

**Ravenna Army Ammunition Plant  
Restoration Advisory Board (RAB)  
Meeting Minutes  
July 20, 2005**

**1. Call to Order & Reading of Minutes**

The meeting was called to order by Community Co-Chair LTC Tom Tadsen at 6:07 p.m. at the Newton Falls Community Center, Newton Falls, Ohio.

LTC Tadsen asked the board members if they had any additions or corrections to the minutes. No comment from the RAB members present. Mr. Tom Smith made a motion to suspend with the reading of the minutes of the previous meeting. The motion was seconded by Walter Landor. LTC Tadsen called the motion to question...."All those in favor please say 'Aye.' All those opposed?" The motion carried, and LTC Tadsen announced the minutes were approved as printed. LTC Tadsen announced that copies of the May 18, 2005 minutes are on the back table.

Secretary Christy Esler took attendance with 12 members present, 3 excused and 9 absent (Floyd Banks, Kevin Cooper, Robert Daughtery, JJ Leet, Irene Glavies-Lutz, Milan Markov, Nina Miller, Charles Ramer and Mark Zigmont).

**2. General Business**

LTC Tadsen directed everyone's attention to the back table to pick up tonight's meeting presentation handouts, and introduced Mark Patterson, the Army Co-chairperson.

Mark Patterson discussed the Technical Assistance for Public Participation (TAPP) contract to support the RAB. Mark announced that Janet Bishop of URS created and mailed a letter to the RAB members regarding the amount of funds remaining and technical issues that could be addressed. JJ Leet commented at the May 18, 2005 meeting that the RAB would be interested in re-applying for another grant, especially considering recent issues. LTC Tadsen said that in JJ's absent we should table the vote until the next scheduled RAB meeting to further discuss the issue.

LTC Tadsen asked the RAB members if they had any TAPP subject recommendation (s) not addressed by URS. The RAB members did not have any recommendations to add.

Marti Long inquired about soliciting other bidders.

Mark Patterson answered that by saying that the RAB currently has URS under contract.

Mark Patterson corrected his previous statement regarding the amount of funds available from \$1,800.00 to the correct amount of approximately \$4,000.00. Mark advised the RAB members to use the remainder of this award amount before re-applying for additional grant funding.

Walter Landor asked if URS could help us with the application.  
Mark Patterson- stated that URS could help but the process is fairly simple.

Marti Long asked when the application deadline is.  
Mark Patterson said that the application needs to be turned in by the end of the 4<sup>th</sup> quarter.

Marti Long then asked Mark Patterson- If there is a small balance remaining can we turn those funds in and then re-apply?  
Mark suggested if possible we should use the remaining amount of this grant then re-apply.

LTC Tadsen pointed out that Kerry Macomber mentioned at the May 18, 2005 meeting to possibly have a past to present comprehensive index of the documents/topics.

Mark Patterson said that although that would be a topic to look into the comprehensive documents are located at the repository for public review. A topic that I would recommend is the Shaw Environmental proposed plan for remediation of Load Lines 1 thru 4. This would be a new topic for the RAB.

LTC Tadsen requested that Kerry Macomber e-mail him and Mark Patterson notes that she has put together in regards to her ideas on a comprehensive index of documents and topics .

LTC Tadsen announced that Shaw Environmental's Public Comment Meeting for the Proposed Plan for Remediation of Load Lines 1 thru 4 at the Ravenna Army Ammunition Plant will be held on August 1, 2005 at the Newton Falls Community Center from 6:00 pm to 8:00 pm.

### **3. Update on the removal of explosively contaminated buildings at RVAAP using engineered burning. Rick Callahan, MKM Engineers.**

LTC Tadsen introduced the presenters for the evening and informed everyone that Rick Callahan would not be presenting this evening because of out of town obligations but Mark Patterson would conduct the update.

Mark Patterson stated that the Army is still awaiting comments from United States Environmental Protection Agency (USEPA). Mark commented on the Public Tours that were conducted on July 12<sup>th</sup> & 13<sup>th</sup> for the purpose of familiarizing the public with the sites and the process itself. Feedback from the public and the elected officials present was all positive. We were focusing on the burn project, National Guard opportunities and we witnessed a number of wildlife sightings. If or when it is appropriate or needed we may consider conducting additional tours.

We are trying to set up a meeting with the USEPA Regional Headquarters in Chicago, regulatory programmatic people in Washington, D.C., along with the Army and the Ohio Environmental Protection Agency (OEPA). This will be an inter-agency meeting and we will present the results to the RAB as soon afterward as possible.

