

**IOWA ARMY AMMUNITION PLANT
RESTORATION ADVISORY BOARD
MINUTES
July 21, 2009**

The Restoration Advisory Board meeting was called to order by Eric Orth at 5:05 p.m. on July 21, 2009 at the Stonegate Parlor C Room located in the Comfort Suites Hotel.

Minutes Review

The minutes were accepted as written.

Agenda Review

There were no changes to the agenda.

Public Comment

Vaughn Moore and Thurman Huffman mentioned that there use to be an old school house east of Line 1 that was used as an electrical shop at one time. The building was located between the cafeteria and the road that comes around the east side of the line about half way. They stored transformers there at one time, line trucks, and poles in the building. Vaughn and Thurman further added that the building is no longer there. Rodger Allison responded that he and Linda Wobbe will research this.

Vaughn and Thurman mentioned a Line 1 service garage that was used as a service building for all AEC trucks at one time before the location was moved to the central garage. They further added that this garage was building 1-129 located on the east side of Line 1 at the north end. Vaughn added that there should be tanks buried there.

Vaughn mentioned the historical practice of cleaning the ditches and disposing of the wastes at the Old Fly Ash Waste Pile. Vaughn added that this waste was from the ditches that ran with TNT. He also mentioned that they dumped the dirt into mounds. Rodger responded that the Army has done extensive sampling at the Old Fly Ash Waste Pile, but didn't find any RDX. Rodger further added that the Army is aware of the additions to the site from other works sites that included sewage sludge. All this is currently identified and is being addressed.

Project Update

Rick Arnseth briefed the RAB from a slide presentation. Please see exhibit 3 for his presentation.

Soil Treatment

Mark Hagerla asked for some analytical results and Rick provided them later in the presentation.

Paula Graham asked how the soil is treated. Rick explained the Alkaline Hydrolysis soil treatment process which is a chemical method they recently switched to from the biological method (see slide 12 from exhibit 3). Paula asked what happens to the sodium hydroxide. Rick responded and explained the breakdown process: the sodium stays there and the hydroxide reacts with the TNT molecule and destroys it. This process creates a high pH of around 12. Paula asked if the soil was perfectly safe once treated. Rick responded that it is safe and that the soil will be moved from trench 7 and disposed of in trench 6 after treatment. Eventually, trench 6

will be capped. Rodger Allison added that the harsh chemical they are using to treat the soil is also being changed when it reacts with the RDX and TNT. Rick added that it undergoes a fast reaction. The hydroxyl is consumed and the pH quickly starts to drop. The only reason they switched to this chemical treatment method is because TNT is harder to treat using the biological method.

Vaughn Moore asked where the TNT contaminated soil came from. Rodger explained that the soil came from various places around the installation (i.e. Line 800 Pinkwater Lagoon, Former Line 1 Impoundment Area, Lines 5A, 5B, and 9). Soil was taken to trench 7 for later treatment and disposal. This stockpiled soil in trench 7 is the stuff they are now treating.

Rodger confirmed that the only thing being left behind in the soil from the treatment process is the high pH and sodium. Rick added that the rainwater washes the soil, then goes into the sedimentation ponds, and is treated through a carbon system. The pH, after being run through the treatment system, is around 7. Rodger reiterated that the only time they need to worry about worker health is when they are handling the soil during the treatment process and even then they are suited up and prepared for it.

Offsite Plume Progress

Paula Graham asked how long it would take to remediate the offsite plume. Rick responded that Tetra Tech has five years to get the RDX concentrations to <50 ppb and the clock started ticking October 2007. Paula asked how many homes are within the >100 ppb part of plume. Rick said that it is his understanding that there are no homes in the core of the plume now. Rodger confirmed that there were never any homes over the core of the plume. However, there are 6 homes that sit within the boundary of the plume that is >2ppb. Paula further stated that she mentioned this because there is someone who lives in the plume who has cancer. Rodger said he spoke with that person about sampling their well in the spring of 2009, but they had covered up their well. The well is no longer accessible. Rodger further added that the last time this person's well was sampled, it was non-detect for explosives and it was even non-detect during the 1993 sampling event. Paula added that the person has lived there a long time.

