

**IOWA ARMY AMMUNITION PLANT
RESTORATION ADVISORY BOARD
MINUTES
October 19, 2010**

The Restoration Advisory Board meeting was called to order by Rodger Allison in Elyn Holton-Dean's absence at 5:05 p.m. on October 19, 2010 at the Comfort Suites Hotel.

Minutes Review

The minutes were accepted as written.

Agenda Review

There were two changes to the agenda. The presentation that was scheduled for this RAB offered by LTC Tommie Hewitt was postponed to the next RAB meeting (i.e. January). Linda Wobbe from the IAAAP will be presenting the FUSRAP update vice Ron Frerker from the U.S. Army Corps of Engineers.

Public Comment

Rodger Allison introduced Sandeep Mehta from the Environmental Protection Agency (EPA); he will be replacing Matt Jefferson and taking over as the new EPA Project Manager. Matt Jefferson expressed they would be transitioning between Project Managers and assured the board the same level of EPA commitment/participation. Matt thanked everyone and expressed the honor it was to serve the board and public during his tenure.

FUSRAP

Linda Wobbe briefed the RAB from a slide presentation. Please see exhibit 3 for her presentation.

Linda shared some photos of the West Burn Pads South (WBPS) excavations and indicated FUSRAP is roughly 90% finished with backfilling. FUSRAP is hopeful to complete excavations at the WBPS within the next week; then, they will re-seed the area and get the site prepared for winter.

Vaughn Moore asked about the Line 1 excavations that FUSRAP planned to expand based on sampling results and address yet this year. Linda explained that there are five different areas on Line 1 that FUSRAP planned to address this year: she recalled two of the five locations: excavation near building 1-12 and an excavation near building 1-85. Linda could not recall the other three areas but said she could get that specific information to Vaughn. Linda added that she could bring maps to the next RAB meeting and depict the locations of the five excavations on Line 1 that FUSRAP is addressing this year.

Vaughn Moore asked how many tons of dirt FUSRAP excavated from the WBPS. Linda responded that FUSRAP removed 2100 tons of soil from the WBPS. Vaughn asked if all of this was taken to the Inert Disposal Area (IDA) or if some was hauled offsite. Linda explained that some of the soil had to be shipped offsite; some of the barium concentrations were too high to go to the IDA and had to be shipped offsite. Lueene McCracken asked where the soil was taken offsite. Linda explained that she believes they took some to Rock Island and some was shipped to Michigan, but she would have to confirm. Lueene further asked if any contaminated soil had been shipped to the landfill in Ft. Madison. Linda explained that she did not believe so, but she could verify that. Matt Jefferson added that no soil was taken to Ft. Madison landfill. Rodger Allison explained that the Ft. Madison landfill

was considered at one time for very low level contaminated soil that would be acceptable to send to any, but the determination was made not to.

Linda explained that the contaminated water trough that went to building 1-70 was removed this summer. FUSRAP will be addressing the soil under the contaminated water trough.

Thurman Huffman asked if they ever excavated around the north 1-12 building. Linda said she believes there were some excavations in this area. Thurman further stated that the contaminated water that went to building 1-70 came from north 1-10, south 1-10, north 1-12, and 1-05-2. Linda agreed with Thurman's statement and indicated that FUSRAP would be sampling along the path of the trough.

Vaughn Moore asked how long before they started burying Trench 7 (IDA). Linda deferred this question to Rick Arnseth and indicated that Rick would be addressing this during his IRP update.

Mark Hagerla asked the status of an excavation that FUSRAP started last year, could not finish, and had to put a tarp down and backfill for the winter. Mark wanted to know if this excavation had been opened back up and finished. Linda does not recall if this excavation was completed. Linda said that other than the PCB area on Line 1, FUSRAP has not finished any other excavations on Line 1. Linda further indicated that FUSRAP would be starting back on the five locations on Line 1 before the weather sets in this year and then come back next spring/summer to complete the remainder of excavations on Line 1.

