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June 11, 2004

Mr. Scott Bradley
U.S. Army Corps of Engineers
Engineering and Support Center, Huntsville
Attn: CEHNC-FS-IS
4820 University Square
Huntsville, AL 35816-1822

Subject: **Submittal of Final Work Plan to Investigate EBS Sites, Mound Area, EBS Site 109(7), Seneca Army Depot Activity; File No. 1017A**

Dear Mr. Bradley:

Parsons Engineering Science, Inc. (Parsons) is pleased to submit the Final Work Plan for the Mound Area, EBS Site 109(7) at the Seneca Army Depot Activity located in Romulus, New York for your review.

The work was performed in accordance with the Scope of Work (SOW) for Delivery Order 20 to the Parsons Contract DACA87-02-D-0005.

Parsons appreciates the opportunity to provide the Army with this document. Should you have any questions about the material presented and summarized in this document, please do not hesitate to call me at (617) 457-7905 to discuss them.

Sincerely,
TODD HEINO by

Todd Heino, P.E.
Program Manager

Enclosures

cc: Mr. S. Absolom, SEDA
Mr. R. Battaglia, CENAN
Mr. K. Hoddinott, USACHPPM (PROV)
Mr. C. Boes, USAEC

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June 11, 2004

Mr. Julio Vazquez
USEPA Region II
Superfund Federal Facilities Section
290 Broadway, 18th Floor
New York, NY 10007-1866

Mr. Joseph White
New York State Department of Environmental Conservation (NYSDEC)
Bureau of Eastern Remedial Action
Division of Hazardous Waste Remediation
625 Broadway 11th Floor
Albany, NY 12233-7015

Subject: **Submittal of Final Work Plan to Investigate EBS Sites, Mound Area, EBS Site 109(7), Seneca Army Depot Activity; EPA Site ID: NY0213820830 - NY Site ID: 8-50-006; File No. 1022A/1023A**

Dear Mr. Vazquez/Mr. White:

Parsons Engineering Science, Inc. (Parsons) is pleased to submit the Final Work Plan for the Mound Area, EBS Site 109(7) at the Seneca Army Depot Activity located in Romulus, New York for your review.

Should you have any questions, please do not hesitate to call me at (617) 457-7905 to discuss them.

Sincerely,

Todd Heino, P.E.
Program Manager

Enclosures

cc: S. Absolom, SEDA
R. Battaglia, USACE
E. Kashdan
C. Bethoney, NYSDOH
C. Boes, AEC
K. Hoddinott, USACHPPM
S. Bradley, USACE

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June 11, 2004

Mr. Julio Vazquez
Project Manager
US Environmental Protection Agency, Region II
Superfund Federal Facilities Section
290 Broadway, 18th Floor
New York, NY 10007-1866

Mr. Joseph White
New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation
Bureau of Eastern Remedial Action
625 Broadway, 11th Floor
Albany, NY 12233-7015

Subject: **Notification of Intent to Proceed; Investigate EBS Sites, Mound Area, Site 109(7), Seneca Army Depot Activity; EPA Site ID: NY0213820830 - NY Site ID: 8-50-006**
File No. 1022A/1023A

Dear Mr. Vazquez/Mr. White:

Parsons Engineering Science, Inc. (Parsons) plans to initiate field sampling activities associated with the Investigation of EBS Sites, Mound Area, Site 109(7) at the Seneca Army Depot Activity (SEDA) in Romulus, NY on, or shortly after, July 12, 2004, weather permitting. This notification is simultaneous to our submission of the Final Work Plan.

Most of the comments received to date on the Draft Work Plan relate to requests that additional sampling and analysis be conducted. Most of these are based on speculation and conjecture. The Army and Parsons do not believe these comments are warranted and submit that the proposed limited size of the investigation at Site 109(7) is an appropriate start to this characterization effort. If the results of the limited site investigation indicate that further work may be warranted due to the finding of unexpected levels of contaminants, then the Army will review the need for additional work at that time. The scope of the proposed investigation at Site 109(7) is consistent with that which was conducted for three other mound sites at the Depot during the investigation of Non-Evaluated EBS Sites in 1998 and 1999, and which indicated that the other mounds were of no continuing environmental concern.

Should you have any questions or concerns about Parsons' notification of its intent to proceed, please do not hesitate to call me at 617-457-7905 to discuss them. Additionally, if you desire to coordinate a site visit and collection of split samples, please contact me. I hope that this notification is helpful for your scheduling activities.

Sincerely,
TODD HEINO by JWAdams

Todd Heino, P.E.
Program Manager

Enclosures

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cc: S. Absolom, SEDA
K. Hoddinott, USACHPPM
C. Boes, AEC
S. Bradley, USACE
R. Battaglia, USACE
C. Bethoney, NYSDOH

FINAL

WORK PLAN
INVESTIGATE EBS SITES, MOUND AREA, EBS SITE 109(7)
SENECA ARMY DEPOT ACTIVITY
ROMULUS, NEW YORK

Prepared For:

Seneca Army Depot Activity
Romulus, New York

and

U.S. Army Corps of Engineers
Huntsville Center

Prepared By:

PARSONS
100 Summer St
Suite 800
Boston, Massachusetts 02110

Contract No. DACA87-02-0005
Delivery Order No. 20
743520

June 2004

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Acronyms and Abbreviations

1,1DCE	1,1-dichloroethene
1,2-DCE	cis- and trans- 1,2-dichloroethene
ARAR	applicable or relevant and appropriate requirements
ASTM	American Society for Testing and Materials
AWQS	Ambient Water Quality Standard
bgs	below grade surface or below ground surface
BRA	Baseline Risk Assessment
BRAC	Base Realignment and Closure
BTEX	benzene, toluene, ethylbenzene and xylene
CERCLA	Comprehensive Environmental Responsibility, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal regulations
CLP	Contract Laboratory Program
cm	centimeter or centimeters
conex	container express
DoD	Department of Defense
DQO	Data Quality Objective
DRMO	Defense Reutilization and Materials Office\
dup or DU	duplicate sample designator
e.g.,	for example
EB	equipment blank sample designator
EBS	Environmental Baseline Survey
ECL	Environmental Conservation Law
Eh	redox potential
et seq	and the following one
FB	field blank sample designator
Fe	chemical symbol for Iron
FFA	Federal Facilities Agreement
FOIL	Freedom of Information Law
FPPA	Farmland Protection Policy Act
FSAP	Field Sampling and Analysis Plan
gpm	gallon per minute or gallons per minute
H	Henry’s law constant
H	Herbicides
HEA	Health Effect Assessment
hr	hour or hours
HWR	Hazardous Waste Remediation
i.e.,	that is
IAG	Interagency Agreement

Acronyms and Abbreviations
(continued)

IRIS	Integrated Risk Information System
kg/hectare	kilogram or kilograms per hectare
K_{oc}	organic carbon partition coefficient
K_{ow}	octanol-water partition coefficient
LRA	Local Development Authority
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
mg/L	milligram or milligrams per Liter
mL/g	milliliter or milligrams per gram
mm Hg	millimeters of mercury
mol/m^3-atm	mole or moles per cubic meter-atmosphere
MS	matrix spike sample designation
MSD	matrix spike duplicate sample designation
MV	millivolt or millivolts
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum
nm	nanometer
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
NYCRR	New York State Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
OB	Open Burn
OCP	Organochlorine Pesticides
OPP	Organophosphorous Pesticides
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Planned Industrial Development
POTW	Publicly-Owned Treatment Works
ppm	part or parts per million
QA/QC	Quality Assurance/Quality Control
QAMS	Quality Assurance Management Staff
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SCIDA	Seneca County Industrial Development Authority
SD	Sediment sample designation
SEC	Secondary Drinking Water Guidance Value
SEDA	Seneca Army Depot Activity

Acronyms and Abbreviations
(continued)

SPDES	State Pollutant Discharge Elimination System
SSHP	Site-specific Safety and Health Plan
SVOC	Semivolatile Organic Compound
SW	Surface Water sample designation
TAGM	Technical and Administrative Guidance Memorandum
TAL	Target Analyte List
TB	trip blank sample designator
TBC	to be considered
TCE	trichloroethylene or trichloroethene
TCL	Target Compound List
TIC	Tentatively Identified Compound
TOG	Technical Operating Guidance
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
USC	United States Code
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
Zn	chemical symbol for Zinc
$\mu g/cm^2$	microgram or micrograms per square centimeter

References

Environmental Protection Agency (EPA), 1988. "Guidance for Conducting Remedial Investigation and Feasibility Studies Under CERCLA". October 1988.

Environmental Protection Agency (EPA), 2000. "Data Quality Objectives Process for Hazardous Waste Site Investigations QA/G-4HW", January 2000.

Parsons, 2003a. Generic Installation Remedial Investigation/Feasibility Study (RI\FS) Work Plan for Seneca Army Depot Activity.

