

Massachusetts Military Reservation Cleanup Team (MMRCT)
Building 1805, Camp Edwards
June 10, 2009
6:00 – 8:45 p.m.

Meeting Minutes

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Handouts Distributed at Meeting:

1. Presentation handout: J-1 Range Environmental Monitoring Update
2. Presentation handout: J-3 Range Environmental Monitoring Update
3. Presentation handout: Former B & Former D Ranges Update
4. Presentation handout: CS-18/19 Source Area Update
5. Presentation handout: Ashumet Valley Construction Update
6. MMRCT Cleanup Team Meeting Evaluation form



**Agenda Item #1. Introduction, Agenda Review, Action Items Review, Approval of
5/13/09 MMRCT Meeting Minutes**

Mr. Murphy convened the meeting at 6:04 p.m. and the Massachusetts Military Reservation Cleanup Team (MMRCT) members introduced themselves. Mr. Murphy also reviewed the agenda and the Responses to Action Items from the May 13, 2009 MMRCT meeting, and asked if there were any changes or additions to the May 13, 2009 MMRCT meeting minutes. No comments were offered and the minutes were approved as written.

Agenda Item #2. Brief Updates

Mr. Murphy noted that the staff from the Impact Area Groundwater Study Program (IAGWSP) would be taking some photographs of tonight's meeting to be used on the IAGWSP website.

Ms. Grillo informed the group that there's been an effort to recruit new MMRCT members, including a news release and an interview on radio station WXTK.

Agenda Item #3. J-1 and J-3 System Performance Monitoring Results

Mr. Gregson stated that tonight's presentations on the J-1 and J-3 System Performance Monitoring Results, which are basically a synopsis of the IAGWSP's annual reports, will be given by Katie Thomas (J-1) and Mike Morris (J-3) of Jacobs.

J-1 System Performance Monitoring Results

Ms. Thomas displayed a map of MMR, pointed out the J-1 Range, which is one of the Southeast Ranges, and noted that the range is long and narrow, approximately 600 feet by 6,000 feet. The range was used from the 1940s to the late 1990s, as an anti-tank range, transition range for small arms, and for munitions testing and the disposal of munitions and other materials by burial and burning. Ms. Thomas reported that soil investigation at the range revealed explosives and propellants at concentrations up to 65,000 parts per billion (ppb) and that the groundwater contamination is related to the disposal areas.

Ms. Thomas stated that there are two groundwater plumes associated with the J-1 Range: the J-1 North plume, which contains RDX and perchlorate and emanates from the northern end of the range, and the J-1 South plume, which contains RDX and emanates from the southeast portion of the range and migrates off base. She also noted that the J-1 Range Soil & Groundwater Remedial Investigation/Feasibility Study (RI/FS) was issued in May 2009 and that an in-depth briefing on the RI/FS would occur at the July MMRCT meeting – while tonight's presentation would focus just on the past year's monitoring results.

Ms. Thomas reported that current contaminant concentrations at the J-1 North plume are 14 ppb for RDX and 78 ppb for perchlorate. She also noted that an active treatment system has been operating since October 2007 at the J-1 South plume, while there is currently no active treatment for J-1 North.

Ms. Thomas showed a map of the J-1 North perchlorate plume and noted that it is defined by the Massachusetts Department of Environmental Protection (MassDEP) maximum contaminant level (MCL) of 2 ppb. She then pointed out the 2 ppb concentration contour and the 15 ppb concentration contour and noted that the depiction being shown is the most up-to-date depiction, based on data through December 2008. She also reviewed monitoring results for the J-1 North plume: in the upgradient portion – consistent concentrations, blow 1 ppb at monitoring well 303M3 (MW-303M3) and MW-164M1, and a maximum concentration of 3.7 ppb at MW-303M2; in the mid-plume area – consistent concentrations at eight monitoring wells, decreasing concentrations at two monitoring wells, and increasing concentrations at MW-346M1 to 37.7 ppb; in the downgradient portion – consistent results at MW-286M1 and MW-370M3, decreasing concentrations at MW-286M1 to 1.8 ppb,

increasing concentrations at MW-370M2 to the current maximum perchlorate plume concentration of 78 ppb; and no detections downgradient of the plume; and west of the plume – isolated detections at two monitoring wells with concentrations less than 2 ppb.