Mark Hagerla asked if Line 1 was still an operating line. Linda concurred. Mark asked if there were any danger in anything that is going on at the plant that has been previously contaminated and is currently affecting any of the people working there now. Linda explained, as far as worker health and safety, she does not know. Linda explained that she does know the current operating contractor, American Ordnance (AO), has a health and safety program in place that all of their workers are covered under, but historical stuff or things of that nature she is unsure of. Linda further explained that in the Records of Decisions (ROD), one of the risk criteria is based on worker exposure and that the cleanup goals established in the Operable Unit 1 (OU1) ROD were based on industrial worker exposure. Rick Arnseth added that for those soils, the cleanup standard is actually stricter than for direct worker exposure. The cleanup standard for TNT and RDX is for protection of groundwater, which is quite a bit lower. Therefore, for soils that could potentially stay in place with a little bit of contamination, the cleanup goal is to get it down low enough to protect the groundwater, so it is actually more protective.

Vaughn Moore said they are not more or less concerned about what is being cleaned up in the ground, but what is in those buildings and done in those buildings and what will continue to remain in some of those buildings and if you (the Army) are trying to put production back into Line 1, there are certain areas that you are not going to put production unless you get people sick. Vaughn added that there were already people trying to file claims because they have been on the Army side, have worked on Line 1, and have gotten sick. Vaughn went on to say that the plan of the Army was as soon as the Atomic Energy Commission (AEC) left, they were going to put everything in Line 1 and it is not going to work because people are getting sick. Vaughn expressed this is what they are trying to address; but the Army is addressing what's coming out of the buildings, but it is wrong to put workers in a building that shouldn't be in that building. Vaughn added that what went in those buildings would stay there and not leave and people are going to continue to get sick. Vaughn expressed that it is not fair to have another generation get sick. Rodger Allison expressed his respect for Vaughn's comment, and indicated that unfortunately what the RAB is focusing on is what leaves the building. Rodger

indicated that if anyone wants to discuss what remains inside the buildings and things of that nature, he could get Vaughn in touch with the right people to discuss. Vaughn furthered added that all the buildings were cleaned the same way; when they washed the buildings down, the slate roof was asbestos slate, the ramp walls were asbestos slate; when they washed the buildings they took hoses and washed the walls/ceilings, squeegee out the doors, but what they are not taking into consideration is that concrete is porous and the cement walls sucked that stuff up. Vaughn added that the Army has to address this. Rodger again, said that this would be a different focus if Vaughn wants to talk to other professionals and other officials that can address this; however, this is out of the scope for the RAB meeting. Rodger indicated that he could certainly get Vaughn talking to the right people, however. Mark Hagerla asked if this was really out of the scope of the RAB meeting when certainly someone went inside these buildings and tested these buildings before they let people go in there and work, unless the line been in continuous operation. Rodger said that Line 1 has been in periodic operation. Mark added that if the line has been partially cleaned, it should be suited environmentally safe to work in. Rodger explained how the focus of the RAB is CERCLA type cleanups or cleanup that went outside the building. Rodger added that our focus deals with the groundwater, soil, streams, sediment, surface water, and the like and what happens in operational buildings is a completely different stream of money, authorization, and effort. Rodger further stated that there might be others that address the concerns in the safety realm that deal with worker exposure, and will address what Mark and Vaughn are talking about here. Rodger recognized the need to provide contact information to Vaughn and Mark and get them talking to the right people who can address their concerns. Mark indicated his understanding of addressing the outside stuff and protecting the Indiana bat, whereas someone else is protecting the people who are still working there. Rodger concurred with Mark's assessment. Eric Orth indicated that this is the difference between OSHA and EPA. Mark said he is starting to think that the Indiana bat has more precedence than people. Rodger said they are taking care of human health too, but sometimes the Indiana bat has a higher cleanup level than the humans do.

Mark Hagerla indicated that the Army has put up more fences in the area out at the plant, more than what used to be, and questioned if these areas were fenced to prevent access to bad areas of the plant. Rodger explained that fences are typically put up for operational access.

Paula Graham indicated that she helps people file claims for their radiation-induced cancers, and there have been a number of people who have contacted her who have worked at the plant, but cannot file because they are not covered during the time period of 1947-1974 that the SEC has covered. Paula added that she has read some reports where some residual radiation was found in the cracks and floor in some of the buildings, and in one of the buildings, an air filter that appeared to be fairly new, contained radioactive contamination. Paula further explained and referenced an understanding dated 1963 between Albuquerque DOE and the Army stating that both parties have contaminated water runoff, private wells, and public streams. The agreement indicates that they would share the liability if there were any claims. Rodger asked if the community action board was still in existence regarding worker health. Paula indicated that she is a member of the community advisory board for conventional weapons. Rodger indicated that this might be an avenue to get resources and discuss these issues with them.

