

**MONTHLY PROGRESS REPORT #13  
FOR APRIL 1998**

**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 April 1 to April 30, 1998. Scheduled actions are for the six-week period ending June 14, 1998.

**1. SUMMARY OF ACTIONS TAKEN**

Sampling

Soil sampling was performed at 0-6 inches at grid O in Area 16 and at 18-24 inches at Areas 12 (grid F), 15 (grid C), 16 (grid O), and 18 (grid G).

Analytical Results

Electronic Data Deliverables (EDDs) were received from ITS (the laboratory contractor) for Sample Delivery Groups (SDGs) 58-69 in April. Hardcopy data deliverables were received from ITS for SDGs 61-69 during the month. Results for SDGs 70-72 were being prepared by ITS as of the end of April.

Validation

Ogden continued validation of hardcopy deliverables during April. All data contained in SDGs 31, 32, 35, 36, 37, 38, 40, and 42 had been validated by the end of the month. Additional data have been validated but have not been entered into the database. All validated data entered in the database are attached to this report, and are summarized in Section 2. Validation is underway for SDGs 18-21, 41, and 43-54.

Water Level Measurements

A round of water level measurements was collected on April 1, 1998. A draft map of the water table contours from these measurements is provided in Figure 1.

Meetings

The Impact Area Groundwater Study Review Team met on April 30, 1998. Weekly project review meetings continued during the month with EPA, MADEP, USGS, TRC, and JPO.

## 2. SUMMARY OF DATA RECEIVED

The data validated during the month are presented in an attachment to this progress report. The attached results include field samples (having sample numbers that end in "A", or "D" for Duplicate) as well as quality control samples (ending in "E" for Equipment blank, "F" for Field blank, "T" for Trip blank). The attachment includes a list of qualifier codes to explain the validation results.

The validated results include samples from 15 groundwater monitoring wells and four duplicate samples. The samples were collected from new wells MW-2D, -4S, 7S, -7D, -17S, -17D, -23M2, -23M3, -28S, -29S, and -30S; Bourne wells 97-1, 97-2, and 97-5; and Long Range Water Supply well 1-2. Detected compounds and concentration ranges for the monitoring well samples are summarized in Table 1. The explosive compounds 4-A-2,6-DNT and HMX were detected in MW-30S. Volatile organic compounds (VOCs) detected in groundwater samples include chloroform (MW-4S, -7S, -23M2, -23M3, -30S, and LRWS 1-2), toluene (MW-2D, -30S), and total xylenes (MW -7S). Bis (2-ethylhexyl) phthalate (BEHP) was the only semivolatile organic compound (SVOC) detected in groundwater samples (all wells *except* for MW-2D, -23M2, and LRWS 1-2). The herbicide pentachlorophenol was detected in well MW-23M3, and the pesticide endrin aldehyde was detected in well MW-29S. No PCBs were detected in these groundwater samples. Among the 23 metallic analytes, only antimony, selenium, silver, thallium, and mercury *were not* detected. Background levels for metallic analytes in groundwater have not yet been established.

The validated soil results include samples from boring MW-5 and from grids in Areas 1, 2, 3, 4, 10, 12, 14, 19, 20, 41, and 42. Detected compounds and concentration ranges for these samples are summarized in Table 2. This table includes preliminary background concentrations which have been proposed to EPA and MADEP based on the preliminary results of sampling in Areas 41 (Shawme Crowell State Forest) and 42 (Four Ponds Conservation Area).

The explosive compounds detected in soil using EPA Method 8330 include 2-A-4,6-DNT, HMX, and RDX in grid 12D, and HMX in grid 12E. VOCs detected include acetone (grids 2D, 2E, 2I, 2K, 2L, 2M, 2N, 4G, 10D, 14A, 14B, 14D), methylene chloride (grids M6C and M8A), trichloroethene (grids M6C, M8A, M8B, M8C), and tetrachloroethene (grid M8C). SVOCs detected include polycyclic aromatic hydrocarbons (PAH; benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, and pyrene) and di-n-butyl phthalate in grid 12D. Some of these PAHs were also detected in grids 12E, 41A, 42G, 42I, and M8C. Phthalates were also detected in grids 1A, 10E, M6C, and M8A, including diethyl phthalate and bis-2-ethylhexyl phthalate. No PCBs were detected. DDT (grids 2A, 2D, 2K, 2M, 41A, 42G, 42I, 42K, M6C, M8A, M8B, M8C) and DDE (grids 2A, 2D, 2K, 2M, 42G, 42I, 42K, M6C, M8B, M8C) were the only pesticides detected. Four herbicides were detected: MCPA (grids 3J, 4G, 41A, 42G, 42H, 42I, 42J, 42K, M8B, M8C), Dicamba (grid 14A), 2,4,5-T (grid

12D), and bentazon (grid 14A). Among the 23 metallic analytes, only silver, sodium, and thallium *were not* detected. Antimony, cadmium, lead, selenium, and mercury *were not* detected at concentrations above the proposed background levels for soil.

**3. DELIVERABLES SUBMITTED**

Deliverables submitted during the reporting period included the following:

Weekly Progress Update (March 27 - April 2)	April 3, 1998
Monthly Progress Report for March 1998	April 10, 1998
Weekly Progress Update (April 3 - April 9)	April 10, 1998
Weekly Progress Update (April 10 - April 16)	April 17, 1998
Weekly Progress Update (April 17 - April 23)	April 24, 1998

**4. SCHEDULED ACTIONS**

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

Drilling and sampling soil, surface water, and sediment have been completed in accordance with existing sampling plans. Groundwater sampling remains to be performed at five wells around FS-12 and at residential wells northwest of Snake Pond in accordance with the Response Plan for 90WT0013. Installation and sampling of additional wells is anticipated in accordance with a Response Plan for MW-19. A meeting of the Impact Area Groundwater Study Review Team will be convened on June 2, 1998.