

## MEMORANDUM FOR RECORD

SUBJECT: Fort Detrick Restoration Advisory Board (RAB) Meeting Summary, 18 July 2012

### 1. Summary Contents

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

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**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, Fort Detrick Co-Chair  
Dr. Gary Pauly, Community RAB Member, Co-Chair  
Mr. Robert Craig, Chief, Environmental Management Office, Fort Detrick  
Mr. Joseph Gortva, Environmental Restoration Program Manager  
Ms. Elisabeth Green, Maryland Department of the Environment  
Mr. Rolan Clark, Community RAB Member  
Ms. Jennifer Hahn, Community RAB Member  
Ms. Laurie Haines-Eklund, Army Environmental Command  
Ms. Karen Harbaugh, Community RAB Member  
Mr. Barry Kissin, Community RAB Member  
Mr. Rob Thomson, U.S. Environmental Protection Agency, Region III

### Others Present:

Mr. Ethan Weikel, US Army Corps of Engineers  
Mr. William Hudson, U.S. Environmental Protection Agency, Region III  
Mr. Gary Zolyak, Fort Detrick Office of Staff Judge Advocate  
Mr. Dale Moncer, Fort Detrick Environmental Office  
Mr. John Cherry, ARCADIS  
Mr. Tim Llewellyn, ARCADIS  
Ms. Shelly Morris, ARCADIS  
Ms. Katrina Harris, Bridge Consulting Corp.  
Ms. Shelley Aloï, City of Frederick  
Ms. Violet Rice, Community Observer  
Dr. Barbara Brookmyer, Frederick County Health Department  
Mr. George Rudy, Community Observer

### Members Absent:

Mr. Charles Billups, Community RAB Member  
Dr. Henry Erbes, Community RAB Member  
Mr. Cliff Harbaugh, Community RAB Member  
Ms. Helen Miller-Scott, 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. Joe Gortva called the meeting to order and turned it over to LTC St. Angelo, Army Co-Chair, at 6:33 p.m., on Thursday, July 19, 2012, at the Hampton Inn & Suites, 1565 Opossumtown Pike, Frederick, Maryland. LTC St. Angelo welcomed everyone to the meeting. He stated that the main agenda item for the evening was a presentation by ARCADIS on Area B groundwater highlighting recent results and the path forward. LTC St. Angelo introduced Dr. Gary Pauly, Community Co-Chair.

#### **4. Purpose of RAB Meetings** presented by Dr. Gary Pauly, Community Co-Chair

Dr. Pauly discussed the composition of the Restoration Advisory Board, noting that it is a group of people put together by the Department of Defense where there are ongoing environmental restoration projects. He stated that the Board has members from the Army, the community, the regulatory agencies (Maryland Department of the Environment and U.S. Environmental Protection Agency), and other interested parties. Dr. Pauly said that the Board is intended to be a forum for communication among stakeholders, the public, and Fort Detrick and its contractors to see the progress on projects and where projects are headed in the future. He advised that the Board has a planned agenda and presentations and to stay on track he would request questions from members of the public be limited to the topic being discussed. He noted that there is a comment period at the end of the meeting where the public is invited to speak and offer concerns or questions. Dr. Pauly reminded everyone that there is no video recording of the meeting.

#### **5. Meeting Minutes** presented by Mr. Joseph Gortva, Fort Detrick

Mr. Gortva advised that the April 2012 meeting minutes had been distributed and no comments had been received to date. Mr. Pauly advised that he had not received any comments from community members, but he had a few minor grammar changes. Mr. Gortva suggested Dr. Pauly send his changes to him and then the minutes would be finalized and added to the web site.

#### **6. Update on Area B Groundwater Investigation** presented by Mr. Tim Llewellyn and Mr. John Cherry, ARCADIS

Mr. Tim Llewellyn stated that it had been two years since they had begun updating the Board and that much work had been completed. He advised that the primary purpose of his presentation is to convey the results of all the work over the past two years. He noted that the work included drilling new wells and recent groundwater and surface water sampling. Mr. Llewellyn said that he would begin the presentation and then Mr. John Cherry would be discussing the sampling results.

Mr. Llewellyn reviewed his four primary topics: the project objectives and the status of current work; the conceptual site model; the April 2012 groundwater and surface water sampling results; a project summary and the anticipated path forward.

