



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON
4551 LLEWELLYN AVENUE, SUITE 5000
FORT GEORGE G. MEADE, MARYLAND 20755-5000

REPLY TO
ATTENTION OF:

IMME-PWE

December 15, 2014

MEMORANDUM FOR Restoration Advisory Board Members

SUBJECT: Minutes for the November 20, 2014 Restoration Advisory Board Meeting

1. The Restoration Advisory Board (RAB) meeting was held on November 20th, 2014, at 7:00 p.m. at the Holiday Inn Express located at 7481 Ridge Road, Hanover, Maryland, 21076. The next RAB meeting will be **Thursday, January 15th, 7 p.m.**, at the Marriott Courtyard, 2700 Hercules Road, Annapolis Junction, Maryland, 20701.

2. The following RAB members were present:

Mr. John Burchette, U.S. Environmental Protection Agency
Mr. Mick Butler, Fort Meade Co-Chair
Mr. George Knight, Acting Fort Meade Restoration Manager
Mr. Martin Madera, Community Member
Mr. David Tibbetts, Community Co-Chair
Mr. Brian Chew for Ms. Kerry Topovski, Anne Arundel County Health Dept.
Mr. Fred Tutman, Community Member

3. Members not present:

Mr. Rusty Bristow, Community Member
Mr. Wayne Dixon, Community Member
Ms. Kellyann Few, Community Member
Mr. Harry Neal, Community Member
Mr. Howard Nicholson, Community Member

4. Others present were:

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| Mr. Ola Awosika | Parsons |
| Mr. Steve Cardon | Fort Meade BRAC (Calibre) |
| Mr. Walt Chahanovich | Fort Meade, Office of SJA |
| Mr. John Cherry | ARCADIS |
| Ms. Sarah Gettier | URS |
| Ms. Elisabeth Green | Maryland Department of the Environment |
| Ms. Katrina Harris | Bridge Consulting Corp. |
| Mr. Jerry Kashatus | URS |
| Mr. Mark Magness | CBI |

IMME-PWE

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Mr. Scott McClelland
Ms. Erin McKinley
Mr. Michael Rooney

URS
Fort Meade Environmental Office (Osage of Virginia)
HGL

5. Announcements and Minutes:

a. Mr. Mick Butler welcomed everyone, and Mr. David Tibbetts called the meeting to order. Mr. Butler invited all present to introduce themselves and sign in.

b. Mr. Tibbetts made a motion to approve the September 18th, 2014 meeting minutes. The motion was seconded and unanimously adopted to approve the September 18st, 2014 minutes.

6. Old Business:

a. Mr. Butler asked everyone to confirm their contact information on the sign-in sheet at the registration table.

b. Mr. Butler asked Mr. George Knight to give an update on the revision of the Board's charter. Mr. Knight advised the proposed revised charter had been sent out after the last Board meeting for review and comments; no comments have been received. Mr. Tibbetts said he would like to suggest the proposed change to two-year term limits be removed, and the service terms of community members be kept as is. Mr. Tibbetts referred to page 11, line 26, and mentioned there may be other references. He noted there is a long learning curve for community members, and since the Board only meets every other month, it takes many years to get up to speed on the environmental issues. Mr. Martin Madera stated that non-attendance should be a factor, but if active and interested, the person should be able to remain a member. A motion was made, seconded and unanimously adopted to delete the two-year term limits from the revised charter. A suggestion was also made to change the definition of a quorum from 51% to a majority of members present (page 21, Section F). Mr. Tibbetts asked about the ability to elect an alternate community co-chair, and Mr. Knight responded that the new charter, once approved, will have provision for an alternate community co-chair. Mr. Butler suggested Mr. Knight make the revisions discussed and send out a revised version for voting on at the next meeting.

7. Preliminary Assessment/Site Inspection Update:

a. Mr. Butler introduced Mr. Jerry Kashatus of URS, an Army contractor.

b. Mr. Kashatus stated he had given a presentation at the last meeting on the Southwest Areas of Interest, and a question had been asked about whether past radiological or biological waste had been generated at Buildings 8549/8550/8551. He displayed the slide presented at the previous meeting which showed all the soil and groundwater samples collected. He noted the buildings had been constructed around the same time and served as motor pools until the 1990s. He said he had reviewed the records and could only find information on common cleaners and

compounds used to calibrate the equipment, but there was no evidence of biomedical or radiological waste being generated.

c. Mr. Kashatus reminded the Board of the scope of the Preliminary Assessment/Site Inspections. He noted he had presented information on the Southwest and Southeast Areas of Interest at previous meetings and would be discussing the Northern Areas of Interest at this evening's meeting.

