U.S. Army Natick Soldier Systems Center RAB Meeting Minutes for April 17, 2008

Restoration Advisory Board (RAB) Meeting
Frederick Conley Public Safety Training Center
20 East Central Street
Natick, Massachusetts
April 17, 2008
DRAFT Meeting Minutes

I. Attendance

RAB Members Present:

Robert Campbell	Massachusetts Department of Environmental Protection
Marco Kaltofen	Co-Chair Community Member
Steven Lubic	Board of Selectmen Representative
Elizabeth McCoy	Employee Member U.S. Army Natick Soldier Systems Center (NSSC)
John McHugh	U.S. Army NSSC

RAB Members Absent:

Tony Doheny, Jr.	Community Member
James Fitzgerald	Community Member
LTC(R) Sid Gantman	Community Member
Joel McCassie	Co-Chair NSSC
Richard Miller	Community Member
Neil Osgood Jr.	Community Member
Jim Straub	Massachusetts Department of Conservation and Recreation
Harlee Strauss	Community Member
Kannan Vembu	Board of Selectmen Representative
Christine Williams	U.S. Environmental Protection Agency (EPA)

Others in Attendance:

Michelle Bonanca	Environmental Safety and Health Office (ESHO) NSSC
James Connolly	U.S. Army NSSC
Stacy Greendlinger	U.S. EPA
Willard Murray	ECC
Denise O'Leary	McCarthy Reporting Service
Bryan Olson	U.S. EPA
Kevin Palaia	ICF International
Amy Rosenstein	ICF International
Robert Tess	ECC
Jerry Whitaker	NSSC Public Affairs Office (PAO)

II. Handouts

1. Proposed Plan for Soil at the T-25 Area, Building 14 and Former Building 13, and Boiler Plant
2. Proposed Plan for Soil at the T-25 Area, Building 14 and Former Building 13, and Boiler Plant (presentation slides)
3. U.S. Army Soldiers System Center Bldg 22/36 & 63/2/45 Plume Capture/Remediation

III. Meeting Minutes

Mr. John McHugh called the meeting to order and explained that the first portion of the meeting would be an informational session, and the second hour would be the public hearing starting at 8:00 pm where people provide formal comments on the record for the Army's Proposed Plan for soil at the T-25 Area, Building 14 and the former Building 13, and the Boiler Plant.

Mr. McHugh reminded people that the Army would respond to any comments that people make during the informational session. In the public hearing part each commenter should give their name and address and comment, and the Army would respond in writing later. This meeting also opens up the formal public comment period which runs for 30 days through May 18, 2008. Written, fax, or e-mail comments during that time period are also acceptable.

Mr. Kevin Palaia introduced the Proposed Plan for soil at the T-25 Area, Building 14 and former Building 13 site and the Boiler Plant Site, and explained that he would discuss what the Army's preferred alternative is for the cleanup of soil for each of these three areas at the facility. Mr. Palaia then provided the following discussion.

Purpose of the Public Hearing

The purpose of the public hearing is to present to the public the Proposed Plan or the preferred cleanup approach for soil at each of these three areas. A map of the facility was presented at the front of the room and in the handouts that highlighted the three different areas, including the T-25 Area, the former Building 13 and 14 area, and the Boiler Plant Site.

Mr. Palaia indicated that he would summarize the site histories, the previous environmental investigations, what contaminants were detected, the general extent of contaminants, and any interim cleanup actions that may have been performed in the areas. He would also explain the rationale for why the Army selected the preferred alternative. The public hearing provides a forum to facilitate community input on the comments or concerns that the public may have with this Proposed Plan.

Mr. Palaia indicated that the first hour is an informational session, and the Army would respond to questions as they do in any typical RAB meeting. The second hour, starting at 8:00 p.m., is the

formal comment period and individuals should voice your comments for the official record.

What Does the Proposed Plan Do?
The Proposed Plan presents the Army's preferred alternatives for soil at the site. The Proposed Plan focuses solely on soil contamination associated with these areas. Ground water associated with these areas will be handled under separate decision documents.