Mr. Llewellyn stated that the four objectives of the current study are to further assess: groundwater flow directions, the depth and extent of contamination, the full range of possible chemical compounds, and the potential for contaminant migration off-site.

Mr. Llewellyn displayed a list of the tools used to meet the objectives and their current status. He stated that the assessment and repair of existing wells had begun in February 2011, followed by almost a year of installing new groundwater monitoring wells. He stated that the direct push investigation was conducted in March 2012 to look at the shallow groundwater on-site and off-site, but the primary focus was the off-site investigation. Mr. Llewellyn said that the full length of Carroll Creek was walked during the spring and seep surveys in March 2012 to look for potential groundwater discharge points. He explained that a significant amount of groundwater and surface water sampling has been completed, and that a second round is scheduled for

September 2012 so there will be data from the spring and the fall. Mr. Llewellyn said that vapor intrusion sampling is planned for the fall, and that a dye trace study will be done in the summer/fall of 2013.

Mr. Llewellyn next discussed where the project is in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process. He explained that CERCLA is the environmental regulation the Army is operating under and showed the five major phases. Mr. Llewellyn advised that the project is currently in the Remedial Investigation phase where the site is characterized, samples are collected and analyzed, and site geology is studied. He said that information from the remedial investigation is pulled into a conceptual site model which is a tool used to visualize what is going on at the site. He said that the Remedial Investigation study can take some time, particularly at a site as complicated as Fort Detrick. He said that they are not yet done with the Remedial Investigation phase for the project, but they are getting near the end. He said that the project will then move into the Feasibility Study phase where the possible remedies are assessed for the issues found at the site. Mr. Llewellyn explained that the next phase is the Proposed Plan, a public document which presents the Army's preferred alternative for a site; this document is put out for a formal public comment period and discussed at a public meeting. He continued explaining that once comments are received, the remedy is advanced or modified and a Record of Decision is prepared. Mr. Llewellyn said that the Record of Decision is the legal document which obligates the Army to implement the remedy. He noted that the final step is the actual implementation of the remedy.

Mr. Llewellyn said that he would next discuss the conceptual site model. He explained that the model gathers all the information from the remedial investigation phase into a succinct format that provides a clear understanding of all the issues at the site including geology, groundwater flow, and the contamination nature and extent. He further explained that it is a written document as well as a graphic and communications tool that he will be talking about later in the presentation. Mr. Llewellyn noted that the model is a very useful tool in that it can either drive a project forward to a remedy or identify data gaps.

Mr. Llewellyn reviewed the four primary elements of the conceptual site model. He said that the first is the geologic framework which is the foundation of the model; this information is obtained through the drilling program. Mr. Llewellyn stated that the second element is the groundwater and surface water flow patterns which drive the migration of contaminants. He explained that the flow pattern information is obtained from the elevation data collected from wells and streams. He advised that the third element is identifying the groundwater discharge areas to know where contaminated groundwater may discharge to the surface. Mr. Llewellyn stated that stream surveys and dye trace studies provide this information. Mr. Llewellyn said that the final element is the nature and extent of contamination, and this data is collected through groundwater/surface water sampling.

Mr. Llewellyn showed an aerial photograph of Area B and surrounding roads. He also showed a transect of a portion of Area B which showed the subsurface of Area B. Mr. Llewellyn stated that he would use the transect to talk about the first three elements of the conceptual site model. He briefly discussed the types of rock formations beneath Area B, noting that they had confirmed the aquifers beneath Area B are rock aquifers and the rock is very shallow. He stated that the

geology is a karst environment, and that groundwater flows through fractures in the rock. Mr. Llewellyn said that the frequency of the fractures decreases with depth, which is very common, and that there are fewer fractures below 250 feet. He stated that most of the groundwater flow is occurring in the upper 250 feet below the ground surface. Mr. Llewellyn said that he was not saying there was no groundwater flow occurring deeper than 250 feet as there is, and groundwater is contaminated at depth.

Mr. Llewellyn said that the groundwater flow is from west to east through the karst aquifer, through the fractures in the aquifer, and that it appears to be primarily discharging to seeps and springs along the eastern side of Area B. He stated that in addition to the rock aquifer, there is also a fairly thin surficial aquifer that is composed of sands, silts and clays; it is slightly thicker under Carroll Creek so there is some shallow groundwater overlying the bedrock.

