US Army, Engineering & Support Center
Huntsville, AL

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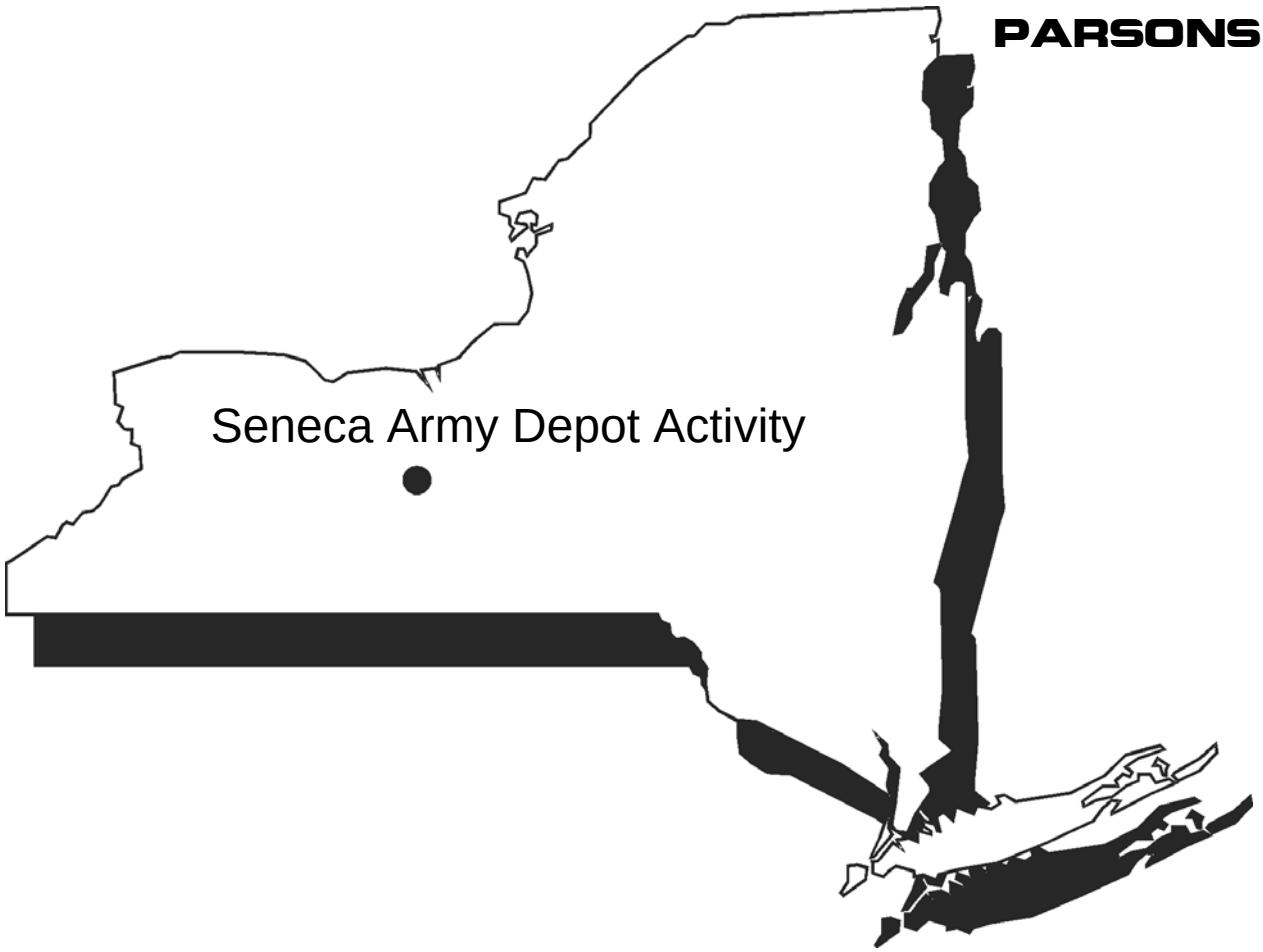
Seneca Army Depot Activity
Romulus, NY

