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Revision

APPENDIX T

RELEASE ABATEMENT MEASURE (RAM)

AND

RESPONSE ACTION OUTCOME (RAO) STATEMENT

FORMER BUILDING 1004 - VERBECK HOUSING AREA

FORT DEVENS, MASSACHUSETTS

22 OCTOBER 1996
REVISED 31 OCTOBER 96

CSVZ 96107 USA

T.1 BACKGROUND AND DESCRIPTION OF PROJECT

T.1.1 OBJECTIVE. The objective of this work is to perform a Release Abatement Measure (RAM) to remediate contaminated soils and groundwater identified by the Devens Commerce Center during site preparation activities. A RAM Completion Statement and Response Action Outcome (RAO) Statement shall be prepared upon completion of the remediation activities.

T.1.2 SITE HISTORY. On December, 21, 1989, Fort Devens was placed on the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980, as amended. Fort Devens was used for a variety of U.S. military training missions from 1917 until 1990 when the base was selected for cessation of operations and closure under Public Law 101-510, the Base Realignment and Closure (BRAC) Act of 1990.

The Devens Commerce Center (DCC) and the Army negotiated a Memorandum of Agreement (MOA) to complete some early actions at several sites in preparation for potential new tenants and/or buyers. In summary, the MOA stipulated that the DCC would remove underground storage tanks (USTs) and up to 100 cubic yards of contaminated material at each site. If soil contamination extended beyond 100 cubic yards or groundwater contamination was evident, the Army would take responsibility for the remaining remediation efforts.

Building 1004 was located in the former Verbeck Housing Area and was used a central heating plant for the area. A federal Job Corps Center is planned for construction on the former Verbeck Housing Area property. The DCC is providing site preparation for the project. The Army continues to have ownership of the property.

The UST at building 1004 was removed along with less than 100 cubic yards of contaminated material and the excavation was backfilled. After removal of the USTs the buildings within this area have all been demolished and removed by the DCC. During the removal of building 1004, the DCC identified a sump beneath the boiler room. The DCC submitted a RAM plan and removed approximately 100 cubic yards of contaminated material. The groundwater table was encountered at approximately 13 feet below ground surface (bgs) and a sheen of petroleum contamination was evident.

The excavation done to date by the DCC shall remain open awaiting continued efforts by the Army. The transition from DCC to Army shall work as follows: (1) DCC Licensed Site Professional (LSP) will provide letter indicating that he will no longer be the LSP of record for the site (a report of activities conducted by the DCC will be provided with this letter); (2) Army LSP from Weston will provide letter indicating that he is new LSP of record and highlighting RAM activities to be conducted by the Army (RAM Plan submitted by the DCC will be referenced and elaborated on where necessary); (3) Army receives approval from MADEP-CERO; (4) conduct remediation

and (5) prepare RAM Completion Report (documents all activities including DCC) and RAO Statement.

T.1.3 CONTAMINANT HISTORY. The primary contaminant at the site is TPH related to No.s 2 and 4 heating oil. There is a possibility of No. 6 fuel oil contributing to the contamination.

T.2 PROJECT DESCRIPTION

T.2.1 SUMMARY. As discussed with the MADEP previously, the Army intends on performing RAM activities in accordance with the previously approved RAM Plan prepared by the DCC. The DCC RAM Plan (previously provided to Weston) allows for additional excavation (up to 200 cubic yards total) and dewatering to remediate groundwater. The contractor shall conduct the RAM and prepare a RAM Completion Statement and RAO Statement.

T.2.2 SITE SAFETY AND HEALTH PLAN (SSHP) ADDENDUM. The contractor shall prepare an addendum to the existing SSHP developed for work at Fort Devens.

T.2.3 RAM PLAN REVIEW AND LSP LETTER. The contractor shall review the MADEP approved DCC RAM Plan. Upon receipt of the DCC LSP letter/report the contractor shall prepare a letter/workplan that includes the following: (1) statement indicating that he is the new LSP of record for the site working on behalf of the Army; (2) summary of RAM activities planned (Work Plan) (differentiating between items specifically covered in the approved plan and those that are not - the contractor shall provide specifics for general items previously approved and for new items/changes); (3) schedule for project to include field work and subsequent submittals.

T.2.4 FIELD WORK. All work shall be conducted in accordance with the Massachusetts Contingency Plan (MCP). Devens is a Tier 1A site under the MCP. The contractor shall excavate approximately 500 cubic yards of contaminated material. Excavation shall be conducted to approximately 2 feet below the ground water table elevation (approximately 13 ft. bgs). The clean-up goal for this project is 500 ppm TPH. This goal shall be continuously evaluated by the contractor and the COR during the remediation. Field screening via Headspace and immunoassay technique shall be used to guide the excavation and segregate contaminated and clean soils.