The Proposed Plan identifies what the preferred alternatives are, explains the rationale, and requests public feedback and input. Once the comments are received from the public, the remedy selection will be presented in a Record of Decision (ROD). Part of that ROD will be a segment called the Responsiveness Summary which is a summary of the public comments received during the formal hearing as well as the public comment period and the Army's response in consideration of those comments.

Lastly, any public comments that are received are considered during the decision-making process that the Army makes in conjunction with the federal and state regulators.

Major Steps in the CERCLA Process
Some of the major steps in the Superfund process are as follows. Initially a site goes through discovery. In the case of the U.S. Army NSSC, it was listed on the National Priorities List as a Superfund Site in the mid 1990s.

The next phase in the process is a site investigation or remedial investigation, whereby various media are sampled and analyzed. The nature and extent of contamination in those different media are evaluated. In the remedial investigation (RI) additional sampling and analysis can be performed as well as assessments of risk to human health and the environment or ecological receptors.

Also part of the RI/FS process is the feasibility study (FS), where if you do have contamination that exceeds particular standards or does pose a risk to human health or the environment, the feasibility study looks at remedial alternatives that would be used to address that contamination or clean up the contamination.

The next step in the process is the Proposed Plan. The Proposed Plan is where the Army presents its preferred alternative for remediating a site. The next step in the process is the Record of Decision which actually selects the remedy and discusses the details. Following the signing of that remedy by the Army with the federal and state regulators, the remedy is implemented through a remedial design and remedial action and lastly site closeout.

T-25 Area, Buildings 13/14 and Boiler Plant Locations
In some cases where you have sites that have similar issues, similar contamination, similar interim removal actions and similar preferred alternatives, there is an option to group the sites,

which is what is being done in this Proposed Plan. This Proposed Plan includes the T-25 Area, the Building 14 and the former Building 13, and the Boiler Plant area. These are three sites that have been studied since at least the late 1980s and they are finally culminating in a proposed alternative to clean up soil.

For each area the site history, environmental investigation work that was performed, risk assessments, and any interim cleanup actions will be summarized. The Army's preferred approach to addressing each site will also be presented.

T-25 Area - Location and Description
The T-25 Area is approximately a 15-acre area. It's surrounded on the east, north and west sides by residential properties. To the south it is boarded by the remainder of the SSC facility. The entire area is primarily paved with buildings; however, there are a few small areas of unpaved areas including a baseball field and an embankment along the perimeter of the property of the site that is unpaved. There is also a ground water treatment facility located in the T-25 Area which is a result of ground water contamination discovered there and a ground water remedy that was implemented under a separate operable unit and separate decision document.

T-25 Area
A photograph of the ground water treatment system building was presented. This Proposed Plan addresses soil, not ground water. The ground water treatment system was installed in 1997 under a separate decision document and has been in operation ever since.

T-25 Area - Site History
In the mid 1950s the Army purchased the property which essentially encompasses this entire peninsula. Prior to the 1950s, the T-25 Area was a gravel pit that was operated by the Town of Natick. During that time there were various operations consistent with sand and gravel, so a lot of cutting, a lot of filling and a lot of construction debris. In 1954 the Army purchased the land and began to develop it. The T-25 Area was used primarily for the storage of outdoor bulk wastes and materials including drums of petroleum, solvents and pesticides.

Those operations continued from approximately the early '70s to the late '80s. In 1989, there were indoor storage facilities built for the storage of drums. Currently and historically, the T-25 Area has been used for warehouse operations and serves as the shipping and receiving port for the remainder of the facility. There are various laboratory research and develop buildings and garage operations, drop-test structures that operate throughout that T-25 Area.

T-25 Area Investigations
In the late 1980s there were some initial investigations that involved the sampling and analysis of soil gas, or the vapor/air that is contained within the unsaturated soil. This is done primarily as a screening technique to identify whether there could be soil contamination and/or ground water contamination. As a result of those surveys from 1992 to 1995, there was a Phase I remedial

investigation conducted which involved extensive soil and ground water sampling and analysis.

