 01310

SECTION 01400

QUALITY ASSURANCE AND QUALITY CONTROL SERVICES

PART 1 - GENERAL

1.01 DESCRIPTION

A. The Engineer will execute a quality assurance and quality control (QA/QC) program based on an Analytical Quality Assurance/Quality Control Plan (prepared by the Engineer), a Sampling and Analysis Plan (prepared by the Engineer), and these specifications. The Contractor is responsible for assuring its work meets project QA/QC requirements and is overseen by the Contractor's designated Construction Quality Assurance (CQA) Representative. All excavation and earthwork related construction must be performed in the presence of the Engineer. The Contractor shall cooperate with the Engineer with inspection, sampling, and testing as requested by the Engineer. The data generated as part of the quality assurance and quality control program shall govern over data generated from the Contractor's required quality control program and any other test data.

1.02 TESTING

A. Engineer's Responsibilities: The Engineer shall provide and pay for QA/QC services for the following work items as described in the Engineer's Construction QA/QC Plan.
   1. Confirmatory sampling of excavation areas.
   2. Compaction testing for all soil placement.

B. Contractor's Responsibilities: The Contractor shall provide and pay for QC services for the following work items:
   1. Tests required for treatment or discharge of construction water.

C. The Contractor shall pay for repeat tests performed by the Engineer required because of the Contractor's negligence or failure to meet specification requirements.

D. Testing laboratories shall meet the qualifications specified in the Construction QA/QC Plan for this project that is included in the project plans.

1.03 SUBMITTALS

A. The Contractor shall submit to the Engineer at least three working days in advance of their use the name and qualifications of independent test agencies to be used for this project.

B. The Contractor shall submit a certified written report of each inspection, test or similar service, in duplicate to the Engineer.

Report Data: Written inspection or test reports shall include:

1. Names of testing agency or test laboratory.
2. Dates and locations of samples, tests, or inspections.
3. Names of individuals present.
4. Complete inspection or test data.
5. Test results.
6. Interpretations.
7. Recommendations.

1.04 COORDINATION

A. The Contractor shall coordinate required tests with the Engineer and shall notify the Engineer a minimum of 24 hours in advance.

B. The Contractor shall allow a reasonable amount of time after samples are taken to obtain results from the Engineer.

C. The Engineer shall provide copies of all test results to the Contractor.

D. The Contractor shall cooperate with the Engineer and the testing laboratory to provide access to the work and to assist in obtaining samples.

E. The Contractor shall schedule his work to allow the required testing and shall not cover up work for which acceptable test results have not been received.

F. Inspection, sampling, and testing shall be as specified in other sections.

1.05 MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made for work required under this section. All costs in connection therewith shall be considered incidental to the work under this Contract.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 EXECUTION

Upon completion of inspection or testing, repair damaged work and restore substrates and finishes to original form.

END OF SECTION 01400

SECTION 01500

TEMPORARY FACILITIES AND FIELD OFFICE

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

A. Provide the necessary field trailer, porta-johns, power and water hookups for the workers to carry out the project work as specified. Install the temporary facilities to be ready for use when first needed to avoid delays in the work. Do not remove the facilities until no longer needed and removal is authorized by the Engineer. Usage charges for temporary facilities are to be paid by the Contractor.

1.02 QUALITY ASSURANCE

A. Regulation: Comply with requirements of local laws and regulations and ANG preferences governing construction and local industry standards, in the installation and maintenance of temporary services and facilities.

B. Standards: Comply with the requirements of NFPA Code 241, "Building Construction and Demolition Operations", the ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and the NECA National Joint Guideline NJG-6 "Temporary Job Utilities and Services".

PART 2 - PRODUCTS

2.01 SUBMITTALS

The Contractor shall submit a list of facilities intended for use within 5 days following Notice of Award and prior to commencing work.

PART 3 - EXECUTION

3.01 UTILITY INSTALLATION

Engage the local utility company to install temporary service or make connections to existing service, if available. Arrange with the NYANG Site Representative for an acceptable time when service can be interrupted to make connections. The Contractor shall obtain and pay for permits and construction required to bring temporary utilities to the site.

A. Electric Power Service: Comply with applicable requirements of NEMA, NECA and UL standards and governing regulations.

B. Temporary Telephones: Telephone service for the field office can be provided by cell phones. Post a list of operational and emergency telephone numbers.

3.02 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

A. Sanitary Facilities: Sanitary facilities must be provided and shall include temporary toilets, wash facilities and drinking water fixtures. Comply with governing regulations including safety and health codes for the type, number, location, operation and maintenance of fixtures and facilities.

B. Temporary Enclosure: Provide temporary enclosure of materials, equipment, to provide protection from exposure, foul weather, other construction operations, and similar activities.

C. The Contractor shall pay for temporary utilities.

3.03 COLLECTION AND DISPOSAL OF SANITARY WASTES

Establish a system for regular collection and disposal of sanitary waste materials. Dispose of waste material in a lawful matter. Burying or burning of waste materials on the site or washing waste material down sewers shall not be permitted.

3.04 SECURITY AND PROTECTION FACILITIES INSTALLATION

Provide a neat, uniform appearance in security and protection facilities acceptable to the Owner and the Engineer. Maintain site in a safe, lawful and publicly acceptable manner.

A. Temporary Fire Protection: Comply with recommendations of NFPA Standard 10.

B. Barricades, Warning Signs and Lights: Comply with recognized standards and code requirements for erection of substantial barricades where needed to prevent accidents.

C. Security Enclosure and Lockup: Install substantial temporary or permanent enclosures of partially completed areas of construction. Provide locking entrances adequate to prevent unauthorized entrance, vandalism, theft and similar violations of project security.

D. Anchor temporary facilities, as required, to prevent possible roll over or tipping by winds.

3.05 TERMINATION AND REMOVAL

Remove each temporary service and facility when need has ended and approval has been given by the Engineer.

At substantial completion, clean and renovate permanent services and facilities that have been used to provide temporary services and facilities during the construction period.

END OF SECTION 01500

SECTION 01540

SITE SECURITY

PART 1 - GENERAL

1.01 SUMMARY

A. Work included in this section:
   1. Security program;
   2. Entry Control;
   3. Personnel identification; and
   4. Restrictions.

B. Related work specified in other sections:
   1. Section 01025 - Measurement & Payment
   2. Section 01500 - Construction Facilities and Field Office

1.02 SECURITY PROGRAM

A. Entrance to Hancock ANG Base for mulitple days must be secured in advance. For mulitple entries and exits over more than 24 hours, the current security procedure that must be implemented is as follows. Provide at least three days in advance of entry the following information to the Hancock ANG Environmental Manager;
   - Name and copy of current driver's license for each person to enter the base; and
   - Copy of valid vehicle insurance and registration for each vehicle to enter the base.

B. The Contractor during his operations shall be responsible for providing security at the project site. The Contractor during his operations shall protect all temporary facilities, equipment and materials from theft, vandalism and unauthorized entry (trespassers) described in the Contractor's Scope of Work and as shown on the Contract Drawings as Area of Work.

C. Unless otherwise specified, Contractor shall initiate site security during the first week of mobilization. Contractor shall cease security operation upon removal of all remediation equipment, temporary offices and material during the demobilization phase of Contractor's operations

1.03 ENTRY CONTROL

A. Contractor shall restrict entrance to the project site to authorized Air National Guard personnel as well as Contractor's own workers and sub-contractors. Contractor shall restrict access of vehicles onto the project site.