Mark explained that during the past RAB meetings, members of the public and elected officials suggested proceeding with a lab or bench scale test prior to the burn. We heard your suggestion and I am pleased to say that we have received funding to conduct a lab test burn. We will be working with Eileen Mohr of the OEPA, Akron Regional Air Quality Management District (ARAQMD) and USEPA to report our findings and receive your input. A 3<sup>rd</sup> party contractor will be used for Quality Control issues, and this will take some time to coordinate.

Mark mentioned the unanswered questions that were recorded during the May 18, 2005 RAB meeting, and announced that the replies to those questions were provided on a handout sheet available on the back table. LTC Tadsen followed Mark's statement by saying that if any member of the audience does not understand an answer that is on the handout, or needs further information, please see us after the meeting.

Mark announced that RAB member contact information was requested at the last RAB meeting so we have put together a contact information sheet that is also located on the back table.

#### **4. Presentation on the groundwater investigation at the alleged mustard agent burial site, Al Brillinger of SpecPro.**

Marti Long asked what the acreage was on the site in case it does end up restricted.

Al Brillinger- 100 feet square.

Delbert Woloski- The three breakdown chemicals - are they hazardous?

Al Brillinger- No they are not hazardous, we just take normal precautions when we look for the breakdown chemicals.

Kerry Macomber- Has your company ever investigated a site containing mustard agent?

Al Brillinger answered Kerry by saying that he has not sampled for mustard agent with SpecPro however he has conducted sampling events for mustard agent for a previous employer at Pine Bluff Arsenal, AR.

Sarah Lock- The containers, drums etc. - is there a timeline that we are aware of before these containers break down and a traces of the breakdown chemicals could be detected? Also what was in the containers that were previously found and tested?

Al Brillinger- The containers were labeled "detonating war gas", however testing revealed no traces of mustard agent or breakdown chemicals and the containers were empty. When testing was performed we would still pick up those breakdown chemicals if the agent was present.

Dan Spicer- How far outside of the area did you test?

Al Brillinger- 10 ft. outside the defined area.

Chantelle Carroll (SpecPro) - 150 ft. from the actual site by Explosive Ordnance Disposal (EOD) and U.S. Army Corps of Engineers' (USACE's) recommendation.

Al Brillinger- We found all natural soils – silty clay mixture and when drilling it was a silty sand mixture.

Kerry Macomber- What is your experience with the breakdown chemicals?

Al Brillinger- I gained experience with the breakdown chemicals at Pine Bluff Arsenal, in the Chemical Weapons storage areas.

Kerry Macomber - So these samples were taken in an area 100 ft by 100 ft?

Al Brillinger explained that the study was designed that way.

Marti Long directed a question to Eileen Mohr- Arsenic in our ground water is naturally occurring. What about barium and beryllium?

Eileen Mohr said that yes arsenic is naturally occurring in this area and it is not uncommon. We did not detect beryllium, but barium also occurs naturally in this area.

Dan Spicer- asked are any of the test wells near creeks?

Al Brillinger- Yes, near Hinckley Creek

Sarah Lock inquired about the depth of these ground water wells?

Al Brillinger- said that they are from 26 to 30ft. in depth.

Delbert Woloski- How deep were those samples that were taken in 1998?

Al Brillinger- Several feet below ground surface.

Eileen Mohr added that she can look up and provide the correct depth information.

Al stated that SAIC had used the Electro-magnetic (EM31 / EM61) metal detectors.

Eileen Mohr located the depth information and reported as follows:

EM31: Data detecting targets at the maximum depth of 15 ft. 1,360 survey points represent 2,720 linear feet of data.

EM61: Data detecting targets at the maximum depth of 10 ft 3,996 survey points represent 7,922 linear feet of data.

LTC Tadsen added that the Hinckley Creek area contains a number of wetlands and SpecPro sampled without causing any wetlands damage. Please explain how you avoided damage to the wetlands.

Al Brillinger- We avoided wetlands as much as possible while moving vehicles and equipment into, and out of the area. In order to stay out of the wetlands we moved a bore hole 10 ft. away and were lucky enough to locate an abandoned electric line. We entered the area and exited the area with heavy equipment along the electric line right of way.

Joe Beutler- What kind containers were found?

Al Brillinger- The containers found were a 55 gal. drum and 7 small cans. All the containers were empty. No mustard agent was detected and no traces of breakdown chemicals were found.

Sarah Lock- As a possible contributing factor, will naturally occurring wetlands contribute to an earlier breakdown of mustard agent?

Chantelle Carroll- The soil in the area of concern contains heavy clay that would hold the contamination in place, so the wetlands would have no potential impact on causing a more rapid breakdown.

