SUMMARY OF ERRATA
STENOGRAPHERS REPORT
TRANSCRIPT OF THE NAVAL WEAPONS STATION EARLE RESTORATION ADVISORY BOARD MEETING AND PUBLIC MEETING HELD ON MAY 10, 2001 TO PRESENT AND DISCUSS THE PROPOSED PLAN FOR OPERABLE UNIT 6 (OU-6)

1. Page 4, Line 24: Patel should be spelled as "Battelle"
2. Page 5, Line 2: will "be" operational.....
3. Page 5, Line 6: The word "but" should be "put"
4. Page 7, Line 16-17: should read: "So if landfill operations ended in 1968,..."
5. Page 9, Line 3: change "dry" to "try"
6. Page 9, Line 11: change "were" to "we"
7. Page 10, Line 3 change "the" to "be a"
8. Page 10, Line 4-5: And so there was a remedial action (proposed) to (address potential) exposure to groundwater.
9. Page 10, Line 12: change "a" to "an"
10. Page 13, Line 16-17: The water (groundwater level) has not been observed to rise into the placed waste (in the landfill).
11. Page 18, Line 17: change "has seized" to "ceased"
12. Page 18, Line 19-22: replace with "The soils adjacent to the closed furnace were cleaned up to the residential lead standard of 100 parts per million in 1995. And the State has.....
13. Page 19, Line 25: change "Hypoxin" to "Hockhocksen"
14. Page 20, Line 10: change to read: "Did we cover your....."
15. Page 21, Line 15: Let's move on to the Navy's (preferred alternative being presented) tonight. As I mentioned ...
16. Page 23, Line 4 - 5: Jessica (Mollin), EPA project manager, (or her predecessor), have had input ...
17. Page 23, Line 11: change "place" to "person"
18. Page 26, Line 24: change "base" to "casing"
19. Page 27, Line 2: change "record" to "RCRA"
20. Page 27, Line 5: Yes, metals investigated included mercury.
21. Page 30, Line 23: metals that are recyclable are sent for recycling."
22. Page 31, Line 9: change "ordinance" to "ordnance" , and also same change (Pg. 32, lines 13, 14,17)
23. Page 31, Line 10: change "explosion" to "explosive"
24. Page 33, Line 24: change "hull" to "haul"
25. Page 35, Line 6: change "bit" to "pit"
26. Page 40, Line 12: change "with" to "we'll"
27. Page 42, Line 09: read...." proposed by...."
28. Page 43, Line 7: "overtime" should be "over time"
29. Page 44, Line 3: change "EODP" to "EOD"
30. Page 46, Lines 17-19: change to read: "We have also sent forward to our major command an information packet that can be placed on the internet describing all of our sites,....."
31. Page 48, Line 13, Line 20: change "16(f)" to "16/F" as well in other locations (Pg. 51, lines 2 and 17)
32. Page 49, Line 13: change "tan" to "tank"
33. Page 49, Line 17: "When the Navy is finished with....."
34. Page 50, Line 21: "investigation" should be "investigating"

NAVAL WEAPONS STATION EARLE

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RESTORATION ADVISORY BOARD TRANSCRIPT OF PROCEEDINGS

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May 10, 2001
HOWELL TOWNSHIP MUNICIPAL COMPLEX
Howell, New Jersey
7:30 p.m.

APPEARANCES:

RUSSEL E. TURNER
Senior Project Manager
600 Clark Avenue, Suite 3
King of Prussia, PA 19406-1433
For Tetra Tech Nus, Inc.

MR. GOEPFERT: Thank you everybody for coming this evening, it's about time that we normally start the meeting. My name is Greg Goepfert, from the Naval Station Earle. I'm an environmental engineer on the base. And I want to say a very nice thank you to Ms. Janet Coakley and for Howell Township's hospitality to have us here tonight. And since we have some faces that are new to the restoration board meeting, I would like everybody to stand and introduce themselves so you can be noted by our stenographer this evening. You want to start on this side here.

LT. WEXLER: Hi, my name is Lt. Ian Wexler, I'm the base JAG, base attorney, nice meeting you all.

CAPT. SHAW: Yes. Good evening, I'm Captain Shaw, I'm the commanding officer at Naval Station Earle.

MR. KINKADE: Merwin Kinkade, representing the Borough of Tinton Falls as the restoration advisory.

MR. JARGOWSKY: Lester Jargowsky, representing the Monmouth County Health Department and restoration.

MS. MOLLIN: Jessica Mollin, from EPA, I'm the project manager for Naval Station Earle.

MS. COAKLEY: Janet Coakley, the chairman of the Howell Environmental Commission, and a member of the restoration advisory board.

MR. SMITH: Don Smith, vice chair Howell Township Environmental Commission.

MR. HERMANNI: Gus Hermanni, Environmental Director Naval Station Earle.

MR. TURNER: Russ Turner, Tetra Tech, Environmental Engineer, consultant to the navy.

MR. KOLICIUS: John Kolicius, Navy Engineering Field Activity Northeast. I'm the remedial project manager for the program at Earle.

MS. ELDRIDGE: Nancy Eldridge, I'm the public affairs officer at Naval Station Earle.

MR. HAMMER: Michael Hammer, I'm on the environmental commission in Howell Township.

MR. MARSINIAK: Stanley

Marsiniak, Howell Township Environmental Commission.

MR. MEYER: Carl Meyer.

MR. MEYER: Steven Meyer, Board of Adjustment Howell Township.

MR. GOEPFERT: Again, thank you very much for coming this evening. Our agenda this evening is we're going to review the minutes of our December meeting. We're going to talk about the planned work at two of our sites, Sites No. 3 and No. 10. Our community co-chair, Mr. Lester Jargowsky, will give a short report, and I will give a short report as to the outreach efforts that we have conducted in the community. And I also give a short talk on the status of some of the active remediation work we have under way currently at two of our sites.