Parsons, 2003b. Mound Area Installation Remedial Investigation/Feasibility Study (RI\FS) Work Plan for Seneca Army Depot Activity.

Parsons Engineering Science, Inc., 1995. Generic Installation Remedial Investigation/Feasibility Study (RI\FS) Work Plan for Seneca Army Depot Activity.

Parsons Engineering Science, Inc, 1999. Final Investigation of Environmental Baseline Survey Non-Evaluated Sites [SEAD-119A, SEAD-122(A,B,C,D,E), SEAD-123(A,B,C,D,E,F), SEAD-46, SEAD-68, SEAD-120(A,B,C,D,E,F,G,H,I,J), and SEAD-121(A,B,C,D,E,F,G,H,I)], February 1999.

Woodward-Clyde Federal Services, March 1997, U.S. Army Base Realignment and Closure 95 Program, Environmental Baseline Survey Report.

1.0 INTRODUCTION

The purpose of this work plan is to describe an investigation that will be conducted at the Environmental Baseline Survey (EBS) Site 109(7), hereafter referred to as the Mound Area. Results and findings of the proposed investigation will be used to prepare a Decision Document to justify the future disposition of the site. The work will include a review of historical information, a site visit, installation of test pits and collection of subsurface soil samples, surface soil sampling, chemical analysis of the collected samples, and a review, assessment, and summation of all of the collected data and information.

The proposed work at the Mound Area will be performed according to requirements and guidance of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as set forth in the Interim Final "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (EPA, 1988). Work will also comply with the latest guidance from the Environmental Protection Agency (EPA), New York State Department of Environmental Conservation (NYSDEC), and the Department of Defense's (DoD's) Base Realignment and Closure (BRAC) Office. All field work will be conducted in accordance with the Generic Installation Remedial Investigation/Feasibility Study (RI\FS) Work Plan for Seneca Army Depot Activity (Parsons, 1995) and in accordance with updates as necessary, which are attached to this workplan. The Generic Work Plan describes in detail how the fieldwork will be performed. The proposed work will be completed in accordance with EPA Data Quality Objective (DQO) process (EPA, 2000). All field work will be completed in compliance with the Generic SEDA Health and Safety Plan (Parsons, 2003a) and with the site-specific Mound Area Health and Safety Plan (Parsons, 2003b).

1.1 Background Information

Seneca Army Depot Activity (SEDA or the Depot) was constructed in 1941. The 10,600-acre Depot was owned by the United States Government and operated by the Department of the Army until late 2000, when portions of the Depot were deeded over to the State of New York (Prison) and the Seneca County Industrial Development Authority (SCIDA - Adolescent Center) for redevelopment and reuse. In September 2003, nearly 7,000 acres were transferred to the SCIDA as conservation/recreation land. Prior to construction of the Depot, the site was used for farming.

SEDA was proposed for inclusion on the National Priority List (NPL) as a Federal Facility site in July of 1989; the Depot's listing was approved by Congress and its listing was finalized in August of 1990. In accordance with requirements of Section 120 of CERCLA (Title 42, *U.S. Code*, Sec. 9620), the US Army, the EPA, and the NYSDEC negotiated and signed a Federal Facilities Agreement (FFA) or an Interagency Agreement (IAG) governing site investigation and remediation of the Depot in January 1993. This agreement determined that future investigations

were to be based on CERCLA guidelines and RCRA was considered an Applicable or Relevant and Appropriate Requirement (ARAR) pursuant to Section 121 of CERCLA. In October 1995, SEDA was designated as a facility to be closed under the provisions of the Base Realignment and Closure (BRAC) process. In 2000, the facility was closed.

1.2 Site Description

The Mound Area has been briefly mentioned in two previous documents. EBS Site 109(7), the Mound Area, was first designated in the *Environmental Baseline Survey Report* (Woodward-Clyde, 1997) which was issued in accordance with requirements of the U.S. Army's BRAC 95 Program. When first listed, the environmental condition of the Mound Area was classified as a Category 7 area, which indicates that the area has not been investigated and requires additional evaluation. Abutting land immediately surrounding parcel 109(7) was classified as Category 1 land, which indicates that there has been no storage, release, or disposal of hazardous substances or petroleum products, and there is no evidence for a release, disposal, or migration of hazardous substances in any of the abutting land. Subsequently, the Mound Area was also discussed in the report *Investigation of Environmental Baseline Survey Non-Evaluated Sites [SEAD-119A, SEAD-122(A,B,C,D,E), SEAD-123(A,B,C,D,E,F), SEAD-46, SEAD-68, SEAD-120 (A,B,C,D,E,F,G,H,I,J), and SEAD-121(A,B,C,D,E,F,G,H,I)]* (Parsons, 1999). The Mound Area was briefly described as part of the discussion provided for SEAD-120G, however no investigations were conducted at EBS Site 109(7) as part of this study.

The Mound Area is located in the east-central portion of the Depot, northwest of the Depot's former Administration area and main entry gate off State Route 96, as shown in **Figure 1-1.** It is located in the portion of the former Depot where the future land use has been designated as Planned Industrial/Office Development (PID). Information on the Mound Area is extremely limited. The area consists of an earthen mound, or berm, that may be related to a historic small arms range that was reported to have once existed in this area. The boundary of the Mound Area, EBS Site 109(7), which is delineated on **Figure 1-1**, is limited to the extent of the berm. No documents or evidence linking the Mound Area to the suspected, historic small arms range have been identified in the available site records.

Based on observations made during a site inspection in November 2003, the Mound Area is a pushed up berm, with estimated measurements of approximately 300 feet (ft.) in length, with a maximum height of 10 ft., a width of 30 ft. at the base and 10 ft. at the top, and side slopes at an angle of approximately 45 degrees. One end of the berm is located near the corner of East Kendaia Rd. and Bundle Ammunition Pack Rd., and it extends in a northeast direction, as shown on **Figure 1-1**. The berm is covered with brush and trees, many of which are oak. The trunks of several of the trees measure up to 18 inches in diameter. Data indicates that oak trees with trunks measuring 18 inches in diameter may be as old as 75 years of age. This would suggest that some

of the trees present at the Mound Area pre-date the US Government's ownership of and the Army's operations at SEDA, which began approximately 60 years ago.

The Mound Area's soil cover, which, based on visual inspection, is homogeneous across the site, appears to be topsoil throughout with some shale fragments mixed into the cover. There are numerous animal burrows in the berm, some of which are up to three ft. in depth. A visual inspection of the animal burrows suggests that there is topsoil throughout the length of the hole. There was no visual indication of contaminated soil or debris within the berm, based on the absence of discolored soil or odor.

In the areas immediately surrounding the berm, there are alternating areas of open fields, brush, and woods. There are large areas of the surrounding land covered with shale fragments, which are consistent with the type of material contained within the berm. In addition, isolated areas where water has ponded during precipitation events were observed in the vicinity of the Mound Area in November; however, the wet areas are ephemeral and only seemed to form immediately after a storm event.

Based on a review of available topographic maps for this area, it is expected that the most likely surface water flow path would be towards the northeast to northwest quadrants. The regional surface topography is highest to the south of the Mound, falling off towards the north. However, the overall gradient is shallow, suggesting that most storm water from vegetative areas would infiltrate.

2.0 DATA EVALUATION

2.1 Data Quality Objectives

The Generic Data Quality Objectives (DQOs) for Remedial Investigation/Feasibility Study (RI/FS) work conducted at SEDA are outlined in the *Generic RI/FS Workplan* (Parsons, 1995). These include documented levels of data acceptability defined in terms of completeness, representativeness, accuracy, precision, comparability and traceability, and which have been established to ensure that the data produced within the RI/FS will be of known quality and be able to withstand scientific and legal scrutiny. Since the establishment of the RI/FS DQOs for SEDA, updates relating to the definition of DQOs have been published by the EPA and are presented in *Data Quality Objectives Process for Hazardous Waste Site Investigations QA/G-4HW* (EPA, 2000). Necessary updates to the Generic SEDA DQOs are reflected in the section below.

The RI/FS process requires decisions regarding future site remedial actions, including whether or not any actions are required. The RI serves as the mechanism for collecting and assessing data that will be used in the decision making process. During this portion of the overall process, data are collected and assembled to:

- Characterize site conditions;
- Determine the nature of the waste(s) or contaminant(s), if present;
- Assess the risk posed to human health and the environment by the identified waste(s) or contaminant(s), if present; and
- Perform testing to evaluate the potential performance and cost of treatment technologies that are being considered for use.

If necessary, the FS provides the mechanism within which the alternative remedial actions are developed and scoped, assessed and evaluated. Ultimately, the output of the combined RI/FS process is a recommended alternative for remedial actions needed at the site that is based on the data that is developed during the RI/FS. Consequently, the collected data must be of sufficient quantity and quality to support defensible decision making.