Ms. Thomas then showed another J-1 Range North plume depiction (with lines of cross-section) and noted that the figure is slightly different because it comes from the RI, which involved a data cut-off date of spring 2008. She also displayed perchlorate cross-section A-A', which runs through the center of the plume, and noted that it illustrates the heterogeneity of the plume.

Ms. Thomas showed a map of the RDX contamination at J-1 North (based on data through December 2008), noted that there are two plumes – a main plume and the western plume – and pointed out the 0.6 ppb, 2 ppb, and 20 ppb concentration contours. She also reviewed monitoring results for the J-1 North RDX plumes: in the upgradient portion of the main plume – fluctuation in five monitoring wells, consistent concentrations in three monitoring wells, decreases in two monitoring wells, and a current maximum concentration of 14 ppb (in MW-303M2); in the mid-plume area of the main plume – consistent concentrations in eight monitoring wells, decreases in four monitoring wells, and increases in two monitoring wells, with the maximum concentration of 6.2 ppb; in the downgradient portion of the main plume – a decrease at MW-286M2 to nondetect, consistent concentrations at MW-370M2, with a maximum concentration of 1.8 ppb, and no detections downgradient of the plume; and in the western plume – concentrations are consistent with previous results (3.5 to 8 ppb) with a slight decrease at MW-487M2 to 6.8 ppb, and the current maximum concentration being 8 ppb (at MW-486M1).

Ms. Thomas then showed RDX cross-section A-A', which runs through the center of the main plume, noting that it's similar to the perchlorate depiction in terms of heterogeneity, but includes some trailing edge concentrations that continue to be detected close to the source area. She also showed cross-section B-B', through the western RDX plume, and noted that there's heterogeneity in that area as well, likely indicating multiple source areas.

Ms. Thomas reminded the group that the two main contaminants of concern (COCs) in the J-1 North plume are perchlorate and RDX, and then reviewed a slide entitled "J-1 North Plume Major Insights": for perchlorate – detections in the western plume are low (less than 2 ppb), and most of the observations in the main plume are consistent with the previous conceptual understanding (low concentrations are in the trailing edge, the highest concentrations are migrating downgradient from the center of the plume, and the plume is heterogeneous); and for RDX – concentrations are consistent and decreasing, and observations in the main plume are consistent with the previous conceptual understanding (decreasing concentrations in the trailing edge, highest concentrations in the mid-plume portion, the plume is heterogeneous, and there are nondetects within the plume.)

Ms. Thomas then reviewed a slide entitled "Other J-1 North Chemical Monitoring Results," which noted the following: the current concentration of HMX detected in the plume is 11 ppb, while the HMX GW-1 standard is 200 ppb; historic high concentrations of HMX at MW-191M2 have decreased to 2.3 ppb; benzene concentrations at MW-187D have continued to decrease to 30 ppb, while the GW-1 standard is 5 ppb; and other volatile organic compound (VOC) detections were consistent with previous results and were below applicable standards.

Mr. Foster said that it was noted that *most* observations in the main J-1 North perchlorate plume were consistent with the previous conceptual understanding, and the inquired about examples that weren't consistent. Ms. Thomas pointed to an area of uncertainty related to the increase in concentrations at MW-370, and added that the heterogeneity of the plume makes it hard to predict where increases and decreases in concentrations will be seen. Mr. Jacobs said that while he wouldn't say that the perchlorate concentrations at MW-370 are inconsistent with the conceptual site model, it wasn't expected that concentrations there would be that high.

Ms. Thomas continued her presentation by referring to the J-1 South plume, noting that she would be discussing data from October 2007 through October 2008. She also said that she would be using a plume depiction based on 2007 data, and explained that the plume hasn't been updated based on the most recent data because the October 2008 data cut-off for the annual report and the November 2008 data cut-off for the RI/FS were so close together it didn't make sense to spend resources to revise the plume outline when it would have to be revised again. She then pointed out on the figure the J-1 Range, the base boundary, a residential neighborhood in Sandwich, and the 2 ppb, 20 ppb, and 200 ppb plume contours.

