

United States Army Corps of Engineers
New England District

Final Land Use Control Implementation Plan, Study Area 71

**Former Fort Devens Army Installation
Devens, Massachusetts**

Contract No. W912WJ-19-D-0014

Contract Delivery Order No. W912WJ-20-F-0022

September 2023

Final Land Use Control Implementation Plan, Study Area 71
Former Fort Devens Army Installation, Devens, Massachusetts

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Acronyms and Abbreviations

ABB-ES	ABB Environmental Services, Inc.
AOC	area of contamination
Army	U.S. Department of the Army
B&M	Boston and Maine Railroad
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Fort Devens	former Fort Devens Army Installation
ft	foot
IC	institutional control
LIFO	Lease in Furtherance of Conveyance
LUC	land use control
LUCIP	Land Use Control Implementation Plan
MassDEP	Massachusetts Department of Environmental Protection
MassDevelopment	Massachusetts Development Finance Agency
NAUL	Notice of Activity Use Limitation
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
RAO	remedial action objective
ROD	Record of Decision
SA	study area
SHL	Shepley's Hill Landfill
Sovereign	Sovereign Consulting Inc.
SSSMP	Site-Specific Soil Management Plan
USACE	U.S. Army Corps of Engineers – New England District
USEPA	United States Environmental Protection Agency

1 Introduction

This Land Use Control Implementation Plan (LUCIP) was developed to guide the implementation of stand-alone land use controls (LUCs) (also referred to as institutional controls [ICs]) for the Former Railroad Roundhouse Study Area (SA) 71 at the former Fort Devens Army Installation (Fort Devens), located in Devens, Massachusetts (Figure 1). SERES-Arcadis 8(a) Joint Venture 2, LLC prepared this LUCIP on behalf of the U.S. Army Corps of Engineers – New England District (USACE), under Contract Number W912WJ-19-D-0014. The United States Environmental Protection Agency (USEPA) and Massachusetts Department of Environmental Protection (MassDEP) are responsible for regulatory oversight of SA 71 in accordance with the Federal Facility Agreement, signed pursuant to Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; 42 United States Code §9601 et. seq.). The U.S. Department of the Army (Army) is responsible for carrying out remedy implementation in accordance with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP; 40 Code of Federal Regulations [CFR] Part 300). This LUCIP was prepared in accordance with the Final Land Use Control Implementation Work Plan (SERES-Arcadis 8(a) Joint Venture 2, LLC 2022).

SA 71, a former railroad roundhouse that was operated by the Boston and Maine Railroad (B&M) from approximately 1900 to 1935 (Sovereign Consulting Inc. [Sovereign] 2015), is located on the southern shore of Plow Shop Pond (Figure 2). The Army purchased the land in 1942. SA 71 is undeveloped and currently is zoned as open space/recreational (Vanasse Hangen Brustlin, Inc. 1994). Response actions have been conducted to remove railroad maintenance materials containing heavy metals that was disposed along the pond shoreline and in the upland soil at SA 71. Table 1 below presents the organization of this LUCIP.

Table 1 LUCIP Organization

Section	Title	Purpose
Section 1	Introduction	Identifies the site name and location, name of the organization that prepared the document, the agency responsible for oversight, and the organizational structure of the document.
Section 2	Site Details	Summarizes the site characteristics, site history, property information, and stakeholder contacts.
Section 3	Key Elements for All Planned/Implemented Institutional Controls	Develops an IC relationship matrix and identifies each IC, the substantive use restriction(s) achieved by each IC, and the legal description of the restricted area(s).
Section 4	Institutional Control Maintenance Elements	Summarizes the assurance monitoring and reporting process of each IC and provides an implementation schedule.
Section 5	Institutional Control Enforcement Elements	Discusses enforcement-related information for addressing various events including improper or incomplete IC implementation or maintenance, and reports of an IC breach/violation.

Section	Title	Purpose
Section 6	Institutional Control Modification and Termination Elements	Provides information on modifying or terminating an IC.
Figures		Figures 1 and 2 illustrate the site location, site features, removal areas, IC boundaries, and engineering controls.
Appendices		Appendix A provides a list of references used in the development of the LUCIP. Appendix B provides the Lease in Furtherance of Conveyance (LIFOC) and any forthcoming enclosures. Appendix C presents the Record of Decision (ROD) for Plow Shop Pond (Area of Contamination [AOC] 72) – Red Cove and Former Railroad Roundhouse (SA 71). Appendix D presents a LUC checklist used for annual IC assurance monitoring. Appendix E presents the Responses to Regulatory Comments.

2 Site Details

This section describes the site characteristics, summarizes the site history, and provides property information and IC stakeholder contacts.

2.1 Site Description

SA 71 is a part of an approximately 119-acre plot located on parcel lot #32-99-1800 on 60 Cook Street on the former Main Post and consists of a 200- to 300-foot- (ft-) wide strip of land extending south from Plow Shop Pond along the northeast boundary of Fort Devens for approximately 1,100 ft (Sovereign 2015) (Figure 2). SA 71, which is approximately 6 acres in size, is bounded to the east by the Pan Am Railway Ayer Hill Yard and is zoned open space/recreational (Vanasse Hangen Brustlin, Inc. 1994). SA 71 is the location of a former railroad roundhouse that was operated by B&M from approximately 1900 to 1935 (Sovereign 2015). Historical features of the roundhouse included numerous railroad tracks, a coal trestle, ash pit, water tower, and several buildings. The roundhouse was located at the northern end of SA 71, immediately adjacent to the southern shore of Plow Shop Pond. Locomotive maintenance waste was disposed along the shoreline of Plow Shop Pond adjacent to the roundhouse; this area is referred to as the maintenance byproduct disposal area. The location of the former railroad roundhouse has been inferred from site observations and from overlaying a B&M drawing (right-of-way and track map) prepared by the Office of Valuation Engineer (B&M 1919) on existing maps. The roundhouse and structures occupied about 6 acres, while the nearby tracks and freight yard occupied approximately 35 additional acres. According to historical insurance maps, by 1942 all of the buildings except the brick storeroom and the water tower had been removed (MACTEC 2008). SA 71 is presently not used for any purposes and access to the site is not restricted based on a current and future land use open space/recreational scenario.

2.2 Site History

Fort Devens was established in 1917 as Camp Devens, a temporary training camp for soldiers from the New England area. In 1931, the camp became a permanent installation and was redesignated as Fort Devens. Throughout its history, Fort Devens has served as a training and induction center for military personnel and a unit mobilization and demobilization site. All or portions of this function occurred during World Wars I and II, the Korean and Vietnam conflicts, and operations Desert Shield and Desert Storm. The primary mission of Fort Devens is to command, train, and provide logistical support for non-divisional troop units and to support and execute Base Realignment and Closure (BRAC) activities.

SA 71 is the location of a former railroad roundhouse operated by B&M from approximately 1900 to 1935. The Army purchased a 53-acre parcel from B&M in 1942 that included the former roundhouse. Following the 1996 base closure, the Army leased the land formerly occupied by the roundhouse to the Massachusetts Development Finance Agency (MassDevelopment) as part of the large lease parcel known as A.1SHL that includes the Shepley's Hill Landfill (SHL).

From 1993 to 1994, the Army conducted site investigations in the area of the former railroad roundhouse (ABB Environmental Services, Inc. [ABB-ES] 1993, 1995). Data gathered during the investigations indicated the widespread presence of coal ash and maintenance byproducts in surface and deeper soil across much of SA 71. The deposits of maintenance byproduct formed a sloping pond bank on their northern side, underlain by naturally deposited sand, silty sand, and peat, and extended into the pond. High concentrations of inorganic analytes, in particular antimony, copper, and lead, were identified in the area of the observed maintenance byproducts, and the probable source of these analytes was attributed to the disposal of maintenance byproducts from the former roundhouse (ABB-ES 1993). However, the contamination in soil did not appear to be a source of groundwater contamination. Groundwater in SA 71 was evaluated during the railroad roundhouse supplemental site investigation, and no contaminants of potential concern were identified in the groundwater (ABB-ES 1995).

Based on the 1993 to 1994 investigation results, most of the impacted soil was in the maintenance byproduct disposal area and contained concentrations of antimony, copper, and lead substantially higher than local background concentrations (ABB-ES 1995); therefore, remediation of the soil in that area was deemed appropriate. Consequently, an Action Memorandum was prepared in 1999 to propose a time-critical removal action consisting of the excavation and disposal of impacted soil and to solicit public comment regarding the removal action (Stone and Webster Environmental Technologies and Services 1999).

The removal action was conducted at SA 71 from November 1999 to May 2000 and resulted in the removal of approximately 2,400 cubic yards of metals-contaminated soil. The excavation was backfilled with clean soil and in May 2000 was covered with loam and seed. Final sidewall confirmatory samples from the excavation identified concentrations of antimony and lead above the remediation goals. However, due to the large volume of soil already removed and the increased depth of excavation that would be required, additional excavation was put on hold pending results of additional risk evaluations (Roy F. Weston, Inc. 2001).

The remedial action objective (RAO) for the Railroad Roundhouse removal action was to mitigate maintenance byproduct-impacted ash-sediment layer along the shoreline on Plow Shop Pond. In 2013, a removal action was completed to excavate approximately 900 cubic yards of maintenance by-product below the water line at southern shoreline of the former Railroad Roundhouse area. The removal action was completed successfully, mitigating the risk to the environment and achieved the remedial goal for that area (Sovereign 2014).

In 2014, a quantitative human health risk assessment evaluated unrestricted residential use (Sovereign 2014). Although the human health risk evaluation demonstrated acceptable risk for the assumed future use (open

space/recreation) of the site, because the excess Cumulative Lifetime Cancer Risk for human receptors was above acceptable risk criteria for unrestricted residential use of SA 71, a CERCLA response action was required to prohibit future use of the upland portion of the site for residential purposes.

A CERCLA ROD was issued in September 2015 for AOC 72 and SA 71. While the selected remedy for AOC 72 was No Further Action, to mitigate any potential risk to health and welfare from exposure to debris and residual soil contamination associated with activities in the upland area of the former Railroad Roundhouse, a “Limited Action: Implementation of Land Use Controls” remedy was selected for SA 71. The ROD specified that the LUCs would be addressed through institutional controls, affirmative measures, and prohibitive directives with the objective of limited potential exposure (Sovereign 2015).

2.3 Property Information and Institutional Control Stakeholder Contacts

The contact information for each IC stakeholder is provided below.

Army (Landowner): NC3/Taylor Bldg/RM 1400, 2530 Crystal Drive, Arlington, VA 22202, Attn: BRAC Base Environmental Coordinator. The Army BRAC Base Environmental Coordinator can be contacted via the link provided on the Fort Devens website at <https://www.nae.usace.army.mil/Missions/Projects-Topics/Former-Fort-Devens-Environmental-Cleanup/>.

USEPA: United States Environmental Protection Agency, Region 1, 5 Post Office Square, Federal Facilities Superfund Section, Suite 100 (HBT), Mail Code OSRR07-3, Boston, MA 02019, Attn: Remedial Project Manager.

MassDEP: Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, One Winter Street, Boston, MA 02108, Attn: Superfund Federal Facilities, Section Chief.

MassDevelopment (Lessee): Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: President & CEO. With copies to the following:

- Massachusetts Development Finance Agency, 33 Andrews Parkway, Devens, MA 01434, Attn: EVP, Devens Operations;
- Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: EVP, Real Estate; and
- Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: General Counsel.

3 Key Elements for All Planned/Implemented Institutional Controls

LUCs in regard to real property are broadly interpreted to mean the following:

“any restriction or control, arising from the need to protect human health and the environment, that limits use of and/or exposure to any portion of that property, including water resources. This term encompasses ‘institutional controls,’ such as those involving real estate interests, governmental permitting, zoning, public advisories, deed notices, and other ‘legal’ restrictions. The term may also include restrictions on access, whether achieved by means of engineered barriers such as a fence or concrete pad, or by ‘human’ means, such as the presence of security guards. Additionally, the term may involve both

affirmative measures to achieve the desired restriction (e.g., night lighting of an area) and prohibitive directives (e.g., no drilling of drinking water wells).” (Johnston 1998)

The LUCs for a property will provide a blueprint for how the property is to be used to maintain the level of protection intended by the remedial alternative.

3.1 General Elements

The ROD (Sovereign 2015) was signed in September 2015 and documents “Limited Action: Implementation of LUCs” as the selected remedy for SA 71, consisting of ICs, access use restrictions, affirmative measures, and prohibitive measures. The RAO, as stipulated in the ROD included the following:

- Prevent ingestion/direct contact with residually impacted soil that could pose unacceptable human health risk at SA 71.

The limited action alternative for SA 71 included the following component:

- Implementation of LUCs: addressed through ICs, affirmative measures, and prohibitive directives.

The Army has leased SA 71 to MassDevelopment, along with other Fort Devens parcels, as documented in the 1996 LIFOC (Appendix B). The lease terms include the stipulation that “The Lessee shall not occupy or use parcels A.1 and A.20 of the Leased Premises as described in Exhibit A without the written consent of the Army.” Lease parcel A.1 (also known as A.1SHL) includes SA 71. Implementation of LUCs will be assessed through annual LUC inspections upon approval of this LUCIP.

3.2 Elements Specific to Instrument Category

The ROD for SA 71 was signed in September 2015 (Sovereign 2015). In accordance with the ROD, the basis of the RAO (Section 3.1) was the potential health risks to individuals based on potential future use scenarios of SA 71 (e.g., resident) (Sovereign 2015).

The Army has leased SA 71 to MassDevelopment, along with other Fort Devens parcels, as documented in the 1996 LIFOC (Appendix D). LUCs are included in the 1996 LIFOC that is currently in effect for all leased Fort Devens parcels, including SA 71. These LUC restrictions include a moratorium on subsurface excavation, drilling, digging or other disturbance of the surface of the ground, or construction, alterations, additions, modifications, improvements or installations that may adversely affect the clean-up of leased premises by the lessee without approval of the Army, USEPA, and MassDEP. The LIFOC also stipulates that no groundwater will be extracted for any purpose. These restrictions are more stringent than the RAO for SA 71 as it addresses groundwater extraction which is not presented in the ROD.

LUCs for SA 71 would be implemented through ICs, affirmative measures, and prohibitive directives, with the objective of limiting potential exposure to any residual soil contamination associated with the former railroad roundhouse activities. The specific elements of the LUCs include the following:

1. Prohibiting residential reuse through the use of a property deed restriction and the implementation of an environmental use covenant consistent with a Notice of Activity Use Limitation (NAUL) at the time of property transfer by the Army to MassDevelopment. The residential reuse restriction is the SA 71 boundary and is shown on Figure 2.

2. Affirmative measures to include public education and outreach.
3. Prohibitive directives to ensure that any future soil disturbance activities are avoided by the public and that any excavation by construction/utility contractors is performed in accordance with a Site-Specific Soil Management Plan (SSSMP). The soil disturbance restriction is the SA 71 boundary and is shown on Figure 2.

LUCs would include annual inspections and five-year reviews to confirm the overall effectiveness of the established LUCs.

3.2.1 Land-Use Control Inspection

Existing land use and site conditions will be assessed during annual LUC inspections to confirm that the LUC requirements are being met. If future proposed land uses are inconsistent with the LUCs, then site exposure scenarios to human health and the environment will be re-evaluated to confirm the selected response actions are appropriate.

3.2.2 Interviews

Telephone interviews will be conducted with the property manager or other designee familiar with the day-to-day activities at SA 71. During the interviews, the representative will be asked about compliance with the existing LUCs. Specifically, the following items will be discussed during the interviews:

- The representative's familiarity with the LUCs imposed upon the property and documentation of these controls;
- Change to property use;
- Approved conditional exemptions, amendments, and/or releases;
- Unauthorized use and activities;
- Review of corrective action to resolve unauthorized uses and activities;
- Overall effectiveness of the LUCs;
- Excavations (planned or emergency) that may have extended to soils within the soil disturbance restriction boundary delineated on Figure 2; and
- Proposed plans for property sale, future redevelopment, and construction or demolition activities on the property.

The LUC checklist for SA 71 is presented in Appendix D.

3.2.3 Physical On-Site Inspection

Field personnel will perform a physical inspection of SA 71 during annual LUC inspections to confirm compliance with the LUCs. The physical inspection of SA 71 will include the following items:

- An examination for evidence that groundwater extraction wells have been installed on the premises;
- An examination for evidence that no harmful exposures to the public are evident regarding soil or groundwater;
- An examination for penetrations through the soil surface; and
- Any evidence of site use changes.

The annual LUC checklist, including physical on-site inspection components, is presented in Appendix D.

3.3 Institutional Control Relationship Matrix

Table 2 below provides a summary of LUCs, ICs, and other post-ROD restrictions for SA 71.

Table 2 Summary of Land Use Controls, Institutional Controls, and Other Post-ROD Restrictions

Affected Parcel	Media Affected	LUC/IC Goals/Objectives	Restriction	Use Restriction/IC Objective	IC Instruments (Planned or Implemented)	Site Controls	Other
SA 71, located within Parcel #32-99-1800	Soil	Prevent ingestion/direct contact with residually impacted soil that could pose unacceptable human health risk at SA 71	No contact with contaminated soil	<p>Prohibition of residential reuse of property within the SA 71 LUC boundary. Implementation of a deed restriction and an environmental use covenant consistent with a NAUL at the time of property transfer by the Army to MassDevelopment.</p> <p>Affirmative Measures – Public Education and Outreach. Preparation and distribution of LUC information/restrictions in a brochure or fact sheet to notify the public and current and future landowners of the potential risks associated with direct contact and ingestion of residual contamination in the upland area of SA 71 and confirm they understand LUC requirements and restrictions implemented to limit those risks.</p> <p>Prohibitive Directives – Preparation of a SSSMP to ensure that future soil disturbance activities are avoided by the public and to define the process and procedures required to ensure safe management of soils within the SA 71 LUC boundary.</p>	<p>Implemented: ROD (Sovereign 2015), LIFOC (1996)</p> <p>Planned (upon transfer of property): Restrictive covenants documented in Quitclaim Deed and NAUL</p>	Annual LUC Inspections	Five-year reviews

4 Institutional Control Maintenance Elements

The Army is responsible for implementing, maintaining, reporting, and enforcing the LUCs. Although the Army may delegate some or all of these duties required under this LUCIP to another entity (such as a future property owner) or through a third party by contract or through other means, it retains ultimate responsibility for ensuring the effectiveness and integrity of the SA 71 remedy, as determined by the ROD, through the proper management of soils and implementation, maintenance, reporting, and enforcement of LUCs. Should another entity or third party cease to perform these duties, the Army shall implement the LUCs or propose modifications to this LUCIP that provide an equivalent level of protection, as determined by USEPA and MassDEP, in consultation with MassDevelopment or its successor municipal authority.

Upon approval of this LUCIP by USEPA and MassDEP, the Army will undertake the implementation actions identified in Table 3 to ensure compliance with requirements set forth in the ROD and set forth herein, and ensure that LUC objectives are met and maintained.

Upon transfer of the property, the Army shall ensure that a NAUL is recorded on the title to the property and a copy of the NAUL, prepared, recorded and inserted on the deed is included in Appendix B after recording in the Worcester County Registry of Deeds is complete. The Army, in consultation with USEPA and MassDEP, will work with the future property owner to ensure that the NAUL includes all ROD-required LUCs. Copies of subsequently executed NAULs should be inserted into Appendix B as they are recorded/executed.

4.1 Institutional Control Assurance Monitoring

The following monitoring and maintenance activities will occur annually to confirm the performance objectives of the LUCs are met:

- IC activities are the following:
 - Deed Restriction: At the time the SA 71 portion (as shown on Figure 2) of lease parcel A.1 is transferred to MassDevelopment, the Army will implement a deed restriction prohibiting future residential land use for the SA 71 portion of lease parcel A.1.
 - NAUL: Prior to the SA 71 portion (as shown on Figure 2) of lease parcel A.1 property transfer to MassDevelopment, the Army will cause a NAUL to be prepared, executed, and implemented pursuant to requirements set forth in 310 Code of Massachusetts Regulation 40.1047 pursuant to LUCIP implementation.
- Affirmative measures include the following:
 - Public Education and Outreach: Distribution of this LUCIP to appropriate parties; and
 - Meeting amongst the stakeholders if there is a change in the area due to intrusive activities.
- Prohibitive measures include the following:
 - Future Soil Disturbance and Excavation: The Army (or its designee) will distribute a SSSMP to all construction and/or utility personnel to follow for the management of potentially contaminated soil.

The following monitoring and maintenance activities will occur every five years:

- IC activities include conducting a five-year review in accordance with CERCLA, Section 121(c), so that human health and the environment are being protected by the remedy and to document maintenance of the LUCs.
- Affirmative measures include distribution of the five-year review to appropriate parties.

4.2 Reporting

This section describes the reporting that will be completed to document IC activities and affirmative measures.

4.2.1 Annual Reviews/Inspections

Annual reviews, physical inspections, and interviews with Army, MassDevelopment and current/future sublessees or future property owners shall be conducted to verify continued, effective implementation, enforcement, and compliance with the LUCs required per the ROD and this LUCIP. The Army shall complete the annual LUC inspection checklist, included in Appendix D, to annually evaluate/verify compliance with the foregoing. The Army (or its designee) will provide results of the annual LUC inspection in an annual LUC inspection/compliance report for submittal to USEPA, MassDEP, and MassDevelopment. At a minimum, the annual report will include the completed annual LUC inspection checklist (Appendix D) and a narrative summary of work performed, discuss observations during physical site inspections, identify deviations from the LUCIP and whether they were caused by an implementation issue, a change in site conditions or land use, or some other issue. The report should also recommend corrective actions necessary or already undertaken to correct the infraction(s). If any deficiency(ies) are found during the annual inspection, a written explanation will be prepared indicating the deficiency and what efforts or measures have or will be undertaken to correct the deficiency, and a schedule to correct the same. The correction and enforcement of such deficiencies shall follow the requirements under Section 6, Institutional Control Modification and Termination Elements. If there is to be a delegation of performance of duties by the Army as permitted by Section 4 above, the Army, having ultimate responsibility for the remedy's integrity, will promptly notify USEPA, MassDEP, and MassDevelopment of such delegation.

The Army shall provide copies of the Final LUC Inspection/Compliance Report to USEPA, MassDEP, and MassDevelopment.

4.2.2 Five-Year Reviews

As part of the comprehensive five-year review process conducted at Devens under Section 121 of CERCLA, as amended by Superfund Amendments and Reauthorization Act of 1986, a review/inspection of the continued short- and long-term effectiveness of the LUCs will be conducted by the Army, with the cooperation of MassDevelopment and any current and future property lessees and/or owners. Public meetings will be held by the Army coincident with these five-year reviews to help keep the public informed of site status, including its general condition and effectiveness of the remedial action.

4.2.3 Institutional Controls

An annual LUC compliance review, using the LUC checklist presented in Appendix D, will be documented in an annual report and will be provided by the Army to USEPA, MassDEP, and MassDevelopment. The annual report will include a summary of the items reviewed from the checklist, identification of deviations from this LUCIP,

necessary corrective actions due to implementation issues or as a result of changes in site conditions or land use, and proposed changes to this LUCIP and reporting frequency. If deficiencies, including violations of the LUCs, are found during the annual review, a written explanation will be prepared indicating the deficiency and what efforts or measures have been or will be undertaken to correct the deficiency. The correction and enforcement of such deficiencies will meet the requirements in Section 5 of this LUCIP. If the Army intends to delegate performance of duties, the Army will promptly notify USEPA, MassDEP, and MassDevelopment.

4.2.4 Affirmative Measures

The annual review will include items identified on the attached LUC checklist in Appendix D. This checklist will be followed as a guideline to review required tasks and updates that may be necessary because of changing circumstances throughout that year. The annual report will also address whether the use restrictions and controls referenced in this LUCIP were communicated appropriately via public outreach and education, whether the current property owner and lessee and state and local agencies were notified of the restrictions and controls affecting SA 71, and whether use of the area has conformed to such restrictions and controls.

A fact sheet for SA 71 that presents a site map and summarizes the site history and LUCs and restrictions will be distributed following completion of the LUCIP. The fact sheet will be mailed to the stakeholders identified in the Former Fort Devens Community Involvement Plan and will also be distributed electronically via email and posted to the Fort Devens website.

4.3 Implementation Schedule

The Army will implement all actions by the timeframes indicated in the table below.

Table 3 Milestone Activity Schedule

Milestone Activity	Completion Date
Post the Final LUCIP to the Fort Devens website at https://www.nae.usace.army.mil/Missions/Projects-Topics/Former-Fort-Devens-Environmental-Cleanup/	Within 30 days of USEPA and MassDEP concurrence of the LUCIP
Annual LUC inspection	Occurs annually as part of the inspections of the former Main Post sites
Distribute fact sheet for SA 71	Within 90 days of USEPA and MassDEP concurrence of the LUCIP

5 Institutional Control Enforcement Elements

If the Army determines that the LUCs are not being complied with, its actions may range from informal resolutions with the owner or violator, to the institution of judicial action. Any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs will be addressed by the Army as soon as practicable, but in no case will the process be initiated later than 10 days after

the Army becomes aware of the breach. The Army will notify USEPA and MassDEP as soon as practicable but no longer than 10 days after discovery of any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the ICs. The Army will notify USEPA and MassDEP regarding how the Army has addressed or will address the breach within 10 days of sending USEPA and MassDEP notification of the breach. Should the Army become aware that a user of SA 71 has violated any LUC requirement where a local agency may have independent jurisdiction (local regulations and permits), the Army will also notify the agencies and MassDevelopment or future property owner of such violations and work cooperatively with them to re-establish owner/user compliance with the LUC. Without limiting the authority of the USEPA and MassDEP under applicable law, MassDEP shall have the authority to enforce the NAUL against the then current owner of the property(ies).

6 Institutional Control Modification and Termination Elements

If the Army can demonstrate based on currently available or newly acquired data, that site access restriction can be relaxed or removed while protection of human health is maintained, the Army may petition USEPA for such a relaxation or removal of restrictions. Until such time, the LUCs reflected in this LUCIP are expected to remain in place. If LUCs are no longer needed, the owners, if other than the Army or MassDevelopment, of the area of LUCs will be notified and LUCs will be discontinued.

6.1 Modification

The Army shall not modify or terminate LUCs, implementation actions, or modify restrictions regarding land use without approval by USEPA and the MassDEP and the concurrence of MassDevelopment; provided that Army determines, in its sole discretion, that the requirement for such concurrence shall not place the Army in violation of its legal obligations to the USEPA. The Army shall seek prior concurrence before any anticipated action that may disrupt the effectiveness of the LUCs or any action that may alter or negate the need for LUCs. This LUCIP may be amended only in accordance with Section VII of the Federal Facility Agreement. Except as provided by Section 6.3 of this LUCIP, no changes shall be made without the prior approval of USEPA and MassDEP, and the concurrence of MassDevelopment; provided that Army determines, in its sole discretion, that the requirement for such concurrence shall not place the Army in violation of its legal obligations to the USEPA. In the latter case, Army shall take reasonable steps to consult with MassDevelopment to minimize the impacts of the changes to these parties. Any modification or termination of LUCs required by the current remedy decision document for SA 71 (i.e., ROD) will also require a modification to the SA 71 remedy to document such changes.

6.2 Termination

The LUCs will be maintained until the Army can demonstrate to USEPA, based on currently available or newly acquired data, that site access restriction can be relaxed or removed while protection of human health is maintained. If LUCs are no longer needed, as determined in an Explanation of Significant Differences or ROD Amendment, the Army will coordinate with the owner of the affected property(ies) and MassDEP to record releases of the relevant LUCs following applicable federal, state, and local regulations and will also advise MassDevelopment of that action. At that time, the specific LUCs that are no longer needed, and the associated responsibilities will be discontinued.

6.3 Approvals

Changes to the LUCIP can only be approved through the process set forth in Section 5 of this LUCIP. Where the approval of a party (hereafter, the "approval party") is required under this LUCIP for non-substantive changes that may be made without amendment of this LUCIP as provided herein, the Army (or its designee) shall give the approval party notice thereof, along with any information to be included in such notice pursuant to the terms of this LUCIP. If the approval party fails to respond to the request for approval within 30 days after said request is made, the Army (or its designee) will send the approval party a second request. If the approval party fails to respond to such second request within 10 days after said second request is made, the approval party will be deemed to have approved such request.

6.4 Notices

All notices, responses, requests, and approvals required or permitted under this LUCIP, between or among MassDevelopment (or its successor entity[ies]), USEPA, MassDEP and/or the Army, shall be sent by postage pre-paid certified or registered mail (return receipt requested) or by recognized overnight courier (such as DHL, Federal Express, UPS), with delivery charges prepaid, to the following respective addresses identified below unless all parties consent to the use of electronic mail:

Massachusetts Development Finance Agency: Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: President & CEO. With copies to the following:

- Massachusetts Development Finance Agency, 33 Andrews Parkway, Devens, MA 01434, Attn: EVP, Devens Operations
- Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: EVP, Real Estate
- Massachusetts Development Finance Agency, 99 High Street, Boston, MA 02110, Attn: General Counsel

USEPA: United States Environmental Protection Agency, Region 1, 5 Post Office Square, Federal Facilities Superfund Section, Suite 100 (HBT), Mail Code OSRR07-3, Boston, MA 02019, Attn: Remedial Project Manager.

