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RESTORATION ADVISORY BOARD MEETING MINUTES 12 APRIL 2012 NAS SOUTH  
WEYMOUTH MA  
4/12/2012  
NAS SOUTH WEYMOUTH RESTORATION ADVISORY BOARD



# Naval Air Station South Weymouth, MA Restoration Advisory Board (RAB) Meeting Minutes April 12, 2012

## **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 January 2012 RAB meeting 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 the Feasibility Study (FS) for the Solvent Release Area (SRA). The referenced slides are included in Attachment C.

D. Barney began the presentation on the SRA with a brief recap of prior RAB presentations about the SRA Site. The last SRA discussion was on the Remedial Investigation in October 2010. The presentation tonight is on the FS process. The FS is in draft form and is out for review and comments. The objectives of the presentation are summarized on Slide 2; the location of the SRA Site is shown on Slide 3.

A variety of investigation techniques were used to gather data and understand the Site. All the information was compiled into the RI Report. The FS reviews the information gathered and evaluates potential remedial alternatives to address unacceptable risks to human health and the environment identified in the RI. The RI identified unacceptable risks to human health posed by contaminants in groundwater at the Site. Slide 4 presents the extent of groundwater contamination at the Site. The groundwater flows to the southeast. The FS process includes identifying the media and contaminants of concern (COCs), developing remedial action objectives (RAOs), developing preliminary remediation goals (PRGs), identifying remedial technologies and developing alternatives, and finally evaluating the remedial alternatives.

The media of concern at the site is groundwater. The primary contaminants are chlorinated solvents, tetrachloroethene, or PCE, is the major COC. No unacceptable human health or ecological risks were identified in the RI for soil, sediment, and surface water; thus they were not media of concern for the RI (Slide 5). However, since contaminated groundwater discharges into the East Mat Ditch (EMD), the FS considers surface water as a medium of concern and addresses future recreational exposure to surface water in the EMD. Exposure to groundwater via vapor intrusion is also evaluated in the FS. Slide 6 presents the COCs for each evaluated exposure pathway. Slides 7 and 8 present the overburden and bedrock groundwater PCE contours, respectively. There is about 20 feet of overburden above the bedrock. The PCE concentration contour line of 5 micrograms per liter ( $\mu\text{g/L}$ ) is shown for reference as it represents the federal and state drinking water standard. The bedrock plume has an additional southern component.

Slide 9 presents the four RAOs which were developed to protect human health and the environment. Once the RAOs were established, PRGs, or target cleanup goals, were developed to reduce COC concentrations and mitigate unacceptable risks. Risk-based PRGs were developed based on the RAOs for the following exposure scenarios: recreational exposure via vapor intrusion to occupants of future buildings; construction worker exposure to groundwater; and life-long recreational exposure to surface water in the EMD via ingestion and dermal contact.

Slide 10 presents the list of all the process options and remedial technologies that were screened in the FS. The options included: limited action (fencing, monitoring, etc.); containment (isolate plume); removal (extract groundwater); in-situ treatment (inject treatment substrates, extract vapors, permeable reactive barriers [PRB]); and ex-situ treatment (extracted groundwater treatment options). The screening process eliminated many of the process options. The options that were carried forward in the FS included: land use controls (LUCs); monitoring of groundwater and surface water; and in-situ treatment, including enhanced bioremediation and mulch permeable reactive barriers (PRBs). These components were combined to form the remedial alternatives evaluated to comprehensively address the risks at the Site.

Five remedial alternatives were developed and evaluated in the FS. Details of the monitoring, LUCs and other components of the selected alternative will be developed during the remedial design. G-1 is the no action alternative, which is required by CERCLA as a baseline for comparison purposes. Alternative G-2 consists of monitoring groundwater north and south of the EMD and surface water in the EMD, engineering controls (fence around EMD), and LUCs (a permanent restriction on use of groundwater for drinking water or irrigation and temporary restrictions to control exposures until the RAOs are achieved) (Slide 11). Alternative G-3 includes the components in Alternative G-2, plus additional monitoring wells and a mulch PRB (installed to the top of bedrock) that will intercept and treat the leading edge of the groundwater plume before it reaches the EMD (Slide 12). A vegetable oil-based electron donor can be injected into the PRB to stimulate anaerobic biological degradation. Alternative G-4 includes the components in Alternative G-3, plus an additional upgradient PRB to treat the PCE source area (Slide 13). Alternative G-5 includes some components of the other alternatives; one PRB near the EMD, as described in G-3, plus more monitoring wells. In addition Alternative G-5 includes an enhanced in-situ bioremediation component in the overburden and bedrock source areas (Slide 14). All of these remedial alternatives require LUCs which will be in place as long as they are needed.

