ORIGINAL

Naval Weapons Industrial Reserve Plant

Calverton, New York

Public Meeting

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7:00 P.M.
April 17, 2002

Riverhead Town Hall
200 Howell Avenue
Riverhead, New York

P R E S E N T:

Jim Colter	Naval Facilities Engineering Command
Dave Brayack	Tetra Tech NUS
Judy Lamey	
Jeff McCullough	NYSDEC (Albany)
Foster Wheeler	

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Proceedings

MR. COLTER: It's 7:15, and we'll let the record show we convened the meeting. I'd like to thank, first of all, Jeff McCullough, from the New York State DEC, for showing up. Andrea Lohneiss, from the Town of Riverhead. And Harry Hinston, is our lone representative. At this point, I like to put it out to Harry and Andrea, if you'd like me to proceed with the presentation due to the lack of public attendance.

MR. HINSTON: Go forward.

MR. COLTER: Okay, well, then, we will.

My name is Jim Colter. I met you about a month ago, I'm with the Navy's Facilities Engineering Command, out of Philadelphia, I'm the remedial project manager for the Calverton site. We are here to talk about the Installation Restoration Site 7, which is our Fuel Depot Area, formerly operated by Northrop Grumman when they were in operation here.

As you might recall from last time, we are following the CERCLA process, in our investigation and cleanup of this site that was enacted in 1980 by Congress and consists of the

steps that you see here, Preliminary Assessment, Site Ivestigation, Remedial Investigation, Feasibility Study, Record Of Decision, Remedial Design, Remedial Action.

Record of decision is the spot we are at now. Followed by design and construction.

This shows the flow chart of the stages I just went over, and how they relate to the process at Calverton. We did an assessment study in the late '80s, followed by a site investigation in 1992.

We then switched to the RCRA terminology versus CERCLA terminology, and a site investigation in '95, followed by a RCRA facility assessment, which is the same as a remedial investigation, from '94 through '98. We did a feasibility study or corrective measures study, earlier this year. We are in the remedy corrective stage at this site. Tonight we are going to specifically talk about the Fuel Depot.

There's a map, the field depot is Site 7, it is part of this parcel here, with the Jet Fuels Systems Lab. The site description, it's about 400 by 150 feet. As I showed earlier, it is in the

middle of the industrial area. It was used to store jet fuel, diesel fuel and gasoline and underground storage tanks. These tanks ranged in size from 4,000 gallons to 50 thousand gallons. As of April 1998, all of the tanks have been removed from the site. There is no longer any tanks remaining. The site is enclosed by a fence and there's a combination of gravel and concrete and macadam, and there's one building that remains, the old pump house. This is a photo of the Fuel Depot, looking north. This building is not the pump house. This is a building now owned by the Town of Riverhead. It's the old facilities maintenance area. So you're looking north. This dirt area, here, is where all of the tanks were formerly buried.

Another shot, looking more northeast. You can see more of the dirt area where the tanks were buried. And over on the eastern end, it's heavily wooded.

Again, site history. It was used for fuel storage, it was constructed in 1954 and operated by Northrop Grumman through '96. Throughout the active period, the tanks changed in size and material to conform with the environmental

regulations of the time. Again, all of the tanks as of 1998 have been removed.

Here's a shot of some older tanks. These are about 4,000 gallon tanks. There's a little bit bigger tank. I think that's a 10 thousand gallon tank? And then the last tanks removed, were these 50 thousand gallon tanks, and those were done in '98.

Our investigative history of this site. Again, we conducted a preliminary assessment, or initial assessment study, in 1986. Northrop Grumman initiated a free product investigation in 1988. They installed 34 monitoring wells to delineate the extent of free product. The Navy followed up a few years later with a site investigation, to determine if the site was indeed contaminated. And we did confirm the presence of contamination in groundwater. So we recommended a more intensive field exercise.

Did that in 1994-1995. We collected 46 soil gas samples, putting a probe in the ground, measuring the airspace in the soil. Where we got high readings, we biased our soil sampling locations in those areas. We did eight soil borings. We

installed 24 temporary groundwater monitoring wells, and then put 10 permanent ones in, to continue monitoring the site over the years.

This led us to be able to define the extent of the groundwater contamination, but there were some data gaps that were identified. So we conducted a Phase 2 Remedial Investigation in 1997 through 1998. We installed another 12 monitoring wells and an additional permanent well. We collected 13 additional soil samples from under the 50 thousand gallon tanks. That was one area that we weren't able to get soil samples in the past, because of the presence of tanks. When the tanks were removed, a hole was opened and we took advantage and took some soil samples from below the tanks.