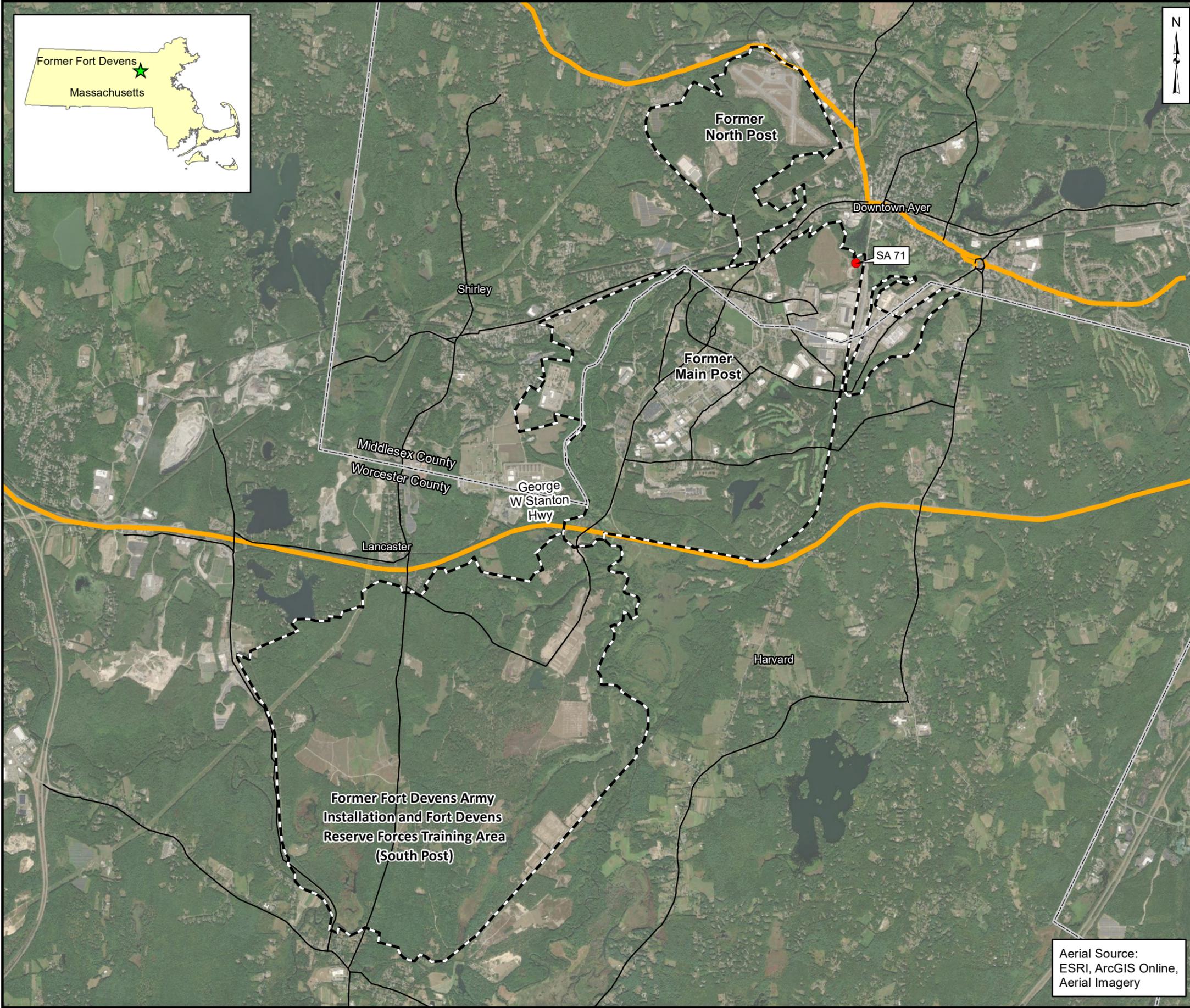
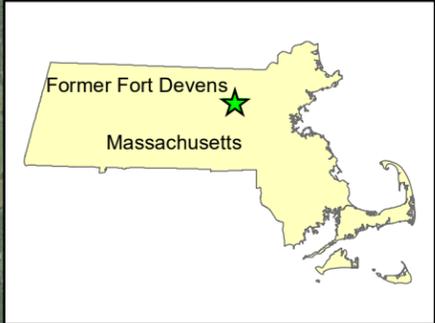
MassDEP: Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, One Winter Street, Boston, MA 02108, Attn: Superfund Federal Facilities, Section Chief.

Army: NC3/Taylor Bldg/RM 1400, 2530 Crystal Drive, Arlington, VA 22202, Attn: BRAC Base Environmental Coordinator.

A party may change its address for notice by notice to the other parties in accordance with this section. Notices shall be deemed given when delivered (or, if delivery is refused, when so refused).

Figures

T:_ENV\Devens_RFTA\Seed_Task_Order\WXDs\AR2022 - SA 71\Figure 1 - Site Location.mxd 7/14/2022 9:59:54 AM User Name: Sharmayh4948



Legend

-  Former Fort Devens Boundary
-  Study Area (SA)
-  County Line
-  Highway
-  Major Road



SA 71, Former Railroad Roundhouse
Former Fort Devens Army Installation
Devens, Massachusetts

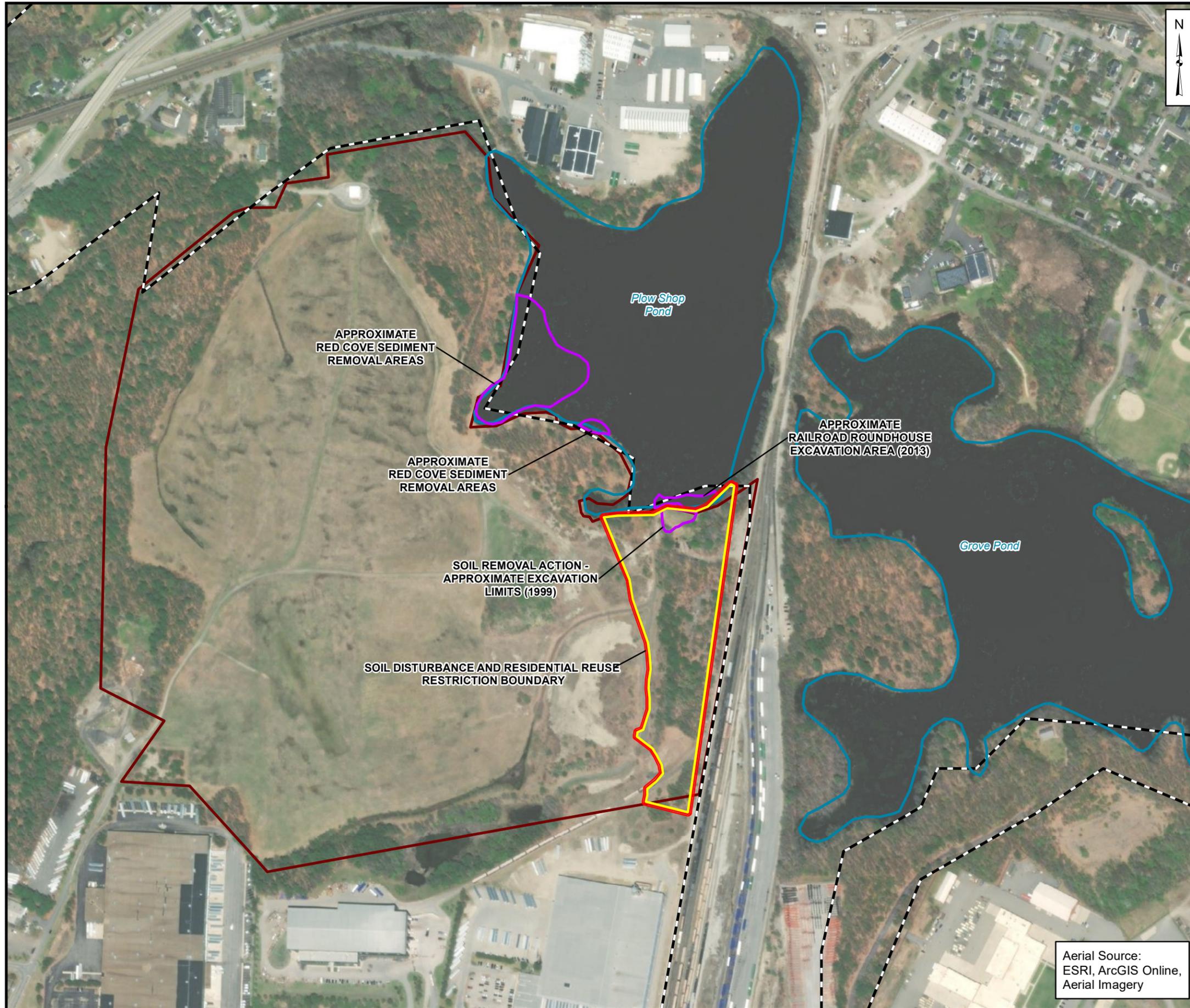
Site Location

Aerial Source:
ESRI, ArcGIS Online,
Aerial Imagery



Figure 1

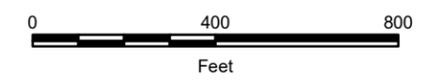
T:_ENV\Devens_RFTA\Seed_Task_Order\WXDs\AR2023 - SA 71\Figure 2 - SA 71 Site Layout.mxd 6/12/2023 11:06:33 AM User Name: yadav0264



- Legend**
-  Former Fort Devens Boundary
 -  Parcel Boundary (Parcel #32-99-1800)
 -  Waterbody
 -  Excavation Area
 -  SA 71 Boundary
 -  Soil Disturbance and Residential Reuse Restriction Boundary

Note:
Boundaries and site features shown on the figure are approximate.

Abbreviation:
SA = Study Area



SA 71, Former Railroad Roundhouse
Former Fort Devens Army Installation
Devens, Massachusetts

Site Layout and Restrictions

Aerial Source:
ESRI, ArcGIS Online,
Aerial Imagery



Figure
2

Appendix A

LUCIP References

References

- ABB Environmental Services, Inc. (ABB-ES). 1993. Draft Railroad Roundhouse Site Investigation Report, Feasibility Study for Group 1A Sites, Fort Devens, Massachusetts. September.
- ABB-ES. 1995. Railroad Roundhouse Supplemental Site Investigation. Feasibility Study for Group 1A Sites, Fort Devens, Massachusetts. September.
- Boston and Maine Railroad. 1919. Right of Way and Track Map, Boston and Maine Railroad, Station 1414+90 to 1467+70. Prepared by the Office of Valuation Engineer, Boston. December.
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- Roy F. Weston, Inc. 2001. Final Closure Report for Study Area 71, Former Railroad Roundhouse Site Various Removal Actions – Phase II. Devens, Massachusetts. January.
- SERES-Arcadis 8(a) Joint Venture 2, LLC. 2022. Final Land Use Control Implementation Work Plan. Former Fort Devens Army Installation, Devens, Massachusetts. February.
- Sovereign. 2014. Study Area 71 Risk Characterization Update, Railroad Roundhouse, Devens, Massachusetts. Technical Memorandum. December.
- Sovereign. 2015. Final Record of Decision for Plow Shop Pond (AOC 72) – Red Cove and Former Railroad Round House (SA 71), Former Fort Devens Army Installation, Devens, Massachusetts. September.
- Stone and Webster Environmental Technologies and Services. 1999. Action Memorandum Railroad Roundhouse Study Area 71. Devens, Massachusetts. November.
- Vanasse Hangen Brustlin, Inc. 1994. Devens Reuse Plan Prepared for the Towns of Ayer, Harvard, Lancaster, and Shirley Boards of Selectmen. November 14.

Appendix B

Enclosures

LEASE IN FURTHERANCE OF CONVEYANCE
OF REAL PROPERTY AND FACILITIES ON
THE FORT DEVENS, MASSACHUSETTS,
MILITARY RESERVATION

202-
529-1389

INDEX

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EXHIBITS

<u>Exhibit Number</u>	<u>Title</u>
A	Lease Premises
B	Memorandum of Agreement - Delivered at Closing ↳ MOA - Army and Landbank
C	Survey of Condition - Delivered at Closing

DEPARTMENT OF THE ARMY
LEASE IN FURTHERANCE OF CONVEYANCE
UNDER
BASE REALIGNMENT AND CLOSURE (BRAC)
THE FORT DEVENS, MASSACHUSETTS,
MILITARY RESERVATION

WHEREAS, the United States, acting through the SECRETARY OF THE ARMY, hereinafter referred to as the "Army" or "Lessor", has made a final disposal or reuse decision with regard to property located at the Fort Devens, Massachusetts, Military Reservation (Fort Devens), dated May 9, 1996; and

WHEREAS, pursuant to the Defense Base Closure and Realignment Act of 1990 (PL 101-510), as amended, (Base Closure Law) Fort Devens must close not later than July 10, 1997; and

WHEREAS, pursuant to Chapter 498 of the Massachusetts Acts of 1993, as amended, the Government Land Bank (Land Bank), hereinafter referred to as the "Land Bank" or "Lessee", was granted the authority to oversee and implement the civilian reuse of Fort Devens in accordance with a locally-approved reuse plan; and

WHEREAS, on December 7, 1994, the Reuse Plan and associated Bylaws for Fort Devens (Reuse Plan) were approved by the towns of Ayer, Harvard and Shirley; and

WHEREAS, the Land Bank, a Local Reuse Authority, has made an application for an Economic Development Conveyance (EDC) to the

Department of the Army for the purchase of portions of the property that formerly comprised Fort Devens; and

WHEREAS, the Army, as authorized by the Base Closure Law, has determined that the Land Bank's application meets the criteria for conveyance to assist economic development and has accepted the application; and an offer to purchase/sell has been negotiated and accepted by Army and the Land Bank, in a Memorandum of Agreement (the MOA), dated May 9, 1996, regarding the transfer to the Land Bank of certain portions of Fort Devens not being retained by the Army or transferred to federal agencies, for the purpose of implementing the Reuse Plan; and

WHEREAS, due to the ongoing environmental cleanup and the unexploded ordnance (UXO) clearance process at Fort Devens being undertaken by the Army, in order to implement the intentions of the Army and the Land Bank as set forth in the MOA, certain parcels will be leased rather than conveyed pending completion of the environmental cleanup and UXO clearance by the Army, said parcels being more particularly described in Exhibit A, hereinafter referred to as the "Lease Premises."

WHEREAS, as soon as a Finding of Suitability to Transfer (FOST) is executed by the Army for the Leased Premises, or a portion of said Leased Premises, and said Leased Premises may be conveyed consistent with the requirements of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9620 (h), as amended, and other legal and policy requirements, the Secretary of the Army intends to convey the same to the Land Bank by one or more quitclaim deeds, as provided for in the MOA, and the Land Bank agrees to accept such conveyance(s) as soon as the above-referenced conditions are met; and

WHEREAS, the Army and the Land Bank have agreed to a Lease pending conveyance(s) so as to provide immediate possession of the Lease Premises to the Land Bank; and

WHEREAS, the parties hereto find, acknowledge, and agree that: (a) the public interest will be served by this Lease because interim use of the Lease Premises will facilitate economic recovery and reuse of the property and create new jobs in the region, thereby helping to offset the impacts of the closure of Fort Devens in a manner that will not interfere with or delay the environmental remediation and UXO clearance of the Lease Premises; (b) the Lease will relieve the Secretary of the expense of continued care, custody, control, operation and maintenance of the property; and (c) under said circumstances obtaining fair market value for leasing the Lease Premises is not compatible with the public interest.

AND WHEREAS, the Secretary has determined in accordance with the authority contained in 10 U.S.C. 2667(f), that the surplus property hereby leased would facilitate state or local economic adjustment efforts; would be advantageous to the United States and be in the public interest; and that obtaining fair market value is not compatible with the public benefit;

NOW THEREFORE,

WITNESSETH

This lease (Lease) is made as of the 9th day of May, 1996, on behalf of the United States, between THE SECRETARY OF THE ARMY (Army), by the authority of Title 10, United States Code, Section 2667, having an address for purposes of the Lease at Department of the Army, C/O Commander and Division Engineer, United States

Army Corps of Engineers, New England Division, Frederick C. Murphy Federal Building, 424 Trapelo Road, Waltham, MA 02254-9149, and THE GOVERNMENT LAND BANK (Land Bank), a Massachusetts body corporate and politic created by Chapter 212 of the Acts of 1975, as amended, having its principal office at 75 Federal Street, 10th Floor, Boston, Massachusetts 02110.

THIS LEASE is granted subject to the following terms and conditions:

ARTICLE 1

LEASE; LEASE TERM; USE OF LEASE PREMISES

1.01 To have and to hold for a term commencing May 9, 1996 and ending on May 9, 2046 (Lease Term), unless sooner terminated or conveyed in fee pursuant to the terms hereof or of the Memorandum of Agreement between the United States of America and the Government Land Bank for the Conveyance of Fort Devens, Massachusetts, dated May 9, 1996 (MOA), attached as Exhibit B, the Army hereby leases to the Land Bank, and the Land Bank hereby leases from the Army, the Lease Premises (Exhibit A herein), including all buildings, facilities and improvements thereon and rights appurtenant thereto. If due to default by the Land Bank or termination of the MOA, the Land Bank is not entitled to conveyance of the Leased Premises at the time the Army is able to convey in fee, then the Lease shall terminate on the date of execution of a Finding of Suitability to Transfer (FOST) by the Army with respect to that portion of the Leased Premises covered by the FOST. The Lessor reserves the use and occupancy of the following buildings, including all facilities and areas currently used by the Lessor in connection therewith, and the right of ingress and egress thereto, until July 10, 1997: T-204, ASP

Operations; T-3701, Administrative; P-3748, Warehouse; T-3758, TASC Warehouse; P-3759, Warehouse; P-3773, Reserve Center; P-3774, Organization Maintenance Shop; P-3775, Oil Storage Building; P-3776 Dispatch Building; P-3631 thru 3642, 3644, 3647, 3649, 3653, collectively the ASP; and Housing Units at 80 Walnut St., 822 Plum Street, and 540 Oak St. The Lessor may vacate said buildings and facilities at any time prior to July 10, 1997, after 30 days written notice to the Lessee.

1.02 As provided in paragraph 1.03 of the MOA, the Lease Premises, or portions thereof, shall be conveyed in accordance with and pursuant to the terms of the MOA to the Land Bank upon execution of a FOST by the Army.

1.03 The Land Bank and any sublessees, subtenants or licensees under this Lease (collectively "sublessees") may use the Lease Premises for all uses as may be permitted by the Reuse Plan or, upon approval of the Army, amendments to the Reuse Plan. If the Army reasonably determines any such amendment of the Reuse Plan allows a use or uses not adequately analyzed in the Fort Devens Disposal/Reuse Environmental Impact Statement (EIS), the Land Bank shall provide additional environmental analysis and documentation, at the Land Bank's expense, to the Army as the Army deems necessary to comply with the National Environmental Policy Act of 1969 and implementing regulations and other applicable environmental laws and regulations, prior to any use under such amendment. The Land Bank shall be solely responsible for complying with the Massachusetts Environmental Policy Act (MEPA).

1.04 Except as otherwise specifically provided, any reference herein to "Lessor" or "Army" shall include their duly authorized representatives. Any reference to "Lessee" or "Land Bank" shall

include successors and assigns, and their duly authorized representatives.

ARTICLE 2

RENT

2.01 The Land Bank shall provide the Army as rent (Rent) hereunder, (a) protection, repair and maintenance of, and assumption of sole operating responsibility for the Lease Premises, except with regard to Army operations undertaken in furtherance of or related to the environmental clean-up or UXO clearance of the Lease Premises, and (b) payment of utility charges, as provided in the Utilities Agreement contained in the MOA. The Land Bank agrees that monetary rent received by the Land Bank from any Sublessee of the Land Bank under this Lease will be applied to costs incurred by the Land Bank for protection, maintenance, operation, repair and improvement of the Lease Premises, as may be necessary to cover such costs.

ARTICLE 3

CONDITION OF LEASE PREMISES; REPAIRS; UTILITIES; HISTORIC PRESERVATION

3.01 The Land Bank has inspected and knows and accepts the condition and state of repair of the Lease Premises. It is understood and agreed that the Lease Premises are leased in an "as is," "where is" condition, without any representation or warranty by the Army concerning the state of repair or condition of the Lease Premises, and without obligation on the part of the Army to make any alterations, repairs or additions, except as may be specifically provided herein. The Land Bank acknowledges that

the Army has made no representation or warranty concerning the condition and state of repair of the Lease Premises nor any agreement or promise to alter, improve, adapt or repair the Lease Premises which has not been fully set forth in this Lease or the MOA. The parties specifically agree that the provisions of this paragraph in no way alter the indemnification and other obligations of the Army set forth in Article 5 of the MOA.

3.02 The Army and the Land Bank will jointly conduct an inventory and condition survey of the Lease Premises, to include the environmental condition, prior to lease execution by either party. The inventory and condition survey will be documented in a survey report (Survey) prepared by the Army, signed by the duly authorized representatives of both parties, and attached as Exhibit C to this Lease. The Survey will refer to and incorporate by reference the Environmental Baseline Survey (EBS), dated March 8, 1996, prepared by the Army, as well as any other environmental conditions that may not be specifically identified in the EBS. The Land Bank hereby acknowledges receipt of a copy of the EBS. At the conclusion of the Lease Term, the Army and the Land Bank will jointly conduct a close-out survey. The Army will prepare a close-out report based upon the close-out survey. The close-out survey and report will include an updated EBS prepared in accordance with Article 16.11.a of this Lease. All significant variances from the initial Survey shall be clearly documented in the close-out report. The close-out survey and report will constitute the basis for settlement by the parties for any leased property shown to be lost, damaged, contaminated, or destroyed during the lease term and restoration of the property as required under this Lease.

3.03 The Land Bank shall keep the Leased Premises in good order and in a clean, safe condition at the Land Bank's sole cost and

expense. The Land Bank shall exercise due diligence in the protection of all property located on the Leased Premises against fire, casualty, or damage from any and all causes, excepting: (i) reasonable wear and tear, (ii) alterations, construction, site preparation or demolition undertaken pursuant to Article 12; and (iii) alterations or damage done in conjunction with environmental remediation or UXO clearance activities conducted by the Army or its contractors. For any Leased property that is not conveyed to the Land Bank upon termination or expiration of this lease; is not covered by the above exceptions; and that is damaged or destroyed by the Land Bank without written permission of the Army; the Land Bank shall be repair or replace said property to the reasonable satisfaction of the Army; or, in lieu of such repair or replacement, the Land Bank shall, at the Army's election, pay to the Army money in an amount sufficient to compensate for the loss sustained by the Army by reason of said damages or destruction. It is understood and agreed by the parties, however, that portions of the Lease Premises, as determined by the Land Bank, may be maintained at the minimal level necessary to prevent deterioration and diminution of value, pending reuse thereof by the Land Bank.

3.04 The Land Bank shall provide, at its sole cost and expense, janitorial, building maintenance and repair and grounds maintenance services at the Lease Premises, as may be required by the Land Bank in the operation of the Lease Premises.

3.05 In accordance with and if authorized by the Utilities Agreement contained in the MOA, the Land Bank may request, and the Army shall provide to the Lease Premises, electricity, natural gas, water, sewer, and telephone services, on a reimbursable basis during the period that the Army retains operation of said systems. Furthermore, if the Land Bank obtains

utility services from sources other than the Army, the charges and method of payment for each utility or service will be determined by the appropriate supplier of said utility or service in accordance with applicable laws or regulations, on such basis as the appropriate supplier and the Land Bank may agree.

3.06 The Lease Premises include historic buildings eligible for listing on the National Register of Historic Places, as described in the Programmatic Agreement attached to the MOA (Exhibit B herein). These buildings will be maintained by the Lessee in accordance with the Secretary of the Interior's Standards for Rehabilitation and Illustrated Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service 1992) (hereinafter Secretary's Standards). Lessee will notify the Army and the State Historic Preservation Officer (SHPO) of any proposed rehabilitations, structural or landscape alterations to these buildings prior to undertaking said rehabilitations/ alterations. If the Lessee does not receive a written objection from the Army or SHPO within 30 days, the Lessee may proceed with the proposed rehabilitations or alterations. Any approved rehabilitations, structural or landscape alterations to these buildings must adhere to the Secretary's Standards.

ARTICLE 4

COMPLIANCE WITH LAWS

4.01 Throughout the term of the Lease, the Land Bank shall, with regard to the Lease Premises, at its own cost and expense, promptly observe and comply with all applicable laws, orders, regulations, rules, ordinances, and requirements of the federal, state, county and local governments and of all of their

administrative departments, bureaus and officials and of the Devens Enterprise Commission established pursuant to Chapter 498 of the Massachusetts Acts of 1993, as amended. The Land Bank shall pay all costs, expenses, claims, fines, penalties and damages that may in any manner arise out of or be imposed because of the failure of the Land Bank to comply with said laws. The provisions of this paragraph shall (a) in no way compromise the Army's obligation under applicable legal requirements to complete the environmental clean-up of the Lease Premises or the clearance of UXO thereon, or to indemnify the Land Bank, as provided for in the MOA; (b) not obligate the Land Bank to complete the environmental clean-up of the Lease Premises being undertaken by the Army as required under CERCLA, the National Contingency Plan (NCP), the FFA, the MOA, and deeds from the Army to the Land Bank.

ARTICLE 5

INDEMNIFICATION OF THE ARMY

5.01 The indemnification provided by the Land Bank to the Army under this Article 5 is subject to the indemnification provided by the Army to the Land Bank under Article 5 of the MOA and in the event of conflict or inconsistency between the provisions of Article 5 of this Lease and said provisions of Article 5 of the MOA, said provisions of Article 5 of the MOA shall control.

5.02 The Army shall not be responsible for damages to property or injuries or death to persons which may arise from or be attributable or incident to the condition or state of repair of the Lease Premises, or the use and occupation of them, or for damages to the property of the Land Bank, or for damages to the property or injuries or death to the person of the Land Bank's

officers, agents, contractors, servants or employees, or others who may be on the Lease Premises at their invitation or the invitation of any one of them. This paragraph shall not apply to damage to property or injuries or death to persons caused by or attributable to the actions of the United States in conducting environmental remediation or other activities on the Lease Premises.

5.03 The Land Bank agrees to assume all risks of loss or damage to property and injury or death to persons by reason of or incident to its possession and/or use of the Lease Premises or the activities conducted under this Lease. The Land Bank expressly waives all claims against the United States for any such loss, damage, personal injury or death caused by or occurring as a consequence of such possession and/or use of the Lease Premises by the Land Bank, or the conduct of activities or the performance of responsibilities under this Lease by the Land Bank. The Land Bank further agrees, to the extent permitted under state law, to indemnify and hold harmless the Army, its officers, agents and employees, from and against all suits, claims, demands or actions, liabilities, judgments, costs and attorneys' fees arising out of, or in any manner predicated upon, personal injury, death or property damage resulting from, related to, caused by or arising out of the possession and/or use of the Lease Premises by the Land Bank. The indemnification obligations of the Land Bank contained herein do not extend to damages, claims, suits, liabilities, judgments, costs and attorney's fees arising out of, caused by or predicated upon (a) the gross negligence or willful misconduct of the Army or its officers, agents or employees, without contributory fault on the part of the Land Bank or any other person, firm, or corporation, or (b) activities undertaken by the Army in relation to the CERCLA clean-up or UXO clearance of the Lease Premises. The Army will

give the Land Bank notice of any claim against it covered by this indemnity as soon after learning of such claim as practicable.

5.04 The Land Bank shall indemnify and hold harmless the United States from any costs, expenses, liabilities, fines, or penalties resulting from discharges, releases, emissions, spills, storage, disposal, or any other action by the Land Bank giving rise to United States liability, civil or criminal, or responsibility under Federal, state or local environmental laws.

5.05 This Article 5 and the obligations of the Land Bank hereunder shall survive the expiration or termination of the lease and the conveyance of the Leased Premises to the Land Bank. The Land Bank's obligation hereunder shall apply whenever the United States incurs costs or liabilities for the Land Bank's actions giving rise to liability under this Article.

ARTICLE 6

ASSIGNMENT; SUBLETTING

6.01 Without the prior written consent of the Army through the Corps of Engineers, New England Division, the Land Bank shall not sublease, license, or grant any interest under this lease, except as provided for in Article 9 (Mortgaging). The Army's consent shall not be unreasonably withheld or delayed and shall be deemed granted if a response is not received by the Land Bank within twenty-one (21) days of the receipt by the Army of a written request for consent. Every sublease shall specifically identify and require compliance with the Environmental Protection provisions set out in Article 16 of this Lease and shall state that it is subject to the terms and conditions of this lease and that, in case of any conflict between the instruments, this lease

will control. The Land Bank shall provide each sublessee with, and make available as appropriate to licensees, a copy of this Lease and MOA.

6.02 The Land Bank may not assign this Lease without the prior written consent of the Army, which consent shall not be unreasonably withheld or delayed, and no assignment shall be valid unless the assignee shall, by an instrument in a form sufficient for recording, enter into an assumption agreement and assume all of the Land Bank's obligations under this Lease. A duplicate original of that assumption agreement will be delivered to the Army within thirty (30) days after the making of the assignment. Upon compliance with the foregoing condition, but not otherwise, the Land Bank shall be released and discharged from any and all liability under the Lease that may accrue from and after the date of the assignment. The assignee shall have no rights under the MOA and shall not be entitled to a conveyance of the Leased Premises upon execution of a FOST by the Army for the Leased Premises or a portion thereof.

