Naval Air Station South Weymouth, MA
Restoration Advisory Board (RAB) Meeting Minutes
September 8, 2011

1. INTRODUCTIONS/ APPROVAL OF PRIOR MEETING MINUTES

John Goodrich, RAB facilitator, opened the meeting at approximately 7:00 PM. He requested that all attendees, including RAB members, regulators, and audience members, introduce themselves. He noted that the meeting agenda, handouts, and the sign-in sheet were available on the table at the back of the room. The sign-in sheet for the meeting is provided as Attachment A. J. Goodrich asked if everyone had time to read the minutes from the April 2011 RAB meeting (since the June 2011 RAB meeting consisted of tours of active site at the Base, there were no formal meeting minutes prepared) and if there were any comments. There were no comments.

J. Goodrich reviewed the guidelines for the meeting and reminded everyone that the focus of the meeting is cleanup issues. Any issues and/or comments not related to base cleanup will be noted and referred to the appropriate agency or organization. He reminded the participants when asking questions to wait to speak until they are acknowledged, to state their names and affiliations, and to speak clearly or into the microphone when they have questions.

He then reviewed the agenda for the meeting. The meeting agenda and the action item tracking list are provided as Attachment B. In accordance with the agenda, the presentation and discussion would be followed by the updates and action items portion of the meeting. The minutes, agenda and action items for the meeting are posted on the BRAC PMO website: http://www.bracpmo.navy.mil/.

2. PRESENTATION

J. Goodrich introduced Dave Barney to give the presentation on Building 82. Building 82, also referred to as Hangar 2, was an aircraft hangar constructed during the 1950's. Building 82 is located in the center of the Base. The last Building 82 presentation to the RAB (September 2010) discussed the feasibility study (FS). Since that time, additional program elements have been completed. The objectives to tonight's presentation are shown on Slide 2. Selected slides from the presentation are included in Attachment C.

The Remedial Investigation (RI) was completed in 2010. The Navy completed a RI Addendum and maintenance action to address data gaps remaining after the RI was finalized and the FS was under development. These additional activities are the focus of this presentation.

Slide 3 presents the objectives of the RI addendum which was performed to address additional questions raised after the RI was complete. The three components of this investigation were: determine if high VOC concentrations at SB-112 have affected groundwater; confirm if extremely low PCB concentrations from the 2006 investigation still exist: and gather additional data about the TCE groundwater plume. Three rounds of groundwater profiling were performed to further investigate the TCE plume, with each subsequent round based on prior information.

The soil sample collected at SB-112 had high VOCs associated with it, so groundwater samples were collected from the surrounding areas to determine if there were impacts to groundwater. Three groundwater samples were collected at, above, and below the soil sample target interval (12 to 14 feet bgs). No VOCs were detected in groundwater; geochemical parameters collected indicated that TCE would not be degraded in this area. The investigation concluded that VOC concentrations in the soil sample were not impacting groundwater.

PCBs were detected at a few monitoring well locations in 2006 during the RI. One shallow overburden and four deep overburden wells with PCB detections in 2006 were re-sampled. To determine if turbidity was a factor in the PCB detections (PCBs adsorb to soil particles), filtered and unfiltered samples were collected. The turbidity in the 2009 samples was generally similar to previous samples, though three wells had higher turbidity values. PCBs were not detected in either filtered or unfiltered samples in 2009. The reason for the 2006 PCB detections is unknown, but turbidity and cross-contamination were ruled out.

The additional TCE work included delineating the extent of the plume and assessing the potential impact and interaction of the storm drains and utilities at the site with the TCE plume. During the course of the additional work, three rounds of groundwater profiling were conducted which successfully delineated the extent of the plume (Slide 4). A groundwater level round was conducted that included wells within the TCE plume and downgradient (to the south and east of the site). This information was used to determine where the contamination may have originated and the direction of plume migration.

