

Hazardous Waste Site Review Committee Meeting

June 23, 2016, 04:00 PM CDT
6410 W Highway 30, Alda, NE 68810

I. Open Meeting Law Information

The Chair, John Turnbull, called the meeting to order at 04:03 PM Central Daylight Time. Chairman Turnbull verified public notice and availability of copy of law in the meeting location – NEB. REV. STAT. §§ 84-1407 THROUGH 84-1414 (1999, Cum. Supp. 2006, Supp. 2007)

II. Roll Call of Appointed Hazardous Waste Site Review Committee

Ten of the twelve appointed committee members were present. There were six members of the public present at the meeting.

First Name	Last Name	Attendance
Teresa	Anderson	X
Greg	Baxter	X
Karen	Bredthauer	X
Chris	Exstrom	
Alex	Harness	X
Brad	Kloss	X
Chad	Nabity	X
Dan	Purdy	X
Jon	Rosenlund	X
Casey	Sherlock	X
Timothy	Smith	
John	Turnbull	X

Others in attendance: Joe Francis, Mark DeKraai, Mark Vess, Dwight Miller, and Quinn Lewandowski.

III. Review and Approval of Meeting Minutes

Chad Nabity made a motion to approve the May 24, 2016 meeting minutes. The motion was seconded by Casey Sherlock; the motion passed by roll call vote with no abstaining votes and no dissensions. Committee member Greg Baxter was absent at the time of this vote.

- **Yea:** Anderson, Bredthauer, Harness, Kloss, Nabity, Purdy, Rosenlund, Sherlock, and Turnbull
- **Nay:** None
- **Abstentions:** None

Chad Nabity made a motion to approve the June 21, 2016 meeting minutes. The motion was seconded by Brad Kloss; the motion passed by roll call vote with no abstaining votes and no dissensions. Committee member Greg Baxter was absent at the time of this vote.

- **Yea:** Anderson, Bredthauer, Harness, Kloss, Nabity, Purdy, Rosenlund, Sherlock, and Turnbull
- **Nay:** None
- **Abstentions:** None

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IV. Review of Work

A. Review of Agenda

Due to Mark Vess of Heritage having to leave the meeting early, the agenda items the “Summary of Previous Meeting Feedback” and “Review of Future Meeting/Work Schedule” would be moved towards the end of the meeting. This agenda change was unanimously approved with no dissensions.

B. Summary of Previous Meeting Feedback

Mark DeKraai led a brief review of the feedback received at the meeting on May 24th. The survey measured the committee’s responses via a Likert Scale and open comment boxes. Most of the meeting review questions measured achieved an average rating of “Excellent” to “Very Good.” Results of the meeting feedback survey are included in the following table:

May Meeting Feedback Questions & Comments		Rating
1. How useful was development of Procedural and Ground Rules?		1.64*
<ul style="list-style-type: none"> • more participation from all committee members • Good • it worked well 		
2. How useful was the development of future meetings and topic framework?		1.64
<ul style="list-style-type: none"> • system utilized was excellent 		
3. How well was Heritage explanation of functions of the facility, management processes, wastes to be handled and plans for future expansion?		1.91
<ul style="list-style-type: none"> • Time. It will be very difficult to explain all details to us in the short amount of time that we have, but they do as good as can be expected • will have better understanding when more of the testing is done • It will be more clear when we visit • NA. • It is all a little nebulous. the presentation mixed lbs. + tons and could have been consistent • Shorten explanations and stay focused on the current issues. No need for a long discussion on airbags. • I felt that a lot of the questions I had were brought up by others and Mark was able to clarify some of the information that was presented • Consisted of a considerable amount of speculation and unknowns due to process research uncertainty. This was explained well and will lead to better understanding of most efficient processes but at this time leaves a lot of room for changes 		
4. How well was Heritage explanation of technology used and why, plans for quality control, reliability of technology, sequence of steps from generation of waste to post-closure of facility?		1.82
<ul style="list-style-type: none"> • Didn't hear about post-closure • still cloudy as many steps are in the planning phase • NA. • More specifics about the technology equipment + DTS functions would help me evaluate if all bases are being covered 		

