

MEMORANDUM FOR RECORD

SUBJECT: Fort Detrick Restoration Advisory Board (RAB) Meeting Summary, 22
SEPTEMBER 2010

1. Summary Contents

Items addressed at the meeting are listed below, with corresponding section numbers indicated in the column on the right.

SUBJECT/ACTION TYPE	SECTION NUMBER
Summary Contents	1
Attendees	2
Meeting Opening / Remarks	3
Purpose of RAB Meetings	4
Installation Restoration Program Emerging Topics	5
RAB Membership	6
Meeting Minutes	7
Area B Groundwater Remedial Investigation Work Plan	8
General Restoration Questions	9
Meeting Closing	10

Please note: PowerPoint presentations were utilized during the RAB meeting. A copy of the presentations is attached to these minutes and is incorporated into these minutes by this reference.

Text contained within brackets [] has been added for clarification purposes.

2. Attendees

Members Present:

LTC James St. Angelo, Director, Safety and Environment and Co-Chair
Ms. Linda Robinson, Community RAB Member and Co-Chair
Mr. Robert Craig, Chief, Environmental Management Office
Mr. Joseph Gortva, Environmental Restoration Program Manager
Mr. John Fairbank, Maryland Department of the Environment
Dr. Henry Erbes, Community RAB Member
Ms. Laurie Haines, Army Environmental Command
Dr. Gary Pauly, Community RAB Member
Ms. Helen Miller-Scott, Community RAB Member

Others Present:

Mr. Jeffrey Parks, Shaw Environmental & Infrastructure, Inc.
Mr. Gary Zolyak, USAG/OSJH (Ft. Detrick Environmental Attorney)
Mr. Rob Thomson, U.S. Environmental Protection Agency, Region III
Mr. William Hudson, U.S. Environmental Protection Agency, Region III
Dr. Barbara Brookmyer, Frederick County Health Department
Ms. Ashley Roeske, U.S. Army Corps of Engineers
Mr. Keith Hoddinott, USAPHC
Ms. Katrina Harris, Bridge Consulting Corp.
Mr. Dewey Chaney, Community Observer
Ms. Sylvia Chaney, Community Observer
Ms. Virginia Gaver, Community Observer
Ms. Holly Knoch, Community Observer
Ms. Karen Harbaugh, Community Observer
Mr. Cliff Harbaugh, Community Observer
Ms. Pat Wolfe, Community Observer
Mr. Jerry Wolfe, Community Observer
Ms. Virginia Orfanos, Community Observer
Ms. Megan Ecksteink, Frederick News Post
Mr. Ralph Huffman, Community Observer
Ms. Violet Rice, Community Observer
Ms. Carol Norris, Community Observer
Mr. Carroll Rice, Community Observer
Ms. Shirley Rice, Community Observer
B. Ellis, Community Observer
Mr. Frank Anastasi, Community Observer
Ms. Jenny Sanders, Community Observer
Mr. Steve Nakascki, Community Observer
Ms. Stacey Bucknor, Community Observer
Mr. Gerald Koehl, Community Observer
Pat Frucella, Community Observer

Members Absent:

Mr. Charles Billups, Community RAB Member

Ms. Alicia Evangelista, Frederick County Health Department
Mr. Barry Kissin, Community RAB Member
Mr. Gerald Toomey, Community RAB Member
Mr. Craig Toussaint, Community RAB Member
Mr. Thomas Wade, Community RAB Member

3. Meeting Opening / Remarks

Mr. Robert Craig convened the meeting at approximately 6:30 p.m., on Wednesday, September 22, 2010, at the Residence Inn, 5230 Westview Drive, Frederick, Maryland. Mr. Craig introduced the new Director of Safety and Environment, Lieutenant Colonel (LTC) James St. Angelo. LTC St. Angelo welcomed everyone to the meeting and thanked everyone for their participation. LTC St. Angelo stated it was his pleasure to be a member of the Board and to be co-chairing with Ms. Linda Robinson. He advised that the Garrison Commander, COL Robinson, could not be present, but had transferred the Army co-chair responsibilities to him as Director of Safety and Environment. LTC St. Angelo said he looked forward to working with the Board and the community. LTC St. Angelo asked the Board to introduce themselves which they did. Mr. Craig asked a few other Army staff and contractors, as well as U.S. Environmental Protection Agency staff to introduce themselves which they did.

4. Purpose of RAB Meetings presented by Ms. Linda Robinson

Ms. Linda Robinson advised the RAB community members had held an administrative meeting and had drafted a document entitled "Purpose of the Ft. Detrick Restoration Advisory Board" based on available guidance from EPA and the Department of Defense. She stated the document she was about to read would be available as a handout at every meeting so new people would know the purpose of the Board and its meetings.