Brush Creek Offsite

Paula Graham asked if we still see the RDX running off the boundary because of all the rain. Rick responded that they still see spikes in RDX concentrations in the creek if we have a large rainfall. Rick further added that we are still unsure why this is happening but we are continuing to search.

Mark Hagerla asked about detecting the source of the RDX runoff especially the mobilization that occurs during rainfall events. Mark added that it sounds like something on the surface is not cleaned up and he wants to know if it is in Tetra Tech's scope of responsibility to try and detect where the contamination is coming from. Rick explained that they are unsure at this point what the source of contamination is, and depending on what the source is, it may or may not be in their scope. Mark then asked if it was the Army's responsibility to find the source and Rodger replied that it indeed is. Rodger further explained that it depends where the source is as to whether Tetra Tech is responsible for it. If the source is sediment, then it is Tetra Tech's responsibility. But since we are unsure of the source at this point, we don't know yet if it is Tetra Tech's responsibility. We are still looking at all the possibilities of where the source could be coming from. Rodger then mentioned the old pipe recently found by FUSRAP during one of their excavations at Line 1. The pipe might be an old field tile. We are investigating what it is

and where it connects (if it connects at all). This could be a possible source. We don't know at this point if it is an abandoned pipe leading to a melt building that we can't remediate. We just don't know. Everything we have is speculation at this point, but the Army is on the hook for it. Mark then asked if there is anyone actively looking into this. Rodger responded that Linda Wobbe is spending a lot of time pouring over maps and researching other avenues to try and find a group to come in and do this research for us.

Vaughn Moore mentioned that not all of the pinkwater that was loaded in trucks made it to the pinkwater lagoon. Sometimes they use to load the truck and leave the valve open and drive and let the water spill in the road, especially if it had been raining for days. They didn't want to get stuck at the lagoon. Vaughn went on to say that there was no cap on the truck so it would slush out and the valves leaked. Vaughn said that one man slipped into the Line 800 Lagoon when it had been raining for days and the water ate his legs to pieces and to this day his legs are severely scarred. That is why they wouldn't take the water to the lagoon if it was rainy and muddy. Vaughn added that we shouldn't believe everything that is written on paper because that isn't the way it always happened. Rodger stated that this is an example of why we are keeping an open mind to determine where the sources are. Rodger further explained the spikes in brush creek and the investigation of looking for possible sources. Rick explained that if the water was historically spread on the road, it would have either made its way into a ditch or into brush creek if close enough. Rick went on to say that most of the ditches are wet and are perfect for degrading this stuff via phytoremediation or just the amount of organic carbon that falls into the ditches.

Vaughn Moore mentioned that they used to clean the engines with diesel fuel at the roundhouse so it is probably still on the ground.

Paula Graham asked more about the RDX contaminated water under the melt buildings and what could be done. Rodger responded that a couple options would be to plug or eliminate those pipes and that they would do something to prevent the water from flowing down and escaping the site. Rodger went on to say that we cannot stop all of it because we can't get underneath the buildings without comprising the structure. Paula asked if the melts are still active. Rodger stated that most of them are active.

Paula Graham asked if RDX is still being used in the melt buildings. Rodger responded that, yes, both RDX and TNT are still used, but current operations do not contribute to the contamination. The contamination left is legacy from historical practices.

MMRP Update

Terry Thonen briefed the RAB from a slide presentation. Please see exhibit 4 for his presentation.

Dig and Verify Field Activities

Vaughn Moore asked what the area is by the swedesburg cemetery with the moon craters. Rodger Allison responded that the swedesburg cemetery is within the boundary of the Incendiary Disposal Area. Vaughn said that once in a while after a hard rain a mortar round would wash up in the ditch and they had to go get it (out there by barricade K).

