

REMEDY SELECTION PLAN FOR THE TRAINING AREAS JOINT BASE CAPE COD

April 2018

The United States Environmental Protection Agency (EPA) seeks your input on the proposed remedy for multiple Training Areas located on the Camp Edwards portion of the Joint Base Cape Cod (JBCC). This Remedy Selection Plan summarizes investigation results and response actions conducted to date along with a proposed remedy for each area.

The Army National Guard's Impact Area Groundwater Study Program (IAGWSP), under the oversight of EPA and the Massachusetts Department of Environmental Protection (MassDEP), has investigated potential soil and groundwater contamination at the Training Areas. IAGWSP's initial investigations at these sites determined that they were not expected to have significant environmental impacts and therefore would not be investigated until other higher priority sites were addressed. The IAGWSP has concluded the Training Areas investigation and has issued a comprehensive investigation report that summarizes the results of the evaluations soil and groundwater conditions at thirty-six areas where various types of military training activities were conducted.

The Army National Guard's work at the site is conducted under the authority of EPA's Safe Drinking Water Act Administrative Orders (SDWA 1-97-1019 and SDWA 1-2000-0014), and in consideration of the substantive cleanup standards of the MassDEP's Massachusetts Contingency Plan (MCP).

EPA wants your feedback on the proposed remedies and is seeking public comment April 11 to May 10, 2018. After the comment period ends, EPA will consider the public comments, consult with MassDEP, and will issue a Decision Document providing the details of the remedies selected for each area. The Decision Document will include a Responsiveness Summary that provides responses to comments received during the public comment period. MassDEP will issue its official position in a comment letter after the public comment period has ended.

PROPOSED REMEDY RECOMMENDED FOR NO FURTHER ACTION

No further investigations or response actions are recommended for many of the Training Areas. No Further Action (NFA) recommendations are Training Area specific and reflect the results of the soil, groundwater, surface water, sediment and munitions data collected and analyzed for each specific area and the associated risk screening evaluation for each. At most NFA areas, the environmental analyses indicated that military training related contaminants were absent or present at low concentrations comparable to background and do not pose a risk to human health or the environment.

At several Training Ranges, the NFA recommendation considered other investigations or cleanup work (both ongoing and completed) performed in conjunction with another operable unit at JBCC.

PROPOSED REMEDY RECOMMENDED FOR FURTHER ACTION

At a few Training Areas, additional environmental work has been proposed. Future actions including additional data review, geophysical surveys and/or confirmatory sampling are proposed at six Training Areas (B-7, C-15, Engineer Training Site, Former E Range/E1 Range, IBC Range and KD Range).

A summary of and the proposed remedy for each Training Area are presented in the table on pages 4 and 5 of this fact sheet. Training Areas where an action is proposed are highlighted in blue and also described on page 7.

HOW TO PARTICIPATE

Written comments can be provided during the public comment period or can be made orally at a presentation on the remedy selection during the JBCC Cleanup Team meeting to be held on April 11, 2018 at 6:00 p.m. at Building 1805 on the JBCC. EPA, MassDEP and IAGWSP representatives will be available at the meeting or by phone (see page 7 for contact information) to respond to questions regarding the Training Areas. After the public comment period has ended, EPA will evaluate the public comments and make a decision. A summary of comments and the responses to those comments will be provided as part of the Decision Document.

BACKGROUND

The Training Areas at Camp Edwards include 36 locations where various types of military training-related activities have been conducted. A map of the Training Areas is provided in Figure 1-1. The areas have been used for small unit maneuvers, bivouacs, combat assault training, chemical warfare simulations, pyrotechnic use (including smokes and flares), grenade training, bayonet training, small arms and rocket firing. Live firing of small arms is primarily performed at small arms ranges. The small arms ranges at Camp Edwards have been investigated and a Decision Document was issued in 2015.

The Training Areas are located in a circumference to the south, west, and north of the Central Impact Area (CIA). Certain additional areas are located toward the southern end of JBCC.