"The Restoration Advisory Board (RAB) is a stakeholder group that meets to discuss environmental restoration (cleanup) at Fort Detrick.

The Department of Defense created RABs to provide an opportunity for community members to:

- 1) Participate in the review of restoration documents.
- 2) Provide advice as individuals to the decision-makers on environmental restoration issues at a specific property.

This RAB consists of:

- 1) Two co-chairs, one from Fort Detrick and one from the community.
- 2) Members of the community who have expressed interest in being a member and have been appointed by the Fort Detrick co-chair.
- 3) Members from Fort Detrick involved in environmental restoration.
- 4) Representatives from Frederick County and Frederick City Agencies.

- 5) Representatives from the regulatory agencies involved in environmental restoration, including the Maryland Department of the Environment and the US Environmental Protection Agency who are resources to the RAB.

In addition, other members of the public are encouraged to attend. During each meeting, a time will be designated for questions and comments from them.

RAB meetings offer members the opportunity to influence cleanup decisions through discussion, and to provide input to decision makers. Because representatives of the environmental agencies overseeing cleanup participate in the RAB meetings, the RAB also offers members and the public the opportunity to share their questions, concerns, and ideas with those agency representatives.

According to published DOD and EPA guidelines, RABs may only address issues associated with environmental restoration activities. This has to do with the source of funding for RABs. Community members may raise some non-restoration issues during discussions. While these issues may not be appropriate for discussion within the context of the RAB, Fort Detrick representatives should be responsive to these concerns by referring them to the appropriate Fort Detrick office or to alternative forums more appropriate for the issue that was raised. Individuals hoping to discuss activities other than environmental restoration should contact the Fort Detrick co-chair of the RAB. The co-chair will identify the point of contact or office responsible for handling the issues of interest and pass along the names of inquirers to the appropriate offices for resolution.

RAB members should provide advice as individuals, not as a group. Consensus is not a prerequisite for RAB recommendations, though consensus may evolve in the course of discussion. Community members should participate in an open and constructive manner and be respectful of others' opinions. Visiting members of the public are asked to do the same."

Ms. Robinson explained the text she had just read came almost in their entirety from the RAB Rule Handbook, Office of the Secretary of Defense, February 2007 and the RAB Implementation Guidelines, a DOE and EPA publication from September 27, 1994. She said she hoped the document would help everyone understand the format and objectives of the Board and its meetings.

LTC St. Angelo noted that what Ms. Robinson had just read was also captured in the ground rules as shown on the screen and in a handout.

5. Installation Restoration Program / Emerging Topics presented by Mr. Robert Craig

Mr. Craig stated he had been stationed at Fort Detrick for seven and a half years, and Mr. Joe Gortva, Environmental Restoration Program Manager, slightly longer. He noted that when they became responsible for the environmental restoration program they took the position that the program was fairly mature, and people previously involved had made sound decisions. Mr. Craig said at the last RAB meeting and the weeks preceding the meeting, issues were raised including the concern that perhaps Fort Detrick did not look at everything they should have. He

stated he was calling these issues “emerging issues.” Mr. Craig explained it was understood now that Fort Detrick was a location where herbicides were tested, and perhaps developed; however, there is very little written history at Fort Detrick documenting the work done in the 1940s, 1950s, and 1960s. He noted Fort Detrick has clearly heard the concerns from the community, but there are not many records.

Mr. Craig advised Fort Detrick has started a three-prong investigation, and from a CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) perspective, the effort is being called a Preliminary Assessment/Site Investigation. He stated the investigation was already underway and had started with a research of archival records. He explained the federal government has dozens of warehouses [which are not located on Fort Detrick] where archival records from Fort Detrick are stored. He stated the Army has hired a contractor experienced with historic record searches to review records from the 1940s, 1950s and 1960s and to help determine what was done at Fort Detrick. Mr. Craig continued explaining that in terms of timing, the historical records search has been broken into two segments. He said the first segment would look at the use and testing of 2,4,5-T which was a component in many herbicides, and of particular concern to veterans. Mr. Craig said a preliminary report on 2,4,5-T would be completed in October. He advised this investigation is not limited to herbicides and will also look at what might have been tested in the field or in buildings at Fort Detrick. Mr. Craig stated a full Archive Search Report (ASR) would be completed in February 2011.

Dr. Henry Erbes stated the environmental restoration program had looked for herbicides very early in the program, sometime between 1994 and 1996. He said Maryland Department of the Environment and the U.S. Environmental Protection Agency had signed off on the report and suggested Mr. Craig locate that report. Mr. Craig concurred that herbicides had been addressed early in the program and determined to not be an issue that needed further work. Mr. Craig stated a similar decision may be reached again. Dr. Erbes expressed concern that re-examining the same issues may not be an effective use of taxpayer dollars.

