

Restoration Advisory Board Meeting Agenda

September 16, 1997

- 7:00** **Welcome**
LTC Donald C. Olson
Commander, Seneca Army Depot Activity
- 7:05** **Acceptance of Minutes/ RAB Charter Change: Attendance**
Mr. Stephen M. Absolom/Dr. Dick Durst
Army Co-chair/Community Co-chair
- 7:15** **Solidification of Contaminated Soil**
Mr. Michael Duchesneau
Project Manager, Parsons-Engineering Science, Inc.
- 7:35** **Changes to Fiscal Year 1998 Program**
Mr. Thomas R. Enroth
Project Engineer, U.S. Army Corps of Engineers, NY District
- 7:50** **Break**
- 8:00** **Clearance of Unexploded Ordnance (UXO)**
Mr. Kevin Healy
Technical Manager, U.S. Army Corps of Engineers, Huntsville, AL
- 8:30** **Open Discussion**
- 9:00** **Adjourn**



*Presentation to the RAB
September 16, 1997*

*Solidification/Stabilization
Remedial Technologies
Michael Duchesneau, P. E.*

Solidificaton/Stabilizaton

Treatment technology, (in-situ or ex-situ), involving mixing of solid or semi-solid waste with an additive to prevent leaching and eliminate exposure.



Superfund Policy for Solidificaton/Stabilizaton

“ Immobilization is generally appropriate as a treatment alternative only for materials containing inorganics, semi-volatile and/or non-volatile organics.”

Solidificaton/Stabilizaton

Definitions

Solidification - (macro-scale) production of a monolithic, inert, block to prevent physical interaction between waste and leaching fluids.

Stabilization - (micro-scale) involves a chemical reaction that produces an insoluble product from the waste.

Solidificaton/Stabilizaton Goals

- *Prevent Exposure*
- *Eliminate Leaching :*
 - *Change solubility of waste*
 - *Decrease Surface Area between leaching fluid and waste*
- *Improve Handling and Physical Charateristics*

Solidification/Stabilization

Solidifying Agents

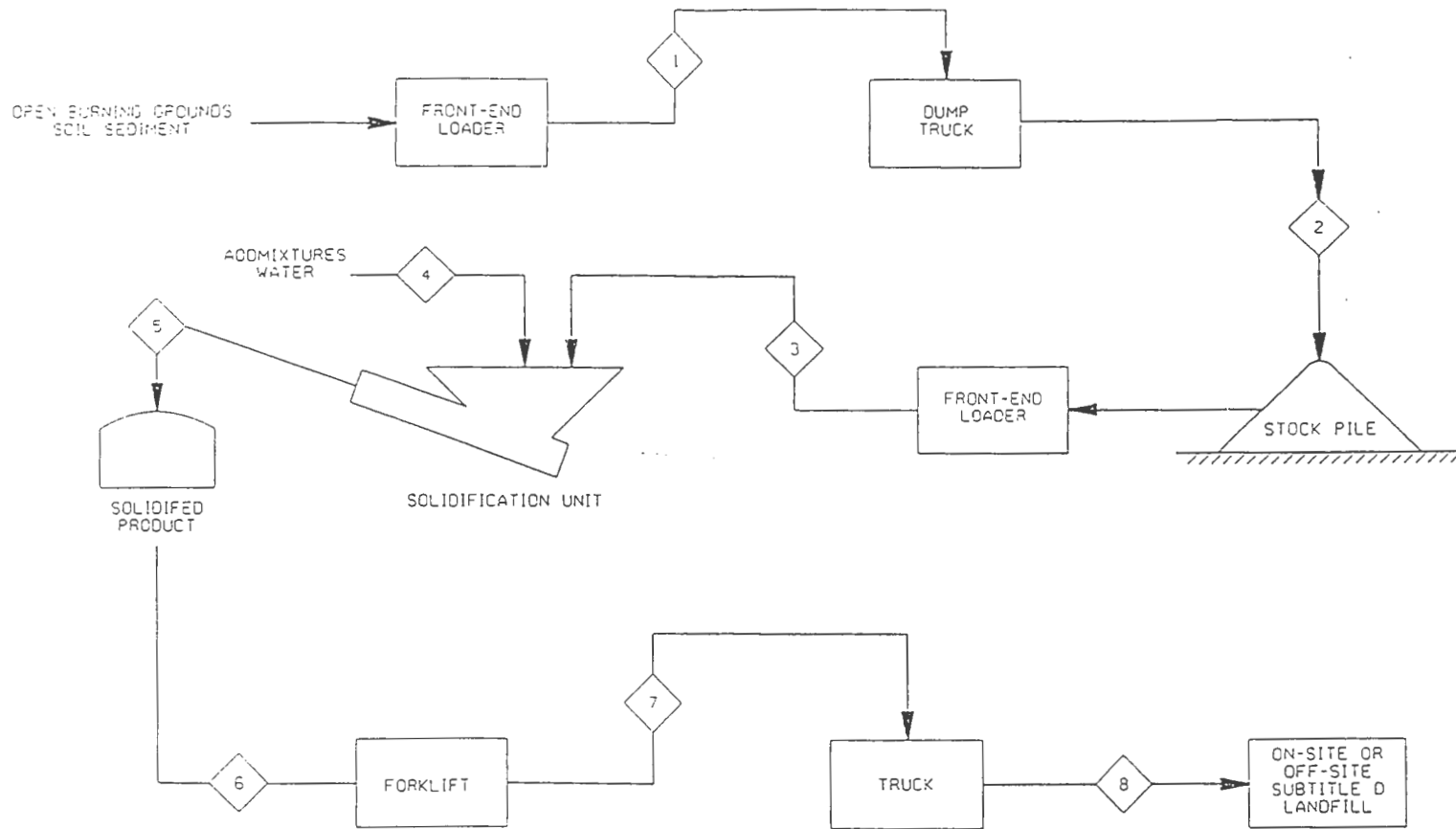
- *Lime, Quicklime or Limestone*
- *Fly Ash Pozzolan (Silica)*
- *Portland Cement or Cement Kiln Dust*
- *Asphaltic Materials*
- *Mixtures of these Materials*