Each alternative has to be evaluated against the criteria listed in the CERCLA regulations. The alternatives are also compared to each other using the same criteria. The alternatives have to meet the threshold requirements of protecting human health and the environment and compliance with laws and regulations. The balancing criteria are used to compare the alternatives to each other based on long-term effectiveness and permanence, reduction of toxicity, mobility, or volume through treatment, short-term effectiveness, implementability, and cost. The modifying criteria, which are evaluated during the Proposed Plan stage, include state acceptance and community acceptance.

Slide 15 compares the alternatives and evaluates how they meet the criteria. This is a very general comparison and there are other considerations that are not presented on the table. The CERCLA status for the SRA Site is summarized on Slide 16. The Draft Final FS is anticipated in the spring and the final is anticipated for the summer of 2012. The Proposed Plan and public hearing to present the Navy's selected remedy is tentatively planned for the fall of 2012; the Record of Decision is anticipated in winter 2012.

H. Welch asked if the mulch PRB will treat all the COCs in the groundwater. D. Barney responded that it is a proven and effective remedial technology, especially for the CVOCs (PCE, etc.). C. Keating added that it has also been proven effective in other sites across the country. She noted that you have to re-inject more carbon source every four or five years. It will work and is sustainable.

S. Zemba asked what the oil/carbon source was. D. Barney responded that the source isn't specified in the FS as the FS is more conceptual; the details will be worked out during the design process.

H. Welch asked if the mulch PRB will clean up the groundwater to the PRG. D. Barney said it may increase the iron and manganese levels; therefore, monitoring is required. The remedy will be adjusted as needed if it is creating another problem (i.e. iron floc in EMD).

M. Parsons asked if there were similar conditions at the sites elsewhere where PRBs were used. She asked if there is a vapor issue associated with the mulch. D. Barney stated he was unsure about the off-gassing of the mulch. There are a series of wells or injection points that allow for re-injection, which if necessary, could double as vapor extraction locations. C. Keating added that odors did not seem to be a concern at the other sites.

H. Welch asked where the other sites are located. C. Keating stated that she has requested the case studies. D. Barney added that there is one state site in Needham, Massachusetts where a similar technology has been implemented, and that it is protecting the Town of Wellesley water supply.

A. Malewicz asked if reducing the source had been looked at. D. Barney responded that Alternative G-5 includes a source area component.

D. Galluzzo asked about the direction of groundwater flow and if it would be more effective if the PRB extended the width of the plume. D. Barney stated that the PRB could be wider, but the current concept is to intercept and treat the major area of contamination in the plume. Otherwise, it would cost a lot of additional money for very little return. A "funnel" like setup may be implemented to direct the water toward the barrier. The barrier is very permeable and groundwater will easily flow through it.

M. Parsons asked how long it will take to remediate the source areas. D. Barney stated that it will take a long time, but Alternative G-5 (with enhanced bioremediation) would have an accelerated cleanup time compared to the other alternatives. M. Parsons asked if the groundwater restriction is permanent. D. Barney stated there is a restriction in some areas of the Base; at SRA there will be a restriction on use of groundwater for drinking water or irrigation. The restrictions are mostly permanent, but if the objectives are met, they can be lifted.

S. Zemba asked what the physical restrictions would be with regards to the timeframe of cleanup. D. Barney stated that it is on the order of 50+ years and that there might be fence around the EMD, if a risk becomes associated with the surface water (at this time there is no risk associated with the surface water). There is no risk associated with just walking around the Site.

In response to a comment from M. Parsons about the water supply for the development, P. Harting-Barrat stated that she had received two calls about the developer's water source. M. Parsons stated it is still in negotiations. J. Goodrich noted that questions on this issue should be directed to SSTDC or LNR.

