

**Spring Valley Partnering Meeting
February 10, 2015
Spring Valley Project Trailers Conference Room**

Name	Organization/Address	
Sherri Anderson-Hudgins	USACE - Huntsville	X
Thomas Bachovchin	ERT	X
Brenda Barber	USACE - Baltimore	X
Todd Beckwith	USACE - Baltimore	
Janelle Boncal	Parsons	
Bethany Bridgham	American University	X
Sean Buckley	Parsons	X
Paul Chrostowski	CPF Associates, AU Consultant	X
Tom Colozza	USACE - Baltimore	
Jennifer Conklin	DDOE	
Kathy Davies	EPA – Region III	
P. deFur	Environmental Stewardship Concepts/RAB TAPP Consultant	X
Diane Douglas	DDOE	
Bill Eaton	URS	
Alma Gates	RAB Member – Horace Mann Representative	X
Steven Hirsh	EPA –Region III	X
Dawn Iovan	EPA – Region III	
Leigh Isaac	Environmental Stewardship Concepts	
Carrie Johnston	ERT – Community Outreach Team	
Julie Kaiser	USACE - Baltimore	
Dan Noble	USACE - Baltimore	X
Cliff Opdyke	USACE - Baltimore	
Jon Owens	USACE - Baltimore	
Randall Patrick	Parsons	X

Lan Reeser	USACE - Baltimore	X
Amy Rosenstein	ERT (Risk Assessor, Independent Consultant)	
Don Silkkenbaken	Parsons	
Jim Sweeney	DDOE	X
Andrea Takash	USACE – Corporate Communications Office	X
Tenkasi Viswanathan	USACE – Washington Aqueduct	
Cheryl Webster	USACE - Baltimore	
Ethan Weikel	USACE - Baltimore	
Nan Wells	ANC 3D Commissioner	
Gretchen Welshofer	URS	
Maya Werner	ERT	
Kellie Williams	USACE - Huntsville	X
Rebecca Yahiel	ERT – Community Outreach Team	X
Rebekah McCoy	ERT	X

Summary of 10 February 2015 Spring Valley Partnering Meeting

Consensus Decisions

- The Partners will have a call on Tuesday 17 February 2015 to discuss cobalt.

10 February 2015 Action Items

- USACE requested all comments related to cobalt be submitted to them before the 17 February call.

Tuesday 10 February 2015

Check-in

The Partners conducted their normal check-in procedure.

A. Groundwater Study Efforts

The goal of this segment of the meeting was to provide an update on ongoing and upcoming groundwater study efforts.

USACE provided a brief update on the status of groundwater study efforts and the Groundwater Remedial Investigation (RI) report.

1. Groundwater Study Efforts

The initial preliminary results for the multiport well on Rockwood Parkway have been sent out for validation. Preliminary data shows all samples were non-detect for perchlorate, and less than 1 part per billion for arsenic. This was not unexpected as the other two cross-gradient multiport wells were also clean. USACE will be working with their contractors to get the validated data. The well is scheduled to be sampled twice more. The next sampling event will be in the spring.

2. Groundwater RI

The contractor URS is working to provide USACE with the first draft groundwater RI report, which is expected by the end of February or early March. Once the draft report is reviewed internally by the USACE team, it has to be reviewed by the Center of Expertise (CX) in Omaha, and will be reviewed by the Public Health Command. Once those comments are received and addressed, a Draft-Final Groundwater RI will be provided to the Partners for their review. USACE is waiting for input from the Partners regarding the risk assessment approach in the RI document. USACE plans to give the Draft-Final Groundwater RI to the Partners by this summer. USACE is not planning to make the Groundwater RI available for public comment.

Discussion

Dr. Peter deFur, RAB TAPP Consultant, suggested seeing how the Site-Wide RI public comment period goes before deciding to include or not include a public comment period on the Groundwater RI.

P. DeFur stated the fact that there is no use for the groundwater in Spring Valley now, but the groundwater resource is protected by the city. We have to take into account the potential human health exposures. USACE explained the approach was to include the potential future exposure to be considered for the potential drinking water source.

In response to P. deFur, USACE explained that the new well on Rockwood Parkway would be sampled twice. This data will be used in the Groundwater RI report. If this well is clean, it would indicate no connection between the Sibley Hospital area and the two upgradient contaminated wells in the Kreeger Hall area. However, USACE would like to keep monitoring the new well on Rockwood Parkway and not decommission it until a formal decision was made.

P. DeFur asked if any of the monitoring wells in Spring Valley had been taken out of service. USACE stated that a few wells have been decommissioned at Sibley and at 52nd Court, per a homeowner's request. USACE stated that out of over 50 wells over the years, only 3 or four wells have been decommissioned.

B. 4825 Glenbrook Road Remedial Action

Parsons presented an update on the 4825 Glenbrook Road Remedial Action effort.

1. Recent Intrusive Operations

Intrusive activities have resumed at the site. The crews removed the curved portion of the retaining wall near the former garage to allow roll-offs to be parked inside the tent. The soil and debris from this activity was staged.

The new 10-foot high fence installation activities began, and are expected to be completed by this weekend.