6.03 Upon request of the Lessee, the Lessor shall consider attorning to a particular sublease, where the terms of said sublease are consistent with standard Government lease terms and applicable law, regulation, and policy.

ARTICLE 7

TAXES

7.01 The Land Bank shall pay to the proper authority, when and as the same become due and payable, all taxes, assessments and similar charges, which at any time during the term of this Lease,

may be taxed, assessed or imposed upon the Property or interest of the Land Bank with respect to or upon the Lease Premises.

ARTICLE 8
DEFAULTS

8.01 The following shall be deemed a default by either the Army or the Land Bank and a breach of the Lease: a party's failure to observe or perform any of its obligations under the terms, covenants or conditions of the Lease, which failure persists after the expiration of ninety (90) days from the date the aggrieved party gives written notice to the party calling attention to the existence of that failure. However, if the default is one relating to a matter that exposes occupants or the public to an imminent danger to safety or health of which the public authorities have given due notice to the party, then such shorter notice to the party, whether written or otherwise, shall be sufficient notice of default under this Lease.

8.02 In the event of a default, as provided in 8.01, the aggrieved party may, at its option, following the expiration of applicable notice and grace periods: (a) seek injunctive relief, monetary damages, or both; (b) take such measures as the aggrieved party deems reasonable to mitigate the effects of or cure such default, and assess all costs incurred for such mitigation to the defaulting party; (c) terminate this Lease; or (d) avail itself of any combination of said remedies.

8.03 Any action taken by either party under this Article 8 shall not waive any right that the party would otherwise have against the other party who shall remain responsible for any loss and damage suffered by reason of the default or breach.

8.04 If the Land Bank shall have made any sublease hereunder and if any Sublessee thereunder shall have given to the Army a notice (Sublessee Notice), specifying the name and address of the Sublessee, the Army shall give to the Sublessee a copy of each notice of default by the Land Bank at the same time as and whenever any such notice of default shall thereafter be given by the Army to the Land Bank, addressed to the Sublessee at the address last furnished to the Army. No notice of default by the Army shall be deemed to have been given to the Land Bank unless and until a copy thereof shall have been so given to the Sublessee. The Sublessee shall then have a period of ten (10) days more, after service of the notice upon it, for remedying the default or causing it to be remedied, than is given the Land Bank hereunder after service of such notice upon it, except in the case of imminent danger to safety or health.

8.05 The Army will accept performance by any Sublessee hereunder of any covenant, condition or agreement to be performed under the Lease by the Land Bank, with the same force and effect as though performed by the Land Bank.

8.06 From and after receiving a Sublessee Notice, the Army and the Land Bank will not materially modify or amend the Lease without giving each Sublessee that gave a Sublessee Notice to the Army hereunder thirty (30) days written notice thereof.

8.07 Other than under the provisions of this Article 8, the Army shall have no legal responsibility or obligation to the Land Bank's sublessees or licensees.

ARTICLE 9
MORTGAGING

9.01 The Land Bank or any Sublessee may make a mortgage or mortgages on its interest in the Lease. The provisions of this Article 9 shall be fully applicable to Sublessees of the Land Bank.

9.02 If the Land Bank shall have made any mortgage (sometimes referred to as a Leasehold Mortgage) and if a Leasehold Mortgagee (the holder of any Leasehold Mortgage) shall have given to the Army a notice (Leasehold Mortgagee's Notice) specifying the name and address of the Leasehold Mortgagee, the Army shall give to the Leasehold Mortgagee a copy of each notice of default by the Land Bank at the same time as and whenever any such notice of default shall thereafter be given by the Army to the Land Bank, addressed to the Leasehold Mortgagee at the address last furnished to the Army. No notice of default by the Army shall be deemed to have been given to the Land Bank unless and until a copy thereof shall have been so given to the Leasehold Mortgagee. The Leasehold Mortgagee shall then have a period of ten (10) days more after service of notice upon it, for remedying the default or causing it to be remedied, than is given the Land Bank under paragraph 8.01 herein, except in case of imminent danger to safety or health. The Leasehold Mortgagee, in case the Land Bank shall be in default, shall, within the period provided for in this paragraph 9.02 and, if applicable, 9.04, have the right to remedy the default or cause it to be remedied.

9.03 The Army will accept performance by the Leasehold Mortgagee of any covenant, condition, or agreement to be performed under

the Lease by the Land Bank with the same force and effect as though performed by the Land Bank.

9.04 Except where the default is one relating to a matter that exposes occupants or the public to an imminent danger to safety or health of which the public authorities have given due notice to the Land Bank, whether written or otherwise, the time of the Leasehold Mortgagee to cure any default by the Land Bank that reasonably requires the Leasehold Mortgagee be in possession of the Lease Premises to do so, shall be deemed extended to include the period of time required by the Leasehold Mortgagee to obtain possession and foreclose expeditiously and with due diligence.

9.05 From and after receiving the Leasehold Mortgagee's Notice, the Army and the Land Bank will not materially modify or amend the Lease in any respect without the prior consent of the Leasehold Mortgagee, which consent shall not be unreasonably withheld or delayed. In the event the Leasehold Mortgagee fails to respond to a notice of material modification or amendment of the Lease within thirty (30) days after service of notice, the Leasehold Mortgagee will be deemed to have given its consent.

9.06 No Leasehold Mortgagee shall become liable under the Lease unless a Leasehold Mortgagee becomes the owner of the leasehold estate, and in such event shall be liable only for as long as such Leasehold Mortgagee remains the owner of the leasehold estate.

9.07 If a Leasehold Mortgagee acquires the Land Bank's interest in the Lease as a result of a sale under its Leasehold Mortgage pursuant to a judgment of foreclosure and sale, or through any transfer in lieu of foreclosure, or through settlement of or

arising out of any pending or contemplated foreclosure action, the following provisions of this paragraph shall apply, namely:

a. The Leasehold Mortgagee must assume the Lease and the Leasehold Mortgagee shall have no right with respect to the Lease Premises unless said Leasehold Mortgagee assumes and delivers to the Army a duplicate original of the assumption agreement (to be executed in form for recording) within ten (10) days after said Leasehold Mortgagee acquires title to all or a portion of the Land Bank's interest in the Lease.

b. The Leasehold Mortgagee may transfer its interest in the Lease to a nominee or a wholly-owned subsidiary corporation without the prior consent of the Army, provided, however, that the Leasehold Mortgagee shall deliver to the Army in due form for recording within ten (10) days after the date of the transfer a duplicate original of the instrument of assignment and an instrument of assumption by the transferee of all of the Land Bank's obligations under the Lease, and provided further that the Army shall be given prior written notice of such transfer, and that the transferee shall use the Lease Premises in a manner that conforms to the Reuse Plan. The Leasehold Mortgagee shall be relieved of any further liability under the Lease after the transfer.

9.08 Any purchaser at a foreclosure sale must assume the Lease and said purchaser shall have no right with respect to the Lease Premises unless said purchaser so assumes and delivers to the Army a duplicate original of the assumption agreement (to be executed in form for recording) within ten (10) days after said purchaser acquires title to all or a portion of the Land Bank's interest in the Lease.

ARTICLE 10
QUIET ENJOYMENT

10.01 The Land Bank, upon performing its obligations under the Lease shall and may, at all times during the Lease Term, peaceably and quietly have, hold, and enjoy the Lease Premises, subject to the rights of the Army under this Lease and the MOA.

ARTICLE 11
SUCCESSORS AND ASSIGNS

11.01 The covenants and agreements contained in the Lease inure to the benefit of and are binding upon the parties to the Lease, their successors and assigns, but this Article does not modify the provisions governing assignment, as elsewhere provided for in the Lease.

ARTICLE 12
IMPROVEMENTS; RESTORATION

12.01 The Land Bank shall have the right to make improvements to the Lease Premises, which improvements may include, without limitation, the demolition of existing buildings and the construction of new buildings and facilities, as provided for in the Reuse Plan and that do not violate the terms of this Lease. If the lease expires or terminates without conveyance of the Lease Premises to the Land Bank pursuant to the terms of the MOA, all improvements to the Lease Premises will become the property of the United States, and the Land Bank shall not be entitled to any compensation therefor.

12.02 If, on or before the date of expiration of this Lease or its termination by the Land Bank or the Army in accordance with the terms hereof, the Land Bank shall vacate the Lease Premises, the Land Bank will remove any personal property of the Land Bank therefrom, and restore the Lease Premises to as good order and condition as that existing upon the date of commencement of the term of this Lease, except for: (a) alterations, site preparation, improvements or demolition undertaken -- (i) pursuant to this Article 12, Article 16, or otherwise hereunder by the Army in conjunction with environmental remediation or UXO clearance activities, or (ii) with the permission of the Army; or (b) due to fair wear and tear. If this Lease is terminated by the Army in accordance with the terms hereof, the Land Bank shall vacate the Lease Premises, remove personal property therefrom, and restore the Lease Premises to the condition aforesaid within such reasonable time as the Army may designate. In either event, if the Land Bank does not remove said personal property and so restore the Lease Premises, then, at the option of the Army, said personal property shall either become the property of the United States, without compensation therefor, or the Army may cause it to be removed and the Lease Premises to be restored at the expense of the Land Bank, and no claim for damages against the United States or its officers or agents shall be created by or made on account of such removal and/or restoration work.

ARTICLE 13

NOTICES

13.01 All notices to the parties shall be addressed to them at the respective addresses first given for them in this Lease, or to such other address of which either of them, as the case may

be, shall notify the other in the manner stated in this Article 13 for giving notice. Notices must be given by either registered mail, return receipt requested, or by certified mail, return receipt requested. The service of the notice shall be deemed complete upon the receipt of said notice, or the refusal thereof, by the applicable party.

ARTICLE 14

NO WAIVER

14.01 The failure of the Army or the Land Bank to insist in any one or more instances, upon a strict performance of any of the covenants of the Lease, or to exercise any option contained in the Lease, shall not be construed as a waiver of or relinquishment for the future of the performance of that covenant, or the right to exercise that option, but the same shall continue and remain in full force and effect.

ARTICLE 15

REMEDIES CUMULATIVE

15.01 The rights and remedies given to the Land Bank or the Army upon the breach of any of the terms of the Lease are distinct, separate and cumulative remedies, and no one of them, whether exercised or not, shall be deemed to be in exclusion of any of the others.

ARTICLE 16
ENVIRONMENTAL AND SAFETY PROVISIONS

16.01 The parties acknowledge that Fort Devens has been identified as a National Priorities List Site under CERCLA. The Land Bank acknowledges that the Army has provided it with a copy of the FFA and will provide the Land Bank with a copy of any amendments thereto. The Land Bank agrees to abide by the applicable terms of the FFA and any documents originating therefrom, and further agrees that should any conflict arise between the terms of the FFA, as it may be amended, and the Lease, the FFA shall take precedence. The Land Bank further agrees that, except as provided in the provisions of Article 5 of the MOA, the Army assumes no liability to the Land Bank should implementation of the FFA interfere with the Land Bank's use of the Leased Premises, provided, however, that the Army shall, to the extent reasonable, practical, and without additional costs, minimize interference with such use. The Land Bank shall have no claim on account of any such interference against the Army or any officer, agent, employee or contractor thereof, other than for abatement of rent.

16.02 The United States' rights under this Lease specifically include the right for United States officials to inspect, upon reasonable notice, the Leased Premises for compliance with environmental, safety, and occupational health laws and regulations, whether or not the United States is responsible for enforcing them. Such inspections are without prejudice to the right of duly constituted enforcement officials to make such inspections. The United States normally will give the Lessee twenty-four (24) hours prior notice of its intention to enter the Leased Premises unless the United States determines earlier entry is required for safety, environmental, operations, or security purposes. The Lessee shall have no claim on account of any entries against the United States, the Commonwealth, or any officer, agent, employee, or contractor thereof.

16.03 The Land Bank shall not construct or make or permit its sublessees to construct or make any substantial alterations, additions, or improvements to or installations upon or otherwise modify or alter the Leased Premises in any way which may adversely affect the cleanup, human health, or the environment without the prior written consent of the Army. Such consent may include a requirement to provide the Army with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the United States. For construction or alterations, additions, modifications, improvements, or installations in the proximity of operable units that are part of a National Priorities List (NPL) site, such consent may include a requirement for written approval by the United States' Remedial Project Manager.

16.04 The Army, EPA and the Massachusetts Department of Environmental Protection (DEP), their officers, agents, employees, contractors and subcontractors have the right, upon reasonable notice to the Land Bank, and to parties in possession, to enter upon the Leased Premises for purposes consistent with the applicable provisions of the FFA, and for the following purposes:

a. to conduct investigations and surveys, including, where necessary, drilling, soil and water sampling, test pitting, soil boring tests and other activities required under the FFA;

b. to inspect field activities of the Army and its employees, agents, contractors and subcontractors in implementing the FFA;

c. to conduct any test or survey required by EPA or DEP relating to the implementation of the FFA or environmental conditions at the Leased Premises, or to verify any data submitted to the EPA or DEP by the Army relating to such conditions; and

d. to construct, operate, maintain or undertake any other response or remedial action as required or necessary under the FFA, including, but not limited to, monitoring wells, soil removal, pumping wells and treatment facilities;

provided that the Leased Premises are restored in a reasonable manner to their condition prior to the exercise of the above rights, and provided further that any such inspection, survey, investigation or other response or remedial action will, to the extent reasonable, practical and without significant additional cost, be coordinated with a representative of the Land Bank and be performed in a manner that will minimize interference with the operations of the Land Bank. The Land Bank agrees to comply with the provisions of any health or safety plan in effect during the course of the above-described response or remedial actions.

16.05 The Land Bank or any agent or contractor of the Land Bank shall not undertake subsurface excavation, drilling, digging or other substantial disturbance of the surface of the ground, or construction, alterations, additions, modifications, improvements or installations that may adversely affect the clean up being undertaken on the Leased Premises or other portions of the Fort Devens NPL site, without: (a) seven (7) days prior written notice to the Army, EPA and DEP; and (b) prior written consent of the Army, which consent shall not be unreasonably withheld or delayed, and which consent may include a requirement for written approval by the EPA and DEP. Such consent may involve a requirement to provide the Army with a performance and payment bond satisfactory to it in all respects and other requirements deemed necessary to protect the interests of the Army. No groundwater will be extracted for any purpose. Excavation of garbage or landfill materials is prohibited.

16.06 The Land Bank hereunder shall be solely responsible for obtaining, at its cost and expense, any environmental permits required for its operations under the Lease, independent of any

existing permits, provided however, that the Army shall, where permitted by applicable law or regulation, and at no cost to the Army, assign any such permits to the Land Bank, if so requested by the Land Bank, except where such assignment is prohibited by regulations or written policy of the Army.

16.07 The Land Bank shall have a plan approved by the Army for responding to hazardous waste, fuel and other chemical spills prior to commencement of operations on the Leased Premises, which approval shall not be unreasonably withheld or delayed. Such plan shall be independent of Fort Devens or its successors and shall not rely on use of installation personnel or equipment. Should the Army provide any personnel or equipment, spill containment, either on request of the Land Bank, or because the Land Bank was not, in the reasonable opinion of the Army, conducting timely cleanup actions, the Land Bank agrees to reimburse the Army for its costs.

16.08 The Land Bank shall comply with: (i) the requirement of 10 U.S.C. § 2692 to obtain the necessary Army approval for any storage of toxic or hazardous materials on the Leased Premises and (ii) the hazardous waste permit requirements under the Resource Conservation and Recovery Act (RCRA) and its Massachusetts equivalent. Except as specifically authorized by the Army in writing, the Land Bank must provide, at its own expense, any hazardous waste management facilities, required by applicable laws and regulations. Hazardous waste management facilities of the Army will not be available to the Land Bank.

16.09 Any Army accumulation points for hazardous and other wastes will not be used by the Land Bank. The Land Bank will not permit their hazardous waste to be commingled with hazardous waste of the Army.

16.10 The Land Bank acknowledges that the Leased Premises are being leased subject to a Finding of Suitability to Lease (FOSL), dated March 28, 1996, which has been provided to the Land Bank.

The parties hereto acknowledge and agree that the Leased Premises consist of parcels identified by the Army and EPA as parcels that require further environmental remediation, or documentation of the completion of remediation, by the Army, and include areas designated as Areas of Contamination, Study Areas, and Areas Requiring Environmental Evaluation.

16.11 Notices

a. Preceding expiration, revocation or termination of this lease, the Lessee shall fully fund the Army's preparation of an updated EBS that will document the environmental condition of the property at that time in conjunction with the close-out survey and report, as described in Article 3.02 of this Lease. The updated EBS will serve to support the FOST for the transfer or conveyance of the property or, if the termination is not for purposes of conveying said property, a comparison of the initial and close-out surveys will assist the Division Engineer in determining any environmental restoration requirements, to be completed by the Lessee in accordance with the condition Article 12 of this Lease.

b. NOTICE OF HAZARDOUS SUBSTANCES. To the extent such information is available on the basis of a complete search of Army files, notice regarding hazardous substances stored for one year or more, known to have been released, or disposed of on the Leased Premises is provided in the notice attached to the MOA (Exhibit B herein). The Land Bank should consult the EBS for more detailed information.

c. NOTICE OF THE PRESENCE OF ASBESTOS. The Leased Premises are known to contain certain amounts of asbestos, such as in, but not limited to, the floor tile, linoleum and associated mastic, asbestos-containing pipe and tank insulation, heating, ventilating and air conditioning vibration joint cloths, exhaust flues, acoustic ceiling treatment, siding, and roofing materials.

The Lessee covenants and agrees that in its use and occupancy of the property, it will comply with all applicable laws relating to asbestos, and the Army assumes no liability for damages for personal injury, illness, disability, or death to the Lessee, its successors or assigns, or to any other person including members of the general public, arising from or incident to the purchase, transportation, removal, handling, alteration, renovations, use, disposition or other activity causing or leading to contact of any kind whatsoever with asbestos on the property described in this Lease, regardless of whether the Lessee, its successors, or assigns, have properly warned or failed to properly warn the individual(s) injured.

d. NOTICE OF THE PRESENCE OF LEAD-BASED PAINT. The Lessee is hereby informed and does acknowledge that all buildings on the Lease Premises, which were constructed or rehabilitated prior to 1978, are presumed to contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant woman. Before renting pre-1978 housing (target housing) lessors and sublessors must disclose to sublessees the presence of lead-based paint and/or lead-based paint hazards in the dwelling. "Target housing" means any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless any child who is less than 6 years of age resides or is expected to reside in such housing) or any 0-bedroom dwelling.

(1) Available information concerning known lead-based paint and/or lead-based paint hazards, the location of lead-based paint and/or lead-based paint hazards, and the condition of painted surfaces is contained in the EBS, dated March 8, 1996, and the Finding of Suitability to Lease, dated March 28, 1996,

which have been provided to the Lessee. All lessees and sublessees must also receive the federally approved pamphlet on lead poisoning prevention. The Lessee hereby acknowledges receipt of the information described in this paragraph.

(2) The Lessee and its sublessees, successors, and assigns, shall not permit the occupancy of any target housing without complying with this section 16.07d and all applicable federal, state, and local laws and regulations pertaining to lead-based paint and/or lead-based paint hazards. Prior to permitting the occupancy of target housing, if required by law or regulation, the Lessee will abate and eliminate lead-based paint hazards by treating any defective lead-based paint surface in accordance with all applicable laws and regulations.

e. NOTICE OF THE PRESENCE OF RADON. Buildings on the Lease Premises may contain unhealthy levels of radon. Available and relevant radon assessment data pertaining to the Lease Premises are in the EBS. Prior to the use of any building for residential use or 24-hour per day occupancy, the Lessee, at its expense, must take appropriate measures to reduce the radon level to safe levels, in accordance with EPA guidelines.

f. NOTICE OF THE PRESENCE OF UXO. Certain portions of the Lease Premises, as designated as A2, A21, and A22 in Exhibit A herein (UXO Parcels), are subject to further UXO clearance by the Army, which clearance shall be undertaken by the Army promptly and at Army expense, subject to availability of funds. The Army will inform the Land Bank in writing when the clearance has been completed.

16.12 Each sublease, tenancy or license agreement made by the Land Bank hereunder shall contain provisions that will ensure the continuing compliance of the Land Bank, and the grantee

thereunder, with the FFA, CERCLA, and this Article 16.

Furthermore, the Land Bank shall provide to the EPA and DEP, by certified mail, a copy of each sublease or license of the Leased Premises (as the case may be) within fourteen (14) days after the effective date of such transaction. The Land Bank may delete the financial terms and any other proprietary information from the copy of any sublease or license furnished pursuant to this paragraph.

16.13 The Lessee shall not occupy or use parcels A.1 and A.20 of the Leased Premises as described in Exhibit A without the written consent of the Army.

16.14 As contemplated in 40 CFR 51.853 (c) (xix) and 93.153(c) (xix) governing the conduct of General Conformity determinations, implementing Clean Air Act § 176(c), this lease is in furtherance of the transfer of the property through an EDC application and, as soon as the Finding of Suitability to Transfer (FOST) is issued and said property can be conveyed in accordance the requirements of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9620(h) (3), as amended, and other legal and policy requirements, the Army is legally obligated to convey to the Land Bank by one or more quitclaim deeds, the Lease Premises. The Army does not intend to and does not retain continuing authority to control air pollutant emissions associated with activities conducted on the Leased Premises pending the conveyance(s) within the meaning of 40 CFR 51.853 (c) (xix) and 91.153 (c) (xix).

ARTICLE 17
DISPUTES CLAUSE

17.01 Except as provided in the Contract Disputes Act of 1978 (41 U.S.C. 601-613) (the Act), all disputes arising under or relating to this lease shall be resolved under this clause and the provisions of the Act.

17.02 "Claim", as used in this clause, means a written demand or written assertion by the Land Bank seeking, as a matter of right, the payment of money in a sum certain, the adjustment of interpretation of lease terms, or other relief arising under or relating to this lease. A claim arising under this lease, unlike a claim relating to this lease, is a claim that can be resolved under a lease clause that provides for the relief sought by the Land Bank. However, a written demand or written assertion by the Land Bank seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by section 17.04 below.

17.03 A claim by the Land Bank shall be made in writing and submitted to the Division Engineer for a written decision. A claim by the United States against the Land Bank shall be subject to a written decision by the Division Engineer.

17.04 For Land Bank claims exceeding \$100,000, the Land Bank shall submit with the claim a certification that (i) the claim is made in good faith; and (ii) supporting data are accurate and complete to the best of the Land Bank's knowledge and belief; (iii) and the amount requested accurately reflects the lease adjustment for which the Land Bank believes the United States is liable.

17.05 The certification shall be executed by (i) a senior company official in charge of the Land Bank's location involved; or (ii) an officer or general partner of the Land Bank having overall responsibility of the conduct of the Land Bank's affairs.

17.06 For Land Bank claims of \$100,000 or less, the Division Engineer must, if requested in writing by the Land Bank, render a decision within 60 days of the request. For Land Bank-certified claims over \$100,000, the Division Engineer must, within 60 days, decide the claim or notify the Land Bank of the date by which the decision will be made.

17.07 The Division Engineer's decision shall be final unless the Land Bank appeals or files a suit as provided in the Act.

17.08 At the time a claim by the Land Bank is submitted to the Division Engineer or a claim by the United States is presented to the Land Bank, the parties, by mutual consent, may agree to use alternative means of dispute resolution. When using alternate dispute resolution procedures, any claim, regardless of amount, shall be accompanied by the certificate described in section 17.04 of this Article, and executed in accordance with section 17.05 of this clause.

17.09 The United States shall pay interest on the amount found due and unpaid by the United States from (1) the date the Division Engineer received the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Division Engineer receives the claim and

then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

17.10 The Land Bank shall proceed diligently with the performance of the lease, pending final resolution of any request for relief, claim, or action arising under the lease, and comply with any decision of the Division Engineer.

ARTICLE 18
MISCELLANEOUS

18.01 Both parties acknowledge and agree that a Notice of Lease will be recorded in the public records, which Notice shall be signed by the parties hereto and identify the Lease Premises.

18.02 The Lease is subject to all existing easements and rights of way of record.

18.03 The provisions of this Lease are not subject to 10 U.S.C. §2662.

18.04 This Lease contains the entire agreement between the parties regarding the lease of the Lease Premises to the Land Bank, and any agreement hereafter made shall not operate to change, modify or discharge this Lease in whole or in part unless that agreement is in writing and signed by the party sought to be charged with it.

18.05 No member or delegate to Congress or Resident Commissioner shall be admitted to any share or part of this Lease or to any benefit to arise therefrom. Nothing herein contained, however,

shall be construed to extend to any incorporated company, if the Lease be for the general benefit of such corporation or company.

18.06 Nothing contained in this Lease will make or will be construed to make the parties hereto partners or joint venturers with each other, it being understood and agreed that the only relationship between the Army and the Land Bank hereunder is that of lessor and lessee. Neither will anything in this Lease render or be construed to render either of the parties hereto liable to any third party for debts or obligations of the other party hereto.

18.07 The brief headings or titles preceding each Article are merely for purposes of identification, convenience and ease of reference and will be completely disregarded in the construction of this Lease.

18.08 This Lease is executed in two (2) counterparts, each of which is deemed an original of equal dignity with the others and which is deemed one and the same instrument as the other.

18.09 All personal pronouns used in this Lease, whether used in the masculine, feminine or neuter gender, will include all other genders.

18.10 This Lease shall terminate upon the transfer of all of the Lease Premises to the Land Bank in fee, or otherwise as provided for herein.

18.11 If any provision of this Lease is declared or found to be illegal, unenforceable or void, then both parties shall be relieved of all obligations under that provision. The remainder

of this Lease shall remain enforceable to the fullest extent permitted by law.

18.12 Discrimination.

a. The Lessee shall not discriminate against any person or persons or exclude them from participation in the Lessee's operations, programs or activities conducted on the Leased Premises, because of race, color, religion, sex, age, handicap, or national origin.

b. The Lessee, by acceptance of this lease, is receiving a type of Federal assistance and, therefore, hereby gives assurance that it will comply with the provisions of Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. § 2000d); the Age Discrimination Act of 1975 (42 U.S.C. § 6102); and the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794). This assurance shall be binding on the Lessee, its agents, successors, transferees, sub-lessees and assignees.

Article 19

Insurance

19.01. At the commencement of this lease, the Land Bank shall obtain, from a reputable insurance company, or companies, comprehensive liability insurance. The insurance shall provide an amount not less than a combined single limit of \$1,000,000 for any number of persons or claims arising from any one incident with respect to bodily injuries or death resulting therefrom, property damage, or both, suffered or alleged to have been suffered by any person or persons resulting from the operations of the Lessee under the terms of this lease.

19.02 The liability insurance policy shall insure the hazards of the demised premises and operations conducted in and on the demised premises, independent contractors, contractual liability (covering the indemnity included in this leases agreement), and shall name the United States as an insured party. Each policy will provide that any losses shall be payable notwithstanding any act or failure to act or negligence of the Land Bank or the United States or any other person; provide that the insurer will have no right of subrogation against the United States; and be reasonably satisfactory to the United States in all respects. Under no circumstances will the Land Bank be entitled to assign to any third party rights of action that it may have against the United States arising out of this Lease. The Land Bank shall require that the insurance company give the Division Engineer thirty (30) days written notice of any cancellation or change in such insurance. The Division Engineer may require closure of any or all of the Lease Premises during any period for which the Lessee does not have the required insurance coverage. The Land Bank shall require its insurance company to furnish to the Division Engineer a copy of the policy or policies, or if acceptable to the Division Engineer, certificates of insurance evidencing the purchase of such insurance. The minimum amount of liability insurance coverage is subject to revision by the Division Engineer every three years or upon renewal or modification of this lease.

19.03 It is the Buyer/Lessee's option to obtain insurance on the structures and improvements of the Lease Premises, for such periods as the Lessee is in possession of the Lease Premises pursuant to this lease, to protect its interest. Nothing herein contained shall be construed as an obligation upon the United States to repair, restore or replace the Lease Premises or any

part thereof should it be diminished in value, damaged or destroyed. The purchase price will not be altered should such damage occur and the Lessee has failed to obtain insurance. Any proceeds paid to the United States shall be applied to the purchase price.

19.04 The Land Bank shall maintain worker compensation and employer's liability insurance as required by the Commonwealth of Massachusetts.

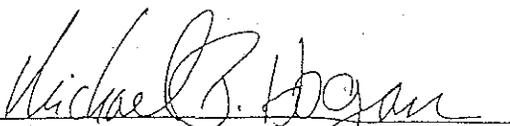
IN WITNESS WHEREOF, the parties have executed the Lease as of the day and year first above written.