T. Pries asked who is responsible for the maintenance of the PRBs. D. Barney stated that the Navy is responsible for the entire remedy and monitoring throughout the duration of the remedy.

M. Bromberg asked for clarification on the Alternative G-5 figure – are there multiple areas of source treatment? D. Barney responded that there are two treatment zones: for overburden and bedrock groundwater source areas.

D. Doyle asked if the contamination in the bedrock is the source or is the source in the overburden. D. Barney stated that it is assumed that the overburden is the release area. It will likely take a long time for the concentration to decrease, and that is why the LUCs will be in place. It should also be noted that the remedy may need to be altered and re-evaluated based on the monitoring results.

A. Hilbert asked what community acceptance was. D. Barney stated that the community is given the opportunity to comment on the Proposed Plan and the Navy then evaluates the comments and responds accordingly. A. Malewicz added that community weighs in and provides an opportunity to modify the proposed remedy. She noted that most of the Base is categorized as GW-3 (e.g. not suitable for drinking water); any wells must get a DEP permit.

S. White asked what the source was. D. Barney stated the source is not known; it is possibly related to the hobby shop or pistol range. The SRA area was initially sampled as a background location; CVOCs were found in groundwater and the area was then designated as a site.

M. Parsons asked about recreational use on the Site. D. Barney stated that it is zoned as open space (likely to be a National Park transfer) and there could be a scout camp or something similar in the open space north of the EMD. The area south of the EMD is zoned for recreation and that area may include indoor or outdoor recreation. It was noted that there may be flexibility needed in zoning and development.

H. Welch asked if there is a backup plan if the remedy does not work; would a removal be considered. D. Barney stated that they would probably re-evaluate other options. They have to maintain flexibility and if the remedy does not work as anticipated they will determine why and how to fix it at that point. Why a remedy doesn't work is useful in determining how to choose a more appropriate remedy. H. Welch asked if it doesn't work, will it be re-opened for the public to comment on. D. Barney responded yes, and added that there is an administrative process to look at a possible modification of the remedy. C. Keating stated

that there are sometimes contingencies written in, but the EPA doesn't approve a remedy unless they think it is going to work.

D. Doyle asked who pays for the remedy. D. Barney stated that the Navy sets the budget and funds what is necessary to do the remediation with input from the regulators.

M. Smart asked about the PRB construction. D. Barney said it would be covered (not a trench) but would have injection points interspersed throughout. The PRBs would not likely be fenced off.

M. Brennan commented that LUCs have to be enforced and fences are made to be cut, so his preference is Alternative G-4 or G-5.

D. Galluzzo asked if the profile of the RDA was GPS'd. D. Barney stated that the boundary and LUCs at RDA have been professionally surveyed. D. Galluzzo is concerned that the Navy will be too flexible and the development will go beyond the agreed upon boundary and impact the RDA remedy.

S. Zemba commented that the LUCs are dependent on the zoning staying the same. What if the zoning changes? C. Keating stated if the zoning changes then the risks would have to be evaluated in the five year review; but the zoning is not likely to change. A. Malewicz stated that the LUCs are not based on zoning, but on risk, and they stand independently. There will be a deed restriction. The LUCs aren't tied to the zoning and they will remain in place until the risks are mitigated. The LUC details will be developed during the Remedial Design.

T. Pries asked if the zoning changed, would the remediation plan change. D. Barney stated that the Navy would not change the remedy. In accordance with the BRAC laws, once property is transferred if the reuse plan changes then any additional cleanup required to support the changed use would be funded by others.

### **3. UPDATES AND ACTION ITEMS**

#### Action Items:

- 1) Designation of no salt zones as part of the development. J. Young has provided a written update that is attached to the minutes. He will be present at the next RAB meeting to answer any questions.
- 2) WGL inspection – The first quarterly inspection was conducted in December 2011. A professional engineer inspects the landfill and makes observations regarding the integrity of the

landfill. There is a contract in place with Shaw to return and make repairs based on the inspection.

M. Bromberg asked if Bill Brandon had comments on the inspection. C. Keating stated that she thinks so, but it is not complete yet. D. Galluzzo asked if the dirt pile near the WGL gate had any impact on the landfill. D. Barney stated it did not impact the landfill and of greater concern would be the retention pond built on the other side of French Stream. Monitoring of the landfill is occurring quarterly to ensure that there is no impact to the remedy.