Ms. Thomas then reviewed the J-1 South plume RDX results: upgradient – concentrations at MW-360M2 (the well closest to where the source is believed to be) fluctuated between nondetect and 0.66 ppb; at the base boundary – concentrations at MW-398M2 steadily decreased before system startup and were nondetect in 2008 (thought to be due to the influence of the extraction well); downgradient of the base boundary, within the plume – an increase at MW-482M2 to 1.02 ppb, a decrease at MW-480M2 to nondetect, continued fluctuation between 5 and 20 ppb at MW-481M2, and a current maximum plume concentrations of 14.9 ppb; and downgradient of the plume – a gradual increase at MW-402M2 to 1.12 ppb. Ms. Thomas mentioned that the RI will incorporate drilling results “in this area” in support of a new plume depiction, and also said that it's recognized that the plume appears to be migrating downgradient. She also showed the figure for the J-1 South plume cross-section A-A' and pointed out the potential source area, the plume near the water table, and the extraction well located at the core of the plume. She noted that the plume is very homogeneous and appears to be riding fairly shallow in the aquifer.

Ms. Thomas also displayed a slide entitled “J-1 South RDX Plume Major Insights,” which noted the following: observations are consistent with the previous conceptual understanding, upgradient concentrations are decreasing, the highest concentrations are located within the core of the plume, and the plume downgradient of the base boundary continues to migrate downgradient.

Mr. Taylor inquired about the depth of residential wells beyond the toe of the plume. Ms. Richardson replied that there no known residential wells in that area. All of the residences have been hooked up to town water and letters that the IAGWSP sent out to that neighborhood in 2005 did not lead to the identification of any residential wells. Ms. Richardson also noted that the IAGWSP will be working with AFCEE with respect to its ongoing Land-Use Control (LUC) residential well program in an effort to verify residential wells in that area, if any.

Ms. Thomas stated that the extraction well installed at the base boundary, which began operating in October 2007, is pumping at 75 gallons per minute (gpm), although during the design process a lower flow rate was identified as sufficient to capture the width of the plume. To be conservative, however, pumping began at 75 gpm, with the understanding that the well's performance would be evaluated, and it's now understood that the 75 gpm rate is higher than necessary to capture the plume. Ms. Thomas also noted that system monitoring detected breakthrough, and so a granular activated carbon (GAC) exchange was performed (April 30 – May 1, 2008). She further noted that the system, which has operated at an availability of just over 97%, has treated nearly 38 million gallons of groundwater. In addition, she reported that influent concentrations started around 11 ppb, rapidly decreased, and now continue to remain fairly constant, just below 2 ppb – an indicator that the high concentrations upgradient of the base boundary have decreased, and an indicator of the all the clean water flushing into the extraction well through the plume in that area.

Ms. Thomas then reviewed the “Recommendations/Next Steps” slide: implement the flow rate change to a recommended 45 gpm; evaluate the chemical monitoring network during the remedy decision process; brief the MMRCT on the RI/FS at the July meeting; hold a public comment period on the Remedy Selection Plan (RSP) in September; and maintain the schedule for sampling and reporting.

Mr. LoGiudice said that it seems that everything is going “according to plan, the concentrations are decreasing.” Ms. Thomas agreed that concentrations in the upgradient portion of the plume are decreasing due to extraction well capture at the base boundary. She also referred to the downgradient portion of the plume and noted that through the RI/FS the IAGWSP will be showing a new depiction based on new drilling results, including from the area along Grand Wood Drive. She further noted that there will be an assessment of various FS alternatives that include long-term monitoring and various active treatment scenarios for the downgradient portion of the plume.

Mr. Foster asked if the flow rate change would be implemented before the next MMRCT briefing. Ms. Richardson replied that that recommendation will come as part of RI/FS annual update, which has not yet been issued to the agencies for review. She added that the change would not occur until the agencies have a chance to weigh in on it. Mr. Gregson clarified that the draft RI/FS has been issued to the agencies for their review. He also said that the document would be finalized sometime after the July MMRCT meeting.

J-3 System Performance Monitoring Results

Dr. Morris stated that the J-3 Range, which is located in the southeastern portion of MMR, just southeast of the Impact Area, is approximately 300 feet wide by 3,000 feet long and was used from the 1940s until 1997. It was originally used as a mortar range, and later, beginning in the 1950s, as a contractor munition testing range, which involved activities such as munitions disposal by burial and burning and wastewater disposal. Soil investigation at the J-3 Range found explosives and propellants contamination at concentrations up to 65,000 ppb, most of which was determined to be in disposal areas (primarily the disposal area in the southern part of the range) and in the area of a melt/pour building. A Rapid Response Action (RRA) conducted in 2004 removed about 3,500 tons of soil from these areas. Dr. Morris also noted that groundwater investigation at the J-3 Range found a plume of RDX and perchlorate that heads southeast and is approximately 400 feet wide and extends about 3,700 feet downgradient from the source.