The crews filled 18 roll-offs with low probability soil from the Area A, which was the area that had been dug out to install the I-beam to support the tent structure.

The team began excavating in Grids 50/-10, 70/-10, and 70/10 behind the curved retaining wall. They have currently excavated two and a half to three feet, less than halfway, behind the retaining wall.

Thirteen roll-offs have been filled as of February 10. The crews uncovered and bagged 5.6 pounds of scrap glass from grid 70/-10. All samples have cleared headspace. No agent or agent breakdown products have been detected to date under the second tent location.

A few glass fragments were encountered in the low probability soil that possibly were AUES fragments; however, there were only about three or four pieces. Those items were bagged, head spaced and cleared. No stained soil has been found.

The glass fragments in grid 70/-10 were located up against the retaining wall. It appears to be glass that was in the backfilled material. The idea is to concentrate on the 70/-10 area behind the retaining wall and bring the wall down evenly. The scrap glass being found is typical AUES glassware (test tubes, pipettes, etc.)

The disposal characterization composite samples have not been analyzed yet. However, no agent or agent breakdown products have been detected in any other samples. No sample tests have come back with hazardous waste characteristics.

The crews are excavating in such a way to keep an even work surface. This includes removing lagging between the soldier piles and adding lagging between the 4801 property at the same time. This is not a fast process but everything is moving along well. The crews are hand digging against the structure where the machinery cannot access. Excavations to remove the retaining wall will take approximately another four weeks. Once the retaining wall is removed, the team can investigate and remove the footer.

Another activity will be installing the privacy fence, including the new fabric along the 4801/4825 boundary to cover the exposed wood and match it with the gray privacy screen.

The site will be shut down this coming Monday, on Presidents Day. The scheduled completion date for the second ECS location is December 3, 2015.

Discussion

EPA asked where the first glassware at 4825 was originally found. USACE stated that it was found in the front yard area by the sidewalk. The reports on the property showed the locations of the test pits that had AUES glass.

USACE asked if Parsons had received low level analysis from the soil around where the glass was found. Parsons stated that they do not have those results back yet. USACE further asked if grab samples were taken around where the glass was found or if only disposal characteristics were tested for. Parsons stated that no grab samples were taken because there was not stained soil or indications of any contaminants in the soil.

DDOE was curious about the soil from behind the retaining wall because some of the transcripts had stated that items had been thrown behind the retaining wall, yet nothing has currently been found. Parsons stated that nothing had been found yet. P. deFur stated that the individuals from the transcripts may have been thinking of a different location. EPA stated that this type of information is difficult when you are asking people to remember something from a long time ago at a site that has changed over the years. P. deFur stated when people misremember, it is usually the details and not the actual act. Parsons stated that there was another retaining wall on the property that they could have been talking about. Further glass debris has been found, just not a lot of it. DDOE asked about the crawl space at 4835 Glenbrook Rd. USACE stated that they generated no findings during the investigation of the property to indicate that the crawl space was a problem.

AU asked if Parsons was on track to meet the completion date for the second tent location or if there was anything new that could delay progress. Parsons replied stating that there was no reason to expect that we would not. The PDT looked at the dates and came up with this conservative estimate. The area under this tent will be more variable when talking about the elevations of the bedrock or saprolite, so we are

planning on less soil but potentially more brick and foundation work. Once we start working on removing the basement walls, we will have a much better idea.

EPA asked if the concrete slab was removed. Parsons explained that the team will finish removing it after the curved retaining wall has been removed.

EPA asked if the waste was shipped to Texas. Parsons replied that the hazardous shipments will be February 19 and February 26.

C. Remedial Investigation Report

The Partners discussed the review of the Remedial Investigation (RI) Report and brought up any general or specific items to discuss.

1. Peter deFur (Environmental Stewardship Concepts/RAB TAPP Consultant)

P. deFur had not completed his review yet. He stated that many details and specifics are not all easy to locate in a way that makes them transparent and possible to back check. He was looking for big picture information about how items are documented that connect with the recommendation section. The questions he was asking included: Are the recommendations justified and justifiable? And do we have the support for them? For the most part the answers are yes. Some weaknesses that can be improved will be formalized in his comments. He thinks the recommendations are largely justified with the preceding information.

Discussion

USACE asked P. deFur what he thought of the conclusions and the structure of the risk assessment, which was completed the way the work plans stated they would be done. P. deFur replied that there is one conclusion that he is struggling with, which he will submit comments next week. He stated that the risk management decisions were also discussed with the Partners and thus there were not any surprises. The way the data was analyzed and treated with respect to regulatory numbers, non-detects, low levels, comparisons to background, etc., seems to be fine.

2. Environmental Protection Agency (EPA) Region III

EPA has not completed their review. The toxicology comments have been sent to USACE. There were not a lot of significant issues with the risk assessment and risk management. EPA believes that USACE needs to take a closer look at cobalt and determine if it is site related. The geologist is working through the document and we should receive those comments shortly. The geologist has some suggestions on word changes that reflect why we made certain decisions or how decisions were made, but it does not change any of the recommendations.