Mr. Llewellyn next discussed the nature and extent of contamination. He said that the recent sampling verified the former dump site B-11 is the principal source of the solvents in the groundwater, and the primary contaminants are solvents. He stated that the other former dump sites at Area B that have been capped are not significant groundwater sources; he said that this does not mean they are not the source of any contamination, but the primary source is B-11. He explained that the extent of the groundwater contamination in the aquifer system begins at B-11, moves towards Robinson Run, and discharges partially into Carroll Creek.

Mr. Llewellyn referred to his earlier statement that the conceptual site model also identified data gaps, and the model identified two data gaps at Area B. He said that there has been discussion about groundwater discharging to Carroll Creek, but it is not known whether there is groundwater flow underneath Carroll Creek at depths of about 250 feet and thus carrying deeper contamination off-site. Mr. Llewellyn said that the dye trace study will help address this data gap.

Mr. Llewellyn said that the second data gap is along the property line. He reminded the Board that they had been briefed previously that there are solvents in the parts per million at the property line, and that the Army has not been able to get access to the private property directly across from the property line. He stated that some residential wells have been sampled in this area, as well as a nearby seep and stream. He noted that wells had been installed on this property in 2004, and that ARCADIS had reviewed that data, but that data did not indicate any issue with solvents. Mr. Llewellyn said that they are still treating this as a data gap and attempts are still being made to obtain legal access.

Mr. Llewellyn displayed another 3-D cross section and advised that it summarizes the entire contaminant flow picture. He pointed out B-11, the primary source area, on the left side. He said that the Army had performed a focused soil removal action in 2004 at B-11 to remove as much of the contaminated soil as possible. He said that the existing wells and the new wells installed have confirmed there are solvents at the parts per million levels compared to a drinking water standard for these solvents of five parts per billion. Mr. Barry Kissin asked for more detail on the parts per million levels, and Mr. Cherry responded that the highest concentrations appear to be in the 10 to 15 parts per million range. Mr. Llewellyn continued summarizing that groundwater is coming from the west, entering the contaminated area around B-11, picking up

the solvents, transporting them at lower and lower concentrations as they dissolve and diffuse through the aquifer, and carrying them towards the seeps and streams in Carroll Creek and Robinson Run. Mr. Llewellyn said that low levels of solvents have been detected downstream from the seeps and springs, below risk-based criteria for recreational use. He stated that this is new information based on the most recent sampling; previous sampling did not detect solvents in Carroll Creek.

Ms. Jennifer Hahn asked what the long-term risks are to low-level exposure. Mr. Llewellyn responded that the regulatory guidance is based on a 30-year exposure so it is a long-term perspective.

Dr. Pauly asked if there is something unique about the Frederick formation and the New Oxford formation where all the upwelling seems to be occurring. Mr. Llewellyn said that that issue is being further examined.

Mr. Cherry said that he would be discussing the results from the April 2012 sampling of groundwater and surface water.

Mr. Cherry summarized information presented previously on the 2011/2012 drilling program. He stated that 29 new monitoring wells have been installed up to 325 feet deep; some of the wells took up to three months to drill. Mr. Cherry explained that geophysical logging and sampling was performed during the drilling so decisions could be made about where wells were being drilled and to ensure there are good monitoring points for the future. He stated that almost 4,000 linear feet of drilling was completed, as well as 3,028 linear feet of geophysical logging.

Mr. Cherry said that a site-wide comprehensive groundwater sampling event took place in April 2012 with samples collected from 79 new and old monitoring wells and 8 former/current residential wells. He stated that a second sampling event will take place in the fall of 2012. Mr. Cherry advised that groundwater elevation data was collected from 127 locations to help understand the groundwater flow direction.

Mr. Cherry next discussed the initial draft data, but emphasized that it is draft and currently undergoing third-party data validation review. He said that all the information being presented tonight are preliminary observations with final data expected in late July.

Mr. Cherry listed four key initial observations. He said that solvents are the main contaminant and are present at parts per million levels in the vicinity of B-11. He noted that they had sampled for 216 compounds at Area B, and that there are detections of other compounds, but they do not rise to the level of serious concern. He cautioned again that this observation is based on preliminary data. He stated that the primary solvents are TCE, PCE and Chloroform. He said that the final observation is that the solvents are present in shallow groundwater and surface water off-site to the east of Area B.