Dr. Morris stated that the annual report for the J-3 Range plume, which contains primarily RDX and perchlorate, covers the period from September 2007 through September 2008. During that time the highest concentration of RDX detected in the plume was 37 ppb and the highest of perchlorate was 194 ppb. Dr. Morris noted that several surface water sampling events were conducted at Snake Pond and no explosives or propellants were found there. He also reported that the J-3 Range plume treatment system, which has been operating since fall 2006 and has treated 170 million gallons of groundwater, consists of three extraction wells operating at about 195 gpm. He further noted that the extracted water is treated at the Fuel Spill 12 (FS-12) treatment plant (using GAC and ion exchange resin) and the treated water is returned to the aquifer via existing FS-12 reinjection wells. He also said that the system, which is expected to operate until around 2024, was installed as part of an RRA, and that the RI/FS is due in December 2009.

Ms. Crocker asked when it was determined that there was no contamination in Snake Pond. Dr. Morris replied that approximately six sampling events that occurred primarily in summer 2008 yielded nondetect results in Snake Pond surface water for explosives and perchlorate.

Dr. Morris displayed a figure of the RDX plume and reviewed monitoring results at the trailing edge: consistent nondetects at two monitoring wells, decreases in concentrations at two monitoring wells, and a significant decrease after the 2004 RRA at MW-163S (located in the former J-3 Range disposal area). He also reviewed results from the plume core upgradient of the base boundary: decreases at four monitoring wells; nondetects at 15 monitoring wells; an increase at one well (MW-198M4), from nondetect to 0.413 ppb; the highest RDX concentration (36.8 ppb) detected at MW-227M2; a decrease in concentrations at MW-22 from 0.241 ppb to nondetect; a decrease in concentrations at MW-198M2 from 11.2 ppb to 3.03 ppb; and a decrease in concentrations at MW-198M3 from 0.611 ppb to

nondetect. Dr. Morris noted that in general this portion of the plume has decreasing concentrations or nondetects. He also reviewed results from the plume core downgradient of the base boundary: decrease at MW-250M3 to nondetect; a slight increase at piezometer 211 (90PZ0211), from 0.926 ppb to 1.4 ppb, which is reflective of contamination that was downgradient of the treatment system prior to startup; and nondetect at 14 wells. At the leading edge (along the northern edge of Snake Pond and into the Snake Pond spit), all 11 leading edge wells tested nondetect for RDX.

Dr. Morris displayed a map showing lines of cross-section and pointed out an area of RDX contamination thought to be maintained because of competing hydraulic stresses between the in-plume and downgradient extraction wells. He then showed cross-section D-D' and pointed out the source area, MW-163, the RDX plume's rather rapid descent to MW-198, and the area of RDX contamination between competing stresses from the extraction wells.

Ms. Crocker asked what will happen to that "hotspot." Dr. Morris replied that the flow rate of the in-plume well could be turned down to allow the RDX mass to move toward the downgradient extraction wells. However, the reason that well is operating is to capture the perchlorate contamination that's upgradient of it. Right now it's a matter of focusing hydraulic stress to capture the upgradient perchlorate or ramping down the pumping rate to let the RDX move downgradient.

Dr. Morris then reviewed the slide entitled "J-3 RDX Plume Specific Insights," which noted the following: the general footprint of the RDX plume has changed from the 2006 RI/FS depiction and 2007 depiction; the maximum concentration in the 2008 plume is 36.8 ppb; there's a significant decrease in RDX concentrations in the trailing edge of the plume; monitoring wells in the main body of the plume show decreasing concentrations on the eastern and western sides, resulting in a narrower plume; a dramatic decrease in concentration was seen in the vicinity of the in-plume extraction well; concentrations have also decreased in the vicinity of the two downgradient extraction wells; and the leading edge has retreated, with the most downgradient detection being at 90PZ0211.