So I'll review the minutes of our last meeting. At the last meeting, Capt. Shaw took over command of Naval Weapons Station Earle, actually not at the meeting, but prior to the meeting he took over command of Earle and introduced himself as the commanding officer. Mr. Kolicius stated that Patel (phonetic) Labs was going to install some additional wells at our

site 16/F that we'll talk about later. The wells were installed and will operational next month. Mr. Merwin Kinkade led a discussion about the Department of Defense Restoration Advisory Board Meeting, that was held in St. Louis in November, and some of the recommendations that he had but forth to the board have been implemented.

We talked about some of the outreach efforts that we might consider in the community. And we have implemented some of them, and we'll talk about that later in the agenda. And my task was basically to arrange for a special RAB meeting, which is tonight's meeting, to serve as a public meeting for the proposed plans at Sites No. 3 and 10, as well as to examine the opportunities for public outreach. Do we have any additions or changes to the minutes? Do we have a motion to approve?

MS. COAKLEY: I'll make a motion to approve.

MR. GOEPFERT: Is there a second?

MR. KINKADE: Second.

MR. GOEPFERT: All in favor to approve the minutes.

(Whereupon the members signify by saying aye.)

MR. GOEPFERT: All against.

(Whereupon there is no response.)

MR. GOEPFERT: The minutes stand approved and will be entered into the record. The next item on the agenda is the direct discussion of our plans for Sites 3 and 10 on the base, remediation work. And Mr. Russel Turner from Tetra Tech Nus, our consultant, will give a brief overview of some of the work that's planned. I'll move this. Please feel free to ask questions as they come up.

MR. TURNER: On the first slide -- all right. The relative location of the two sites you can see is site 10, is about in the middle of the main site area, and Site 3 is in the southern end of the main site area. Is everyone comfortable with that?

MR. MARSINIAK: Before you start, can you identify any highway or roads so we can get an idea of where, in position the roads are so I can understand it better.

MR. GOEPFERT: This is Highway 34. This is the main entrance on Route

34.

MR. MARSINIAK: This is 34.

MR. GOEPFERT: This is the main entrance to the base, the main area of the base, and Mr. Marsiniak, I think you're more familiar with this is the western most gate off Asbury Avenue.

MR. MARSINIAK: Okay.

MR. TURNER: Is that better? All right. Let's go to the next slide, if everyone is comfortable with that. The next slide will be an area photograph of Site 3. Site 3 is the more green vegetated area that you can see in the center and up a little bit from the bottom. That's approximately five acres, former land fill, used from about 1960 to about 1968. So if you think the 1968, that would have been about 32 years since it became inactive. Generally, what has been disposed there is household type trash, you know, municipal type waste.

We did some test pits, we encountered things like paper, plastics, you know, bottles, things like that. Reportedly, industrial wastes were also disposed there, including solvents and such, but no industrial or

particularly army type -- excuse me, navy type, military type waste was found there, it's really just municipal type waste in the test pits. After it was -- after it was closed, it was covered with about two feet of sandy soil. So if you look at the site now, you can find -- and this is a recent photograph of that from last week.

MR. GOEPFERT: Yes.

MR. TURNER: That Greg took, and that's the entrance. If can remember the area photograph, there's a road that goes in and there's a turn around area. The yellow dots on the last slide, that shows the monitoring well locations. In addition to monitoring wells, remedial investigation of a lot of surface soils, sub surface soils, sediments, a whole range of samples were taken to support the ecological assessments for the site. This recent photo, let's move on that, gives you an idea of what it looks like from the ground, coming in the main access road. And it gives you an idea of the maturity of some of the trees there, which maybe 15 to -- maybe as much as 30 years old.

MR. KOLICIUS: Just a note,

generally it was standard practice within a lot of the navy bases after a site like this was closed to dry to revegetate it to some extent, so pine trees were often planted in the area, and from the aerial photograph, you can see the greener trees as opposed to the more light colored trees in a lot of the surrounding area, that's because a lot of it was pines that weren't necessarily native to the area, much of the surrounding area is more hardwood forest. So from the aerial photos were are able to a lot of times delineate to some extent, the extent of some of these sites.

MR. TURNER: Okay. After the remedial investigation was concluded and discussed and made available to the public, for the site, we're going to talk about Site 3 first. There was a range of technologies looked at, and it was brought down to three alternatives. Alternative (1), included periodic review and long term monitoring of ground water. This it called no action, it's not -- obviously not no action, that was done before there was a need to cover a remedial action objective that was identified in those studies, and that was for a

concentration of arsenic in ground water that human health risk assessment, was found under the future residential scenario to the compound of concern. And so there was a remedial action to exposure to the ground water.

Alternative (2) limited action, would include additional soil cover, regrading for drainage, improved drainage, and revegetation, fencing, cable type fencing and warning signs. In addition, access restrictions and prohibition of future construction on the landfill that would be a administrative control. In addition, there would a CEA which would be a Classification Exception Area under the guidelines of NJDEP would be required to insure that ground water isn't used directly. And periodically, review and monitoring, that's included in all that in Alternative (2), and the total price it was approximately $878,000.

Alternative (3), is a -- would be a designed low permeability cap system, cover system. It would include a low permeability layer or a membrane, something like that. And it would be the more expensive, I think that's a little over five million dollars. In addition,

Alternative (3), also includes fencing, access restrictions, the CEA has alternatives to this as well, as well, as long term monitoring. Tonight, the navy is proposing after consultation with EPA and NJDEP, Alternative (2), which is the limited action, covering institutional controls and long term monitoring. It would include, the work would include removing exposed debris and vegetation where necessary to allow the additional cover soil and regrading. The trees, we have a concern for the trees, possibly the trees could be saved, but some of them would have to be removed. Okay. Any questions? No.