There are 22 designated training areas at JBCC that have been historically used for troop training exercises. The training activities in these areas included small unit maneuvers and bivouacs. They include Training Areas A-4, A-5, A-6, B-7, B-8, C-13, C-14, C-15 and BA-1.

The majority of these areas were included for evaluation based upon historical information suggesting possible past training activities involving small unit maneuvers, pyrotechnics and/or chemical warfare training (simulated using tear gas). Also evaluated in the Training Areas Investigation Report are the Land Nav II and Engineer Training Sites, which lie within the boundaries of one or more of the Training Areas noted above.

Other ranges investigated include IBC Range (Infantry Battle Course), KD Range (West), U Range, and the Former E Range. Munitions used at these ranges included small arms ammunition, rifle grenades, recoilless rifles, and rockets. Several demolition areas and grenade use training areas were also investigated. Demolition Area 3 was located to the west of the CIA; Demolition Area 4 was believed to have been located along the southern boundary of the CIA; and two Inactive Demolition areas were located to the immediate west of Training Area BA-1. Grenade courts GN1 and GN2 were located to the immediate north of Training Area BA-1.

There are a number of natural and/or man-made topographic features at JBCC that have undergone investigation in conjunction with the Training Areas including Bailey's Pond, Donnelly Pond, Deep Bottom Pond, Opening Pond and Gibbs Pond.



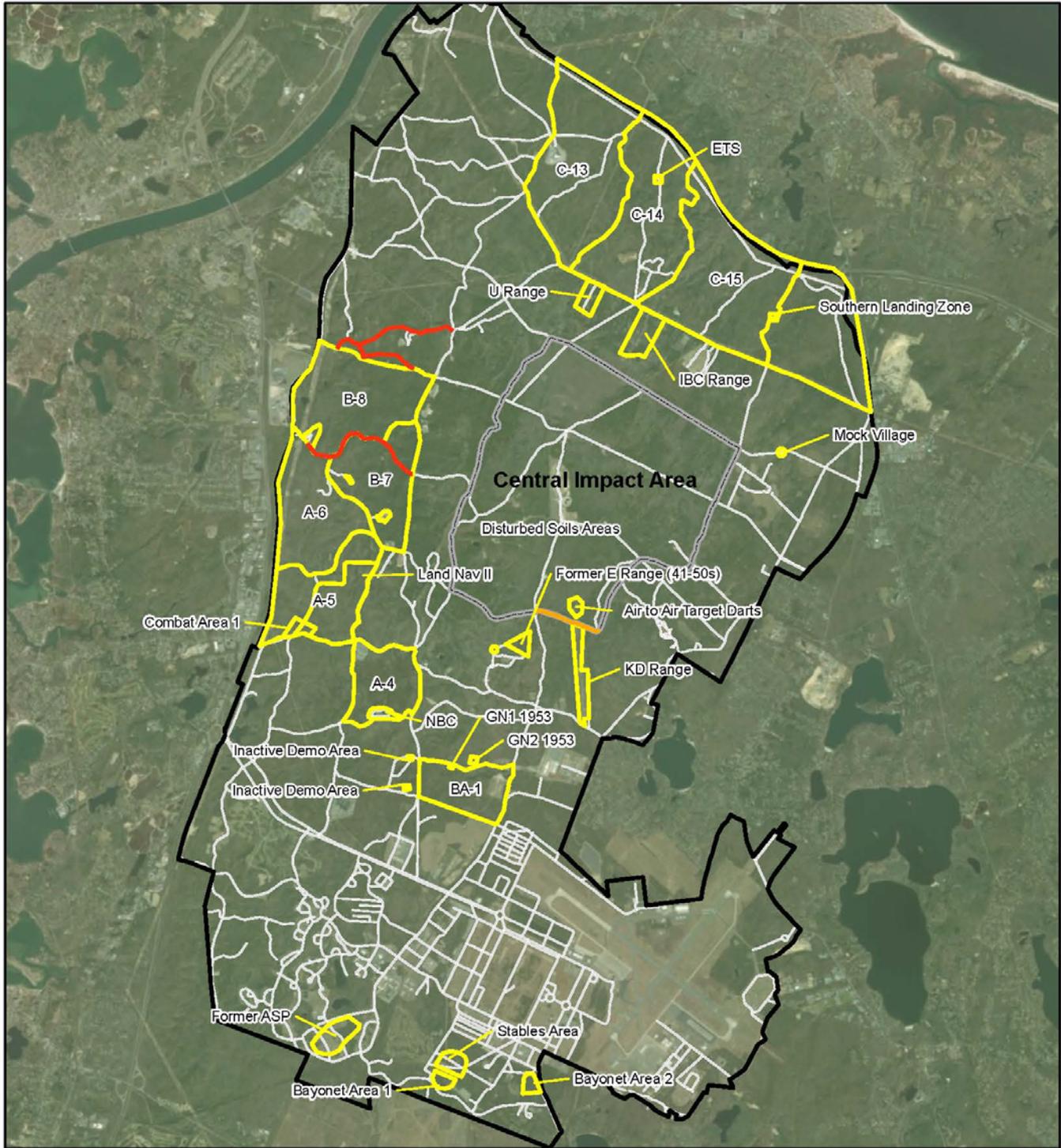
U Range – example of a training range area