M. Parsons commented that it looked like they took the RDA culvert out. D. Barney stated that the plan was to leave the bottom part of the western-most culvert in-place and grade over it, but he will make a site visit.

MassDEP Update: None.

IR/EBS Program Site Update: D. Barney stated there was a summary on the back table.

Building 81, Building 82, and SRA are all in the FS stage. The Building 81 FS will be out in 1-2 weeks and is a possible topic for the next RAB.

The second quarterly LTM event at WGL was completed in March.

The STP is another possible topic for the next RAB meeting. The remedial action was implemented, but confirmation sampling indicated a greater area of contamination than originally identified. Additional soil delineation was conducted and with the new data the Navy is looking to modify the remedy.

At the RDA, a new LTM report format is being followed. Bids were received for the landfill gas trench. Of the five bidders invited, three did not submit bids and the remaining two bids were deemed non-responsive. The design is being re-evaluated.

The MassDEP Solid Waste Management Section in the Southeast Regional Office has approved the Small Landfill closure certification report.

AOC 55C is pending transfer in FOST 6A. Another wetland inspection will be conducted in June.

At RIA 11, the Navy is working through the PFC issues. A report is being developed for the IOA. A path forward is still being determined for RIA 111 (old wooden Hangar 2).

### Conclusion/Next Meeting

J. Goodrich wrapped up the meeting. The next RAB meeting will be the second Thursday in June (June 14, 2012). The meeting will again be held at the New England Wildlife Center, 500 Columbian St., Weymouth, MA. Suggested topics for the next meeting include:

- B81 FS
- STP update

S. Zemba asked what the comment deadline was for the draft SRA FS. D. Barney responded that the Navy will accept comments until the end of April.

## **ACTION ITEM: Designation of no salt zones as part of the development**

Article VII of SSTTDC's Health Regulations (see below), adopted in February of 2009 creates 'no salt zones' for private areas located within the NAS South Weymouth Water Resources Protection Overlay District. As defined in Section 9 of the Zoning and Land Use By-Laws for NAS South Weymouth, this District consists of the Aquifer Protection District and the Wetlands Protection District.

This article only regulates private property. However, as future SSTTDC-owned infrastructure is constructed, SSTTDC will consider implementing 'no salt zones' for those roadways that SSTTDC will own in the future, including the section of the East-West Parkway located on the former NAS (the ends of the E/W Parkway that will be located in Weymouth or Rockland jurisdictions will be subject to regulations in those respective towns).

For instance, SSTTDC is currently evaluating proper setback distances from the Old Swamp River Bridge where 'no salt zone' signage could be installed as part of the current E/W Parkway contract with Barletta Heavy Division.

## **ARTICLE VII - SAND ADDITIVES**

Except in emergency situations (as determined by the Director of the applicable Department of Public Works or his or her designated agent), no person, firm, corporation or developer engaged in sanding of private ways, private roadways, private parking lots and any other private areas whereupon vehicular or pedestrian traffic is permitted, where such locations are within the NAS South Weymouth Water Resources Protection Overlay District, as such term is defined in the By-Laws, or any portion of Shea Drive located between Route 18 and the intersection of Shea Drive and Memorial Grove Avenue that is privately owned, may use any additive to sand or gravel for the purpose of accelerating the melting process of ice and/or snow in said areas.

The Applicable Board or any of its duly authorized representatives, may request on a bi-monthly basis of any person, firm, corporation or developer, a report of pollutants that may be injurious to resources within the Water Resources Protection Overlay District and the portion of Shea Drive referenced above, that may be contained in the run-off from any private roadway, private parking area and/or any other private areas whereupon vehicular and/or pedestrian traffic is allowed. Upon such request, the person, firm, corporation or developer, at his own expense, shall supply the Applicable Board or its duly authorized representative, a copy of the results obtained from the testing of water run-off, such testing to be done by a qualified laboratory.

Whoever violates any provision of the foregoing regulation or any order made thereunder shall be punished by a fine of not more than Fifty Dollars (\$50.00) for each occasion such violation occurs.