

MEMORANDUM FOR RECORD

SUBJECT: Fort Detrick Restoration Advisory Board (RAB) Meeting Summary,
04 FEBRUARY 2015

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 [] or footnotes has been added for clarification purposes.

2. Attendees

RAB Members Present:

Dr. Gary Pauly, Community RAB Member, Co-Chair
Mr. Joseph Gortva, Environmental Restoration Program Manager, Acting Army Co-Chair
Lt. Col. Brian Barthelme, Fort Detrick
Mr. Rolan Clark, Community RAB Member
Mr. Barry Glotfelty, Frederick County Health Department
Dr. Elisabeth Green, Maryland Department of the Environment
Ms. Jennifer Hahn, Community RAB Member
Ms. Karen Harbaugh, Community RAB Member
Mr. George Rudy, Community RAB Member

Others Present:

Mr. Larry Brown, US EPA Public Affairs
Mr. John Buck, US Army Corps of Engineers
Mr. Gareth Buckland, Fort Detrick Environmental Office
Mr. Gary Zolyak, Fort Detrick Office of the Staff Judge Advocate
Mr. Keith Hoddinott, US Army Public Health Command
Mr. Randal Curtis, US Army Corps of Engineers
Mr. Nick Minecci, Fort Detrick Public Affairs Office
Mr. Jeff Samuels, Congressman John Delaney's Office
Mr. John Cherry, ARCADIS
Ms. Shelly Morris, ARCADIS
Ms. Katrina Harris, Bridge Consulting Corp.

Members Absent:

Mr. Eli DePaula, Community RAB Member
Dr. Henry Erbes, Community RAB Member
Ms. Laurie Haines-Eklund, Army Environmental Command
Mr. Cliff Harbaugh, Community RAB Member
Mr. Barry Kissin, Community RAB Member
Mr. Rob Thomson, US Environmental Protection Agency

3. Meeting Opening / Remarks

Mr. Joseph Gortva called the meeting to order. He thanked everyone for attending and welcomed everyone to the meeting. Mr. Gortva advised that he is the Environmental Restoration Program Manager for Fort Detrick and will be filling in as the Army Co-Chair for Mr. Bob Craig who is out of town. Dr. Gary Pauly introduced himself as the community co-chair and welcomed everyone. Mr. Gortva invited the Board and audience members to introduce themselves.

Mr. Rudy noted that he was having trouble e-mailing Mr. Craig and asked Mr. Gortva to email him the e-mail address he should use. Mr. Gortva asked if there were any

opening comments from the co-chair, and he responded that he did not have any comments.

Mr. Gortva reminded the Board that he had sent out links to download the work plans for Site Inspection investigations at Area A and Area B. He asked the Board members to send him any comments in the next two weeks so they can be incorporated into a draft final version with a projected timeline of beginning the work this spring.

4. Purpose of RAB Meeting and Ground Rules presented by Mr. Joseph Gortva

Mr. Gortva suggested that the key ground rule for the evening be to focus on getting through the planned presentations. He said that if any Board members needed immediate clarification on a portion of a presentation, please raise their hand and ask; otherwise, he asked that all questions be held to the end of the presentation. He advised that there also would be time at the end of each presentation for any audience members to ask questions.

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

Mr. Gortva noted the minutes from the November 2014 meeting had been distributed to the Board members for review, and no comments had been received. He asked for any comments to be sent to him within the next week. Mr. George Rudy requested the minutes and any other documents sent by email be sent as pdf's; Mr. Gortva agreed. Ms. Jennifer Hahn referred to a statement made by Mr. Cherry on page 8: "Mr. Cherry said it did not appear there was contamination at depth on the Waverley Property." She said "at depth" might not be clear. Mr. Gortva said "at depth" referred to wells drilled deeper than where first water was encountered; he said that this clarification could be added if appropriate but he would review that section of the minutes. Ms. Hahn said that it had been discussed at the meeting that the slide on page 33, referred to on page 12 of the minutes, which said there was no current risk on Waverley identified since no one was living there would be modified; Ms. Hahn asked if the slide had been changed. Ms. Hahn said that she wanted to be sure City representatives were clear that there could be a problem in the future and vapor intrusion testing might be warranted if there was development in certain areas of the Waverley property where contamination has been found in shallow groundwater. Mr. Gortva said that this information had been added to the summary slide for the Waverley property. Ms. Hahn said that she wanted to ensure the answer to Alderman Russell's question about the City working with the Army on any needed restrictions was a full and complete answer.