These ponds are located to the south, west and north of the CIA. Surface water and sediment samples were analyzed. Past investigations have been conducted at a number of disturbed soil areas within the CIA identified during early aerial photographic reconnaissance flights. The identified areas include cleared areas, ground scars, trenches, bunkers, pits and excavations.

INVESTIGATIONS AND FINDINGS

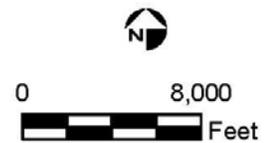
Since 1997, a number of site inspections and field investigations have been conducted at the Training Areas. Groundwater beneath the Training Areas is being monitored as part of the JBCC Long Term Monitoring Program. In 1997 and 1998, surface water and sediment sampling programs were conducted at a number of shallow ponds at JBCC. From 1998 to 2003, site inspections and field investigations including soil sampling were conducted at many of the Training Areas under the Phase IIa and Phase IIb programs. From 2005 to 2014, additional investigations were conducted at a number of areas, including investigations at temporary training sites in 2010. In 2015, supplemental soil sampling programs were conducted at IBC Range, KD Range (West) and U Range.

The overall results of the groundwater sampling evaluations conducted to date indicate that the groundwater beneath the Training Areas has not been significantly impacted by past training activities and that the Training Areas are not currently a source of groundwater contamination above action levels.



- Training Area
- Demo Area 3
- Demo Area 4
- Impact Area Boundary
- MMR Boundary
- Roads

**Figure 1-1
Location of
Training Areas**



Some sites and features (e.g., ponds) are too small to be included in the figure. Please see the Training Areas Investigation Report.