Al Brillinger- No

LTC Tadsen- If you did encounter any of the three breakdown products would that indicate contamination?

Al Brillinger & Chantelle Carroll – said yes that would indicate contamination.

Eileen Mohr- Concurred with Al's answers.

No other questions were fielded from RAB Members for SpecPro's presentation. LTC Tadsen opened the floor to public attendees for questions.

LTC Tadsen informed the audience that Bill Krimmer arrived at the Ravenna Army Ammunition Plant by appointment today to discuss information from former RVAAP contractor employees. The information that he provided concerned allegations of potentially contaminated sites located in the arsenal.

Mark Patterson said that we need to process the information that Bill Krimmer has brought forward in accordance with CERCLA laws and regulations in order to follow procedures. 38 of the 51 environmental areas of concern (AOC's) were identified by a preliminary assessment. The remaining thirteen AOC's were subsequently identified. A number of former employees offered information, generating a subsequent investigation by the US Army Center for Health and Preventive Medicine (USACHPPM). The USACHPPM investigation identified a number of the subsequent 13 AOC's. Some AOC's have been cleaned up and closed but most of them are still under investigation.

An unidentified Ravenna Resident asked Al Brillinger if the 3 breakdown chemicals he was referring to are dangerous.

Al Brillinger- No, they are non hazardous chemicals.

The unidentified Ravenna Resident then asked Al if all 51 AOC's contained mustard agent. Al Brillinger turned the question to Mark Patterson, Mark told the gentleman that the other sites are assessed for explosives, heavy metals, organic products, oil and propellants primarily, or a combination.

Barbara Gaskin (Streetsboro Resident) - directed a question to Al Brillinger. When was the first investigation for mustard agent?

Al Brillinger said that the first investigation was in 1969.

Mark Patterson explained that the sites that Al Brillinger of SpecPro is referring to have been investigated because of an individual claiming to know of the existence of mustard agent in this area. We are required to investigate any claims of contamination at the arsenal. Some cases we find are true and others turn up to be incorrect but regardless of the result we are required to investigate.

Richard Zamenille (Newton Falls resident) - Workers poured this mustard agent into a drum then buried it? Was there special packaging? And was this an accepted practice?

Al Brillinger- During my time at Pine Bluff they used heavy containers and these were in bunkers and heavily guarded 24 hours per day, 7 days each week. I am not sure how they buried the drums or what they considered normal practice.

Richard Zamenille (Newton Falls resident) - How many years would it take to break down?

Al Brillinger- It depends on the conditions and I couldn't say for sure.

Mark Patterson said that the standard process was to place lime on it, since lime breaks down the mustard agent quickly.

Bill Krimmer (Paris Township Resident) - What happens if a leak is found? What direction did you drill from Hinckley Creek?

Al Brillinger- During the testing we would have detected a trace immediately and the drilling site was Southwest of Hinkley Creek.

Carol O'Laughlin (Streetsboro Resident) - Could you obtain any help from Army records, regarding buried chemicals?

Mark Patterson said that records have been kept, but the detailed information is very limited. However, we do rely on information the records provide. Ravenna was a non- chemical weapons / non- chemical agent site. Mark also explained that the more recent document files are more accurate and complete than the aged files.

Julie Smeiles (The Villager) inquired about earlier testing of surface soil samples, 0-1 ft. in depth.

Al Brillinger- Only two surface soil samples were taken in the earlier investigation.

Eileen Mohr- USACHPPM required discrete soil samples right into the center of the site from 0-1 ft. in depth.

Julie Smeiles (The Villager) - Why are you only digging one foot deep into the ground when the mustard agent is several feet in the ground?

Al Brillinger- to detect breakdown chemicals. If mustard agent is not contained you will detect breakdown products before you encounter the actual mustard agent.

Julie Smeiles (The Villager) - By only digging down 0-1ft?

Mark Patterson- The mustard agent would volatilize or break down, no matter what depth it is buried, and would move between soil gaps.

Eileen Mohr- The whole point of USACHPPM's Relative Risk Site Evaluation (RRSE) was to rank every AOC as High- Medium, or Low (relative risk). The initial sampling in the RRSE is to nationally evaluate all the contaminated sites, prioritized by relative risk.

Bill Krimmer (Paris Township Resident) alleged that sources informed him that mustard agent and nerve gas was buried 8 feet or more below ground surface. The sources allegedly informed Bill that a "leaker" was found, and had to be addressed in 1965.

Bill asked Mark Patterson if there was a leak discovered in the future, how you would contain the leak from moving off site.