The final design of the cap system, let's look at the -- if you guys can see it, you can see the red line, and the black x-line, those are the limits of where the cap would be placed. The red line indicates the limits of the cover system, the black x-line indicates the proposed fence, roughly that's approximately five acres. The cable type fence and warning signs restrictions on the Earle Master plan, to preclude future construction that would damage the cap. The cover system, long term monitoring, as well as classification exception area.

Now, the dollar numbers we showed up there just one minute ago to let everyone get an idea that would be present value, which essentially would mean the amount of money the government would have to put in the bank today, to fund that process over a period of time, over a 30 year period or depending on the long term monitoring that would be funded in today's dollars. And that's the proposed plan for Site 3, Alternative (2), if there are any questions?

MR. HAMMER: How big is that area? How deep is it?

MR. TURNER: All right. How deep is it? All right. Within the fenced area is approximately five acres.

MR. HAMMER: Five acres.

MR. TURNER: Yeah.

MR. HAMMER: How deep is it?

MR. TURNER: And the depth is probably two feet of cover on average of sandy soil, and then about maybe three to four feet, it's not a very deep landfill. It's kind of pushed in and covered. It's actually, this site, one of the things I wanted to mention is if you look at the site to the southeast of the turn

around area there, in the center, there's a wetland area where we do a fair amount of sampling addendum, sampling, to look at ecological receptors, and we did a fair amount of work in that area. But there's -- the site is more or less flat, but it falls off pretty rapidly to a deep, relatively deep ravine down to the southeast corner.

MR. HAMMER: Is there water table in the area of the contaminants?

MR. TURNER: Well, what's happened is the deepest well there is about 25 feet. And that's below any of the waste.

MR. HAMMER: But it's not through the dump area though.

MR. TURNER: The water is not that the placed waste. In fact, the deepest well we put in there, we put in these wells for a specific reason, to see if there's any immediate impact leaching. And often those wells come up dry, depending on the rain.

MR. MARSINIAK: You've got a stream -- you've got a stream running on this side south of Howell Township; right?

MR. TURNER: This is a

drainage depression, let me show you on the map up here.

MR. MARSINIAK: Am I looking at this (indicating).

MR. GOEPFERT: That's the eastern branch of the --

MR. KOLICIUS: We have sampled the water right at the fence line here and we didn't find any impact in any of the sites. One of the things we did as part of our remedial investigation, we did sampling of every stream leaving the base, just to get a general feel for the various water sheds and to see if any of the sites in Earle had a cumulative effect had any impact leaving the base.

MR. MARSINIAK: My question here I just wrote it down, is stream travels to different water sheds. I think I would like to see that later on, you know, because you have different water sheds from the base going different ways; right? Not only into the Manasquan, but you've got not the different water sheds.

MR. TURNER: The drainage from the landfill, this drainage occurs from here

(indicating).

MR. MARSINIAK: Where is that?

MR. KOLICIUS: As part of the remedial investigation which was finished in 1995, we did look at all the different water sheds on the base, and what sites would potentially be impacting which particular water sheds. And as I said, the main thing that we found from all the water shed sampling was there was no impact at our fence line from any of the sites. We started with both investigations adjacent to the site, but then there was a concern about human impact, so as part of the that earlier investigation, we did look at every stream emanating from Earle. Because one of the things that's kind of unique about Earle, is there aren't actually any streams that start off base, and pass through and continue on. Earle is pretty much the headwaters for any of the streams.

MR. MARSINIAK: It is the headwaters, when you look at it, it is the headwaters.

MR. KOLICIUS: We have six

different water sheds that are on the main side area.

MR. GOEPFERT: Are there any other questions or comments on Site No. 3?

MR. TURNER: Okay. Let's move onto Site 10. Let's wait one second and make sure we have all of our questions answered. Okay. All right. We want to cover Site 10 then and answer any questions. This is an approximately two acre site. You can see it up there where the yellow area is about in the center of it. You can see once again the green, like John Kolicius mentioned, is the over growth of the pine trees probably that were put down there maybe 15, 25 years ago, after the navy was through disposing of this.

MR. KOLICIUS: One point you didn't make on the last aerial, the yellow dots on both of these pictures, are the locations of the existing ground water monitoring wells.

MR. TURNER: All right. This was also a former landfill. It was used for metal waste from about 1953 to the mid 60's. Once again, that's about 30 plus years, it's been inactive 35 years. The type of material interred

here would be demilitarized munitions, in other words, casings, rounds, from bullets and such. In other words, as far as we know, there's no evidence that any live ammunition was ever interred there and none has been found there, and there's never been any evidence that there has been.

Once again, this two acre landfill is covered by a very thin, in this case, thinner than Site 3, but a very thin sandy soil covering over the interred materials. And you can actually find munitions casings scattered through that area. A significant remedial investigation, including these wells, which are represented by the yellow dots, was performed including surface soil sediments, sub surface soil sediments. Those results once again were used for the human health risk assessments, and ecological assessments that were performed. That's all I have for this slide.

MR. GOEPFERT: Okay. I just want to mention that what you see off to the right in that slide, was that open yard was used as a lay down area for scrap metal, which we no longer use it for. Also, if you see off on the

right hand side, next to that scrap metal pile, there's a fenced in area, and I just point that out where it is, the fenced in area here, that was the site of our old hazardous waste storage facility, which has been formally closed in 1999.

And we now have an indoor facility to store our hazardous waste, a state of the art indoor facility. So we're not using -- storing barrels of waste oil or any other types of waste outdoors any more. And as I said before, the scrap metal yard has been decommissioned, and also at the northern end of that site of that yard there where you see the roof of the building, was a furnace where small caliber ammunition items were burned many years ago, and that operation has seized operation back in 1990.

So it was also cleaned up, the soils that bled through the soils, and it was cleaned up to the residential standard of 100 parts per million in 1995. And the State has bought off on the clean closure with that site, so there was actually quite a bit of activity in this adjacent area to this site No. 10. Thank

you, Russ. We have a question in the back.

