# APPENDIX L

# ORDNANCE AND EXPLOSIVES AVOIDANCE SURVEY REPORT

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**FINAL REPORT**

**Unexploded Ordnance Support Services**
**Phase Remedial Investigation, Ramsdell Quarry (RVAAP-01)**
**And the**
**Phase II Remedial Investigation, Erie Burning Grounds (RVAAP-02)**

**Ravenna Army Ammunition Plant**
**Ravenna, Ohio**

**(RVAAP-01) (RVAAP-02)**
**Ravenna Army Ammunition Plant**

## 1.0 INTRODUCTION

### 1.1 Project Authorization

Explosive Ordnance Technologies Incorporated (EOTI), was contracted by Science Applications International Corporation (SAIC), to provide standard Ordnance Avoidance and Site Safety services for the Ramsdell Quarry Landfill (RVAAP-01) and the Erie Burning Grounds (RVAAP-02) Remedial Investigations. The project commenced with mobilization of personnel on October 26, 2003. The following report contains a brief description of events and operational procedures used during the project.

### 1.2 Objectives

The purpose of the project was to provide Ordnance Avoidance and Explosive Safety support for SAIC and subcontractors during well drilling and surface soil sampling efforts. EOTI was subcontracted to augment SAIC with UXO personnel to provide on-site UXO support during all drilling and sampling activities. During previous site investigation activities, components of explosives were encountered in RVAAP-01 and RVAAP-02 areas. Additionally, the survey team was to avoid any surface or subsurface anomalies that could potentially represent OE. The UXO team was responsible for reporting all UXO to the SAIC Supervisor and the U.S, Army Corp of Engineers on-site safety representative. Specifically, the following tasks were to be completed:

1. Prepare OE avoidance plans to incorporate into SAIC's Work Plan for the Phase 1 and Phase II RI's;

2. Provide pre-work orientation and safety briefings and conduct OE awareness training sessions at the field site for sampling crews.

3. Visually verify the extent of surface ordnance and explosive waste.

4. Use magnetometers/gradiometers to verify subsurface soil sample and well drilling locations to be free of anomalies.

5. Prepare final report.

## 2.0 DAILY OPERATIONS

**UXO Team Leader** – The UXO Team Leader for this project was Mr. Allen Graves. Mr. Graves is qualified due to the extensive training and experience he possesses. He has more than 15 years of combined military and civilian UXO experience. Mr. Graves is qualified for and has served in the positions of, UXO Supervisor, UXO Technician III

and UXO Technician II. Duties and assignments include range clearance as a supervisor of multiple team operations and civilian UXO experience including performance as UXO Supervisor for OE removal operations.

**UXO Team Member** – The UXO Team Member for this project was Scott Collier. Mr. Collier is a graduate of the U.S. Naval Explosive Ordnance Disposal School. Mr. Collier is a Explosive Ordnance Disposal Technician with over 5 years of combined military and civilian experience.

**26 October, 2003** - Allen Graves (UXO Supervisor) and Scott Collier (UXO Technician II), mobilize to Ravenna, Ohio.

**27 October, 2003** - EOTI personnel arrive for Site Safety meeting.

SAIC Project Manager, briefs site history, work assignments and objectives of the Phase I and Phase II Remedial Investigations.

Allen Graves (Senior UXO Supervisor) provides a detailed UXO Safety Briefing to include examples of ordnance previously located at Ravenna. All personnel signed the Site Work Plan and Health and Safety log during this meeting.

EOTI personnel depart to commence UXO Avoidance operations with soil sampling and well drilling crews.

EOTI team assists with equipment checkout and loading support vehicles.

**28 October - 7 November** - Arrive at site for 0700 Safety Briefing.

UXO team rotates between the Well Drilling Team, the Soil Sampling Teams providing magnetometer assisted sweeps throughout the duration of the project for RVAAP-01 and RVAAP-02.

**8 November, 2003** - All EOTI personnel demob from the site.

## 3.0 EQUIPMENT

EOTI personnel conducted UXO Survey sweeps with GA52CX Shonstedt Magnetometers for all soil sample locations and approach paths. Monitoring/Pizometer Wells were surveyed with GA52CX Shonstedt Magnetometers and MG230 (downhole) gradiometers.

## 4.0 SUMMARY

EOTI personnel conducted magnetometer/gradiometer check for all Monitoring Well and

Soil Sample locations. Occasionally sub-surface anomalies were detected in the proposed Monitoring Well or Soil Sample location requiring the selection of another location.

All work was conducted safely with no injuries to personnel.

Wayne Lewallen,
Project Manager, EOTI