Solidification/Stabilization Advantages & Disadvantages

- *Advantages :*
 - *Proven Technology (BDAT for metals)*
 - *Simple*
 - *Generally Less Costly than Washing*
- *Disadvantages:*
 - *Effectiveness is Matrix Dependent*
 - *High Clay Soils cause Clumping*
 - *High Oil Content Decrease Effectiveness*
 - *Volume of Material is Increased*

FIG. 1.—CONCRETE
GROUT IN SATHALDEE INDIAN
WATER.





TYPICAL FLOW RATES														
MATERIAL	STREAM NO.													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
SOIL/SEDIMENT (CY/HR)	50	50	40											
SOLIDIFIED PRODUCT (CY/HR)					60	60	60	60						
ADMIXTURES / WATER (CY/HR)				20										

P PARSONS
PARSONS ENGINEERING SCIENCE, INC.
 CLIENT/PROJECT TITLE
**SENECA ARMY DEPOT ACTIVITY
 REMEDIAL INVESTIGATION/FEASIBILITY STUDY
 OPEN BURNING GROUNDS**
 EGT: ENVIRONMENTAL ENGINEERING P# 720444-05000
**FIGURE 5-1
 ALTERNATIVE 4 AND 5
 SOLIDIFICATION/SUBTITLE D LANDFILL**
 SCALE: 1/4" = 1'-0" DATE: MARCH 1994

FY 98 Environmental Program Update

Presented by Thomas Enroth
Project Engineer
U. S. Army Corps of Engineers

FY 98 Environmental Program, Seneca Army Depot

TONIGHT'S DISCUSSION

- Projects that have changed
- What are the changes
- How will the program be effected
- Summary

FY 98 Environmental Program, Seneca Army Depot

Projects That Changed

- Installation Groundwater Monitoring Program
- Ash Landfill
- Open Burning Grounds
- Fire Training Areas

FY 98 Environmental Program, Seneca Army Depot

Projects That Changed

- Munitions Washout Facility
- IRFNA Disposal Site
- Old Construction Debris Landfills

FY 98 Environmental Program, Seneca Army Depot

Projects That Changed

- Deactivation Furnaces
- Removal-BTEX /VOC's

FY 98 Environmental Program, Seneca Army Depot

Projects That Changed

- Sludge Piles
- Radiation Survey

FY 98 Environmental Program, Seneca Army Depot

Summary

- FY 98 will still be a very busy year
- FY 98 budget submission is for \$12.5 Million (was \$16.8 Million last month)
- All of the projects that were planned are still in the schedule
- A phased approach will be used
- Cleanup projects may be accelerated