As a result of that Phase I, there was a small area of soil contamination identified in an area called the Storage Area which is an area central to the T-25 Area where there was prior storage of pesticide containers. The Phase I identified concentrations of chlordane, DDD, DDT and some petroleum hydrocarbons in the soil at depths of up to approximately 7 feet.

From 1995 to 1998, additional sampling and analysis was performed as part of a Phase II remedial investigation and feasibility study. The results of this investigation further delineated the soil contamination within the Storage Area and identified the pesticide contamination to go a little bit deeper than the original 7 feet, up to 10 feet. They also identified some PAH contamination. It was really the Phase I and the Phase II RI that identified ground water as the principal contaminant or principal contaminated media within the T-25 Area. That led to the ground water treatment system implementation and the ROD related to the ground water cleanup, thus the installation and operation of the treatment system beginning in the 1997-1998 timeframe.

The Phase II also identified a small area of petroleum contamination in the shallow surface soils at the Buildings T-62 and T-68 area which are located in the southwest corner of the T-25 Area. That contamination was removed in 2005 and the final ROD was signed last August, 2007.
In 1997 the ground water extraction and treatment system was initiated.

However, from 1998 until the current date there were some additional soil data collection activities that weren't necessarily all related to the Superfund process at the facility, and those included primarily soils collected to support new construction. There was a storm water sewer system upgrade, and there were a few new buildings that were constructed. Additionally, new monitoring wells and extraction wells were installed as part of the ground water remedy. Each of these activities involved a collection of some soil samples.

There was also a small kerosene spill in the southern portion of the T-25 Area. A subsequent soil removal was conducted under State guidelines to remediate that soil area.
The EPA requested that the Army conduct a supplemental remedial investigation and risk assessment to evaluate whether any of the new soil data posed a risk or changed the conclusions of the initial risk assessment which was conducted as part of the Phase II RI in 1998.

T-25 Area Storage Area Removal Action
There was soil contamination identified in the Storage Area. In 1997, upon discovering that contamination, the Army implemented a removal action, which involved the excavation and off-site disposal of up to approximately 1,380 tons of soil. The soil was contaminated with pesticides so those were excavated to a depth of approximately 10 feet. The area was on the order of 2,400 square feet, or approximately 40 feet by 60 feet.

The cleanup standards that were used for the soil cleanup were Massachusetts Contingency Plan

(MCP) Residential Soil Standards. Of the State standards, these are the most conservative standards out there. They assume residential exposure; therefore the cleanup goals were conservative.

The excavation was successful after removing soil that had concentrations exceeding these levels. Confirmation samples confirmed that the soil remaining was not above the 1997 standards at the time. In fact, we have gone back and compared the confirmation samples to more recently revised State standards and they are still below the revised residential standards. The excavation was then backfilled with clean fill and paved over.

T-25 Chlordane Storage Area Excavation
Two photographs of the excavation were presented. The depth of the excavation ranged anywhere from 5 to 10 feet. It was not a very large area, probably 40 feet by 60 feet, or a total of about 2,400 square feet. This is the finished property. Clean backfill and paved over.

T-25 Area Site Risks
As part of any investigation under the CERCLA process, a risk assessment is conducted. This was done initially in 1998 where the potential risks associated with human health exposures and/or ecological exposures were evaluated. The potential receptors that were evaluated looked at current exposures to facility employees, construction workers, trespassers, but also future potential receptors due to residential exposure.

In a risk assessment an evaluation is performed to determine whether the estimated risks are above or below acceptable incremental risk limits that are set forth by the U.S. Environmental Protection Agency. The risk assessment performed for the T-25 Area soils identified that there were no unacceptable health risks associated with the soil. The reason being is that the soil removal action conducted at the Storage Area eliminated contaminant concentrations that were above residential standards.