Range/Site	Past Use	Focus of Investigation (Area of Concern)	Representative Wells	Groundwater Analyses	Groundwater Detections	Soil Sampling	Soil Analyses	Soil Detections	Removal Actions	Findings/Recommendations
A-4	Training Area - Maneuvers and Bivouacs - CBR Training Area	Simulated Chemical Warfare Training and use of Pyrotechnics ⁽¹⁾	MW-210 ASPWELL MW-231	Full Groundwater Suite ⁽²⁾	Perchlorate in a few wells - Metals in ASPWELL	2 Composite soil samples - 4 multiple increment samples	Full Soil Suite ⁽³⁾ for composite samples	No explosives detects - a few perchlorate, PAH and metals detects	No soil removal actions	No further action
A-5	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training and possible use of Pyrotechnics	MW-226 MW-82 MW-80 MW-84	Full Groundwater Suite	Perchlorate in a few downgradient wells	One multiple increment sample - Western Boundary	Explosives and Perchlorate	Explosives and perchlorate were non-detect	No soil removal actions	No further action
A-6	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training (Possible tear gas use at GP-24)	MW-213 MW-280 MW-233 MW-81	Full Groundwater Suite	Perchlorate detected in some wells	No soil samples collected	NA	NA	No soil removal actions	No further action
B-7	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training	MW-174 MW-282 MW-267	Full Groundwater Suite	Perchlorate detected in some wells	Samples collected for Former C and D Ranges only	NA	NA	No soil removal actions	Continue CIA plume monitoring for perchlorate at representative wells in B-7.
B-8	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training	MW-475 MW-476 58MW0021	TAL Metals	Copper detected in a few wells	Samples collected for Former A and B Ranges only	NA	NA	No soil removal actions	No further action
C-13	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training and use of Pyrotechnics	PPAWSPW-1 PPAWSPW-2	Explosives and Perchlorate	No explosives or perchlorate detects	2 5-Point composite soil samples	Full Soil Suite	Explosives/SVOCs were non-detect - some low metals detects below screening levels	No soil removal actions	No further action
C-14	Training Area - Maneuvers and Bivouacs	Simulated Chemical Warfare Training and use of Pyrotechnics	MW-435 LRMW0001	Full Groundwater Suite	Some RDX detects - likely from Demo 2	Samples collected for Demolition Area 2 only	NA	NA	No soil removal actions	No further action
C-15	Training Area - Maneuvers and Bivouacs - also SLZ (Southern Landing Zone)	Simulated Chemical Warfare Training and use of Pyrotechnics	MW-17 MW-52 MW-53	Full Groundwater Suite	Molybdenum in some well samples - also chromium	2 5-Point composite and 2 soil boring samples	Composites-full soil suite Borings- VOCs and SVOCs only	Phenol detected in one SB sample - low SLZ SVOC/metals detects below screening levels	No soil removal actions	Conduct confirmatory sampling for pyrotechnics and smoke.
Land Nav II (Eastern portion of Training Area A-5)	Training Area - Maneuvers and Bivouacs - Land Navigation	Simulated Chemical Warfare Training and possible use of Pyrotechnics	See Training Area A-5	See Training Area A-5	See Training Area A-5	No soil samples collected	NA	NA	No soil removal actions	No further action
1949 Engineer Training Site (Location assumed to be in Training Area C-14)	Engineer Training - including bridge building and mine warfare site	Demolition Explosives/Claymore Mines	MW-435	Explosives	Some RDX detects - likely Demo 2	No soil samples collected	NA	NA	No soil removal actions	Confirmatory investigation for munitions required.