UNITED STATES OF AMERICA

By 
Paul W. Johnson

Deputy Assistant Secretary of the Army
(Installations and Housing)

THE GOVERNMENT LAND BANK

By: 
Michael P. Hogan
Executive Director

Appendix C

**Record of Decision for Plow Shop Pond (AOC 72) – Red Cove
and Former Railroad Roundhouse (SA 71)**



TRANSMITTAL MEMO

To Carol Keating - USEPA 2 - Hard Copy and CD
Jane Dolan - USEPA Hard Copy and CD
David Chaffin - MADEP Hard Copy and CD
Ron Ostrowski - Mass Development Hard Copy and CD
Julie Corenzwit - Co-Chair, Devens Restoration Advisory Board Hard Copy and CD
Laurie Nehring - PACE Hard Copy and CD
Richard Doherty - Engineering and Consultant Resources, Inc. Hard Copy and CD
Ken Munney - USFWS Hard Copy and CD
Libby Herland - USFWS Hard Copy and CD
Richard Hartley - MA Div. of Fisheries and Wildlife Hard Copy and CD
Calvin Moore - Moore Lumber Co. Hard Copy and CD
James Greacen - Mabbett & Associates Hard Copy and CD
Chair - Ayer Board of Selectmen Hard Copy and CD
Ayer Town Administrator Hard Copy and CD
Ayer Board of Health Hard Copy and CD
Ayer Conservation Commission Hard Copy and CD
Mark Wetzel, P.E., Ayer Public Works Hard Copy and CD
Chair - Lancaster Board of Selectman Hard Copy and CD
Lancaster Town Administrator Hard Copy and CD
Lancaster Conservation Commission Hard Copy and CD
Chair - Shirley Board of Selectman Hard Copy and CD
Chair - Harvard Board of Selectman Hard Copy and CD
Harvard Town Administrator Hard Copy and CD
Nashua River Watershed Association Hard Copy and CD
Peter Lowitt - Devens Enterprise Commission Hard Copy and CD
Robert Burns - Boston and Maine Corporation Hard Copy and CD

Cc: Robert Simeone - BEC, Devens RFTA Hard Copy and CD
Penelope Reddy - USACE New England District 2 - Hard Copy and CD
Marc Cicalese - Sovereign Consulting Electronic copy
Eric Simpson - Sovereign Consulting Electronic copy

Date: 13 November 2015

Subject: **ROD for AOC 72 and SA 71 (Final Version)**
Contract Number W912WJ-10-D-0003, Delivery Order 0009

On behalf of the US Army Corps of Engineers (USACE) New England District and the Army BRAC Environmental Office at Devens, Sovereign is pleased to provide the following attachments:

1. Record of Decision (ROD) for AOC 72 and SA 71 (Final Version)
2. CD with Electronic Copy



SOVEREIGN CONSULTING INC.

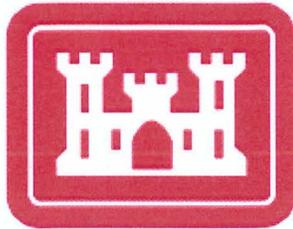
The ROD presents the selected remedies for Plow Shop Pond (Area of Contamination [AOC] 72) and the Former Railroad Roundhouse (Study Area [SA] 71) located at the former Fort Devens Army installation (Devens) in Devens, Massachusetts.

If you have any questions regarding this document please contact Robert Simeone at (978) 796-2205.

Sincerely,

Rachel B. Leary, PE, LSP
Senior Engineer

Enclosure: As noted above



FINAL

RECORD OF DECISION
FOR PLOW SHOP POND (AOC 72) -RED COVE
AND FORMER RAILROAD ROUND HOUSE (SA 71)

FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MA

SEPTEMBER 2015

Prepared for:
US Army Corp of Engineers
New England District
Concord, Massachusetts

Prepared by:
Sovereign Consulting Inc.
Contract No.: W912WJ-10-D-0003
Delivery Order: 0009



SDMS Doc ID 582119

NOTICE

The United States Department of Defense, Department of Army, funded wholly or in part the preparation of this document and work described herein under Contract No. W912WJ-10-D-0003 and Delivery Order 0009. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

AOC	Area of Contamination
ARAR	Applicable or Relevant and Appropriate Requirement
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EE/CA	Engineering Evaluation/Cost Analysis
ELCR	Excess Lifetime Cancer Risk
GSR	Green and Sustainable Remediation
LUCs	Land Use Controls
LUCIP	Land Use Control Implementation Plan
MassDEP	Massachusetts Department of Environmental Protection
NTCRA	Non-Time Critical Removal Action
RAB	Restoration Advisory Board
RAO	Remedial Action Objective
ROD	Record of Decision
SA	Study Area
Sovereign	Sovereign Consulting Inc.
SHL	Shepley's Hill Landfill
TCRA	Time Critical Removal Action
USACE	United States Army Corp of Engineers
USEPA	U.S. Environmental Protection Agency

1.0 DECLARATION

1.1 Site Name and Location

The site which is the subject of this Record of Decision (ROD) includes the Plow Shop Pond Operable Unit - Area of Contamination (AOC) 72 and the former Railroad Roundhouse Study Area (SA) 71. Response Actions have been conducted in both Plow Shop Pond and the former Railroad Roundhouse site under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to remove impacts to pond sediments from groundwater discharges containing arsenic from the Shepley's Hill Landfill and railroad maintenance by-product material containing heavy metals that was discharged along the pond shoreline and to remove impacts to upland soil at the former Railroad Roundhouse Site from railroad maintenance byproduct deposition.

Devens (CERCLIS I.D. Number MA7210025154) is located in the towns of Ayer and Shirley (Middlesex County) and Harvard and Lancaster (Worcester County), Massachusetts, approximately 35 miles west of Boston, Massachusetts.

1.2 Statement of Basis and Purpose

This decision document presents the selected remedies for AOC 72 and SA 71 at the former Fort Devens, which was chosen in accordance with CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA), and to the extent practical, the National Contingency Plan (NCP). This decision is based on the Administrative Record file for these two sites.

The Commonwealth of Massachusetts concurs with the Selected Remedy. A copy of the concurrence letter is included as Appendix A.

1.3 Assessment of Site

The response actions selected in this Record of Decision are necessary to protect the human health, welfare and the environment from actual or threatened releases of hazardous substances into the environment at Railroad Roundhouse SA71. A CERCLA action is required because the cumulative Excess Lifetime Cancer Risk (ELCR) for human receptors is above acceptable risk criteria for unrestricted residential use of SA71. However, the human health risk evaluation demonstrates acceptable risk for the assumed future use (open space/recreation) of the site. The potential risk to human health is driven by residual maintenance byproduct material in upland soils of the former Railroad Roundhouse as a result of activities in the former area. The ecological

risk assessment indicated that ecological receptors are unlikely to be at risk from contaminants of concern in surface soil.

The human health risk assessment indicated that potential exposures to contaminants (principally arsenic) in surface water and sediment in Plow Shop Pond, including Red Cove and in the area of the former Railroad Roundhouse, by recreational receptors, are within the USEPA's acceptable cancer risk range and do not exceed a Hazard Index limit of 1. The installation of a low-permeability groundwater barrier wall between the landfill and Red Cove and sediment removal actions within the Red Cove area and former Railroad Roundhouse area of AOC72 have mitigated the potential risk associated with Plow Shop Pond sediments. In addition, all visual evidence of the maintenance byproduct was removed. With the removal of impacted sediment from both Red Cove and in the area of the former Railroad Roundhouse, exposure point concentrations have been reduced, and the benthic community is expected to improve.

1.4 Description of Selected Remedy

1.4.1 *Plow Shop Pond - AOC 72*

No Further Action is the Selected Remedy for Plow Shop Pond AOC72 because no unacceptable risks to human health and welfare or the environment were identified. To mitigate the source of the arsenic-impacted groundwater discharging to Red Cove, a low-permeability barrier wall was installed upgradient of Plow Shop Pond at Shepley's Hill Landfill (SHL) 2012. The selected remedy for Red Cove was contingent upon the successful implementation of the barrier wall at the landfill.

Following the installation of the barrier wall between SHL and Red Cove in 2012, a removal action was completed at Red Cove to excavate and dispose of off-site, arsenic impacted sediments from the pond. The removal of the arsenic-impacted sediments mitigated the "risk to environmental receptors" and therefore all remedial action objectives for Red Cove had been achieved.

A second removal action was completed in 2013 along the shoreline of the former Railroad Roundhouse to excavate the maintenance by-product below the water line at southern shoreline of Plow Shop Pond to reduce the risk to ecological receptors caused by residual metals concentrations in pond sediments. The removal action was completed successfully, mitigating the risk to the environment and achieved the remedial goal for that area (Sovereign, 2014a).

1.4.2 *Former Railroad Roundhouse - SA 71*

The major component of the Selected Remedy for the former Railroad Roundhouse SA71 is implementation of land use controls. Land use controls are addressed through institutional controls, access restrictions, affirmative measures, and prohibitive directives.

A removal action was conducted at SA 71 to remove soils impacted with metal caused by the deposition of a maintenance by-product from historic activities at the former Railroad Roundhouse. Approximately 2,400 cubic yards of soil within the former maintenance by-product disposal area was excavated. Final sidewall confirmatory samples identified residual concentrations of antimony and lead at depth above remedial goals. The upland excavation area was later backfilled with clean soil.

1.5 Statutory Determinations

The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element.

Because this remedy will result in hazardous substances remaining on site above risk-based levels for unrestricted use/unlimited exposure, a five year review will be conducted to ensure that the remedy continues to be protective of public health and welfare, or the environment. The review will be completed once every 5 years until the stakeholders determine that a review is no longer necessary.

1.6 ROD Data Certification Checklist

The following information is included in the Decision Summary section (Section 2) of this ROD. Additional information can also be found in the Administrative Record file for this site.

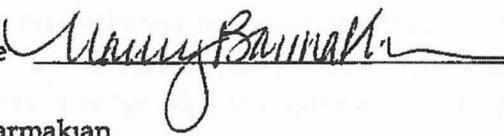
- Descriptions of constituents of concern (COC) (i.e., heavy metals) remaining on-site;
- Baseline risk represented by the presence of residual metals concentrations;
- Cleanup levels established for chemicals of concern and the basis for these levels;
- How source materials constituting principal threats are addressed;
- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of groundwater used in the baseline hazard assessment and ROD;
- Potential land and groundwater use that will be available at the site as a result of the selected remedy;
- Estimated capital, annual operation and maintenance, and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected; and
- Key factor(s) that led to selecting the remedy.

1.7 Authorizing Signatures

29 Sep 2015

Signature M.J.II.1180145105' Digitally signed by O'DONNELL WILLIAM J. II. 1180145105
DN: cn=US, ou=U.S. Government, ou=DoD,
ou=PR, ou=USA,
c=US, email=O'DONNELL.WILLIAM.J.II.1180145105,
Date: 2015.09.29 14:16:07 -0400 Date _____

William J O'Donnell
Chief, Reserve, Industrial and Medical Branch BRAC
Division Department of the Army Assistant Chief of
Staff for Installation Management

Signature  Date 09/30/15

Nancy Barmakian
Acting Chief, Office of Site Remediation and Restoration
US EPA Region 1

2.0 DECISION SUMMARY

2.1 Site Name, Location and Brief Description

The site that is the subject of this ROD is the Plow Shop Pond (AOC 72) and the former Railroad Roundhouse (SA 71). Plow Shop Pond is located within the former Fort Devens Military Installation (Fort Devens) in the Devens Enterprise Zone (Devens), Massachusetts. Devens is located approximately 35 miles northwest of the city of Boston, within the towns of Ayer, Shirley (Middlesex County), Harvard and Lancaster (Worcester County) in the Commonwealth of Massachusetts (see **Figure 1**). The former Fort Devens was established in 1917 for military training and logistical support during World War I. Fort Devens became a permanent Base in 1931, and continued service until its closure in 1996 pursuant to the Defense Base Closure and Realignment Act of 1990.

The 30-acre Plow Shop Pond is located southwest of the business and residential district in Ayer, Massachusetts. Plow Shop Pond is a man-made pond where water levels are maintained by the concrete Nonacoicus Brook Dam. Plow Shop Pond receives inflow from the Grove Pond to the east through the railroad causeway, and discharges over the dam spillway to Nonacoicus Brook. Plow Shop Pond has a maximum depth of about 9 feet; however, it has an average depth of less than 6 feet. Depth to bedrock under the pond is approximately 40 to 80 feet (AMEC, March 2010).

Both ponds are in an Area of Critical Environmental Concern (ACEC), and in proximity to a protected species habitat in the upland area. An ACEC designation is a formal state designation of a significant ecological area directed to the actions and programs of Massachusetts environmental agencies. Plow Shop Pond is located northeast of SHL, south of Molumco Industrial Park, and west of Grove Pond. The Red Cove area is located in the southwest corner of Plow Shop Pond along the northeast perimeter of SHL.

The former Railroad Roundhouse (SA 71), at the southeast corner of Plow Shop Pond, is the former location of a railroad roundhouse operated by the Boston and Maine Railroad (B&M) from approximately 1900 to 1935. The site consists of a 200- to 300-foot wide strip of land extending south from Plow Shop Pond along the northeast boundary of Devens for approximately 1,100 feet (see **Figure 2**). Historical features included an array of railroad tracks, a coal trestle, ash pit, water tower, and several buildings. The roundhouse was located at the northern end of this strip, immediately adjacent to the southern shore of Plow Shop Pond. The shoreline adjacent to the railroad roundhouse is the location of the Maintenance By-Product Disposal Area that was used as a disposal area for locomotive maintenance waste. Maps and aerial photographs indicate that all of the buildings except a brick storeroom and the water tower were removed by 1942.

The location of the former Railroad Roundhouse has been inferred from site observations and from overlaying a B&M drawing (Right-of-Way and Track Map) prepared by the Office of Valuation Engineer (B&M, 1919) on existing maps (see **Figure 3**). The track map identified areas such as an ash pit, coal trestle, water tower, office, and oil house. There were also several unnamed small buildings or sheds. The roundhouse and structures occupied about 6 acres, while the nearby tracks and freight yard occupied approximately 35 additional acres. According to historical insurance maps, by 1942 all of the buildings except the brick storeroom and the water tower had been removed (MACTEC, 2008).

The Army purchased a 53 acre parcel from the B&M in 1942. Following the 1996 base closure, the Army then leased the land formerly occupied by the roundhouse to MassDevelopment as part of the larger lease parcel known as A.1SHL that includes the SHL (see **Figure 1**). This lease parcel will be transferred by deed to MassDevelopment when the adjacent SHL remedy is determined to be Operating Properly and Successfully (OPS). The buildings and tracks at the site had been removed, but a few concrete foundations remained in the area. SA 71 is presently not used for any purposes (i.e., it is open space), and access to the site is not restricted.

The lead agency for the site is the Army. As lead agency, the Army is responsible for:

- Preparation of the ROD;
- Reassessing its initial determination that the Preferred Alternative(s) provides the best balance of trade-offs;
- Factoring in any new information or points of view;
- Providing the EPA, MassDEP and supporting agencies (MassDevelopment) with an opportunity to review and comment on the ROD; and
- Considering EPA, MassDEP, MassDevelopment comments; and making the final remedy decision jointly with EPA.

The Army will publish a notice of the availability of the ROD in a major local newspaper and make the ROD available for public inspection and copying prior to commencement of remedial actions.

EPA is the lead regulatory agency and is supported by MassDEP. The Army is responsible for implementing, maintaining, reporting on, and enforcing the ROD. Although the Army may later transfer these procedural responsibilities to another party by contract, or through other means, the Army shall retain ultimate responsibility for remedy integrity.

2.2 Site History and Enforcement Activities

On 21 November 1989, Fort Devens was placed on the CERCLA National Priorities List (NPL), assigned CERCLIS I.D. Number MA7210025154, and was identified for cessation of operations and closure under Public Law 101-510, the Defense Base Realignment and Closure Act of 1990. Fort Devens was officially closed in March 1996. Portions of the property formerly occupied by Fort Devens were retained by the Army for reserve forces training and renamed the Devens Reserve Forces Training Area (RFTA). Areas not retained as part of the Devens RFTA were, or are in the process of being, transferred to new owners (MassDevelopment) for reuse and redevelopment.

2.2.1 *Plow Shop Pond - AOC 72*

From 1992 to 1995, investigations in Plow Shop Pond were initiated under the SHL Remedial Investigation (E&E, 1993; ABB-ES, 1993b; ABB-ES, 1995b). The results of these investigations noted that metals had accumulated in the sediments of Plow Shop Pond. Consequently, the Plow Shop Pond Operable Unit was established under AOC 72, and the USEPA took the lead on performing additional investigations at Plow Shop Pond and Grove Pond to determine other (non-Army) sources of contamination while the Army performed surface water and sediment investigations in Plow Shop Pond as it pertained to analytes related to the SHL and former Railroad Roundhouse area.

As part of the overall Plow Shop Pond remedial investigations conducted from 1995 to 2006, site investigations were conducted in the Red Cove area, which is a shallow cove located in the southwest corner of Plow Shop Pond, and along the southern shoreline of AOC 72 in the area of the former Railroad Roundhouse. The results of these investigations documented concentrations of arsenic in sediment located in the vicinity of Red Cove which were attributed to groundwater discharge from the SHL site (Gannett Fleming, 2006), and maintenance byproduct deposits and concentrations of polycyclic aromatic hydrocarbons, antimony, copper, and lead extending 15 to 25 feet offshore along the southern shoreline of the pond in the area of the former Railroad Roundhouse (ABB-ES, 1995a; MACTEC, 2008).

Following these investigations, the Army completed a comprehensive remedial investigation for AOC 72 in 2011. The results of this investigation confirmed that arsenic was transported to Red Cove via groundwater migrating from SHL, and arsenic was concentrated in a solid iron precipitate (floc) near the sediment surface at the point of groundwater discharge. In addition, the source of the other contaminants identified at AOC 72 was identified as historic releases of liquid wastes from the Hartnett Tannery for chromium, mercury, and arsenic distributed throughout the pond (AMEC, 2011).

Following the completion of the 2011 remedial investigation, the Army determined that it was appropriate to proceed with removal actions at AOC 72 under the Superfund Accelerated Cleanup Model (USEPA, 1994) and the criteria pursuant to CERCLA (40 USC §9604) and the National Contingency Plan (40 CFR 300.415).

Consequently, the Army prepared an Engineering Evaluation/Cost Analysis (EE/CA) to evaluate response measures for a Non-Time Critical Removal Action (NTCRA) at AOC 72 and to address impacted sediment in two specific areas of the pond: Red Cove and along the shoreline of the former Railroad Roundhouse. The EE/CA served as a more streamlined analogous function to the remedial investigation/feasibility study approach conducted for remedial actions. Consequently, a feasibility study was not drafted for AOC 72.

The EE/CA defined the removal action objectives (RAOs), which are project objectives identified to ensure the protection of human health and welfare or the environment, for Red Cove as "mitigate arsenic-impacted sediment in the Red Cove area in AOC 72 to reduce risk to environmental receptors consistent with local conditions in Plow Shop Pond" and for the former Railroad Roundhouse as "mitigate risk to environmental receptors posed by maintenance byproduct-impacted ash-sediment layer along the SA 71 shoreline". Based on the results of the EE/CA, the recommended removal action for AOC 72 was excavation (Sovereign, 2012a).

An Action Memorandum (Sovereign, 2012b) was subsequently prepared in 2012 to document the decision to perform the recommended NTCRA (excavation) in AOC 72 and to solicit public comment regarding the removal action. Following the approval of the AOC 72 Action Memorandum, a Removal Action Work Plan (Sovereign, 2013b) was prepared and removal actions were conducted at Plow Shop Pond (**Figures 2**) between July and October 2013. Prior to commencing work, wetlands and ecological surveys were completed and the pond level was lowered. The removal action area was separated into confirmation sampling grids, and the excavation was initiated at the furthest most cells before moving inland as the excavation progressed. As part of the removal action, approximately 3,000 cubic yards of impacted material was removed from the Red Cove area, and over 900 cubic yards of sediment containing maintenance byproduct was subsequently removed from the shoreline of former Railroad Roundhouse.

The removal action included the restoration of upland areas along Plow Shop Pond that were disturbed during site access and excavation activities. The upland restoration adjacent to the Red Cove area was completed in May 2014. The upland restoration along the shoreline adjacent to SA 71 includes re-grading, re-seeding and re-planting of impacted areas and will be completed no later than 31 October 2015.

2.2.2 Former Railroad Roundhouse - SA 71

From 1993 to 1994, the Army conducted site investigations in the area of the former Railroad Roundhouse site. Data gathered during the investigations indicated the widespread presence of coal ash and maintenance byproduct materials in surface and deeper soil across much of the site. The deposits of maintenance byproduct formed a sloping pond bank on their northern side, underlain by naturally deposited sand, silty sand, and peat and extending out into the pond. High concentrations of inorganic analytes, in particular antimony, copper, and lead, were identified in the area of the observed maintenance byproduct materials, and the probable source of these analytes was attributed to be the disposal of maintenance byproducts from the former roundhouse (ABB-ES, 1993a). However, the contamination in soil did not appear to be a source of groundwater contamination (ABB-ES, 1995a).

Because the majority of soil contaminants occurred in the maintenance byproduct disposal area, and because concentrations of antimony, copper, and lead in soil from that area were substantially above concentrations in the local background area (ABB-ES, 1995a), remediation of these soils was deemed appropriate. Consequently, an Action Memorandum (SWETS, 1999) was subsequently prepared in 1999 to propose a Time Critical Removal Action (TCRA) consisting of the excavation and disposal of impacted soil and to solicit public comment regarding the removal action.

The removal action was conducted at SA 71 from November 1999 to May 2000 and resulted in the removal of approximately 2,400 cubic yards of metals-contaminated soil. The excavation was backfilled with clean soil and in May 2000 was covered with loam and seed. Final sidewall confirmatory samples from the excavation identified concentrations of antimony and lead above the remediation goals. However, due to the large volume of soil already removed and the increased depth of excavation that would be required, additional excavation was put on hold pending results of additional risk evaluations (Weston, 2001).

2.3 Community Participation

In accordance with the Section 117 of CERCLA, the public was provided with the opportunity to participate in the selection of the remedial action. A Proposed Plan for AOC 72 and SA 71 was made available to the public by the Army in December 2014.

Proposed Plan for
No Further Action for the Plow Shop Pond Operable Unit - AOC 72;
Limited Action for SA 71 - former Railroad Roundhouse Site
Former Fort Devens Army Installation

The Proposed Plan is available in the Administrative Record file and the information repository maintained at the following locations:

U.S Army Garrison Fort Devens
BRAC Environmental Office Building 666, Room 140
Devens, MA 01432
Contact: Robert Simeone (p) 978-796-2205

Ayer Public Library
26 East Main Street
Ayer, MA 01432

Harvard Public Library Fairbanks Street Harvard, MA 01451

The public notice for the Proposed Plan was published in the Lowell Sun and Nashoba Valley Newspapers on Friday, December 12, 2014. The public meeting was held on Thursday, January 15, 2015, to present the Proposed Plan to a broader community audience than those that had already been involved at the site. At this meeting, representatives from the Army, EPA, MassDEP, and MassDevelopment answered questions about the remedy selection process, and also used this meeting to solicit a wider cross-section of community input on the reasonably anticipated future land use and potential beneficial groundwater uses at the site. Though community involvement was solicited, the Army did not receive comments from the general public during the public comment period.

2.4 Scope and Role of Response Actions

The Fort Devens CERCLIS I.D. Number, MA7210025154, is the applicable identification number for the entire property, consisting of 9,300 acres. Since the listing of the property on the NPL, a number of SA, AOC, and Areas Requiring Environmental Evaluation (AREE) have been the subject of investigations and remedial and removal actions have been conducted in accordance with CERCLA. In addition, other releases at the property have undergone response actions under the MCP under the purview of MassDEP.

The scope of this ROD includes Plow Shop Pond (AOC 72) and the former Railroad Roundhouse site (SA 71).

The response actions at AOC 72 have included the following:

- Completion of the installation of a low-permeability barrier wall up gradient of Red Cove at Shepley's Hill Landfill to mitigate the discharge of arsenic impacted groundwater to Plow Shop Pond, prior to commencing removal action;
- Excavation of approximately 3,000 cubic yards of arsenic impacted sediments at Red Cove;
- Excavation of approximately 900 cubic yards of railroad maintenance by-product material and impacted soils and sediments from along the shoreline of the former Railroad Roundhouse site;
- Dewatering and off-site disposal of excavated sediments;
- Completed confirmatory sampling to ensure risk-based goal was achieved; and
- Restoration of upland areas disturbed during site access and excavation activities.

Response Actions at SA 71 have included:

- Excavation of approximately 2,400 cubic yards of heavy metals impacted soils and former building demolition debris; and
- Off-site disposal of excavated soils.

Response actions completed under other regulatory programs similarly have been documented in accordance with applicable requirements. All remedial and removal documentation pertaining to other AOCs, AREEs, and SAs at Devens are available in the Administrative Record.

2.5 Site Characteristics

The 30-acre Plow Shop Pond (AOC 72) is located southwest of the business and residential district in Ayer, Massachusetts. See **Figure 1** for a site location map. The pond is currently zoned as Open Space/Recreational Unrestricted (VHB, 1994), with a posted restriction for "Catch and Release" only fishing. Red Cove is located on the western shore line of the pond adjacent to SHL. The former Railroad Roundhouse is located at the southern end of Plow Shop Pond, bordered to the east by Pan-AM railroad tracks and rail yard, and is zoned Open Space/Recreation. Both the Red Cove and Railroad Roundhouse upland areas are located within the Devens Enterprise Zone.

2.5.1 Conceptual Site Model

Sources of the contaminants that drive potential risk in Plow Shop Pond include historic releases of liquid wastes from the Hartnett Tannery containing chromium, mercury, and arsenic distributed throughout the pond and historic discharge of arsenic impacted groundwater from beneath SHL to the Red Cove area. Metals and PAHs were present in sediment along the shoreline of former Railroad Roundhouse as a result of activities in the former railroad roundhouse. This ROD does not address impacts on the ponds from the former tannery. Those impacts will be addressed under the Massachusetts Contingency Plan.

Plow Shop Pond (AOC 72)

Arsenic concentrations in groundwater at SHL impacted the pond sediments in the Red Cove area of Plow Shop Pond which is located in a cross gradient to down gradient position relative to SHL. Arsenic in Red Cove sediment was concentrated in iron floc near the sediment surface, where groundwater discharge to surface water from SHL occurs. Dissolved arsenic concentrations in Red Cove surface water decreased rapidly with height above the sediment surface, as the water column transitioned to oxidizing conditions and solid arsenic precipitates or adsorbs to iron floc. Iron oxides precipitated as an orange-red floc or sediment in Red Cove as reduced groundwater discharges to oxygenated surface water. Arsenic was absorbed by or co-precipitated with the iron floc near the sediment surface.

The predominant source of the dissolved arsenic emanating from the landfill appears to be naturally occurring arsenic within aquifer sands and bedrock materials. Arsenic is being mobilized by both naturally-occurring and landfill-induced conditions through the geochemical process of reductive dissolution which releases dissolved arsenic to the aquifer. It should be noted that EPA believes the source of the dissolved arsenic emanating from the landfill appears to be two-fold - (1) naturally-occurring arsenic within aquifer sands and bedrock materials; and, (2) arsenic-containing wastes within the landfill.

To mitigate the source of the arsenic-impacted groundwater discharging to Red Cove, a low-permeability barrier wall was installed upgradient of Plow Shop Pond at Shepley's Hill Landfill (SHL) 2012. The selected remedy for Red Cove was contingent upon the successful implementation of the barrier wall at the landfill.

Investigations and removal actions at Red Cove support the conceptual site model (CSM) that site contaminant sources are from SHL. Best available technologies have been used in site investigations and removal actions. These efforts have resulted in the control of the arsenic source discharge to Red Cove as well as the removal of arsenic containing sediments that were determined to be above risk based thresholds.

The former roundhouse was located adjacent to the southern shore of Plow Shop Pond. The shoreline adjacent to the former Railroad Roundhouse site was used as a dumping area for locomotive maintenance by-products. As noted in the May 2008 *Final SA 71 Risk Characterization*, the maintenance byproduct deposits "consist predominantly of coal ash, but also contained fragments of brick, coal, porcelain, and other debris including occasional pieces of a soft, shiny metal that looked as if it had solidified after splashing, molten, on a solid surface" and "the ash-like material is underlain by a dark, fibrous peat." Releases of antimony, copper, lead, zinc, and

PAHs associated with the maintenance by-product at former Railroad Roundhouse appeared limited to the area of waste deposits in the an upland areas and also extending into the pond up to 60 feet from shore.

Former Railroad Roundhouse (SA 71)

The completion of investigations and removal actions at SA 71 from 1998 to 2013 have confirmed the CSM that site risks were driven by the presence of debris and maintenance by-products in site upland soils and pond sediments. Best available technologies have been used in site investigations and removal actions. These efforts have resulted in the reduction of risk to human health in upland soils and the elimination of the ecological risk in pond sediments along the shore line of SA 71.

2.5.2 Site Geology and Hydrogeology

Plow Shop Pond is a man-made pond where water levels are maintained by a concrete dam (Nonacoicus Brook Dam). Plow Shop Pond receives inflow from the Grove Pond to the east through the railroad causeway, and discharges to Nonacoicus Brook. Plow Shop Pond has a maximum depth of about 9 feet but most of the pond is less than 6 feet deep. Depth to bedrock under the pond is estimated to be 40 to 80 feet (AMEC, 2011).

Most of the pond is classified by the MassDEP as a "Deep Marsh". The pond is eutrophic, organically enriched, and supports dense growth of aquatic vegetation during summer months. The pond supports a warm water fish community, and there are no rare species in the pond (ABB-ES, 1992).

The watershed of Plow Shop Pond above the dam is 16.5 square miles and 53% forested (USGS Streamstats). Emergent vegetation is limited to a narrow band along the shoreline. Note that adjacent land is largely developed (Railroad, Shepley's Hill Landfill [SHL], and industrial properties), but that there is a wooded buffer along much of the shoreline.