d. Mr. Kashatus explained a Preliminary Assessment is conducted by looking at information from a site, including historical reports, aerial photographs, charts, figures, and graphs, and assessing whether the information is sufficient to reach a decision that the site is clean enough to recommend no further action; if there is uncertainty and more information is needed, the site moves into the Site Inspection phase where additional samples are collected.

e. Mr. Kashatus displayed a graphic depicting the Superfund/Comprehensive Environmental Restoration, Compensation and Liability Act (CERCLA) process. He pointed out these sites were at the very initial stage of the CERCLA process.

f. Mr. Kashatus explained the sites were divided geographically to make them more manageable. He stated the golf course sites were given priority because of pending construction and have been closed out. He explained the other sites were divided into the North, Southeast, Southwest, and South of Route 32. Mr. Kashatus displayed a map showing how the sites were divided into geographic areas.

g. Mr. Kashatus next discussed the North Areas of Interest. He noted the area was mostly used for housing with a few buildings used for maintenance of vehicles and motor pools. He advised 25 areas of interest were identified, and 8 sites were determined to need no further action during the Preliminary Assessment phase. Mr. Kashatus said field work for the remaining 17 sites was completed during the Site Inspection phase. He noted laboratory data had been received and validated and risk-based screening had been performed on the results. Mr. Kashatus said the draft report for the Southeast Areas of Interest had been reviewed by the regulators, and the regulators' comments are in the process of being addressed.

h. Mr. Kashatus displayed a list of the 17 North Areas of Interest and a map showing the sites' location. He noted they included buildings, two incinerators, former motor pools and a few old dump sites.

i. Mr. Kashatus advised that at the conclusion of the Site Inspection, no further action was recommended for 8 of the sites. He noted the regulators had not yet agreed with the recommendation for the sites shown in italics. He explained that typically the issue is something like the compound chromium, which was analyzed for as total chromium and some assumptions made based upon the results. He advised more work will be done for those sites which may then lead to a no further action decision, such as speciating the chromium during the analysis. Mr. Kashatus said he would be discussing tonight nine sites that went through the Site Inspection process and will require some further work before a decision can be made. He added that some

of the 9 sites are italicized as they may not need further work based on the conservative risk assumptions he had discussed at previous meetings.

j. Mr. Fred Tutman asked Mr. Kashatus how decisions are made about what to screen for when collecting the samples and whether such decisions are based on the site's history. Mr. Kashatus responded the site's history is assessed during the Preliminary Assessment, and for most of the sites some sampling has occurred in the past. He said the results of the previous sampling efforts are examined, and aerial photographs are reviewed to look for stained soils that were not sampled. Mr. Kashatus said potential issues are identified during the Preliminary Assessment stage and then in collaboration with the Army and the regulators, a decision is made about the need for additional work. Mr. Kashatus stated a work plan is then developed which outlines the locations to be sampled and the constituents for which the samples will be analyzed; the work plan is reviewed by the regulators and their input incorporated. Mr. Tutman asked if there is ever a scenario where something is found that was not expected. Mr. Butler suggested Mr. Kashatus further explain the all-inclusive nature of the initial sampling. Mr. Kashatus advised the initial sampling for most of the sites is very broad and includes many constituents; he said the analyte list may be further narrowed if there are no detections.

k. Mr. Kashatus next reviewed the risk assessment process for the Site Inspections, noting the Board had been briefed on the process in the past. He explained the process is simpler than the risk assessments done during a Remedial Investigation; therefore, the criteria were very stringent. He stated that once all the chemical data was received from the laboratory, the maximum (not an average) detected concentration for each chemical compound is compared with the most recent Regional Screening Levels (RSLs) produced by EPA for soil, groundwater and air. Mr. Kashatus said chemicals become chemicals of potential concern if the maximum detected concentration is greater than the Regional Screening Levels. He noted the data is also compared to regional background levels for soil as they are the only existing background numbers; he said the background study underway for groundwater will provide numbers that can be used for comparison. He said all the risks are added together and compared to the site-specific thresholds of 5×10^{-5} for total cancer risk and 0.5 for total non-cancer hazard. Mr. Kashatus explained if the number is less than the threshold, no further action is needed. Mr. Kashatus said the sites he would be discussing tonight are those that would be likely continuing to the remedial investigation/feasibility study phase.

l. Mr. Kashatus explained for each of the sites he would be showing figures of the site with its location, historic and recent sampling results, information on why the site is an area of interest, and the calculated cancer and non-cancer risk (usually groundwater is driving the risk at these sites). Mr. Kashatus said he would also present the chemical compounds identified for each site that contribute the most to the elevated risk levels and the comparison numbers for EPA's Maximum Contaminant Levels.