Discussion

USACE and EPA discussed the issue of cobalt. USACE asked if cobalt is a site contaminant or not, how would that change how the EPA feels about the contamination levels. EPA stated another option is to determine where the cobalt hot spots are located and remove them, or we have to better justify the reason why it is not a site contaminant. The cobalt numbers look like they need to be dealt with in specific areas.

P. deFur stated that that is one of the topics that he tried to get more data on but was unable to. There is no way to be confident that cobalt is or is not a site contaminant one way or another. As a management decision, once you recognize that cobalt levels exceed what might be considered a benchmark safe level, a remedial action is required.

EPA stated that at some point they would need to meet and discuss this specific issue. ERT stated that one issue is with the confidence of the toxicity. EPA stated that they were specifically concerned with the Spaulding and Captain Rankin (SCRA) Exposure Unit (EU) with cobalt. P. deFur stated that it is in a place where we know there were AUES activities. DDOE stated that it sounded like a known site related

area and USACE replied that all of the exposure areas usages are known; they were all pretty intensely used. EPA stated that if it was a known mustard area then cobalt was probably not used there. AU stated that since the values are statistically elevated over background, it has to come from somewhere.

The cobalt HI value exceedance is a line we should not cross, so they want either more discussion or removal. It might be a very small area. P. deFur stated that removal could involve delineation sampling. ERT stated that it might already be delineated since many samples have been completed on the SCRA EU. ERT stated that the issue is with the confidence in the cobalt toxicity value that the RSL is based on. At one point the RSL was approximately 1600 ppm, and then was lowered to approximately 400 ppm and now it is 23 ppm.

3. Paul Chrostowski (CPF Associates, AU Consultant)

P. Chrostowski stated that a third of their comments are about past documents that they thought were not accurately addressed in the RI. They disagree with the methodology used for the assessment of workers, and that the risk assessment does not take into account the special situations under which grounds keepers work. The grounds keepers stir up a lot of dust, which the default parameters used do not take that into account.

AU has both a soil and a groundwater EU. The two RI's and risk assessments are being conducted by separate parties and on two different pathways, looking at different COPCs. The exposure does not account for cumulative exposure for future potential residential users, in unrestricted use where someone could be exposed to both groundwater and soil. If we took into account both exposures it would drastically change the conclusion for the AU EU.

P. Chrostowski has a problem with the lack of sampling coverage in the northern area of the AU EU. There is a four-acre area that only has a handful of samples and that handful of samples was only analyzed for two or three parameters. There is only one sample that has a full set of analyses. P. Chrostowski feels that there is a lack of sample coverage in the northern area while the southern area had dense samples and P. Chrostowski was able to calculate accurate statistics. ERT stated that, as had been mentioned previously, this is an area of significant soil removals and that accounts for what appears to be a lack of samples, i.e., samples of removed soil are not included in the risk assessment.

P. Chrostowski's main issue with the risk assessment is that they cannot replicate the results. They started with the primary sources of the data, tracked it through the calculations of exposure point concentrations and then through the calculations of risk and could not replicate the numbers in the RI for any of the steps. P. Chrostowski does not have any coordinates for the samples, which they would like to obtain so they can do statistical analysis.

P. Chrostowski has found what he characterized as errors in the risk assessment, including differences with EPA guidance and using different exposure point concentrations for central tendency and the reasonable maximum exposure (RME). He said that EPA guidance is clear that you use the same concentration for both those cases and vary the exposure factors. Another error was not assessing the inhalation carcinogenicity of the PAHs. He said that EPA guidance is clear that there are sources that can be used for toxicity data and toxicological factors are available in some of the EPA guidance sites.

Cobalt is an issue that needs attention. In P. Chrostowski's opinion, errors include that the oral Reference Dose (RfD) was used for the inhalation Reference Concentration (RfC) is a two orders of magnitude difference. At the AU EU, there are hazard indices of around four to where it is close to requiring remediation or at least some additional sampling. After looking at the methodology that was used for the backyard gardening pathway, P. Chrostowski was surprised that the models used were based upon wildlife rather than based upon human consumption. The bio uptake for cobalt had no type of vegetation that any human would eat. Other issues included what the total unrestricted use would be, especially for the northern portion of the AU EU and what the current and future work risk would be for the whole area.

P. Chrostowski would have a difficult time recommending to the university that they accept the risk assessment with the way the risk is calculated now and still feel safe about unrestricted use in the future.

P. Chrostowski discussed using background for an arsenic cleanup goal rather than the 20-ppm goal. However, he noted that after completing calculations for background, he stated that although it was not the goal for cleaning up arsenic, it is basically at background levels.

Discussion

P. Chrostowski agreed with EPA stating that the Partners need a special meeting on the risk assessment, but he would like the other Partners to pay particular attention to their risk assessment comments. P. Chrostowski emphasized the importance of the traceability of data and getting a spreadsheet with accurate ProUCL inputs and locations of samples.

USACE/ERT stated that P. Chrostowski's comments would be formally addressed but that they had not yet had time to respond to the individual issues raised.

4. DC District Department of the Environment (DDOE)

DDOE stated that most of their comments had to do with history. They defer to EPA's comments regarding the risk assessment, and thus the conclusions and recommendations.