In 1998, after Northrop Grumman had already left -- they vacated in February of '96, I believe. We wanted to see if there was any free product remaining at the site that might interfere with any remedial system that we may choose to install. So we did what's called an engineering evaluation and a cost analysis to determine whether or not there was any recoverable free product

remaining on the site. Basically, that study revealed that Northrop Grumman removed 174 gallons over the ten years that they had it installed, and there really wasn't anything left to recover from the water table.

What our investigations revealed was we did have petroleum contaminated groundwater. Because it's petroleum, the contaminants were toluene, ethylbenzene and xylene. We feel we have a well-defined plume at this point. We are noticing that it is not migrating very far. I'll show you a picture in a minute. We think there might be a little bit of natural attenuation that's taking place at the far edge, and that there's no other source remaining to continue to feed the plume.

We did hit a small freon pocket on the groundwater. I'll go over that in a second. And we did find that all the petroleum contaminated soils were removed when all the tanks -- different tank removal efforts were done. So we don't have any surface soil contamination. We don't have any subsurface soil contamination, other than soil that remains at the groundwater and soil interface, where groundwater meets the soil. This is a result, we

feel, of the groundwater contamination and not general soil contamination.

This shows our boundary of our plume. This shows our outer boundary of the xylene, ethylbenzene and toluene contamination. The smaller one, here, is our freon plume. When we put a monitoring well in there, Northrop Grumman actually put the well in, they discovered a freon hit, turned it over to the Navy, we continued the investigation and we determined that was about the size of the freon contamination in the groundwater.

These areas, here, show the direction of flow basically to the east, and there's a groundwater divide on Long Island. Things to the north, flow northeast. Thing to the south, flow southeast. We happen to be right in the middle. So we are seeing more of a due east groundwater flow direction.

Now we get into the feasibility study. What were some of the alternatives that we looked at? We take -- a lot of technologies are out there. What we do is we try to put them up against these eight criteria items and try to pick the best one that accounts for the majority of them.

You have your threshold criteria, which is basically they have to meet these two requirements or we throw them out all together: That's overall protection of human health, and compliance with state and federal regulations.

Then we get into the balances criteria, is it effective, is it permanent? Does it reduce toxicity and mobility, is it implementable, is it cost effective.

Then finally, we go to the criteria, what does the state and the community like to see us do?

The alternatives that we considered for Site 7, was the no-action alternative. We do that as a matter of policy. We want to measure everything else against that. We do carry it through, although it doesn't meet the minimum criteria of protection of human health and the environment, in compliance with federal and state regulation.

The second one was institution controls and natural attenuation. Putting a deed restriction on the site and letting things naturally biodegrade. This does meet the protection criteria,

but it takes a long time to naturally biodegrade at the levels of contamination that we have. So we would end up with a long-term land use restriction and long-term liability on the Navy's part.

The third alternative is a pump and treat system, groundwater extraction treatment and discharge. Again, this meets the goal of protection of human health. It is effective in containing the groundwater contamination, although it's very slow and it's very costly. Typically, we estimate 30 years on a pump and treat system is a minimum time to meet a goal.

The fourth alternative is what we call air sparging and bioventing. If you picked up a fact sheet, there's a schematic of it on the back page of it? It is basically a way of putting wells in on the site and injecting oxygen into the groundwater. And enhancing the biological degradation of the contaminants. We feel we can do a source removal within a two to four year period. That will get most of the contaminants in the groundwater, down to a very low level, probably to a level where it is no longer cost effective to run this type of system. And then we'll go back and

we'll have to reevaluate maybe switching to another type of active system. Or maybe at that point, natural attenuation. But we'll have to run this system first and see how good of a job we do.

The last alternative we consider, is bioremediation, with oxygen releasing compounds. That is basically putting a curtain of wells in on the site and injecting some chemical that is rich in oxygen. It basically does the same things that the air sparge system does. It's a way of throwing more oxygen into the system to enhance biodegradation. It basically has the same advantages as air sparging. The one disadvantage, it's more costly.

So, basically, what we concluded is that we feel that alternative four is going to be the preferred remedy to clean up this site. And that's basically it. Do you have any questions.

MR. HINSTON: Seems like a small little area to clean. But basically you're going to pump oxygen down into the water table around the circumference of the plume and aerate it.

MR. COLTER: And then from within the plume. And then we'll put other wells in to extract the vapors and treat the vapors before we release

it.

MR. HINSTON: There is no liquid to pump out.