m. Mr. Kashatus first discussed Building 1007, noting it is in the northeastern portion of the site and is also known as Solid Waste Management Units 14 to 18; it also overlays Motor Pool 15 and Wash Rack 10. He explained Building 1007 was identified as a potential site because it was a former maintenance facility and motor repair facility with wash racks and

oil/water separators. Mr. Kashatus said metals in groundwater are driving the risk at this site with both the cancer risk (primarily from chromium and arsenic) and non-cancer risk (primarily from cobalt, thallium and arsenic) above the very conservative threshold numbers.

n. Mr. Kashatus next discussed Building 2120c, noting it was used for vehicle storage and maintenance and has wash racks, a wash pit that trucks drove into, and an oil/water separator. He noted metals in groundwater are driving the risk, with cancer risk being slightly above the threshold number and non-cancer risk being much higher than the threshold number. He advised the results for compounds with Maximum Contaminant Levels exceed the numbers by several orders of magnitude so it is very likely this site will continue to the remedial investigation/feasibility study phase.

o. Mr. Kashatus reviewed the investigation of Building 2128, noting it was in the same general area as Building 2120c. He stated numerous samples had been collected at this site. He advised the analysis of the site showed organics, primarily PAHs, are causing the cancer risk numbers to exceed the threshold number, while metals are driving the non-cancer risk. Mr. Kashatus noted this site likely will continue to the remedial investigation/feasibility study phase.

p. Mr. Kashatus next discussed Building 1943, the site of a former incinerator. He advised the previous samples were collected from a cleared area where it was assumed the incinerator had been located; however, based on research, the incinerator was identified as being in a different area and thus the recent sampling was conducted in that area. Mr. Kashatus advised that metals are driving the cancer and non-cancer risk, with an upgradient well showing the highest concentrations which may mean the levels are natural background levels.

q. Mr. Kashatus said the next site he would discuss, Motor Pool-13, did not have any sampling conducted in the past but was identified based on an old map. He stated a sample was collected in the northern portion of the site as aerial photographs showed staining only in this area. He said that sample showed some organics that are causing a cancer risk and cobalt causing a non-cancer risk so additional work may be required at this site.

r. Mr. Kashatus reviewed the investigation results for Motor Pool-18, a site identified by looking for stained soils on aerial photographs. He said organics in the groundwater are driving the cancer risk at this site, with metals driving the non-cancer hazard.

s. Mr. Kashatus next discussed Motor Pool-19 where sampling had been conducted in the past, but more samples were collected recently based on stained soils identified in aerial photographs. He said both total metals analysis and dissolved metals analysis were conducted, with the dissolved metals results showing a lower risk.

t. Mr. Kashatus reviewed the results for Dump Site B where sampling had been conducted in the past, but more samples were collected recently to confirm the previous results. He noted metals (chromium and iron) in the soil showed a possible risk, along with the potential risk from metals in the groundwater. Mr. Kashatus said another site, Dump Site 1957-E, also

has cancer and non-cancer risk being driven by metals, along with some petroleum product which is present at the site.

u. Mr. Kashatus said the next step in the process for these sites is to respond to comments on the draft report from the regulators. He stated the final recommendation for each of the sites will be a no further action determination, a Supplemental Site Inspection, or a Remedial Investigation/Feasibility Study.

v. Mr. Kashatus summarized the overall PA/SI status by noting all the draft reports have been submitted to the regulators, comments have been received, and responses are being prepared. He reminded the Board the investigation of the Golf Course sites has been completed. Mr. Kashatus said he will be updating the Board on the South of Route 32 Areas of Interest at the next meeting.

8. Performance-Based Contract--Five Year Summary:

- a. Mr. Butler introduced Mr. John Cherry of ARCADIS, an Army contractor.
- b. Mr. Cherry advised he would be giving a recap of ARCADIS' five-year contract which will be ending soon. He stated he had put together a snapshot of what it takes to do a five-year contract at this type of site.
- c. Mr. Cherry explained a performance-based acquisition vehicle allows the contractor to drive the level of effort and manage the project with the focus on results versus activities. He said an example would be the Army directing ARCADIS to delineate groundwater contamination versus directing ARCADIS to install a certain number of wells. He noted it is up to the contractor to figure out how to get from Point A to Point B while the price is guaranteed to the Army. He added that Army and regulatory approval is needed for the project to move forward.
- d. Mr. Cherry presented some of the statistics over the five-year term of the contract, noting that 350 ARCADIS staff had worked on Fort Meade sites, with some being experts only needed for a short period of time, while 35 people worked 75% of the total project hours during the five-year period.
- e. Mr. Cherry advised a total of 77,000 hours had been worked on the six different sites at Fort Meade and one site at Phoenix Military Reservation. He highlighted some of the activities completed. He said five of the sites have final remedial investigations/feasibility studies and ARCADIS is hoping to finalize one more; four plus final feasibility studies completed; several proposed plans finished and four Records of Decision signed; two large excavations; several non-time critical removal actions; groundwater remediation systems and a groundwater containment system; hundreds of borings and well installations; thousands of environmental samples; vapor intrusion investigations; 18 technical meetings and 30 Board meetings; off-post drilling; public meetings; 20 monitoring reports; 76 health and safety audits; 0 OSHA reportable