Dewatering shall be conducted to facilitate the excavation of contaminated soils below the water table. The contractor shall propose the dewatering technique and on-site treatment and disposal method in the above LSP letter/workplan. A potential alternative for dewatering is: CMP and crushed stone sumps be constructed to extract

the water; a mobile oil/water separator and GAC treatment system be used to treat the water; and a discharge basin be excavated to dispose of the treated effluent.

Confirmation samples shall be collected and analyzed for EPH/VPH via the MADEP method upon completion of excavation activities. It is estimated that 8 samples will be required.

Three water table monitoring wells shall be installed at the site to evaluate potential ground water contamination. Ground water samples shall be collected and analyzed for EPH and VPH in accordance with MADEP methods. This data shall be used in preparation of the RAM Completion Report and RAO.

The excavation shall be backfilled with on-site material. The contractor shall evaluate the compactive efforts required based on the future use. The DCC has the plans for future building footprints. If this excavation is not in the footprint of a planned building compaction requirements will be minimal.

Contaminated soils shall be transported to the storage area located adjacent to the Soil Storage Facility by Building 202 for ultimate disposition in conjunction with the other contaminated materials.

Waste Characterization shall be conducted in accordance with the Contaminated Soil Removal, Phase II, Various Sites, Fort Devens, Massachusetts, Section 01410, Sampling Procedures and Laboratory Services. It is assumed that 5 samples will be required (1 per 100 cubic yards).

T.2.5 UTILITY CLEARANCES AND COORDINATION. The Contractor is responsible for obtaining dig safe number and coordinating utility clearances and all field work with appropriate DCC and Devens personnel. Due to the closure of Fort Devens, legwork will be required to obtain site plans and determine the appropriate parties to contact. The contractor shall notify affected landowners and the MADEP at least one week prior to commencement of field activities.

T.3 PREPARATION OF SUBMITTALS.

T.3.1 RAM COMPLETION REPORT AND RAO. Prior to the submittal of the RAM Completion Statement the contractor shall assess the risk posed by the site in accordance with the "Interim Final Petroleum Report: Development of Health-Based Alternative to the Total Petroleum Hydrocarbon (TPH) Parameter" August 1994. A meeting shall be held among the contractor's Project Manager, LSP, Risk Assessor, and the NED EM, to discuss the risk assessment and recommendations for future efforts at the site. It is assumed that no additional soil will need to be excavated to reach a Class A-2 or A-3 RAO. The contractor shall prepare an RAM Completion

Report in accordance with 310 CMR 40.0446. The appropriate RAO forms and required documentation shall be submitted along with the RAM Completion Report.

T.4 COORDINATION

T.4.1 Liaison will be maintained for the duration of the project through periodic communications with the Corps of Engineers Construction Manager (COE CM) Steve Umbrell, and Engineering Manager (COE EM), Mark Applebee at (617) 647-8227.

T.4.2 In order to prevent misunderstandings leading to later changes and contractor lost effort, the contractor shall coordinate his efforts with the COE. The Contractor shall notify the COE periodically during the Contractor's performance period, especially at major milestones and decision points. Coordination with property owners, such as the Fort Devens and DCC, shall also be required as noted herein. The COE shall be notified of the results of all meetings with property owners, should the COE not be in attendance. All questions, submissions and other correspondence shall be directed to the COE for necessary action.

T.4.3 Meetings and conferences initiated by the Contractor or U.S. Agencies shall be held only with the approval of and in the presence of the COE. A Memorandum for the Record (MFR) of the matters discussed during the meetings and conferences regarding the project will be prepared and type written by the contractor and forwarded to the COE within 7 calendar days.

T.4.4 The Contractor shall budget for two (2) meetings with the Corps and the MADEP throughout this project. It is assumed that these meetings will be held at building P12 at Devens. These meetings are in addition to the meeting referenced elsewhere in this Scope of Work.

T.4.5 Reports and data generated under this contract shall become the property of the Government and distribution to any other source, including property owners, the MADEP, or any other U.S. or state agencies, by the Contractor unless authorized by the COE is prohibited.

T.4.6 The Contractor shall not make available to the news media or publicly disclose any data generated or reviewed under this contract. When approached by the news media, the Contractor shall refer them to the COE for response.

T.5 SUBMITTALS AND REVIEWS

T.5.1 GENERAL SUBMITTAL REQUIREMENTS

T.5.1.1 All submissions shall be accompanied by a letter of transmittal identifying the contents of the submission. A preview copy of all submittals shall be

provided to the COE EM at a minimum of 3 days prior to the scheduled submittal date. The COE EM will provide comments within 2 days of receipt. These comments shall be incorporated by the contractor prior to distribution of the document to other parties.

T.5.1.2 In case of late submission, the contractor must notify the COE of this fact as soon as possible but no later than two (2) days before the original date of submission. A letter of explanation is required for any submission expected to be late by five (5) calendar days or more.