MR. TAYLOR: Which way is the ground water flowing?

MR. GOEPFERT: Could you just introduce yourself?

MR. TAYLOR: I'm Steve Taylor, I'm the manager of the Manasquan Water Shed Management Group. And I'm wondering which of those wells are down grading the others?

MR. GOEPFERT: The answer to your question will become apparent in the next slide.

MR. TAYLOR: Thank you.

MR. GOEPFERT: Oh, actually the slide after that.

MR. TAYLOR: Do we have a reference point?

MR. GOEPFERT: Yes.

MR. TURNER: All right. There was one thing I wanted to mention, from the aerial view to the north and the east are sensitive wetlands, it's recognized that way.

MR. GOEPFERT: So that's the general ground water flow is to the north and east to the Hypoxin (phonetic) water shed.

MR. TURNER: This photo then, like the last series, shows a recent photograph of Site 10, the access road. And once again just to notice the trees, the maturity of some of the trees. Now, in this case, let's go to the next --

MR. GOEPFERT: In this case, this is just the access road as you're coming in facing the north of the site.

MR. TURNER: Did we over your question well enough for the ground water direction?

MR. TAYLOR: Yes.

MR. TURNER: Okay. Alternative (1), in this case, is the real no action alternative, it would cost nothing. And it really would be no measures implemented. The Alternative No. 2, limited action, would include institutional controls, access restrictions. Institutional controls meaning a limitation placed on the master plan, for instance, to keep construction out. This was deemed during the process that it didn't add any sufficient additional protection of the environment or human health, and it was not retained, therefore,

there's a zero there for the cost estimate.

The third alternative that was carried through includes institutional controls, but containment and installation taken of a cover system, which would include low permeability layer, which would probably be a membrane type layer, or a low permeability -- like go geosynthetic (phonetic) clay layer or something like that. This as well would include the fencing access restrictions classification exception area, and the long term monitoring and sampling that goes along with that over a number of years, and the price is estimated at 1.3 million or a little bit more.

Okay. Let's move onto the navy tonight, as I mentioned before, after consultation with regulatory bodies, want we propose is Alternative (3), which is a cover system and institutional controls, clearing and grading would be the first -- one of the first steps of the actual installation. Additional cover soils would have to be brought in, there would have to be submitted erosion control measures, to avoid washing of soils, because in this case, since a complete impermeable membrane

would have to be placed over the former landfill, just about all the trees and vegetation would have to be removed pretty much. We figure about two acres would have to be removed.

In addition, the grading and revegetation and final cover would promote precipitation run off, and limited erosion. In this case, we show again the cable type fence around the perimeter of the proposed cover system, which would be the black line with the x's, and the red line on the figure, the slide shows the limits, approximate limits of the cover system. In addition, there would be long term monitoring, periodic review, and establishment and maintenance of the classification section here, and that pretty well rounds it out. Any questions for either site?

MR. HAMMER: Who sets the standards for your decision, the navy, or the US Government, or a higher regulatory body? Does the navy decide what you're going to do or do you concur with the New Jersey DEP? I mean who decides what you're --

MR. TURNER: It's a cooperative effort really, you know, the process

leads from remedial investigation, and regulatory bodies, NJDEP, Bob Marcolina (phonetic), is generally available to anyone at these meetings. And you know Jessica or her other person, EPA project manager, have input all the way along, from the remedial investigation through the feasibility study, even the development of the alternatives and checking the technologies, they have input all along.

MR. HAMMER: So there's really no place that decides -- it's a joint effort then between the State and the --

MR. TURNER: I believe that's correct.

MR. GOEPFERT: The process we follow is the standard super fund process.

MR. HAMMER: That's --

MR. GOEPFERT: That's spear-headed by the US Environmental Protection Agency, with technical assistance from the New Jersey Department of Environmental Protection. Now, the navy, we're the lead proponent on the site, which means that we get to propose our plan to remediate the site, and the EPA actually holds the trump card, they can either approve or

disapprove our proposal; okay?

So based upon public input, if we get written concerns or other comments, based upon our funding constraints, what have you, we propose the cure for the site. And once we propose then, after intense regulatory review, they will sign off in what they call a record of decision. And from there, we can act, we can go ahead and remediate the sites.

MR. HAMMER: So this is more or less your public hearing.

MR. GOEPFERT: This is the public hearing for these two sites. Yes, sir.

MR. HAMMER: An invitation for comment.

MR. KOLICIUS: And again, just to clarify a little bit in the record of decision, and who actually makes the decision that this is what we're going to do, the record of decision in this case would be signed by Capt. Shaw as the facility representative, the commanding officer of the base, as well as the regional administrator for EPA Region 2, which covers New Jersey. And the Department of Environmental Protection here in New Jersey, does

have input the whole way. If this was not a Federally designated super fund site, they would be more of the lead agency, and we would have more of a direct say in the signing of the decision. But in this case, with it being a Federal designated Super Fund Site, as it was listed back in the 80's, the EPA and Earle jointly sign.

MR. HAMMER: So this is part of your task more or less.

MR. KOLICIUS: We're required to have a 30 day public comment period for this proposed plan. The formal public meeting isn't absolutely necessary, unless someone in the public requests it. Generally we choose to have a meeting, rather than waiting for someone to request it.

MR. HAMMER: And you only have two sites that are really concerned.

MR. KOLICIUS: At this time. This is actually also known as Operable Unit 6. We have completed some actions of four operable units. We have another one in the works. And there will probably be an additional remedial action proposed at later dates, as funding and

the investigations proceed.

MR. GOEPFERT: I have a complete book with all our sites to give you at the conclusion of the meeting.

MR. HAMMER: These are the most serious sites, is that it?

MR. KOLICIUS: We generally try to work on a worst first basis. And Sites 4 and 5 were considered the most critical sites on the base. And they were Operable Unit 1, those landfill caps were completed several years ago. They're now in a long term monitoring status, and with EPA and the State, we have worked to establish a hierarchy of what we can proceed with at what time.