6. RAB Operating Procedures presented by Mr. Joseph Gortva, Fort Detrick

Mr. Gortva referred to the sample operating procedures for Forest Glen's Board which he had distributed at the last meeting, and his suggestion that the Board have a separate meeting to prepare something similar for Fort Detrick's Board. He advised that Fort Detrick had made significant changes regarding on-post access, including requiring a background check, so it was not feasible to have a meeting on-post. He said that he had been looking for a meeting place where there would not be a cost. Mr.

Rudy suggested Winchester Hall, and Mr. Gortva said he would check into that possibility. Ms. Karen Harbaugh offered her business as another option.

7. Archive Search Report presented by Randal Curtis, U.S. Army Corps of Engineers

Mr. Gortva noted that the Archive Search Reports are the basis for the work plans currently being reviewed for Site Inspections at Area A and Area B.

Mr. Curtis stated that he had started this presentation in August, so he would do a quick review of the information presented at the August meeting. Mr. Curtis reviewed an outline of his presentation. He encouraged those interested to read the report and then come back with questions that he will be glad to answer at a future meeting.

Mr. Curtis reminded the Board that this report is the second Archive Search Report [ASR 2] performed by the Archival Research & Analysis group at the U.S. Army Corps of Engineers¹. He stated that the first report focused on herbicides only, and that those findings were reported about four years ago, with the final report issued in April 2012 [ASR 1]. Mr. Rudy asked about the availability of the presentation on the first report, and Mr. Gortva responded that both the presentation to the Board (February 2011) and the report itself are available on the Fort Detrick web site.

Mr. Curtis discussed the process of compiling the report. He stated that at one time there was a technical library on Fort Detrick which gathered reports being generated; however, when the post demilitarized from a biological warfare program, the technical library was discontinued. He said that some reports got shipped to other Army installations, some were destroyed, and some went to the Washington National Record Center or to College Park.

Mr. Curtis said that Fort Detrick was the center for the Biological Warfare Research, Development, Test and Evaluation Program. He explained that this program worked with anti-personnel, anti-animal and anti-crop bacteria, viruses, and toxins within a restricted footprint within Fort Detrick's Area A. He advised that the facilities inside the footprint included laboratories, enclosed test chambers, pilot plants, incinerators for treating the solid waste or air being vented off by these processes, sewage systems for treating sanitary and contaminated waste, and solid waste disposal and landfills. Mr. Curtis said that the Archive Search Report has a brief history, but there are other history documents that are also well done including Norm Covert's "Cutting Edge" and a World War II history by Rex Cochrane.

Mr. Curtis said that as information was being gathered, he was struck by the emphasis put on safety during the time of the biological warfare program. He advised that during World War II five colonels were on-post, with one of those being in charge of safety. He said that this high level of command, along with the number of personnel assigned to safety, was significant. He said that part of the reason was the newness of the program and the desire to not have any incidents, such as a release to the environment, to

¹ [Research and Technical Services Section of Environmental and Munitions Branch]

protect not only human health but also the viability of the research program. Mr. Curtis said that a very stringent system was in place to ensure what they needed to do was contained in a safe manner and that they were able to decontaminate.

Mr. Rudy commented that he agreed with some of Mr. Curtis' statements, but even with subject matter experts, he has yet to find the infrastructure, up through present time, that precludes release to the environment.

Mr. Curtis said that the documentation found included test plans and test reports (numbered sequentially), laboratory notebooks, published reports, and status reports. Mr. Curtis added that environmental investigations from the 1970s and forward were also reviewed, with the majority being part of the Administrative Record.

Mr. Curtis said that the potential for biological warfare material to be on post was examined. He said that the research showed no field or open-air anti-personnel or anti-animal tests with biological warfare agents; the open air or field tests were done with simulants that mimicked the pathogens. Mr. Curtis said that Area B existed as a circular open-air grid for testing of the simulants within the device being designed to see how it released. He stated that there were meters that sampled how the simulant progressed downwind. Mr. Curtis said that anti-crop tests were done in the open with biological pathogens such as Southern Blight, cereal grain rust and rice blast. Mr. Curtis said that the pathogens were released at such a time as to not contaminate any surrounding fields growing that type of crop. Ms. Hahn asked about how the pathogens were released, and Mr. Curtis said that a variety of methods were used. Mr. Rudy said individuals with neighboring farms have advised they have witnessed aerial sprayings. Mr. Curtis said that some of the aerial spraying [from aircraft] would be with the simulants but not with the anti-crop pathogens.