The EPA's Quality Assurance Management Staff (QAMS) developed the DQO Process (EPA, 1996) as a systematic planning tool for developing data collection designs that support defensible decision making in a resource-effective manner. Proper application and use of the EPA's recommended DQO Process can improve the effectiveness, efficiency and defensibility of data collection efforts used in the development and recommendation of potential remedial actions.

The DQO Process is an iterative process that consists of seven steps, as is shown in **Figure 2-1**. The output from each step influences the choices that may be made later in the process, and may

lead to reconsideration of prior decisions due to the development or discovery of new data that does not support prior decisions. The first six steps focus on the development and specification of decision performance criteria or DQOs that will be used to develop the data collection design. Key components of each of these steps are highlighted below:

- State the Problem – Concisely describe the problem to be studied. Review existing information and data to serve as the basis of the problem definition.
- Identify the Decision – Identify what questions the investigation/study will attempt to resolve, and the actions that may result.
- Identify the Inputs to the Decision – What information/data needs to be obtained and collected to resolve the problem identified?
- Define the Study Boundaries – Specify the time periods and spatial area to which the decisions will apply. Determine where and when data should be collected.
- Develop a Decision Rule – Define the statistical parameter of interest, specify the action level, and integrate the previous DQO inputs into a single statement that describes the logical basis for choosing among the alternatives.
- Specify Tolerable Limits on Decision Errors – Define decision error rates based on the consideration of making an incorrect decision.

The last step of the DQO Process is the development and specification of the data collection design based on the DQOs. During this step, all of the data and information developed and collected during the prior steps of the process are evaluated and used to generate alternative data collection designs that could be applied to resolving the identified problem. Once the alternative data collection strategies are identified, the most resource-effective design that meets all the DQOs may be selected and implemented. This Workplan presents the Army's recommended approach to conducting an investigation that will be used to prepare a Decision Document that will be used to justify the future disposition of the site.

The Decision Rule specifies the action level for the decision, which will be a media specific criterion. Potential Applicable or Relevant and Appropriate Requirements (ARARs) are listed in **Appendix A**. Decision Errors are comprised of sampling design error and measurement error. In order to reduce error introduced in the measurement process during physical sample collection, sample collection will be completed under the supervision of a field manager and in compliance with all relevant procedures and guidelines.

State the problem	Determine whether hazardous waste or materials are present at the Mound Area, EBS Site 109(7)
Identify the decision	Determine whether further investigation or action is necessary
Identify the inputs into the decision	Fill characteristics and observations, and analytical results
Define the study boundaries	The study will be conducted within the boundary of the site, which is the extent of the berm, as delineated in **Figure 1-1**. Soil will be investigated and analyzed for the presence of VOCs, SVOCs, Pest/PCBs, and metals.
Develop a decision rule	Compare individual results and statistical data set summaries to media specific guidance criteria, to determine if further investigation or action is necessary. Applicable media specific guidance criteria include NYSDEC recommended soil cleanup goals, EPA soil screening limits, background data sets, and other ARARs listed in **Appendix A**.
Specify tolerable limits on decision errors	If the true values exceed the decision rule, then further evaluation and assessment is necessary.

2.2 Data Validation

Analytical data developed during this remedial investigation will be used to support final decisions relative to the final disposition of the Mound Area. Analyses proposed as part of the investigation of the Mound Area include directed analysis of volatile organic compounds (VOCs), Semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs)/pesticides, and metals in soil collected from the test pits and from the surface soil locations. Sample analysis for each contaminant class will be will be performed in accordance with the EPA recommended procedures as described in **Section 2.0**.

Validation of analytical data resulting from analytical determinations in soil will be performed in a manner that is generally consistent with procedures defined in the EPA's "National Functional Guidelines for Organic Data Review" and consistent with EPA Region 2's Standard Operating Procedures. Specific data validation procedures that will be followed include:

- HW-24, Validating Volatile Organic Compounds by SW-846 Method 8260B, Revision 1, June 1999;
- HW-22, Validating Semivolatile Organic Compounds by SW-846 Method 8270, Revision 2,

June 2001;

- HW-23B, Validating Pesticides/PCB Compounds by SW-846 Method 8082, Revision 1.0, May 2002 [The most current SOP for validating PCB data is HW-23B. However, until a Regional Data Validation SOP can be prepared for Pesticides (i.e., utilizing analytical method SW-846 8081a), DV SOP HW-23 should be used in conjunction with the QA/QC criteria detailed in SW-846 Method 8081A.]; and
- HW-2, Evaluation of Metals Data for the CLP Program, Revision 11, January 1992.

The data package submittal requested from the laboratory for the analytical determinations in soil will contain all data generated during the analyses, including mass spectral identification charts, mass spectral tuning data, spike recoveries laboratory duplicate results, method blank results, instrument calibration, and holding times documentation.

Other analyses will be subjected to full data validation. Full data validation is a *qualitative* and *quantitative* review of those items evaluated during a qualitative assessment in addition to calculating sample and laboratory QC results with the instrument raw data. This level of data quality provides assurance that all sample results reported by the laboratory were transcribed, calculated, and reported correctly. Therefore, this level of data review requires laboratories to submit all environmental sample results, laboratory QC results, and instrument raw data (i.e., a full data package or "CLP-type" data deliverable).

3.0 SAMPLING PLAN FOR THE MOUND AREA

The Army proposes to conduct test pitting and to classify, collect, and analyze subsurface and surface soil samples to develop data pertinent to the material that is contained in the berm. The proposed locations for the installation of the test pits and collection of soil samples are described below in **Sections 3.1** and **3.2**. However, it should be noted that conditions present at, and in the immediate vicinity of the berm will be reassessed prior to the excavation of the proposed test pits and the collection of the proposed samples. Actual locations selected for the test pits and the sampling will be finalized in the field, based on field determinations. At the time of sampling, if site observations and conditions suggest that there are unique features that were not previously recognized, the Army reserves the right to relocate samples or test pit locations. Unique features that could provide the basis for relocation of a proposed sample or test pit may include (but are not limited to) discoloration of surface soil or surface covering, evidence of vegetation kill or growth stunting, the presence of surface debris, or detection of chemical type odors.

3.1 Test Pits

In preparation of the installation of test pits, clearing activities will be performed, as necessary; the area has already been grubbed. Three test pits will be installed within the berm to define and characterize the nature and composition of material comprising the mound proper. The Army expects to install the three test pits at evenly spaced intervals along the southeast side of the berm, as shown in **Figure 1-1**. Each test pit, which will run perpendicular to the length of the berm, will be excavated into the berm for a distance of approximately 15 ft. (i.e., halfway through the width of the mound), revealing a cross section of the berm, as shown in **Figure 3-1**. Final excavations will extend to a depth of approximately 2 ft. below ground surface to confirm that only native material is present beneath the mound. The expected width of each test pit will be 18 to 24 inches. However, the final dimensions of the test pits will depend on the stability of the material contained in the mound, and each test pit could be expanded in length or width if evidence of possible contaminants were observed in the field. No additional shoring will be used to support the excavation.

Excavated soil will be staged on a plastic tarp that is placed on the ground surface at a location near the berm and the excavation. Material from the berm at a depth range of 0 to 2 inches below top of berm, material from 2 inches below top of berm to the ground surface, and material from below ground surface will be kept separated, at least until they can be inspected and classified. If the excavated soils from the berm and from below ground surface are observed to be different materials, then the soils will be backfilled to their original location. If the soils are determined to be of equivalent quality and properties, the staged piles will be mixed and backfilled into the test pit. Backfilled soil will be compacted to the fullest extent practical and the

surface contour of the mound will be returned to the pre-existing form to the fullest extent possible, when the excavation is closed.

The exposed faces of the mound proper will be observed and catalogued to provide information about the nature and composition of the material immediately surrounding the excavation site. If variations are noted on the exposed excavation faces, field decisions may be made to extend the test pit in one or more directions. Three soil samples will be collected from the exposed surfaces of each test pit for chemical analysis. Field observation and sample collection activities will be conducted from the surface of the mound or outside of the test pit; there will be no entrance into the test pit.

Procedure

Test pitting procedures are provided in Section 3.4.3 of Appendix A, Field Sampling and Analysis Plan in the Generic Workplan. Level C personal protection equipment (PPE) will be worn by all personnel performing test pit operations. The excavated soils will be monitored for volatile organic compounds (VOCs), using a PID during test pitting.

Three soil samples will be collected from each test pit. The first sample will be collected from the surface (0 to 2 inches below top of berm). The second sample will be collected from a depth range between 2 inches below top of berm and the ground surface; the exact location of the second sample will be biased towards including soil that may be discolored or appear anomalous. The third sample will be collected below ground surface, which should be comprised of native material. Each sample will be collected as a composite from its appropriate depth range, except for samples collected for VOC analysis which will be collected from a single location, as described below in the *Procedure* discussion in **Section 3.2**.