Mark Patterson- There is a chemical agent emergency response group at Aberdeen Proving Grounds that would respond. Mark then explained that in 60 years we have not encountered any problems and he believes in all these years there would have been a release of some sort, if in fact any mustard agent was buried here.

Bill Krimmer (Paris Township Resident) - If I can convince my sources to physically come on site and point out the location would you grant them immunity? Bill explained to everyone that he was told by his sources that they were required to sign an agreement that they could not discuss any actions they witnessed in the compound. He said that these people are afraid of what the government will do to them if they do talk - for example, prosecution, pensions denied etc.?

Mark Patterson said that in all of his time at Ravenna and the former employees he has spoken to he has never heard of anyone who was required to sign such a document, from the Army, or any of its contractors. If any of your sources come forward themselves with this information we would conduct a step by step process. USACHPPM would conduct the initial investigation and testing of the site.

LTC Tadsen asked Mark Patterson if he could possibly contact the Judge Adjutant General in Rock Island to issue a statement that anyone coming forward with information to assist the investigation would not be penalized in any way.

Mark answered by saying that he would first check with the Army Environmental Center to see if this issue has come up in the past and the result.

LTC Tadsen explained to the RAB members and public audience members that any person who would like to come forward is urged to do so, and we welcome their information.

LTC Tadsen also said that Bill Krimmer has touched on a good point. In Washington, D.C. on the old American University Campus, condos were built on a previously undiscovered mustard agent site and the only way that information was provided to the proper authorities was by archival photos. It was a World War I site, and no one was still around to provide any personal information to identify the site or assist in the investigation.

Ron Duncan (Middlefield Resident) - Did you use ground penetrating radar (GPR)?

Al Brillinger said that they did not use GPR during the geophysical investigation; they used electro-magnetic sensing equipment.

Mark Patterson added the EM 31 and EM 61 have been used for many years by USACE and haven proven to be very effective.

Ron Duncan (Middlefield Resident) - Is the GPR a more state-of-the-art method? Do you not want to use the best technology out there?

Mark Patterson- GPR may be a state-of-the-art technology. However, because of the site conditions and the funding, the EM31 & EM61 were more than appropriate.

Laura Duncan (Middlefield Resident) - inquired about the possibility of mustard agent being detected at other sites.

Mark Patterson - Yes it is possible, based on this recent information provided by Bill's sources.

Laura Duncan (Middlefield Resident) - What health concerns are associated with Mustard agent - neurological, and skin concerns from ground water infiltration of creeks and wells?

Al Brillinger described the health concerns of mustard agent exposure to be damage to, and irritation of body tissues.

Laura Duncan (Middlefield Resident) - said that her grandfather died of mustard gas exposure and she was wondering what kind of symptoms he went through before it took his life.

Mark Patterson said that a number of people misname mustard agent as mustard gas. Mustard agent is shot in artillery shells and it becomes a suspended mist in the air that settles on vegetation, but is NOT actually a gas.

Laura Duncan (Middlefield Resident) - Do you inhale this and it blisters your insides?  
LTC Tadsen- It also injures and damages human tissues through ingestion. Al Brillinger agreed.

Ron Duncan (Middlefield Resident) - Have you worked on a site where they did detect mustard agent.

Al Brillinger said that he has not worked on a site that detected mustard agent and he is thankful that he has not encountered it. He worked where mustard agent was stored, but did not witness or experience a release of mustard agent.

Ron Duncan (Middlefield Resident) - Asked if someone could repeat where he could obtain public records.

Mark Patterson said that they can travel to the Ravenna Library which is under construction right now, or the Newton Falls Library. We have a web site that you can visit ([rvaap.org](http://rvaap.org)) or you can call my office to request an appointment at RVAAP to review the documents.

Julie Smeiles (The Villager) informed everyone that the Ravenna Library is currently under construction and you cannot view any electronic documents at this time - only hard copies.

Ron Duncan (Middlefield Resident) inquired about if they would see documents from 60 years ago and thanked Mark Patterson for conducting the public tours.

Mark Patterson thanked Mr. Duncan for taking the time to attend the tours and said that we have a number of historical archival files available for review onsite.

Julie Smeiles (The Villager) - Informed the audience that they cannot access the Ravenna Library's electronic documents because the library is under construction.



John Smuck (Kent Resident) - requested Mark to please repeat the website. Mark obliged.

Howard Johnson (Ravenna Resident) - Understands that the first testing was completed in 1969. In the meantime, what brought about this investigation?

Al Brillinger said that the investigation was initiated after receiving an anonymous report of the mustard agent allegedly buried at that site.