FY 98 Environmental Program, Seneca Army Depot

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SENECA ADA

INSTALLATION AND OPEN BURNING GROUNDS

ORDNANCE REMEDIATION OVERVIEW

Presented to the SENECA ADA

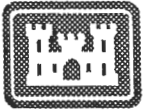
Restoration Advisory Board

September 16th, 1997



Ordnance and Explosives Program Overview

US Army Corps of Engineers
Huntsville Engineering
and Support Center



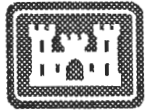
Topics

- Definitions
- Huntsville Center OE Missions
- OE Center of Expertise
- OE Design Center



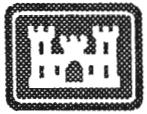
Definitions

- **OE -- Ordnance and Explosives:** Bombs and warheads, guided and ballistic missiles; artillery and mortar; rocket ammunition, mines; demolition charges, pyrotechnics, grenades; containerized and uncontainerized explosives and propellants; military chemical agents; and all similar and related items or components, explosive in nature or otherwise designed to cause damage to personnel or material. Soils with explosive constituents are considered OE if the concentration is sufficient to be reactive and present an imminent safety hazard.
- **UXO -- Unexploded Ordnance:** An item of ordnance which has failed to function as designed, or has been abandoned or discarded and is still capable of functioning and causing injury to personnel or material.
- **UXO Personnel:** Graduates of the US Naval Explosive Ordnance Disposal (EOD) School at Indianhead, Maryland. Active duty EOD experience requirements vary with position (Sr. Supervisor -- 15 years, Supervisor -- 10 years, Specialist -- 3 years).



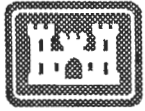
Huntsville Center OE

- Huntsville has 2 Main OE Missions
 - USACE OE Center of Expertise
 - USACE OE Design Center
- Secondary Munitions Missions
 - Range and Training Lands Program



OE CX & Design Center Experience

- Have Traditional Corps Capabilities
- Additional Unique Capabilities
 - Explosive Ordnance Disposal
 - Staff of Military Trained EOD Safety Specialists
 - 400+ years EOD Experience
 - Experienced in Both Conventional & CWM
 - OE Experienced Staff in
 - Public Affairs
 - Engineering
 - Legal/Regulatory
 - Contracting



OE CX Missions

- Oversight of USACE OE Activities
- Develop USACE OE Policy
- Review of OE Design Products
- Advise and Participate in External Working Groups for OE
- Find the Best Available Technology for UXO
- OE Training



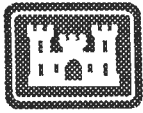
OE Design Center Mission

- To Reduce the Risks to the Public from OE
- To Do all Actions Safely
- Insure Highest Level of Quality
- Be Cost Effective
 - Risk Based versus Removal Without Analysis



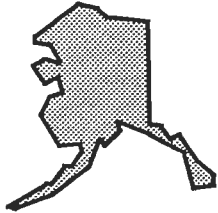
OE Customers

- FUDS (Formerly Used Defense Sites)
- IR (Installation Restoration)
- BRAC (Base Realignment and Closure)
- Work for Others
 - National Park Service
 - Bureau of Land Management
 - Department of Energy
 - Environmental Protection Agency



Potential OE Sites

Site Counts as of: 27 Sep 96



2,052 FUDS

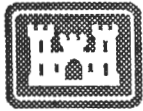
224 ARMY

125 USAF

138 USN

(224 est. CWM)





Execution Strategy

ACTION

- Investigations/Studies
- Time Critical Removal Actions
- Engineering Evaluation Cost Analysis
- Removal Design
- Removal Actions

EXECUTION OPTIONS

Government:

- In House UXO Specialists
- Other Districts

Contracts (AE/UXO)

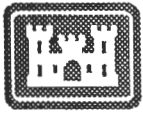
- Purchase Orders
- Letter
- Time & Materials (1 -UXO)
- Firm Fixed Price
- Cost Plus Fixed Fee (2 - UXO)
(3 - A/E)



Project Categories

Three Basic Categories of Projects:

- OE Risk Reduction -- Project Focus is on Known or Probable OE and Public Safety
 - 58 Former Defense Sites
 - 30 BRAC Installations
 - 1 Active Installation
- OE Avoidance -- Project Focus is HTRW or Construction
- Real Estate Disposal Actions



