

DRAFT LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM

FORMER OAK AND MAPLE HOUSING AREAS

FORMER FORT DEVENS ARMY INSTALLATION, DEVENS, MA

December 2014

Prepared for: U.S. Army Corp of Engineers New England District Concord, Massachusetts

Prepared by:
Sovereign Consulting Inc.
and HydroGeoLogic, Inc.
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CERTIFICATION:

I hereby certify that the enclosed Report, shown and marked in this submittal, is that proposed to be incorporated with Contract Number W912WJ-10-D-0003, Task Order #007. This document was prepared in accordance with the U.S. Army Corps of Engineers (USACE) Scope of Work and is hereby submitted for Government Approval.

Reviewed By:	
1 - I wash	12.32.2014
HGL Project Manager	Date
En DS	(a) (a) (b) Y
Sovereign Quality Control Manager	Date
Received By:	
Musig Mine	12/22/2014
USACE Project Manager	Date

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HGL 12/23/14

SO1003

LIST OF ACRONYMS AND ABBREVIATIONS

Army United States Department of the Army

BRAC Base Realignment and Closure

CERCLA Comprehensive Environmental Response, Compensation, and

Liability Act

DEC Devens Enterprise Commission

DoD Department of Defense

EOD explosive ordnance disposal

EPA United States Environmental Protection Agency

ESD Explanation of Significant Differences

FFS Focused Feasibility Study

HA Housing Area

HFA human factor applications HGL HydroGeoLogic, Inc.

LUC Land Use Controls

LUCIP Land Use Control Implementation Plan

Massachusetts Department of Environmental Protection

Massachusetts Development Finance Agency

MD munitions debris

MDAS materials documented as safe

MEC munitions and explosives of concern

mm millimeter

MMRP Military Munitions Response Program

MPPEH materials potentially presenting an explosive hazard

RAO Response Action Outcome

RCWM recovered chemical warfare material

RI remedial investigation ROD Record of Decision

SARA Superfund Amendments and Reauthorization Act

SI Site Inspection

SSI Supplemental Site Investigation

USACE U.S. Army Corps of Engineers

UXO unexploded ordnance

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LAND USE CONTROL IMPLEMENTATION PLAN ADDENDUM FORMER OAK AND MAPLE HOUSING AREAS DEVENS, MASSACHUSETTS

1.0 INTRODUCTION AND PURPOSE

This Land Use Control Implementation Plan (LUCIP) Addendum is prepared pursuant to the Final Explanation of Significant Differences (ESD) for Grant Housing Area and 37-MM Impact Area, Former Fort Devens Army Installation, Devens MA, dated September 2014. The Grant Housing Area (HA) and Impact Area Record of Decision (ROD) was signed by the United States Department of the Army (Army) and the United States Environmental Protection Agency (EPA) in September 2009. The ESD incorporated additional Land Use Controls (LUCs) as the remedy, beyond what was stipulated in the 2009 ROD, to address the former Oak and Maple HAs based on their immediate proximity to the Grant HA and the 37-mm Impact Area. This LUCIP Addendum supplements the initial LUCIP that was prepared pursuant to the 2009 ROD, Land Use Control Implementation Plan, Grant Housing Area and 37-mm Impact Area, dated May 2011 ("2011 LUCIP") and provides the specific LUC requirements and implementation applicable to the former Oak and Maple Housing Areas. These four former housing areas are sometimes collectively referred to as the "Property."

1.1 SITE BACKGROUND

For related information for the Grant HA and the Impact Area, see 2011 LUCIP Section 1.1.

Oak and Maple HAs

In preparation for the future development of the former Oak and Maple HAs for commercial construction (innovation and technology center), a Military Munitions Response Program (MMRP) Remedial Investigation of the former Oak and Maple HAs was conducted in 2010 and 2011 (HydroGeoLogic, Inc. [HGL], 2012), based on recommendations detailed in the 2008 Preliminary Assessment Site Inspection/Supplement Site Investigation (SSI) (Weston, 2008c). Both housing areas overlap portions of the firing fan associated with the former 37-mm training range. The purpose of the investigation was to characterize the nature and extent of munitions and explosives of concern (MEC), material potentially presenting an explosive hazard (MPPEH), and munitions debris (MD) present within the former Oak and Maple HAs. The

investigation revealed that the probability of encountering MEC within the previously developed Oak and Maple HAs is low.

The Focused Feasibility Study (FFS) Addendum prepared for the former Oak and Maple HAs (HGL, 2013) concluded that the best remedy was LUCs, with additional provisions beyond the 2009 ROD LUCs that were developed for the Grant HA and Impact Area. The addition of the former Oak and Maple HAs to the Grant HA and Impact Area ROD allows the ROD-stipulated LUC remedy to be applied over the entire former training range.

Exhibit A summarizes prior investigations and removal actions at the Oak and Maple HAs.

Pursuant to the FFS and the FFS Addendum, the Army, under the oversight of the EPA and with the involvement of Massachusetts Department of Environmental Protection (MassDEP), assessed the potential likelihood that unexploded ordnance (UXO) and other MEC is on the former Oak and Maple HAs in light of the previous investigation and removal actions, and evaluated various additional remedial alternatives to protect the public, including tenants and workers, from any potential UXO and other MEC on the Property. The FFS Addendum reached the following conclusions: (a) the investigation and removal actions have occurred using the best available technology; (b) while not 100% conclusive, these efforts have removed all identified UXO from the top 18 inches of soil at the Grant HA and to greater depths within the Impact Area; (c) the probability of encountering UXO in the former Oak and Maple HAs is low; (f) although there remains a risk of exposure to remnant UXO with an explosive safety hazard, the remaining hazard of encountering UXO in the former Oak and Maple HAs would be primarily associated with construction work during future development (e.g., utility or foundation installation or other deeper excavation activities); and (d) the implementation of LUCs is the appropriate remedy to provide additional protection to residents and workers in the event that they encounter UXO at the Property.

The LUCs, which will allow the Response Action Outcome (RAO) to be achieved and ensure the protection of public health and welfare at the former Oak and Maple HAs, are presented in Section 4.0.

1.2 LAND AFFECTED

A Zoning District Plan and narrative description for the former Oak and Maple HAs is included as **Figure 1**. A plan showing all four former housing areas in relation to Devens is included as **Figure 2** and a plan showing the four areas in relation to one another is included as **Figure 3**.