Mr. Rudy advised that he had information from Mrs. Grace Cole that a cow herd was killed by spraying. Mr. Gortva said that he believed this was from an incident when the fencelines were sprayed with herbicides which were arsenic-based. The cows died from eating the grass along the fence which was sprayed.^{2 3}

² [The Installation Assessment of Fort Detrick, Maryland Record Evaluation Report No. 106 Volume I, JANUARY 1977, page II-11 provides that "In September 1951, eleven dairy cows died as a result of arsenical poisoning. A Fort Detrick investigation concluded that the cows apparently died as a result of eating grass which had been sprayed by a chemical weed killer containing sodium arsenite. Government employees sprayed weed killer along the Fort Detrick fences a week prior to the incident." A copy of the report can be found in the Fort Detrick Installation Restoration Information Repository files located in the Maryland Room of the Frederick County Library.]

³ [ASR 1, page 122, "On 31 August 1951, the Post Engineer personnel sprayed the fence line of the Grid Area (Area B) with an unspecified arsenic based weed killer, resulting in the killing of eight cows grazing on adjacent lands and the farmer sought compensation for his losses". Based on 1951-11-08 Claim of Mr. Harry Free]

Mr. Curtis said that the search also looked for facilities on Fort Detrick that might have biological agents. He advised that when most of the former restricted area was turned over to the National Cancer Institute in the early 1970s, there was a strong decontamination process which occurred. He stated that most of the structures were certified to be able to be used for any purpose; four buildings were not able to be re-used [with unrestricted use] based on concerns about the potential for anthrax spores to be present within the concrete. He advised that these facilities are still in use. Mr. Curtis said that when it comes time to raze these buildings, there will be issues as to how the concrete is processed.⁴

Mr. Curtis said that there was sludge that went to the treatment plant that contained some anthrax spores; it was treated with a decontaminating agent [hypochlorite] and buried in Pit 12 at Area B.⁵

He stated that during the removal action at Pit 11 at Area B, there were some vials of viable biological material comingled with other hazardous waste. Mr. Gortva added that the Pit was capped and is being monitored.⁶

⁴ [ASR 2, page 47, "Four buildings (201, 263, 375 and 470) were not certified free of biological agent based on concerns that while *Bacillus anthracis* spores (anthrax) did not remain on building surfaces, allowing use, spores could possibly remain encased in the building foundation, cracks and pores.]

⁵ [ASR 2 page 88

"Sludge from Structures 375 & 384. During the period of ceasing all Biological Warfare work (1969-1972), inorganic material from holding tanks in the Decontaminating Plant, Bldg. 375, was found to contain Bacillus Anthracis. Facility Engineering and Safety developed a procedure to sterilize the "sludge" prior to removing it. During the time that the material was removed (1971-1972), rigid control and testing procedures were used. All tests (for sterility) were negative (no growth)."

ASR Page 89

"Pit 12 – contains 150 tons of liquid waste including approximately 25 tons of sludge which was buried in 1972 from holding tanks at decontamination plants (Bldgs. 384 and 375) located in area A. Hypochlorite was put on top of the sludge as it was removed from the holding tanks. Additional hypochlorite was put on top of the sludge prior to burial. Burial of...contaminated sludge has caused the area to be considered permanently contaminated with anthrax spores" as the sludge might not have been completely treated.]

⁶ [ASR page 94, "During this removal action vials containing live pathogens in medical wastes at Area B-11 were found and all intrusive work was temporarily suspended at the disposal area until additional safety measures and testing procedures were in place. The interim removal action was completed in 2004."]

Mr. Curtis said that there was some rice blast in storage at Fort Detrick which began in 1966. He said that in the early 1970s, the Army got approval to demilitarize the rice blast by treating it with Carboxide gas; it was incinerated and the ash disked into soil in Area B.

Mr. Curtis discussed the general methods of decontamination. He stated that if there were any highly infectious agents or simulants being tested, equipment needed to be able to be sterilized so it could be used again. He advised that heat was the primary method used to sterilize and decontaminate with steam such as autoclaving. He said that if the material was something like paper or gloves, they would be incinerated. Mr. Curtis stated that there were several solid waste incinerators on-post.

Mr. Rudy asked if Maryland Department of the Environment regulates effluent cleanup from currently operating incinerators on-post; Mr. Rudy said that the community has a number of questions and he would send them in writing to Mr. Gortva.⁷ Mr. Gortva reminded the Board that discussion of current operating incinerators is not within the scope of the Board and they do not fall under the Environmental Restoration Program, but he would forward questions to the appropriate persons at Fort Detrick.

Mr. Curtis explained that when there was equipment that high heat could damage, a variety of chemicals were used for sterilization. He listed the main chemicals used, including liquid bleach and formaldehyde [See ASR section 5.6].