The TCE plume was more extensive than anticipated, but the TCE concentrations were relatively low. The positions of the shallow and deep plumes suggest a single source east of Building 82. The catch basin south of Building 15 was identified as a potential source. Slide 5 presents the extent and orientation of the shallow and deep TCE plumes. The shallow overburden groundwater contours demonstrate the control that the two 42-inch storm drains have on the shallow groundwater flow. Both shallow and deep overburden groundwater flows to the west/southwest.

Maintenance Actions were performed by the Navy to address other MassDEP issues, primarily concerns with areas where elevated concentrations were identified in specific soil and sediment samples. Previous

maintenance actions at the Base included the storm drain TACAN work in 2000 and removal of floor drains in a number of buildings, including Building 82. Not all the floor drains were removed from Building 82. The objectives of the maintenance actions were to reduce the levels of known contamination in soil/sediment to below the MCP S-1 criteria. Confirmatory samples were collected at locations where soil with elevated chemical concentrations was removed during previous actions.

The locations of the work performed are shown on Slide 6. Soil borings were advanced to follow up on previous work and delineate the extent of potentially impacted material. Asbestos-containing material (ACM) was removed from the Hangar apron (gasket material) and then the concrete was removed. Gas Trap Manholes (GTM) and piping were removed along with an associated soil removal. A Limited Removal Action (LRA) was conducted on Navy property based on findings during new road construction. Sediment was removed from a drainage ditch. All material (soil, piping, etc.) was transported off site and disposed.

Soil borings were advanced near floor drains where prior soil removals were completed and materials remained with concentrations that exceeded criteria. Ten borings were advanced (Slide 7) with samples collected from various borings for different analyte groups based on previous exceedances. All results were below the MCP S-1 criteria.

Aircraft maintenance was handled on the apron, and any leakage would be washed into the floor drains and discharged into a GTM (similar to an oil-water separator). The gas/petroleum floats on the water; the water would then be drained to the Base stormwater system. In the late 80's, the GTMs were retro-fitted to drain to a downgradient oil-water separator, so that anything that went into the floor drains would eventually discharge into the sanitary system instead of the stormwater system. To access the GTMs, ACM was removed and disposed of in accordance with MassDEP asbestos abatement protocols prior to concrete removal. The components of the GTM removal activities are summarized on Slide 8. During the maintenance activities, four GTMs (approximately 4 ft x 4 ft x 10 ft) were removed and a grab sample was collected below each GTM. The grab samples indicated that further excavation was required. After additional excavation (416 CY of soil removed) the final confirmatory samples indicated levels were below criteria. Slide 9 presents the locations of the GTMs and piping/soil removal.

The LRA was completed to remove petroleum impacted soil that was discovered and partially addressed by the developer of the Base during construction of an access road. The LRA footprint was adjusted based on soil borings (16 total). PetroFLAG field screening was used to direct the soil removal and confirmatory sampling and to identify the extent of the required soil removal. Confirmatory sampling indicated that only one analyte exceeded the MCP criteria. Excavation was conducted right to the edge of the fence and the road; Navy's contractor had to remove pieces of the fence for access (Slide 10).

Based on the results, it was concluded that no further action was required; the area was restored and fencing reinstalled.

The last maintenance action activity was the drainage ditch sediment removal. Slide 11 presents the sediment removal location at the northeast corner of the Site. Sediment from three ditches which lead to a culvert was excavated to 1 foot bgs for a distance of 15 feet. Confirmatory sampling results were less than criteria and the area was restored. The soils along the ditches were sloped to match the adjacent channel sides and create positive drainage throughout the channel. Erosion fabric was placed along the slopes, which were then seeded.

All objectives of the maintenance actions were achieved and resulted in the reduction of the levels of known contamination in soil/sediment to below the MCP S-1 criteria.