MR. HAMMER: Thank you.

MR. SMITH: On Site 10, how extensive was your investigation as to what metals were buried there?

MR. KOLICIUS: Were buried there?

MR. TURNER: No, not particularly, we did test it, but we found there were typical munitions base materials, would be the extent. We were more concerned with anything

that was leaching, so we ran a full sweep of record metals, a long list of metals.

MR. SMITH: Strictly metals, no mercury.

MR. TURNER: Yeah.

MR. SMITH: There was no magnesium.

MR. TURNER: Oh yeah.

MR. GOEPFERT: All the tested metals and constituents are listed in the proposed plan reports.

MS. COAKLEY: A related question though, for this site, it appears the only thing you did is test for is the metals and ground water.

MR. TURNER: Not correct.

MS. COAKLEY: At least the copy I'm looking at, Site 3 has --

MR. TURNER: Look at the tables.

MS. COAKLEY: The table (1) says Site 3, table (2) says Site 3, table (3) says Site 3, table (4) says Site 3, table (5) says Site 3, table (6) says (10).

MR. TURNER: Table (2), would

be a current distribution of organic chemicals and surface soils, (1) is organic and surface soils, (3) is organic and sediments.

MS. COAKLEY: Again, look at the site number.

MR. TURNER: Site 3, oh, I'm sorry, we're talking about Site 10, I'm sorry.

MR. KOLICIUS: For Site 10 remedial investigation phase, we had looked at all of the various possibilities and from that we determined the metals were the contaminants of concern at this site. We have looked for other things such as solvents, pesticides, but in this case, the metals were the contaminants of concern, so from the feasibility study through the proposed plan, we're discussing how to deal with metals at this site. We're not going to try to design a system to contain something that's not there.

MS. COAKLEY: The others were pre-determined not to be an issue.

MR. KOLICIUS: Right.

MR. TURNER: Our record is about this thick (indicating).

MS. COAKLEY: I'm just trying

to point out what was different there?

MR. TURNER: We're zeroing in on that.

MR. MEYER: Considering the size of this site, would it be feasible just to remove the contaminants, or is it something where you can just remove the shell casings and eliminate the problem, or have all the contaminants already leached from them?

MR. TURNER: Oh no, no, they're stable as they are, at least they appear to be, because really not much is entering the ground water. The navy feels that with the addition of an impermeable layer, it will be that much more protective of ground water, but to remove the soil, remove the contents of the landfill is fairly expensive. And it was looked at the and ruled out early on, because of sheer cost, and then disposal or recycling, it gets complicated, and costly is the real thing I think.

MR. MEYER: It's likely the spent brass thing would be expensive because of the contaminant in it.

MR. TURNER: Well, it would

be because of digging it up and hauling it some place to have it smelted and separated from the dirt. It's not a simple job. It just doesn't work out cost wise.

MR. MEYER: I just was wondering whether it would be cheaper than the long term monitoring just to clean it up and be done with it.

MR. TURNER: It was considered. This is -- we tried to come up with the inexpensive method that is considered protective of the environment and human health.

MR. MARSINIAK: A question. You must have shells coming in now; right?

MR. TURNER: For this landfill, no.

MR. MARSINIAK: I mean no, the base itself, I mean I'm stepping ahead of myself, here, you must have other materials coming in off your ships, what are you doing with that material?

MR. GOEPFERT: Any metals that's recyclable is sent for recycling. We do not do any active dumping on the base.

MR. MARSINIAK: Okay. No

active dumping on the base.

MR. GOEPFERT: No.

CAPT. SHAW: This material was from a demilitarization of old ordinance, from a facility, he pointed out where we used to have a demilitarization furnace. That furnace was dismantled back in 1990, this dump site was adjacent to that, it hasn't been used for many years. But what it was, was old ordinance was furnaced, the explosion material burned out, and then the spent cases dumped We don't have any demilitarization ordinance operations going on at this station.

MR. MARSINIAK: I tell you something, Captain, my house was demilitarized. I owned one of the houses. I lived in one of the houses from the base.

CAPT. SHAW: Okay.

MR. KOLICIUS: The main thing as the captain stated is the --

CAPT. SHAW: The operation that would generate that waste is not there any more.

MR. MARSINIAK: Okay. That's what I was just wondering, you've still got

10,000 acres and you're going to be using, what are we doing? How are we balancing this out?

MR. TURNER: That's a good point this out.

MR. GOEPFERT: That is a good point.

CAPT. SHAW: I can explain just real briefly, it really doesn't go to the question of environmental, but the United States Army now, several years ago, was tasked as the single manager for all conventional ammunition, and the Army is responsible for the end stage of the life cycle of the all ordinance now. So any conventional ordinance goes back to the army, and the army has some very large contracts now throughout the country, and some overseas as well, to demilitarize ordinance.

MR. KOLICIUS: And actually the decision to take this furnace out of the system, in addition to the army taking on the lead, there also was an environmental concern, because as some of the environmental rules came into effect, this type of furnace couldn't meet some of the air emission standards, which is part of the reason the decision was made to dismantle

it.

CAPT. SHAW: Exactly.

MR. MARSINIAK: No smoke and stuff like that.

MR. KINKADE: You might want to point out for the record, I mean, those of us who have been working with you for a while know this, but this particular site has some specific contaminants of concern, or low levels in concern. But the technique that you're proposing is not new by any means, not only is it not new, it's widely used and accepted. But it's also been used on base in other operable units.

MR. GOEPFERT: As John Kolicius mentioned before, we had two larger landfills that were capped back in 1998. Those two landfill jobs cost a total of almost five million dollars. And they totalled about nine, 9 1/2 acres in size between the two of them, just to put things in perspective, that's a good point, Merwin.

MR. TURNER: And from experience, we generally always find that to dig and hull the whole thing and dispose of it, first removing it elsewhere is frowned upon, and it's

more costly.