Trenches, Pits and Excavations	Combat Unit Training Gun and Mortar Impact Area	Training Rounds/possible UXO	MW-09	Full Groundwater Suite	A few explosives or perchlorate detects	10 5-Point composite and 10 discrete samples	Explosives Only	Explosives were non-detect at Pit-1 and Ex-2	No soil removal actions	No further action
Bunkers	Observation Posts and Protection - reinforced concrete structures	No confirmed MC use	MW-15 MW-71	Full Groundwater Suite	Some perchlorate and metals detects	BK-1 - 10 5-point composite and 10 discrete samples	Explosives Only	Explosives were non-detect at BK-1	No soil removal actions	No further action
Former Buildings	NA - Located in J Ranges and CS-19 - other operable units	NA	NA	NA	NA	NA	NA	NA	No soil removal actions	No further action
Cleared Areas	Uncertain Use - Possible troop assembly or logistics staging areas	No confirmed MC use	No Appropriate Wells	NA	NA	42 5-Point composite and 42 discrete samples	Full Soil Suite for most samples	Metals at CA-4 - Some low pesticides and metals at CA-7 all below screening levels	No soil removal actions	No further action
Ground Scars	Uncertain Use - Several located in impact cratered areas	No confirmed MC use	No Appropriate Wells	NA	NA	26 5-Point composite and 26 discrete samples	Explosives Only	Two RDX detects at GS-7 - One RDX, HMX and 2A-DNT detect at GS-8 below screening levels	No soil removal actions	No further action
Demolition Area 3	Demolition Training - Demolition of large rocks	Demolition Explosives and Perchlorate	MW-42	Full Groundwater Suite	One perchlorate detect (out of 37 samples)	7 Discrete soil samples	Explosives Only	2A-4,6-DNT detected in one sample below screening levels	No soil removal actions	No further action
Demolition Area 4	Demolition Training - Possible demolition of trucks	Demolition Explosives and Perchlorate	No Appropriate Wells	NA	NA	No soil samples collected	NA	NA	NA	No further action
Inactive Demolition Sites	Demolition Training	Demolition Explosives and Perchlorate	MW-150	Full Groundwater Suite	No explosives or perchlorate detects	6 5-Point composite and 6 discrete samples	Explosives, SVOCs and TAL Metals	Explosives were non-detect - low metals detects in some samples below screening levels	No soil removal actions	No further action
Bailey's Pond	No Training Use	No confirmed MC use - possible discarded ammunition disposal	MW-202 MW-278	Explosives and Perchlorate	Some perchlorate detects - may be from CIA	3 Surface water and 3 sediment samples	Full Surface Water/Sediment Suite ⁽⁴⁾	Some low SW SVOC and metals detects - also SED metals detects below screening levels	No sediment removal actions	No further action
Donnelly Pond	No Training Use	No confirmed MC use - possible discarded ammunition disposal	No Appropriate Wells	NA	NA	3 Surface water and 4 sediment samples	Full Surface Water/Sediment Suite	One SW BHC and low metals detects - some SED metals detects below screening levels	No sediment removal actions	No further action
Deep Bottom Pond	Engineer Training Landing Zones Nearby	No confirmed MC use	95-6ED 95-6ES	Full Groundwater Suite	A few perchlorate detects - likely Former A or CIA	7 Surface water and 8 sediment samples 4 composite soils	Full Surface Water/Sediment Suite Full Soil Suite	Some SW and SED low pesticide detects below screening levels	No sediment removal actions	No further action
Opening Pond	No Training Use	No confirmed MC use - possible metal debris disposal	MW-255 MW-271	Explosives and Perchlorate	Explosives and perchlorate detects - possibly Demo 1	3 Surface water and 3 sediment samples	Full Surface Water/Sediment Suite	SW low metals detects - one SED pesticide and some metals detects below screening levels	No sediment removal actions	No further action