Rodger mentioned that URS plans to blow in place (BIP) one item, an old antitank mine that is unsafe to move, tomorrow at 1600 hours. A few days later they have another demo planned for

roughly 20 items that will take place at the Demolition Area. Rodger mentioned that we have already notified the neighbors along the boundary to the north and northeast (i.e. hospital, hospice, nursing homes, community college, etc).

Mark Hagerla asked if URS is notified when American Ordnance test fires items. Terry indicated that they were indeed notified.

Paula Graham asked what was in the antitank mine that URS plans to BIP. James Mars (U.S. Army Corps of Engineers) indicated that the antitank mine was filled with TNT.

FUSRAP

Ron Frerker briefed the RAB from his notes regarding the programmatic side of FUSRAP. He does not have a slide presentation to reference. Then, Keith Jefferies briefed the RAB from a slide presentation regarding recent excavations at Line 1 and West Burn Pads South. Please see exhibit 5 for Keith's presentation.

To date, FUSRAP has placed approximately 5300 CY of contaminated soil into the Inert Disposal Area (IDA). The contaminated soil consists primarily of RDX, TNT, and possibly minor amounts of HMX.

FUSRAP is currently working with the EPA to amend the ROD in order to transport contaminated soil offsite since trench 6 of the IDA has reached its capacity.

FUSRAP is working on the development of the Feasibility Study for the ROD which will treat the radiological contamination and the Firing Site areas.

FUSRAP may be able to receive an additional 2 million dollars towards cleanup for additional work starting as soon as they can get the money on contract.

Excavations

There were questions as to the way the excavations were numbered. Ron explained that the excavation number did not correspond to the building number. The excavation numbers are separate designations from the design plan. Vaughn Moore said he needs to know the building numbers these excavations were around.

Paula Graham said that she would be interested in getting the analytical results of the contaminants in the buildings regarding worker health issues and tied to what toxic substance caused the diseases some people have and what buildings they worked in. Ron said that their part was only to do a radiological survey inside some of the buildings at Line 1; they didn't do a chemical analysis of the inside, they only addressed the soil. Paula added that if PCB's were found outside of a certain building, then the PCB's probably came from that building. Ron said that it is possible, but it is also possible, like with the PAH contamination caused by railroad tracks, parking lot, roads, etc., that it was not related to the operations in the building itself. Mark Hagerla said that they want to know where these excavations are and what buildings they are around. Keith Jefferies said that he could ground truth the excavation numbers with their associated building. Ron asked if the FUSRAP RD/RAWP was available in the IRP Administrative Record. Rodger responded that he didn't think so. Vaughn Moore said that he knows what was done in each building and he wants to know what was found around each building. Ron said that this information is located in maps within the FUSRAP RD/RAWP.

Rodger said they could make arrangements to come to the plant to view this document. This document makes the correlation between the excavations numbers and the building numbers. Rodger explained that for Operations Security (OPSEC) purposes, he cannot say what was manufactured in each building. Keith said he would make sure to include building numbers in future presentations.

Mark Hagerla said that it seems like a waste of money to excavate and then close the excavations just to reopen the excavation later to dig more soil or backfill with clean soil. Ron explained the excavation process and the time it takes to receive confirmation sample results along with the funding issues and the fact that there is a lot more contamination out there than ever dreamed. Mark asked if they took samples prior to digging to delineate the contamination. Ron explained their sampling rationale and that their budget was based on their sample results. However, after excavating, a lot of their confirmation results were still above the RG (i.e. failed) so they had to go back and excavate further until all contaminated soil was removed. Andrew Maly added that this issue at Line 1 isn't unique to Line 1 or the Iowa AAP. He further added that they run into these issues all over [the Nation] at other installations as well because of the unknown pathways. Andrew explained that FUSRAP operates under different funding roles than the IRP. Mark asked if IDNR was on board and would let this happen. Dan Cook of the IDNR responded that they would prefer all the soil be taken the first time around. Ron explained why they couldn't just leave the excavations open until they got sample results back. The reason is usually for safety and additional costs of handling the water that would enter the excavation. Rodger explained that there is a very narrow window of opportunity to get into the production lines to excavate since these are active lines. FUSRAP closes the excavations for operational and safety considerations. It is not the preferred method by any means. Ron closed by adding there are a number of excavations that failed because the confirmation result was 1.6 or 1.8 and the RG is 1.3.