Mr. John Fairbank stated that back in the 1990s the Army advised the testing had been done in the greenhouse, and testing was performed on the greenhouse drains to see if there was any herbicide contamination. Mr. Fairbank said he did not recall any sampling for herbicides in Area B other than in test pits. Mr. Gortva advised that sampling had been conducted in some of the wells for herbicides, but very little was detected in the groundwater. He noted the ASR will allow the Army to target areas for sampling.

Mr. Erbes suggested an approach be taken similar to what the Maryland Department of the Environment did with respect to the TCE (trichloroethylene) issue. He stated they scoured the area to find out if there were other potential sources for the TCE and other volatiles, and they found there was a nearby dry cleaner. Mr. Erbes said the dry cleaner was looked at as a possible source, but there was no longer any evidence remaining. He said Maryland Department of the Environment also found an unregistered underground storage tank for gasoline or oil right across the street from the Fort Detrick entrance. Mr. Erbes suggested other potential sources of herbicides, particularly 2,4,5-T, in the area be researched to have a complete picture since Fort Detrick was not the only place to use herbicides.

Mr. Craig continued with his presentation. He stated the first draft of a work plan for the records search had been developed the previous Friday.

Mr. Craig noted some historic information had recently been obtained not from Army records, but from the Department of Veteran Affairs records. He explained a 2006 Veterans Affairs report that talked about possible exposures to soldiers in the Continental United States, and Fort Detrick was one of a dozen locations mentioned. Mr. Craig said the report discussed testing in two one-acre fields in Area B. He continued explaining that Mr. Gortva reviewed photographic records, also known as EPIC studies, and found in 1952 photographs some barren areas; the areas were two separate plots of approximately two acres which seem to be the areas the Veterans Affairs report mentions.

Mr. Craig emphasized what he was talking about was not the end, but the beginning of an investigation. He said a Phase One herbicide and dioxin sampling plan had been developed for the site located in the 1952 photographs. In response to a question, Mr. Craig confirmed the work was a preliminary assessment/site investigation effort. Mr. Craig stated the Veterans Affairs document reported that 2,4,5-T was applied at the rate of 0.05 pounds per acre or approximately 0.2 pounds. He advised a draft work plan had been submitted the previous Friday to the regulators, and the Army is awaiting their comments. Mr. Craig referred to Mr. Erbes' earlier comment about background samples and Fort Detrick not being an island and noted the work plan includes collecting at least four background samples away from Fort Detrick to compare to the levels detected at Fort Detrick.

Mr. Erbes asked for which contaminants of concern would the samples be analyzed. Mr. Craig responded that the work plan is for a Phase I investigation which will be looking for 17 dioxins and herbicides. Mr. Craig said once there is a better understanding of what activities took place at Areas A, B, and C additional investigations, to include a broader range of analytes, may be developed.

Mr. Craig next discussed the conceptual approach for the work plan. He noted the Army is waiting for regulatory comments before sharing the work plan with the RAB. He stated normally work plans are shared with the RAB simultaneously with being sent to the regulators; however in this case the Army thought it would be better to address any regulatory comments before seeking RAB input since this draft work plan is so preliminary. Mr. Craig said he anticipated sharing the work plan with the RAB within the next two months.

Mr. Craig summarized an upcoming project to interview former employees and individuals who lived on or near Fort Detrick and have historic knowledge. He advised the contract for the project has not yet been awarded, but he expected the award to be made this week. Mr. Craig said the interview process will be a comprehensive program consisting of in-person and telephone interviews, as well as a web site where people can register to be interviewed and a Hotline. Mr. Craig advised a press release and a public notice would be issued in the next one to two weeks with the web site address and Hotline phone number. He stated the goal is to have a draft report on the interview project by mid to late December; he advised an update will be given at the next RAB meeting.

Mr. Erbes suggested Mr. Norm Covert be contacted for his personal knowledge as well as access to interviews with former employees, particularly some interviews conducted in the early 1990s with individuals who had already been retired for some time.

Mr. Craig next discussed the Federal Facilities Agreement, explaining that as a result of being listed on the National Priorities List, the property owner and EPA negotiate an agreement which includes, among other provisions, penalties for not keeping to a schedule. He stated all parties are working towards a December signature date. Mr. Craig emphasized the agreement is not negotiated at the local level, but is negotiated by Army and EPA Headquarters personnel.