PARSONS



ENGINEERING EVALUATION / COST ANALYSIS ACTION MEMORANDUM

SEAD 44A, QA FUNCTION TEST RANGE AND SEAD 46, 3.5' ROCKET RANGE

SENECA ARMY DEPOT ACTIVITY

CONTRACT NO. DACA87-95-D-0018
TASK ORDER NO. 52

May 2005

ENGINEERING EVALUATION / COST ANALYSIS

ACTION MEMORANDUM

SENECA ARMY DEPOT

ROMULUS, NEW YORK

FOREWORD

This Engineering Evaluation/Cost Analysis (EE/CA) Action Memorandum document presents the selected ordnance and explosives (OE) response actions for SEAD 44A, the QA Function Test Range and SEAD 46, the 3.5' Rocket Range at Seneca Army Depot, Romulus, New York. This Action Memorandum is one of seven covering all sites investigated during the Engineering Evaluation/Cost Analysis (EE/CA). Separate Action Memorandums are available for SEADs 16&17, EOD Areas #2 and #3, the Grenade Range, SEAD 57, SEAD 45, the Demo Range, SEAD 53 Ditch, and Indian Creek.

At this installation, the United States Army Corps of Engineers (USACE) is the executing agency on behalf of the Department of Defense under the Defense Base Realignment and Closure Program. The USACE developed this EE/CA Action Memorandum to closely follow the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended and consistent with the National Contingency Plan (NCP). This decision is based on the information contained in the Administrative Record for this site. This document has been accepted by the undersigned.

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Stephen M. Absolom
Installation Manager/
BRAC Environmental Coordinator

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1.0 INTRODUCTION

The 10,587-acre Seneca Army Depot Activity (SEDA) facility was constructed in 1941 and has been owned by the United States Government and operated by the Department of the Army since that date. From its inception in 1941 until 1995, SEDA's primary mission was the receipt, storage, maintenance, and supply of military items, including munitions and equipment. The Depot's mission changed in early 1995 when the Department of Defense (DOD) recommended closure of the Seneca Army Depot under its Base Realignment and Closure (BRAC) process. This recommendation to close Seneca Army Depot Activity was approved by Congress on September 28, 1995 and the Depot was officially closed in July 2000.

In accordance with the requirements of the BRAC process, the Seneca County Board of Supervisors established the Seneca Army Depot Local Redevelopment Authority (LRA) in October 1995. The primary responsibility assigned to the LRA was to plan and oversee the redevelopment of the Depot. The Reuse Plan and Implementation Strategy for Seneca Army Depot was adopted by the LRA and approved by the Seneca County Board of Supervisors on October 22, 1996. Under this plan and subsequent amendment, areas within the Depot were classified as to their most likely future use. These areas included: housing, institutional, industrial, an area for the existing navigational LORAN transmitter, recreational/conservation, and an area designated for a future prison.

In July of 1998, the U.S. Army Corps of Engineers (USACE) conducted a site visit and historical data collection effort. The findings are documented in the Archives Search Report (ASR). The ASR initially subdivided the depot into 27 Areas of Interest (AOIs) for ordnance contamination based on physical attributes, homogeneity, and current and historical land use. The ASR evaluated each AOI to determine whether the area should or should not be investigated for ordnance and explosives/ unexploded ordnance (OE/UXO). Each AOI was classified as requiring further investigation or not requiring further investigation based on a review of historical documents, aerial photography, and employee interviews. Most of the AOIs were also visited by USACE to determine whether any traces of OE were readily apparent.

The ASR classified 15 of the areas as uncontaminated. Subsequently, one of the areas recommended for further investigation, SEAD-43, was classified as a no further action site after a geophysical and intrusive investigation in 1999. The remaining 11 AOIs discussed in the ASR were classified as sites where OE might present a safety risk. An Engineering Evaluation and Cost Assessment (EE/CA) project was undertaken in order to characterize ordnance and explosives (OE) concentrations and locations, identify potential safety concerns associated with the OE, study risk management alternatives, recommend response action alternatives, and document the selected alternatives for the various AOIs.

SEAD 44A, the former QA Function Test Area, and SEAD 46, the former 3.5" Rocket Range, were two of the Seneca Army Depot AOIs identified for further investigation. The EE/CA investigation subsequently confirmed the presence of ordnance and explosives (OE) materials and unexploded ordnance (UXO) within the SEAD 44A and 46 AOIs. These areas are

considered to pose some risk to public safety. A map which shows the location of the various AOIs investigated is presented in Figure 1.

2.0 STATEMENT OF BASIS AND PURPOSE

The response actions put forth in this decision document for SEAD 44A and SEAD 46 AOIs on the Seneca BRAC site were selected in accordance with BRAC requirements and the LRA's Reuse Plan and Implementation Strategy. Based on the results of the completed EE/CA, the United States Army Corps of Engineers (USACE) will conduct a Non-Time Critical Removal Actions (NTCRA) at eight of the eleven AOIs. The removal actions will consist of clearance to depth of instrument detection for both SEAD-44A and SEAD-46. In addition to these NTCRAs, institutional controls (ICs) will be implemented base wide.