In addition to the SHL which is located to the west, south, and hydraulically upgradient of the pond basin, Plow Shop Pond is bounded by the Molumco Industrial Park to the north, the former Railroad Roundhouse (SA 71) to the south, and the Guilford Transportation railroad right of way which crosses a causeway between Grove and Plow Shop Ponds to the east.

The upland area of Plow Shop Pond at the former Railroad Roundhouse is generally sandy soils in the overburden with increasing silt with depth. The area is sparsely vegetated with small trees and brush. There is a slight slope to the edge of pond.

2.5.3 Potential Ecological Receptors

Plow Shop Pond is located in an Area of Critical Environmental Concern (ACEC), which are Massachusetts areas that are designated by the Secretary of Environmental Affairs in accordance with 301 CMR 12.00 to receive special recognition because of their ecological quality, uniqueness, and the significance of their natural and cultural resources.

In addition, the upland areas surrounding the pond include freshwater wetland areas subject to protection under state and local regulations and wildlife habitat areas designated under the Massachusetts Natural Heritage and Endangered Species Program (NHESP).

2.5.4 Current and Future Site and Resource Uses

Plow Shop Pond (AOC 72) currently has a catch-and-release fishing advisory according to the Freshwater Fish Consumption Advisory List published August 2013 by the Massachusetts Department of Public Health Bureau of Environmental Health (MassDPH), and information provided in previous reports indicates that "Catch and Release Only" signs are posted at Plow Shop Pond (Gannett Fleming, 2006; AMEC, 2011). According to MassDPH, Plow Shop Pond is categorized as a "P6" advisory, meaning that "No one should consume any fish from this water body" (MassDPH, 2013).

The former Railroad Roundhouse site (SA 71) is currently zoned as Open Space/Recreational per the Devens Reuse Plan. This ROD and subsequent implementation of Land Use Controls (LUCs) will restrict the future use of the upland area of the former Railroad Roundhouse to Open Space/Recreational.

2.6 Summary of Site Risks

Removal actions completed in Red Cove and former Railroad Roundhouse were driven by risk-based clean up criteria. Previous site investigations and confirmation sampling events provide a sufficient data set to determine any risks present at each site.

2.6.1 Plow Shop Pond - AOC 72

The 2011 Remedial Investigation Report evaluated whether a significant risk to human health and welfare and environment existed at AOC 72, Plow Shop Pond, a waterbody located east of the SHL, based on results from all surface water and sediment investigations conducted in and prior to 2009. The 2011 human health risk assessment indicated that potential exposures to contaminants (principally arsenic) in surface water and sediment in Plow Shop Pond, including Red Cove and in the area of the former Railroad Roundhouse, by recreational receptors, are within the USEPA's acceptable cancer risk range and do not exceed a Hazard Index limit of 1.

Furthermore, the results of a qualitative evaluation of the potential for fish ingestion indicate that the estimated risks and hazards associated with arsenic do not exceed the risk management limits, even with conservative exposure assumptions. As a result, no contaminant was identified in either surface water or sediment in Plow Shop Pond, including Red Cove and in the area of the former Railroad Roundhouse, exceeding risk thresholds based on the quantitative human health risk characterization (AMEC, 2011; Sovereign, 2014c).

The ecological risk assessment indicated a risk of adverse effects for several receptors from exposure to contaminants of concern not only in Red Cove and in the area of the former Railroad Roundhouse but throughout both Plow Shop Pond and Grove Pond. These results suggested that a weight of evidence finding on the potential for ecological impacts associated with Red Cove and the former Railroad Roundhouse was not possible. This was because all locations associated with the study showed significant indications of impact related to either exceedance of threshold effect concentrations or diminishment of benthic and/or epibenthic markers (AMEC, 2011). This was similar to the results of the 2006 EPA site investigation at Plow Shop Pond (Gannett Fleming, 2006) and the 2008 sediment risk assessment at SA 71 during which a noticeable difference between study areas could not be identified which resulted in the conclusion that observed impacts were possibly not due solely to contaminants originating from SA 71 (MACTEC, 2008).

Following removals action in 2013, concentrations of metals were reduced to below the remedial goals along the shoreline of the former Railroad Roundhouse and were consistent with pond local condition concentrations. In addition, all visual evidence of the maintenance byproduct was removed. With the removal of impacted sediment from the former Railroad Roundhouse, exposure point concentrations have been reduced, and the benthic community is expected to improve (Sovereign, 2014a).

The installation of a low-permeability groundwater barrier wall between SHL and Red Cove in 2012 (Sovereign, 2013a) and sediment removal actions within the Red Cove area and former Railroad Roundhouse area of AOC 72 in 2013 have mitigated the potential risk associated with Plow Shop Pond sediments. The results of post-excavation confirmatory sediment sampling within Red Cove were below the remedial goals for arsenic (270 mg/kg), consistent with local condition concentrations of arsenic in sediment east of the Red Cove area. With the removal of impacted sediment from Red Cove exposure point concentrations have been reduced, and the benthic community is expected to recover to levels that are consistent with local conditions within the pond.

2.6.2 Former Railroad Roundhouse - SA 71

The removal of 2,400 cubic yards of soil in 1999 has resulted in a reduction of risk to human health and welfare or the environment at SA 71, and the residual conditions in the upland area of SA 71

are consistent with industrial fill containing coal ash. Following the removal action, a human health and ecological risk evaluation was conducted in 2001 (Harding, 2002) to evaluate the risk associated with post-remedial conditions at SA 71. A revised human health and welfare risk evaluation was then conducted in 2014 at the request of the USEPA and MassDEP to update all risk assessment assumptions and address additional state and federal regulatory agency comments (Sovereign, 2014c). As summarized below, the quantitative human health risk evaluation indicates a potential risk to human receptors. The ecological risk assessment indicates risk to the environment has been mitigated, although it still exceeds some of the ecological screening values at some locations.

At this time, the current and future land use of SA 71 remains open space/recreational (VHB, 1994). To be conservative, the quantitative human health risk assessment evaluated unrestricted residential use, using several algorithms and exposure variables, such as chemical-specific toxicity and derivation of exposure factors (Sovereign, 2014c). Table 1 includes a summary of the contaminants of concern that were included in the assessment. Based on 2014 updated human health risk evaluation for SA 71, the cumulative Excess Lifetime Cancer Risk (ELCR) for human receptors is above acceptable risk criteria for unrestricted residential use of SA 71. Specifically, the ELCR for residential human receptors is greater than one chance in 1,000,000 (10^{-6}). However, the updated human health risk evaluation demonstrates acceptable risk for the assumed future use (open space/recreation) of the site (Sovereign, 2014c).

Ecological receptors at SA 71 include terrestrial wildlife, plants, and invertebrates that may occur in or utilize the area. Potential contaminant exposure routes for these receptors include incidental soil ingestion and terrestrial food web exposure. Risk to terrestrial wildlife, plants, and invertebrates was evaluated through comparison of contaminant concentrations in surface soil to Protective Contaminant Levels, phytotoxicity benchmark values, and invertebrate toxicity benchmark values, respectively. The 2001 ecological risk assessment indicated that ecological receptors are unlikely to be at risk from contaminants of concern remaining in surface soil. Although concentrations at some locations still exceed some of the ecological screening values, most concentrations are consistent with background levels, and the overall magnitude of exceedance is small. The lower concentrations, combined with the general observation of a healthy ecological community indicated that ecological receptors are unlikely to be at risk from analytes remaining in the surface soil at SA 71 (Harding, 2002).

Implementing the response action selected in this ROD, will mitigate the risk posed by the potential for actual or threatened releases of hazardous substances from this site. The implementation of a deed restriction that prevents residential use in this area will ensure protection of human health.

2.7 Remedial Action Objectives

The primary project goals as established in the EE/CA (Sovereign, 2012a) for AOC 72 and SA 71 were to mitigate arsenic impacts in sediment in and around Red Cove and to mitigate sediment impacted by maintenance by-product deposits of the former Railroad Roundhouse along the shoreline of Study Area 71 in order to be protective of human health and the environment. The Removal Actions in each area are discussed separately in the sections below.

2.7.1 Removal Action Objective - Plow Shop Pond

In the fall of 2012, an 850-foot long hydraulic barrier wall was installed to the top of bedrock on the eastern boundary of SHL to divert groundwater flow north and away from Plow Shop Pond, under a separate NTCRA. Its purpose is to mitigate the ongoing arsenic flux from SHL to the Red Cove portion of Plow Shop Pond.

In addition, the 2013 removal action at AOC 72 removed arsenic impacted sediments that were associated with the arsenic-in-groundwater flux to Red Cove from beneath SHL prior to the installation of the barrier wall. Based on these two removal actions, risk to human health and welfare or the environment at AOC 72 have been mitigated. Therefore and due to the mitigation of risk at AOC 72, an RAO and Remedial Action Alternatives for AOC 72 are not necessary and the Preferred Remedy of No Further Action is presented in **Section 2.12** below.

2.7.2 Removal Action Objective - Former Railroad Roundhouse

Based on investigations and removal actions completed to date, the RAO for SA 71 is as follows:

- Prevent ingestion/direct contact with residually impacted soil that could pose unacceptable human health risk at SA 71.

2.8 Description of Alternatives

For both sites, remedial alternatives were developed and assessed as part of the EE/CA and Action Memorandum process prior to the NTCRA for AOC 72 in 2013, and the TCRA for SA 71 in 2000. Pursuant to the Superfund Accelerated Cleanup Model (USEPA, 1994) and the criteria pursuant to CERCLA (40 USC §9604) and the National Contingency Plan (40 CFR 300.415), the EE/CA process for NTCRAs and TCRAs served as a more streamlined analogous function to the remedial investigation/feasibility study approach. Consequently, a feasibility study was not prepared for either site. However, the public was provided the opportunity to comment on all proposed alternatives as part of the 2012 Action Memorandum for AOC 72 and the 1999 Action Memorandum for SA 71.

2.9 Plow Shop Pond - AOC 72

The Army prepared an EE/CA in 2012 to evaluate response measures for the NTCRA at AOC 72 and to address impacted sediment at Red Cove and in the area of the former Railroad Roundhouse. The EE/CA defined the RAOs for Red Cove as “mitigate arsenic-impacted sediment in the Red Cove area in AOC 72 to reduce risk to environmental receptors consistent with local conditions in Plow Shop Pond” and for the area of the former Railroad Roundhouse as “mitigate risk to environmental receptors posed by maintenance byproduct-impacted ash-sediment layer along the SA 71 shoreline” (Sovereign, 2012a).

The EE/CA evaluated all of the remedies and/or alternatives based on implementability, cost, and effectiveness. The EE/CA compared six alternatives that would meet the selected RAOs: Alternative 1 - No Action, Alternative 2 - Excavation, Alternative 3 - Capping, Alternative 4 - Excavation and Backfilling, Alternative 5 - Excavation and Capping and Alternative 6 - Excavation and Capping with Sand/Iron Filter. These alternatives are summarized below and presented in greater detail in the aforementioned EE/CA report.

Although there was no cost associated with this alternative, Alternative 1 (No Action) was found to not meet the RAOs or protectiveness requirements. Alternative 2 (Excavation) was found to meet the RAOs and provide protectiveness and was deemed to be readily implementable. Alternative 3 (Capping) was found to meet the RAOs and provide protectiveness; however, there was a degree of uncertainty in the effectiveness because impacted sediment remained and impacted groundwater could discharge beyond the cap. Alternative 4 (Excavation and Backfilling) was found to meet the RAOs and provide protectiveness; however, the cost of this Alternative was more than Alternative 2. Alternative 5 (Excavation and Capping) was found to meet the RAOs and provide protectiveness; however, there was a degree of uncertainty in the effectiveness because impacted sediment remained and impacted groundwater could discharge beyond the cap. Finally, Alternative 6 (Excavation and Capping with Sand/Iron Filter) was found to meet the RAOs and provide protectiveness as well as provide additional protection in Red Cove by preventing groundwater discharge and the formation of iron floc. However, the cost of this alternative was considerably higher than Alternative 2. Consequently, Alternative 2 (Excavation) was selected based on a high degree of protectiveness, relative ease of implementation, relative cost, and compatibility with RAOs (Sovereign, 2012a). Based on the results of the EE/CA, the recommended removal action alternative for AOC 72 was Alternative 2 - Excavation, based on a high degree of protectiveness, relative ease of implementation, relative cost, and compatibility with RAOs (Sovereign, 2012a).

An Action Memorandum (Sovereign, 2012b) was subsequently prepared in 2012 to document the decision to perform the recommended NTCRA (excavation) in AOC 72 and to solicit public

comment regarding the removal action. Following the approval of the AOC 72 Action Memorandum, removal actions were conducted at Plow Shop Pond between July and October 2013 as further detailed in **Section 1.4**.

Following the 2013 removal action at AOC 72 as well as the 2012 installation of the barrier wall at the SHL, risk to human health and welfare or the environment at AOC 72 was mitigated. Therefore, evaluation of additional Remedial Action Alternatives for AOC 72 are not necessary, and the Preferred Remedy based on current conditions is No Further Action.

2.10 Former Railroad Roundhouse - SA 71

For SA 71, the Army prepared an Action Memorandum in 1999 to propose the TCRA of soil excavation and removal. Because the removal action was considered time critical, alternative technologies were not evaluated beyond the conceptual level at the time (SWETS, 1999). However, public comment was solicited during the Action Memorandum process. Following the approval of the SA 71 Action Memorandum, removal actions were conducted at SA 71 from November 1999 to May 2000 to remove approximately 2,400 cubic yards of impacted soil.

Final sidewall confirmatory samples from the excavation identified concentrations of contaminants above the remediation goals. However, further excavation was not warranted based on the current and future use of SA 71 (open space/recreation), the depth of the impacted soil, and the low risk associated with the remaining soil (Weston, 2001).

Consequently, the development of additional remedial alternatives for SA 71 focused on limiting the exposure to site soils in excess of human health risk-based thresholds as identified in the site updated risk assessment. Based on this evaluation, two additional alternatives for SA 71 were retained for detailed analysis.

1. No Further Action
2. Limited Action: Implementation of Land Use Controls

2.10.1 SA 71 Alternative 1 - No Further Action

This baseline or No Further Action¹ alternative consists of taking no further action towards preventing direct contact with residually impacted soil that may remain at SA 71. No Further Action is easily implemented but leaves the area as is with no further measures to prevent exposure. There would be no technologies used and no cost associated with this alternative.

¹ CERCLA requires consideration of "No Action" as a baseline with which to compare other alternatives.

2.10.2 SA 71 Alternative 2 – Limited Action: Implementation of Land Use Controls

Land Use Controls (LUCs) for SA 71 would be implemented through institutional controls, affirmative measures and prohibitive directives with the objective of limiting potential exposure to any residual soil contamination associated with the former RRRH activities. The specific elements of the LUCs include (1) prohibiting residential reuse through the use of a property deed restriction and the implementation of an environmental use covenant consistent with a Notice of Activity Use Limitation (NAUL)² at the time of property transfer by the Army to MassDevelopment; (2) affirmative measures to include public education and outreach; and (3) prohibitive directives to ensure that any future soil disturbance activities are avoided by the public and that any excavation by construction/utility contractors is performed in accordance with a site specific Soil Management Plan (SMP). The LUCs for SA 71 would be implemented following the issuance of the ROD through a Land Use Control Implementation Plan (LUCIP). The LUCIP formalizes the roles and responsibilities of the Army, EPA, and MassDEP in the long-term administration and management of the alternative. Annual inspections and 5-year reviews will be conducted to confirm the overall effectiveness of the established LUCs. The approximate proposed boundaries of the LUCs would correspond to the SA 71 boundary as presented on **Figure 3** and would be maintained as per the LUCIP.

The capital cost of this alternative is estimated at \$35,000 with a \$20,000 annual cost.

2.10.3 SA 71 Evaluation of Alternatives

The current alternatives were subsequently evaluated using the threshold criteria, primary balancing criteria, and modifying criteria required by the National Contingency Plan. For current conditions at SA 71, Alternative 1 (No Further Action) is not effective in the long or short term and does not address the hazard of human exposure to remaining residual soil and would therefore not be protective of human health. Alternative 2 (Limited Action – Implementation of Land Use Controls) is protective of human health and provides a means of limiting potential exposure to any residual soil contamination associated with the former RRRH activities. This alternative is readily implementable and would be effective in the long and short term. Consequently, Alternative 2 (Limited Action – Implementation of Land Use Controls) provides the most appropriate and reasonable means of addressing any potential risk associated with

² An NAUL can be implemented at disposal sites deemed by the MassDEP to be Adequately Regulated pursuant to 310 CMR 40.0111 where the selected remedy relies, in whole or in part, on the imposition of land use controls to minimize the potential for human or ecological exposure to contamination or to protect the integrity of a remedy.

future exposure to any residual soil contamination remaining in the upland area of SA 71. A summary of this evaluation is provided on Table 2.

2.11 Comparative Analysis of Alternatives

As detailed in the proceeding sections, remedial alternatives were developed and assessed with respect to their effectiveness in meeting the RAO for SA 71. The preferred and appropriate alternative for AOC 72 is No Further Action, and the preferred and appropriate alternative for SA 71 is Alternative 2 - Limited Action: Implementation of LUCs.

Table 2 - Summary of Remedial Alternatives Evaluation

	<i>Protection of Human Health and the Environment</i>	<i>Compliance with ARARs</i>	<i>Long-Term Effectiveness and Permanence</i>	<i>Reduction of Toxicity, Mobility or Volume Through Treatment</i>	<i>Short-Term Effectiveness</i>	<i>Implementability</i>	<i>Cost</i>
AOC 72							
1 - No Further Action	●	●	●	○	●	●	●
SA 71							
1 - No Further Action	○	◐	○	○	○	●	●
2 - Limited Action - LUCs	●	●	●	○	●	●	●
<ul style="list-style-type: none"> ● Fully meets criterion ◐ Partially meets criterion ○ Does not meet criterion 							

Based on the information currently available, the Army believes these Alternatives meet the threshold criteria and modifying criteria. The Army's rationale and preferred remedy for the each area are presented in the following sections.

Plow Shop Pond - AOC 72

Under CERCLA, if no unacceptable risks to human health and welfare or the environment are identified, then No Further Action is the appropriate remedy. Following the installation of the

barrier wall between SHL and Red Cove and the successful implementation of the AOC 72 removal action in 2013 to address contaminated sediments in Plow Shop Pond, risk to human health and welfare or the environment has been mitigated; therefore, the "No Further Action" is proposed. Future monitoring of the effectiveness of the barrier wall will be incorporated into the SHL Long-Term Monitoring and Maintenance Plan (Sovereign, 2013c) and will be conducted as part of long-term monitoring at SHL. The results of the long-term groundwater monitoring in the area of the barrier wall and Red Cove will be presented in SHL Annual Reports (Sovereign, 2014b).

Former Railroad Roundhouse - SA 71

Following the 1999 removal action, the presence of railroad maintenance byproduct materials in the upland soil and the risk to human health and welfare or the environment has been mitigated but not reduced to acceptable risk levels for residential use. Based on the screening of alternatives, Alternative 2 (LUCs) provides the most appropriate and reasonable means of addressing any potential risk associated with future exposure to any residual soil contamination associated with the former RRRH activities remaining in the upland area of SA 71. The Army is recommending this alternative as it is protective of human health, complies with ARARs, is cost-effective and meets the RAO of preventing ingestion/direct contact with any residual soil contamination which may remain at the site.

The LUCs will require a deed restriction prohibiting residential reuse that runs with the land and is legally enforceable. All resources needed to implement Alternative 2 at SA 71 are readily available. LUCs, once finalized, would be implemented through a LUCIP. The LUCIP formalizes the roles and responsibilities of the Army, EPA, and MassDEP in the long-term administration and management of the LUCs. Annual reviews/inspections will be conducted to confirm the overall effectiveness of the established LUCs.

The LUCs will require notification to all current and future landowners to confirm they understand LUC requirements, restrictions and annual inspections to verify compliance with the LUCs.

2.12 Alternative Selection

Based on the information presented in the CERCLA nine-criteria screening process, Alternative 2 - Limited Action: Implementation of Land Use Controls, is the selected remedy for SA 71 that is protective of human health and the environment. Alternative 2 - complies with ARARs and is a cost effective remedy.

As stated in Section 2.7.1, No Further Action is the preferred remedy for AOC 72, as the risk to human health and welfare or the environment at AOC 72 have been mitigated.

2.13 Principal Threat Waste

Principal threat wastes are defined as source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. These include soils containing significant concentrations of highly toxic materials and surface or subsurface soils containing high concentrations of contaminants that are, or potentially are mobile due to wind entrainment, volatilization, surface runoff, or sub-surface transport.

The residual subsurface contamination associated with maintenance byproduct material located in the upland area of SA 71 are not considered to pose a Principal Threat.

2.14 Selected Remedy

2.14.1 *Plow Shop Pond - AOC 72*

The Selected Remedy based on current conditions at AOC 72 is No Further Action.

2.14.2 *Former Railroad Roundhouse - SA 71*

The Selected Remedy is Alternative 2 - Limited Action: Implementation of Land Use Controls. The LUCs are addressed through institutional controls, access restrictions, affirmative measures, and prohibitive directives:

- Institutional controls are to be implemented through a deed restriction prohibiting future residential use. The deed restriction will be implemented at the time of property transfer from the Army to MassDevelopment. In addition, an environmental use covenant consistent with a NAUL will be implemented at the time of property transfer.
- Affirmative measures to include public education and outreach.
- Prohibitive directives to ensure that any future soil disturbance activities are avoided by the public and that any excavation by construction/utility contractors is performed in accordance with a site specific Soil Management Plan (SMP).
- Annual site inspections of the site to evaluate access controls and evaluate the overall effectiveness of the LUCs will be conducted every five years.

The LUCs would be implemented following the issuance of the ROD through a LUCIP. Within 120 days of ROD signature, the Army shall prepare and submit for EPA review and approval a draft LUCIP that shall contain implementation and maintenance actions, including periodic inspections. The LUCIP formalizes the roles and responsibilities of the Army, EPA, MassDEP,

and MassDevelopment in the long-term administration and management of the alternative. The LUCIP will provide details of the deed restriction, details of the information to be included in the brochure/fact sheets and website, locations of brochure/fact sheet distribution, detailed description and survey coordinates of the area that is being addressed by the LUCs (see **Figure 3**), and the schedule/procedure for dissemination of the information. The LUCIP will include a Soils Management Plan for a future invasive work at the site. These instructions will include requirements for informing EPA, public notification requirements, safety procedures, and protocols for proper soil handling procedures.

The implementation of MassDevelopment/DEC requirements will be monitored as part of this alternative under the LUCIP and as part of the Comprehensive Five-Year Review process conducted at Devens which is required under Section 121 of CERCLA, as amended by SARA of 1986.

The estimated costs include initial capital costs to develop the educational materials, 30-year annual costs, and a 3% discount rate is as follows:

- Estimated Capital Cost: \$35,000
- Estimated Present-Value Annual Cost: \$20,000
- Estimated Total Present-Value Cost: \$432,085.04

Capital and annual costs used in the calculation of present worth costs for the selected remedy are presented in **Table 3** attached. In addition, project management costs were added to capitals costs as a percentage of calculated costs. A 20% management and contingency fee was added to the annual costs associated with Alternative 2. Cost estimates assume Land Use Controls will be maintained until such time that the risks associated with subsurface soils and debris is at levels to allow for unrestricted use and exposure.

The Army is responsible for implementing, maintaining, reporting on, and enforcing the Land Use Controls. Although the Army may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Army shall retain ultimate responsibility for the remedy integrity.

2.15 Statutory Determinations

Under CERCLA §121 and the NCP, the lead agency must select remedies that are protective of public health, welfare and the environment, comply with ARARs (unless a statutory waiver is justified), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition,

CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduces the toxicity, mobility or volume (TMV) of hazardous wastes as a principal element and a bias against off-site disposal of untreated wastes. The following sections discuss how the selected remedy meets these statutory requirements.

2.15.1 Protection of Public Health, Welfare, or the Environment

The selected remedy for SA 71 (Alternative 2), will protect public health and welfare through mitigation of potential risk to health and welfare from exposure to residual soil and debris in the upland of the former Railroad Roundhouse. This is accomplished in two ways:

- Implementation of Land Use Controls
- Prohibitive directives to include restrictions on all ground intrusive activities unless a Site-specific Soils Management Plan is followed.

Threats to the environment are not anticipated while residual subsurface contamination associated with maintenance byproduct material remains in place.

2.15.2 Compliance with Applicable and/or Relevant and Appropriate Requirements

The prior response action at SA 71 met the ARARs identified in the Action Memorandum (SWETS, 1999). No other ARARs are applicable to the selected remedy.

2.15.3 Cost Effectiveness

In the lead agency's judgment, the selected remedy is cost-effective and represents a reasonable value for the money to be spent. In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness." (40 CFR 300.430(f)(3)(i)(a)) This was accomplished by evaluating the "overall effectiveness" of those alternatives that satisfied the threshold criteria (i.e., were both protective of human health and the environment and ARAR-compliant). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in TMV through treatment; and short-term effectiveness). Overall effectiveness was then compared to costs to determine cost-effectiveness. The relationship of the overall effectiveness of this remedial alternative was determined to be proportional to its costs and hence this alternative represents a reasonable value for the money to be spent.

As shown in the comparative analysis of alternatives and summarized in **Table 2**, the selected remedy for SA 71, Alternatives 2, is the most cost effective alternative evaluated that provides acceptable levels of achievement of the other evaluation criteria, including implementability, short- and long-term effectiveness, and protectiveness.

The estimated present worth cost of the selected remedy is \$432,085.04 for Alternative 2. Although Alternative 1 is less expensive, protection of public health and welfare is not addressed. Other alternatives evaluated may provide incrementally more protectiveness; however, their increased costs are not warranted by the incremental increases in protectiveness. In addition, under future use conditions, overall risks from potential subsurface residual soil contamination were found to be low.

2.15.4 *Utilization of Permanent Solutions and Alternative Treatment Technologies (or Resource Recovery Technologies) to the Maximum Extent Practicable*

The Army has determined that the selected remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner at the site. Of those alternatives that are protective of human health and the environment, the Army has determined that the selected remedy provides the best balance of trade-offs in terms of the five balancing criteria, while also considering the statutory preference for treatment as a principal element and bias against off-site treatment and disposal and considering state and community acceptance.

The selected remedy reduces potential risks to public health and welfare by mitigating potential future exposure to residual subsurface soil contamination associated with maintenance byproduct material at the former Railroad Roundhouse. The selected remedy does not present short-term risks different from the other alternatives. There are no special implementability issues that set the selected remedy apart from any of the other alternatives evaluated. Additionally, a Principal Threat has not been found to exist at the former Railroad Roundhouse; therefore, the preference for treatment is not paramount.

2.15.5 *Preference for Treatment as a Principal Element*

Because of the low risk levels currently existing at the site, treatment of residual subsurface soil contamination associated with maintenance byproduct material is not deemed necessary. Therefore, because treatment was evaluated and deemed unnecessary, this statutory preference is satisfied.

2.15.6 *Five-Year Review Requirements*

Because contaminants remain on site at concentrations greater than those that would allow for unlimited use and unrestricted exposure, a statutory review will be conducted within 5 years after initiation of remedial action to evaluate whether the remedy continues to be protective of public health, welfare, and the environment in both the short- and long-terms.

2.16 Documentation of Significant Changes

The Proposed Plan was released for public comment in December 2014. It identified No Further Action as the Preferred Alternative for AOC 72 and Alternative 2 - Limited Action (LUCs) as the Preferred Alternative to address the potential risk above residential standards at the former Railroad Roundhouse.

Alternative 2 involved the institution of Land Use Controls, as a deed restriction to restrict site use to Open Space/Recreation Unlimited, and prevent residential use of the property. There were no significant changes presented during the comment period.

3.0 RESPONSIVENESS SUMMARY

3.1 Stakeholder Comments and Lead Agency Responses

No written comments from the public were received on the Proposed Plan (Sovereign, 2015) for the duration of the public comment period.

The Army conducted a Public Meeting on the Proposed Plan on 15 January 2015. A transcript of the meeting and copy of the presentation is provided in **Appendix B**. No significant changes to the Proposed Plan were presented by the public during the hearing. A copy of agencies' comments and the Army's response to those comments are attached in **Appendix C**.

3.2 Technical and Legal Issues

The Land Use Controls will require a deed restriction prohibiting future residential use. Other than the legal changes to deeds and deed notices noted in Subsection 2.16, no other technical or legal issues are foreseen during implementation of the selected remedies.