Range/Site	Past Use	Focus of Investigation (Area of Concern)	Representative Wells	Groundwater Analyses	Groundwater Detections	Soil Sampling	Soil Analyses	Soil Detections	Removal Actions	Findings/Recommendations
Gibbs Pond	No Training Use	Possible defoliant use nearby (power lines)	No Appropriate Wells	NA	NA	2 Surface water and 2 sediment samples	Full Surface Water/Sediment Suite	Some SW and SED low pesticide detects below screening levels	No sediment removal actions	No further action
BA-1	Combat Unit Training Pyrotechnics Use - Gun Positions - Grenade Courts	Small Arms Ammunition - Explosives - Rifle Smoke Grenades	03MW-0707 27MW-0705 27MW-2061	Full Groundwater Suite	No explosives or perchlorate - A few trace level metals	~28 Composite and 31 discrete soil samples	Explosives, SVOCs, VOCs, TAL Metals and some Pesticides	Some 2,4-DNT detects Former F Range - some bromoform detects subject of removal action	Soil excavations for bromoform removal in 2001 and 2005	No further action
GN1/GN2 Grenade Court	Grenade Use Training	Grenades	MW-496	Explosives Metals Perchlorate Semivolatiles	Two perchlorate detects	12 Composite and 9 discrete soil samples	Full Soil Suite for some samples	Metals in some samples - 2,4-DNT detects (from GP-11)	No soil removal actions	No further action
Mock Village ⁽⁵⁾	Urban Reconnaissance and Street Fighting	0.30 Cal. Blank Rounds - Explosives - Pyrotechnics - Grenades	XXLRWS4-1	Metals Semivolatiles Water Quality	A few trace metal detects	3 Discrete soil samples	Explosives, SVOCs, TAL Metals and Dyes	No explosives detects - some low SVOC and metals detects below screening levels	No soil removal actions	No further action
Former Ammunition Supply Points ⁽⁵⁾	Ammunition Storage and Distribution	Small Arms Ammunition - Munitions	MW-156	Pesticides	A few trace pesticide detects	25 Discrete soil samples	Explosives, Metals and Pesticides	Some metals detects (zinc) - a few pesticide detects (dieldrin) below screening levels	No soil removal actions	No further action
1940s Era Latrines	Field Bathrooms	Possible waste disposal - none confirmed	No Appropriate Wells	NA	NA	No soil samples collected	NA	NA	No soil removal actions	No further action
Stables ⁽⁵⁾	Enclosure for Horses	No associated MC	No Appropriate Wells	NA	NA	No soil samples collected	NA	NA	No soil removal actions	No further action
Bayonet Area ⁽⁵⁾	Bayonet Training	No associated MC	No Appropriate Wells	NA	NA	No soil samples collected	NA	NA	No soil removal actions	No further action
Waste Oil Dump Sites	Associated with Artillery Training Impact Areas	Oil leakage Into subsurface soil	No Appropriate Wells	NA	NA	No soil samples collected	NA	NA	No soil removal action - Groundwater treated under CIA	No further action
Air to Air Target Darts	Anti-Aircraft Training	No associated MC	No Appropriate Wells	NA	NA	3 5-Point composite soil samples	Full Soil Suite	No explosives detects - a few low metals detects below screening levels	No soil removal action - Groundwater treated under CIA	No further action
E-1/Former E	Artillery and Rocket Firing Machine Gun Training Anti-Tank Training	Explosives 0.50 Cal. Machine Gun Projectiles	MW-74 MW-75 MW-77 MW-78	Explosives Dioxins Perchlorate Volatiles	Some perchlorate detects - a few dioxin detects	12 5-Point soil composite and 14 discrete samples	Explosives, SVOCs, TAL Metals, Dyes and PCNs	No explosives or PCN detects - Some low SVOC/metals detects below screening levels	No soil removal actions	Additional post-Decision Document investigation required (MEC).
IBC Range	Infantry Assault Course	Small Arms Ammunition - LAW Subcaliber Rounds - Grenades - Explosives	MW-17	Full Groundwater Suite	No explosives or perchlorate detects	16 5-Point soil composite, 4 discrete samples and 5 mis grids	Full Soil Suite for most samples - also Perchlorate and Dyes	A few metals detects - one RDX detect - SVOC detects (phenol) below screening levels	No soil removal actions	Note lead concentration and further evaluate if range use changes.
KD (West)	Multiple Weapons Training	Small Arms - Rifle - Dragon Missiles - TOW Missiles - 90mm Recoilless Rifle	MW-109 MW-472 MW-473 MW-474	Full Groundwater Suite	No explosives - a few metals or phthalates detects	~93 Composite and 93 discrete soil samples and 2 mis grids	Full Soil Suite for many samples	Some explosives (NG) and pesticide and metals detects below screening levels	Soil removal from multiple range locations	Munitions debris and targets will be removed and confirmatory soil samples will be collected from beneath the primary target at the middle of the range.
U Range	Multiple Weapons Training	LAW Rockets - 3.5 Inch Rockets - M79 Grenades	MW-62	Full Groundwater Suite	No explosives - a few low metal detects	~35 Composite and 41 discrete samples 4 boring samples	Full Soil Suite for most samples - also PCNs and Perchlorate	No explosives detects - Perchlorate detected at firing line and some phthalate/PAH and metals detects below screening levels	Soil removal from firing line (perchlorate).	No further action