Dr. Morris continued his presentation by showing a figure of the J-3 Range perchlorate plume and noting that its flow path is very similar to that of the RDX plume. He then reviewed perchlorate monitoring results at the trailing edge of the plume: nondetects in eight monitoring wells; decreases in two monitoring wells; and a slight increase in one monitoring well (MW-163), which had decreased somewhat dramatically from 2005, probably due to the 2004 source removal action. He also reviewed monitoring results at the plume core upgradient of the base boundary, where the plume is most heterogeneous: decreases at nine monitoring wells; nondetects at nine monitoring wells; increases at four monitoring wells; the highest concentration (194 ppb) at MW-198M2, which decreased from 299 ppb in 2007; three shallower wells on the eastern side show concentrations increasing, in contrast to deeper wells in the area, which may be related to hydraulic stress imposed by the in-plume extraction well; and dramatic decreases in concentrations in the vicinity of the in-plume well, seen primarily at MW-343, which is currently testing nondetect.

Dr. Morris then reviewed monitoring results at the plume core downgradient of the base boundary: decreases in three wells, one of which decreased to nondetect for the first time; nondetects in ten wells; and increases in six wells. He noted that the most dramatic increase occurred at MW-250M2 (from 4.88 ppb to 7.83 ppb), while wells downgradient of the capture zone showed slight increases (from 1.41 ppb to 1.93 ppb at MW-217M2, and a slight increase at PZ-211, which subsequently decreased in 2008. Dr. Morris said that it's thought that there's some evidence that the plume is retreating back toward the source. He also reported that MW-217 shows the most downgradient extent of the plume, and all 11 leading edge wells are nondetect.

Dr. Morris displayed a J-3 Range perchlorate plume map showing lines of cross-section, and then the figure cross-section D-D', pointing out the higher concentrations upgradient of the in-plume well, concentrations representing a portion of the plume that moved downgradient prior to system startup,

the trailing edge, MW-153, and the portion of the plume that's downgradient of the current extraction system.

Dr. Morris reviewed the slide entitled "J-3 Perchlorate Plume Specific Insights": the footprint of the perchlorate plume is narrower and shorter than the 2006 RI/FS depiction; the maximum perchlorate concentration in the 2008 plume is 194 ppb (at MW-198M2), which is down from 299 ppb in 2007; there are significant decreases in perchlorate concentrations in the trailing edge of the plume, which continues the trend from 2007; the main body plume wells show decreasing concentrations along the center of the plume, and more fluctuating concentrations along the eastern side; perchlorate concentrations near the in-plume well are nondetect; and concentrations of perchlorate decrease in proximity to the downgradient extraction wells.

Dr. Morris stated that the J-3 treatment system consists of three extraction wells: the in-plume well (pumping at 100 gpm) and the two downgradient wells (EW-32 and EW-1, pumping at 65 gpm and 20 gpm respectively). The water is pumped from the wells to the treatment system where it's treated and then reinjected into the aquifer via the existing FS-12 reinjection system. Dr. Morris also showed a graph entitled "J-3 Range ETR System Influent Contaminant Concentrations" and said that influent concentrations of perchlorate and RDX indicate that the extraction wells are located where they should be.

Dr. Morris then displayed a three-panel figure entitled "J-3 Range Plume Comparison for 2006, 2007, and 2008" and noted that the plume appears to be getting shorter and narrower, and seems to be breaking up, particularly in proximity to the existing extraction system. He concluded his presentation by reviewing a "Next Steps" slide: the J-3 RI/FS is due December 2009; the MMRCT briefing on the RI/FS will occur in early 2010; the public comment period on the RSP will occur in spring 2010; and the IAGWSP will maintain the schedule for sampling and reporting.

Agenda Item #4. Former B & D Ranges Update

Mr. Gregson showed a map of Former B & D Ranges and pointed out the MMR boundary, the Impact Area, and the Small Arms Ranges (SARs), both current and inactive. He noted that Former B & D Ranges are inactive SARs that haven't been used for about 20 years and are fairly overgrown. He also said that there is no plan at this time to bring them back into use. He further noted that the ranges, which are located on the western side of the base, were constructed prior to World War II, from 1935 to 1941, and that these ranges were not part of the 1999/2000 Berm Maintenance Program to remove lead from active ranges.