T.5.1.3 The contractor shall deliver all submissions of material under this contract to the following offices.

<u>OFFICE</u>	<u>POC</u>	<u>NUMBER</u>
NEDEM	Mark Applebee	2
NEDCM	Steve Umbrell	2
Devens BRACEO	James Chambers	8
MADEP	Lynne Welsh	3
EPA	Jim Byrne	1
DCC	Ron Ostrowski	2

T.5.2 SUBMITTAL DOCUMENTS.

T.5.2.1 The following contract documents shall be submitted as indicated below. Following each submission, comments generated as a result of the review shall be incorporated by the contractor.

SUBMITTALS

- a. LSP Letter/Work Plan
- b. SSHP Addendum (COE Only)
- c. RAM Completion Report and Response Action Outcome (RAO)

T.5.2.2 All reports and submittals presenting data, analyses, and recommendations shall be prepared in a standard format for Contractor reports. All MCP documents shall be submitted in accordance with all MCP requirements. All site drawings shall be of engineering quality with sufficient detail to show interrelations of major features on the site map (i.e., north arrows, keys, scales, etc.). When drawings are required, data may be combined to reduce the number of drawings. A decimal paragraphing system shall be used. The report covers shall be durable binders which hold pages firmly while allowing easy removal, addition, or deletion of pages. A report title page shall identify the report title, the Contractor, the contract number, the project number, the MADEP case and permit number, and the date. Following each

submission, comments generated as a result of the Government's review shall be incorporated by the contractor. A response to comments package shall be prepared by the contractor.

T.6 MILESTONES/COMPLETION SCHEDULE

All work shall be completed in accordance with the following time limits.

<u>Work Task</u>	<u>When Required (in calendar days)</u>	<u>Approx. # of days from NTP</u>
Submit LSP Letter/Work Plan	Within 7 days after Notice to Proceed (NTP)	7
Complete Field Work	Within 21 days of submittal of LSP Letter	28
Submit Draft RAM Completion and RAO	Within 28 days of completion of Field Work	56
MADEP and DCC comments	Within 14 days of submittal of RAM and RAO	70
Submit Final RAM Completion Report and RAO	Within 14 days of RA meeting	84

T.7 QUALITY CONTROL

T.7.1 The contractor is responsible for the quality of their submittals and for all damages caused the Government as a result of their negligence in the performance of any services furnished under the contract.

T.7.2 Although submissions required by your contract are technically reviewed

by the Government, it is emphasized that your work must be prosecuted using proper internal controls and review procedures. The letter of transmittal for each submission which you make shall include a certification that the submission has been subjected to your own review and coordination procedures to insure (a) completeness for each discipline commensurate with the level of effort required for that submission, (b) - elimination of conflicts, errors and omissions, and (c) the overall professional and technical accuracy of the submission. Documents which are significantly deficient in any of these areas will be returned to you for correction and/or upgrading prior to completion of the Government review. Contract submission dates will not be extended if a resubmission of draft material is required for this reason. It is requested that you indicate in writing in your fee proposal letter your cognizance of this requirement. This letter must also indicate that your firm and your associates, if any, have the professional competency and technical expertise necessary to accomplish this project in a satisfactory manner.

T.8 CONTRACTOR PAYMENTS

The Contractor shall propose the work breakdown structure for their proposal. The work breakdown structure shall be agreed upon by the contractor and the NEDEM prior to the submittal of the cost proposal.

T.9 REFERENCE DOCUMENTS

T.8.1 Commonwealth of Massachusetts Department of Environmental Protection Bureau of Waste Site Cleanup, Revised Massachusetts Contingency Plan 310 CMR 40.0000, latest edition.

T.8.2 Chemical Data Quality Management for Hazardous Waste Remedial Measures, U.S. Army Engineering Regulation, ER-1110-1-263, 1 October 1990.

T.8.3 Requirements for the Preparation of Sampling and Analysis Plan, U.S. Army Engineering Manual, EM-200-1-3, September 1994.

T.8.4 EM 1110-1-4000, Monitor Well Design, Installation and Documentation at Hazardous and/or Toxic Waste Sites, 31 August 1994.

T.8.5 U.S. Army Corps of Engineers Safety and Health Requirements Manual, U.S. Army Engineering Manual No. EM-385-1-1, October 1992.

T.8.6 Test Methods for Evaluating Solid Wastes, USEPA Pub. No. SW-846, latest edition.

T.8.7 MADEP Guidance Document, WSC/ORS 95-141, "Guidance for Disposal Site Characterization in Support of the MCP", July 1995.

T.8.8 MADEP Guidance Document, WSC-401-91, "Interim Final Petroleum Report: Development of Health-Based Alternative to the TPH Parameter."