Mr. Cherry displayed a map showing the Area B groundwater monitoring wells and the off-site residential wells.

Mr. Cherry said that he would next discuss the TCE detections in the groundwater. He explained the legend that showed the concentrations of TCE detected and noted that ug/L is the same as parts per billion. He noted that an "X" indicates the detection exceeded the drinking water standard.

Mr. Cherry discussed the TCE sampling results as shown on an aerial map. He pointed out that the cluster of high concentrations, greater than 1,000 ppb are near B-11. He said that the preliminary data shows the highest concentrations of 14,000 to 15,000 ppb at approximately 150 feet below ground surface. Mr. Cherry noted that these levels are higher than seen in recent sampling events, but not as high as historic levels. Ms. Hahn asked for confirmation that the levels are not increasing, but the detections are coming from newly installed wells. Mr. Cherry confirmed that the information represents new data being added to an existing data set and does not mean the levels have substantially increased. He noted that there had been levels detected at the 100,000 parts per billion level in the past, but those levels are not being detected now.

Mr. Gortva stated that he had asked similar questions and specifically asked if ARCADIS was seeing increases in the existing wells. He stated that ARCADIS had responded that based upon their review of the preliminary data the levels were remaining pretty consistent.

Mr. Kissin questioned the high levels being detected near the boundary and stated that the Board had been told previously the high detection was due to a one-time puncture of a drum. Mr. Cherry stated it is possible to have high residual levels for a number of years. He said that there has been a known plume for a number of years, which has now been traced back to B-11, and that the groundwater has now been sampled at depth to confirm what is present. Mr. Cherry said that it is important to keep in mind that no one is drinking the water on Area B. He said that there is recognition and concern that there are private properties around Area B, but the Army has tested those private drinking water wells, those residents are on bottled water, and contaminant levels are not being detected. Mr. Cherry said that a larger study is about to be initiated for the off-post groundwater that would be discussed later in the evening.

A member of the general public asked if the plume had shifted over the years and is now an active source. Mr. Cherry responded that B-11 is a residual source and the high levels of contamination in the ground water continue to create the plume.

Mr. Gortva stated that the capping of the landfill prevents rainwater from passing through the waste material and being transported to the groundwater table. He continued explaining that contamination in the bedrock acts as a residual source, and as the contamination moves deeper in to the subsurface, the flow rate is much slower so the contamination dissolves more slowly over time. He said that the capping was an initial remedy, and the current project focuses on developing a remedy for the deeper bedrock contamination.

Mr. Cherry concluded the discussion of TCE by noting that it is the primary contaminant having been detected at higher levels than any other compound.

Mr. Cherry next discussed the PCE contamination and advised that there were no detections over 1,000 ppb and that detections were generally in the several hundred ppb range and thus above the

drinking water standard. He stated that the highest detections were clustered around B-11 with detections under the drinking water standard scattered throughout Area B. Mr. Cherry said that there were lower level detections in the area where seeps and springs are discharging to surface water.

Mr. Cherry next discussed the chloroform contamination. He noted that it was a relatively common volatile organic compound and is a disinfection by-product of municipal water supplies. He stated that it is also possibly associated with the prior soil removal action. He advised that the highest concentrations are more than 1,000 ppb near B-11.

Mr. Kissin stated that he had not heard chloroform mentioned at previous meetings. He asked if it is considered a carcinogen. Mr. Cherry responded that chloroform is not currently listed by EPA as a carcinogen, but EPA continually evaluates this list. He said that ARCADIS' risk assessors treated it as a borderline carcinogen to be conservative.

Ms. Hahn asked if consideration had been given to possible interaction with other chemicals. Mr. Cherry said that there is no indication of a need to be concerned along those lines as there is no recognized cocktail effect.

Mr. Llewellyn noted that previous discussions have focused on the two primary contaminants of TCE and PCE, but mention has been made of other solvents present at lower concentrations and upcoming reports will contain this information.

Mr. Kissin said that he was surprised at the level of chloroform that was being shown in this presentation and asked for the maximum contaminant level for chloroform. Mr. Cherry responded that it is 80 ppb.