B. Contractor shall allow only authorized personnel with proper identification entry to the project site.

C. Contractor shall maintain a daily log of workers, deliveries, and visitors. Contractor shall provide the Daily Security Logs at the end of each week with the appropriate end of week Daily Report Log.

PERSONNEL IDENTIFICATION

A. Hancock ANG will provide a pass for each person the first day on site. Hancock ANG may also provide a vehicle pass for each vehicle.

B. The Contractor shall provide an identification badge to each person authorized to enter premises. The Contractor shall stop at the security gate to show the badge at the beginning of each workday.

C. At a minimum, the badge will include: Personal photograph, name, assigned number, expiration date and Contractor's name or employer. Each badge will be consecutively numbered.

D. If required, the Contractor shall receive a badge specifically from The Air National Guard security office. This badge shall be required for daily entry to the work site.

RESTRICTIONS

A. With the exception of the Contractor's duly authorized personnel, still and video cameras shall not be permitted on site.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION 01540

SECTION 01564

EROSION CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

The work specified in this section consists of the labor, equipment, tools, materials, and services needed to accomplish erosion control measures during and following construction as described herein, shown on the Contract Drawings.

A. Work included in this section:
1. Installation of sedimentation and erosion control barriers.
2. Inspection of all erosion control measures weekly, after each rainfall and at least daily during prolonged rainfall.
3. Repairing immediately any failed sedimentation and erosion control barrier.
4. Removing and disposing of sediment deposits in a manner that does not result in additional erosion or pollution.
5. Removal of hay bales or silt fences after completion of construction and permanent stabilization is complete.

B. Related work specified in other sections:
1. Section 02222 - Excavation
2. Section 02223 - Backfilling
3. Section 02990 - Finish Grading, Topsoil and Seeding

1.02 PERFORMANCE REQUIREMENTS

A. Observe government policy established by United States Environmental Protection Agency (USEPA) Memorandum 78-1.

B. Conform to all erosion and sedimentation control measures of the State of New York as established in the New York Guidelines for Urban Erosion and Sediment Control, October 1991.

C. Temporary erosion and sediment control measures shall be installed as the first step in construction, shall be continuously maintained, and shall not be removed until permanent grass cover is completely established and stabilized, with Engineer's approval.

1.03 SCHEDULE

A. Taking into account specific constraints or other criteria outlined herein, the Contractor shall prepare a detailed schedule which sets forth his program of operations to effectively control erosion and sediment-runoff at all times during construction and during the one-year guarantee period following completion of the work.
   1. Two copies of the schedule shall be filed with the Engineer.
   2. At least one copy shall be kept at the project site at all times, and shall be made available for examination by the Engineer.
   3. The schedule shall be arranged so as to include:
      a. Chronological completion dates for each temporary (and permanent) measure for controlling erosion and sediment.
      b. Location, type and purpose for each temporary measure to be undertaken.
      c. Dates when those temporary measures will be removed.

1.04 SUBMITTALS

A. Product Data. Provide product data for each component to be used in erosion and sediment control.

B. Methods. Provide a description of and a plan showing implementation measures.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Hay/Straw Bales
   1. Shall be securely tied and measure, at a minimum, 14 inches by 18 inches by 30 inches long (14" x 18" x 30") or greater.

B. Stakes and Fasteners
   1. Shall be two #3 rebar or two 2-inch by 2-inch wood stakes for each hay/straw bale.
   2. Shall be a 2-inch by 2-inch by 36-inch hardwood post or Standard T or U section steel posts weighing not less than 1.33 pounds per linear foot for silt fences.

2.02 METHODS

A. Sediment Barriers - Sediment barriers shall be hay or straw bales (as shown in Figure C-3), stone, silt fences (as shown in Figure C-3) or other approved materials that will prevent migration of silts and sediment to receiving waters.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

A. It is the Contractor's responsibility to implement and maintain erosion and sedimentation control measures to effectively prevent accelerated erosion and sedimentation from the start of construction until grass cover is in place during the 2002 growing season.

B. Earthmoving activities shall be conducted in such a manner as to prevent accelerated erosion and sedimentation.

C. During construction, all erosion and sedimentation control measures shall be inspected by the Contractor immediately after each rainfall and at least daily during prolonged rainfall.
   1. Repair and/or maintenance of sedimentation and erosion control measures will be made as soon as needed.
   2. The Contractor shall be held responsible for the implementation and maintenance of all erosion control measures on this site.

D. Land disturbance shall be kept to a minimum.
   1. Restabilization shall be scheduled immediately after any disturbance.

E. Catch basins (sumps) shall be protected with silt fences or hay bales throughout the construction sequence and until all disturbed areas are stabilized.

F. Erosion and sedimentation control measures shall be installed prior to all construction activities.

G. Sediment removal from temporary control structures and from permanent drainage facilities shall be the responsibility of the Contractor. Sediment that is removed shall be disposed of in a manner which is consistent with overall intent of the plan and which does not result in additional erosion.

H. The erosion and sedimentation control measures described herein are intended as a general guide for the Contractor.
   1. It is the Contractor's responsibility to provide any and all work necessary to prevent erosion of soil from the construction site and to provide silt fences, hay bales or other control measures as the need arises during construction at no additional cost to the Owner.

I. Remove all sedimentation and erosion control barriers after completion of construction and permanent stabilization of erosion during the 2002 growing season.

3.02 SEDIMENT BARRIERS

A. Sediment barriers shall be used across swales and ditches; and at other applications where the structure is of a temporary nature and structural strength is not required.
   1. Sediment barriers are temporary berms, diversions, or other barriers that are constructed to retain sediment onsite by retarding and filtering storm runoff.

B. Recommended Materials and Dimensions shall be as specified in Section 2.01 of this specification.

3.03 SPECIAL CONDITIONS

Prohibited Construction Practices - Prohibited construction practices include but shall not be limited to the following:

1. Dumping of spoil material into any stream corridor, any wetlands, any surface waters or at unspecified locations.
2. Indiscriminate, arbitrary or capricious operation of equipment in any stream corridors, any wetlands or any surface waters.
3. Pumping of silt-laden water from trenches or other excavations into any surface waters, any stream corridors or any wetlands.
4. Disposal of trees, brush and other debris in any stream corridors, any wetlands, any surface water or at unspecified locations.
5. Permanent or unspecified alteration of the flow line of any stream.
6. Open burning of construction project debris.

3.04 ADJUSTMENT OF PRACTICES

1. If the planned measures do not result in effective control of erosion and sediment runoff to the satisfaction of the NYANG, the Contractor shall immediately adjust his program and/or institute additional measures so as to eliminate excessive erosion and sediment-runoff.
2. If the Contractor fails or refuses to comply promptly, the Engineer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor.

END OF SECTION 01564

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION OF REQUIREMENTS

Provisions of this section apply to the procedural requirements for the actual closeout of the Work, not to administrative matters such as final payment. Closeout requirements relate to both substantial and final completion of the Work; they also apply to individual portions of completed work as well as the total Work. Specific requirements contained in other sections have precedence over the general requirements contained in this section.

1.02 PROCEDURES AT SUBSTANTIAL COMPLETION

A. Prerequisites: Comply with the General Conditions and complete the following before requesting inspection of the Work, or a designated portion of the Work, for certification of substantial completion. A representative of NYANG, the Engineer and possibly the NYSDEC or NYSDOH will perform the substantial completion inspection.