Mr. Curtis advised that Fort Detrick followed Army practices for that time regarding solid waste disposal. He said that if there was burnable waste, it went to the incinerator; non-burnable waste went to a landfill. Mr. Curtis said that there were duplicate systems, and that waste within the restricted area was handled separately from waste within the barracks area.⁸ Mr. Curtis stated that information from 1947 shows two-thirds of the waste from the restricted area was being incinerated on-post and that one-third was sent to the City of Frederick's incinerator, along with 1,500 pounds daily from the rest of the post. Mr. Curtis said that the material from the restricted area would have been sterilized before it was sent to the City's incinerator [or the post incinerator]. He stated that two loads of non-combustible material was sent to the City's dump daily.⁹ Ms. Hahn asked where the City's incinerator and dump site were located, and Mr. Curtis said that he did not know where they were located at that time. Mr. Rudy said that he would look into the location of the City's incinerator and safety practices in place at that

⁷ [The municipal and medical waste incinerators are regulated by State and Federal laws and regulations and are permitted under a Title V Air Permit.]

⁸ [ASR 2 pages 74-75, "Detrick directed that size permitting, all potentially contaminated refuse, whether it was combustible or not, was to be autoclaved prior to being placed outside for removal. Items too large to be autoclaved, had to be cleared by the Safety Division."]

⁹ [In 1947, if potentially contaminated, this waste material would have been sterilized or decontaminated prior to disposal.]

time for the City incinerator. Mr. Curtis advised that in 1948, Fort Detrick built an incinerator [Building 1112] at the Monocacy River facility to incinerate non-contaminated rubbish¹⁰; this incinerator [1112] operated until it was replaced by the current incinerator [393] in 1975 in Area A. Mr. Gortva added that the Monocacy River facility is in Area C where Fort Detrick has just completed the additional sampling for the former ash disposal area associated with the former incinerator [1112].

Ms. Hahn asked how long waste materials were taken to the City's incinerator. Mr. Curtis responded that complete data was not found. He said that Fort Detrick began working as a biological warfare center in 1943, and that there is not much information as to where the solid waste is going at that point. Mr. Curtis said that he has information for 1947. He said that there was also information that it took a few years to get the Monocacy River incinerator working properly so there was still some use of the City's incinerator [circa 1949-1950].

Mr. Curtis said that in 1948 the non-burnable trash pit was established in Area B; he said that it is uncertain if there was disposal in Area A before 1948. Mr. Curtis said that once the disposal area was established at Area B, it is unlikely that there would have still been a need to use the City's landfill. He noted that there was also a combustible burn pit (on the edge of Area A, near the current running track) and a rubble disposal pit (mostly construction rubble) underneath the helicopter pad. In response to Mr. Rudy's question about effluent control and cleanup, Mr. Gortva said that the cleanup program had looked at what types of materials were being burned and what was described was wood products and paper; investigations found no residual contamination from burn pit operations. Mr. Gortva said that when the nearby stormwater pond [near building 1546] was constructed, they did not find any materials of concern.

Mr. Curtis said that an early environmental assessment identified a potential landfill at a location in Area A. He said that his search did not find any evidence of a landfill, and the earlier assessment may have been referring to some debris in the area. Mr. Curtis said that an investigation by the environmental program also found no evidence, and a determination was made that no further action was needed.

Mr. Curtis discussed liquid waste disposal from the contaminated laboratory sewer system, noting that it was kept separate from the regular sewer system. He explained that piping would collect the liquid into holding tanks and then it would be treated by batches at plants where the liquid would be heated to a temperature that would kill any live biological agents. He said that the liquid would then be released into the regular sewer system after treatment. Mr. Curtis stated that the original 1940s decontamination treatment plants were replaced by the current single plant. Ms. Hahn asked if the treatment plants were located on Fort Detrick, and Mr. Curtis advised that they were on Fort Detrick. Mr. Curtis said that initially that the City of Frederick municipal system handled the sanitary sewage, but then it was switched to the Monocacy River plant in

¹⁰ [Incinerator 523 in Area A continued to burn rubbish from within the Restricted Area]

the late 1940s.¹¹ He stated that the sludge from the sewage disposal plant was used as fertilizer on-post and off-post through the 1960s.¹² Mr. Curtis said that it was not very well documented, but decontamination chemicals would have gone into the contaminated sewage by way of the floor drains. He explained that the focus at the time was killing the biological agents and not necessarily focusing on the chemicals used to do so. Mr. Rudy asked if TCE or PCE could have gotten into the system. Mr. Gortva responded that TCE and PCE would not have been the decontaminating chemicals.

Mr. Curtis stated that by 1952 large quantities of acid, used cleaning solution, or contaminated flammable liquids were not poured down building drains but stored in carboys for removal and disposal. He said that it is unclear where that disposal location was, but later site plans indicate that disposal was in the Area B pits which have been part of environmental investigations.