One comment was about the ballistic firing of 75mm shells. They wondered if there is a range fan for 75mm. There have not been enough 75mm shells found within the current fan to justify stating that it is also the 75mm fan. Further, the property was not big enough for firing a 75mm, which would need almost two miles. It might have to go down as an unknown, unless USACE wants to do a major project to look for it and there is not much evidence that USACE would be able to.

The second comment has to do with storm water runoff going into the sewer system. Certain chemicals could drop into the sediment in the low parts of the sewer system and could be sampled. This could give ideas of where burials and major sources might be.

Discussion

P. deFur stated that the evidence on the 75 mm rounds is based on the finding of 75mm shells and a document about the occurrence of a number of shells and a photograph. Other than that, we do not have any evidence that they were actually fired. DDOE stated that one of the documents mentioned that a few were fired and they landed in an area that messed up the soils so badly that they could not use that area anymore. We do not know if any further shells were fired.

DDOE and P. deFur remembered that there was a document that described the 1000 shells, but not where they went. DDOE stated that many of them ended up in a trench in 4825 Glenbrook Road, and P. Chrostowski stated that one of them was at the Public Safety Building. DDOE stated that 75 mms are all over the property but we cannot account for all of them. P. deFur stated that he does not think that we will be able to account for 1000 of anything from 1918. DDOE also stated that we do not know where the \$800,000 worth of explosives went either. USACE stated they have a consensus memo that stated a 1918 report discusses the firing of the 75mms and suggests that the reference was to a location in Lakehurst, New Jersey. USACE stated the basic conclusion was that there is no direct evidence that 75mms were ever actually fired here. The range of the gun needed to fire a 75mm round was 6500 to 8000 yards, so you could only fire in one of two ways.

The first way was to fire directly into the ground in order to catch the round; this would bury the round underground, which was not wanted. They did not want the shell burying itself in the ground and then detonate because the release of gas could not be observed. The second option was to fire straight up in the air, but then you are bringing the shell down right where you are which is very complex. You need a tremendous area to account for winds. P. deFur asked if the artillery cannon could do that. USACE explained that the 75mm would not do that unless you had a special mounted gun. The picture of the gun

emplacement is not a set up where you could fire up into the air. USACE believes that they built the gun emplacement to teach people how to build gun emplacements. They were not interested in firing the gun. P. deFur explained the fact that Army would have needed to fire 75 mms 6,500 yards or more, yet there is not a 6,500-yard reach, which challenges the credibility of firing 75mm rounds. EPA stated that firing up in the air is generally what artillery does. Generally, you do not do direct fire with artillery but it is usually an indirect arc. Everyone agreed. P. deFur stated that in order to get it within the 6,500 yard range the angle would have to be very steep which may not have been possible with the equipment.

Alma Gates, RAB Member/Horace Mann Representative, asked if there had been any evidence found in the Dalecarlia Woods. DDOE explained that a few rounds were found along Dalecarlia Parkway. This area is an AOI; the Westmoreland Circle impact area. If there is an area where these rounds landed, then it would be between where the Dalecarlia geophysical surveying stopped and Westmoreland Circle. However it is not 6,500 yards. USACE also stated that shell casings have not been found and that unless they were really good about recycling them, you would think we would find at least one. DDOE stated that there is evidence that the rounds were used statically, just as they were found on 52nd Court and 4825 Glenbrook Road.

Discussion Overall

USACE stated that for the detailed comments they will put together written responses. USACE believes the response to comments and the current discussion will go past the March RAB meeting date. EPA stated that it is ok to tell the RAB that the Partners continue to have additional discussions about the comments. EPA thinks that we should definitely have the RAB discussion in March, whether we are ready to give them the draft RI report is a different issue.

A. Gates, stated that she agreed and that we needed to keep the conversation going, but that we also need to be very careful about what we say because she has heard from some people since the last RAB meeting who believe there will be a need to clean up contaminants at Spring Valley. EPA stated that that is not necessarily a wrong assumption. A. Gates stated that the facts could be reported more clearly.

P. deFur explained that over a number of years we have seen a lot of activity to remediate various properties. We have cleaned up arsenic and other contaminated soils, so there should be no surprise that contamination has been found on AUES. A. Gates thinks that what is not being clearly stated is that over time the acceptable levels of contaminants have changed, and now since those levels have been lowered, additional clean up may have to occur. EPA stated that we took care of the contaminants that we knew were a problem (arsenic and munitions).

P. deFur stated that we have done a lot of cleanup in Spring Valley and the RI report addresses current conditions, historical conditions, and the work we have already done. Despite the spot removals, early removal actions, and emergency removal actions, it is still a big site with work left to be done. A typical RI usually states what is recommended when work starts at a site. Yet, in Spring Valley, major work has been going on for the better part of 20 years.

P. Chrostowski stated that there is a trend in superfund sites that are being done this way with early removal actions. EPA stated that they are fighting back especially with federal facilities that are starting removal without ever starting an RI, because they feel like fragmenting doesn't give the public time to comment and they don't look at cumulative issues. EPA is trying to stay on track with the RI.

