

**MONTHLY PROGRESS REPORT #4  
FOR JULY 1997**

**EPA REGION I ADMINISTRATIVE ORDER SDWA I-97-1019  
MASSACHUSETTS MILITARY RESERVATION  
TRAINING RANGE AND IMPACT AREA**

The following summary of progress is for the period from July 1 to July 31, 1997. Scheduled actions are for the six-week period ending September 13, 1997.

**1. SUMMARY OF ACTIONS TAKEN**

UXO Survey

Ogden and CMS Environmental (the UXO contractor) continued work on site during the month of July. This work included investigation and removal (if possible) of UXO to a depth of two feet. Immovable UXO that must be blown-in-place was identified to the EOD detachment. The following areas were cleared by UXO removal during the month of July:

- remainder of Chadwick Road that was not cleared in June.
- Barlow Road, from Wood Road north to Jefferson Road.
- Jefferson Road from Barlow to Spruce Swamp Road.
- Turpentine Road, from Five Corners south to Area 2 ("Site 3/Target Area").
- Gravel staging area at the corner of Barlow and Wood Roads.
- Gravel staging area at the corner of Wheelock and Spruce Swamp Roads.

Surface clearance activities have also been completed at seventeen drilling locations in the Impact Area, including MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-14, MW-15, MW-25, MW-26, MW-27, MW-28, and MW-29. Downhole UXO clearance has been completed at MW-4, MW-7, MW-11, MW-12, MW-14, MW-28, and MW-29, by advancing 10-foot deep boreholes at each drilling location.

UXO recovered during clearance activities are summarized in Table 1. UXO present at Spruce Swamp Road, Pocasset-Sandwich Road, and drilling locations MW-1, MW-6, and MW-27 were destroyed by EOD on July 25. Some UXO are still present at Demo Area 1 from the surface clearance operations initiated in June, and additional UXO has been discovered in Areas 2 and 3 after July 25.

Plans and Reports

Ogden and ETA shifted resources from preparation of the Archive Search reports to completion of the Action Plan, in accordance with a July 1 telephone call with EPA. The text of the Action Plan was provided to EPA, MADEP, and other stakeholders during a meeting of the Impact Area Groundwater Study Review Team on July 10. Four of the Field Sampling Plans that are referenced in the Action Plan were also provided at this meeting. The Draft Response Matrix that had been

submitted on May 30 was updated to reflect the most recent changes to the Action Plan, and was also provided at the July 10 meeting.

NGB submitted the Draft Human Health Risk Assessment Work Plan to EPA for review on July 11, 1997. This document describes procedures for preliminary risk evaluations and risk assessments. The document includes Tier I and Tier II screening criteria for use in determining the need for further study and to identify immediate hazards based on the analytical results to be obtained during the study.

NGB received comments from EPA concerning the Draft Field Sampling Plans on July 15, 1997. NGB submitted Final Field Sampling Plans for Barber Rig and Rotosonic Rig drilling investigations on July 18, 1997. NGB is preparing Field Sampling Plans for the remaining areas identified in the Action Plan. These areas and the status of plans are summarized in Table 2.

NGB submitted the Draft Range Use History Report and the Draft Chemical Composition of Munitions Report to EPA for review on July 16, 1997. These two documents provide results of the Archive Search for munitions composition and known activities that occurred in the Training Ranges and Impact Area. Requests for further information relating to range use are continuing at this time.

### Drilling

D.L. Maher (the drilling subcontractor) and Valeri Construction (Maher's road building subcontractor) mobilized to the site on July 14. TRC (EPA's oversight contractor) and US Geological Survey were present for oversight of drilling activities. The decontamination pad was completed. MW-14 was completed and screened at 96-106 feet below ground surface (bgs). MW-28 was completed and screened at 95-105 feet bgs. The shallow and deep wells at MW-23 were completed and screened at 118-128 bgs and 268-278 feet bgs, respectively. Bedrock was encountered at 311 feet bgs at MW-23. As of July 31 MW-10 was being drilled at 135 feet bgs using the Sonic rig, MW-29 was being drilled at 100 feet bgs using a Barber rig, and MW-7 was being drilled at 100 feet bgs using a Barber rig.