2.0 LAND USE CONTROLS FOR THE FORMER OAK AND MAPLE HOUSING AREAS

Pursuant to the *Final Explanation of Significant Differences (ESD) for Grant Housing Area and 37-MM Impact Area, Former Fort Devens Army Installation, Devens MA*, dated September 2014, the LUCs required for the former Oak and Maple HAs include the following institutional controls, affirmative measures, prohibitive directives, and construction activity requirements and shall be implemented as follows:

a) Construction Activity Requirements

- 1. Pre-construction clearance of selected grids: ten (10) un-surveyed grids within Sub-Area 2, as identified in the MEC Remedial Investigation (RI) Report (HGL, 2012) were not cleared during the 2010/2011 remedial investigation. The ten un-surveyed grids are shown in Figure 4. Prior to beginning any site redevelopment activities, the Army will perform MEC clearance surveys within these grids following procedures detailed in the SI work plan (HGL, 2010). The following tasks will be implemented:
 - Ongoing coordination with Massachusetts Development Finance Agency (MassDevelopment) such that MEC clearance can coincide with MassDevelopment plans to remove remnant concrete building slabs (scheduled for spring 2015).
 - Preparation of MEC Clearance Survey and Construction Support
 Work plan prior to MEC survey mobilization. This work plan will
 summarize all MEC survey procedures specified in the SI work plan
 including any necessary updates. The work plan will provide details
 on the order of field activities necessary to complete the survey and
 the schedule for such activities. The work plan will be prepared in

accordance with all applicable Department of Defense (DoD) and Army directives, policy, and guidance.

- 2. MEC physical preview of any proposed construction footprint: the entire proposed construction area would be previewed by physically walking and performing a visual inspection of the area to ensure no MEC is present. The following tasks will be implemented:
 - Ongoing coordination with MassDevelopment such that all <u>MEC</u>
 <u>physical preview</u> requirements can be performed in accordance with
 future development/construction plans and schedules.
 - Preparation of a MEC Clearance Survey and Construction Support Work Plan: This work plan will specify all means and methods for performing the MEC physical preview.
- 3. Future MEC construction support for all intrusive activities where construction support has not previously been conducted: MEC construction support will be provided for all intrusive activities (i.e., whenever an activity involves the disturbance and/or excavation of soils) in accordance with all applicable DoD and Army directives, policy, and guidance related to explosive safety requirements; will be performed in conjunction with the Devens Soil Management Policy, and the Devens UXO training required for all Devens and contractor personnel who perform intrusive work, as noted in the Grant HA LUCs described in the Grant HA and Impact Area ROD (Weston, 2009b) and the 2011 LUCIP (Section 2c). The following tasks will be implemented:
 - Ongoing coordination with MassDevelopment such that the Army can provide MEC construction support for all future construction projects and all intrusive activities.
 - Preparation of a MEC Clearance Survey and Construction Support Work Plan: This work plan will specify all means and methods for performing MEC construction support. The work plan will be

prepared in accordance with all applicable DoD and Army directives, policy, and guidance.

b) <u>Deed Notices for Potential Presence of Unexploded Ordnance and Prohibition of Residential Reuse:</u> MassDevelopment, the current owner of the former Oak and Maple HA property, has agreed to record and insert two Deed Notices into any deeds by which MassDevelopment conveys all or part of the property located in the former Grant, Oak and Maple HAs. The first deed notice addresses the Potential Presence of Unexploded Ordnance, as required per the Grant HA LUCs (see 2011 LUCIP Exhibit B). A copy of the draft deed notice, which covers all of the property, is included as Exhibit B-1. This deed notice will be included in all subsequent transfers of the property from the current owner.

In addition, MassDevelopment has agreed to insert a Deed Notice for Prohibition of Residential Reuse that will prohibit residential use of the former Oak and Maple property. The prohibition on residential reuse is warranted based on potential human health risks and explosive safety hazards associated with UXO or MEC that may still be present in these areas. A copy of the draft deed notice, which covers only the Oak and Maple portions of the property, is included as Exhibit B-2. The restriction would be included in all subsequent transfers of the property from the current owner.

- c) <u>Public Education through distribution of educational materials, live information</u> sessions, web-based visual and audio media, and signage (at the site):
 - 1. This LUC requirement (e.g., affirmative measures) will be implemented through the ongoing distribution of educational materials per the 2011 LUCIP, (Section 2b. and related Exhibits C and D). The Army will cause all planned and ongoing (i.e., existing web-based media) information distribution related to this requirement to be expanded to include the former Oak and Maple HA.

The intent of the LUCs for the former Oak and Maple HAs is to educate future tenants and employees, the public, and construction contractors to the potential presence of UXO, locations where UXO are more likely to be encountered, how to identify UXO, how to minimize the potential of encountering UXO, and what actions to take if suspect UXO is encountered.

3.0 LUC RESPONSIBILITIES

The Army is responsible for implementing, maintaining, and reporting on the LUCs. Although the Army may now or in the future delegate some or all of its duties as indicated in this LUCIP Addendum through a third party by contract or through other means, the Army shall retain ultimate responsibility for the remedy integrity. It is anticipated that MassDevelopment, the Devens Enterprise Commission (DEC), or their successors will perform some of the duties required under this LUCIP Addendum, but this effort is, and shall at all times be, voluntary. Should MassDevelopment, the DEC, or their successors cease performing these duties, the Army shall implement the LUCs or propose modifications to this LUCIP Addendum that provide an equivalent level of protection as determined by EPA and MassDEP, in consultation with MassDevelopment or its successor municipal authority.

4.0 IMPLEMENTATION ACTIONS

Upon concurrence in this LUCIP Addendum by EPA and MassDEP, in accordance with their respective legal authorities, the Army will undertake implementation actions to confirm compliance with LUC objectives. The Army will notify the EPA and MassDEP of any changes in LUC management responsibility.

The following LUC implementation actions will be undertaken by the Army to ensure that the LUC objectives are met and maintained.

4.1 DISTRIBUTION OF LUCIP ADDENDUM

Within 30 days of receiving EPA approval and MassDEP concurrence of this LUCIP Addendum, in accordance with their respective legal authorities, the Army will undertake the following specific actions:

- Send a copy of this LUCIP Addendum to the Town of Ayer, Massachusetts for its records;
- Send a copy of this LUCIP Addendum to the Town of Harvard, Massachusetts for its records;
- Send a copy of this LUCIP Addendum to the Town of Shirley, Massachusetts for its records;
- Send a copy of this LUCIP Addendum to the DEC for its records;

- Send a copy of this LUCIP Addendum to MassDevelopment to be kept in its files at 33 Andrews Parkway; and
- Place a copy of this LUCIP Addendum in the central Army repository.

4.2 DEED NOTICES AND EDUCATIONAL MATERIALS

The Army shall do the following:

The Army (or its designee) will verify that the Deed Notices are included in all future deeds conveying interests in the former Oak and Maple HA property. Exhibit B-1 presents the Deed Notice for Potential Presence of Unexploded Ordnance (Grant, Oak and Maple HAs). Exhibit B-2 presents the Deed Notice for the Prohibition of Residential Reuse at the Former Oak and Maple HAs.

The Army will cause the Devens Fire Department to continue to provide contractor awareness briefings (and to make such briefings available to any occupant, tenant, or resident who requests a briefing), until such time as the Devens Fire Department shall elect to discontinue the same, in which event, the Army shall arrange for suitable alternative briefing. The Army will verify and ensure that these briefings continue beginning when this LUCIP Addendum is finalized.