P. Chrostowski stated that the media did a disservice to the public and the process by thinking that it was all done. P. Chrostowski has received calls from the Eagle, the university's newspaper, asking if AU agreed with the conclusions of the RI, which they had not even read yet. USACE stated that they had not seen the story yet, but the story had been spread around. USACE added that they worked closely with the newspaper and hoped for the best.

USACE stated that they read a document put out by EPA in 2006/2007, when they changed the value for cobalt. It seemed that the uncertainty factor associated with the new value was a factor of about 3,000. P. Chrostowski stated that they rarely go over a factor of 3000 and it is a matter of policy. P. Chrostowski explained that EPA's position normally is to go ahead and calculate the risk accurately using whatever toxicity values are uncertain. In the end, the risk manager will take these calculations into account to make the decision. In this case, it would be USACE's decision, given all of the uncertainties, if they do or do not warrant additional action. ERT stated that is what was done in the RI. P. Chrostowski stated that the document states this in the risk assessment, which is not the appropriate place for risk management. Risk management by national policy is separated from the risk assessment.

P. deFur explained that risk managers also look at the regulatory history and the regulatory toxicology history of a particular chemical. The knowledge base has increased substantially as time has gone by. ERT stated that they cited the 2008 study for cobalt. However, P. Chrostowski stated that the document is already obsolete. USACE did not agree that the 2008 document was obsolete.

ERT stated that many aspects of the project have been piecemeal, which is the nature of the project. ERT has given AU different spreadsheets and data in chunks. ERT can provide the current x and y for the samples we have. There were dozens if not hundreds of samples that are not shown, that are associated with the arsenic removals. The RI was organized so as not to repeat every findings of every single previously finalized report. ERT believes that all the information is in the RI report, and includes those previous reports as appendices. All results are explained in the screening documents leading up to the risk assessment. ERT said all the information is there, but some of it was submitted piecemeal to AU.

P. Chrostowski stated that what represents backfill in the northern portion of the AU EU is not apparent in the document unless they go back to the original reports such as from the CDC or the TCRA on the athletic field. ERT agreed that one would have to go to the finalized reports (included as appendices) and noted that this construction of the RI report was briefed several times.

USACE asked P. Chrostowski if he was referring to the EU area, not the rest of the campus. P. Chrostowski confirmed this, and added that he is satisfied with the rest of the campus. The northwestern area of the EU is where he feels that the sample density is not adequate. ERT reiterated that there would be many more samples during the Time Critical Removal Actions (TCRA) and that the samples of removed soil are not shown in the RI figures. ERT reiterated that the RI report cannot possibly repeat all the details of every single report for the whole site. There are TCRA reports for the arsenic removals on AU and site-wide. All of those reports talk about all of the samples taken and the backfill. The data for backfill soil was reviewed and approved before the backfill was allowed to come on site.

P. Chrostowski asked what prevents USACE from taking all that data, putting it on one figure and marking off everywhere that has been remediated, and areas that have been sampled and that do not require remediation, to one comprehensive figure. One figure for each EU that had a risk assessment could encapsulate all the information so the reader, now or in the future, does not need to go back and access a half a dozen different reports. USACE explained that they used the data that was necessary to perform the risk assessments for the EUs and what has already been remediated was addressed in previous reports. ERT reiterated that documents are referenced very carefully in the RI and huge sections of the RI report are based on the previous reports. The sequence of screening documents have been briefed and talked about many times, with the idea that one report leads to another.

P. Chrostowski asked why a figure could not be made to show where the data came from. There are plenty of data points that had to do with fill, so why not show it all. USACE restated that these data are shown in the previous finalized reports, included as appendices.

P. Chrostowski believes the public expects a degree of transparency and clarity in these documents, so that the process can be viewed from the beginning, from the discovery of the sample all the way through the calculation of risk, which right now cannot be done. He met with a member of the public who is a

retired EPA senior staffer who is sophisticated in risk assessment and has stated that he will be taking a look at this risk assessment. USACE restated that the screening process that led to the risk assessments in the RI was comprehensive and each step had been briefed to the Partners prior to proceeding.

D. Partner Discussion, Upcoming March Restoration Advisory Board (RAB) Meeting

USACE stated that they wanted to discuss with the Partners what the March RAB meeting would look like in more detail. USACE would like to state the RI's conclusions.

EPA suggested briefly going over the CERCLA process to refresh the participants because people seem to have forgotten that the Record of Decision (ROD) is not the end of the process.

USACE suggested the Partners try to resolve the remaining issues before presenting to the RAB. EPA stated that it is a good thing for the public to know that we have disagreements and that we work them out. P. Chrostowski stated that it is like academic peer review. It is a very complex document and they do not think the public will be surprised that there are issues that need to be resolved.

USACE does not want to discuss people's properties in public until they know what is going to be happening. In the next 30 days, they are trying to figure out how many people they need to contact to let them know that there is a public meeting coming up where USACE is going to talk about their property. If the current conclusions of the document are not completely accepted yet, then we have to include those people who may be affected in the conversation. EPA stated that there are many messages that people want to hear. For instance, the Army is not going back and reassessing arsenic since arsenic cleanup is complete and is no longer a concern. There is good news.