Mr. Gortva noted that his understanding is that by law a Federal Facility Agreement is not required until there is a decision document to sign, which is about two years away, but the Army is being proactive and working to get the agreement in place. Mr. Rob Thomson of EPA advised that once a site is on the National Priorities List, there is authority for the Army and EPA to sign Records of Decision. Mr. Thomson explained that, at a private site, the schedule for implementation of a Record of Decision would be in the Record of Decision itself. He continued explaining that because the Army is funded by the government, it is more difficult to set schedules which are enforceable because performance of work is tied to how money is allocated by Congress. Mr. Thomson said the Federal Facility Agreement establishes a Site Management Plan where the schedules are developed in coordination with funding. Mr. Gary Zolyak mentioned one of the significant aspects of the agreement is that it stipulates penalties so if the Army does not meet set deadlines there is a dollar penalty which can be up to \$10,000 a day.

Ms. Linda Robinson asked what provisions would be in the Federal Facility Agreement. Mr. Craig responded that one aspect of the agreement is schedules for remedial investigations/feasibility studies.

Mr. Craig continued the discussion to note that a contract to implement the Area B Groundwater work plan should be awarded shortly. Mr. Craig stated there would be a presentation this evening on the work plan by Jeff Parks of Shaw, but another contractor will actually be performing the work.

6. RAB Membership presented by Ms. Linda Robinson

Ms. Robinson referenced the RAB charter and read the following sentences extracted from the charter relevant to membership.

“RAB membership is open to the public and selection is approved by the Installation Commander through application to the Restoration Program Manager. Membership will consist of 10 to 15 community members. The selection process is based on applicant representation of diverse interests in the local community with preference given to those who are most impacted by the restoration process. The Restoration Program Manager [Joe Gortva] will provide information regarding RAB applicants and obtain feedback from the membership at a regular meeting.”

Ms. Robinson said Mr. Gortva had previously provided three applications which were considered in an administrative meeting, and they agreed the three applicants would be welcomed as community members. She noted two of the applications were from a husband and wife and they have agreed only one of them will apply for a seat on the Board in order to allow other community members an opportunity to participate. She stated Mr. Cliff Harbaugh will be the proposed member. Ms. Robinson invited anyone present who was interested in RAB membership to take and complete an application, copies of which were available at the sign-in table. Ms. Robinson stated membership requires attendance and participation, as well as a good bit of reading.

LTC St. Angelo advised that the Army accepts and welcomes the proposed applicants as members.

7. Meeting Minutes presented by Mr. Joe Gortva

Mr. Gortva advised since the RAB was not able to get through the agenda of the last meeting and the topics were transferred to this meeting's agenda, there is no summary of the last meeting.

8. Area B Groundwater Remedial Investigation Work Plan presented by Mr. Jeff Parks, Shaw E&I

Mr. Jeff Parks of Shaw Environmental & Infrastructure, Inc. explained that he would be discussing the work plan developed for the Area B Groundwater Remedial Investigation. He stated a work plan is basically an instruction booklet of what work is going to be done and how the work is going to be done. He noted the work plan discusses why certain work is being done and what the objectives are that the work will hopefully accomplish. Mr. Parks said the work plan is a very thick document containing much technical information, such as how the wells will be sampled and how to collect a groundwater sample. Mr. Parks stated his presentation would cover the highlights of the overall plan and some of the major elements so the community can have a good idea of the length and breadth of the Army's work over the next couple of years.

Mr. Parks stated numerous groundwater investigations have occurred at Area B since 1977. He advised the Fort Detrick partnering team has held ongoing meetings for two years. [The Fort Detrick partnering team includes members from the U.S. Environmental Protection Agency, Maryland Department of the Environment, Fort Detrick, U.S. Army Environmental Command, and the U.S. Army Public Health Command.] Mr. Parks said initial efforts focused on developing a conceptual site model where all the information available is put into a model to determine if all the elements make sense. He commented that as part of the modeling effort, the Army brought in two nationally known karst ground water experts, with more than 55 years of experience, to provide a good solid base for the model. Mr. Parks said EPA also brought in a nationally-known expert in karst ground water for all project meetings and appointed a very senior groundwater expert as the Project Manager for EPA with experience at many military sites as well as private commercial sites. Mr. Parks noted that input from the Army Surgeon General's Office, the RAB, and the public, through various public meetings, was included in the development of the work plan.

Mr. Parks advised the first step was to develop the work plan objectives. He stated the first objective is to confirm the groundwater flow direction, noting there is pretty good data showing how groundwater flows from west to east, but with the karst topography there can be crevices, fractures, and caves which can make groundwater flow change from its normal pattern of flowing straight downhill. He said the work will ensure the groundwater is tracked from the source of the contamination to where it would potentially impact the environment or the public. Mr. Parks discussed the second objective of determining the depth of the contamination and the groundwater flow at depth.