The Army (or its designee), in consultation with MassDevelopment (or the successor utility provider), will develop a draft of the electric bill insert by the date noted in **Exhibit D**, LUC Implementation Schedule, which shall be based upon the narrative attached to this LUCIP Addendum as Exhibit C of the 2011 LUCIP and include photographs of typical UXO.

The Army (or its designee), in consultation with MassDevelopment and the DEC, will complete development/revisions of the webpages to host the supplemental educational materials inclusive of the former Oak and Maple HA property by the date indicated in Exhibit D, LUC Implementation Schedule. The materials shall include those materials listed on Exhibit D of the 2011 LUCIP.

4.3 REVIEWS

The Army (or its designee) will conduct annual reviews to confirm the overall effectiveness of, and compliance with the established LUCs in the former Oak and Maple HAs. Such annual review shall include interviews with personnel of MassDevelopment and DEC (or successor municipal authority) as to the discovery, reporting, and disposal of UXO during the prior year.

Oak and Maple HAs: The annual review of the LUCs at the former Oak and Maple HAs shall include verification that the website, utility bill inserts, UXO awareness training, inclusion of the Deed Notice to Prohibit Residential Use and the Deed Notice of Potential Presence of Unexploded Ordnance in deeds conveying the former Oak and Maple HAs (or portions thereof), and other requirements set forth in this LUCIP Addendum are being properly implemented. The annual review of the LUCs at the former Oak and Maple HAs will include a physical inspection, along with interviews with property owners, to determine if intrusive activities were conducted within the former Oak and Maple HAs; and if intrusive activities were conducted, to document those activities and determine if they were conducted with MEC construction support in accordance with the LUCIP Addendum. The Army shall utilize the checklist attached to this LUCIP Addendum as Exhibit C in the course of conducting its annual review. MassDevelopment will have an opportunity to review and comment on each annual review prior to submission as set forth in Section 4.4 below.

<u>Five-Year Review:</u> Furthermore, a review/inspection of the effectiveness of the LUCs will also be conducted by the Army, with the cooperation of MassDevelopment and the DEC, as part of the Comprehensive Five-Year review process conducted at Devens under Section 121 of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986. 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, presence of UXO, and effectiveness of the remedial action.

4.4 REPORTING AND NOTIFICATION

An annual LUC compliance report will be provided by the Army to EPA, MassDEP, MassDevelopment and the DEC. If any deficiency(ies) should be 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 6.0 Enforcement. If there is to be a delegation of performance of duties by the Army as permitted by Section 3.0 above, the Army will promptly notify EPA, MassDEP, MassDevelopment and DEC of such delegation.

Annual reports will be submitted by the Army to the Base Realignment and Closure (BRAC) distribution list, which includes EPA, MassDEP, MassDevelopment, the DEC, and the Towns of Ayer, Harvard, and Shirley, Massachusetts. A link to the annual report will be provided on the community website as described in Section 2.0. The annual report will include a summary of the review and any physical site inspections, identification of deviations from this LUCIP Addendum, corrective actions necessary due to implementation issues or as a result of changes in site conditions or land use, and proposed changes to inspection and reporting frequency. The annual report will also include a summary of any UXO discovered during the reporting period (including the location of discovered UXO, the type of UXO (if known) and information on the activity conducted that led to the find, and the name and affiliation of the individual that reported the discovery), as well as safety procedures followed and the ultimate disposition of any such discovered UXO. The annual report will also address whether the use restrictions and controls referenced in this LUCIP Addendum were communicated in the deed(s) and other legal instruments, whether the owners and state and local agencies were notified of the use restrictions and controls affecting the former Oak and Maple HA property, and whether use of these areas has conformed to such restrictions and controls.

In the event that UXO is discovered (by intrusive construction activity or other encounter) within an area addressed by this LUCIP Addendum, and is reported to or by the Army or its designee (e.g., currently Devens Emergency Dispatch Center), the Army will then implement the following actions:

- Provide notification of the discovery of UXO to the agencies listed in Section 8.2;
- Determine whether local emergency responders (e.g., Devens Fire Department and Massachusetts State Police [Bomb Squad]) will address the UXO discovery by removal or destruction; and

 If the local emergency responders do not address the UXO, the Army will be responsible for removal or destruction of the UXO.

5.0 LUC CHANGES

The Army shall not modify or terminate LUCs, implementation actions, or modify restrictions regarding land use without approval by EPA and the MassDEP, and the concurrence of MassDevelopment and the DEC (or successor municipal authority); provided that the 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 EPA. 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 Addendum may be amended only in accordance with Section VII of the Federal Facilities Agreement (FFA). No changes shall be made without the prior approval of EPA and MassDEP, and the concurrence of MassDevelopment and the DEC (or successor municipal authority); 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 EPA. In the latter case, the Army shall take reasonable steps to consult with MassDevelopment and the DEC (or successor municipal authority) to minimize the impacts of the changes to these parties.

6.0 ENFORCEMENT

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If the LUCs reflected in this LUCIP Addendum cease to provide an appropriate level of protection, the Army shall propose modifications through the process of preparing another ESD or a ROD amendment. If the Army determines 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 EPA and MassDEP as soon a 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 LUCs. The Army will notify EPA and MassDEP regarding the way in which it has addressed or will address the breach within 10 days of sending EPA and MassDEP

notification of the breach. Should the Army become aware that a user of the former Oak and Maple HA property 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 of such violations and work cooperatively with them to re-establish owner/user compliance with the LUC.

7.0 DURATION OF LUCS

LUCs will be maintained until such time that the hazard associated with potential remnant UXO in the soil is at levels to allow for unrestricted use and exposure without the use of LUCs. If LUCs relating to the Deed Notices specified in this LUCIP Addendum are no longer needed, as determined in an ESD or ROD amendment, MassDEP and MassDevelopment may provide the owner with releases for recordation with the deed (if applicable) pertaining to their property, and will also advise the DEC (or successor municipal authority) of that action. At that time, LUCs and associated responsibilities contained in the Deed Notices will be discontinued.

8.0 APPROVALS AND NOTICES

8.1 APPROVALS

Changes to the LUCIP Addendum can only be approved through the process set forth in Section 7.0. Where the approval of a party (hereafter, the "approval party") is required under this LUCIP Addendum for non-substantive changes that may be made without amendment of this LUCIP Addendum 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 Addendum. 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.