An ecological risk assessment was also conducted and found that risks were minimal, and were not ecologically significant because the habitat of the T-25 Area is not supportive of a healthy ecological community due to the industrial nature of the area.

In 2008 the EPA requested that the Army look at some of the more recent soil data to determine whether the new data had any impacts on the conclusions of the 1998 risk assessment. This reevaluation was performed against current standards. The supplemental RI confirmed that there still were no unacceptable risks associated with soil contact within the T-25 Area. As such, the supplemental RI recommended no further action to address soils within the T-25 Area.

Building 13/14 Location and Description
Building 14 and the former Building 13 are located in the southwest corner of the T-25 Area. As with the T-25 Area, each of these buildings was constructed in the mid 1950s when the Army

took over the property. Building 14 is a simple two-story concrete structure and former Building 13 was an incinerator used primarily for classified paper incineration. The areas abut each other and there is a vehicle refueling area that is located between the two buildings.

Building 14 Area
Photographs were shown of Building 14. The upper level of Building 14 is used primarily for administrative space and long-term storage space. The lower side of Building 14 is where currently and historically a number of vehicle maintenance operations have occurred. There is also a vehicle refueling area.

Former Building 13 Area
A photograph was shown of what was left of Building 13. Building 13 was an incinerator for classified paperwork which operated from approximately the 1950s through 1985. The above ground structure, above the foundation, was dismantled in the early 1990s. In addition to this building serving as an incinerator, it was also used as an area where pesticide equipment was stored, washed, and decontaminated.

Building 13/14 Site Investigation
Site investigations were conducted within the Building 14 and the former Building 13 area. In the 1990s, as part of the T-25 Area investigations, there was some limited sampling that was conducted in each of these areas. However, it was not focused. It wasn't until 2004 when a focused site investigation was performed in these areas. It involved substantial surface soil, subsurface soil and ground water sampling and analysis.

The results of the site investigation in 2004 led to two areas of contamination exceeding applicable criteria. The first area was to the south/southeast of Building 14 where there was petroleum contamination observed in the soil at depths of up to approximately 15 feet deep. The source for this contamination was suspected to be an old oil/water separator that was used to receive runoff from what used to be some car wash bays within the upper portion of the building. There was also evidence of some former underground storage tanks in the same area.
The secondary area of contamination was limited to the fairly shallow surface soil, essentially less than one-foot in depth around the entire footprint of the former incinerator. The contaminants there were petroleum hydrocarbons, one or two pesticides, and a metal or two.

Building 13/14 Removal Action
As a result of this site investigation, in 2007 the Army implemented another soil removal action to address the areas that exceeded the residential standards. The cleanup goal was MCP Residential Soil Standards. For the Building 14 area approximately 635 tons of petroleum contaminated soil was excavated at depths of up to 15 feet. At the Building 13 area, about a third of the volume, or 257 tons, was excavated. However, it was over a much wider area, 3,300 square feet. It was at a much shallower depth; generally it was the top foot of soil that was contaminated. These soils were excavated and shipped off site for asphalt batching.

In addition to the soil removal, the foundation of the former incinerator, the concrete foundation, was demolished as well as the associated piping. Each of the areas was sampled for confirmation samples to determine if cleanup standards were met. The confirmation samples did meet the residential cleanup goals. Each of the areas was backfilled with clean fill. The Building 14 area was then repaved and Building 13 was hydroseeded for new grass.

Former Building 13 Excavation
Photographs of the former Building 13 excavation were shown, including the demolition of the old foundation, the stack foundation, and the incinerator foundation. The soil in the entire area surrounding the former Building 13 was excavated to approximately a foot deep, and disposed off site at asphalt batching facilities.

There was some concern with slope stability in the area, due to a major utility corridor running parallel to the street. So the soil up along the steep hillside was left in place.

Building 14 Excavation
A photograph of the excavation at Building 14 was shown. The excavation occurred right up against the building on the north side and on the south side there's a major utility corridor running literally within a couple of feet here, including a 14,000 volt electrical line. There were quite a few challenges related to this deeper excavation. This was the 15-foot excavation, therefore, sheet piling was needed on pretty much all sides of the excavation to shore up the sides for safety.