Mr. Cherry said that the location of non-detects and low level detections were consistent across Area B for all contaminants so it is possible to focus in on what the issues are at Area B.

Mr. Cherry said that everything he had been talking about was primarily results from deep or shallow bedrock wells, and that he was now going to discuss the shallow groundwater results.

Mr. Cherry stated that approximately a month of direct push work was performed along the property boundary, on county-owned property, and residential homes. He said that direct push was attempted at 52 locations, and that groundwater was able to be collected from 39 shallow locations. Mr. Cherry explained that samples could not be collected at 13 locations despite multiple attempts.

Mr. Cherry showed pictures of the direct push drilling rig and explained how the equipment is used to collect groundwater samples. He said that a steel tube is pushed into the ground until rock is encountered and then a small diameter well is installed called a piezometer.

Mr. Cherry displayed an aerial photograph showing the distribution of the direct push points and pointed out the distribution was centered around Carroll Creek where groundwater is rising to the surface into the silts and sediments along the stream valley. He also displayed a map showing

where samples were collected and locations where the drill rig encountered rock and samples could not be collected. He stated that there were a few areas where access could not be obtained from the property owners. He said that a second phase of the direct push investigation is being planned to expand the investigation and fill in some data gaps based on lack of access or based on observations from the first phase.

Mr. Cherry showed an aerial photograph with locations marked of where TCE had been detected in the shallow groundwater. He stated that there were no detections along the property line and some low-level detections just over the drinking water standard with one of those detections on Area B and some off-post. He said that the results were similar for PCE. He noted that it was important to remember that the further away from the site one gets it is possible that the contamination is coming from another source. He said that Rosemont Avenue has had a variety of previous activities, including dry cleaning and vehicle maintenance, so that the detection in that area may or may not be related to Fort Detrick. Mr. Cherry said that the source is one of the issues that will continue to be examined. Mr. Cherry advised that all but one of the chloroform detections were at low levels which did not exceed the drinking water standard. Mr. Robert Craig asked if the source for the one exceedance could be Area A, and Mr. Cherry responded Area A could be a source as could any of the municipal water supplies that run through that area.

Mr. Cherry showed an aerial photograph marked with the areas proposed for supplemental direct push borings in the fall of 2012. He stated that the proposed work had been discussed with EPA and Maryland Department of the Environment and the plan revised to incorporate their comments. He noted that the work is pending right of entry agreements.

Mr. Cherry next discussed the results of the sampling of the seeps and springs. He stated that 13,000 feet of stream bed was surveyed by trained personnel walking through the stream bed and conducting a visual inspection for seeps and springs. He advised that they identified approximately 40 seeps and springs. Mr. Cherry said that 58 spring and surface water locations were sampled. Mr. Cherry showed a photograph of a seep/spring emanating out of the spring bank into Carroll Creek.

Mr. Cherry showed an aerial photograph marked with the locations of where TCE was detected in seeps and springs. He explained that there were some concentrations exceeding the 5 ppb drinking water standard, but emphasized that no one is drinking the water. He said that the results indicate the contamination is coming from B-11 and re-surfacing.

Mr. Cherry displayed the results from the analysis for PCE and noted that the concentrations were lower than those detected for TCE with no PCE levels exceeding the drinking water standard. He then discussed the chloroform detections and stated that there were some low-level detections, possibly related to Area A or municipal water supplies.

Mr. Cherry said that 32 surface water/stream samples were collected across the study area. He displayed a map of the TCE detections, noting that there were only two detections in surface water that exceeded the drinking water standard, one at the center of Area B and one in Robinson Pond that had a detection in the single parts per billion. He said that all the other samples were

non-detect or below the drinking water standard. Mr. Cherry said that there were some low-level detections in Carroll Creek at the single parts per billion level.

Mr. Kissin said that he thought statements had been made at previous meetings that appreciable levels of PCE and TCE were not expected to be found in Carroll Creek. Mr. Llewellyn responded that Mr. Kissin was correct; based on prior sampling results, surface water had not been impacted in the past. Mr. Llewellyn said that the information being presented tonight is new information based on the most recent sampling.