8.2 NOTICES

All notices, responses, requests, approvals and other communications required or permitted under this LUCIP Addendum, between or among MassDevelopment, DEC, EPA, MassDEP and/or the Army, shall be in writing and 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:

If to MassDevelopment:

Massachusetts Development Finance Agency, 160 Federal Street, Boston, MA 02110, Attn: President & CEO

with copies to:

Massachusetts Development Finance Agency, 33 Andrews Parkway, Devens, Massachusetts 01434, Attn: EVP, Devens Operations

and

Massachusetts Development Finance Agency, 160 Federal Street, Boston, MA 02110, Attn: EVP Real Estate

and

Massachusetts Development Finance Agency, 160 Federal Street, Boston, MA 02110, Attn: General Counsel

If to the DEC:

Devens Enterprise Commission, 33 Andrews Parkway, Devens, Massachusetts 01434, Attn: Land Use Administrator/Director

If to the Army:

Department of the Army, Fort Devens, BRAC Division, 30 Quebec Street, Room 100, Devens, MA 01432-4479, Attn: BRAC Environmental Coordinator

If to EPA:

U.S. Environmental Protection Agency, Region I, 5 Post Office Square, Federal Facilities Superfund Section, Suite 100 (HBT), Mail Code OSRR07-3, Boston, MA 02109-3912, Attn: Remedial Project Manager

If to MassDEP:

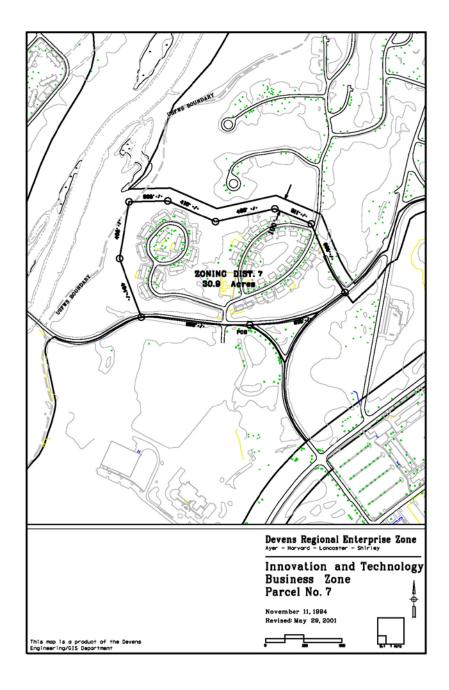
Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup, One Winter Street, Boston, MA 02108, Attn: Superfund Federal Facilities, Section Chief

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).



Figure 1

Zoning District Plan and Narrative Description of the former Oak and Maple HAs



DESCRIPTION OF THE FORMER OAK & MAPLE HAS

A certain parcel of land located within the Devens Enterprise Zone as the innovation and Technology Business Zone. The parcel is an irregular shaped parcel located north of Hospital Road. The parcel is more particularly described as follows:

Beginning at a point near the center of the southerly line of Parcel 7. Said point is located at the centerline intersection of Hospital Road and Givry Street; thence

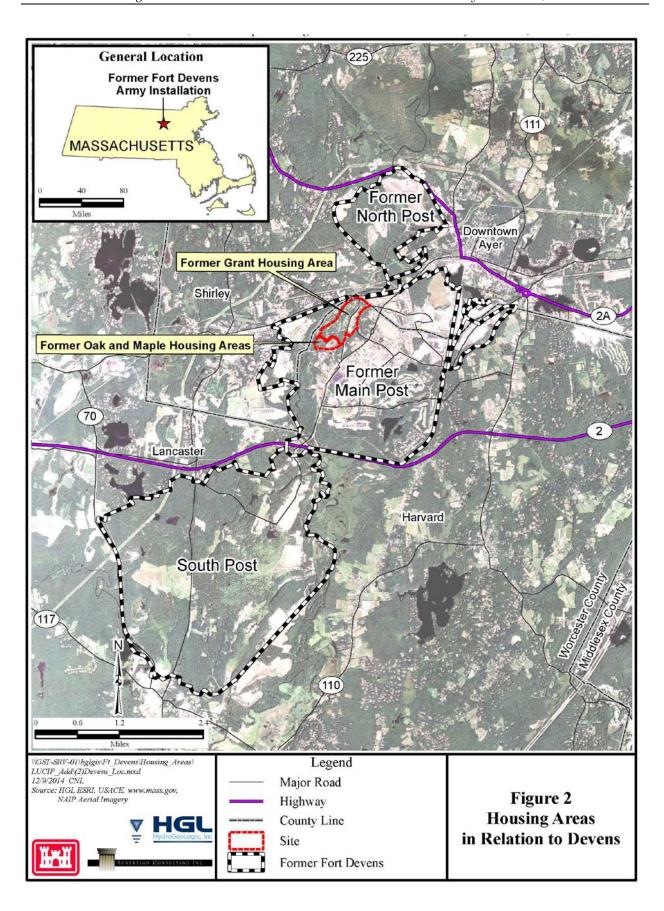
Westerly along the centerline of Hospital Road, a distance 860′ more or less, to a point; thence Northerly forming an interior angle of 107°, a distance of 494′ more or less, to a point; thence Northerly forming an interior angle of 150°, a distance of 455′ more or less, to a point; thence Easterly forming an interior angle of 101°, a distance of 305′ more or less, to a point; thence Easterly forming an interior angle of 155°, a distance of 410′ more or less, to a point; thence Easterly forming an interior angle of 216°, a distance of 480′ more or less, to a point; thence Southeasterly forming an interior angle of 145°, a distance of 311′ more or less, to a point; thence