MR. GOEPFERT: Any other questions?

MR. TAYLOR: I have a question that's actually related to the soil removal question. It's about how the landfills were first formed, did they dig pits into the ground and then dump into the pit, or did they just throw the material on top of the ground and then cover it? Because I read -- I think I read in the report somewhere that some of the material was found around two feet deep, which isn't really that deep. So I got curious about how deep the hole was, and if in fact there was a hole originally.

MR. GOEPFERT: That's a good question.

MR. TURNER: Yeah, what it looks like is that in the case of Site 3, it was on the site of an existing ravine, not real steep, but one that goes out. And this landfill seemed to have been pushed and a thin layer of soil, sandy soil pushed on top of it. And then when it got out to some distance, there was a, you know, a fairly steep slope, and so it was

pushed on top of that as well.

MR. TAYLOR: So it was material actual down the edge of this ravine, if you want to call it that as well?

MR. TURNER: None exposed, but we did do -- we did do a test bit to find the limit of the landfill in that area, and it was back quite a bit, so some fair amount of soil was pushed beyond the last of the waste disposed there. And so there was quite a bit of soil actually beyond the last of the waste disposed there. Does that make sense to you?

MR. TAYLOR: Yeah. So are you saying that the soil was applied after the material was there?

MR. TURNER: Yes. Yes. I think it was just pushed on top and then pushed over the edge to make an embankment there.

MR. MEYER: That's the old style landfill, you back up to the edge of the ravine, you dump it in, when you don't want to get a hole in your tire, you throw some dirt on top of it.

MR. TURNER: And it made it a flat area, you know, which at one time was a

ravine. Any other questions? You guys have been pretty easy on us so far.

MR. TAYLOR: You said that these alternatives were proposed, when will you know if these proposed alternatives are accepted?

MR. GOEPFERT: We have an open public comment period which extends to the May 23rd. And we invite you to give us written comments if you would like, if you wanted to reexamine the report that we put out, the proposed plan. We have a proposed plan in the library, we also have one if you would like to take it home and take a look at it. And so once that public comment period ends, what we do is we submit a responsive summary to the EPA, answering all the public concerns, and then a meeting will be held between the EPA and the navy, and the EPA will basically decide whether the alternatives that are proposed are going to be accepted.

We expect that process to take probably 30 to 45 days after the close of the public comment period. And with that schedule in mind and the planning in store, we could probably be out to the field as early at the end of August

to get started doing some of the field work.

MR. KINKADE: Is there funding for that part of it?

MR. GOEPFERT: Funding has been received this year.

MR. KOLICIUS: Actually, in this case, just because of some of the things I was saying as far as funding availability and making sure that this project would go through, we're confident because of the discussions we have with EPA and DEP, that this is not going to change significantly. I mean we may have to tweek some of the proposals a little bit, but we have actually gone out on a limb a little bit, and contracted for the design and construction already. We can make changes in the contract if necessary, but in this case, we locked in the monies so that this job will be done this construction season. Mr. Jargowsky.

MR. JARGOWSKY: On behalf of the RAB members that are here, I would like to suggest a hand vote, a couple of us here, relative to our support for this project. I would like to support the project as defined for Sites 3 and 10. Do you need a motion?

MR. GOEPFERT: Yeah, I'll need a motion. But we had one other question I think before we take that vote.

MR. HAMMER: I just was -- I guess I'm repeating myself, but you have 29 sites, maybe more here. Could you describe a little bit how you picked -- are these the only two that were picked so far? I haven't been involved in this before. Could you describe how you picked these two sites?

MR. GOEPFERT: The sites were picked back in 1983, and extensive study was performed by interviewing employees on the base. And people who had knowledge of some of the operations on the base, military and civilian. And based upon the information gleaned from those oral history - that oral history project, and also an examination of things like aerial photographs and that sort of thing, an initial judgement was made which sites required further study.

And the sites that required further study were those original 29; okay? And then from that, we found about five additional sites since that time that require further study. So

we have a total of about 35 sites that we're carrying right now. Out of those sites we have either put in place remedial actions or have finished remedial actions on about 62 percent of those sites, which amounts to about -- whatever the numbers are, you know, about 20 of those sites are now completed. So the remainder are, we like to think as Mr. Kolicius mentioned before, that we handled the worst first; okay?

These sites that we're looking at now are towards the tail end of the five priority sites. And we have one other site that we're looking at later this year, that will be a remedial design for Site No. 13, which is an industrial type landfill. So by the end of this calendar year, we should be about three-quarters through our program.

MR. HAMMER: That's just the investigative stage.

MR. GOEPFERT: No, the investigative stage for the most part was completed in 1995.

MR. HAMMER: Okay.

MR. KOLICIUS: The only additional investigative work going on right now

is for some of these new sites that Greg said we have discovered through one means or another. Greg has actually actively gone after some long term employees and/or retirees, to try to make sure we're not missing anything. And in one case, we had a situation where a hunter on the base stumbled across something that didn't look right. And he did the right thing, he notified the Environmental Department and we found another site we had to investigate. It was back in the woods, in the middle of nowhere, but once we find it with need to deal with it.

MR. MARSINIAK: Greg, that what about the old bunkers that have been around on the base for years, are those going to be sites you evaluate later or you're working on them today.

MR. GOEPFERT: We have no intention of investigating anything with the bunkers.

MR. MARSINIAK: I did work a long time ago inside those bunkers, many years ago. I see you pretty well got them spread out here.

MR. GOEPFERT: Yes.

MR. MARSINIAK: You got the best railroad system right now, better than Central Railroad.

MR. GOEPFERT: Is there someone who wanted to make a motion based on Mr. Jargowsky's recommendation?

MR. KINKADE: Yes.

CAPT. SHAW: Did we answer your question?

MR. HAMMER: Yes.