4.0 REFERENCES

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FIGURES

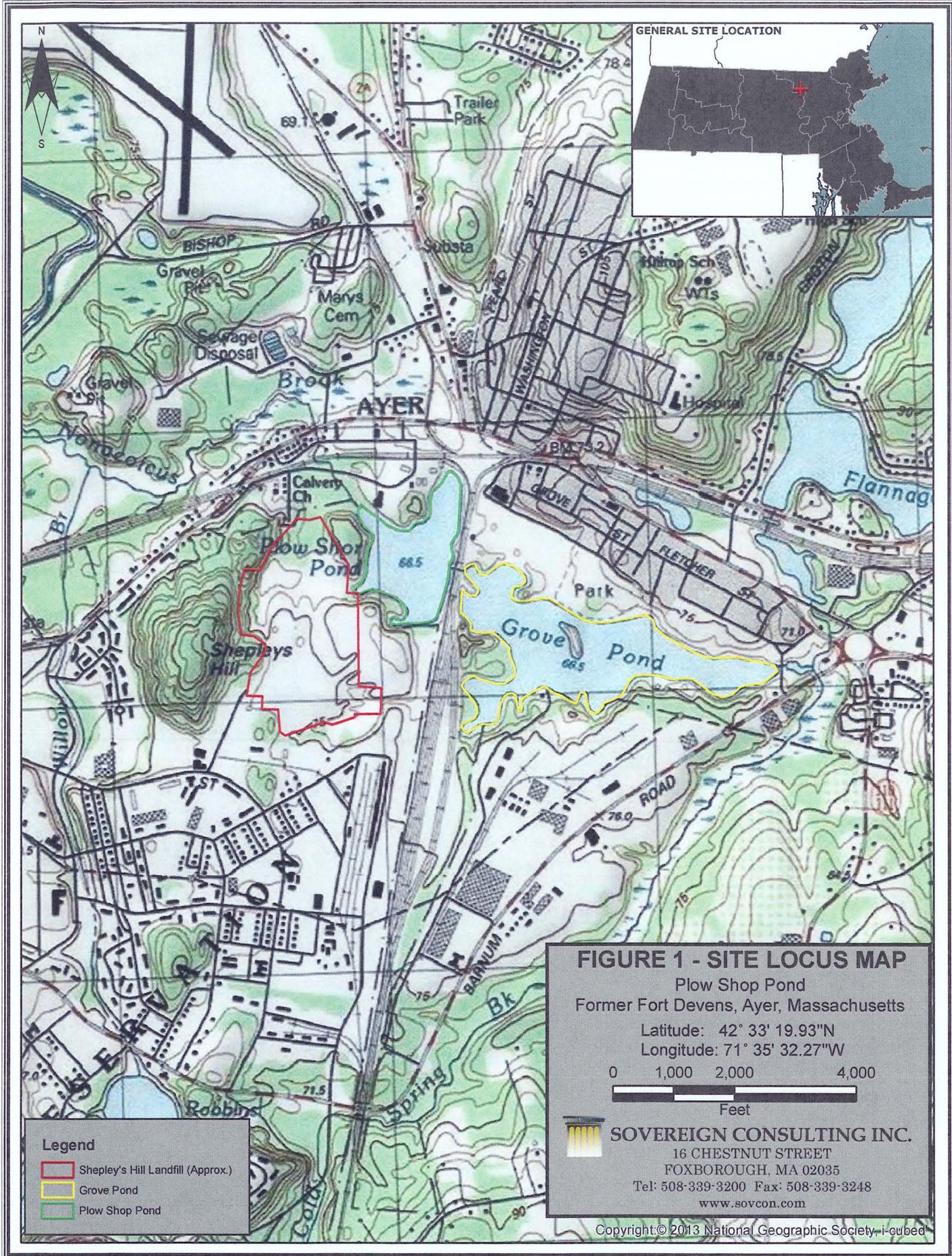
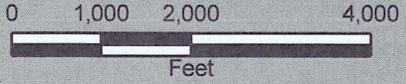


FIGURE 1 - SITE LOCUS MAP

Plow Shop Pond
Former Fort Devens, Ayer, Massachusetts

Latitude: 42° 33' 19.93"N
Longitude: 71° 35' 32.27"W



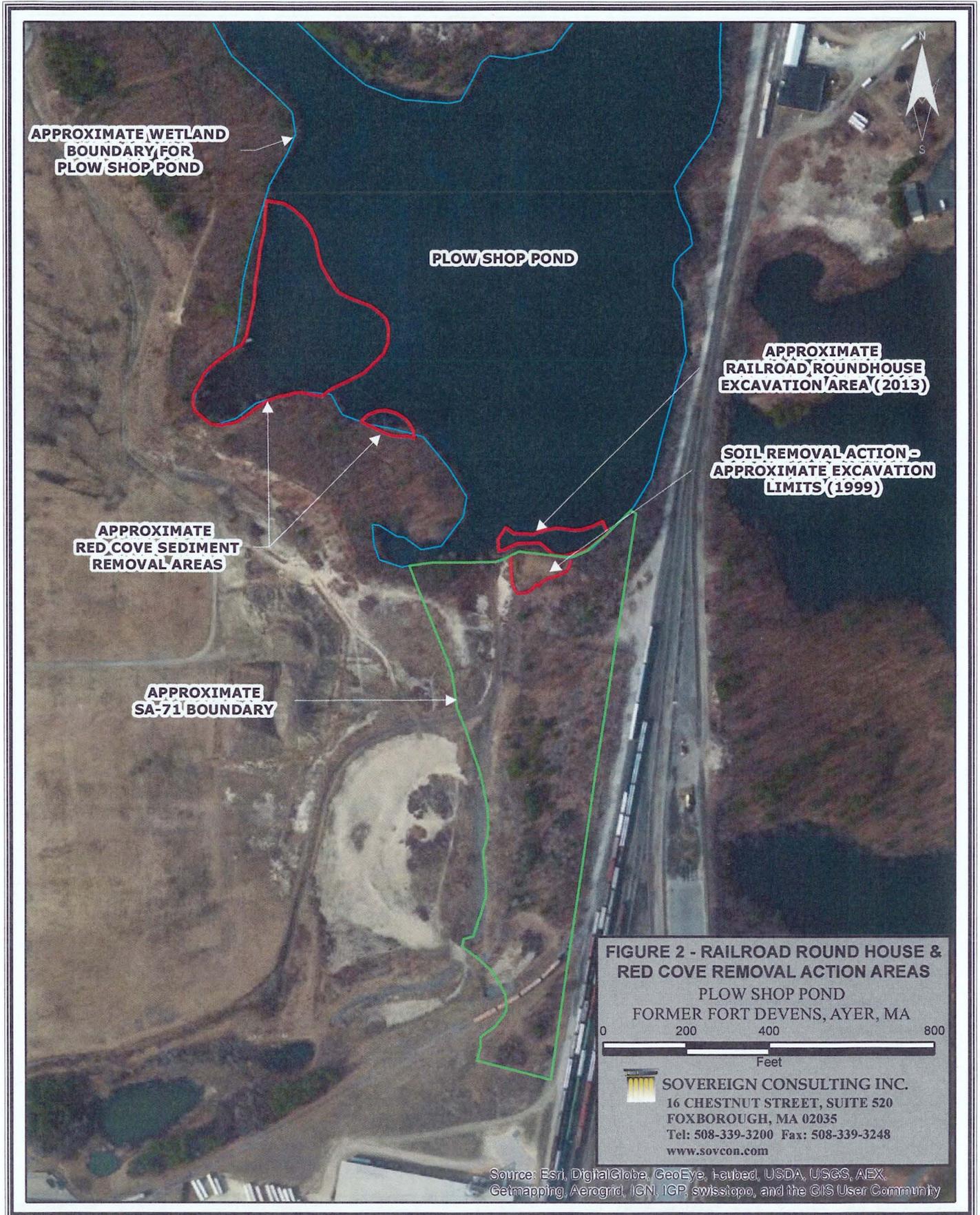
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Legend

- Shepley's Hill Landfill (Approx.)
- Grove Pond
- Plow Shop Pond

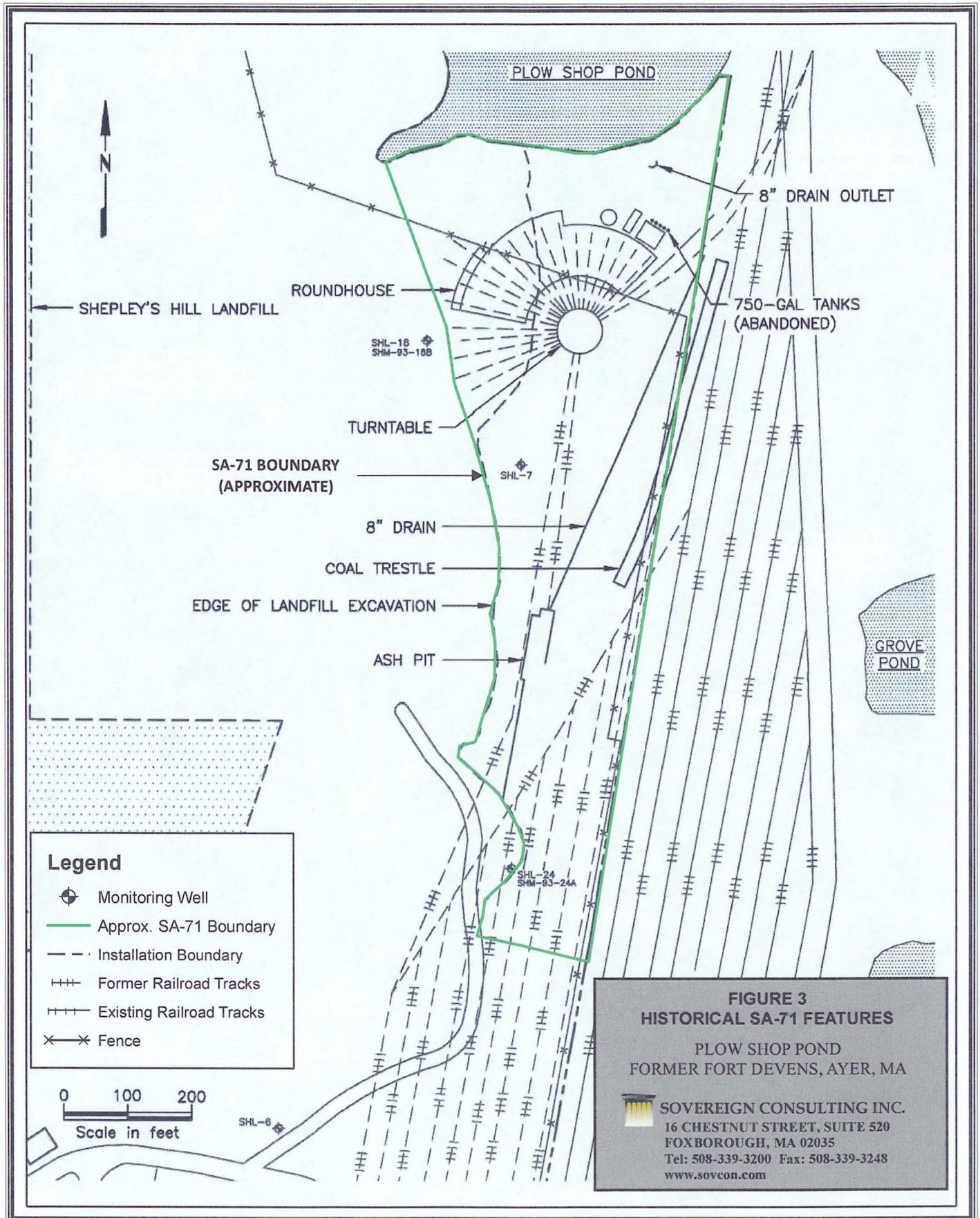
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Wetland Data Source: National Wetland Inventory Layer, 2010, US Fish & Wildlife Service.

02/26/2015 ROV
Updated 07/15/2015 ROV

Source: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**FIGURE 3
HISTORICAL SA-71 FEATURES**

PLOW SHOP POND
FORMER FORT DEVENS, AYER, MA

 SOVEREIGN CONSULTING INC.
16 CHESTNUT STREET, SUITE 520
FOXBOROUGH, MA 02035
Tel: 508-339-3200 Fax: 508-339-3248
www.sovcon.com

Taken from 'Previous Sample Locations, SA 71 Sediment Risk Characterization, Project 3618-04-8014, Figure 1-3' by MACTEC dated October 13, 2006.

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TABLES

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TABLE 1
SOIL CONTAMINANT OF CONCERN TABLE
Railroad Roundhouse
Fl. Devens Study Area 71
Devens, Massachusetts

Compounds Detected During Subsurface Sampling Activities Master Listing	MassDEP Background Natural Soil mg/ kg	MassDEP Background Coal Ash Fill mg/ kg	Frequency of Detection #/#	Highest Concentration Detected mg/ kg	Contaminant of Concern?	Justification For Removal From COC List	Location
VOLATILE ORGANICS							
Toluene	N/A	N/A	1/2	0.002	No	BRSLs	SHS-93-02X-0.0
Naphthalene	0.5	1	11/21	10.00	YES	COC	RHS-94-09X-0.0
PAHs							
30							
2-methylnaphthalene	N/A	N/A	10/21	20.00	No	BRSLs	RHS-94-08X-1.1
Acenaphthene	0.5	2	6/19	10.00	No	BRSLs	RHS-94-09X-0.0
Acenaphthylene	0.5	1	3/19	1.00	No	ProUCL EPC Below Background	RHS-94-13X-0.2
Anthracene	1	4	11/21	30.00	No	BRSLs	RHS-94-09X-0.0
Benzo(a)anthracene	2	9	11/21	20.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Benzo(a)pyrene	2	7	6/21	30.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Benzo(b)fluoranthene	1	4	9/21	10.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Benzo(g,h,i)perylene	1	3	6/19	9.00	No	No RSL	RHS-94-09X-0.0
Benzo(k)fluoranthene	1	4	10/21	10.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Chrysene	2	7	12/21	30.00	YES	COC	RHS-94-09X-0.0
Dibenz(a,h)anthracene	0.5	1	2/19	3.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Fluoranthene	4	10	13/21	60.00	No	BRSLs	RHS-94-09X-0.0
Fluorene	1	2	7/21	10.00	No	BRSLs	RHS-94-09X-0.0
Indeno(1,2,3-cd)pyrene	1	3	6/19	9.00	No	ProUCL EPC Below Background	RHS-94-09X-0.0
Phenanthrene	3	20	13/21	70.00	No	No RSL	RHS-94-09X-0.0
Pyrene	4	20	14/21	50.00	No	BRSLs	RHS-94-09X-0.0
INORGANICS							
Aluminum	10,000	10,000	21/21	4710.00	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Antimony	1	7	23/35	38.00	YES	COC	SA71-HS2
Arsenic	20	20	35/35	26.00	No	ProUCL EPC Below Background	SA71-HS2
Barium	50	50	21/21	138.00	No	BRSLs	SHS-93-02X-0.0
Beryllium	0.4	0.9	1/21	1.10	No	BRSLs	SHS-93-02X-0.0
Cadmium	2	3	3/19	6.57	YES	COC	RHS-94-12X-0.0D
Calcium	N/A	N/A	21/21	11200.00	No	BRSLs	SHS-93-03X-0.0
Chromium	30	40	17/21	15.80	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Cobalt	4	4	19/21	4.77	No	BRSLs	RHS-94-12X-0.0
Copper	40	200	21/21	153.00	No	BRSLs	RHS-94-12X-0.0
Iron	20,000	20,000	21/21	20300.00	No	BRSLs	RHS-94-12X-0.0
Lead	100	600	33/35	660.00	No	ProUCL EPC Below Background	SA71-FL33
Magnesium	5,000	5,000	21/21	170.00	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Manganese	300	300	21/21	291.00	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Mercury	0.3	1	9/21	0.33	No	BRSLs	RHS-94-08X-0.0
Nickel	20	30	21/21	19.50	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Potassium	N/A	N/A	21/21	5352.00	No	No RSL	SHS-93-03X-0.0
Selenium	0.5	1	9/21	4.20	No	BRSLs	RHS-94-09X-0.0
Silver	0.6	5	1/21	2.97	No	ProUCL EPC Below Background	SHS-93-03X-0.0
Sodium	N/A	N/A	21/21	613.00	No	No RSL	RHS-94-12X-0.0D
Thallium	0.6	5	1/19	0.50	No	ProUCL EPC Below Background	RHS-94-11X-1.5
Tin	N/A	N/A	9/19	16.70	No	BRSLs	RHS-94-08X-0.8
Vanadium	30	30	18/21	15.80	No	ProUCL EPC Below Background	RHS-94-12X-0.0
Zinc	100	300	20/21	3380.00	YES	COC	RHS-94-12X-0.0D
PESTICIDES							
4,4'-DDE	N/A	N/A	1/2	0.01	No	BRSLs	SHS-93-02X-0.0

Notes:

MDL - Method Detection Limit

COC - Contaminant of Concern

N/A - Not applicable

BRSLs- Concentration below USEPA Regional Screening Levels (RSLs) for residential soil.

Chrysene not identified as a COC in the 2001 RA.

Cobalt, iron and magnesium have limited toxicology data. Although they are considered COCs limited toxicological data resulted in minimal risks associated with exposure.

TABLE 3

Capital and Annual Costs for Selected Remedy
Alternative-2

	Quantity	Unit	Cost
Capital Costs			
Preparation of LUCIP	10500	1	\$ 10,500.00
Implementation of LUCs	7500	1	\$ 7,500.00
Legal Support	5500	1	\$ 5,500.00
Puplic Involvement	3500	1	\$ 3,500.00
Distribution of Site Information	2100	1	\$ 2,100.00
Management & Contingency		20%	\$ 5,820.00
Total			\$ 34,920.00
Annual Costs			
Site Inspection	7750	1	\$ 7,750.00
Potential Review of Site Conditions	8500	1	\$ 8,500.00
Management & Contingency		20%	\$ 3,250.00
Total			\$ 19,500.00

TABLE 3

Net Present Worth Calculations

Year	Capital Cost	Annual Cost	Total Cost	Discount Factor	Present Worth
0	\$ 34,920.00	\$ 19,500.00	\$ 54,420.00	1.00	\$ 54,420.00
1		\$ 19,500.00	\$ 19,500.00	0.97	\$ 18,915.00
2		\$ 19,500.00	\$ 19,500.00	0.94	\$ 18,347.55
3		\$ 19,500.00	\$ 19,500.00	0.91	\$ 17,797.12
4		\$ 19,500.00	\$ 19,500.00	0.89	\$ 17,263.21
5		\$ 19,500.00	\$ 19,500.00	0.86	\$ 16,745.31
6		\$ 19,500.00	\$ 19,500.00	0.83	\$ 16,242.95
7		\$ 19,500.00	\$ 19,500.00	0.81	\$ 15,755.67
8		\$ 19,500.00	\$ 19,500.00	0.78	\$ 15,283.00
9		\$ 19,500.00	\$ 19,500.00	0.76	\$ 14,824.51
10		\$ 19,500.00	\$ 19,500.00	0.74	\$ 14,379.77
11		\$ 19,500.00	\$ 19,500.00	0.72	\$ 13,948.38
12		\$ 19,500.00	\$ 19,500.00	0.69	\$ 13,529.93
13		\$ 19,500.00	\$ 19,500.00	0.67	\$ 13,124.03
14		\$ 19,500.00	\$ 19,500.00	0.65	\$ 12,730.31
15		\$ 19,500.00	\$ 19,500.00	0.63	\$ 12,348.40
16		\$ 19,500.00	\$ 19,500.00	0.61	\$ 11,977.95
17		\$ 19,500.00	\$ 19,500.00	0.60	\$ 11,618.61
18		\$ 19,500.00	\$ 19,500.00	0.58	\$ 11,270.05
19		\$ 19,500.00	\$ 19,500.00	0.56	\$ 10,931.95
20		\$ 19,500.00	\$ 19,500.00	0.54	\$ 10,603.99
21		\$ 19,500.00	\$ 19,500.00	0.53	\$ 10,285.87
22		\$ 19,500.00	\$ 19,500.00	0.51	\$ 9,977.29
23		\$ 19,500.00	\$ 19,500.00	0.50	\$ 9,677.98
24		\$ 19,500.00	\$ 19,500.00	0.48	\$ 9,387.64
25		\$ 19,500.00	\$ 19,500.00	0.47	\$ 9,106.01
26		\$ 19,500.00	\$ 19,500.00	0.45	\$ 8,832.83
27		\$ 19,500.00	\$ 19,500.00	0.44	\$ 8,567.84
28		\$ 19,500.00	\$ 19,500.00	0.43	\$ 8,310.81
29		\$ 19,500.00	\$ 19,500.00	0.41	\$ 8,061.48
30		\$ 19,500.00	\$ 19,500.00	0.40	\$ 7,819.64
TOTALS		\$ 604,500.00	\$ 639,420.00		\$ 432,085.04
<i>Total Present Worth</i>					\$ 432,085.04

Department of Environmental Protection

APPENDIX A



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

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Lieutenant Governor

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U.S. Environmental Protection Agency
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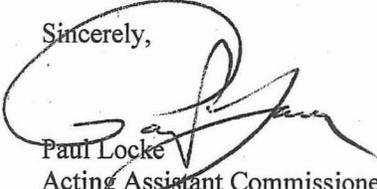
Re: Record of Decision
Area of Concern 72 and Study Area 71
Former Fort Devens Army Installation
MassDEP RTN 4-3002621
Date: September 29, 2015

Dear Ms. Barmakian:

The Massachusetts Department of Environmental Protection (MassDEP) reviewed the *Record of Decision for Plow Shop Pond (AOC 72) - Red Cove and Former Railroad Round House (Study Area 71), Former Fort Devens Army Installation, Devens, Massachusetts*, dated September 2015. The Record of Decision summarizes the results from the site investigations that were conducted to characterize site conditions, summarizes the results from the removal actions that were conducted to address unacceptable risks to human health and the environment, and documents the Army's rationale for selecting a No Further Action Decision for AOC 72 and Alternative 2 - Limited Action: Implementation of Land Use Controls for SA 71. MassDEP concurs with the selected decision.

If you have any questions or comments, please contact David Chaffin, Project Manager (617-348-4005), or Anne Malewicz, Federal Facilities Section Chief (617-292-5659).

Sincerely,



Paul Locke
Acting Assistant Commissioner
Bureau of Waste Site Cleanup

CC: C. Keating, USEPA
R. Simeone, USA-Devens
R. Ostrowski, MassDevelopment
Restoration Advisory Board
J. Naparstek, MADEP-Boston

APPENDIX B

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

1 Meeting Attendees:

2

3 Robert Simeone, Army BRAC Environmental Coordinator;

4 Jane Dolan, US Environmental Protection Agency (USEPA);

5 Laurie O'Connor, USEPA;

6 David Chaffin, Massachusetts Department of Environmental Protection (MassDEP)

7 Pam Papineau, Ayer Board of Health;

8 Ron Ostrowski, MassDevelopment;

9 Elizabeth Andersen, H&S Environmental;

10 Laurie Nehring, Local Citizen and with People of Ayer Concerned about the

11 Environment (PACE);

12 Julie Corenzwit, RAB Co-Chair and PACE member;

13 Richard Doherty, ECR Consulting (consultant to PACE);

14 Ann Malewicz, MassDEP;

15 Melissa Macdonald, PACE;

16 Penny Reddy, Corps of Engineers;

17 Steve Passafaro, Sovereign Consulting;

18 Rachel Leary, Sovereign Consulting;

19 John Bishop, Ayer Public Spirit;

20 Robert Corrieri, Devens Committee;

21 Frank Maxant, Ayer;

22 Gail Berlinger, Ayer

23

24 *****P R O C E E D I N G S *****

25

26 Mr. Simeone:

27

28 There is a sign in sheet going around. Okay, so if there are not any questions I'll have
29 Steve start in on the slides for the proposed plan.

30

31 Mr. Passafaro:

32

33 Ok, as Bob said, we're here to discuss the Proposed Plan tonight and we have put
34 together some brief summary slides of the information you will find in the plan. First, to
35 start off with, the proposed plan itself—the purpose of it is to facilitate public
36 involvement in the remedy selection process for both Plow Shop Pond, AOC 72, and
37 the former railroad roundhouse site, SA 71. The plan presents the Department of
38 Army's preferred alternatives for both sites, which for Plow Shop Pond is no further
39 action, and for the former railroad roundhouse is limited action or land use controls. So,
40 this is just a map of the area. Just to point out a few quick things: Plow Shop Pond is
41 located northeast of the Shepley's Hill landfill, and it is fed by Grove Pond, which is to
42 the east and discharges to Nonacoicus Brook to the northwest. A few areas of interest
43 are the former Hartnett tannery, located off of tannery cove at the northwest corner of
44 Grove Pond, east of the pond itself. And the former railroad roundhouse site—it's
45 orange here, it's a little hard to see—comes off of the other end of the pond. It's
46 approximately eleven hundred feet long and varies from two hundred to three hundred

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

47 feet wide. That's the site of the former Boston-Maine railroad roundhouse turnaround,
48 which operated from 1900 to 1935.

49

50 Ms. Nehring:

51

52 Could you point out on that map where our drinking water supplies were?

53

54 Mr. Passafaro:

55

56 We have a McPherson well, which is located about right here, and that would be the
57 closest drinking water supply.

58

59 Ms. Nehring:

60

61 What about Ayer's?

62

63 Mr. Passafaro:

64

65 Oh, sorry—the Ayer wells are right here, and the Devens wells are right about here,
66 right off of the—this is the CSMS facility for the guard.

67

68 Ms. Nehring:

69

70 And just for people who don't know, maybe the direction of water flow?

71

72 Mr. Passafaro:

73

74 Ground water flow, you mean?

75

76 Ms. Nehring:

77

78 No, surface water flow.

79

80 Mr. Passafaro:

81

82 Surface water flow—from Grove Pond to Plow Shop Pond out to Nonacoicus Brook.

83

84 Ms. Nehring:

85

86 Thank you.

87

88 Mr. Passafaro:

89

90 Sure. A little brief background on the pond itself—site investigations were conducted
91 here between 1992 and 2010 and identified elevated concentrations of arsenic in the
92 Red Cove area, which was attributed to Shepley's Hill. The Red Cove itself is this small

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

93 area right here. And railroad maintenance byproducts along the shoreline of the former
94 roundhouse—that's this area right here. Prior to performing removal actions in the pond,
95 it's important to note that non-time critical removal action was conducted in 2012
96 between the landfill and Red Cove to install a groundwater barrier wall to mitigate the
97 arsenic and groundwater flux from beneath the landfill to Red Cove slash Plow Shop
98 Pond. After which point a non-time critical removal action was conducted in the pond, in
99 2013 that resulted in the removal of three thousand cubic yards of impacted sediment
100 from Red Cove, mitigating risk to the environmental receptors there, from the arsenic,
101 as well as over nine hundred cubic yards of impacted sediment from the shoreline
102 adjoining the former railroad roundhouse, mitigating risk to environmental receptors
103 posed by maintenance byproduct.

104

105 Ms. Nehring:

106

107 Could you define for me what non-time critical removal means, exactly?

108

109 Mr. Passafaro:

110

111 Well, there's two removal actions under CERCLA that you could take that are separate
112 from the standard FS and FFS process, either time critical or non-time critical removal
113 action. The difference between the two is based on contaminants, severity... This was
114 taken from what's called the Engineer Evaluation and Cost Analysis, or EE/CA,
115 sidetrack, which allowed the Army to evaluate alternatives and move forward with
116 removal action.

117

118 Ms. Nehring:

119

120 So basically, it was pretty bad chemicals that were in there, but nobody was being
121 exposed to it, so there wasn't urgency to get it out, but it does have to come out.

122

123 Mr. Passafaro:

124

125 Basically. And you'll see what's going on by the railroad roundhouse, where a time
126 critical action was inducted in 2000, but that's in the next slide. So this shows you right
127 here a figure of the old layout of the roundhouse site itself. The pond is up top. Here's
128 the old roundhouse. The maintenance byproduct disposal area is this area right here,
129 between the roundhouse turnaround and the shoreline itself. Investigations in the early
130 nineties identified elevated concentrations of antimony, copper and lead in that area,
131 which was attributed to former operations at the roundhouse itself. So, in this case, a
132 time critical removal action was conducted in 1999 to remove twenty-four hundred cubic
133 yards of impacted soil from the former maintenance byproduct disposal area up to the
134 shoreline. However, final side-wall samples identified residual concentrations of
135 antimony and lead after the removal action was completed. So, to summarize the site
136 risk for Plow Shop Pond, as I stated earlier, the combination of the installation of the
137 groundwater barrier wall between the landfill and Red Cove in 2012, as well as the
138 sediment removal actions within Red Cove and along the shoreline of the former

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

139 railroad roundhouse, resulted in the mitigation of the risk to human health and the
140 environment in the pond itself. Regarding the former railroad roundhouse, in '99, the
141 removal action resulted in a reduction in risk to human health and the environment. In
142 2014, a follow-up human health risk evaluation indicated that the cumulative excess
143 lifetime cancer risk for human receptors is above acceptable criteria for unrestricted
144 use. However, it did demonstrate that was acceptable risk for the assumed future use,
145 and current use, of the site, which is open space and recreation. So consequently, this
146 led to the remedial action objectives and alternatives for the pond. Again, since risk was
147 mitigated, there wasn't a real action objective, and alternatives weren't necessary, and
148 the preferred remedy for AOC 72, Plow Shop Pond, is no further action. For the former
149 railroad roundhouse, because there is still possible risk to unrestricted use, the remedial
150 action objective is to prevent ingestion or direct contact with residual soils, and remedial
151 alternatives that were evaluated included no further action—however, that doesn't
152 prevent exposure—and implementation of land use controls, which is the preferred
153 remedy. Now, land use controls are institutional controls which would limit potential
154 exposure to residual soil contamination and this would be accomplished through a
155 property deed restriction, which would prohibit residential reuse, and maintain just open
156 space, and also would require, if there were any soil disturbances, that they be
157 managed under a soil management plan as well as a health and safety plan. Now,
158 these land use controls would be implemented following the issuance of the Record of
159 Decision, and through a Land Use Control Implementation Plan, or LUCIP for short. The
160 LUCIP would formalize the roles and responsibilities of the Army, EPA and DEP and
161 long-term administration and management, and require annual inspection and five-year
162 reviews to confirm the overall effectiveness. Now, at this time, the approximate
163 boundaries for the land use controls will probably correspond to the boundary of the
164 former railroad roundhouse, although a final determination will come with the LUCIP
165 regarding the boundary extent. So, as I'm sure everyone's aware, we're in the middle of
166 a public comment period right now, and comments are due postmarked by February
167 third, at which time the Army will respond as part of a responsiveness summary, which
168 will be included in the Record of Decision, which is the final document for these sites.
169 And, lastly, all written comments can be sent to the address up there. So are there any
170 additional questions?