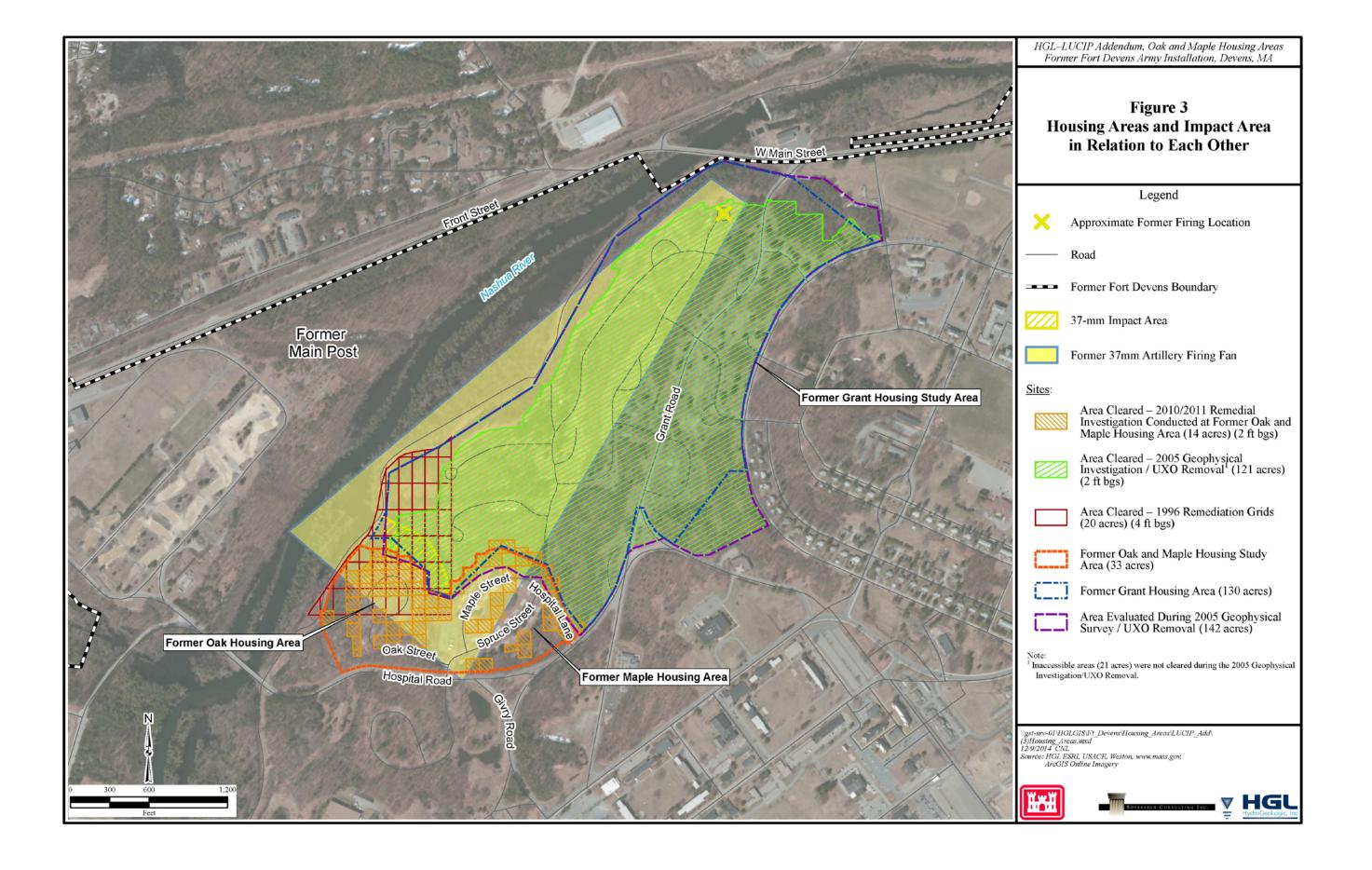
Southeasterly forming an interior angle of 135° and partly along the centerline of Hospital Lane, a distance of 605′ more or less, to a point. Said point being on the centerline Intersection of Hospital Lane and Hospital Road.

The last five courses will follow 100' southwesterly from and parallel to the Residential I Zone, parcel 6; thence

Southwesterly along the centerline of Hospital Road, forming an interior angle of 95°, a distance of 815′ more or less, to the point of beginning.

Said Innovation and Technology Business Zone, Parcel 7, as described above and shown on the accompanying graphic contains approximately 30.9 acres, more or less.





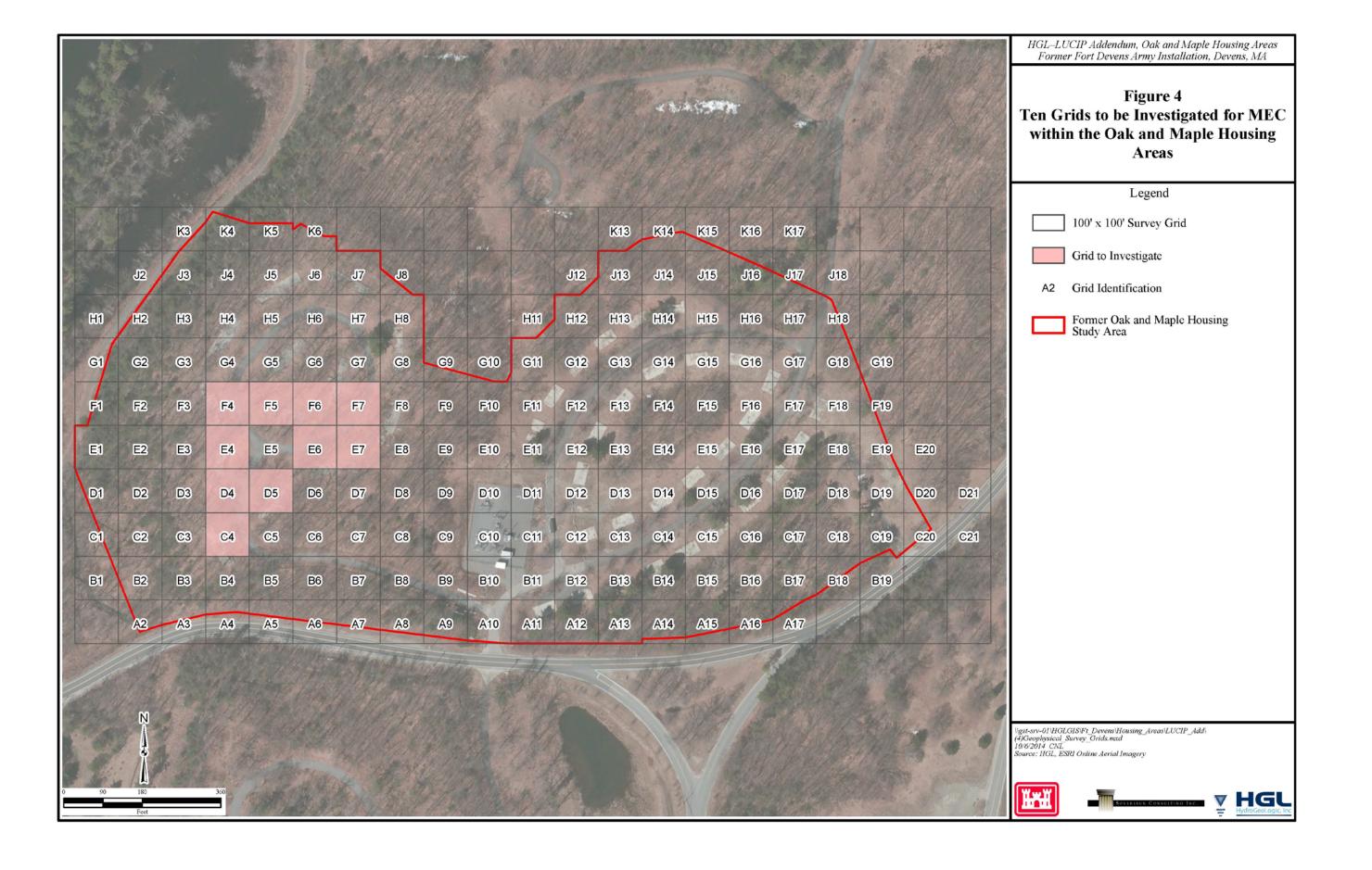




EXHIBIT A

Reports relating to presence, assessment, and removal of UXO at the former Oak and Maple Housing Areass

Department of Defense, 2008. Instruction 4140.62, *Management and Disposition of MPPEH*, EM 385-1-97, *Explosive Safety and Health Requirements Manual*. September.