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5. How well was Heritage explanation of ground water protection, air emissions, and other factors related to environmental quality?	2.18
<ul style="list-style-type: none"> • Perhaps addressing potential health issues that history has shown to exist from exposure - human -animal • I would have liked to see more site specific info. Flood plain was mentioned but high ground water was not. • More details and less uncertainty • More specifics about the technology equipment + DTS functions would help me evaluate if all bases are being covered 	
6. What were the major strengths of today's meeting?	
<ul style="list-style-type: none"> • Good Information • Learning about the process • ~within 2 hr window • Flowed well. The committee has folks with a variety of strengths, knowledge, experience • It was on time and on target • A good start • John kept meeting on track and moving along • Ran more smoothly, better directed. clear plans set for next couple of meetings 	
7. What else could have improved the meeting?	
<ul style="list-style-type: none"> • maybe 1 break • Beverage 	

*Ratings were from 1=excellent to 5=terrible

C. Update Notebooks

Joe Francis worked with committee members to update their notebooks.

D. Review of Future Meetings/Work Schedule

1. The next meeting will take place July 19th at 4:00 PM CDT – location to be determined. The next meeting will cover:
 - a. Factor #1 - Economic Considerations.
 - b. Factor #8 – Enforcement and Regulation – Both Heritage and DEQ perspectives
 - c. Issues and concerns across all eight areas
2. The University of Nebraska Public Policy Center will send out a scheduling poll to determine meeting dates for August and September.
3. The facilitator will develop a draft report for distribution prior to the August meeting for member review. A modified draft report will be distributed prior to the September meeting for member review.

V. Committee Comments and Questions

A. Comments, Questions & Answers from Site Review Meeting

Mark Vess from Heritage provided answers to questions from committee members

Chris Exstrom's email written to the committee (Chris was unable to attend the 6/23/16 meeting) – "Let me start by sharing my understanding of the HC smoke detonation chemistry because it is important to keep in mind when discussing emergency responses. HC is a chlorine-containing

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hydrocarbon compound. It's a definite environmental hazard and there are indications in mice that it may be carcinogenic. However, in a smoke pot, HC is mixed with aluminum and zinc oxide. When the pot is detonated, the HC breaks apart and the chlorine in it reacts with the zinc oxide to form zinc chloride particles that are very small - think of it as very fine white soot. In this form, the zinc chloride combines with water vapor to form the "smoke".

We already have the first couple of pages from this National Academy of Sciences report in our supplementary material. <http://www.nap.edu/read/5582/chapter/7>

If you read further into the document, it has been shown that the HC breaks down within about 10 yards of detonation. Therefore the major environmental contaminant to be concerned about in the event of an uncontrolled smoke pot detonation is the zinc chloride.

In and of itself, zinc chloride has minimal hazardous qualities, but in the "smoke" form, the particles have a corrosive property, enough to at least irritate skin and do some damage to eye and lung tissue, depending on the level of exposure.

The remoteness of the Heritage site is an advantage as any released zinc chloride smoke would diffuse, becoming lower in concentration, before reaching significantly populated areas. I'm sure that part of DEQ's technical analysis will include estimates of exposure levels and effects in the event of a pallet load or truckload of smoke pots detonating at once, but at this point, my sense is that if the county has an emergency response plan to handle an accidental release of a toxic or corrosive gas - say ammonia or chlorine from a derailed train car - then that will be more than enough to handle an uncontrolled zinc chloride smoke release.

In the rotary kiln, the temperatures are too high for water vapor to exist, so the zinc chloride won't form smoke but it will be important for the exhaust scrubbers to be able to trap the zinc chloride along with the other vapor-phase side products produced.

I would ask about what suppression/containment precautions are going to be planned for and incorporated into the new building. Potential issues - although all may be very unlikely - could be an uncontrolled zinc chloride smoke release, problems with the kiln heating system, or other kiln malfunctions. I was impressed with the subfloor secondary containment design in the hydrolysis building. Would a similar thing be useful in the kiln building? The reason I ask is that if I had to put out a zinc chloride smoke, my first thought would be to douse it with as much water as I could. The zinc chloride particles would dissolve in the extra water and . . . no more smoke."