In response to a question from Mr. Erbes, Mr. Parks said shallow groundwater refers to water in the overburden, on top of bedrock, and is approximately 30 to 50 feet deep. He stated this water would respond more to weather conditions, such as flash flooding, where water flows more quickly and can percolate directly from the soil. Mr. Parks said any water in the karst, beyond the weather zone, would be considered deep. Mr. Parks said contamination had been detected in a well at 180 feet so additional wells were installed at 320 feet; this ongoing process will continue with the investigation going as deep as necessary to characterize the extent of contamination in groundwater.

Mr. Parks discussed the third objective, noting after the groundwater flow and other data had been collected, they would establish an appropriate monitoring well network for the shallow, intermediate, and deep levels. Mr. Gortva noted the existing well network would be assessed to see if any additional wells are needed at different depths. Mr. Parks stated there are about 70 existing wells and plans for about another 35. He said the work plan objective will ensure any additional wells are installed in appropriate locations to provide useful data.

Ms. Robinson asked if any of the wells would be off-site. Mr. Parks responded that the work plan is a living document and since it was finalized, a deep well has been added in-between Carroll Creek basin and Areas A and B, but the exact location has not yet been determined. Mr. Parks said this is the only deep off-site well planned at this time. Ms. Robinson asked if the well is being installed in the direction where the contamination is headed, and Mr. Parks confirmed it would be as the objective is to confirm the contamination boundaries. He noted there will be off-site sediment and surface water locations sampled, as well as direct push shallow groundwater sampling. [Several dozen direct push shallow groundwater sampling points are planned off-site as part of the work plan.] Mr. Parks explained that direct push technology allows collection of a groundwater sample, but does not involve the installation of a monitoring well.

Ms. Robinson asked if additional off-site wells could be added, if needed. Mr. Gortva said they could be added in a Phase 2 investigation, if necessary, but after the needed data was gathered during the Phase 1 work.

Mr. Parks discussed the fourth objective of obtaining appropriate analytical data to address both chemicals suspected to be present and those not suspected, but which would then be ruled out by the data.

Mr. Parks said the final objective is to assess the possibility of vapor intrusion. He noted there are very few buildings at Area B, and vapor intrusion is not a major concern, but it will be

assessed. He explained that vapor intrusion results from volatile organic compounds vaporizing off the water table, coming into soils, and moving into building basements - similar to radon. Mr. Erbes asked if Mr. Parks was familiar with the vapor intrusion evaluation done on the Robinson property in the 1990s. Mr. Parks responded affirmatively and noted that while vapor intrusion was not found to be an issue at that time, the intent is to have the remedial investigation be as comprehensive as possible. He said the Robinson property would be checked again, along with other locations, utilizing new technology to be sure the investigation is as thorough as possible. Mr. Gortva added that in addition to technology advancements since the initial study for vapor intrusion, the regulatory guidance has been updated as to how to do the assessment and what models to use. He noted this investigation will capture the most current information for completing the remedial investigation.

Mr. Parks next reviewed the major activities in the work plan:

- Horizontal flow meter survey to determine the direction of groundwater flow in wells.
- Spring and seep sampling to see what is moving from groundwater to surface water.
- Focused dye trace study where dye is injected into the groundwater and monitored to see where it comes out.
- Drive point technology sampling and piezometer installation that basically presses a straw hydraulically into the groundwater to extract a sample of the water. Mr. Parks noted this is a quick method to cover a lot of ground.
- Installation of new wells and borehole logging of new wells and select existing wells. Mr. Parks explained borehole logging involves activities such as inserting a video camera to see what the insides of the wells look like and to look for features such as cracks where groundwater may be flowing out that is not currently known. It also includes a variety of tests that look at the conductivity of rocks and the type of rock present.
- Monitoring of water levels in all the wells to determine which way the groundwater is flowing.
- Groundwater sampling where samples will be collected from the wells and sent to a chemical laboratory to be analyzed for all the selected parameters.
- Surface water and sediment sampling to consist of two events of surface water sampling and one sediment sampling event. Mr. Parks noted the samples will be collected from the waterways that run through and around Area B, as well as up-gradient and down-gradient of Carroll Creek, to see how the surface water flow integrates with the groundwater flow and to determine all the connections.
- Vapor intrusion sampling.
- Partnering with regulators, the RAB, and the public throughout the entire process.