Human Factors Applications, Inc., 1996. Final Removal Action Report, Ordnance, Ammunition and Explosives Removal Action, Devens RFTA, Ft. Devens, Massachusetts. October.

HydroGeoLogic, Inc. (HGL), 2012. MEC Remedial Investigation, Former Oak and Maple Housing Areas, Former Fort Devens Army Installation. August.

HydroGeologic, Inc. (HGL). 2013. Final Focused Feasibility Addendum, Former Oak and Maple Housing Areas, March.

Ordnance & Explosives Remediation, Inc., 2006. Site Specific Final Report Digital Geophysical Mapping (DGM) & Unexploded Ordnance (UXO) Removal, Grant Housing Area, Former Ft. Devens, Harvard,

Sovereign Consulting, Inc., (Sovereign) and HGL, 2014. *Construction Support Work Plan, Former Oak and Maple Housing Areas, Former Fort Devens Army Installation*. July.

USACE, 2006. New England District, Final Expanded Conceptual Site Model Report. June.

USACE, New England District, 2007. *Performance Work Statement for Completion of CERCLA Documents Related to Munitions and Explosives of Concern at Oak and Maple Housing Areas, Devens, MA*. Revised 11 May.

Weston, 2008c. Final Preliminary Assessment Site Inspection/Supplemental Site Investigation Comprehensive Report. October.

Weston, 2009b. Record of Decision, Grant Housing Area and 37-mm Impact Area Former Fort Devens Army Installation, Devens, Massachusetts. September.

EXHIBIT B-1

Deed Notice for Former Army Housing Areas (Grant, Oak and Maple)

SECTION ___: NOTICE FOR POTENTIAL PRESENCE OF UNEXPLODED ORDNANCE

Grantor hereby gives notice that (i) the premises conveyed herein (or a portion thereof) are within the former Grant, Oak, or Maple Housing Areas (the Property), and (ii) for a short period of time between World War I and World War II, the Property [or portions thereof, as supported by a legal description and a sketch] was used by the United States Army (the Army) for training, including the use of military munitions, and from the early 1960s until the closure of Fort Devens in March 1996, the Property was used for military housing purposes. The Property is or was held by MassDevelopment pursuant to two deeds: (a) a deed, that included "Parcel 1" inclusive of the former Grant Housing Area, in favor of MassDevelopment's predecessor (Massachusetts Government Land Bank) dated May 9, 1996, and recorded with the Worcester (South District) Registry of Deeds in Book 17907, Page 001 (the "1996 Army Deed"); and (b) a deed, that included "Parcel A.21" inclusive of the Former Oak Housing Area, a portion of the former Grant Housing Area and the 37-mm Impact Area (Impact area), in favor of MassDevelopment dated February 11, 2003, and recorded with the Worcester (South District) Registry of Deeds in Book 29378, Page 064 (the 2003 Army Deed, and, together with the 1996 Army Deed, the "Army Deeds). Prior to conveyance of the Property, the Army performed removal actions of unexploded ordnance (UXO) from the Property as described in the 1996 report by Human Factors Applications, Inc. (HFA Report). Section XVII of the 1996 Army Deed and Section XI of the 2003 Army Deed provide a standard UXO notice indicating that, as a result of historic operations of the Property as an active military installation, there exists a possibility that UXO may exist on the Property, but that based on a comprehensive records search and

statistical and physical testing of areas of the Property, the Army does not believe that UXO is present on the Property.

Following the conveyance of the Property to MassDevelopment, and in preparation for the development of portions of the Property, including the Grant Housing Area for new residential construction, and the former Oak and Maple HAs for new commercial construction, the removal actions described in the HFA Report were determined to be incomplete and additional removal actions were determined to be necessary. Thereafter, the United States Environmental Protection Agency (EPA), with the review and comment of the Massachusetts Department of Environmental Protection (MassDEP), oversaw an investigation of the Property to identify and address an array of possible contaminants, including UXO and other munitions and explosives of concern (MEC), at the Property. In March 2003, the Army initiated a Preliminary Assessment/Site Investigation (PA/SI) and a subsequent Supplemental Site Investigation (SSI) on portions of the Property to address these contaminants. However, before the final PA/SI/SSI was completed, in order to accelerate redevelopment MassDevelopment voluntarily contracted with a private company to investigate and, as necessary, remediate UXO and other MEC at the Property. MassDevelopment's contractor performed digital geophysical mapping and UXO removal at the Property, reviewed the reports, studies, maps, and other materials generated by the Army and/or its contractors with respect to UXO and other MEC at the Property, and conducted extensive field investigations and removal actions to remove residual UXO and MEC from the Property. Details and conclusions from those investigations and removal actions are contained in the report prepared for MassDevelopment (Ordnance & Explosives Remediation, Inc., 2006).

Following the completion of MassDevelopment's investigations and removal actions, the Army completed the PA/SI/SSI. The final PA/SI/SSI recommended that land use controls

(LUCs) be evaluated and implemented on the Property to address the potential for residual MEC. As a result of these recommendations, the Army prepared a Focused Feasibility Study (FFS) to evaluate the remedial alternatives to protect the public, including residents and workers, from any potential UXO and other MEC on the Property in light of the previous investigations and removal actions. Copies of the report detailing MassDevelopment's investigations and removal actions, the PA/SI/SSI and the FFS are available for review at the New England regional office of the EPA (5 Post Office Square, Boston), the Army (Base Realignment and Closure BRAC Division – Devens), the MassDEP (One Winter Street, Boston), the public libraries for the Town of Ayer, Massachusetts, the Town of Harvard, Massachusetts, and the Town of Shirley, Massachusetts.

The various alternatives that were evaluated by the EPA and the Army, and the selected remedy, are described in the Record of Decision dated September 2009 (ROD), a copy of which is available for review at the New England regional office of the EPA (5 Post Office Square, Boston), the Army (BRAC Division – Devens), the MassDEP (One Winter Street, Boston), the public libraries for the Town of Ayer, Massachusetts, the Town of Harvard, Massachusetts, and the Town of Shirley, Massachusetts. The ROD reached the following conclusions: (a) the investigation and removal actions have occurred using the best available technology; (b) while not 100% conclusive, these efforts have removed all identified UXO from the top 18 inches of soil throughout the Grant HA and the Impact Area and to greater depths within the Impact Area; (c) UXO in the Grant HA is unlikely at depths greater than 18 inches due to the angle of penetration of projectiles into the ground surface along the range, the effect of local soil composition (i.e., sand and gravel deposits) on limiting penetration depths, and up to 90 years for frost heaves to have brought items to the surface; (d) UXO in the Impact Area may be buried at

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depths deeper than the frost line, but that any potential associated with frost heaves bringing UXO to the surface is considered minimal; (e) the probability of encountering UXO in the Grant HA is low; (f) although there remains a risk of exposure to remnant UXO with an explosive safety hazard, the remaining hazard of encountering UXO in the Grant HA or the Impact Area would be primarily associated with construction work during future development (e.g., utility or foundation installation or other deeper excavation activities); and (g) the implementation of LUCs is the appropriate remedy to provide additional protection to residents and workers in the event that they encounter UXO at the Property.