injuries or lost time; completed Fort Meade's first four Records of Decision under the Installation Restoration Program as well as Fort Meade's first CERCLA remedies.

f. Mr. Cherry showed the labor hours plotted by week and noted the busiest week was during the excavation at the Manor View Dump Site, as well as off-post drilling and other activities simultaneously taking place.

g. Mr. Cherry displayed a map showing the sites included in the contract and their location. He showed a graphic of where each site was in the CERCLA process when the contract began in 2009, the contract objectives for the sites, and the present status of each site in the CERCLA process. He noted the objective was to bring the sites to the Record of Decision stage or Remedy in Place; he added there had been some contract revisions. Mr. Cherry advised ARCADIS is very close to achieving all the objectives.

h. Mr. Cherry next discussed the Architect of the Capitol site, noting it is a 100-acre property off Route 32. He stated the final Record of Decision was completed in 2014 following a public meeting. Mr. Cherry said a soil removal still needs to be completed due to elevated lead detections, and the removal will occur under a different contract.

i. Mr. Cherry said the Former Pesticide Shop is a small site which was taken to completion under the ARCADIS contract. He stated after a Record of Decision and Remedial Design documents, a fairly large excavation had been done with more than 1700 tons of soil excavated, including 917 tons of hazardous waste soil which had to be handled separately; 69 truckloads were safely transported out of the installation to the final disposal site. Mr. Cherry said groundwater treatment is underway with one round of injections completed. He said the site has been restored and is fenced in.

j. Mr. Cherry reviewed the activities at the Former Mortar Range and advised it is another site that is completed. He said the remedy included signage and an educational program to convey the potential for unexploded ordnance to be present. He advised visual sweeps and periodic inspections would be conducted in the future.

k. Mr. Cherry summarized the Manor View Dump Site where an investigation was begun many years ago when there were methane detections near military homes caused by a former unregulated dump. He said ARCADIS' contract objective was to excavate the waste and this was achieved through a non-time critical removal action. He said a final Record of Decision was completed in 2014. Mr. Cherry noted 27,000 tons of waste materials and soil were removed and resulted in 1,100 truckloads being transported to the final disposal location. He said the site is now a grassy field awaiting re-use.

l. Mr. Cherry discussed Operable Unit 4 and Lower Patapsco Aquifer, showing its location in the southeast corner of Fort Meade with the groundwater extending off-site into Odenton. He noted when ARCADIS began work on this site, there had been various remedial investigations and the Army wanted a holistic approach. He advised the objectives were to figure out sources of the tetrachloroethylene (PCE), trichlorethylene (TCE), and carbon

tetrachloride in the groundwater and to take the site to a final Record of Decision. Mr. Cherry said there have been many rounds of drilling and wells installed on-post and off-post. He reminded the Board a non-time critical removal action had been implemented at this site to address the groundwater. He explained a hydraulic containment system was installed which includes 21,000 feet of piping to pull groundwater out, clean it, and reinject it back into the formation; to date 56 million gallons of water has been treated. Mr. Cherry noted the air sparging/vapor extraction system was installed near the former Post Laundry Facility to address a source area in that part of the site. Mr. Cherry said an in-situ chemical oxidation system was also installed near two other source areas to address solvents in the groundwater. Mr. Cherry advised discussions are still continuing with the regulators to address the inorganic compounds at the site.

m. Mr. Cherry summarized the results of the activities at the Closed Sanitary Landfill and advised a Proposed Plan should be issued soon. He stated some low levels of benzene, arsenic and inorganics have been detected in the groundwater on the property line. He advised the preferred remedy is an air sparging system along the property line to treat the groundwater.

n. Mr. Cherry showed a summary of the progress on the sites, noting they all went from the remedial investigation stage to much further along in the CERCLA process.

o. Mr. Tibbetts asked about the contract value, and Mr. Cherry estimated it was between \$16 and \$17 million. Mr. Tibbetts asked how much of the signing of four Records of Decision was related to the new contract and how much was just the fact the sites were in process. Mr. Cherry responded that the sites presented many challenges and many steps in the process can be very lengthy; to achieve the first Records of Decision for most of the sites which have been around for many years is an accomplishment. Mr. Tibbetts stated he personally thought ARCADIS had done a great job. Mr. Tibbetts said he thinks an important question to ask at the end of a contract is whether a contractor has made a difference, and he thinks ARCADIS has made a tremendous difference in the process.