USACE asked if we are only discussing the three EUs currently identified for possible issues with cobalt. EPA confirmed this. P. Chrostowski stated that as far as the AU campus is concerned, they do not feel the need to tamper with the boundaries of the EU as it is drawn now. Everything outside of the EU has been covered somewhere else. ERT stated that in the screening process used, cobalt results (as were all chemicals) were screened throughout the risk assessment process and then quantified as part of the risk assessment to see if cobalt posed any risk. However, the RI makes the argument that based on the low confidence in the cobalt toxicity value, that no further work based on cobalt was recommended.

USACE stated that EPA is not specifically worried about cobalt in AOI 9; but rather the concern was for the Spaulding-Rankin EU (SCRA). EPA stated that if this is causing the most concern, then we should set up a call to specifically talk about cobalt. USACE agreed.

After brief discussion, Tuesday, February 17 at 10:00am was agreed on to discuss the cobalt issue.

USACE asked for all comments related to cobalt to be submitted before the conference call so USACE could review them.

USACE stated that the RAB meeting will be located at the Metropolitan Memorial United Methodist Church, 3401 Nebraska Avenue Northwest, Washington, DC 20016. USACE will send letters to the residents who will be listed in the RI report letting them know what the RI says and invite them to the March RAB meeting. USACE stated that the letters were originally going to go to 96 homes based mainly on the concern by the Army with respect to munitions in certain areas of the neighborhood. Since the Partners are still discussing cobalt as a potentially issue, USACE should also tell those homeowners that they are under consideration for chemical risk as well. EPA stated that AU and SCRA are only two property owners. If we can agree that there are not potential chemical issues in AOI 9, then 98 letters are needed.

EPA stated that the specific issue they have with cobalt is within the SCRA EU as the HI was higher than five. It is a specific issue at a specific location. ERT stated the only reason why it did not receive the

outlier process was because it was a single property, albeit a large one. EPA stated that although SCRA is only one property, it is still a large exposure area. ERT stated that they do not disagree, and the outlier procedure could be applied here.

ERT stated that the HI in AOI 9 is 1.6, which is very low. USACE asked if we applied the outlier procedure to the SCRA EU, then would the argument we used for cobalt in the other areas still be valid. EPA is not questioning the methodology. Because of the number of samples within the approximately two-acre SCRA EU, the 426 ppm maximum cobalt result was diluted over the other samples. EPA stated that between now and the follow-on conference call, the Partners should go through the data, do the analyses, and come up with the worst-case scenario, which would be having the hot spot bounded by the samples that we currently have. This might be a very small area.

USACE expects many of the 96 households who will be invited to the RAB with the RI letter will attend the meeting if they are concerned. USACE will ask these homeowners for RSVPs to gauge whether the meeting room is adequate.

USACE will begin the presentation with an overview of the CERCLA process, as suggested by EPA. USACE will bring posters on easels to put up around the room, similar to a community meeting. EPA suggested USACE describe how the document was managed, how it accounts for 20 years' worth of work, and the writing approach. Once USACE starts to talk about the document's number of pages, and documents involved, and the samples analyzed, people will start to understand how complicated this document is. USACE should also include a refresher on the risk assessment on how risk assessment works. EPA stated that their risk assessor will attend the meeting and could explain the risk assessment and its results.

USACE will then possibly explain the MEC HA and what it concludes about munitions at the site. EPA stated that they do not believe any of the Partners have any comments on the conclusions concerning munitions.

In response to USACE, P. deFur explained that he would explain the document as an independent perspective. He believes that it is important for USACE and EPA to lay out what the document is about and says. It is important to mention the groundwater study and that it is on its own analytical track. With USACE having explained the process, P. deFur will say what he thinks is good about the report, what is less than perfect but it is still ok, and the parts that he would consider unacceptable and why.

USACE asked the Partners if they believed it was worthwhile to speak about the risk assessment uncertainties for cobalt at this time. P. deFur stated that he would have to address since it would be a gap and people would ask why. How these items were assessed in the RI must be discussed. ERT stated that USACE would present the conclusion as a chemical exceedance and would lay out the argument. At that point, P. deFur will give his perspective.

Over a hundred properties have been remediated. These things are all part of the project history that people need to be reminded of. Early on it was determined that the major contaminant at the site besides munitions was arsenic, which took a separate track and many properties were remediated due to this effort.

EPA explained that an issue that may come up is what work the Army Corps has been doing all this time, and why does more work have to be done. USACE stated that that this question will be answered by the process discussion. USACE will also talk about technology advancements. EPA added that every five years after project completion, there will be a review of the Decision Document. EPA will see if the toxicity values changed significantly and, if so, then additional work may be considered again.

P. deFur asked if USACE will state that the Army will respond as necessary to future actions. USACE confirmed this. P. deFur agreed that this statement is reassuring to the public. P. deFur added that given

the groundwater situation, we can anticipate future five year reviews. EPA stated that the project team and the Partners will be able to say that they have done everything that current technology allows us to do.