Internet Addresses

■ Huntsville Center

- email: *lnameinitial*@smtp.hnd.usace.army.mil
- Home Page on the Web:
<http://www.hnd.usace.army.mil>

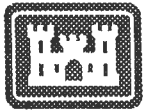
■ DUSD - Environmental Security

- <http://www.acq.osd.mil/ens/>

■ Project Information Retrieval System

- <http://dogbert.ncr.usace.army.mil>



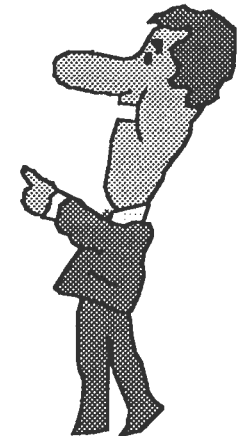
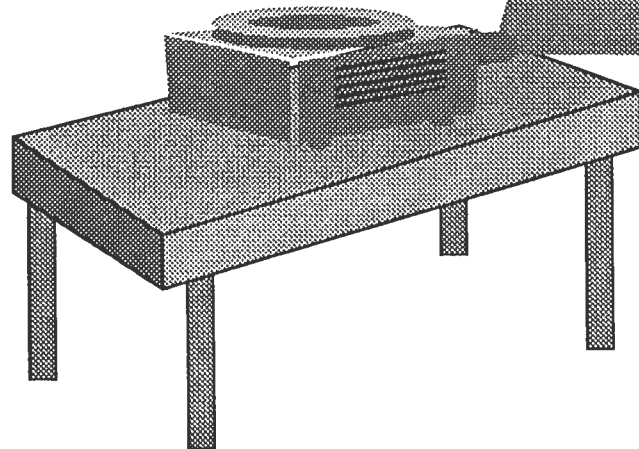


Questions

USAESC, Huntsville
P.O. Box 1600
Huntsville, AL 35807-4301

OE Project Execution:
Phone: (205) 895-1582
FAX: (205) 895-1819

OE- CX - Policy, Regulations:
Phone: (205) 895-1320
FAX: (205) 722-8709





Installation-Wide Remediation Overview



Complete Archive Search Report (FY 98)

Information search to gather all available information regarding potential Ordnance sites. Includes records reviews, personnel interviews, etc.

Perform an Engineering Evaluation/Cost Analysis

Sampling at various sites to determine the presence/ extent of OE contamination at each and possible alternatives for removal.

Prepare cost analyses for alternatives and recommend removal alternative

Public/Regulatory Review

Implement Chosen Alternative (s)