Mr. Gregson reported that Former B Range was constructed from 1935 to 1941 using a natural hillside as a berm, and then was reconfigured to expand the range and divide it into two individual training areas. Prior to its conversion to a composting area for the base, Former B Range was used at various times as a machinegun/pistol training range, pistol range, rifle range, and mortar firing position. Former D Range, which was constructed around the same time, was used as an anti-aircraft miniature rifle range, then a machinegun range, and then, again, a rifle range. Mr. Gregson noted that groundwater wells installed downgradient of the ranges have historically tested nondetect for lead. He also mentioned that since both of the ranges have been inactive for some time, no training with tungsten-nylon bullets ever occurred there. He also reported that lysimeters installed in some of the areas with the highest lead detections on Former D Range showed metal detections of antimony, barium, cadmium, chromium, iron, and lead (in shallow lysimeters, five feet below ground surface [bgs]), and barium, copper, and lead in deep lysimeters (10 feet bgs). Mr. Gregson then displayed 1950s-era photos of the ranges – Former B North, Former B South, and Former D.

Mr. Gregson stated that when Former B & D Ranges were initially investigated in 2001/2002, soil sampling results showed lead to be the primary COC, although other metals, such as antimony and copper also were found. In addition, some SVOCs were detected at Former B Range, where the

investigation also found many projectiles in the hillside. Lead concentrations at Former B were as high as 2,800 parts per million (ppm), while the state's GW-1 cleanup number for lead is 300 ppm. At Former D Range, various projectiles and fragments were found in the berm, and lead concentrations were as high as 10,000 ppm in several target area soil samples. Mr. Gregson described the initial investigation as a baseline investigation that was focused on lab analysis to delineate contaminants in the soil.

Mr. Gregson then stated that the purpose of 2008's field delineation was to try to determine if an action to remove the lead contamination in soil could be taken. This effort, which involved the use of an x-ray fluorescence (XRF) device, metal detectors, and lab samples to assess the extent of lead/bullet fragments in soil, delineated the lead contamination to a cleanup standard of 300 ppm. Mr. Gregson reported that at Former B North, the highest lead concentrations (up to 10,000 ppm) were found in the range floor and the backstop berm, and at Former B South, lead concentrations were generally lower, with one spot having concentrations up to 2,800 ppb. Sieving of the soil at various locations at Former B Range to see what metal might be recovered for recycling (which involved taking half-foot lifts and screening them with a 0.5-inch screen for munitions and shell casings) found a significant amount of lead that's thought to be recyclable. Soil sampling associated with the screened soil showed lead concentrations up to 2,500 ppm. Mr. Gregson also reported that at Former D Range, soil samples were collected at the firing line, the range floor, and the backstop berm, and significant lead concentrations were found, up to 11,681 ppm. Ms. Crocker inquired about the depth of the lead that was found. Mr. Gregson replied that for the most part, the lead was found within one foot or so of the surface.

Mr. Gregson showed a figure depicting XRF screening surface samples at Former B North and pointed out various features, including the firing lines, range floor, and backstop berm. He also showed the Former B South figure, pointed out the same type of features, and mentioned that the IAGWSP also will be conducting additional XRF screening at the area between the berm and the hillside beyond to determine whether any over-shots had gone into that area. Mr. Gregson then displayed the figure depicting XRF screening surface samples at Former D Range, again pointed out the various features of the range, and referred to an area there that will also be screened for the possibility of over-shots, before a soil removal action is taken.

Mr. Gregson stated that a soil removal project note was approved in May 2009, and the planned response action is scheduled to start this month and be completed later this summer. He reiterated that additional XRF screening will be conducted behind the berms at the ranges, and noted that excavation areas will be revised if needed. He also reported that about 0.3 acres of vegetation will be cleared at Former B Range and about 0.9 acres at Former D Range. He further noted that selected areas will be excavated to a depth of 1 to 3 feet, based on the previous delineation sampling. And it's estimated that about 740 tons of soil will be removed from Former B North, about 125 tons from Former B South, and about 4,550 tons from Former D Range. In addition, post-excavation XRF screening will be conducted, to be followed by lab analysis, and the IAGWSP will continue to remove soil until the target concentration of 300 ppm is reached.