Ms. Robinson asked what drives the quality assurance activities that are part of the remedial investigation. Mr. Parks responded that a very detailed, lengthy quality assurance/quality control plan has been developed and is available for review. He noted that depending on the particular process or task, there are very stringent parameters that the labs need to follow. He advised that the labs used are tested and audited by the Army and EPA, as well as other agencies, to make sure their instruments are accurate, and producing not only good, but consistent data. Mr. Parks explained there are also procedures in place that the labs use to clean their equipments so new samples are not contaminated by old sample residues. He noted the rules the lab has to follow

are strictly enforced and guided by guidance books. Mr. Parks explained that, for sampling efforts, standard operating procedures are developed and agreed to by the partnering team members as to how something is going to be done, such as whether a pump is going to be used at the bottom of a well or the top of a well, as well as back up plans if the first method is not successful. Mr. Parks said each effort has its own rule book and guidance documents. He added that the contractor also has internal quality assurance processes involving various levels of management and senior technical experts to ensure accurate reports are produced.

Mr. Parks displayed a chart showing the activities to be done in their order of implementation to build on knowledge.

Mr. Gortva mentioned again that Shaw would not be doing the implementation, but the contract award is on schedule so there should be no slippage in the schedule.

Mr. Parks stated he would next discuss each of the work plan activities previously highlighted.

Mr. Parks explained the Horizontal Flow Meter Survey, which involves using a device that is very sensitive, inserting it into a well, and determining from what direction ground water is coming into the well. He stated that gathering such data from 60 or 70 wells provides very useful information and clearly identifies the gross groundwater flow, as well as the specific flow in a certain area. Mr. Parks displayed an aerial photograph with the horizontal flow meter locations marked on the photograph.

Mr. Parks discussed the spring and seep reconnaissance and sampling, noting the stretch of Carroll Creek to the east of Area B is believed to be a major discharge area for groundwater from Area B and therefore is a concern. He said there are also intermittent and full time springs and creeks to the north and south of Area B that will be sampled.

Mr. Erbes asked if specific recharge spots in the stream would be sampled, and Mr. Parks responded they would not be. Mr. Gortva stated the streams would be sampled which would provide data on groundwater flowing into recharge areas along the stream. Mr. Parks displayed an aerial photograph showing the areas to be sampled.

A member of the general public asked if Baker Park would be part of the investigation. Mr. Parks explained the investigation is an iterative process where the first step is to determine what, if anything, is leaving the installation and then moving out the sampling effort as needed. The member of the general public asked if the water plant on Market Street provides water to Fort Detrick. Mr. Craig responded that the City has a water plant and the Army has a water plant just about 50 yards downstream of the City's plant; he pointed out the location of the water plants on the map. Mr. Craig stated there was no connection between the water plants' intakes on the Monocacy River and the Area B investigation.

Mr. Parks advised that a Focused Dye Trace Study will be performed where dye will be injected into one of the new wells that is about 325 feet deep, and where a low level of TCE (trichloroethylene) was detected, to determine where the dye is coming out. He noted this is a good method of determining short distance groundwater flow. In response to a question from

Mr. Erbes, Mr. Parks said the dye would be injected into the bottom of the well where the TCE was detected. Mr. Parks showed an aerial photograph with the focused dye trace locations.

A member of the general public stated that he understood Area B is the focus of this remedial investigation, but there is evidence that there is groundwater contamination under the main site and incidences where they used some sort of nerve gas in various testing on Area A similar to what was done on Area B. [To date, there is no documentation to substantiate that nerve gas was tested at Fort Detrick. The ongoing ASR should be able to confirm this when it is finalized.] He suggested the investigation be expanded to include Area A.

Ms. Robinson asked if something was found in the ASR related to Area A whether the Army would develop a separate work plan for Area A. Mr. Gortva responded affirmatively and stated if an issue is found that has not been previously addressed, a preliminary assessment would be done first and then if further work is needed, a remedial investigation work plan would be developed. He added it is possible a preliminary assessment would determine no further work is needed and the project would end.

Mr. Gortva stated Area A cannot be added to the Area B work plan. He stated funding can only be allocated toward specific sites. He explained that if a new site is found, a request for funding would be submitted in order to conduct additional work.

Ms. Laurie Haines stated there have been remedial investigations of many sites conducted at Area A already, and a remedy is in place at one site in Area A. Mr. Gortva added there are two sites at Area A. He said the one site is the TCE spill site at Building 568, which has been briefed at previous RAB meetings and where the concentrations of TCE have dropped significantly; the source area is approaching drinking water standards and most wells are well within drinking water standard limits. Mr. Gortva said the other site is a No. 6 fuel oil site which is stable and not moving, but is continuing to be monitored under the [Maryland Department of the Environment] Oil Control Program. Mr. Gortva said Fort Detrick has addressed groundwater in Area A. He stated that if the ASR finds other areas that need to be investigated, Fort Detrick will do so.