Notes

1] Pyrotechnics - includes flares and/or smokes

2] Full Groundwater Suite - includes explosives, perchlorate, semivolatiles, volatiles, pesticides, metals and water quality parameters

3] Full Soil Suite - includes explosives, perchlorate, semivolatiles, volatiles, pesticides/PCBs, herbicides, TAL metals and miscellaneous parameters (ammonia, nitrate/nitrite, total phosphorus and TOC)

4] Full Surface Water and Sediment Suite - includes explosives, semivolatiles, volatiles, EDB, pesticides/PCBs, herbicides, TAL metals and miscellaneous water quality parameters (ammonia, nitrate/nitrite, total phosphorus and TOC)

5] These sites are being evaluated under the Military Munitions Response Program by the Installation Restoration Program

Acronyms

LAW light anti-tank weapon

MC munitions constituents

MIS multi-increment sampling

PAH polycyclic aromatic hydrocarbon

PCN polychlorinated naphthalene

SVOC semivolatile organic compounds

TOW tube launched-optically tracked wire guided missile

VOC volatile organic compounds

These results likely reflect the fact that at most training areas only limited amounts of small arms ammunition was used and at some training areas no ammunition was used at all. In addition, heavier caliber ammunition associated with guns, mortars or rockets was only used at a very small number of training areas, and for the most part, was restricted to the use of inert training munitions.

A comprehensive groundwater monitoring program has been conducted at over 100 wells as part of the Training Areas investigation. Evaluation of monitoring well data show that explosives (primarily RDX) were detected in a small number of groundwater samples. Perchlorate was reported in a limited number of wells at relatively low concentrations (below 2.0 parts per billion {ppb}). In some cases, the detections of explosives and/or perchlorate were associated with wells located generally downgradient of the CIA groundwater plume. Trace levels of propellants (primarily dinitrotoluene and di-n-butylphthalate) were reported in a small number of samples from a few wells. Low levels of a number of metals (aluminum, barium, calcium, copper, iron, magnesium, sodium and zinc) were reported in many of the monitoring wells that were sampled. Levels were generally consistent with JBCC background groundwater concentrations; however, the maximum reported concentrations for a few metals exceeded background levels but were below screening levels. Overall, copper and lead were reported in a small percentage of the samples that were evaluated. In addition to the metals identified above, tungsten was reported in a small number of samples from a few wells below screening levels. Trace levels of a few VOCs, SVOCs and pesticides were reported in some samples from certain wells. Risk screening evaluations were based on validated analytical data collected for groundwater, soil, surface water and sediment, where data were available.

Certain explosive related compounds have been detected in soils at a few areas. Explosives related detections were primarily associated with isolated locations in the CIA as well as at IBC and KD ranges but were not detected in soil samples from the majority of the Training Areas. Perchlorate was also detected in only a few soil samples from areas including U Range where a removal action was conducted.

Metals associated with past training activities (including small arms use) have been detected in a few soil samples from some Training Areas. In almost all cases, lead concentrations in soil are below the most conservative state risk-based cleanup standard. Copper concentrations in most soil samples are generally comparable to background.



IBC Range

GEOPHYSICAL INVESTIGATIONS

With a few exceptions, historical information gathered in the IAGWSP investigations indicated that inert training munitions were primarily used at the Training Areas. Small arms ammunition was primarily confined to the use of blanks. Live ammunition was typically only used at Small Arms Ranges and were not allowed on the Training Areas.

Site field reconnaissance investigations were conducted at many Training Areas including both non live-fire and live-fire sites. During these site visits, explosives ordnance disposal (EOD)/unexploded ordnance (UXO) staff typically accompanied the field investigation team and conducted limited geophysical (Schonstedt) monitoring in the immediate reconnaissance area. Subsequent decisions regarding the need for additional site-specific geophysics and/or UXO investigations were considered in conjunction with the preparation of related field sampling plans and based upon the review of historical information, ordnance and explosives discoveries, and field/UXO information associated with the site in question.

Small arms ammunition, rockets, and/or artillery projectiles were used at a few Training Areas including Former E Range, IBC Range, KD Range and U Range. As such, more extensive geophysical work was conducted at these training areas to evaluate for the presence of UXO. Inert, training munitions were found at IBC Range, KD Range and U Range. UXO were found at Former E Range and additional investigations are required.

RESPONSE ACTIONS

Soil remediation projects have been undertaken at certain Training Areas to reduce potential contaminant concentrations and limit mobility (see table on pages 4-5). Most of these removal actions have been focused on isolated soil contamination at the multi-use ranges (KD Range West and U Range) where multiple types of ammunition and/or ordnance were historically used. Substantive soil removal actions were conducted at the Training Area BA-4 Disposal Area as a separate operable unit.