In 2010/2011, in preparation for the future development of the former Oak and Maple HAs for commercial construction (including the innovation and technology center), a Military Munitions Response Program (MMRP) RI of the former Oak and Maple HAs was conducted (HGL, 2012) pursuant to recommendations detailed in the 2008 PA/SI/SSI (Weston, 2008). The purpose of the investigation was to characterize the nature and extent of MEC material potentially presenting an explosive hazard (MPPEH) and munitions debris (MD) present within the former Oak and Maple HAs. The investigation revealed that the probability of encountering MEC within the previously developed Oak and Maple HAs is extremely low.

The FFS Addendum prepared for the former Oak and Maple HAs (HGL, 2013) concluded that: a) the best remedy was LUCs with **additional provisions** beyond the 2009 ROD LUCs developed for Grant HA and Impact Area (as described below); (b) the probability of encountering UXO in the former Oak and Maple HAs is low; and (c) although there remains a risk of exposure to remnant UXO with an explosive safety hazard, the remaining hazard of encountering UXO in the former Oak and Maple HAs would be primarily associated with construction work during future development (e.g., utility or foundation installation or other

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deeper excavation activities).

The addition of the former Oak and Maple HAs to the Grant HA and Impact Area ROD allows the ROD-stipulated LUC remedy to be applied over the entire former training range.

Subject to compliance with the LUCs, the Grant HA portion of the property is suitable for new residential construction. The former Oak and Maple HA portions of the Property are suitable for future commercial use. The LUCs for the Grant, Oak and Maple HA portions of the Property require the insertion of this Deed Notice in subsequent deeds conveying ownership interests in these portions of the Property. The LUCs also require the distribution of educational materials to inform the property owners, residents, tenants, construction workers, and utility workers conducting ground-intrusive activities on the former Oak and Maple Housing Area portions of the Property of the potential presence of UXO on how to identify UXO, and what actions to take if suspect UXO is encountered.

In addition, the LUCs for the former Oak and Maple HAs require specific measures to be taken related to any construction activity or groundbreaking. The required measures include: (a) pre-construction clearance of 10 un-surveyed grids that were not cleared during the 2010/2011 remedial investigation; (b) a physical inspection of the proposed construction area to assure no MEC is present; and (c) MEC construction support for all intrusive activities where construction support has not previously been conducted. The LUCs are more fully described in the Land Use Control Implementation Plan (LUCIP) and the LUCIP Addendum.

Should suspect UXO or other MEC be encountered at the Property, the Army has certain obligations to take necessary remedial action pursuant to Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), 42 U.S.C. § 9620(h), Section VII of the 1996 Army Deed and Section I of the 2003 Army Deed. Section VII

of the 1996 Army Deed and Section II of the 2003 Army Deed reserve for the Army a right of access to the Property if needed to fulfill these obligations. The ROD confirms the Army's commitment with respect to MEC and UXO, including the obligations to conduct actions required by CERCLA and the Army Deeds.

This section of this Deed contains important factual and legal information. It shall be referenced in any subsequent deed conveying ownership interests in all or part of the Property.

The reports listed in Attachment A of this Deed Notice are available for review at the New England regional office of the EPA (5 Post Office Square, Boston), the Army (BRAC Division – Devens), the MassDEP (One Winter Street, Boston), the public libraries for the Town of Ayer, Massachusetts and the Town of Harvard, Massachusetts.

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EXHIBIT B-2

Deed Notice for Former Army Housing Areas (Oak and Maple)

SECTION ___: NOTICE FOR PROHIBITION OF RESIDENTIAL REUSE AT OAK AND MAPLE HAS

Grantor hereby gives notice that (i) the premises conveyed herein (or a portion thereof) are within the former Grant, Oak, or Maple Housing Areas (the Property), and (ii) for a short period of time between World War I and World War II, the Property [or portions thereof, as supported by a legal description and a sketch] was used by the United States Army (the Army) for training, including the use of military munitions, and from the early 1960s until the closure of Fort Devens in March 1996, the Property was used for military housing purposes. The Property is or was held by MassDevelopment pursuant to two deeds: (a) a deed, that included "Parcel 1" inclusive of the former Grant Housing Area, in favor of MassDevelopment's predecessor (Massachusetts Government Land Bank) dated May 9, 1996, and recorded with the Worcester (South District) Registry of Deeds in Book 17907, Page 001 (the "1996 Army Deed"); and (b) a deed, that included "Parcel A.21" inclusive of the Former Oak Housing Area, a portion of the former Grant Housing Area and the 37-mm Impact Area (Impact area), in favor of MassDevelopment dated February 11, 2003, and recorded with the Worcester (South District) Registry of Deeds in Book 29378, Page 064 (the 2003 Army Deed, and, together with the 1996 Army Deed, the "Army Deeds).

In 2010/2011, in preparation for the future development of the former Oak and Maple HAs for commercial construction (including the innovation and technology center), a Military Munitions Response Program (MMRP) RI of the former Oak and Maple HAs was conducted (HGL, 2012) pursuant to recommendations detailed in the 2008 PA/SI/SSI (Weston, 2008). The purpose of the investigation was to characterize the nature and extent of MEC material potentially presenting an explosive hazard (MPPEH) and munitions debris (MD) present within

the former Oak and Maple HAs. The investigation revealed that the probability of encountering MEC within the previously developed Oak and Maple HAs is extremely low.

The FFS Addendum prepared for the former Oak and Maple HAs (HGL, 2013) concluded that:

- a) the best remedy was LUCs with **additional provisions** beyond the 2009 ROD LUCs developed for Grant HA and Impact Area. The additional provisions are described in greater detail in the **Land Use Control Implementation Plan Addendum** (LUCIP Addendum).
- (b) subject to compliance with the LUCs, the former Oak and Maple HA portions of the property **are suitable for commercial use**; and
- (c) because the UXO clearance actions did not cover the entire property, **residential use** of the former Oak and Maple HA portions of the property is **expressly prohibited**.

The addition of the former Oak and Maple HAs to the Grant HA and Impact Area ROD allows the ROD-stipulated LUC remedy to be applied over the entire former training range. The LUCs for the former Oak and Maple HAs require the insertion of this Deed Notice in subsequent deeds conveying ownership interests in these portions of the Property.

Should suspect UXO or other MEC be encountered at the Property, the Army has certain obligations to take necessary remedial action pursuant to Section 120(h) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended (CERCLA), 42 U.S.C. § 9620(h), Section VII of the 1996 Army Deed and Section I of the 2003 Army Deed. Section VII of the 1996 Army Deed and Section II of the 2003 Army Deed reserve for the Army a right of access to the Property if needed to fulfill these obligations. The ROD confirms the Army's commitment with respect to MEC and UXO, including the obligations to conduct actions required by CERCLA and the Army Deeds.