Ms. Hahn asked if air sampling is conducted to measure the volatilization of the TCE and PCE. Mr. Cherry said that some basic air monitoring was conducted along the Creek where there were seeps and springs and surface water detections, and that there were no detections in the air. Mr. Cherry said that the concentrations are very low in the Creek so that they would not expect to see anything in the air, but the monitoring was performed.

Mr. Cherry showed aerial photographs of the PCE and chloroform sampling locations. He said that there were more non-detects and some very low level detections of PCE and chloroform in the surface water.

Mr. Cherry said that the off-post detections were further analyzed by a comparison to human health screening criteria.

Mr. Cherry reviewed the first criteria which assumed recreational use of the stream by a child or adult for 45 days per year over a lifetime. He said that the analysis found no exceedances.

Mr. Cherry stated that the second criteria was ingestion of fish from the stream, and again, the analysis against EPA guidance numbers found no exceedances.

Mr. Cherry said that the third criteria was use of the water from the stream for drinking water purposes. He said that there were some exceedances; however, this is a hypothetical situation as no one is drinking this water.

Mr. Cherry showed aerial photographs with the results of the surface water and spring data compared to the three screening criteria.

Ms. Hahn commented that she believes any level of exposure is not good and could be harmful to individuals with certain genetic predispositions. Mr. Cherry said that the detections are recognized as a concern but the only way to provide a perspective is to use published criteria. He said that a number is just a number until it is compared to relevant criteria, and in this case, dose and frequency of exposure were used to determine if there are any potential risks.

Mr. Cherry said that none of the surface water samples in Carroll Creek exceeded the value, but some of the spring samples did exceed the value. He explained that this means the contamination is re-surfacing in the springs and then there is a dilution factor in the Creek. He stated that there is no actual use of surface water for potable purposes.

Mr. Cherry stated that the discussions so far had focused on the three primary contaminants of TCE, PCE, and chloroform. He stated that the samples were tested for 216 parameters total in the various media of soil, sediment, seeps, springs, surface water, and groundwater and showed a list of the parameters. He stated that the parameters included semi-volatile organic compounds, pesticides, PCBs, herbicides, metals, and dioxin/furans.

Mr. Cherry said that when all the data is tallied from every sample taken, there are more than 39,000 data points. He said that once all the data is reviewed, more information on other constituents will be provided; however, the preliminary review showed other constituents were not an issue.

Mr. Cherry reviewed the key points based on preliminary observations from the review of the draft data. He noted that final data is expected in a few weeks and will be incorporated into the conceptual site model report, which will be submitted late summer or early fall of 2012 and will be discussed at future Board meetings. He reiterated that the preliminary data shows minimal or no impacts from many parameters, with solvents being the main contaminant. He repeated that the solvents are present at parts per million levels in the vicinity of B-11. Mr. Cherry said that solvents are also present in shallow groundwater and surface water off-site to the east of Area B.

Mr. Llewellyn stated that the information presented this evening was not intended to minimize any issues on the part of the Army or ARCADIS, but to put the issues on the table so they can be addressed in an open manner. Mr. Llewellyn said that some new information has been obtained, but the conceptual site model has not changed substantially.

Mr. Llewellyn reviewed the path forward, which includes addressing data gaps through the dye trace study, the vapor intrusion sampling, and the second round of groundwater/surface water sampling in the fall of 2012. Mr. Llewellyn said that the additional data and the further development of the conceptual site model are required to move forward to a final remedial investigation document.

## **7. Off-Post Private Well Investigation** presented by Ms. Shelly Morris, ARCADIS

Mr. Gortva stated that Fort Detrick was initiating a comprehensive off-post private well investigation. He said that the purpose is to address the questions that have been raised over time of where is Fort Detrick's documentation showing all the private wells locations or documentation showing all the private wells sampled. He said that because of the way projects have proceeded over the years, there is not an all-inclusive document that shows all the locations of private wells or sampling results. Mr. Gortva said that ARCADIS will be creating that document by locating all the private wells around Area B, documenting the information available for the wells, and collecting samples. Mr. Gortva said that he wanted to put the project in context and stated that it is not because of something new that has happened, but it is being done to make sure the information is readily available.

Ms. Morris presented a summary of the scope of the project. She stated that there would be extensive public outreach throughout the project including mailings, newspaper announcements, public meetings, door-to-door visits, and a project hotline. She said that the intent of the project

is to identify all the private wells through research and verify use of those wells as drinking water wells through a door-to-door survey. Ms. Morris said that the next step will be to obtain permission to access the property, collect samples, analyze the samples for volatile organic compounds, and report the results.