Mark Hagerla asked how many breaks were in the waste water line. Linda indicated that there were 22-27 points of interest along this waste line. Linda explained the contaminated water trough's diameter and added that it was 1700 feet long. Mark asked if Tetra Tech was the party removing the trough. Rodger explained that the actual structural removal of the trough is not under the purview of the RAB, what is, is the fact that FUSRAP will sample the soil at the trough points of interest. Matt asked if there was a figure regarding the trough. Linda said she could bring this map to the next RAB

to give a visual of the trough pathway. Rodger requested that FUSRAP bring maps so the board has a reference point to discuss at the meetings. Vaughn agreed and said they are trying to cross-reference with the sites that are referenced during the RAB, but are having a difficult time because during their era, they referred to the areas differently. Vaughn further mentioned the 1963 agreement/understanding that Paula brought up earlier, and said that it states that both parties (AEC and the Army) recognize that due to the past, present, and future operations they may be jointly responsible for any contamination of public streams and private wells outside Burlington AEC and IOP (Iowa Ordnance Plant). Vaughn went on to say that, this tells him that back in 1963 they knew this problem existed and it was not addressed then. Vaughn mentioned that this explains to them why the pipeline was built in Line 1 and pumped over the plant spillway out Long Creek because they were trying to stop the RDX contamination buildup at the flyash pile where they were pumping that down Brush Creek, so that is why that pipeline was set in there and run and dispersed into another creek so they could get the concentrations down in this creek. Rodger indicated that he was unfamiliar with this pipeline. Vaughn explained that this pipeline was built on the backside of Line 1, ran out of Line 1 up between Lines 2 and 3 by the pump house, it turned and went down to the plant lake and the pipe went over the spillway. Vaughn indicated that this line was pumped at night. Vaughn recalls going into G Yard sitting on the bridge with his spotlight on and remembering that everything in the creek went belly up. Additionally, when it was pumped out, it was as red as dye. Thurman Huffman said they tried to show this pipeline to Rodger awhile back. Rodger said they followed this pipe and it went to an operational building on the south side of Line 8. Vaughn said the pipe that had been removed came from Line 1. Vaughn said he could provide the name of the engineer who designed the pipeline and one of the guys that put it in. Vaughn said they had so many problems, and there may be some pipes leaking on the backside of Line 1, because they had problems keeping the pipes down because of the surface water in the Line 1 area. Rodger asked that Vaughn speak with Rodger after the meeting and provide the contact information of these men. Mark asked if the wastewater treatment line is still being used. Linda said that this waste line has not been used since the 1970's, and possibly, earlier; however, these inactive lines were still attached to the buildings.

Mark Hagerla asked if we have any explanation of why we get the higher readings of the groundwater runoff during rainfall events. Linda explained that Line 1 is going to be an interesting line; we are looking to start groundwater investigations at Line 1 very soon. Rodger indicated that Rick would be talking about the Brush Creek issue during his IRP update.

IRP Project Update

Rick Arnseth briefed the RAB from a slide presentation. Please see exhibit 4 for his presentation.

Inert Disposal Area

Rodger Allison asked about the sediment sampling. Rick indicated that they did not find anything in the trench 7 seddams sediments; trench 6 had a couple of detects of explosives, but well below the goal. If trench 7 collects water, Tetra Tech will treat it through a treatment system until they can get it closed up.

Vaughn Moore asked how much metals went out of the seddams during the big rains earlier this year. Rick explained that they have taken some samples at the confluence of Long Creek and they could not identify evidence of any elevated metals.

Vaughn Moore asked how deep the caps are on the landfill. Rick explained the multi-layers of cover on the landfill cap. Vaughn indicated that groundhogs and badgers would tear up the soil in a heartbeat. Rick indicated that they [groundhogs and badgers] could make it through the upper layers

of soil if they wanted to, but they would eventually run into some pretty stiff plastic. Rick further added that they perform inspections to address things like this.

Rodger Allison inquired about the decision point of whether Tetra Tech would be able to breach trench 7 berm this year. Rick explained that the decision to breach the berm is weather dependent, and that conditions need to be dry to complete this earthwork.

Off-site Brush Creek Investigation

Sivert Iversen asked if anyone ever found out where the water went to from the change houses. Rick indicated that he was unsure.