1. Submit executed warranties, maintenance agreements, inspection certificates and similar required documentation for specific units of work, enabling unrestricted occupancy and use by the Government.
2. Submit record documentation and erosion control maintenance information..
3. Complete final cleaning, and remove temporary facilities and tools.

B. Inspection Procedures: Upon receipt of Contractor's request, the Engineer, and and ANG representative will either proceed with inspection or advise the Contractor of prerequisites not fulfilled. Following initial inspection, the Engineer will either prepare the certificate of substantial completion, or advise the Contractor of work which must be performed prior to issuance of the certificate of completion. The Engineer and a NYANG representative will repeat the inspection when requested and assure that the Work has been substantially completed. Results of the completed inspection will form the initial "punch-list" for final acceptance.

1.03 PROCEDURES AT FINAL ACCEPTANCE

A. Reinspection Procedure: The Engineer and a NYANG representative will reinspect the Work upon receipt of the Contractor's notice that the Work has been completed, including punch-list items from earlier inspections. Upon completion of reinspection, the Engineer will either recommend final acceptance and final payment, or will advise the Contractor of work not

completed or obligations not fulfilled as required for final acceptance. If necessary, this procedure will be repeated.

1.04 RECORD DOCUMENTATION

A. Record Drawings: The Contractor shall maintain a complete set of either blue- or black- line prints of the contract drawings and shop drawings for record mark-up purposes throughout the Contract Time. Mark-up these drawings during the course of the work to show both changes and the actual installation, in sufficient detail to form a complete record. Give particular attention to work that will be concealed and difficult to measure and record at a later date. Require the entities marking prints to sign and date each mark-up.

These marked prints (Record Drawings) shall be kept current and available by the Contractor on the job site at all times. All changes from the contract plans that are made in the work, or additional information that may be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. The drawings shall include but not be limited to the following:

1. The location and dimensions of any changes within the design features of any kind or description known to exist within the construction area. The locations shall include dimensions to permanent features.
2. Correct grade or alignment of roads, structures, utilities, or project components if any changes were made from contract drawings.
3. All changes or modifications which result from authorized field changes.
4. Additional work ordered by the Engineer or ANG.

B. Maintenance Information: Provide required maintenance information for the erosion control measures to be kept in place into the 2002 growing season, properly identified and indexed. Include operating and maintenance instructions extended to cover warranties, inspection procedures, and similar appropriate data for each equipment item.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 OPERATOR INSTRUCTIONS

Require each installer of systems requiring continued operation and maintenance by ANG's operating personnel, to provide on-location instruction to ANG's personnel, sufficient to ensure safe, secure, efficient, non-failing utilization and operation of systems.

3.02 FINAL CLEANING

At the time of project close out, clean and return the Work area to its original condition. Complete the following operations before requesting the Engineer's inspection for certification of substantial completion:

A. Remove non-permanent protection and labels.

B. Remove debris

C. Police yards and grounds.

D. Reinstall or replace with equivalent new fencing any permanent fencing removed during construction.

END OF SECTION 01700

SECTION 02072

UNDERGROUND STORAGE TANK REMOVAL

PART 1 - GENERAL

1.01 DESCRIPTION

The work specified in this section consists of the labor, equipment, tools, materials, and services needed to perform the removal of the underground storage tanks (USTs) described herein or as shown on the Contract Drawings.

A. Work included in this section:
   1. Excavation and removal of steel USTs from beneath the former pump house foundation as shown in the contract drawings.

B. Related work specified in other sections:
   1. Section 01200 - Health and Safety
   2. Section 02100 - Site Clearing
   3. Section 02222 - Excavation
   4. Section 02140 - Construction Water Management

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 GENERAL

A. Safety Guidelines. Personnel working in the general vicinity of the tanks shall be trained and thoroughly familiar with the safety precautions, procedures, and equipment required for controlling the potential hazards associated with this work. Personnel shall use proper protection and safety equipment during work around the tank as specified in API Publ 2217, API RP 1604, and the contract clauses.

B. Where multiple tanks are to be removed within close proximity to structures or buildings the Contractor shall remove the outer tank first.

3.02 EXCAVATION

A. Tank Excavation. Excavation around the perimeter of the tank shall be performed in a manner that will limit the amount of potentially contaminated soil that could be mixed with previously uncontaminated soil. All excavated soils shall be stockpiled until composite samples are tested for possible PCB contamination. Surface water shall be diverted to

prevent direct entry into the excavation. Dewatering of the excavation will be limited to that necessary to assure adequate access to the tank and piping and to assure a safe excavation. Dewatering may result in the production of contaminated water and/or free product. Free product shall be recovered from the groundwater only as part of necessary dewatering.

B. Open Excavations. Open excavations and stockpile areas shall be secured while awaiting verification test results from the excavated soil beneath the tank. The excavation shall not be backfilled without approval from the Engineer.

C. Stockpiles. Uncontaminated excavated soil that has been stockpiled can be used for backfill in the tank excavation prior to using borrow material. Uncontaminated soil shall be stockpiled separately from the contaminated soil, a safe distance away from, but adjacent to, the excavation. Contaminated soil shall be placed on an impermeable geomembrane a minimum of 30 mils thick, and covered with a 10 mil sheet of geomembrane as specified. The geomembrane shall be placed such that the stockpiled soil does not come into contact with surface water run-off. The 10 mil geomembrane cover shall prevent rain or surface water from coming into contact with the contaminated soil.

3.03 FLOWABLE CONCRETE REMOVAL

The Contractor must remove flowable concrete from within tanks. All concrete shall be broken into pieces 36-inches (in any dimension) or smaller before placement into the excavation area as backfill.

3.04 TANK STEEL DISPOSAL:

A. Disposal. Tank steel can not be disposed of on site. Contractor is responsible for all aspects of steel removal and disposal. Contractor shall provide approved transportation, labor, equipment, labels, shipping manifests, placards, etc. required to transport and dispose of the steel in accordance with federal, state, and local regulations. Tank steel shall not be disposed until approval is given by the Engineer.

END SECTION 02072

SECTION 02100

SITE PREPARATION/CLEARING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included in This Section. Principal items are:
   1. Selective removal to limits shown on the Drawings.
   2. Protection and preservation of trees and vegetation outside the clearing limits.

B. Related Work Specified in Other Sections.
   1. Section 01564 - Erosion Control
   2. Section 02219 - Waste Transport and Disposal
   4. Section 02222 - Excavation

1.02 CODE REQUIREMENTS AND ENVIRONMENTAL SAFEGUARDS

Accomplish disposal of material removed from site in accordance with applicable Federal, State, and local regulations. At all times, comply with regulations in force to prevent pollution of air and water.

1.03 SITE INVESTIGATIONS

The Contractor shall carefully examine the site to determine the full extent of the Work required to conform to the Drawings and Specifications. Any inaccuracies or discrepancies between the Drawings and Specifications shall be brought to the Owner's attention in order to clarify the exact nature of the Work to be performed.

PART 2 - PRODUCTS. (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 CLEARING AND SITE PREPARATION

A. Clearing and site preparation shall include the removal of all vegetation, including, but not limited to, brush, shrubs, stumps, and roots within the Project area. Removed material shall be placed onsite out of natural drainage paths. Holes

resulting from the removal of underground structures and roots that extend below the finished grade shall be cleaned and backfilled with suitable materials.