The maintenance actions removed elevated concentrations of chemicals in soil and sediment although the RI indicated no unacceptable human health or ecological risks for soil and sediment. Therefore soil, sediment, and surface water are not media of concern for the FS. Groundwater is the only medium of concern addressed in the FS. For an FS, Remedial Action Objectives (RAOs) are developed. Two RAOs for groundwater were developed in the Building 82 FS:

1) Prevent human exposure (including showering, drinking, and irrigation) to groundwater containing concentrations of TCE, and other COCs, in excess of remediation goals and that cause unacceptable risk.
2) Restore groundwater impacted by TCE, and other COCs, such that risks to human-health allow for unrestricted site use.

Four remedial alternatives for Building 82 were evaluated in the FS:

1) G-1: No action
2) G-2: Chemical oxidation, natural attenuation with monitoring, and land use controls (LUCs)
3) G-3: Enhanced bioremediation, natural attenuation with monitoring, and LUCs
4) G-4 Natural attenuation with monitoring and LUCs

The CERCLA status for Building 82 is summarized on Slide 12: the Final RI Report, RI Addendum Report, and Maintenance Action Completion Report have been issued. The Final FS will be issued in fall 2011, the revised proposed plan is anticipated for winter 2011-2012 and the ROD is anticipated for spring 2012.

M. Parsons presented a series questions prepared by D.Galluzzo, who could not attend, and addressed to the RAB (see Attachment D).

Question 1. Were the Navy, EPA, and DEP invited to the September 6, 2011 meeting of the Environmental Subcommittee of the Weymouth Town Council?
Response: No.

Question 2. Has the Navy signed a document stating that the Base would be cleaned up to unrestricted use?
Response: No. D. Barney stated that the cleanup is consistent with CERCLA.

Question 3. The question was addressed to J. Young (not in attendance) concerning the purpose of raising confusion regarding the cleanup efforts at SRA and WGL – which is diagonally across the street from an apartment building under construction. Isn't the concern of that cleanup standard contrary to the active selling and acceptance of resident occupancy during the uncertainty alluded to by SSTTDC.

Question 4: For D. Barney, would you please indicate the terms and conditions of the POS signed agreement dated July 13, 2011? Were there changes of those terms and conditions when there was another signing on August 31, 2011 indicating that the LRA and the developer were interested in moving forward to a final signing date of November 15, 2011?
Response: D. Barney stated that the LRA and developer were afforded an opportunity to perform environmental due diligence investigations at SRA, Building 81, and Building 82.

Question 5. Do the environmental cleanup efforts by the Navy in anyway fall short of recorded laws, regulatory standards or statutes?
Response: D. Barney stated that the Navy does not make unilateral clean up decisions, it is a cooperative effort between the Navy and regulatory agencies. The cleanups are based on what the law requires.

B. Olson stated that these three sites are difficult. The DEP classifies the groundwater as useable or not usable for drinking water (i.e. productive aquifer), separate from any contamination issues. If the groundwater is determined usable for drinking water then cleanup is based on those standards. If it is not usable as drinking water, then it does not have to necessarily be cleaned up to that standard; instead it would be cleaned up to the foreseeable future use. The Navy strives to get to unrestricted use and a lot of sites have achieved this, excluding the landfills. The goal is to get to unrestricted use, but for groundwater the laws state that they have to be cleaned up to drinking water standards only if it is a drinking water source. The groundwater beneath Building 82 is classified as a drinking water source, so the cleanup goal is to that level. There will still need to be interim restrictions no matter what.

M. Parsons presented pictures of an existing irrigation system and stated that she does not want to see water from the IR sites used for this purpose.

M. Bromberg asked what alternatives are being presented at the three different sites and what the time frames for cleanup are. B. Olson responded that the FS's for each site will lay out all alternatives and the best alternative will be determined based on the cost/time frame to achieve cleanup goals.

M. Bromberg asked when the three FS's will be completed. D. Barney stated that for Building 82, the FS was presented a year ago, but new information was needed (e.g. RI Addendum and Maintenance Action) before finalizing it. The Building 82 FS will likely be completed before the SRA and Building 81 FS's.