Howard Johnson (Ravenna Resident) - How many persons, if any, were affected in 1969?

Mark Patterson- This was a Government Owned Contractor Operated (GOCO) facility, so employee health records were maintained by the contractors. At the time, Olin and Firestone employed the individuals who may have worked at this alleged mustard agent site.

Howard Johnson (Ravenna Resident) – Said employees had been denied their medical records when they left employment at the arsenal

Mr. Douglas (Southington Resident) – said that his parents both worked at the Arsenal and they obtained their records from the contractors before they left. He said his parents told him that all employees were told they could have their medical records, but they had to pick them up personally.

Mark Patterson thanked Mr. Douglas for that information.

Dori Spicer (Paris Township Resident) - asked Al Brillinger where Pine Bluff Arsenal was located and to spell his name.

Al Brillinger answered that Pine Bluff is 40 miles south of Little Rock, AR and gave the correct spelling of his name to Dori Spicer.

Julie Smeiles (The Villager) – asked Mark Patterson about the information Bill gave you regarding nerve agents.

Mark Patterson- There has never been a mention of nerve agent at the Arsenal before, so this information is new for us; we will follow up on this.

Laura Duncan (Middlefield Resident) - directed a question to Al Brillinger – So; you never came in contact with mustard agent or saw anyone who has?

Al Brillinger- said that he has only saw pictures of the effects of mustard agent on humans.

Laura Duncan (Middlefield Resident) – Do you have future plans to install ground water sampling wells outside of the perimeter?

Mark Patterson said that there are approximately 250 ground water monitoring wells located in the installation and residential wells around the outside of the Arsenal were tested in the past.

Laura Duncan (Middlefield Resident) - explained that in Middlefield they have 3 or 4 wells that are taking hits. Why do you not have any off post?

Mark Patterson informed the audience that RVAAP has plenty of room for ground water monitoring wells to be placed near potentially contaminated areas to identify any

contaminant that may move off site. The wells are closer to the potentially contaminated sites.

Bill Krimmer- My sources tell me that, in the 1950's, material was buried 30 to 40 ft below ground surface in Area 2 in C Block. Around Winklepeck Burning Grounds, the undetonated artillery shells were 90's, 120's and 155's buried 30 to 50 feet below ground surface. We discussed previously how difficult that would be, but this still needs to be investigated. I think it would make sense to place ground water sampling wells outside of the perimeter.

Mark Patterson stated that the ground water sampling wells are placed closer to the source and if you detect any contaminants, you place wells farther out. The Winklepeck ground water monitoring wells go 40 -50ft to pick up any contaminants. We have no information that anything has ever been buried that deep at the Arsenal. Eileen Mohr concurred with the Winklepeck ground water monitoring well depth.

Ron Duncan (Middlefield Resident) said that if the contamination enters bedrock, the aquifer could carry contaminants for miles.

Mark Patterson- at the Winklepeck site these wells are not installed in bedrock. Eileen said they are drilled in unconsolidated (glacial till) material.

Ron Duncan (Middlefield Resident) - What is the closest residential community to the mustard agent site?

LTC Tadsen said that it is Newton Falls, 7 to 8 miles away. Route 5 is the nearest highway approximately 1 to 2 miles from the site.

LTC Tadsen asked the audience if there were any additional questions.

LTC Tadsen announced to the audience that if anyone has information or knows someone who does have pertinent information, please urge them to come forward. We appreciate any information that we receive.

Bill Krimmer turned to the public attendees and recited his home phone number (330-358-2830) and his cell number (330) 281-9103 for anyone who may be uncomfortable contacting the Army and would like to contact him instead.

Julie Smeiles (The Villager) - asked why we are not discussing the members that have exceeded the number of absences permitted by the charter.

LTC Tadsen informed Julie that we do not have a quorum tonight; therefore we will have to wait until the Sept. 26<sup>th</sup> meeting to discuss. He also informed everyone of Mr. Earle Miller's passing in May and how we will truly miss him as a Board member on the RAB.

LTC Tadsen announced that the next RAB Meeting will be held Sept. 26, 2005 on a Monday if that is acceptable to the members instead of our normal Wednesday night meetings. We

are trying to accommodate the USACHPPM staffers who would like to attend. A location for Sept. 26, 2005 will be announced on the agenda. LTC Tadsen also informed the audience that we have placed a question box with 3x5 cards in the back of the room, for any additional questions or comments. He thanked the RAB members, presenters, and members of the general public for their interest, attention, and their attendance on this very warm evening.

There being no further business, the meeting was adjourned at 8:04 pm.

Respectfully submitted,

Christy Esler  
RAB Administrator