### Sampling and Analysis

Soil and groundwater samples have been analyzed or submitted for borings at MW-7, MW-14, MW-23, MW-28, and MW-29. The types of samples being analyzed, dates of submittal, and preliminary results are summarized in Table 3. All results in Table 3 are unvalidated. Concentrations of specific compounds will be presented in tabular form after the results for all samples in a sample data group are available and have been validated.

No explosive compounds have been detected in soil or groundwater samples analyzed to date by screening methods. Trihalomethanes (chloroform and dibromochloromethane) have been reported at estimated concentrations below the detection limit in groundwater profiling samples from 240 to 260 feet bgs in the MW-23 boring. Some explosives results have been delayed beyond the normal 1-day turnaround time while the laboratory resolves a potential problem with

the RDX/HMX screen for soil.

Water Level Measurements

Continuous water level recording devices were installed in three wells: LRWS-2, CS-19 (MW-7E), and CS-10 (AEHA-11). The well at CS-10 is being used because a suitable well was not available at CS-18, the original intended location. Wells at CS-18 were filled with bentonite and/or were located under standing water.

Meetings

There was a meeting of the Impact Area Groundwater Study Review Team on July 10, 1997. The meeting was preceded by a tour of the Impact Area, Moving Target Range, NBC Site, and J-3 Range.

There was a public Open House to introduce NGB contractors for the Impact Area Groundwater Study on July 24, 1997.

**2. SUMMARY OF DATA RECEIVED**

Daily reports of UXO survey results were received by Ogden during the month and are summarized in section 1 above. Table 1 provides a summary of potential UXO discovered to date.

Laboratory results for soil and groundwater samples were received during the month and are summarized in Section 1 above. Concentrations for specific compounds will be presented in tabular form after the results for all samples in a sample data group are available and have been validated. The types of samples being analyzed, dates of submittal, and preliminary results are summarized in Table 3. All results in Table 3 are unvalidated.

Surveyed elevations were obtained for the wells used in water level measurements. These elevations are presented in Table 4 along with the water level measurements. Water level contours are indicated on Figure 1.

**3. DELIVERABLES SUBMITTED**

Deliverables submitted during the reporting period included the following:

Final Action Plan	July 10, 1997
Draft Field Sampling Plan for Area 2	July 10, 1997
Draft Field Sampling Plan for Area 3	July 10, 1997
Draft Field Sampling Plan for Rotasonic Drilling Investigation	July 10, 1997
Draft Field Sampling Plan for Barber Rig Drilling Investigation	July 10, 1997

Draft Response Matrix (Version 1.0)	July 10, 1997
Monthly Progress Report No. 3 (June 1997)	July 10, 1997
Weekly Progress Update (July 4-10)	July 11, 1997
Draft Human Health Risk Assessment Work Plan	July 11, 1997
Draft Range Use History Report	July 16, 1997
Draft Chemical Composition of Munitions Report	July 16, 1997
Weekly Progress Update (July 11-17)	July 18, 1997
Final Field Sampling Plan for Rotosonic Drilling Investigation	July 18, 1997
Final Field Sampling Plan for Barber Rig Drilling Investigation	July 18, 1997
QA/QC Plan Addendum with Laboratory SOPs/MDLs	July 24, 1997
Weekly Progress Update (July 18-24)	July 25, 1997

#### **4. SCHEDULED ACTIONS**

Actions scheduled for the next six weeks are indicated in Figure 2. This figure provides a Gantt chart based on the Draft Action Plan, updated to reflect progress and proposed work.

UXO surveys, drilling, sampling, and analysis will continue during August. Well development is scheduled to begin during the week of August 11, 1997. Field Sampling Plans will continue to be completed and submitted to EPA during August. Sampling of surface soil, surface water, storm water, and sediment is scheduled to begin on August 15 pending plan submittals and approvals.

The Draft Fate and Transport of Munitions Report will be submitted on August 15, 1997.

A meeting of the Impact Area Citizen Review Team, will be conducted on August 21, 1997.