There was some open discussion about all the building sumps, and Vaughn Moore explained how historically the janitor gal would mop up the floors and dump it in the sump. Vaughn added that there were several buildings on Line 1 that had sumps pumping out water because the buildings would flood otherwise. Vaughn further added that when the Army took over operations, the pumps were shut off, which caused an underground lake to form. Vaughn expressed his frustration and stated that building 1-10 is ready, and this tells him that production is moving back into the line where we currently have a mess that has not even been figured out yet.

Mark Hagerla asked if the Army is sure that the present day work on Line 1 is not contributing to this contamination. Rodger explained that it is his understanding, as far as effluent, that the contribution from present day work would be minimal. Rodger further added that the present day contribution would be well within the current National Pollutant Discharge Elimination System (NPDES) limits. Eric Heerdt, from American Ordnance, explained that at this point they do not plan to have any water effluent directly from their processes.

Bruce Workman asked if there were any permitted discharge things that were allowed. Rodger explained the NPDES discharges permitted through the State, and going by memory, said those permitted discharge limits are in the vicinity of 1-3 ppm. Eric Orth added that these permitted discharges are 500 times what the health advisory level (HAL) is. Eric Orth explained the permit and the different ways to analyze for explosives.

Rick Arnseth indicated that a question came up during the July 2010 RAB regarding the relationship between the offsite plume and some of the deep drinking water aquifers in southeast Iowa. Rick shared some figures regarding bedrock aquifers in Iowa and explained that this aquifer is 1000-1500 feet deeper than the offsite groundwater plume.

Vaughn Moore asked how the aquifers would change during an earthquake situation. Rick Arnseth indicated that he is unsure about and that it would depend on the magnitude.

WBPS Excavations (FUSRAP)

Vaughn Moore asked if any more testing has been done in Spring Creek after the water got into the cavity and then went back out. Linda Wobbe responded that FUSRAP took some samples, but she does not recall the results. Linda indicated she could find out and let Vaughn know at the next RAB. Matt Jefferson explained that the Spring Creek water backed up into FUSRAP's excavation, the water was treated, and then discharged. Linda followed up and said that any water that came into their excavations was treated prior to discharge. Matt added that FUSRAP logged this incident into the State. Dan Cook said that this type of incident happened multiple times, and every time water came

into one of their excavations, they sampled and treated it. Matt said this is part of the reaction that they have to do when something like this occurs.

What is a RAB

Rodger Allison briefed the RAB from a slide presentation. Please see exhibit 5 for his presentation.

Public Comment

Mark Hagerla said there had been concern about the accurate size of the Burn Pads area (now called the "Explosive Disposal Area" broken out further into the North, West, and East Burn Pads, North Burn Pads Landfill, and West Burn Pads Landfill) it was stated that the area was much larger than the 15 acres previously mentioned, and questioned if everyone was confident that there was no other contamination in the larger area around there. Rodger Allison explained that we have found all active disposal areas and clarified by showing the size of the entire Explosive Disposal Area on an aerial map. Rodger explained that they think all contaminates they are aware of have been found, and so far they have not been led to any other areas within the overall Explosive Disposal Area. Matt Jefferson added that there is one other thing they need to close the loop on and that is the barium contamination that FUSRAP found very close to the sediments near Spring Creek.

Mark Hagerla asked about the FUSRAP excavations on Line 1 that was covered up for the winter due to lack of money or whatever; he wanted to know when those areas would be addressed. Rodger Allison explained that all of those sites that were left earlier, during phase 1, would be addressed later during phase 2. Therefore, if there was a site covered up by FUSRAP and left for the winter, they will be coming back for that. Linda Wobbe concurred.

Rodger Allison mentioned the parallel program Operational Range Assessment Program (ORAP) that is a program to determine if anything is leaving some active sites (specifically operational ranges) that may be harmful. Rodger thinks the Pistol Range is the only site being addressed under ORAP. Rodger said this team was onsite last week and they are putting together some plans on how to move forward with this site. Rodger added they should have some information ready to present at the next RAB meeting.

Rodger Allison mentioned the 40mm Test Range that AO will place at the Line 6 area.

Matt Jefferson said that the documents EPA would be reviewing regarding the 40mm Test Range is to ensure that the remedy that is going to be in place under CERCLA, will continue to be protective of human health and the environment in association with this range.

Vaughn Moore mentioned an area by J Yard, known as the antenna farm. Rodger Allison confirmed the location of the site and said that because it was used by AEC, the Army identified it as a site to investigate. Rodger added that this site was investigated under FUSRAP, and they have taken samples there.