Mr. Gregson then showed figures depicting proposed excavation areas at Former B & D Ranges and pointed out the equipment staging areas and access paths. He also noted that the green dots on the figures represent XRF readings below 300 ppm, while yellow dots represent XRF reading above 300 ppm. He said that once the soil has been excavated, it will be screened (to remove material less than 4 inches, then less than 1 inch, and then to divide lead particles/fragments/rock less than ½ inch from well-graded sand) in order to minimize the volume of material that has to be sent off site. He reported that lead particles, fragments, and rocks will be transported off site for recycling, the other materials will be stockpiled for future re-use elsewhere on base, and the well-graded sand will be sampled to ensure that they do not contain elevated lead concentrations. Mr. Gregson also mentioned that lead from behind the berms at J & K Ranges will be excavated and screened with Former B & D Range soils.

Ms. Crocker asked why there's such an effort being made to remove the lead, given that it's "never going to damage the water." Mr. Gregson explained that although previous work indicates that lead doesn't readily migrate through the subsurface to groundwater, there are concerns associated with human contact with lead, as well as an ecological risk concern.

Ms. Grillo referred to the soil removal project note and inquired about next steps with regard to the overall SAR RI/FS. Mr. Gregson replied that it depends on the level of success. He said that a letter report on results will be issued after the removal and recycling action is finished. Then, the IAGWSP will look at these results and results from other areas to make sure that all the potential COCs are covered, after which it will be decided whether the sites can be closed out. Mr. Gregson stated that Former B & D Ranges are part of the larger SAR operable unit, and it may not be possible to attain final closure of the B & D sites until the decision on all the SARs is finalized. Ms. Grillo asked when that decision might be made. Mr. Gregson replied that that will probably occur in the fall.

Agenda Item #5. Demolition Area 1 and BA-4 Decision Documents

Ms. Jennings announced that if all goes well, the draft Demolition Area 1 (Demo 1) Decision Document (DD) Addendum and the draft BA-4 Decision Document are expected to be released on June 17, 2009. She also noted that the first Demo Area 1 DD went out with an RSP (similar to a Proposed Plan), after which the final DD was issued and a public comment period held. In this case, however, the DD is being issued in draft form for comment, and the final DD will "essentially respond to comments and look essentially the same." A 30-day public comment period will run from June 17 to July 17, 2009, and team members can raise any questions they might have at the July 8, 2009 MMRCT meeting. Ms. Jennings also noted that documents (the draft DDs, a fact sheet, and probably the news release that's going to be issued) will be sent directly to MMRCT and Senior Management Board (SMB) members. She further noted that the DDs and all supporting documents (RI/FS reports, Completion of Work reports, and the like) will be available on U.S. Environmental Protection Agency (EPA) and IAGWSP websites.

Ms. Crocker asked when the public would be able to weigh in on the DDs. Ms. Jennings replied that the public will have the opportunity during the same time period as MMRCT and SMB members do. She noted that a news release will be issued to make the public aware that these draft documents are available. She also said that there have been MMRCT presentations on these sites in the past, and there will not be a separate meeting pertaining to these DDs.

Agenda Item #6. CS-18/19 Source Area Update

Mr. Davis reminded the group that the Chemical Spill 18 (CS-18) site is a gun position (Gun Position 9 [GP-9]), which was used for field artillery and firing into the Impact Area. He also noted that GP-9, which was one of the most frequently used gun positions, was identified for investigation before the IAGWSP began. He further noted that evidence of reported burning of excess propellant bags at the site has been found.

Mr. Davis then displayed a figure entitled "CS-18 (GP-9) Proposed Sidewall Sample Locations" and noted that decision units shown in red were already excavated based on a regular composite sampling method. He further noted, however, that the Air Force Center for Engineering and the Environment (AFCEE) came to an agreement with the regulatory agencies to resample the entire site using a more updated methodology designed for munitions sites, where contaminants are found in a much more heterogeneous situation. Based on the newer sampling data, additional areas in need of excavation (because of DNT contamination exceeding 700 ppb) have been identified. Mr. Davis referred to the figure and said that decision units shown in green do not require excavation, while those shown in yellow do. He also said that confirmation sampling will include explosives, semi-volatile organic

compounds (SVOCs), and perchlorate, and mentioned that the SVOC method occasionally picks up DNT not detected using the explosives method.