EPA asked if USACE was still planning on doing a community meeting. USACE replied that the community meeting will be during the public comment period. It will be scheduled based on when the RI document is released for the public comment period. P. deFur asked if the current round of Partner comments and discussions are going to be publicly available. USACE explained that Partner comments are usually included with their internal copies, but the public copies are usually clean, with the exception of the Proposed Plan. USACE has included regulator, AU, and other comments upfront in final documents. P. deFur assumed that anything he sends will ultimately become part of the public record. If someone asks for a copy of P. deFur's comments or AU's comments, can they be given to them? USACE does not see a problem with this, but they do not know if it will bring more clarity or more confusion. USACE will discuss this topic further.

E. Open Issues and New Data

The goal of this segment of the meeting was to share issues not on the agenda for possible placement on a future agenda and to share new data that became available since the last Partnering meeting.

ERT provided a presentation of the preliminary layout of the Feasibility Study (FS).

ERT presented the preliminary layout of the FS. This layout could change based on comments from the Partners and stakeholder on the RI. Two guidance documents are being used to develop the FS; the Army's Military Munitions Response Program (MMRP) RI/FS and the EPA's guidance for conducting an RI/FS. They both provide suggested table of contents (TOC) to address the necessary topics.

ERT summarized the overall process noting that the RI identifies the problem and the FS identifies the solution.

Section 1 - Introduction

The RI recommends an FS to analyze alternatives to mitigate the two primary problems: unacceptable explosive hazards and the unacceptable human health risk in soil. Possible alternatives for soil remediation, including removing the contaminated soil and replacing the area with clean soil, have been previously discussed at Partner meetings. The mitigation of the unacceptable explosive hazard is more complicated and what this presentation is focused on.

The specific areas that have been identified for additional work due to unacceptable explosive hazards are within the range fan, the impact areas of the Livens and the Stokes, and the static testing areas with a buffer area around them. AOI 13 is identified as a possible disposal area.

The 96 properties in these areas were further divided by types of geophysical techniques that had previously been used on the properties. The groupings included; no DGM previously done on the properties, post-classification scheme (A-B-C-D anomalies) DGM, and pre-classification scheme DGM.

Section 2 – Remedial Action Objectives

In the RI, the remedial action objectives (RAOs) are presented. The first two RAOs deal with soil contamination issues. The last RAO objective is to reduce the potential for encountering MEC. Applicable or Relevant and Appropriate Requirements (ARARs) will be a big part of the FS, which helps focus and screen the alternatives that are generated. The general response actions (GRA) are those that must be taken to satisfy the remedial action objectives.

The GRAs to mitigate unacceptable explosive hazards will be established as no further action (NFA), land use controls (LUCs), and the digital geographic mapping (DGM)/Anomaly removal.

Section 3 - Identification and Screening of Technologies

Section 3 is the first level of screening. It will establish DGM and anomaly removal as the primary means to mitigate the potential explosive hazards. Then it will look at different ways of applying them. The screening of technologies will establish DGM/anomaly removal as the means to mitigate explosive hazards, then review different ways of applying it, such as: DGM that focuses on pits/trenches vs. single items, the current method (EM61+G-858 and A-B-C-D anomaly classification), and the current method as supplemented by Advanced Classification (AC). As new technology becomes available, we have to constantly look and consider if it will add significant level of quality to the investigations.

ERT discussed AC using instrumentation such as metal mapper. This instrument supplements the current ones and is better than the current anomaly classification scheme because it identifies an anomaly a likely munition or not. ERT thinks that there is some merit to supplementing the current method with AC, but possibly need to receive input from the regulators and stakeholders on adding AC technology since it is not right now part of the established method at Spring Valley. Potential issues may arise with the homeowner who may say they were told that we were already doing the highest level of technology available.

Section 3 also establishes the manner in which the current method as supplemented by AC will be applied with the three different types of sites. Sites never DGM'd at all will use current EM61/G-858, in addition to AC, to determine which anomalies to intrusively investigate. Sites that were DGM'd and dug pre-2007 would be revisited. The team would apply AC to remaining anomalies. Sites DGM'd and dug post-2007 would be revisited and the team would apply AC to remaining anomalies.

Discussion

EPA stated that the Partners should consider AC. ERT stated that they were trying to stay neutral about using AC since there may be some arguments against using it at some point. The rest of the presentation assumes that AC will be used. P. deFur stated that he cannot think of why we would not use AC.

P. deFur also asked if the candidate technologies discussion could start early so that way if the Partners have input, it could be included. The FS may include a new technology, even if the technology does not get carried forward to the final alternatives analysis in the FS.

A. Gates asked stated that the property owners of the properties being discussed might want to have a more private presentation and not have their specific property be discussed in the bigger public screening. ERT stated that this current presentation will not go beyond this room. A. Gates stated that the map highlights those properties. USACE explained that this figure is in the RI report, which will become publically available soon.

A. Gates stated that she is worried about the people that USACE does not reach. USACE explained that they will be sending certified letters. USACE's goal is to be transparent with the 96 homeowner since we now believe further investigation in those areas are needed. A. Gates stated that, for her, the transparency is the fact that we know that there is a problem and what the problem is. She is not sure if it is another property owners business to know which exact addresses are involved. She stated that USACE has been good about protecting property owners and that this map might be too transparent.