MR. KINKADE: I move that we accept and support the proposal, the proposed alternatives for Sites 3 and 10.

MR. JARGOWSKY: Second.

MR. GOEPFERT: Do we have any discussion on the proposal by Mr. Kinkade? Any other comments from the board members of the public present? Okay. You want to just have a vote on this, all in favor.

(Whereupon all members signify by saying aye.)

MR. GOEPFERT: This is all in favor of a proposal to the board to support the alternatives selected.

MR. KINKADE: Yes.

MR. GOEPFERT: Okay. All against?

(Whereupon there is no response.)

MR. GOEPFERT: Any abstentions?

(Whereupon there is no response.)

MR. GOEPFERT: Then it appears the motion is carried, the restoration advisory board supports the alternatives proposed the navy for Sites No. 3 and 10. So noted in the record. Thank you very much. Okay. I'll just continue with the remainder of the agenda this evening. We have a community co-chair report by Mr. Jargowsky.

MR. JARGOWSKY: Good evening. Thank you, Greg. Basically I think what I would like to do is just give you some perspective on where we have been, where we have come from, how we have developed, and where we see ourselves going now with the restoration advisory board. I'm a citizen member of the board, and I have been involved with the board now for about four years. Times flies when you're having fun. The board has a lot of really fine individuals involved such as Janet Coakley, she's an

excellent RAB member. Merwin Kinkade, from Tinton Falls is here, he's another excellent member.

And we're looking for some of you who might be sitting out there right now to join us as citizen members of the restoration advisory board. The RAB overtime has been involved with a lot of things. In fact, the navy has been exceptionally helpful to us. Right from the beginning, we had a pretty active dialog, and we wanted to make sure before any fancy testing was done, any where, at any site that every single stream leaving the base was tested. And that's how -- correct me if I'm wrong -- Merwin, but that's how we started.

And we didn't want to deal with surprises later, we wanted everything tested right away, and to our total surprise and amazement, the navy did it. And that set the stage for a remarkable positive working relationship with the navy ever since then. The navy has been also very helpful with us, every now and then they give us little demonstrations on different little tidbits that they pick up at Ocean front off of the old range on Sandy Hook

from years and years gone back, the old mines and different things that washed up, and how their EODP goes and helps the civilians out.

And we learn a lot with learn a lot, the navy has been giving us lots of tours, lots of opportunity for hands on seeing these sites and getting involved. Why I'm saying all this is that we are here tonight, we would love to have some more people on the RAB; okay? And it's not only just a matter of going to a meeting, you know, there's opportunities galore to learn and to actually see the sites. It's quite interesting. If you haven't had a chance to see the -- go on the safari tour on the bus in Earle, you're really missing something. You'll see lots of turkeys, lots of deer running around the site. And it's the headwaters of all of our water sheds or most of them in Monmouth County, and it's quite a sight to behold.

So with those few words, I would like to thank Capt. Shaw, he's coming right along following the navy tradition of strong environmental stewardship. When this whole RAB concept got started there was a meeting held up in Boston, that we went up to, and all the armed

services were there at this big meeting, this kick off meeting. The strongest environmental message of all the services came from the United States Navy, and it was strong. And you know basically that set the spirit and tone, the way I read it, for the whole navy. And I don't see the same degree of activity and tenacity to the environmental problems with our colleagues over in the army as we do with the navy. The navy is holding the flag high, so thank you very much.

MR. GOEPFERT: Thank you, Lester. And following with that, I would just like to give you an update of some of the outreach efforts that have taken place over the last three or four months that I tried to pursue based upon the recommendation of Mr. Kinkade and Mr. Kolicius and the rest of the board from their meeting in St. Louis in November. I prepared a presentation for the Monmouth County Environmental Council back in, I believe it was February, and Mr. Kinkade was present. And the Monmouth County Council enjoyed a presentation about all our sites on the base.

In March, I went to the Manasquan Water Shed Group, Mr. Taylor (phonetic), who is

the manager of that group was present, along with his -- most of the membership and Mr. Marsiniak. And we had a very interesting evening, discussing about all of our sites, and opened up some eyes as to, you know, how far we've progressed in our program. I did invite people out to a site tour on the 28th of April, unfortunately we were a little light in participation, however, we had two distinguished gentlemen from Colts Neck that showed up who enjoyed the tour, one who was a Naval Weapon Station Earle retiree, and the other gentleman is on the Environmental Commission of Colts Neck.

So we were very pleased to have them with us. We wish we could have more people to enjoy some of the progress that we have been making. We have also sent forward to our on the major command an information packet that describes all of our sites, to try to make things a little bit more accessible to the public. We do have a public repository of all the information on our sites at the Library in Shrewsbury, that's the eastern branch of the Monmouth County Library. However, for those people who have become more computer literate, we

have attempted to put together a web site where some of this information can be accessed, and that is something that's in progress right now.

And further, we have -- there was a conference in St. Louis, which Mr. Kinkade and Mr. Kolicius had attended, and they had come back with some very interesting dialog recommendations for our group, some of which we have adopted. And Mr. Jargowsky and I will be attending another national conference that's more navy focused next weekend, and that's going to be a national navy type initiative. So we look forward to reporting to you at our next meeting what recommendations came out of that. Lieutenant Wexler, our new JAG officer has reminded us that we are the second largest in geography, the second largest military facility in New Jersey, with Fort Dix being number one. We're the second largest military base in land area in New Jersey.

And we have quite a good program of environmental restoration going on, and we also are attempting to comply as best we can with all environmental laws. So we want to make sure that the base continues to enjoy -- not only as a military facility, but for the resources that are

out there. So if anybody would like to be a little bit more involved with the group, I have a community interest form that you could take back with you. Even if you can't attend all the meetings, we would like to see you come to some of them. And we also have a site summary booklet that you can feel free to take home and look at, at your leisure. So does anybody have any other questions of our outreach efforts? Okay. Thank you very much.