Mr. Curtis discussed incinerators and noted that they were located in groups close to where there were laboratory facilities that would cumulatively vent their products [exhausts or waste materials] to be burnt by the air incinerator or a solid waste incinerator. He stated there were the 200 [building] series incinerators, the 300 series incinerators, and the 500 series incinerators. Mr. Curtis advised that the ash disposal procedures during the World War II era are unclear; however, it is clear later on that ash is going to the ash disposal locations at Area B and near the former Monocacy Incinerator. He noted that these disposal areas have been investigated by the environmental program.

Mr. Rudy said that in January boxes showed up on his porch with information related to Fort Detrick including a 1959 map showing everything buried in Area B up to that point. He advised that he did not have the map with him but would share it, and it could be discussed at the next meeting. Mr. Rudy said that based on his review of the map, there could be other disposal areas that should be discussed in addition to the emphasis on B-11. Mr. Curtis said that there are many maps included in the Archives Search Report, but without seeing Mr. Rudy's map, he could not say if it has already been included. Mr. Rudy said that he would get a copy of the map to Mr. Gortva.

Mr. Curtis next discussed TCE use at Fort Detrick. He stated that TCE is an industrial solvent used for degreasing parts and has been used at Fort Detrick for that purpose. He noted that it was also used at Fort Detrick as a refrigerant in sizable quantities, with at least one storage tank being more than 400 gallons. Mr. Curtis said that TCE-based refrigeration systems were identified in Buildings 376, 470, 568, and 1412. He stated

¹¹ [ASR2 page 70, "On 1 November 1948, the Post Engineer activated the Monocacy Sewage Treatment Plant."].

¹² [Sludge was used into the early 1970s. Later use through the late 1980s is uncertain (verbal account). Written accounts indicate that "From the mid-1970s until 1997, Detrick disposed of the dried sewage sludge from the wastewater treatment process at the post landfill in Area B.]

that the TCE spill near Building 568 was apparently from leaking drums stored outside or a refrigerant system inside which leaked. Mr. Curtis advised that there is a record of drums of TCE being disposed of in Area B, Pit 11.

Mr. Curtis said that PCE use at Fort Detrick seems to have been very limited; it was used as a solvent and degreaser, but there were no dry cleaning plant on Fort Detrick (just a storefront where items were received and then taken to another location).

Mr. Rudy asked if there was still monitoring at the Building 568 spill site. Mr. Gortva said yes, and there are quite a few monitoring wells that have been sampled for a number of years. Mr. Gortva said that because the current occupant of Building 568 has been extracting groundwater, cleaning it to remove the TCE, and using it for aquaculture studies, it has reduced TCE concentrations from about 1,000 parts per billion to near the drinking water standards.

Mr. Gortva said that the work plan for Area A which he had mentioned earlier, includes looking at Buildings 376, 470 and 1412 to determine if there is potential groundwater contamination. The work plan proposes installing some wells around these buildings.

Mr. Curtis reviewed the research on radioactive activities at Fort Detrick Buildings, noting that use began in 1948. He said that only snippets of information are available on how it is used--as a calibration agent with instrumentation and as a tracer particle so when something was dispersed it was detectable. Mr. Curtis said that these uses were under Atomic Energy Commission/Nuclear Regulatory Commission licenses. Mr. Curtis displayed a list of building where radiological activities occurred, noting that most of the buildings are on the National Cancer Institute campus. He advised that in the 2002 decommissioning plan only four buildings were noted.

Mr. Rudy stated that he had a deathbed confession by a resident of Frederick whose husband was killed on Fort Detrick by polonium, placed in a lead casket, and buried in Area B. Mr. Rudy said he will provide this information to the Army.¹³

Mr. Curtis discussed radioactive material disposal noting that it begins in 1951 in a trench in Area B, involving both solid and liquid radioactive wastes. He stated that the locations moved over time in Area B. He advised that on-post burial ends in 1957 with opening of a Radioactive Material Disposal Facility at Edgewood Arsenal for Army installations east of the Mississippi.

Mr. Curtis advised that radioactive material was stored and packaged for shipment off-post in Building 261. He said that there was also another process for treating liquid waste which was to allow it to naturally decay as the half-life of some of the radiologicals was a very short period of time; it could then be disposed of through the

¹³ [No records substantiating this claim was found during the ASR research. In 1992, Fort Detrick's Byproduct Material License was amended to allow use of Polonium 210 (half-life of about 138 days) to be used in a sealed source.]

sanitary sewer system. Mr. Curtis said that another process used through December 1999 was to dilute it to the level allowed by the regulations at that time.