Building 13/14 Site Risks
As with the T-25 Area, an evaluation of site risks was performed to determine whether there are any potential human health risks. The contaminant concentrations were compared to risk-based residential soil standards. Prior to the remove action, several contaminants exceeded these criteria. Thus the removal action in 2007 removed the soil exceeding these concentrations. Confirmation samples collected met the cleanup goals. Therefore, the potential human health risks associated with soil at the 13/14 site have been eliminated.

As far as ecological risks, because there's really no significant terrestrial habitat within this area there's very little opportunity for ecological exposure; ecological risks were not deemed to be significant.

Boiler Plant Location and Description
The last of the three sites is the Boiler plant site. The Boiler plant site is further to the south located on a small peninsula extending into the South Pond of Lake Cochituate. It's a fairly small parcel, approximately two acres in size.

The area included three buildings; the primary building is the boiler plant or Building 19, which produces steam for the facility. The building is somewhat built into the steep hillside and towards

the back of it there were operations in the basement level that were related to pesticide storage and mixing operations. In addition to Building 19 there was a former pump house, Building 23, which was used to pump water from Lake Cochituate in years past to provide water to the Boiler Plant for the steam production. Lastly, there was a former piggery located to the southwest of the Boiler Plant.

Boiler Plant
A photograph of the south side of the Boiler Plant was shown.

Boiler Plant Site History
In years past the lower basement level had been used for pesticide mixing and other operations. In addition, there was a leach field that collected liquid waste from the building and collected it in the leach field. So that was a potential source area of concern. The former pump house was located adjacent to the lake, and was used to pump lake water to the Boiler Plant for the steam processing. Lastly, the former piggery was southwest of the Boiler Plant, and was used in the past for housing and feeding pigs for research activities at the facility.

Boiler Plant Site Investigation
In 1996 and 1999 a couple of phases of site investigations were performed where extensive soil and ground water sampling was conducted. As a result of those investigations there was an area of soil identified to the south of the Boiler Plant that had concentrations of PAHs and PCBs primarily that exceeded residential soil standards, but also pesticides and lead, but to a lesser degree. In general, the contamination was identified up to approximately 10 feet in depth. It was centered on where the leach field had been.

Boiler Plant Removal Action
As a result of the contamination identified in the mid to late '90s, in 2001 the Army implemented another removal action which removed up to 768 cubic yards of contaminated soil, or to a depth of approximately 10 feet. In addition to the soil being excavated and treated off site in an asphalt batching process, the pump house, Building 23, a retaining wall, and a water intake structure were removed during that removal action. Cleanup goals were residential soil standards. Confirmation soil samples collected determined that, in fact, the removal action met those cleanup goals. The excavations were backfilled with clean fill and repaved.

Boiler Plant Excavation
A photograph of the Boiler Plant excavation was shown, illustrating the extent of that excavated area along the back side of the building. The leach field was located in the area.

Boiler Plant Site Risks
Human health and ecological risks were evaluated for current receptors including maintenance workers and potential future receptors such as residential scenarios, workers and recreational visitors. The risk assessment that was performed identified some risks related to the contaminated

soil. However, the removal action performed in 2001 removed the risks. Therefore, there were no other soils in existence that exceeded the cleanup standards.

Ecological screening was also performed and concluded that there were no significant ecological risks associated with the area.

Preferred Alternative for Soil at the T-25 Area, Building 14 and Former Building 13 and Boiler Plant

The Army's preferred alternative for soil at each of these three areas discussed is No Further Action. In each case, any human health or ecological risks that were present initially in the contaminated soil were addressed through the soil removal actions that were conducted. Therefore, the risks have been removed and the soil in the area is no longer a concern.

The No Further Action remedy is the preferred remedy for each of these areas. Essentially No Further Action indicates that there will be no additional investigation or remedial actions related to these areas. The only requirement under a No Further Action is that the CERCLA five-year reviews do continue so that the remedy is evaluated on a routine basis to evaluate whether it remains protective of human health and the environment.