9. Update on Operable Unit 4:

a. Mr. Butler asked Mr. Cherry to next give a more detailed update on the groundwater treatment systems at Operable Unit 4.

b. Mr. Cherry stated three groundwater interim remedies have been installed at Operable Unit 4. He displayed a map showing the site location. He noted the purpose of the interim actions is to treat the source areas where PCE, TCE and carbon tetrachloride have been detected in the groundwater. He said after the source areas are treated, the groundwater flows to the southeast where a deep groundwater treatment system has been installed that collects the water, treats it, and reinjects the water back into the aquifer.

c. Mr. Cherry discussed the in-situ chemical oxidation system at source Area #1, near Buildings 2286 and 2276. He explained the area has been an active construction site for several years so the buildings and features at the site have changed substantially. He said the injections

are done by setting up a temporary site and completing the injections through the injection lines in place. He advised three rounds of groundwater monitoring have been completed since the injection, and the results show the compounds are declining; Mr. Cherry displayed graphs showing the monitoring results. Mr. Cherry said a second injection is tentatively planned for 2015 based on the monitoring results.

d. Mr. Cherry next discussed the air sparging/soil vapor extraction system installed at Area #2, near Building 2250, the former Post Laundry Facility, to treat PCE in the groundwater. He noted the system has been running since March 2014, and quarterly monitoring has been conducted. He stated this system will operate into 2015. Mr. Cherry discussed the initial results from the monitoring which is showing gradual declines in the concentrations. Mr. Cherry said the system has gone through some start-up changes and optimization and has been steadily running for just over 80 days. He noted there have been some spikes but they are not unexpected.

e. Mr. Cherry reviewed the interim remedy installed at Area #3, the Lower Patapsco Aquifer which was completed in March 2014. He explained the hydraulic containment system consists of a series of deep extraction wells and a line of injection wells. He continued explaining the water is flushed out, treated, and reinjected. He advised there is a surface water formation that has not had to be used since the formation is accepting all the treated water. He stated over 56,000 million gallons of water has been extracted, treated, and reinjected. He noted the containment system is a long-term system that will be in operation for decades.

10. Update on the Nevada Avenue Investigation:

a. Mr. Butler introduced Ms. Erin McKinley of Osage of Virginia to give an update on the Nevada Avenue investigation.

b. Ms. McKinley advised she would be giving an update on the monthly sampling results at the three off-post homes as shown on an aerial photograph. She displayed a table and chart showing monitoring results from the last 12 months through November 2014. She stated the last detections of PCE remain below maximum contaminant levels and continue to decline, and there were no detections of dichloroethene or TCE in November. She said there were also detections of methylene chloride at two homes in September at 0.4 and 0.5 ppb.

c. Ms. McKinley said the report is in the draft final stage with comments from the regulators being resolved. She advised the monthly sampling will continue as will the provision of bottled water.

11. Open Discussion/New Business:

a. Mr. Tibbetts said at a recent Greater Odenton Improvement Association meeting a mention was made of people being evacuated from military housing, near the new construction going towards Howard County. Mr. Butler asked if the reference was made about the Manor View Site, and Mr. Tibbetts said the person raising the issue said it was not Manor View. Mr.

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Tibbetts said he would give Mr. Butler the contact information for the person who asked the question who was a military spouse.

b. Mr. Knight invited nominations for community co-chair. Mr. Tibbetts expressed interest in serving as community co-chair. No other nominations were made. A motion was made, seconded and unanimously approved to have Mr. Tibbetts serve as community co-chair for a one-year term.

c. Mr. Butler invited Board members to contact him with any suggestions for topics for the next meeting. Mr. Knight advised the Army would like to try a new location for the next meeting as the space is larger; he said the location is the Marriott Courtyard, 2700 Hercules Road, Annapolis Junction, 20701. The Board agreed with the new location.

d. The meeting was adjourned at 9:02 p.m.

MICHAEL P. BUTLER
Chief, Environmental Division

CF:
RAB MEMBERS
FGGM GARRISON COMMANDER
PUBLIC AFFAIRS OFFICE