Ms. Morris discussed the basis for the study, which is to expand upon Fort Detrick's existing private drinking-water well sampling program, identify and document drinking-water wells in use surrounding Area B, and confirm and document that residents consuming the groundwater around Area B are not being impacted by volatile organic compounds.

Ms. Morris advised that the study area is approximately 1,300 acres surrounding Area B based primarily on groundwater flow direction. She explained that about 2,500 tax parcels were identified in the study area, with approximately 149 parcels outside of the public water service area. She said that the remaining parcels are within the public water service area, so the study will verify if these residents are using public water or if there are any private wells in use.

Ms. Morris displayed an aerial photograph and pointed out the boundary of the study area, the existing public water service areas, and areas being phased into public water use over the next one to six years.

Ms. Morris reviewed the project timeline noting that an initial mailing will be sent to all the residents in the study area announcing the project and a public meeting planned for August. She said that the project details will be provided in depth at the public meeting. Ms. Morris said that a second mailing will follow the public meeting and will consist of one letter targeted toward residents that research indicates are connected to public water and ask for verification and if they do have any private wells. She continued explaining that a second letter will be targeted toward residents that research indicates have a private well and that letter will provide information on the planned door-to-door survey.

Ms. Morris said that a door-to-door survey will be conducted at residences not connected to public water. She stated that the personnel conducting the survey will be dressed in uniforms (shirts with company logo and large identification cards). She explained that the personnel will be asking questions about the well, for example location and any filtration systems, and for written permission to sample the well. Ms. Morris said that the survey and access forms will also be included in the second mailing.

Ms. Morris said that the third mailing will be sent to residences not connected to public water and who were not responsive during the door-to-door survey. She said that the fourth mailing would go to residences that agreed to have their well samples, but the right-of-entry form had not been received. Ms. Morris said that sampling is scheduled for September, followed by reporting of the results.

LTC St. Angelo asked about rental properties, and Ms. Morris responded that information would be sent to the property owner.

Ms. Karen Harbaugh asked if only private residences would be sampled or businesses also. Ms. Morris said that if the business has a private drinking water well it would be sampled.

## **8. RAB Member Open Discussion**

Mr. Gortva invited any comments or questions from the RAB members.

Mr. Craig stated that ARCADIS has done a great job in providing new information and wondered if this was a point where sufficient information existed to take another positive action. He questioned whether there should be further discussion with the County about whether signage is needed at Carroll Creek. Mr. Kissin and Ms. Hahn expressed support for the idea of installing signage so the public would have the information to make their own decision.

Mr. Kissin stated that the Army has been aware of the contamination since 1977, and the Army is not moving fast enough to quantify the issues and take action.

The Board discussed the properties where legal access has not been able to be obtained and suggestions for obtaining access. The Board members suggested legal action, using community Board members to talk to residents, and offering monetary incentives; a suggestion was also made that education needed to be conducted to inform the residents of why their participation is important. Mr. Gary Zolyak mentioned where access could not be obtained, there was often a nearby county property where access was provided. Mr. Zolyak expressed appreciation to the County for their assistance.

Ms. Hahn asked if the next presentation on Area B could include the 216 parameters tested for and the highest level detected.

## **9. General Community Comments**

Mr. Gortva invited other comments or questions from the general public.

A member of the general public said that he had seen photographs in the newspaper of City workers collecting algae or performing similar work in the Creek and suggested that the Army notify the City that they should not have employees working in Carroll Creek.

## **10. Next Meeting**

Mr. Gortva advised that the next meeting was tentatively scheduled for October 10, and this date was agreed to by the Board.

The meeting adjourned at approximately 8:58 p.m.

Reviewed by:

Approved/Disapproved

Enclosures:

Fort Detrick Installation Restoration Program Area B Groundwater Investigation Update  
Meeting Sign-In Sheet

DISTRIBUTION:

Each RAB Member (w/o enclosure)

Each Meeting Attendee (w/o enclosure)

Official Copy Published on the Fort Detrick Website

<http://www.detrick.army.mil/rab/meetingMinutes.cfm>