Field quality control will consist of the collection and analysis of one rinsate blank sample and one field duplicate sample per 18 field samples or less collected. One matrix spike/matrix spike duplicate (MS/MSD) will be collected for chemical analysis per 20 samples or less. The location of collection of these QA/QC samples will be determined in the field. Required sample containers, preservation techniques, and holding times are specified in EPA SW-846 Method 5035 for VOCs and in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)" (EPA, 1996).

Analysis

All soil samples will be analyzed for Target Compound List (TCL) VOCs by EPA SW-846 Method 8260B, TCL SVOCs by EPA SW-846 Method 8270C, TCL pesticides and PCBs by EPA SW-846 Method 8081A/8082A, Target Analyte List (TAL) metals by EPA SW-846 Method 6010B and 7471A, and cyanide by EPA Method 9012.

3.2 Surface Soil Sampling

Five surface soil samples will be collected from five locations at the Mound Area, as shown on **Figure 1-1**. Surface soil is defined as soil collected from the surface to a depth of 2 inches. Sample locations have been selected, such that surface soil conditions within the mound proper will be defined. As described in **Section 1.0**, the Mound Area, or berm, is uniform in appearance. Thus, surface soil sample locations have been selected such that each sample is collected from a different portion of the berm. As discussed in **Section 3.1**, the three test pits will be installed along the southeast side of the berm; hence the nine soil samples from the test pits (not counting QA/QC samples) will be collected from the southeast side of the berm. To get adequate coverage of the berm, the five surface soil sample locations are proposed as follows:

- SS109-1: One surface soil sample will be collected from the southwestern tip of the berm;
- SS109-2: One surface soil sample will be collected from the center of the berm;
- SS109-3: One surface soil sample will be collected from the northeastern tip of the berm; and
- SS109-4 and SS109-5: Two surface soil samples will be collected on the northwestern side of the berm, as illustrated in **Figure 1-1**.

The four proposed samples located close to the edge of the berm [SS109-1, SS109-3, SS109-4 and SS109-5] will be collected at a position approximately 18 inches from the edge of the berm; sample SS109-4 will be collected at a location approximately 100 ft. from the southwestern tip of the berm, and sample SS109-5 will be collected at a location approximately 200 ft. from the southwestern tip of the berm. It should be noted that surface soil sample locations may change based on judgments made in the field given actual site conditions.

Procedure

Surface soil samples will be collected from the near-surface interval (i.e., 0 to 2-inch depth) beneath resident site vegetation. At the time of sampling, personnel will mark a 1-foot by 1-foot square area on the surface of the proposed sample collection zone and remove any obvious, loose accumulations of vegetation, debris, rocks or stones. A decontaminated split-spoon will then be driven into the ground in the approximate center of the area to a final depth of roughly six 6 to 8 inches below grade using a sledge-hammer or equivalent device. The spoon will then be recovered and opened, and necessary volumes needed for VOC determinations will be collected immediately from the soil that is found in the split-spoon's barrel at depths of 0 to 2 inches below any vegetative cover or root ball. Samples for VOC determinations will be collected from the split-spoon's barrel using a syringe-barrel samplers in accordance with procedures described in EPA's SW-846 Method 5035. Three separate sample aliquots will be collected for each VOC analysis; one, required for determination of high concentration VOCs, will be preserved with

methanol; and two aliquots, required for determination of low level VOCs, will be preserved with sodium bisulfate. For each sample aliquot, approximately 5 grams (gms) of soil will be recovered by plunging the open-end of a pre-tared and calibrated syringe barrel and plunger assembly into the undisturbed contents of the split-spoon sampler. The weight of soil in the syringe will be determined using a balance. Once the sample soil is packed in the barrel of the syringe and weighed, it will be transferred into an open, pre-labeled 40-mL screw-capped vial that contained the specified preservative. The screw-capped vials will then closed and immediately sealed.

Once needed sample aliquots are recovered for the VOC determinations, decontaminated trowels or spoons and stainless steel bowls will be used to collect sufficient volume to fill all of the remaining sample bottles. All sample volume will be recovered from the remaining area of the 1-foot by 1-foot square, at depths not to exceed 2 inches below resident vegetative and root ball materials. The site inspector/field geologist will classify the soil according to the Unified Soil Classification System as presented in the American Society for Testing and Materials' (ASTM's) Method D 2488, Standard Practice for the Description and Identification of Soils (Visual-Manual Procedure), as modified by the Burmeister Procedure. A complete description of the soil type will be recorded in the field logbook.

Field quality control requirements are the same as those mentioned in **Section 3.1**.

Analysis

Required analyses are the same as those listed in **Section 3.1**.

4.0 PLANS AND MANAGEMENT

4.1 REFERENCED PLANS

The following plans for Seneca Army Depot Activity are incorporated by reference into this document:

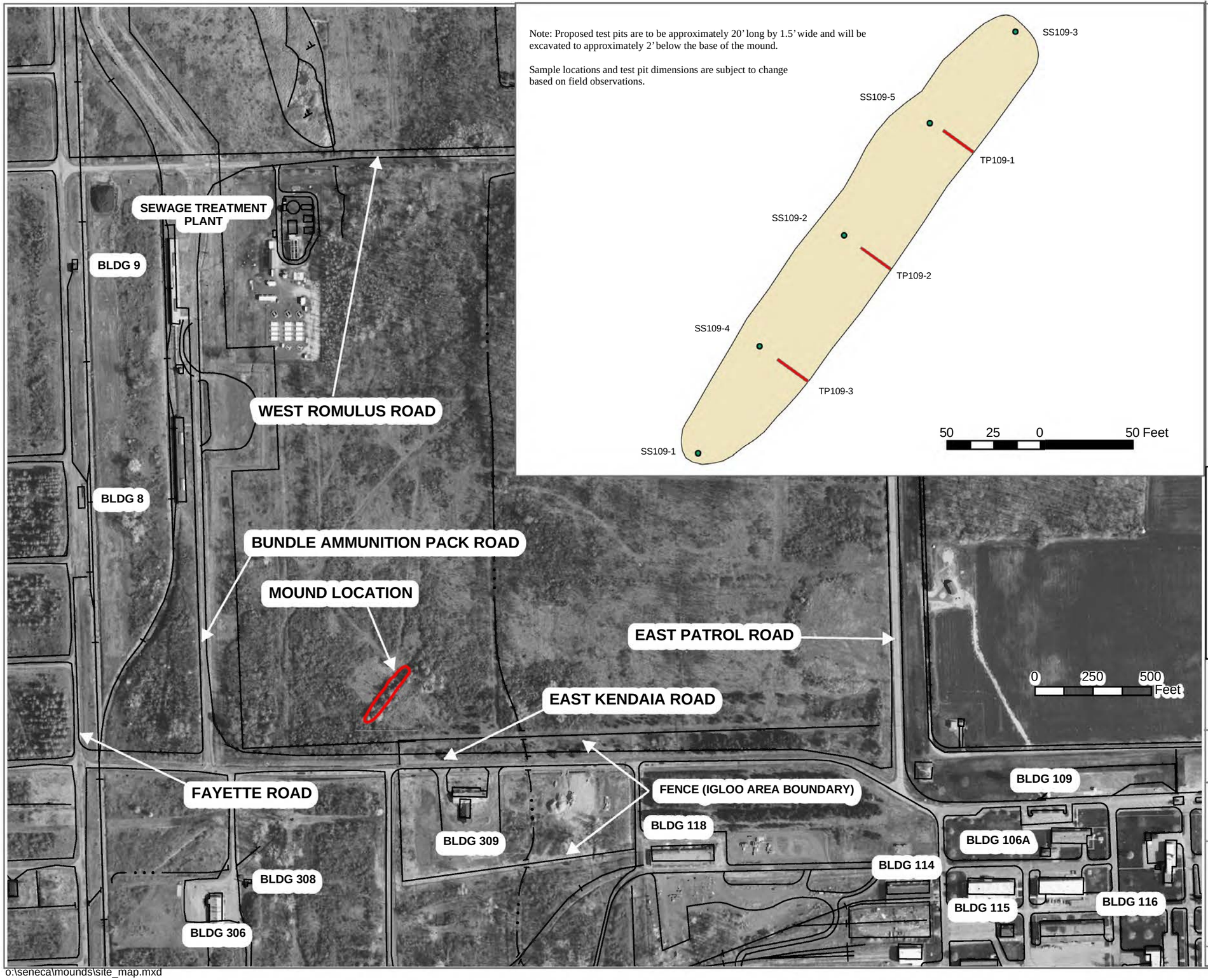
- Appendix A. Field Sampling and Analysis Plan
- Appendix B. Site-Specific Safety and Health Plan (SSHP) (Parsons, 2003b)
- Appendix C. Chemical Data Acquisition Plan

4.2 SCHEDULING

The proposed schedule for performing the work at the Mound Area is presented in **Table 4-1**.

4.3 STAFFING

The project team organization for performing the work described in this Work Plan is presented in **Figure 4-1**.