A member of the general public discussed a letter he had received for a former nearby resident of Fort Detrick discussing the testing of a gas. He said the letter reports the former resident seeing animals dying during the test. He said he is going to push very hard to have Area A and Area C included in the National Priority List work so there is no delay in the study and investigation and no neglect of Clover Hill.

Mr. Erbes reiterated previous statements by the Army that Area A cannot be included in the Area B remedial investigation because of funding restrictions. He suggested the member of the general public have the person who wrote the letter participate in the interview project.

Mr. Gortva emphasized that the ASR is not limited to Area B, but will encompass all activities conducted at Fort Detrick. He reiterated that if the ASR finds areas that were not addressed, a preliminary assessment will be performed. He stated that the work plan for the area B groundwater has to be focused only on Area B groundwater. Mr. Gortva said Fort Detrick has

heard, and is addressing, the community's concerns, but different issues need to be addressed through different studies.

Mr. Parks resumed his presentation and displayed an aerial photograph with the locations for the direct push shallow ground water sampling to be conducted along the southern boundary of Area B and in the Carroll Creek floodplain, which is where the existing data indicates most of the groundwater from Area B discharges. Mr. Parks noted that the work plan provides for an extensive look at groundwater in Area B.

Mr. Parks discussed the new wells to be installed, noting 29 wells (shallow, intermediate, and deep) will be installed at 13 locations, with the deep wells installed down to 300 feet or deeper. Mr. Parks explained the work plan included provision for two additional wells, if needed, so there would not be the need for a contractual amendment. Ms. Robinson asked if these could potentially be off-site wells. Mr. Gortva responded that the wells could be sited anywhere the partnering team, which includes the regulators, decide the wells are needed, although there is a legal process which must be followed to get permission if they are not on Fort Detrick property.

Mr. Parks displayed a map of the new monitoring well locations and discussed the rationale for the locations, including gaining a better understanding of the plume and the source area.

Mr. Parks stated that extensive borehole logging is planned on all the new wells and some existing wells as shown on a map he displayed.

Mr. Parks discussed the water level monitoring locations as displayed on a map. He stated this activity consists of measuring all the levels at one time to gain a comprehensive idea of where ground water is flowing. Ms. Robinson asked for confirmation that some of the locations are off-site, and Mr. Parks confirmed some are off-site.

A member of the general public asked why there are no wells adjacent to Kemp Lane and north of Area B. Mr. Parks pointed out, on the map, the disposal area location and the plume of contamination based on the data collected to date. Mr. Parks also pointed out the wells which are monitored to the north, but so far those wells do not indicate flow from this area. Mr. Gortva said a number of wells have been tested over the years along Kemp Lane, and there were no detections above drinking water standards.

Mr. Parks discussed the ground water sampling, noting that many samples will be collected to support the risk assessment to human health and to also properly assess the environmental conditions. He explained that one round of samples would be collected in the spring (the wet season) and one round of samples would be collected in the fall (the dry season). Mr. Parks said that the samples would be analyzed for both the standard suite of chemicals, as well as an expanded suite of non-standard compounds. He explained that at some of the off-site wells the samples would be analyzed for what are known as emergent chemicals. Mr. Gortva noted that EPA had requested some of these emergent chemicals be tested, which had been found at other sites across the country, and the Army agreed to conduct the analysis. Mr. Parks displayed a map of the groundwater sampling locations.

Mr. Parks reviewed the surface water and sediment sampling, which will help determine what the groundwater may be depositing into the surface water and what chemicals might be moving into the surface water from the sediment. Mr. Parks referenced the list of compounds the samples will be analyzed for and noted that it was a very extensive list. Mr. Parks displayed a map showing the surface water and sediment sampling locations.

Mr. Parks next discussed the vapor intrusion sampling, which will be conducted following EPA's recent guidance. Mr. Parks displayed a map showing the initial vapor intrusion investigation area, which includes buildings on-post as well as off-post. Mr. Parks explained that if the groundwater beneath a building is not heavily contaminated, the likelihood of vapor intrusion is less.

9. General Restoration Questions

A member of the general public asked if sampling had been conducted in Clover Hill. Mr. Gortva responded that samples had been collected from a number of wells over the years and analyzed for volatile organic compounds; the analyses show no detections.

Ms. Robinson asked if the ground water sampling could impact groundwater conditions. Mr. Gortva responded that the sampling will not affect the overall ground water flow patterns.

A member of the general public referred to a pump test done by the developer of Coventry Estates, which allegedly caused all the wells in the area to go dry. He stated, if the information was correct, the pump test may have impacted Area B. Mr. Gortva drew a diagram to illustrate what happens when water is withdrawn from a well, which is that a cone of depression is created around that well so if the water was drawn down three feet in Lake Coventry, the water in the surrounding area would have been drawn down much less. The member of the general public suggested Fort Detrick further investigate the pump test.