At Training Area BA-1, soil excavations were implemented in 2001 to remove bromoform contaminated soils and again in 2009 to remove soils where propellant bags from historical artillery use had been deposited. At the Grenade Courts, propellant contaminated soil was removed in conjunction with remedial measures implemented at gun position GP-11. At KD Range (West) over 500 yards of soil were excavated in 2000 to reduce elevated concentrations of several explosives including RDX, HMX and TNT. At U Range, 1,665 cubic yards of perchlorate contaminated soil was removed in 2017.

To date, no response actions have been needed to actively treat groundwater due to contamination from any of the Training Areas. A Human Health Risk Screening was conducted for the 36 Training Areas to identify any analytes that warranted further evaluation, and no analytes were found that exceeded screening criteria.

PROPOSED REMEDY SUMMARY

No further remedial action (NFA) is recommended as the remedy at the majority of Training Areas. These NFA recommendations are Training Area specific. They reflect the results of the soil, groundwater, munitions, surface water and sediment data collected and analyzed for the specific area in question and the associated risk screening evaluations. At certain NFA areas, risk screening results indicate that one or more contaminants may have exceeded certain screening criteria in a few samples. However, in most cases, contaminant concentrations were below the most conservative state risk-based cleanup standards. In those cases where one or more screening criteria may have been exceeded by a given contaminant, the risk screening evaluation further considered the available data including the magnitude of the exceedance, the frequency of detection and the specific screening criteria being exceeded. The NFA recommendations were subsequently based on an overall assessment of the available information for that Training Area.

Four sites are being evaluated under the Military Munitions Response Program by the Installation Restoration Program: Mock Village, Former Ammunition Supply Points, Stables and the Bayonet Area.

Further action is being recommended for six Training Areas: B - 7, C-15, Engineer Training Site, Former E Range/E1 Range, IBC Range and KD Range West.

B-7 – Based on a review of investigation results, perchlorate monitoring associated with the Central Impact Area Plume will be continued as appropriate at Area B-7 to confirm current conditions.

C-15 – This heavily wooded area was used for maneuvers and bivouacs. There is some uncertainty regarding residual soil and groundwater contaminant levels for smokes and pyrotechnics. Confirmatory sampling is required.

ENGINEER TRAINING SITE – Located in the center of Training Area C-14 the site was used for bridge building and mine warfare training. Confirmatory investigation for munitions is required.

FORMER E/E1 Range – A former anti-tank range that may contain unexploded rockets and other UXO. Work at this site will include geophysical surveys, UXO removal and soil and groundwater sampling.

IBC Range – Lead in soil will be re-evaluated if range use changes. Current lead levels are acceptable for an operational small arms range.

KD Range (West) – Munitions debris and targets will be removed from the KD range and confirmatory soil samples will be collected from beneath the primary target APC at the middle of the range.

Additional work may be needed at these areas based on the results of the initial investigations.

FOR MORE INFORMATION

Contact the following individuals for more information:

Pamela Richardson – IAGWSP

(508) 968-5630

Ellie Donovan – MassDEP

(508) 946-2866

Kate Melanson – EPA

(617) 918-1491

Or visit the EPA or IAGWSP web sites at:

<http://cumulis.epa.gov/supercpad/cursites/scitinto.cfm?id=0100960>

<http://jbcc-iagwsp.org>

Information repositories have been established to make information on the program available to the public. A complete repository of documents, including copies of work plans, sampling results, site reports, fact sheets, meeting minutes, and other materials, are available at the Jonathan Bourne Library in Bourne. All documents are available through the Cape Libraries Automated Materials Sharing (CLAMS) system at <https://www.clamsnet.org>.

Key document related to the Training Area sites include:

- *Final JBCC Training Areas Investigation Report*, April 2018

This report includes all the investigation and cleanup actions conducted for the Training Areas.

OPPORTUNITIES FOR PUBLIC COMMENT

The 30-day public comment period for the proposed remedies will be April 11 through May 10, 2018. During the public comment period, comments can be submitted orally during the public meeting to held on April 11, and as follows:

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