J. Cunningham stated that it was his understanding that the Navy was cleaning up to the proposed use. Previously the developer said there was not enough water for water supply. Is there enough groundwater to use, and therefore cleanup? B. Olson noted that if groundwater is classified as a potential drinking water source, then it would be cleaned up to drinking water standards.

J. Cunningham stated that he thought the developer was going to either use water from MWRA or Weymouth. D. Barney replied that groundwater could be used, but previous tests indicated that the aquifer didn't produce enough water to cover the entire Southfield project. The groundwater classification is a state requirement therefore the Navy must meet that quality as part of the cleanup, it does not matter if the groundwater is actually used or not. A. Malewicz added that if groundwater is classified as GW-1, then cleanup is to GW-1, but there is also a question of yield. The resource must be protected.

J. Cunningham asked if the Navy will cleanup groundwater even if it is not used. D. Barney replied yes. If the groundwater was not cleaned up and the waste was left in place, the Navy must monitor LUCs, which means a long term commitment for the Navy.

M. Parsons asked if the bioremediation alternative for Building 82 is the same pilot program used at Willow Grove. D. Barney stated he did not know specifically, but the concepts are similar. The Willow Grove project has a twist in that it re-circulates the water. There can be site differences, different aquifers, etc.

K. Bowe asked when the Building 82 FS will be ready. D. Barney stated by the end of the year/fall.

K. Bowe asked what the challenges in meeting goals/schedule are. D. Barney replied it depends on how quickly issues are resolved with the regulatory agencies. In the case of Building 82, the regulatory agencies needed more information before the next step could be taken. The review, response to

comments, and revision process can take time. Additionally, if there are uncertainties that require collection of additional data, the schedule can be extended 1 to 2 years.

K. Bowe asked if there were milestones established. D. Barney stated that the Base is governed by the Federal Facilities Agreement, signed by the Navy and EPA, which requires the Navy to provide a Site Management Plan with a milestone schedule. There is a series of timelines and timeframes in the FFA.

B. Olsen added that one of the problems is that when more data are collected, it often results in more questions and uncertainty. At some point, the decision is made that there is enough data and you move forward. He stated that at the three IR sites, the Navy is very close. There is enough data to make decisions and move forward, but the decisions will most likely be made a year from now.

M. Parsons commented that the Base does not look bad; there are no barrels, etc. She asked if the developer can spend more and do a more extensive cleanup. A. Malewicz replied yes. Many sites in the Superfund or MCP programs may not look bad, but groundwater is more difficult. The DEP strives to do it right, once.

M. Parsons asked what vapor intrusion barriers are. A. Malewicz responded that a vapor intrusion barrier could be a gap between the building and the ground so the gas can't migrate, clay, mats, there are many different types based on the contamination concern.

M. Bromberg asked about the zoning for a school near Building 81. What could be done there for vapor intrusion? D. Barney replied that it is best not to put a school over a groundwater plume. B. Olson and A. Malewicz agreed. There are ways to build so that vapor intrusion is not an issue.

M. Bromberg asked whether a parking lot would prevent the vapors or would they try to escape around the sides of the parking lot. A. Malewicz replied that hopefully the remedial alternative would address those issues. B. Olson stated that it would be EPA's preference to not put a school above a groundwater plume. The future use of the property will be looked at, and the risk-based clean up levels will be tailored to that use. The alternatives in the FS will be studied and the best alternative will be chosen.

D. Barney stated that the developer has been involved for almost 10 years, so they understand the elements of contamination present on the Base. If you know where the problem areas are, you might be able to design around it. The Navy is being asked to look at the future use in developing alternatives for cleanup. While the remedy is under way there will be institutional controls in place so things will not be built. A. Malewicz stated that if there was concern about a vapor intrusion issue based on the data, the DEP would put controls in place to protect future development. Example restrictions include not being able to build or requiring vapor barriers, etc.