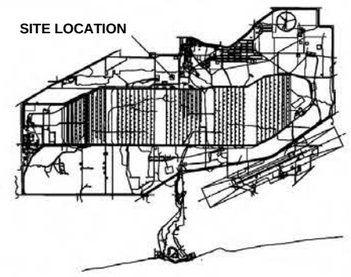
Note: Proposed test pits are to be approximately 20' long by 1.5' wide and will be excavated to approximately 2' below the base of the mound.

Sample locations and test pit dimensions are subject to change based on field observations.

LEGEND

- Surface Water
- Railroad
- Mound Location
- SS109-1 — Proposed Surface Soil Sample Location
- TP109-1 — Proposed Test Pit Location

N



PARSONS

SENECA ARMY DEPOT ACTIVITY
WORKPLAN FOR THE MOUND AREA,
EBS SITE 109(7)

FIGURE 1-1
LOCATION AND
PROPOSED SAMPLING PLAN
FOR THE MOUND AREA

Date: JUN 2004 | Rev:

o:\seneca\mounds\site_map.mxd

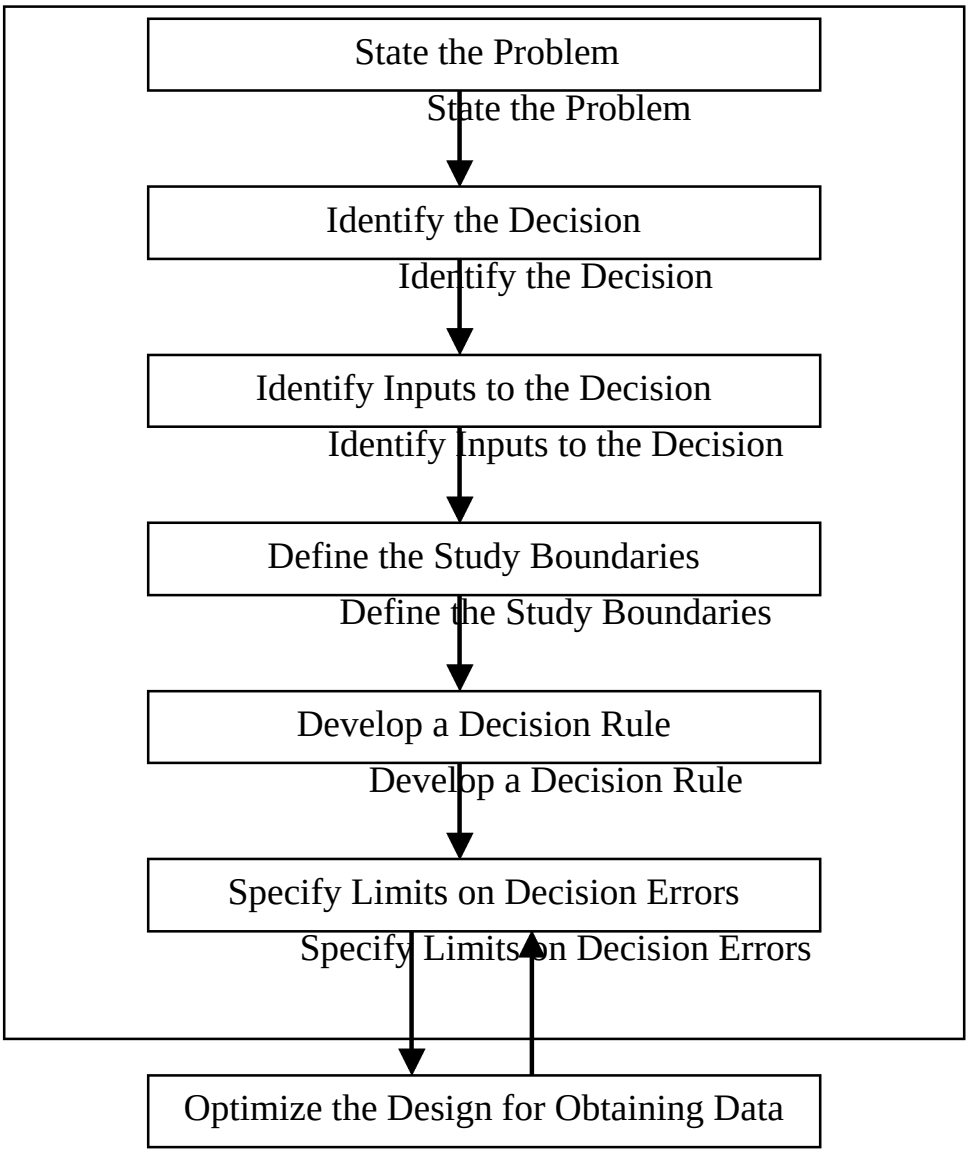
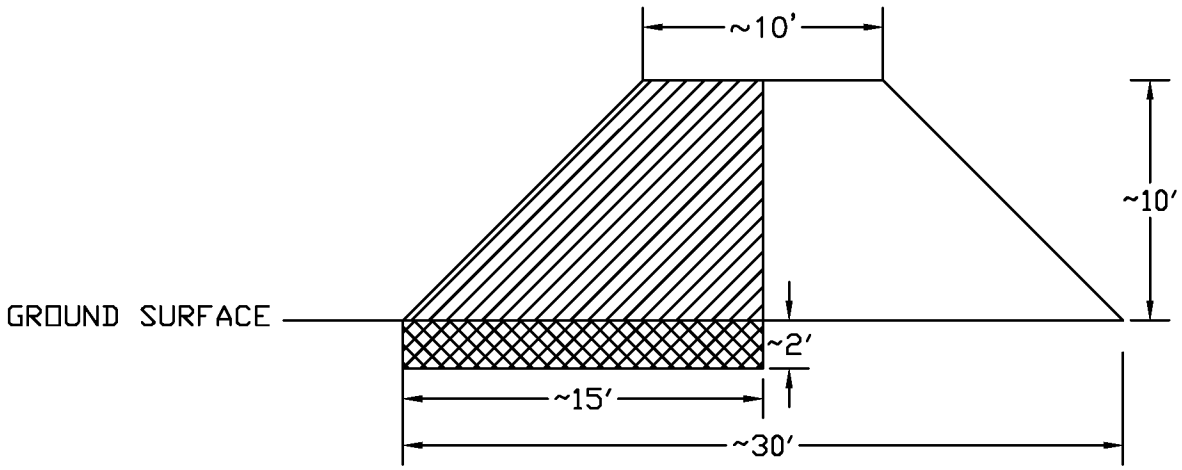


Figure 2-1
EPA Quality Assurance Management Staff's
Data Quality Objectives Process
(Guidance for the Data Quality Objectives Process, EPA/600/R-96/055, Sept 1996)



BERM

NOTE:

DIMENSIONS OF THIS TEST PIT AND DIMENSIONS OF THE BERM ARE APPROXIMATE.

LEGEND:

TRENCH INTO THE BERM

TRENCH BELOW GROUND SURFACE

PARSONS

SENECA ARMY DEPOT ACTIVITY
WORKPLAN FOR THE MOUND AREA,
EBS SITE 109(7)