DEQ will look at issues in modeling under RCRA review and air permits.

Heritage appreciates the comments and questions by Chris Exstrom and will develop water deluge systems to respond to a situation in which there is an incident with large smoke release.

Are there plans for retrofitting a fire suppression system into the receiving building and the new building?

There will be fire suppression systems in all of the new plant. Heritage will need to look at the logistics of retrofitting a deluge system in the shipping and receiving facility because there is no water by the receiving building. With the construction, they will look at ways to bring water to that area to allow the installation of a fire suppression system in the receiving area.

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Will the receiving building have the capacity and capability to hold the supply of munitions being unloaded, and yet still allow for the organization to have the separated out?

With the handling of explosive materials the general rule is you expose the minimum amount of material to a minimal amount of people in the minimal amount of time. Heritage will bring one semi-trailer to the building at a time to utilize space to unload the materials and do a safety inspection in one area. If materials need to be repackaged they would be reconfigured in another area of the building and placed into another semi-trailer for outgoing storage. During the unloading process, Heritage will utilize the trailers, the doors on the trailers, and space in the facility to process the material safely in an orderly fashion with an efficient flow.

Do you have an idea how much the Army will ship to Heritage on a regular daily/weekly basis?

Heritage will let the Army know that the optimal receiving number for Heritage is no more than four trucks a day to offload. Those four trucks would provide about 160,000 lbs. of materials to process. During the two to three months before the beginning of processing by the thermal treatment unit the Army will begin sending trucks of materials for storage for later processing. After the plant is up and running the Army will only send about four to five semi-trailer loads per week.

The rail within Heritage is currently dated. Do you anticipate any shipping by rail?

The Army is not anticipating any rail delivery with this particular contract. Heritage's rail could handle a very limited rail delivery. The rail would need to be modernized to better handle the weight of shipments, the turns the rail would have, etc. Mark Vess stated that he and his business partner are exploring some avenues to help fund the possible future modernization of the rail such as a government sponsored program.

At the end of the processing cycle with the zinc chloride remaining, it is somewhat acidic. Is your plan to dilute that with water?

This is part of the process engineering that goes into the air pollution control (APC). Heritage would like to process engineer to maximize the zinc chloride to be recovered for recycling, because it is such a valuable product. Heritage's background has been to create the safest and best way to do things, and with many explosive materials being made of natural products the goal would be to safely reclaim and recycle as much of the products as possible. Hazen Research, Inc. will be testing and designing the best process to recycle these marketable materials, reduce any hazardous waste produced, all while providing the most exemplary environmentally friendly processing.

Do you have training plans for the 60-70 people that you plan to hire to help meet the needs of this contract?

Heritage has written standard operating procedures (SOP) and training plans for all positions. The one thing Heritage does not have in place is the hazard safety analysis for each new position. As part of the Army contract process, after they get all the manuals for the new equipment and engineering information for the equipment, Heritage will go through all the life safety codes for all the buildings and all the safety apparatuses. All the confined spaces will be identified; the lockout/tag-out procedures for every step will be identified; and information on how to shut everything down will be supplied. The employees at Heritage have an extensive training list. The employees have 24 or 40 hours of hazmat training depending on what position they are in; all the supervisors have eight hours of supervisor training; all the employees have annual 24 hours of refresher trainings; they have three day training assessments; all are trained on forklifts; all are first-aid and blood borne pathogen certified; all receive fire suppression and extinguisher training, emergency procedures training, and many other trainings.

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Heritage trains their employees a lot and frequently. Heritage also conducts a documented safety briefing each day where they document each task and go over every safety precaution for that task. Heritage employees are also briefed on the weather hour by hour and they monitor static electricity, storms, etc. The training manual that the army has examined as a part of this process is at least 2,000 pages long.

What is the extent of the Incident Command System (ICS) training? Should there be a release, would they be responding as a team? Would you have the capability and technical expertise to merge into the fire department or other entities to respond to an incident?

Mark Vess is one of the original EPA certified hazmat instructors for the U.S. Airforce. Mark is trained and certified as an instructor for incident command system, and is a certified National Fire Academy instructor for all things hazmat. Mark utilizes all of that background to train all of the employees himself.