Based on the data collected during the EE/CA investigation and the historical information presented in the ASR, the OE potentially remaining at the site consists of items normally associated with Army munitions depot QA function test range and 3.5" rocket range operations. At SEAD 44A UXO items included service 40mm grenades and an unexpended slap flare while OE materials such as numerous 40mm practices grenades, expended slap flares and CS grenades were also found. At SEAD 46 unexpended flares, fuzes, smoke charges and an M-83 bomblet comprised the UXO found while expended flares, 40mm practice grenades, fuzes and a Mk 2 grenade shell made up the OE materials found. .

The USACE OE Program addresses issues such as the detection and disposal of UXO, which may create an imminent and substantial endangerment to the public health, welfare, or the environment. The decision process leading to this Action Memorandum is similar to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended and consistent with the National Contingency Plan (NCP). The basis for this decision is documented in the Administrative Record for the site. The Administrative Record is located in Building 123 on the Depot. The US Environmental Protection Agency (US EPA) and the New York State Department of Environmental Conservation (NYSDEC) have been actively involved in the Seneca EE/CA document review process.

3.0 PROJECT JUSTIFICATION

Results of the EE/CA investigation confirmed that ordnance hazards, which may potentially affect public safety, are present within SEADs 44A and 46 at Seneca Depot. The public has some access to most of the site and there are no administrative and only minimal engineering controls currently in place to modify public behavior and reduce exposure to OE. A qualitative risk analysis was performed using the OE Risk Impact Assessment (OE RIA) for OE EE/CA Evaluations to assess the explosive safety risk to the public. The confirmed presence of UXO, combined with unrestricted access, current surface activities, and potential future residential construction, contributes an imminent and substantial risk to public safety, welfare, and the environment in SEADs 44A and 46 portions of Seneca Army Depot.

4.0 ALTERNATIVES CONSIDERED

Response action alternatives were considered for SEADs 44A and 46. Alternatives that were considered included:

- No Further Action (NFA);
- Institutional Controls;
- Clearance to Depth of 6" for UXO items;
- Clearance to Depth of instrument detection for UXO items; and
- Clearance to Depth of UXO items by means of excavation and mechanical sorting.

5.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION

A series of Restoration Advisory Board (RAB) meetings, open to the public, have been held several times a year since 1995 to communicate the status of the project and to solicit public involvement. The conclusions and recommendations of the EE/CA study, of which SEADs 44A and 46 were a part, were presented at the March 20, 2001 RAB meeting. A formal public comment period was held immediately after the March 20 meeting. Project stakeholders, including the RAB members, NYSDEC, US EPA, and the general public, were given an opportunity to submit written comments on any aspects of the EE/CA study and report. The US EPA provided written comments which were addressed by the Army. No written comments were received from other members of the public. Army operational issues prevented action beyond the EE/CA report presentation and comment collection until Fall of 2003.

6.0 COORDINATION SUMMARY

EE/CA investigation objectives, activities, and results for SEADs 44A and 46 at Seneca Depot were all provided to New York State Department of Environmental Conservation (NYSDEC), the US EPA, the Local Redevelopment Authority (LRA) and other project stakeholders. All phases of project deliverables, from the EE/CA Work Plan through the Draft Final EE/CA Report, were made available to project stakeholders and the public. The US EPA was an active participant in the project document review process.

7.0 SELECTION CRITERIA

Generally, the selection criteria used to evaluate each response action alternative included 1) how the alternative would reduce the risk to the public, 2) how well and easily the alternative could be implemented, and 3) the cost of the alternative. The specific criteria used to evaluate the response action alternatives were:

- Overall protection of human health and environment;
- Compliance with applicable relevant and appropriate requirements;
- Short-term and long-term effectiveness in reducing risk to the public;
- Implementability of the alternative; and

- Cost of implementing the alternative.

These criteria are discussed further in Chapters 7 and 8 of the EE/CA Report (Parsons, 2004).

8.0 DESCRIPTION OF SELECTED REMEDIES AND CLEAN UP OBJECTIVES

Clearance to depth of instrument detection will occur at SEAD-44A and SEAD-46. At each area geophysical equipment will be used to survey all grids not cleared in the EE/CA and any resultant OE anomalies will be disposed of. The remedy cost estimate for SEAD-44A is $2,632,700 and for SEAD-46 is $788,000. The SEAD-44A clearance is complete and the property has been transferred to the prison.