OB Grounds Remediation Overview



Complete Work Plans

Complete Explosives Safety Submission

Perform Remediation

Surface OE Contamination

sift soils in the burning pad berms

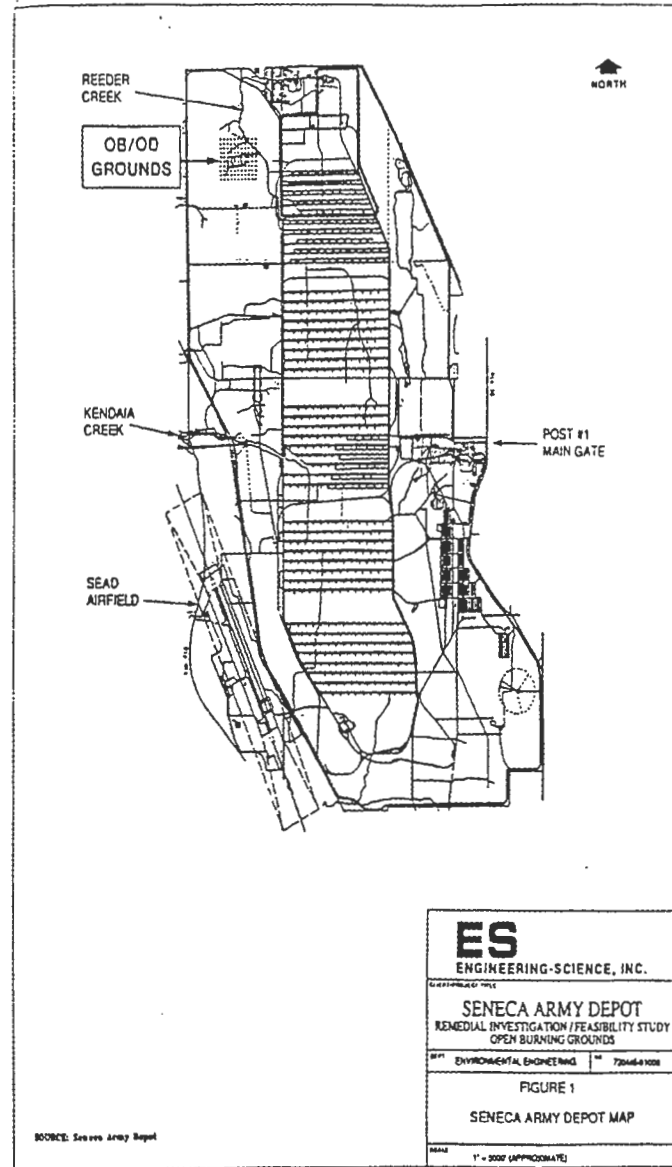
sift soils in the low-lying hill

visually/geophysically locate OE contamination in the
remaining acreage

Subsurface OE Contamination

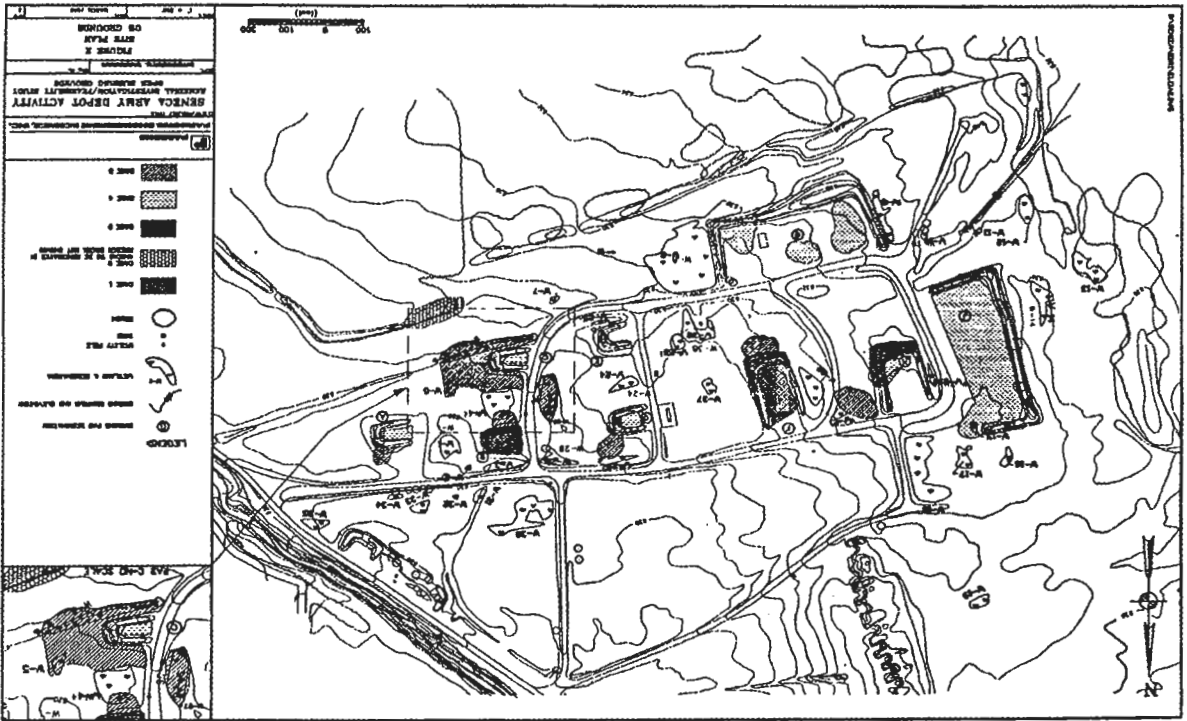
sweep and clear all anomalies to a depth of two feet

sift soils in areas of greater depths





USACE OE CX





Quality Control/Quality Assurance

Contractor performs QC

Huntsville Safety Specialist is on-site to oversee all operations and perform a 10% QA check

Disposal

UXO is blown in place.

OE-related scrap is inspected (as many as four times) before being certified as inert and disposed of to locally available scrap dealers.

