

**IOWA ARMY AMMUNITION PLANT  
RESTORATION ADVISORY BOARD  
MINUTES**

**April 17, 2012**

The Restoration Advisory Board (RAB) meeting was called to order by Rodger Allison in Elyn Holton-Dean's absence at 5:00 p.m. on April 17, 2012 at the Comfort Suites Hotel.

**Minutes Review**

There was one grammatical error brought to attention from the January 2012 meeting minutes as described below.

Page 2 under the IAAAP Safety presentation...there appeared to be an extra "exposed" in the 2<sup>nd</sup> to the last paragraph. The sentence currently reads: "*Butch said that not everyone wears coveralls, just people exposed to exposed explosives and propellants.*" During the meeting this appeared to be a typo, but for clarification purposes, this sentence should read: "*Butch said that not everyone wears coveralls, just people exposed to uncovered explosives and propellants.*"

**Agenda Review**

There were two changes to the agenda. Alex Smith from Shaw Environmental will be presenting the MMRP Update instead of Laura Percifield and the order of RAB presentations will be rearranged.

**Public Comment**

Paula Graham asked how the water line replacement is coming along. Rodger Allison asked for clarification to Paula's question and didn't know if she was talking about the replacement of the water mains for the production lines or the wheeling of water to Middletown and Danville. Paula asked about Danville and wondered if they got their water through the plant. John Carroll updated the audience and stated that they (American Ordnance) are doing the water line project and it is progressing. To answer the other question, they do wheel water to Danville. Rodger asked if the wheeled water to Danville would go through the new water mains. John concurred that it would. Paula asked why they were replacing the water pipes and wondered if it had something to do with contamination. Rodger said the pipes were just old and deteriorating such that they needed new water lines. John added that they were having so many water main breaks because the pipes were so old. John said that they aren't putting steel pipe back in, it is all plastic lines. Paula asked how the plastic will work out with the pollution in the groundwater and such. Rodger said there shouldn't be any interaction whatsoever that they are aware of. Paula wondered because she called the state hygienic lab and she talked to someone who thought that contamination could make it through plastic pipes. Rodger doesn't think they are using the standard white PVC pipe; it is whatever the standard water main pipe is. John said the only thing he is aware of that can be a problem with plastic pipes is petroleum products. John explained that you don't run plastic pipes where petroleum contamination is present because petroleum in the ground can deteriorate the standard pipes, but he doesn't know that explosives contamination would ever be a problem. Dan Cook with IDNR indicated that you cannot run PVC pipe through any contaminated soil or groundwater, but that is for the BTEX and gasoline, benzene, and other solvents that will go through PVC. The explosive RDX is not a solvent and it is usually solvents that they are worried about with PVC pipes. Vaughn Moore asked if acetone was a solvent. Dan

responded that acetone would go through PVC pipe. Rodger added that as they were developing the pathway and the lines for laying the water mains, American Ordnance took our environmental map and came down and looked at our documentation so they knew what areas to avoid and what was acceptable to run through. Rodger added they also have procedures in place that if the pipe does go through a contaminated area, to stop the preferential pathway, so they don't transfer contamination from one location to another. The Army is working very closely with American Ordnance on this project. Rodger added that they don't have any particular acetone contaminated areas that is identified or that they are aware of. Paula asked about the Freon in the ground. Rodger added that they are not going through any of that.

Mark Hagerla asked if there was danger during the water main breaks that there could be seepage back into those lines before they get fixed. John Carroll said they follow a procedure to avoid seepage and they test prior to putting it back into service to assure that there are no bacteria growing in the line. John added that when you fix a water main break, you use chlorine to decontaminate everything around the patch, depending on how bad the break is. Mark said the chlorine will take care of the bacteria, but that it wouldn't take care of any contamination that people would possibly drink. John said that they always flush the lines long enough to get anything out of the pipe. John said that typically they leave the water on to keep the lines pressurized when they are patching pipes so they don't have any contamination siphoning back into the system. But sometimes if it is a bad enough break, they have to replace sections of pipe such that keeping the lines pressurized during this time is not possible. There is a different procedure for this, but they are very careful.

### **Cleanup Administration**

Rodger Allison briefed the RAB from a slide presentation. Please see exhibit 3 for his presentation.