Mr. Davis then reported that January/February 2009 CS-18 groundwater sampling showed only well with a detection of perchlorate (0.77 ppb, while the standard is 2 ppb). He also said that monitoring for explosives began in 1999 and monitoring for perchlorate began in 2002, and based on that data set there is no groundwater problem associated with CS-18. He noted that a CS-18 Groundwater DD will be issued later this summer, and a Removal Action Report for the source area will be issued right at the end of the summer.

Mr. Davis reminded the group that CS-19 is a munitions debris disposal area – sort of like a “mini-landfill,” where items have been found at locations up to 15 feet deep. He also said that the site was identified through an anonymous tip in 1990, and that the bunker area north of the original CS-19 site was identified in a 2003 witness interview that was part of the Archive Search Report. Mr. Davis then showed an aerial photograph of the site and pointed out various features such as the main disposal area, soil stockpiles, the perimeter road, and the bunker area. He said that as indicated by results from sampling with the new methodology, one outstanding grid, which is part of the old CS-19 disposal area, needs to be excavated. He also pointed out the hottest spot that was found in the disposal area and noted that it is in right in the area where the highest groundwater concentrations were seen in the past, although the last couple of sampling rounds showed that concentrations dropped more than 90%. Mr. Davis then showed another figure and spoke about the CS-19 bunker area, where TNT, in addition to some lower levels of DNT, was detected. He pointed out the four additional grids to be excavated there, and he pointed out the location of a burial pit, which also needs to be excavated. He further noted that the contract for additional removal work at CS-18 and CS-19 was awarded yesterday, and the work will proceed as quickly as the weather allows. In addition, Mr. Davis stated that because there’s no cleanup number for TNT at this time, he decided to use MassDEP’s reportable concentration number and move toward site closure rather than spend resources on a TNT leaching study that may or may not lead to a cleanup number in a reasonable timeframe.

Ms. Crocker remarked that the maps are very easy to understand and she finds it unfortunate that the public can’t see them. Ms. Richardson assured her that presentation handouts/maps are available on the cleanup programs’ websites.

Agenda Item #7. Ashumet Valley Construction Update

Mr. Davis reminded the group that it was determined that an additional extraction well would be installed (in the southern part of the Ashumet Valley plume) because during the remedy decision process it was found that higher contamination concentrations existed there than previously thought. He noted that the extraction well has been installed, and although an easement had been secured for locating the mobile treatment unit (MTU), and a bubbler in the Backus River, the Falmouth Conservation Commission objected to the plan. Therefore, AFCEE quickly contacted the property owner and identified revised locations for these system components. The Conservation Commission approved the new plan and AFCEE and the property owner are working on wrapping up the revised easement offer. Mr. Davis noted that the construction work is already under contract, the goal is to achieve system startup by September 2009, and the system is anticipated to operate until 2019. He also reminded the group that the Ashumet Valley Record of Decision (ROD) is currently in the signature process and is expected to be signed by EPA any day now.

Ms. Rielinger asked if Mr. Davis is dealing with the same property owner as he was originally. Mr. Davis replied that he is. Mr. Gregson inquired about the nature of the Conservation Commission’s objection to the original locations. Mr. Davis replied that some of the commission’s members objected to the need to cut down some pine trees. He also said that he initially got the sense from the

Conservation agent that the original plan would not pose any problems, which is why he'd gone forward with the original easement offer.

Agenda Item #8. Public Comment

Ms. Crocker asked why the minutes from the May MMRCT meeting included so much discussion about the former Community Working Group, Base Realignment and Closure (BRAC) issues, and the like. Mr. Davis explained that those discussions revolved around future land use in the area of CS-19 groundwater. He explained that the CS-19 Proposed Plan is for monitored natural attenuation (MNA) and no active treatment of the plume, and anticipated future use of the land during the lifetime of the plume (primarily military use) was a consideration when making the decision to propose MNA. Ms. Crocker expressed uncertainty as to how future land use pertains to the CS-19 groundwater decision. Mr. Davis explained that the two are related because the decision involves making a use assumption for the area above the groundwater contamination. He also noted that an individual at the last MMRCT meeting has suggested that that assumption may not be correct. He further noted that AFCEE will be responding to that person's comment in the Responsiveness Summary that's part of the final CS-19 ROD.

Agenda Item #8. Next Meeting Schedule and Adjourn

Mr. Murphy stated that the MMRCT would meet next on Wednesday, July 8, 2009. He then adjourned the meeting at 7:45 p.m.