M. Brennan asked if any due diligence was done to determine the source of PCB detections at Building 82. D. Barney stated that the due diligence was returning to those same wells and collecting multiple samples (filtered and unfiltered) at each location to try and replicate the results. No source was identified and the results could not be replicated. P. Call agreed and added that no likely source could be identified. Inclusion of PCBs in the LTM is discussed in the FS to ensure that there is not a problem.

M. Brennan asked what criteria the GTM samples were compared to. MCP S-1 criteria. He asked if samples were collected along the other side of the gas pipe line. D. Barney stated that the gas line was installed in clean fill. There was one exceedance, and they went 25 feet on either side of that exceedance, to ensure that the extent was defined. As you go toward the new construction, there is limited soil (not clean fill) that could be contaminated.

M. Smart asked if the soil between the GTMs (around the connector piping) was removed. D. Barney stated that the soil between was not removed, just the soil around the manholes. Soil samples were collected in between the GTMs though.

M. Smart said that he will check about invitations to the SSTTDC meeting, as he was told they were sent. A. Hilbert stated there is very poor communication between the Town, SSTTDC and they don't include AWRAH.

C. Keating noted that there have been some delays to clarify foreseeable future use. There has been progress with that and they want to make sure that it is done right the first time.

M. Parsons asked about the buildings with AULs and how are they lifted? Who is responsible for the AULs when the building comes down? A. Malewicz responded that to lift the AUL they need to show the DEP that there is a basis to lift the AUL.

M. Parsons asked who is paying to take down Hangar 2. D. Barney stated it is not the Navy. There are 4 AULs on the Base property, 2 of which have been transferred and 2 others will be transferred.

3. UPDATES AND ACTION ITEMS

Action Items: None.

MassDEP Update: None.

IR/EBS Program Site Update: D. Barney stated that there is a handout in the back. There are on-going discussions about finalizing the FS for Building 81, Building 82, and SRA.

The WGL construction is complete and cattails are coming up in the restored wetland area. The Draft Remedial Action Completion Report has been submitted. The LUC plan for the landfill has been implemented.

Additional soil delineation was conducted at the STP. The data have been submitted to the regulators and a meeting has been held to determine a path forward.

The LTM program continues at the RDA and comments have been received on the landfill gas investigation report. That report was a follow up to high methane measurements in landfill gas during the LTM process. The Navy is now planning a corrective action to control and abate the methane. The LTM program continues at Small Landfill. A completion report needs to be filed with the Southeast Regional office and a notice of landfill operations need to be recorded in the Plymouth County Registry.

The RODs for the Main Gate Encroachment Area and AOC 55C are done.

Additional field work has been completed for AFFF (RIA 11) and more data will be collected in the Hangar 1 slab after the abatement is completed and before the demolition of Hangar 1. RIA 111 requires additional investigation work but is on hold because funding is being diverted to the RDA methane issues.

There are no changes to the FOSTs.

M. Bromberg asked if any pipes that were excavated led to the TACAN. D. Barney stated that yes the pipes go under the Hangar 2 apron and join the twin 48-inch pipes to go to the TACAN. M. Bromberg asked what contamination triggered the remedial action. D. Barney stated PAHs.

M. Parsons asked if there could be a meeting in October to discuss the FS for SRA and the SMP. She wants to discuss the FS and LUCs and details of development to determine level of clean up. D. Barney stated that the SMP is out for review. The developer has indicated that at this point the development is conceptual only and things can change. The SRA FS will not be ready for October. C. Keating stated there will not be enough details on SRA for an October meeting.

Conclusion/Next Meeting

J. Goodrich wrapped up the meeting. The next RAB meeting will be the second Thursday in November (November 10, 2011). The meeting will again be held at the New England Wildlife Center, 500 Columbian St., Weymouth, MA. Suggested topics for the next meeting include:

- RDA update
- FS discussion on one of the IR sites, if available
- STP update
- Vapor Intrusion discussion