In The Matter Of:

Iowa Army Ammunition Plant

Operable Unit Nine, Construction Debris Sites 001-002

Public Meeting

February 9, 2015

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IOWA ARMY AMMUNITION PLANT

PUBLIC MEETING

FEBRUARY 9, 2015

OPERABLE UNIT NINE

PROPOSED PLAN

CONSTRUCTION DEBRIS SITES

CC-IAAP-001 AND CC-IAAP-002

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PERSONS PRESENT:

Public Meeting Facilitators:

Ms. Kathleen Anthony, PMP
Senior Project Manager
PIKA International, Inc.
5025 Arnold Avenue
McClellan, California 95652

Mr. Jesse Kahler
Environmental Protection Specialist
Iowa Army Ammunition Plant
17571 DMC Highway 79
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Mr. Vaughn Moore, Concerned Citizen Attendee

Ms. Lueene McCracken, Concerned Citizen Attendee

Mr. Dean Johnson, Concerned Citizen Attendee

Ms. Jen Busard
Environmental Assistant - PIKA, International
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Mr. Steve Bellrichard
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17571 DMC Highway 79
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(Time: 4:30 p.m.)

MR. KAHLER: For those of you who don't know who I am, I'm Jesse Kahler. I'm the acting Environmental Restoration Manager while Zaynab Murray is out on maternity leave.

So on behalf of Lieutenant Colonel Michael Triplett, welcome to the public meeting.

The Army is holding this meeting to discuss the Proposed Plan for OU 9, Operable Unit 9. This is the construction debris site, and we'll also be accepting public comments regarding the proposed action.

Operable Unit 9 covers actions taken as part of the CERCLA -- or Comprehensive Environmental Response, Compensation and Liability Act.

These documents are presented with oversight and with concurrence from EPA. In its role as lead agency for environmental cleanup at the Iowa Army Ammunition Plant under the CERCLA, or Comprehensive Environmental Response, Compensation and Liability Act, the Army announced it will accept public comments for both of these documents any time from January 13th through February 11th of 2015.

This public meeting is required by Section 117 of CERCLA, 42 U.S. Code, Subsection 9617, and Article 27 of the Federal Facility Agreement between the Army and the EPA.

As we move through today's agenda, we'll hear from Kate Anthony from PIKA, as well as myself.

We will allow -- At the end, we will allow for questions and answers to clarify any information we've provided here today.

Please note that these will not stand as the official comments, that the Army is required to provide written responses per CERCLA. Those will come during the next allotted time frame on the agenda.

We'll accept public comments today; however, the Army won't provide official responses today.

The Army will fully consider all pertinent comments and will provide official written responses. The public can continue to expect regular updates during quarterly RAB meetings -- which you folks already know.

Tonight, the proceedings will be recorded by a stenographer for the official

record. Therefore, if you offer any questions or make any statements, please state your name for her benefit as you begin speaking.

So, we thank you for that; and at this time, I'd like to introduce Kate Anthony, who will discuss Operable Unit 9.

MS. ANTHONY: I've got another handout here. These are the maps that will show up in the presentation, and they're hard to see from a distance, so I've printed them out for you so you can see them.

If you don't mind, I'll sit while I talk, if that's okay with everybody.

Here's an overview of what we're going to talk about today (Indicating).

We'll do an introduction, and then we'll cover a little bit of the history of the facility, the background of the OU 9, the two sites; the scope and role of response actions are what we're, what we're planning to do; a summary of the site risks or, you know, what we found, and what the risk remaining at the site is.

And then we're going to talk about the Remedial Objectives -- what the plans are to take care of the material that's left onsite.

And then we're going to summarize those alternatives. You know, when we went through the feasibility studies, we came up with a list of alternatives of how to deal with this.

And then I'm going to talk about how those alternatives were evaluated; and then how we came up with the recommended alternatives; and then give you, the community, a chance for some input and some comments.

This is what Steve -- or at least Jesse went through about the Preferred Remedial Alternative. This is part of -- both sites are part of Operable Unit 9 at the Iowa Army Ammunition Plant.

And you'll see on your map that comes up next where these are located, and this work is being conducted under CERCLA. The Army is the lead agency, and the EPA is the primary regulatory agency.

And, again, the Army and EPA are issuing the Proposed Plan as part of the public participation responsibilities under Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and Section 117(a) of CERCLA.

The Army and EPA will select the Remedial Alternative after reviewing all available information, including the comments, if you make them, submitted during the 30 day public review period. And again, that review period is January 13 through February 11, 2015.