FIGURE 3-1
CROSS SECTION OF TEST PIT

Job #: 743520-01100 | Date: June 2004

acad on R:\Project-graphics\SENECA\MOUND AREA\Fig3-1.dwg

FIGURE 4-1
PROJECT TEAM ORGANIZATION FOR THE
INVESTIGATION AT MOUND AREA, EBS SITE 109(7),
SENECA ARMY DEPOT ACTIVITY

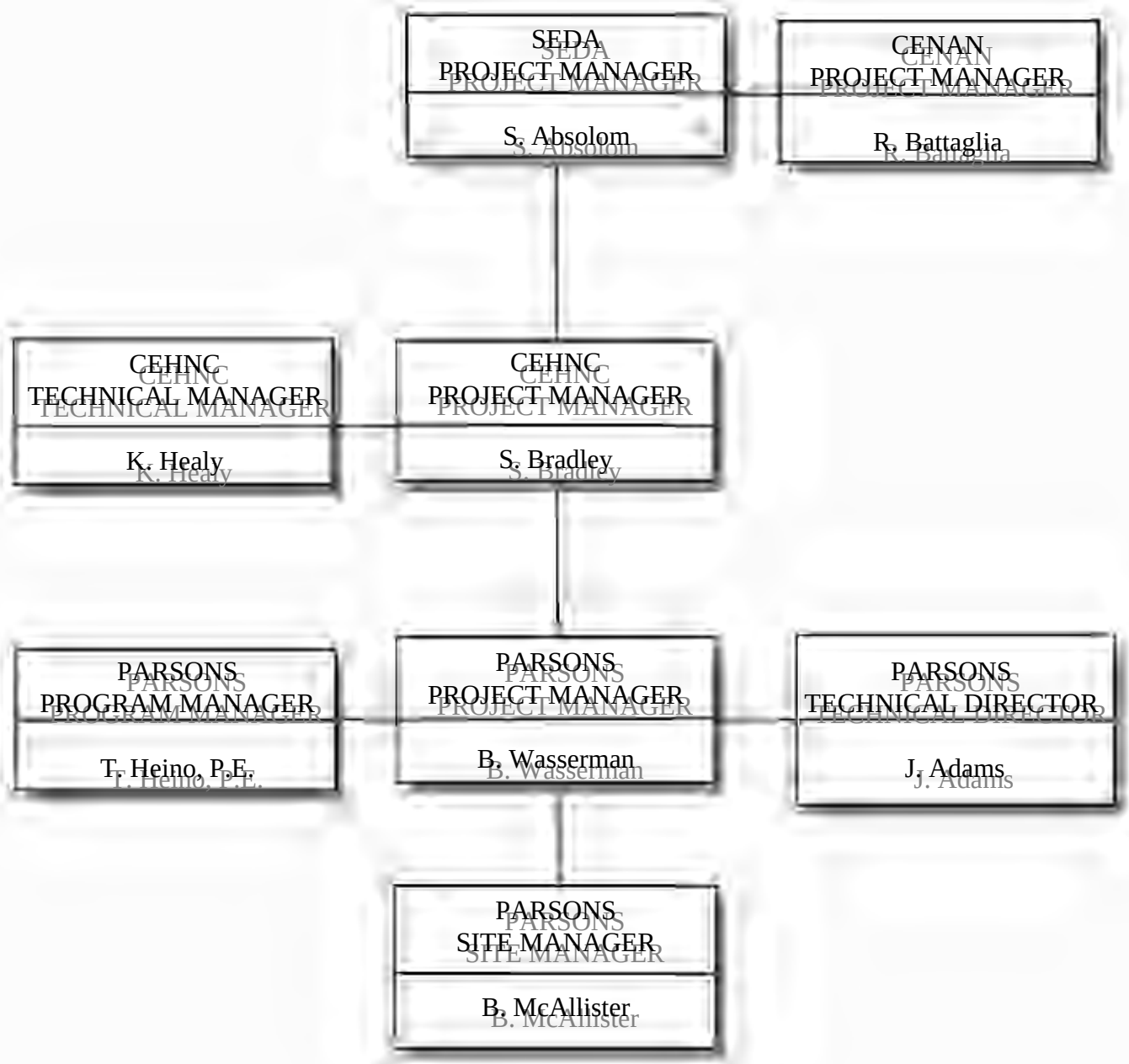


TABLE 4-1
PROJECT SCHEDULE
MOUND AREA, EBS SITE 109(7)
Seneca Army Depot Activity

Task Name	Duration	Approximate Start	Approximate Finish
Review of Pre-Draft Workplan (Army only)	7 days	12/22/2003	12/29/2003
Submit Draft Workplan	21 days	12/29/2003	1/14/2004
Agency Approval of Workplan	60 days	1/14/2004	5/1/2004
Submit Final Workplan	15 days	5/1/2004	6/11/2004
Agency approval of Final Workplan	30 days	6/11/2004	7/11/2004
Notification to proceed with fieldwork	30 days	6/11/2004	7/11/2004
Mobilization	2 days	7/12/2004	7/13/2004
Installation of test pits and collection of surface and subsurface soil samples	3 days	7/14/2004	7/16/2004
Chemical analysis	30 days	7/16/2004	8/15/2004
Validation of data	15 days	8/16/2004	8/31/2004
Preparation of Draft Decision Document (DD)	30 days	9/1/2004	10/1/2004
Agency review of Draft DD	30 days	10/2/2004	11/1/2004
Submit Draft Final DD	15 days	11/2/2004	11/17/2004
Agency review of Draft Final DD	30 days	11/18/2004	12/17/2004
Submit Final DD	30 days	12/18/2004	1/17/2005
Agency review and approval of Final DD	30 days	1/18/2005	2/14/2005

*Note that all dates are approximations and are subject to change.

APPENDIX A

Potential Applicable or Relevant and Appropriate Requirements (ARARs)

Appendix A
PRELIMINARY IDENTIFICATION OF Potential ARARs AND TBC CRITERIA

Introduction

Section 121(d)(1) of CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), requires that remedial actions must attain a degree of cleanup that assures the safety of human health and protection of the environment. Moreover, all potential applicable or relevant and appropriate requirements (ARARs) must be outlined. ARARs include federal standards, requirements, and criteria, and limitations under state environmental or facility siting regulations that are more stringent than federal standards. Although the requirements of CERCLA Section 121 generally apply as a matter of law only to remedial actions, USACE's policy for response actions is that ARARs will be identified and complied with to the maximum extent practicable. Only media specific ARARs for soils are applicable.

Non-promulgated advisories or guidance documents issued by federal or state governments do not have the status of potential ARARs. However, these "to be considered" (TBC) criteria may be used in determining the necessary level of cleanup for human safety and protection of the environment. Potential ARARs and TBCs for EBS Site 109(7), the Mound Area are listed in the following sections.

Sources of Chemical-Specific ARARs

New York State:

- New York State Codes, Rules and Regulations (NYCRR) Title 6, Chapter X.
- New York Groundwater Quality Standards (6 NYCRR 703).
- Declaration of Policy, Article 1 Environmental Conservation Law (ECL), Department of Environmental Conservation.
- General Functions, Powers, Duties and Jurisdiction, Article 3 Environmental Conservation Law, Department of Environmental Conservation.

Sources of Location-Specific ARARs

Federal:

- Executive Orders on Floodplain Management and Wetlands Protection (CERCLA Floodplain and Wetlands Assessments) #11988 and 11990.

- National Historic Preservation Act (16 USC 470) Section 106 et seq. (36 CFR 800) (Requires Federal agencies to identify all affected properties on or eligible for the National Register of Historic Places and consult with the State Historic Preservation Office and Advisory Council on Historic Presentation).

- RCRA Location Requirements for 100-year Floodplains (40 CFR 264.18(b)).

- USDA/SCS - Farmland Protection Policy (7 CFR 658).

- USDA Secretary's Memorandum No. 1827, Supplement 1, Statement of Prime Farmland, and Forest Land - June 21, 1976.

- EPA Statement of Policy to Protect Environmentally Significant Agricultural Lands - September 8, 1978.

- Farmland Protection Policy Act of 1981 (FPPA)(7 USC 4201 *et seq*).

- Endangered Species Act (16 USC 1531).

- Wilderness Act (16 USC 1131).

New York State:

- New York State Freshwater Wetlands Law (ECL Article 24, 71 in Title 23).

- New York State Freshwater Wetlands Permit Requirements and Classification (6 NYCRR 663 and 664).

- New York State Floodplain Management Act and Regulations (ECL Article 36 and 6 NYCRR 500).

- Endangered and Threatened Species of Fish and Wildlife Requirements (6 NYCRR 182).

- New York State Flood Hazard Area Construction Standards.

Sources of Action-Specific ARARs

Federal:

- RCRA Subtitle C Hazardous Waste Treatment Facility Design and Operating Standards for Treatment and Disposal systems, (i.e., landfill, incinerators, tanks, containers, etc.) (40 CFR 264 and 265); Minimum Technology Requirements.

- RCRA, Subtitle C, Closure and Post-Closure Standards (40 CFR 264, Subpart G).
- RCRA Generator Requirements for Manifesting Waste for Offsite Disposal (40 CFR 262).
- RCRA Transporter Requirements for Off-Site Disposal (40 CFR 263).
- RCRA, Subtitle D, Non-Hazardous Waste Management Standards (40 CFR 257).
- RCRA Land Disposal Restrictions (40 CFR 268) (On and off-site disposal of excavated soil).
- DOT Rules for Hazardous Materials Transport (49 CFR 107, 171.1-171.500).
- Occupational Safety and Health Standards for Hazardous Responses and General Construction Activities (29 CFR 1904, 1910, 1926).
- RCRA Identification and Listing of Hazardous Wastes, Toxicity Characteristic (40 CFR 261.24).
- SARA (42 USC 9601).
- OSHA (29 CFR 1910.120).
- Clean Air Act (40 CFR 50.61).

New York State:

- New York State Pollution Discharge Elimination System (SPDES) Requirements (Standards for Stormwater Runoff, Surfacewater, and Groundwater discharges (6 NYCRR 750-757).
- New York State RCRA Standards for the Design and Operation of Hazardous Waste Treatment Facilities (i.e., landfills, incinerators, tanks, containers, etc.); Minimum Technology Requirements (6 NYCRR 370-373).
- New York State RCRA Closure and Post-Closure Standards (Clean Closure and Waste-in-Place Closures) (6 NYCRR 372).
- New York State Solid Waste Management Requirements and Siting Restrictions (6 NYCRR 360-361), and revisions/enhancements effective October 9, 1993.

- New York State RCRA Generator and Transporter Requirements for Manifesting Waste for Off-Site Disposal (6 NYCRR 364 and 372).