### **IRP Project Update**

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

Regarding Brush Creek Offsite Sampling shown on slide 6 of Rick's presentation, Rodger Allison asked the location of the surface water sampling location named BC-OFF1. Rick indicated that the location of BC-OFF1 is at the installation boundary. Surface water sampling locations BC-OFF3 and BC-OFF6 are at the losing stretch of Brush Creek. Paula Graham asked if the RDX concentrations are going down in those two locations. Rick said that the levels fluctuate, but they have had some wild fluctuations in the past and they hope that they have eliminated some of those fluctuations from the remedial actions they have taken on the installation, but they will keep monitoring it.

Rodger asked that Rick explain monitored natural attenuation (MNA). Rick explained that MNA includes dilution, dispersion, and natural processes that destroy the contaminants under natural conditions. They are looking to ensure that the plume is decreasing in size and monitoring the conditions in the aquifer. They are looking for evidence that the process is working and looking for trends in decreasing concentrations and that is what they see in a lot of these offsite wells. Rodger said they also ensure that certain parameters that lead to the destruction of RDX exist as well and asked for Rick to explain this. Rick explained that conditions most favorable to ensure destruction of RDX tend to be low oxygen, organic carbon, and other byproducts like dissolved

iron and various other parameters. They also look for RDX breakdown products. One of the best evidences is that the plume is shrinking.

Mark Hagerla asked if we made any headway in determining the source that is making its way offsite. Rick explained that they found some obvious sources at line 1 that may be contributing to the headwaters of Brush Creek. Rodger said they just completed the first round of sampling for line 1 groundwater and they will present the data to the RAB as soon as they get a chance to review it. They think that there may be some sources that were previously unaccounted for.

Vaughn Moore said that Thurman Huffman wanted them to not forget to sample around the 1-05-1 melt building. This melt was in operation until 1958 or 1959. At that time they were running both melts. Rick said he will have to look and see what sampling has been done there. Vaughn said that both melts were in continuous operation and they use to wash the molds out on the ground.

To address Mark Hagerla's earlier concern, Rick said that it doesn't look like the RDX levels that are going offsite today via Brush Creek, are affecting the groundwater plume.

Regarding slide 10 of Rick's presentation, Rodger asked if the fluctuations in the offsite groundwater plume are expected. Rick said that he doesn't know, but we do have some pretty dramatic changes in rainfall that may affect it.

Rodger added that if the offsite projections as shown on slide 10 hold true, then the Army and EPA will work together to address the challenge to see if there is anything they can do to speed up the process to try to hit their 40-year target.

Regarding slide 11 of Rick's presentation, Rodger asked Rick to explain the alkaline hydrolysis treatment in groundwater. Rick explained the treatment process of alkaline hydrolysis in groundwater. They have never done this treatment in groundwater before; they have only done it successfully on contaminated soil.

Regarding slide 11 of Rick's presentation, Mark Hagerla asked what kind of comments Tetra Tech is responding to from the EPA regarding the testing technologies. Rick said that most of the comments were confusion on the comments for the reviewer thinking this was a remedial investigation work plan for the Demolition Area. He thinks if they can convince them that they aren't trying to fully characterize the Demolition Area, rather a work plan for testing technologies, then most of the comments should go away.

Vaughn Moore asked what they have found in the groundwater at the Demolition Area. Rick said the only thing they are seeing in the groundwater is RDX, he doesn't recall any TNT. The only RDX he has seen is at concentrations less than 20 ppb. Vaughn asked if they found any lead azide. Rick said they wouldn't see lead azide, they would see lead. Rick is unsure; there may have been some lead near the surface in the soil. Vaughn asked about fulminated mercury. Rick doesn't recall any mercury in the areas they looked at. Rick added that the Demolition Area is an active site and they don't plan to clean it up.

Rodger added that if any of the audience wants any more detail or has any further questions after the meeting, just let us know.

### **MMRP Update**

Alex Smith from Shaw Environmental briefed the RAB from a slide presentation. Please see exhibit 5 for his presentation.

Vaughn Moore indicated there were two maneuver areas on the plant; one was on the east side of the plant and one was located south of Line 3A. Vaughn also added that they used heavy weapons at the historical pistol range (small arms...50's, 30's, and 45's). Vaughn added that the Army National Guard used that site as a firing range also. Vaughn added that Shaw should also look outside the plant down by Skunk River because the lead washed out of the Long Creek down into those areas. Alex indicated that they anticipate doing some sampling and they will follow any contamination they find as long as they can detect it. Vaughn also added that across the road from the pistol range there used to be an old demolition field. Vaughn explained the location of this demolition area to start clear up at the top of the hill east extending clear down to Long Creek (on the south side of the road). Vaughn said this was an Army dump and an AEC dump, and at the top of the hill there use to be a pond and they filled the pond up with flyash and then put dirt on it.