We do encourage you to review and provide written comments, if you have them, on this plan; and if you plan to take it home and provide comments, we'll need your comments postmarked by February 11.

And after all the public comments are addressed, we'll finalize the Proposed Plan.

The history of the plant you probably know much better than I since you've sat through all the RAB meetings. It's been a load, assemble and pack operation, dealing with a variety of conventional ammunition and fuzing systems.

It was initially developed in 1941, and operated in -- for World War II, and operated until August 1945; and then production was resumed in 1949 and continued to the present.

From 1947 to mid-1975, the former Atomic Energy Commission occupied the facilities on the site. Then they reverted back to Army

control in 1975.

Currently, the plant is a government-owned facility, but it's operated by a private contractor, American Ordnance, LLC.

And here's the first map (Indicating). That's the location of the two sites within, within the facility.

Next slide.

Here's a little bit of the site background.

Construction Debris Site 1 was discovered in 2007 at the intersection of Roads H and A during work on a water line along Road H. They discovered a bunch of discarded construction and demolition debris -- things like brick, concrete, metal parts, wire and metal banding. The debris is visible in several eroded areas along the steep embankment of Road H.

And the Remedial Investigation at Site 1 was conducted between June 11th and June 19, 2013.

Construction Debris Site 2 was discovered by hunters or recreational users in March 2009 along a tributary of Brush Creek in a forested area south of Line 2. The site was used

to discard demolition material -- sheet metal, corrugated transite roofing, wire buckets and wood. The debris was dumped all along the banks of an intermittent unnamed drainage, which discharges into Brush Creek. There's no record indicating the quantities of material or the dates it was placed there.

The Remedial Investigation at Site 2 was conducted between June 14 and June 19th in 2013.

And here's a little bit closer picture of those sites. They're about a mile from each other; and you can see Site 2 is in that heavily wooded area.

The Remedial Investigation Summary.

We conducted a Remedial Investigation in 2013, and the objective was to characterize the nature and extent of the chemicals of potential concern at both sites.

And we developed a list of chemicals of potential concern by evaluating the future -- or the historical land uses and industrial operations at the facility, to come up with the contaminants that we were going to sample for.

And we collected samples from soil,

surface water, sediments and groundwater, and analyzed them for the presence of the contaminants concerned.

Next slide.

The soil samples we collected from four different depths. We collected them at the surface; two feet; six feet; and ten feet.

And all of the samples we analyzed for explosives, metals, pesticides, herbicides, hexavalent chromium, semi-volatile organic compounds, polynuclear aromatic hydrocarbons, volatile organic compounds, and polychlorinated biphenyls, or PCBs, and asbestos.

At Site 1, throughout all the samples, we detected seven metals and one pesticide that exceeded their respective Preliminary Action Limits, or limits that were established to let us know that there -- something that was of interest, or the background concentrations for the various soil and sediment, surface water, groundwater samples.

In soil, we detected arsenic, barium, cadmium, total chromium, lead, selenium and endrin aldehyde. It said there was an area of total chromium and selenium.

And in surface water, total and dissolved arsenic, total and dissolved barium, total hexavalent chromium, and total selenium.

In groundwater, it was total arsenic, total chromium, total hexavalent chromium and total lead.

And here you'll see -- You have these maps, and you'll see the different soils. These are -- You'll see on the titles.

This one is the soil and sediment sample exceedances.

And then Jen skipped over it, but there was surface, subsurface soil samples, and you can see the different depths -- two foot, six foot, ten foot are delineated by different colors.

Next slide.

And then the groundwater and the surface water sampling exceedances.

For Site 2, it was similar.

We found seven metals. However, we had one sample in the sediment that had 13 SVOCs, which exceeded their respective PALs or background concentrations.

In the soil, we had arsenic, barium,

total chromium, lead and selenium.

In sediment, arsenic, barium, total chromium, lead and selenium.

And then the PAHs or the SVOCs that exceeded were:

Acenaphthene.

Acenaphthylene.

Benzo(a)anthracene.

Benzo(a)pyrene.

Benzo(b)fluoranthene.

Benzo(g,h,i)perylene.

Chrysene.

Dibenzo(a,h)anthracene.

Fluoranthene.

Indeno(1,2,3-cd)pyrene.

Phenanthrene.

And pyrene.

In groundwater, total and dissolved arsenic, total chromium, and total hexavalent chromium.

Next slide.

And then, the next set of maps that you have show where these exceedances are.

And you can see this on this one, the one sediment sample there at the end, that's

where the SVOCs were found.

And then the subsurface.

And the groundwater.