A member of the general public asked for confirmation that there had been a newspaper article, which referred to a pump test that caused wells to go dry in Clover Hill. Mr. Craig noted that Fort Detrick had recently conducted a short-duration pump test from Area A to see if ground water from Area A is sufficiently productive that it could be used to supplement the flow from the Monocacy River. He said the test lasted a few days and there was a measurable draw down of two to three inches in some monitoring wells. Mr. Craig said the report will soon be submitted to the State of Maryland for the State to determine whether the aquifer is sufficiently productive. Mr. Craig said that he was not aware of anyone's wells going dry as a result of this short duration pumping feasibility test. He noted that the test had been completed more than three weeks ago and Fort Detrick has not received any complaints about any wells going dry.

A member of the general public said he would like Fort Detrick to obtain funding to do some sampling offsite for exposure to Agent Orange.

A member of the general public asked why television cameras were not allowed in the meeting since it was a public forum. Mr. Erbes said it was not a public forum, but a Board meeting to

which the public has access. LTC St. Angelo responded that a decision had been made to not allow videotaping of a Board meeting by news cameras.

A member of the audience introduced himself as a hydrogeologist who in 1994 worked for an engineering company who performed work at Fort Detrick. He stated he was a self-employed consultant who worked on similar issues across the country. He said the community concerns [Referencing non-restoration activities] are valid, but the Board meetings are not the place where they should be addressed. He said that was why separate meetings were set up to address those issues. He referenced Ms. Robinson's discussion of what the purpose of the RAB is, which includes channeling community concerns to the appropriate agency and forum. He stated the community concerns have resulted in the archival record project discussed at the beginning of the meeting, which indicates the impact the concerns of the community has had on the program. He suggested the 1994 remedial investigation work plan be reviewed for additional historic information.

A member of the general public commented that he was attempting to bring to the Army's attention that in the two-month investigation he had been involved with there was enough information to want to include Area A in the investigation. He asked LTC St. Angelo to report back to his superiors that there are 400 to 700 people who are very angry with the Army as they have multiple family members with exotic cancers that are more like exposure to Agent Orange than to TCE. He noted the problem is that the exposure happened 30 years ago, and there cannot be a risk assessment based on what occurred 30 years ago. He agreed the archival study is important, but stated he believes it would be better to cast the net as wide as possible in the remedial investigation and accelerate the process. Ms. Haines stated that the net was being cast across Fort Detrick as the ASR would encompass all of Fort Detrick.

A member of the general public asked what level of protection workers would use when drilling wells in Area B. Mr. Gortva responded that the safety plans approved by the Maryland Department of the Environment and EPA called for Level D. The member of the general public expressed concern about the possibility of encountering anthrax. Mr. Gortva responded that only the non-pathogenic form of anthrax had been detected in Area B and that no drilling was planned in the disposal areas.

A member of the general public asked if comments were being solicited on the work plan. Mr. Gortva advised that the time for submitting comments had passed. The member of the general public stated he would still be submitting comments. He said one comment he would be making is that all the attics of the buildings be sampled as ultraviolet rays will not have affected the compounds, as well as the sump of Ed Krantz' old property to see what was present. He noted the investigation will provide a picture of what is in the groundwater now, but the community is interested in what was in the air 30 years ago or more.

Mr. Zolyak mentioned there is a public meeting planned with the County on October 4 at Winchester Hall to discuss the cancer concerns.

A member of the general public asked if the RAB is going to apply for a technical assistance grant and Ms. Robinson said a decision has not yet been made.

10. Next RAB Meeting

LTC St. Angelo asked if there were any suggested topics for the next meeting from the community members. He also stated that topics could be submitted to the community co-chair, Ms. Robinson, for forwarding to the Army. He said the next proposed meeting date is November 17 and Ms. Robinson said she would check with the community members on this date.

Ms. Robinson asked if the contractor replacing Shaw could be present at the next meeting and do a short presentation so the RAB could get to know them.

The meeting adjourned at approximately 9:10 p.m.

Reviewed by:

/Signed/
James St. Angelo, III
Lieutenant Colonel, US Army
Co-Chairman

/Signed/
Linda S. Robinson
Community RAB Member
Co-Chairwoman

Approved:

/Signed/
Judith D. Robinson
Colonel, US Army
Commander, US Army Garrison

Enclosures:

Fort Detrick Installation Restoration Program Emerging Topics Slide Presentation
Fort Detrick Installation Restoration Program Area B Groundwater Remedial Investigation Work
Plan Slide Presentation
Meeting Sign-In Sheet

DISTRIBUTION:

Each RAB Member (w/o enclosure)