### **Public Comment**

Vaughn Moore said he talked to an individual that use to work out at the burning fields and he said Spring Creek was contaminated and use to run red with TNT or green with lead azide. He said that they use to wash the tubs out onto the cement and those tubs did drain into the creek. He said there were three dump sites in that area. Rodger said they do have three dump sites in that area accounted for: the East Burn Pads, North Burn Pads, and West Burn Pads. Vaughn said they also use to bury a lot of stuff...odds and ends.

Vaughn said that Thurman wanted to know if the old settling pond was still present behind old smoky (powerhouse) and the laundry. Vaughn said they use to pump the water up from the lake and then the pond gravity fed down to the water treatment. Rodger Allison said there is a pond there. John Carroll added that south of the coal pile there is still a pond that takes coal pile runoff, leachate from the flyash landfill, and boiler blowdown are all pumped to that, and then there is a treatment area south of the main heating plant where this water is treated prior to discharge. Vaughn said he is referring to a pond that was up on the hill where water was pumped up from Lake Mathes. John wondered if Vaughn was referring to the reservoir. Vaughn concurred and was referring to the reservoir...they use to call it "the pond." Vaughn asked if the reservoir still had water in it. John said that it is still there and does still have water in it.

Vaughn Moore asked if they found out anymore about the pipeline in Line 1. Rodger said this pipeline stops at Brush Creek. Rodger said the pipe that ran on the west side of the line went downward and the best they can tell is that it stops at Brush Creek.

Regarding the pipe that went over the spillway at Lake Mathes that Vaughn and Thurman brought up at an earlier RAB Meeting, Vaughn indicated that there is a possibility that this pipe came from a pilot house at Line 2. Rodger indicated the he and Sara walked the area where Vaughn said there was some type of shack. Vaughn said there use to be a guard shack by the railroad tracks by the plant spillway, but it has been torn down for years.

Regarding the Old Flyash Waste Pile, Vaughn is trying to figure out if they dumped flyash into the creek and then ran water through it to change the color so people down south weren't complaining about the red color, why aren't they finding any contamination south of the plant

with all the contaminants in flyash? Vaughn said they also dumped sludge in this flyash pile. Vaughn said that according to the 2010 Installation Action Plan, the embankment is falling off into Brush Creek and Vaughn is concerned about this flyash situation because of the leakage. Vaughn wanted to know why they aren't finding any of this contamination offsite south of the offsite plume. Rodger said that as the flyash falls into the water, it is so light that it just floats on top and they have measured the water, the sediment, and they are just not seeing any actionable contamination. The State has also been in to measure it. Based on the data Rodger has seen, the flyash floats on top of the water and doesn't stick around. Vaughn added that somewhere down south there has to be a lot of flyash. Rodger said that Brush Creek goes into the Skunk River so it will just go right on downward. Vaughn said that those fields offsite flood and spread out and this has to settle somewhere. Vaughn mentioned when the creek overflowed it went all over someone's property offsite and filled up the rock quarry and did not drain...Fye Excavating had to come in and dig a trench to drain the rock quarry. Since this happened the water in the quarry has not turned over once. Vaughn said he is not a scientist, but not everything goes right down the creek...stuff spreads out...so where is it and where did it go? Rodger said it is his understanding that the flyash doesn't settle. Rick said every time there is a good rainfall, there will be sediment transport. A lot of times it is carried right out to the Skunk River and the Mississippi River. Each substantial rainfall is just going to push it further downstream. Rick added that in those conditions whatever is being carried by whatever creek will spread out in the flood plain.

Regarding the old ammonium nitrate line (i.e. Line 8), Vaughn said they demolished some of the old buildings and buried them there. Rodger said they have evaluated the soil in these areas.