B. Contractor shall be responsible for all permits, lighting, temporary barricades, fencing, etc., required for Work on the Owner's property. The Contractor shall relieve the Owner of any and all legal responsibility for this phase of the Work.

C. Removal of trees, shrubs, and vegetation shall occur only with prior approval. The roots of trees to remain shall not be damaged by operations under this Section or any other Section. Herbicides for the control of woody plants shall not be used. Trunks, stumps, limbs, branches and roots within the extent of excavation shall be removed without Owner approval.

D. Any such item damaged by the Contractor shall be restored or replaced immediately at the Contractor's expense.

F. No trees, stumps, and other cleared and grubbed material may be used in backfills or structural embankments.

G. Burning onsite shall not be permitted.

3.02 GUARANTEE

A. Contractor shall guarantee that Work performed under this Section will not permanently damage trees, shrubs, turf, or plants designated to remain, or other adjacent work or facilities. If damage resulting from Contractor's operations appears during the period up to 12 months after completion of the project, he shall replace damaged items at his own expense.

END OF SECTION 02100

SECTION 02219

TRANSPORT AND WASTE DISPOSAL (Optional Task for Excavation Sub-Contractor)

PART 1 - GENERAL

1.01 DESCRIPTION

The work specified in this section consists of the labor, equipment, tools, materials, and services needed to perform the disposal of contaminated soil described herein or as shown on the Contract Drawings.

A. Work included in this section:
   1. Transport and disposal of excavated soil with PCB contamination greater than the NYSDEC surface and sub-surface cleanup objectives of 1 ppm and 10 ppm, respectively.

B. Related work specified in other sections:
   1. Section 01105 - Health and Safety
   2. Section 01564 - Erosion Control
   5. Section 02100 - Site Clearing
   6. Section 02222 - Excavation
   7. Section 02223 - Backfilling
   8. Section 02990 - Finish Grading and Seeding.

1.02 SUBMITTALS

A. Submit the name and location and a copy of the operating permit for each off-site disposal facility to be utilized for this project. Provide a statement of acceptability from each facility for each waste stream to be received from this project. Analytical data for soil to be excavated is provided in the Design Report.

B. Submit a brief work plan detailing the procedures, materials, and equipment to be used for the transport and disposal of excavated soil and waste material from project activities.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 GENERAL

A. Transportation of excavated materials shall be performed by a permitted transporter in a manner consistent with NYDOT transportation requirements for hazardous soils that will

prevent spills and the spread of contamination. Containers used for transportation shall be lined to prevent spillage of liquids.

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

C. All excavated material shall be weighed on the truck scale prior to disposal. Certified weigh tickets for all disposed material shall be provided to the Engineer at the end of each work week.

D. All trucks shall enter and leave Hancock Field via the facility entrance along Molloy Road shown on Drawing C-1. Upon entry, all vehicles must stop at the entrance gate, provide identification and give reason for site entry.

3.02 DISPOSAL OF SOIL WITH PCB CONTAMINATION GREATER THEN THE NYSDEC CLEANUP OBJECTIVES FOR SURFACE AND SUB-SURFACE SOILS

Soils with PCB contamination greater than or equal to the NYSDEC Cleanup-Objectives for surface and sub-surface soil are located at the site as shown on the Contract Drawings. All soil with PCB contamination greater than or equal to shall be excavated and properly disposed off-site at a facility permitted to receive such contaminants.

END SECTION 02219

SECTION 02222

EXCAVATION

PART 1 - GENERAL

1.01 DESCRIPTION

The work specified in this section consists of the labor, equipment, tools, materials, and services needed to perform all excavation as described herein or shown on the Contract Drawings.

A. Work included in this section:
1. Excavation of soils at Site 15 whether contaminated or not.
2. Excavation for site structures at Site 15.
3. Removal of existing soil pile at Site 1.

B. Related work specified in other sections:
1. Section 01500 - Temporary Facilities and Field Office
2. Section 01564 - Erosion Control
3. Section 02223 - Backfilling
4. Section 02990 - Finish Grading, Topsoil, and Seeding

1.02 QUALITY ASSURANCE

A. Field Measurements

The Surveyor hired by the Engineer shall verify that survey benchmark, monuments and intended elevations for the work are as shown on the Drawings or as provided by the Engineer.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.01 PREPARATION

A. Identify required lines, levels, contours, and datum.

B. Protect control points, bench marks, existing structures, fences, sidewalks, paving, and curbs from excavation equipment and vehicular traffic. Damaged items shall be promptly repaired at the Contractor's expense.

C. Prior to start of construction, notify the appropriate organizations, and have staked or marked all underground utilities. Utilities include water, gas, electrical, telephone, cable, storm sewer, sanitary sewers, laterals, and services. In the event such locations indicate a possible interference, or when needed to locate points of connection to existing facilities, perform exploratory excavations to determine the utilities' location and elevation. Provide the utility owner with the results of the exploratory excavations for his review. Allow the Engineer sufficient time to determine any changes required as a result of such exploratory excavations prior to start of construction.

D. Maintain existing culverts and other drainage and utility structures above and below grade that are to remain in their pre-work condition

3.02 SOIL EXCAVATION AND HANDLING PROCEDURE

A. All soil excavated from the designated soil excavation areas will be excavated and handled according to the following procedures:
   1. Excavate shallow soil (0-2 feet below ground surface) contaminated with PCBs over 1 ppm.
   2. The Engineer shall perform confirmatory sampling of the excavation bottom and sides for total PCBs and excavate additional soil, if necessary, as directed by the Engineer in accordance with the Sampling and Analysis Plan.
   3. Excavate deep soil (10-14 feet below ground surface) with PCBs over 10 ppm.
   4. Excavation side walls will be sloped in accordance with Subpart P of 29 CFR 1926.
   5. The Engineer shall perform confirmatory sampling of the excavation bottom and sides to verify attainment of PCB soil cleanup objectives. The Engineer shall direct the excavation of additional soil, if necessary to meet NYSDEC soil cleanup objectives, in accordance with the Sampling and Analysis Plan.

B. When removing concrete, separate the concrete from soil within the excavation area, as much as reasonable, prior to moving concrete to the stockpile area.

C. Equipment used for the excavation of contaminated material shall be decontaminated prior to its reuse on clean material.

D. 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 two working days following excavation for results of confirmatory sampling performed by the Engineer. The extent and depth of additional excavation, if required, shall be determined by the Engineer.

E. Excavation shall be performed in a manner that prevents migration of excavated soil from one area to another. Contamination that spreads beyond the existing contamination limits shall be removed at the Contractor's expense.

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

G. Conduct excavation operations to provide continuous drainage and minimal ponding of clean water and containment of impacted water. Direct clean surface water away from the excavation areas.

3.03 CLASSIFICATION OF EXCAVATED MATERIAL

A. Classifications of excavated materials are as follows:
   1. Common Excavation - "Common excavation" shall include all excavation except "rock excavation." All unconsolidated and non-indurated material, rippable rock, loose rock, soft mineral matter, weathered rock or saprolite, and soft or friable shale which is removable with normal earth excavation equipment shall be considered "common excavation." All boulders and detached pieces of solid rock, concrete, or masonry less than 1 cubic yard in volume shall be classified as "common excavation."

3.04 EXCAVATION

A. Underpin adjacent structures that may be damaged by excavation work, including utilities and pipe chases.

B. Excavate subsoil required to accommodate construction operations as needed.

C. Excavate as required to accommodate site drainage.

D. Banks are to be shored or machine-sloped to an angle that is safe for the specific material in which the excavation is made.