Paula Graham asked what building number excavation EU9D-A was around. Keith is unsure but said that it is the building closest to the Line 1 Impoundment Area. He thinks it is building 1-17.

Paula Graham asked about the lead contaminated soil removal. Keith explained that the level was over the RG of 1000 ppm.

New Business:

Eric Orth introduced Mr. Matt Jefferson of the EPA and indicated that Matt was taking over for Scott Marquess.

Rodger Allison indicated the plant has a new commander, LTC Tommie Hewitt Jr. He couldn't be with us tonight because of previous commitments, but should be present at the next meeting.

Public Comment

Vaughn Moore mentioned that anyone from the plant can call him with questions and he will help and try to answer any questions.

Mark Hagerla said that it concerns him that we are getting ready to close the IDA since we are still finding contamination out there. Rick Arnseth explained the limits on how much soil trench 6 of the IDA can take because of the slope requirements in the State of Iowa regulations. Trench 6 was never designed to hold all contaminated soil found on the plant. Rick added that the soil can also be treated in place. Rodger mentioned that the Army and EPA are going to discuss what

to do with contaminated soil found in the future. Right now they are hoping to treat the contaminated soil in place via insitu soil treatment. We now have better options than before, like the new alkaline hydrolysis treatment method. Matt Jefferson added that we are in the planning stages right now of how to handle stuff that comes up in the future once the IDA is closed.

Vaughn Moore mention that he doesn't like the term "cost effectiveness". He went on to say that we didn't care about it 40 years ago. The answer is to get it out of here. Rodger agreed with Vaughn, and added that back in the day there weren't these regulations in place and we weren't smart about it back then. Rodger further stated that our goal is to protect human health and the environment. However, at the same time we are wards of the taxpayer and we don't want to overspend the taxpayer's dollars.

Co-Chair Election

The RAB elected Elyn Holton-Dean as the RAB Community Co-Chair by acclamation.

Rodger Allison mentioned that the RAB Display is still available to go out in the community.

Rodger also questioned the board about membership and if there is interest in trying to expand membership. The board will give this some thought prior to the next meeting.

Next Meeting/Draft Agenda

The next meeting is scheduled for October 20, 2009 at the Winegard Board Room located in the Burlington/West Burlington Area Chamber of Commerce. Agenda topics suggested were IRP project update, MMRP update, CC Update, FUSRAP update, and a status update of each project in the CERCLA Process.

The meeting was adjourned at 7:40 p.m.

Original signed by:
see original for signature
Sara Garland
Secretary

Original signed by:
see original for signature
Elyn Holton-Dean
Community Co-Chair

Original signed by:
see original for signature
Rodger Allison
Army Co-Chair

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| Exhibits: | 1 | Attendees |
| | 2 | Agenda |
| | 3 | Restoration Project |
| | 4 | MMRP Update |
| | 5 | FUSRAP Update |

Exhibit 1

RAB MEMBERS PRESENT

Marjorie Fitzsimmons
Mark Hagerla
Elyn Holton-Dean
Eric Orth

RAB MEMBERS NOT PRESENT

Dean Vickstrom
Bruce Workman

GOVERNMENT MEMBERS PRESENT

Rodger Allison
Matt Jefferson
Dan Cook

GOVERNMENT MEMBERS ABSENT

Dan McGhee
LTC Tommie Hewitt, Jr.

PUBLIC

Sara Garland
Vaughn Moore
Thurman Huffman
Linda Wobbe
Sivert Iversen
Ron Frerker
Terry Thonen
Chris Wiehl
Keith Jefferies
Andrew Maly
Leon Baxter
James Mars
Paula Graham
Lasca Yerrington
Lueene McCracken