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This section of this Deed contains important factual and legal information. It shall be referenced in any subsequent deed conveying ownership interests in all or part of the Property.

The reports listed in Attachment A of this Deed Notice are available for review at the New England regional office of the EPA (5 Post Office Square, Boston), the Army (BRAC Division – Devens), the MassDEP (One Winter Street, Boston), the public libraries for the Town of Ayer, Massachusetts and the Town of Harvard, Massachusetts.

Attachment A to Deed Notices

Reports

Army, 1996. EPA Federal Facilities Agreement. 26 March.

Army, 2001. MassDevelopment Environmental Services Cooperative Agreement. September.

Department of Defense, 2008, Instruction 4140.62, <u>Management and Disposition of MPPEH</u>, EM 385-1-97, *Explosive Safety and Health Requirements Manual*. September 2008.

Human Factors Applications, Inc. 1996. Final Removal Action Report, Ordnance, Ammunition and Explosives Removal Action, Devens RFTA, Ft. Devens, Massachusetts. October 1996.

HydroGeoLogic, Inc. (HGL), 2012. MEC Remedial Investigation, Former Oak and Maple Housing Areas, Former Fort Devens Army Installation. August.

MassDevelopment, 1997. *Final Zone II Plan*. MassDevelopment, Devens Commerce Center. 16 September.

Nobis Engineering, Inc. 2005. 2005 Five-Year Review Report, Volume I & II, Former Fort Devens, Devens Massachusetts, prepared for U.S. Army Corp of Engineers, September 2005. URL http://www.epa.gov/region1/superfund/sites/devens/237422.pdf

Ordnance & Explosives Remediation, Inc. 2006. Site Specific Final Report Digital Geophysical Mapping (DGM) & Unexploded Ordnance (UXO) Removal, Grant Housing Area, Former Ft. Devens, Harvard, Worcester, Massachusetts. 22 March.

Sovereign Consulting, Inc. (Sovereign) and HGL, 2013. Final Focused Feasibility Study, Former Oak and Maple Housing Areas, Former Fort Devens Army Installation. March.

Sovereign Consulting, Inc, (Sovereign) and HGL, 2014. *Construction Support Work Plan, Former Oak and Maple Housing Areas, Former Fort Devens Army Installation*. July.

USACE, St. Louis District, 1995a. U.S. Department of Defense BRAC, Ordnance, Ammunition and Explosives-Archives Search Report Findings, Fort Devens. May.

USACE, St. Louis District, 1995b. U.S. Department of Defense BRAC, Ordnance, Ammunition and Explosives-Archives Search Report Conclusions and Recommendations, Fort Devens. May.

USACE, St. Louis District, 1995c. U.S. Department of Defense BRAC, Ordnance, Ammunitions and Explosives-Archives Search Report Maps, Fort Devens. May.

USACE, 2006. New England District, Final Expanded Conceptual Site Model Report. June.

USACE, New England District, 2007. Performance Work Statement for Completion of CERCLA Documents Related to Munitions and Explosives of Concern at Former Oak and Maple Housing Areas, Devens, MA. Revised 11 May.

U.S. Depart of Defense Explosives Safety Board (DDESB), 2004. Technical Paper 18 Minimum Qualifications for UXO Technicians and Personnel. December 2004.

WESTON, 2004. Draft Final Explosives, Lead, and Perchlorate - Conceptual Site Model Investigation Areas - Grant, Locust, and Cavite Housing Areas, Former Fort Devens, Devens, Massachusetts. December.

Weston Solutions, Inc. (Weston), 2006. Final Polychlorinated Biphenyls Time Critical Removal Action Closure Report, Former Grant Housing Area, Fort Devens, Devens, Massachusetts. August.

WESTON, 2008a. Final Focused Feasibility Study, Grant Housing Area and 37MM Impact Area Former Fort Devens Army Installation, Devens, Massachusetts. April.

WESTON, 2008b. Proposed Plan, Grant Housing Area and 37MM Impact Area Former Fort Devens Army Installation, Devens, Massachusetts. September.

WESTON, 2008c. Final Preliminary Assessment Site Inspection/Supplemental Site Investigation Comprehensive Report. October.

WESTON, 2009a. Final Release Abatement Measure Completion Report/Partial Response Action outcome Statement – Grant Housing Area. June.

WESTON, 2009b. Record of Decision, Grant Housing Area and 37-mm Impact Area Former Fort Devens Army Installation, Devens, Massachusetts. September.

EXHIBIT C

Annual Review Checklist

For former Oak and Maple HA Property check√ task notes			
notes			
Name(s) and title(s) of person(s) interviewed:			
Date(s) of interview:			
Any UXO discovered? No. Yes. (if "yes", provide detail regarding objects discovered, dates and locations of discovery and information regarding reporting and disposal)			

For For	For Former Oak and Maple HA Property		
check√	task	notes	
	Verify existence of website and content		
	Verify the inclusion of required utility bill inserts		
	Verify posting of utility bill insert in a conspicuous location		
	Verify distribution of current soils management policy to construction		
	Verify that awareness training is being conducted	 (1) Did ground intrusive construction activities occur during the reporting period? □ No. □ Yes. (2) At the time of application for the building permit, were contractors who were applying to conduct ground intrusive construction activities provided a current copy of the Devens Soil Management Policy? □ No. □ Yes. (3) Were all contractors who applied for a building permit required to attend UXO awareness training prior to commencing ground intrusive construction activities? □ No. □ Yes. 	
	Verify that deed notice has been included in deeds conveying portions of the, Oak HA, or Maple HA		
	Physical Inspection (Required for Oak and Maple HAs.	□ No.	
		☐ Yes. (if "yes", provide date of inspection, the areas that were inspected and whether any surface or near surface UXO were discovered)	

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For Fori	For Former Oak and Maple HA Property	
	Physical Inspection	Were intrusive activities undertaken in
		Former Oak and Maple Housing Areas?
		□ No.
		☐ Yes. (if "yes", describe)
		If intrusive activities were conducted, were
		they conducted with MEC construction support in accordance with the LUCIP?
		□ No. (If "no", describe)
		□ Yes.

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EXHIBIT D

LUCIP Addendum Implementation Schedule

Milestone Activity	Completion Date
Revise the Educational Pamphlet/Insert (Exhibit C) to Include Former Oak/Maple HA Property	August 31, 2015
Finalize the Web-based Visual and Audio Media (Sections 2)	August 31, 2015
Oak and Maple Housing Areas: Install Signage (Section 2)	Within thirty (30) days after issuance of the first building permit for a commercial building in Former Oak and Maple HAs
Oak and Maple Housing Areas: Install kiosk or community bulletin board in Former Oak and Maple HAs (Section 2)	Within thirty (30) days after issuance of the first building permit for a commercial building in Former Oak and Maple HAs

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