MR. COLTER: There's no free product. If there was a thick layer of product, that would short circuit this type of system, that is one of the reasons we went in. We felt halfway through our investigation, this would be a good site to use air sparging because of the sandy soils. But if there was a thick layer of product there, it would short-circuit it. So we went in and determined early whether that was going to happen, or not. We found that there was no product left. Air sparging will take care of whatever little sheen might be left on the groundwater.

MR. HINSTON: The freon, how did that accumulate? Where did that come from?

MR. COLTER: The best we can tell, I don't think we have a picture of it -- this is a fuel distribution pipe. What Grumman used to do -- that same pipe I just showed you, runs over here, it crosses the road and goes to a fuel storage area that's on the other side of the road. What they used to do was -- they didn't want to pressure

test the pipe with a typical medium -- I'm not sure what they might have used in case it failed. But they used freon.

MR. HINSTON: As a coolant.

MR. COLTER: To pressure test the pipe, to see if it had any leaks or anything like that. They didn't want to put the fuel through it to see if they had a leak, so they ran the freon through it to pressure test it before they started pumping millions of gallons of fuel product through the pipe. They probably had a couple of leaks and things in the beginning. That is how we feel the freon got down there.

Freon is a volatile organic. It will react the same. With the addition of oxygen, it will breakdown. So it's another reason this alternative is good, because we can attack this area with the same system. We don't have to put something separate in.

MS. LOHNEISS: Jim, there's nothing on the other side of the road that you have to do.

MR. COLTER: The other side, over there is the Jet Fuel Systems Lab, and -- we basically have split this site so the road isn't

blocked.

MS. LOHNEISS: Oh, right.

MR. COLTER: This building over here, is the Jet Fuels Systems Lab. At one point, when we were investigating the freon, Northrop Grumman had found -- I'm not sure how they found something in their report when they transferred the property? And so the Navy agreed to take over the investigation so they could get out of their contract sooner. We would make it part of our program. When we went out and did groundwater sampling, we found sporadic hits of breakdown products of 1, 1, 1 TCA. We found 1, 2 DCE, which is a breakdown product of TCE, and things like that. But very low, very sporadic. And we really -- we just put those results in a report and really haven't gotten any adverse comments regarding it.

MS. LOHNEISS: But you retained ownership of that area.

MR. COLTER: Yes. When we took ownership in '96, there was still some of the wells to put in. Our plan right now for Site 10, is to go over that data again and dust it off, so to speak, and put together a finding of suitability to

transfer, with the backup data.

MS. LOHNEISS: With Site 7.

MR. COLTER: Not with Site 7.

MS. LOHNEISS: Okay.

MR. COLTER: We want to try to get rid of that parcel. The building is deteriorating. I don't know if you have been out there. Judith Hare, who owns the property, asked us to expedite the transfer of that parcel if we can, because the building is in bad shape. Our goal is to dust that analytical data off and make sure it supports a suitability document. If it does, we'll send it out and go from there.

Anything else?

MR. HINSTON: I guess that's it. Seems pretty simple, cut and dry, two to three years aerate it.

MR. COLTER: Hopefully, it is shallow, conducive because of the type of contaminant to breakdown with oxygen and.

MR. HINSTON: Seems like Grumman, when they had the facility, they kept up on it, monitored the tanks, consumption versus lost product.

MR. COLTER: When the tank regs

changed, they were pretty good about changing the site as a whole. It wasn't as dirty as you might think after so many years of operation. And these four parcels is what's left that need to be cleaned up, and we are taking care of the two core ones right now so...

MR. HINSTON: Seems like a simple fix.

MR. COLTER: Well, I appreciate you coming out.

MR. HINSTON: I enjoyed the air-conditioning.

MR. COLTER: Wish there was more people here for you. If there's nothing else, we'll conclude the meeting.

(Time noted: 7:39 p.m.)

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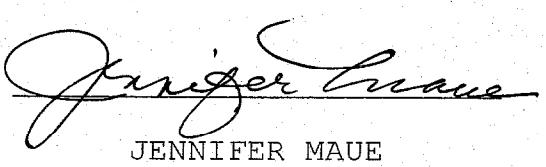
C E R T I F I C A T E

STATE OF NEW YORK)
) ss.
COUNTY OF SUFFOLK)

I, JENNIFER MAUE, a Registered Professional Reporter, do hereby certify that the foregoing Matter, taken at the time and place aforesaid, is a true and correct transcription of my shorthand notes.

I further certify that I am neither counsel for nor related to any party to said action, nor in any wise interested in the result or outcome thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this 24th day of April, 2002.



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