171

172 Ms Corenzwit:

173

174 So is the remaining contamination primarily on the land adjacent to the pond, or is it in
175 the pond sediments, or both?

176

177 Mr. Passafaro:

178

179 For the railroad roundhouse, there are residual impacts in the soil adjacent to the pond,
180 but they're located at depth primarily at ten to fifteen feet below grade, although I
181 believe in some cases there might be a six to nine foot sample. In the pond itself, the
182 removal actions have brought the pond back to local conditions.

183

184 Ms Papineau:

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

185

186 Just kind of a follow-up question to that statement you just made, I want to clarify
187 something that I think I gathered from reading the background materials, that we're not
188 actually saying for Plow Shop that there are no hazardous contaminants. We're saying
189 they're reduced to the baseline level before the Army got involved in things getting
190 there. Is that correct? We're not really saying that Plow Shop that there are no
191 environmental concerns with Plow Shop. It's just not—it's at a kind of baseline level. Is
192 that correct?

193

194 Mr. Passafaro:

195

196 Yes.

197

198 Mr. Simeone:

199

200 Right. That's what we mean when we say local conditions.

201

202 Ms. Papineau:

203

204 Yeah, that's what I wondered, I wanted to clarify that "local conditions." And we think
205 that a lot of that may have come from the tannery or whatever.

206

207 Mr. Simeone:

208

209 Correct.

210

211 Ms Papineau:

212

213 Can you give any kind of a general environmental assessment based on what you know
214 of what are those baseline hazards associated with Plow Shop?

215

216 Mr. Simeone:

217

218 I have a stack of reports, about that high, from over the years.

219

220 Ms Papineau:

221

222 Is it horribly bad, medium bad...?

223

224 Mr. Simeone:

225

226 A lot of the heavy metals are not bioavailable, so you don't get a lot of uptake of the
227 mercury. I mean, mercury in sediments in ponds in the Northeast is well-documented.
228 The levels of mercury are pretty high, but we did various risk assessments and others
229 have as well, so we can point you to that information if you really wanted to get into that
230 quantitative summary of that. Overall, obviously it would be better if it wasn't there, but it

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231 is, and whether it's worth removing it from the resource is probably questionable,
232 because it is an extensive area.

233
234 Ms Papineau:

235
236 And it's all sediment-based.

237
238 Mr. Simeone:

239
240 It's mainly mercury and chromium from the tannery, so it's pretty widespread throughout
241 the pond.

242
243 Ms Nehring:

244
245 One of the long-term concerns I think Ayer is going to have is the impact on the abutting
246 Grove Pond, and I know the water flows in the other direction from Grove to Plow Shop
247 Pond, but we hear talk from time to time depending on who is managing the recreation
248 department about how to better use Grove Pond for recreation. And so there's some
249 talk sometimes of, for example, putting herbicides in there to get rid of all the weeds that
250 are there today, so that it can become more of a community boating area. We hear
251 sometimes talk about using Grove Pond as a water source, and they want to stir up the
252 sediment, I believe they would stir up the sediment, to be able to pump water from
253 Grove Pond up to the fields to water the fields, and we hear about this and it's like, 'Oh,
254 gosh, we don't want that to happen', because we don't know the locations where all this
255 stuff is buried, and it's not bioavailable because of the way it is now, but people might
256 unknowingly make that an awful lot different in the future, when there aren't all of us
257 around watching. So I think I'm wondering, all the things that we're doing to watch the
258 ponds, long-term, can there be some sort of deed restriction, could there be some way
259 of making sure that if people do that they do so with a lot of study and guidance and
260 experts investigating? I don't know if you share my concern?

261
262 Ms Papineau:

263
264 I do share your concern, and we might be kind of crossing that border between is it
265 something that's Army responsibility versus town responsibility, and as far as going with
266 that baseline level versus what the Army has responsibility for. But I agree with you. I
267 think that there are concerns. We know it now because we're involved in it, but time
268 goes by and we lose that knowledge.

269
270 Ms. Nehring:

271
272 With Plow Shop Pond, maybe that comes back to Ayer at some point, so we want to
273 keep an eye for the same reason, recreational purposes. And if the surrounding area is
274 going to be limited now, in terms of open space and recreation, where Shepley's Hill is
275 and the railroad roundhouse was, could there be disturbances at some point later on
276 that could inadvertently cause some problems.

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277

278 Ms Papineau:

279

280 Are those land areas within the current boundaries of Devens, or are some of them
281 crossing over into Ayer?

282

283 Mr. Simeone:

284

285 You mean the pond itself?

286

287 Ms. Papineau:

288

289 No, the roundhouse area.

290

291 Mr. Simeone:

292

293 The roundhouse is a part of former Devens. It's property that will go to Mass
294 Development as part of the landfill parcel, so it hasn't been formally transferred yet to
295 Mass Development, but it will be someday.

296

297 Ms. Papineau:

298

299 Okay. It's not within the current boundaries of Ayer.

300

301 Mr. Simeone:

302

303 The Harvard-Ayer line runs—yeah, it's within Ayer. It's within the town of Ayer but it's
304 within the enterprise zone of Devens.

305

306 Ms. Papineau:

307

308 Yeah, that's where I get a little foggy on what's enterprise zone versus what's—

309

310 Mr. Simeone:

311

312 Any property that's former Devens is within the enterprise zone.

313

314 Mr. Ostrowski:

315

316 The Army property was transferred to Devens back in '96 so that's why the property will
317 come back to Mass Development once Shepley's Hill is operating properly and
318 successfully.

319

320 Ms. Papineau:

321

322 So then is it correct to say it's within the historical boundary of Ayer?

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323

324 Mr. Simeone:

325

326 Yes. Exactly. The historical boundary.

327

328 Mr. Maxant:

329

330 The current town boundary has never changed. All of the enterprise zone is Ayer,
331 Harvard, or Shirley. We should be clear about that. It's in Ayer. In the enterprise zone.

332

333 Mr. Simeone:

334

335 Good distinction.

336

337 Ms. Papineau:

338

339 That's why I'm foggy. [laughter] Is it the same with Plow Shop? Is that also within the
340 Devens enterprise zone?

341

342 Mr. Simeone:

343

344 No. Plow Shop is outside the boundary of former Devens.

345

346 Ms. Papineau:

347

348 Okay. That's Ayer we own that.

349

350 Mr. Simeone:

351

352 Well, Calvin Moore is the owner. Any other questions?

353

354 Mr. Maxant:

355

356 So the Army owns the roundhouse site and the Shepley's Hill Landfill.

357

358 Mr. Simeone:

359

360 Right.

361

362 Mr. Maxxant:

363

364 Under the expectation that it will be transferred to Mass Development. But who has
365 municipal jurisdiction right now over the land owned by the Army by the railroad?

366

367 Mr. Simeone:

368

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369 MassDev. Mass Development.

370

371 Mr. Maxant:

372

373 Mass Development has municipal jurisdiction.

374

375 Mr. Simeone:

376

377 Correct. Yes, Rich?

378

379 Mr. Doherty:

380

381 First I want to say that I acknowledge all the good work that's been done in the Army
382 related to Red Cove with excavation and the barrier wall, just great things that
383 happened there. But I do have one concern about the Proposed Plan, and that's source
384 of the arsenic that contaminated Red Cove is still there. The contaminated landfill is still
385 there and there is a barrier wall now. My concern is that the Proposed Plan has no
386 monitoring of that whatsoever that I can see, other than the monitoring of the barrier
387 wall, which is just hydraulic monitoring, and that's fine, but I was just wondering, is there
388 some way there could be some element of monitoring the Cove itself incorporated into
389 the proposed plan?

390

391 Mr. Simeone:

392

393 We made the decision—the short answer is yes, we can incorporate monitoring, but we
394 made the decision administratively not to incorporate it under this Proposed Plan, but to
395 do it under the management plans for the landfill, which we know are going to go on for
396 some time. So, under the landfill O&M plans that we have, we will be incorporating
397 future evaluations. How effective the barrier wall is will determine whether there's future
398 breakout of iron and arsenic within Red Cove again, so that's how we're going to
399 monitor the effectiveness of the barrier wall through the Shepley's remedy and the
400 receptor of it, the pond itself.

401

402 Mr. Doherty:

403

404 So let's say in five years, the hydraulic monitoring shows a very low [inaudible], and Red
405 Cove suddenly turns red again, and dead fish appear or something? Is there some sort
406 of even visual monitoring of Red Cove?

407

408 Mr. Simeone:

409

410 Again, I think it would all fall under Shepley's. The visual and the chemical would fall
411 under that. I mean, if by some chance it's not associated with the barrier wall but it's still
412 the landfill—maybe it's skirting around the barrier wall or whatever—then we'd have to
413 address that at that time.

414

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

415 Ms. Nehring:

416

417 Has the monitoring been established yet?

418

419 Mr. Simeone:

420

421 We haven't set those parameters yet, because the barrier wall hasn't really been in that
422 long and we need time for the down gradient groundwater of the barrier wall to flush
423 through the system, so that we can then start to look at it anew. But it will be
424 incorporated into future monitoring plans.

425

426 Ms. Nehring:

427

428 Would it be monitored yearly, something like that?

429

430 Mr. Simeone:

431

432 Probably, yes. Probably yearly. As far as the management of the resources of the
433 ponds as a whole, regarding what you said about Grove Pond, I do think that is a
434 question for the towns and the DEP as well. As you know, the tannery is a DEP/MCP
435 site, so if you wanted to have a holistic resource management plan associated with the
436 ponds, I think that's a good place to start. We're certainly going to help out with putting
437 signs around the ponds, "No Fishing" signs.

438

439 Ms. Papineau:

440

441 I was also wondering, is the railroad ever going to be brought into this to help fund the
442 railroad roundhouse cleanup that was done?

443

444 Mr. Simeone:

445

446 That's still being litigated. That's still in the courts, unfortunately. We are trying to. For
447 those who don't know, the contamination that we cleaned up was from the railroad, but
448 the Army purchased the property, so we were liable under CERCLA to do the cleanup.
449 We did it, and now we're trying to recover our costs from the railroad, and that's kind of
450 where it's at. And in doing so, they apparently also countersued the government and
451 included the town of Ayer in that suit. It's very complicated, but... that's where that
452 stands. The DOJ attorney that I work with is in contact with the Town of Ayer's attorney
453 it's working its way through. That's really all I can say.

454

455 Ms. Malewicz:

456

457 So, Bob, Fort Devens currently owns this property, the roundhouse?

458

459 Mr. Simeone:

460

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461 Correct.

462

463 Ms. Malewicz:

464

465 So you could put a deed restriction on it?

466

467 Mr. Simeone:

468

469 Yes.

470

471 Ms. Malewicz:

472

473 And you decided to do a land use control or soil management plan versus a removal of
474 the top few inches or few feet? Did you look at the cost difference between...

475

476 Mr. Simeone:

477

478 Yes, it's—what occurred out there with the removal action was, they did the time critical
479 action memo, and then in the action memo they set very conservative preliminary
480 remediation goals of unrestricted use, which was not the correct thing to do. The land
481 use plan, we should have a commercial or open space type land use to do the cleanup.
482 So we got out there, we started digging, and that hole was—I wasn't there, but it was
483 over fifteen feet deep, and they dug below the water table, and they took confirmatory
484 samples and found that they were still elevated above the unrestricted use cleanup
485 goals. So what we did, was we reevaluated, and said, 'Really, these cleanup goals
486 should be commercial,' so in the completion report, that's documented, and the
487 confirmation samples that were taken, that's the sidewall samples that are referenced in
488 that slide, were below the commercial standards. So we never really gave much thought
489 to continuing the excavation to not have the land use control—

490

491 Ms. Malewicz:

492

493 Right, because it's so deep.

494

495 Mr. Simeone

496

497 —especially given how deep it was, yes.

498

499 Ms. Malewicz:

500

501 I understand.

502

503 Mr. Simeone:

504

505 So this seemed like the easiest fix. Even though the unacceptable risk is kind of
506 borderline, there are uncertainties with that site. There's a lot of coal ash that spread

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

507 throughout the site from the railroad operations. Those, as you know, fall under the
508 MCP for cleanup nor do they fall under CERCLA for cleanup. But they can have
509 elevated heavy metals and PAHs. So those are still there, and there is still the residual
510 that we identified in our own confirmation samples that is still there. Based on that
511 uncertainty, and based upon how the property's going to be used in the future, it made
512 sense to do that.

513

514 Ms. Nehring:

515

516 Are there any specific plans for that property that are happening from Mass
517 Development's perspective, like the open space plans?

518

519 Mr. Ostrowski:

520

521 There's been a lot of talk about putting solar panels out there. The Army has talked
522 about that and there has been some talk about using the land outside of the 84 acres of
523 the landfill. But still, nothing's certain. There's no concrete plans, or somebody coming
524 in, it's still talk.

525

526 Mr. Simeone:

527

528 It's all talk till it happens.

529

530 Ms. Nehring:

531

532 That would not be recreational use, though.

533

534 Mr. Ostrowski:

535

536 Well, if it's an Army project, they can make it work.

537

538 Mr. Simeone:

539

540 There is talk about putting solar panels on the landfill, to power the pump-and-treat,
541 things like that. That's, again, just talk.

542

543 Ms. Malewicz:

544

545 The deed is for non-residential. In the deed it doesn't talk about recreational. I'm sorry,
546 I'm mumbling. It's after five, I have my quiet voice on, I guess. So, the deed looks like
547 it's going restrict for residential, thus it will be used for commercial or open space, and
548 you don't anticipate recreational, that would not be included?

549

550 Mr. Simeone:

551

552 In the roundhouse? No, it's still suitable for recreation.

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

553

554 Ms. Malewicz:

555

556 But not residential?

557

558 Mr. Simeone:

559

560 But not residential. Correct. It's suitable for open space. The risk calculations we did
561 indicated it was acceptable risk for the current land use which is open space slash
562 recreational.

563

564 Ms. Nehring:

565

566 And not commercial, right?

567

568 Mr. Simeone:

569

570 And not commercial, right.

571

572 Ms. Papineau:

573

574 Is that area zoned for a particular use right now?

575

576 Mr. Ostrowski:

577

578 Open space. If you look behind there, on the screen, the land reuse plan there—

579

580 Ms. Papineau:

581

582 Oh, okay.

583

584 Ms. Nehring:

585

586 That's why I was asking about solar panels, because we favor solar energy, but we
587 move a large amount of open space and recreation from the original plan—if Shepley's
588 Hill Landfill is zoned for open space, and we end up putting solar panels on it instead,
589 and that chunk of land is removed from the recreational aspect, that differs from what
590 people envisioned it as in the future, so we'd have to re-zone it and people would need
591 to be involved in that decision.

592

593 Mr. Ostrowski:

594

595 All I know is I've been hearing about it for a couple of years now, that it might be used
596 as a solar farm, but nothing's happening, so I don't know. I don't know how that's going
597 to go, I can't read the future.

598

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599 Ms. Nehring:

600

601 But if it were to happen, it would go before a zoning board?

602

603 Mr. Ostrowski:

604

605 Well, that's kind of a question that the DEC (Devens Enterprise Commission) would
606 have to answer. The first level of re-use is open space, but there could be other layers
607 that would be acceptable under open space, maybe that's one I don't know, possibly,
608 I'm not in that area but Peter Lowitt would be the guy to address those issues involving
609 the reuse plan.

610 Ms. Nehring:

611

612 Okay. So it wouldn't be open space where people are running around, but maybe
613 wildlife, and there wouldn't be asphalt, or—

614

615 Mr. Ostrowski:

616

617 Well, open space you can put trails, you can put walking paths, you can put maybe, uh,
618 some golf stuff, maybe.

619

620 Ms. Nehring:

621

622 But not if there are solar panels there.

623

624 Mr. Ostrowski:

625

626 But see, you've still got the grasshopper sparrow there too, so that kind of puts a limit
627 on their habitat, and that's a known Massachusetts endangered species, so that's
628 another consideration with what to do with it.

629

630 Ms. Papineau:

631

632 So, if in the possible chance that there's open space and you put trails there, one of our
633 members was asking, if children were to be looking around back there looking for turtles
634 along the shoreline, is that safe? Is that something we need to be worried about?

635

636 Mr. Simeone:

637

638 On the landfill?

639

640 Ms. Papineau:

641

642 No, not on the landfill—I guess I mean, along—on either of the two sites.

643

644 Mr. Simeone:

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

645

646 It's not a problem. The open space had the recreational exposure scenario.

647

648 Ms. Papineau:

649

650 She was specifically talking about kids picking up turtles, picking up snakes, picking up
651 stuff that is in direct contact with dirt and soil, so...is there a risk assessment specifically
652 looking at children being exposed?

653

654 Mr. Simeone:

655

656 I'm not sure. I'd have to check the child scenario for that. Like I said, it passed the
657 recreational trespasser scenario.

658

659 Ms. Malewicz:

660

661 That's different than a child.

662

663 Mr. Simeone:

664

665 Yes, it is.

666

667 Ms. Malewicz:

668

669 That needs to be looked at.

670

671 Mr. Simeone:

672

673 Let me take a look at that and see.

674

675 Ms. Malewicz:

676

677 Could you put a soccer field here, or anything like that?

678

679 Mr. Simeone:

680

681 Sure. I mean, anything like that presumes that you would come in with fill and put clean
682 fill down. The contamination we're talking about—we've already covered over the
683 excavation that we did at the roundhouse that had those elevated numbers of antimony
684 and lead. They were already down deep to begin with. Then we came in and we
685 backfilled, and we backfilled even more when we made a terrace to dig out the
686 sediments from the pond. And now in the springtime, we're going back in, and we're
687 going to topsoil and seed that entire bank of the roundhouse where the excavation work
688 was done, so anyone kind of walking through there is not going to be exposed to the
689 residual that is well beneath. Nevertheless, when we did risk assessments, we assume
690 that that's not there, and that there is that exposure, in case someone digs a hole or

Transcript of the Public Meeting on January 15, 2015 concerning the Proposed Plan for AOC 72 and SA 71 – MassDevelopment Commerce Center, Devens MA.

691 whatever, so we'll take a look at it.

692

693 Ms. Dolan:

694

695 The risk assessment did include both adults and children.

696

697 Ms. Malewicz:

698

699 For recreational?

700

701 Ms. Dolan:

702

703 Yes.

704

705 Mr. Simeone:

706

707 Any other questions?

708

709 Mr. Doherty:

710

711 The fill that the Army put at SA-71, is that going to stay there?

712

713 Mr. Simeone:

714

715 Yes, pretty much. It's had some problems with erosion, because we didn't stabilize it
716 right away, and we're going to reshape it somewhat so that we can get slopes that
717 aren't as steep as they are now. And then topsoil and seed it. Alright, any other
718 questions on the Proposed Plan?

719

720

721 **Conclusion of the AOC 72 and SA 71 Proposed Plan Public Meeting.**

APPENDIX C

**MassDEP COMMENTS ON
DRAFT RECORD OF DECISION AOC 72 & SA71 FOR
RED COVE AND FORMER RAILROAD ROUND HOUSE
FORMER FORT DEVENS ARMY INSTALLATION (RTN 2-0000662)
May 12, 2015**

- 1) Section 1.3, First Sentence: Please replace “the environment” with “human health and the environment”.

Response:

The recommended text edit will be made.

- 2) Section 1.4, Final Sentence: Please replace “Preferred Remedy” with “selected remedy” throughout the document.

Response:

Alternate text was inserted here, based on EPA comment No. 4.

- 3) Section 2.1, Third Paragraph: Please confirm that the ACEC was established “due to the proximity to SHL and the protected species habitat in the upland area”, or revise the sentence to indicate that the ponds are located within an ACEC and the upland is a habitat for a protected species.

Response:

The text has been inserted to clarify that the pond and upland areas are located within an ACEC.

- 4) Section 2.1, Fourth Paragraph: Please change the figure citation to Figure 3 or identify the SA 71 boundary on Figure 2.

Response:

The citation will be updated.

- 5) Section 2.1, Fifth Paragraph: Please change the figure citation to Figure 3.

Response:

The recommended text edit will be made.

- 6) Section 2.2: Please define the acronyms NTCRA and TCRA where first used.

Response:

The recommended text will be inserted as described above.

- 7) Section 2.2: Please confirm/correct the “Figures 3 and 4” citation (e.g., replace with “Figure 2”).

Response:

The recommended text edit will be made.

- 8) Section 2.5: Please confirm that Plow Shop Pond is located within the Devens Enterprise Zone and zoned as indicated or correct text (e.g., revise to explain that adjacent upland is located within DEZ and zoned as indicated).

Response:

Plow Shop Pond is not located in the DEZ. The upland areas of RRRH and Red Cove are located in the DEZ and are zoned as Recreational/Open Space. The language in Section 2.5 will be revised to clarify this point.

- 9) Section 2.5.1, Subsection Plow Shop Pond: Please eliminate repeated text in second paragraph (first sentence).

Response:

The recommended text edit will be made.

- 10) Section 2.10: Please confirm/correct the Section 3.2 citation.

Response:

The citation was deleted.

- 11) Section 2.10.2: Please change the figure citation to Figure 3.

Response:

The citation will remain the same, but Figure 2 will be updated.

- 12) Sections 2.14 and 2.15.3: Please confirm the estimated total present value cost (\$7,820 is the NPV of the year 30 annual cost?).

Response:

The total cost of \$432,085.04 will be referenced. The appropriate edits will be made.

- 13) Section 2.15.3: Please confirm/correct the Table 3 citation (should be Table 2?).

Response:

The citation is correct.

- 14) Table 4: The SA 71 remedy will allow soil disturbance in accordance with a soil management plan. Consequently, the list of location-specific ARARs should also include: Endangered Species Act regulations (321 CMR 10.00) and Areas of Critical Environmental Concern regulations (301CMR 12.00).

Response:

The ARAR Table will be updated to include Endangered Species Act regulations (321 CMR 10.00) and Areas of Critical Environmental Concern regulations (301CMR 12.00).

- 15) Table 4, Action-Specific ARARs: A Notice of Activity and Use Limitation [310 CMR 40.0111(8)] should be used to impose land use controls at SA 71.

Response:

Table 4 was removed from document since the ARARs were not applicable to the final remedy.

- 16) 16. The RRRH upland restoration and associated RACR Addendum should be completed prior to signing the ROD, or the ROD should be revised to indicate that RRRH upland restoration and associated RACR Addendum will be completed prior to December 31, 2015.

Response:

The upland restoration is scheduled to be completed in September 2015, prior to signing the ROD.

EPA COMMENTS ON
DRAFT RECORD OF DECISION AOC 72 & SA71 FOR
RED COVE AND FORMER RAILROAD ROUND HOUSE
FORMER FORT DEVENS ARMY INSTALLATION (RTN 2-0000662)

May 11, 2015

GENERAL COMMENTS

- 1) Please ensure consistency by naming the site "Former Railroad Roundhouse SA71".

Response:

The recommended text edits will be made.

SPECIFIC COMMENTS

- 1) TABLE OF CONTENTS - Please make the following changes:
- 1.2 - Should read "Statement of Basis and Purpose".
 - 1.4 - Add 1.4.1 and 1.4.2 before Plow Shop Pond and Railroad Roundhouse.
 - 2.2 - Add 2.2.1 and 2.2.2 before Plow Shop Pond and Railroad Roundhouse.
 - 2.5.1 - The title should be lowercase. Delete Plow Shop Pond and Railroad Roundhouse.
 - 2.5.2 - Site Geology and Hydrogeology (should hydrogeology by hydrology?)
 - 2.5.3 and 2.5.4 - Potential Ecological Receptors and Current and Future Site and Resource Uses
 - 2.6 - Add 2.6.1 and 2.6.2 before Plow Shop Pond and Railroad Roundhouse.
 - 2.8 - Description of Alternatives should be uppercase.
 - 2.9 - Plow Shop Pond - AOC72
 - 2.10.3 - Delete.
 - 2.11 through 2.15 - The titles should be uppercase in the TOC and text.
 - 2.16 - The title should be uppercase in the TOC and text.
 - 3.1 - The title should be lowercase.

Response:

The Table of Contents will be update appropriately following the revisions to this draft.

- 2) Pg 1, Section 1.1 – Replace “includes the” with “is” and delete “Site, Limited Action” in the first sentence.

Response:

The recommended text edit to delete “Site, Limited Action” in the first sentence, will be made. The remainder of the sentence will not be updated.

- 3) Pg 1, Section 1.3 – Assessment of Site. Change to read:

“The remedial actions selected in this Record of Decision are necessary to protect human health, welfare and the environment from actual or threatened releases of hazardous substances into the environment at Railroad Roundhouse SA71. A CERCLA action is required because the cumulative Excess Lifetime Cancer Risk (ELCR) for human receptors is above acceptable risk criteria for unrestricted residential use of SA71. However, the human health risk evaluation demonstrates acceptable risk for the assumed future use (open space/recreation) of the site. The potential risk to human health is driven by residual maintenance byproduct material in upland soils of the former Railroad Roundhouse as a result of activities in the former area. The ecological risk assessment indicated that ecological receptors are unlikely to be at risk from contaminants of concern in surface soil.

The human health risk assessment indicated that potential exposures to contaminants (principally arsenic) in surface water and sediment in Plow Shop Pond, including Red Cove and in the area of the former Railroad Roundhouse, by recreational receptors, are within the USEPA’s acceptable cancer risk range and do not exceed a Hazard Index limit of 1. The installation of a low-permeability groundwater barrier wall between the landfill and Red Cover and sediment removal actions within the Red Cover area and former Railroad Roundhouse area of AOC72 have mitigated the potential risk associated with Plow Shop Pond sediments. In addition, all visual evidence of the maintenance byproduct was removed. With the removal of impacted sediment from both Red Cove and in the area of the former Railroad Roundhouse, exposure point concentrations have been reduced, and the benthic community is expected to improve.”

Response:

The above text edits will be made

- 4) Pg 2, Section 1.4 – Description of Selected Remedy. Change to read:

“The major component of the Selected Remedy for the former Railroad Roundhouse SA71 is implementation of land use controls. Land use controls are addressed through institutional controls, access restrictions, affirmative measures, and prohibitive directives. No Further Action is the Selected Remedy for Plow Shop Pond AOC72 because no unacceptable risk to human health and welfare or the environment were identified.” Please feel free to embellish the description if so desire.

Response:

The above sentences will be inserted in Section 1.4.1 and Section 1.4.2 as appropriate.

- 5) Pg 3, Section 1.5 - Delete first paragraph in this section and substitute:

"The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable and satisfies the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element.

Because this remedy will result in hazardous substances remaining on site above health based levels, a five year review..." continue with existing second paragraph in this section.

Please ensure consistency in this section with ROD guidance.

Response:

The above text will be inserted in Section 1.5.

- 6) Pg 4, Section 1.6 - Please remove James T. Owens from the signature block and identify Nancy Barmakian as the Acting Director, Office of Site Remediation and Restoration.

The recommended text edits will be made.

- 7) Pg 5, Section 2.1 - Insert "(B&M)" after "Boston and Maine Railroad".

The recommended text edits will be made.

- 8) Pg 6, Section 2.1, par 2 - Replace the "and" that follows "1942" with a period, followed by the new second sentence beginning: "Following the 1996..."

The recommended text edits will be made.

- 9) Pg 7, Section 2.1, par 3 - End the first sentence after the ID number. Begin the new second sentence: "It was identified..."

The text will remain as stated in the draft.

- 10) Pg 6, Section 2.2 - Begin this section with the third paragraph. Either delete the first two paragraphs or combine them with the information provided at the bottom of page 7 and page 8. Add to the end of the first paragraph on page 9 the following: "The preliminary restoration conducted in May 2014 has degraded and will therefore require re-grading, re-seeding and re-planting. These activities are anticipated to be conducted in the early summer of 2015 but will be completed no later than 31 December 2015. These restoration activities are a requirement of this

Record of Decision. The post-removal bordering wetland assessment and restoration activities will be documented in an addendum to the Remedial Action Completion Report."

The first two paragraphs of Section 2.2 will be deleted and the above sentence was added at the end of Section 2.2.2.

- 11) Pg 11, Section 2.5 – Begin the last sentence with: "The former Railroad Roundhouse site is located ..." Ensure consistency throughout the document.

The recommended text edits will be made.

- 12) Pg 13, Section 2.5.1, par 1 – Delete "an" in the last sentence.

There does not appear to be an "an" to delete in this paragraph. No changes were made.

- 13) Pg 14, Section 2.5.4, par 2 - Delete the extra period at the end of the last sentence.