And to summarize, soil, sediment and water samples from both sites were scanned for radiation using a multi-spectrum detector, an alpha/beta/gamma detector, and there was no detected radiation. All the radiation was within normal background levels.

The soil borings and geophysical data, we did soil borings to ten feet, and we didn't find any buried construction debris or any evidence of any disturbance in the subsurface.

The detected contaminants of potential concern, including the concentration of metals, pesticides and SVOCs that exceeded their respective Preliminary Action Limit or background concentrations were further evaluated during the human health and ecological risk assessments.

The risk assessments found that none of the COPCs were analyzed that exceeded their respective preliminary action levels or background concentrations posed an unacceptable risk to human health or the environment.

And, so, since no health -- no human health or

ecological risks were identified at either site, there's no response action, including treatment, removal or land use controls proposed for Site 1. We didn't find anything there.

However, at Site 2, there's piles of debris that are transite roofing/siding material that contain chrysotile asbestos; and that's a CERCLA hazardous substance.

This asbestos-containing material will eventually degrade and pose a threat, a future threat of exposure to friable asbestos.

Therefore, we proposed a Remedial Action at Site 2, is to remove and dispose of the debris piles; and then sample the site to verify that all of the material has been removed.

The evaluation of the risk is discussed in the following slides.

When we got the sampling results, we sent those to a risk assessor, who conducted a Baseline Human Health Risk Assessment, and a Screening-Level Ecological Risk Assessment for each of the two sites.

And they ran the numbers and did the evaluation, and no human health or ecological risks were identified at either site.

The Baseline Human Health Risk Assessment was conducted in accordance with the framework described by the Risk Assessment Guidance for Superfund.

And the Screening-Level Ecological Risk Assessment was completed in accordance with the Superfund Guidance for Ecological Risk Assessment Guidance for Superfund, process for designing and conducting ecological risk assessments.

And those are the Guidance documents that are required by the regulatory agencies.

And the current and foreseeable future uses at both sites is industrial and recreational.

And the exposure risks that were evaluated included soil and surface water and sediment for hunters, current and future.

Soil and soil-derived dust for future construction workers.

And soil and groundwater hypothetically used as drinking water for future/commercial industrial workers.

The Baseline Human Health Risk Assessment evaluated potential exposures to

surface soil, subsurface soil and groundwater, and surface water for current and future hunters, future outdoor workers, and future construction workers. And those are the -- that's the proposed future land use for this property.

The evaluation was performed using very conservative exposure assumptions, which represent very cautious estimates of the potential site exposure.

And the potentially complete exposure pathways included indirect contact, incidental ingestion and dermal contact with soil, surface water and sediment; and inhalation of the contaminants of potential concern in the dust released from the soil; and potable use of groundwater ingestion with groundwater used as tap water in a commercial setting.

So they evaluated all of the possible ways that the hunter or the industrial worker or the recreational user would come in contact with the media present at both of these sites.

The next slide.

And the results of the Baseline Human Health Risk Assessment indicated, for the current and potential future land uses, that the

potential exposure to the soil and surface water and sediment at the site would be associated with cancer risks that do not exceed USEPA's cancer risk range of 1 in 1 million to 1 in 10,000, for all receptors, except for the commercial/industrial worker, which falls within the acceptable range, and the noncancer hazard index values that are lower than USEPA's threshold value of 1.

In addition, the results of the Baseline Human Health Risk Assessment indicate that combined, exposure to soil -- so if they were combined to all of these things -- in soil, surface water, sediment and groundwater used as drinking water, would not result in risks that exceed the upper bound of the USEPA's Remedial Goal range of hazard index of 1; and therefore, no response actions to mitigate cancer and noncancer risks are required for any of the media at either of the sites.

And then the Screening-Level Ecological Risk Assessments, they went through the same process, only they used ecological receptors instead of human receptors.

And we talked about the Guidance that

was used, and the Screening-Level Risk Assessments evaluated the potential for chemical constituents of concern detected in soil, surface water and sediment to adversely affect ecological receptors. They looked at certain specific things at the site.

We had biologists out at the site, and they picked certain actual animals that are native to this area, and they went through the Ecological Risk Assessment, and based their risk assessment on those receptors.

An analysis of the uncertainties of the SLERA found that estimations of exposure and potential toxicity used in calculating the Hazard Quotient, which is, instead of the hazard index for humans, a Hazard Quotient is for the ecological receptors, and they're based on conservative assumptions of bioavailability, and uptake, and toxicological threshold, resulting in Hazard Quotients that overestimate the potential risk for the exposed individuals.