Mark Hagerla asked if IDNR was satisfied with everything that is going on. Dan Cook explained that the previous administration did not want IDNR doing anything at the IAAAP, they wanted the EPA to take care of everything, and therefore, IDNR was not part of the IAAAP FFA. Dan went on to say that despite this, the Army treats the IDNR as if they were signatory to the FFA and therefore they get to review documents and such as if they were signatory not as if they were the general public. Dan said that the previous EPA project manager, Scott Marquess, treated the site like it was his own backyard,

so they are happy with what is going on. Dan added that there was a long period when there were disputes ongoing and not a lot was done, but those have all been taken care of now.

Bruce Workman asked what has been spent so far on restoration. Rodger Allison explained that they have spent around 120 million so far, and there is about 25-30 million more to go, which includes from now until 40 years from now after the active remediation is finished.

Vaughn Moore asked if old renovation was still scheduled for demolition. Rodger Allison answered that it is on the list. Vaughn stated that if he recalls, not all of Lines 6 and 9 were torn down. Rodger explained that most of the Line 9 buildings were torn down, with the exception of one small building. Rodger explained that this small building was left due to the question regarding PCBs and disposal/handling of that, so they left the building alone while the issue is being resolved. Vaughn asked if the central test area building was still being used. Rodger explained that this building is being currently used by AET.

Next Meeting/Draft Agenda

The next meeting was scheduled for January 11, 2011 at the Comfort Suites Hotel. Agenda topics suggested were NPDES permit discussion, IRP project update, CC Update, FUSRAP update, Line 1 update, ORAP update, and training topic.

Mark Hagerla asked if anyone has analyzed the offsite disposal and wondered if there would be any place on the plant that could be utilized for disposal of stuff since the IDA is closed and in the process of capping. Mark further asked about the cost analysis and wondered if it would be cost efficient to dispose of what is left in an offsite location. Rodger Allison explained that the only place where they have anything left is Line 1 soil, which FUSRAP is addressing. Rodger said he does not know the exact numbers, but it is his understanding that it costs more to keep the IDA open and maintained with the water issues, etc. than it costs to dispose in offsite locations. Mark said that he does not think it is good to contaminate other places if we do not have to. Rodger further explained that the places where the contaminated soil is taken are EPA approved and take this type of contamination anyway.

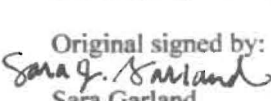
Vaughn Moore asked about the old cement dump south of Line 3; he wondered if they ever checked this area. Rodger explained that this area is known as the Construction Debris Landfill, and that the IRP does have information on this site.

Mark Hagerla thanked Matt Jefferson for all his help during his tenure.

Thurman Huffman asked if AEC had any information on the burning field and the air pollution when they were using this site daily. Rodger Allison said they do not have any information regarding air conditions because it would be hard to determine how much was in the air at any give time historically. Rodger further stated that a lot of that stuff in the air was heavy so it would have gone down to the ground pretty quickly and fortunately, we are in an attainment area as far as air is concerned.

The meeting was adjourned at 7:15 p.m.

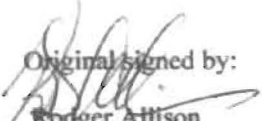
Original signed by:


Sara Garland
Secretary

Original signed by:


Elyn Holton-Dean
Community Co-Chair

Original signed by:


Rodger Allison
Army Co-Chair

Exhibits:	1	Attendees
	2	Agenda
	3	FUSRAP
	4	Restoration Project
	5	What a RAB is

Exhibit 1

RAB MEMBERS PRESENT

Mark Hagerla
Eric Orth
Dean Vickstrom
Bruce Workman
Vaughn Moore
Alan Koenig
Sivert Iversen, Jr.

RAB MEMBERS NOT PRESENT

Elyn Holton-Dean
Kim Perlstein
Hans Trousil

GOVERNMENT MEMBERS PRESENT

Rodger Allison
Matt Jefferson
Dan Cook

GOVERNMENT MEMBERS ABSENT

LTC Tommie Hewitt, Jr.

PUBLIC

Thurman Huffman
Cyril Onewokae
Paula Graham
Lueene McCracken
Linda Wobbe
Ryan Drew
Christinia Crippes
Pam Horton
Dean Johnson
James Bard
James Fine
Sandeep Mehta
Dean Treadway
David Jefferies
Sara Garland