What level of hazmat incident command training will the employees have?

They are trained at least to technician level. Heritage's management, their safety people, their chief of security are incident commander trained as well as incident management trained. The Heritage staff during an incident would interact with the chief or whoever is assuming command, and take action until they arrive and the responders would take over and the Heritage staff would brief the command on the incident and provide support as needed.

In the hydrolysis process, are the bugs sensitive to salts?

The contractors utilized this methodology to inject the anaerobic amendment material into the ground and it destroys all the explosive contamination and the source of the contamination produced during the production years at the plant.

Is HC material a candidate for hydrolysis?

No, it is not. The government has selected the best method. There is a requirement in the contract for RCRA approved thermal treatment process to dispose of the HC material.

Who has the storage regulations?

Within the State of Nebraska there are explosive storage regulations and licenses that the State Patrol handles. There are licenses to store materials, purchase materials, and those combine to create a business license. On the federal level, Heritage has a manufacturing license with the ATF that allows them to store, use, and chemically alter any explosive compound as part of their processes. Storage requirements, the State of Nebraska and the ATF, borrowed a lot of requirements that are DoD regulations based on its expertise with explosive materials. Heritage has to comply with all of their standards.

Does the whole unit go through the thermal treatment, and then you separate the metal?

Yes

Where does the water go from the washing of the canisters?

That is all inside of the facility, and all that water will go into indoor storage tanks. That water will then be fed back into the closed loop system. There will be some waste water, but that will be treated and go out to an evaporation pond.

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Besides HC, is there a certain amount of residual/other solids that will be recycled/repurposed?

Three main things will be repurposed. They will be able to recycle all of the metal which makes up about 45-48% of the weight. There is the thermal process, that will produce the heavy ash that will fall out with the metal and will be recycled if it is clean, and there is also the fly ash that will be collected by the APCs. The ash will make up another 40% of that weight. Metals will be certified clean before they are recycled.

B. Unanswered Questions/Clarifications from Previous Committee Meetings

I'm still not sure what will eventually get approved, this site for the processing of HC or this site for various chemicals?

This process is about approving this site to manage hazardous waste. Before Heritage could process anything other than HC, anything new must pass all standards before it could be certified. The committee is approving a hazardous waste facility, and it could encompass more than HC. If there are any changes to the permit the public will be able to comment.

C. Heritage Presentation on Emergencies and Transportation

Dwight Miller from Parametrix presented information for Heritage and answered questions during and after the presentation; Mark Vess was not able to attend the remainder of the meeting.

Factor #7 - Plans for responses to emergencies and for site security, qualifications, and training of personnel, and actions to be taken when there are operating problems.

1. Emergencies response and site security plans

- a. Extensive plans are required by the U.S. Army
- b. Ammunition & Explosives (A&E) Safety Program Plan
- c. Current site security plan follows the ATF and the new plan will now include US Army protocols as well
- d. Corporate Safety and Health Plan is a standard plan in place for any corporate organization, and Heritage's plan will continue to be edited as the other plans are developed and added. It will likely refer even more back to the other plans.
- e. Personnel Responsible for Safety and Security
 - Fred MrVicka, Safety Officer
 - James Milby, Explosive Safety Officer
 - Mark Vess, President

2. Emergency Preparedness

- a. Protocol for localized and facility-wide emergency response
- b. Internal radio communications
- c. Fire prevention – Bunkers currently meet separation needs for the materials they are holding
- d. First aid stations/training – Set for today's operation and will be expanded to cover the new facilities
- e. Heritage plans to conduct onsite training with fire departments

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- f. Active spill prevention and cleanup protocols under NPDES (National Pollution Discharge Elimination System) - It is part of those spill prevention protocol

3. Actions to be taken when there are operating problems

- a. Safety and emergency response is designed into processes and equipment. They are not expecting the materials that they are handling to have a high energetic nature.
- b. Process override and emergency shutdown – Especially in relation to the rotary kiln, there is protocol for bringing that up and down in temperature in a safe way that will not damage the equipment. It is a part of the operations plan, and a lot of that will be referred to in emergency response plans.
- c. Operations Plan and manuals
- d. Actions are led by Operations Manager or designated trained staff – Heritage does not have untrained staff in charge of the operation. These are highly technical and expensive pieces of equipment.
- e. Operating engineers will be on-call to support site staff at a minimum for troubleshooting of issues. Operating engineers are there only for an operating standpoint, but obviously an emergency takes precedence.