And the results of the SLERA indicate that, given the uncertainties described, the concentrations present, present an acceptable risk to ecological receptors, and no further

evaluation of risk was required.

So the Remedial Action Objectives, we came to the conclusion that there was no risk to human health or the environment from the contaminants of potential concern.

However, we still have that asbestos debris. So, there was no asbestos debris at Site 1, so no further action is recommended for that site.

The Remedial Action Objectives for Site 2 for soil, sediment and surface water are:

Prevent direct media contact -- and by "media," we mean ACM debris, asbestos-containing debris -- with human and ecological receptors.

Prevent the miti- -- prevent mitigation (sic) of friable asbestos through wind, surface water runoff, and erosion pathways; and remove all the ACM debris to prevent exposure and allow for unlimited use and unrestricted exposure; and recommend no further action after removal of the ACM debris.

So the remedial alternatives were where we came up with these in the feasibility study; and four alternatives were developed to address that debris at Site 2; and no remedial

alternatives were developed for Site 1 because there was no risk.

The first alternative that we had to evaluate was no action; and that's given to us that we have to do that for all of the sites and all of the feasibility studies, your first one is no action. What is going to happen if you just left the site in its present condition and didn't do anything.

The second alternative we came up with was, what if we fenced it and just put land use controls and long-term monitoring, you know, place a barbed wire fence around the debris piles, and then do maintenance to make sure that the fence stays in place and periodic vegetation removal.

The third alternative was encapsulating it with land use controls -- placing a two-foot thick cap of clean soil over and around the edge of the debris pile, and then conduct long-term monitoring to ensure the integrity of the cap and the stability and effectiveness of the erosion control measures.

And the fourth alternative we evaluated was just to remove the material and

dispose of it at an approved off-site facility.

And the Army and EPA used the following nine CERCLA evaluation criteria to determine the best alternative for addressing the debris piles.

And the first evaluation criteria is overall protection of human health and the environment.

And, then, compliance with applicable or relevant or appropriate requirements.

Long-term effectiveness and permanence.

Reduction of toxicity, mobility or volume of contaminants through treatment.

Short-term effectiveness.

Implementability.

Cost.

State and support agency acceptance; and community acceptance.

So, for overall protection of human health and the environment, because no action would be performed, Alternative 1 would not prevent the degradation of the ACM material and potential future exposure to friable asbestos.

Alternative 2 would deter access to

the material, but it would not reduce potential degradation, mobility, or the volume of the debris that's present.

Alternatives 3 and 4 offer the best overall protection of human health in the environment by eliminating ACM degradation, mobility and possible exposure to friable asbestos.

Compliance with relevant and appropriate requirements.

Under Alternative 1, since no action would be taken, the ARARs would not be met.

Alternative 2 wouldn't reduce the potential for degradation or the mobility of friable asbestos; and therefore, that wouldn't meet the ARARs, either.

Compliance with the project ARARs is expected if either Alternative 3 or Alternative 4 were applied.

Long-term effectiveness and performance.

Alternatives 1 and 2 would not -- wouldn't reduce or eliminate the potential exposure, degradation or mobility.

So Alternatives 3 and 4, they address

the potential exposure to friable asbestos by encapsulating or removing it.

Alternative 3 provides a physical barrier that will provide temporary reduction to the future exposure, as long as we maintain the cap, and land use controls are maintained.

Alternative 4 provides the best long-term effect and performance of the Remedial Action.

Reduction of toxicity, mobility or volume of contaminant through treatment.

Alternatives 1 and 2, again, no significant reduction in toxicity, mobility, volume or future potential exposure to the ACM debris.

Alternative 3 doesn't reduce the volume; however encapsulation of the debris pile, it will provide a physical barrier that limits exposure.

Alternative 4 provides maximum reduction in mobility and the volume of the hazardous materials by removing it and disposing of it at an off-site facility.

Short-term effectiveness.

Alteratives 1 and 2 would not disturb

the ACM. Therefore, it's a limited short-term risk to workers. However, the long-term risk of exposure for hunters and trespassers remains if the material is disturbed.

Alternative 1 could be implemented immediately because it's no action; and Alternative 2 could be implemented in several weeks. It wouldn't take long to put a barbed wired fence around it.

Alternatives 3 and 4 would take longer to implement -- approximately two months for each alternative, once it's approved.

Appropriate measures would have to be used during construction to limit workers' exposure, working with this material generated, because friable asbestos, once you start moving it, it will be -- friable asbestos would be generated, and possibly impact workers.

Implementability.

Alternative 1 is the easiest to implement. It's easy not to do anything.