Mr. Curtis stated that sludge from the sewage disposal was used as a fertilizer from approximately 1948 through the 1960s. He continued explaining that from at least 1975 until 1997, sludge containing radioisotopes was disposed of at the post landfill in Area B. He advised that from 1998 until 2004 the sludge was sent to a low-level radioactive waste facility in Utah.

Mr. Curtis next discussed the search for aboveground storage tanks and underground storage tanks containing gasoline, diesel and fuel oil which had not yet been identified under the environmental program, and noted a handful were found.

Mr. Curtis reviewed the results of the search for potential munition or explosive hazards. He said that the Army had previously identified four Munition Response Sites for inclusion into the Military Munitions Response Program. He said that other grids do not warrant inclusion into the Program because there is not an explosive hazard potential, for example, a temporary grid area established in Area A before Area B was ready. He noted that two small arms ranges were excluded and a former skeet range has been remediated.

Mr. Curtis said that the Archives Search Report also looked at whether Fort Detrick conducted any activities off-post [in the surrounding community]. He advised that in July 1953 there was a dissemination test using zinc cadmium sulfide (florescent particles) mixed with lycopodium spores (a flash powder) to act as a simulant for dry biological agent. He said that the test was done along the Potomac River. Mr. Rudy asked if the City of Frederick was notified in advance, and Mr. Curtis said that he did not know. Mr. Curtis said that there were a number of trials conducted in the 1950s with zinc cadmium sulfide particles for large-scale dispersion efforts; some of those tests have been made public in the past. He stated that the tests occurred in a number of locations in the United States.

Mr. Curtis next discussed pest control activities at Fort Detrick. He explained that the search's focus was on whether there were any exotic pesticides being used and there were not; however, there was a greater awareness of pest control than at most other installations so there was a more vigorous program. He further explained that the concern was that pests would contaminate ongoing tests or potentially carry out whatever agent they had been in contact with to post personnel or the public. Mr. Curtis said that the conclusion was that pesticide use may have been higher at Fort Detrick than other Army posts. Mr. Gortva said that all the Area B disposal areas were examined for pesticides in the soil and groundwater, and he believes that it has been thoroughly documented that there is not a pesticide issue in groundwater at Area B.

Mr. Rudy asked if there were an incident and a contaminated animal got loose in the community, what procedures or programs are in place to protect the community. Mr. Gary Zolyak responded that there are National Environmental Policy Act (NEPA)

documentation for the new buildings, and the documentation talks about the likelihood of such an incident and what would happen.¹⁴

Mr. Curtis said that both archive search reports are available on Fort Detrick's web site: [ASR 1] <http://www.detrick.army.mil/responsible/repository/asr16June2014.pdf> ; and, [ASR 2] <http://www.detrick.army.mil/responsible/ArchivalReport2012.pdf>.

Mr. Rolan Clark asked how much work Mr. Curtis himself did on the search and report. Mr. Curtis said that there were about a dozen people from his office who worked on the report, but he wrote most of the two reports. Mr. Clark commented that he appreciated the tremendous amount of work put into the report.

8. Area B Groundwater Investigation Update presented by Mr. John Cherry, ARCADIS

Mr. John Cherry reviewed the topics he would be covering starting with an overview of Area B and a snapshot summary of new analytical results and observations since the last Board meeting. He said that he also would be discussing the deep drilling on-post and off-post, and new groundwater sampling results at the Waverley property, County property, and Area B.

Mr. Cherry displayed an aerial photograph of the Area B Study Area showing the Study Area divided into nine areas labeled A through I. He reminded everyone that there were a lot of investigations going on simultaneously and not all of them would be discussed during his presentation this evening. He advised that the areas highlighted in green would be the ones where there is new information being presented.

Mr. Cherry next gave a Snapshot Update on activities since the last Board meeting. He advised that the deep drilling phase has been completed, with eight permanent monitoring wells installed with depths ranging from 86 feet to 443 feet deep. Mr. Cherry said that the deep boring at Area B Monitoring Well 79 was completed at 443 feet; he advised that PCE was detected at this location at the same general concentrations seen at adjacent points. Mr. Cherry said that at the last meeting he discussed the preliminary screening level data from Packer test results from off-post deep borings on the Waverley property. He said that the analytical data had been received from sampling of the permanent monitoring wells which is considered more reliable than the Packer test data. He said that the sampling showed concentrations at shallow depths along the fenceline; sampling of the deeper well installed about 100 feet from the fenceline, across from B-11, at a depth of 145 to 155 (Waverley-1) found detections of TCE at 340 parts per billion, PCE at 12 parts per billion, chloroform at 160 parts per billion, and 1,1-DCE at 14 parts per billion. Mr. Cherry advised that these detections exceed the EPA

¹⁴ [Discussions on this topic of current procedures and programs is outside the scope of the Installation Restoration Program. For further information or questions, please contact the Fort Detrick Public Affairs Office at 301-619-2018]

standards. He said that there were no exceedances in wells further south on the Waverley property.