E. Grade the top perimeter of excavations to prevent surface water from draining into the excavation.

F. Remove lumped subsoil, boulders, and rock under 1 cubic yard. Refill voids with concrete or compacted gravel/crushed stone.

G. Notify the Engineer of unexpected subsurface conditions, or of questionable soils encountered at required subgrade elevations, and discontinue work in the area until notified to resume work.

H. Should the Contractor, through negligence or otherwise, carry his excavation below the designated subgrade, structural backfill or unclassified backfill (material type dependent on the

nature of work), shall be furnished and placed as backfill in sufficient quantities to reestablish the designated subgrade surface.

3.07 FIELD QUALITY CONTROL

A. Field inspection will be performed under provisions of Section 01400.

B. Provide for visual inspection of bearing surfaces.

3.08 PROTECTION OF EXCAVATIONS

A. Protect excavations by methods required to prevent cave-ins or loose soil from falling into excavation.

B. All excavations shall be properly and legally maintained while they are open and exposed. Sufficient and suitable barricades, warning lights, flood lights, signs, etc., to protect life and property shall be installed and maintained at all times until the excavation has been backfilled and graded to a safe and satisfactory condition.

C. Protect the bottom of excavations and soil adjacent to, and beneath, foundations from freezing.

D. Exposed subgrade surfaces shall remain undisturbed, drained, and maintained as uniform areas shaped to receive the foundation components of the structure.

END OF SECTION 02222

SECTION 02223

BACKFILLING

PART 1 - GENERAL

1.01 DESCRIPTION

The work specified in this section consists of the labor, equipment, tools, materials, and services needed to perform all backfilling as described herein or shown on the Contract Drawings.

A. Work included in this section:
   1. Site filling and backfilling.
   2. Classification of materials.

B. Related work specified in other sections:
   1. Section 02222 - Excavation

1.02 SUBMITTALS

A. For each offsite material proposed, notify the Engineer of the source of material and furnish for approval a certified gradation analysis at least 3 working days prior to date of anticipated use of such material.

1.03 QUALITY ASSURANCE

A. Referenced standards: Comply with the applicable provisions and recommendations of the following, except as otherwise shown or specified.
   1. ASTM D2487 - Classification of Soil.
   2. ASTM D698 - Standard Proctor Compaction.
   3. ASTM D854, D2216 - Physical Property of Soils
   4. ASTM D4318 - Atterburg Limits.
   5. ASTM D136 - Method for Sieve Analysis of Fine and Coarse Aggregates

B. No materials shall be used on this project for fill, backfill, subbase, or other purpose until approval is obtained from the Engineer. Only material from approved sources shall be used. The source along Avenue "D" at Hancock Field is large enough to meet project backfilling needs. The Engineer is currently having samples from the Avenue "D" source analyzed and will determine its suitability for use prior to mobilization for construction.

PART 2 - PRODUCTS

2.01 ONSITE MATERIALS

A. Onsite material, located at Avenue "D", required for fill or backfill shall be natural material, free from trash, debris, snow, ice, or soils that contain detectable levels of PCBs. Only materials with no detectable levels of PCBs shall be utilized.

B. Demolished concrete from the existing concrete pad, pump house slab, pump house foundation, and flowable grout from within the six 25,000-gallon underground storage tanks shall be broken into chunks not larger then 36 inches in any dimension prior to placement in the excavation areas as backfill. The Contractor shall not place any demolished concrete in the excavation without prior approval from the Engineer.

2.02 OFFSITE MATERIALS

A. Offsite material required for fill or backfill shall be natural material from offsite sources, free from trash, debris, deleterious materials, snow, or ice.

B. STRUCTURAL BACKFILL/CRUSHED AGGREGATE shall conform to NYSDOT for Type 4 granular fill materials. Materials furnished for Type 4 shall consist of stone, or sand and gravel or blends of these materials. Materials furnished shall be well graded from fine to coarse and shall be free of mud, debris, organic matter or other deleterious materials.

Gradation for Type 4 structural fill/crushed aggregate shall conform to:

Sieve Size Designation	Percent Passing By Weight
2 inch	100
No. 40	20-65
No. 200	0-10

C. Unclassified fill or backfill shall be materials classified in ASTM D 2487 as GW, BP, GC, SW, SP, SM, SC, and CL and shall be free form roots and other organic matter, trash, frozen materials, and stone larger than 2 inch in any dimension. Additionally, any material classified as SM shall have not more than 25 percent by weight passing in the No. 200 sieve. CL soils shall have a liquid limit no greater than 30 and a plasticity index no greater than 15. The material shall be obtained from approved offsite sources.

D. Pea gravel shall be natural materials be free from organic or other deleterious materials. Gradations for pea gravel shall conform to:

Sieve Size	Percent Passing by Weight
1 inch	100
1/2 inch	90-100

1/4 inch	0-15
No. 4	0-5

E. Pipe Bedding and Backfills shall consist of bank run gravel or sand free of silt, clay, loam, friable or soluble materials and organic matter graded in accordance with ASTM C136 and D2487 within the following gradation limits:

Gravel:

Sieve Size	Percent Passing by Weight
1 1/4 inch	100
1 inch	95-100
1/4 inch	30-65

PART 3 - EXECUTION

3.01 GENERAL BACKFILLING REQUIREMENTS

A. Verify that fill materials to be used are acceptable based on project requirements and approved in advance by the Engineer for Site use.

B. Verify with the Engineer that all subsurface installations for the project have been inspected and are ready for backfilling.

C. Generally, place backfill in the excavation in a maximum of 18-inch lifts and compact subgrade to a minimum compaction of 85% density in accordance with ASTM D698. 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. Backfill spaces shall be inspected prior to backfilling operations and all unsuitable materials, including sheeting, bracing forms and debris, shall be removed. Remove all water, snow, and ice and debris from surfaces to accept backfill material. No backfill shall be placed against foundation walls of structural members unless they are properly shored and braced or of sufficient strength to withstand lateral soil pressures.

E. Backfill material shall be sampled and analyzed by the Engineer prior to the commencement of work. Backfill material shall be inspected by the Engineer prior to placement and all roots, vegetation, organic matter, or other foreign debris shall be removed. Concrete stones larger than 36 inches in any dimension shall be crushed in place or broken. Stones shall not be allowed to form clusters with voids. The contractor may stockpile onsite excavated material acceptable for backfill and backfill from Avenue "D". The Contractor shall prevent exposure of backfill material with PCB-impacted soil being removed from the site.

F. Backfilling shall be started as soon as practicable following excavation. Backfilling shall be carried on expeditiously thereafter. Backfill shall be started at the lowest section of the area to be backfilled. Natural drainage shall not be obstructed at any time.

G. Backfill material shall not be placed when moisture content is more than two percent above optimum or is otherwise too high to allow proper compaction. When material is too dry for adequate compaction, water shall be added to the extent necessary. Maintain within two percent of optimum moisture content of backfill materials to attain required compaction density. Rough grade all backfilled and filled areas to meet subsequent topsoiling or paving requirements. Make grade changes gradual. Blend slopes into level areas.

H. Roll over backfilled material several times to ensure sufficient material compaction. Material should be compacted so as to eliminate settling. If settling occurs after the project has been completed, the Contractor shall return to the site and restore the area to a sufficient grade at the cost of the Contractor.

3.02 TOLERANCES

A. Top Surface of General Backfilling – match existing grades as acceptable to Engineer.

3.03 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01400.