Alternative 2 would not require an access road or heavy equipment, and it would be relatively easy to get in there to build a fence.

Alternatives 3 and 4 have similar

implementability, due to the need to mobilize equipment and vehicles on site.

Long-term maintenance and effective land use controls are required for Alternative 3. Compared to Alternative 4, Alternatives 2 and 3 would be more difficult to implement.

No action will be required after completion of Alternative 4, making it the most implementable remedy.

Now, for cost.

Since no action would be taken, there's no cost associated with Alternative 1.

And then costs for Alternatives 2 and 3 vary, based on overall time estimated for each alternative to achieve the remediation goals.

Alternative 2, security fencing with land use controls, the estimated cost for that is $119,577.

Alternative 3, encapsulation, with one year of long-term monitoring, is 269,238.66. However, if you add ten years of monitoring, cost goes up to 469.283, and will increase as the years go on.

And Alternative 4, total removal and clearance of the site, is 462,336.23.

The Preferred Remedial Alternative for Site 2 is removal and disposal of the debris piles, due to the potential for future exposure to the friable asbestos.

Alternative 3 prevents exposure to friable asbestos by installing a barrier. However, this alternative also requires the use of an effective long-term maintenance, which is an additional cost; plus the potential for future exposure in the event of degradation of the cap, and also erosion control measures to prevent the cap from being breached.

Alternative 4 provides the best solution to eliminate the risk for the future exposures; and the costs incurred during remedial actions are offset by eliminating the need for incurring costs for long-term maintenance and future monitoring.

The Army and EPA support the Preferred Remedial Alternative, removal of the ACM debris piles, and believe it is the best alternative with respect to the evaluation criteria, and it's expected to satisfy CERCLA Section 121(b) statutory requirements, which are:

Protective of human health and the

environment.

Comply with applicable and relevant and appropriate requirements.

Cost effective.

And use permanent solutions and alternative treatment technologies to the maximum extent practicable.

Detailed information regarding this proposed plan is available in the Administrative Record File. This document is up there for you to review. The library here has computers available for you to view it if you need to take look at it. I also have a couple of copies here you can look at.

We put this announcement in the paper of this meeting. It was in the Hawk Eye on January 9 and January 12th of 2015, and this is part of the ongoing 30 day public comment period of February -- or January 13 through February 11th.

And comments -- Your input to the Proposed Plan is important to us, and comments are vital to select the remedy.

You can submit the comment forms -- we have them over here -- if you have any comments

on the plan; and you can mail them to the Army Ammunition Plant, attention to Jesse here; and they must be postmarked by February 11th.

And if you have any questions, you can contact Jesse, and his number is also on the comment sheet over here if you want, if you want to call him and have questions for him.

MR. KAHLER: Is that it, Kate?

MS. ANTHONY: That's it.

MR. KAHLER: So at this time, we'd like to open it up for questions about the information we provided in the Power Point.

MR. VAUGHN MOORE: My name is Vaughn Moore. I just want to throw this at you guys. Which way do you guys want to go on this thing? Or are you thinking about?

MR. KAHLER: Well, I mean, we're, we're talking about removing the soil and disposing of it off-site.

MR. VAUGHN MOORE: That's your pick?

MR. KAHLER: Well, the EPA and the Army have concurred on that decision.

MR. VAUGHN MOORE: All right. That's fine.

MS. LUEENE MCCRACKEN: I am

Lueene McCracken, and I agree with Vaughn. I agree with what you're going to do. To me, it's the best solution, because asbestos flying around everywhere is very dangerous to people. So I think it's a good idea, Alternative 4.

MR. KAHLER: Did you have any other questions about the information?

Okay, so what we'll do now, we'll open it up for public comment. If you folks have anything you'd like to provide insight into or --

Dean, a comment? Okay.

Well, if nobody has anything, I have my contact information here if you'd like it before you, before you leave; and I'd be more than happy to answer any questions you have in the future or accept any public comments.

And that will conclude our meeting. Thank you for coming.

(End of meeting, 5:10 p.m.)

C E R T I F I C A T E

I, M. Jane Weingart, a Certified Shorthand Reporter of the State of Iowa, hereby certify that I acted as the reporter for the taking of the captioned public meeting, and that I reported the proceedings in machine shorthand correctly and have had the same transcribed under my direction into typewriting; that the above and foregoing is a true and correct transcript of my shorthand notes so taken of all proceedings.

I further certify that I am neither related to nor employed by any of these parties or their attorneys in any way.

Dated and signed this 23rd day of February, 2015.

M. Jane Weingart

M. Jane Weingart
Certified Shorthand Reporter