Factor #6 Transportation considerations such as methods to be used, waste containment during transport, the party responsible for transport, timing of arrivals, routing, and response plans in case of spills.

1. Means of Transport

- a. All delivery will be by semi-truck/trailer (GPS tracked and alarmed)
- b. Delivered by Army contract carrier
- c. Fully licensed for explosives transport under Army oversight
- d. Heritage responsibility starts at the gate.
- e. Materials shipped as “product” in original containment

2. Timing of arrivals and routing

- a. Average of one truck/day (routine operations)
- b. Peak deliveries of four trucks/day (initial)
- c. Deliveries during regular working hours
- d. Delivery would be avoided during inclement weather and typical inclement weather months
- e. Heritage’s storage capability allows for more efficient deliveries
- f. Trucks will arrive from I-80 via Alda Road and Old Potash Highway and to the facility
- g. Not much transport by rail. It could be a means to transport to the site. It is assumed that it is going to be almost all truck transportation.

3. Response plans for spills during transport

- a. Army contract carriers have spill plans and retain third-party spill response services
- b. Follow transport regulations under USDOT

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- c. Local emergency responders will be briefed on routes and material types

D. Question and Answer from Heritage Presentation

Is this machine being used in other types of businesses? Have they had any safety issues?

Rotary kilns have been a common way to make cement, so there is a lot of history using this equipment. Many rotary kilns are also used in the disposal of hazardous waste. Equipment manufacturers put together an operating manual that helps develop the operating procedure that lays out how to prevent any safety issues.

How much HC materials does the Army have in surplus? Will there be future contracts available after this 5 year trial?

This contract will process about 20-23 million pounds of HC materials. The Army has about 800 million to one billion pounds of this material to dispose of that is sitting in depots across the U.S.

-I would like to see a list of the level of training for each level of staff (current and future) and the specific courses and certifications they need to earn and maintain. I would like to see Heritage make sure the local response teams have what they need. Also, I would like to see Heritage be an active participant in the local LEPC.

With whom are emergency response plans shared with?

Heritage plans to work with local emergency management to ensure an appropriate response in case of an incident. There needs to be coordination between local responders and the facility. It is proposed to have a sit-down meeting between the facility and local emergency management.

Is this HC of reportable quantities for Tier II forms?

NDEQ believes HC is not reportable under Tier II but is still looking into this issue.

Are there any types of bonding requirements for an operation such as this? Is there a succession plan in case something happens to person as involved in the process such as Mark Vess?

This is the type of issue that will be raised in the next meeting as the committee discusses issues, concerns and recommendations.

Will employees be hired locally or brought in? How many employees will there be and does the local community have a sufficient pool of employees for this operation?

These are the types of issues that will be addressed under #1 Economic Considerations during the next meeting.

VI. Next Steps and Adjourn

A. Member Comments

There were no additional member comments.

B. Meeting Feedback

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Today's meeting helped clarify questions. The committee continues to stay organized and cover topics on the agenda. Only possible improvements would be a short five minute breaks during the meeting.

C. Summary of Next Steps

1. Since the Grand Island Public Library is not available, the next meeting will take place July 19th at 4:00 PM CDT at the Alda Community Center. The next meeting will cover:
 - a. Factor #1 - Economic Considerations
 - b. Factor #8 – Enforcement and Regulation – Both Heritage and NDEQ perspectives
2. Committee members will review all eight factors, and identify the main thoughts and recommendations. The statute also talks about concerns and issues; members are encouraged to bring those to the next meeting. As we start developing a report, the committee will share their conclusions. After that point, Mark DeKraai will have enough to develop a rough draft of the report.
3. The University of Nebraska Public Policy Center will send out a scheduling poll to determine meeting dates for August and September. Members are encouraged to respond promptly to the poll, as they have done in the past.

D. Public Comments

No public comments were made.

E. Adjourn

John Turnbull adjourned the meeting at 5:43 PM CDT