END OF SECTION 02223

SECTION 02990

FINISH GRADING 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, and mulch.

B. Related work specified in other sections:
1. Section 01500 - Temporary Facilities and Field Trailor
2. Section 01564 - Erosion Control
3. Section 02222 - Excavation

1.02 SUBMITTALS

A. Materials and Products: Submit for approval data.
1. Topsoil Source: If Avenue "D" source is not suitable for topsoil, the Contracotr 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.

B. Installer - Submit the name of subcontractors (if used) and Qualification Statements.

1.03 QUALITY ASSURANCE

A. 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.

B. 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.

PART 2 - PRODUCTS

2.01 TOPSOIL

A. Offsite 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 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. The soil 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.

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

2.04 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
Optimal Seed Mix	

2.05 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.

a. 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.
b. Hydromulch manufactured from recycled paper products will be acceptable.
c. Product and Manufacturer:
   1. Conwed Virgin Wood Fiber Mulch by Conwed, Inc.
   2. Silva Fiber by Weyerhaeuser Co.
   3. 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. No final slope shall exceed 15 percent.

3.02. TOPSOIL

A. The Contractor shall place a minimum of six (6) inches of compacted topsoil over excavated areas and the disturbed areas as directed by the Engineer.

B. 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 six (6) inch minimum requirement. No topsoil shall be spread in water or while frozen or muddy.

C. The topsoil shall then be rolled. 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.

D. Quality Control

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 offsite soil:

Material Property	Test Method	Frequency
Grain-size Analysis with Fines	ASTM D-422	1 per 10,000 cubic yards
Soil pH	ASTM D-4972	1 per 10,000 cubic yards
Organic Content	ASTM D-2974	1 per 10,000 cubic yards

3. Additional testing will be required if an alternate source is proposed to be utilized.

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.

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 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 at a uniform rate of 1,500 lbs/acre.

3.06. WATERING

A. Following applications of seed and mulch, 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

APPENDIX C

CONSTRUCTION DRAWINGS

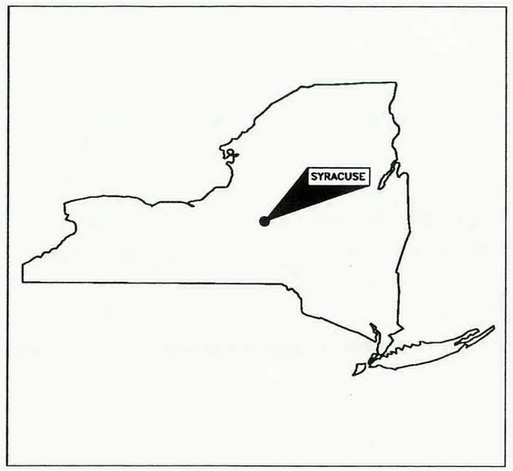
LIST OF FINAL DESIGN DRAWINGS
HANCOCK FIELD SITE 15
TIME CRITICAL REMOVAL ACTION

Drawing No.	Description
G-1	TITLE SHEET AND DRAWING INDEX
C-1	EXISTING SITE PLAN
C-2	EXCAVATION/DEMOLITION PLAN
C-3	MISCELLANEOUS DETAILS

TIME CRITICAL REMOVAL ACTION
SITE 15, HANCOCK FIELD
SYRACUSE, NEW YORK

Prepared For:

NEW YORK AIR NATIONAL GUARD



THE STATE OF NEW YORK
(NOT TO SCALE)

DRAWING INDEX

NUMBER	TITLE
G-1	TITLE SHEET AND DRAWING INDEX
C-1	EXISTING SITE PLAN
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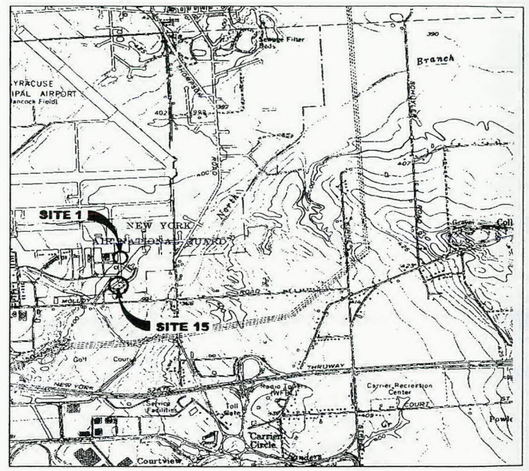

SITE LOCATION MAP
(NOT TO SCALE)

Rev	Date	Description	By
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Job No. 740741
Designed
Drawn MAB
Checked DOM
Reviewed DBB
Approved
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SITE 15, HANCOCK FIELD
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TITLE SHEET AND DRAWING INDEX

DRAWING NO. G-1

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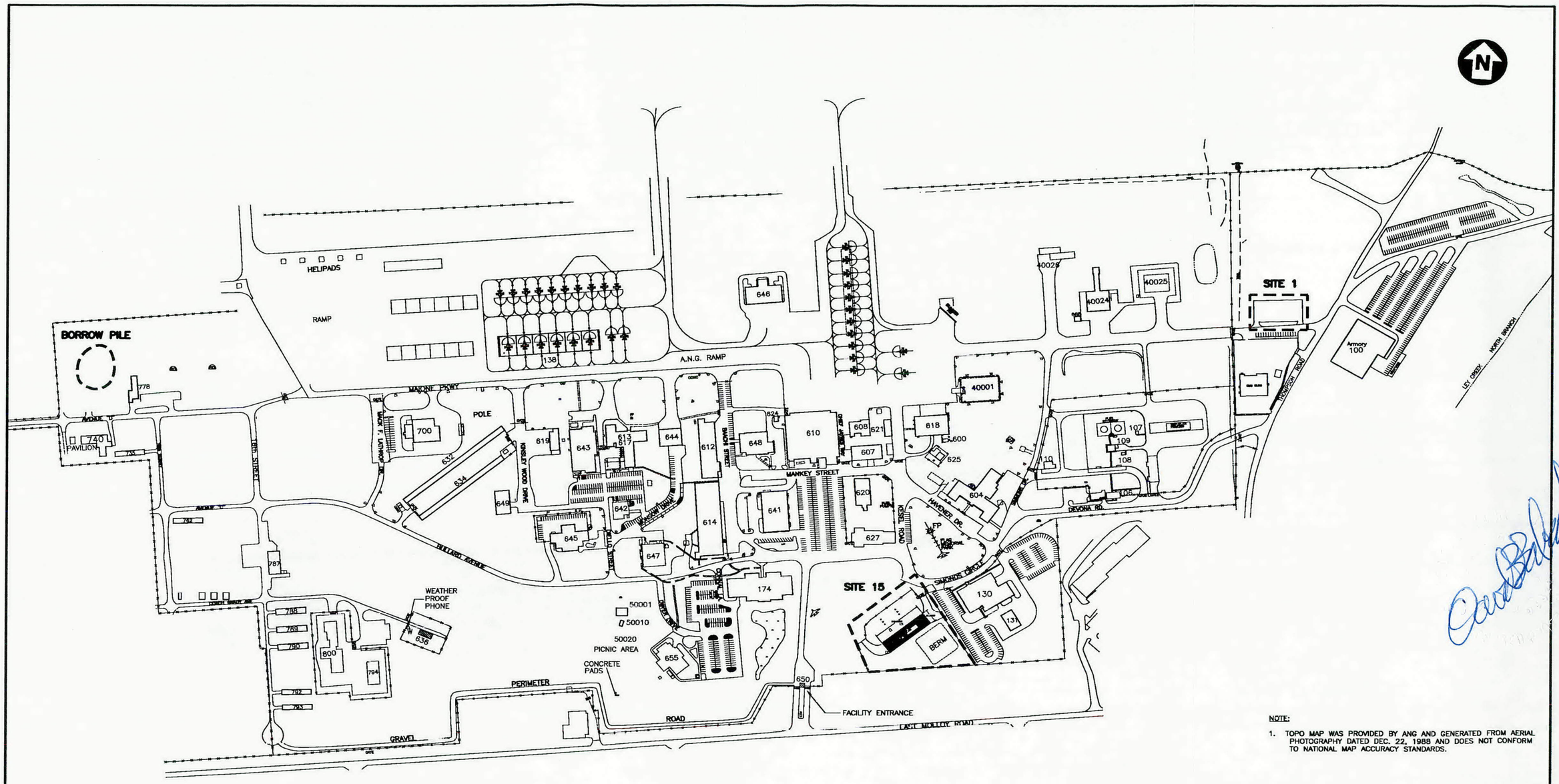