I just want to go over some of the progress on some of the active sites that we have after remediation. Site 16(f), what you're looking at here is the inside of the trailer that contains the process equipment to treat water that has been impacted by an underground oil spill. And there was a line, a broken line that was evidenced several years ago where we found oil in the ground. And this is labeled as Site 16(f), and the remediation work that we have going on there is basically an oil and water separation process. And what we are doing is bringing the water with the oil out of the ground, and separating the oil out.

And this process is called

bio-slurping, it's basically a pump and treat type system. And what happens is we recover the oil, we recycle the oil, and the clean water gets sent through a filter system, and sent back to our waste water treatment plant.

MR. SMITH: What type of oil is that?

MR. GOEPFERT: Diesel fuel. This was diesel fuel to fuel our locomotives for the railroad. There was kind of a long run of line, there was about a half of mile run of line that ran from the storage tank, the underground storage tan to the actual dispensing location, and that was the line that had ruptured. To date we have recovered about 4,000 gallons of oil in this process, adjacent to this, we have a trailer on site. The navy is finished with the process equipment at this site, the navy will be able to take the process to another navy site or another Department of Defense site where they can use the same equipment over again. The building, one of the buildings that are next to this process unit --

MS. REED: Is this self-contained?

MR. GOEPFERT: Yes, it's self-contained.

MS. REED: It's like a mobile home.

MR. GOEPFERT: Could you --

MS. REED: I said it's like a mobile home.

MR. GOEPFERT: Right. Could you give us your name, please?

MS. REED: Carol Reed, environmental committee (phonetic).

MR. GOEPFERT: Yes, it's a mobile unit. Yes. It doesn't have wheels on it now, but wheels can be put on it. So we have a building that's adjacent to this Unit No. 1, that's going to be demolished. It's a rather large building that's about over 50 years old. It's in a state of disrepair, and it's being demolished in the June time frame. And after the building is demolished, we're going to be investigation the extent of the movement of the oil underneath the building. And if necessary, additional wells will be placed so that the oil could be cleaned up under the old footprint of the building.

MR. MARSINIAK: Where is 16(f) on this plan, is it down towards the ocean or is it --

MR. GOEPFERT: No, it's at the main base.

MR. MARSINIAK: It's at the main base.

MR. GOEPFERT: Right.

MR. TURNER: That was the --

MR. GOEPFERT: It shows right here, Mr. Marsiniak, right at that location (indicating). This is the entrance to the base (indicating).

MR. MARSINIAK: It's that little strip.

MR. GOEPFERT: There you go. Community involvement. And we have Site 16(f) right here (indicating). So the bio-slurper, what it does is basically remove the oil from the water, and also -- it also adds oxygen to the ground at the same time to enhance the biological degradation of some of the oil that is still remaining in the ground.

The next slide shows Site No. 26 and our deep cold winter that we had this year,

this is not a refinery, this is a remediation site. And what it was -- it's actually a refinery of our ground water. And we had a series -- it's a system called soil vapor extraction and air sparging (phonetic), we sparge air into the ground. You volatilize the contaminant, which is trichlorethylene and old solvent, which was poured down a slop sink inside this building on a regular basis, years ago that was the standard method of disposing of that type of solvent material. We do not do that today.

The material trichlorethylene has been found in the wells at this site, in the thousands of parts per billion range, which is far above the New Jersey Quality Standard for ground water. The air sparging system has been run successfully for three months this year so far, and based upon our operations experience, we experience a normalized reduction in trichlorethylene concentration of 75 percent. So on an average for the time that this system has been running, we have reduced the concentration in the more prominent wells at this site by about 75 percent.

Now, the remediation goal at this

site I understand is right down to the ground water quality standard of (1). The initial estimates was that this remediation effort would take in the range of two to three years to complete. But the initial results appear to be promising, perhaps it will take less time than we thought.

MR. KOLICIUS: The problem is you always have to take the longest time to get that last little bit.

MR. GOEPFERT: No doubt about it, the last ten percent takes 90 percent of your time, that's just a standard. Yes, Mr. Taylor.

MR. TAYLOR: Greg, you mentioned that it was only operated for three months. You kind of implied that their are points in time when it's not operating for some reason. Is that because of weather or is that because of some other --

MR. GOEPFERT: Well, right now, we have a contract renewal situation. And the contract will be re-activated at the end of this month, and it will be started up again, so that we have some continuity. But that of course has given the aquifer time to recover, and you

know, the initial stages might even be more efficient after this relaxation period.

MR. KOLICIUS: The other thing with this, even though the system is being run by remote controls so that we don't necessarily have to have an operator the whole time, we are still only operating it during the base's active operating hours. So if there would be any kind of upset conditions, somebody would be around to respond to it.

MR. GOEPFERT: So that's basically the low down on Site No. 26. Any other questions or comments? Basically, like I said before I do have some community interest forms here. If you would be interested in attending more of these meetings, we would like to have you, and put you on our mailing list. So please feel free to fill out a form, you can send it back to me, if you want, my address, the station's address is on the bottom of the form. If there aren't any other questions, I would ask for a motion to adjourn.

MR. JARGOWSKY: So moved.

MR. GOEPFERT: We have a motion adjourn. All in favor. Seconded.

MR. KINKADE: Second.

MR. GOEPFERT: All in favor.

(Whereupon the members signify by saying aye.)

MR. GOEPFERT: Thank you very much all for coming, and thanks for the hospitality, Janet, and our next meeting will be scheduled for September 13th.

(Whereupon the hearing is adjourned.)

CERTIFICATE

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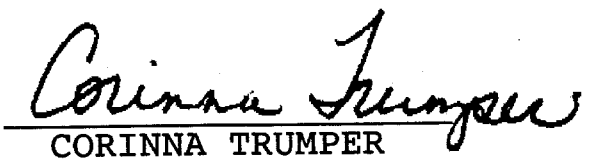

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