Vaughn asked if they were going to tear down renovation (i.e. Line 800) or let it fall down. Rodger said it is on the demo list for the facility reduction program and is on the list of modified caretaker status which means we watch it, but let it deteriorate and fall apart. So, if the funding and programs come along properly, then they will methodically take it down, otherwise they just watch it fall. Vaughn asked if there was any chance of the contamination getting back into the pink pond again...if you get a hole in the roof and get water running through there. Rodger said they don't anticipate that occurring. However, it could contaminate the soil right around those buildings. They have already gone in and removed quite a bit of soil in that area. This is part of the OU-9 Contingency ROD...trying to address any contamination left under building slabs and the soil around buildings. Rodger added that this is on the radar to address. Vaughn said the water in the tanks at Line 800 use to be pumped to the pink pond...Vaughn wondered what happened to those pipes. Rodger said those pipes were removed. Rodger added that when they take down these production lines, they sample under the removed slabs.

Rodger said that he loves these mini dialogues and asked if anyone else has any issues to present, he would be happy to put them on the agenda or just bring points like Vaughn has been doing; they certainly welcome that dialogue as well.

Rodger said he will look into the Spring Creek issue as well as the pilot house. The Army and EPA have some ongoing dialogue regarding the Old Fly Ash Waste Pile, so the board should hear more about that soon.

Rodger said some folks asked about another RAB tour. Some possible dates include May 15 or May 17. Right now the tour is just for RAB members, but Rodger would like to extend the tour to Thurman, Vaughn, and Luenne as they regularly attend the RAB Meetings. Rodger said there

is also a community luncheon on May 29<sup>th</sup> combined with a production tour that the public is invited to.

Dean Vickstrom asked what anomalies or surprises have showed up out here that was unexpected. Rodger indicated that he would have to give it some thought. Dan Cook said that the chunk of cesium they found was a surprise. Rodger said they didn't expect to see the West Burn Pads South of the Road, which turned out to be an extension of the West Burn Pads. Rodger said they thought they removed all the settling basins at the Line 800 Pinkwater Lagoon but as they started drilling a groundwater monitoring well they found a false bottom in the settling basin...they stopped excavating at 10 ft and 14 ft bgs there was a vein of contaminated soil that was a source to groundwater contamination. These are some examples of surprises where they thought they got everything, but they didn't. That is why Rodger likes to think of it as a continuous improvement, but never stop looking.

Vaughn said that they go out and try to find people that will talk about the conditions when they worked at the plant. Rodger added that most of time the histories mesh. For example, Rodger knows what Vaughn is talking about regarding Spring Creek running green. The first time he did a deer count, Spring Creek was the brightest green...come to find out it was algae that was growing in the creek. The West Burlington Wastewater Treatment Plant also adds nutrients and the algae was springing to life.

Paula Graham said that she has helped a lot of former workers get their compensation, and they all have a story about how the contamination caused their cancer and it would be nice if someone wrote an article about the sacrifices that the workers have made and what they have contributed...maybe a monument or something. Rodger said they do have Eagle Park Memorial to recognize the sacrifices that the workers have made through the years.

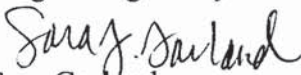
LTC Bruens said from his perspective, everyone is always invited and always welcome to come to the plant.

### **Next Meeting/Draft Agenda**

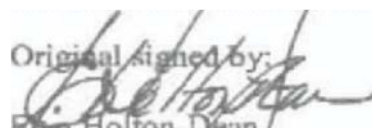
The next meeting was scheduled for July 17, 2012, at the Comfort Suites Hotel. Agenda topics suggested were, IRP project update, CC Update, MMRP Update, and possibly a FUSRAP Update.

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 | Cleanup Administration |
|           | 4 | IRP Project Update     |
|           | 5 | MMRP Update            |

Exhibit 1

**RAB MEMBERS PRESENT**

Mark Hagerla  
Dean Vickstrom  
Vaughn Moore  
Kim Perlstein  
Hans Trousil  
Alan Koenig

**RAB MEMBERS NOT PRESENT**

Elyn Holton-Dean  
Eric Orth  
Bruce Workman

**GOVERNMENT MEMBERS PRESENT**

LTC Michael Bruens  
Rodger Allison  
Sandeep Mehta  
Dan Cook

**PUBLIC**

Linda Wobbe  
Tammy Allison  
Laura Percifield  
Aaron Steele  
Alex Smith  
John Carroll  
Ken Herstowski  
Cyril Onewokae  
Jim Bard  
Alison Hart  
Sara Garland  
Paula Graham