Seneca Army Depot Activity institutional controls related to SEADs 44A and 46 include deed notification and 5 year reviews. Details of the intended institutional controls are described in section 5 of the EE/CA report (Parsons 2004). Using estimated clean up costs as a basis, the pro rated portion of base wide institutional controls implementation for these sites is $12,208.

Recurring reviews by the Army will occur every five years for a period of at least 30 years. Each recurring review will evaluate the effectiveness of the selected response actions, and shall be performed in accordance with Section 9 of the EE/CA Report and applicable Army guidance. The cost of each recurring review is expected to be $15,000.

The clean up objective for SEADs 44A and 46 is unrestricted use. At SEAD 44A the action has been completed.

9.0 TRADE OFF ANALYSIS

The response action alternatives chosen for SEADs 44A and 46 at Seneca Depot are the best alternatives as determined from the available historical records and data gathered in support of the EE/CA (Parsons, 2004). Care will be exercised when any intrusive activities are performed to ensure worker and public safety and preservation of the environment.

10.0 DOCUMENTATION OF SIGNIFICANT CHANGES

If the actions outlined in this EE/CA Action Memorandum are delayed or not taken at SEAD 46 (SEAD 44a is already completed) on Seneca Depot, the potential exists for continued and substantial endangerment to public health, welfare, and the environment. No significant changes relating to existing or proposed development have been identified on the Seneca Depot property.

11.0 RESPONSIVENESS SUMMARY

No written comments pertaining to the EE/CA report were received from the public during the March 20, 2001 public meeting. However, the US Environmental Protection Agency (EPA) did provide written comments during the formal EE/CA public comment period. The Army responded to the EPA's final comments in a letter dated January 15, 2004. All comments and responses are contained in the project Administrative Record.