Mr. Cherry next gave the detailed update on the deep drilling. He displayed an aerial photograph showing three areas marked with red stars and discussing the reasons why deep drilling was being conducted in these three areas. He stated that he would discuss all three areas.

Mr. Cherry displayed a slide recapping the deep drilling work, including the depths drilled to and where the permanent wells were screened. He noted that the new information is the deep well installed at Area B which was screened at 433 to 443 feet deep.

Mr. Cherry discussed the new deep groundwater results for the Waverley property. He displayed an aerial photograph showing only analysis of deep groundwater samples for PCE and TCE at the four borings on the Waverley property. He noted that the EPA standard for PCE and TCE is 5 parts per billion; the detection of PCE at Waverley-1 (on the fenceline, across from B-11) was 12 parts per billion, and the detection of TCE at this location was 340 parts per billion. Mr. Cherry advised that the sampling of the other three deep borings on the Waverley property did not have any PCE or TCE detections above the EPA standard and most were non-detects. Mr. Cherry displayed a chart showing a summary of all the compounds detected at the deep wells on the Waverley property. He noted the compounds at Waverley-1 that exceeded the EPA standards were outlined in red and were TCE, PCE, chloroform, and 1,1-dichloroethene.

Mr. Rudy asked what the plan is to look at the current status of all the Area B burial sites. Mr. Gortva responded that part of the capping remedy is to have long-term monitoring of the caps, and that the Army is currently working with EPA and Maryland Department of the Environment to have an approved monitoring plan in place to monitor the groundwater at each of the disposal areas to ensure the capping remedy is working. Mr. Gortva said that a contract had been issued to ARCADIS for this work, and ARCADIS will be providing a draft plan soon that will be shared with the Board and regulators to review and provide comments. Mr. Rudy asked if the caps were being monitored. Mr. Gortva said that the physical caps are monitored, and that there are groundwater monitoring wells around all the caps. He said that the plan ARCADIS is developing will be approved by EPA and Maryland Department of the Environment to ensure they agree with the number and location of wells included in the long-term monitoring plan. Mr. Rudy asked what would happen if monitoring showed an increase in a reading. Mr. Gortva said that groundwater monitoring has been occurring around the landfill caps for a number of years; if something increased, the current monitoring program should have detected the increase. Mr. Cherry added that ARCADIS had done

extensive sampling of the Area B groundwater wells, including those around the capped areas, as part of the remedial investigation of the groundwater.¹⁵

Mr. Cherry summarized the meaning of the most recent well sampling results. He stated that this is the first round of data from the wells, and that additional sampling will be done in the future. He said that the data confirms there are exceedances of EPA standards close to the fenceline, with low impacts or non-detections in wells on the Waverley property further south. Mr. Cherry said that there is no current or anticipated future potable use of the groundwater on the Waverley property so there is no risk from groundwater ingestion; future human health and ecological risk assessments are necessary to evaluate all potential routes of exposure. Mr. Cherry noted that assessment of remedial alternatives for Area B groundwater will have to account for off-post groundwater contamination in this area.

Mr. Cherry displayed an aerial photograph showing both deep and shallow groundwater sampling results. He reminded the Board of the TCE/PCE detections in the shallow groundwater which exceed the EPA standard along the fenceline.

Mr. Rudy asked if the data is provided to the developer of the Waverley property. Mr. Gortva said that the right of entry agreement calls for the Army to provide the developer with all the information collected, including validated sampling results; he noted that the Army went a step further and also provided the preliminary Packer test data. Mr. Rudy asked if the sampling information is provided to the City planning commission, and Mr. Gortva said that the data is not automatically sent to the City but would be provided if requested.