The extra period will be removed.

- 14) Pg 14, Section 2.5.5, par 1 – Insert "a" prior to "catch-and-release".

The recommended text edits will be made.

- 15) Pg 14, Section 2.6, par 2 - Change to read: "... and welfare and environment existed at AOC 72, Plow Shop Pond, a water body located east..."

The recommended text edits will be made.

- 16) Pg 15, Section 2.6, par 4 – Insert a comma after "With the removal of impacted sediment from Red Cove..."

There already is a comma in that place. No changes were made.

- 17) Pg 16, Section 2.6, par 1 – Replace the last sentence with: "The ecological risk assessment indicates risk to the environment has been mitigated, although it still exceeds some of the ecological screening values at some locations."

The recommended text edits will be made.

- 18) Pg 16, Section 2.6, par 4 - At the end of the page to conclude the "assessment of the Site" section of the Decision Summary, please add this paragraph: "Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare, and the environment."

The following text will be inserted to address the above comment:

"Implementing the response action selected in this ROD, will mitigate the risk posed by the potential for actual or threatened releases of hazardous substances from this site. Without the implementation of a deed restriction in this area, an imminent and substantial endangerment to public health, welfare, and the environment remains."

- 19) Pg 22, Section 2.13 – Add a definition of Principal Threat Waste.

The definition of Principal Threat Wastes will be added to the text.

- 20) Pg 22, Section 2.14 – Add Subsection 2.14.1 Plow Shop Pond AOC72. Add "The Selected Remedy based on current conditions at AOC72 is No Further Action." Add Subsection 2.14.2 Former Railroad Roundhouse SA71. Add "The Selected Remedy is Alternative 2 - Limited Action: Implementation of Land Use Controls. Land use controls are addressed through..."

The recommended text edits will be made.

- 21) Pg 23, Section 2.14, first bullet - Replace the draft text with: "Institutional controls are to be implemented through a deed restriction prohibiting residential reuse that runs with the land and is legally enforceable."

The following text will be inserted "Institutional controls are to be implemented through a deed restriction prohibiting future residential use."

- 22) Pg 23, Section 2.14, par 2 – Replace "including period inspections" with "including periodic inspections".

The recommended text edits will be made.

- 22) Pg 24, Section 2.15 – Replace "or" with "and" at "public health, welfare or the environment..." Ensure consistency throughout the document. Also, spell out "TMV".

The recommended text edits will be made.

- 23) Pg 25, Section 2.15.3 - Please use the CFR citation rather than NCP: 40 C.F.R. § 300.430(f)(1)(ii)(D)).

The recommended text edits will be made.

- 24) Pg 26, Section 2.15.6 – Add "continue to" at the beginning of the fourth line.

The recommended text edits will be made.

- 26) Pg 27, Section 3.2 - Add this sentence at the beginning of the section: "The Land Use Controls will require a deed restriction prohibiting residential reuse that runs with the land and is legally enforceable."

The following text will be inserted, "The Land Use Controls will require a deed restriction prohibiting future residential use."

**MassDEP COMMENTS ON
DRAFT RECORD OF DECISION AOC 72 & SA71 FOR
RED COVE AND FORMER RAILROAD ROUND HOUSE
FORMER FORT DEVENS ARMY INSTALLATION (RTN 2-0000662)**

June 23, 2015

- 1) Response to MassDEP Comment (RTC) 8: The proposed revision was not fully implemented - text should not indicate that Plow Shop Pond is zoned Open Space/Recreational (PSP is off-post), and to identify the assumed future use, text should indicate that the Railroad Round House upland area is zoned Open Space/Recreation.

Response

The following text was inserted in Section 2.5

“The former Railroad Roundhouse is located at the southern end of Plow Shop Pond, bordered to the east by Pan-AM railroad tracks and railyard and is zoned Open Space/Recreation. ”

- 2) RTC 11: The proposed revision was not implemented – Please change the figure citation to Figure 3, which presents the SA 71 boundary.

Response

Figure 2 has been revised and will be included in the Final ROD.

- 3) RTC 12: The proposed revision was not fully implemented – The total present value cost of Alternative 2 given in Section 2.15.3 (\$7,820) is incorrect.

Response

The amount of \$432,085.04 replaced \$7,820 in the text.

- 4) RTC 15: The proposed revision was not implemented – Per recent EPA-DEP agreement regarding the use of AULs at CERCLA sites, Table 4 should identify 310 CMR 40.0111(8) as the ARAR that applies to the land use controls that will be used at SA 71.

Response

Table 4 was removed from document since the ARARs were not applicable to the final remedy.
--

EPA COMMENTS ON
DRAFT RECORD OF DECISION AOC 72 & SA71 FOR
RED COVE AND FORMER RAILROAD ROUND HOUSE
FORMER FORT DEVENS ARMY INSTALLATION (RTN 2-0000662)

June 23, 2015

GENERAL COMMENTS

- 1) For consistency, I think Railroad Round House should be Railroad Roundhouse.

Response

The suggested change was made.

- 2) It's not critical, but "Former" should be capitalized if it's in the title, otherwise it should be lowercase "former". Sound OK?

Response

A lower case "former" is used throughout the body of the text of the Final ROD.

- 3) I think "R" in "Railroad" on the cover page has been deleted.

Response

That is correct. The "R" was inadvertently deleted.

- 4) "Action" should also be deleted in the first paragraph of Section 1.1.

Response

The suggested change was made.

- 5) Two spelling errors in paragraph 2 in Section 1.3 (this alas was EPA's mistake for not reading suggested text more carefully). Change "Cover" to "Cove".

Response

The suggested change was made.

**JULIE CORENZWIT COMMENTS ON
DRAFT RECORD OF DECISION AOC 72 & SA71 FOR
RED COVE AND FORMER RAILROAD ROUND HOUSE
FORMER FORT DEVENS ARMY INSTALLATION (RTN 2-0000662)**

June 19, 2015

A couple of minor corrections to the public meeting transcript in Appendix B:

- Line 15: Unless there is more than one Melissa Macdonald, she is a local citizen and member of PACE
- Lines 328 and 362: Frank Maxant's name is misspelled with a double 'x'.

Response:

The recommended edits will be made in Appendix B.

Appendix D

Land Use Control Checklist

Land Use Control Checklist for SA 71, Former Railroad Roundhouse

I. Site Information			
Site Name/Location: SA 71		Name/Affiliation: Former Railroad Roundhouse	
Remedy Includes: Annual land use control inspections and institutional controls			
Inspection Date:			
Participants:			
II. Documentation and Records			
Item	Yes	No	Comments
Any related notices filed with Devens Enterprise Commission?			
Any related Department of Public Works permits found?			
Any related zoning permits or variances found?			
Any related Conservation Commission findings, proposals, or notices of intent found?			
III. Physical On-Site Inspection			
Item	Yes	No	Comments
Any evidence of excavation in the soil disturbance restriction boundary?			
Is there evidence of damage to the property?			
Any groundwater extraction wells present?			
Any signs of development on the property?			
Any change in the use of the property from open space/recreational?			
Is there sufficient access to the site for monitoring?			
Any signs of increased exposure potential?			

Land Use Control Checklist for SA 71, Former Railroad Roundhouse

IV. Interview			
Name of Interviewer:			
Name of Interviewee:			
Date of Interview:			
Contact Information:			
Interview Notes:			
Site Update:			
Item	Yes	No	Comments
Is interviewee familiar with the LUCs imposed upon the property and documentation of these controls?			
Are there any extraction wells at the property?			
Are there any proposed plans for property sale, future development, construction, or demolition activities at the property?			
Any excavations, planned or emergency, that may have extended into the soil surface within the soil disturbance restriction boundary?			
a. If yes, did the Army (or its designee) distribute the SSSMP to all construction and/or utility personnel to follow for the management of potentially contaminated soil?			
b. If yes, was the construction-related or intrusive soil activity that occurred within the SA 71 soil disturbance restriction boundary performed in accordance with the requirements set forth in the SSSMP?			
Are there any issues with site access for monitoring?			

Land Use Control Checklist for SA 71, Former Railroad Roundhouse

V. Response Actions			
Item	Yes	No	Comments
Were violations of the LUCs present?			
Are there Response Actions necessary based on the violations?			
Are modifications/terminations of LUCs necessary?			
Have Enforcement Actions been taken during this reporting period?			

Appendix E

Responses to Regulatory Comments



Project Name: Former Fort Devens Army Installation		Location: Devens, Massachusetts			
Document Name: Draft Land Use Control Implementation Plan, Study Area 71					
Prepared By: USACE and SERES-Arcadis 8(a) JV					
No.	Ref. Page / Para.	COMMENT (MassDEP submitted on October 26, 2022 and USEPA submitted on October 31, 2022)	RESPONSE (Submitted on December 8, 2022 as a Response Letter to MassDEP/USEPA Comments on the Draft)	BACKCHECK COMMENT (MassDEP submitted on December 12, 2022 and USEPA submitted on January 25, 2023)	BACKCHECK RESPONSE
MassDEP COMMENTS (Joanne Dearden)					
1.	Section 4.3	The LUCIP should include a schedule for all the activities that will be conducted under the plan. Also, please include a timeframe for when the annual inspection is to be conducted (i.e. spring, summer, etc.)	Section 4.3 will be updated to include a Milestone Activity Schedule table. The annual inspection is generally conducted at the end of year in November or December.	No additional comments.	NA
2.	Appendix B, Page B-4	Please revise the last bulleted item as there are several phrases that seem to be repeated.	The last bulleted item on Page B-4 will be checked and edited, as necessary, for redundancy.	No additional comments.	Please note Appendix B has been removed from the Draft Final SA 71 LUCIP based on USEPA comments received on the AOC 69W LUCIP which were provided after the USEPA provided comments on the Draft SA 71 LUCIP.
3.	Appendix C, LUC Checklist, IV. Interview	Please add the date of the interview to the checklist.	The checklist will be amended in response to this comment.	No additional comments.	NA
USEPA COMMENTS (Carol Keating)					
GENERAL COMMENTS					
1.		While it may be appropriate to discuss the geographic and historical investigative and remedial relationship between AOC 72 and SA71 in the introductory section of the LUCIP, the remaining portions of the document should dedicated solely to SA71.	References to the remedial activities conducted at Plow Shop Pond will be removed from the post-introduction sections of the LUCIP.	NA	NA
2.		Army should make clear that the SA71 LUC boundary is the SA 71 site boundary, both in the text and, importantly, in Figure 2.	The text and Figure 2 will be updated accordingly.	NA	NA
3.		As noted in Page-Specific Comment 4 below, the 2015 ROD (pgs. 20 & 22) specifically provides that "The LUCIP will provide details of the deed restriction, details of the information to be included in the brochure/fact sheets and website, locations of brochure/fact sheet distribution, detailed description and survey coordinates of the area that is being addressed by the LUCs (see Figure 3), and the schedule/procedure for dissemination of the information." However, this draft LUCIP does not contain any of these details, especially with respect to the affirmative measure like the brochures, etc.. The LUCIP must be amended to include the required details.	The property is still retained by the Army. If the property is transferred in the future, the LUCIP would be amended to include the Quitclaim Deed. The Quitclaim Deed would include a detailed description and survey coordinates of the area that is being addressed by the LUCs. Current Section 4.2.2 of the LUCIP (will become Section 4.2.4 in the Draft Final) will be revised to indicate that a fact sheet will be prepared for SA 71 which will include a site history, land use controls and restrictions, and a site map. The text will also indicate that the fact sheet will be distributed to the stakeholders identified in the CIP and will be distributed via email and posted to the Fort Devens website. A schedule for dissemination of the fact sheet will be included in the Milestone Activity Schedule table	NA	NA

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			in Section 4.3.		
4.		The LUC Checklist does not seem to include any item related to ensuring that the SSSMP was complied with for intrusive activities. Please verify compliance with this requirement and amend the checklist to identify how it will be enforced and monitored in the future.	The Army notes that USEPA did not request this change to the LUC checklist for the other LUCIPs containing SSSMPs that are currently under preparation (AOCs 44/52 and AOC 69W). No change to the LUC checklist will be made in response to this comment.	Response unacceptable. Please amend checklist to include verification of this requirement. The same comment has/will be made for the other LUCIPs.	The LUC checklist was amended to include two additional checklist items: (1) "If yes, did the Army (or its designee) distribute the SSSMP to all construction and/or utility personnel to follow for the management of potentially contaminated soil?" and (2) "If yes, was the construction-related or intrusive soil activity that occurred within the SA 71 soil disturbance restriction boundary performed in accordance with the requirements set forth in the SSSMP?"
PAGE-SPECIFIC COMMENTS					
1.	Page 3, Section 2.2, 6 th Paragraph	Please revise the paragraph to read, <i>"The Remedial Action Objective (RAO) for the Railroad Round House removal action was to mitigate maintenance byproduct-impacted ash-sediment layer along the shoreline on Plow Shop Pond. In 2013, a removal action was completed to excavate approximately 900 cubic yards of maintenance by-product below the water line at southern shoreline of the former Railroad Round House area. The removal action was completed successfully, mitigating the risk to the environment and achieved the remedial goal for that area (Sovereign, 2014a)."</i>	The cited paragraph will be revised as suggested.	NA	NA
2.	Page 3, Section 2.2, 7 th Paragraph	Please delete the last sentence. It is misleading and inconsistent with text in the June 2014, <i>Final Removal Action Closure Report for Railroad Round House and Red Cove - Plow Shop Pond</i> ("June 2014 RACR") and the September 2015, <i>Record of Decision for Plow Shop Pond (AOC 72) – Red Cove and Former Railroad Round House (SA 71)</i> ("September 2015 ROD") which indicate that while removal of sediments may have mitigated potential risks to environmental receptors in Plow Shop Pond, residual maintenance byproduct material remaining in upland soils of the former Railroad Roundhouse pose unacceptable, potential risks to human receptors.	The cited sentence will be deleted as requested.	NA	NA

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3.	Page 3, Section 2.2, Last Paragraph	Please replace the last sentence with, <i>“Although the human health risk evaluation demonstrated acceptable risk for the assumed future use (open space/recreation) of the site, because the excess Cumulative Lifetime Cancer Risk (ELCR) for human receptors was above acceptable risk criteria for unrestricted residential use of SA71, a CERCLA response action was required to prohibit future use of the upland portion of the site for residential purposes.”</i>	The referenced sentence will be replaced as suggested.	NA	NA
4.	Page 4, Section 2.2, 1 st Paragraph	For consistency with the September 2015 ROD (pgs. 20), please delete the current text and replace it with, <i>“A CERCLA ROD was issued in September 2015 for AOC 72 and SA71. While the selected remedy for AOC 72 was No Further Action, to mitigate any potential risk to health and welfare from exposure to debris and residual soil contamination associated with activities in the upland area of the former Railroad Roundhouse, a “Limited Action: Implementation of Land Use Controls” remedy was selected for SA71. The ROD specified that the LUCs would be addressed through institutional controls, affirmative measures, and prohibitive directives with the objective of limited potential exposure.”</i>	The last paragraph in Section 2.2 will be replaced with the suggested text.	NA	NA
5.	Page 5, Section 3.1, 2 nd Paragraph	This section should identify specific components of each ROD-specified LUCs. Specifically, the current text should be deleted and replaced with, <i>“In accordance with the ROD, the specific elements of the LUCs include (1) prohibiting residential reuse through the use of a property deed restriction and the implementation of an environmental use covenant consistent with a Notice of Activity Use Limitation (NAUL) at the time of property transfer by the Army to MassDevelopment; (2) affirmative measures to include public education and outreach; and (3) prohibitive directives to ensure that any future soil disturbance activities are avoided by the public and that any excavation by construction/utility contractors is performed in accordance with a site specific Soil Management Plan (SMP).”</i>	These specific components are identified in Section 3.2, Elements Specific to Instrument Category.	NA	NA
6.	Page 5, Section 3.2	While the discussion provides details related to LUC inspections, interviews, and visual on-site inspections, the draft LUCIP should identify each of the ROD-specified LUCs and thoroughly describe how each will be implemented. (See Section 2.0 in	The language in Section 2.14.2 of the ROD which discusses the implementation of LUCs has been incorporated into Section 3.2 and this LUCIP. More specifically, Institutional Controls are discussed in Section 4, Institutional Control Maintenance Elements.	NA	NA

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		<p>the "FINAL LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA") (April 2021)). As recommended in prior draft LUCIP comments, the existing discussion should be replaced with the following text (or something similar).</p> <p><i>"The ROD for SA 71 was signed in September 2015 and identified the specific elements of LUCs as follows:</i></p> <ul style="list-style-type: none"> <i><u>Institutional Controls</u> – A prohibition of residential reuse will be enforced through a deed notice that prohibits construction of single family or multi-family residences; child care facilities and any type of facility or use for children or young adults through grade 12; and, nursing home or assisted living facilities within the SA71 LUC boundary. The deed restriction will be implemented at the time of property transfer from Army to MassDevelopment. An environmental use covenant consistent with a "Notice of Activity and Use Limitation" (NAUL) issued pursuant to Massachusetts General Laws ch. 21E sec 6 and implementing regulations at 310 CMR 40.0111 and 310 CMR 40.1074(5), will also be implemented at the time of property transfer. MassDevelopment will record the NAUL in the chain of title for all deeds in which MassDevelopment conveys the SA71 property (or a portion thereof). The NAUL shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Restricted Area or a portion thereof is conveyed in accordance with 310 CMR 40.1074(5). As a result, all subsequent deeds conveying Restricted Area property (no matter who conveys) will convey subject</i> 	<p>Public Education and Outreach is included in Section 4, Institutional Control Maintenance Elements and will be expanded upon in accordance with the response to USEPA General Comment #3. The SSSMP is included as Appendix B and is introduced in Section 3.2. Annual Site inspections and Reviews will be included in a new section numbered/titled Section 4.2.1, Annual Reviews/Inspections. Five-year reviews will be included in a new section numbered/titled Section 4.2.2, Five-Year Reviews.</p> <p>UXO/MEC awareness briefing is not a ROD-specified LUC. Additionally, this is Army retained property so procedures specified by a third-party agreement in this case would not apply.</p>		

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		<p><i>to the residential prohibition. The NAUL prohibiting residential reuse is necessary until such time that the concentrations of residual soil contamination in the SA71 LUC boundary, as identified in the 2015 ROD, are at levels that allow for unrestricted use and unlimited exposure (UU/UE). A copy of the NAUL to be placed on the chain of title is included in Exhibit ?. Copies of the executed NAUL will be inserted in Exhibit ? upon recording in the Worcester County Registry of Deeds"</i></p> <ul style="list-style-type: none"> • <i><u>Public Education and Outreach</u> - **in accordance with the ROD (pg. 22), the draft LUCIP should be amended to include details of the information to be included in the public education and outreach materials/activities (i.e., brochure/fact sheets and Army, MassDevelopment, and DEC websites). (See Section 2.0(c) in the "FINAL LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA") (April 2021)).</i> • <i><u>Site-Specific Soil Management Plan (SSSMP)</u> – Army shall prepare a Site-Specific Soil Management Plan that contains the process and procedures required to ensure proper management of soils generated during the performance of construction-related and/or intrusive soil activity involving the disturbance, excavation, removal and/or relocation of soils within the SA71 LUC boundary.</i> • <i><u>UXO/MEC Awareness Briefing</u> – Army (or its designee) shall ensure that prior to commencing any construction-related and/or intrusive soil activity involving the disturbance, excavation, removal and/or relocation of soils within the SA71 LUC boundary all personnel conducting,</i> 			

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		<p><i>overseeing, and/or supervising construction-related and/or intrusive soil activity involving the disturbance, excavation, removal and/or relocation of soils within the SA71 LUC boundary have successfully completed the required Devens UXO/MEC Awareness Briefing;</i></p> <ul style="list-style-type: none"> • <i>Annual Site Inspections and Interviews – Army shall conduct annual reviews, physical site inspections and interviews with Army, MassDevelopment, and current property owners to verify continued, effective implementation, enforcement, and compliance with the ROD-required LUCs;</i> • <i>Five-Year Reviews – Because residual soil contamination remains in the upland area of SA71 above concentrations that would allow for unlimited use and unrestricted exposure, Army must conduct a statutory five-year review to evaluate whether the selected remedy continues to be protective of public health, welfare, and the environment in both the short- and long-terms.</i> <p><i>The implementation of MassDevelopment/DEC requirements are to be monitored as part of the selected remedy under the LUCIP and as part of the Comprehensive Five-Year Review process conducted at Devens which is required under Section 121 of CERCLA, as amended by SARA of 1986. (ROD, pg. 24)</i></p>			
7.	Page 6, Section 3.3, Table 2	<p>For consistency with the ROD, please amend the table to include the following:</p> <ul style="list-style-type: none"> • <i>Cleanup Objective</i> (pg. 17) – <i>Prevent ingestion/direct contact with residually impacted soil that could pose unacceptable human health risk at SA 71.</i> • <i>Land Use Control/Objective</i> (pg. 20) – <i>A separate column for each LUC (i.e., (1) Prohibition of residential use of property</i> 	Table 2 will be amended in response to this comment.	NA	Please note the format for Table 2 was revised based on USEPA’s global LUCIP comments received on the AOC 69W LUCIP which were provided after the USEPA provided comments on the Draft SA 71 LUCIP. As still applicable, the USEPA’s comment #7 on the Draft SA 71 LUCIP was incorporated into the Draft Final SA 71 LUCIP.

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		<p>within the SA71 LUC boundary; (2) Affirmative Measures – Public Education and Outreach; and (3) Prohibitive Directives – ensure proper management of soils generated during the performance of construction-related and/or intrusive soil activity involving the disturbance, excavation, removal and/or relocation of soils within the SA71 LUC boundary.</p> <ul style="list-style-type: none"> • <i>Conditions for Termination - Residual contaminant concentrations in soils within the SA71 LUC boundary are at levels to allow for unrestricted use and unlimited exposure (UU/UE) without the use of LUCs.</i> <p><u>LUC Instruments</u> – (for LUC/Objective (1)) Institutional Control – implementation of a deed restriction and an environmental use covenant consistent with a Notice of Activity Use Limitation (NAUL) at the time of property transfer by the Army to MassDevelopment; (for LUC/Objective (2)) Preparation and distribution of LUC information/restrictions in brochures/fact sheets to notify the public and current and future landowners of the potential risks associated with direct contact and ingestion of residual contamination in the upland area of SA71 and confirm they understand LUC requirements and restrictions implemented to limit those risks; (for LUC/Objective (3)) Preparation of a Site-Specific Soil Management Plan (SSSMP) to ensure that future soil disturbance activities are avoided by the public and to define the process and procedures required to ensure safe management of soils within the SA71 LUC boundary.</p>			
8.	Page 8, Section 4	Please amend the current discussion to include all ROD-specified LUCs and a more thorough description of LUC Responsibilities (See, e.g., Section 3.0, April 2021, FINAL LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA".))	Section 4 will be amended and will be consistent with the language used in the LUCIPs currently under preparation (AOCs 44/52, AOC 57, and AOC 69W).	NA	NA
9.	Page 8, Section 4.1	Please expand the current discussion to include a more thorough description of annual LUC inspections/reviews (See, e.g., Section 4.3(a), April 2021, FINAL LAND USE CONTROL IMPLEMENTATION	Section 4.1 will be amended and will be consistent with the language used in the LUCIPs currently under preparation (AOCs 44/52, AOC 57, and AOC 69W).	NA	NA

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		PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA").			
10.	Page 9, Section 5.0	Please amend the discussion to include the text in Section 6.0 of the April 2021, "FINAL LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA").	Section 5 will be amended and will be consistent with the language used in the LUCIPs currently under preparation (AOCs 44/52, AOC 57, and AOC 69W).	NA	NA
11.	Page 9, Section 6.0	The current discussion of when LUCs might be "discontinued" is inconsistent with the ROD and relevant EPA IC guidance. EPA recommends that the draft document be amended to include the discussion of "LUC Changes" and "Duration of LUCs" in Sections 5.0 and 7.0, respectively, of the April 2021, "FINAL LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM, FORMER OAK AND MAPLE HOUSING AREAS AND A PORTION OF THE FORMER GRANT HOUSING AREA ("RESTRICTED AREA").	Section 6 will be amended and will be consistent with the language used in the LUCIPs currently under preparation (AOCs 44/52, AOC 57, and AOC 69W).	NA	NA
		Comment on Appendix B, Draft Site-Specific Soil Management Plan (SSSMP), Study Area 71			
12.	Appendix B, Draft Site-Specific Soil Management Plan, Study Area 71	The development of a SSSMP for SA71 for inclusion in the site-specific LUCIP will help ensure that soils excavated, relocated and/or removed during performance of any construction-related and/or intrusive soil activity within the SA71 LUC boundary are consistently and properly managed. Although EPA was unable to review the SA 71 SSSMP, given our recent experience in developing the SSSMP for the Former Oak and Maple Housing Areas and a Portion of the Former Grant Housing Area ("Restricted Area"), we believe it would be both appropriate and useful to apply the same approach, namely the format and much of the substantive requirements to the SA71 SSSMP.	The minor edits received on Appendix B for the other LUCIPs currently under preparation (AOCs 44/52, AOC 57, and AOC 69W) will be incorporated into the SA 71 SSSMP, as applicable.	NA	Please note Appendix B has been removed from the Draft Final SA 71 LUCIP based on USEPA's global LUCIP comments received on the AOC 69W LUCIP which were provided after the USEPA provided comments on the Draft SA 71 LUCIP.
		END OF COMMENTS			



Project Name:	Former Fort Devens Army Installation	Date:	September 25, 2023
Location:	Devens, Massachusetts		
Document Name:	Draft Final Land Use Control Implementation Plan, Study Area 71, June 2023		
Prepared By:	USACE and SERES-Arcadis 8(a) JV		

No.	Ref. Page / Para.	COMMENT	RESPONSE
Michael Daly (USEPA) – Comments Received August 29, 2023			
1.	Section 2.3 – Property Information and IC Stakeholder Contacts	MassDevelopment should be identified as the lessee of the property which includes SA 71.	Section 2.3 was revised to identify MassDevelopment as the lessee.
2.	Section 3.2 – Elements Specific to Instrument Category	SA 71 is still retained by the Army thus It should be clarified in the LUCIP that the LUC objectives required by the SA 71 ROD and detailed in this LUCIP differ from those restrictions that were incorporated into the 1996 LIFOC with MassDevelopment. The LUCIP should also briefly discuss the adequacy of the existing LIFOC provisions in meeting SA 71 LUC objectives. LIFOC Article 16.05 restricts the lessee from undertaking any surface and subsurface alterations that may adversely affect the clean up being undertaken by the Army, unless approved by Army, MassDEP, and EPA, and prohibits extraction of ground water for any purpose.	A passage was added after the 1 st paragraph of Section 3.2 that states: “The Army has leased SA 71 to MassDevelopment, along with other Fort Devens parcels, as documented in the 1996 LIFOC (Appendix D). LUCs are included in the 1996 LIFOC that is currently in effect for all leased Fort Devens parcels, including SA 71. These LUC restrictions include a moratorium on subsurface excavation, drilling, digging or other disturbance of the surface of the ground, or construction, alterations, additions, modifications, improvements or installations that may adversely affect the clean-up of leased premises by the lessee without approval of the Army, USEPA, and MassDEP. The LIFOC also stipulates that no groundwater will be extracted for any purpose. These restrictions are more stringent than the RAO for SA 71 as it addresses



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			groundwater extraction which is not presented in the ROD.”
3.	Table 2 – Summary of LUCs, ICs, & Other Post-ROD Restrictions	Please see Comment #2 above. It is recommended that the 1996 LIFOC between the Army and MassDevelopment be listed as an implemented IC (6 th column). Future planned IC instruments for this property that should be identified in this column would also include the incorporation of restrictive covenants within a quitclaim deed(s) transferring this land to MassDevelopment as well as recordation of a Notice of Activity and Use Limitation (NAUL). Please consider revising the table to include these planned IC instruments.	Table 2 was revised accordingly.
4.	Section 6 – Modification and Termination Elements	It should be identified in this section of the LUCIP that any modification or termination of LUCs required by the SA 71 ROD will also require a modification to the SA 71 remedy to document such changes. Please amend the text as necessary.	A sentence was added at the end of Section 6.1 that states, “Any modification or termination of LUCs required by the current remedy decision document for SA 71 (i.e., ROD) will also require a modification to the SA 71 remedy to document such changes.”
Anne-Marie Dowd (MassDevelopment) – Comment Received September 14, 2023			
1.	Section 4.1 – Institutional Control Assurance Monitoring	<p>MassDevelopment recommends the following changes be made since the Army may transfer the SA 71 portion of lease parcel A-1 separately, as has occurred in other transactions:</p> <ul style="list-style-type: none"> • IC activities are the following: <ul style="list-style-type: none"> – “Deed Restriction: At the time that the SA 71 portion (as shown on Figure 2) of lease parcel A.1 is transferred to MassDevelopment, the Army will implement a deed restriction prohibiting future residential land use for the SA 71 portion of lease parcel A.1. – NAUL: Prior to the SA 71 portion (as shown on Figure 2) of lease parcel A.1 property transfer to MassDevelopment, the Army will cause a NAUL to be prepared, executed, and implemented pursuant to requirements set forth in 310 Code of Massachusetts Regulation 40.1047 pursuant to LUCIP implementation.” 	The referenced bullets in Section 4.1 were revised accordingly.



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		END OF COMMENTS	