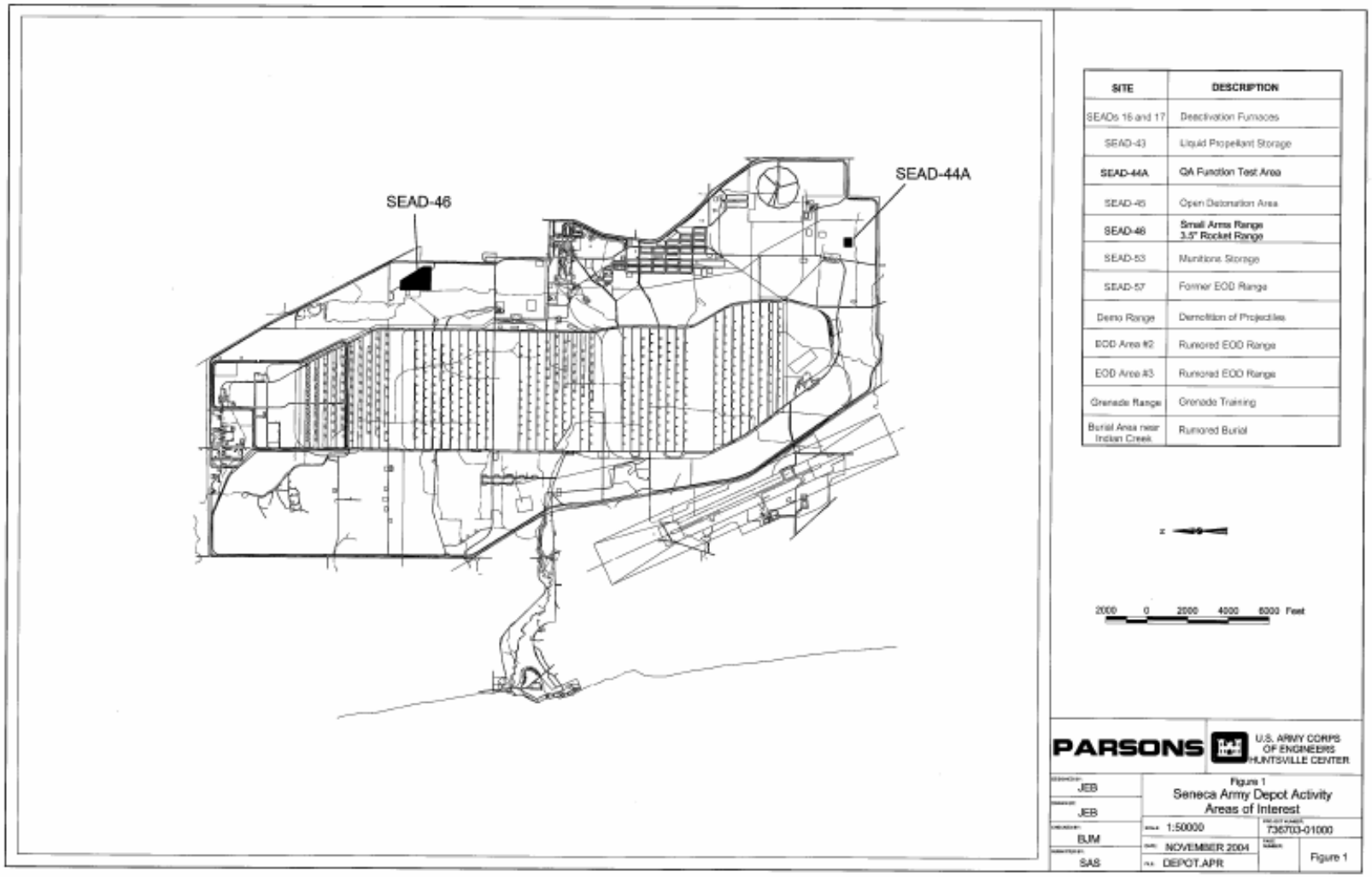
TABLE 1

OE Response Action Summary

Area of Interest	Approximate Size (Acres)	Recommended OE Response Action	Estimated Implementation Cost	Response Action Status
SEAD-44A	15	Clearance to depth of instrument detection	$2,632,700	Complete
SEAD-46	40	Clearance to depth of instrument detection	$788,000	Pending
		Site wide Institutional Controls implementation (Prorated Portion)	$12,208	Pending
		Total Cost	**$3,432,908**	

FIGURE 1

Areas of Interest



ATTACHMENT A

RAB Meeting Notes
March 20, 2001

MINUTES
RESTORATION ADVISORY BOARD
March 20, 2001 MEETING

1. ATTENDANCE:

Government RAB Members Present:
Stephen M. Absolom, BRAC Environmental Coordinator, SEDA/Army Co-Chair; Julio Vazquez, Environmental Protection Agency; Alicia Thorne, NYS Department of Environmental Conservation; Marsden Chen, DEC;

Community RAB Members Present:
Karen Tackett, Community Co-Chair; Brian Dombrowski, Patricia Jones, Industrial Development Agency; Bob McCann, Ken Riemer, Dave Schneider, Fred Swain, Henry Van Ness

Community RAB Members Not Present:
Jan Schneider (excused), Dan Geraghty, NYS Department of Health, Frank Ives (excused), Dave Wagner (excused), Jeffrey Beall (excused), Russell Miller, Frankie Young-Long

Environmental Support Personnel and Guests Present:
Michael Duchesneau, Parsons Engineering; James Lowerre, Parsons; Todd Heino, Parsons; Kevin Healy, Corps of Engineers, Hunstville; Randy Battaglia, U.S. Army Corps of Engineers, New York District; Thomas Enroth, U.S. Army COE, New York District; Brad Wright, OSC; Nancy Williamson, Recording Secretary

2. Mr. Absolom called the meeting to order at 7:05 p.m. All attendees were asked to introduce themselves. Request for changes to the November and January minutes elicited no changes. Mr. Absolom and Ms. Tackett signed the minutes into the record.

3. The agenda for the evening consisted of a presentation by Mr. James Lowerre, Parsons Engineering, who discussed findings of all the ordnance sites at Seneca Army Depot, and specifically noted that

recommendations would be made at a future meeting. The handout is enclosed.

Mr. Lowerre began his presentation by defining Ordnance and Explosives (OE) and its subset Unexploded Ordnance (UXO). UXO is of higher concern because it is primed, fused or armed and being more sensitive could cause harm.

Scope and background were explained. Mr. Duchesneau of Parsons pointed out the areas of investigation on an oversized map as Mr. Lowerre explained each area. A map was shown for proposed future land use.

Mr. Lowerre summarized the approach taken to investigate for OE and UXO. A grid method was used and geophysical surveys identified anomalies; dig sheets were prepared for likely targets, excavation was done, and items found were identified as False Positive, Non-OE Scrap, OE Scrap, OE or UXO. The Army's most stringent standards were applied to the acreage designated - 25% of large areas were examined, 100% of small areas using the grid system. (When actual remediation is done, 100% examination will apply to all areas.)