The No Further Action remedy in each of the three areas meets the requirement of CERCLA in that it is protective of human health and the environment; it complies with all applicable, relevant and appropriate regulations and requirements; it provides short and long-term effectiveness; it is cost effective; and it is easy to implement.

The requirement under CERCLA is that every five years this remedy will be reviewed to determine whether this alternative remains protective of human health and the environment.

Community Participation

One of the purposes of the public hearing is to give the community and the general public an opportunity to provide feedback on this Proposed Plan. There are a number of ways to provide feedback. At 8:00 p.m. the formal comment period will open and participants can express comments that will be recorded. Comments can also be submitted via e-mail, fax or letter to Mr. Jim Connolly, whose contact information is listed in the Proposed Plan.

Today kicks off a 30-day comment period which will be closing on May 18, 2008. Any comments need to be received in one of those fashions before May 18th. Following the collection of all public comments, they will be compiled and prepared in a responsiveness summary which will document the comment as well as the Army's response to and consideration of that comment. The responsiveness summary will then become part of the Record of Decision, which will select the remedy going forward on these three sites. The ROD will be signed by the Army and the EPA, with concurrence by the State of Massachusetts.

Ms. Stacey Greendlinger clarified that public comments needed to be postmarked by May 18, 2008.

Mr. Palaia asked if there were any other questions.

Mr. Marco Kaltofen asked whether there were going to be a further field investigations in five years.

Mr. Palaia replied no. The five-year review only looks at the remedy and whether it remains protective. It looks at whether standards have changed, whether contaminants that may have been considered safe now are still considered safe against the new criteria.

Mr. Kaltofen asked if the was anything pending with the Conservation Commission related to the Boiler Plant.

Mr. McHugh replied no. The Conservation Commission gave the Army a completion certificate.

Mr. Rob Tess introduced himself and gave a brief update on what the Army has been doing with the capture of the contaminated ground water plumes at Building 22/36 and 63/2/45 areas.

Plume Capture
There's some PCE contamination in the Building 22/36 area, and there's TCE contamination near the Building 63/2/45 area. ECC installed some extraction wells and is currently treating the ground water using the existing treatment plant at the T-25 Area.

System Upgrade Highlights
ECC installed 7 extraction wells, an additional 15 monitoring wells and 7 piezometers to monitor water levels while the extraction wells are operating. Piping and conduits were installed, about 3,000 linear feet of piping and conduits from the very tip of the peninsula all the way back to the T-25 Area extraction treatment system. ECC made some upgrades to the existing treatment plant's operation systems, but didn't have to make any upgrades to the plant equipment itself because it already had the capacity to handle the water.

Construction and Startup
In the winter of 2006 ECC installed the first two extraction wells and conducted aquifer tests to verify that the ground water was going to behave the way it was anticipated based on the modeling by MACTEC. Once that was verified and everything turned out just as planned, ECC installed the remaining extraction wells and the piping through the spring of 2007.
Through the spring and summer of last year ECC installed all of the electrical and instrumentation upgrades. In late July ECC started turning pumps on and made sure that everything operated properly. ECC officially considered the system up and running full time as of August 22, 2007.

Containment Demonstration

The current phase includes proving that the system works as designed. The system has been operating since August 2007. There was an initial period when ECC adjusted the ground water and extraction well flow rates a little bit. Before the system was started up, ECC collected two rounds of water level data and put that information into the ground water model for the base. The output from the model was shown, predicting that plume capture was occurring with flow rates as low as 1 to 2 gallons per minute per out of each extraction well. After the startup, ECC collected three rounds of water level data in September, November and December and plotted all of the data.

The observed data correlates very well with the predicted model data. The initial indication is that at the current pumping rates of 1 to 2 gallons per minute, the existing extraction well network is containing and capturing the ground water that exceeds the cleanup goals.

Mr. McHugh closed the information session at 7:57 p.m.