Sources of TBC Criteria

Federal:

- Proposed Maximum Contaminant Levels (50 Federal Register 46936-47022, November 13, 1985).
- Proposed Maximum Contaminant Levels Goals (50 Federal Register 46936-47022, November 13, 1985).
- Proposed Requirements for Hybrid Closures (combined waste-in-place and clean closures) (52 Federal Register 8711).
- EPA, 1989. Risk Assessment Guidance for Superfund, Volume I. Human Health Evaluation Manual (Part A). EPA/540/1-89/002.
- EPA, 1997. Exposure Factors Handbook. Volumes 1 – III. Update to Exposure Factors Handbook (EPA/600/8-89/043 – May 1989). EPA/600/P-95/002Fa.
- EPA, Integrated Risk Information System (IRIS), electronic database.
- EPA Health Effect Assessment (HEAs).
- TSCA Health Data.
- Toxicological Profiles, Agency for Toxic Substances and Disease Registry, U.S. Public Health Service.
- Cancer Assessment Group (National Academy of Science) Guidance.
- Waste Load Allocation Procedures.
- Fish and Wildlife Coordination Act Advisories.
- Federal Guidelines for Specification of Disposal Site for Dredged or Fill Material.
- EPA Interim Guidance for Establishing Soil Lead Clean Up Levels.
- RCRA Clean-Up Criteria for Soils/Groundwater (RFI Guidance), EPA 530-SW-89-031.
- EPA OSWER Publication 9345.3-03 FS, Management of Investigation-Derived Waste, January 1992.

New York State:

- New York State Analytical Detectability for Toxic Pollutants (85-W-40 TOG).
- New York State Toxicity Testing for the SPDES Permit Program (TOG 1.3.2).
- New York State Regional Authorization for Temporary Discharges (TOG Series 1.6.1).
- Sediment Criteria - December, 1989 - Used as Guidance by the Bureau of Environmental Protection, Division of Fish and Wildlife, New York State Department of Environmental Conservation.
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites; October 1994.
- New York State Department of Environmental Conservation, Technical and Administrative Guidance Memorandum: Determination of Soil Cleanup Objectives and Cleanup Levels, TAGM 4046, January 24, 1994 (revised).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Use of Inactive Hazardous Waste Disposal Site Numbers, February 1987, (HWR-4001).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Preparation of Annual "Short List" of Prequalified Consultants, January 1993, (HWR-4002).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Guidelines for Entries to the Quarterly Status Report of Inactive Hazardous Waste Disposal Sites, May 1987, (HWR-4003).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Guidelines for Classifying Inactive Hazardous Waste Disposal Sites, June 1987, (HWR-4004).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Insurance Requirements for Consultant and Construction Contracts and Title 3 Projects, September 1989, (HWR-4005).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Consultant Contract Overhead Rates and Multipliers, April 1988, (HWR-4006).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Phase II Investigation Generic Workplan, May 1988, (HWR-4007).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Phase II Investigation Oversight Guidance, November 1990, (HWR-4008).
- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Team Submissions in Responding to Requests for Proposals and Title 3 Projects, June 1992, (HWR-4009).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Roles and Responsibilities of the NYSDEC Regional Offices, January 1992, (HWR-4010).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Contractor/Consultant Oversight Guidance - O&D Memo #88-26, July 1988, (HWR-4011).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Inactive Hazardous Waste Disposal Site Registry Petitions - O&D Memo #88-33, August 1988, (HWR-4012).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Emergency Hazardous Waste Drum Removal/Surficial Cleanup Procedures, January 1995, (HWR-4013).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Protocol Between Division of Hazardous Waste Remediation and Division of Environmental Enforcement, September 1988, (HWR-4014).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Health and Safety Training and Equipment, October 1988, (HWR-4016).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Protocol Between DHWR and DHSR for Determining Lead Program for RCRA/CERCLA Title 13 Sites, November 1988, (HWR-4017).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Phase I Investigations, November 1988, (HWR-4018).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Phase II Investigation Oversight Note-Taking, November 1990, (HWR-4019).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Guidelines for Responding to Freedom of Information Law (FOIL) Requests, December 1988, (HWR-4020).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Start/End Definitions for Program Elements Within Funding Sources, March 1991, (HWR-4021).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Records of Decision for Remediation of Class 2 Inactive Hazardous Waste Disposal Sites - O&D Memo #89-05, February 1989, (HWR-4022).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Citizen Participation Plan, February 1989, (HWR-4023).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): NYSDOH Hazardous Waste Site Notification, March 1989, (HWR-4024).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Guidelines for Remedial Investigation/Feasibility Studies, March 1989, (HWR-4025).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Subcontracting under Hazardous Waste Remediation Contracts, April 1989, (HWR-4028).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Roles and Responsibilities of the Technology Section - Site-Specific Projects, April 1990, (HWR-4029).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Selection of Remedial Actions at Inactive Hazardous Waste Sites, May 1990, (HWR-4030).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites, October 1989, (HWR-4031).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Disposal of Drill Cuttings, November 1989, (HWR-4032).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Inactive Sites Interface with Sanitary Landfills, December 1989, (HWR-4033).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Guidelines for Eligibility Determination for Work Performed Under the EQBA Title 3 Provisions, January 1900, (HWR-4034).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Project Manager and Contract Manager Responsibilities Under Standby Contract, March 1990, (HWR-4034).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Landfill Regulatory Responsibility, March 1990, (HWR-4036).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Major Milestone Dates for Tracking Remedial Projects, April 1990, (HWR-4037).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Remediation of Inactive Hazardous Waste Disposal Sites, April 1990, (HWR-4038).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Contract Appeals, October 1990, (HWR-4039).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Permitting Jurisdiction Over Inactive Hazardous Waste Site Remediation - O&D Memo #94-04, March 1994, (HWR-4040).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Releasing Sampling Data, Findings and Recommendations, February 1991, (HWR-4041).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Interim Remedial Measures, June 1992, (HWR-4042).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Procedures for Handling RPP-Funded PSAs, February 1992, (HWR-4043).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Accelerated Remedial Actions at Class 2, Non-RCRA Regulated Landfills, March 1992, (HWR-4044).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Enforcement Referrals, July 1992, (HWR-4045).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Determination of Soil Cleanup Objectives and Cleanup Levels, January 1994, (HWR-4046).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Priority Ranking System for Class 2 Inactive Hazardous Waste Sites, December 1992, (HWR-4047).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Interim Remedial Measures-Procedures, December 1992, (HWR-4048).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Payment Review Process, April 1993, (HWR-4050).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Early Design Strategy, August 1993, (HWR-4051).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Administrative Records and Administrative Record File, August 1993, (HWR-4052).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Obtaining Property Access for Investigation, Design, Remediation and Monitoring/Maintenance, September 1993, (HWR-4053).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Contract Conceptual Approval Process, November 1994, (HWR-4054).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Contract Final Approval Process, November 1994, (HWR-4055).

- New York State, Division Technical and Administrative Guidance Memorandum (TAGM): Remedial Action by PRPs, April 1995, (HWR-4056).

APPENDIX B

RESPONSES TO COMMENTS

Army's Response to Comments from the US Environmental Protection Agency

Subject: Draft Work Plan for EBS Site 109(7)
Seneca Army Depot
Romulus, New York

Comments Dated: March 3, 2004

Date of Comment Response: June 11, 2004

Army's Response to Comments

I. GENERAL COMMENTS

Comment 1: The background information on this site that has been provided in this document appears to be incomplete. For example, although the Army has been aware of this site since at least 1997, when it was included in the EBS Report, there is no documentation that any former installation personnel or staff were interviewed to gain insight into the past use of the property. In addition, no documentation is provided regarding review of historical aerial photograph. Could activities at the adjacent Building 309 or sewage treatment plant have been related to the berm? Do the apparent roads cut through the trees (evident on Figure 1-1 to the north and northwest of the berm) provide an indication as to the direction the site was accessed?

Response 1: As is indicated in the text of the Work Plan, Site 109(7) was first reported in the Environmental Baseline Survey (EBS) Report (Woodward-Clyde, 1995) based on the results of an interview which suggested that it might have been a former firing range. The Army has no historical information for this site, and therefore, cannot comment on the roads in the surrounding area. A review of aerial photographs from 1968 and 1993 does appear to confirm the presence of the Mound at those times; however, the photographs provide no additional information about the site.

Within the EBS Report, Site 109(7) was classified as a CERFA category 7 site because it had not been evaluated and required evaluation. At the same time, three other similar sites comprised of one or more piles or mounds of soil were also identified in the vicinity of the Duck Pond, which is in the northeastern portion of the Depot. In 1998, the Army began a limited site investigation of many of the CERFA category 5, 6, and 7 sites identified during the EBS process, and at this juncture, Sites 109(7), 110(7), 111(7), and 112(7) were grouped as a single site (i.e., SEAD-120G) warranting further investigation, and a limited site investigation of SEAD-120G was proposed and conducted.