Mr. Lowerre went through the sites and indicated various features of each, percentage investigated and findings. He then explained risk assessment, clean-up alternatives, and proposed recommendations. (Please refer to handout.)

There will always be a potential for OE exposure. Risk Assessment involves identifying stakeholders and educating them on potential risks. Institutional controls will be implemented to limit future use of the sites and to minimize OE exposure.

During a discussion of institutional controls, deeds were brought up as a type of land use restriction. There were questions about restrictions being written into abstracts. Mr. Absolom explained that restrictions would go into the deed, itself. The

abstract doesn't have enforcement, the deed has. When asked if the Army would be responsible for an abstract and a deed, Mr. Absolom said the Army would prepare a quit claim deed.

Cleanup alternatives encompass the following: 1) No DOD action indicated, 2) institutional controls, 3) clearance of OE to depth of six inches, 4) clearance to depth of instrument detection, 5) excavation and sifting, or some combination of these.

Charts were presented showing costs for remediating sites for unrestricted vs. restricted land use based on the recommended cleanup alternatives, however, no recommendations have been presented.

There would be a proposed recurring review involving all stakeholders that could happen every two to three years to check on effectiveness of proposed cleanup alternatives, maintenance of controls, and support to landowner. (Reviews would occur sooner if OE or UXO were encountered after cleanup.) During the review, the Army would send out a contractor and government representative to check the areas for change.

There followed a Discussion/Q&A Session on the presentation.

Question: What is the timeframe for cleanup of SEAD 45?
A: Two to three years if funding is there.

Comment: Romulus is currently creating zoning laws, but since the depot is also in the town of Varick it was suggested that Varick be contacted

Mr. Duchesneau indicated Varick had been contacted but that they would follow up.

Comment: Deed restrictions are good but need to be spelled out. Once someone buys land, there is no control on the owner's activity. So we have concerns about areas with ordnance in them.

Comment: Surprise was indicated with the finding of white phosphorous rounds and concern expressed over the proper disposal.

Comment: Mr. Duchesneau remarked that the whole idea is to come up with approaches to each area, spend dollars wisely and where it makes the most sense. Most sites will have institutional controls and deed restrictions.

Comment: Most areas are disposal activity sites and not impact ranges for target shooting which explains the surface debris.

Comment: The Open Burning Ground cleanup is for recreation/conservation use, not for building a house with a basement. So it doesn't make sense to clean to ten feet and spend the money to do it. There must be land use controls. If, in the future, there is a need to dig deeper, there are ways that an operation could be handled with ordnance people overseeing any construction.

Mr. Duchesneau said that controls involve education and other processes. There will be an independent group (the Department of Defense Explosive Safety Board or DDESB) reviewing recommendations. And the group will not let land transfer without strong assurance that restrictions will be followed.

Comment: An archive search report was done searching all local and national archives of what the Army did here, and interviewing retirees. Fieldwork included archival discoveries.

Mr. Absolom stated that the Army would recommend a proposed action on each site. When ready, the Army will be back to present recommendations. The Army will want stakeholders' opinions on proposals after which it may or may not revise the recommendations depending on the rationale. The Army alternatives should be developed over the next two months.

Mr. Vazquez stated that the Army is using the CERCLA process to address UXO. The EPA is not involved in

UXO issues. The DDESB is the watchdog on these issues but uses CERCLA steps.

4. Mr. Absolom then opened the floor to general discussion by asking what items the RAB wanted brought up in future.

Comment: What is happening at the Ash Landfill and the wall treating the TCE contamination?

A: We have comments back on the proposed plan. The plan should be finalized in the next two months. We also have a report on the wall for the first year effort.

Q: Mr. Duchesneau asked Mr. Riemer about future coordination for land use.

A: Mr. Riemer stated that it would be discussed Thursday, March 22, by the town board and should be decided by early summer.

Q: Mr. Duchesneau asked Ms. Jones if she was tracking it.

A: Ms. Jones indicated she was.

Mr. Absolom asked if the board wished to meet every other month as suggested in the January meeting. The Board agreed that every other month was still desirable.

5. The next meeting will be May 15, 2001, at 7 p.m. in the Romulus Town Offices, Willard, NY.

Mr. Absolom thanked everyone for coming and adjourned the meeting at approximately 8:40 p.m.

Respectfully submitted,

Enclosure

NANCY WILLIAMSON
Recording Secretary

APPROVED AS SUBMITTED:

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STEPHEN M. ABSOLOM
U.S. Army Co-Chair

Karen Tackett
Community Co-Chair