NOTE:

1. TOPO MAP WAS PROVIDED BY ANG AND GENERATED FROM AERIAL PHOTOGRAPHY DATED DEC. 22, 1988 AND DOES NOT CONFORM TO NATIONAL MAP ACCURACY STANDARDS.

200 100 0 200 400

SCALE. 1"=200'

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EXISTING SITE PLAN

DRAWING NO. C-1

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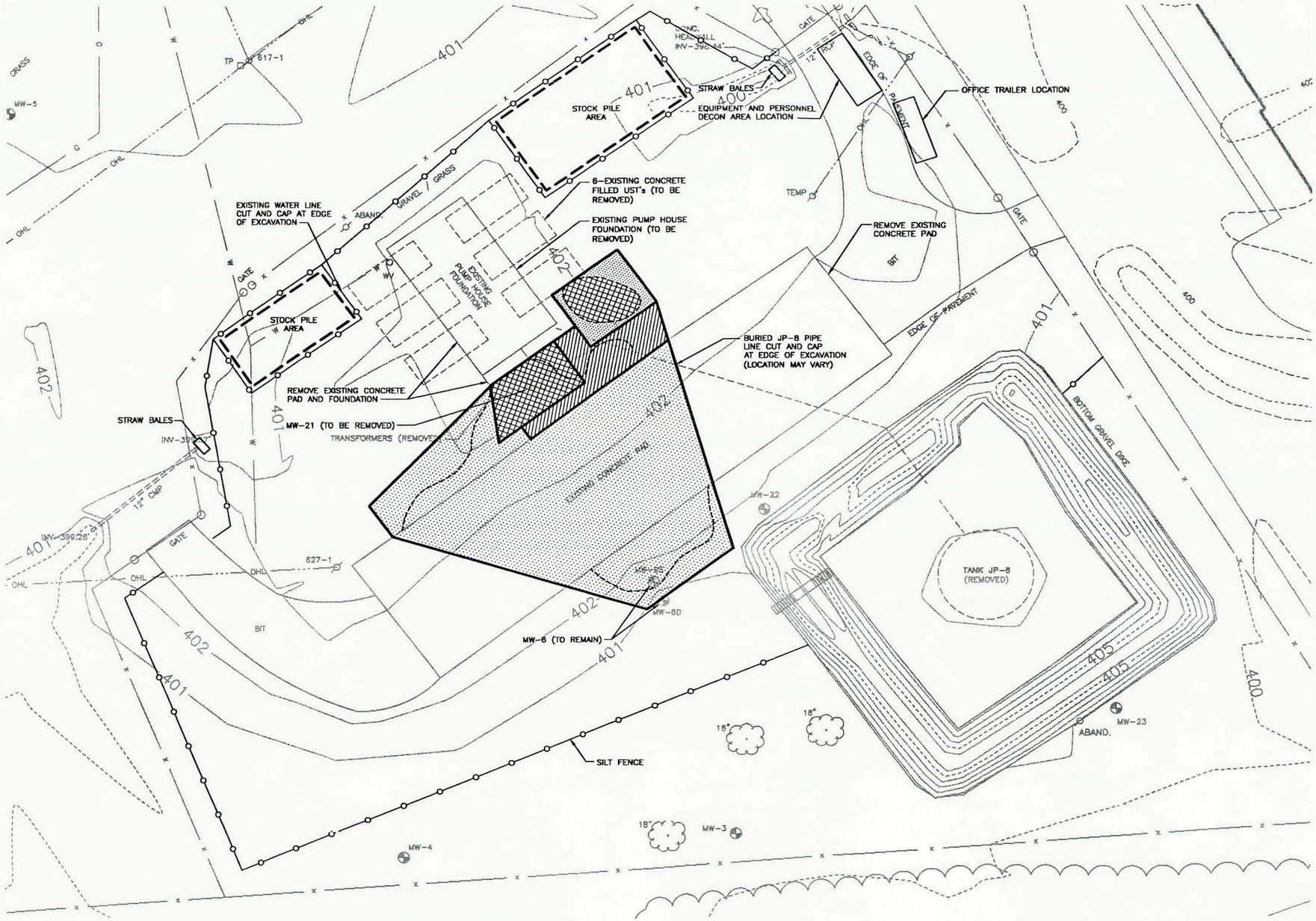

NOTES:

1. NORTH ORIENTATION AND COORDINATE VALUES ARE BASED ON THE NEW YORK STATE PLANE COORDINATE SYSTEM (NAD 27) AS PER EXISTING CONTROL POINTS FOR THE N.Y.A.N.G. APRON IMPROVEMENTS PROJECT.
2. VERTICAL DATUM IS BASED ON NGVD 1929 ELEVATIONS CONVERTED FROM NAVD 1988 ELEVATIONS FOR ABOVE PROJECT.
3. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM DATA OBTAINED BY FIELD SURVEY, PREVIOUS MAPS AND RECORDS. THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER UNDERGROUND UTILITIES, THE EXISTENCE OF WHICH ARE NOT KNOWN TO THE UNDERSIGNED. SIZE AND LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION.
4. THE HORIZONTAL AND VERTICAL EXCAVATION LIMITS SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL HORIZONTAL AND VERTICAL LIMITS WILL BE BASED ON RESULTS OF CONFIRMATORY SAMPLING BY THE ENGINEER IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHEETING, SHORING, BRACING, AND DEWATERING NECESSARY TO COMPLETE THE WORK.
6. THE CONTRACTOR SHALL PROVIDE ALL ELEMENTS OF WORK AREA SECURITY NECESSARY TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS ONTO THE SITE. EXISTING FENCING AS SHOWN IS SECURE AND FULLY ENCLOSES THE WORK AREA ALONG ACCESSIBLE LAND ROUTES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH MAINTENANCE OF WORK AREA SECURITY MEASURES DURING CONSTRUCTION.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL THE DUST CREATED BY ANY AND ALL OF HIS OPERATIONS TO SUCH A DEGREE THAT IT WILL NOT ENDANGER THE SAFETY AND WELFARE OF THE GENERAL PUBLIC. THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR 1910, 29 CFR 1926, AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS.
8. CONTRACTOR SHALL MAINTAIN PROPER EROSION CONTROL TECHNIQUES (INCLUDING SILT FENCE AND STRAW BALE DIKES) AS REQUIRED IN ACCORDANCE WITH SPECIFICATION SECTION 01564.
9. THE CONTRACTOR SHALL POST WORK ZONES WITH SIGNS READING "WARNING, HAZARDOUS WORK AREA, DO NOT ENTER UNLESS AUTHORIZED". WARNING SIGNS SHALL BE POSTED AT A MINIMUM OF EVERY 500 FT. ALONG THE PERIMETER FENCING.
10. BACKFILL TO PRE-CONSTRUCTION GRADES USING ONSITE BORROW MATERIAL AND APPROVED SOURCES.
11. DECON AREA, OFFICE TRAILER AND STOCK PILE LOCATIONS ARE SHOWN IN SUGGESTED LOCATIONS. CONTRACTOR TO PROPOSE LOCATIONS AND BE APPROVED BY THE ENGINEER.