In response to A. Gates, USACE explained that in the past, they have respected homeowner privacy until a document is made public. The guidance documents say this step is necessary. This occurred with the 2003 Engineering Evaluation/Cost Analysis (EE/CA), which states the arsenic levels at all points on each property. The EE/CA has been publically available for years. It was also available before remediation occurred. EPA stated that the difference with the EE/CA was that USACE knew specific concentrations. In this case, USACE is stating that they generally have a concern that there could be munitions on a property. USACE can say that in this area, they investigated X-Thousand items and four of them were of concern and theses concerns are what brings us back to your property.

Section 4 - Development and Screening of Alternatives

Section 4 will identify the specific remaining alternatives, and do the broad screen against Effectiveness, Implementability, and Cost. The alternatives will be established by varying the amount of coverage (acreage) and the number of anomalies to dig, as follows:

Alternatives 1 and 2, NFA and LUCs, will be screened out.

Alternative 3 is to DGM everything and dig everything. This includes all driveways and hardscape, and possibly cutting brush, trees, gardens, etc. The idea is to get as much coverage of the area as we can, and not using the classification systems.

Alternative 4 is to DGM the accessible areas and then dig everything found. There is some grey area with what is considered 'accessible,' which could include hardscape but not cutting down trees and large plants. Again, no classification would be needed because all anomalies would be investigated.

Alternative 5 is full DGM coverage while only digging certain anomalies as determined by the AC technology.

Alternative 6 would be DGM coverage of the accessible areas and utilizing AC technology to choose selected anomalies to be dug.

Discussion

EPA asked if the statement saying that if any new information comes to light, the USACE will return to the site, educate the community. Are LUCs required for protectiveness? Some peoples' opinion is that they are already in place and therefore not part of the remedy.

ERT explained that in this case, standalone LUCs could include completely fencing your property to prevent anyone from getting to an area or cementing the area over neither of which would be practical. For the 4825, there was a subset of LUCs considered as an alternative to tearing down the house and dig down to bedrock, which included, for example, deed covenants restricting digging under the house, etc.).

EPA stated that they are talking about managing residual contamination. We cannot guarantee that all munitions are found, but we will make sure that the community is educated about it; they know what to do if one was found: you recognize it, you report it, and USACE will come back and handle it.

ERT added that this information could be added into the FS; the alternatives mentioned in this presentation are specific to the 96 properties.

EPA stated that a LUC component would be needed for alternative 4 and that it would not necessarily be needed for alternative 3. ERT stated that a LUC component may be added for all the alternatives but not all of the options have been detailed yet.

Section 5 - Detailed Analysis of Alternatives

The alternatives remaining would move on to a detailed classic FS analysis with the nine criteria, including the threshold criteria, balancing criteria, and the modifying criteria. After the analysis of the remaining alternatives, one alternative would be selected which would be the preferred alternative for mitigating potential explosive hazards at those 96 properties. ERT is currently working out the details, but wanted to share the current rough structure.

This same basic process will also be applied to the soil posing a human health risk on portions of AU. However, the alternatives will be more straightforward, including soil treatment technologies such as: Soil washing, soil stabilization, phytoremediation, and excavation/disposal. The likely preferred alternative will be excavation/disposal, followed by backfill with clean soil, as we have already done on many properties.

The area underneath the Public Safety Building would be a special case and would have to be discussed qualitatively given that it is an occupied building.

EPA and USACE discussed the Public Safety Building (PSB) within the FS. EPA asked how the PSB would be documented in the ROD. What is the alternative? Is the alternative a LUC with the current use of the building and if the use changes or the building is removed there is a contingency? USACE confirmed this, explaining that essentially the building is a cap. As long as the cap remains in place, there is not a problem. They agreed that the building is acting as an engineering control. EPA stated that the PSB could require inspections to see if there are any cracks on the floor and that sealant is maintained.

USACE and AU discussed whether utility repairs occurred beneath the building. AU stated that they have a standard contract procedure, especially if they know intrusive work is involved. AU gives their contractors a fact sheet about the USACE work and a liability form to sign. It has worked well for work done in front of the Kreeger building. USACE and AU agreed that for this building (PSB) they should not dig underneath the building until coordination with USACE occurs first.

USACE asked if there was a replacement plan for the building. P. Chrostowski replied that his understanding is that AU may try and move the Public Safety offices to the East Campus, but did not know what the future use of the building might be.

Discussion

USACE stated that this FS presentation was a preview of what is to come. All 96 homes will be considered in the FS, despite past investigations/work completed at certain properties.

F. Document Tracking Matrix for Hazardous Toxic Waste (HTW) and Military Munitions Response Program (MMRP)

The goal of this segment of the meeting was to review the comment due dates on HTW and MMRP draft reports and the status of the documents.

USACE noted that the only document that is currently out for review is the Groundwater Data Summary Report, which will be Appendix G of the RI.

G. Partner's Parking Lot

The goal of this segment of the meeting was to review and update the Parking Lot list.

The Partners reviewed the Parking Lot.

H. Agenda Building

The Partners will meet for a RAB run-through at 2:00 pm on 10 March 2015.

The next meeting is scheduled for 14 April 2015.

I. Adjourn

The meeting was adjourned at 2:00 p.m.