Site work for SEAD-120G mounds included the excavation of test pits in five of the identified piles or mounds of soil, and the collection and analysis of soil samples. Each of the test pits was excavated in a pile that was found in one of the three other EBS sites [i.e., 110(7), 111(7), or 112(7)]. Site 109(7) was not

investigated as part of this work because its contents were assumed to be similar in nature to the materials contained in the piles found at the other three sites, and the other three sites were all located in an area where the future land use was designated as Conservation/Recreational while Site 109(7) was located in a portion of the Depot where the future land use was designated as Planned Industrial/Office Development.

The results of the limited site investigation conducted on SEAD-120G sites were presented by the Army in the report "Final Investigation of Environmental Baseline Survey Non-Evaluated Sites" (Parsons, May 1999). In summary, this work indicated that no Target Compound List (TCL) volatile organic, semivolatile organic, pesticide, or polychlorinated biphenyl compounds (PCBs) were detected in the sampled piles at concentrations exceeding State of New York's recommended soil cleanup objective levels. Additionally, only one of the characterized samples contained a concentration of total petroleum hydrocarbons (TPH) above the detection limit of the method; however, there is no defined cleanup objective level of TPH in the State of New York. Finally, although five Target Analyte List (TAL) metals were found at levels surpassing their respective cleanup objective levels in the soil samples, all measured concentrations were generally found to be less than twice background, and were thus considered to be due to natural variability of these constituents in soil. Based on these results, the Army recommended that SEAD-120G be designated as a no action SWMU without a reuse restriction.

The EPA and the NYSDEC questioned the lack of analytical data for Site 109(7) once the Army initiated its effort to transfer the land at the former Depot classified as Planned Industrial/Office Development to the Seneca County Industrial Development Authority for reuse. At this time, the Army redesignated Site 109(7) as SEAD-121J, and proposed a limited site investigation of the site to obtain additional information about the possible contents of the identified mound. The proposed limited site investigation is consistent with prior investigation of the soil piles and mounds that were completed and reported at the other three SEAD-120G EBS sites [i.e., Sites 110(7), 111(7) and 112(7)].

The Army has proposed, and will conduct, a limited site investigation at Site 109(7) to provide additional physical and chemical information about the possible contents of the identified mound. This additional information will serve as the basis from which future decisions/conclusions relating to the origins of the mound and the potential for the contents of the mound to pose a threat to surrounding populations and the environment will be based.

No additional site information has been added to the text at this time.

Comment 2: Additional documentation is needed for the cleared areas shown on Figure 1-1, as they may have been part of the same use that created the mound. A walk-through investigation should be completed for these cleared areas, noting anything observed on the surface, including: spent bullets, cartridges or other ammunition; distressed vegetation; discolored soil; discoloration of any ponded surface water; or any materials, debris, or fill that appears to be non-native to the forested area.

Response 2: As stated in the Work Plan in Section 1.2, a preliminary site walk was performed in November 2003. More extensive site observations at the site (i.e., the mound) and in the surrounding area will be recorded as part of the proposed site work. Results of this effort will be recorded in the field notes, and summarized in the report prepared for the limited site investigation. The examination of the area surrounding the Mound will be limited to observations based on visual inspections.

II. SPECIFIC COMMENTS

Comment 1: Section 1.2, Page 1-2. A discussion of surface water flow should be included in this section. It appears from Figure 1-1 that the nearest defined surface water drainage ditch is located to the east of the berm. Would all surface water flow from the site to this ditch, or does some migrate toward East Kendaia Road, Bundle Ammunition Pack Road, or other feature?

Response 1: The Army has not yet completed a detailed visual survey of the area surrounding the Mound. This will be performed as part of the limited site investigation. Based on a review of available topographic maps for this area, it is expected that the most likely surface water flow path would be towards the northeast to northwest quadrants. The regional surface topography is highest to the south of the piles, falling off towards the north. However, the overall gradient is shallow, suggesting that most storm water from vegetative areas would infiltrate. This information has been added to the text. Additional surface water flow information will be observed during the field program, and noted in the subsequent report.

Comment 2: Section 1.2, Page 1-3. The last paragraph of this section indicates that ponded water has been observed at the site. Include a description of this ponded water, including color, sheen, noticeable odor, or other pertinent observations.

Response 2: As noted above, a detailed visual site inspection has yet to be performed. Descriptions of the site will be recorded in the field notes during the field program. Photographs will be obtained at that time.

Comment 3: Section 3.1, Page 3-1: Text in the third paragraph of Section 1.2 indicates that trees up to 18 inches in diameter are growing directly on the berm. However, no mention of clearing and grubbing activities is included in the test pit completion section. Revise text to indicate whether clearing and grubbing is needed for completion of test pits.

The text implies that test pits locations will be evenly spaced, but may be modified on the basis of visual clues (discolored soil, stressed vegetation, etc.). Alternatively, consideration should be given to screening the area with a metal detector and biasing the location of the test pits toward the presence of suspect metal debris.

Clarify in the text that not only will soils from the berm and from below ground surface be kept separated, but that soils from different depths within the berm itself will also be kept separate. This practice will facilitate the sampling discussed in the "Procedure" section and allow for a more accurate estimate of the depth of the sample relative to the top of the berm.

Finally, there is an obvious typographical error in the third sentence of the second paragraph of this section, "tmkjuhe."

Response 3: Grubbing activities have already been conducted at the site. If necessary, clearing activities will be performed. The text has been revised accordingly.

The objective of this field program is to provide preliminary information about the physical and chemical characteristics of the Mound [Site 109(7)] to determine if any additional examination is warranted. The scope of work outlined in the Work Plan is adequate for a limited site investigation. The Army believes that screening the area with a metal detector to determine test pit locations is not necessary.

The following statement will be added to the text: "Material from the berm at a depth range of 0 to 2 inches below top of berm, material from the depth range of 2 inches to the ground surface, and material from below ground surface will be kept separated, at least until they can be inspected and classified."

The typographical error has been corrected.

Comment 4: Section 3.1, Page 3-2. "Procedure" Section: Revise text in the second paragraph to describe samples from "below top of berm" as opposed to "below ground cover." The latter could be confused with "below ground surface," which is actually used in this section to discuss soils that are below the base of the berm.

In addition, revise the text for the second sample (to be collected between two inches below top of berm to the ground surface) to indicate that this sample will be biased to include any discolored or anomalous soil that may be observed in the test pit. In this case, an additional sample should be collected. Revise text to indicate that "At least three samples will be collected from each test pit," as some test pits may warrant additional samples for complete characterization. .

Response 4: The phrase "below ground cover" has been replaced with "below top of berm". The text has been changed accordingly.

Only three samples will be collected from each test pit. Two samples will be collected at different depths within the berm, and the third sample will be collected at the bottom of the test pit, which is below ground surface, in order to confirm that only native material is beneath the mound. The objective of this field program is to define the area known as 109(7) by conducting a limited site investigation, and the scope of work outlined in the Work Plan is adequate to achieve this objective. The text has been revised to indicate that the second sample will be biased to include soil that may be discolored or include anomalous soil, etc.

Comment 5: Section 3.2, Page 3-2. As noted previously, revise the first sentence to indicate that "At least five surface soil samples will be collected..." from the mound area. During collection of samples, anomalous soils may be encountered, justifying additional sampling. In addition, the sixth sentence of this section ("As discussed in….") contains a typographical error. The surface soil samples will be collected from the northwest side of the mound, not the southeast. Revise accordingly.

Response 5: As stated above, the scope of work outlined in the Work Plan is adequate for a limited site investigation. Therefore, only five surface soil samples will be collected from the Mound. The sixth sentence refers to the nine soil samples collected in the test pits, which are correctly identified as located on the southeast side of the berm (Figure 1-1).

Army's Response to Comments from the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Subject: Draft Work Plan for EBS Site 109(7)
Seneca Army Depot
Romulus, New York

Comments Dated: May 21, 2004
Date of Comment Response: June 11, 2004

Army's Response to Comments

I. GENERAL COMMENTS

Comment 1: The NYSDEC and NYSDOH have reviewed the above reference work plan and attended the presentation of the scope of work at the April 20 RAB meeting. This plan is approved for the purpose of performing a preliminary assessment at this location.

I did notice that radiation screening is not included in the soil screening and I would recommend that an initial walkover of the area be done to determine if radiation is present at this location, if it has not yet been done. If radiation is present at greater than 3 X background, the level of protection for inhalation pathways would have to be upgraded. Also, for the surface soil samples collected on the surface of the mound, they should be obtained from a depth of 0 to 2 inches below vegetative cover.

Response 1: The Army does not believe that it is necessary to screen the soil for radiation. There is no historical presence or evidence to suggest the presence of radiation in this area, and, historically, this type of screening is not part of a limited site assessment.

Agreed. All surface soil samples will be obtained from a depth of 0 to 2 inches below vegetative cover.