LEGEND

- EXISTING FENCE
- TEMPORARY SILT FENCE
- APPROX. OUTLINE OF AREA OF SURFICIAL (0-2') PCB CONTAMINATION EXCEEDING NYSDEC ACTION LEVEL OF 1000 µG/KG
- EXISTING MONITORING WELL LOCATION
- SHALLOW EXCAVATION (0-2') <50ppm
- SHALLOW EXCAVATION (0-2') >50ppm
- DEEP EXCAVATION (10'-14') >50ppm

20 10 0 20 40

SCALE: 1"=20'

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EXCAVATION/DEMOLITION PLAN

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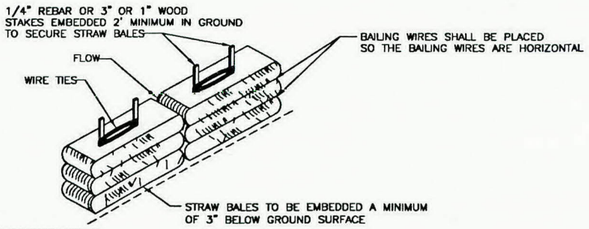
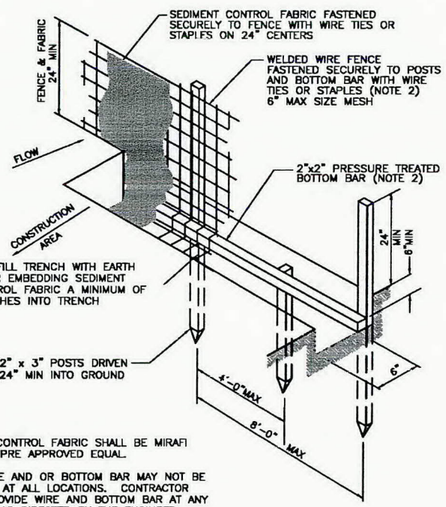


NOTES:

1. BALES SHALL TIGHTLY ABUT ADJACENT BALES.
2. BALES SHALL BE REPAIRED OR REPLACED AS NEEDED SO AS NOT TO IMPEDE STORM FLOW OR DRAINAGE.

1 STRAW BALE DETAIL
NOT TO SCALE



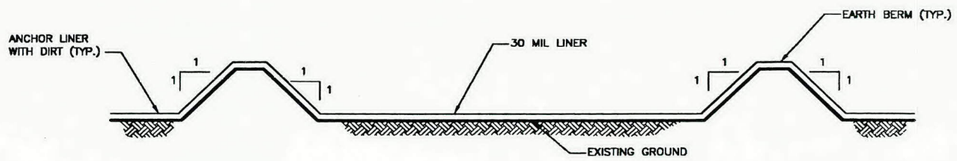
NOTES:

1. SEDIMENT CONTROL FABRIC SHALL BE MIRAFI 100X OR PRE APPROVED EQUAL.
2. WIRE FENCE AND OR BOTTOM BAR MAY NOT BE REQUIRED AT ALL LOCATIONS. CONTRACTOR SHALL PROVIDE WIRE AND BOTTOM BAR AT ANY LOCATION AS DIRECTED BY THE ENGINEER.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO MAINTAIN THE INTEGRITY OF THE SILT FENCE.

2 SILT FENCE DETAIL
NOT TO SCALE

GENERAL NOTES:

1. ALL EXCAVATIONS SHALL BE SLOPED OR SHORED, AS NECESSARY, TO MEET 29 CFR 1926 SUBPART P.
2. PCB CONTAMINATED SOILS SHALL BE LOADED DIRECTLY INTO TRANSPORT VEHICLES.
3. SOILS EXCAVATED FROM THE TANK AREA SHALL BE STOCKPILED IN A BERMED AREA ON A 30 MIL LINER (LOCATION PROPOSED BY CONTRACTOR AND APPROVED BY ENGINEER) UNTIL COMPOSITE SAMPLES CAN BE ANALYZED FOR POSSIBLE PCB CONTAMINATION. THE STOCKPILE WILL BE COVERED WITH 6 MIL POLY TO PREVENT RAIN WATER RUNOFF
4. DEMOLISHED CONCRETE FROM THE TANK REMOVAL SHALL BE STOCKPILED SEPARATELY FROM THE SOILS (LOCATION PROPOSED BY CONTRACTOR AND APPROVED BY THE ENGINEER) PRIOR TO BACKFILLING.
5. GROUNDWATER SHALL BE COLLECTED, AS NECESSARY, TO COMPLETE THE EXCAVATIONS AND TAKING OF CONFIRMATORY SAMPLES. CONTRACTOR TO PROPOSE METHODS (ON-SITE WATER TREATMENT AND/OR OFF-SITE DISPOSAL). GROUNDWATER CAN BE EXPECTED AT APPROXIMATELY 9-10 FEET BELOW GRADE.
6. BACKFILL EXCAVATED AREAS TO EXISTING GRADE WITH BORROW MATERIAL OBTAINED FROM AN ON-SITE LOCATION (SEE EXISTING SITE PLAN).
7. BACKFILL SHALL BE COMPACTED SO THAT NO SETTLING OCCURS (CONTRACTOR TO PROPOSE METHOD).
8. THE CONCRETE PADS SHALL BE REMOVED IN SUCH A WAY THAT THERE IS ONLY MINIMAL DISTURBANCE TO THE UNDERLYING SOILS. THE CONCRETE SHALL BE STOCKPILED SEPARATELY FROM THE SOILS UNTIL TESTING BY THE ENGINEER IS COMPLETE (LOCATION PROPOSED BY CONTRACTOR AND APPROVED BY THE ENGINEER).
9. AFTER REMOVAL OF THE CONCRETE PADS, SOIL SAMPLES WILL BE COLLECTED TO DETERMINE PCB CONCENTRATIONS, IF ANY, UNDER THE PADS.
10. CLEAR AREAS OF VEGETATION, AS NECESSARY TO PERFORM OPERATIONS. CLEARED VEGETATION SHALL BE STOCKPILED ON SITE AT AN AREA DESIGNATED BY THE ENGINEER.



3 STOCK PILE AREA DETAIL
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MISCELLANEOUS DETAILS

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APPENDIX D

PROJECT PLANS:

(1) HEALTH AND SAFETY PLAN

(2) QUALITY ASSURANCE PROJECT PLAN

(3) SAMPLING AND ANALYSIS PLAN

(See the Work Plan for Time Critical Removal Action - Parsons ES, October 2001 for the final version of these plans)