Mr. Zolyak stated that the right of entry for the Waverley property expired in November 2014 so the Army is currently not able to get onto the property. He said that there is ongoing litigation and for a variety of reasons, including the litigation, the Waverley property owner has decided not to extend the right of entry, and that there is nothing the Army can do at this time. Mr. Zolyak stated that the Waverley property owner had filed a lawsuit against the Army for \$37 million in 2014. He said that there was an oral argument before US District Court Judge Blake in December 2014 because the Federal government wanted to dismiss the lawsuit. He advised that Judge Blake agreed with the Federal government and issued an order in mid-January dismissing the \$37 million claim in the US District Court. Mr. Zolyak said that he expects the property owner to appeal to the Fourth Circuit Judge. Mr. Zolyak said that a second lawsuit was filed in the US Federal Claims Court in Washington, D.C. at the end of July 2014 and alleged that the installation of wells on the property constitutes the Federal government taking his property. Mr. Zolyak said that this lawsuit is still pending and has not yet been heard by the judge. Mr. Zolyak reminded the Board that the Army does not have the authority to go into court to force access onto this property, but the EPA does have authority. He

¹⁵ [The landfill cap monitoring program has reviews every six months and a more extensive review every five years. These reviews evaluate site conditions that may trigger additional testing or actions that may be required to ensure that the caps are functioning as intended.]

stated that EPA's attorney is in the process of sending a letter to the property owner strongly encouraging him to sign another right of entry and allow the Army access.

Mr. Gortva said that the data collected to date from the Waverley wells provides a pretty good picture and confirms what the Army and ARCADIS thought was happening with the groundwater. He said that the Army would like to collect additional rounds to ensure the results are the same and to have access for the implementation of any remedy. He said that access is not needed immediately.

Mr. Zolyak said that he believes EPA is having discussions with the property owner, and EPA that is going to require that should be homes be built on this parcel, all potential buyers will sign a document acknowledging they are buying property adjacent to a Superfund site. Ms. Hahn expressed concern about the current environmental statement for the Waverley property. Mr. Rudy stated that he thinks the Maryland Department of the Environment should update their letter about the Waverley property. Ms. Green said that the Waverley property did not get an all clean response from the State; the State has prohibited use of the groundwater on the Waverley property because of potential concerns.

Mr. Cherry next discussed deep drilling on the County property; he said that the location is at the opposite end of Area B along Montevue Lane. He stated that a deep boring was installed down to 400 feet, Packer sampling was done, and two permanent monitoring wells were installed at 99 to 109 feet deep and 382 to 397 feet deep. Mr. Cherry said that the shallower well was sampled, and analysis found PCE at non-detect and TCE at 0.1 part per billion with a "J" qualification which means an estimated detection from the laboratory. Mr. Cherry reminded the Board that this deep well was installed on the County property to see to what extent, if at all, groundwater was migrating beyond the primary discharge area. He advised that additional work is planned including additional sampling and re-evaluating seeps and springs. Mr. Gortva added that the 0.1 detection does not indicate a concern for vapor intrusion, but the slides note there are other shallower detections in the vicinity that are still under investigation.

Mr. Cherry said that another observation from the deep drilling is that fewer fractures are seen as they drill deeper, and these fractures are not producing much water; therefore, not much contamination would be expected to be seen at deeper levels.

Mr. Cherry discussed the new deep well installed at Area B to 500 feet deep. Mr. Cherry advised that a Packer test sample was only able to be collected at 340 to 350 feet deep. He said that four deeper intervals were assessed down to 470 feet, but water flow was so minimal at these depths, no Packer test samples could be collected. He noted that a zone was found at 433 to 443 feet where a well was installed and will be sampled in March.

Mr. Cherry reviewed the schedule of upcoming work, including a work plan to address some data gaps and some sampling. He reviewed the overall Area B schedule and noted potential groundwater pilot treatability studies are being discussed.

Ms. Harbaugh asked when the next round of vapor intrusion testing would be conducted; Mr. John Buck responded that the target date is the end of March, pending receipt of rights of entry.

9. RAB Member Open Discussion and General Community Comments

Mr. Rudy asked if it would be possible to receive the minutes sooner. Mr. Gortva said that he would do his best to send them out within a week of receiving them.

Mr. Gortva invited Board members to send him any other topics for future meetings by e-mail.

10. Future Meeting Dates

Mr. Gortva advised that Mr. Rob Thomson of EPA had apologized for not being able to attend tonight's meeting and had asked if it was possible for the May meeting to be moved to May 13; all agreed with this date. Mr. Gortva said that the future meeting dates are August 5, 2015 and November 4, 2015 (subject to room availability).

The meeting adjourned at approximately 9:03 p.m.

Reviewed by:

Approved/Disapproved

Enclosures:

Archives Search Report Presentation

Area B Groundwater Investigation Progress Report Presentation

Meeting Sign-In Sheet

DISTRIBUTION:

Each RAB Member (w/o enclosure)

Each Meeting Attendee (w/o enclosure)

**FORT DETRICK RESTORATION ADVISORY BOARD
LIST OF TOPICS FOR FUTURE MEETINGS**

Proposed Topics

- City road proposed to go through Area B – Nov 2014
- Surface water detections – Nov 2014

Completed presentations

- Archive search report presentation – Feb 2015